ADDENDUM

Public Building Commission of Chicago | Richard J. Daley Center | 50 West Washington Street, Room 200 | Chicago, Illinois 60602 | (312) 744-3090 | pbcchicago.com

ADDENDUM NO.: **03**

PROJECT NAME: **Legler Regional Library Renovations**

PROJECT NO.: **08310**

CONTRACT NO.: **C1597**

DATE OF ISSUE: **December 6, 2019**

NOTICE OF CHANGES, MODIFICATIONS, OR CLARIFICATIONS TO CONTRACT DOCUMENTS

The following changes, modifications, or clarifications are hereby incorporated and made an integral part of the Contract Documents. Unless clearly expressed otherwise by this Addendum, all terms and conditions defined in the original Contract Documents shall continue in full force and effect and shall have the same meaning in this Addendum. Issued Addenda represent responses/clarifications to various inquiries. Contractors shall be responsible for including all associated labor/material costs in its bid. Drawings/specifications corresponding to inquiry responses will be issued with the Issue for Construction Documents, upon issuance of building permit.

ITEM NO. 1: **CHANGE TO KEY DATES**

Change 1 **Bid Due Date and Time** has been **RESCHEDULED** to Thursday, December 12, 2019 at 11:00a.m.

ITEM NO. 2: **REVISIONS TO BOOK 1 – PBC INSTRUCTIONS TO BIDDERS**

None.

ITEM NO. 3: **REVISIONS TO BOOK 2 – PBC STANDARD TERMS AND CONDITIONS**

None.

ITEM NO. 4: **REVISIONS TO BOOK 3 – TECHNICAL SPECIFICATIONS**

Change 1 **Book 3 – Volume 1 – REVISED** Specification Section 000110 – TABLE OF CONTENTS – Updated to denote revised specifications

Change 2 **Book 3 - Volume 1 - REVISED** 003126.10 - ATTACHMENT A – ASBESTOS-CONTAINING MATERIAL, LEAD-BASED PAINT AND HAZARDOUS MATERAIL SURVEY SUMMARY REPORT: Added asbestos-containing wire jacketing insulation to executive summary and summary table

Change 3 **Book 3 - Volume 1 - REVISED** 003126.10 - ATTACHMENT A – ASBESTOS-CONTAINING MATERIAL, LEAD-BASED PAINT AND HAZARDOUS MATERAIL SURVEY SUMMARY REPORT: Added fire escape, roof ladder, and site fence to tested materials for lead-based paint in executive summary and summary table

Change 4 **Book 3 - Volume 1 - REVISED** 003126.10 - ATTACHMENT A – ASBESTOS-CONTAINING MATERIAL, LEAD-BASED PAINT AND HAZARDOUS MATERAIL SURVEY SUMMARY REPORT: Added laboratory results and chains of custody to Appendix C

Change 5 **Book 3 - Volume 1 - REVISED** 080152.61 - WOOD WINDOW AND DOOR REPAIRS: Revised specifications to include existing wood door restoration.

Change 6 **Book 3 - Volume 1 - REVISED** 080152.61 - WOOD WINDOW AND DOOR REPAIRS: Revised specifications to include re-glazing of existing Insulated Glass Units (IGU).

Change 7 **Book 3 - Volume 1 - ADDED** Specification Section 230130 - HVAC AIR-DISTRIBUTION SYSTEM CLEANING

Change 8 **Book 3 - Volume 1 – ADDED** Specification Section 232500 - HVAC WATER TREATMENT

ITEM NO. 5: REVISIONS TO DRAWINGS

Change 1 **REVISED** Drawing No LBP-003, LEAD BASED PAINT MITIGATION EXTERIOR FIRE ESCAPE AND LADDER: Clarification of keynotes that both Fire Escape AND Ladder are part of lead mitigation area

Change 2 **REVISED** Drawing No A-101, FIRST LEVEL AND MEZZANINE LEVEL FLOOR PLAN: Added Keynote 09-P5 to locations of new fin tube along East wall of Book Stack Area [113] and Wellness Room [126]

Change 3 **REVISED** Drawing No A-101, FIRST LEVEL AND MEZZANINE LEVEL FLOOR PLAN: Revised Keynote 09-T1 to include: "OR EXPOSED MECHANICAL / PLUMBING LINES"

Change 4 **REVISED** Drawing No A-101, FIRST LEVEL AND MEZZANINE LEVEL FLOOR PLAN: Added Keynote 09-T1 to Lobby [103]; Study Room [105]; Study Room [106]; Adult Reading Room [107]; Conference Room [108]; Children's Reading Room [119]; STAIR [123]; & STAIR [124]

Change 5 **REVISED** Drawing No A-101, FIRST LEVEL AND MEZZANINE LEVEL FLOOR PLAN: Added Keynote 09-T2 to South-West corner of Adult / Reference Reading Room [107]

Change 6 **REVISED** Drawing No A-101, FIRST LEVEL AND MEZZANINE LEVEL FLOOR PLAN: Revised Keynote 09-L3 & 09-L4 to point to railings, light post, and fence at front entrance.

Change 7 **REVISED** Drawing No A-102, SECOND LEVEL FLOOR PLAN: Revised Keynote 09-T1 to include: "OR EXPOSED MECHANICAL / PLUMBING LINES"

Change 8 **REVISED** Drawing No A-102, SECOND LEVEL FLOOR PLAN: Added Keynote 09-T1 to Lobby [201]; YOUmedia [206]; Teens Staff Room [208]; Teen Staff Head [208A]; & Computer Lab [227]

Change 9 **REVISED** Drawing No A-201 – EXTERIOR ELEVATIONS: Added keynote 08-M1 for Contractor to provide mockups of wood door and wood window at indicated locations on elevation.

Change 10 **REVISED** Drawing No A-601, DOOR SCHEDULE AND DETAILS: Added Note N to Existing Window and Door Repair Notes to refer to detail E3/A-622 for Typical Insulated Glass Unit (IGU) glazing putty and sealant replacement.

Change 11 **REVISED** Drawing No A-621, WINDOW SCHEDULE AND DETAILS: Added Note N to Existing Window and Door Repair Notes to refer to detail E3/A-622 for Typical Insulated Glass Unit (IGU) glazing putty and sealant replacement.

Change 12 **REVISED** Drawing No A-622, WINDOW ELEVATIONS AND DETAILS: Added Detail E3/A-622, TYP INSULATED GLASS UNIT (IGU) DETAIL

Change 13 **REVISED** Drawing No A-650, FINISH SCHEDULE AND DETAILS: Revised VCT-02, Product Number = 0710; Color = FULL MOON.

Change 14 **REVISED** Drawing No A-910 – SIGNAGE DETAILS: Revised Sign S15 & S18 sign specifications.

Change 15 **REVISED** Drawing No PD-102, SECOND FLOOR - PLUMBING DEMOLITION PLAN: ADDED kitchen sink in North-West alcove of Computer Lab [227] and general note no. 2 for demolition clarification.

Change 16 **REVISED** Drawing No P-000 – PLUMBING SYMBOLS, NOTES & ABBREVIATIONS: ADDED system abbreviation for non-potable water.

Change 17 **REVISED** Drawing No P-100 – BASEMENT FLOOR - PLUMBING PLAN: ADDED backflow preventor and non-potable water line for glycol fill station.

Change 18 **REVISED** Drawing No P-400 – PLUMBING RISER DIAGRAMS: ADDED backflow preventor and non-potable water line for glycol fill station.

Change 19 **REVISED** Drawing No P-500 – PLUMBING SCHEDULES: ADDED backflow preventor schedule.

Change 20 **REVISED** Drawing No M-000 – MECHANICAL SYMBOLS, NOTES & ABBREVIATIONS: ADDED general sheet notes 26 thru 35.

Change 21 **REVISED** Drawing No M-100 – BASEMENT FLOOR - MECHANICAL DUCTWORK PLAN: REVISED VAV-006 ductwork in the basement area.

Change 22 **REVISED** Drawing No M-200 – BASEMENT FLOOR - MECHANICAL PIPING PLAN: ADDED Glycol fill station to serve the chilled water and hot water systems.

Change 23 **REVISED** Drawing No M-501 – MECHANICAL SCHEDULES: ADDED glycol fill station schedule.

Change 24 **REVISED** Drawing No M-601 – MECHANICAL DETAILS: ADDED Glycol fill station detail no. 6.

Change 25 **REVISED** Drawing No E-100 – BASEMENT FLOOR - ELECTRICAL POWER PLAN: ADDED Keynote 6 associated to the replacement of the existing booster pump.

Change 26 **REVISED** Drawing No E-100 – BASEMENT FLOOR - ELECTRICAL POWER PLAN: ADDED New Glycol fill station location on plan and associated Keynote 7.

Change 27 **REVISED** Drawing No E-100 – BASEMENT FLOOR - ELECTRICAL POWER PLAN: DELETED Equipment tags that are not required for existing to remain mechanical powered equipment.

Change 28 **REVISED** Drawing No E-602 – ELECTRICAL DETAILS: ADDED Smoke Evac Fan EF-5 to detail 1/E-602 Fire Alarm Riser Diagram. Associated general note 17 has also been added to detail 1/E-602.

ITEM NO. 6: REQUESTS FOR INFORMATION

RFI-1.

Question: **VCT-02 is spec'd as Tarkett: IQ Granit SD 12"x12" 0723, Old Bark. However, this product is not available in that size. It's is only offered in 24"x24", will this size change be accepted? Also, this product is custom from Tarkett and will have a 14-16 week lead time. Will another color or manufacturer be acceptable?**

Response: VCT-02 is permanently static-dissipative vinyl flooring for use in ESD-sensitive areas such as MDF/Server Room [024]. VCT has been revised to: 0710 - FULL MOON / LIGHT GREY. Refer to revised Finish Schedule on Drawing A-650, included in this Addendum.

RFI-2.

Question: **Drawing T-602 indicates that the Intrusion Detection System is provided by 2FM. Please confirm if 2FM will be furnish and installing the complete Intrusion Detection System.**

Response: Specifications 281000 - CITY OF CHICAGO SECURITY (2FM) SYSTEM SPECIFICATIONS & Detail 5/T-602 have been revised per Addendum No. 2. Contractor to provide: intrusion system panel, sensors, detectors, wiring, devices, and all associated work required for intrusion system.

RFI-3.

Question: **During the site visit held yesterday, 11/26/19, it appears that there are signs of possible failure of some of the skylight panel junctions, as well as broken glass. Being that it is expected that the top and bottom sides of the glass are to be cleaned, how will this possible failure be addressed? Does 2FM have any future plans for addressing this skylight?**

Response: Current skylight work scope is to remove debris and clean top and underside of skylight glass. Contractor is to notify AOR when access is available to inspect the condition of stain glass.

RFI-4.

Question: **On P-102 Room 202 It shows a mop sink but in the demo pages it shows it getting demolish so will this mop sink be replaced with new or existing to remain?**

Response: Existing mop sink to remain as-is in Room 202. However, there is a small kitchenette in the North-West Alcove of Computer Lab [227] that has a standard sink. Kitchenette and standard sink is to be demolished. Refer to Architectural Sheet AD-102.

RFI-5.

Question: **Drawing LBP-003 designates the fire escape and ladder to be a lead based paint mitigation area. It further states that the ladder (not the fire escape) was not tested for the presence of lead based paint. Furthermore, the Asbestos-Containing Material, Lead-Based Paint and Hazardous Material Survey Summary Report does not indicate the testing of the fire escape for the presence of lead.**

Please clarify whether the base bid is to include the mitigation of both the fire escape and ladder or simply scraping and painting, with any necessary testing and mitigation covered under the Owner Allowance.

Response: Keynote #1 has been revised to indicate 'Lead-Based Paint mitigation area includes fire escape and ladder'. Drawing LBP-003 has been revised and is included in this Addendum.

This Addendum includes the following attached Specifications and/or Documents:

1. Specification Section 000110 – TABLE OF CONTENTS
2. Specification Section 003126.10 - ATTACHMENT A – ASBESTOS-CONTAINING MATERIAL, LEAD-BASED PAINT AND HAZARDOUS MATERAIL SURVEY SUMMARY REPORT
3. Specification Section 080152.61 - WOOD WINDOW AND DOOR REPAIRS
4. Specification Section 230130 - HVAC AIR-DISTRIBUTION SYSTEM CLEANING
5. Specification Section 232500 - HVAC WATER TREATMENT

This Addendum includes the following attached Drawings:

1. LBP-003 – LEAD BASED PAINT MITIGATION EXTERIOR FIRE ESCAPE AND LADDER, dated 12/5/2019
2. A-101 – FIRST LEVEL AND MEZZANINE LEVEL FLOOR PLAN, dated 12/5/2019
3. A-102 – SECOND LEVEL FLOOR PLAN, dated 12/5/2019
4. A-201 – EXTERIOR ELEVATIONS, dated 12/5/2019
5. A-601 – DOOR SCHEDULE AND DETAILS, dated 12/5/2019
6. A-621 – WINDOW SCHEDULE AND DETAILS, dated 12/5/2019
7. A-622 – WINDOW ELEVATIONS AND DETAILS, dated 12/5/2019
8. A-650 – FINISH SCHEDULE AND DETAILS, dated 12/5/2019
9. A-910 – SIGNAGE DETAILS, dated 12/5/2019
10. PD-102 – SECOND FLOOR - PLUMBING DEMOLITION PLAN, dated 12/5/2019
11. P-000 – PLUMBING SYMBOLS, NOTES & ABBREVIATIONS, dated 12/5/2019
12. P-100 – BASEMENT FLOOR - PLUMBING PLAN, dated 12/5/2019
13. P-400 – PLUMBING RISER DIAGRAMS, dated 12/5/2019
14. P-500 – PLUMBING SCHEDULES, dated 12/5/2019
15. M-000 – MECHANICAL SYMBOLS, NOTES & ABBREVIATIONS, dated 12/5/2019
16. M-100 – BASEMENT FLOOR - MECHANICAL DUCTWORK PLAN, dated 12/5/2019
17. M-200 – BASEMENT FLOOR - MECHANICAL PIPING PLAN, dated 12/5/2019
18. M-501 – MECHANICAL SCHEDULES, dated 12/5/2019
19. M-601 – MECHANICAL DETAILS, dated 12/5/2019
20. E-100 – BASEMENT FLOOR - ELECTRICAL POWER PLAN, dated 12/5/2019
21. E-602 – ELECTRICAL DETAILS, dated 12/5/2019

END OF ADDENDUM NO. 03

SECTION TOC

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LEGLER REGIONAL LIBRARY RENOVATION

115 S. Pulaski Road
Chicago, Illinois 60624

ISSUE FOR BID
NOVEMBER 13, 2019

The following listed documents comprise the Project Manual for the project listed above. Where numerical sequence of sections is interrupted, such interruptions are intentional.

The complete Project Manual for this Project consists of Book 1, Book 2, and Book 3 (Volume 1 and 2), which must not be separated for any reason. The Architect and Owner disclaim any responsibility for any assumptions made by a Contractor of Subcontractor who does not receive a complete Project Manual, including all sections listed in the Table of Contents.

BOOK 3: VOLUME 1

BOOK 3: VOLUME 2

DIVISION 22 – PLUMBING

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

END OF TABLE OF CONTENTS

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Asbestos-Containing Material, Lead-Based Paint and Hazardous Material Survey Summary Report

Site: **Legler Regional Library**
115 S. Pulaski Road
Chicago, Illinois 60624

Survey Dates: **March 19, 2019; July 26, 2019; October 3, 2019; December 3, 2019**

Project No.: **E12834X006**

Report Revision: December 5, 2019

Prepared for: ***Public Building Commission of Chicago***
Richard J. Daley Center, Room 200
50 West Washington Street
Chicago, Illinois 60602

Report Issue Date: August 2, 2019

Asbestos-Containing Material, Lead-Based Paint and Hazardous Material Survey Summary Report

Site: **Legler Regional Library**
115 S. Pulaski Road
Chicago, Illinois 60624

Report by:

Lynzie Plumley
Environmental Specialist I

Evan Christian
Senior Project Manager

Reviewed by:

Doug McCormick
Director, Field Support Services

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CARNOW CONIBEAR

1.0 EXECUTIVE SUMMARY

Carnow, Conibear & Assoc., Ltd. (Carnow Conibear) was retained by Public Building Commission of Chicago (PBCC) to perform an asbestos-containing material, lead-based paint and hazardous material survey at Legler Regional Library located at 115 S. Pulaski Road, Chicago, Illinois. The surveys incorporated accessible interior and exterior areas of the building scheduled for renovation per proposed scope of work provided by the Public Building Commission of Chicago.

The asbestos survey was conducted in phases. The first phase included a review of available historical asbestos related documentation. The second phase included a visual inspection of interior and exterior building areas to identify accessible, suspect asbestos-containing materials, collect representative samples from each suspect material, analyze samples for the presence of asbestos, and to quantify each confirmed asbestos-containing material.

The asbestos-containing materials identified include:

- Wire Jacketing Insulation – identified on pendant lights in lobby areas

The asbestos survey identified inaccessible areas not available at the time of this survey. A majority of space located above hard ceilings and behind masonry and plaster walls are not accessible without demolition. Asbestos-containing material may be present within these inaccessible locations.

The lead-based paint survey consisted of visually inspecting the painted survey areas to determine representative paint histories and collecting measurements utilizing an X-ray fluorescence (XRF) spectrum analyzer. The lead-based paint testing was limited to major building components and locations with damaged or peeling paint. The limited lead-based paint survey assessed for potential lead-based paint in the survey areas as defined by the Department of Housing and Urban Development (HUD).

The lead painted components identified at the subject site include:

- Plaster Walls – painted white and located in Room 007
- Stone/Concrete Walls – painted white and located in Mezzanine Areas
- Cast Iron Bookcases – painted white and located in Stack Area 113
- Exterior Fire Escape and Roof Ladder – painted black and located on east elevation

Notable painted components tested and are not lead-based paint include:

- Metal fence surrounding site property

The hazardous materials survey consisted of visually inspecting the subject site to determine the presence and location of potential polychlorinated-biphenyl (PCB) containing equipment (lighting ballasts, switchgears, transformers, and hydraulic fluids), mercury containing equipment (mercury lamps, thermostats, switches, thermometers, regulators, and gauges), and other hazardous chemical wastes, including chlorofluorocarbon (CFCs) containing equipment.

CARNOW CONIBEAR

Hazardous materials identified during the survey included:

- Boiler Chemicals
- PCB containing equipment
- Mercury containing equipment
- Refrigerants
- Chemicals

Carnow Conibear recommends incorporating this information into future renovation documents regarding the presence and location of asbestos-containing materials, lead-based paint and hazardous materials. All asbestos and/or lead abatement activities shall be conducted by a licensed contractor in accordance with the Illinois Department of Public Health (IDPH), USEPA National Emissions Standards for Hazardous Air Pollutants (NESHAPS), and Occupational Safety and Health Administration (OSHA) regulations and requirements. Prior to renovation or demolition; remove, dispose, and/or recycle all regulated materials as identified in this report that may be impacted by planned renovations. All renovation/demolition work shall be performed in accordance with the requirements of OSHA's Safety and Health Regulations for Construction (29 CFR 1910 Subpart H) and all applicable local, state, and federal rules and regulations. The demolition contractor shall utilize engineering control methods to reduce or eliminate hazardous materials exposures for the site workers.

CARNOW CONIBEAR

2.0 INTRODUCTION

Carnow, Conibear & Assoc., Ltd. (Carnow Conibear) was retained by Public Building Commission of Chicago (PBCC) to perform an asbestos-containing material, lead-based paint and hazardous material survey at Legler Regional Library located at 115 S. Pulaski Road, Chicago, Illinois. Surveys incorporated accessible interior and exterior areas of the building scheduled for renovation. Surveys were conducted March 19, 2019; July 25, 2019; October 3, 2019; and December 3, 2019 by Carnow Conibear representatives Mr. Evan Christian, Ms. Lynzie Plumley, and Ms. Karen Zelzer. See Appendix A for copies of inspector licenses and certificates.

2.1 Renovation Scope

The surveys incorporated accessible interior and exterior areas of the building scheduled for renovation per proposed scope of work provided by the Public Building Commission of Chicago.

2.2 Objective

2.2.1 Asbestos Containing Material Survey

The purpose of the asbestos survey was to identify the location of asbestos-containing materials within the planned renovation areas at Legler Regional Library in Chicago, Illinois. To achieve this purpose, the following procedures were performed:

- Historical Document Review – to gain an understanding of previous asbestos activities and locate structural, electrical, and mechanical elements of the building.
- Visual Inspection – to determine the location of suspect materials.
- Bulk Sampling – samples are taken in random locations, to provide representative sampling for each suspect material.
- Sample Analysis – to determine the type and percent of asbestos in the material. Materials containing greater than one percent (>1%) asbestos are considered asbestos-containing.
- Reporting – to prepare a summary report documenting the inspection findings and providing recommendations as warranted.

Because a destructive survey was not performed, the possibility exists that some asbestos-containing materials were not included in this survey if they were concealed behind walls and/or ceilings, within inaccessible pipe chases, or had restricted access. However, Carnow Conibear made every reasonable effort to locate hidden mechanical systems or other inconspicuous materials despite constraints.

2.2.2 Lead-Based Paint Survey

The objective of the lead-based paint survey was to identify painted building components to determine the existence, condition, and location of lead-based paint as defined by HUD. To achieve this objective, the following procedures were performed:

- Visual Inspection – to determine location of painted surfaces.

- Sampling – lead-based paint sampling to determine the presence of these constituents.
- Reporting – to prepare a summary report documenting the inspection findings.

2.2.3 Hazardous Materials Survey

The objective of the hazardous material survey was to determine the presence of PCBs, mercury containing equipment and any other chemicals that could present health hazards to site workers and/or require special disposal. To achieve this objective, the following procedures were performed:

- Visual Inspection – to determine the presence, quantity and location.
- Reporting – to prepare a summary documenting the inspection findings and providing recommendations as warranted.

The quantities provided in this report only represent the materials found on the day of inspection based upon the scope of proposed work. Additional chemicals and equipment may be brought onto the property after the date of the inspection or consumed and/or disposed prior to the report issue date. Hazardous materials that are not anticipated to be impacted in the proposed scope of work were not inventoried.

2.3 General Facility Description

Legler Regional Library was constructed in 1919 consists of two floors and a basement. Floors are predominantly stone, carpet, and vinyl floor tile with walls of concrete, brick, plaster, and gypsum.

3.0 SITE INSPECTION

3.1 Asbestos-Containing Material Survey

3.1.1 Historical Document Review

Available building construction documents were reviewed to gain an understanding of previous asbestos activities and locate basic building systems.

3.1.2 Asbestos Survey Methodology

The asbestos survey consisted of several phases. The first phase of the survey consisted of the historic document review. Next, a walkthrough inspection of the subject site to identify homogeneous areas (materials which are uniform in composition throughout) and to assess material condition was conducted. The final phase consisted of collecting representative bulk samples from the suspected asbestos-containing materials. Materials may have been assumed to contain asbestos due to inaccessibility of the room or area where the materials were located or if sampling of the material would damage or compromise the integrity of the building component and may render it inoperable.

3.1.3 Suspect Asbestos Containing Material Sample Collection

All bulk samples were collected based on methods described in USEPA guidelines. The samples were collected and stored in sample bags with a unique sample identification number prior to delivery to STAT Analysis Corporation (STAT) for analysis. A chain of custody (COC) form was signed and dated by the inspector, the delivering representative, and the laboratory representative who received the samples.

3.1.4 Asbestos Sample Analysis

STAT's laboratory is accredited for bulk asbestos fiber analysis by the National Voluntary Laboratory Accreditation Program (NVLAP) through the National Institute of Standards and Technology (NIST). STAT utilized dispersion staining and polarized light microscopy (PLM) techniques for analyzing the samples consistent with National Institute for Occupational Safety and Health (NIOSH) methods. PLM is the EPA's recognized method for determining bulk asbestos content.

The results of the laboratory analysis revealed the presence of asbestos-containing materials. Table I summarize the results of the bulk sample analysis, material description, location, and estimated quantity. See Appendix B for approximate locations of all identified asbestos materials and Appendix C for the bulk sample laboratory report and chain of custody documentation.

Table I – Summary of Asbestos Survey

Legler Regional Library Renovations
115 S. Pulaski Road, Chicago, Illinois

SAMPLE ID	MATERIAL DESCRIPTION	MATERIAL LOCATION	LABORATORY RESULT	ESTIMATED QUANTITY/ COMMENTS
EC031919-01 thru 07	Hard Coat Plaster	Original Walls and Ceilings Throughout	Asbestos Not Detected	Not Quantified
EC031919-08 thru 10	Tan Carpet (Broadloom) Glue	108, 111, 114, Stack 113, 227	Asbestos Not Detected	Not Quantified
EC031919-11 thru 13	Tan Carpet (Tile) Glue and Gray Leveling Compound	107, 119, Stack 113, Media 206,	Asbestos Not Detected	Not Quantified
EC031919-14 thru 16	White Interior Window Caulk	Windows Throughout	Asbestos Not Detected	Not Quantified
EC031919-17 thru 19	12”x12” Pink Mottled Floor Tile	Corridor 225	Asbestos Not Detected	Not Quantified
EC031919-20 thru 22	Tan Glue beneath 12”x12” Pink Mottled Floor Tile	Corridor 225	Asbestos Not Detected	Not Quantified
EC031919-23 thru 25	2’x4’ Suspended Ceiling Tile – Segmented Gouges and Pinholes	Receiving Room 119, Corridor 120, Stack Area, Office Spaces, Corridor 225	Asbestos Not Detected	Not Quantified
EC031919-26 thru 28	12”x12” Gray Floor Tile w/ Small Black Specks	Closets 212, 213, 215; Storage 220	Asbestos Not Detected	Not Quantified
EC031919-29 thru 31	Tan Glue beneath 12”x12” Gray Floor Tile w/ Small Black Specks	Closets 212, 213, 215; Storage 220	Asbestos Not Detected	Not Quantified
EC031919-32 thru 34	12”x12” Brown and Tan Mottled Floor Tile	Basement Corridor, Staff Lounge 006, Meeting Room 007, Basement Corridor 019, Receiving 119, Corridor 120, Closet 104, Lab 209	Asbestos Not Detected	Not Quantified
EC031919-35 thru 37	Tan Glue beneath 12”x12” Brown and Tan Mottled Floor Tile	Basement Corridor, Staff Lounge 006, Meeting Room 007, Basement Corridor 019, Receiving 119, Corridor 120, Closet 104, Lab 209	Asbestos Not Detected	Not Quantified
EC031919-38 thru 40	Drywall	Office Areas, Corridor 225, 209, 210, 207, Staff Lounge 006, Various Buildouts	Asbestos Not Detected	Not Quantified
EC031919-41 thru 43	Drywall Joint Compound	Office Areas, Corridor 225, 209, 210, 207, Staff Lounge 006, Various Buildouts	Asbestos Not Detected	Not Quantified
EC031919-44 thru 46	Gray Sink Undercoating	Room 209	Asbestos Not Detected	Not Quantified
EC031919-47 thru 49	Tan Glue behind Acoustical Panels	Meeting Room 007	Asbestos Not Detected	Not Quantified
EC031919-50 thru 52	2’x4’ Suspended Ceiling Tile – Pinholes	Work Room 001, Meeting Room 007, Staff Lounge 006	Asbestos Not Detected	Not Quantified

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SAMPLE ID	MATERIAL DESCRIPTION	MATERIAL LOCATION	LABORATORY RESULT	ESTIMATED QUANTITY/ COMMENTS
EC031919-53 thru 55	Red Fire Stop	Conduit Penetrations Throughout	Asbestos Not Detected	Not Quantified
EC031919-56 thru 58	4" Black Baseboards	Various Locations	Asbestos Not Detected	Not Quantified
EC031919-59 thru 61	Tan Blue behind Baseboards	Various Locations	Asbestos Not Detected	Not Quantified
EC072519-01 thru 03	Asphalt Roof Field	Main Roof	Asbestos Not Detected	Not Quantified
EC072519-04 thru 06	Roof Flashing	Main Roof	Asbestos Not Detected	Not Quantified
EC072519-07 thru 09	Black/Gray Roof Sealant	Main Roof	Asbestos Not Detected	Not Quantified
EC072519-10 thru 12	Membrane Roof Insulation	Penthouse Roof, Walkout Roofs	Asbestos Not Detected	Not Quantified
EC072519-13 thru 15	Cement Plaster	Penthouse/Mezzanine Glass	Asbestos Not Detected	Not Quantified
EC072519-16 thru 19	White/Gray Parapet Sealant	Roof Parapet	Asbestos Not Detected	Not Quantified
EC072519-20 thru 21	Ceramic Tile Mortar/Glue	Restrooms	Asbestos Not Detected	Not Quantified
Not Sampled	Fiberglass Thermal Systems Insulation	Throughout Building	Material Not Suspect to Contain Asbestos	*All TSI observed during inspection was fiberglass. Asbestos pipe insulation may exist in inaccessible areas or within pipe chases.*
EC100319-01 thru 03	Door Caulk – Black	018	Asbestos Not Detected	Not Quantified
EC100319-04 thru 06	Interior Window Caulk – White	021, 022	Asbestos Not Detected	Not Quantified
EC100319-07 thru 09	Interior Window Caulk – White type 2	211	Asbestos Not Detected	Not Quantified
EC100319-10 thru 12	Residual Black Floor Tile Mastic	006, 007	Asbestos Not Detected	Not Quantified
EC100319-13 thru 15	Floor Vapor Barrier	209	Asbestos Not Detected	*Located beneath wood subfloor.*
EC100319-16 thru 18	Flooring Material – Red	209	Asbestos Not Detected	*Located beneath wood subfloor.*

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SAMPLE ID	MATERIAL DESCRIPTION	MATERIAL LOCATION	LABORATORY RESULT	ESTIMATED QUANTITY/ COMMENTS
EC100319-19 thru 21	**Wire Jacketing Insulation**	**Pendant Lights in Lobby**	**10-15% Chrysotile Asbestos**	***Wire jacketing may be located in other inacceess-ible areas.***

IDPH and EPA define an asbestos-containing material as any material containing greater than 1 percent asbestos.
Bold indicates greater than 1% ACM.
Locations are provided for reference only. Materials may exist in other areas not noted.

3.2 Lead-Based Paint Survey

3.2.1 Lead-Based Paint Survey Methodology

The lead-based paint survey consisted of visually inspecting the painted survey areas to determine representative paint histories and to collect random samples utilizing an X-ray fluorescence (XRF) spectrum analyzer. The lead-based paint testing was limited to major building components and locations with damaged or peeling paint only. Sampling of suspect lead-based paint (LBP) components and/or surfaces was conducted following the U.S. Department of Housing and Urban Development (HUD) guidelines of June 1995 for single family housing, Chapter 7, Lead Based Paint Inspection, 1997 Revision, and the EPA and HUD's Performance Characteristics Sheet for the RMD LPA-1 XRF lead paint analysis system. There may be materials that were not identified, because they were located in inaccessible areas and not available at the time of inspection.

Paint sampling was conducted utilizing an X-Ray Fluorescence spectrum analyzer (XRF), manufactured by Radiation Monitoring Devices, Inc. (RMD) located in Watertown, Massachusetts. The RMD model LPA-1 uses a Cobalt 57 (^{57}Co) radioactive source and an advanced, solid-state radiation detector to generate an X-Ray fluorescence spectrum of a painted surface. The spectrum is then analyzed by a microprocessor to eliminate the effects of substrate and other factors such as scattering to allow an accurate determination of the amount of lead on a surface.

Portable XRF lead-based paint analyzers are the most common method for inspections in buildings, because of their accuracy, high speed, and ability to measure the paint without destructive sampling.

See Appendix D for a complete testing log of all XRF measurements collected for this survey.

Table II presents the lead-based paint components and/or surfaces identified during this sampling.

Table II – Summary of Positive Lead-Based Paint

Legler Regional Library Renovations
115 S. Pulaski Road, Chicago, Illinois

COMPONENT	LOCATION	SUBSTRATE	COLOR	CONDITION	RESULT (mg/cm^2)
North, South, East, West Walls	Lobby 201	Concrete	White	Intact	3 - 10
Cast Iron Bookcases	Stack 113	Metal	White	Intact	5.8
North, South, East, West Walls	Room 007	Plaster	White	Intact	4 - 14
Fire Escape	East Elevation	Metal	Black	Deteriorated	4.5 – 7.1
Roof Ladder	East Elevation	Metal	Black	Deteriorated	4.2

Painted surfaces which indicate a concentration of $\geq$1.0 milligram per centimeter squared (mg/cm^2) of surface area are considered to be lead-based paint as defined by HUD.

CARNOW CONIBEAR

3.3 Hazardous Material Survey

The survey consisted of a visual inspection to determine the location and quantity of hazardous and potentially hazardous materials that may require special disposal considerations. Areas proposed for renovation were surveyed for polychlorinated-biphenyl (PCB) containing equipment and materials (lighting ballasts, switchgears, transformers, and hydraulic fluids), and mercury-containing equipment and materials (mercury lamps, thermostats, switches, thermometers, regulators, and gauges), as well as other potentially hazardous chemicals. Hazardous materials identified during the survey are summarized on Table III.

Table III – Summary of Hazardous Material Survey

Legler Regional Library
115 S. Pulaski Rd.
Chicago, Illinois

CATEGORY	ITEM	QUANTITY	UNITS	LOCATION(S)
Chemicals	Delayed Action Door Close (small oil tank)	3	each	Children Music Room #210, SW Meeting Room, Storage/Workroom #022,
	Hydraulic Elevator Reservoir	1	each	Elevator Equipment Room #010
	Polyol Ester Oil Canister	1	each	Condenser Room
	Grease Trap	1	each	Auditorium #227
	Boiler Cleaning Chemicals (55 gallon drums)	10	each	Mechanical Equipment Rooms #016/017/018
PCBs	Fluorescent Ballasts	1504	each	Throughout Building
	HID Ballasts	29	each	Exterior of Building and Below-Grade Exterior Window Wells.
	Switchgears	1	bank	Mechanical Equipment Rooms #016/017/018
Mercury	Fluorescent Bulbs	771	each	Throughout Building
	HID Bulbs	29	each	Exterior of Building and Below-Grade Exterior Window Wells.
	Thermostats	38	each	Office, Auditorium, Lobby #201, Youth Media Front Room, Music Studio, Book Stack Area #113, Clerical Staff, Branch Librarian Office, Vestibule #101, Adult Reference Room #107, Small Conference Room #108, Children's Room #119, SW Meeting Room, Employee Lounge, Basement Hallway #019/#002, Storage/Workroom #022,

Table III – Summary of Hazardous Material Survey

Legler Regional Library
115 S. Pulaski Rd.
Chicago, Illinois

CATEGORY	ITEM	QUANTITY	UNITS	LOCATION(S)
				Mechanical Equipment Rooms #016/017/018, S. Storage #021, N. Storage #021, Condenser Room #020,
	Gauges	17	each	Pump Room, Mechanical Equipment Rooms #016/017/018, Condenser Room #020
	Switches	3	each	Closet #112, Basement Hallway #019/#002, and Engineer's Locker Room #015
	Thermometer	1	each	Condenser Room #020
Refrigerants	Built-in Mini Refrigerator	1	each	Auditorium #227
	Built-in Ice Maker	1	each	Auditorium #227
	Drinking Fountain with Refrigerant	1	each	Employee Lounge
	Refrigerant Canister	1	each	Condenser Room
	Tetrafluoroethane Tanks (5 gallon)	2	each	Mechanical Equipment Rooms #016/#017/#018
Other/Universal Waste	Batteries – Emergency/Exit Lights and Smoke/Carbon Monoxide Detectors	70	each	Corridor #225, Auditorium #227, Lobby #201, Youth Media Front Room, Children's Music Room #210, SE Stairwell #222, Corridor #120/121, Book Stack Area #113, Mezzanine Book Stack Area, Adult Reference Room #107, Children's Room #119, Vestibule #008, SW Meeting Room, Employee Lounge and Basement Hallway #019/002.

All high intensity discharge (HID) light and fluorescent light ballasts are assumed to potentially contain PCBs. All non-digital thermostats and gauges are assumed to contain mercury and should be handled with caution. Cleaning chemicals mainly consisted of multipurpose surface cleaners.

In addition to the materials listed in Table III, easily transportable devices potentially containing hazardous materials such as fire extinguishers, refrigerators, freezers, mini refrigerators, microwaves, TVs and containers of standard cleaning chemicals were observed in many of the

proposed renovation areas. These mobile components appeared to be in use at the time of the survey and/or are expected to be preserved and relocated prior to work. Therefore, these items have been recorded, but were omitted from the hazardous materials survey.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Carnow, Conibear & Assoc., Ltd. (Carnow Conibear) was retained by the Public Building Commission of Chicago to perform an asbestos-containing material, lead-based paint and hazardous material survey at Legler Regional Library in Chicago, Illinois. The survey incorporated accessible interior and exterior areas of the building scheduled for renovation.

Based on the survey results, Carnow Conibear recommends the following:

- Incorporate the data from this report into future renovation documents regarding the presence of asbestos-containing materials, lead-based paint and hazardous materials.

- All future lead-based paint or hazardous material removal and/or demolition/renovation work shall be conducted by a licensed contractor in accordance with IDPH, NESHAPS, IEPA, and OSHA regulations and requirements.

- Dispose of all lead-based paint and hazardous materials in accordance with all applicable local, state, and federal regulations.

- A majority of space located above hard ceilings and behind masonry walls are not accessible without demolition. Asbestos-containing material may be present within these inaccessible locations. If unidentified materials are found in these areas, these materials shall be assumed to be asbestos-containing.

Carnow Conibear has applied prevailing industry standards and reasonable judgment and effort within the scope of work outlined in Carnow Conibear's proposal, while conducting the asbestos-containing material, lead-based paint and hazardous material survey. The standards, judgment, and effort used by Carnow Conibear personnel to investigate, assess, and determine the presence of potential environmental hazards and liabilities associated with the subject building are consistent with requirements outlined in federal and state guidelines. Carnow Conibear makes no warranty, express or implied, that the findings and interpretations in this report are a complete representation hazards and liabilities, associated with the building. Findings presented in this report are only indicative of conditions present during the time of the investigation and cannot be used to predict potential future or previous health effects on building occupants. The services performed by Carnow Conibear on this project have been conducted in a professional manner consistent with industry standards at the time of testing. There may be materials that were not identified, because they were located in inaccessible areas and not available at the time of inspection. Carnow Conibear made every reasonable effort to locate mechanical systems and other inconspicuous materials.

The information contained in this report was prepared based upon specific test parameters requested by the Public Building Commission of Chicago and regulations in force at the time of the report. The information herein is only for the specific use of the Public Building Commission of Chicago, Chicago Public Schools, and Carnow Conibear. Carnow Conibear accepts no responsibility for the use, reuse, interpretation, or reliance by other parties on the information contained herein, unless written authorization has been obtained from Carnow Conibear. Carnow Conibear bears no responsibility for the implementation of recommendations included in this report unless specifically requested to do so by the Public Building Commission of Chicago.

APPENDIX A

Inspector Licenses and Certificates

CARNOW CONIBEAR

IDPH

ASBESTOS PROFESSIONAL LICENSE

ID NUMBER	ISSUED	EXPIRES
100 - 19466	4/12/2019	05/15/2020

EVAN I CHRISTIAN
3024 N RACINE AVE, APT 2
CHICAGO, IL 60657

Environmental Health

ENDORSEMENTS	TC EXPIRES
INSPECTOR	11/28/2019
MANAGEMENT PLANNER	1/5/2019
PROJECT MANAGER	2/5/2020
AIR SAMPLING PROFESSIONAL	

Alteration of this license shall result in legal action
This license issued under authority of the State of Illinois
Department of Public Health
This license is valid only when accompanied by a valid
training course certificate.

2018

OCCUPATIONAL TRAINING & SUPPLY, INC.

7233 S. Adams Street ♦ Willowbrook, IL 60527 ♦ (630) 655-3900 ♦ www.otssafety.com

Asbestos Building Inspector Refresher

Occupational Training & Supply, Inc. certifies that

Evan Christian

has successfully completed the Asbestos Building Inspector Refresher course and has passed the competency exam with a minimum score of 70%. The course is accredited by the Illinois Department of Public Health and Indiana Department of Environmental Management for purposes of accreditation in accordance with EPA 40 CFR 763, Asbestos Hazard Emergency response Act (AHERA) and TSCA Title II.

Course Date: 11/28/2018

Exam Date: 11/28/2018

Expiration Date: 11/28/2019

Certificate Number: BIR1811283257

Kathy DeSalvo

Kathy DeSalvo, Director

IDPH

LEAD RISK ASSESSOR LICENSE

LEAD ID	ISSUED	EXPIRES
1002004	1/9/2019	1/31/2020

Evan I Christian
3024 N Racine Ave, Apt 2
Chicago, IL 60657

ILLINOIS LEAD PROGRAM
Environmental Health

Alteration of this license shall result in legal action

RISK ASSESSOR CERTIFICATE EXPIRES

3/2/2020

This license issued under authority of the State of Illinois -Department of Public Health

This license is valid only when accompanied by a valid training course certificate

If found return to 525 W. Jefferson St Springfield, IL 62761

2017

OCCUPATIONAL TRAINING & SUPPLY, INC.

7233 S. Adams Street ♦ Willowbrook, IL 60527 ♦ (630) 655-3900 ♦ www.otssafety.com

Lead Risk Assessor Initial

Occupational Training & Supply, Inc. certifies that

Evan Christian

has successfully completed the Lead Risk Assessor Initial course and has passed the competency exam with a minimum score of 70%. This course is accredited by the Illinois Department of Public Health in accordance with the Illinois Lead Poisoning Prevention Code.

Course Date: 3/1/2017 - 3/2/2017

Exam Date: 3/2/2017

Expiration Date: 3/2/2020

Certificate Number: LRA1703020789

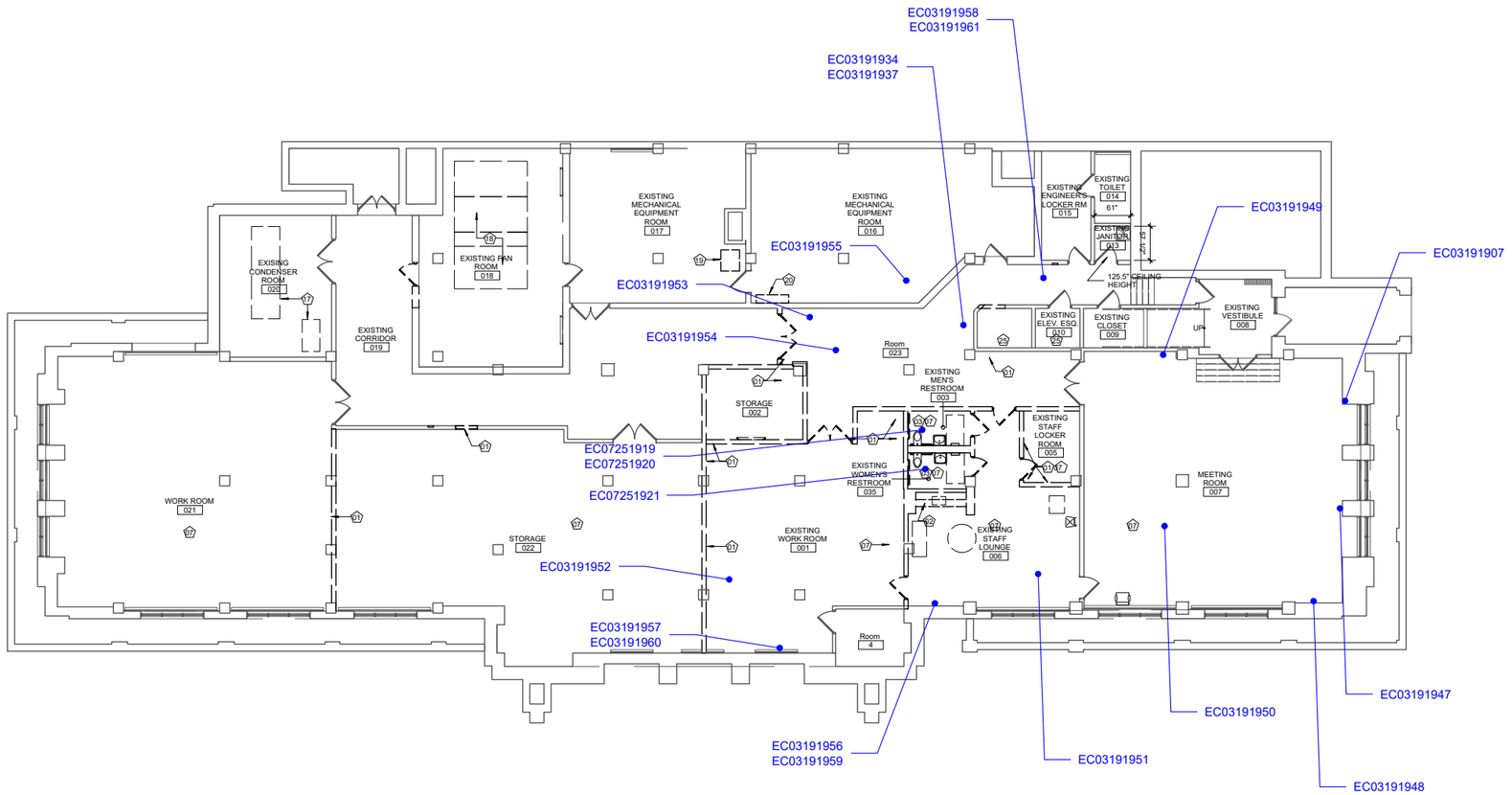
Kathy DeSalvo, Director

APPENDIX B

Sample and Asbestos-Containing Material Locations

CARNOW CONIBEAR

KEYNOTES	
●	Sample Location -- Sample ID



1 ASBESTOS INSPECTION
BASEMENT FLOOR PLAN

NTS

W:\...comwpd\PBCC\Legler Branch Library\Design\Legler Branch Library Sample Location Drawing.dwg

DRAWING HISTORY				
NO.	DATE	DRAWN BY:	CHECKED BY:	REMARKS
1	08/01/2019	J. Kalingasan	E. Christian	
2				
0				

CLIENT:
Public Building Commission of Chicago
Richard J. Daley Center, Room 200
50 West Washington Street
Chicago, Illinois 60602

PROJECT NAME:
Asbestos Inspection
Legler Regional Library
115 South Pulaski Road
Chicago, IL 60624

SHEET TITLE:
ASBESTOS INSPECTION
BASEMENT

Carnow, Conibear & Assoc., Ltd.
Environmental Consulting Services
600 W. Van Buren St., Suite 500, Chicago, IL 60607
t: 312.782.4486 f: 312.782.5145
www.ccaltd.com

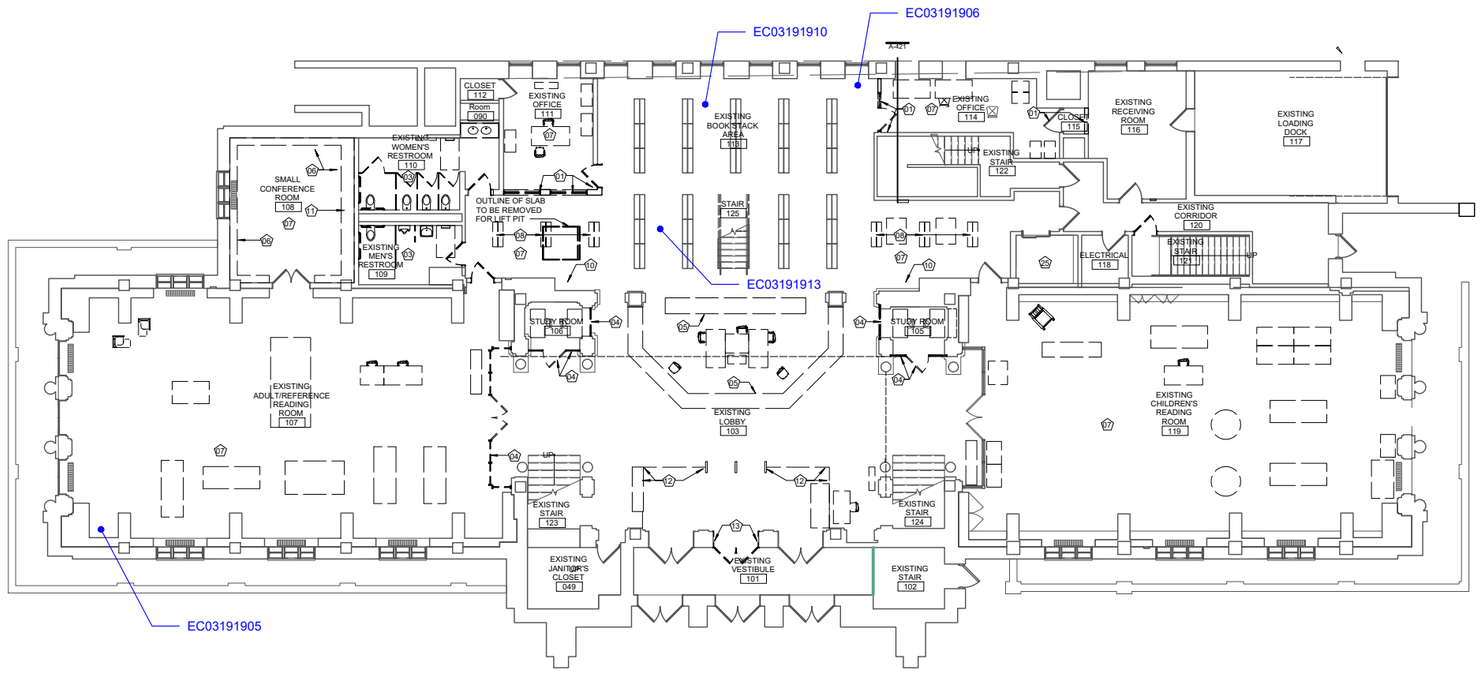
CARNOW CONIBEAR

CCA PROJECT NO.
E12834W006

DATE:
August 1, 2019

SHEET NO.
ASB-1

KEYNOTES	
●	Sample Location -- Sample ID



2 ASBESTOS INSPECTION
1ST FLOOR PLAN

NTS

W:_common\PBCC\Legler Branch Library\Design\Legler Branch Library Samples Location drawing.dwg

DRAWING HISTORY				
NO.	DATE	DRAWN BY:	CHECKED BY:	REMARKS
1	08/01/2019	J. Kalingasan	E. Christian	
2				
0				

CLIENT:
Public Building Commission of Chicago
Richard J. Daley Center, Room 200
50 West Washington Street
Chicago, Illinois 60602

PROJECT NAME:
Asbestos Inspection
Legler Regional Library
115 South Pulaski Road
Chicago, IL 60624

SHEET TITLE:
ASBESTOS INSPECTION
1ST FLOOR

Carnow, Conibear & Assoc., Ltd.
Environmental Consulting Services
600 W. Van Buren St., Suite 500, Chicago, IL 60607
t: 312.782.4486 f: 312.782.5145
www.ccaltd.com

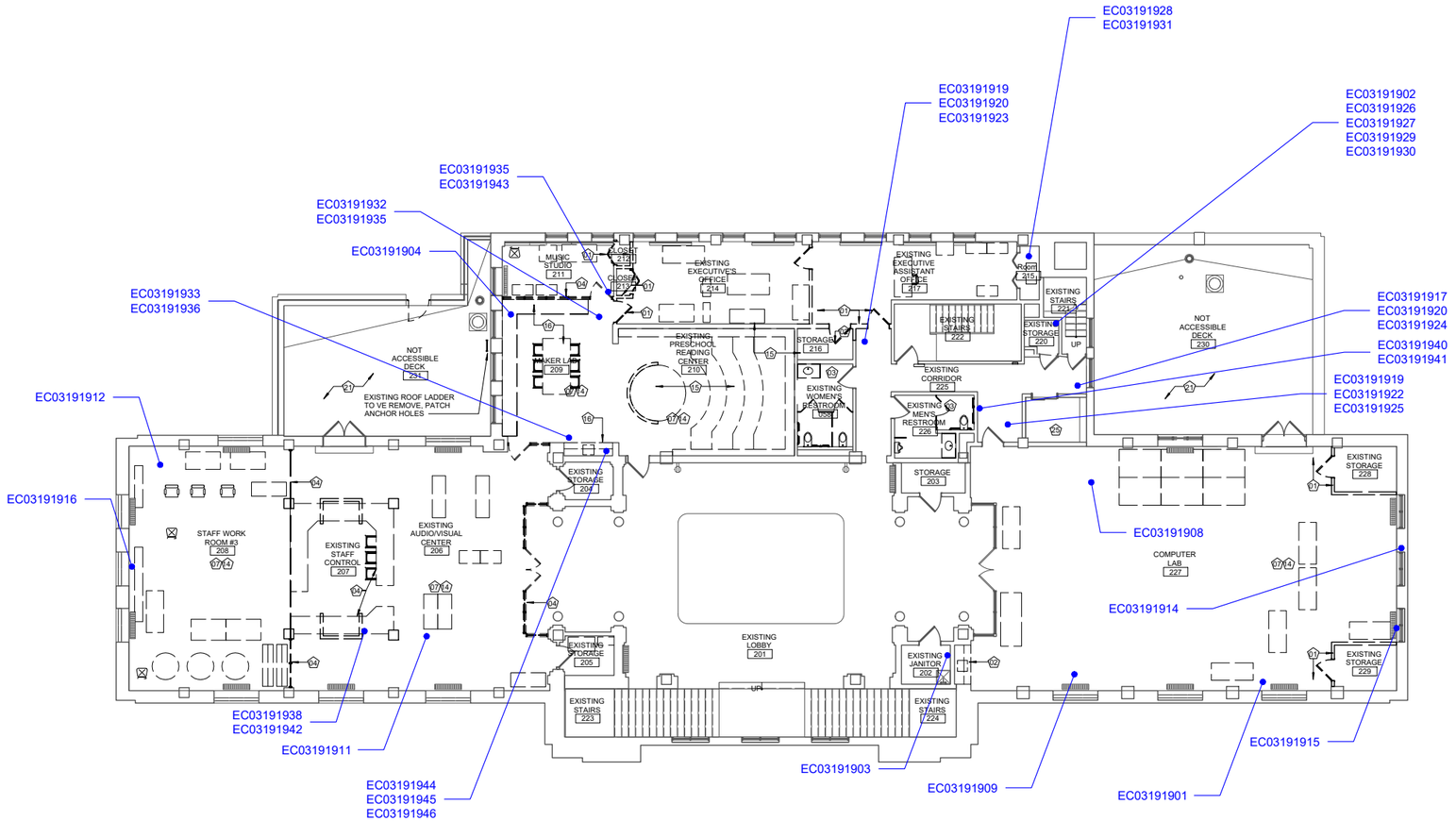
CARNOW CONIBEAR

CCA PROJECT NO.
E12834W006

DATE:
August 1, 2019

SHEET NO.
ASB-2

KEYNOTES	
●	Sample Location -- Sample ID



3 ASBESTOS INSPECTION
2ND FLOOR PLAN

NTS

N

W:_comwpd\PBCC\Legler Branch Library\Design\Legler Branch Library Sample Location drawing.dwg

DRAWING HISTORY				
NO.	DATE	DRAWN BY:	CHECKED BY:	REMARKS
1	08/01/2019	J. Kalingasan	E. Christian	
2				
0				

CLIENT:
Public Building Commission of Chicago
Richard J. Daley Center, Room 200
50 West Washington Street
Chicago, Illinois 60602

PROJECT NAME:
Asbestos Inspection
Legler Regional Library
115 South Pulaski Road
Chicago, IL 60624

SHEET TITLE:
ASBESTOS INSPECTION
2ND FLOOR

Carnow, Conibear & Assoc., Ltd.
Environmental Consulting Services
600 W. Van Buren St., Suite 500, Chicago, IL 60607
t: 312.782.4486 f: 312.782.5145
www.ccaltd.com

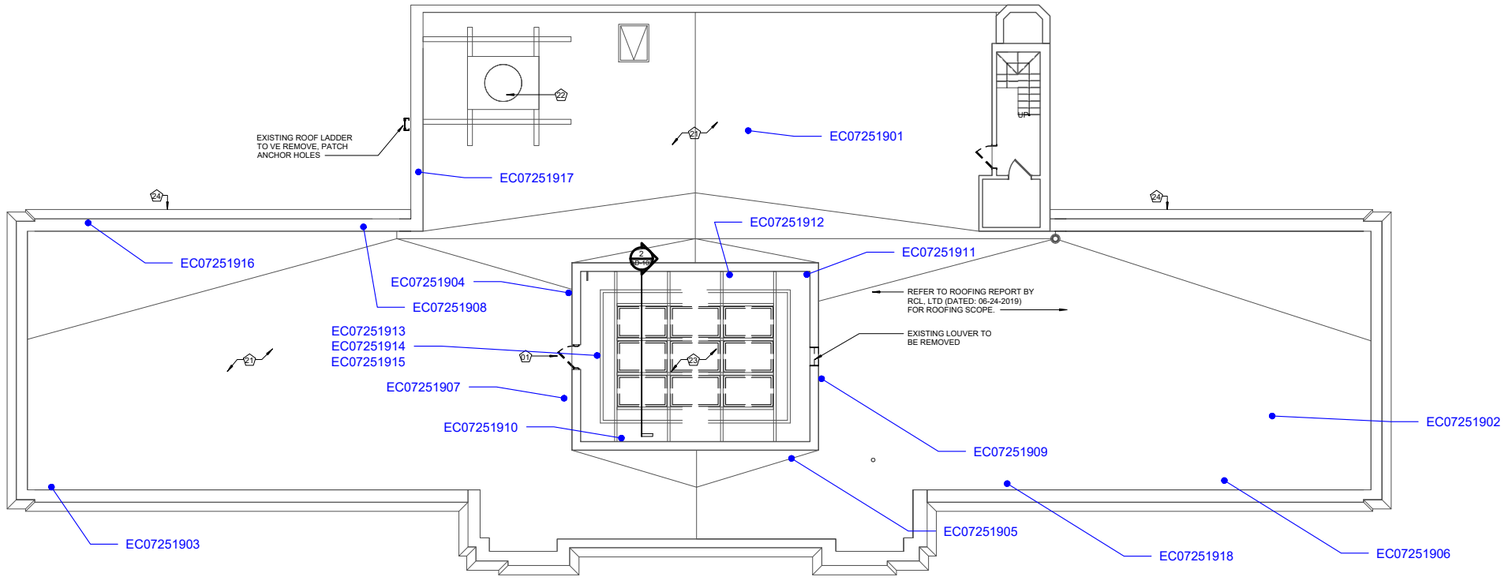
CARNOW CONIBEAR

CCA PROJECT NO.
E12834W006

DATE:
August 1, 2019

SHEET NO.
ASB-3

KEYNOTES	
●	Sample Location -- Sample ID



4 ASBESTOS INSPECTION ROOF PLAN

NTS

W:\...comwpd\PBCC\Legler Branch Library\Design\Legler Branch Library-Sample Location Drawing.dwg

DRAWING HISTORY				
NO.	DATE	DRAWN BY:	CHECKED BY:	REMARKS
1	08/01/2019	J. Kalingasan	E. Christian	
2				
0				

CLIENT:

Public Building Commission of Chicago
Richard J. Daley Center, Room 200
50 West Washington Street
Chicago, Illinois 60602

PROJECT NAME:

Asbestos Inspection
Legler Regional Library
115 South Pulaski Road
Chicago, IL 60624

SHEET TITLE:

ASEBSTOS ABATEMENT

ROOF

Carnow, Conibear & Assoc., Ltd.
Environmental Consulting Services
600 W. Van Buren St., Suite 500, Chicago, IL 60607
t: 312.782.4486 f: 312.782.5145
www.ccaltd.com

CARNOW CONIBEAR

CCA PROJECT NO.
E12834W006

DATE:
August 1, 2019

SHEET NO.
ASB-4

APPENDIX C

Asbestos Laboratory Results and Chain of Custody Documentation

CARNOW CONIBEAR

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

NVLAP Lab Code 101202-0

ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY

Method: EPA/600/R-93/116

Carnow, Conibear, & Associates
600 W. Van Buren Street, Suite 500
Chicago, IL 60607
Phone: (312) 782-4486
Fax: (312) 782-5145

Reference: E12834X006
Location: Legler Library 115 S Pulaski
Batch No.: 343283
Customer No.: 141

Date Received: 07/25/2019
Date Analyzed: 07/26/2019
Date Reported: 07/26/2019
Turn Around Time: 1 Day

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
343283001	EC072519-01	ND	Binder 80-85% Glass 15-20%
343283002	EC072519-02	ND	Binder 80-85% Glass 15-20%
343283003	EC072519-03	ND	Binder 80-85% Glass 15-20%
343283004	EC072519-04	ND	Binder 99-100%
343283005	EC072519-05	ND	Binder 99-100%
343283006	EC072519-06	ND	Binder 99-100%
343283007	EC072519-07	ND	Binder 99-100%
343283008	EC072519-08	ND	Binder 99-100%
343283009	EC072519-09	ND	Binder 99-100%
343283010	EC072519-10	ND	Cellulose 20-25% Binder 75-80%
343283011	EC072519-11	ND	Cellulose 20-25% Binder 75-80%
343283012	EC072519-12	ND	Cellulose 20-25% Binder 75-80%
343283013	EC072519-13	ND	Binder 90-95% Other 5-10%

ND = Asbestos Not Detected (Not Present) NA = Not Analyzed NS = Not Submitted

Components of inhomogeneous samples are analyzed per our Standard Operating Procedure, or per customer request.

The use of the NVLAP logo does not imply endorsement by NVLAP or any agency of the US Government.

Analyzed by Name: Henry Robateau / Microscopist

Date: 07/26/2019

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

NVLAP Lab Code 101202-0

ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY

Method: EPA/600/R-93/116

Carnow, Conibear, & Associates
600 W. Van Buren Street, Suite 500
Chicago, IL 60607
Phone: (312) 782-4486
Fax: (312) 782-5145

Reference: E12834X006
Location: Legler Library 115 S Pulaski
Batch No.: 343283
Customer No.: 141

Date Received: 07/25/2019
Date Analyzed: 07/26/2019
Date Reported: 07/26/2019
Turn Around Time: 1 Day

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
343283014	EC072519-14	ND	Binder 90-95% Other 5-10%
343283015	EC072519-15	ND	Binder 90-95% Other 5-10%
343283016	EC072519-16	ND	Binder 99-100%
343283017	EC072519-17	ND	Binder 99-100%
343283018	EC072519-18	ND	Binder 99-100%
343283019	EC072519-19	ND	Binder 90-95% Other 5-10%
343283020	EC072519-20	ND	Binder 90-95% Other 5-10%
343283021	EC072519-21	ND	Binder 90-95% Other 5-10%

ND = Asbestos Not Detected (Not Present) NA = Not Analyzed NS = Not Submitted

Components of inhomogeneous samples are analyzed per our Standard Operating Procedure, or per customer request.

