WAKELY ASSOCIATES, INC. ARCHITECTS 30500 Van Dyke Avenue Suite 209 Warren, MI 48093 ADDENDUM NO. 01
MACOMB COUNTY-COUNTY WAREHOUSE
F & O and PURCHASING OFFICES
Page 1 of 5 (write up only)

### November 7, 2024

ADDENDUM NO. 01 to the plans and specifications for MACOMB COUNTY – COUNTY WAREHOUSE – F & O AND PURCHASING OFFICE RENOVATION, CLINTON TOWNSHIP, MI, Architect's Project No. 242053, dated OCTOBER 31, 2024

<u>Specification Sections: 09510 and10999 and Drawings G0,0, G2.0, G3.0, LS1.0, AD1.0, A1.0, A1.0A. A1.1, A1.2, A1.3, A2.0, A3.0, A4.0, A9.1, M0.00, M1.00, PD1.10, MD1.10, MD2.10, P1.10, M1.10, M2.10, M5.00, M6.00, M7.00, E0.00, E1.00, EPD1.10, ELD1.10, ED2.10, EP1.10, EL1.10, E2.10, E5.00, E6.00, E7.00 are being issued with this Addendum.</u>

### Pre-bid Meeting Sign-In sheet is being issued with this Addendum

### **GENERAL ITEMS**

**ITEM NO. G1:** Pre-bid meeting sign-in sheet issued for reference

### **ARCHITECTURAL ITEMS:**

**ITEM NO. A1**: Refer to Sheet G0.0:

1. Added sheet A1.0A, Composite Roof Plan to drawing index.

**ITEM NO. A2**: Refer to Sheet G2.0:

1. Sheet re-issued.

**ITEM NO. A3**: Refer to Sheet G3.0:

1. Revised sheet G3.0. Deleted and added general key notes.

**ITEM NO. A4**: Refer to Sheet LS1.0:

1. Revised sheet.

**ITEM NO. A5**: Refer to Sheet AD1.0:

1. Revised sheet.

**ITEM NO. A6**: Refer to Sheet A1.0:

1. Revised sheet.

**ITEM NO. A7**: Refer to Sheet A1.0A:

1. Added sheet A1.0A, Composite Roof Plan.

**ITEM NO. A8**: Refer to Sheet A1.1:

1. Revised sheet.

**ITEM NO. A9**: Refer to Sheet A1.2:

Revised sheet.

**ITEM NO. A10**: Refer to Sheet A1.3:

1. Revised sheet.

**ITEM NO. A11**: Refer to Sheet A2.0:

1. Revised sheet.

**ITEM NO. A12**: Refer to Sheet A3.0:

Revised sheet.

ITEM NO. A13: Refer to Sheet A4.0:

1. Revised sheet.

**ITEM NO. A14**: Refer to Sheet A9.1:

1. Revised sheet.

### **MECHANICAL ITEMS**

ITEM NO. M1: Refer to sheet M0.00 – Mechanical General Information (Re-

issued);

1. Adjusted Project number on plans as indicated.

**ITEM NO. M2**: Refer to sheet M1.00 Mechanical Composite Plan (Re-issued);

1. Adjusted Project number on plans as indicated.

**ITEM NO. M3**: Refer to sheet PD1.10 – Plumbing Demolition First Floor Plan (Re-

issued);

1. Adjusted Project number on plans as indicated.

2. Added scope to re-work fire protection main in warehouse

space.

**ITEM NO. M4**: Refer to sheet MD1.10 – Mechanical Demolition First Floor Plan

(Re-issued):

1. Adjusted Project number on plans as indicated.

**ITEM NO. M5**: Refer to sheet MD2.10 – Mechanical Demolition Roof Plan (Re-

issued);

1. Adjusted Project number on plans as indicated.

**ITEM NO. M6**: Refer to sheet P1.10 – Plumbing New Work First Floor Plan (Re-

issued);

1. Adjusted Project number on plans as indicated.

2. Added cold water piping size to plan as indicated.

3. Added scope to re-route fire protection main as required to

install new ductwork.

ITEM NO. M7: Refer to sheet M1.10 – Mechanical New Work First Floor Plan (Reissued):

- 1. Adjusted Project number on plans as indicated.
- 2. Removed terminal unit #15
- 3. Removed diffuser serving IT space
- 4. Added fire dampers at location shown
- 5. Adjusted diffuser layout to accommodate Architectural ceiling elements.
- 6. Extended 40"x24" duct as indicated

ITEM NO. M8: Refer to sheet M2.10 – Mechanical New Work First Floor Plan (Reissued):

- 1. Adjusted Project number on plans as indicated.
- 2. Added keyed note #2
- 3. Added rooftop unit mounted screening to unit.

Refer to sheet M5.00 – Mechanical Details (Re-issued); ITEM NO. M9:

- 1. Adjusted Project number on plans as indicated.
- 2. Added rooftop unit screening detail
- 3. Added rooftop unit cooling drain pan detail
- 4. Added gas piping connection detail

ITEM NO. M10: Refer to sheet M6.00 – Mechanical Schedules (Re-issued);

- 1. Adjusted Project number on plans as indicated.
- 2. Removed terminal unit #15 from VAV schedule
- 3. Added note specifying disconnect by manufacturer for terminal
- 4. Added note specifying field installed controllers by temperature controls contractor.
- 5. Adjusted airflow of terminal unit #13
- 6. Adjusted notes on exhaust fan schedule as indicated
- 7. Re-work S-3 diffuser from 2 slot 2-way to 2 slot 1-way

ITEM NO. M11: Refer to sheet M7.00 – Mechanical Details (Re-issued):

1. Adjusted Project number on plans as indicated.

### **ELECTRICAL ITEMS**

ITEM NO. E1: Refer to sheet E0.00 Electrical General Information and Lighting

Schedule (Re-issued);

- 1. Adjusted Project number on plans as indicated.
- Removed Fixture D.
- 3. Added Fixture X2.