The use of the NVLAP logo does not imply endorsement by NVLAP or any agency of the US Government.

Analyzed by Name: Henry Robateau / Microscopist

Date: 07/26/2019

STAT Analysis Corporation
2242 W. Harrison, Suite 200, Chicago, Illinois 60612 Phone: (312) 733-0551 Fax: (312) 733-2386
e-mail address: STATinfo@STATAnalysis.com

CHAIN OF CUSTODY RECORD

Client:	Carnow Conibear
Street Address:	600 W. Van Buren Suite 500
City, State, Zip:	Chicago, IL 60607
Phone:	312-762-2900
Fax:	312-782-5145
e-mail/Alt. Fax:	
Project Number:	E12834X106
Project Name:	Legler Library
Project Location:	115 S. Pulaski
Project Manager:	Evan Christian
P.O. Number:	

Turn Around: Immediate: ☐ 4 Hrs: ☐ 8 Hrs: ☒ 24 Hrs: ☒ 1 Day: ☒ 2 Days: ☐ 3 Days: ☐ 5 Days: ☐

Date Due: Time Due: Note: Not all turn around times are available for all analysis.

OFFICE USE ONLY BELOW:

Batch No.: 343283

Samples Acceptable: Yes: ☒ No: ☐

Checked by (Initial/Date):

QC by (Initial/Date): 7/26/19

Reported By (Initial/Date/Time/Method):

Comments:

Relinquished by:		Date/Time: 7/25/19 3:10
Received by:		Date/Time: 7/25/19 15:10
Relinquished by:		Date/Time:
Received by:		Date/Time:
Relinquished by:		Date/Time:
Received by:		Date/Time:

Client Sample Number/Description:	Date Taken	Time On	Time Off	Rate (lpm)	Volume (Liters)	Area Wiped (ft^2)	Laboratory Sample No.	PCM Asbestos	PLM Asbestos (Bulk)	PLM Point Count	PLM Gravimetric	TEM Air Asbestos	TEM Bulk Asbestos	TEM Gravimetric Asb.	TEM Microvac Asb.	TEM Water		Other:						
EC072519-																								
01 Asphalt Roof	7/25/19								↓															
02 Field	↓																							
03																								
04 Roof Flashing																								
05																								
06																								
07 Black/Gray Roof																								
08 Sealant																								
09																								
10 Membrane Roof																								
11 Insulation																								
12																								

Comments: Email results to echristian@ccaltd.com

STAT Analysis Corporation
2242 W. Harrison, Suite 200, Chicago, Illinois 60612 Phone: (312) 733-0551 Fax: (312) 733-2386
e-mail address: STATinfo@STATAnalysis.com

CHAIN OF CUSTODY RECORD **Page : 2 of 2**

Client:	Carnow Conibear
Street Address:	600 W. Van Buren Suite 500
City, State, Zip:	Chicago, IL 60607
Phone:	312-762-2900
Fax:	312-782-5145
e-mail/Alt. Fax:	
Project Number:	E12834X006
Project Name:	Legler Library
Project Location:	115 S. Pulaski
Project Manager:	Evan Christian
P.O. Number:	

Turn Around: Immediate: ☐ 4 Hrs: ☐ 8 Hrs: ☐ 24 Hrs: ☒ 1 Day: ☒ 2 Days: ☐ 3 Days: ☐ 5 Days: ☐
Date Due: Time Due: Note: Not all turn around times are available for all analysis.

OFFICE USE ONLY BELOW:
Batch No.: 343283
Samples Acceptable: Yes: ☒ No: ☐
Checked by (Initial/Date): 7/26/19
QC by (Initial/Date):
Reported By (Initial/Date/Time/Method):
Comments:

Relinquished by:	Evan Christian	Date/Time: 7/25/19 3:10
Received by:	EL	Date/Time: 7/25/19 5:10
Relinquished by:		Date/Time:
Received by:		Date/Time:
Relinquished by:		Date/Time:
Received by:		Date/Time:

Client Sample Number/Description: EC072519-	Date Taken	Time On	Time Off	Rate (lpm)	Volume (Liters)	Area Wiped (ft^2)	Laboratory Sample No.	PCM Asbestos	PLM Asbestos (Bulk)	PLM Point Count	PLM Gravimetric	TEM Air Asbestos	TEM Bulk Asbestos	TEM Gravimetric Asb.	TEM Microvac Asb.	TEM Water		Other:							
13 Mezzanine Skylight	7/25/19								↓																
14 Cement Plaster	↓																								
15 ↓																									
16 White/Grey Parapet																									
17 Sealant																									
18 ↓																									
19 Ceramic Tile Men's 003																									
20 ↓																									
21 ↓ Women's 035																									

Comments: Email results to echristian@ccaltd.com

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

NVLAP Lab Code 101202-0

ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY

Method: EPA/600/R-93/116

Carnow, Conibear, & Associates
600 W. Van Buren Street, Suite 500
Chicago, IL 60607
Phone: (312) 782-4486
Fax: (312) 782-5145

Reference: E12834X006
Location: Legler Library 115 S Pulaski
Batch No.: 340816
Customer No.: 141

Date Received: 03/19/2019
Date Analyzed: 03/21/2019
Date Reported: 03/21/2019
Turn Around Time: 2 Days

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
340816001	EC031919-01	ND	Cellulose 1-5% Binder 95-99%
340816002	EC031919-02	ND	Cellulose 1-5% Binder 95-99%
340816003	EC031919-03	ND	Cellulose 1-5% Binder 95-99%
340816004	EC031919-04	ND	Cellulose 1-5% Binder 95-99%
340816005	EC031919-05	ND	Cellulose 1-5% Binder 95-99%
340816006	EC031919-06	ND	Cellulose 1-5% Binder 95-99%
340816007	EC031919-07	ND	Cellulose 1-5% Binder 95-99%
340816008	EC031919-08	ND	Cellulose 1-5% Binder 95-99%
340816009	EC031919-09	ND	Cellulose 1-5% Binder 95-99%
340816010	EC031919-10	ND	Cellulose 1-5% Binder 95-99%

ND = Asbestos Not Detected (Not Present) NA = Not Analyzed NS = Not Submitted

Components of inhomogeneous samples are analyzed per our Standard Operating Procedure, or per customer request.

The use of the NVLAP logo does not imply endorsement by NVLAP or any agency of the US Government.

Analyzed by Name : Daniel Mikos / Microscopist

Date: 03/21/2019

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

NVLAP Lab Code 101202-0

ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY

Method: EPA/600/R-93/116

Carnow, Conibear, & Associates
600 W. Van Buren Street, Suite 500
Chicago, IL 60607
Phone: (312) 782-4486
Fax: (312) 782-5145

Reference: E12834X006
Location: Legler Library 115 S Pulaski
Batch No.: 340816
Customer No.: 141

Date Received: 03/19/2019
Date Analyzed: 03/21/2019
Date Reported: 03/21/2019
Turn Around Time: 2 Days

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
340816011	EC031919-11	ND	Cellulose 1-5% Binder 95-99%
340816012	EC031919-12	ND	Cellulose 1-5% Binder 95-99%
340816013	EC031919-13	ND	Cellulose 1-5% Binder 95-99%
340816014	EC031919-14	ND	Cellulose 1-5% Binder 95-99%
340816015	EC031919-15	ND	Cellulose 1-5% Binder 95-99%
340816016	EC031919-16	ND	Cellulose 1-5% Binder 95-99%
340816017	EC031919-17	ND	Cellulose 1-5% Binder 95-99%
340816018	EC031919-18	ND	Cellulose 1-5% Binder 95-99%
340816019	EC031919-19	ND	Cellulose 1-5% Binder 95-99%
340816020	EC031919-20	ND	Cellulose 1-5% Binder 95-99%

ND = Asbestos Not Detected (Not Present) NA = Not Analyzed NS = Not Submitted

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Analyzed by Name : Daniel Mikos / Microscopist

Date: 03/21/2019

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ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY

Method: EPA/600/R-93/116

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600 W. Van Buren Street, Suite 500
Chicago, IL 60607
Phone: (312) 782-4486
Fax: (312) 782-5145

Reference: E12834X006
Location: Legler Library 115 S Pulaski
Batch No.: 340816
Customer No.: 141

Date Received: 03/19/2019
Date Analyzed: 03/21/2019
Date Reported: 03/21/2019
Turn Around Time: 2 Days

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
340816021	EC031919-21	ND	Cellulose 1-5% Binder 95-99%
340816022	EC031919-22	ND	Cellulose 1-5% Binder 95-99%
340816023	EC031919-23	ND	Cellulose 35-40% Binder 60-65%
340816024	EC031919-24	ND	Cellulose 35-40% Binder 60-65%
340816025	EC031919-25	ND	Cellulose 35-40% Binder 60-65%
340816026	EC031919-26	ND	Cellulose 1-5% Binder 95-99%
340816027	EC031919-27	ND	Cellulose 1-5% Binder 95-99%
340816028	EC031919-28	ND	Cellulose 1-5% Binder 95-99%
340816029	EC031919-29	ND	Cellulose 1-5% Binder 95-99%
340816030	EC031919-30	ND	Cellulose 1-5% Binder 95-99%

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Date: 03/21/2019

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ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY

Method: EPA/600/R-93/116

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600 W. Van Buren Street, Suite 500
Chicago, IL 60607
Phone: (312) 782-4486
Fax: (312) 782-5145

Reference: E12834X006
Location: Legler Library 115 S Pulaski
Batch No.: 340816
Customer No.: 141

Date Received: 03/19/2019
Date Analyzed: 03/21/2019
Date Reported: 03/21/2019
Turn Around Time: 2 Days

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
340816031	EC031919-31	ND	Cellulose 1-5% Binder 95-99%
340816032	EC031919-32	ND	Cellulose 1-5% Binder 95-99%
340816033	EC031919-33	ND	Cellulose 1-5% Binder 95-99%
340816034	EC031919-34	ND	Cellulose 1-5% Binder 95-99%
340816035	EC031919-35	ND	Cellulose 1-5% Binder 95-99%
340816036	EC031919-36	ND	Cellulose 1-5% Binder 95-99%
340816037	EC031919-37	ND	Cellulose 1-5% Binder 95-99%
340816038	EC031919-38	ND	Cellulose 10-15% Binder 85-90%
340816039	EC031919-39	ND	Cellulose 10-15% Binder 85-90%
340816040	EC031919-40	ND	Cellulose 10-15% Binder 85-90%

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Analyzed by Name : Daniel Mikos / Microscopist

Date: 03/21/2019

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ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY

Method: EPA/600/R-93/116

Carnow, Conibear, & Associates
600 W. Van Buren Street, Suite 500
Chicago, IL 60607
Phone: (312) 782-4486
Fax: (312) 782-5145

Reference: E12834X006
Location: Legler Library 115 S Pulaski
Batch No.: 340816
Customer No.: 141

Date Received: 03/19/2019
Date Analyzed: 03/21/2019
Date Reported: 03/21/2019
Turn Around Time: 2 Days

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
340816041	EC031919-41	ND	Cellulose 1-5% Binder 95-99%
340816042	EC031919-42	ND	Cellulose 1-5% Binder 95-99%
340816043	EC031919-43	ND	Cellulose 1-5% Binder 95-99%
340816044	EC031919-44	ND	Cellulose 10-15% Binder 85-90%
340816045	EC031919-45	ND	Cellulose 10-15% Binder 85-90%
340816046	EC031919-46	ND	Cellulose 10-15% Binder 85-90%
340816047	EC031919-47	ND	Cellulose 1-5% Binder 95-99%
340816048	EC031919-48	ND	Cellulose 1-5% Binder 95-99%
340816049	EC031919-49	ND	Cellulose 1-5% Binder 95-99%
340816050	EC031919-50	ND	Cellulose 35-40% Binder 60-65%

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Analyzed by Name : Daniel Mikos / Microscopist

Date: 03/21/2019

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NVLAP Lab Code 101202-0

ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY

Method: EPA/600/R-93/116

Carnow, Conibear, & Associates
600 W. Van Buren Street, Suite 500
Chicago, IL 60607
Phone: (312) 782-4486
Fax: (312) 782-5145

Reference: E12834X006
Location: Legler Library 115 S Pulaski
Batch No.: 340816
Customer No.: 141

Date Received: 03/19/2019
Date Analyzed: 03/21/2019
Date Reported: 03/21/2019
Turn Around Time: 2 Days

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
340816051	EC031919-51	ND	Cellulose 35-40% Binder 60-56%
340816052	EC031919-52	ND	Cellulose 35-40% Binder 60-65%
340816053	EC031919-53	ND	Binder 95-99% Glass 1-5%
340816054	EC031919-54	ND	Binder 95-99% Glass 1-5%
340816055	EC031919-55	ND	Binder 95-99% Glass 1-5%
340816056	EC031919-56	ND	Binder 99-100%
340816057	EC031919-57	ND	Binder 99-100%
340816058	EC031919-58	ND	Binder 99-100%
340816059	EC031919-59	ND	Cellulose 1-5% Binder 95-99%
340816060	EC031919-60	ND	Cellulose 1-5% Binder 95-99%
340816061	EC031919-61	ND	Cellulose 1-5% Binder 95-99%

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Analyzed by Name : Daniel Mikos / Microscopist

Date: 03/21/2019

STAT Analysis Corporation
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e-mail address: STATinfo@STATAnalysis.com

CHAIN OF CUSTODY RECORD **Page : 1 of 5**

Client:	Carnow Conibear
Street Address:	600 W. Van Buren St. Suite 500
City, State, Zip:	Chicago, IL 60607
Phone:	312-296-1287
Fax:	
e-mail/Alt. Fax:	
Project Number:	E12834X006
Project Name:	Legler Library
Project Location:	115 S. Pulaski
Project Manager:	Evan Christian
P.O. Number:	

Turn Around: Immediate: ☐ 4 Hrs: ☐ 8 Hrs: ☐ 24 Hrs: ☐ 1 Day: ☐ 2 Days: ☒ 3 Days: ☐ 5 Days: ☐
Date Due: Time Due: Note: Not all turn around times are available for all analysis.

OFFICE USE ONLY BELOW:
Batch No.: 340816
Samples Acceptable: Yes: ☑ No: ☐
Checked by (Initial/Date): 3/21/19
QC by (Initial/Date): 3/21/19
Reported By (Initial/Date/Time/Method):
Comments:

Relinquished by: Date/Time: 3/19/19 11:05
Received by: Date/Time: 3/19/19 1105
Relinquished by: Date/Time:
Received by: Date/Time:
Relinquished by: Date/Time:
Received by: Date/Time:

Client Sample Number/Description: EC03i919-	Date Taken	Time On	Time Off	Rate (lpm)	Volume (Liters)	Area Wiped (ft^2)	Laboratory Sample No.	PCM Asbestos	PLM Asbestos (Bulk)	PLM Point Count	PLM Gravimetric	TEM Air Asbestos	TEM Bulk Asbestos	TEM Gravimetric Asb.	TEM Microvac Asb.	TEM Water	Other:
-01 Hard Coat Plaster	2nd Fl. 227								X								
-02	2nd Fl. Electrical																
-03	2nd Fl. Janitor																
-04	2nd Flr 220																
-05	107																
-06	Stacks																
-07 ↓	Basement Meet Rm																
-08 Tan Carpet Glue	227																
-09 (Broadloom)	227																
-10 ↓	Stacks																
-11 Tan Carpet Glue	Media																
-12 Gray Leveling	Media																
-13 ↓ (Carpet Tile)	Stacks																

Comments: email results to echristian@ccaltd.com

STAT Analysis Corporation
2242 W. Harrison, Suite 200, Chicago, Illinois 60612 Phone: (312) 733-0551 Fax: (312) 733-2386
e-mail address: STATinfo@STATAnalysis.com

CHAIN OF CUSTODY RECORD **Page : 2 of 5**

Client:	Carnow Conibear
Street Address:	600 W. Van Buren St. Suite 500
City, State, Zip:	Chicago, IL 60607
Phone:	312-296-1287
Fax:	
e-mail/Alt. Fax:	
Project Number:	E12834X0006
Project Name:	Legler Library
Project Location:	115 S. Pulaski
Project Manager:	Erin Christian
P.O. Number:	

Turn Around: Immediate: ☐ 4 Hrs: ☐ 8 Hrs: ☐ 24 Hrs: ☐ 1 Day: ☐ 2 Days: ☒ 3 Days: ☐ 5 Days: ☐
Date Due: Time Due: Note: Not all turn around times are available for all analysis.

OFFICE USE ONLY BELOW:
Batch No.: 340816
Samples Acceptable: Yes: ☐ No: ☐
Checked by (Initial/Date):
QC by (Initial/Date):
Reported By (Initial/Date/Time/Method):
Comments:

Relinquished by:	Date/Time: 3/19/19 11:05
Received by:	Date/Time: 3/19/19 17:15
Relinquished by:	Date/Time:
Received by:	Date/Time:
Relinquished by:	Date/Time:
Received by:	Date/Time:

Client Sample Number/Description: EC03191 9-	Date Taken	Time On	Time Off	Rate (lpm)	Volume (Liters)	Area Wiped (ft^2)	Laboratory Sample No.	PCM Asbestos	PLM Asbestos (Bulk)	PLM Point Count	PLM Gravimetric	TEM Air Asbestos	TEM Bulk Asbestos	TEM Gravimetric Asb.	TEM Microvac Asb.	TEM Water		Other:							
14 White Interior 227									X																
15 Window Caulk 227									X																
16 Mastic									X																
17 12x12 Pink Mottled 225									X																
18 Floor Tile									X																
19									X																
20 Tan Glue on									X																
21 Floor Tile									X																
22									X																
23 2x4 Ceiling Tiles- 225									X																
24 Segmented w/									X																
25 Gouges + Pinholes									X																

Comments: email results to echristian@ccaltd.com

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e-mail address: STATinfo@STATAnalysis.com

CHAIN OF CUSTODY RECORD

Client:	Carnow Conibear
Street Address:	600 W. Van Buren St. Suite 500
City, State, Zip:	Chicago, IL 60607
Phone:	312-296-1287
Fax:	
e-mail/Alt. Fax:	
Project Number:	E12834X006
Project Name:	Legler Library
Project Location:	115. S. Pulaski
Project Manager:	Evan Christian
P.O. Number:	

Turn Around: Immediate: ☐ 4 Hrs: ☐ 8 Hrs: ☐ 24 Hrs: ☐ 1 Day: ☐ 2 Days: ☒ 3 Days: ☐ 5 Days: ☐
Date Due: _____ Time Due: _____ Note: Not all turn around times are available for all analysis.

OFFICE USE ONLY BELOW:
Batch No.: 340816
Samples Acceptable: Yes: ☐ No: ☐
Checked by (Initial/Date):
QC by (Initial/Date):
Reported By (Initial/Date/Time/Method):
Comments:

Relinquished by:	Date/Time: 3/19/19 11:45
Received by:	Date/Time: 3/19/19 11:45
Relinquished by:	Date/Time:
Received by:	Date/Time:
Relinquished by:	Date/Time:
Received by:	Date/Time:

Client Sample Number/Description: EC031919-	Date Taken	Time On	Time Off	Rate (lpm)	Volume (Liters)	Area Wiped (ft^2)	Laboratory Sample No.	PCM Asbestos	PLM Asbestos (Bulk)	PLM Point Count	PLM Gravimetric	TEM Air Asbestos	TEM Bulk Asbestos	TEM Gravimetric Asb.	TEM Microvac Asb.	TEM Water		Other:						
26 12x12 Gray Floor Tile 220																								
27 -Small black specks 220																								
28 Give Storage																								
29 Tan Mastic on																								
30 Floor Tile																								
31																								
32 12x12 Brown+Tan Mott																								
33 Mottled Floor Tile Mott																								
34 Basement																								
35 Tan Glue on Floor Tile																								
36																								
37																								

Comments: email results to echristian@ccaltd.com

STAT Analysis Corporation
2242 W. Harrison, Suite 200, Chicago, Illinois 60612 ***Phone: (312) 733-0551*** ***Fax: (312) 733-2386***
e-mail address: STATinfo@STATAnalysis.com

CHAIN OF CUSTODY RECORD

Client:	Carnow Conibear
Street Address:	600 W. Van Buren St. Suite 500
City, State, Zip:	Chicago, IL 60607
Phone:	312-296-1287
Fax:	
e-mail/Alt. Fax:	
Project Number:	E12839X006
Project Name:	Leyler Library
Project Location:	115. S. Pulaski
Project Manager:	Evan Christian
P.O. Number:	

Turn Around: Immediate: ☐ 4 Hrs: ☐ 8 Hrs: ☐ 24 Hrs: ☐ 1 Day: ☐ 2 Days: ☒ 3 Days: ☐ 5 Days: ☐

Date Due: Time Due: Note: Not all turn around times are available for all analysis.

OFFICE USE ONLY BELOW:

Batch No.: 340810

Samples Acceptable: Yes: ☐ No: ☐

Checked by (Initial/Date):

QC by (Initial/Date):

Reported By (Initial/Date/Time/Method):

Comments:

Relinquished by:	Date/Time: 3/19/09 11:05
Received by:	Date/Time: 3/19/09 1105
Relinquished by:	Date/Time:
Received by:	Date/Time:
Relinquished by:	Date/Time:
Received by:	Date/Time:

Client Sample Number/Description:	Date Taken	Time On	Time Off	Rate (lpm)	Volume (Liters)	Area Wiped (ft^2)	Laboratory Sample No.	PCM Asbestos	PLM Asbestos (Bulk)	PLM Point Count	PLM Gravimetric	TEM Air Asbestos	TEM Bulk Asbestos	TEM Gravimetric Asb.	TEM Microvac Asb.	TEM Water		Other:						
EC031919 -																								
38 Drywall Mud	-																							
39 " Music	-																							
40 " 225	-																							
41 Drywall Joint Corridor 225																								
42 Compound 2nd Fl. N Room																								
43 " Music																								
44 Gray Sink Undercoating	- Air																							
45 "	- "																							
46 "	- "																							
47 Tan Glue behind																								
48 Acoustical Panels																								
49 "																								

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2242 W. Harrison, Suite 200, Chicago, Illinois 60612 Phone: (312) 733-0551 Fax: (312) 733-2386
e-mail address: STATinfo@STATAnalysis.com

CHAIN OF CUSTODY RECORD **Page : 5 of 5**

Client:	Carnow Conibear
Street Address:	600 W. Van Buren St. Suite 500
City, State, Zip:	Chicago, IL 60607
Phone:	312-296-1287
Fax:	
e-mail/Alt. Fax:	
Project Number:	E12834x006
Project Name:	Legler Library
Project Location:	115 S. Pulaski
Project Manager:	Evan Christian
P.O. Number:	

Turn Around: Immediate: ☐ 4 Hrs: ☐ 8 Hrs: ☐ 24 Hrs: ☐ 1 Day: ☐ 2 Days: ☒ 3 Days: ☐ 5 Days: ☐
Date Due: Time Due: Note: Not all turn around times are available for all analysis.

OFFICE USE ONLY BELOW:
Batch No.: 340816
Samples Acceptable: Yes: ☐ No: ☐
Checked by (Initial/Date):
QC by (Initial/Date):
Reported By (Initial/Date/Time/Method):
Comments:

Relinquished by:	Date/Time: 3/19/19 11:05
Received by:	Date/Time: 3/19/19 11:05
Relinquished by:	Date/Time:
Received by:	Date/Time:
Relinquished by:	Date/Time:
Received by:	Date/Time:

Client Sample Number/Description: EC031919 -	Date Taken	Time On	Time Off	Rate (lpm)	Volume (Liters)	Area Wiped (ft^2)	Laboratory Sample No.	PCM Asbestos	PLM Asbestos (Bulk)	PLM Point Count	PLM Gravimetric	TEM Air Asbestos	TEM Bulk Asbestos	TEM Gravimetric Asb.	TEM Microvac Asb.	TEM Water		Other:						
50 2x4 Fissures + Basement									X															
51 Pinholes									X															
52 "									X															
53 Red Fire Stop									X															
54 "									X															
55 "									X															
56 4" Black Baseboard									X															
57 "									X															
58 "									X															
59 Tan Glue behind									X															
60 Baseboard									X															
61 "									X															

Comments: email results to echristian@ccaltd.com

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
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NVLAP Lab Code 101202-0

ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY

Method: EPA/600/R-93/116

Carnow, Conibear, & Associates
600 W. Van Buren Street, Suite 500
Chicago, IL 60607
Phone: (312) 782-4486
Fax: (312) 782-5145

Reference:	E12834X006	Date Received:	10/03/2019
Location:	Legler Library 115 N Pulaski	Date Analyzed:	10/04/2019
Batch No.:	344322	Date Reported:	10/04/2019
Customer No.:	141	Turn Around Time:	1 Day

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
344322001	EC100319-01	ND	Cellulose 10-15% Binder 85-90%
344322002	EC100319-02	ND	Cellulose 10-15% Binder 85-90%
344322003	EC100319-03	ND	Cellulose 10-15% Binder 85-90%
344322004	EC100319-04	ND	Cellulose 1-5% Binder 95-99%
344322005	EC100319-05	ND	Cellulose 1-5% Binder 95-99%
344322006	EC100319-06	ND	Cellulose 1-5% Binder 95-99%
344322007	EC100319-07	ND	Cellulose 1-5% Binder 95-99%
344322008	EC100319-08	ND	Cellulose 1-5% Binder 95-99%
344322009	EC100319-09	ND	Cellulose 1-5% Binder 95-99%
344322010	EC100319-10	ND	Cellulose 10-15% Binder 85-90%

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Analyzed by Name : Daniel Mikos / Microscopist

Date: 10/04/2019

STAT Analysis Corporation
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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

NVLAP Lab Code 101202-0

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Method: EPA/600/R-93/116

Carnow, Conibear, & Associates
600 W. Van Buren Street, Suite 500
Chicago, IL 60607
Phone: (312) 782-4486
Fax: (312) 782-5145

Reference:	E12834X006	Date Received:	10/03/2019
Location:	Legler Library 115 N Pulaski	Date Analyzed:	10/04/2019
Batch No.:	344322	Date Reported:	10/04/2019
Customer No.:	141	Turn Around Time:	1 Day

Laboratory Sample	Customer Sample Number	Asbestos Components (%)	Non-Asbestos Components (%)
344322011	EC100319-11	ND	Cellulose 10-15% Binder 85-90%
344322012	EC100319-12	ND	Cellulose 10-15% Binder 85-90%
344322013	EC100319-13	ND	Cellulose 10-15% Binder 85-90%
344322014	EC100319-14	ND	Cellulose 10-15% Binder 85-90%
344322015	EC100319-15	ND	Cellulose 10-15% Binder 85-90%
344322016	EC100319-16	ND	Cellulose 10-15% Binder 85-90%
344322017	EC100319-17	ND	Cellulose 10-15% Binder 85-90%
344322018	EC100319-18	ND	Cellulose 10-15% Binder 85-90%
344322019	EC100319-19	Chrysotile 10-15%	Binder 85-90%
344322020	EC100319-20	Chrysotile 10-15%	Binder 85-90%
344322021	EC100319-21	Chrysotile 10-15%	Binder 85-90%

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Analyzed by Name : Daniel Mikos / Microscopist

Date: 10/04/2019

STAT Analysis Corporation
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e-mail address: STATinfo@STATAnalysis.com

CHAIN OF CUSTODY RECORD

Client:	Carnow Conibear
Street Address:	600 W. Van Buren Suite 500
City, State, Zip:	Chicago, IL 60607
Phone:	312-762-2900
Fax:	312-782-5145
e-mail/Alt. Fax:	
Project Number:	E12834X006
Project Name:	Legler Library
Project Location:	115 N. Pulaski
Project Manager:	Evan Christian
P.O. Number:	

Turn Around: Immediate: ☐ 4 Hrs: ☐ 8 Hrs: ☐ 24 Hrs: ☐ 1 Day: ☒ 2 Days: ☐ 3 Days: ☐ 5 Days: ☐

Date Due: Time Due: Note: Not all turn around times are available for all analysis.

OFFICE USE ONLY BELOW:

Batch No.: 344322

Samples Acceptable: Yes: ☑ No: ☐

Checked by (Initial/Date): 09/4/19

QC by (Initial/Date): 10/4/19

Reported By (Initial/Date/Time/Method):

Comments:

Relinquished by:	Evan Christian	Date/Time: 10/3/19 10:50
Received by:		Date/Time: 10/3/19 1050
Relinquished by:		Date/Time:
Received by:		Date/Time:
Relinquished by:		Date/Time:
Received by:		Date/Time:

Client Sample Number/Description: EC100319-	Date Taken	Time On	Time Off	Rate (lpm)	Volume (Liters)	Area Wiped (ft^2)	Laboratory Sample No.	PCM Asbestos	PLM Asbestos (Bulk)	PLM Point Count	PLM Gravimetric	TEM Air Asbestos	TEM Bulk Asbestos	TEM Gravimetric Asb.	TEM Microvac Asb.	TEM Water		Other:						
01 Black Door Caulk 018	10/3/19								X															
02	↓								↓															
03	↓																							
04 White Interior 021																								
05 Window Caulk 022																								
06 ↓ 022																								
07 White Interior 211																								
08 Window Caulk	↓																							
09 ↓	↓																							
10 Black Residual 006																								
11 Mastic 007																								
12 ↓ 007	↓																							

Comments: Email results to echristian@ccaltd.com

STAT Analysis Corporation
2242 W. Harrison, Suite 200, Chicago, Illinois 60612 Phone: (312) 733-0551 Fax: (312) 733-2386
e-mail address: STATinfo@STATAnalysis.com

CHAIN OF CUSTODY RECORD **Page : 2 of 2**

Client:	Carnow Conibear
Street Address:	600 W. Van Buren Suite 500
City, State, Zip:	Chicago, IL 60607
Phone:	312-762-2900
Fax:	312-782-5145
e-mail/Alt. Fax:	
Project Number:	E12834X006
Project Name:	Legler Library
Project Location:	115 S. Pulaski
Project Manager:	Evan Christian
P.O. Number:	

Turn Around: Immediate: ☐ 4 Hrs: ☐ 8 Hrs: ☐ 24 Hrs: ☐ 1 Day: ☒ 2 Days: ☐ 3 Days: ☐ 5 Days: ☐
Date Due: Time Due: Note: Not all turn around times are available for all analysis.

OFFICE USE ONLY BELOW:
Batch No.: 344322
Samples Acceptable: Yes: ☐ No: ☐
Checked by (Initial/Date):
QC by (Initial/Date):
Reported By (Initial/Date/Time/Method):
Comments:

Relinquished by: Evan Christian Date/Time: 10/3/19 10:50
Received by: Date/Time: 10/3/19 10:50
Relinquished by: Date/Time:
Received by: Date/Time:
Relinquished by: Date/Time:
Received by: Date/Time:

Client Sample Number/Description: EC100319-	Date Taken	Time On	Time Off	Rate (lpm)	Volume (Liters)	Area Wiped (ft^2)	Laboratory Sample No.	PCM Asbestos	PLM Asbestos (Bulk)	PLM Point Count	PLM Gravimetric	TEM Air Asbestos	TEM Bulk Asbestos	TEM Gravimetric Asb.	TEM Microvac Asb.	TEM Water		Other:						
-13 Vapor barrier 209	10/3/19								X															
-14 beneath plywood									↓															
-15 ↓ subfloor ↓									↓															
-16 Red Flooring 211									↓															
-17 Material beneath									↓															
-18 ↓ subfloor ↓	↓								↓															
-19 Pendant Light + Mezz.									↓															
-20 Wiring									↓															
-21 ↓ ↓	↓								↓															

Comments: Email results to echristian@ccaltd.com

APPENDIX D

Lead-Based Paint Field Data Sheets

CARNOW CONIBEAR

Carnow, Conibear & Assoc., Ltd.
Environmental Consulting Services
600 W. Van Buren St., Suite 500, Chicago, IL 60607
t: 312.782.4486 f: 312.782.5145
www.ccsltd.com

CARNOW CONIBEAR

XRF CALIBRATION CHECK TEST RESULTS

Client: PBC Date: 7/25/19

Address: Legler Regional Library - 115 Pulaski

XRF Serial #: 2295

XRF Instrument: Heuresis Pb200i

Inspector/License #: Evan Chrzan 1002004

XRF Unit File #:

Calibration Check Tolerance Used: +/- 0.2 mg/cm² on 1. mg/cm² Heuresis Standard

Time Corrected Mode – Duration of Test is seconds long

CALIBRATION CHECK (Bare Wood)

Calibration Time	1st Reading	2nd Reading	3rd Reading	Average Reading	Difference From Average & 0.0 mg/cm²	Acceptable Yes/No
7:45AM	-0.2	-0.1	-0.1	-0.13		Yes

CALIBRATION CHECK (Painted)

Calibration Time	1st Reading	2nd Reading	3rd Reading	Average Reading	Difference Between Average & 0.0 mg/cm²	Acceptable Yes/No
7:47 AM	0.8	0.9	1.0	0.9		Yes

CALIBRATION CHECK (Painted)

Calibration Time	1st Reading	2nd Reading	3rd Reading	Average Reading	Difference Between Average & 0.0 mg/cm²	Acceptable Yes/No
1:30PM	0.9	1.1	0.8	0.9		Yes

CALIBRATION CHECK ( )

Calibration Time	1st Reading	2nd Reading	3rd Reading	Average Reading	Difference Between Average & 0.0 mg/cm²	Acceptable Yes/No

Lead Based Paint XRF Data Sheet

Client: PBC | Building Address: 115 S. Pulaski | City: Chicago | Inspection Date: 7/25/17

Area Description: 2nd Floor | State: IL | Inspector: EC | License #: 100 2004

XRF Serial #: 2295 | XRF Instrument: RMD LPA-1 | XRF Unit /File #: | Inspector's Signature:

XRF Test Shot #	Test Location	Component	Substrate	Color	Condition Assessment Deterioration Present?	Estimated Damage	XRF Reading mg/cm²	Classification P=Positive ≥1.0 N=Negative <1.0
7	Stairwell to Roof-221	N. Wall	Plaster	White	(Y) N		0.1	P (N)
8	↓	E. Wall	↓	↓	(Y) N		0.1	P N
9	↓	S. Wall	↓	↓	(Y) N		-0.1	P N
10	↓	W. Wall	↓	↓	(Y) N		0.2	P N
11	↓	Ceiling	↓	↓	Y (N)		0.1	P N
12	Corridor 225	N. Wall	Drywall	↓	Y N		0.2	P N
13	↓	E. Wall	↓	↓	Y N		0.6	P N
14	↓	S. Wall	↓	↓	Y N		0.3	P N
15	↓	W. Wall	↓	↓	Y N		0.1	P N
16	↓	Acoustic Ceiling	Plaster	↓	Y N		0.1	P N
17	Room 227	N. Wall	Plaster	White	Y N		0.5	P N
18	↓	E. Wall	↓	↓	Y N		0.4	P N
19	↓	S. Wall	↓	↓	Y N		0.3	P N
20	↓	W. Wall	↓	↓	Y N		0.4	P N
21	↓	Ceiling	↓	↓	Y N		0.8	P N
22	Lobby 201	N. Wall	Concrete	White	Y (N)		10.0	(P) N
23	↓	E. Wall	↓	↓	Y (N)		7.0	(P) N
24	↓	S. Wall	↓	↓	Y (N)		4.0	(P) N
25	↓	W. Wall	↓	↓	Y (N)		3.0	(P) N
26	↓	Column	↓	↓	Y N		7.0	(P) N
27	Room 217	N. Wall	Drywall	White	Y N		0.4	P (N)
28	↓	E. Wall	Plaster	↓	Y N		0.4	P N
29	↓	S. Wall	Drywall	↓	Y N		0.3	P N
30	↓	W. Wall	Drywall	↓	Y N		0.1	P N
31	↓	Ceiling	Plaster	↓	Y N		0.7	P N

CARNOW CONIBEAR

Lead Based Paint XRF Data Sheet

Client: PBC | Building Address: 115. S. Pulaski | City: Chicago | Inspection Date: 7/25/19

Area Description: 2nd Floor | State: IL | Inspector: EC | License #: 1602004

XRF Serial #: 2295 | XRF Instrument: RMD LPA-1 | XRF Unit /File #: | Inspector's Signature:

XRF Test Shot #	Test Location	Component	Substrate	Color	Condition Assessment Deterioration Present?	Estimated Damage	XRF Reading mg/cm²	Classification P=Positive ≥1.0 N=Negative <1.0
32	Room 214	N. Wall	Drywall	White	Y N		0.4	P (N)
33	↓	E. Wall	Plaster	↓	Y N		0.2	P N
34	↓	S. Wall	Drywall	↓	Y N		0.3	P N
35	↓	W. Wall	Drywall	↓	Y N		0.5	P N
36	↓	Ceiling	Plaster	↓	Y N		0.7	P N
37	Room 210	Display Platform	~~Orange~~ Drywall	Orange	Y N		0.2	P N
38	↓	E. Wall	↓	White	Y N		0.3	P N
39	↓	S. Wall	↓	↓	Y N		0.2	P N
40	↓	W. Wall	↓	↓	Y N		0.1	P N
41	↓	Ceiling	Plaster	↓	Y N		0.6	P N
42	Room 209	N. Wall	Plaster	~~Yellow~~	Y N		0.1	P N
43	↓	E. Wall	Drywall	↓	Y N		0.1	P N
44	↓	W. Wall	Drywall	↓	Y N		0.2	P N
45	↓	Ceiling	Ceiling	↓	Y N		0.3	P N
46	↓	Door Frame	Metal	Black	Y N		0.4	P N
47	Room 211	N. Wall	Plaster	White	Y N		0.1	P N
48	↓	E. Wall	↓	↓	Y N		0.1	P N
49	↓	S. Wall	Drywall	↓	Y N		0.2	P N
50	↓	W. Wall	—	↓	Y N	—	—	P N
51	↓	Door Frame	Metal	Black	Y N		0.3	P N
52	Room 206	N. Wall	Plaster	Beige	Y N		0.2	P N
53	↓	E. Wall	↓	↓	Y N		0.3	P N
54	↓	S. Wall	↓	↓	Y N		0.4	P N
55	↓	W. Wall	↓	↓	Y N		0.1	P N
56	~~Hallway~~	Storefront	Drywall	Orange	Y N		0.2	P N

CARNOW CONIBEAR

Lead Based Paint XRF Data Sheet

Client: PBC Building Address: 115 S. Pulaski City: Chicago Inspection Date: 7/25/19

Area Description: 1st Floor State: IL Inspector: EC License #: 1002004

XRF Serial #: 2295 XRF Instrument: RMD LPA-1 XRF Unit /File #: Inspector's Signature:

XRF Test Shot #	Test Location	Component	Substrate	Color	Condition Assessment Deterioration Present?	Estimated Damage	XRF Reading mg/cm²	Classification P=Positive ≥1.0 N=Negative <1.0
57	Elevator	Door	Metal	White	Y (N)		0.1	P (N)
58	↓	N. Wall	Metal	Purple	Y N		0.2	P N
59	↓	E. Wall	↓	↓	Y N		0.3	P N
60	↓	S. Wall	↓	↓	Y N		0.1	P N
61	↓	W. Wall	↓	↓	Y N		0.7	P N
62	Room 116	N. Wall	Plaster	White	Y N		0.1	P N
63	↓	E. Wall	↓	↓	Y N		0.2	P N
64	↓	S. Wall	↓	↓	Y N		0.4	P N
65	↓	W. Wall	↓	↓	Y N		0.3	P N
66	↓	Ceiling	↓	↓	Y N		0.7	P N
67	Room 119	N. Wall	Plaster	White	Y N		0.3	P N
68	↓	E. Wall	↓	↓	Y N		0.2	P N
69	↓	S. Wall	↓	↓	Y N		0.4	P N
70	↓	W. Wall	↓	↓	Y N		0.5	P N
71	Room 107	N. Wall	Plaster	White	Y N		0.4	P N
72	↓	E. Wall	↓	↓	Y N		0.3	P N
73	↓	S. Wall	↓	↓	Y N		0.2	P N
74	↓	W. Wall	↓	↓	Y N		0.2	P N
75	Room 108	N. Wall	Plaster	White	Y N		0.1	P N
76	↓	E. Wall	↓	↓	Y N		0.3	P N
77	↓	S. Wall	↓	↓	Y N		0.4	P N
78	↓	W. Wall	↓	↓	Y N		0.1	P N
79	Stack 113	Cast Iron Bookcase	Metal	White	Y N		5.8	(P) N
					Y N			P N
					Y N			P N

CARNOW CONIBEAR

Lead Based Paint XRF Data Sheet

Client: PBC | Building Address: 115 S. Pulaski | City: Chicago | Inspection Date: 7/25/19

Area Description: 1st Floor, Basement | State: IL | Inspector: EC | License #: 1002004

XRF Serial #: 2295 | XRF Instrument: RMD LPA-1 | XRF Unit /File #: | Inspector's Signature:

XRF Test Shot #	Test Location	Component	Substrate	Color	Condition Assessment Deterioration Present?	Estimated Damage	XRF Reading mg/cm²	Classification P=Positive ≥1.0 N=Negative <1.0
80	Room 111	N. Wall	Drywall	White	Y (N)		0.1	P (N)
81	↓	E. Wall	↓	↓	Y N		0.2	P N
82	↓	S. Wall	↓	↓	Y N		0.2	P N
83	↓	W. Wall	↓	↓	Y N		0.5	P N
84	Men's 109	N. Wall	CMU	White	Y N		0.2	P N
85	↓	E. Wall	↓	↓	Y N		0.3	P N
86	↓	S. Wall	↓	↓	Y N		0.4	P N
87	↓	W. Wall	↓	↓	Y N		0.5	P N
88	Room 114	N. Wall	Drywall	White	Y N		0.1	P N
89	↓	E. Wall	Plaster	↓	Y N		0.3	P N
90	↓	S. Wall	↓	↓	Y N		0.4	P N
91	↓	W. Wall	↓	↓	Y N		0.1	P N
92	↓	Ceiling	↓	↓	Y N		0.4	P N
93	Stair 121	N. Wall	Plaster	White	Y N		0.1	P N
94	↓	E. Wall	↓	↓	Y N		0.5	P N
95	↓	S. Wall	↓	↓	Y N		0.6	P N
96	↓	W. Wall	↓	↓	Y N		0.2	P N
97	Room 007	N. Wall	Plaster	White	Y N		10.0	(P) N
98	↓	E. Wall	↓	↓	Y N		14.0	(P) N
99	↓	W. Wall	↓	↓	Y N		8.0	(P) N
100	↓	S. Wall	↓	↓	Y N		4.0	(P) N
101	↓	Ceiling	↓	↓	Y N		0.1	P (N)
102	Basement Corridor	Duct	Metal	White	(Y) N		0.3	P N
103	↓	↓	↓	Beige	(Y) N		0.4	P N
~~104~~					Y N			P N

CARNOW CONIBEAR

Lead Based Paint XRF Data Sheet

Client: PBC | Building Address: 115 S. Pulaski | City: Chicago | Inspection Date: 7/25/19

Area Description: Basement | State: IL | Inspector: EC | License #: 100120054

XRF Serial #: 2295 | XRF Instrument: RMD LPA-1 | XRF Unit /File #: | Inspector's Signature:

XRF Test Shot #	Test Location	Component	Substrate	Color	Condition Assessment Deterioration Present?	Estimated Damage	XRF Reading mg/cm²	Classification P=Positive ≥1.0 N=Negative <1.0
104	Locker Room 005	N. Wall	CMU	White	Y (N)		0.1	P (N)
105	↓	E. Wall	↓	↓	Y N		0.2	P N
106	↓	S. Wall	↓	↓	Y N		0.1	P N
107	↓	W. Wall	↓	↓	Y N		0.4	P N
108	↓	Ceiling	Drywall	↓	Y N		0.1	P N
109	Staff Lounge 006	N. Wall	CMU	White	Y N		0.2	P N
110	↓	E. Wall	Drywall	↓	Y N		0.3	P N
111	↓	S. Wall	Plaster	↓	Y N		0.1	P N
112	↓	W. Wall	↓	↓	Y N		0.4	P N
113	Men's 003	N. Wall	CMU	White	Y N		0.1	P N
114	↓	E. Wall	↓	↓	Y N		0.3	P N
115	↓	S. Wall	↓	↓	Y N		0.6	P N
116	↓	W. Wall	↓	↓	Y N		0.6	P N
117	↓	Ceiling	Drywall	↓	Y N		0.1	P N
118	Women's 035	N. Wall	CMU	White	Y N		0.2	P N
119	↓	E. Wall	↓	↓	Y N		0.3	P N
120	↓	S. Wall	↓	↓	Y N		0.1	P N
121	↓	W. Wall	↓	↓	Y N		0.2	P N
122	↓	Ceiling	Drywall	↓	Y N		0.4	P N
123	Basement Corridor	N. Wall	Brick	White	Y N		0.3	P N
124	↓	E. Wall	CMU	↓	Y N		0.1	P N
125	↓	S. Wall	Plaster	↓	Y N		0.1	P N
126	↓	W. Wall	CMU	↓	Y N		0.3	P N
127	↓	Ceiling	Plaster	↓	Y (N)		0.4	P (N)
					Y N			P N

CARNOW CONIBEAR

Lead Based Paint XRF Data Sheet

Client: PBC Building Address: 115 S. Pulaski City: Chicago Inspection Date: 7/25/19

Area Description: Basement State: IL Inspector: EC License #: 1002004

XRF Serial #: 2295 XRF Instrument: RMD LPA-1 XRF Unit /File #: _____ Inspector's Signature: [signature]

XRF Test Shot #	Test Location	Component	Substrate	Color	Condition Assessment Deterioration Present?	Estimated Damage	XRF Reading mg/cm²	Classification P=Positive ≥1.0 N=Negative <1.0
128	Storage 022	N. Wall	CMU	White	Y N		0.1	P N
129	↓	E Wall	↓	↓	Y N		0.0	P N
130		S. Wall			Y N		0.1	P N
131		W. Wall			Y N		0.2	P N
132		Ceiling	Plaster		Y N		0.6	P N
133	021	N. Wall	CMU	White	Y N		0.1	P N
134	↓	E. Wall	↓	↓	Y N		0.0	P N
135		S. Wall			Y N		0.4	P N
136		W. Wall			Y N		0.2	P N
137		Ceiling	Plaster		Y N		0.5	P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
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					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N

CARNOW CONIBEAR

Carnow, Conibear & Assoc., Ltd.
Environmental Consulting Services
600 W. Van Buren St., Suite 500, Chicago, IL 60607
t: 312.782.4486 f: 312.782.5145
www.ccaltd.com

CARNOW CONIBEAR

XRF CALIBRATION CHECK TEST RESULTS

Client: PBC Date: 12/3/19

Address: Lesler Regional Library - 115 Pulaski

XRF Serial #: 2295

XRF Instrument: Heuresis Pb200i

Inspector/License #: Evan Christian 1002004

XRF Unit File #:

Calibration Check Tolerance Used: +/- 0.2 mg/cm² on 1. mg/cm² Heuresis Standard

Time Corrected Mode – Duration of Test is seconds long

CALIBRATION CHECK (Bare Wood)

Calibration Time	1st Reading	2nd Reading	3rd Reading	Average Reading	Difference From Average & 0.0 mg/cm²	Acceptable Yes/No
8:35 AM	-0.0	-0.1	-0.1	-0.07		Yes

CALIBRATION CHECK (Painted)

Calibration Time	1st Reading	2nd Reading	3rd Reading	Average Reading	Difference Between Average & 0.0 mg/cm²	Acceptable Yes/No
8:37 AM	0.9	0.9	1.0	0.93		Yes

CALIBRATION CHECK (Painted)

Calibration Time	1st Reading	2nd Reading	3rd Reading	Average Reading	Difference Between Average & 0.0 mg/cm²	Acceptable Yes/No
9:10 AM	0.9	1.0	0.9	0.93		Yes

CALIBRATION CHECK ( )

Calibration Time	1st Reading	2nd Reading	3rd Reading	Average Reading	Difference Between Average & 0.0 mg/cm²	Acceptable Yes/No

Lead Based Paint XRF Data Sheet

Client: PBC | Building Address: 115 Pulaski | City: Chicago | Inspection Date: 12/3/19

Area Description: Building Exterior | State: IL | Inspector: EC | License #: 1902004

XRF Serial #: 2295 | XRF Instrument: Heuresis Pb200i | XRF Unit /File #: | Inspector's Signature:

XRF Test Shot #	Test Location	Component	Substrate	Color	Condition Assessment Deterioration Present?	Estimated Damage	XRF Reading mg/cm²	Classification P=Positive ≥1.0 N=Negative <1.0
7	Roof - 2nd Floor	Ladder	Metal	Black	(Y) N	10%	4.2	(P) N
8	Site Exterior - South	Fence Post	↓	↓	(Y) N	<5%	0.8	P (N)
9	↓	Fence Picket	↓	↓	(Y) N	↓	0.3	P (N)
10	↓	Fence Rail	↓	↓	(Y) N	↓	0.4	P (N)
11	Site Exterior - West	Fence Post	↓	↓	(Y) N	↓	0.2	P (N)
12	↓	Fence Picket	↓	↓	(Y) N	↓	0.2	P (N)
13	↓	Fence Rail	↓	↓	(Y) N	↓	0.4	P (N)
14	Fire Escape	Post	Metal	Black	(Y) N	<5%	4.5	P N
15	↓	Post	↓	↓	(Y) N	↓	6.3	P N
16	↓	Stair	↓	↓	(Y) N	↓	7.1	P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N
					Y N			P N

CARNOW CONIBEAR

APPENDIX E

Photographic Documentation

CARNOW CONIBEAR

Legler Regional Library
115 S. Pulaski Road, Chicago, IL 60624

	Sample ID: EC031919-23 thru 25 Location: Receiving Room 119, Corridor 120, Stack Area, Office Spaces, Corridor 225 Sample Description: 2'x4' Suspended Ceiling Tile – Segmented Gouges and Pinholes
	Sample ID: EC031919-14 thru 16 Location: Windows Throughout Sample Description: White Interior Window Caulk

Legler Regional Library
115 S. Pulaski Road, Chicago, IL 60624

	Sample ID: EC031919-17 thru 19; EC031919-20 thru 22 Location: Corridor 225 Sample Description: 12”x12” Pink Mottled Floor Tile and associated Glue
	Sample ID: EC031919-32 thru 34; EC031919-35 thru 37 Location: Basement Corridor, Staff Lounge 006, Meeting Room 007, Basement Corridor 019, Receiving 119, Corridor 120, Closet 104, Lab 209 Sample Description: 12”x12” Brown and Tan Mottled Floor Tile and associated Glue

Legler Regional Library
115 S. Pulaski Road, Chicago, IL 60624

	Sample ID: EC031919-50 thru 52 Location: Work Room 001, Meeting Room 007, Staff Lounge 006 Sample Description: 2'x4' Suspended Ceiling Tile – Pinholes
	Sample ID: EC072519-13 thru 15 Location: Penthouse/Mezzanine Glass Sample Description: Cement Plaster

Legler Regional Library
115 S. Pulaski Road, Chicago, IL 60624

	Sample ID: EC072519-07 thru 09 Location: Main Roof Sample Description: Black/Gray Roof Sealant
	Sample ID: EC072519-04 thru 06 Location: Main Roof Sample Description: Roof Flashing

Legler Regional Library
115 S. Pulaski Road, Chicago, IL 60624

	Sample ID: EC072519- 01 thru 03 Location: Main Roof Sample Description: Asphalt Roof Field
	Sample ID: EC072519-16 thru 19 Location: Main Roof Sample Description: White/Gray Parapet Sealant

Legler Regional Library
115 S. Pulaski Road, Chicago, IL 60624

	Sample ID: EC072519-10 thru 12 Location: Penthouse Roof, Walkout Roofs Sample Description: Membrane Roof Insulation
	Sample ID: EC031919-01 thru 07 Location: Original Walls and Ceilings Throughout Sample Description: Hard Coat Plaster

Legler Regional Library
115 S. Pulaski Road, Chicago, IL 60624

	Sample ID: EC031919-08 thru 10 Location: 108, 111, 114, Stack 113, 227 Sample Description: Tan Carpet (Broadloom) Glue
	Sample ID: EC031919-44 thru 46 Location: Room 209 Sample Description: Gray Sink Undercoating

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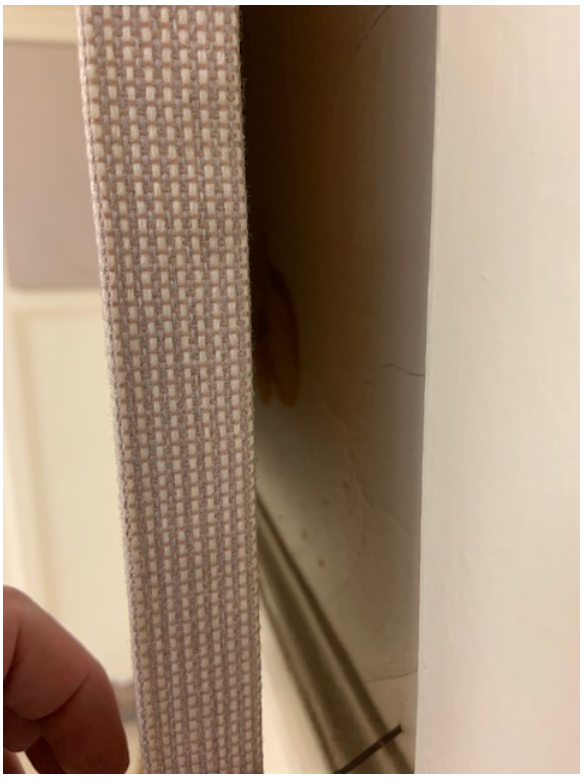
	Sample ID: EC031919-26 thru 28; EC031919-20 thru 22 Location: Closets 212, 213, 215; Storage 220 Sample Description: 12”x12” Gray Floor Tile w/ Small Black Specks and associated Glue
	Sample ID: EC031919-47 thru 49 Location: Meeting Room 007 Sample Description: Tan Glue behind Acoustical Panels

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	Sample ID: Material Not Sampled – Not Suspected to Contain Asbestos Location: Basement Sample Description: Fiberglass Fire Rated Door Insulation
	Sample ID: Materials Not Sampled – Not Suspected to Contain Asbestos Location: Mechanical Room Sample Description: Fiberglass Pipe and Duct Insulation

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	Sample ID: Material Not Sampled – Not Suspected to Contain Asbestos Location: Throughout Building Sample Description: Fiberglass Pipe Insulation in Pipe Chase
	Sample ID: N/A Location: Stacks Sample Description: Bookcase with Lead-Based Paint Film

SECTION 080152.61 - WOOD WINDOW **AND DOOR** REPAIRS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes wood window repairs as follows:

1. Repairing wood windows**, doors** and trim.
2. **Window sash and frame restoration or replacement.**
3. **Door leaf and frame restoration or replacement.**
4. **Weather-stripping.**
5. **Temporary weatherproof door closures as required to maintain building in a weatherproof condition.**

B. Related Sections include the following:

1. **See Division 7 Section "Joint Sealants" for material and execution requirements for joint sealant work related to window restoration.**
2. **See Division 9 Section "Painting" for material, surface preparation, and application requirements for new finishes on restored wood windows and doors.**

1.3 DEFINITIONS

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

B. Glazing: Includes glass, glazing points, glazing tapes, glazing sealants, and glazing compounds.

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

D. Window: Includes window frame, sash, hardware, storm window, and exterior and interior shutters unless otherwise indicated by context.

E. Wood Window Component Terminology: Wood window components for repair work include the following classifications:

1. Frame Components: Head, jambs, and sill.
2. Sash Components: Stiles and rails, parting bead, stop, and muntins.

3. Exterior Trim: Exterior casing, brick mold, and cornice or drip cap.
4. Interior Trim: Casing, stool, and apron.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.5 SEQUENCING AND SCHEDULING

A. Perform window repairs in the following sequence, which includes work specified in this and other Sections:

1. Label each window frame with permanent opening-identification number in inconspicuous location.
2. Tag existing window sash, storm windows, ~~and shutters~~ with opening-identification numbers and remove for on-site or off-site repair. Indicate on tags the locations on window of each component, such as "top sash," "bottom sash~~.," "left shutter," and "right shutter."~~
3. Remove window, dismantle hardware, and tag hardware with opening-identification numbers.
4. Install temporary protection and security at window openings.
5. In the shop, label each sash, storm window, ~~and shutter~~ unit with permanent opening-identification number in inconspicuous location and remove site-applied tags.
6. Sort units by condition, separating those that need extensive repair.
7. Clean surfaces.
8. General Wood-Repair Sequence:

    a. Remove paint to bare wood.
    b. Rack frames slightly to inject adhesive into mortise and tenon joints; square frames to proper fit before adhesive sets.
    c. If thicker than original glass is required, rout existing muntins to required rebate size.
    d. Repair wood by consolidation, member replacement, partial member replacement, and patching.
    e. Sand, prime, fill, sand again, and prime surfaces again for refinishing.

9. Repair, refinish, and replace hardware if required. Reinstall operating hardware.
10. Install glazing.
11. Remove temporary protection and security at window openings.
12. Reinstall units.
13. Apply finish coats.
14. Install remaining hardware and weather stripping.

B. Perform door repairs in the following sequence, which includes work specified in this and other Sections:

1. **Label each door leaf with permanent opening-identification number in inconspicuous location.**
2. **Tag existing door leaf with opening-identification numbers and remove for on-site or off-site repair. Indicate on tags the locations on door of each component.**
3. **Remove door, dismantle hardware, and tag hardware with opening-identification numbers.**
4. **Install temporary protection and security at door openings.**
5. **In the shop, label each leaf unit with permanent opening-identification number in inconspicuous location and remove site-applied tags.**
6. **Sort units by condition, separating those that need extensive repair.**
7. **Clean surfaces.**
8. **General Wood-Repair Sequence:**

    a. **Remove paint to bare wood.**
    b. **Rack frames slightly to inject adhesive into mortise and tenon joints; square frames to proper fit before adhesive sets.**
    c. **If thicker than original glass is required, rout existing muntins to required rebate size.**
    d. **Repair wood by consolidation, member replacement, partial member replacement, and patching.**
    e. **Sand, prime, fill, sand again, and prime surfaces again for refinishing.**

9. **Repair, refinish, and replace hardware if required. Reinstall operating hardware.**
10. **Install glazing.**
11. **Remove temporary protection and security at window openings.**
12. **Reinstall units.**
13. **Apply finish coats.**
14. **Install remaining hardware and weather stripping.**

1.6 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include recommendations for product application and use.
2. Include test data substantiating that products comply with requirements.

B. Shop Drawings:

1. Include plans, elevations, and sections showing locations and extent of repair and replacement work, with enlarged details of replacement parts indicating materials, profiles, joinery, reinforcing, method of splicing into or attaching to existing wood window **and door**, accessory items, and finishes.
2. Include field-verified dimensions and provisions for sealant joints as required for location.

C. Samples for Initial Selection: For each type of exposed wood and finish.

1. Identify wood species, cut, and other features.
2. Include Samples of hardware and accessories involving color selection.

D. Samples for Verification: For the following products in manufacturer's standard sizes unless otherwise indicated, finished as required for use in the Work:

1. Replacement Units: 12-inch- long, full-size frame sections with applied finish.
2. Replacement Members: 12 inches long for each replacement member, including parts of frame, sash, exterior trim, and interior trim.
3. Repaired Wood Window **and Door** Members: Prepare Samples using existing wood window members removed from site, repaired, and prepared for refinishing.
4. Refinished Wood Window **and Door** Members: Prepare Samples using existing wood window members removed from site, repaired, and refinished.
5. Hardware: Full-size units with each factory-applied or restored finish.
6. Weather Stripping: 12-inch- long sections.

1.7 INFORMATIONAL SUBMITTALS

A. Qualification Data: For wood-window **and door**-repair specialist wood **and door-**repair-material manufacturer.

1.8 QUALITY ASSURANCE

A. Wood-Window **and Door**-Repair Specialist Qualifications: A qualified wood window **and door** specialist, experienced in repairing, refinishing, and replacing wood windows in whole and in part. Experience only in fabricating and installing new wood windows **and doors** is insufficient experience for repairing wood windows.

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

B. Wood-Repair-Material Manufacturer Qualifications: A firm regularly engaged in producing wood consolidant and wood-patching compound that have been used for similar wood-repair applications with successful results, and with factory-authorized service representatives who are available for consultation and Project-site inspection and on-site assistance.

C. Mockups: Prepare mockups of window **and door**-repair processes to demonstrate aesthetic effects and to set quality standards for materials and execution and for fabrication and installation. Prepare mockups so they are as inconspicuous as practicable.

1. Locate mockups on existing windows where directed by Architect.

2. Wood Window **and Door** Repairs: Prepare one entire window unit and **door leaf** to serve as mockup to demonstrate samples of each type of repair of wood window **and door** members including frame, sash, glazing, and hardware.
3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Pack, deliver, and store products in suitable packs, heavy-duty cartons, or wooden crates; surround with sufficient packing material to ensure that products are not deformed, broken, or otherwise damaged.

B. Store products inside a well-ventilated area and where environmental conditions comply with manufacturer's requirements; protect from weather, moisture, soiling, abrasion, extreme temperatures, and humidity.

1.10 FIELD CONDITIONS

A. Weather Limitations: Proceed with wood window **and door** repairs only when existing and forecasted weather conditions are within the environmental limits set by each manufacturer's written instructions and specified requirements.

PART 2 - PRODUCTS

2.1 WOOD WINDOW REPAIRS, GENERAL

A. Quality Standard: Comply with applicable requirements in Section 6, "Interior & Exterior Millwork," in AWI/AWMAC/WI's "Architectural Woodwork Standards" for construction, finishes, grades of wood windows, and other requirements unless otherwise indicated.

1. Exception: Industry practices cited in Section 6, Article 1.5, Industry Practices, of the Architectural Woodwork Standards do not apply to the work of this Section.

2.2 WOOD-REPLACEMENT MATERIALS

A. Wood, General: Clear fine-grained lumber; kiln dried to a moisture content of 6 to 12 percent at time of fabrication; free of visible finger joints, blue stain, knots, pitch pockets, and surface checks larger than 1/32 inch deep by 2 inches wide.

1. Species: Match species of each existing type of wood component or assembly unless otherwise indicated.

B. Frame Heads and Jambs and Exterior Trim: Match existing species.

C. Exterior Trim **and wood stop**: Match existing species.

D. Sills: Match existing species.

E. Interior Trim: Match existing species.

2.3 WOOD-REPAIR MATERIALS

A. Source Limitations: Obtain wood consolidant and wood-patching compound from single source from single manufacturer.

B. Wood Consolidant: Ready-to-use product designed to penetrate, consolidate, and strengthen soft fibers of wood materials that have deteriorated due to weathering and decay and designed specifically to enhance the bond of wood-patching compound to existing wood.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Abatron, Inc.
b. ConServ Epoxy LLC.
c. Gougeon Brothers, Inc.
d. Protective Coating Company.

e. System Three Resins, Inc.

C. Wood-Patching Compound: Two-part epoxy-resin wood-patching compound; knife-grade formulation as recommended in writing by manufacturer for type of wood repair indicated, tooling time required for the detail of work, and site conditions. Compound shall be designed for filling voids in damaged wood materials that have deteriorated due to weathering and decay. Compound shall be capable of filling deep holes and spreading to feather edge.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Abatron, Inc.
b. Advanced Repair Technology, Inc.
c. ConServ Epoxy LLC.
d. Gougeon Brothers, Inc.
e. Polymeric Systems, Inc.
f. Protective Coating Company.
g. System Three Resins, Inc.

D. Wood Filler: Solvent base, tinted to match surface finish color.

2.4 WEATHER STRIPPING

A. Compression-Type Weather Stripping: Compressible weather stripping designed for permanently resilient sealing under bumper or wiper action; completely concealed when window is closed.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. National Guard Products, Inc.
b. Pemko Manufacturing Co.
c. Reese Enterprises, Inc.
d. Zero International, Inc.

2. Weather-Stripping Material: Match existing materials and profiles as much as possible unless otherwise indicated.

a. Cellular Elastomeric Gaskets: Preformed; complying with ASTM C 509.
b. Doors: Silicone bulb in aluminum extrusion, by Reese Enterprises, Inc. or equivalent product by another listed manufacturer.

B. Sliding-Type Weather Stripping: Woven-pile weather stripping of wool, polypropylene, or nylon pile and resin-impregnated backing fabric.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. National Guard Products, Inc.
b. Pemko Manufacturing Co.
c. Reese Enterprises, Inc.
d. Zero International, Inc.

2. Weather Seals: Provide weather stripping with integral barrier fin or fins of semirigid, polypropylene sheet or polypropylene-coated material.

2.5 GLAZING MATERIALS

A. Glazing system: Wood stop (profile to replication putty glazing) be fabricated to secure existing IG units in sash.

2.6 MISCELLANEOUS MATERIALS

A. Borate Preservative Treatment: Inorganic, borate-based solution, with disodium octaborate tetrahydrate as the primary ingredient; manufactured for preserving weathered and decayed wood from further damage by decay fungi and wood-boring insects; complying with AWPA P5; containing no boric acid.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Abatron, Inc.
b. Nisus Corporation.
c. System Three Resins, Inc.

B. Cleaning Materials:

1. Detergent Solution: Solution prepared by mixing 2 cups of tetrasodium pyrophosphate (TSPP), 1/2 cup of laundry detergent that contains no ammonia, 5 quarts of 5 percent sodium hypochlorite bleach, and 15 quarts of warm water for each 5 gal. of solution required.
2. Mildewcide: Commercial, proprietary mildewcide or a solution prepared by mixing 1/3 cup of household detergent that contains no ammonia, 1 quart of 5 percent sodium hypochlorite bleach, and 3 quarts of warm water.

C. Adhesives: Wood adhesives for exterior exposure, with minimum 15- to 45-minute cure at 70 deg F, in gunnable and liquid formulations as recommended in writing by adhesive manufacturer for each type of repair.

D. Fasteners: Use fastener metals that are noncorrosive and compatible with each material joined.

1. Match existing fasteners in material and type of fastener unless otherwise indicated.
2. Use concealed fasteners for interconnecting wood components.
3. Use concealed fasteners for attaching items to other work unless exposed fasteners are unavoidable or the existing fastening method.
4. For fastening metals, use fasteners of same basic metal as fastened metal unless otherwise indicated.
5. For exposed fasteners, use Phillips-type machine screws of head profile flush with metal surface unless otherwise indicated.
6. Finish exposed fasteners to match finish of metal fastened unless otherwise indicated.

E. Anchors, Clips, and Accessories: Fabricate anchors, clips, and window accessories of aluminum, nonmagnetic stainless steel, or hot-dip zinc-coated steel complying with requirements in ASTM B 633 for SC 3 (Severe) service condition.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect adjacent materials from damage by performing wood window **and doors** repairs.

B. Clean wood windows **and doors** of mildew, algae, moss, plant material, loose paint, grease, dirt, and other debris by scrubbing with bristle brush or sponge and detergent solution. Scrub mildewed areas with mildewcide. After cleaning, rinse thoroughly with fresh water. Allow to dry before repairing or painting.

C. Condition replacement wood members and replacement units to prevailing conditions at installation areas before installing.

3.2 WOOD WINDOW **AND DOOR** REPAIRS, GENERAL

A. Have wood window and door repairs performed only by qualified wood-window **and door**-repair specialist.

B. Appearance Standard: Completed work is to have a uniform appearance as viewed by Architect from the window and door interior at 5 feet away and from the window **and door** exterior at 20 feet away.

C. Execution of the Work: In repairing wood windows **and doors**, disturb them as minimally as possible and as follows:

1. Stabilize and repair wood windows **and doors** to reestablish structural integrity and weather resistance while maintaining the existing form of each item.
2. Remove coatings and apply borate preservative treatment before repair. Remove coatings according to Division 9 Section "Painting" unless otherwise indicated.
3. Repair items in place where possible.
4. Install temporary protective measures to protect wood window **and door** work that is indicated to be completed later.
5. Refinish wood windows **and doors** according to Division 9 Section "Painting" unless otherwise indicated.

D. Mechanical Abrasion: Where mechanical abrasion is needed for the work, use gentle mechanical methods, such as scraping and natural-fiber bristle brushing, that will not abrade wood substrate, reducing clarity of detail.

E. Repair Wood Windows **and Doors**: Match existing materials and features.

1. Repair wood windows **and doors** by consolidating, patching, splicing, or otherwise reinforcing wood with new wood matching existing wood or with salvaged, sound, original wood.

F. Protection of Openings: Where sash or windows **or doors** are indicated for removal, cover resultant openings with temporary enclosures so that openings are weathertight during repair period.

G. Identify removed windows **and doors**, frames, sash, and members with numbering system corresponding to window locations to ensure reinstallation in same location. Key windows and doors, sash, **leaf** and members to Drawings showing location of each removed unit. Permanently label units in a location that will be concealed after reinstallation.

3.3 WOOD WINDOW **AND DOOR** PATCH-TYPE REPAIR

A. General: Patch wood members that exhibit depressions, holes, or similar voids and that have limited amounts of rotted or decayed wood.

1. Remove from windows before performing patch-type repairs at meeting or sliding surfaces unless otherwise indicated. Reglaze units before reinstallation.
2. Verify that surfaces are sufficiently clean and free of paint residue before patching.
3. Remove rotted or decayed wood down to sound wood.

B. Apply borate preservative treatment to accessible surfaces after removing rotted or decayed wood and before applying wood consolidant or patching compound. Apply treatment liberally by brush to joints, edges, and ends; top, sides, and bottom. Allow treatment to dry.

C. Apply wood-patching compound to fill depressions, nicks, cracks, and other voids created by removed or missing wood.

1. Prime patch area with application of wood consolidant or manufacturer's recommended primer.
2. Mix only as much patching compound as can be applied according to manufacturer's written instructions.
3. Apply patching compound in layers as recommended in writing by manufacturer until the void is completely filled.
4. Sand patch surface smooth and flush with adjacent wood, without voids in patch material, and matching contour of wood member.
5. Clean spilled compound from adjacent materials immediately.

3.4 WOOD WINDOW **AND DOOR** MEMBER-REPLACEMENT REPAIR

A. General: Replace parts of or entire wood window members at locations where damage is too extensive to patch.

1. Remove from windows before performing member-replacement repairs unless otherwise indicated.
2. Verify that surfaces are sufficiently clean and free of paint residue before repair.
3. Remove broken, rotted, and decayed wood down to sound wood.

4. Custom fabricate new wood to replace missing wood; either replace entire wood member or splice new wood part into existing member.
5. Secure new wood using finger joints, multiple dowels, or splines with adhesive and nailing to ensure maximum structural integrity at each splice. Use only concealed fasteners. Fill nail holes and patch surface to match surrounding sound wood.

B. Apply borate preservative treatment to accessible surfaces after replacements are made. Apply treatment liberally by brush to joints, edges, and ends; top, sides, and bottom.

C. Repair remaining depressions, holes, or similar voids with patch-type repairs.

D. Clean spilled materials from adjacent surfaces immediately.

E. Reinstall units removed for repair into original openings.

F. Weather Stripping: Replace nonfunctioning and install missing weather stripping to ensure full-perimeter and meeting rail weather stripping for each operable sash.

3.5 GLAZING

A. Completely remove all glass and glazing materials from existing sash and leaf.

B. Verify that glazing rabbets are primed before installing glass.

C. Install glass using wood stop.

3.6 WEATHER STRIPPING INSTALLATION

A. Install weather stripping for tight seal of joints as determined by preconstruction testing and demonstrated in mockup.

3.7 ADJUSTING

A. Adjust existing and replacement operating sash, screens, hardware, weather stripping, and accessories for a tight fit at contact points and weather stripping for smooth operation and weathertight closure. Lubricate hardware and moving parts.

3.8 CLEANING AND PROTECTION

A. Protect window **and door** surfaces from contact with contaminating substances resulting from construction operations. Monitor window surfaces adjacent to and below exterior concrete and masonry during construction for presence of dirt, scum, alkaline deposits, stains, or other contaminants. If contaminating substances contact window surfaces, remove contaminants immediately.

B. Clean exposed surfaces immediately after repairing wood windows. Avoid damage to coatings and finishes. Remove excess sealants, glazing and patching materials, dirt, and other substances.

C. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction.

END OF SECTION 080152.61

230130 - HVAC AIR-DISTRIBUTION SYSTEM CLEANING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Section includes cleaning of interior surfaces of HVAC equipment. The HVAC equipment cleaning work includes the following:
   1. Supply air, return air, outside air intake, exhaust and relief air duct distribution systems.
   2. Duct-mounted VAV boxes, unit heaters, baseboards, and exhaust fans.
   3. Air distribution devices (registers, grilles, and diffusers).

B. The HVAC equipment cleaning work includes verification, through inspection and/or testing by the cleaning contractor, as specified herein and as indicated in referenced NADCA standards.

1.2 DEFINITIONS

A. HVAC System: For purposes of this section, the surfaces to be cleaned include all interior surfaces of the heating, air-conditioning and ventilation system from the points where the air enters the system to the points where the air is discharged from the system, including the inside of air distribution equipment, coils, and condensate drain pans; see NADCA ACR for more details.

1.3 REFERENCE STANDARDS

A. NADCA ACR - Assessment, Cleaning and Restoration of HVAC Systems; 2013.

B. NFPA 90A - Standard for the Installation of Air-Conditioning and Ventilating Systems; 2018.

C. NFPA 90B - Standard for the Installation of Warm Air Heating and Air-Conditioning Systems; 2018.

D. UL 181 - Standard for Factory-Made Air Ducts and Air Connectors; current edition, including all revisions.

E. UL 181A - Closure Systems for Use with Rigid Air Ducts; Current Edition, Including All Revisions.

1.4 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Qualifications Statement: Submit qualifications of proposed cleaning contractor for approval.

C. Project Cleanliness Evaluation and Cleaning Plan, as specified.

D. Project Closeout Report: Include field quality control reports, evidence of satisfactory cleaning, and documentation of items needing further repair.

1.5 QUALITY ASSURANCE

A. Cleaning Contractor Qualifications: Company specializing in the cleaning and restoration of HVAC systems as specified in this section.
   1. Certified by one of the following:
      a. NADCA, National Air Duct Cleaners Association: www.nadca.com
   2. Having minimum of five years documented experience.
   3. Employing for this project a supervisor certified as an Air Systems Cleaning Specialist by NADCA.

PART 2 - PRODUCTS

2.1 TOOLS AND EQUIPMENT

A. Vacuum Devices and Other Tools: Exceptionally clean, in good working order, and sealed when brought into the facility.

B. Vacuum Devices That Exhaust Air Inside Building, Including Hand-Held and Wet Vacuums: Equipped with HEPA filtration with 99.97 percent collection efficiency for minimum 0.3-micron size particles and DOP test number.

C. Vacuum Devices That Exhaust Air Outside Building, Including Truck- and Trailer-Mounted Types: Equipped with particulate collection including adequate filtration to contain debris removed from the HVAC system; exhausted in manner that prevents contaminant re-entry to building; compliant with applicable regulations as to outdoor environmental contamination.

2.2 REPLACEMENT PRODUCTS

A. Fibrous Glass Insulation: Provide material complying with UL 181 equivalent to existing material in quality and thickness.

2.3 DUCT DEODORIZER

A. Equal to Madacide, as supplied by Mateson Chemical, EnviroCon as manufactured by Bio-Cide
   1. International, Inc., or approved equal.

2.4 SANITIZER

A. An E.P.A. registered sanitizer "Oxine" as manufactured by Bio-Cide International or approved equal. "BBJ" microbiocide as manufactured by BBJ Chemical Compounds, "Airkem NR Quat" as manufactured by Airkem Industrial Products, or approved equal.

2.5 SURFACE TREATMENTS

A. A duct liner adhesive coating, Foster 40-10, 40-20 or 40-23, as manufactured by Foster Products Corporation, Cover-Al as manufactured by Mateson Chemical Corporation, or approved equal shall be used. Product shall be a quick setting waterbase adhesive and coating designed for field application to faced or unfaced fiberglass duct liner insulation, or to unfaced fiberboard ductboard insulation. The coating shall dry to form an effective air erosion

preventive coating, sealing and reinforcing the surface. The coating shall be resistant to fire, water, oil, grease, bacteria, and fungus.

B. Mechanical insulation repair coating, Tough Coat, as manufactured by Vac System Industries, Inc., or approved equal shall be used. The coating material shall contain an anti-microbial agent, shall not affect the thermal or acoustic properties of the insulation, and shall conform to NFPA 90A and NFPA 90B.

PART 3 - EXECUTION

3.1 PROJECT CONDITIONS

A. Comply with applicable federal, state, and local requirements.

B. Perform cleaning, inspection, and remediation in accordance with the recommendations of NADCA ACR and as specified herein.

C. Where NADCA ACR uses the terms "recommended", "highly recommended", or "ideally" in regard to a certain procedure or activity, do that unless it is clearly inapplicable to the project.

D. Obtain Board's approval of proposed temporary locations for large equipment.

E. Designate a decontamination area and obtain Board's approval.

F. If unforeseen mold or other biological contamination is encountered, notify Architect/Engineer of Record immediately, identifying areas affected and extent and type of contamination.

3.2 EXAMINATION

A. Inspect the system as required to determine appropriate methods, tools, equipment, and protection.

B. Perform “Project Evaluation and Recommendation” according to NADCA ACR.

C. Proceed with work only after unsatisfactory conditions have been corrected and after all HVAC equipment renovation has been completed, but prior to the final balancing of the HVAC systems.

D. Start of cleaning work constitutes acceptance of existing conditions.

E. When concealed spaces are later made accessible, examine and document interior conditions prior to beginning cleaning.

F. Document all instances of mold growth, rodent droppings, other biological hazards, and damaged system components.

3.3 PREPARATION

A. When cleaning work might adversely affect life safety systems, including fire and smoke detection, alarm, and control, coordinate scheduling and testing and inspection procedures with authorities having jurisdiction.

B. Ensure that electrical components that might be adversely affected by cleaning are de-energized, locked out, and protected prior to beginning work.

C. Air-Volume Control Devices: Mark the original position of dampers and other air-directional mechanical devices inside the HVAC system prior to starting cleaning.

D. Access to Concealed Spaces: Use existing service openings and make additional service openings as required to accomplish cleaning and inspection.
   1. Do not cut openings in non-HVAC components without obtaining the prior approval of Board.
   2. Make new openings in HVAC components in accordance with NADCA Standard 05; do not compromise the structural integrity of the system.
   3. Do not cut service openings into flexible duct; disconnect at ends for cleaning and inspection.

E. Ceiling Tile: Lay-in ceiling tile may be removed to gain access to HVAC systems during the cleaning process; protect tile from damage and reinstall upon completion; replace damaged tile.

3.4 CLEANING

A. Use any cleaning method recommended by NADCA ACR unless otherwise specified; do not use methods prohibited by NADCA ACR, or that will damage HVAC components or other work, or that will significantly alter the integrity of the system.

B. Obtain Board's approval before using wet cleaning methods; ensure that drainage is adequate before beginning.

C. HVAC EQUIPMENT CLEANING
   1. General:
      a. Containment: Debris removed during cleaning shall be collected and precautions must be taken to ensure that debris is not dispersed outside the HVAC system during the cleaning process.
      b. Particulate Collection: Where the particulate collection equipment is exhausting inside the building. HEPA filtration with 99.97% collection efficiency for 0.3 micron size (or greater) particles shall be used. Mechanical cleaning operations shall be undertaken only with particulate collection equipment in place including adequate filtration to contain debris removed from the HVAC system. When the particulate collection equipment is exhausting outside the building, precautions shall be taken to locate the equipment down wind and away from all air intakes and other points of entry into the building.
      c. Controlling odors: Control offensive odors and/or mist vapors during the cleaning process. Refer to Division 01 Section, "Dust, Fume and Odor Control."
      d. Cleaning: Visibly clean all system components as defined in applicable NADCA standards. Upon completion, all components must be returned to those settings recorded prior to cleaning operations.
      e. Removal: Remove visible surface contaminants and deposits from within the HVAC system in strict accordance with these specifications and NADCA recommendations.

f. Verification: Verification of HVAC system cleanliness shall be determined after mechanical cleaning, but before the application of any treatment or introduction of any treatment-related substance, including biocidal agents and coatings.

2. Air-Volume Control Devices: Existing dampers and any-directional mechanical devices inside the HVAC system to remain must have their position marked prior to cleaning and upon completion must be restored to their marked position.
3. Service Openings: Utilize service openings, at various points of the HVAC system for physical and mechanical entry and inspection.
   a. Utilize the existing openings already installed in the HVAC system where possible.
   b. Other access points shall be provided, where required, and shall be sealed in accordance with industry codes and standards. Refer to Sections 23 31 00- HVAC Ducts and Casings and Section 23 33 00 - Air Duct Accessories.
   c. Closures must not significantly hinder, restrict, or alter the air-flow within the system.
   d. Closures must be properly insulated to prevent heat loss/gain or condensation on surfaces within insulated systems.
   e. Openings must not compromise the structural integrity of the system.
   f. Construction techniques used in the creation of openings shall conform to requirements of the authority having jurisdiction and applicable NFPA, SMACNA and NADCA standards.
   g. Cutting service openings into flexible duct is not permitted.
   h. All service openings capable of being re-opened for future inspection or remediation shall be clearly marked and shall have their location recorded in project record documents.
4. Outside air intake shaft and ducts, Terminal Units (VAV, etc.) Blowers and Exhaust Fans: Clean supply, return and exhaust fans , including blowers, fan housings, air chambers and plenums, heaters/cooling coils, scrolls, blades, vanes, shafts, baffles, dampers and drive assemblies. All visible surface contamination shall be removed.
   a. Assure that a suitable operative drainage system is in place prior to beginning wash down procedures.
   b. Clean all coils and related components, including evaporator fins.
5. Debris disposal: All debris removed from the HVAC System shall become property of the Contractor and shall be removed from the Site and disposed of legally.
6. Source Removal Cleaning Methods: The HVAC system shall be cleaned using Source Removal mechanical cleaning methods noted in NADCA ACR. The cleaning method(s) selected shall render the HVAC system visibly clean and capable of passing cleaning verification methods and other specified tests. No cleaning method, or combination of methods, should be used which could potentially damage components, or alter the integrity, of the HVAC system.
   a. All methods shall incorporate the use of vacuum collection devices that are operated continuously during cleaning. A vacuum device shall be connected to the downstream end of the section being cleaned through a predetermined opening. The vacuum collection device must be of sufficient power to render all areas being cleaned under negative pressure.
   b. All vacuum devices, including hand-held and wet vacuums, exhausting air inside the building shall be equipped with HEPA filters (99.97 % efficiency).
   c. All vacuum devices exhausting air outside the facility shall be equipped with particulate collection including adequate filtration to contain debris removed from the HVAC system. Such devices shall exhaust in a manner that will not allow

contaminants to re-enter the facility. Release of debris outdoors shall be done in accordance with requirements of authority having jurisdiction.

D. Ducts: Mechanically clean all portions of ducts.

E. Hoses, Cables, and Extension Rods: Clean using suitable sanitary damp wipes at the time they are being removed or withdrawn from their normal position.

F. Registers, Diffusers, and Grilles: When removing, take care to prevent containment exposure due to accumulated debris.

G. Coils: Follow NADCA ACR completely including measuring static pressure drop before and after cleaning; do not remove refrigeration coils from system to clean; report coils that are permanently impacted.
   1. Measure static pressure differential across each coil.
   2. Any cleaning methods used shall render the coil visibly clean and capable of passing coil cleaning verification in accordance with NADCA standards.
      a. Coil drain pans shall be subject to NADCA ACR, "Non-Porous Surfaces Cleaning Verification."
      b. The drain for the condensate drain pan shall remain operational.
      c. Cleaning methods shall not cause any damage to displacement of, inhibit heat transfer, or erosion of the coil surface or fins, and shall conform to coil manufacturer recommendations.
      d. Coils shall be thoroughly rinsed with clean water to remove latent residues, and all fins shall be combed and straightened.
   3. Coils and coil drain pans are to be cleaned in accordance with NADCA ACR, with drain pan(s) kept operational. Rinse coils with clean water to remove latent residues and cleaning materials; comb and straighten fins.
   4. Electric-resistance coils shall be de-energized, locked out, and tagged prior to cleaning.
   5. Coils that are not equipped with drain pans shall first be subjected to Type 1 cleaning. If Type 1 does not provide acceptable results, Type 2 shall be used, with a means for draining of the cleaning water provided.

H. Biocidal Agents and Coatings:
   1. Biocidal agents shall only be applied if active fungal growth is found, or where unacceptable levels of fungal contamination have been verified through the testing.
   2. Application of any biocidal agents used to control the growth of fungal or bacteriological contaminants shall be performed after the removal of surface deposits and debris.
   3. Only biocidal agents registered by the U. S. Environmental Protection Agency (EPA) specifically for use within HVAC system shall be used.
   4. Biocidal agents shall be applied in strict accordance with manufacturer's instructions.
   5. Biocidal coating products for both porous and non-porous surfaces shall be EPA registered, water soluble solutions.

I. Fibrous Glass Material: Use HEPA vacuuming equipment, under constant negative pressure, do not permit to get wet, and do not damage surfaces; replace material damaged by cleaning operations.

J. Existing Damaged Fibrous Glass Material: Report to Architect/Engineer of Record all evidence of damage, deterioration, delaminating, friable material, mold or fungus growth, or moisture that cannot be remedied by cleaning or resurfacing with an acceptable insulation repair coating.
   1. Material with active fungal growth is considered unremediable.
   2. Remove unremediable material and clean underlying surfaces.

K. Collect debris removed during cleaning; ensure that debris is not dispersed outside the HVAC system during the cleaning process.

L. Store contaminated tools and equipment in polyethylene bags until cleaned in the designated decontamination area.

3.5 REPAIR

A. Repair openings cut in the ventilation system so that they do not significantly alter the airflow or adversely impact the facility's indoor air quality.

B. At insulated ducts and components, accomplish repairs in such a manner as to achieve the equivalent thermal value.

C. Reseal new openings in accordance with NADCA Standard 05.

D. Reseal rigid fiber glass duct systems using closure techniques that comply with UL 181 or UL 181A.

E. When new openings are intended to be capable of being re-opened in the future, clearly mark them and report their locations to Board in project report documents.

3.6 FIELD QUALITY CONTROL

A. Ensure that the following field quality control activities are completed prior to application of any treatments or coatings and prior to returning HVAC system to normal operation.

B. Visually inspect all portions of the cleaned components; if not visibly clean as defined in NADCA ACR, re-clean and reinspect.

C. Coils: Cleaning must restore the coil pressure drop to within 10 percent of the coil's original installed pressure drop; if original pressure drop is not known, coil will be considered clean if free of foreign matter and chemical residue based on visual inspection.

D. Notify Architect/Engineer of Record when cleaned components are ready for inspection.

E. Notify Board's testing and inspection agency when cleaned components are ready for inspection.

F. Board reserves the right to verify cleanliness using NADCA ACR Surface Comparison Testing or NADCA Vacuum Test.

G. When directed, re-clean components until they pass.

H. Contractor shall bear the costs of retesting due to inadequate cleaning.

I. Submit evidence that all portions of the system required to be cleaned have been cleaned satisfactorily.

3.7 ADJUSTING

A. After satisfactory completion of field quality control activities, restore adjustable devices to original settings, including, but not limited to, dampers, air directional devices, valves, fuses, and circuit breakers.

B. At the conclusion of the HVAC cleaning work, but before the HVAC systems are returned to normal operation, the Contractor is to return all controls, dampers, and other directional devices within the HVAC system to the settings recorded prior to the start of cleaning.

C. Where areas of the HVAC systems have been found to be damaged and/or in need of repair, the Contractor shall prepare a written report indicating the nature and locations of these items. A copy of this report shall be submitted to the Owner.

END OF SECTION 220519

SECTION 232500 - HVAC WATER TREATMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES THE FOLLOWING:

A. Water treatment Scope.
   1. Remove existing open and closed systems water treatment and provide new water treatment as noted hereinafter.
   2. Remove existing pot feeders and provide new ones for chilled water and hot water systems as noted hereinafter.
   3. Provide 30% propylene glycol solution for the chilled and hot water systems.
   4. Include flushing and cleaning of the chilled water and hot water systems.

B. Materials.
   1. System cleaner.
   2. Closed system treatment (water).
   3. Open system Condenser water system treatment (cooling towers).

C. By-pass (pot) feeder.

D. Solution metering pump.

E. Solution tanks.

F. Liquid level switch.

G. Acidity controller.

H. Conductivity controller.

I. Water meter.

J. Solenoid valves.

K. Timers.

L. Water softeners.

M. Test equipment.

N. Side-stream filtration equipment.

O. Centrifugal separators

P. Stainless steel piping

1.2 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide chemical treatment materials, chemicals, and equipment including electrical characteristics and connection requirements.

C. Shop Drawings: Indicate system schematic, equipment locations, and controls schematics, electrical characteristics and connection requirements. Submit shop drawings showing scaled plans, elevations, sections, and large-scale details. Include pretreatment and chemical treatment equipment, including tanks, sequence of operations and piping connections to HVAC systems, and clear space required for maintenance.
   1. Wiring Diagrams: For power and control wiring. Clearly differentiate between factory-installed and field-installed wiring.

D. Shop Drawings: Indicate system schematic, equipment locations, and controls schematics, electrical characteristics and connection requirements.

E. Qualifications: For treatment provider and project technicians.

F. Manufacturer's Installation Instructions: Indicate placement of equipment in systems, piping configuration, and connection requirements.

G. Manufacturer's Field Reports: Indicate start-up of treatment systems when completed and operating properly. Indicate analysis of system water after cleaning and after treatment.

H. Certificate: Submit certificate of compliance from Authority Having Jurisdiction indicating approval of chemicals and their proposed disposal.

I. Project Record Documents: Record actual locations of equipment and piping, including sampling points and location of chemical injectors.

J. Operation and Maintenance Data: Include data on chemical feed pumps, agitators, and other equipment including spare parts lists, procedures, and treatment programs. Include step by step instructions on test procedures including target concentrations.

K. Water Treatment Program: Written explanation of procedures and operations to be performed, on an annual basis, by application equipment to ensure water quality criteria specified in Article "Performance Requirements" is achieved and maintained. Submit three copies in 3-ring binders.

L. Passivation Confirmation Letter (open condenser water systems): Submit a signed letter verifying passivation of galvanized-steel surfaces.

1.3 QUALITY ASSURANCE

A. Water Treatment Service Provider Qualifications: Engage a firm with not less than 5 years experience in the analysis and maintenance of the quality of water utilized in HVAC equipment and systems comparable to those indicated or required for the Project, and that clearly demonstrates a capability to accurately analyze water qualities, install water-treatment equipment, and apply water treatment processes as specified.
   1. Project Technicians: Certified Water Technologists (CWT) in good standing, certified by the AWT, or have similar training and experience qualifications.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70 by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

1.4 PERFORMANCE REQUIREMENTS

A. Water Quality:
1. General: Water used within HVAC systems shall minimize corrosion, scale buildup, and biological growth, to ensure optimum efficiency of HVAC equipment and that a hazard to either operating personnel or the environment has not been created.
2. HVAC water treatment shall be based upon quality of water available at Project site, HVAC system equipment material characteristics and functional performance characteristics, operating personnel capabilities, and requirements and guidelines of authorities having jurisdiction.
3. Water used within closed hydronic systems (both water and glycol), including hot-water heating, chilled water, and dual-temperature water systems shall have the following qualities:
a. Acidity (pH): 8.5 to 10.2.
b. "P" Alkalinity: Record value and include in test report.
c. Boron: Adjust value as needed to buffer pH to range indicated. Record final value in test report.
d. Soluble Copper: 0.20 ppm, maximum.
e. Conductivity: 3500 µS/cm, maximum.
f. Free Caustic Alkalinity: 20 ppm, maximum.
g. Microbiological Limits:
1) Total Aerobic Plate Count: 1000 organisms/ml, maximum.
2) Total Anaerobic Plate Count: 100 organisms/ml, maximum.
3) Nitrate Reducers: 100organisms/ml, maximum.
4) Sulfate Reducers: 0 organisms/ml.
5) Iron Bacteria: 0 organisms/ml.
4. Open Hydronic Systems (including condenser water):
a. Acidity (pH): 8.0 to 9.1.
b. "P" Alkalinity: 50 ppm, maximum.
1) Soluble Copper: 0.20 ppm, maximum.
c. Conductivity: 1500 µS/cm.
d. Free "OH" Alkalinity: 0 ppm.
e. Microbiological Limits:
1) Total Aerobic Plate Count: 10,000 organisms/ml, maximum.
2) Total Anaerobic Plate Count: 1,000 organisms/ml, maximum.
3) Nitrate Reducers: 100 organisms/ml, maximum.
4) Sulfate Reducers: 0 organisms/ml.
5) Iron Bacteria: 0 organisms/ml.
f. Polymer Testable: 10 to 40.
5. Passivation for Galvanized Steel (cooling tower applications): For the first 60 days of operation.
a. pH: 7 to 8.
b. Calcium Carbonate Hardness: 100 to 300 ppm.
c. Calcium Carbonate Alkalinity: 100 to 300 ppm; pH shall not exceed 8 as the controlling limit.

1.5 MAINTENANCE SERVICE

A. Scope of Maintenance Service: Provide chemicals and service (all labor) program to maintain required water conditions and quality for chilled-water piping, heating hot-water piping, and dual temperature-water piping, condenser-water piping, and related equipment. Services and

chemicals shall be provided for a period of one year from date of Preliminary Acceptance, and shall include the following:

1. Initial water analysis (conducted at Site) and HVAC water-treatment recommendations. Written report of the findings to be left with the Board and a copy of such report shall be forwarded to both the commissioning agent and consulting engineer.
2. Startup assistance for Contractor to flush the systems, clean with detergents, and initially fill systems with required glycol/chemical treatment prior to operation.
3. Periodic field service and consultation. Include all work specified. Check for proper operation of all pumps, controllers, meters, and sensors. Calibrate sensors as required. Check chemical tank levels and inventory, and arrange chemical deliveries well in advance of needs.
4. Customer report charts and log sheets.
5. Laboratory technical analysis.
6. Analyses and reports of all chemical items concerning safety and compliance with government regulations.
7. Train Board's operating personnel with the operation and adjustment of each piece of equipment / system, care and handling of treatment chemicals, and water test control procedures including basic water chemistry and the importance of water treatment.

1.6 WARRANTY

A. Written warranty, executed by manufacturer agreeing to repair or replace components or equipment that fail in materials or workmanship within warranty period indicated.
   1. Warranty Period: One year from date of Preliminary Acceptance or eighteen months from date of shipment from factory, whichever is longer.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Nalco, an Ecolab Company

B. Earthwise Environmental.

C. H-O-H Chemicals, Inc.

D. US Water

E. Global Water Technology, Inc.

2.2 MATERIALS

A. System Cleaner:
   1. Liquid alkaline compound with emulsifying agents and detergents to remove grease and petroleum products; sodiumtripoly phosphate and sodium molybdate.
   2. Biocide chlorine release agents such as sodium hypochlorite or calcium hypochlorite or microbiocides such as quarternary ammonia compounds, tributyltin oxide, methylene bis (thiocyanate).

B. Closed System Treatment (Water):
   1. Sequestering agent to reduce deposits and adjust pH; polyphosphate.

2. Corrosion inhibitors; boron-nitrite, sodium nitrite and borax, sodium totyltriazole, low molecular weight polymers, phosphonates, sodium molybdate, or sulphites.
3. Conductivity enhancers; phosphates or phosphonates.

C. Glycol (Closed Systems):
1. Propylene Glycol: HVAC grade, containing corrosion inhibitors and environmental stabilizer additives for mixing with softened water. Softened water shall be used to dilute the glycol to 30 percent by volume in the system.
a. Industrial/automotive/marine/raw glycol shall NOT be used in any HVAC application.

D. Condenser Water System Treatment (Cooling Towers):
1. Sequestering agent to inhibit scaling; phosphonates, sodium polyphosphates, lignin derivatives, synthetic polymer polyelectrolytes, or organic phosphates.
2. Acid to reduce alkalinity and pH; sulphuric acid.
3. Corrosion inhibitor; zinc-phosphate, phosphonate-phosphate, phosphonate-molybdate and phosphonate-silicate, sodium tolyltriazole, or low molecular weight polymers.
4. Biocide chlorine release agents such as sodium hypochlorite or calcium hypochlorite.

2.3 BY-PASS (POT) FEEDER

A. Manufacturers:
1. Griswold Controls
2. J. L. Wingert Company
3. Neptune, a brand of the Dover Company

B. Bypass Feeders: Steel, with corrosion-resistant exterior coating, minimum 3-1/2-inch fill opening in the top, and NPS 3/4 bottom inlet and top side outlet. Quarter turn or threaded fill cap with gasket seal and diaphragm to lock the top on the feeder when exposed to system pressure in the vessel.
1. Capacity: 5 gallons.
2. Minimum Working Pressure: 125 psig.

2.4 SOLUTION METERING PUMP

A. Chemical Solution Injection Pumps:
1. Self-priming, positive-displacement; rated for intended chemical with minimum 25 percent safety factor for design pressure and temperature.
2. Adjustable flow rate.
3. Metal and thermoplastic construction.
4. Built-in relief valve.
5. Fully enclosed, continuous-duty, single-phase motor. Comply with requirements in Section 23 05 13 - Common Motor Requirements for HVAC Equipment.

B. Chemical Solution Tubing: Polyethylene tubing with compression fittings and joints.

C. Injection Assembly:
1. Quill: Minimum NPS 1/2 with insertion length sufficient to discharge into at least 25 percent of pipe diameter.
2. Ball Valve: Two-piece, stainless steel as described in "Stainless-Steel Pipes and Fittings" Article, and selected to fit quill.

3. Packing Gland: Mechanical seal on quill of sufficient length to allow quill removal during system operation.
4. Assembly Pressure/Temperature Rating: Minimum 600 psig at 200 deg F.

2.5 SOLUTION TANKS

A. 120 gallon capacity, polyethylene, self-supporting, 1 gallon graduated markings; molded fiberglass cover with recess for mounting pump, agitator, and liquid level switch.

B. Minimum 110% containment vessel

2.6 LIQUID LEVEL SWITCH

A. Polypropylene housing with integrally mounted PVC air trap, receptacles for connection to metering pump, and low level alarm.

2.7 ACIDITY (PH) CONTROLLER (OPEN SYSTEMS REQUIRING ACID INJECTION FOR ACIDITY (PH) CONTROL):

A. Microprocessor-based controller, 1 percent accuracy in a range from zero to 14 units. Incorporate solid-state integrated circuits and digital LCD display in NEMA 250, Type 12 enclosure with gasketed and lockable door.

B. Digital display and touch pad for input.

C. Sensor probe adaptable to sample stream manifold.

D. High, low, and normal pH indication.

E. High or low pH alarm light, trip points field adjustable; with silence switch.

F. Hand-off-auto switch for acid pump.

G. Internal adjustable hysteresis or deadband.

H. Building automation system alarm dry contacts.

I. Audible alarm and light.

J. Provide a backup safety timer for systems requiring acid injection that will shut off the acid pump after a fixed time, to protect against pH controller failure.

2.8 CONDUCTIVITY CONTROLLER (OPEN SYSTEMS - COOLING TOWERS):

A. Microprocessor-based controller, 1 percent accuracy in a range from zero to 5000 micromhos. Incorporate solid-state integrated circuits and digital LCD display in NEMA 250, Type 12 enclosure with gasketed and lockable door

B. Digital display and touch pad for input.

C. Sensor probe adaptable to sample stream manifold.

D. High, low, and normal conductance indication.

E. High or low conductance alarm light, trip points field adjustable; with silence switch.

F. Hand-off-auto switch for solenoid bleed-off valve.

G. Bleed-off valve activated indication.

H. Internal adjustable hysteresis or deadband.

I. Building automation system alarm dry contacts.

J. Audible alarm and light.

K. Bleed Valves:
1. Cooling Systems: Forged-brass body, globe pattern, general-purpose solenoid with continuous-duty coil, or motorized valve.

2.9 WATER METER

A. Water Meter:
1. Type: AWWA C700, oscillating-piston, magnetic-drive, tantalization meter.
2. Body: Bronze.
3. Minimum Working-Pressure Rating: 150 psig.
4. Maximum Pressure Loss at Design Flow: 3 psig.
5. Registration: Gallons or cubic feet.
6. End Connections: Threaded or flanged.
7. Controls: Flow-control switches with normally open contacts; rated for maximum 10 A, 250-V ac; and that will close at adjustable increments of total flow. Hardwired to both the chemical controller and the building automation system (BAS).

B. Water Meter:
1. Type: AWWA C701, turbine-type, tantalization meter.
2. Body: Bronze.
3. Minimum Working-Pressure Rating: 150 psig.
4. Maximum Pressure Loss at Design Flow: 3 psig.
5. Registration: Gallons or cubic feet.
6. End Connections: Threaded or flanged.
7. Controls: Flow-control switch with normally open contacts; rated for maximum 10 A, 250-V ac; and that will close at adjustable increments of total flow. Hardwired to both the chemical controller and the building automation system (BAS).

2.10 SOLENOID VALVES

A. Forged brass body globe pattern, normally open or closed as required, explosion-proof and watertight solenoid enclosure, and continuous duty coil.

2.11 TIMERS

A. Inhibitor Injection Timers (Open Systems):

1. Microprocessor-based controller with LCD display in NEMA 250, Type 12 enclosure with gasketed and lockable door.
2. Programmable timers with infinite adjustment over full range, and mounted in cabinet with hand-off-auto switches and status lights.
3. Test switch.
4. Hand-off-auto switch for chemical pump.
5. Illuminated legend to indicate feed when pump is activated.
6. Programmable lockout timer with indicator light. Lockout timer to deactivate the pump and activate alarm circuits.
7. LCD makeup totalizer to measure amount of makeup and bleed-off water from two water meter inputs.
8. Building automation system alarm dry contacts.
9. Audible alarm and light.

B. Biocide Feeder Timer (Open Systems - Cooling Towers):
1. Microprocessor-based controller with digital LCD display in NEMA 250, Type 12 enclosure with gasketed and lockable door.
2. 24-hour timer with 14-day skip feature to permit activation any time of day.
3. Precision, solid-state, bleed-off lockout timer and clock-controlled biocide pump timer. Prebleed and bleed lockout timers.
4. Solid-state alternator to enable use of two different formulations.
5. 24-hour display of time of day.
6. 14-day display of day of week.
7. Battery backup so clock is not disturbed by power outages.
8. Hand-off-auto switches for biocide pumps.
9. Biocide A and Biocide B pump running indication.
10. Building automation system alarm dry contacts.
11. Audible alarm and light.

2.12 TEST EQUIPMENT

A. Test Kit: Manufacturer-recommended equipment and chemicals in a wall-mounted cabinet for testing pH, conductivity, inhibitor, chloride, alkalinity, and hardness; include sulfite and testable polymer tests for high-pressure boilers, oxidizing biocide test for open cooling systems, glycol test kit for closed loop heating/cooling/dual temperature systems, and other test equipment as required by the water treatment supplier.

B. Portable Glycol Test Kit Assembly: Kit shall include sample container, chart, carrying case, instructions, all components required to determine the type of glycol, percent of glycol to water by volume, and condition of glycol (contamination) in the field.

C. Corrosion Test-Coupon Assembly: Constructed of 1-inch diameter corrosion resistant material, complete with piping, valves, 0-20 gpm flow meter and control valve, and mild steel and copper coupons. Alternatively, the assembly may be constructed from 1-inch black iron pipe, to provide additional surfaces for corrosion evaluation. The assembly shall be installed in the vertical plane, properly supported, with water flow from the bottom to the top of the assembly.
1. Two-station rack for closed-loop systems.
2. Four-station rack for open systems.

2.13 SIDE-STREAM FILTRATION SYSTEM

A. Manufacturers:
1. PEP Filters, Inc.
2. Cuno.
3. Watts.

B. Description: Floor-mounting housing with multiple filter cartridges (minimum 4) for removing particles from water.
1. Housing: Stainless steel; designed to separate inlet from outlet and to direct inlet through multiple cartridge-type water filters; with base, feet, or skirt.
a. Pipe Connections NPS 2 and Smaller: Threaded according to ASME B1.20.1.
b. Stainless Steel Housing Pipe Connections NPS 2-1/2 and Larger: Stainless Steel, Class 150 flanges according to ASME B16.5 or grooved according to AWWA C606.
c. Tool free replacement of filters (V-Band Clamp, etc.).
d. Top vent with valve.
e. Bottom drain with valve.
f. Pressure and temperature taps across unit.
2. Multi-Filter Cartridges: Wound polypropylene media with a tin core, 0-20 micron rating, and a maximum temperature rating of 200 deg F; sized to properly fit the filter vessel. The minimum flow rate shall be the greatest of 5% of system pump flow rate/filtration of the entire system volume every 4 hours or 25 GPM. Pressure drop through clean filters at flow rate above shall not exceed 2 psig. Filter cartridges shall be furnished in a quantity sufficient for six (6) complete changes of the filter vessel. Filter cartridges shall be changed when the pressure drop across the filter vessel exceeds 6 psi.

2.14 STAINLESS-STEEL PIPES AND FITTINGS

A. Stainless-Steel Tubing: Complying with ASTM A269/A269M, Type 316.

B. Stainless-Steel Fittings: Complying with ASTM A815/A815M, Type 316, Grade WP-S.

C. Two-Piece, Full-Port, Stainless-Steel Ball Valves: ASTM A351/A351M, Type 316 stainless-steel body; ASTM A276/A276M, Type 316 stainless-steel stem and vented ball; carbon-filled TFE seats; threaded body design with adjustable stem packing; threaded ends; 250-psig SWP and 600-psig CWP ratings.

PART 3 - EXECUTION

3.1 PREPARATION

A. Systems shall be operational, filled, started, and vented prior to cleaning. Use water meter to record capacity in each system.

B. Place terminal control valves in open position during cleaning.

C. Verify that electric power is available and of the correct characteristics.

3.2 CLEANING SEQUENCE

A. Concentration:
   1. As recommended by manufacturer.

B. Hot Water Heating and Dual Temperature Systems:
   1. Apply heat while circulating, slowly raising temperature to 160 degrees F and maintain for 12 hours minimum.
   2. Remove heat and circulate to 100 degrees F or less; drain systems as quickly as possible and refill with clean water.
   3. Circulate for 6 hours at design temperatures, then drain.
   4. Refill with clean water and repeat until system cleaner is removed.

C. Chilled Water Systems:
   1. Circulate for 48 hours, then drain systems as quickly as possible.
   2. Refill with clean water, circulate for 24 hours, then drain.
   3. Refill with clean water and repeat until system cleaner is removed.

D. Use neutralizer agents on recommendation of system cleaner supplier and approval of Architect/Engineer of Record.

E. Flush open systems and glycol filled closed systems with clean water for one hour minimum. Drain completely and refill.

F. Remove, clean, and replace strainer screens.

G. Inspect, remove sludge, and flush low points with clean water after cleaning process is completed. Include disassembly of components as required.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.4 CLOSED SYSTEM TREATMENT

A. Provide one bypass feeder on each system. Install isolating and drain valves and necessary piping. Install around balancing valve downstream of circulating pumps unless indicated otherwise.

B. Introduce closed system treatment through bypass feeder when required or indicated by test.

C. Provide 3/4 inch water coupon rack around circulating pumps with space for 4 test specimens.

D. Multi-Cartridge Side Stream Filter: Install in all closed hydronic systems, and equipped with the following:
   1. Install multi-cartridge side stream filter in a bypass circuit around circulating pumps.
   2. Install a full-port ball isolation valves on inlet, outlet, vent and drain below feeder inlet.
   3. Install a swing check on inlet after the isolation valve.
   4. Install on 4-inch high equipment pad.

E. Provide 30% by volume inhibited glycol mix in all closed hydronic systems.

1. Glycol to be propylene for new systems or where propylene is currently used.

F. Install pressure fill units on all closed hydronic systems and include the following:
1. Install water meter in makeup water supply. Coordinate totalization signal with building automation system.
2. Coordinate alarm signal tie in to building automation system.
3. Provide pressure regulator set at the difference in height (in psig) between the discharge of the pressure regulator to the highest point in the system plus 5 psig.

3.5 CONDENSER WATER SYSTEMS (COOLING TOWERS)

A. Provide automatic condenser water control systems for inhibitor feed, blowdown and biocide feeds. Inhibitor application shall be meter activated, blowdown shall be conductivity activated, and biocide shall be meter fed with blowdown locked out to ensure biocide retention time.

B. Control system shall incorporate solid state integrated circuits and digital LED displays, in NEMA-12 steel enclosure. Provide gasketed and lockable door.

C. Base dissolved solids control on conductivity and include:
1. LED digital readout display (micro-ohm/cm).
2. Temperature compensated sensor probe adaptable to sample stream manifold.
3. High, low, normal conductance indicator lights (LED).
4. High or low conductance alarm light (flash or steady switch), trip points field adjustable. Flash or steady switch shall have silence position.
5. Illuminated legend shall indicate "ALARM" whenever alarm condition exists.
6. Hand-off-automatic switch for solenoid bleed valve.
7. Illuminated legend shall indicate "BLEED" when valve is operated.
8. Adjustable hysteresis or dead-band (internal).

D. Base inhibitor feed control on make-up volume and include:
1. Solid state counter (1-15 field selectable).
2. Solid state timer (adjustable 1/4 to 5 minutes).
3. Test switch.
4. Hand-off-automatic switch for chemical pump.
5. Illuminated legend shall indicate "FEED" when pump is activated.
6. Solid state lock-out timer (adjustable 1/4 to 3 hours) and indicator light. Lock-out timer shall deactivate the pump and activate alarm circuits.
7. Panel totalizer (amount of makeup), electro-mechanical type.

E. Biocide programmer to include:
1. 24 hour timer with 14 day skip feature to permit activation any hour of the day.
2. Precision solid state bleed lock-out timer (0-9 hours) and biocide pump timer (0 - 2-1/4 hours), clock controlled.
3. Solid state alternator to enable the use of two different formulations.
4. Digital display of the time of day (24 hours).
5. LED display of day of week (14 days).
6. Fast and slow clock set controls (internal).
7. Battery back-up so clock is not disturbed by power outages, quartz timekeeping accuracy.
8. Hand-off-automatic switches for biocide pumps.
9. Illuminated legend shall indicate "BIOCIDE A" or "BIOCIDE B" when pump is activated.

F. Provide water meter on system make-up, wired to control system.

G. Provide solution pumps to feed sequestering agent and corrosion inhibitor from solution tank into condenser water supply to tower. Provide agitator as required.

H. Provide conductivity controller to sample condenser water and operate 1 inch solenoid bleed valve and piping to blowdown controller sampler wired to open when condensing water pump is operating.

I. Introduce biocide to tower by intermittent slug feed.

J. Provide liquid level switch in each solution tank to deactivate solution pump and agitator and sound local alarm bell.

K. Provide 3/4 inch water coupon rack around circulating pumps with space for 4 test specimens.

L. Centrifugal Separator: Install in all open hydronic systems (condenser water), and equipped with the following:
   1. Install centrifugal separator in a bypass circuit around circulating pumps.
   2. Install a full-port ball isolation valves on inlet, outlet, and vent.
   3. Install a motorized purge valve at the outlet and pipe to floor drain.
   4. Install on 4-inch high equipment pad.
   5. Coordinate interlock of purge operation with building automation system.

3.6 PASSIVATION OF GALVANIZED STEEL (COOLING TOWERS)

A. General: Upon acceptance of condenser water system cleaning and first chemical treatment, add chemical to passivate all galvanized components of the cooling tower system in the first 60 days of operation. Maintain pH, Hardness and Alkalinity values as specified.

3.7 FIELD QUALITY CONTROL

A. Perform tests and inspections and prepare test reports.
   1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.

B. Tests and Inspections:
   1. Inspect field-assembled components and equipment installation, including piping and electrical connections.
   2. Inspect piping and equipment to determine that systems and equipment have been cleaned, flushed, and filled with water/glycol (as indicated), and are fully operational before introducing chemicals for water-treatment system.
   3. Place HVAC water-treatment system into operation and calibrate controls during the preliminary phase of HVAC system's startup procedures.
   4. Do not enclose, cover, or put piping into operation until it is tested and satisfactory test results are achieved.
   5. Test for leaks and defects. If testing is performed in segments, submit separate report for each test, complete with diagram of portion of piping tested.

6. Leave uncovered and unconcealed new, altered, extended, and replaced water piping until it has been tested and approved. Expose work that has been covered or concealed before it has been tested and approved.
7. Cap and subject piping to static water pressure of 50 psig above operating pressure, without exceeding pressure rating of piping system materials. Isolate test source and allow test pressure to stand for four hours. Leaks and loss in test pressure constitute defects.
8. Repair leaks and defects with new materials and retest piping until no leaks exist.
9. Adjust water flow through corrosion coupon assemblies to equal a rate of 8 gpm = 3 ft./sec. through a 1-inch pipe, or lower flow as required by the Board.

C. Remove and replace malfunctioning units and retest as specified.

D. Sample boiler water at one-week intervals after boiler startup for a period of five weeks, and prepare test report advising the Board of changes necessary to comply with the specified performance requirements for water quality. Sample boiler water at four-week intervals following the testing noted above to show that automatic chemical-feed systems are maintaining water quality complying with performance requirements specified.

E. At one week intervals for five weeks following Preliminary Acceptance / Substantial Completion, perform separate water analysis on hydronic systems to show that automatic chemical-feed systems are maintaining water quality complying with performance requirements specified and prepare written report of findings, including changes necessary to ensure water quality is maintained in accordance with specified performance requirements. Submit copy of written reports to the Board.

F. Comply with ASTM D3370 and with the following standards:
1. Silica: ASTM D859.
2. Acidity and Alkalinity: ASTM D1067.
3. Iron: ASTM D1068.
4. Water Hardness: ASTM D1126.

3.8 CLOSEOUT ACTIVITIES

A. Training: Train Board's personnel on operation and maintenance of chemical treatment system.
1. Provide minimum of two sessions of 4 hours of instruction for two people.
2. Have operation and maintenance data prepared and available for review during training.
3. Conduct training using actual equipment after treated system has been put into full operation.

3.9 DEMONSTRATION AND TRAINING

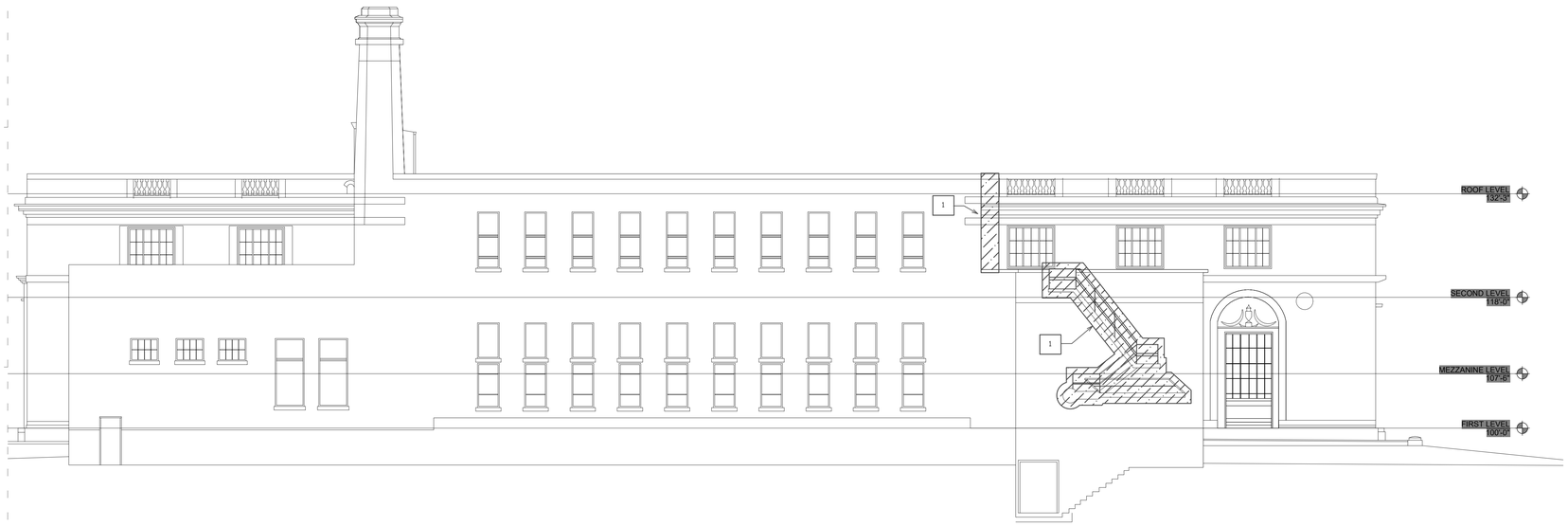
A. Engage a factory-authorized service representative to train Board's designated maintenance personnel to adjust, operate, and maintain HVAC water-treatment systems and equipment. Refer to Division 01.
1. Train Board's maintenance personnel on procedures and schedules for starting up and shutting down, troubleshooting, servicing, and maintaining the systems and equipment. The training will occur after the startup/cleaning report has been provided to the Board and the trainer will provide two (2) Installation and Operations manuals for the use of the Board’s personnel during training. Training shall be provided in two separate 4-hour sessions. Sessions shall not occur on the same day.

2. Review data in maintenance manuals. Refer to Division 01. All required and recommended maintenance will be reviewed as well as operational troubleshooting. If the Installation and Operations Manual does not include a written troubleshooting guide one shall be provided.
3. Schedule training with the Board, through Architect/Engineer of Record, with at least seven days' advance notice.

B. Demonstrate proper operation of equipment to commissioning agent or designated Board personnel. The scope of the demonstration will include functional performance requirements under both local and building automation control as well as any commissioning requirements specified in Divisions 01 and 23.

END OF SECTION 232500

1/32" = 1'-0" | 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 1" = 1'-0" | 1-1/2" = 1'-0" | 3" = 1'-0" | 6" = 1'-0"



1 EXTERIOR LEAD BASED PAINT MITIGATION
EAST ELEVATION FIRE ESCAPE AND LADDER
1/8"=1'

LEAD BASED PAINT MITIGATION SCOPE OF WORK:

1. The Abatement Contractor is responsible for the complete mitigation of all loose and failing paint films. Paint films shall be removed back to tightly adhered areas. All edges shall be wet sanded to create a smooth transition where paint films have been removed.
2. coordinate location of repairs involving torch cutting by the General Contractor for full removal of paint in these locations.
3. Abatement Contractor shall coordinate abatement with General Contractor.
4. All work per Specification Section 02 83 19.13.

GENERAL NOTES:

1. Contractor shall adhere to all record keeping and reporting requirements as detailed in Illinois Department of Public Health (IDPH) regulations (Illinois Administrative Code Part 845-Lead Poisoning Prevention Code).
2. Work Practice and Occupant Protection Plan (845.255) will be required to be submitted to Carnow Conibear prior to start of work. Work Practice and Occupant Protection Plan shall be prepared by licensed Project Supervisor.
3. Contractor is required to use the attached Lead Compliance Form for this project. Contractor Supervisor shall provide forms for each area to be completed. No compliance investigation (clearance sampling) will begin until the signed Lead Compliance Form has been received. The Lead Compliance Form can be found attached to specification 02 83 19.13.
4. Abatement Contractor shall select and apply an appropriate primer based upon criteria specified in AOR Specification Package. Abatement Contractor responsible for coordination of surface preparation at all areas where lead-based paint mitigation occurs. AC responsible to ensure that any primer paints utilized are approved for use by General Contractor/Painting Subcontractor.
5. All wastes generated during the LBP mitigation activities shall be separated and TCLP'd, by the Abatement Contractor, by homogenous materials (i.e.: suits, towels, water, paint chips, poly, etc.). All costs associated with any TCPL analysis or disposal shall be incurred by the Abatement Contractor. Materials which leach lead in concentrations of 5mg/L or greater, as measured by the TCLP process, must be disposed of as hazardous waste. Materials which leach lead in concentrations of less than 5mg/L shall be disposed of as special waste or at an approved Subtitle D facility.
6. The contractor is responsible for verifying quantities in the field before bidding. Any questions about the scope or clarifications shall be obtained from the Project Designer prior to bidding. Any interpretations of the design documents shall only be made by the Project Designer. The abatement contractor shall be responsible for removing any ACM which will be disturbed during renovation activities, prior to renovation activities.
7. The Environmental Scope is an integral part of the Architect of Record (AOR) total specifications package; therefore, it shall be used in conjunction with the total specification package. ***The term "refer to AOR Documents for details" is meant to be an addition to what the architect has indicated on his drawings and by no means limits the work to what is shown on the architect's drawings.***
8. Contractor shall paint entire metal system with a primer suitable for adhesion to a metal surface. New paint films shall be applied following all appropriate specification sections in the AOR documents. Coordinate all work with General Contractor.
9. A Work Practices and Occupant Protection Plan (as detailed in IDPH Lead Poisoning Prevention Code Section 845.255) will be required to be submitted and approved prior to start of any lead mitigation/abatement work. This plan shall be reviewed by the MEC and AOR to ensure appropriate measure are being implemented to prevent lead exposures to surrounding community or school occupants.
10. Sandblasting, grinding and chemical washing of buildings, facilities and other structures require permit from the City of Chicago - Ordinance 11-4-2190.
11. Mitigation Contractor must be USEPA RRP certified.

LEAD BASED PAINT MITIGATION KEYNOTES

1	Lead Based Paint Mitigation Area - FIRE ESCAPE AND LADDER

GENERAL ENVIRONMENTAL NOTES

WARNING: VARIOUS COMPONENTS/SURFACES WITHIN THE BUILDING HAVE TESTED ABOVE AND BELOW THE LEAD THRESHOLD OF 1.0 MG/CM2 REGARDLESS OF CONCENTRATIONS, THERE IS A POTENTIAL FOR LEAD DUST GENERATION DURING DRILLING, CORING, PAINTING PREPARATION AND OTHER RENOVATION ACTIVITIES FOR ALL SMALL SCALE DISTURBANCES, THE CONTRACTOR SHALL FACILITATE THE APPROPRIATE MEASURES FOUND IN PROJECT SPECIFICATIONS TO PREVENT DUST MITIGATION TO OTHER PARTS OF THE BUILIDNG. LEAD-BASED PAINT MAY BE PRESENT WITHIN THE BUILDING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO TAKE APPROPRIATE SAFETY MESURES IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL RULES AND REGULATIONS INCLUDING OSHA (1926.62) COMPLIANCE. WASTE CHARACTERIZATION AND WASTE DISPOSAL. ALL WORK WITH SURFACES CONTAINING LEAD-BASED PAINT SHALL BE DONE IN ACCORDANCE WITH SPECIFICATIONS PROJECT SPECIFICATIONS.

WARNING: ASBESTOS-CONTAINING BUILDING MATERIALS ARE OR MAY BE PRESENT IN THIS BUILDING. NO PERSON MAY DISTURB ASBESTOS-CONTAINING MATERIALS UNLESS THAT PERSON IS A LICENSED ASBESTOS WORKER OR CONDUCTS SUCH WORK IN ACCORDANCE WITH SPECIFICATIONS CONTAINED IN THE PROJECT DOCUMENTS AND IN COMPLIANCE WITH ILLINOIS DEPARTMENT OF HEALTH RULES AND REGULATIONS.