ITEM NO. E2: Refer to sheet E1.00 Electrical Power Composite First and Second

Floor Plans (Re-issued);

1. Adjusted Project number on plans as indicated.

**ITEM NO. E3**: Refer to sheet EPD1.10 Electrical Power Demolition First Floor

Plan (Re-issued);

1. Adjusted Project number on plans as indicated.

**ITEM NO. E4**: Refer to sheet ELD1.10 Electrical Power Demolition First Floor Plan

(Re-issued);

1. Adjusted Project number on plans as indicated.

ITEM NO. E5: Refer to sheet ED2.10 Electrical Power Demolition Roof Plan (Re-

issued);

1. Adjusted Project number on plans as indicated.

Refer to sheet EP1.10 Electrical Power New Work First Floor Plan (Re-issued):

(Re-issued);

1. Adjusted Project number on plans as indicated.

2. Added circuit numbers as indicated on plans.

3. Added data outlets as indicated on plans.

4. Added 3 TV locations as indicated on plans.

5. Added Keynotes 6,7,8, and 9.

Added power for ECUH.

ITEM NO. E7: Refer to sheet EL1.10 Electrical Lighting New Work First Floor Plan

(Re-issued);

1. Adjusted Project number on plans as indicated.

2. Added circuit numbers as indicated on plans.

3. Adjusted lighting in vestibule/main entrance as indicated on

plans.

4. Adjusted lighting in open office as indicated on plans.

ITEM NO. E8: Refer to sheet E2.10 Electrical Power New Work Roof Plan (Re-

issued);

1. Adjusted Project number on plans as indicated.

**ITEM NO. E9**: Refer to sheet E5.00 Electrical Details (Re-issued);

1. Adjusted Project number on plans as indicated.

2. Added 2 Gang Floor Box Detail.

3. Added TV Detail.

4. Added TV1 Detail.

5. Added Card Reader Detail.

Added TELE/AV/AV Outlet Detail.

**ITEM NO. E10**: Refer to sheet E6.00 Electrical Panel Schedules (Re-issued);

1. Adjusted Project number on plans as indicated.

2. Adjusted panel schedules as indicated.

ITEM NO. E11: Refer to sheet E7.00 One-Line Riser Diagrams (Re-issued);

1. Adjusted Project number on plans as indicated.

2. Added RTU-1 feeder tag.

3. Added transformer T-RPN.

4. Added panel RP-N.

### **END OF ADDENDUM NO. 1**

Cc: Mary Schultz, Macomb County

Ben Treppa, Macomb County Facilities & Operations

Anthony Torelli, Macomb County Dan Waters, Wakely Associates Ron Syme, Wakely Associates

### SECTION 09510 - ACOUSTICAL CEILINGS

### PART 1 - GENERAL

### 1.01 RELATED DOCUMENTS:

Α. Attention is directed to Division O, Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

### 1.02 DESCRIPTION OF WORK:

The extent of acoustical panel ceiling is shown on the Α. drawings and in schedules.

### 1.03 QUALITY ASSURANCE:

- Α. The installation of acoustical panel ceilings is to be by an experienced installation firm which is acceptable to the manufacturer of the acoustical units, as shown by current written statement from the manufacturer.
- В. Standard for Terminology and Performance: Applicable publications by the Acoustical and Insulating Materials Association (AIMA), including "Performance Data, Architectural Acoustical Materials."
- С. Fire Hazard Classification: UL tested, listed and labeled as Class 0.25.

### 1.04 SUBMITTALS:

### Α. Product Data:

- For information only, submit PDF copy of manufacturer's product specifications and installation instructions for each acoustical panel ceiling material required, and for suspension system, including certified laboratory test reports and other data as required to show compliance with these specifications. Distribute one additional copy of each installation instruction to the Installer.
  - Include manufacturer's recommendations for cleaning and refinishing acoustical panel, including precautions against materials and methods which may be detrimental to finishes and acoustical performance.

### 1.05 SAMPLES

- Submit (3) three sets of 12" square Samples for each acoustical panel required. In each set of samples show the full range of exposed color and texture to be expected in the completed work. Sample submittal and Architect's review will be for color and texture only. Compliance with other requirements is the exclusive responsibility of the Installer.
- Submit (3) three, 12" long samples of exposed 2. runner and molding. Architect's review will be for color and texture only. Compliance with other requirements is the exclusive responsibility of the Installer.

### Maintenance Stock:

At the time of completing the installation, deliver stock of maintenance materials to the Owner. Furnish full size units matching the units installed, packaged with protective covering for storage and identified with appropriate labels. Furnish an amount equal to 5.0% of the amount installed.