DOB STAMP APPROVAL

CHICAGO PUBLIC LIBRARY

SEAL | DATE 10/31/19

Legler Regional Library Renovation

115 S. Pulaski Road
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CHICAGO PUBLIC LIBRARY
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Environmental Consultant

Issuance

Mark	Description	Date
1	ISSUE FOR BID	11/13/19
2	ADDENDUM #3	12/5/19

PBC Project Name: Legler Regional Library
PBC Contract No: C1597
PBC Project No.: 08310

Title
LEAD BASED PAINT MITIGATION EXTERIOR FIRE ESCAPE AND LADDER

Sheet
LBP-003

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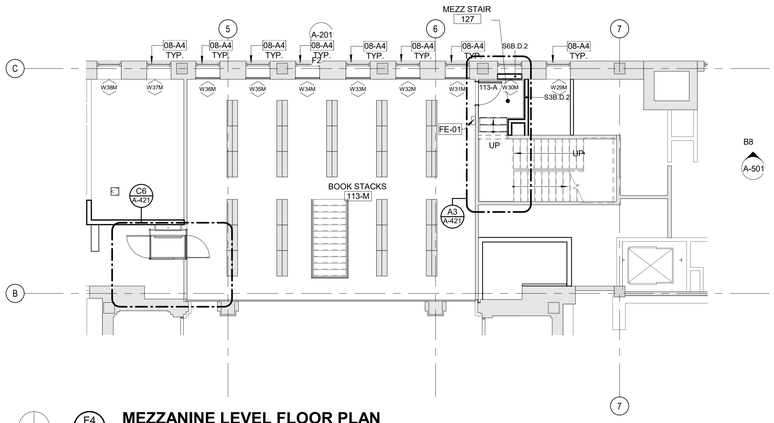
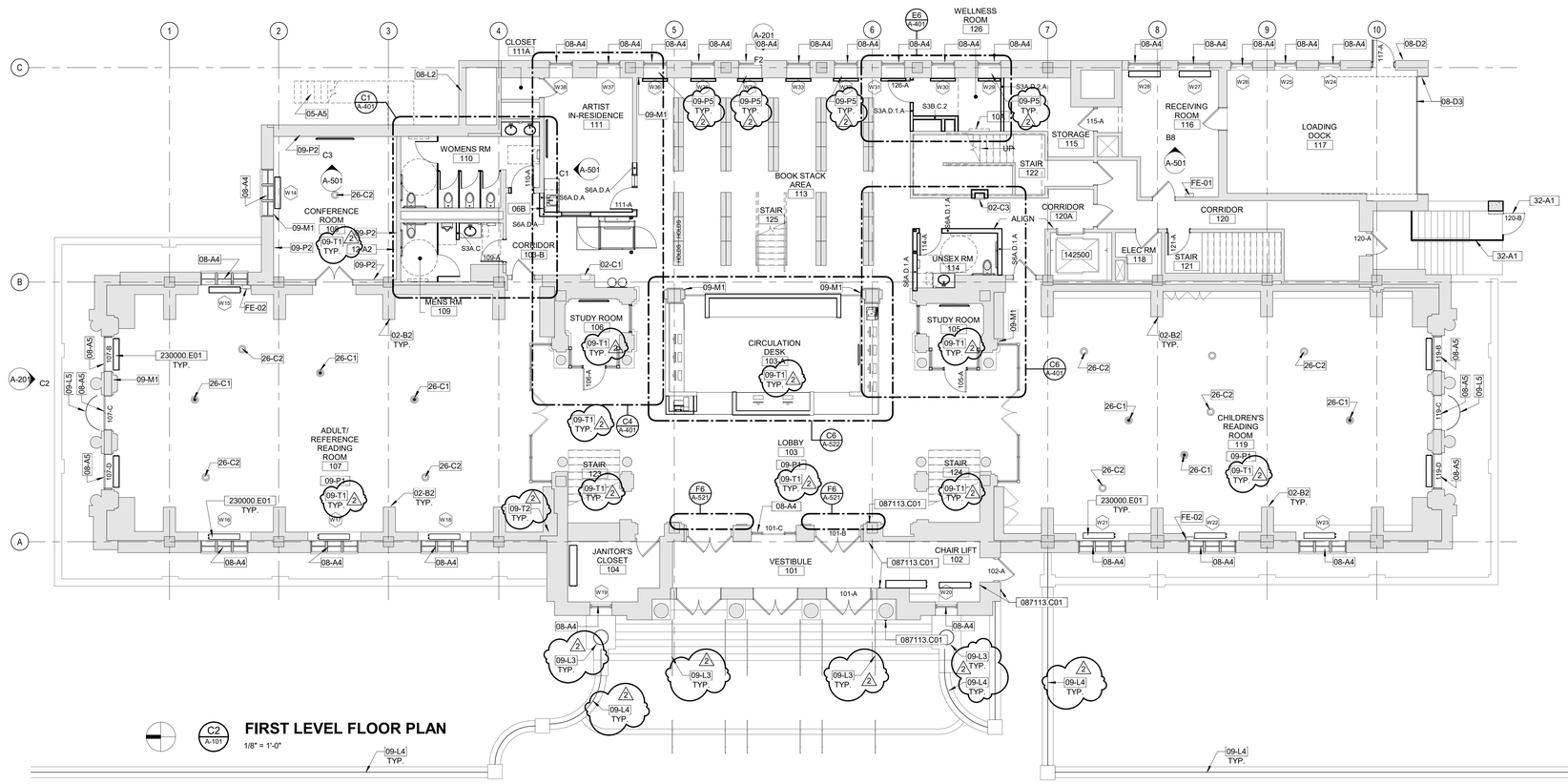
1/32" = 1'-0" | 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 1" = 1'-0" | 1-1/2" = 1'-0" | 3" = 1'-0" | 6" = 1'-0"



F4 / A-101 **MEZZANINE LEVEL FLOOR PLAN**
1/8" = 1'-0"



C2 / A-101 **FIRST LEVEL FLOOR PLAN**
1/8" = 1'-0"

GENERAL FLOOR PLAN NOTES

A. THESE GENERAL NOTES APPLY TO A-100 SERIES FLOOR PLAN DRAWINGS.

B. SEE PROJECT GENERAL NOTES, SYMBOLS AND MOUTING HEIGHTS ON SHEET A-001.

C. SEE PARTITION TYPES, ACOUSTIC CONSIDERATIONS AND DEVICE MOUNTING LOCATIONS ON SHEET A-002.

KEYNOTE LEGEND

00 10 00

02-B2	EXISTING WOOD BOOKCASES, PROTECT DURING CONSTRUCTION
02-C1	EXISTING BRONZE FIRE EXTINGUISHER CABINET TO REMAIN, CLEAN & POLISH, AND PROVIDE FE-04. PROTECT DURING CONSTRUCTION.
02-C3	RE-INSTALLED SALVAGED BRONZE FIRE EXTINGUISHSER CABINET. PROVIDE 2-HR ENCLOSURE AROUND FEC. CLEAN & POLISH, AND PROVIDE FE-04
05-A5	IN-KIND FIRE ESCAPE REPAIRS TO BE PERFORMED UNDER SEPARATE PERMIT. SEE A-202 FOR IN-KIND FIRE ESCAPE REPAIRS.
08-A4	REFER TO EXISTING WINDOW SCHEDULE ON A-621 FOR SCOPE OF WORK
08-A5	REFER TO EXISTING EXTERIOR WOOD DOOR SCHEDULE ON A-601 FOR SCOPE OF WORK.
08-D2	DOOR TO RECEIVE KEY CARD ACCESS READER
08-D3	REPLACE AND PAINT PERIMETER GARAGE DOOR TRIM. STRIP AND PAINT GARAGE DOORS. REPAIR AND LUBRICATE GARAGE DOOR HARDWARE.
08-L2	REMOVE DIRT AND DEBRIS FROM EXISTING EXTERIOR LOUVERS. CLEAN EXTERIOR LOUVERS AND INTAKE SHAFT. PAINT TO MATCH EXISTING, SEE SPEC 099600.
09-L3	RAILINGS, WINDOW SCREENS, FLAG POLE, LAMP POLE, AND ANY EXTERIOR ORNAMENTAL IRON WORK ATTACHED TO BUILDING TO BE RE-PAINTED HIGH PERFORMANCE EXTERIOR PAINT (SPT-01) PER SPECIFICATION 099600.
09-L4	PERIMETER FENCE AND GATES TO BE RE-PAINTED HIGH PERFORMANCE EXTERIOR PAINT (SPT-01) PER SPECIFICATION 099600 AND 323119 FOR STRIP AND PREPARATION OF IRON GATES AND PERIMETER FENCES.
09-L5	REMOVE AND REPLACE JULIET BALCONY RAILING TO MATCH EXISTING. RE-PAINTED HIGH PERFORMANCE EXTERIOR PAINT (SPT-01) PER SPECIFICATION 099600.
09-M1	REPLACE OR REPAIR BROKEN MARBLE BASE. REPAIR BROKEN BASE AT DECORATIVE WALL PILASTER.
09-P1	PATCH AND REPAIR PLASTER CEILING AS REQUIRED. SEE REFLECTED CEILING PLANS.
09-P2	NEW GYP BD AND MTL FRAMING AT DEMOLISHED CASEWORK LOCATIONS. ALIGN GYP BD WITH EXISTING FACE OF PLASTER.
09-P5 / 2	REMOVE AND SALVAGE WINDOW SILL, TRIM, GRILLE, BASE AND COVER PANEL AS NECESSARY TO INSTALL NEW FIN TUBE, SEE MECHANICAL. REPAIR AND PATCH WALL TO MATCH EXISTING. RE-INSTALL WINDOW SILL, TRIM, GRILLE, BASE AND COVER PANEL.
09-T1 / 2	SURFACE MOUNTED CONDUITS, EXPOSED CONDUIT RACEWAYS, OR EXPOSED MECHANICAL / PLUMBING LINES WILL NOT BE ACCEPTED IN THESE ROOMS. CUT AND TRENCH WALLS AND CEILINGS TO CONCEAL CONDUITS. REPAIR & PATCH WALL, CEILING, AND DECORATIVE MOLDINGS TO MATCH ADJACENT. CONTRACTOR IS TO NOTIFY ARCHITECT/ENGINEER OF ANY CONFLICTS AND/OR ISSUES OF INSTALLING THIS SCOPE OF WORK. REFER TO ELECTRICAL FOR MORE INFORMATION.
09-T2 / 2	MODIFY WALL AS REQUIRED TO CONCEAL NEW MECHANICAL PIPING, SEE MECHANICAL.
12-A2	EXISTING ARTWORK TO BE REMOVED PRIOR TO CONSTRUCTION, REMOVAL, RESTORATION, AND RE-INSTALLATION OF ARTWORK BY OTHERS.
26-C1	MULTI-SERVICE FURNITURE FEED POKE-THRU DEVICE. MODIFY EXISTING CONCRETE SLAB AS REQUIRED FOR NEW FLOOR POKE-THRU DEVICES. COORDINATE WITH ELECTRICAL.
26-C2	RECESSED FLOOR MOUNTED MULTI-SERVICE POKE-THRU DEVICE. MODIFY EXISTING CONCRETE SLAB AS REQUIRED FOR NEW FLOOR POKE-THRU DEVICES. COORDINATE WITH ELECTRICAL.
32-A1	EXTERIOR ORNAMENTAL METAL ENCLOSURE & GATE. SEE CIVIL & LANDSCAPE. SEE DOOR SCHEDULE FOR DOOR AND PANIC HARDWARE.
087113.C01	AUTOMATIC DOOR OPERATOR - PUSH-PLATE SWITCH
142500	HYDRAULIC ELEVATOR MODERNIZATION
230000.E01	FAN COIL UNIT, REFERENCE MECHANICAL DRAWINGS

GENERAL ENVIRONMENTAL NOTES

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DOB STAMP APPROVAL

PUBLIC BUILDING COMMISSION OF CHICAGO
CHICAGO PUBLIC LIBRARY

SEAL | DATE 12/5/19

Legler Regional Library Renovation

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CHICAGO PUBLIC LIBRARY
CITY OF CHICAGO, MAYOR LORI LIGHTFOOT

Architect of Record:
RATIO

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Environmental Consultant

Issuance

Mark	Description	Date
1	ISSUE FOR BID	11/13/19
2	ADDENDUM #3	12/5/19

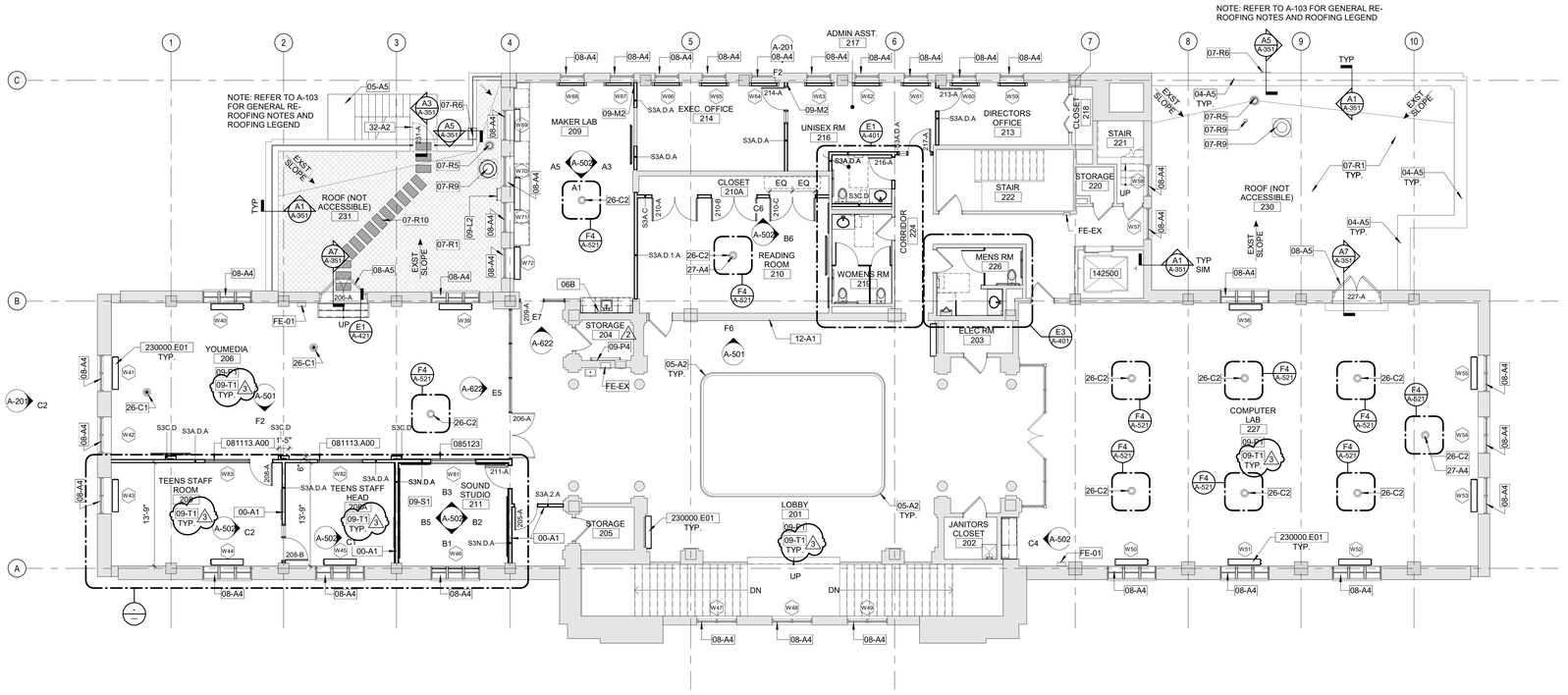
PBC Project Name: Legler Regional Library
PBC Contract No: C1597
PBC Project No.: 08310

Title
FIRST LEVEL AND MEZZANINE LEVEL FLOOR PLAN

Sheet
A-101

12/6/2019 8:45:56 AM

1/32" = 1'-0" | 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 1" = 1'-0" | 1-1/2" = 1'-0" | 3" = 1'-0" | 6" = 1'-0"



SECOND LEVEL FLOOR PLAN

C2 / A-102

1/8" = 1'-0"

GENERAL FLOOR PLAN NOTES

A. THESE GENERAL NOTES APPLY TO A-100 SERIES FLOOR PLAN DRAWINGS.

B. SEE PROJECT GENERAL NOTES, SYMBOLS AND MOUTING HEIGHTS ON SHEET A-001.

C. SEE PARTITION TYPES, ACOUSTIC CONSIDERATIONS AND DEVICE MOUNTING LOCATIONS ON SHEET A-002.

KEYNOTE LEGEND

00 10 00

00-A1	CENTER WALL ON COLUMN GRID LINE
04-A5	REFER TO MASONRY RESTORATION DRAWINGS FOR TUCKPOINTING.
05-A2	REPAIR BENT OR DAMAGED VERTICAL PICKETS. PAINT ENTIRE RAILING WHITE.
05-A5	IN-KIND FIRE ESCAPE REPAIRS TO BE PERFORMED UNDER SEPARATE PERMIT. SEE A-202 FOR IN-KIND FIRE ESCAPE REPAIRS.
07-R1 (2)	NEW PVC ROOFING SYSTEM, 1/2" PROTECTION BOARD, 1 1/2" INSULATION, AND VAPOR RETARDER ON EXISTING SLOPED CONCRETE DECK WITH FLASHINGS AND ACCESSORIES. REFER TO SPEC 070150.19 FOR PREPARATION FOR REROOFING. 07-R1 ASSEMBLY R-VALUE: R-11
07-R5	EXISTING ROOF DRAIN TO BE REPLACED WITH NEW, PROVIDE EXTENSION, SEE PLUMBING DRAWINGS
07-R6	EXISTING ROOF SCUPPER LOCATION
07-R9	EXISTING ROOF VENT TO REMAIN - PROVIDE EXTENSION TO MAINTAIN PROPER FLASHING
07-R10	PROVIDE WALK PADS AS SHOWN AND TO OPERABLE PORTIONS OF MECHANICAL EQUIPMENT WHETHER SHOWN OR NOT
08-A4	REFER TO EXISTING WINDOW SCHEDULE ON A-621 FOR SCOPE OF WORK
08-A5	REFER TO EXISTING EXTERIOR WOOD DOOR SCHEDULE ON A-601 FOR SCOPE OF WORK.
09-L2	EXISTING ROOF ACCESS LADDER TO BE PAINTED. PROVIDE SEALANT AT LADDER EMBEDMENTS. SEE SPEC 099600.
09-M2	REFER TO CONVECTOR UNIT WALL PENETRATION DETAIL E2/A-002.
09-P1	PATCH AND REPAIR PLASTER CEILING AS REQUIRED. SEE REFLECTED CEILING PLANS.
09-P4	REPAIR & PATCH WALL OPENING. PAINT TO WALL TO MATCH ADJACENT.
09-S1	PROVIDE MIN. STC 60 WALLS FOR THIS ROOM AND ACOUSTICAL PANELS AT ALL WALL SURFACES. PROVIDE AN INDEPENDENT HEAT + COOL UNIT FOR THIS ROOM. DUCT WORK ABOVE CEILING TO BE ACOUSTICAL LINED. SEE MECHANICAL
09-T1 (3)	SURFACE MOUNTED CONDUITS, EXPOSED CONDUIT RACEWAYS, OR EXPOSED MECHANICAL / PLUMBING LINES WILL NOT BE ACCEPTED IN THESE ROOMS. CUT AND TRENCH WALLS AND CEILINGS TO CONCEAL CONDUITS. REPAIR & PATCH WALL, CEILING, AND DECORATIVE MOLDINGS TO MATCH ADJACENT. CONTRACTOR IS TO NOTIFY ARCHITECT/ENGINEER OF ANY CONFLICTS AND/OR ISSUES OF INSTALLING THIS SCOPE OF WORK. REFER TO ELECTRICAL FOR MORE INFORMATION.
2-A1	INSTALL ONE OF ARTWORK'S PROTECTIVE ENCLOSURES BY OTHERS. COORDINATE WITH DCASE.
26-C1	MULTI-SERVICE FURNITURE FEED POKE-THRU DEVICE. MODIFY EXISTING CONCRETE SLAB AS REQUIRED FOR NEW FLOOR POKE-THRU DEVICES. COORDINATE WITH ELECTRICAL.
26-C2	RECESSED FLOOR MOUNTED MULTI-SERVICE POKE-THRU DEVICE. MODIFY EXISTING CONCRETE SLAB AS REQUIRED FOR NEW FLOOR POKE-THRU DEVICES. COORDINATE WITH ELECTRICAL.
27-A4	PROVIDE HDMI-LINK BETWEEN TV / PROJECTOR AND FLOOR BOX.
32-A2	EXISTING FENCE GATE TO SWING OUTWARD ONTO FIRE ESCAPE. INSTALL EXTERIOR PANIC HARDWARE, SEE DOOR SCHEDULE.
081113.A00	HOLLOW METAL DOORS AND FRAMES
085123	STEEL WINDOWS
142500	HYDRAULIC ELEVATOR MODERNIZATION
230000.E01	FAN COIL UNIT, REFERENCE MECHANICAL DRAWINGS

GENERAL ENVIRONMENTAL NOTES

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DOB STAMP APPROVAL

PUBLIC BUILDING COMMISSION OF CHICAGO

CHICAGO PUBLIC LIBRARY

SEAL | DATE 12/5/19

Legler Regional Library Renovation

115 S. Pulaski Road
Chicago, IL 60624
CHICAGO PUBLIC LIBRARY
CITY OF CHICAGO, MAYOR LORI LIGHTFOOT

Architect of Record:
RATIO

RATIO

ADDRESS: 30 West Monroe Street, Suite 500, Chicago, Illinois 60603
PHONE: 312-465-2359
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TERRA Engineering Ltd.
225 W. Ohio Street, 4th Floor, Chicago, IL 60654
(312) 467-0123
Civil Engineers of Record

Stearn–Joglekar, Ltd.
223 W Jackson Blvd # 1110, Chicago, IL 60606
(312) 461-1800
Structural Engineers of Record

Brush Architects, LLC
4200 N Francisco Ave, Chicago, IL 60618
(312) 925-3070
Facade Consultant

RCL Engineering Group
PO BOX 4458, Skokie, IL 60076
(847) 965-3366
Roofing Consultant

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(312) 915-0557
MEPFP Engineers of Record

Gwen Grossman Lighting Design
53 W Jackson Blvd, Chicago, IL 60604
(312) 877-5125
Lighting Design Consultant

Lerch Bates Inc.
216 S. Jefferson St, Suite LL2, Chicago, IL 60661
(312) 332-5444
Elevator Consultant

Carnow, Conibear & Assoc., Ltd.
600 West Van Buren, Suite 500, Chicago, IL 60607
(312) 782-4486
Environmental Consultant

Issuance

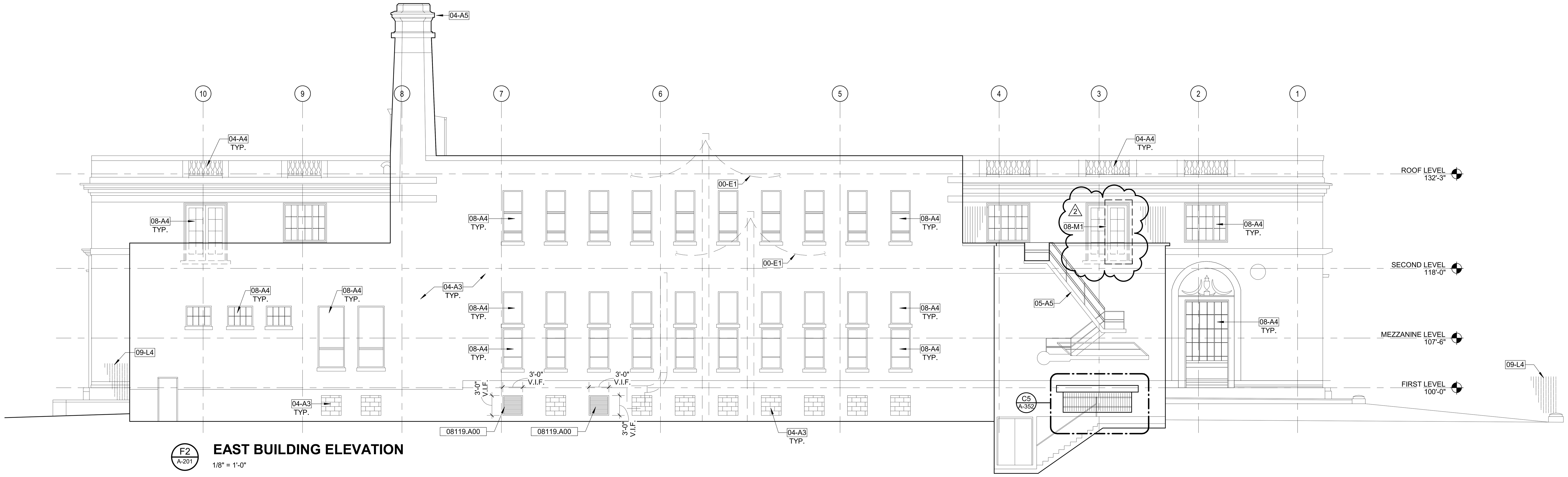
Mark	Description	Date
1	ISSUE FOR BID	11/13/19
2	ADDENDUM #2	11/27/19
3	ADDENDUM #3	12/5/19

PBC Project Name: Legler Regional Library
PBC Contract No: C1597
PBC Project No.: 08310

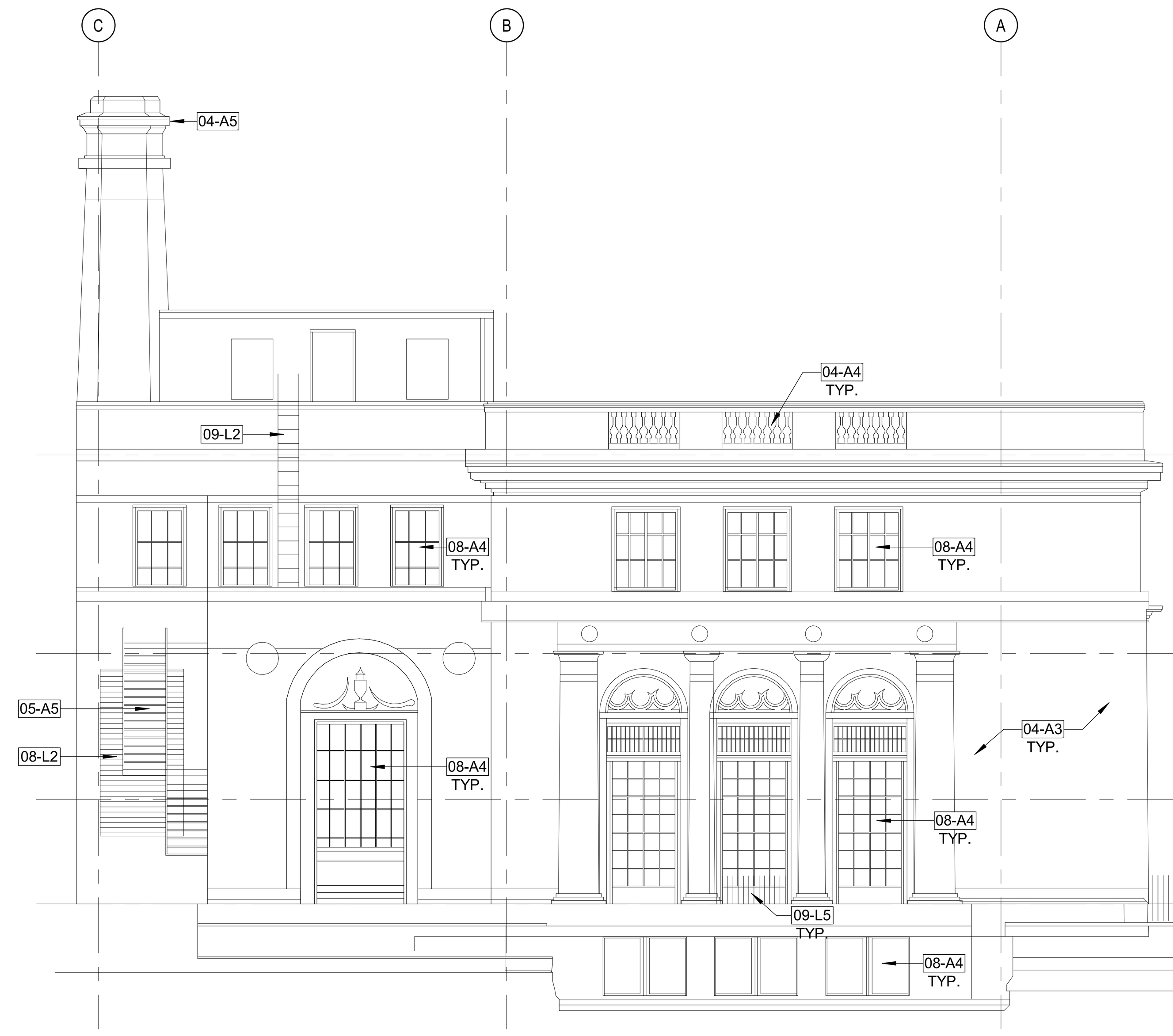
Title
SECOND LEVEL FLOOR PLAN

Sheet
A-102

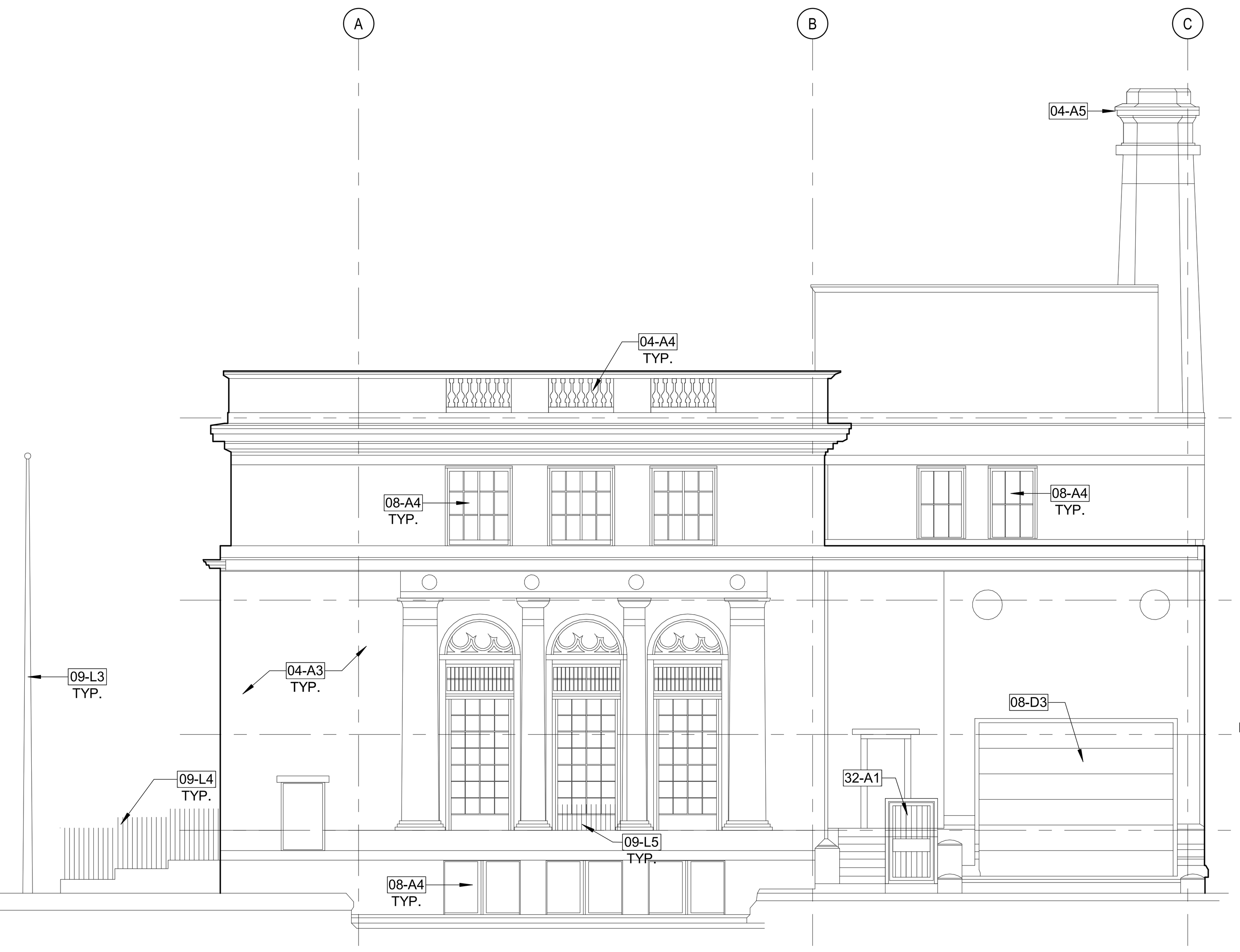
12/5/2019 1:25:13 PM



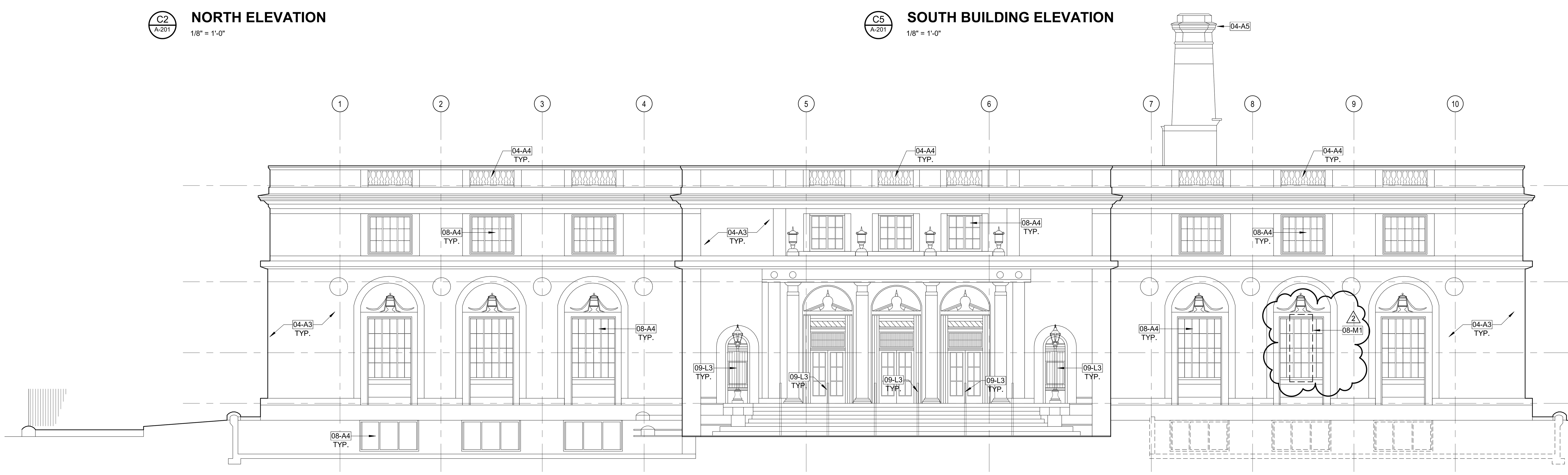
EAST BUILDING ELEVATION (F2 / A-201)
1/8" = 1'-0"



NORTH ELEVATION (C2 / A-201)
1/8" = 1'-0"



SOUTH BUILDING ELEVATION (C5 / A-201)
1/8" = 1'-0"



WEST BUILDING ELEVATION (A2 / A-201)
1/8" = 1'-0"

KEYNOTE LEGEND

00 10 00

00-E1	OVERHEAD ELECTRICAL UTILITY LINES, COORDINATE WITH COMED.
04-A3	REFER TO MASONRY RESTORATION DRAWINGS FOR EXTERIOR FACADE WORK SCOPE.
04-A4	REFER TO MASONRY RESTORATION DRAWINGS FOR STONE BALUSTRADE WORK SCOPE.
04-A5	REFER TO MASONRY RESTORATION DRAWINGS FOR TUCKPOINTING.
05-A5	IN-KIND FIRE ESCAPE REPAIRS TO BE PERFORMED UNDER SEPARATE PERMIT. SEE A-202 FOR IN-KIND FIRE ESCAPE REPAIRS.
08-A4	REFER TO EXISTING WINDOW SCHEDULE ON A-621 FOR SCOPE OF WORK
08-D3	REPLACE AND PAINT PERIMETER GARAGE DOOR TRIM. STRIP AND PAINT GARAGE DOORS. REPAIR AND LUBRICATE GARAGE DOOR HARDWARE.
08-L2	REMOVE DIRT AND DEBRIS FROM EXISTING EXTERIOR LOUVERS. CLEAN EXTERIOR LOUVERS AND INTAKE SHAFT. PAINT TO MATCH EXISTING, SEE SPEC 099600.
08-M1 (2)	CONTRACTOR TO PROVIDE MOCK-UP OF WOOD WINDOW RESTORATION PER SPEC 080152.61 FOR FINAL APPROVAL BY AOR AND OWNER
09-L2	EXISTING ROOF ACCESS LADDER TO BE PAINTED. PROVIDE SEALANT AT LADDER EMBEDMENTS. SEE SPEC 099600.
09-L3	RAILINGS, WINDOW SCREENS, FLAG POLE, LAMP POLE, AND ANY EXTERIOR ORNAMENTAL IRON WORK ATTACHED TO BUILDING TO BE RE-PAINTED HIGH PERFORMANCE EXTERIOR PAINT (SPT-01) PER SPECIFICATION 099600.
09-L4	PERIMETER FENCE AND GATES TO BE RE-PAINTED HIGH PERFORMANCE EXTERIOR PAINT (SPT-01) PER SPECIFICATION 099600 AND 323119 FOR STRIP AND PREPARATION OF IRON GATES AND PERIMETER FENCES.
09-L5	REMOVE AND REPLACE JULIET BALCONY RAILING TO MATCH EXISTING. RE-PAINTED HIGH PERFORMANCE EXTERIOR PAINT (SPT-01) PER SPECIFICATION 099600.
32-A1	EXTERIOR ORNAMENTAL METAL ENCLOSURE & GATE. SEE CIVIL & LANDSCAPE. SEE DOOR SCHEDULE FOR DOOR AND PANIC HARDWARE.
08119.A00	FIXED LOUVERS

GENERAL ENVIRONMENTAL NOTES

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Issuance

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2	ADDENDUM #3	12/5/19

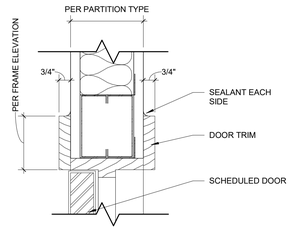
PBC Project Name: Legler Regional Library
PBC Contract No: C1597
PBC Project No.: 08310

Title
EXTERIOR ELEVATIONS

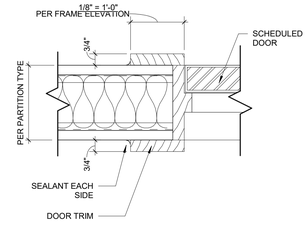
Sheet
A-201

12/6/2019 8:46:08 AM

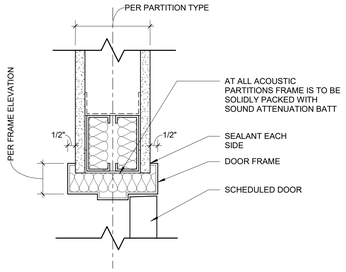
1/32" = 1'-0" | 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 1" = 1'-0" | 1-1/2" = 1'-0" | 3" = 1'-0" | 6" = 1'-0"



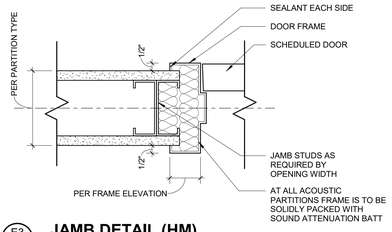
G1 A-601 **HEAD DETAIL (WD)**
3" = 1'-0"



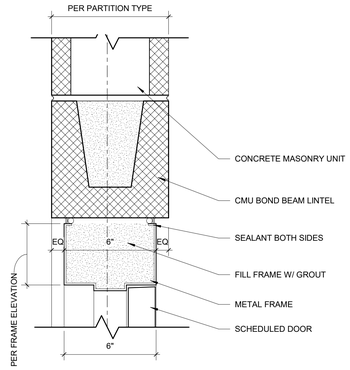
G3 A-601 **JAMB DETAIL (WD)**
3" = 1'-0"



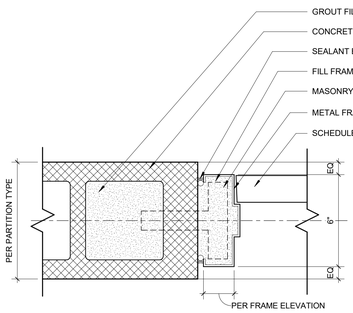
E1 A-601 **HEAD DETAIL (HM)**
3" = 1'-0"



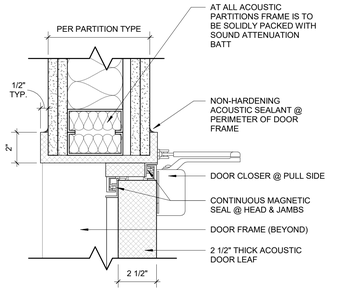
E3 A-601 **JAMB DETAIL (HM)**
3" = 1'-0"



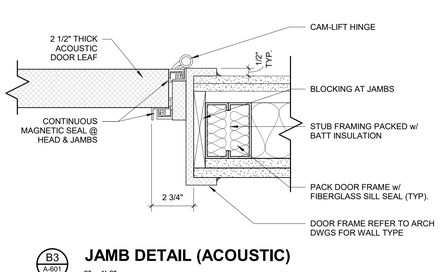
D1 A-601 **HEAD DETAIL (CMU)**
3" = 1'-0"



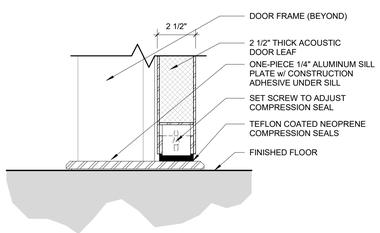
D3 A-601 **JAMB DETAIL (CMU)**
3" = 1'-0"



B1 A-601 **HEAD DETAIL (ACOUSTIC)**
3" = 1'-0"



B3 A-601 **JAMB DETAIL (ACOUSTIC)**
3" = 1'-0"



A1 A-601 **SILL DETAIL (ACOUSTIC)**
3" = 1'-0"

DOOR SCHEDULE (EXISTING)

DOOR NUMBER	PAIR	DOOR SIZE W	SIZE H	SIZE T	DOOR MTRL.	DOOR ELEV.	DOOR GLASS	DOOR HDWR. SET	FRAME MTRL.	FRAME ELEV.	FRAME DETAILS HEAD	DETAILS JAMB	DETAILS THRESHOLD	FIRE RATING	REMARKS
BASEMENT LEVEL															
006-B		3'-0"	7'-0"	1 3/4"	H.M.	F	-	27.0	H.M.	F1	-	-	-	-	EXISTING DOOR, ADD ACCESS CARD
008-A		3'-0"	7'-0"	1 3/4"	H.M.	F 1	-	24.0	H.M.	F	-	-	-	-	EXISTING DOOR, ADD PEEPHOLE
019-A	Yes	2'-6"	7'-0"	1 3/4"	H.M.	F	-	24.0	H.M.	F	-	-	-	-	EXISTING DOOR, ADD PEEPHOLE
021-D	Yes	3'-0"	7'-0"	1 3/4"	H.M.	F	-	27.1	H.M.	F	-	-	-	-	EXISTING DOOR, ADD ACCESS CARD
FIRST LEVEL															
101-A	Yes	3'-0"	7'-0"	1 3/4"	ALUM.	FG	-	25.1	ALUM.	F1	-	-	-	-	EXISTING DOOR, ADD ADA PUSH PLATE BOTH SIDES
101-B	Yes	3'-0"	7'-0"	1 3/4"	H.M.	F	GL-EX	25.0	H.M.	F	-	-	-	-	EXISTING DOOR, ADD ADA PUSH PLATE BOTH SIDES
101-C		3'-0"	6'-11"	1 3/4"	W.D. 1	FG	GL-EX	28.0 1	W.D.	F1	-	-	-		EXISTING DOOR TO REMAIN, ADD WEATHER STRIPPING, SEAL DOOR CLOSED.
102-A		3'-0"	7'-0"	1 3/4"	H.M.	F	-	25.0	H.M.	F1	-	-	-		EXISTING DOOR, ADD ADA PUSH PLATE BOTH SIDES
107-B	Yes	2'-3 1/2"	10'-0"	1 3/4"	W.D.	FG	GL-EX	23.0	H.M.	F1	-	-	-	-	EXISTING DOOR
107-C	Yes	2'-3 1/2"	10'-0"	1 3/4"	W.D.	FG	GL-EX	23.0	H.M.	F1	-	-	-	-	EXISTING DOOR, ADD WEATHER STRIPPING
107-D	Yes	2'-3 1/2"	10'-0"	1 3/4"	W.D.	FG	GL-EX	23.0	H.M.	F1	-	-	-	-	EXISTING DOOR
115-A		3'-0"	7'-0"	1 3/4"	W.D.	F	-	26.0	H.M.	F1	-	-	-	-	EXISTING DOOR, STORAGE LOCKET SET
119-B	Yes	2'-3 1/2"	10'-0"	1 3/4"	W.D.	FG	GL-EX	23.0	H.M.	F1	-	-	-	-	EXISTING DOOR
119-C	Yes	2'-3 1/2"	10'-0"	1 3/4"	W.D.	FG	GL-EX	23.0	H.M.	F1	-	-	-	-	EXISTING DOOR, ADD WEATHER STRIPPING
119-D	Yes	2'-3 1/2"	10'-0"	1 3/4"	W.D.	FG	GL-EX	23.0	H.M.	F1	-	-	-	-	EXISTING DOOR, ADD WEATHER STRIPPING
120-A		3'-0"	7'-0"	1 3/4"	H.M.	F	-	1.0	H.M.	F1	-	-	-	-	EXISTING DOOR, ADD REMOTE ELECTRIC BUZZER, PEEPHOLE
SECOND LEVEL															
206-A	Yes	3'-0"	7'-0"	2 1/2"	H.M.	F	-	22.0	H.M.	F	-	-	-	-	EXISTING DOOR, ADD WEATHER STRIPPING AND NEW THRESHOLD
227-A	Yes	3'-0"	7'-0"	2 1/2"	H.M.	F	-	22.0	H.M.	F	-	-	-	-	EXISTING DOOR, ADD WEATHER STRIPPING AND NEW THRESHOLD
231-A		3'-0"	7'-0"	1 1/2"	C.L.F.	C.L.F.	n/a	2.0	ALUM.	C.L.F.	-	-		-	EXTERIOR CHAIN-LINK, REMOVE EXISTING LATCH, ADD NEW PANIC HARDWARE, ADJUST FENCE GATE TO SWING OUTWARD ONTO FIRE ESCAPE.

DOOR SCHEDULE (NEW)

DOOR NUMBER	PAIR	DOOR SIZE W	SIZE H	SIZE T	DOOR MTRL.	DOOR ELEV.	DOOR GLASS	DOOR HDWR. SET	FRAME MTRL.	FRAME ELEV.	FRAME DETAILS HEAD	DETAILS JAMB	DETAILS THRESHOLD	FIRE RATING	REMARKS
BASEMENT LEVEL															
002-A		3'-0"	7'-0"	1 19/32"	H.M.	F	-	17.0	H.M.	F1	E1/A-601	E3/A-601		-	IN-USE INDICATOR
003-A		3'-0"	7'-0"	1 3/4"	H.M.	F	-	20.0	H.M.	F1	E1/A-601	E3/A-601		90	KEYED FROM OUTSIDE, KICKPLATE
004-A		3'-0"	7'-0"	1 3/4"	H.M.	F	-	20.0	H.M.	F1	E1/A-601	E3/A-601		90	KEYED FROM OUTSIDE, KICKPLATE
006-A		3'-0"	7'-0"	1 3/4"	H.M.	F	-	8.0	H.M.	F1	E1/A-601	E3/A-601		90	ACCESS CARD
019-B	Yes	3'-0"	7'-0"	1 3/4"	H.M.	N1 2	GL-03	12.0	H.M.	F1	E1/A-601	E3/A-601		90	
021-A		3'-0"	7'-0"	1 3/4"	W.D.	F	-	11.0	H.M.	F2	E1/A-601	E3/A-601		-	
021-B		3'-0"	7'-0"	1 3/4"	W.D.	F	-	11.0	H.M.	F2	E1/A-601	E3/A-601		-	
022-A		3'-0"	7'-0"	1 3/4"	H.M.	F	-	10.0	H.M.	F1	E1/A-601	E3/A-601		90	
024-A		3'-0"	6'-8"	1 3/4"	H.M.	F	-	8.0	H.M.	F1	E1/A-601	E3/A-601		90	ACCESS CARD
025-A		3'-0"	6'-8"	1 3/4"	H.M.	F	-	10.0	H.M.	F1	E1/A-601	E3/A-601		90	
026-A		3'-0"	6'-8"	1 3/4"	H.M.	F	-	10.0	H.M.	F1	E1/A-601	E3/A-601		90	
FIRST LEVEL															
105-A		3'-0"	8'-0"	1 3/4"	ALUM.	FG	GL-02	5.0	ALUM.	ALUM.	B3/A-622	B4/A-622		-	
106-A		3'-0"	8'-0"	1 3/4"	ALUM.	FG	GL-02	5.0	ALUM.	ALUM.	B3/A-622	B4/A-622		-	
109-A		3'-0"	7'-0"	1 3/4"	H.M.	F	-	20.0	H.M.	F1	E.T.R	E.T.R		-	KEYED FROM OUTSIDE, KICKPLATE
110-A		3'-0"	7'-0"	1 3/4"	H.M.	F	-	20.0	H.M.	F1	E.T.R	E.T.R		-	KEYED FROM OUTSIDE, KICKPLATE
111-A		3'-0"	7'-0"	1 3/4"	W.D.	FG	GL-02	2 13.0	H.M.	F2	E1/A-601	E3/A-601		-	
114-A		3'-0"	7'-0"	1 3/4"	H.M.	F	-	16.0	H.M.	F1	E1/A-601	E3/A-601		-	IN-USE INDICATOR
117-A		3'-0"	7'-0"	1 3/4"	H.M.	F	-	3.0	H.M.	F1	D1/A-601	D3/A-601			HEAVY-DUTY EGRESS DOOR WITH NEW SOLID HM DOOR WITH PANIC HARDWARE
120-B		3'-0"	8'-0"	1 1/2"	C.L.F.	C.L.F.	-	2.0	ALUM.	C.L.F.	-	-		-	EXTERIOR CHAIN-LINK DOOR WITH PANIC HARDWARE
121-A		3'-0"	7'-0"	1 3/4"	W.D.	F	-	10.1	H.M.	F1	E1/A-601	E3/A-601		90	
126-A		3'-0"	7'-0"	1 3/4"	H.M.	F	-	7.0	H.M.	F1	E1/A-601	E3/A-601		-	REMOTE ELECTRIC BUZZER, IN-USE INDICATOR
MEZZANINE LEVEL															
113-A		3'-0"	7'-0"	1 3/4"	W.D.	F	-	10.1 1	H.M.	F1	E1/A-601	E3/A-601		90	
SECOND LEVEL															
205-A		3'-0"	7'-0"	1 3/4"	W.D.	F	-	9.0 1	H.M.	F1	E1/A-601	E3/A-601		-	
206-A	Yes	3'-0"	8'-0"	1 3/4"	ALUM.	FG	GL-02	4.0	ALUM.	ALUM.	B3/A-622	B4/A-622		-	
208-A		3'-0"	7'-0"	1 3/4"	W.D.	FG	GL-02	13.0	H.M.	F3	E1/A-601	E3/A-601		-	
208-B		3'-0"	7'-0"	1 3/4"	W.D.	FG	GL-02	11.0	H.M.	F2	E1/A-601	E3/A-601		-	
209-A		3'-0"	7'-0"	1 3/4"	ALUM.	FG	GL-02	5.0	ALUM.	ALUM.	B3/A-622	B4/A-622		-	
210-A	Yes	3'-0"	7'-0"	1 3/4"	W.D.	F	-	18.0	H.M.	F1	E1/A-601	E3/A-601		-	
210-B	Yes	3'-0"	7'-0"	1 3/4"	W.D.	F	-	18.0	H.M.	F1	E1/A-601	E3/A-601		-	
210-C	Yes	3'-0"	7'-0"	1 3/4"	W.D.	F	-	18.0	H.M.	F1	E1/A-601	E3/A-601		-	
211-A		3'-0"	7'-0"	2 1/2"	W.D.	N2	GL-02	15.0	H.M.	F1	B1/A-601	B3/A-601	A1/A-601	-	SOUND STUDIO - ACOUSTICAL DOOR
213-A		3'-0"	7'-0"	1 3/4"	W.D.	N2	GL-02	8.0	H.M.	F1	E1/A-601	E3/A-601		-	
214-A		3'-0"	7'-0"	1 3/4"	W.D.	N2	GL-02	8.0	H.M.	F2	E1/A-601	E3/A-601		-	
216-A		3'-0"	7'-0"	1 3/4"	W.D.	F	-	16.0	H.M.	F1	E1/A-601	E3/A-601		-	IN-USE INDICATOR
217-A		3'-0"	7'-0"	1 3/4"	W.D.	FG	GL-02	8.0	H.M.	F2	E1/A-601	E3/A-601		-	
ROOF LEVEL															
R-01		2'-6"	5'-4" 2	1 3/4"	H.M	F	-	2 29.0	H.M.	F1	D1/A-601	D3/A-601			VERIFY DOOR IN EXISTING MASONRY OPENING AFTER SETTING NEW THRESHOLD.
R-02		2'-8"	4'-2"	1 3/4"	H.M.	F	-	29.0	H.M.	F1	D1/A-601	D3/A-601			VERIFY DOOR IN EXISTING MASONRY OPENING AFTER SETTING NEW THRESHOLD.

GLAZING SCHEDULE

TYPE	THICKNESS	GLASS DESCRIPTION	COMMENTS
GL-01	1/4"	INTERIOR - CLEAR, ANNEALED FLOAT GLASS	
GL-02	1/4"	INTERIOR - CLEAR, TEMPERED FLOAT GLASS	
GL-03		INTERIOR - CLEAR, CERAMIC, FIRE-RATED GLASS	90 MIN RATING
GL-04		EXTERIOR - LOW E, INSULATING GLASS	MATCH EXISTING
GL-05	3/8"	CLEAR LAMINATED SAFETY GLASS	SOUND STUDIO
GL-06	1/4"	CLEAR LAMINATED SAFETY GLASS	SOUND STUDIO
GL-EX		EXISTING GLAZING	

EXISTING EXTERIOR WOOD DOOR

DOOR #	DOOR TYPE	LINTEL REPAIR	MTL / WD	FRAME REPAIR NEEDED	FIXED/ OPERABLE	HARDWARE	WEATHER STRIPPING	SILL REPAIR NEEDED	CONDITION (G/F/P/M)	TREATMENT (1-5)	REMARKS
107-B	C	SCRAP AND REPAIR	WD	EXT: CLEAN; INT: SAND AND STAIN	F/F	-	-	EXISTING TO REMAIN	G	2	--
107-C	D	SCRAP AND REPAIR	WD	EXT: CLEAN; INT: SAND AND STAIN	O/O	EXISTING HARDWARE TO REMAIN.	YES, WEATHER STRIPPING NEEDED	EXISTING TO REMAIN	G	2	REPAIR/REPLACE JULIET BALCONY RAILING
107-D	C	SCRAP AND REPAIR	WD	EXT: CLEAN; INT: SAND AND STAIN	F/F	-	-	EXISTING TO REMAIN	G	2	--
119-B	C	SCRAP AND REPAIR	WD	EXT: CLEAN; INT: SAND AND STAIN	F/F	-	-	EXISTING TO REMAIN	G	2	--
119-C	D	SCRAP AND REPAIR	WD	EXT: CLEAN; INT: SAND AND STAIN	O/O	EXISTING HARDWARE TO REMAIN.	YES, WEATHER STRIPPING NEEDED	EXISTING TO REMAIN	G	2	REPAIR/REPLACE JULIET BALCONY RAILING
119-D	C	SCRAP AND REPAIR	WD	EXT: CLEAN; INT: SAND AND STAIN	F/F	-	-	EXISTING TO REMAIN	G	2	--
206-A	--	SCRAP AND REPAIR	WD	EXT: CLEAN; INT: SAND AND STAIN	O-DBL-DOOR; PATCH DOOR; SAND	REPLACE MISSING HDWR	YES, WEATHER STRIPPING NEEDED	EXT: CLEAN. INT: SAND AND STAIN	P	4	SEE #E & #M. HDWR MISSING
227-A	--	SCRAP AND REPAIR	WD	EXT: CLEAN; INT: SAND AND STAIN	O-DBL-DOOR; PATCH DOOR; SAND	REPLACE MISSING HDWR 2	YES, WEATHER STRIPPING NEEDED	EXT: CLEAN. INT: SAND AND STAIN 2	P	4	SEE #E & #M. HDWR MISSING; SAND AND STAIN STAIRS 2

EXISTING WINDOW AND DOOR REPAIR GENERAL NOTES

A. THESE EXISTING WOOD WINDOW AND WOOD DOOR REPAIRS APPLY TO EXISTING WOOD WINDOW SCHEDULE (A-601) AND EXISTING WOOD DOOR SCHEDULE (A-621).
B. REFER TO SPECSIFICATIONS 080152.61 - WOOD WINDOW REPAIRS FOR REFURBISHING AND REPAIRING WOOD WINDOWS AND TRIM.
C. EXISTING WOOD CASEMENT WINDOW SASHS THAT ARE REMOVED FOR RESTORATION WORK UNDER SHOP CONDITION, CONTRACTOR TO PROVIDE PROTECTION TO THE EXISTING BUILDING FROM THE ELEMENTS AND VANDALISM UNTIL THE SASHES & DOORS ARE REINSTALLED.
D. STRIP BOTH SURFACES OF THE WINDOWS, DOORS AND FRAMES DOWN TO BARE WOOD, RESTORE THESE ITEMS AND PREPARE FOR NEW FINISH. ALL EXTERIOR FINISH OF THE WINDOWS, DOORS & FRAMES SHALL BE PAINTED. INTERIOR FINISH OF THESE ITEMS SHALL MATCH THE EXISTING TRIM.
E. REPLACE THE ENTIRE WOOD WINDOW OR DOOR IF DECAYED WOODEN ELEMENT DAMAGE COVERS MORE THAN 50% OF THE PIECE. USE EPOXY FILLER WHEN IF 75% PERCENT OF THE ELEMENT IS STILL SOUND MATERIAL.
F. REFINISH EXPOSED WOOD SURFACES TO MATCH EXISTING (SEE SPECS).
G. EXISTING WOOD WINDOWS (CASEMENT AND DOUBLE HUNG) AND DOORS EXTERIOR MOLDING, FRAMING AND SILLS SHALL BE REPAIRED WITH WATER RESISTANT RESIN CONSOLIDANT AND STRUCTURAL NO-SHRINK EPOXY ADHESIVE PUTTY. IF TOTALLY DETERIORATED, NOTIFY AOR, PRIOR TO REPLACEMENT (MATCH EXISTING PROFILE).
H. WOOD BLOCKING AND SHIM SHALL BE TREATED WOOD.
I. PERMANENTLY SECURE ALL FIXED SASHES AS INDICATED IN EXISTING WINDOW SCHEDULE.
J. PROVIDE SEALANT AROUND THE PERIMETER OF THE OPENING. REMOVE EXISTING AND PROVIDE NEW WEATHERSTRIPPING ON ALL OPERABLE SASHES.
K. CHECK EXISTING HARDWARE FOR PROPER OPERATION. CLEAN AND LUBRICATE ALL EXISTING HARDWARE. REPLACE ALL DAMAGED BROKEN OR MISSING HARDWARE WITH HARDWARE FROM OPERABLE SASHES WITH SIMILAR HARDWARE WHICH ARE SCHEDULED TO BECOME FIXED.
L. MASONRY JOINT ADJACENT TO WINDOW FRAME SHALL BE IN-LINE WITH EXISTING WOOD TRIM ON ALL SIDES.
M. SALVAGE EXISTING HARDWARE FOR RE-USE IF EXISTING WD DOOR REPLACEMENT IS REQUIRED. 1
N. REFER TO DETAIL E/A-622 FOR REPLACEMENT OF SEALANT & GLAZING PUTTY ALONG ENTIRE PERIMETER (TOP, BOTTOM, AND BOTH SIDES) OF EACH INSULATED GLASS UNIT (IGU) WITH A HARDWOOD STOP. 3

CONDITION CLASSIFICATIONS
G - GOOD CONDITION
F - FAIR CONDITION
P - POOR CONDITION
M - MISSING

TREATMENT CLASSIFICATIONS
1. CLEAN, SCRAPE & PAINT
2. CLEAN, SCRAPE, PATCH, SAND & REPAINT (REPAIR CLASS I)
3. MINOR REPAIRS (RE-GLAZE & RE-PUTTY) (REPAIR CLASS II)
4. MAJOR REPAIRS - REPLACE WOOD (REPAIR CLASS III)
5. REPRODUCE/ REPLACE

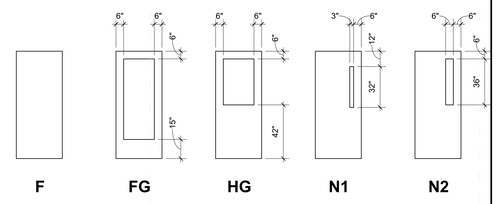
GENERAL DOOR SCHEDULE NOTES

A. THESE GENERAL NOTES APPLY TO A-601 DOOR SCHEDULE DRAWINGS.
B. UNDERCUT DOORS AS REQUIRED BY FINAL FLOOR FINISH.
C. PROVIDE SEALANT BETWEEN HOLLOW METAL FRAME PERIMETERS AND SURROUNDING WALL CONSTRUCTION UNLESS OTHERWISE INDICATED.
D. PROVIDE SEALANT BETWEEN INTERIOR AND EXTERIOR STOREFRONT FRAME PERIMETERS AND SURROUNDING WALL CONSTRUCTION UNLESS OTHERWISE INDICATED.
E. GROUT FULL NEW HOLLOW METAL DOOR FRAMES IN MASONRY WALL CONSTRUCTION.
F. SPOT GROUT NEW HOLLOW METAL DOOR FRAMES IN GYPSUM BOARD WALL CONSTRUCTION.
G. WHERE A FIRE RATING IS INDICATED ON THE DOOR SCHEDULE, HARDWARE AND DOOR ASSEMBLY COMPONENTS SHALL MEET THE REQUIREMENTS OF THAT LABEL.
H. INSTALL DOOR GLASS USING WET-GLAZING METHOD. REFER TO PROJECT MANUAL DIVISION 8 FOR GLAZING.
J. REFER TO PROJECT MANUAL DIVISION 8 FOR HARDWARE SCHEDULE.

DOOR SCHEDULE REMARKS

(E) EXISTING DOOR TO REMAIN

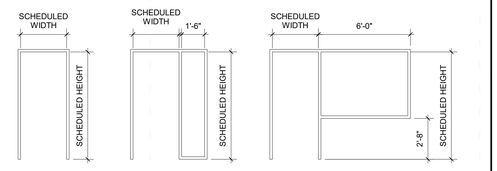
1. INSTALL NEW DOOR AND FRAME IN EXISTING OPENING.
2. RECONDITION AND PATCH DOOR & FRAME. REFURBISH AND REFINISH DOOR, REINSTALL EXISTING HARDWARE.
3. EXPAND EXISTING OPENING AND ADD NEW LINTEL.
4. 3/4" UNDERCUT.



F FG HG N1 N2

DOOR PANEL LEGEND

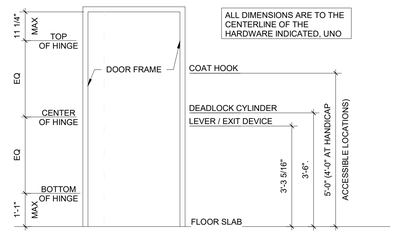
1/4" = 1'-0"



F1 F2 F3

DOOR FRAME LEGEND

1/4" = 1'-0"



DOOR HARDWARE LOCATION DIAGRAM

1/2" = 1'-0"

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DOB STAMP APPROVAL

CHICAGO PUBLIC LIBRARY

SEAL | DATE 12/5/19

Legler Regional Library Renovation

115 S. Pulaski Road
Chicago, IL 60624
CHICAGO PUBLIC LIBRARY
CITY OF CHICAGO, MAYOR LORI LIGHTFOOT

Architect of Record:
RATIO

ADDRESS: 30 West Monroe Street, Suite 500, Chicago, Illinois 60603
PHONE: 312-465-2359
FAX:
WEB: www.ratiodesign.com

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225 W. Ohio Street, 4th Floor, Chicago, IL 60654
(312) 467-0123
Civil Engineers of Record

Stearn-Joglekar, Ltd.
223 W Jackson Blvd # 1110, Chicago, IL 60606
(312) 461-1800
Structural Engineers of Record

Brush Architects, LLC
4200 N Francisco Ave, Chicago, IL 60618
(312) 925-3070
Facade Consultant

RCL Engineering Group
PO BOX 4458, Skokie, IL 60076
(847) 965-3366
Roofing Consultant

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303 W Erie St #510, Chicago, IL 60654
(312) 915-5557
MEPFP Engineers of Record

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53 W Jackson Blvd, Chicago, IL 60604
(312) 877-5125
Lighting Design Consultant

Lerch Bates Inc.
216 S. Jefferson St, Suite LL2, Chicago, IL 60661
(312) 332-5444
Elevator Consultant

Carnow, Conibear & Assoc., Ltd.
600 West Van Buren, Suite 500, Chicago, IL 60607
(312) 782-4486
Environmental Consultant

Issuance

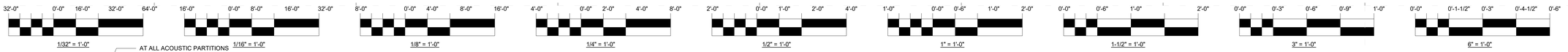
Mark	Description	Date
1	ISSUE FOR BID	11/13/19
2	ADDENDUM #2	11/27/19
3	ADDENDUM #3	12/5/19

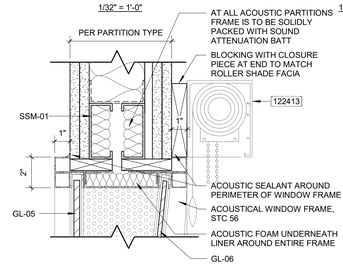
PBC Project Name: Legler Regional Library
PBC Contract No.: C1597
PBC Project No.: 08310

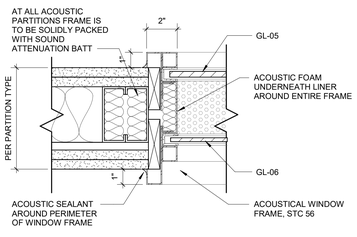
Title
DOOR SCHEDULE AND DETAILS

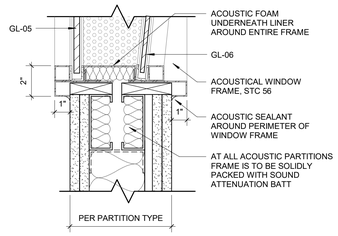
Sheet
A-601

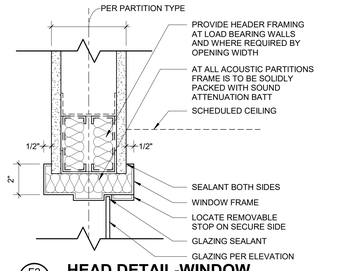
12/5/2019 1:25:24 PM

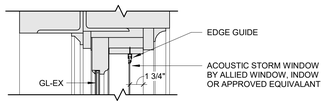


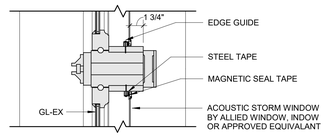


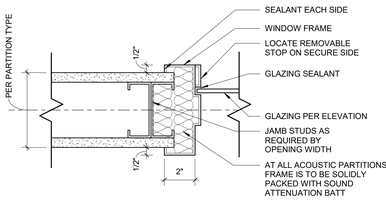


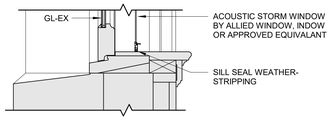


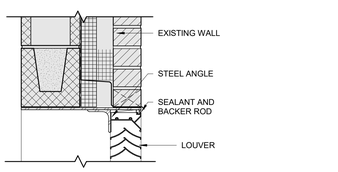


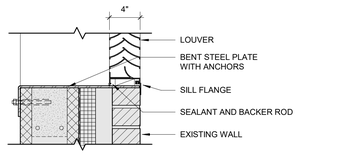


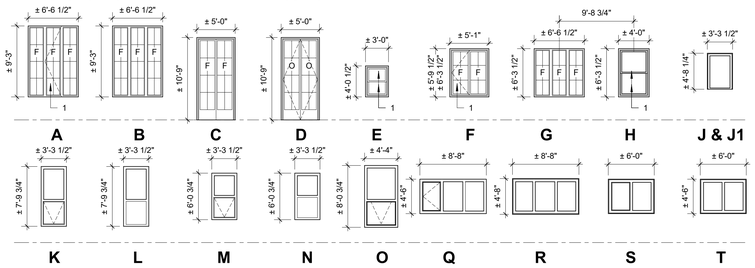












G1 A-621

HEAD DETAIL-WINDOW

3" = 1'-0"

F1 A-621

SILL DETAIL-WINDOW

3" = 1'-0"

E1 A-621

EXST WD WINDOW - HEAD

1 1/2" = 1'-0"

D1 A-621

EXST WD WINDOW - JAMB

1 1/2" = 1'-0"

C1 A-621

EXST WD WINDOW - SILL

1 1/2" = 1'-0"

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EXISTING WINDOW TYPE ELEVATIONS

G2 A-621

JAMB DETAIL-WINDOW

3" = 1'-0"

F2 A-621

HEAD DETAIL-WINDOW

3" = 1'-0"

D2 A-621

JAMB DETAIL-WINDOW

3" = 1'-0"

C2 A-621

LOUVER HEAD DETAIL

1 1/2" = 1'-0"

B2 A-621

LOUVER SILL DETAIL

1 1/2" = 1'-0"

WINDOW #	WINDOW TYPE	LINTEL REPAIR	GLASS / IGU REPAIR	MTL / WD	FRAME REPAIR NEEDED	MTL SECURITY GUARDS	FIXED / OPERABLE	HARDWARE	WEATHER STRIPPING	SILL REPAIR NEEDED	WD PANEL UNDER WINDOW	CONDITION (G/F/P/M)	TREATMENT (1-5)	COMMENTS
BASEMENT LEVEL														
W01	R	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	-	F/F/F	-	-	-	-	G	1	
W02	S	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	-	F/O	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	GOOD EXISTING CONDITION	-	-	G	1	
W03	T	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	-	F/F	-	-	-	-	G	1	
W04	T	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	-	F/F	-	-	-	-	G	1	
W05	R	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	-	F/F/F	-	-	-	-	G	1	
W06	R	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	-	F/F/F	-	-	-	-	G	1	
W07	Q	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	-	O/F/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	GOOD EXISTING CONDITION	-	-	G	1	
W08	Q	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	-	F/F/O	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	GOOD EXISTING CONDITION	SAND, PAINT AND PATCH HOLES	-	G	1	
W09	R	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	-	F/F/F	-	-	SAND, PAINT AND PATCH HOLES	-	G	1	
W10	R	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	-	F/F/F	-	-	SAND, PAINT AND PATCH HOLES	-	G	1	
W11	T	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	-	F/F	-	-	SAND, PAINT AND PATCH HOLES	-	G	1	
W12	T	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	-	F/F	-	-	SAND, PAINT AND PATCH HOLES	-	G	1	
W13	S	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	-	O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	GOOD EXISTING CONDITION	SAND, PAINT AND PATCH HOLES	-	G	1	
FIRST LEVEL														
W14	B	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F/F/F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	2	REMOVE METAL BRACKETS ON EXTERIOR STONE; PATCH STONE
W15	B	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F/O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	GOOD EXISTING CONDITION	EXT: CLEAN; INT: SAND AND STAIN	YES, SAND AND STAIN	G	2	
W16	A	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F/O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	GOOD EXISTING CONDITION	EXT: CLEAN; INT: SAND AND STAIN	YES, SAND AND STAIN	G	2	
W17	B	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F/F/F	-	-	EXT: CLEAN; INT: SAND AND STAIN	YES, SAND AND STAIN	G	2	REPAIR STONE TRIM
W18	A	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F/O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	GOOD EXISTING CONDITION	EXT: CLEAN; INT: SAND AND STAIN	YES, SAND AND STAIN	G	2	
W19	E	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	SCRAPE & PAINT	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	2	
W20	E	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	SCRAPE & PAINT	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	2	
W21	A	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F/O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	GOOD EXISTING CONDITION	EXT: CLEAN; INT: SAND AND STAIN	YES, SAND AND STAIN	G	2	
W22	B	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F/F/F	-	-	EXT: CLEAN; INT: SAND AND STAIN	YES, SAND AND STAIN	G	2	
W23	A	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F/O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	GOOD EXISTING CONDITION	EXT: CLEAN; INT: SAND AND STAIN	YES, SAND AND STAIN	G	2	
W24	SG	SEE MR-100	YES	MTL	REFER TO COND AND TREATMENT	-	F	-	-	-	-	P	5	
W25	SG	SEE MR-100	YES	MTL	REFER TO COND AND TREATMENT	-	F	-	-	-	-	P	5	
W26	SG	SEE MR-100	YES	MTL	REFER TO COND AND TREATMENT	-	F	-	-	-	-	P	5	
W27	O	SEE MR-100	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	
W28	O	SEE MR-100	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	O	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	GOOD EXISTING CONDITION	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	
W29	N	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	O	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	GOOD EXISTING CONDITION	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	SAND AND PAINT GRILL. REMOVE TAPE
W30	N	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	SAND AND PAINT GRILL
W31	M	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	SAND AND PAINT GRILL
W32	N	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	O	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	GOOD EXISTING CONDITION	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	SAND AND PAINT GRILL
W33	N	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	SAND AND GRILL; CLEAR DEBRIS AND BROKEN GLASS FROM PREVIOUS WINDOW
W34	M	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	SAND AND PAINT GRILL
W35	N	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	O	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	GOOD EXISTING CONDITION	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	SAND AND PAINT GRILL
W36	N	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	SAND AND PAINT GRILL
W37	N	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	SAND AND PAINT GRILL
W38	M	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	O	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	GOOD EXISTING CONDITION	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	SAND AND PAINT GRILL
MEZZANINE LEVEL														
W29M	J1	SEE MR-100	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	SAND AND PAINT GRILL
W30M	J1	SEE MR-100	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	SAND AND PAINT GRILL
W31M	J	SEE MR-100	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	SAND AND PAINT GRILL
W32M	J	SEE MR-100	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	SAND AND PAINT GRILL
W33M	J	SEE MR-100	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	REAPAIR HOLE IN METAL SCREEN. CLEAR DEBRIS AND BROKEN GLASS FROM PREVIOUS WINDOW
W34M	J	SEE MR-100	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	SAND AND PAINT GRILL
W35M	J	SEE MR-100	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	SAND AND PAINT GRILL
W36M	J	SEE MR-100	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	SAND AND PAINT GRILL
W37M	J1	SEE MR-100	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	SAND AND PAINT GRILL
W38M	J1	SEE MR-100	-	MTL	CLEAN, SAND AND PAINT	SCRAPE & PAINT	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	SAND AND PAINT GRILL
SECOND LEVEL														
W39	G	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	O/F/O	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	INSTALL WEATHER STRIPPPING	EXT: CLEAN; INT: SAND AND STAIN	-	G	2	REMOVE ORANGE RESIDUE ON STONE ABOVE
W40	G	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F/O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	INSTALL WEATHER STRIPPPING	EXT: CLEAN; INT: SAND AND STAIN	-	G	2	
W41	F	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	INSTALL WEATHER STRIPPPING	EXT: CLEAN; INT: SAND AND STAIN	-	G	2	
W42	F	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	INSTALL WEATHER STRIPPPING	EXT: CLEAN; INT: SAND AND STAIN	-	G	2	
W43	F	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	INSTALL WEATHER STRIPPPING	EXT: CLEAN; INT: SAND AND STAIN	-	G	2	CENTER COLUMN UNDER WINDOW APPEARS SCUFFED
W44	G	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F/O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	INSTALL WEATHER STRIPPPING	EXT: CLEAN; INT: SAND AND STAIN	-	G	2	STONE MEDALLION (BOTTOM RIGHT) FROM WINDOW IS CHIPPED
W45	G	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F/O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	INSTALL WEATHER STRIPPPING	EXT: CLEAN; INT: SAND AND STAIN	-	G	2	
W46	G	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F/O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	INSTALL WEATHER STRIPPPING	EXT: CLEAN; INT: SAND AND STAIN	-	G	2	
W47	F	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	INSTALL WEATHER STRIPPPING	EXT: CLEAN; INT: SAND AND STAIN	-	G	2	APPLY UV FILM TO EACH IGU; INTERIOR SILL CRACKED DOWN THE MIDDLE AND CHIPPED
W48	F	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	INSTALL WEATHER STRIPPPING	EXT: CLEAN; INT: SAND AND STAIN	-	G	2	APPLY UV FILM TO EACH IGU; INTERIOR SILL CRACKED DOWN THE MIDDLE AND CHIPPED
W49	F	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	INSTALL WEATHER STRIPPPING	EXT: CLEAN; INT: SAND AND STAIN	-	G	2	APPLY UV FILM TO EACH IGU; INTERIOR SILL CRACKED DOWN THE MIDDLE AND CHIPPED
W50	G	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F/O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	INSTALL WEATHER STRIPPPING	EXT: CLEAN. INT: SAND, AND STAIN	-	G	2	
W51	G	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F/O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	INSTALL WEATHER STRIPPPING	EXT: CLEAN. INT: SAND, AND STAIN	-	G	2	
W52	G	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F/O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	INSTALL WEATHER STRIPPPING	EXT: CLEAN. INT: SAND, AND STAIN	-	G	2	
W53	F	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	INSTALL WEATHER STRIPPPING	EXT: CLEAN. INT: SAND, AND STAIN	-	G	2	
W54	F	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	INSTALL WEATHER STRIPPPING	EXT: CLEAN. INT: SAND, AND STAIN	-	G	2	
W55	F	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F/O/F	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	INSTALL WEATHER STRIPPPING	EXT: CLEAN. INT: SAND, AND STAIN	-	G	2	STONE CORNICE IS CHIPPED. CAPITAL OF FIRST FLOOR COLUMNS CHIPPED
W56	G	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F/F/F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	2	STONE SILL CRACKED
W57	H	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F/F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	EXISTING DBL-HUNG. REMOVE EXCESS EXISTING PUTTY FROM STONE SILL AND NEARBY BRICK
W58	H	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F/F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	2	EXISTING DBL - HUNG. REMOVE BEE NEST
W59	L	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	-	O	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	GOOD EXISTING CONDITION	INTERIOR: WOOD SILL SPLITTING	-	G	1	
W60	L	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	-	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	
W61	K	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	-	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	
W62	L	SCRAP, REPAINT LINTEL	YES	MTL	CLEAN, SAND AND PAINT	-	O	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	GOOD EXISTING CONDITION	EXT: CLEAN; INT: SAND AND STAIN	-	M	5	BOTTOM SASH - REPLACE SASH FROM BULLET
W63	L	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	-	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	
W64	K	SCRAP, REPAINT LINTEL	-	WD	CLEAN, SAND AND PAINT	-	F	-		EXT: CLEAN; INT: SAND AND STAIN	-	G	1	
W65	L	SCRAP, REPAINT LINTEL	-	WD	CLEAN, SAND AND PAINT	-	O	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	GOOD EXISTING CONDITION	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	CLEAN, REMOVE TAPE
W66	L	SCRAP, REPAINT LINTEL	-	WD	CLEAN, SAND AND PAINT	-	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	
W67	L	SCRAP, REPAINT LINTEL	-	WD	CLEAN, SAND AND PAINT	-	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	
W68	K	SCRAP, REPAINT LINTEL	-	MTL	CLEAN, SAND AND PAINT	-	O	SEAL CLOSE, REMOVE HDWR; PATCH HOLES	GOOD EXISTING CONDITION	EXT: CLEAN; INT: SAND AND STAIN	-	G	1	
W69	H	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F	-	-	-	-	G	2	
W70	H	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	2	PATCH CEILING ABOVE WINDOW
W71	H	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	2	
W72	H	SCRAP, REPAINT LINTEL	-	WD	EXT: CLEAN; INT: SAND AND STAIN	-	F	-	-	EXT: CLEAN; INT: SAND AND STAIN	-	G	2	REMOVE METAL AND SCREW PATCH HOLE ON STONE SILL. REMOVE BLACK TAR

EXISTING WINDOW AND DOOR REPAIR GENERAL NOTES

A. THESE EXISTING WOOD WINDOW AND WOOD DOOR REPAIRS APPLY TO EXISTING WOOD WINDOW SCHEDULE (A-601) AND EXISTING WOOD DOOR SCHEDULE (A-621).
B. REFER TO SPECSIFICATIONS 080152.61 - WOOD WINDOW REPAIRS FOR REFURBISHING AND REPAIRING WOOD WINDOWS AND TRIM.
C. EXISTING WOOD CASEMENT WINDOW SASHS THAT ARE REMOVED FOR RESTORATION WORK UNDER SHOP CONDITION, CONTRACTOR TO PROVIDE PROTECTION TO THE EXISTING BUILDING FROM THE ELEMENTS AND VANDALISM UNTIL THE SASHES & DOORS ARE REINSTALLED.
D. STRIP BOTH SURFACES OF THE WINDOWS, DOORS AND FRAMES DOWN TO BARE WOOD, RESTORE THESE ITEMS AND PREPARE FOR NEW FINISH. ALL EXTERIOR FINISH OF THE WINDOWS, DOORS & FRAMES SHALL BE PAINTED. INTERIOR FINISH OF THESE ITEMS SHALL MATCH THE EXISTING TRIM.
E. REPLACE THE ENTIRE WOOD WINDOW OR DOOR IF DECAYED WOODEN ELEMENT DAMAGE COVERS MORE THAN 50% OF THE PIECE. USE EPOXY FILLER WHEN IF 75% PERCENT OF THE ELEMENT IS STILL SOUND MATERIAL.
F. REFINISH EXPOSED WOOD SURFACES TO MATCH EXISTING (SEE SPECS).
G. EXISTING WOOD WINDOWS (CASEMENT AND DOUBLE HUNG) AND DOORS EXTERIOR MOLDING, FRAMING AND SILLS SHALL BE REPAIRED WITH WATER RESISTANT RESIN CONSOLIDANT AND STRUCTURAL NO-SHRINK EPOXY ADHESIVE PUTTY. IF TOTALLY DETERIORATED, NOTIFY AOR, PRIOR TO REPLACEMENT (MATCH EXISTING PROFILE).
H. WOOD BLOCKING AND SHIM SHALL BE TREATED WOOD.
I. PERMANENTLY SECURE ALL FIXED SASHES AS INDICATED IN EXISTING WINDOW SCHEDULE
J. PROVIDE SEALANT AROUND THE PERIMETER OF THE OPENING. REMOVE EXISTING AND PROVIDE NEW WEATHERSTRIPPING ON ALL OPERABLE SASHES.
K. CHECK EXISTING HARDWARE FOR PROPER OPERATION. CLEAN AND LUBRICATE ALL EXISTING HARDWARE. REPLACE ALL DAMAGED BROKEN OR MISSING HARDWARE WITH HARDWARE FROM OPERABLE SASHES WITH SIMILAR HARDWARE WHICH ARE SCHEDULED TO BECOME FIXED.
L. MASONRY JOINT ADJACENT TO WINDOW FRAME SHALL BE IN-LINE WITH EXISTING WOOD TRIM ON ALL SIDES.
M. SALVAGE EXISTING HARDWARE FOR RE-USE IF EXISTING WD DOOR REPLACEMENT IS REQUIRED.
N. REFER TO DETAIL E3/A-622 FOR REPLACEMENT OF SEALANT & GLAZING PUTTY ALONG ENTIRE PERIMETER (TOP, BOTTOM, AND BOTH SIDES) OF EACH INSULATED GLASS UNIT (IGU) WITH A HARDWOOD STOP. 2

CONDITION CLASSIFICATIONS
G - GOOD CONDITION
F - FAIR CONDITION
P - POOR CONDITION
M - MISSING

TREATMENT CLASSIFICATIONS
1. CLEAN, SCRAPE & PAINT
2. CLEAN, SCRAPE, PATCH, SAND & REPAINT (REPAIR CLASS I)
3. MINOR REPAIRS (RE-GLAZE & RE-PUTTY) (REPAIR CLASS II)
4. MAJOR REPAIRS - REPLACE WOOD (REPAIR CLASS III)
5. REPRODUCE/ REPLACE

12/5/2019 1:25:29 PM

DOB STAMP APPROVAL

PUBLIC BUILDING COMMISSION OF CHICAGO
CHICAGO PUBLIC LIBRARY

SEAL | DATE 12/5/19

Legler Regional
Library Renovation
115 S. Pulaski Road
Chicago, IL 60624
CHICAGO PUBLIC LIBRARY
CITY OF CHICAGO, MAYOR LORI LIGHTFOOT

Architect of Record:

RATIO

RATIO

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Facade Consultant

RCL Engineering Group
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Lighting Design Consultant

Lerch Bates Inc.
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(312) 332-5444
Elevator Consultant

Carnow, Conibear & Assoc., Ltd.
600 West Van Buren, Suite 500, Chicago, IL 60607
(312) 782-4486
Environmental Consultant

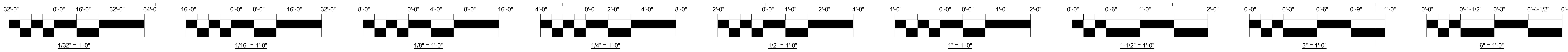
Issuance

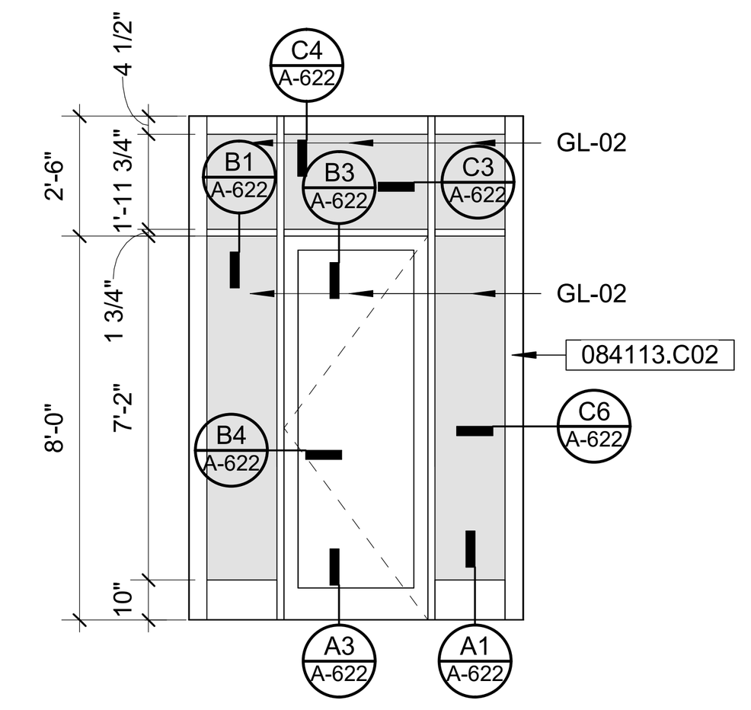
Mark	Description	Date
1	ISSUE FOR BID	11/13/19
2	ADDENDUM #3	12/5/19

PBC Project Name: Legler Regional Library
PBC Contract No: C1597
PBC Project No.: 08310

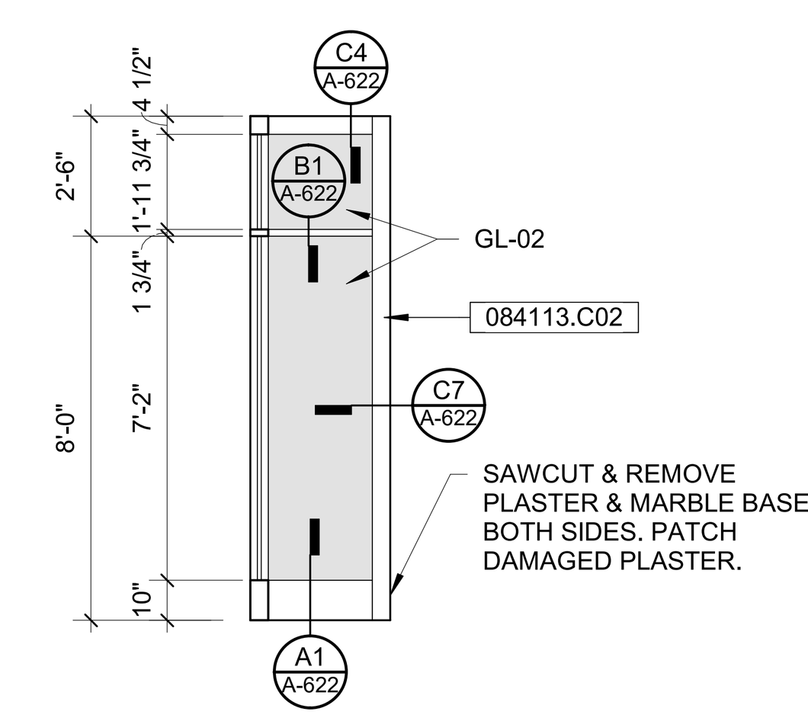
Title
WINDOW SCHEDULE AND DETAILS

Sheet
A-621

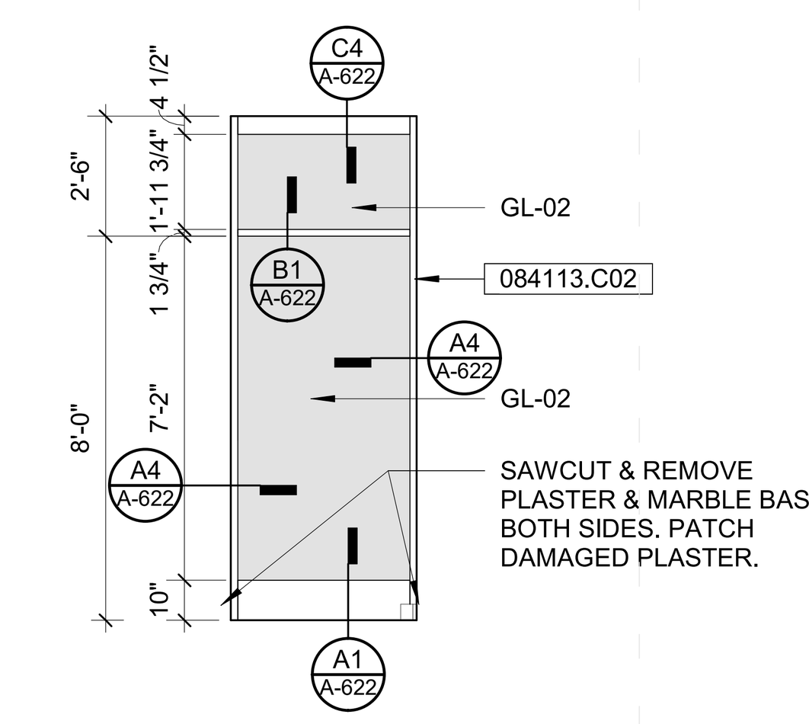




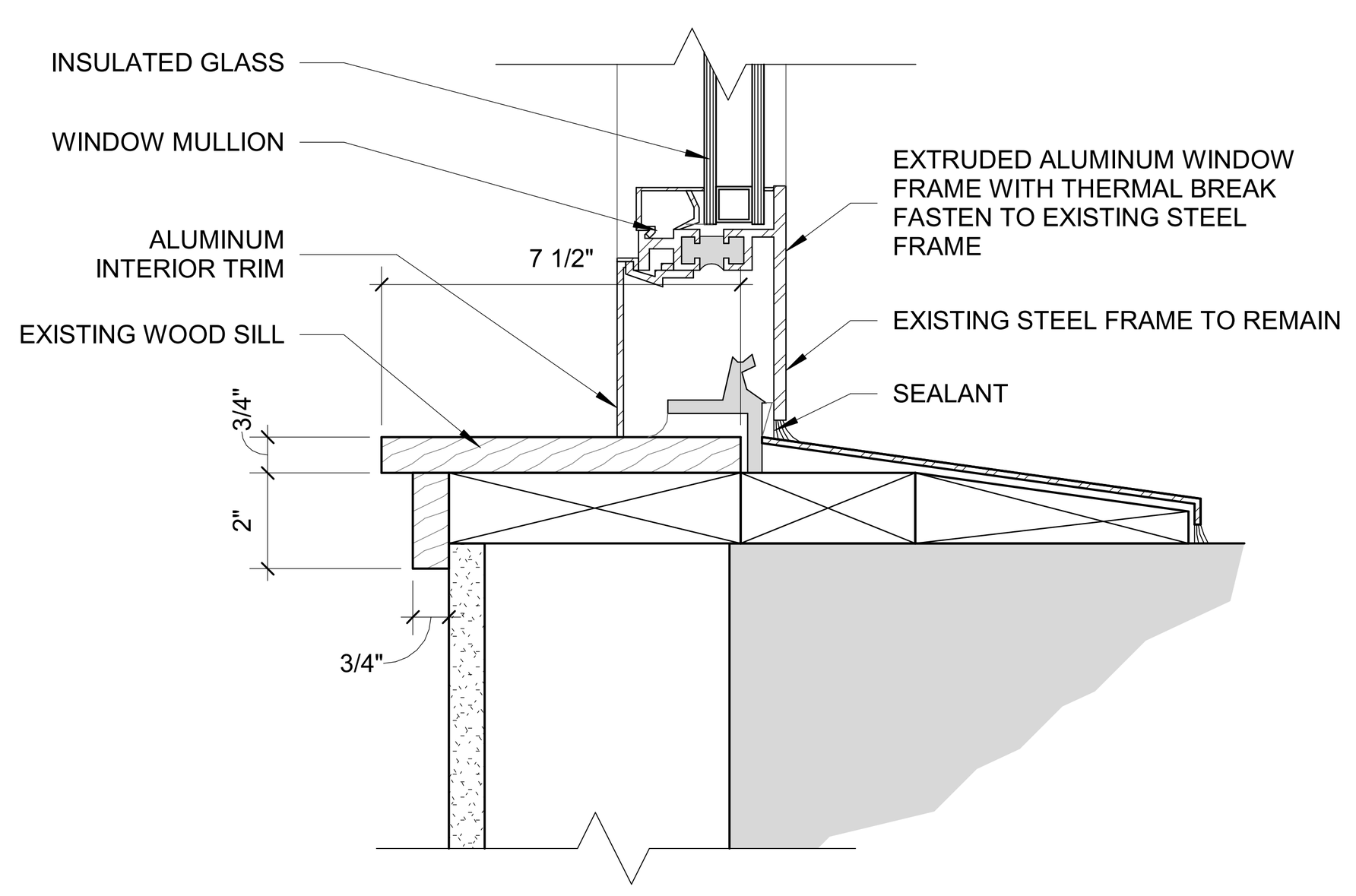
F4 A-622 **106 STUDY ROOM STOREFRONT**
1/4" = 1'-0"



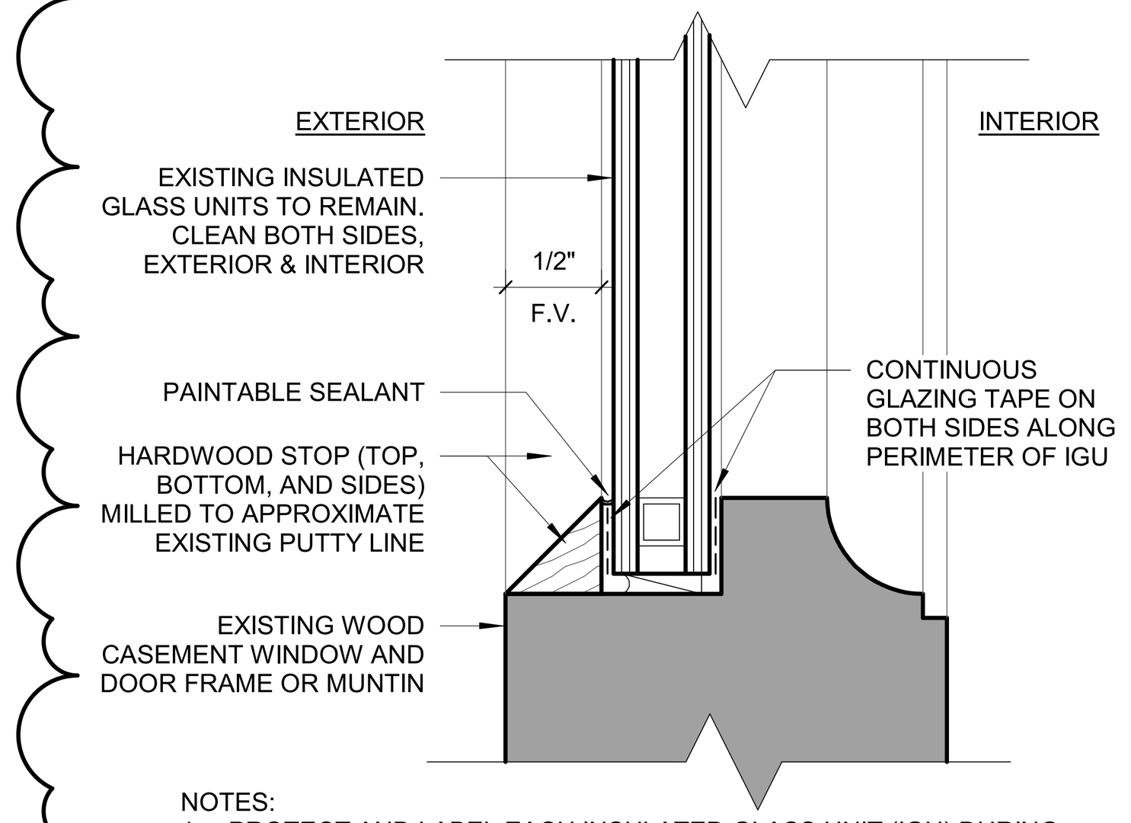
F6 A-622 **106 STUDY ROOM STOREFRONT**
1/4" = 1'-0"



F7 A-622 **106 STUDY ROOM STOREFRONT**
1/4" = 1'-0"

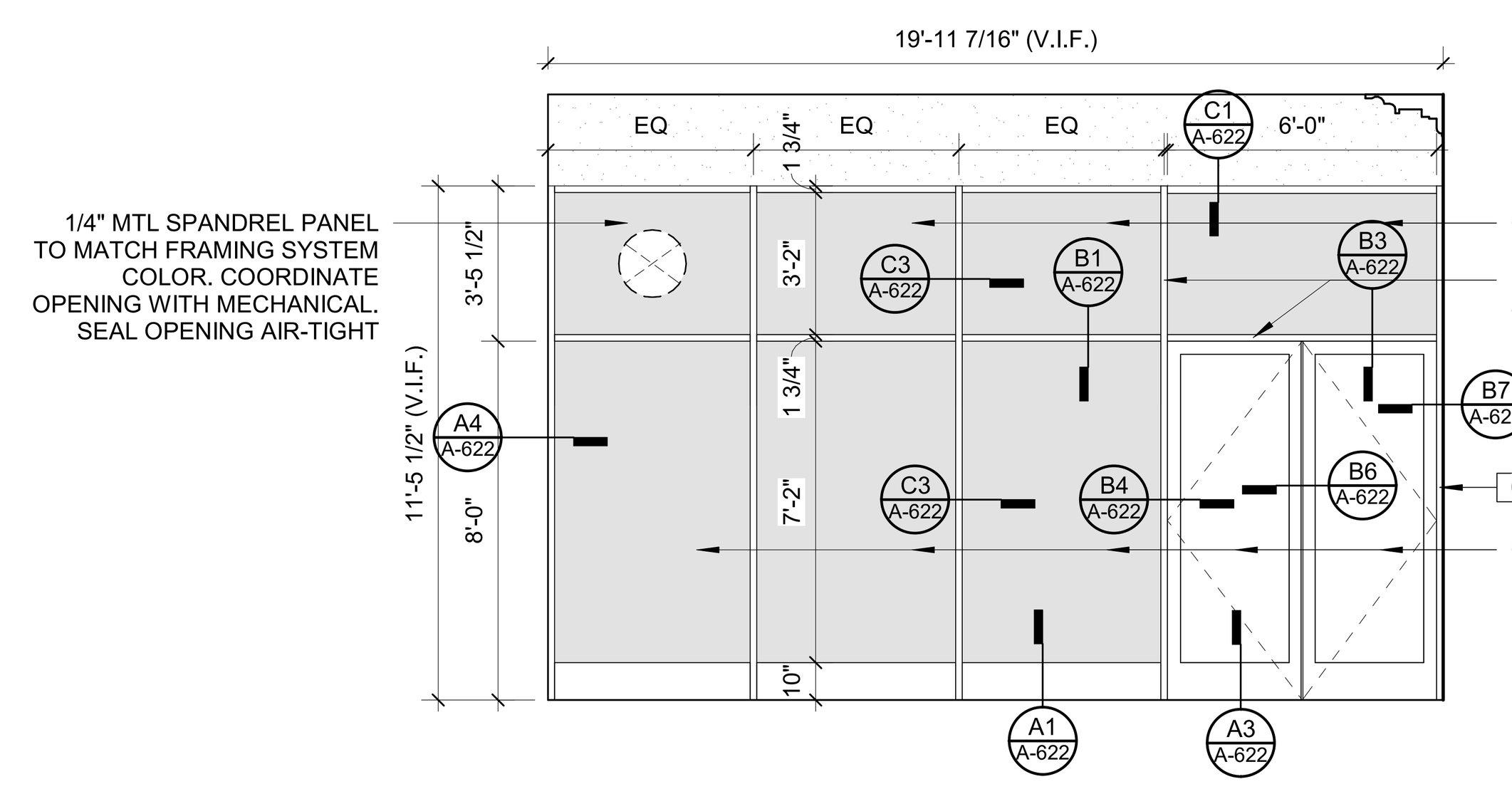


E1 A-622 **HORIZONTAL MULLION (TYP.)**
3" = 1'-0"

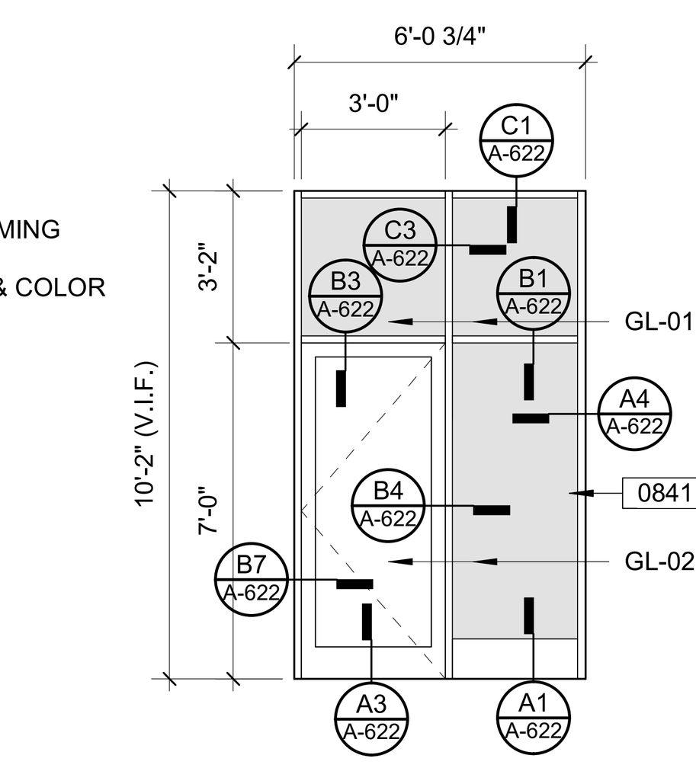


NOTES:
1. PROTECT AND LABEL EACH INSULATED GLASS UNIT (IGU) DURING RESTORATION WORK.
2. REPLACE ALL SEALANT & GLAZING PUTTY ALONG ENTIRE PERIMETER OF EACH INSULATED GLASS UNIT (TOP, BOTTOM, AND BOTH SIDES) WITH A HARDWOOD STOP MILLED TO APPROXIMATE EXISTING PUTTY LINE. HARDWOOD TYPE AND GRADE = WHITE OAK, GRADE FAS.
3. REFER TO SPEC 080152.61 FOR WOOD WINDOW REPAIRS.
4. PRIME & PAINT EXTERIOR WINDOW FRAME & HARDWOOD STOP TO MATCH EXISTING COLOR, PROVIDE SAMPLE TO AOR.
5. SAND AND STAIN INTERIOR FRAME TO MATCH EXISTING COLOR, WD-01, PROVIDE SAMPLE TO AOR.
6. CONTRACTOR TO PROVIDE MOCK-UP AS INDICATED ON A-201 EXTERIOR ELEVATIONS FOR FINAL APPROVAL BY AOR AND OWNER PER SPEC 080152.61 - WOOD WINDOW REPAIRS.

E3 A-622 **TYP INSULATED GLASS UNIT (IGU) DETAIL**
12" = 1'-0"



E5 A-622 **206 youMEDIA STOREFRONT**
1/4" = 1'-0"



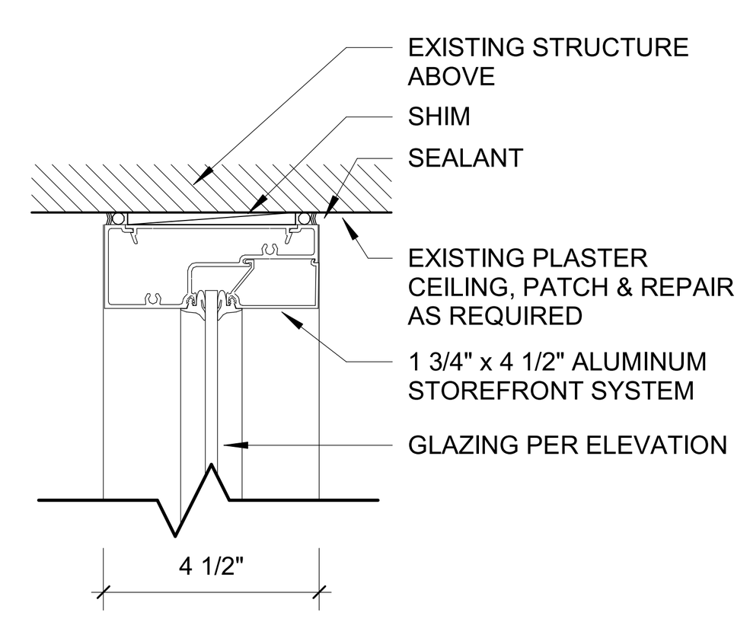
E7 A-622 **209 MAKER LAB STOREFRONT**
1/4" = 1'-0"

NEW WINDOW SCHEDULE

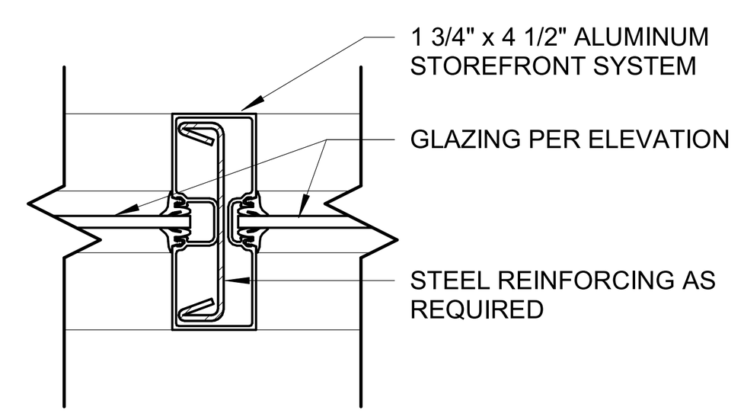
WINDOW #	R.O. Width	R.O. Height	MATERIAL	HEAD	JAMB	SILL	HEAD HEIGHT	COMMENTS
W80	4'-0"	4'-0"	MTL	F2/A-621	D2/A-621	F2/A-621 SIM.	7'-2"	NEW WINDOW
W81	6'-0"	4'-6"	MTL	G1/A-621	G2/A-621	F1/A-621	7'-2"	NEW ACOUSTICAL WINDOW
W82	6'-0"	4'-6"	MTL	F2/A-621	D2/A-621	F2/A-621 SIM.	7'-2"	NEW WINDOW
W83	6'-0"	4'-6"	MTL	F2/A-621	D2/A-621	F2/A-621 SIM.	7'-2"	NEW WINDOW

GLAZING SCHEDULE

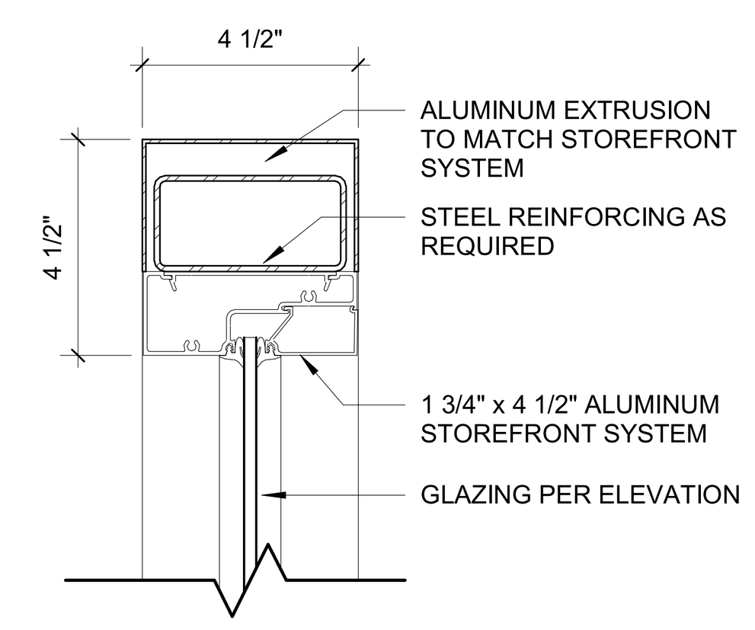
TYPE	THICKNESS	GLASS DESCRIPTION	COMMENTS
GL-01	1/4"	INTERIOR - CLEAR, ANNEALED FLOAT GLASS	
GL-02	1/4"	INTERIOR - CLEAR, TEMPERED FLOAT GLASS	
GL-03		INTERIOR - CLEAR, CERAMIC, FIRE-RATED GLASS	90 MIN RATING
GL-04		EXTERIOR - LOW E, INSULATING GLASS	MATCH EXISTING
GL-05	3/8"	CLEAR LAMINATED SAFETY GLASS	SOUND STUDIO
GL-06	1/4"	CLEAR LAMINATED SAFETY GLASS	SOUND STUDIO
GL-EX		EXISTING GLAZING	



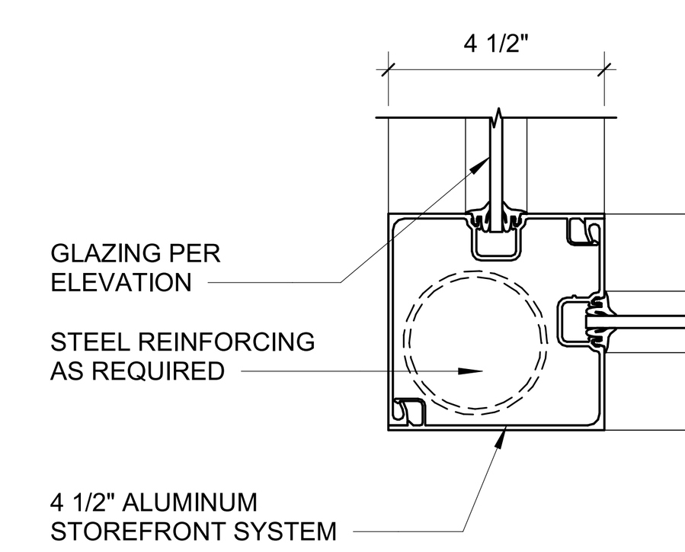
C1 A-622 **STOREFRONT HEAD (TYP.)**
3" = 1'-0"



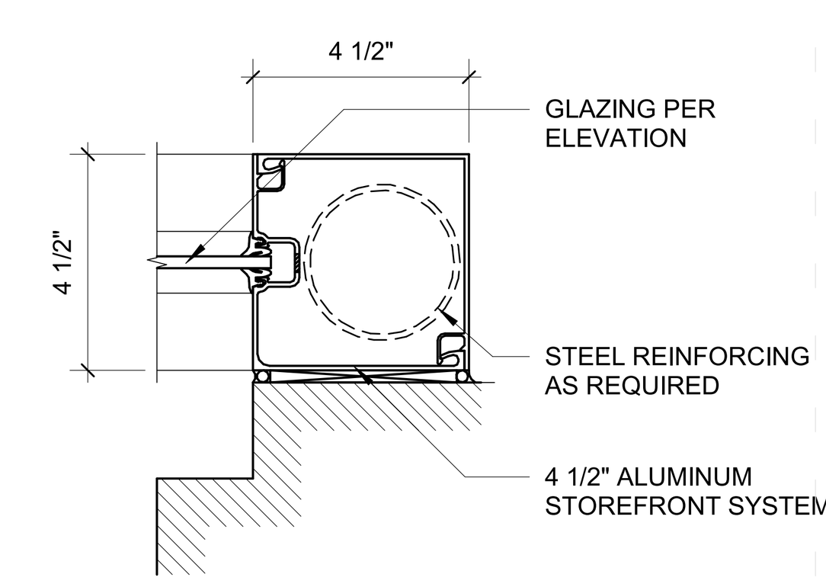
C3 A-622 **VERTICAL MULLION (TYP.)**
3" = 1'-0"



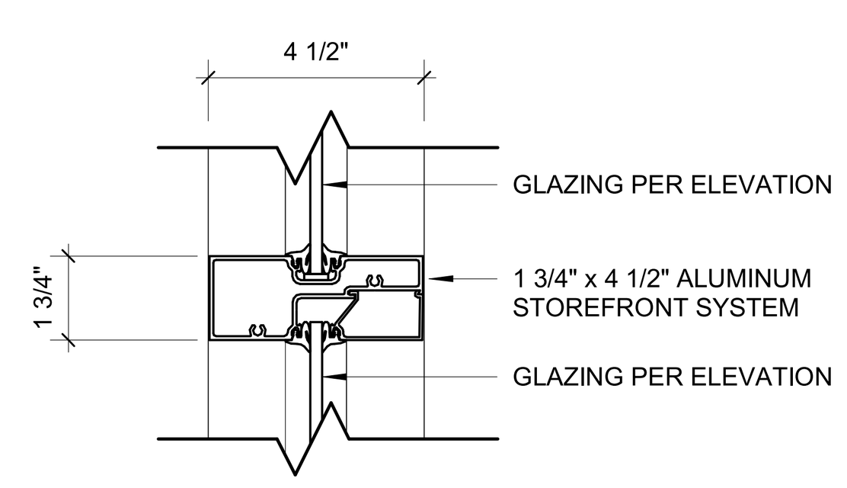
C4 A-622 **TOP HORIZONTAL MULLION**
3" = 1'-0"



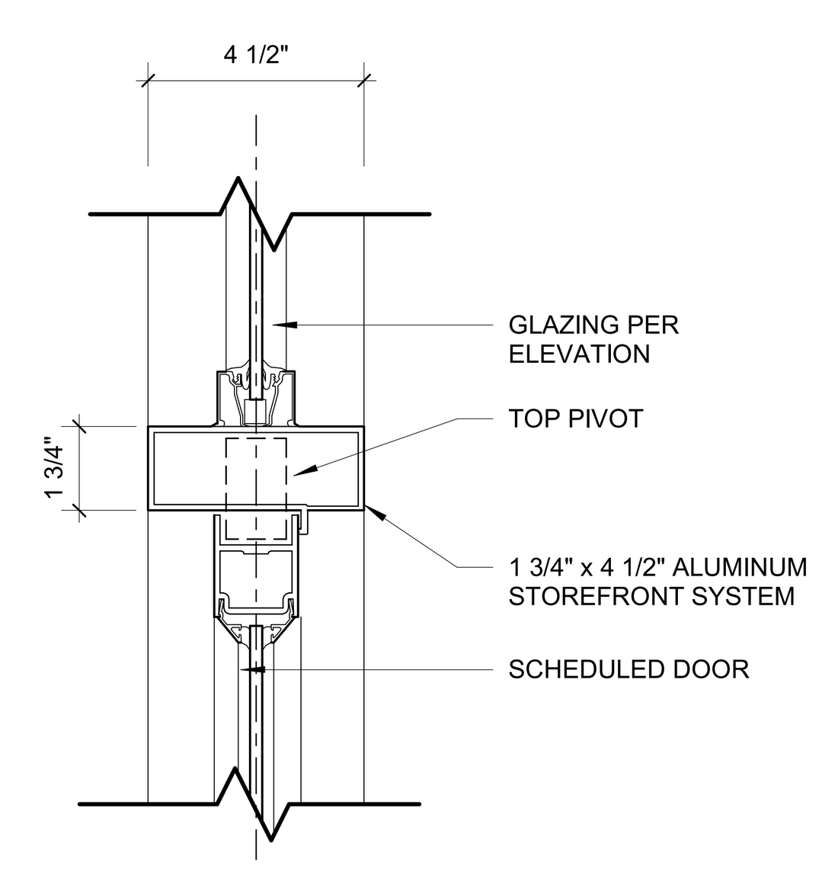
C6 A-622 **INSIDE CORNER POST**
3" = 1'-0"



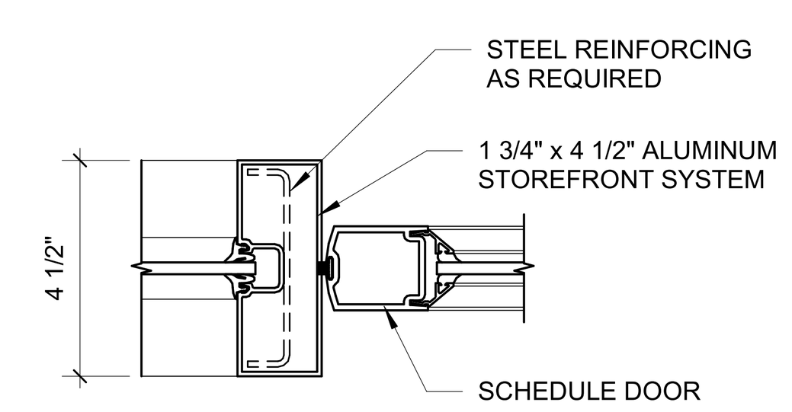
C7 A-622 **CORNER POST AT JAMB**
3" = 1'-0"



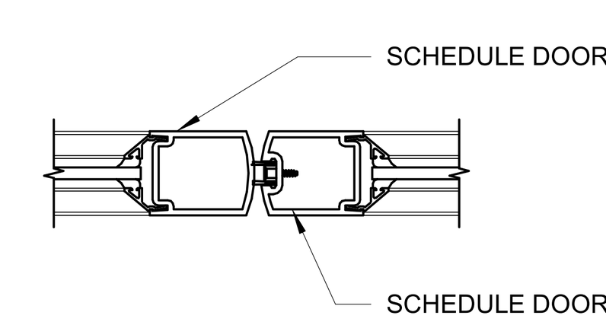
B1 A-622 **HORIZONTAL MULLION (TYP.)**
3" = 1'-0"



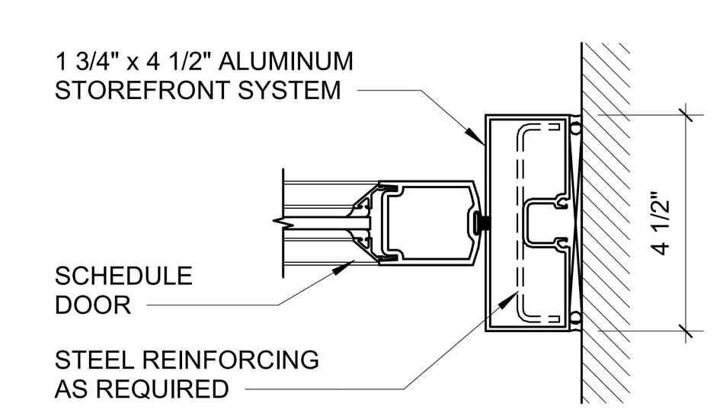
B3 A-622 **STOREFRONT DOOR HEAD**
3" = 1'-0"



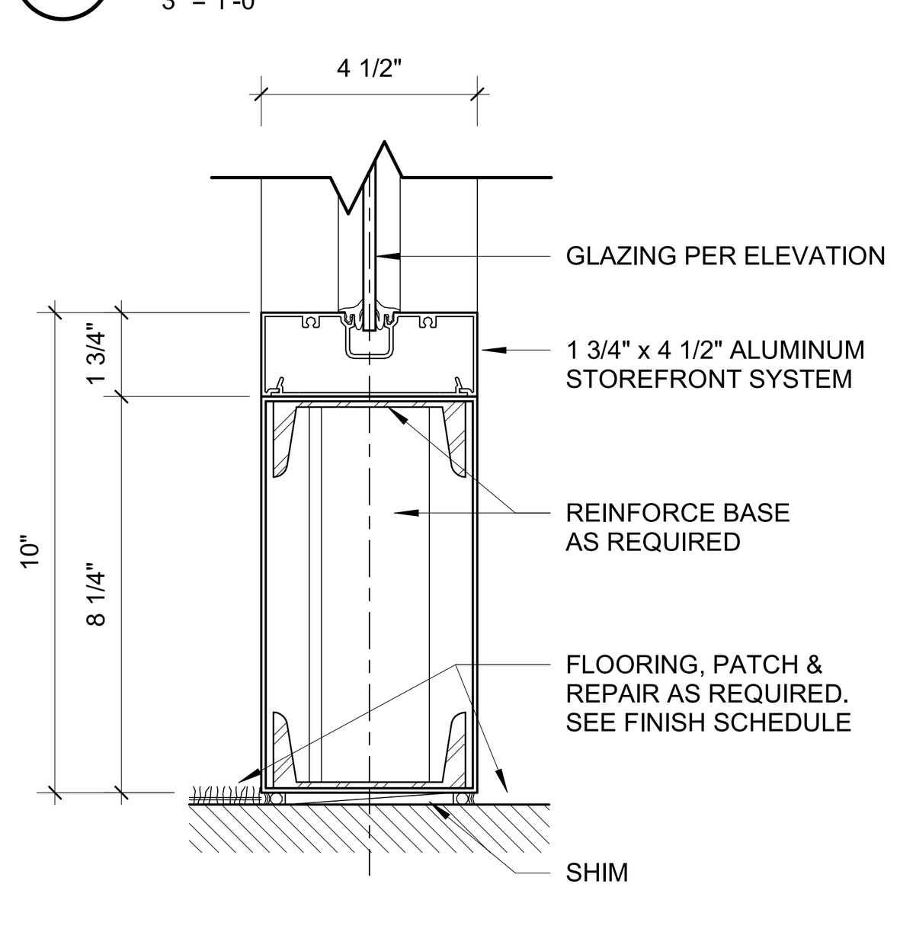
B4 A-622 **DOOR JAMB WITH SIDELITE**
3" = 1'-0"



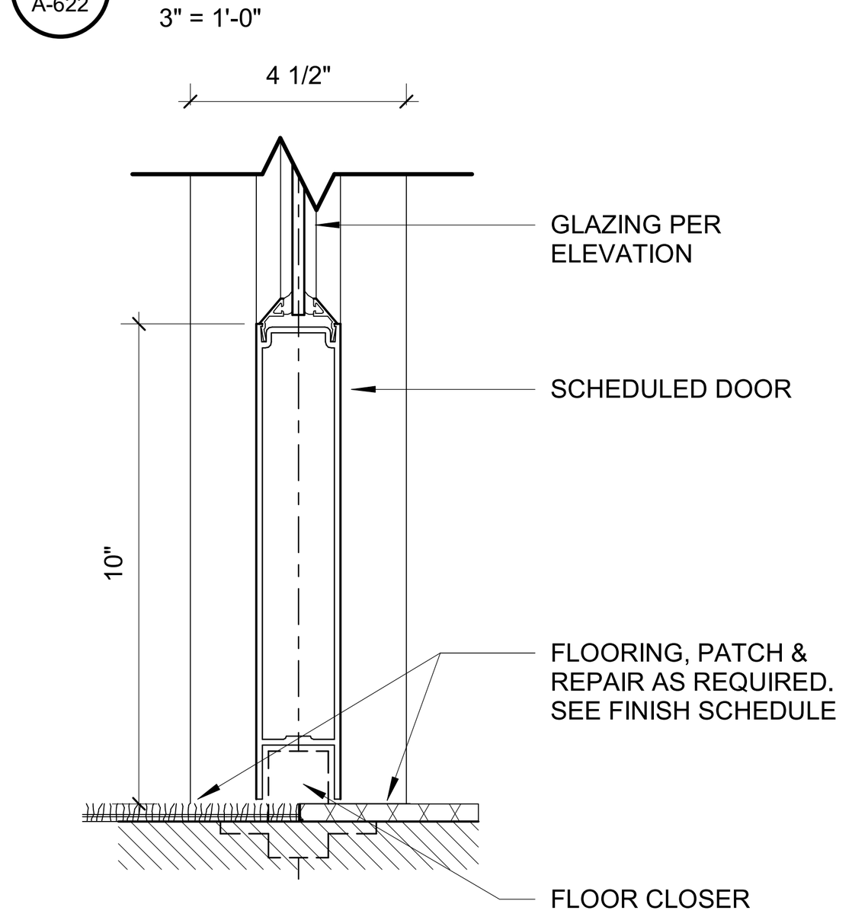
B6 A-622 **DOOR JAMB WITH SIDELITE**
3" = 1'-0"



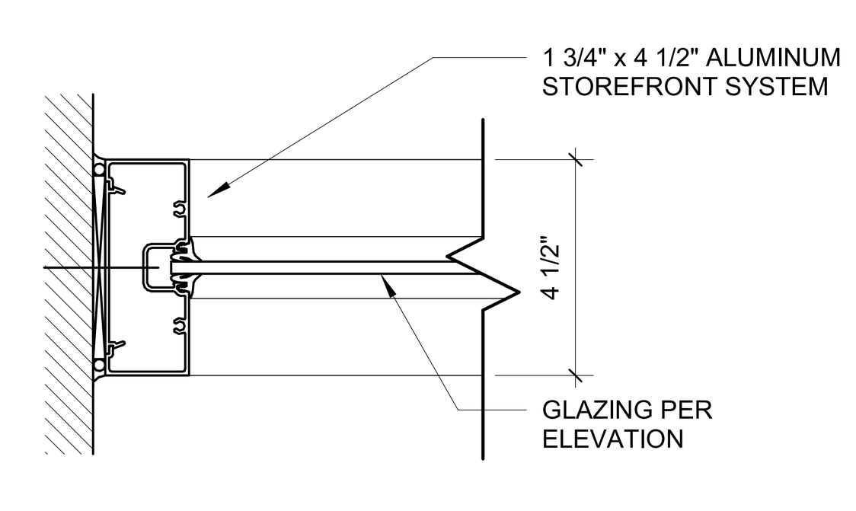
B7 A-622 **STOREFRONT DOOR JAMB**
3" = 1'-0"



A1 A-622 **STOREFRONT SILL (TYP.)**
3" = 1'-0"



A3 A-622 **STOREFRONT DOOR SILL**
3" = 1'-0"



A4 A-622 **JAMB AT WALL**
3" = 1'-0"

GENERAL ENVIRONMENTAL NOTES

WARNING: VARIOUS COMPONENTS/SURFACES WITHIN THE BUILDING HAVE TESTED ABOVE AND BELOW THE LEAD THRESHOLD OF 1.0 MG/CM2 REGARDLESS OF CONCENTRATIONS, THERE IS A POTENTIAL FOR LEAD DUST GENERATION DURING DRILLING, CORING, PAINTING PREPARATION AND OTHER RENOVATION ACTIVITIES FOR ALL SMALL SCALE DISTURBANCES. THE CONTRACTOR SHALL FACILITATE THE APPROPRIATE MEASURES FOUND IN PROJECT SPECIFICATIONS TO PREVENT DUST MITIGATION TO OTHER PARTS OF THE BUILDING. LEAD-BASED PAINT MAY BE PRESENT WITHIN THE BUILDING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO TAKE APPROPRIATE SAFETY MESURES IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL RULES AND REGULATIONS INCLUDING OSHA (1926.62) COMPLIANCE. WASTE CHARACTERIZATION AND WASTE DISPOSAL. ALL WORK WITH SURFACES CONTAINING LEAD-BASED PAINT SHALL BE DONE IN ACCORDANCE WITH SPECIFICATIONS PROJECT SPECIFICATIONS.