### 1.06 JOB CONDITIONS:

Space Enclosures: Do not install until interior Α. acoustical panel ceilings unit space has been enclosed and is weather-tight, and until wet work in the space has been completed and is nominally dry and until work above ceilings has been completed, and until ambient conditions of temperature and humidity will be continuously maintained at values near those indicated for final occupancy.

### PART 2 - PRODUCTS

### 2.01 CEILING UNITS:

- Acoustical Panels: (AT-1) All Areas (Unless noted Α. otherwise)
  - Provide 24" x 24" fiberglass with acoustically 1. transparent membrane with factory-applied latex paint and a plant based binder units not less than 1-1/2" thick. NRC min. 0.80, AC200, CAC 40 min., light reflectance min. 0.88, square tegular edge, Class A.

- Acceptable Products: 2.
  - a. Armstrong: Item No. 8730PB 'Lyra High CAC'. Certainteed Item No. 1672B-IOF-1 ADAG10 High b. CAC.
- Install in 15/16" exposed tee grid. 3.
- 4. Paint exposed/cut edges where visible with manufacturer's recommended edge paint/sealant.
- Acoustical Panels: (AT-2) Toilet & Print Rooms В.
  - Provide 2 x 2 fiberglass units with a scrubbable 1. vinyl film facing (UV protected), not less than 5/8" thick. NRC min. 0.70, CAC, light reflectance min. 0.72.
  - 2. Acceptable Products:
    - Armstrong Item No. 2908 perforated "Random Fissured".
    - Certainteed: Item No. 1532-VINP-1 "Versatone b. White Vintage Perforated".
    - USG: Item No. 7054G "Premier Hi-lite ClimaPlus"- "Kapok".
  - 3. Install in 15/16" exposed tee grid.
- C. Acoustical Panels: (AT-3) Wood Ceiling System
  - Provide linear open series wood ceiling system not 1. less than 34" thick, NRC 0.85, CAC 35 with black acoustic infill panels.
  - Acceptable Products: 2.
    - Armstrong: Woodworks-Grille Forte 5 slats per panel  $(3/4" \times 2-1/4"H)$  69% open area. Model #63254S02 - (finish range to be determined).
      - Install with pre-drilled backer holes in a heavy duty prelude grid. Color-black
      - ii. Panels shall have a Class C fire rating.
- D. Acoustical Clouds: (Grouped & Individually Hung) (AT-4)
  - Provide shapes of fiberglass with surface texturefine, of shape design of small and large trapezoids, parallelograms and triangles grouped together and mounted individually. Refer to reflected ceiling plan. Edge profile-square, sound absorption up to 1.00 noise reduction coefficient (NRC) ASTM C423, with bid block; anti-microbial inherent properties.

- Acceptable Products: 2.
  - Armstrong: Soundscapes Acoustic Clouds-Colors
    - Shape Design: i.
      - a. #5445F02Z02 90° Trapezoid
      - b. #7101F02P01 60° Parallelogram
      - #7101F02T01 60° Triangle
      - #7101F02Z01 60° Trapezoid d.
    - 60° Shapes shall be grouped in an individual cloud and also individually hung and 90° Shape shall be individually hung on an angle.
    - iii. Provide with cable suspension #5450L8CR, Item #5451WH & #5452WH (Grouping frame kit and grouping frame splice kit and #7121 angled hanging kit for 90° trapezoid panels. and all associated manufacturer specific hardware for the indicated layouts.
    - iv. Panels shall have a Class A rating.
- Ε. Acoustical Panels: (AT-5) Copy Room #A120
  - 1. Provide 24" x 24" wet-formed mineral fiber units with Durabrite acoustically transparent membrane not less than 7/8" thick. NRC 0.80, AC170, CAC 35, light reflectance 0.88, beveled tegular edge.
  - 2. Acceptable Products:
    - a. Armstrong Item No. 1941 "Ultima Open Plan"
    - Certainteed: Item No. 1222BB-80-1 Symphony m High CAC
    - USG: Item No. 87200 Mars High-NRC Acoustical c. Panels
  - 3. Install in 15/16" exposed tee grid.
- 2.03 CEILING SUSPENSION MATERIALS:
  - General: Comply with ASTM C 635, as applicable to an Α. intermediate duty suspension system. Coordinate with other work supported by or penetrating through the ceilings, including light fixtures and HVAC equipment.
  - В. Attachment Devices: Size for 5 times the design load indicated in ASTM C 635, Table 1, Direct Hung.
    - Hanger Wires: Galvanized carbon steel, ASTM A 641, soft temper, prestretched, yield-stress load of at least 3 times design load but not less than 12 USWG.

- Exposed Suspension System: Exposed systems compatible with tiles specified and as follows:
  - 1. 15/16" Systems
    - Armstrong 15/16" Prelude XL exposed tee
    - CertainTeed 15/16" Classic Aluminum Capped b. Stab System.
    - Donn DX24 System; USG Interiors
    - Chicago Metallic Corp: 1200 System. d.
- Edge Moldings: Manufacturer's standard channel molding D. for grid type used for edges and penetrations of ceiling, with a single flange of molding exposed, finish to match grid.

### 2.04 MISCELLANEOUS MATERIALS:

- Α. Acoustical Sealant: A heavy-bodied, non-shrinking, nondrying, non-sag grade mastic compound intended for interior sealing of concealed construction joints.
- Tile Cement: As recommended by tile manufacturer. В.