WARNING: ASBESTOS-CONTAINING BUILDING MATERIALS ARE OR MAY BE PRESENT IN THIS BUILDING. NO PERSON MAY DISTURB ASBESTOS-CONTAINING MATERIALS UNLESS THAT PERSON IS A LICENSED ASBESTOS WORKER OR CONDUCTS SUCH WORK IN ACCORDANCE WITH SPECIFICATIONS CONTAINED IN THE PROJECT DOCUMENTS AND IN COMPLIANCE WITH ILLINOIS DEPARTMENT OF HEALTH RULES AND REGULATIONS.

12/5/2019 1:25:34 PM

DOB STAMP APPROVAL

PUBLIC BUILDING COMMISSION OF CHICAGO
CHICAGO PUBLIC LIBRARY

SEAL | DATE 12/5/19

Legler Regional Library Renovation
115 S. Pulaski Road
Chicago, IL 60624
CHICAGO PUBLIC LIBRARY
CITY OF CHICAGO, MAYOR LORI LIGHTFOOT

Architect of Record:
RATIO

ADDRESS: 30 West Monroe Street, Suite 500, Chicago, Illinois 60603
PHONE: 312-465-2359
FAX:
WEB: www.ratiodesign.com

TERRA Engineering Ltd.
225 W. Ohio Street, 4th Floor, Chicago, IL 60654
(312) 467-0123
Civil Engineers of Record

Stearn-Joglekar, Ltd.
223 W Jackson Blvd # 1110, Chicago, IL 60606
(312) 461-1800
Structural Engineers of Record

Brush Architects, LLC
4200 N Francisco Ave, Chicago, IL 60618
(312) 925-3070
Facade Consultant

RCL Engineering Group
PO BOX 4458, Skokie, IL 60076
(847) 965-3366
Roofing Consultant

db | HMS
303 W Erie St #510, Chicago, IL 60654
(312) 915-0557
MEPFP Engineers of Record

Gwen Grossman Lighting Design
53 W Jackson Blvd, Chicago, IL 60604
(312) 877-5125
Lighting Design Consultant

Lerch Bates Inc.
216 S. Jefferson St, Suite LL2, Chicago, IL 60661
(312) 332-5444
Elevator Consultant

Carnow, Conibear & Assoc., Ltd.
600 West Van Buren, Suite 500, Chicago, IL 60607
(312) 782-4486
Environmental Consultant

Issuance

Mark	Description	Date
1	ISSUE FOR BID	11/13/19
2	ADDENDUM #3	12/5/19

PBC Project Name: Legler Regional Library
PBC Contract No: C1597
PBC Project No.: 08310

Title
WINDOW ELEVATIONS AND DETAILS

Sheet
A-622

32'-0" 0'-0" 16'-0" 32'-0" 64'-0"
1/32" = 1'-0"

16'-0" 0'-0" 8'-0" 16'-0" 32'-0"
1/16" = 1'-0"

8'-0" 0'-0" 4'-0" 8'-0" 16'-0"
1/8" = 1'-0"

4'-0" 0'-0" 2'-0" 4'-0" 8'-0"
1/4" = 1'-0"

2'-0" 0'-0" 1'-0" 2'-0" 4'-0"
1/2" = 1'-0"

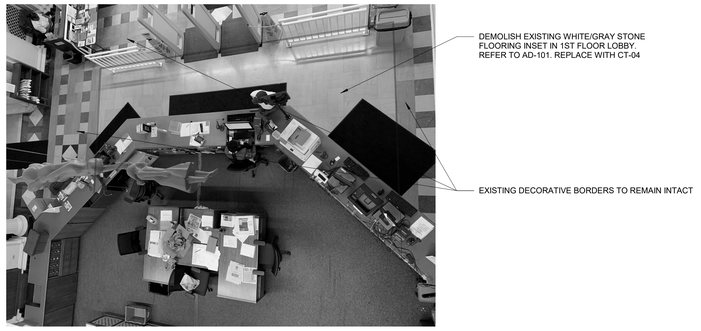
1'-0" 0'-0" 0'-6" 1'-0" 2'-0"
1" = 1'-0"

0'-0" 0'-6" 1'-0" 2'-0"
1-1/2" = 1'-0"

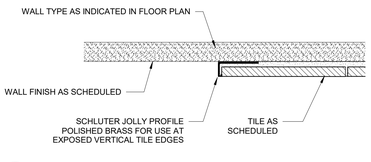
0'-0" 0'-3" 0'-6" 0'-9" 1'-0"
3" = 1'-0"

0'-0" 0'-1-1/2" 0'-3" 0'-4-1/2" 0'-6"
6" = 1'-0"

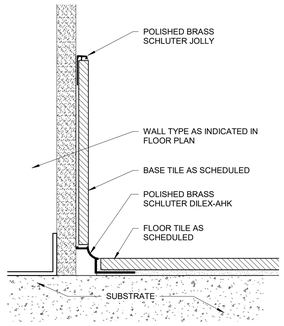
E1 A-650 **LOBBY PLASTER PAINT DETAILS**
12" = 1'-0"



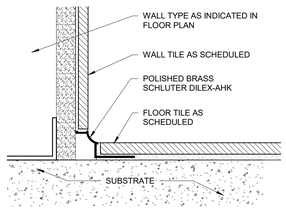
F3 A-650 **DTL- LOBBY TILE INFILL**
1 1/2" = 1'-0"



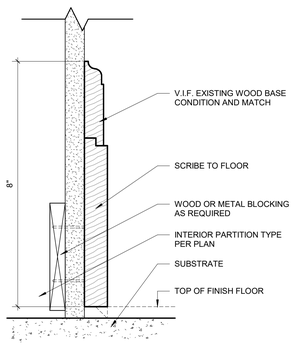
D2 A-650 **DTL- RR VERTICAL EDGE TRIM**
6" = 1'-0"



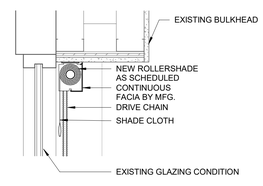
D3 A-650 **DTL- RR BASE TO FLOOR TRIM**
6" = 1'-0"



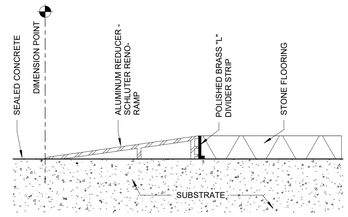
D4 A-650 **DTL- RR WALL TO FLOOR TRIM**
6" = 1'-0"



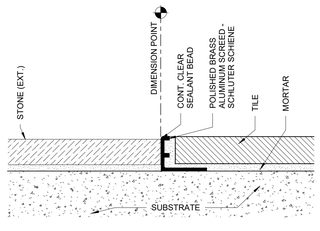
C1 A-650 **DTL- EXISTING WOOD BASE**
6" = 1'-0"



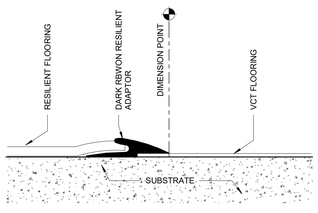
C2 A-650 **TYP. PERIMETER ROLLER SHADE**
1 1/2" = 1'-0"



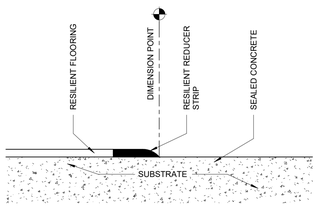
C3 A-650 **TYP. CONCRETE TO STONE TRANSITION**
12" = 1'-0"



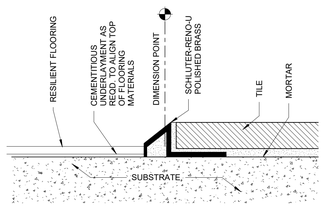
C4 A-650 **TYP. STONE TO TILE TRANSITION**
12" = 1'-0"



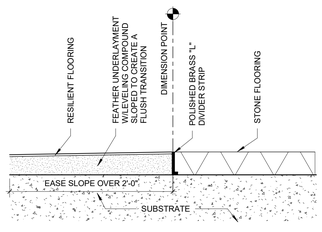
B1 A-650 **TYP. RESILIENT TO VCT TRANSITION**
12" = 1'-0"



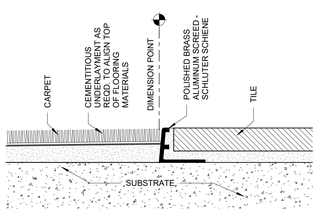
B2 A-650 **TYP. RESILIENT TO CONC. TRANSITION**
12" = 1'-0"



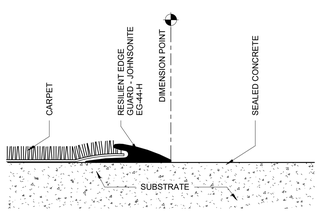
B3 A-650 **TYP. RESILIENT TO TILE TRANSITION**
12" = 1'-0"



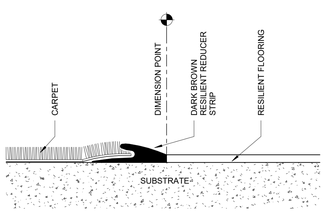
B5 A-650 **TYP. RESILIENT TO STONE TRANSITION**
12" = 1'-0"



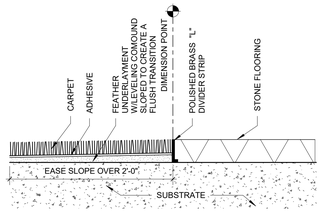
A1 A-650 **TYP. CARPET TO TILE TRANSITION**
12" = 1'-0"



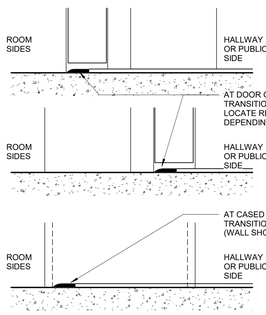
A2 A-650 **TYP. CARPET TO CONC. TRANSITION**
12" = 1'-0"



A3 A-650 **TYP. CARPET TO RESILIENT TRANSITION**
12" = 1'-0"



A5 A-650 **TYP. CARPET TO STONE TRANSITION**
12" = 1'-0"



A6 A-650 **TYP. EDGE STRIP LOCATION**
6" = 1'-0"

FINISH SCHEDULE

TAG	FINISH TYPE	MANUFACTURER	FINISH DESCRIPTION					
			STYLE	SIZE	PRODUCT NUMBER	COLOR	INSTALL NOTES	COMMENTS
ACT-01	ACOUSTICAL CEILING TILE	USG	MARS ACOUSTICAL PANELS	24" X 24" X 3/4"	86785 SLT	WHITE	USE WITH USG DX/DXL 15/16" TEE SYSTEM IN FLAT WHITE	TYP. ACOUSTICAL CEILING
ACT-02	ACOUSTICAL CEILING TILE	USG	MARS HIGH-NRC PANELS 90/30	24" X 24" X 1"	88138 SLT	WHITE	USE WITH USG DX/DXL 15/16" TEE SYSTEM IN FLAT WHITE	SOUND STUDIO CEILING
AF-01	ARCHITECTURAL FILM	SOLYX FILMS	TRANSLUCENT COLOR	V.I.F.	SXB-73	DARK GREY SAND BLAST	REFER TO DRAWINGS	TINTED WINDOW FILM
AWP-01	ACOUSTICAL WALL PANEL	ACOUSTICAL FULFILLMENT	FULFILL WALL PANEL	24"W X 50"H X 2"D; BEVELED EDGE	GUILFORD OF MAINE - CHASE 2138	MOSS 1250	REFER TO DRAWINGS	PANELS TO MEET CLASS "A" RATING PER ASTM E84
CG-01	CORNER GUARD	KOROSEAL	ANODIZED ALUMINUM CORNER GUARD	6'L	N/A	BRASS	REFER TO DRAWINGS	
CPT-01	CARPET	MOHAWK	HEM	24" X 24"	GT178-729	SLIM	BRICK ASHLAR	
CPT-01A	ACOUSTICAL UNDERLAYMENT	PER SPECIFICATIONS					INSTALL WITH CPT-01 IN SOUND STUDIO ONLY	REFER TO SPECIFICATIONS
CPT-02	CARPET	MOHAWK	COLORBEAT	24" X 24"	GT160-168	MUSTARD SEED	BRICK ASHLAR	REFER TO A-151 FOR LAYOUT
CPT-03	CARPET	TANDUS-CENTIVA	URBAN VIEW	24" X 24" / ETHOS MODULAR WITH OMNICOAT BACKING	04405-19806	STONE OAK	VERTICAL ASHLAR	BASEMENT OFFICE AREAS
CT-01	PORCELAIN TILE	VIRGINIA TILE	MARVEL PRO	12" X 24"	ATLMPSS1224R	STATUARIO SELECT / MATTE	RUNNING BOND W/ GR-01	RESTROOM FLOOR TILE
CT-02	PORCELAIN TILE	STONE SOURCE	LAGO DI VITTO	4" X 12"	N/A	BIANCO / POLISHED	VERTICAL STACK BOND W/ GR-01	RESTROOM WET WALL TILE
CT-03	PORCELAIN TILE	DESIGN & DIRECT SOURCE	ESSEX	3" X 12"	N/A	OLIVE / GLOSSY	VERTICAL STACK BOND W/ GR-01 / @ ABOVE RESTROOM COUNTERTOP ONLY	RESTROOM BACKSPLASH
CT-04	PORCELAIN TILE	DALTILE	KEYSTONES	2" X 2" MOSAIC	D311	BLACK/EBONY		INFILL FOR EXISTING STONE FLOOR AREAS
CTB-01	PORCELAIN TILE	VIRGINIA TILE	MARVEL PRO	12" X 24" / CUT TO 6" X 24"	ATLMPSS1224R	STATUARIO SELECT / MATTE	RUNNING BOND W/ GR-01 / MATCH TO FLOOR GROUT LINES / DO NOT INSTALL ON WALLS WITH CT-02 / INSTALL WITH SCHLUTER-JOLLY POLISHED BRASS ON TOP EDGE OF BASE	RESTROOM WALL BASE TILE
EPT-01	EPOXY PAINT	SHERWIN-WILLIAMS	PER SPECIFICATION	N/A	SW 7042	SHOJI WHITE / SEMI-GLOSS		EPOXY PAINT
GR-01	GROUT	TEC	POWER GROUT	N/A	908	DOVE GRAY	USE WITH CT-01,02,03 AND CTB-01	
LVT-01	LUXURY VINYL TILE	MOHAWK	SECOYA	9" X 59"	C0009-872	PICTON PARK	INSTALL RANDOM	
PL-01	PLASTIC LAMINATE	WILSONART	WOODGRAIN	REFER TO DRAWINGS	7984-12	MANGALORE MANGO		LOWER CABINET TYP.
PL-02	PLASTIC LAMINATE	FORMICA	LAMINATE	REFER TO DRAWINGS	8793-58	GREEN SLATE		UPPER CABINET TYP.
PL-03	PLASTIC LAMINATE	WILSONART	COMPACT LAMINATE 114	REFER TO DRAWINGS	7984-60	MANGALORE MANGO		ELEVATOR PANELS
PL-04	PLASTIC LAMINATE	TRESPA	LUMEN	REFER TO DRAWINGS	LM0641	CHINA GOLD		CIRCULATION DESK LETTERING
PL-05	PLASTIC LAMINATE	TRESPA	UNI COLOURS	REFER TO DRAWINGS	A90.0.0	BLACK		CIRCULATION DESK BASE
PT-01	PAINT	SHERWIN-WILLIAMS	PER SPECIFICATION	N/A	SW 7042	SHOJI WHITE / EGGSHELL		TYP. WALL PAINT
PT-02	PAINT	SHERWIN-WILLIAMS	PER SPECIFICATION	N/A	SW 7042	SHOJI WHITE / SEMI-GLOSS		TYP. HIGH-TRAFFIC WALL PAINT
PT-03	PAINT	SHERWIN-WILLIAMS	PER SPECIFICATION	N/A	SW 6126	NAVAJO WHITE / SEMI-GLOSS		REFER TO A-650 E1
PT-04	PAINT	SHERWIN-WILLIAMS	PER SPECIFICATION	N/A	SW 7675	SEALSKIN / SEMI-GLOSS		HOLLOW METAL DOORS/ELEVATORS, FRAMES, AND LINTELS
PT-05	PAINT	SHERWIN-WILLIAMS	PER SPECIFICATION	N/A	SW 9091	HALF-CAFF / EGGSHELL		REFER TO PLANS
PT-06	PAINT	SHERWIN-WILLIAMS	PER SPECIFICATION	N/A	SW 7042	SHOJI WHITE / FLAT		TYP. CEILING PAINT
RB-01	WALL BASE-RESILIENT	TARKETT	INFLECTION	5 1/4"H	MW-44-G	DARK BROWN		DECORATIVE WALL BASE
RB-02	WALL BASE-RESILIENT	TARKETT	DURACOVE	4"H	DC 44 4 X 4 1/8 TOELESS	DARK BROWN		TYP. WALL BASE
RB-03	WALL BASE-RESILIENT	TARKETT	DURACOVE	4"H	DC 44 4 X 4 1/8 TOE	DARK BROWN		TYP. WALL COVE BASE
RF-01	RESILIENT FLOORING	AMERICAN BILTRITE	TEXAS GRANITE	12" X 12"	VTG-143	WHITE/TAUPE	MONOLITHIC	MAKER SPACE FLOORING
SC-01	SEALED CONCRETE	ASHFORD FORMULA	SEALED CONCRETE, LOW REFLECTIVITY	V.I.F.	N/A			SEAL EXISTING CONCRETE; REFER TO SPECIFICATIONS FOR SURFACE PREPARATION
SPT-01	HIGH-PERFORMANCE PAINT	SHERWIN-WILLIAMS	PER SPECIFICATION	N/A	SW 9091	SEALSKIN / SEMI-GLOSS		EXTERIOR PAINT
SPT-02	HIGH-PERFORMANCE PAINT	SHERWIN-WILLIAMS	PER SPECIFICATION	N/A	SW 7042	SHOJI WHITE / FLAT		EXISTING BOOKSTACKS
SS-01	STAINLESS STEEL	N/A	STAINLESS STEEL	REFER TO DRAWINGS	N/A	BRUSHED		ELEVATOR DOORS, CEILING, HANDRAILS, AND TOEKICKS
SSM-01	SOLID SURFACE	ARISTECH SURFACES	AVONITE SOLID SURFACE	REFER TO DRAWINGS	4312	ALASKAN STONE		TYP. COUNTERTOP
SSM-02	NOT USED	-	-	-	-	-	-	-
SSM-03	QUARTZ	WILSONART	QUARTZ	REFER TO DRAWINGS	Q4004	MEHNDI		MAKER SPACE WORK SURFACE
SSM-04	SOLID SURFACE	ARISTECH SURFACES	AVONITE SOLID SURFACE	REFER TO DRAWINGS	8064	ICE WHITE		CIRCULATION DESK
ST-01	STONE-WALL BASE	DALTILE	MARBLE	12" X 12" CUT TO 6" X 12"	M741	EMPRESS GREEN	RUNNING BOND WITH GR-02	MATCH EXISTING STONE WALL BASE
ST-02	STONE-FLOORING	N/A	MARBLE	V.I.F.	N/A	MATCH EXISTING		MATCH ADJACENT EXISTING FLOORS
TP-01	TOILET PARTITION	BOBRICK	PER SPECIFICATION	V.I.F.	PER SPECIFICATION	CELLO 0811 FH		TYP. TOILET PARTITION
VCT-01	VINYL COMPOSITION TILE	ARMSTRONG	STANDARD EXCELON IMPERIAL TEXTURE	12" X 12"	59242	CAROB	MONOLITHIC	
VCT-02	VINYL COMPOSITION TILE	TARKETT	IQ GRANIT SD	ROLL	0710	FULL MOON / LIGHT GREY	MONOLITHIC	STATIC-DISSIPATIVE
WC-01	WALLCOVERING	WOLF GORDON	HUNTINGTON	52"W	HTN-039	ALABASTER	REVERSE HANG / RANDOM MATCH	
WD-01	WOOD VENEER	N/A	RED OAK	REFER TO DRAWINGS	N/A	MATCH EXISTING BOOKCASES	PROVIDE FINISH SAMPLES FOR ARCHITECT APPROVAL	CIRCULATION DESK CASEWORK
WT-01	ROLLER SHADE	MECHOSHADE	MANUAL URBANSHADE SYSTEM W/ CLASSIC BLACKOUT SHADE	V.I.F.	AL-0706	ALABASTER FASCIA / OYSTER SHADE		BLACKOUT SHADE
WT-02	ROLLER SHADE	MECHOSHADE	MANUAL URBANSHADE SYSTEM W/ SOHO 1600 SERIES SHADE	V.I.F.	AL-1602	ALABASTER FASCIA / CANAL SHADE		3% OPEN SHADE

GENERAL ENVIRONMENTAL NOTES

WARNING: VARIOUS COMPONENTS/SURFACES WITHIN THE BUILDING HAVE TESTED ABOVE AND BELOW THE LEAD THRESHOLD OF 1.0 MG/CM2 REGARDLESS OF CONCENTRATIONS, THERE IS A POTENTIAL FOR LEAD DUST GENERATION DURING DRILLING, CORING, PAINTING PREPARATION AND OTHER RENOVATION ACTIVITIES FOR ALL SMALL SCALE DISTURBANCES. THE CONTRACTOR SHALL FACILITATE THE APPROPRIATE MEASURES FOUND IN PROJECT SPECIFICATIONS TO PREVENT DUST MITIGATION TO OTHER PARTS OF THE BUILIDNG. LEAD-BASED PAINT MAY BE PRESENT WITHIN THE BUILDING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO TAKE APPROPRIATE SAFETY MESURES IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL RULES AND REGULATIONS INCLUDING OSHA (1926.62) COMPLIANCE. WASTE CHARACTERIZATION AND WASTE DISPOSAL. ALL WORK WITH SURFACES CONTAINING LEAD-BASED PAINT SHALL BE DONE IN ACCORDANCE WITH SPECIFICATIONS PROJECT SPECIFICATIONS.

WARNING: ASBESTOS-CONTAINING BUILDING MATERIALS ARE OR MAY BE PRESENT IN THIS BUILDING. NO PERSON MAY DISTURB ASBESTOS-CONTAINING MATERIALS UNLESS THAT PERSON IS A LICENSED ASBESTOS WORKER OR CONDUCTS SUCH WORK IN ACCORDANCE WITH SPECIFICATIONS CONTAINED IN THE PROJECT DOCUMENTS AND IN COMPLIANCE WITH ILLINOIS DEPARTMENT OF HEALTH RULES AND REGULATIONS.

DOB STAMP APPROVAL

CITY OF CHICAGO
PUBLIC BUILDING COMMISSION
CHICAGO PUBLIC LIBRARY

SEAL | DATE 12/5/19

Legler Regional Library Renovation

115 S. Pulaski Road
Chicago, IL 60624
CHICAGO PUBLIC LIBRARY
CITY OF CHICAGO, MAYOR LORI LIGHTFOOT

Architect of Record:
RATIO
RATIO

ADDRESS: 30 West Monroe Street, Suite 500, Chicago, Illinois 60603
PHONE: 312-465-2359
FAX:
WEB: www.ratiodesign.com

TERRA Engineering Ltd.
225 W. Ohio Street, 4th Floor, Chicago, IL 60654
(312) 467-0123
Civil Engineers of Record

Stearn-Joglekar, Ltd.
223 W Jackson Blvd # 1110, Chicago, IL 60606
(312) 461-1800
Structural Engineers of Record

Brush Architects, LLC
4200 N Francisco Ave, Chicago, IL 60618
(312) 925-3070
Facade Consultant

RCL Engineering Group
PO BOX 4458, Skokie, IL 60078
(847) 965-3366
Roofing Consultant

db | HMS
303 W Erie St #510, Chicago, IL 60654
(312) 915-0557
MEPFP Engineers of Record

Gwen Grossman Lighting Design
55 W Jackson Blvd, Chicago, IL 60604
(312) 877-5125
Lighting Design Consultant

Lerch Bates Inc.
216 S. Jefferson St, Suite LL2, Chicago, IL 60661
(312) 332-5444
Elevator Consultant

Carnow, Conibear & Assoc., Ltd.
600 West Van Buren, Suite 500, Chicago, IL 60607
(312) 782-4486
Environmental Consultant

Issuance

Mark	Description	Date
1	ISSUE FOR BID	11/13/19
2	ADDENDUM #3	12/5/19

PBC Project Name: Legler Regional Library
PBC Contract No: C1597
PBC Project No.: 08310

Title
FINISH SCHEDULE AND DETAILS

Sheet
A-650

12/5/2019 1:25:39 PM

32'-0" 0'-0" 16'-0" 32'-0" 64'-0"
1/32" = 1'-0"

16'-0" 0'-0" 8'-0" 16'-0" 32'-0"
1/16" = 1'-0"

8'-0" 0'-0" 4'-0" 8'-0" 16'-0"
1/8" = 1'-0"

4'-0" 0'-0" 2'-0" 4'-0" 8'-0"
1/4" = 1'-0"

2'-0" 0'-0" 1'-0" 2'-0" 4'-0"
1/2" = 1'-0"

1'-0" 0'-0" 0'-6" 1'-0" 2'-0"
1" = 1'-0"

0'-0" 0'-6" 1'-0" 2'-0"
1-1/2" = 1'-0"

0'-0" 0'-3" 0'-6" 0'-9" 1'-0"
3" = 1'-0"

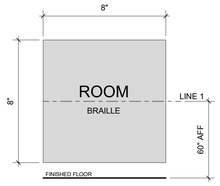
0'-0" 0'-1-1/2" 0'-3" 0'-4-1/2" 0'-6"
6" = 1'-0"

SIGN TYPE S1

RM NO	ROOM
	UNEXCAVATED
006	STAFF LOUNGE
007	COMMUNITY ROOM
009	CLOSET
010	ELEV. EQPM
013	JANITORS CLOSET
015	ENGINEER LOCKER RM
016	MECHANICAL ROOM
017	MECHANICAL ROOM
018	FAN ROOM
020	CONDENSER ROOM
021	WORK ROOM
021A	ASST DIR.
021B	L-4 OFFICE
022	STORAGE
023	PUMP ROOM
024	MDF/ SERVER
025	STORAGE
026	LAUNDRY
103-A	CIRCULATION DESK
104	JANITORS CLOSET
105	STUDY ROOM
106	STUDY ROOM
107	ADULT/ REFERENCE READING ROOM
111	ARTIST IN-RESIDENCE
111A	CLOSET

SIGN TYPE S1

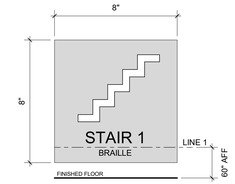
RM NO	ROOM
113	BOOK STACK AREA
115	STORAGE
116	RECEIVING ROOM
117	LOADING DOCK
118	ELEC RM
119	CHILDREN'S READING ROOM
126	WELLNESS ROOM
202	JANITORS CLOSET
203	ELEC RM
204	STORAGE
205	STORAGE
206	YOUMEDIA
208	TEENS STAFF ROOM
208A	TEENS STAFF HEAD
209	MAKER LAB
210	READING ROOM
210A	CLOSET
211	SOUND STUDIO
213	DIRECTORS OFFICE
214	EXEC. OFFICE
217	ADMIN ASST.
218	CLOSET
220	STORAGE
227	COMPUTER LAB
230	ROOF (NOT ACCESSIBLE)
231	ROOF (NOT ACCESSIBLE)



F2 A-910 **SIGN TYPE S1**
3" = 1'-0"

SIGN S1 SPECIFICATIONS:
1. PANEL: 8"x8" PHOTOPOLYMER RAISED COPY AND GRADE 2 BRAILLE
2. CHARACTERS: HELVETICA STANDARD
3. COLOR: PANTONE SILVER 877
4. COPY: PANTONE BLACK 6
5. INSTALLATION: 1/16" THICK BLACK NEOPRENE FOAM TAPE AND SILICONE ADHESIVE AS REQUIRED.

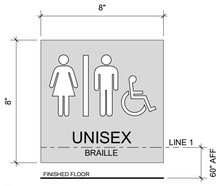
NOTES:
ALL MATERIALS IN COMPLIANCE WITH ADA-ABA GUIDELINES AND UFAS 504 REQUIREMENTS.



F3 A-910 **SIGN TYPE S2**
3" = 1'-0"

SIGN S2 SPECIFICATIONS:
1. PANEL: 8"x8" PHOTOPOLYMER RAISED COPY AND GRADE 2 BRAILLE
2. CHARACTERS: HELVETICA STANDARD
3. COLOR: PANTONE SILVER 877
4. COPY: PANTONE BLACK 6
5. INSTALLATION: 1/16" THICK BLACK NEOPRENE FOAM TAPE AND SILICONE ADHESIVE AS REQUIRED.

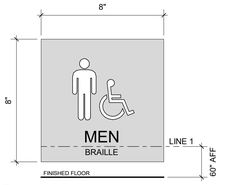
NOTES:
ALL MATERIALS IN COMPLIANCE WITH ADA-ABA GUIDELINES AND UFAS 504 REQUIREMENTS.



F4 A-910 **SIGN TYPE S3**
3" = 1'-0"

SIGN S3 SPECIFICATIONS:
1. PANEL: 8"x8" PHOTOPOLYMER RAISED COPY AND GRADE 2 BRAILLE
2. CHARACTERS: HELVETICA STANDARD
3. COLOR: PANTONE SILVER 877
4. COPY: PANTONE BLACK 6
5. INSTALLATION: 1/16" THICK BLACK NEOPRENE FOAM TAPE AND SILICONE ADHESIVE AS REQUIRED.

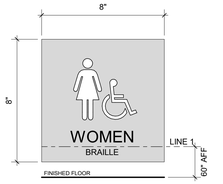
NOTES:
ALL MATERIALS IN COMPLIANCE WITH ADA-ABA GUIDELINES AND UFAS 504 REQUIREMENTS.



F5 A-910 **SIGN TYPE S4**
3" = 1'-0"

SIGN S4 SPECIFICATIONS:
1. PANEL: 8"x8" PHOTOPOLYMER RAISED COPY AND GRADE 2 BRAILLE
2. CHARACTERS: HELVETICA STANDARD
3. COLOR: PANTONE SILVER 877
4. COPY: PANTONE BLACK 6
5. INSTALLATION: 1/16" THICK BLACK NEOPRENE FOAM TAPE AND SILICONE ADHESIVE AS REQUIRED.

NOTES:
ALL MATERIALS IN COMPLIANCE WITH ADA-ABA GUIDELINES AND UFAS 504 REQUIREMENTS.



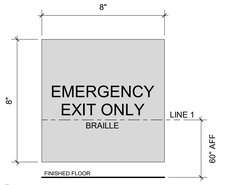
F6 A-910 **SIGN TYPE S5**
3" = 1'-0"

SIGN S5 SPECIFICATIONS:
1. PANEL: 8"x8" PHOTOPOLYMER RAISED COPY AND GRADE 2 BRAILLE
2. CHARACTERS: HELVETICA STANDARD
3. COLOR: PANTONE SILVER 877
4. COPY: PANTONE BLACK 6
5. INSTALLATION: 1/16" THICK BLACK NEOPRENE FOAM TAPE AND SILICONE ADHESIVE AS REQUIRED.

NOTES:
ALL MATERIALS IN COMPLIANCE WITH ADA-ABA GUIDELINES AND UFAS 504 REQUIREMENTS.

GENERAL SIGNAGE NOTES

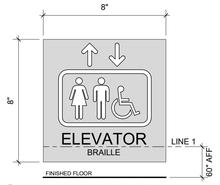
A. SIGNAGE CONTRACTOR RESPONSIBLE FOR ALL CODE RELATED SIGNAGE SHALL COMPLY WITH THE CHICAGO BUILDING CODE. ALL SIGNS TO BE ADA COMPLIANT.
B. PROJECT SHALL FULLY OCMPLY WITH ICC-ANSI 117.1-2009 FOR TECHNICAL REQUIREMENTS.
C. PERMANENT ROOM SIGNAGE SHALL HAVE RAISED LETTERS AND NUMERALS 1/32" IN RELIEF AND 5/8" MINIMUM IN HEIGHT WITH 70% CONTRAST BETWEEN IMAGE/BACKGROUND. PERMANENT ROOM SIGNAGE TO BE ACCOMPANIED BY GRADE 2 BRAILLE.
D. ALL INTERIOR PLAQUES TO BE 1/8" THICK MOLDED PHOTOPOLYMER UNLESS OTHERWISE NOTED. COLOR TO BE SELECTED BY ARCHITECT.
E. NAME ON SIGN TO MATCH ROOM NAME AS INDICATED ON FLOOR PLANS, UNLESS NOTED OTHERWISE. COPY ON SIGNS SHOWN ON THIS SHEETS IS FOR REFERENCE ONLY.
F. SIGNAGE CONTRACTOR IS RESPONSIBLE FOR TYPE SETTING ALL SIGNS, INCLUDING BRAILLE. SUPPLIER TO VERIFY ALL QUANTITIES OF SIGNS AND REVIEW ALL INSTALLATION LOCATIONS WITH PBC, ARCHITECT, AND REGIONAL LIBRARIAN PRIOR TO FABRICATION.
G. ROOM SIGNS SHALL BE WALL MOUNTED WITH DOUBLE FACE TAPE ON THE EXTERIOR OR CORRIDOR SIDE OF DOORS ENTERING ROOMS ON THE LATCH SIDE OF A SINGLE DOOR, RIGHT SIDE OF A DOUBLE DOOR, DIRECTLY ADJACENT TO OPENING, OR CLOSEST AVAILABLE WALL SURFACE. SIGNS SHALL BE MOUNTED 9" FROM LEADING EDGE OF DOOR FRAME, TYPICAL. REFER TO LOCAL JURISDICTIONAL CODES FOR ADDITIONAL REQUIREMENTS. ANY CONFLICTS TO BE BROUGHT TO PBC & ARCHITECT'S ATTENTION.
H. SUBSTITUTION OF ANY MATERIALS REQUIRE WRITTEN APPROVAL OF PBC & ARCHITECT PRIOR TO BIDDING.
I. BLANK BACK UP IS REQUIRED TO BE PLACED ON OPPOSITE SIDE OF GLASS EXACTLY BEHIND SIGN BEING INSTALLED. PROVIDE SAME SIZE FULL FINISH BACK PANEL ON OTHERSIDE OF GLASS AS SIGN BEING INSTALLED.



D2 A-910 **SIGN TYPE S6**
3" = 1'-0"

SIGN S6 SPECIFICATIONS:
1. PANEL: 8"x8" PHOTOPOLYMER RAISED COPY AND GRADE 2 BRAILLE
2. CHARACTERS: HELVETICA STANDARD
3. COLOR: PANTONE SILVER 877
4. COPY: PANTONE BLACK 6
5. INSTALLATION: 1/16" THICK BLACK NEOPRENE FOAM TAPE AND SILICONE ADHESIVE AS REQUIRED.

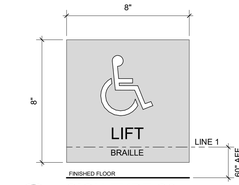
NOTES:
ALL MATERIALS IN COMPLIANCE WITH ADA-ABA GUIDELINES AND UFAS 504 REQUIREMENTS.



D3 A-910 **SIGN TYPE S7**
3" = 1'-0"

SIGN S7 SPECIFICATIONS:
1. PANEL: 8"x8" PHOTOPOLYMER RAISED COPY AND GRADE 2 BRAILLE
2. CHARACTERS: HELVETICA STANDARD
3. COLOR: PANTONE SILVER 877
4. COPY: PANTONE BLACK 6
5. INSTALLATION: 1/16" THICK BLACK NEOPRENE FOAM TAPE AND SILICONE ADHESIVE AS REQUIRED.

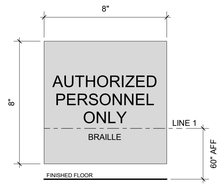
NOTES:
ALL MATERIALS IN COMPLIANCE WITH ADA-ABA GUIDELINES AND UFAS 504 REQUIREMENTS.



D4 A-910 **SIGN TYPE S8**
3" = 1'-0"

SIGN S8 SPECIFICATIONS:
1. PANEL: 8"x8" PHOTOPOLYMER RAISED COPY AND GRADE 2 BRAILLE
2. CHARACTERS: HELVETICA STANDARD
3. COLOR: PANTONE SILVER 877
4. COPY: PANTONE BLACK 6
5. INSTALLATION: 1/16" THICK BLACK NEOPRENE FOAM TAPE AND SILICONE ADHESIVE AS REQUIRED.

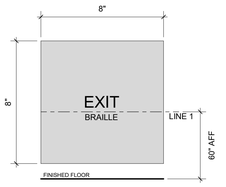
NOTES:
ALL MATERIALS IN COMPLIANCE WITH ADA-ABA GUIDELINES AND UFAS 504 REQUIREMENTS.



D5 A-910 **SIGN TYPE S9**
3" = 1'-0"

SIGN S9 SPECIFICATIONS:
1. PANEL: 8"x8" PHOTOPOLYMER RAISED COPY AND GRADE 2 BRAILLE
2. CHARACTERS: HELVETICA STANDARD
3. COLOR: PANTONE SILVER 877
4. COPY: PANTONE BLACK 6
5. INSTALLATION: 1/16" THICK BLACK NEOPRENE FOAM TAPE AND SILICONE ADHESIVE AS REQUIRED.

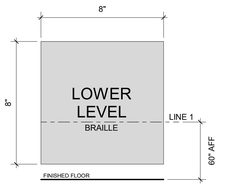
NOTES:
ALL MATERIALS IN COMPLIANCE WITH ADA-ABA GUIDELINES AND UFAS 504 REQUIREMENTS.



D6 A-910 **SIGN TYPE S10**
3" = 1'-0"

SIGN S10 SPECIFICATIONS:
1. PANEL: 8"x8" PHOTOPOLYMER RAISED COPY AND GRADE 2 BRAILLE
2. CHARACTERS: HELVETICA STANDARD
3. COLOR: PANTONE SILVER 877
4. COPY: PANTONE BLACK 6
5. INSTALLATION: 1/16" THICK BLACK NEOPRENE FOAM TAPE AND SILICONE ADHESIVE AS REQUIRED.

NOTES:
ALL MATERIALS IN COMPLIANCE WITH ADA-ABA GUIDELINES AND UFAS 504 REQUIREMENTS.



D7 A-910 **SIGN TYPE S11**
3" = 1'-0"

SIGN S11 SPECIFICATIONS:
1. PANEL: 8"x8" PHOTOPOLYMER RAISED COPY AND GRADE 2 BRAILLE
2. CHARACTERS: HELVETICA STANDARD
3. COLOR: PANTONE SILVER 877
4. COPY: PANTONE BLACK 6
5. INSTALLATION: 1/16" THICK BLACK NEOPRENE FOAM TAPE AND SILICONE ADHESIVE AS REQUIRED.

NOTES:
ALL MATERIALS IN COMPLIANCE WITH ADA-ABA GUIDELINES AND UFAS 504 REQUIREMENTS.

D8 A-910 **SIGN TYPE S12** 2
3" = 1'-0"

SIGN S8 SPECIFICATIONS:
1. PANEL: 8"x8" PHOTOPOLYMER RAISED COPY AND GRADE 2 BRAILLE
2. CHARACTERS: HELVETICA STANDARD
3. COLOR: PANTONE SILVER 877
4. COPY: PANTONE BLACK 6
5. INSTALLATION: 1/16" THICK BLACK NEOPRENE FOAM TAPE AND SILICONE ADHESIVE AS REQUIRED.

NOTES:
ALL MATERIALS IN COMPLIANCE WITH ADA-ABA GUIDELINES AND UFAS 504 REQUIREMENTS.

C1 A-910 **SIGN TYPE S15**
3" = 1'-0"

SIGN S15 SPECIFICATIONS:
1. CONSTRUCTION: ELECTRONICALLY CUT VINYL
2. SIGNAGE WIDTH IS 1'-4" MAX
3. CHARACTERS: BERTHOLD AKZIDENZ GROTESK MEDIUM 3
4. COLOR: PANTONE BLACK 6
5. COPY: AS SHOWN
6. INSTALLATION: DIRECTLY ADHERED TO SOLID SURFACE MATERIAL VIA TRANSFER TAPE.

NOTES:
ALL MATERIALS IN COMPLIANCE WITH ADA-ABA GUIDELINES AND UFAS 504 REQUIREMENTS.

DESIGNATED SIGN S15 LOCATIONS:
1) CIRCULATION DESK (ON SSM-1 VERTICAL SURFACE ABOVE BOOK DROP BOX)

C2 A-910 **SIGN TYPE S16**
3" = 1'-0"

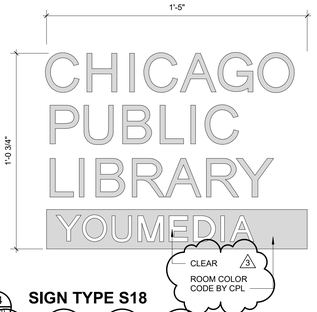
SIGN S16 SPECIFICATIONS:
1. CONSTRUCTION: ELECTRONICALLY CUT VINYL
2. CHARACTERS: HELVETICA BOLD AND HELVETICA REGULAR
3. COLOR: WHITE
4. COPY: AS SHOWN
5. INSTALLATION: DIRECTLY ADHERED TO GLASS SURFACE VIA TRANSFER TAPE.

NOTES:
ALL MATERIALS IN COMPLIANCE WITH ADA-ABA GUIDELINES AND UFAS 504 REQUIREMENTS.

C3 A-910 **SIGN TYPE S17**
3" = 1'-0"

SIGN S17 SPECIFICATIONS:
1. ENGRAVED SIGN IS 4"x12"
2. 60MM THICK WEATHER RESISTANT PLASTIC
3. SIGN HAS WHITE LETTERS ON A CONTRASTING (BLACK) BACKGROUND
4. INSTALLATION: FOAM TAPE AND SILICONE ADHESIVE AS REQUIRED.

NOTES:
ALL MATERIALS IN COMPLIANCE WITH ADA-ABA GUIDELINES AND UFAS 504 REQUIREMENTS.



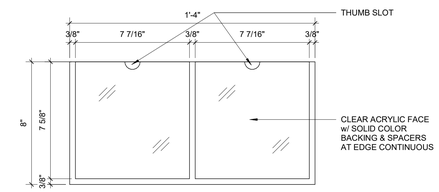
C4 A-910 **SIGN TYPE S18**
3" = 1'-0"

SIGN S12 SPECIFICATIONS: 3
1. SIGNAGE HEIGHT IS 1'-0" MAX
2. CHARACTERS: BERTHOLD AKZIDENZ GROTESK MEDIUM
3. COLOR: PANTONE BLACK 6
4. BACKGROUND COLOR FOR ROOM NAME TO MATCH CPL COLOR CODE.
5. CONSTRUCTION: ELECTRONICALLY CUT VINYL.
6. INSTALLATION: DIRECTLY ADHERED TO GLASS SURFACE VIA TRANSFER TAPE

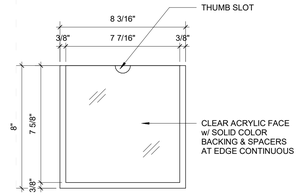
NOTES:
ALL MATERIALS IN COMPLIANCE WITH ADA-ABA GUIDELINES AND UFAS 504 REQUIREMENTS.

SIGN TYPE S18

RM NO	ROOM
107	ADULT/ REFERENCE READING ROOM
119	CHILDREN'S READING ROOM
206	YOUMEDIA
209	MAKER LAB
227	COMPUTER LAB



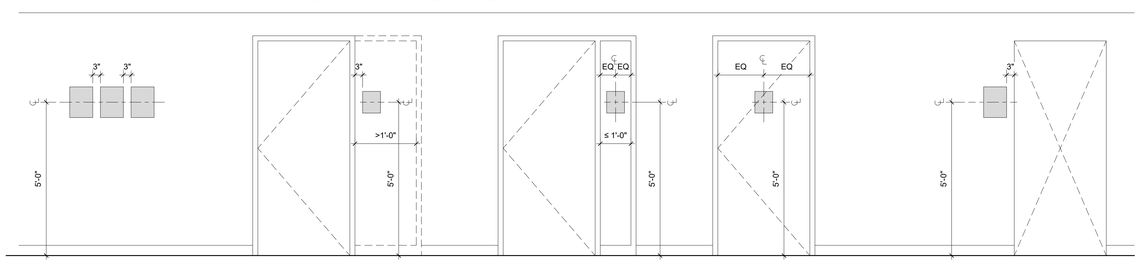
C5 A-910 **SIGN TYPE S20**
3" = 1'-0"



C6 A-910 **SIGN TYPE S21**
3" = 1'-0"

SIGN TYPE S21

RM NO	ROOM	ARTWORK COMMENTS
103	LOBBY	A Carved Wood Sculpture by Elizabeth Catlett
108	CONFERENCE ROOM	"Wilderness, Winter River Scene" by R. Fayerweather Babcock.
201	LOBBY	"Wonder And Knowledge" by Kerry James Marshall



A3 A-910 **SIGNAGE MOUNTING HEIGHTS**
1/2" = 1'-0"

GENERAL ENVIRONMENTAL NOTES

WARNING: VARIOUS COMPONENTS/SURFACES WITHIN THE BUILDING HAVE TESTED ABOVE AND BELOW THE LEAD THRESHOLD OF 1.0 MG/CM2 REGARDLESS OF CONCENTRATIONS, THERE IS A POTENTIAL FOR LEAD DUST GENERATION DURING DRILLING, CORING, PAINTING PREPARATION AND OTHER RENOVATION ACTIVITIES FOR ALL SMALL SCALE DISTURBANCES, THE CONTRACTOR SHALL FACILITATE THE APPROPRIATE MEASURES FOUND IN PROJECT SPECIFICATIONS TO PREVENT DUST MITIGATION TO OTHER PARTS OF THE BUILDING. LEAD-BASED PAINT MAY BE PRESENT WITHIN THE BUILDING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO TAKE APPROPRIATE SAFETY MESURES IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL RULES AND REGULATIONS INCLUDING OSHA (1926.62) COMPLIANCE. WASTE CHARACTERIZATION AND WASTE DISPOSAL. ALL WORK WITH SURFACES CONTAINING LEAD-BASED PAINT SHALL BE DONE IN ACCORDANCE WITH SPECIFICATIONS PROJECT SPECIFICATIONS.

WARNING: ASBESTOS-CONTAINING BUILDING MATERIALS ARE OR MAY BE PRESENT IN THIS BUILDING. NO PERSON MAY DISTURB ASBESTOS-CONTAINING MATERIALS UNLESS THAT PERSON IS A LICENSED ASBESTOS WORKER OR CONDUCTS SUCH WORK IN ACCORDANCE WITH SPECIFICATIONS CONTAINED IN THE PROJECT DOCUMENTS AND IN COMPLIANCE WITH ILLINOIS DEPARTMENT OF HEALTH RULES AND REGULATIONS.

12/5/2019 1:25:46 PM

DOB STAMP APPROVAL

CHICAGO PUBLIC LIBRARY
SEAL | DATE 12/5/19

Legler Regional Library Renovation
115 S. Pulaski Road
Chicago, IL 60624
CHICAGO PUBLIC LIBRARY
CITY OF CHICAGO, MAYOR LORI LIGHTFOOT

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Lighting Design Consultant

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(312) 332-5444
Elevator Consultant

Carnow, Conibear & Assoc., Ltd.
600 West Van Buren, Suite 500, Chicago, IL 60607
(312) 782-4486
Environmental Consultant

Issuance

Mark	Description	Date
1	ISSUE FOR BID	11/13/19
2	ADDENDUM #2	11/27/19
3	ADDENDUM #3	12/5/19

PBC Project Name: Legler Regional Library
PBC Contract No.: C1597
PBC Project No.: 08310

Title
SIGNAGE DETAILS

Sheet
A-910

32'-0" 0'-0" 16'-0" 32'-0" 64'-0"
1/32" = 1'-0"

16'-0" 0'-0" 8'-0" 16'-0" 32'-0"
1/16" = 1'-0"

8'-0" 0'-0" 4'-0" 8'-0" 16'-0"
1/8" = 1'-0"

4'-0" 0'-0" 2'-0" 4'-0" 8'-0"
1/4" = 1'-0"

2'-0" 0'-0" 1'-0" 2'-0" 4'-0"
1/2" = 1'-0"

1'-0" 0'-0" 0'-6" 1'-0" 2'-0"
1" = 1'-0"

0'-0" 0'-6" 1'-0" 2'-0"
1-1/2" = 1'-0"

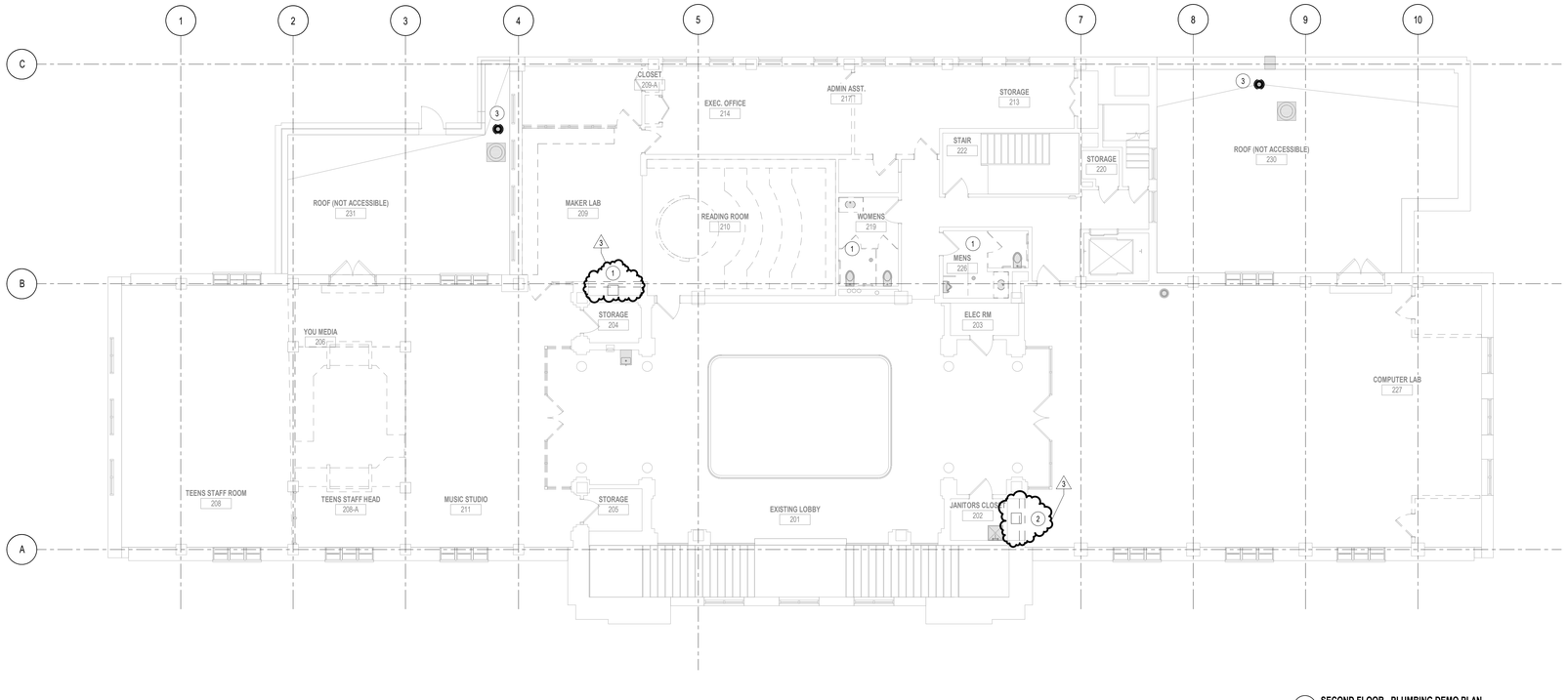
0'-0" 0'-3" 0'-6" 0'-9" 1'-0"
3" = 1'-0"

0'-0" 0'-1-1/2" 0'-3" 0'-4-1/2" 0'-6"
6" = 1'-0"

PLUMBING NOTES

3

1. DEMOLISH EXISTING PLUMBING FIXTURES AND RELATED APPURTENANCES. PREPARE EXISTING PIPING FOR FUTURE FIXTURE CONNECTION.
2. DEMOLISH EXISTING ALCOVE SINK, RELATED APPURTENANCES, DOMESTIC WATER PIPING, AND WASTE PIPING BACK TO MAINS AND CAP.
3. DEMOLISH EXISTING ROOF DRAIN. PREPARE ASSOCIATED STORM DRAIN PIPING FOR FUTURE CONNECTION.



1 **SECOND FLOOR - PLUMBING DEMO PLAN**
1/8" = 1'-0"

0' 4' 8' 16' 32'

12/5/2019 11:16:18 AM

DOB STAMP APPROVAL

PUBLIC BUILDING COMMISSION OF CHICAGO

CHICAGO PUBLIC LIBRARY

SEAL | DATE 12/5/19

Legler Regional Library Renovation

115 S. Pulaski Road
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CITY OF CHICAGO, MAYOR RAHM EMANUEL

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Issuance

Mark	Description	Date
1	ISSUE FOR BID	11/13/19
3	ADDENDUM #3	12/5/19

PBC Project Name: Legler Regional Library

PBC Contract No: C1597

PBC Project No.: 08310

Title

SECOND FLOOR - PLUMBING DEMOLITION PLAN

Sheet

PD-102

1/32" = 1'-0"

1/16" = 1'-0"

1/8" = 1'-0"

1/4" = 1'-0"

1/2" = 1'-0"

1" = 1'-0"

1-1/2" = 1'-0"

3" = 1'-0"

6" = 1'-0"

SYMBOLS LIST

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	ANGLE GATE VALVE		NON-FREEZE WALL HYDRANT
	ALARM CHECK VALVE		OS&Y VALVE
	BALANCING COCK	TS	OS&Y WITH TAMPER SWITCH
	BALANCING VALVE		P-TRAP
	BALL VALVE / ISOLATION VALVE		PRESSURE GAUGE
	CHECK VALVE		PIPE CAP
	DETECTOR CHECK VALVE WITH BY-PASS METER		PUMP (TYPICAL)
	DRY PIPE VALVE		ROOF/YARD HYDRANT
	ELBOW DOWN		SHUT-OFF VALVE
	ELBOW UP		STRAINER
	FIRE ALARM BELL		SIAMESE FIRE DEPT. CONNECTION
	FIRE DEPARTMENT VALVE	TS	TAMPER SWITCH
FEC-R/S	FIRE EXTINGUISHER RECESSED OR SURFACE		TEE DN
◉	FLOOR CLEAN OUT		TEE UP
▶	FLOW ARROW		THERMOMETER
FS	FLOW SWITCH		UNION
	GLOBE VALVE		WALL FIRE PUMP TEST HEADER
	HOSE BIB		WALL/PIPE CLEAN OUT
BF	INLINE BACK FLOW PREVENTER		WALL SLEEVE
	MIXING VALVE		
NS	NON SPRINKLED AREA		
	NEW CONNECTION		

SYSTEMS ABBREVIATIONS

ABBREVIATION	SYSTEM NAME
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RETURN
NPW	NON POTABLE WATER
SAN	SANITARY
V	VENT

3

PLUMBING ABBREVIATIONS

KEY NAME	COMMENT
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
ARCH	ARCHITECTURAL
BFP	BACKFLOW PREVENTER
BLD	BUILDING
BOP	BOTTOM OF PIPE
CD	CONDENSATE DRAIN
CFH	CUBIC FEET PER HOUR
CI	CAST IRON
CL	CENTER LINE
CLG	CEILING
CM	COFFEE MAKER
CO	CLEANOUT
CSW	COLD SOFT WATER
CV	CHECK VALVE
D	DRAIN
DET	DETAIL
DFU	DRAINAGE FIXTURE UNITS
DIA, Ø	DIAMETER
DN	DOWN
DT	FOUNDATION DRAIN TILE
DV	DRAIN VALVE
DWG	DRAWING
DWS	DOMESTIC WATER SERVICE
EC	ELECTRICAL CONTRACTOR
EL	ELEVATION
ELEC	ELECTRICAL
EP	ELEVATOR PUMP
EQUIP	EQUIPMENT
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EWH	ELECTRC WATER HEATER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FF ELEV	FINISH FLOOR ELEVATION
FPC	FIRE PROTECTION CONTRACTOR
FT	FEET
GF	GLYCOL FILL STATION
GPM	GALLON PER MINUTE
HD	HUB DRAIN
ICW	INDUSTRIAL COLD WATER
KW	KILOWATT
LAV	LAVATORY
MAX	MAXIMUM
MB	MOP BASIN
MC	MECHANICAL CONTRACTOR
MECH	MECHANICAL
MIN	MINIMUM
MISC	MISCELLANEOUS
NC	NORMALLY CLOSED
NFWH	NON FREEZE WALL HYDRANT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
P	PUMP
PC	PLUMBING CONTRACTOR
PCP	PUMP CONTROL PANEL
PG	PRESSURE GAUGE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PVC	POLYVINYL CHLORIDE
PW	PRESSURIZED WASTE
REX	REMOVE EXISTING
RP	RECIRCULATION PUMP
SAIN	SANITARY WASTE
SK	SINK
SP	SUMP PUMP
SPEC	SPECIFICATION
ST	STORM, PUMP DISCHARGE TO MEET PRESSURIZED WASTE PIPING REQUIREMENTS
T&P	TEMPERATURE & PRESSURE RELIEF VALVE
TBD	TO BE DETERMINED
TDH	TOTAL DYNAMIC HEAD
TEMP or T	TEMPERATURE
THX	THERMAL EXPANSION TANK
TMV	THERMOSTATIC MIXING VALVE
TP	TRAP PRIMER
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	VENT
VTR	VENT THRU ROOF
W/	WITH
WC	WATER CLOSET
WCO	WALL CLEANOUT
WCO	YARD CLEANOUT
WHA	WATER HAMMER ARRESTER
WS	WATER SOFTENER
°	DEGREE
°F	DEGREES FAHRENHEIT
ø	DIAMETER

GENERAL PLUMBING NOTES:

APPLICABLE TO ALL PLUMBING DRAWINGS

1. DEFINITIONS

A. "FURNISH" MEANS TO "SUPPLY" AND USUALLY REFERS TO DELIVERY OF AN ITEM OF EQUIPMENT TO THE PROJECT SITE, READY FOR INSTALLATION. EQUIPMENT TO THE PROJECT SITE, READY FOR INSTALLATION.

B. "INSTALL" MEANS TO SET IN PLACE, CONNECT AND PLACE IN FULL OPERATIONAL ORDER.

C. PROVIDE" MEANS TO "FURNISH" AND "INSTALL".

D. "FUTURE", "BY OTHERS", "REFER (DISCIPLINE) DIVISION" AND SIMILAR EXPRESSIONS INDICATE WORK THAT MAY BE PERFORMED UNDER THE CONTRACT DOCUMENTS BUT, NOT NECESSARILY UNDER THE DIVISION OR DISCIPLINE ON WHICH THE NOTE APPEARS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK WITH SUPPLIERS, SUBCONTRACTORS, EMPLOYEES, ETC. SHOULD CLARIFICATION OF ANY PORTION OF THE WORK BE REQUIRED, CONTACT THE ARCHITECT/ENGINEER PRIOR TO SUBMITTING BID.

2. CODES

A. THE WORK SHALL COMPLY WITH LATEST CHICAGO BUILDING CODE. THIS WOULD INCLUDE, BUT IS NOT LIMITED TO, THE CURRENT CITY BUILDING CODE. AMENDMENTS, NFPA, ANSI, OSHA, AND ALL OTHER LOCAL OR MUNICIPAL BUREAUS AND DEPARTMENTS WHICH HAVE AUTHORITY OVER THE PROJECT; ANYTHING IN THESE CONTRACT DOCUMENTS NOT WITHSTANDING. THIS SHALL NOT BE CONSTRUED AS WAIVING COMPLIANCE WITH ANY REQUIREMENTS OF THE PLANS AND SPECIFICATIONS WHICH MAY BE IN EXCESS OF ANY REQUIREMENTS OF THESE CODES.

3. INTERPRETATION OF THE DOCUMENTS

A. THE PLUMBING CONTRACTOR SHALL CAREFULLY COMPARE THE DRAWINGS AND SPECIFICATIONS, CHECKING THE MEASUREMENTS AND CONDITIONS UNDER WHICH CONSTRUCTION IS TO BE IMPLEMENTED. FOR CLARIFICATION BETWEEN VARIOUS DRAWINGS AND/OR SPECIFICATIONS, THE DISPUTED ISSUE SHALL BE REFERRED TO THE ENGINEER BEFORE ANY WORK IS EXECUTED. THE PLUMBING CONTRACTOR SHALL STATE IN THEIR PROPOSAL ANY EXCEPTIONS NECESSARY TO MAKE THIS WORK A COMPLETE AND READY-TO-USE INSTALLATION. IF NOT SO-STATED IN THE PLUMBING CONTRACTOR'S PROPOSAL, ANY SUCH WORK WILL NOT BE CONSIDERED ADDITIONAL.

4. COORDINATION

A. THE PLUMBING DRAWINGS ARE DIAGRAMMATIC IN NATURE AND SHALL NOT BE SCALED. ROUTING OF PIPING, DUCTWORK, CONDUITS, RACEWAYS, ETC. AS SHOWN ON THE DRAWINGS DOES NOT INTEND TO SHOW EVERY RISE, DROP, OFFSET, FITTING NOR EVERY STRUCTURAL ELEMENT THAT MAY BE ENCOUNTERED DURING THE INSTALLATION OF THIS WORK. TO THIS EXTENT, DATA GIVEN ON THE DRAWINGS IS AS EXACT AS COULD BE SECURED.

B. THE PLUMBING CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ALL EXISTING AND NEW REQUIRED WORK AND EQUIPMENT WITH THAT OF THE OTHER TRADES. WHERE THERE ARE POTENTIAL CONFLICTS, THE PLUMBING CONTRACTOR SHALL OBTAIN AND VERIFY EXACT LOCATIONS, MEASUREMENTS, LEVELS, SPACE REQUIREMENTS, ETC. AT THE SITE AND SHALL SATISFACTORILY ADAPT HIS WORK TO ACTUAL FIELD CONDITIONS. ALL CHANGES TO EXISTING OR NEW PLUMBING EQUIPMENT, PIPES, FITTINGS, ETC. SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY IN THE COMPLETION DATE OF THE PROJECT.

C. REFER TO ARCHITECTURAL/MECHANICAL DRAWINGS FOR PLANS, ELEVATIONS AND DETAILS INDICATING THE LOCATIONS OF CEILING ELEMENTS (E.G., LIGHTS, SPRINKLERS, DIFFUSERS, ETC.) AND WALL ELEMENTS. CEILING MOUNTED ITEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. IF LOCATION FOR AN ITEM IS NOT SHOWN ON THE ARCHITECTURAL DRAWINGS, VERIFY THE EXACT LOCATION OF THE ITEM WITH THE ARCHITECT PRIOR TO INSTALLATION. THESE REQUIREMENTS APPLY TO ALL CEILING TYPES IN ALL AREAS.

D. THE PLUMBING CONTRACTOR SHALL SUBMIT SKETCHES TO ARCHITECT FOR APPROVAL, PRIOR TO MAKING ANY BEAM PENETRATIONS.

E. COORDINATE & VERIFY WITH GENERAL CONTRACTOR AND RELATED DISCIPLINES PRIOR TO START OF ANY WORK, ALL WORK TO BE PERFORMED INSIDE OF THE 5'-0" BUILDING PERIMETER LIMITS OF CONSTRUCTION AND COORDINATED WITH OTHER TRADES TO MATCH WORK OUTSIDE.

F. ALL FLOOR MOUNTED EQUIPMENT NOT PROVIDED ON A SKID IS TO BE INSTALLED ON 4" THICK CONCRETE HOUSEKEEPING PAD.

G. THE PLUMBING CONTRACTOR SHALL GIVE ALL LOCATIONS AND DIMENSIONS OF ALL REQUIRED ACCESS PANELS TO THE GENERAL CONTRACTOR. GENERAL CONTRACTOR WILL SUBMIT TO THE ARCHITECT/ENGINEER FOR APPROVAL ALL FINISH REQUIREMENTS PRIOR TO INSTALLATION. THE PLUMBING CONTRACTOR SHALL FURNISH THE ACCESS PANELS. THE GENERAL CONTRACTOR SHALL INSTALL THE ACCESS PANELS.

H. ALL PIPING, VALVES AND DEVICES SHALL BE INSTALLED SO AS NOT TO OBSTRUCT ANY PORTION OF A WINDOW, DOORWAY, STAIRWAY OR PASSAGEWAY OR ANY PIECE OF MECHANICAL OR ELECTRICAL EQUIPMENT.

5. SITE EXAMINATION

A. THE PLUMBING CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, VISIT THE SITE, EXAMINE THE PREMISES, AND MAKE A THOROUGH SURVEY OF THE CONDITIONS UNDER WHICH CONSTRUCTION WILL BE IMPLEMENTED. THE PLUMBING CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS. THE SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE. FAILURE TO DO SO SHALL NOT RELIEVE THE PLUMBING CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT. ANY LATER CLAIMS FOR LABOR, EQUIPMENT, OR MATERIALS REQUIRED FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.

B. WATER PRESSURE AND SUPPLY INFORMATION: FIELD VERIFY ALL PRESSURES AND CAPACITIES. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR FLOW TEST INFORMATION.

C. CATCH BASINS AND MANHOLES ARE THE RESPONSIBILITY OF THE SITE CONTRACTOR.

6. PERMITS

A. THE PLUMBING CONTRACTOR SHALL SECURE, OBTAIN AND PAY FOR ALL PERMITS, INSPECTIONS, TAXES, LICENSES, AND FEES TO ALL GOVERNMENT AGENCIES REQUIRED FOR THE EXECUTION AND COMPLETION OF THE PLUMBING WORK. SCHEDULING OF ALL REQUIRED INSPECTIONS SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR. THE PLUMBING CONTRACTOR SHALL PREPARE AND SUBMIT ALL SHOP DRAWINGS AS REQUIRED TO THE GOVERNMENTAL AGENCIES AND UTILITY COMPANIES FOR THEIR APPROVAL.

7. SAFETY

A. THE PLUMBING CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO ENSURE THE SAFETY OF THE CLIENT'S EMPLOYEES, BUILDING EMPLOYEES AND GUESTS AS WELL AS THEIR OWN FORCES, BY ADEQUATELY PROTECTING ANY EXPOSED LIVE CABLE, EQUIPMENT, OR DEVICES THROUGHOUT THE COURSE OF THIS WORK.

B. ALL PLUMBING ELEMENTS THAT ARE IN CONTACT WITH POTABLE / DRINKING WATER SHALL BE NSF 61 CERTIFIED.

8. CONTRACTOR'S DRAWING REVIEW

A. ALL CONTRACTORS/BIDDERS SHALL HAVE RECEIVED A COMPLETE SET OF CONSTRUCTION DOCUMENTS FOR REVIEW AND REFERENCE TO WORK INDICATED. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR FINISHED CEILING HEIGHTS, AND LOCATION OF WALL, ROOF, AND FLOOR OPENINGS. PIPE LOCATE SERVICES SHALL BE REQUESTED AND COMPLETED BEFORE DISTURBANCE OF ANY EXISTING GRADE OR ON-GRADE CONSTRUCTION, SLAB DEMOLITION, OR OTHER ACTIVITIES THAT MAY IMPACT BURIED UTILITIES OR COMMUNICATION CONDUITS.

B. THE PLUMBING CONTRACTOR SHALL CONFIRM THAT PIPE LOCATE SERVICES HAVE BEEN COMPLETED AND THAT NO POTENTIAL CONFLICTS EXIST BEFORE EXISTING GRADE IS EXCAVATED OR EXISTING FLOORING DEMOLISHED, REGARDLESS OF THE LOCATION ON THE PROPERTY. THIS SHALL BE REVIEWED WITH THE OWNER'S PROJECT REPRESENTATIVE.

9. STATEMENT OF WORK

A. THE PLUMBING CONTRACTOR SHALL PROVIDE THE COMPLETE PLUMBING INSTALLATION OF WORK AS INDICATED IN THE CONSTRUCTION DOCUMENTS.

B. PRIOR TO COMMENCEMENT OF WORK, THE PLUMBING CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL, ANY SEQUENCE OF WORK, MOP'S (METHOD OF PROCEDURE) AND/OR COORDINATION SHOP DRAWINGS FOR THE INTENDED WORK.

C. THE PLUMBING CONTRACTOR SHALL REMOVE AL EXISTING EQUIPMENT AND MATERIALS PERTAINING TO THEIR CONTRACT AS SPECIFIED OR AS REQUIRED WEATHER SHOWN ON THE DRAWINGS OR NOT, TO PREPARE FOR THE NEW WORK.

D. THE PLUMBING CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION; FAILURE TO DO SO BEFORE CONDUCTING WORK WILL NOT CONSTITUTE LACK OF RESPONSIBILITY ON THE PART OF THE CONTRACTOR, AND ANY LATER CLAIMS FOR LABOR, EQUIPMENT, OR MATERIALS REQUIRED FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.

E. DISRUPTION OF ANY EXISTING SERVICES SHALL BE COORDINATED WITH THE OWNER, AND SHALL BE PERFORMED AT A TIME AND MANOR SO AS TO CAUSE THE OWNER A MINIMUM OF INCONVENIENCE.

10. WORK PERFORMANCE REQUIREMENTS

A. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL CODES. THESE CODES SHALL BE FOLLOWED AS A MINIMUM PROVIDING HIGHER GRADES OF MATERIAL AND WORKMANSHIP WHERE REQUIRED BY THESE DOCUMENTS. PROVIDE ALL TESTS REQUIRED BY CODE.

B. ANY PENETRATIONS OR OPENINGS IN FIRE-RATED PARTITIONS (WALLS OR FLOORS) SHALL BE CLOSED AT THE END OF EACH WORK DAY, OR WHENEVER IT IS ANTICIPATED THAT NO FURTHER WORK WILL OCCUR IN THAT OPENING DURING THE DAY. THIS INCLUDES ALL TEMPORARY OPENINGS. CLOSURE SHALL BE IN COMPLIANCE WITH 3M FIREPROOFING TEMPORARY OPENINGS. CLOSURE SHALL BE IN COMPLIANCE WITH 3M FIREPROOFING END OF EACH WORK DAY.

C. ALL PIPING PASSING THRU FLOORS, WALLS, CEILINGS OR ROOF SHALL HAVE A DUCTILE IRON PIPE SLEEVE INSTALLED AROUND THE PIPE AND/OR INSULATION. SLEEVES THROUGH FOUNDATION WALLS SHALL BE AT LEAST 2 PIPE SIZES LARGER THAN THE SERVICE PIPE.

D. PROVIDE AN ESCUTCHEON PLATE AROUND PENETRATIONS EXPOSED TO VIEW. ESCUTCHEON PLATES SHALL BE LARGE ENOUGH TO COVER THE ENTIRE HOLE. ALL PENETRATIONS SHALL BE SEALED TO MAINTAIN THE WALL/FLOOR/ROOF FIRE & INSULATION RATINGS.

E. ALL TEMPORARY WALL AND FLOOR OPENINGS SHALL BE PROTECTED AND MARKED AT ALL TIMES.

F. PAINTING SHALL BE SCHEDULED SUCH THAT DRYING TIME OCCURS DURING NON-WORKING HOURS FOR OPERATIONS PERSONNEL COMFORT.

G. NO WELDING SHALL TAKE PLACE INSIDE OF OPERATING FACILITY WITHOUT THE WRITTEN AUTHORIZATION OF THE OWNER'S PROJECT REPRESENTATIVE. WELDING SHALL NOT TAKE PLACE WITHIN 5 FEET OF ANY TELECOM EQUIPMENT RACK WITHOUT ADEQUATE PROTECTIVE MEASURES, AS DEEMED APPROPRIATE BY THE OWNER'S PROJECT REPRESENTATIVE.

H. TRENCHING, EXCAVATION, AND BACKFILL OPERATIONS SHALL BE IN ACCORDANCE WITH ARTICLE 3, SECTION 306 OF THE CHICAGO BUILDING CODE.

11. CUTTING AND PATCHING

A. ALL CUTTING, DRILLING AND PATCHING OF MASONRY STEEL OR IRON WORK BELONGING TO THE BUILDING MUST BE DONE BY THE PLUMBING CONTRACTOR IN ORDER THAT HIS WORK MAY BE PROPERLY INSTALLED, BUT UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT, EXCEPT AT THE DIRECTIONS OF THE ARCHITECT/ENGINEER OR THEIR REPRESENTATIVE. PATCH ALL DISTURBED WALLS, CEILINGS AND FLOORS TO MATCH ADJACENT SURFACES AS NECESSARY.

12. FIRESTOPPING

A. ALL PENETRATIONS IN WALLS, FLOORS, OR CEILINGS SHALL BE SUITABLY CLOSED UP AND SEALED WITH A FIRE-STOPPING COMPOUND LISTED IN THE MOST RECENT FACTORY MUTUAL RESEARCH CORPORATION (FMRC) APPROVAL GUIDE. ONLY PRODUCTS MANUFACTURED BY HILTI SHALL BE PREFERRED (NO SUBSTITUTIONS).

B. PIPES WHICH PASS THROUGH EXISTING AND NEW FIRE-RESISTIVE BARRIERS, INCLUDING FLOOR SLABS AND WALLS, SHALL BE FIRE SEALED TO MAINTAIN THE INTEGRITY OF THE FIRE RESISTIVE BARRIER. ALL EXPOSED PIPES PASSING THROUGH A WALL, CEILING OR FLOOR SHALL HAVE CHROME ESCUTCHEON PLATES.

13. TEMPORARY PROVISIONS

A. THE PLUMBING CONTRACTOR SHALL PROVIDE TEMPORARY WATER SUPPLY MEANS DURING CONSTRUCTION. THE PLUMBING CONTRACTOR SHALL COORDINATE TEMPORARY POWER PROVISIONS WITH THE ELECTRICAL CONTRACTOR. THE PLUMBING CONTRACTOR SHALL PERFORM ALL COORDINATION WITH THE OWNER AND/OR LANDLORD AND UTILITY COMPANY.

B. THE PLUMBING CONTRACTOR SHALL PROVIDE TEMPORARY DRAINAGE PROVISIONS BETWEEN THE START OF CONSTRUCTION UNTIL SUCH TIME THAT THE BUILDING CAN DRAIN, AS INDICATED IN THE CONSTRUCTION DOCUMENTS PLUMBING CONTRACTOR SHALL COORDINATE ALL TEMPORARY POWER PROVISIONS WITH THE ELECTRICAL CONTRACTOR. THE PLUMBING CONTRACTOR SHALL PERFORM ALL COORDINATION WITH THE OWNER AND/OR LANDLORD AND UTILITY COMPANY.

14. EQUIPMENT

A. THE PLUMBING CONTRACTOR SHAL PROVIDE PROPER WORKING CLEARANCE IN FRONT AND AROUND EQUIPMENT PER THE MANUFACTURERS RECOMMENDATIONS.

15. DOMESTIC WATER

A. ALL WATER SUPPLIED TO EQUIPMENT BY OTHER TRADES SHALL HAVE AN ISOLATION VALVE AND AN APPROVED BACKFLOW PREVENTER WHICH SHALL BE SUPPLIED AND INSTALLED BY THE PLUMBING CONTRACTOR.

B. ALL DOMESTIC WATER SUPPLIES TO FIXTURES AND EQUIPMENT SHALL HAVE AIR CHAMBERS OR MANUFACTURED WATER HAMMER ARRESTORS.

C. ALL WATER SUPPLY AND RETURN PIPING SHALL BE INSULATED, INCLUDING ALL PIPING ABOVE CEILINGS, IN PIPE CHASES, AND IN WALLS. REFER TO SPECIFICATIONS FOR TYPE AND THICKNESS OF INSULATION. PROVIDE VALVE HANDLE EXTENSIONS ON ALL INSULATED PIPING.

D. ALL HOT WATER SUPPLY PIPING SHALL BE INSTALLED TO COMPENSATE FOR EXPANSION OF THE PIPE BY INSTALLING PIPE ANCHORS, GUIDES, EXPANSION JOINTS, PIPE OFFSETS, OR LOOPS. EXPANSION JOINTS ARE TO ACCOMMODATE THREE AXIS OF MOVEMENT.

E. ALL INTERIOR AND EXTERIOR HOSE BIBS / WALL HYDRANTS, ROOF HYDRANTS, ETC. SHALL RECEIVE WATER SUPPLY DOWNSTREAM OF A STRAINER AND DOUBLE CHECK VALVE TYPE BACKFLOW PREVENTER INSTALLED INSIDE THE BUILDING AT NO MORE THAN 48" ABOVE THE FLOOR AND ACCESSIBLE TO MAINTENANCE.

F. MOP SINKS / SERVICE SINKS WITH HOSE THREADED FAUCETS SHALL HAVE A VACUUM BREAKER ON THE SUPPLY AFTER THE VALVES, LOCATED 7'-6" ABOVE FINISHED FLOOR

G. PROVIDE DUAL CHECK VALVE FOR ALL FEEDS TO ICE MAKERS, COFFEE MAKERS, AND DISHWASHERS.

H. PROVIDE A REDUCED PRESSURE ZONE BACKFLOW PREVENTER FOR ALL CHEMICAL DISPENSING SYSTEMS AT MOP/SERVICE SINKS AND THREE COMPARTMENT SINKS.

I. EACH GROUP OF FIXTURES SUPPLIED WITH A BRANCH FROM THE MAIN SHALL HAVE AN ISOLATION VALVE NEAR THE POINT OF CONNECTION TO THE MAIN. ALL EQUIPMENT SUPPLIED BY COLD AND/OR HOT WATER SHALL HAVE AN ISOLATION VALVE ON THE WATER SUPPLY.

J. PITCH ALL SUPPLY AND RETURN LINES TO DRAIN COMPLETELY THROUGH LOWER EQUIPMENT, FIXTURES, UNIONS, AND DRAIN VALVES.

K. PROVIDE MANUAL AIR VENTS AIR A THE TOP OF ALL COLD AND/OR HOT WATER MAINS.

L. INSTALL A 1/2" DRAIN VALVE WITH 3/4" HOSE THREAD AND VACUUM BREAKER OUTLET IN ALL MAIN PIPING RUNS WHICH WOULD NOT BE ABLE TO DRAIN THRU A LOWER PIECE OF EQUIPMENT.

M. ALL WATER DISTRIBUTION SYSTEMS, POTABLE AND NON-POTABLE, SHALL BE IDENTIFIED BY COLOR MARKING OR METAL TAGS AS REQUIRED BY ASME A13.1.

N. COPPER PIPE ABOVE GROUND SHALL BE (TYPE L) MINIMUM, SWEAT WITH WROUGHT FITTINGS.

O. PROVIDE UNIONS AND/OR FLANGES TO DISCONNECT ALL PERTINENT EQUIPMENT INCLUDING BUT NOT LIMITED TO PUMPS, WATER HEATERS, TANKS, FILTERS AND VALVE TRAINS.

16. SANITARY, STORM & VENT

A. ALL SANITARY AND STORM PIPING SHALL SLOPE AT 1/4" PER FOOT FOR 2-1/2" AND SMALLER, AT 1/8" PER FOOT FOR 3" TO 6", AND 1/16" FOR 8" AND LARGER PIPING UNLESS INDICATED OTHERWISE ON THE DRAWINGS.

B. ALL HORIZONTAL DRAINS SHALL BE PROVIDED WITH CLEANOUTS LOCATED NO MORE THAN 50 FEET APART FOR DRAINS 4" OR LESS, 100 FEET FOR DRAINS 6" & 8", AND 150 FEET FOR DRAINS 10" OR LARGER. CLEANOUTS SHALL BE INSTALLED AT EACH CHANGE OF DIRECTION OF THE DRAINAGE PIPE GREATER THAN 45 DEGREES.

C. ALL SOIL STACKS SHALL RUN FULL SIZE THROUGH THE ROOF.

D. THE DIAMETER OF ALL VENTS SHALL BE AT LEAST ONE-HALF THE DIAMETER OF THE DRAIN LINE SERVED BUT NOT LESS THAN 1-1/2".

E. RUN NEW WASTE PIPES AS CLOSE AS POSSIBLE TO UNDERSIDE OF FLOOR SLAB AND VENT PIPING AS CLOSE AS POSSIBLE TO SLAB ABOVE.

F. IN AREAS SUCH AS MECHANICAL/ELECTRICAL ROOMS, WHERE A TRAP SEAL IS SUBJECT TO LOSS BY EVAPORATION, PROVIDE A DEEP SEAL TRAP (CONSISTING OF A 4-INCH SEAL), A TRAP FILLED WITH MINERAL OIL, OR A TRAP PRIMER PER MANUFACTURERS REQUIREMENTS

G. ELEVATOR PIT PUMP DISCHARGE SHALL BE PIPED TO AN OPEN SITE DRAIN IN A JANITORS CLOSE OR A MECHANICAL ROOM.

H. THE PLUMBING CONTRACTOR SHALL PROVIDE OPEN SITE DRAINS JANITORS CLOSETS OR MECHANICAL ROOMS FOR DRAINING DOWN THE MAIN SPRINKLER RISERS, AND/OR COMBINATION RISERS. COORDINATE THE DISCHARGE RATE OF THE FIRE WATER RISERS WITH THE FIRE PROTECTIONS CONTRACTOR.

17. MATERIALS

A. UNDERGROUND STORM, DRAINAGE, AND VENT PIPE SHALL BE: CAST-IRON PIPE, HUB SPIGOT: ASTM A-74; ASTM A-888; CISPI 301

B. ABOVE-GROUND STORM, DRAINAGE AND VENT PIPE SHALL BE: CAST-IRON PIPE, HUB & SPIGOT: ASTM A-74; CISPI 301; ASTM A888 COPPER OR COPPER-ALLOY PIPE: ASTM B-42; ASTM B-302 COPPER OR COPPER-ALLOY TUBING (TYPE K OR L): ASTM 75; ASTM B-88; ASTM B-251; ASTM B-306 GALVANIZED STEEL PIPE: ASTM A-53

C. UNDERGROUND WATER SERVICE PIPE SHALL BE: COPPER OR COPPER-ALLOY TUBING (TYPE K); ASTM B-74; ASTM B-88; ASTM B-251; ASTM B-447 DUCTILE IRON WATER PIPE (CEMENT LINED); AWWA C-151; AWWA C-115

D. ABOVE-GROUND WATER DISTRIBUTION PIPE SHALL BE: ALL SIZES - COPPER OR COPPER-ALLOY TUBING (TYPE K OR L); ASTM B-74; ASTM B-88; ASTM B-251; ASTM B-4476" AND LARGER - GALVANIZED STEEL PIPE: ASTM A-53

E. ABOVE-GROUND SOLAR PIPE SHALL BE: ALL SIZES - BRAZED COPPER OR COPPER- ALLOY PIPING (TYPE K OR L).

F. GASKETED BELL AND SPIGOT C.I. PIPING IS RESERVED FOR UNDERGROUND USE. ABOVE GROUND SHALL BE CAULKED JOINTS.

18. INSULATION

A. ALL DOMESTIC HOT & COLD WATER-PIPING SHALL BE INSULATED WITH HEAVY DENSITY, FIBERGLASS PIPE INSULATION 1" THICK, WITH FLAME RETARDANT VAPOR BARRIER JACKET, AS MANUFACTURED BY OWENS-CORNING OR JOHNS-MANVILLE.

B. STORM DRAIN-SUSPENDED PIPING: HEAVY DENSITY, FIBERGLASS PIPE INSULATION 1/2" THICK, WITH FLAME RETARDANT VAPOR BARRIER JACKET, AS MANUFACTURED BY OWENS-CORNING OR JOHNS-MANVILLE. INSULATE ALL INTERIOR HORIZONTAL & VERTICAL LEADERS FROM ROOF DRAINS, AS WELL AS ROOF DRAIN BODY, TO PREVENT CONDENSATION.

19. ADDITIONAL REQUIREMENTS

A. FOR EXACT LOCATION OF PLUMBING FIXTURES, REFER TO ARCHITECTURAL PLANS AND ELEVATIONS.

B. PROVIDE HANGERS AND SUPPLEMENTAL SUPPORT STEEL FOR ALL EQUIPMENT AND PIPING. ALL WATER SUPPLY PIPING SHALL BE SUSPENDED WITH CLEVIS AND/OR TRAPEZE PIPE HANGERS WITH PIPE COVERING PROTECTION SADDLES OR SHEET METAL INSULATION SHIELDS.

C. PIPE HANGARS ON INSULATED PIPING SHALL HAVE BLOCKING OR OTHER MEANS TO SUPPORT THE PIPE WITHOUT COMPRESSING THE INSULATION OR COMPROMISING THE VAPOR BARRIER.

D. PROVIDE ACCESS TO ALL VALVES AND SYSTEM COMPONENTS REQUIRING ACCESS. ALL PIPING ACCESSORIES AND EQUIPMENT IN MECHANICAL ROOMS SUCH AS ISOLATION VALVES, RECIRCULATION PUMPS, ETC. SHALL BE INSTALLED AT A REASONABLE HEIGHT IN ORDER TO FACILITATE MAINTENANCE.

E. EXCEPT FOR PIPING ASSOCIATED WITH THE SUMP PUMPS, PLUMBING PIPING SHALL NOT BE ROUTED THROUGH OR OVER ANY ELEVATOR SHAFTS, ELEVATOR EQUIPMENT AREAS, ELECTRICAL ROOMS/EQUIPMENT AREAS, OR COMMUNICATIONS AREAS.

F. IN ANY CASE WHERE NEW EQUIPMENT IS INSTALLED AND HAS TO BE CONNECTED TO EXISTING SYSTEMS, THE PLUMBING CONTRACTOR SHALL VERIFY THE CAPACITIES AT THE INDICATED POINT OF CONNECTION. SHOULD THE EXISTING CONDITION REQUIRE THE NEW BRANCH TO BE ROUTED TO ANOTHER LOCATION, THE PLUMBING CONTRACTOR SHALL PERFORM THIS WORK AS PART OF THEIR CONTRACT.

G. FACTORY MUTUAL RESEARCH CORPORATION APPROVED EQUIPMENT SHALL BE PROVIDED WHERE APPLICABLE AND DETAILS OF THE INSTALLATIONS SHALL CONFORM TO FACTORY MUTUAL'S RECOMMENDED PRACTICES

20. ACCESSIBILITY

A. PER ILLINOIS ACCESSIBILITY CODE, CURBS IN ACCESSIBLE SHOWER STALLS SHALL BE NO HIGHER THAN 1/2 INCH. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR PROVIDING A RECESSED FLOOR, IF REQUIRED, IN ORDER TO MEET THIS REQUIREMENT. COORDINATE FLOOR/SHOWER BASE HEIGHT WITH ARCHITECTURAL.

B. THE HOT WATER SUPPLY FOR EACH LAVATORY AND SINK IS TO BE INSULATED. THE P-TRAP AND WASTE DRAIN PIPE FOR EACH ADA ACCESSIBLE LAVATORY AND SINK IS TO BE INSULATED.

21. AS-BUILT DRAWINGS

A. THE PLUMBING CONTRACTOR SHALL PROVIDE ALL "AS-BUILT" DRAWINGS SCALED 1/4" MINIMUM AND SUBMIT FOR APPROVAL TO THE ARCHITECT/ENGINEER.

B. SUBMIT ASSEMBLED PRINTED INSTRUCTIONS FOR THE OPERATION AND MAINTENANCE OF EACH ITEM INSTALLED ALONG WITH EQUIPMENT CUTS AND CONTROL WIRING DIAGRAMS.

SHEET LIST

PLUMBING SHEET LIST	
SHEET NUMBER	SHEET NAME
P-000	PLUMBING SYMBOLS, NOTES & ABBREVIATIONS
P-050	UNDERGROUND - PLUMBING PLAN
P-100	BASEMENT FLOOR - PLUMBING PLAN
P-101	FIRST AND MEZZANINE FLOOR - PLUMBING PLAN
P-102	SECOND FLOOR - PLUMBING PLAN
P-400	PLUMBING RISER DIAGRAMS
P-500	PLUMBING SCHEDULES
P-600	PLUMBING DETAILS
PD-100	BASEMENT FLOOR - PLUMBING DEMOLITION PLAN
PD-101	FIRST AND MEZZANINE FLOOR - PLUMBING DEMOLITION PLAN
PD-102	SECOND FLOOR - PLUMBING DEMOLITION PLAN

GENERAL NOTE: NOT ALL SYMBOLS, NOTES AND ABBREVIATIONS ARE APPLICABLE TO THIS PROJECT

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Issuance

Mark	Description	Date
1	ISSUE FOR BID	11/13/19
3	ADDENDUM #3	12/5/19

PBC Project Name: Legler Regional Library
PBC Contract No: C1597
PBC Project No.: 08310

Title
PLUMBING SYMBOLS, NOTES & ABBREVIATIONS

Sheet
P-000

1/32" = 1'-0"

1/16" = 1'-0"

1/8" = 1'-0"

1/4" = 1'-0"

1/2" = 1'-0"

1" = 1'-0"

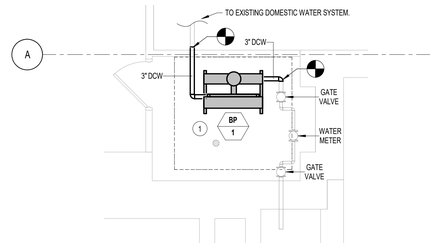
1-1/2" = 1'-0"

3" = 1'-0"

6" = 1'-0"

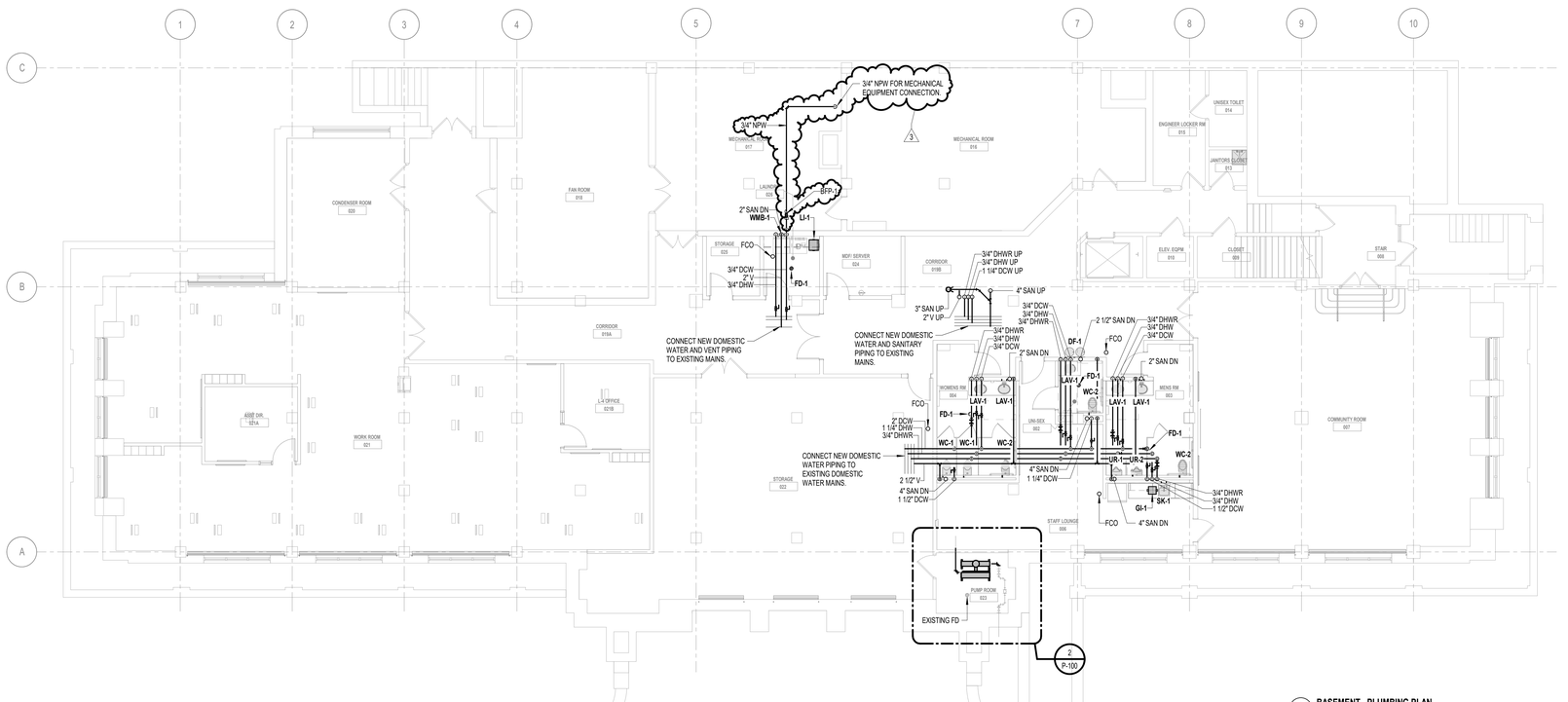
PLUMBING NOTES

1. PROVIDE NEW VARIABLE FREQUENCY DRIVE DUPLEX BOOSTER PUMP PACKAGE. CONNECT SUCTION SIDE OF NEW BOOSTER PUMP PACKAGE TO THE EXISTING DOMESTIC WATER SERVICE. CONNECT PUMP OUTLET TO EXISTING BUILDING DOMESTIC WATER DISTRIBUTION PIPING. PROVIDE ALL REQUIRED ISOLATION AND CHECK VALVES WITHIN BOOSTER PUMP PACKAGED SYSTEM.



2 **WATER SERVICE ROOM**
1/4" = 1'-0"

0' 2' 4' 8' 16'



1 **BASEMENT - PLUMBING PLAN**
1/8" = 1'-0"

0' 4' 8' 16' 32'

12/5/2019 11:16:11 AM

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Title
BASEMENT FLOOR - PLUMBING PLAN

Sheet
P-100

1/32" = 1'-0"

1/16" = 1'-0"

1/8" = 1'-0"

1/4" = 1'-0"

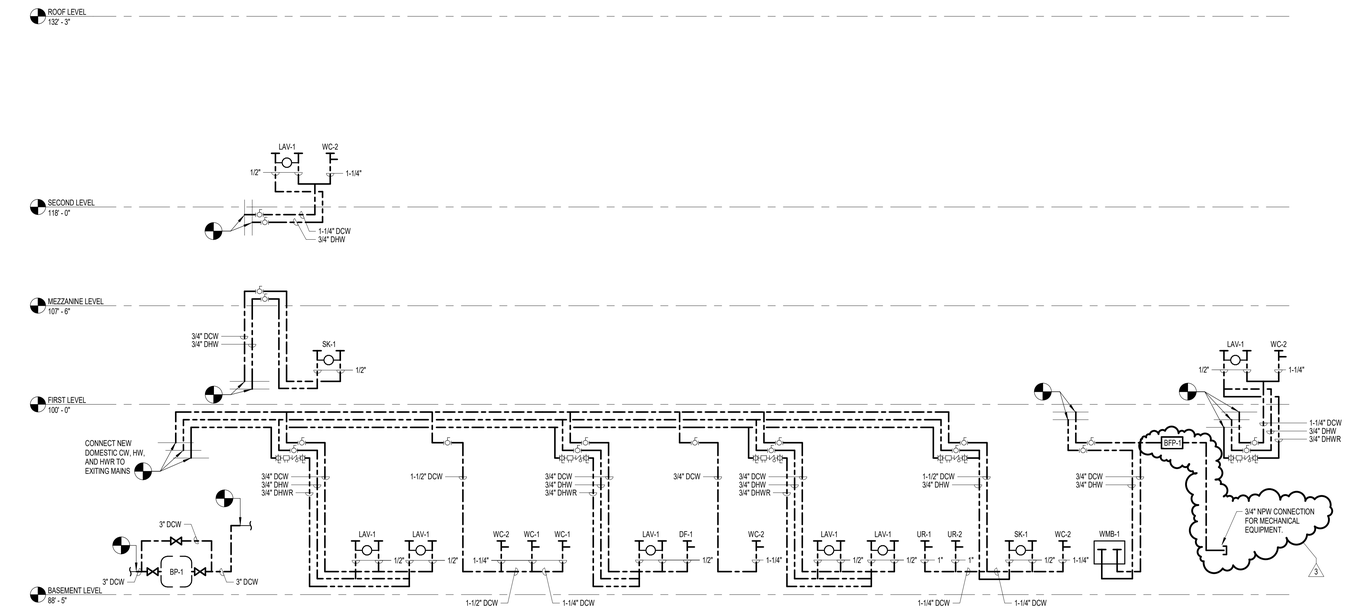
1/2" = 1'-0"

1" = 1'-0"

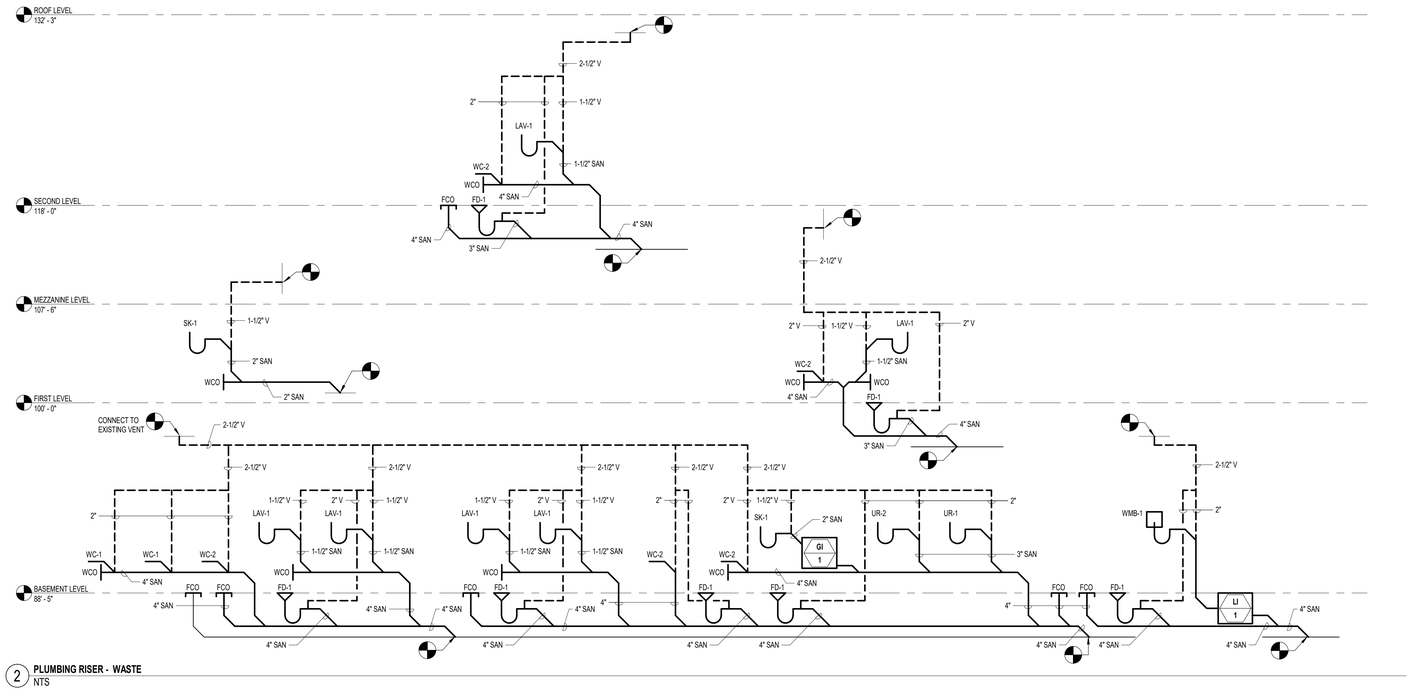
1-1/2" = 1'-0"

3" = 1'-0"

6" = 1'-0"



1 **PLUMBING RISER - SUPPLY**
NTS



2 **PLUMBING RISER - WASTE**
NTS

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PBC Project Name: Legler Regional Library

PBC Contract No: C1597

PBC Project No.: 08310

Title
PLUMBING RISER DIAGRAMS

Sheet
P-400

12/5/2019 11:16:13 AM

32'-0" 0'-0" 16'-0" 32'-0" 64'-0"
1/32" = 1'-0"

16'-0" 0'-0" 8'-0" 16'-0" 32'-0"
1/16" = 1'-0"

8'-0" 0'-0" 4'-0" 8'-0" 16'-0"
1/8" = 1'-0"

4'-0" 0'-0" 2'-0" 4'-0" 8'-0"
1/4" = 1'-0"

2'-0" 0'-0" 1'-0" 2'-0" 4'-0"
1/2" = 1'-0"

1'-0" 0'-0" 0'-6" 1'-0" 2'-0"
1" = 1'-0"

0'-0" 0'-6" 1'-0" 2'-0"
1-1/2" = 1'-0"

0'-0" 0'-3" 0'-6" 0'-9" 1'-0"
3" = 1'-0"

0'-0" 0'-1-1/2" 0'-3" 0'-4-1/2" 0'-6"
6" = 1'-0"

PLUMBING FIXTURES

TAG	GPM/GPF	FIXTURE				FAUCET/VALVE			REMARKS
		TYPE	FINISH	MANUFACTURER	MODEL	TYPE	MANUFACTURER	MODEL	
LAV-1	0.5	UNDER-MOUNT LAVATORY	VITREOUS CHINA	SLOAN	SS-3001	HARDWIRED AUTOMATIC	SLOAN	SF-2100	1
SK-1	1.5	TOP-MOUNT SINK	STAINLESS STEEL	ELKAY	LRADQ191855	MANUAL	AMERICAN STANDARD	7502.170.002	1
UR-1	0.125	WALL-MOUNTED URINAL	VITREOUS CHINA	AMERICAN STANDARD	6590.001	MANUAL FLUSHVALVE	AMERICAN STANDARD	6045.013.002	
UR-2	0.125	WALL-MOUNTED URINAL (ADA ACCESSIBLE)	VITREOUS CHINA	AMERICAN STANDARD	6590.001	MANUAL FLUSHVALVE	AMERICAN STANDARD	6045.013.002	
WC-1	1.1	WALL-MOUNTED WATER CLOSET	VITREOUS CHINA	AMERICAN STANDARD	3351.101	MANUAL FLUSHVALVE	AMERICAN STANDARD	6047.111.002	
WC-2	1.1	WALL-MOUNTED WATER CLOSET (ADA ACCESSIBLE)	VITREOUS CHINA	AMERICAN STANDARD	3351.101	MANUAL FLUSHVALVE	AMERICAN STANDARD	6047.111.002	

1. PROVIDE POINT OF USE TEMPERING VALVE LEONARD 270-LF OR SIMILAR.

DOMESTIC BOOSTER PUMP

TAG		LOCATION	TOTAL CAPACITY (GPM)	MIN. SUCTION (PSI)	MAX. DISCHARGE PRESSURE (PSI)	PUMP QUANITY	ELECTRICAL DATA			MANUFACTURER	MODEL	REMARKS
ABBR.	#						(TOTAL) HP	VOLTS	PH			
BP	1	ROOM 125	86	20	56	1	5	208 V	3	BELL & GOSSETT	AQUABOOST 1B502BVS	

DRINKING FOUNTAIN

TAG	FIXTURE	MATERIAL	DIMENSIONS (LXWXH)	MANUFACTURER	MODEL	REMARKS
DF-1	BI-LEVEL DRINKING FOUNTAIN	STAINLESS STEEL	31-1/2" X 18" X 15-1/2"	FILTRINE	107-14-RA-HL	1, 3
DF-2	BI-LEVEL DRINKING FOUNTAIN	BRONZE	31-1/2" X 18" X 15-1/2"	FILTRINE	107-14-RA-HL	2, 3

1. PROVIDE STAINLESS STEEL FINISH
2. PROVIDE BRONZE FINISH
3. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS.

FLOOR DRAIN

TAG	FIXTURE	MATERIAL	MANUFACTURER	MODEL	REMARKS
FD-1	FINISHED FLOOR DRAIN	CAST IRON	MIFAB	F1100	

WASHING MACHINE BOX

TAG	FIXTURE	MANUFACTURER	MODEL	REMARKS
WMB-1	WASHING MACHINE BOX	GUY GRAY	T200	

INTERCEPTORS

TAG		LOCATION	DIMENSIONS			MANUFACTURER	MODEL	REMARKS
ABBR.	#		WIDTH	HEIGHT	LENGTH			
LI	1	STAFF LAUNDRY	1'-5"	1'-4"	1'-5"	ROCKFORD SEPARATORS	RLSW-30	1
GI	1	STAFF LOUNGE	1'-1"	1'-1"	1'-7 1/4"	ROCKFORD SEPARATORS	RP-07	2

1. TO BE INSTALLED FLUSH WITH FINISHED FLOOR
2. TO BE INSTALLED ABOVE FINISHED FLOOR IN SINK CASEWORK.

ROOF DRAIN

TAG	FIXTURE	MATERIAL	MANUFACTURER	MODEL	REMARKS
RD-1	ROOF DRAIN	CAST IRON	MIFAB	R1200	

3

BACKFLOW PREVENTER

TAG		FIXTURE	SYSTEM	MANUFACTURER	MODEL	REMARKS
ABBR.	#					
BFP	1	DOUBLE CHECK VALVE ASSEMBLY	NON POTABLE WATER	WATTS	LF007	

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PBC Project Name: Legler Regional Library

PBC Contract No: C1597

PBC Project No.: 08310

Title
PLUMBING SCHEDULES

Sheet
P-500

1/32" = 1'-0" | 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 1" = 1'-0" | 1-1/2" = 1'-0" | 3" = 1'-0" | 6" = 1'-0"

VENTILATION SYMBOLS

SYMBOL	DESCRIPTION
	NEW DUCTWORK
	DUCT SECTION - SUPPLY UP
	DUCT SECTION - SUPPLY DOWN
	DUCT SECTION - RETURN UP
	DUCT SECTION - RETURN DOWN
	DUCT SECTION - EXHAUST UP
	DUCT SECTION - EXHAUST DOWN
	DUCT SECTION - OUTSIDE AIR UP
	DUCT SECTION - OUTSIDE AIR DOWN
	EXISTING DUCT
	DUCT/EXISTING WORK TO BE REMOVED
R	INCLINED RISE WITH RESPECT TO AIRFLOW
D	INCLINED DROP WITH RESPECT TO AIRFLOW
	FLEXIBLE CONNECTION TO EQUIPMENT
	LOUVER & SCREEN WXD GROSS OPENING
	FLEXIBLE DUCT
	VOLUME DAMPER WITH QUADRANT LOCKING
M	MOTORIZED DAMPER
	SPLITTER DAMPER
BDD	BACKDRAFT DAMPER (GRAVITY)
FD	FIRE DAMPER, SLEEVE & ACCESS DOOR
	AIR EXTRACTING VANES
	TURNING VANES, DOUBLE THICKNESS AIRFOIL TYPE
SYSTEM RISER NO.	RISER MARK
T	THERMOSTAT (G) W/ GUARD
S	SENSOR
H	HUMIDISTAT
	CONNECTION TO EXISTING PIPING, DUCTWORK, ETC.
700-R 20x12	EXHAUST OR RETURN AIR REGISTER
800-S 20x12	RECTANGULAR CEILING SUPPLY DIFFUSER
800-S 20X12	ROUND CEILING SUPPLY DIFFUSER
800-S 20X12	SIDE WALL, SUPPLY REGISTER W/ VOLUME DAMPER
24x12 DG	DOOR GRILLE W/ BUILT-IN FIRE DAMPER IF LOCATED ON A FIRE DOOR
	LINEAR DIFFUSER W/ BOOT. NO VOLUME DAMPER IN BOOT
	AIR VALVE
	TERMINAL UNIT, VARIABLE VOLUME INTEGRAL DIFFUSER
UC	DOOR UNDERCUT MINIMUM 1"
	ROOF MOUNTED POWER OR GRAVITY VENTILATOR
	ROOF MOUNTED AIR INTAKE
	ELECTRIC DUCT HEATER
TAG SIZE CFM	DIFFUSER / REGISTER TAG

MECHANICAL SYMBOLS

SYMBOL	DESCRIPTION
	PRESSURE GAGE & COCK
	STRAINER
	STRAINER WITH BLOW OFF VALVE
	THERMOMETER
P/T	PRESSURE/TEMPERATURE SENSOR
	CAP
	UNION
	ANCHOR W/ ALIGNMENT GUIDES
	EXPANSION JOINT
	FLEXIBLE CONNECTION
	PRESSURE REDUCING VALVE
	RELIEF VALVE
	TRIPLE DUTY VALVE
	CHECK VALVE
	BALANCING VALVE
	GLOBE VALVE
	GATE VALVE
	BUTTERFLY WHEN VALVE IS 4" OR MORE BALL VALVE WHEN VALUE IS 3" OR LESS
M	VALVE WITH MEMORY STOP
	GAS COCK
	CONTROL VALVE 2 WAY
	CONTROL VALVE 3 WAY
	PRESSURE/TEMPERATURE TAP
	CIRCUIT SETTER
SF	CODE BACKFLOW PREVENTER
	UNIT HEATER VERTICAL
	UNIT HEATER HORIZONTAL
	PIPE DOWN
	PIPE UP
	EXISTING PIPE TO BE REMOVED
	EXISTING PIPE TO REMAIN
	NEW PIPING
	PIPING ASSEMBLY (SEE DETAIL)
V	AIR VENT
	FLOW CONTROL FITTING
FI	FLOW INDICATOR
FS	FLOW SWITCH
PS	PRESSURE SWITCH
	BASE MOUNTED PUMP (SEE DETAIL)
P	INLINE PUMP (SEE DETAIL)
	EQUIPMENT (SPECIFIED BY TAG BELOW)
XX X	EQUIPMENT TAG
SD	SMOKE DETECTOR
FSD	FIRE / SMOKE DETECTOR

SYSTEMS ABBREVIATIONS

DUCTWORK		MECHANICAL PIPING	
ABBREVIATION	**SYSTEM NAME**	**ABBREVIATION**	**SYSTEM NAME**
DE	DRYER EXHAUST	CHWR	CHILLED WATER RETURN
GE	EXHAUST AIR	CHWS	CHILLED WATER SUPPLY
OA	OUTSIDE AIR	CD	CONDENSATE DRAIN
RCR	RECIRCULATION AIR	CDWR	CONDENSER WATER RETURN
RA	RETURN AIR	CDWS	CONDENSER WATER SUPPLY
SA	SUPPLY AIR	HWR	HOT WATER RETURN
TE	TOILET EXHAUST	HWS	HOT WATER SUPPLY
		NGLP	NATURAL GAS - LOW PRESSURE
		RFGG	REFRIGERATION GAS
		RFGL	REFRIGERATION LIQUID

CITY OF CHICAGO NOTES:

1. EQUIPMENT NOISE LEVEL NOT TO EXCEED 55 DB AT THE LOT LINE.
2. THE MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL A SAFETY RELIEF VALVE DESIGNED TO RELIEVE AND/OR PREVENT THE BUILDUP OF EXCESSIVE REFRIGERANT PRESSURE WITHIN THE DIRECT EXPANSION SYSTEMS. THE PRESSURE RELIEF DEVICE SHALL BE SET AT 400 PSI AND SHALL BE INSTALLED ON THE HIGH PRESSURE SIDE AT THE DISCHARGE OF THE COMPRESSOR AND UPSTREAM OF THE COMPRESSOR SHUTOFF (STOP) VALVE.
3. ALL FRESH AIR INTAKE OPENINGS SHALL BE A MINIMUM OF 20'-0" AWAY FROM ANY EXHAUST OR POINT OF CONTAMINATE DISCHARGE.
4. THE EQUIPMENT IN THE VENTILATING AND HEATING SYSTEM SHALL BE SUFFICIENT TO MAINTAIN 72 DEGREES F. IN HEATING AREAS SERVED AT ALL TIMES WHEN 33-1/3 PERCENT OF CODE REQUIRED AIR IS SUPPLIED FROM OUTDOORS AT -10 DEGREES F.
5. VOLUME DAMPERS OF LOCKING TYPE SHALL BE PLACED IN EACH FORCED WARM AIR RUN.
6. ALL WORK SHALL CONFORM TO THE CURRENT CITY OF CHICAGO CODES AND ORDINANCES.
7. ALL FLUES TO EXTEND 6'-0" MINIMUM ABOVE ROOF.
8. HYDRONIC PIPING AND CONTROLS MUST CONFORM TO ARTICLE 12. [18-28-1200] CODE SECTION 1206.1.1. AVOID SUPPLY INTO THE BRANCH CONNECTION OF A TEE.
9. HORIZONTAL GREASE DUCTS SHALL HAVE CLEANOUTS AT NO GREATER THAN 20 FEET APART AND AT LEAST ONE ACCESS THAT IS 20"X20" TO COMPLY WITH 18-28-506.3.10 & 9.1.
10. FOR CEILINGS USED AS PLENUM RETURN, THE CONTRACTOR SHALL GUARANTEE THAT THE PLENUM CHAMBER WILL BE OF A TIGHT CONSTRUCTION AND ALL SOURCES OF AIR CONTAMINATION WILL BE ENCLOSED SO THAT NO CONTAMINATED AIR WILL BE RECIRCULATED.

GENERAL MECHANICAL NOTES

NOTES APPLY TO ALL MECHANICAL DRAWINGS

1. EACH TRADE CONTRACTOR SHALL VISIT CONSTRUCTION SITE PRIOR TO BIDDING, EXAMINE SCOPE AND CONDITIONS OF OTHER CONTRACT WORK, EXAMINE EXISTING CONDITIONS AND ALL INTERFERENCES AND REQUIRED COORDINATION IN ORDER TO INCLUDE EFFECT OF SAID CONDITIONS IN THEIR BID. BID DRAWINGS ARE DIAGRAMMATIC AND DO NOT INDICATE ALL REQUIRED RELOCATIONS, OFFSETS, CHANGE IN ASPECT RATIOS, OR ROUTING CHANGES REQUIRED TO INTEGRATE WORK WITH ALL OTHER CONDITIONS OR TRADES. WORK INSTALLED BEFORE COORDINATING SO AS TO CAUSE INTERFERENCES WITH OTHER TRADES SHALL BE REMOVED AND REWORKED WITHOUT COST TO OWNER. COST OF PROVIDING SUCH RELOCATIONS, OFFSETS, SIZE, CHANGES, REROUTING, ETC. SHALL BE INCLUDED IN BID. COORDINATING SCALED (1/4") COORDINATED DRAWINGS SHALL BE PREPARED BY EACH TRADE TO FACILITATE AND VERIFY FIT AND CONGRUENCE OF THEIR INSTALLATION WITH OTHER TRADES
2. WHERE ADDITIONAL DETAILS, DIAGRAMS, EQUIPMENT DATA, AND ISOMETRICS ARE REQUIRED BY BUILDING DEPARTMENT OR CODE AUTHORITIES FOR PERMIT OR APPROVAL, CONTRACTOR SHALL PROVIDE SAME AT NO ADDITIONAL COST.
3. BUILDING PLANS SHOWN ARE COMPILED FROM SOURCES BELIEVED TO BE ACCURATE. HOWEVER, THE INFORMATION SHOWN ON THESE PLANS IS SCHEMATIC AND CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PROPER DIMENSIONS, SIZES, SYSTEM VOLTAGES, QUANTITIES AND EXTENT OF WORK.
4. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, STRUCTURAL, PLUMBING, FIRE PROTECTION, MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR COORDINATION AND EXTENT OF THE WORK OF THE VARIOUS TRADES AND IMPACT ON THEIR WORK.
5. WITH THE APPROVAL OF THE ARCHITECT AND WITHOUT ADDITIONAL COST TO THE OWNER, MAKE MODIFICATIONS IN THE WORK, INCLUDING REROUTING AS REQUIRED BY INTERFERENCE WITH STRUCTURAL, GENERAL AND WORK OF OTHER TRADES FOR PROPER EXECUTION OF THE WORK.
6. REFER TO THE ARCHITECTURAL DRAWINGS, FIELD CONDITIONS AND DETAILS FOR EXACT LOCATION OF PARTITIONS, ROP, DIMENSIONED ELEMENTS.
7. CUTTING AND PATCHING FOR THEIR WORK SHALL BE PERFORMED BY EACH TRADE CONTRACTOR UNLESS NOTED OTHERWISE.
8. REFER TO ELECTRICAL DIAGRAM AND SPECIFICATIONS FOR VFD DRIVES TYPE, MODEL REQUIREMENTS.
9. ALL WORK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH BUILDING STANDARDS AND ALL APPLICABLE CODES.
10. MEDIUM/LOW PRESSURE DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST SMACNA STANDARDS. SUPPLY DUCTWORK, MEDIUM PRESSURE SHALL NOT EXCEED 2000 FPM VELOCITY OR 0.2 IN/100 FT. PRESSURE DROP. LOW PRESSURE DUCTWORK SHALL NOT EXCEED 1500 FPM OR 0.08 IN/100 FT. PRESSURE DROP. EXHAUST DUCTWORK SHALL NOT EXCEED 1500 FPM OR 0.08 IN/100 FT. PRESSURE DROP.
11. PROVIDE MANUAL DAMPER ON ALL LOW PRESSURE SUPPLY BRANCH TAKE-OFF OF DUCTWORK.
12. ALL DUCT SIZES SHOWN SHALL BE CLEAR INSIDE DIMENSIONS.
13. DIFFUSERS, REGISTERS ARE AS SCHEDULED IN THE DRAWING. CONTRACTOR TO VERIFY AND COORDINATE WITH ARCHITECT TYPE OF CEILING TO DETERMINE FRAME TYPE.
14. BLANK-OFF WITH BLACK PAINTED PANEL WHERE SHOWN. DO NOT PAINT EXPOSED DUCTS OR REGISTERS.
15. PROVIDE UL APPROVED FIRE DAMPERS IN ALL DUCT PENETRATIONS THRU FIRE RATED ASSEMBLIES WHETHER INDICATED OR NOT.
16. FLEXIBLE DUCTWORK: FINAL CONNECTIONS TO ALL BOOT ASSEMBLIES, DIFFUSERS AND REGISTERS SHALL BE MADE WITH CODE-APPROVED INSULATED FLEXIBLE DUCT, THE RMAFLEX TYPE M-KE OR AS MANUFACTURED BY FLEX MASTER OR GENFLEX. FLEXIBLE DUCTWORK SHALL NOT BE USED IN DUCTWORK AS AN ELBOW. FLEXIBLE DUCTWORK SHALL BE: STRAIGHT WITH ONLY MINOR OFFSETS NECESSARY FOR FIELD CONDITIONS. FLEXIBLE DUCTWORK SHALL NOT EXCEED 6'-0" IN LENGTH IN EITHER MEDIUM OR LOW VELOCITY SYSTEMS, SHALL BE PROPERLY SUPPORTED TO PREVENT KINKS OR SAGS, AND SHALL NOT BE USED AS AN ELBOW. CONNECTIONS SHALL BE SECURED WITH WRAP LOCK CLAMPS AND SEALED WITH DUCT SEALER. INSTALLATION SHALL BE IN ACCORDANCE WITH LOCAL CODES WHICH MAY RESTRICT TYPE, LENGTH AND USE OF FLEXIBLE DUCT.
17. FUEL GAS PIPING AND CONTROLS MUST CONFORM TO THE INTERNATIONAL FUEL GAS CODE(IFGC), CHAPTER 4 (WITH MODIFICATIONS AS NOTED IN ARTICLE 14). [18-28-1400]
18. GAS PIPING MUST BE SIZED IN ACCORDANCE WITH IFGC TABLES 402.(1) THROUGH 402.3 (34). [IFGC 402.3]
19. THE MAXIMUM DESIGN OPERATING PRESSURE FOR GAS PIPING SYSTEMS LOCATED INSIDE BUILDINGS SHALL NOT EXCEED 5 PSIG (SOME EXCEPTIONS ARE NOTED). [TFGC 402.5]
20. GAS PIPING MATERIALS MUST CONFORM TO THE GAS PIPING & TUBING MATERIAL MATRIX (LFGC 403 REQUIREMENTS). [IFGC 403]
21. PIPING IN CONCEALED LOCATIONS MUST CONFORM TO THIS IFGC 404.3. [IFGC 404.3]
22. GAS PIPES MUST BE SLOPED AT 1/4 INCH IN EVERY 15 FEET. [IFGC 408.1]
23. ALL FITTINGS AND CONNECTIONS FOR ALL CHILLED WATER, COOLING WATER, HEATING HOT WATER SYSTEMS INSIDE THE BUILDING, EXCEPT INSIDE THE EQUIPMENT ROOM SHALL BE WELDED OR BRAZED.
24. PROVIDE FLEXIBLE DUCTS RATED FOR 10 INCH WG PRESSURE RATING. PROVIDE STRAP FOR INSIDE AND OUTSIDE LINING AT EACH CONNECTION POINT. MINIMUM HYDRONIC PIPING SIZE SHALL BE 3/4".
25. SMOKE DUCT DETECTORS SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING THEIR LOCATION BASED ON THE ACTUAL DUCT ROUTING. INSTALLATION TO BE LEAK FREE AND SHALL PASS THE DUCT PRESSURE TEST.

3

26. ALL NEW EXPOSED VAV BOXES INCLUDING SUPPLY AND RETURN AIR DUCTWORK TO BE PRIMED AND PAINTED TO MATCH THE ADJACENT COLOR.
27. THERE ARE EXISTING ELECTRIC DUCT HEATERS IN A FEW LOCATIONS THAT SHALL BE REMOVED COMPLETE WITH PANEL AND WIRING BACK TO THE JUNCTION BOXES. PATCH DUCTWORK AS REQUIRED TO MATCH THE EXISTING ADJACENT FINISHES.
28. CONTRACTOR TO VERIFY ALL LOCATIONS AND REPAIR EXISTING DUCT AND PIPE INSULATION IN THE BASEMENT AREAS THAT ARE FOUND TO BE DAMAGED, BROKEN AND/OR MISSING. DENSITY AND THICKNESS OF NEW INSULATION SHALL MEET THAT OF THE EXISTING INSULATION.
29. DRAIN THE ENTIRE CHILLED WATER, HOT WATER, DUAL TEMPERATURE AND COOLING TOWER SYSTEMS. TEMPORARILY DISCONNECT EXISTING EQUIPMENT AND BEFORE CONNECTING THE NEW EQUIPMENT, FLUSH THE ENTIRE SYSTEM WITH CHEMICALS AND WITH FRESH WATER IN ORDER TO CLEAN THE EXISTING AND NEW PIPING SYSTEMS. TEST THE WATER QUALITY AND ONCE THE SYSTEM IS FOUND TO BE CLEAN, CONNECT ALL EXISTING AND NEW EQUIPMENT AND FILL THE ENTIRE SYSTEM (WITH THE EXCEPTION OF COOLING TOWER) WITH 30% PROPYLENE GLYCOL SOLUTION. COOLING TOWER SYSTEM TO BE FILLED WITH WATER. ADD CHEMICAL TREATMENT AS NECESSARY.
30. THE DOCUMENTS ARE PREPARED BASED ON THE EXISTING DRAWINGS AND SITE VISIT. HOWEVER, CONTRACTOR TO PERFORM HIS OWN SITE VISIT AND GENERATE A LIST OF EXISTING VAV BOXES AND THEIR LOCATIONS. SUBMIT A REPORT SHOWING THEIR LOCATIONS INCLUDING WHETHER THE BOXES ARE EQUIPPED WITH HEATERS AND/OR SILENCERS FOR EOR'S FURTHER DIRECTION.
31. THE DOCUMENTS ARE PREPARED BASED ON THE EXISTING DRAWINGS AND SITE VISIT AND MAY NOT SHOW ALL EXISTING PIPING, DUCTWORKS, GRILLES, REGISTERS AND EQUIPMENT. AS SUCH IT IS CONTRACTORS RESPONSIBILITY TO VISIT THE SITE AND INCLUDE RELOCATION OF PIPING, DUCTS AND GRILLES AS REQUIRED TO MATCH THE NEW FLOOR PLANS.
32. PROVIDE CLEANING OF THE ENTIRE EXISTING SUPPLY AND RETURN AIR DUCT DISTRIBUTION SYSTEMS INCLUDING EQUIPMENT PER SECTION 230130.
33. REMOVE EXISTING WATER CHEMICAL TREATMENT SYSTEM INCLUDING TOWER FEEDING SYSTEM, POT FEEDERS, ETC. AND PROVIDE NEW SYSTEMS AS NOTED IN SECTION 232500. INCLUDE ALL PIPING AND ELECTRICAL CONNECTIONS REQUIRED.
34. BEFORE REMOVING OR DISCONNECTING ANY EQUIPMENT, OPEN ALL VALVES AND CONTRACTOR SHALL TAKE PRE-CONSTRUCTION READINGS OF THE EXISTING CHILLED WATER PUMPS, CONDENSER WATER PUMPS, DUAL TEMPERATURE WATER PUMPS AND HOT WATER PUMPS AND SUBMIT REPORT TO THE EOR. FOR EACH PUMP, REPORT SHALL INCLUDE FLOWRATE IN GPM, PUMP HEAD IN FEET, MOTOR HP AND AMPS DRAW. EOR WILL REVIEW THE REPORT AND WILL ISSUE DIRECTIVE FOR RE-BALANCING THESE PUMPS DUE TO THE REMODELING WORK. UPON COMPLETION OF THE PROJECT, CONTRACTOR SHALL RE-BALANCE ALL THE ABOVE NOTED PUMPS TO THE REQUIREMENTS PROVIDED BY THE EOR. ONCE THE RE-BALNCING IS DONE, SUBMIT A FINAL REPORT FOR REVIEW. REFER TO SECTION 230593 FOR ADDITIONAL REQUIREMENTS AND PROCEDURES.
35. REFER TO PHASING PLAN SHEET G-004 FOR WORK TO BE COMPLETED IN SPECIFIED AREAS BY SCHEDULED MILESTONE DATES. PROVIDE ADDITIONAL DAMPERS, VALVES, POWER, PLUMBING AS REQUIRED TO COMPLY WITH THE SPECIFIED DATES.