### PART 3 - EXECUTION

### INSPECTION AND PREPARATION WORK: 3.01

- Installer must examine the conditions under which the Α. acoustical ceiling work is to be performed and notify the General Contractor, in writing, of unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.
- Measure each ceiling area and establish layout of В. acoustical units to balance border widths at opposite edges of each ceiling. Avoid the use of less-than-half widths units at borders, and comply with reflected ceiling plans wherever possible.

### 3.02 INSTALLATION:

General: Install material in accordance with manufacturer's printed instructions and comply with governing regulations as indicated, and industry standards applicable to the work.

- Install suspension systems to comply with ASTM C 636 В. with hangers supported only from building structural members as indicated. Locate hangers near each end and spaced 4' - 0' along direct-hung runners, unless otherwise indicated.
  - Secure wire hangers by looping and wire-tying, 1. either directly to structures or to inserts, eyescrews, or other devices which are secure and appropriate for the substrate, and which will not deteriorate or fail with age or elevated temperatures.
- Install edge moldings at edges of each acoustical С. ceiling area and at locations where edge of units would otherwise be exposed after completion of the work, except where adhesively applied.
  - Sealant Bed: Apply continuous ribbon of acoustical 1. sealant, concealed pm back of vertical leg before fastening to vertical surface.
  - Secure moldings to building construction by 2. fastening with screw-anchors into the substrate through holes drilled in not more than 16" o.c. along each molding.
  - 3. Level moldings with ceiling suspension system to level tolerance of 1/8" in 12' - 0".
  - Miter corners of moldings accurately to provide 4. hair-line joints, securely connected to prevent dislocation.
- D. Cope exposed flanges of intersection suspension system members so that flange faces will be flush (cope flange of member supported by other member) except as otherwise indicated.
- Ε. Install acoustical panels in coordination with suspension system, with edges concealed by support of suspension members. Scribe and cut panels to fit accurately at penetrations.
- Install edge trim moldings where indicated and elsewhere F. as needed to conceal edges of acoustical units which would otherwise be exposed to view after completion of the work. Anchor with fasteners, or if not possible, secure in place with permanent adhesive.

### 3.03 CLEANING AND PROTECTION:

- Α. Clean exposed surfaces of acoustical panel ceilings, including trim, edge moldings, and suspension members; comply with manufacturer's instructions for cleaning and touch-up of minor finish damage. Remove and replace work which cannot be successfully cleaned and required to permanently eliminate evidence of damage.
- The Installer shall advise the General Contractor of В. required protection for the acoustical panel ceilings, including temperature and humidity limitations and dust control, so that the work will be without damage and deterioration at the time of acceptance by the Owner.

END OF SECTION 09510

1SECTION 10999 - MISCELLANEOUS SPECIALTIES

### PART 1 - GENERAL

### 1.01 RELATED DOCUMENTS:

A. Attention is directed to Division 0, Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

### DESCRIPTION OF WORK: 1.02

- A. The extent of miscellaneous specialties is as shown on the drawings or schedules and includes the following:
  - 1. Contemporary Bulletin Board Cabinet
  - 2. Entrance Flooring
  - 3. Dishwasher
  - 4. Microwaves
  - 5. Oven/Range

### 1.03 SUBMITTALS:

### A. Product Data:

Submit PDF copy of manufacturer's specifications and installation instructions for each type of specialty required. Indicate by transmittal that copy of each instruction has been distributed to the Installer.

### Samples: В.

Submit three (3) three samples of each color and finish of exposed materials and accessories required for each specialty. Architect's review of samples will be for color and texture only. Compliance with all other requirements is the exclusive responsibility of the Contractor.

### Shop Drawings: С.

Submit shop drawings for fabrication and erection of specialties, including plans, elevations and large scale details, shop anchorages and accessory items. Provide location template drawings for items supported or anchored to permanent construction.

### PART 2 - PRODUCTS

### 2.01 PREFABRICATED PRODUCTS:

- A. Surface Mount Contemporary Bulletin Board Cabinet:
  - 1. Provide Model 2043 (4'h x 5'w) as manufactured by Claridge Products.
    - a. Frame shall be  $1-1/2" \times 3"$  heavy gauge rectangular clear satin anodized aluminum frame.
    - b. Hinge shall be continuous piano type hinge.
    - Provide with tackable back panel of Guilford of Maine fabric. Color selected by Architect from manufacturers standard color range.
    - d. Doors shall be of 3/16" temp. glass with flat key tumbler locks.
    - e. Provide (2) two per building. Locations to be determined by Owner.
- Entrance Flooring В.
  - 1. Provide entrance flooring as shown at each entrance with a new canopy as manufactured by Milliken
    - a. Obex Bar Cutx
    - b. Color: Grey
    - c. Install per manufacturer's specifications.
- Under Counter Dishwasher:
  - Provide ADA Under Counter Dishwashers as shown on drawings. Quantity: As indicated on drawings.
  - 2. Finish to be stainless steel with stainless steel interior 24" wide nominal x 24" deep nominal (32-1/4"H  $\times 23-3/4$ "W  $\times 23-1/2$ "D).
  - 3. Provide models by:
    - a. GE #GDT225SSLSS
    - b. Whirlpool #WDF5505AHS
  - Only one manufacturer shall be used.
- D. Microwave:
  - By Owner. Installed by Contractor.
- Ε. Oven/Range & Hood:
  - 1. By Owner. Installed by Contractor.