MECHANICAL ABBREVIATIONS

ABBREVIATION	DESCRIPTION
AC	AIR CONDITIONER
ACH	AIR CHANGES PER HOUR
ADS	AIR DIRT SEPARATOR
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISHED GRADE
AFMS	AIR FLOW MONTIORING STATION
AFU	ANNUAL FUEL EFFICIENCY RATIO
AHU	AIR HANDLER
AMP	AMPERAGE
APD	AIR PRESSURE DROP
AS	AIR SEPARATOR
ATU	AIR TERMINAL UNIT
AUX.	AUXILLARY
B	BOILER
BAS	BUILDING AUTOMATION SYSTEM
BLDG	BUILDING
BTU	BRITSH THERMAL UNITS
BTU/H	BRITISH THERMAL UNITS PER HOUR
CAI	COMBUSTION AIR INTAKE
CAP.	CAPACITY
CAV	CONSTANT AIR VOLUME
CAV	CABINET UNIT HEATER
CC	COOING COIL
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CFM	GAUGE
CHWP	CHILLED WATER PUMP
CLG	CEILING
CO2	CARBON DIOXIDE
CONN	CONNECTION
COP	COEFFICIENT OF PERFORMANCE
CP	STEAM CONDENSATE PUMP
CRAC	COMPUTER ROOM AIR CONDITIONER
CT	COOLING TOWER
CUH	CABINET UNIT HEATERS
CVP	CONDESER WATER PUMP
DB	DRY-BULB TEMPERATURE
DE	DRYER EXHAUST
DEF	DRYER EXHAUST FAN
DIA, Ø	DIAMETER
DN	DOWN
DOA	DEDICATED OUTSIDE AIR
EAD	EXHAUST AIR DAMPER
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EFF	EFFICIENCY
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EUH	ELECTRIC UNIT HEATERS
EWT	ENTERING WATER TEMPERATURE
EX	EXISTING
EXH	EXHAUST
F	FAHRENHEIT
F.S.P.	FAN STATIC PRESSURE
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FLA	FULL LOAD AMPERAGE
FPB	FAN POWERED BOX
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FIN-TUBE
FT/MIN	FEET PER MINUTE
GAL.	GALLONS
GE	EXHAUST AIR
GPM	GALLONS PER MINUTE
GPR	GEOEXCHANGE PIPE RETURN
GPS	GEOEXCHANGE PIPE SUPPLY
GWP	ETHYLENE GLYCOL WATER PUMP
H	HUMIDISTAT
HC	HEATING COIL
HCP	HEATING COIL PUMP
HOA	HANDS-OFF-AUTO
HP	HORSE POWER
HP	HEAT PUMP
HPS	HIGH PRESSURE SUPPLY
HWP	HOT WATER PUMP
HWV	HOT WATER VALVE
HX	HEAT EXCHANGER
HZ	HERTZ
IH	INTAKE AIR HOOD
IHD	INTAKE HOOD DAMPER
INWC	INCHES WATER COLUMN
INWG	INCHES WATER GAUGE
KEF	KITCHEN EXHAUST FAN
KFD	KITCHEN EXHAUST CONTROL DAMPER
KW	KILOWATTS
LAT	LEAVING AIR TEMPERATURE
LB/HR	POUNDS PER HOUR
LBS	POUNDS
LEF	LAUNDRY EXHAUST FAN
LWT	LEAVING WATER TEMPERATURE
MAX.	MAXIMUM
MBH	THOUSAND BRITSH THERMAL UNITS
MCA	MAXIMUM CURRENT AMPERAGE
MD	MANUAL DAMPER
MERV.	MINIMUM EFFICIENCY RATING VALUE
MFG	MANUFACTURER
MIN.	MINIMUM
MOCP	MAXIMUM OVER-CURRENT PROTECTION
MPS	MEDIUM PRESSURE SUPPLY
MTD	MOUNTED
O.B.D	OPPOSED BLADE DAMPER
OA	OUTSIDE AIR
OAD	OUTSIDE AIR DAMPER
OAI	OUTSIDE AIR INTAKE
P	PUMP
P.D.	PRESSURE DROP
P/T	PRESSURE TESTING
PH	ELECTRICAL PHASE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUIRE INCH GAUGE
PTAC	PACKAGED TERMINAL AIR CONDITIONER
PWP	PROCESS WATER PUMP
RA	RETURN AIR
RAD	RETURN AIR DAMPER
RBD	ROUND BACKDRAFT DAMPER
RCR	RECIRCULATION AIR
RF	RETURN FAN
RH	RELATIVE HUMIDITY
RH	RELIEF AIR HOOD
RHV	REHEAT WATER VALVE
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
RV	RELIEF VALVE
S	SENSOR
SA	SUPPLY AIR
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SF	SUPPLY FAN
SQ. FT.	SQUARE FEET
STV	STEAM VALVE
T	THERMOSTAT
TE	TOILET EXHAUST
TEF	TOILET EXHAUST FAN
TFD	TOILET EXHAUST CONTROL DAMPER
TG	TRANSFER GRILLE
TRE	TRASH EXHAUST
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UH	UNIT HEATERS
V	VOLTAGE
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
VFD	VARIABLE FREQUENCY DRIVE
VSD	VARIABLE SPEED DRIVE
WB	WET-BULB TEMPERATURE
WC	INCHES IN WATER COLUMN

SHEET LIST

MECHANICAL SHEET LIST

SHEET NUMBER	SHEET NAME
M-000	MECHANICAL SYMBOLS, NOTES & ABBREVIATIONS
M-001	MECHANICAL CITY OF CHICAGO SCHEDULE
M-100	BASEMENT FLOOR - MECHANICAL DUCTWORK PLAN
M-101	FIRST AND MEZZANINE FLOOR - MECHANICAL DUCTWORK PLAN
M-102	SECOND FLOOR - MECHANICAL DUCTWORK PLAN
M-103	ROOF - MECHANICAL DUCTWORK PLAN
M-200	BASEMENT FLOOR - MECHANICAL PIPING PLAN
M-201	FIRST AND MEZZANINE FLOOR - MECHANICAL PIPING PLAN
M-202	SECOND FLOOR - MECHANICAL PIPING PLAN
M-203	ROOF - MECHANICAL PIPING PLAN
M-400	MECHANICAL CHILLED WATER FLOW DIAGRAM
M-401	MECHANICAL HOT WATER FLOW DIAGRAM
M-500	MECHANICAL SCHEDULES
M-501	MECHANICAL SCHEDULES
M-600	MECHANICAL DETAILS
M-601	MECHANICAL DETAILS
M-700	TEMPERATURE CONTROLS SYMBOLS, NOTES & ABBREVIATIONS
M-701	TEMPERATURE CONTROLS NETWORK LAYOUT
M-702	TEMPERATURE CONTROLS CHILLED WATER PLANT SCHEMATIC
M-703	TEMPERATURE CONTROLS AHU-1 CONTROL SCHEMATIC
M-704	TEMPERATURE CONTROLS TERMINAL UNIT CONTROL SCHEMATICS
M-705	TEMPERATURE CONTROLS MISCELLANEOUS CONTROL SCHEMATICS
MD-100	BASEMENT FLOOR - MECHANICAL DEMOLITION PLAN
MD-101	FIRST AND MEZZANINE FLOOR - MECHANICAL DEMOLITION PLAN
MD-102	SECOND FLOOR - MECHANICAL DEMOLITION PLAN
MD-103	ROOF - MECHANICAL DEMOLITION PLAN

GENERAL NOTE: NOT ALL SYMBOLS, NOTES AND ABBREVIATIONS ARE APPLICABLE TO THIS PROJECT

DOB STAMP APPROVAL

PUBLIC BUILDING COMMISSION OF CHICAGO

CHICAGO PUBLIC LIBRARY

SEAL | DATE 12/5/19

Legler Regional Library Renovation

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Chicago, IL 60624
CHICAGO PUBLIC LIBRARY
CITY OF CHICAGO, MAYOR RAHM EMANUEL

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RATIO

RATIO

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Issuance

Mark	Description	Date
1	ISSUE FOR BID	11/13/19
3	ADDENDUM #3	12/5/19

PBC Project Name: Legler Regional Library
PBC Contract No: C1597
PBC Project No.: 08310

Title:
MECHANICAL SYMBOLS, NOTES & ABBREVIATIONS

Sheet
M-000

12/5/2019 11:15:50 AM

1/32" = 1'-0"

1/16" = 1'-0"

1/8" = 1'-0"

1/4" = 1'-0"

1/2" = 1'-0"

1" = 1'-0"

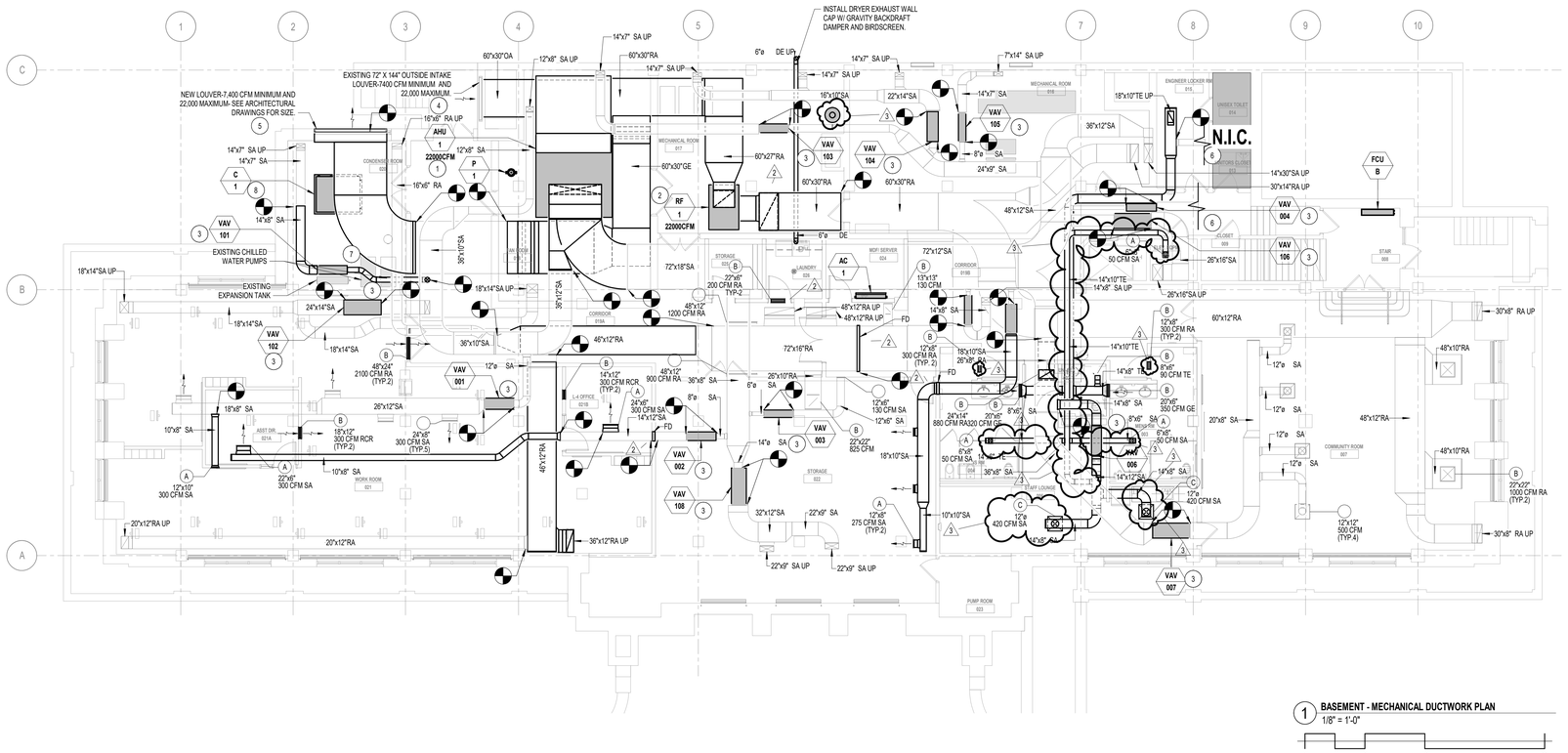
1-1/2" = 1'-0"

3" = 1'-0"

6" = 1'-0"

MECHANICAL DUCTWORK KEYNOTES

1. AIR HANDLING UNIT (AHU) WILL BE SHIPPED IN MULTIPLE PIECES. RETAIN SERVICE OF A MANUFACTURER AND INSTALL ALL PIECES AIRTIGHT. AHU TO BE INSTALLED ON NEW NEOPRENE PADS AND ON EXISTING CONCRETE PAD, ENLARGE CONCRETE PADS AS NECESSARY. EXTEND AND CONNECT OUTSIDE AIR INTAKE, RETURN AIR AND SUPPLY AIR DUCTWORK TO THE AHU COMPLETE AS REQUIRED. INCLUDE ALL MODIFICATION OF EXISTING DUCTWORK AS REQUIRED TO ACCOMMODATE NEW AHU OPENING SIZES AND LOCATIONS.
2. INSTALL NEW RETURN AIR FAN WHERE SHOWN. MODIFY DOWNSTREMUPSTREAM DUCTWORK AND PROVIDE NECESSARY TRANSITION PIECES TO ACCOMMODATE THE NEW RETURN FAN. PROVIDE ALL CONTROLS NECESSARY FOR PROPER OPERATION.
3. FURNISH NEW VAV BOX AND INSTALL WHERE SHOWN, ADJUST THEIR LOCATION AS NECESSARY. MODIFY EXISTING UPSTREAM AND/OR DOWNSTREAM DUCTWORK AS REQUIRED TO ACCOMMODATE NEW BOX. TEMPORARILY REMOVE PIPING AND DUCTWORK THAT MAY BE IN A WAY OF NEW BOX INSTALLATION AND REINSTALL THEM ONCE THE NEW BOX IS INSTALLED.
4. REMOVE OUTSIDE AIR INTAKE LOUVER AND CLEAN PLUGGED BIRD SCREEN (LOCATED BEHIND THE LOUVER) IN PLACE. ONCE THE SCREEN IS CLEAN, RE-INSTALL LOUVER, SECURE AND CAULK ALL AROUND WEATHERTIGHT.
5. REMOVE EXISTING EXHAUST GRILLE FOR THE AHU. EXTEND EXHAUST DUCT AND CONNECT TO NEW EXHAUST LOUVERS. FABRICATE EXHAUST PLENUM BEHIND TWO EXISTING LOUVERS AND CONNECT EXHAUST DUCT TO PLENUM COMPLETE AS REQUIRED.
6. EXISTING DUCT DISTRIBUTION TO REMAIN. REBALANCE EXISTING DIFFUSERS AND REGISTERS TO MATCH THE AIRFLOW OF THE VAV BOX SHOWN.
7. EXISTING CHILLED WATER PUMPS TO REMAIN. BALANCE THEM FOR THE DESIGN FLOWRATES INDICATED.
8. INSTALL NEW CHILLER ON EXISTING CONCRETE PAD WITH NEOPRENE PADS. ENLARGE PAD AS NECESSARY TO ACCOMMODATE THE NEW CHILLER. MODIFY AND EXTEND CONDENSER WATER, CHILLED WATER AND REFRIGERANT VENT PIPING AND CONNECT TO CHILLER COMPLETE AS REQUIRED. PROVIDE CONTROLS SENSORS AND WIRING FOR A COMPLETE OPERATION OF THE CHILLER SYSTEM



1 **BASEMENT - MECHANICAL DUCTWORK PLAN**
1/8" = 1'-0"

0' 4' 8' 16' 32'

12/5/2019 11:21:06 AM

DOB STAMP APPROVAL

PUBLIC BUILDING COMMISSION OF CHICAGO

CHICAGO PUBLIC LIBRARY

SEAL | DATE 12/5/19

Legler Regional Library Renovation

115 S. Pulaski Road
Chicago, IL 60624
CHICAGO PUBLIC LIBRARY
CITY OF CHICAGO, MAYOR RAHM EMANUEL

Architect of Record:

RATIO

RATIO

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(312) 467-0123
Civil Engineers of Record

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Structural Engineers of Record

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216 S. Jefferson St, Suite LL2, Chicago, IL 60661
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Elevator Consultant

Brush Architects, LLC
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Facade Consultant

Gwen Grossman Lighting Design
53 W Jackson Blvd, Chicago, IL 60604
(312) 877-5125
Lighting Design Consultant

Issuance

Mark	Description	Date
1	ISSUE FOR BID	11/13/19
2	ADDENDUM #2	11/27/19
3	ADDENDUM #3	12/5/19

PBC Project Name: Legler Regional Library

PBC Contract No: C1597

PBC Project No.: 08310

Title
BASEMENT FLOOR - MECHANICAL DUCTWORK PLAN

Sheet
M-100

32'-0" 0'-0" 16'-0" 32'-0" 64'-0"
1/32" = 1'-0"

16'-0" 0'-0" 8'-0" 16'-0" 32'-0"
1/16" = 1'-0"

8'-0" 0'-0" 4'-0" 8'-0" 16'-0"
1/8" = 1'-0"

4'-0" 0'-0" 2'-0" 4'-0" 8'-0"
1/4" = 1'-0"

2'-0" 0'-0" 1'-0" 2'-0" 4'-0"
1/2" = 1'-0"

1'-0" 0'-0" 0'-6" 1'-0" 2'-0"
1" = 1'-0"

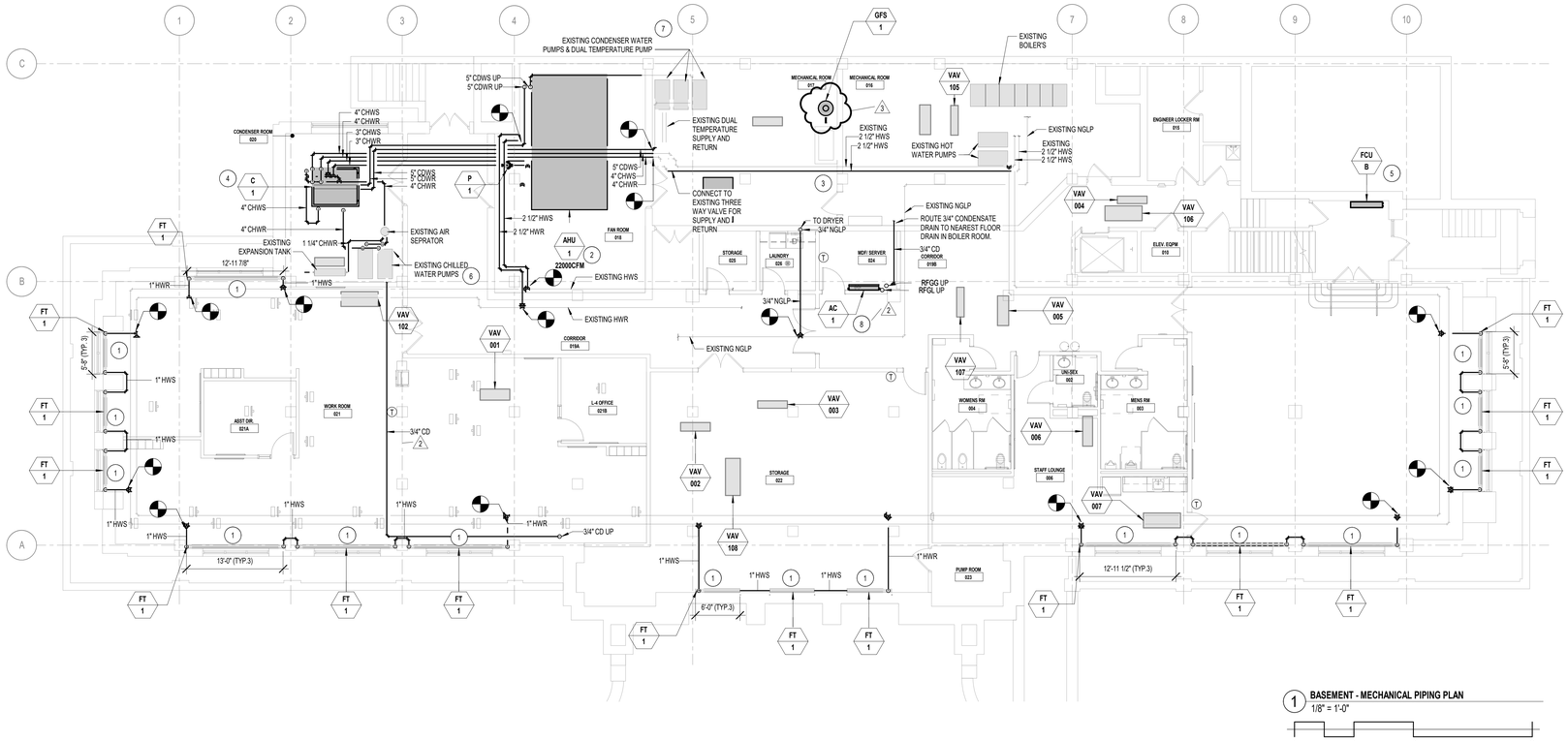
0'-0" 0'-6" 1'-0" 2'-0"
1-1/2" = 1'-0"

0'-0" 0'-3" 0'-6" 0'-9" 1'-0"
3" = 1'-0"

0'-0" 0'-1-1/2" 0'-3" 0'-4-1/2" 0'-6"
6" = 1'-0"

MECHANICAL PIPING NOTES

1. INSTALL NEW HOT WATER RADIATORS WHERE SHOWN (AT EACH WINDOW) AT THE SAME ELEVATION AS EXISTING ONES. RADIATORS SHALL BE COLUMN TO COLUMN AND EACH WINDOW LOCATION SHALL HAVE ITS OWN SUPPLY AND RETURN PIPING DROPS AND THEY SHALL BE ROUTED VERTICALLY IN THE CORNER OF EACH COLUM.
2. PROVIDE NEW CHILLED WATER AND HOT WATER PIPING TO AHU. FROM PIPING MAINS, EXTEND AND CONNECT CHILLED WATER AND HOT WATER PIPING TO COILS COMPLETE AS REQUIRED. INCLUDE ALL MODIFICATION OF EXISTING PIPING AS REQUIRED TO ACCOMMODATE NEW AHU.
3. INSTALL NEW RETURN AIR FAN WHERE SHOWN. MODIFY DOWNSTREM/UPSTREAM DUCTWORK AND PROVIDE NECESSARY TRANSITION PIECES TO ACCOMMODATE THE NEW RETURN FAN. PROVIDE ALL CONTROLS NECESSARY FOR PROPER OPERATION.
4. INSTALL NEW CHILLER ON EXISTING CONCRETE PAD WITH NEOPRENE PADS. ENLARGE PAD AS NECESSARY TO ACCOMMODATE THE NEW CHILLER. MODIFY AND EXTEND CONDENSER WATER, CHILLED WATER AND REFRIGERANT VENT PIPING AND CONNECT TO CHILLER COMPLETE AS REQUIRED. PROVIDE CONTROLS SENSORS AND WIRING FOR A COMPLETE OPERATION OF THE CHILLER SYSTEM
5. INSTALL NEW FAN COIL UNIT WHERE SHOWN. EXTEND DUAL TEMPERATURE PIPING AND CONDENSATE DRAIN PIPING AND CONNECT TO NEW FCU COMPLETE AS REQUIED. BALANCE FCU TO THE DESIGN AIR AND WATER FLOWS SHOWN.
6. EXISTING CHILLED WATER PUMPS TO REMAIN. BALANCE THEM FOR THE DESIGN FLOWRATES INDICATED.
7. EXISTING CONDENSER WATER AND DUAL TEMPERATURE WATER PUMPS TO REMAIN. BALANCE THEM FOR THE DESIGN FLOWRATES INDICATED.
8. FROM AC-1, ROUTE ¾" CONDENSATE DRAIN LINE AND TERMINATE INTO THE ADJACENT BOILER ROOM. VERIFY EXACT ROUTING OF THE LINE AND TERMINATION POINT IN FIELD. INSULATE DRAIN LINE AND PROVIDE CONDNSATE PUMP AS REQUIRED FOR PROPER DRAINAGE.



1 **BASEMENT - MECHANICAL PIPING PLAN**
1/8" = 1'-0"
0' 4' 8' 16' 32'

12/5/2019 11:16:00 AM

DOB STAMP APPROVAL

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CABINET HEATER (HYDRONIC)

TAG ABBR.	#	LOCATION RM. NAME	RM. NUMBER	AREA SERVED	ELECTRICAL DATA VOLTS	PH	EWT	LWT	EAT	MBH	GPM	P.D. FT. WATER	CFM @ FINAL AIR TEMP.	MANUFACTURER	MODEL	REMARKS
CUH	1	EXISTING VESTIBULE	101	VESTIBUL E101	120 V	1	180	160		29	4	15.4	430	STERLING	F-1020	
CUH	2	EXISTING VESTIBULE	101	VESTIBUL E101	120 V	1	180	160		29	4	15.4	430	STERLING	F-1020	

2

FANS

TAG ABBR.	#	LOCATION	SYSTEM SERVED	CFM	F.S.P. IN WC	FAN DATA TYPE	RPM	DRIVE	ELECTRICAL DATA HP	VOLTS	PH	HZ	UNIT WEIGHT (LBS)	MANUFACTURER	MODEL	REMARKS
EF	1	ROOF	EF-1	1040	0.5	DOWNBLAST	1525	DIRECT	1/4	120 V	1	60	40	GREENHECK	G-103-VG	
RF	1	MECHANICAL ROOM 017	AHU-1	22000	2	UNIVERSAL SINGLE WIDTH	1050		15	208 V	3	60	1007	GREENHECK	USF-36	
EF	2	ROOF	EF-2	560	0.3	DOWNBLAST	1725	DIRECT	1/6	120 V	1	60	30	GREENHECK	G-095-VG	
EF	3	ROOF	EF-3	460	0.3	DOWNBLAST	1725	DIRECT	1/6	120 V	1	60	30	GREENHECK	G-095-VG	
EF	4	ROOF	EF-4	120	0.25	DOWNBLAST	1550	DIRECT	1/6	120 V	1	60	18	GREENHECK	G-060-D	
EF	5	ROOF	EF-5	3750	.5	INLINE	1725	BELT	3/4	208 V	3	60	77	GREENHECK	SBCE-3H24-7	

2

DIFFUSERS, REGISTERS AND GRILLES

TAG	TYPE	SIZE	DAMPER	MATERIAL/FINISH	MANUFACTURER	MODEL	REMARKS
A	SUPPLY	SEE PLANS		STEEL	TITUS	300RL	SEE NOTES
B	RETURN / EXHAUST / TRANSFER	SEE PLANS		STEEL	TITUS	350RL	SEE NOTES
C	SUPPLY	SEE PLANS		STEEL	TITUS	OMNI	SEE NOTES
D	RETURN / EXHAUST / TRANSFER	SEE PLANS		STEEL	TITUS	OMNI	SEE NOTES

1 ARCHITECTECT TO SPECIFY FINISH AND FINAL CEILING LOCATIONS

FAN COIL UNIT

TAG ABBR.	#	LOCATION RM. NAME	RM. NUMBER	UNIT SIZE	HEATNIG COIL DATA (FLUID) MBH	GPM	WPD (FT)	ROWS	EWT/LWT (F)	EAT (F)	LAT (F)	COOLING COIL DATA TOTAL MBH	GPM	WPD (FT)	ROWS	EWT/LWT (F)	EAT (F)	LAT (F)	FAN/MOTOR DATA CFM	SP	HP	FLA	FAN/MOTOR DATA VOLTS	PH	HZ	MANUFACTURER	MODEL	REMARKS
FCU	1	MUSIC STUDIO	211	4	36.4	3.7	28.5	4	180/160	70	154.3	12.4	2.5	20	4	45/55	78	56.3	400	0.3	1/6	2.1	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	CPY-04	
FCU	1-1	CONFERENCE ROOM	108	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	200		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	1-2	ADULT/ REFERENCE READING ROOM	107	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	200		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	1-3	ADULT/ REFERENCE READING ROOM	107	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	200		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	1-4	ADULT/ REFERENCE READING ROOM	107	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	200		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	1-5	ADULT/ REFERENCE READING ROOM	107	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	200		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	1-6	ADULT/ REFERENCE READING ROOM	107	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	200		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	1-7	ADULT/ REFERENCE READING ROOM	107	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	200		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	1-8	CHILDREN'S READING ROOM	119	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	1-9	CHILDREN'S READING ROOM	119	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	1-10	CHILDREN'S READING ROOM	119	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	1-11	CHILDREN'S READING ROOM	119	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	1-12	CHILDREN'S READING ROOM	119	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	1-13	RECEIVING ROOM	116	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	1-14	RECEIVING ROOM	116	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	1-15	CHAIR LIFT	102	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	2-1	YOU MEDIA	206	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	2-2	YOU MEDIA	206	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	2-3	YOU MEDIA	206	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	2-4	TEENS STAFF ROOM	208	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	200		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	2-5	TEENS STAFF ROOM	208	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	200		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	2-6	TEENS STAFF HEAD	208-A	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	200		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	2-7	STORAGE	205	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	2-8	EXISTING LOBBY	201	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	2-9	COMPUTER LAB	227	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	2-10	COMPUTER LAB	227	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	2-11	COMPUTER LAB	227	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	2-12	COMPUTER LAB	227	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	2-13	COMPUTER LAB	227	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	2-14	COMPUTER LAB	227	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	2-15	MAKER LAB	209	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	200		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	2-16	MAKER LAB	209	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	200		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	2-17	MAKER LAB	209	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	200		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	
FCU	B	STAIR	008	2	18.4	1.9	7.5	4	180/160	70	155.6	6.106	1.2	5	4	45/55	78	56.4	160		1/7	1.2	120 V	1	60	INTERNATIONAL ENVIRONMENTAL	FXY-02	

3

GLYCOL FILL STATION

TAG ABBR.	#	LOCATION	AREA SERVED	TANK CAPACITY (GALLONS	HZ	HP	PH	VOLTAGE	MANUFACTURER	MODEL	REMARKS
GFS	1	MECHANICAL ROOM 017	HOT AND CHILLES WATER SYSTEM	55	60	3/4	1	115 V	BELL AND GOSSET	GMU-60	

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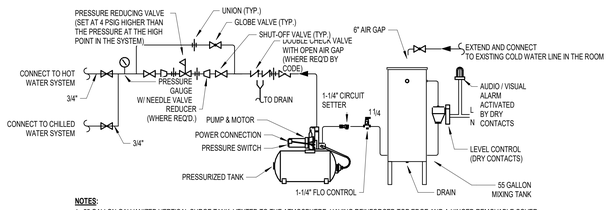
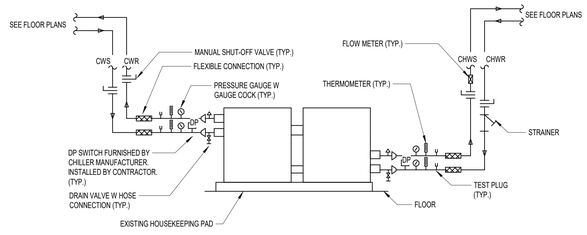
FIELD VERIFY EXISTING CHILLED WATER AND HOT WATER FILL SYSTEMS, REMOVE BACK TO MAIN AND CAP. FROM NEW GLYCOL FILL STATION, ROUTE ¾" LINE AND CONNECT TO EACH SYSTEM, CLOSE TO THE EXPANSION TANK OR AIR SEPARATOR. VERIFY EXACT CONNECTION POINTS AND REQUIREMENTS IN FIELD.



NOTES:

1. 55 GALLON GALVANIZED VERTICAL SURGE TANK, VENTED TO THE ATMOSPHERE, HAVING REINFORCED TOP EDGE AND A HINGED REMOVABLE COVER, ALL SUPPORTED ON 12" HIGH ANGLE LEGS.
2. WATER FEED MAKE-UP ASSEMBLY FOR FIELD MOUNTING TO ALLOW AN OPEN BREAK BETWEEN THE MUNICIPAL SUPPLY AND THE SURGE TANK. PIPING SHALL BE 1" FOR EQUALIZING CONNECTIONS AND 1/2" TO MUNICIPAL SUPPLY.
3. SELF-PRIMING CENTRIFUGAL PUMP, MOUNTED ON 30 GALLON GALVANIZED HORIZONTAL PRESSURIZATION TANK, EQUIPPED WITH AUTOMATIC, AIR VOLUME CONTROL AND TWO-POLE PRESSURE SWITCH. INTERCONNECTED PIPING FROM SURGE TANK TO PUMP INLET SHALL BE FIELD CONNECTED USING 1-1/4" PIPE.
4. FLOW BALANCING VALVE (1-1/4") AND BACK FLOW CHECK VALVE (1-1/4") FOR FIELD MOUNTING BETWEEN THE SURGE TANK AND PRESSURIZATION PUMP.

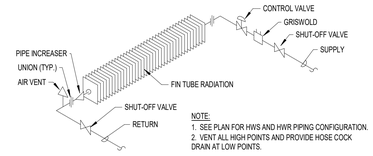
6 **GLYCOL FILL STATION**
NTS



GENERAL NOTES:

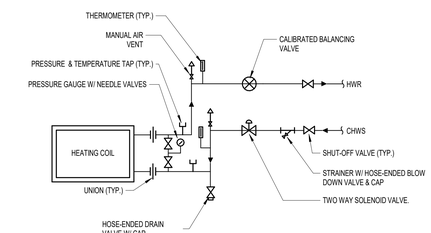
1. MOUNT CHILLER ON EXISTING CONCRETE HOUSEKEEPING PAD. INSTALL CHILLER OVER VIBRATION ISOLATION MOUNTS FURNISHED BY CHILLER MANUFACTURER.
2. EXTEND REFRIGERANT VENT PIPE WITH TRAP AND CONNECT TO EXISTING VENT HEADER. VERIFY EXACT REQUIREMENTS WITH MANUFACTURER.

5 **CHILLER PIPING DETAIL1**
NTS

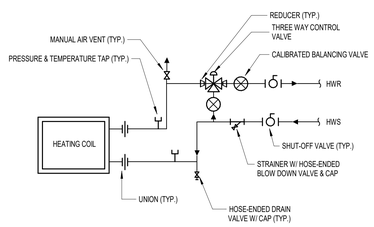


NOTE:
1. SEE PLAN FOR HWS AND HWR PIPING CONFIGURATION.
2. VENT ALL HIGH POINTS AND PROVIDE HOSE COCK DRAIN AT LOW POINTS.

4 **FIN-TUBE RADIATION PIPING DIAGRAM ISOMETRIC**
NTS



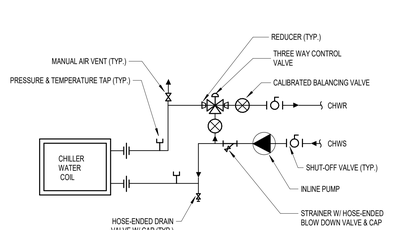
3 **TYPICAL CABINET/SPACE HEATER HEATING COIL PIPING DIAGRAM**
NTS



NOTES:

1. TYPICAL FOR AHU COIL, VAV BOX COIL, FAN COIL UNIT, AND CABINET HEATERS.
2. PIPE SIZES ARE TO BE 3/4" UNLESS NOTED OTHERWISE ON DRAWINGS.

2 **TYPICAL HOT WATER COIL PIPING DIAGRAM**
NTS



NOTES:

1. TYPICAL FOR AHU COIL, VAV BOX COIL, FAN COIL UNIT, AND CABINET HEATERS.
2. PIPE SIZES ARE TO BE 3/4" UNLESS NOTED OTHERWISE ON DRAWINGS.

1 **TYPICAL CHILLED WATER COIL PIPING DIAGRAM**
NTS

12/5/2019 11:16:05 AM

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CHICAGO PUBLIC LIBRARY

SEAL | DATE 12/5/19

Legler Regional Library Renovation

115 S. Pulaski Road
Chicago, IL 60624
CHICAGO PUBLIC LIBRARY
CITY OF CHICAGO, MAYOR RAHM EMANUEL

Architect of Record:
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Gwen Grossman Lighting Design
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Lighting Design Consultant

Issuance

Mark	Description	Date
1	**ISSUE FOR BID**	**11/13/19**
3	**ADDENDUM #3**	**12/5/19**

PBC Project Name: Legler Regional Library

PBC Contract No.: C1597

PBC Project No.: 08310

Title
MECHANICAL DETAILS

Sheet
M-601

1/32" = 1'-0" | 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 1" = 1'-0" | 1-1/2" = 1'-0" | 3" = 1'-0" | 6" = 1'-0"

GENERAL RACEWAY NOTE

1. IN ORDER TO PRESERVE EXISTING PLASTER WALLS AND CEILINGS, INCLUDING ALL DECORATIVE MOLDINGS, CASEWORK, ETC., ELECTRICAL CONTRACTOR SHALL NOT INSTALL ANY EXPOSED CONDUIT RACEWAYS ON ANY EXISTING PLASTER WALLS AND CEILING AS INDICATED ON PLANS. CONTRACTOR IS TO NOTIFY ARCHITECT/ENGINEER OF ANY CONFLICTS AND/OR ISSUES OF INSTALLING THIS SCOPE OF WORK.

2. IN ALL OTHER ROOMS, ELECTRICAL CONTRACTOR SHALL PROVIDE NEW SURFACE MOUNTED METAL RACEWAY SYSTEMS (LEGRAND WIREMOLD SINGLE AND/OR DUALCHANNEL RACEWAY V500 AND V700 SERIES INCLUDING G4000 SERIES RACEWAYS COMPLETE WITH ALL SUPPORTS, CONDUIT/BACKBOX CONNECTORS, COUPLINGS, ELBOWS, FLEXIBLE SECTIONS, CONDUIT AND BACKBOX TRANSITION FITTINGS, ETC.) FOR ALL NEW BRANCH WIRING SYSTEMS (POWER LIGHTING, LOW VOLTAGE FIRE ALARM, ETC). PAINT ALL SURFACE MOUNTED METAL RACEWAYS TO MATCH NEW AND EXISTING SURFACE FINISHES.

GENERAL NOTES

1. ALL NEW CONDUITS AND PIPING SHALL BE ROUTED ABOVE AT THE CEILING. ALL EXPOSED CONDUITS AND PIPING SHALL BE ROUTED WITHIN CLOSETS, OFFICES, CLASSROOMS, AND STORAGE AREAS AS MUCH AS POSSIBLE WITH THE EXCEPTION OF CORRIDORS UNLESS NOTED OTHERWISE. ALL EXPOSED CONDUIT RACEWAYS WITHIN THESE ROOMS OR AREAS SHALL BE SURFACE MOUNTED IN NEW WIREMOLD TYPE RACEWAY.
2. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL BUILDING SYSTEM COMPONENTS THAT ARE IMPACTED BY THE SCOPE OF WORK AND SHALL INCLUDE THE RELOCATION OF THOSE COMPONENTS IN THE PROJECT COST. THIS INCLUDES ALL CONDUIT, WIRE MOLDS, LIGHTING, SWITCHES, FIRE ALARM DEVICES, ETC. REFER TO ARCHITECTURAL DRAWINGS FOR FINAL LOCATION AND MOUNTING HEIGHTS OF ALL ELECTRICAL DEVICES PRIOR TO ROUGH-IN.
3. ALL ELECTRICAL DEVICES, DISCONNECT SWITCHES, STARTERS, JUNCTION BOXES PULL BOXES AND ASSOCIATED WIRING AND CONDUIT LOCATED ABOVE THE CEILING IN PLENUM AREAS SHALL COMPLY WITH CEC REQUIREMENTS FOR INSTALLATION IN AIR HANDLING PLENUM SPACES. VERIFY EXTENT OF SUCH SPACES WITH DIVISION 25 CONTRACTOR.
4. ALL POWER RECEPTACLE CIRCUITS TO PANEL LP-B UNLESS OTHERWISE NOTED.
5. REFER TO ARCHITECTURAL DRAWINGS A-110 & A-111 TO DIMENSIONAL LOCATE FLOOR BOXES AND FURNITURE POKE-THRU'S.
6. ALL NEW 120V BRANCH POWER AND LIGHTING CIRCUITS SHALL BE FED FROM EXISTING BRANCH CIRCUIT PANELBOARDS. ELECTRICAL CONTRACTOR SHALL PROVIDE NEW BRANCH CIRCUIT BREAKERS WITHIN EXISTING PANELBOARDS AS REQUIRED AND SHALL PROVIDE NEW COMPUTER-GENERATED CIRCUIT DIRECTORIES.
7. ALL EXISTING FAN COIL UNITS SHALL BE REPLACED IN KIND WITH NEW. ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE ELECTRICAL CONNECTION AND ASSOCIATED LOCAL DISCONNECT SWITCH TO EACH EXISTING FAN COIL UNIT AND PRESERVE AND MAKE SAFE EXISTING BRANCH CIRCUIT. RE-CONNECT NEW FAN COIL UNIT AND PROVIDE NEW LOCAL 120V SINGLE-PHASE DISCONNECTING MEANS. EXTEND EXISTING FAN COIL BRANCH CIRCUIT WITH NEW CONDUIT AND WIRING (2 #12 & 1 #12 GRD., ¾" CONDUIT) AND MAKE ALL FINAL CONNECTIONS.
8. ALL EXISTING POWERED MECHANICAL EQUIPMENT SCHEDULED FOR REPLACEMENT SHALL BE REPLACED IN KIND WITH NEW. ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE ELECTRICAL CONNECTION AND ASSOCIATED LOCAL DISCONNECT SWITCH TO EACH EXISTING FAN COIL UNIT AND PRESERVE AND MAKE SAFE EXISTING BRANCH CIRCUIT. RE-CONNECT NEW POWERED MECHANICAL EQUIPMENT AND PROVIDE NEW LOCAL DISCONNECTING MEANS TO MATCH EXISTING. EXTEND EXISTING ASSOCIATED BRANCH CIRCUIT WITH NEW CONDUIT AND WIRING (TO MATCH EXISTING) AND MAKE ALL FINAL CONNECTIONS.

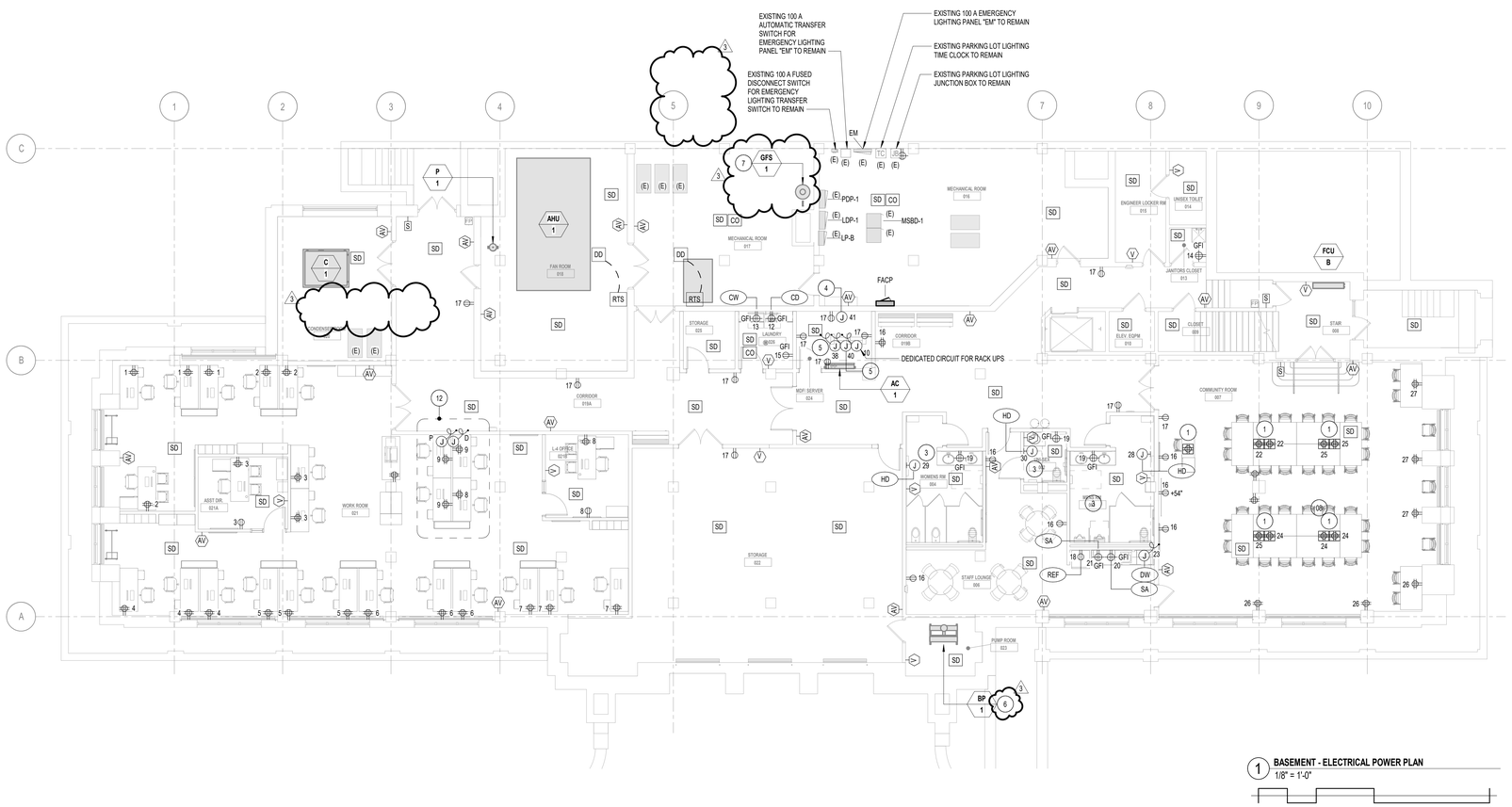
POWER KEYNOTES

1. PROVIDE A RECESSED MOUNTED CHICAGO APPROVED DUAL SERVICE FLOOR BOX DEVICE (RFB4E-OG WITH TAMPER RESISTANT COVER ASSEMBLY #6CTZNKTR OR APPROVED EQUAL). SAW CUT EXISTING FLOOR SLAB TO ACCOMMODATE NEW FLOOR BOX DEVICE.
2. MOUNT POWER RECEPTACLES AND DATA OUTLETS IN CUSTOM MILLWORK UNDER THE COUNTER AT THIS LOCATION. INSTALL FEEDER CONDUITS FROM SOURCE TO WALL MOUNTED POWER AND DATA JUNCTION BOXES AND ROUTE WIRING IN CONDUIT THROUGH MILLWORK TO EACH BRANCHED RECEPTACLE BACKBOX AND DATA OUTLET. COORDINATE OUTLET AND GROMMET LOCATIONS WITH ELECTRICAL DRAWINGS, ARCHITECT AND MILLWORK CONTRACTOR PRIOR TO ROUGH IN.
3. ALL LAV SINK FAUCETS IN ALL TOILET ROOMS AND RESTROOMS SHALL BE PROVIDED WITH AUTOMATIC SENSORS AND SHALL BE CONNECTED VIA HARD-WIRED, LOW VOLTAGE ELECTRICAL CONNECTIONS. REFER TO DETAIL #1 ON SHEET E-600 FOR ADDITIONAL INFORMATION AND REQUIREMENTS. INSTALL AND WIRE 120/24V TRANSFORMERS FURNISHED BY DIVISION 22 CONTRACTOR AS PART OF THE PLUMBING FIXTURE PACKAGE. PROVIDE SAFETY DISCONNECT SWITCHES. INSTALL TRANSFORMERS IN AN ENCLOSED JUNCTION BOX IN AN ACCESSIBLE LOCATION ABOVE THE CEILING. VERIFY EXACT LOCATION IN FIELD.
4. PROVIDE A DEDICATED 120V BRANCH CIRCUIT WITH 20A-1P CIRCUIT BREAKER WITH (2) CONNECTIONS: ENTRY ACCESS CONTROL POWER SUPPLY PANEL AND LOCK POWER SUPPLY PANEL.
5. PROVIDE A 120V CIRCUIT FOR (8) RACK MOUNTED STANDARD USE RECEPTACLES.
6. EXISTING SIMPLEX WATER BOOSTER PUMP SYSTEM TO BE REPLACED WITH NEW DUPLEX WATER BOOSTER PUMP SYSTEM. DISCONNECT AND REMOVE EXISTING WATER PUMP SYSTEM BRANCH CIRCUIT BACK TO SOURCE. PROVIDE A NEW 60 AMP, 208V, 3-PHASE BRANCH CIRCUIT WITH 4 #4 & 1 #8 GRD., 1.5" CONDUIT FROM EXISTING PANEL PDP-1. PROVIDE A NEW 60A-3P FUSED SWITCH WITHIN EXISTING PANEL PDP-1 TO SERVE NEW BP-1.
7. PROVIDE A NEW 20 AMP, 120V, 1-PHASE BRANCH CIRCUIT WITH 2 #12 & 1 #12 GRD., 3/4" CONDUIT FROM EXISTING PANEL LP-B. PROVIDE A NEW 20A-1P CIRCUIT BREAKER WITHIN EXISTING PANEL LP-B TO SERVE NEW GFS-1. PROVIDE A 20A-1P LOCAL TOGGLE DISCONNECT SWITCH.

GENERAL ENVIRONMENTAL NOTES

WARNING: VARIOUS COMPONENTS/SURFACES WITHIN THE BUILDING HAVE TESTED ABOVE AND BELOW THE LEAD THRESHOLD OF 1.0 MG/CM2 REGARDLESS OF CONCENTRATIONS, THERE IS A POTENTIAL FOR LEAD DUST GENERATION DURING DRILLING, CORING, PAINTING PREPARATION AND OTHER RENOVATION ACTIVITIES FOR ALL SMALL SCALE DISTURBANCES. THE CONTRACTOR SHALL FACILITATE THE APPROPRIATE MEASURES FOUND IN PROJECT SPECIFICATIONS TO PREVENT DUST MITIGATION TO OTHER PARTS OF THE BUILDING. LEAD-BASED PAINT MAY BE PRESENT WITHIN THE BUILDING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO TAKE APPROPRIATE SAFETY MEASURES IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL RULES AND REGULATIONS INCLUDING OSHA (1926.62) COMPLIANCE. WASTE CHARACTERIZATION AND WASTE DISPOSAL. ALL WORK WITH SURFACES CONTAINING LEAD-BASED PAINT SHALL BE DONE IN ACCORDANCE WITH PROJECT SPECIFICATIONS.

WARNING: ASBESTOS-CONTAINING BUILDING MATERIALS ARE OR MAY BE PRESENT IN THIS BUILDING. NO PERSON MAY DISTURB ASBESTOS-CONTAINING MATERIALS UNLESS THAT PERSON IS A LICENSED ASBESTOS WORKER OR CONDUCTS SUCH WORK IN ACCORDANCE WITH SPECIFICATIONS CONTAINED IN THE PROJECT DOCUMENTS AND IN COMPLIANCE WITH ILLINOIS DEPARTMENT OF HEALTH RULES AND REGULATIONS.



1 **BASEMENT - ELECTRICAL POWER PLAN**
1/8" = 1'-0"

0' 4' 8' 16' 32'

DOB STAMP APPROVAL

PUBLIC BUILDING COMMISSION OF CHICAGO
CHICAGO PUBLIC LIBRARY

SEAL | DATE 12/5/19

Legler Regional Library Renovation

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CITY OF CHICAGO, MAYOR RAHM EMANUEL

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Issuance

Mark	Description	Date
1	ISSUE FOR BID	11/13/19
2	ADDENDUM #2	11/27/19
3	ADDENDUM #3	12/5/19

PBC Project Name: Legler Regional Library
PBC Contract No: C1597
PBC Project No.: 08310

Title
BASEMENT FLOOR - ELECTRICAL POWER PLAN

Sheet
E-100

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32'-0" 0'-0" 16'-0" 32'-0" 64'-0"
1/32" = 1'-0"

16'-0" 0'-0" 8'-0" 16'-0" 32'-0"
1/16" = 1'-0"

8'-0" 0'-0" 4'-0" 8'-0" 16'-0"
1/8" = 1'-0"

4'-0" 0'-0" 2'-0" 4'-0" 8'-0"
1/4" = 1'-0"

2'-0" 0'-0" 1'-0" 2'-0" 4'-0"
1/2" = 1'-0"

1'-0" 0'-0" 0'-6" 1'-0" 2'-0"
1" = 1'-0"

0'-0" 0'-6" 1'-0" 2'-0"
1-1/2" = 1'-0"

0'-0" 0'-3" 0'-6" 0'-9" 1'-0"
3" = 1'-0"

0'-0" 0'-1-1/2" 0'-3" 0'-4-1/2" 0'-6"
6" = 1'-0"

GENERAL ENVIRONMENTAL NOTES

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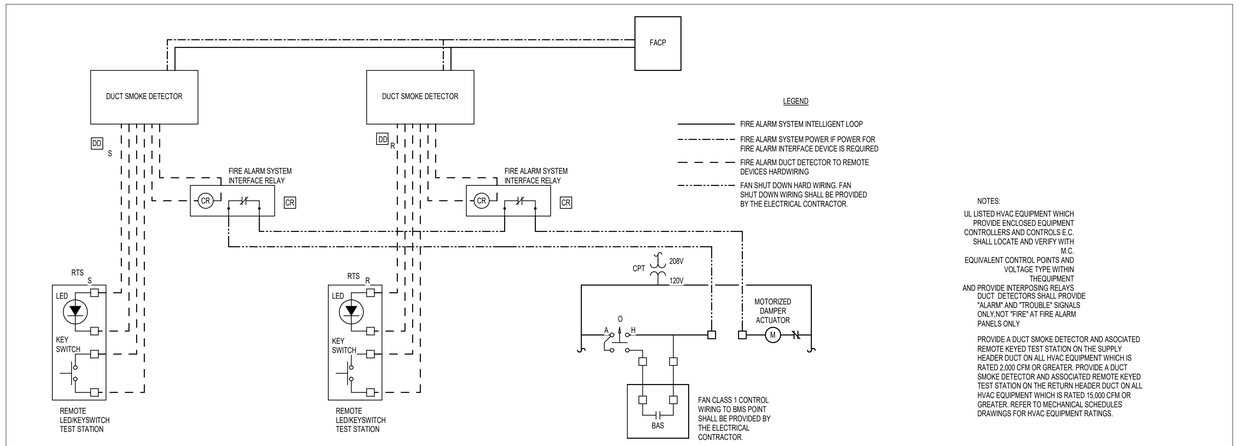
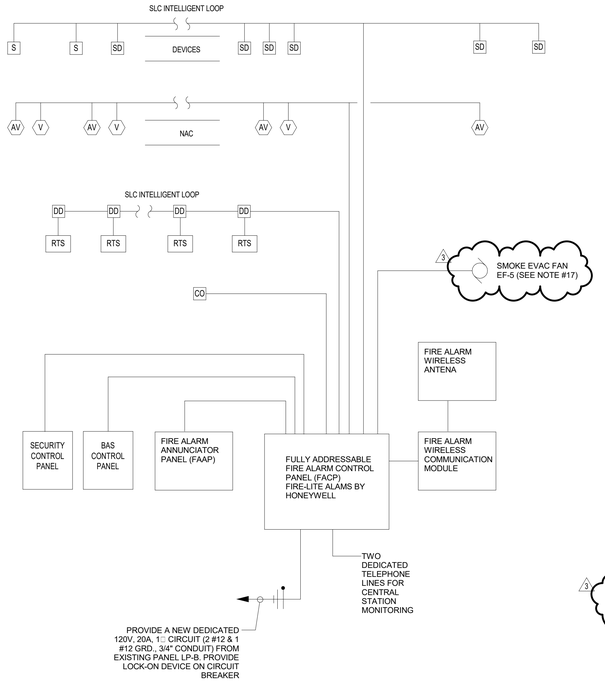


2 **FIRE ALARM - TYPICAL FIRE ALARM SUPPLY/RETURN AIR DUCT SMOKE DETECTORS DIAGRAM E-602**
NTS



1 FIRE ALARM RISER DIAGRAM
NTS

FIRE ALARM SYSTEM GENERAL NOTES:

1. ALL FIRE ALARM SYSTEMS (INITIATING, DETECTION, NOTIFICATION, RELAY MODULES, ETC.,) SHALL BE "B" CLASS WIRING.
2. ALL DEVICES AND EQUIPMENT SHOWN ON PLAN ARE FOR GENERAL LOCATION ONLY AND DO NOT NECESSARILY DEPICT ACTUAL LOCATION. FINAL LOCATION AND PLACEMENT OF DEVICES AND EQUIPMENT SHALL BE FULLY COORDINATED WITH ARCHITECT AND ALL TRADES AND LOCAL FIRE MARSHALL. REFER TO ARCH. DWGS FOR AESTETIC INTENT.
3. ALL SIGNALING LINE CIRCUITS (SLC's) SHALL BE CLASS "B" WIRING METHOD. THESE CIRCUITS SHALL BE 2/C #16 AWG IN 3/4" CONDUIT UNLESS OTHERWISE NOTED.
4. ALL NOTIFICATION DEVICE/APPLIANCE CIRCUITS (NAC's) SHALL BE CLASS "B" WIRING METHOD. CONNECT THESE DEVICES WITH 2/C #16 AWG IN 3/4" CONDUIT UNLESS OTHERWISE NOTED.
5. ALL INITIATING DEVICE CIRCUITS (IDC's) SHALL BE CLASS "B" WIRING METHOD. CONNECT THESE DEVICES WITH 2/C #16 AWG IN 3/4" CONDUIT UNLESS OTHERWISE NOTED.
6. FIRE ALARM SYSTEM INSTALLATION SHALL BE IN STRICT CONFORMANCE WITH THE CITY OF CHICAGO BUILDING CODE AND NFPA 72.
7. INSTALLATION MATERIALS (I.E. CONDUIT, WIRE, FITTINGS, HANGERS, AND STANDARD BOXES) SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR.
8. ALL HORN/STROBE AND STROBE DEVICES SHALL BE MOUNTED AT A HEIGHT OF 80" A.F.F. OR 6" BELOW DROPPED CEILING, ALL OTHER LOCATIONS WHICHEVER IS LESS IN ACCORDANCE WITH ADA (AMERICANS WITH DISSABILITIES ACT). REFER TO ARCH. DWGS FOR LOCATIONS.
9. ALL MANUAL PULL STATIONS SHALL BE MOUNTED 48" A.F.F. TO CENTER OF DEVICE. REFER TO ARCH. DWGS FOR LOCATIONS.
10. FIRE ALARM CONTROL PANEL SHALL BE MOUNTED 6' TO THE TOP OF PANEL A.F.F. REFER TO ARCH. DWGS FOR LOCATIONS.
11. ALL FIRE ALARM SYSTEM CONDUITS SHALL BE FACTORY PAINTED RED EXCEPT WHERE INSTALLED IN EXPOSED SURFACE MOUNTED RACEWAY (WIREMOLD) AREAS/SPACES.
12. FIRE ALARM CONTROL PANEL SHALL BE CAPABLE OF MONITORING ALL DETECTION, INITIATION, NOTIFICATION AND CARBON MONOXIDE DEVICES.
13. MOUNT ALL HVAC DUCT MOUNTED SMOKE DETECTORS WITHIN THE MAIN HEADER DUCT INSIDE THE BUILDING. DUCT DETECTORS MOUNTED ON THE EXTERIOR SIDE OF THE BUILDING SHALL NOT BE ACCEPTABLE.
14. ALL SECURED DOORS AT STAIRWELLS EQUIPPED WITH ELECTRIC DOOR STRIKES SHALL SHALL UNLOCK UPON ACTIVATION OF FIRE ALARM SYSTEM WHERE APPLICABLE. PROVIDE SIGNAL WIRING IN CONDUIT AND ASSOCIATED HARDWARE, SOFTWARE, MODULES AND PROGRAMMING AS REQUIRED..
15. THE FIRE ALARM SYSTEM SHALL BE MONITORED BY AN UNDERWRITERS LABORATORIES, INC. LISTED CENTRAL STATION SERVICE IN ACCORDANCE WITH NFPA 72D-1986.
16. IN THE EVENT OF FIRE ALARM ALL AHU'S SHALL SHUTDOWN.
3 17. PROVIDE ALL ASSOCIATED CLASS 2 CONTROL WIRING IN CONDUIT INCLUDING AUXILIARY INTERFACE RELAYS AND MANUAL KEYED CONTROLS AT FIRE ALARM ANNUNCIATOR LOCATION FOR FIREMAN OPERATION AS REQUIRED.

12/5/2019 11:15:47 AM

DOB STAMP APPROVAL

PUBLIC BUILDING COMMISSION OF CHICAGO
CHICAGO PUBLIC LIBRARY

SEAL | DATE 12/5/19

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Title
ELECTRICAL DETAILS

Sheet
E-602