### PART 3 - EXECUTION

### 3.01 INSPECTION:

Installer must examine the substrates and conditions under which the specialties are to be installed, and notify the General Contractor and Architect in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.

### 3.02 INSTALLATION:

- In addition to the requirements of these specifications, comply with manufacturer's instructions and recommendations for preparation of substrate, installation of anchors, and application of specialties. Coordinate with work of other trades for application of inserts of other integral equipment items.
- Install at the locations shown or scheduled, securely В. mounted with concealed fasteners, unless otherwise shown. Attach to substrates in accordance with the manufacturer's instructions, unless otherwise shown.
- C. Install level, plumb and at the proper height. Cooperate with other trades for installation in finish surface. Repair or replace damaged units as directed by the Architect.

END OF SECTION 10999

# MACOMB COUNTY COUNTY WAREHOUSE - F & O and PURCHASING OFFICES RENOVATION WAKELY PROJECT #242053

PRE-BID MEETING SIGN-IN SHEET November 7, 2024 10:00 a.m.

NAME	FIRM	PHONE NO.	EMAIL
Step Sterior	BERNES IN	7,3 40 78774	RSHETLER OBBREDAVE, COM
Keria Bard	LMM	(248) 453-8335	KBOYD & LMM. US
10m2 bitz	ACCICA	313.580.6813	313.580.6813 tecibitz@teamallied.com
matt spisam	spart ar construction Garb	p 734-331-5061	matt@ spartan-construction growt.com
Lavonte Travis	POST	248 332 3011	lavontetravis @ Pds, Contractors, Com
TONY CALLOUCED	Beexcluc	755-3500 V&	Bensecheed Msv. Com
Stove- trackon HTV	KEO + Asser	717-5276	Swarken Itsch @ heoossoc, com
Vice Yesterich	Frank Prevold + Sons	248-229-8232	nvestench a trankremote com
@ Bab Irdsome	Lobland / Jelani	826-643-5768	( Welsome & Small
Maryberth Sierald	Hurad	526-405-4550	526-405-4550 mbs, exacti @ 11/pci. com.
Malik Awawdeh	Supervisor	917.503.816	8154 Malik-Awarden 98(d) pahoo, con
Vallebolli Aus	Wader-Fact	JB-634-3709	wader electrices & act. e-
Dea Alphader	Oradra Te con	582 824 4712	Donald Scalabolds. Coll

				AIR WORKS	MEP ('enstruction	Holcomb Contracting	Tri-Star Roofing and Sheet Metal	WING CONST.	Meridian Contracting	Dec Constitution	DCC CONSTENCTION	MLP Painting
				586-405-4679	248-977-4868	313-460-9192	810-956-6810	526-739-5995	586-292-6132	810-658-4322	810.658-4322	586-873-6541
				DENNIS DOBRASEO	Em Perez	Mike Dyker	Mark Myres	STEVE HEIME	Pete DiVito	Ryan Amarica	EDIC JOSEF Chic Book	Larro Palushaj
				dennis e girworksheway	eperezo mesem struction	manker of holombins	estimator 2 Ortistarranting net	STEVED WINGED STARTED FOR	Pete. DiVito @ Tochoo.com	Man a Que construction ica	DSEE chie Book Construction. com	586-873-6541 Lazro Palustraj lucky. Hippaintingo

								Genini Electric	SEAN GELDHOF
								FloyD Schmidt	BLUE STAR
								586-703-3603	586-925-9922
								Seminielectric 107	estinctinge blue standens

# enovation, Vic Wertz Buiding No.: 242053

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urchasine 31. 2024

ommissioners Bid Set, Date -

# MACOMB COUNTY BOARD OF COMMISSIONERS

# & O / PURCHASING OFFICE

# VIC WERTZ BUILDING

ISSUED FOR: BID SET

OCTOBER 31, 2024 DATE:

242053 PROJECT NO.:

# ARCHITECT:

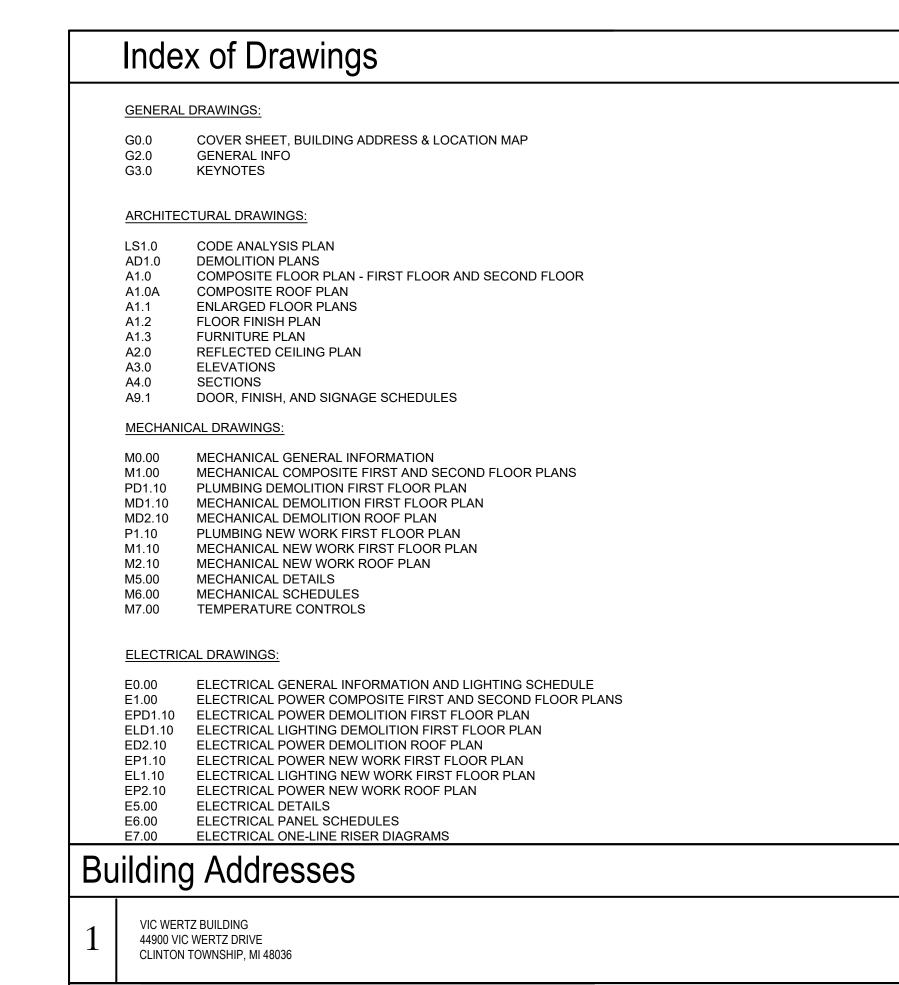
WAKELY ASSOCIATES, INC./ ARCHITECTS 30500 VAN DYKE AVE, SUITE 209, WARREN, MI 48093, 586.573.4100

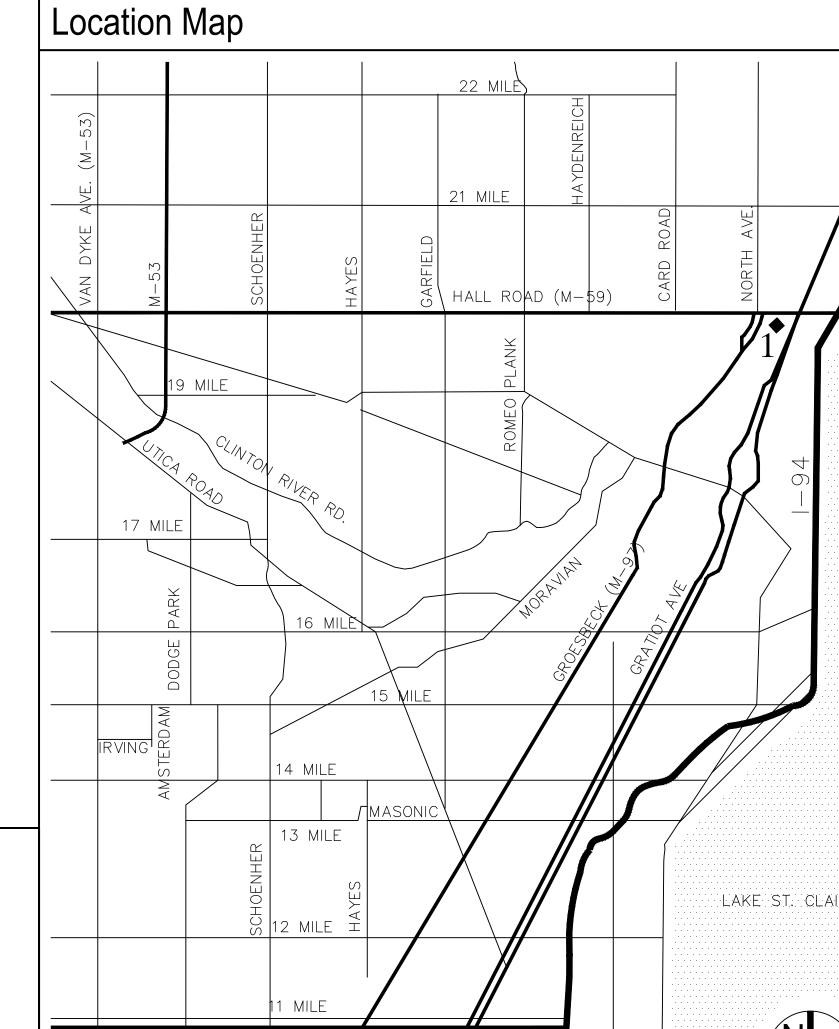
# MECHANICAL/ ELECTRICAL ENGINEERS:

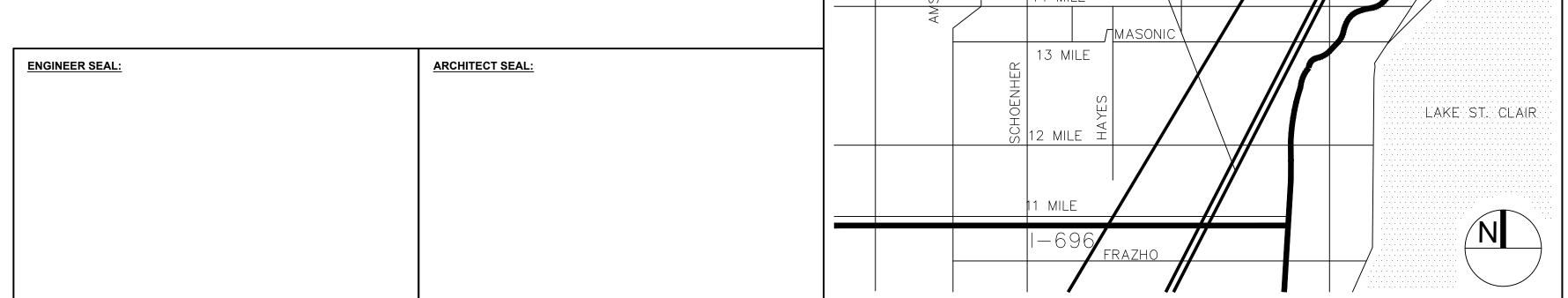
UNIFIED BUILDING SYSTEMS ENGINEERING, LLC 75 N. MAIN ST. SUITE 221, MT. CLEMENS, MI 48043, 248.804.1741

# STRUCTURAL ENGINEER:

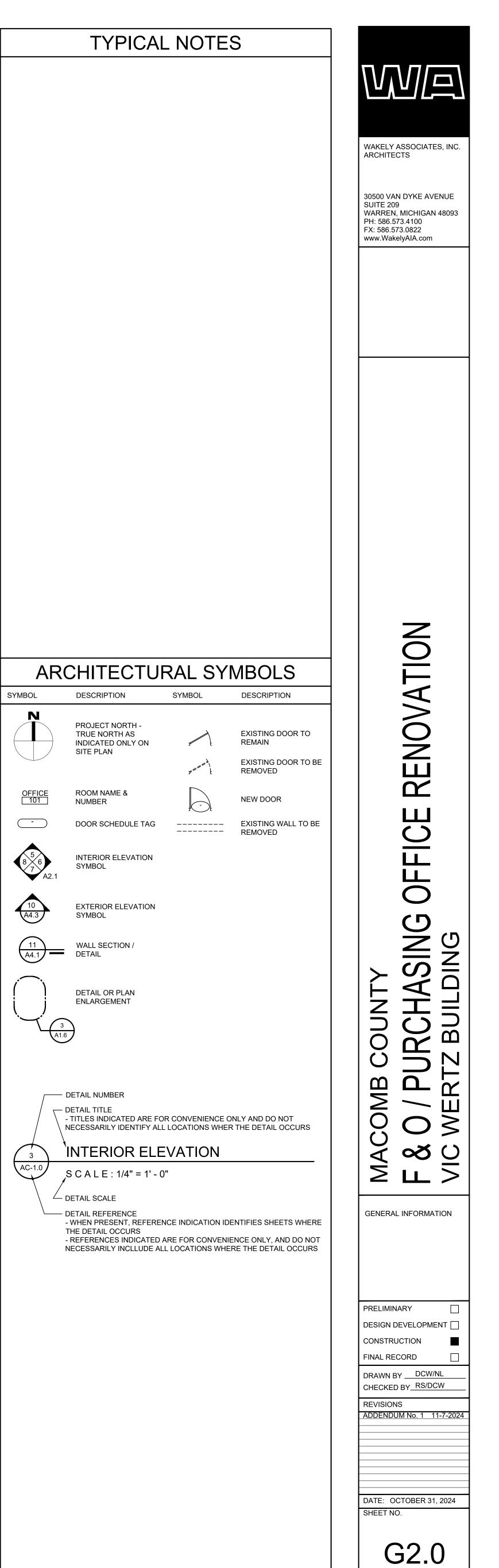
ANDERSON, ECKSTEIN, & WESTRICK, INC. 51301 SCHOENHERR RD, SHELBY TOWNSHIP, MI 48315, 586.726.1234







		ΛΕ	RCHITECTURAL ABBI		VILICT			
ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION	$\dashv$ $\vdash$
A/C & VENT A/E	AIR CONDITIONING & VENTILATION ARCHITECT-ENGINEER	dB DBL ACT DR	DECIBEL DOUBLE ACTING DOOR	JC JT	JANITORS CLOSET JOINT	QT	QUARRY TILE	$\dashv \mid$
AB ABRSV ABRSV THRESH	ARCHITECT BOLT ABRASIVE ABRASIVE THRESHOLD	DECON DEG DEMO	DECONTAMINATION DEGREE DEMONOLISH DEMOLITION	L	ANGLE	R R	RADIUS RISER	
ACI ACOUS INSUL ACOUS PNL	AMERICAN CONCRETE INSTITUTE ACOUSTICAL INSULATION ACOUSTICAL PANEL	DEPT DET DF	DEPARTMENT DETAIL DRINKING FOUNTAIN	L LAB LAM	LENGTH LABORATORY LAMINATED	RB RC RCPTR	RESILENT BASE ROOF CONDUCTOR RECEPTOR	
ACS DR ACS PNL ACST	ACCESS DOOR ACCESS PANEL ACOUSTIC	DIA DIAG DIAPH	DIAMETER DIAGONAL DIAPHRAGM	LAV LBS LG	LAVATORY LABORATORY LONG	RCVG REC REF	RECEIVING RECESS OR RECESSED REFERENCE	
ACST SLNT ADA	ACOUSTICAL SEALANT AMERICANS W/ DISABILITIES ACT	DIFF DIM	DIFFUSER DIMENSION DISTANCE	LH LHR	LEFT HAND LEFT HAND REVERSE	REF REG REINF	REFRIGERATOR REGISTER	
ADDL ADDM ADDN	ADDITIONAL ADDENDUM ADDITION	DIST DW DL	DISTILLED WATER DEAD LOAD	LN LKR LLH	LINEAR LOCKER ROOM LONG LEG HORIZONTAL	REV RF	REINFORCE OR REINFORCED REVISION RADIOGRAPHY & FLOUROSCOPY	
ADJ ADJS AFF	ADJACENT ADJUSTABLE ABOVE FINISHED FLOOR	DMF DN DO	DAMPROOFING DOWN DOOR OPENING OR DATA OUTLET	LLV LO LPT	LONG LEG VERTICAL LOUVER OPENING LOW POINTLTLIGHT	RFG RFO RH	ROOFING ROOF OPENING RIGHT HAND	
AGGR AHU ALT	AGGREGATE AIR HANDLING UNIT ALTERATIONS	DR DRP DRW	DOOR DECAY RETARDANT PLYWOOD DECAY RETARDANT WOOD	LT WT LTG LVR	LIGHTWEIGHT LIGHTING LOUVER	RHB RHR RM	ROOF HOSE BOX RIGHT HAND REVERSE ROOM	
ALUM ANES ANOD	ALUMINUM ANESTHESIA, ANESTESIOLOGY ANODIZED	DS DT DW	DOWNSPOUT DRAIN TILE DISTILED WATER	MACH	MACHINE	RND RO RR	ROUND ROUGH OPENING RAILROAD	
ANSI APC APPROX	AMERICAN NATIONAL STANDARDS INSTITUTE ACOUSTICAL PANAL CEILING APPROXIMATE	DWG DWL	DRAWING DOWEL	MAG MAR MAS	MAGNET OR MAGNETIC MARBLE MASONARY	RS RSF RTF	ROOF SUMP RESILIENT SHEET FLOORING RESILIENT TILE FLOORING	
ARCH ASPH	ARCHITECTURAL ASPHALT	E	EAST	MATL MAX	MATERIAL MAXIMUM	RTNG RTU	RETAINING ROOF TOP UNIT	
ASTM ATC AUTO	AMERICAN SOCIETY FOR TESTING MATERIALS ACOUSTICAL TILE CEILING AUTOMATIC	EA EF EIFS	EACH EACH FACE EXTERIOR INSULATION & FINISH SYSTEM	MB MBC MC	MARKER BOARD MICHIGAN BUILDING CODE MICELLANEOUS CHANNEL	RV RVS	ROOF VENTILATOR REVERSE	
AVG	AVERAGE	EJ EKG EL	EXPANDING JOINT ELECTRO-CARDIOGRAM ELEVATION	MCA MCL MCP	MEDICAL COMRESSED AIR METAL CEILING (LINER) METAL CEILING (PAN)	S S	SOUTH S-SHAPE STEEL MEMBER	
B PL B/B BC	BASE PLATE BACK TO BACK BOTTOM CHORD	ELEC ELEV EMBED	ELECTRICAL OR ELECTRONIC ELEVATOR EMBEDMENT	MECH MED MEMB	MECHCANICAL MEDICAL MEMBRANE	SAB SAF SB	SOUND ATTENUATION BLANKET SPRAY APPLIED FIREPROOFING SOIL BORING	
BD BEV BF	BOARD BEVELED BARRIER FREE	EMER EMER SHR EMER SHR/EWS	EMERGENCY EMERGENCY SHOWER	MEMB RFG MEZZ MFG	MEMBRANE ROOFING MEZZANINE MANUFACTURING	SCHED SDG SE	SCHEDULE SIDING SOUTHEAST	
BF BITUM	BOTH FACES BITUMINOUS	ENCL ENTR	ENCLOSURE ENTRANCE	MH MIN	MANHOLE MINIMUM	SECT SECY	SECTION SECRETARY	
BL BLDG BLDG DAT	BUILDING LINE BUILDING BUILDING DATUM	EQ EQUIP ER	EQUAL EQUIPMENT EMERGENCY ROOM	MISC MO MOD BIT	MISCELLANEOUS MASONRY OPENING MODIFIED BITUMEN	SGFT SH SHT	STRUCTURAL GLAZED FACING TILE SHOWER SHEET	
BLKG BLW BM	BLOCKING BELOW BEAM	ETR EW EWC	EXISITING TO REMAIN EACH WAY ELECTRIC WATER COOLER	MR MRI MRT	MOISTURE RESISTANT MAGNETIC RESONANCE IMAGING MARBLE THRESHOLD	SI SIM SLDG	STEEL & IRON WORK SIMILAR SLIDING	
BOS BOT BR	BOTTOM OF STEEL BOTTOM BEDROOM	EWH EWS EX	ELECTRIC WATER GOODER ELECTRIC WATER HEATER EYE WASH STATION EXISTING	MTC MTD MTL	METAL TOILET COMPARTMENT MOUNTED METALIC OR METAL	SLDG WDW SLNT SLV	SLIDING WINDOW SEALANT SHORT LEG VERTICAL	
BRKT BRZ	BRACKET BRONZE	EXC EXH	EXCAVATE EXHAUST	MTL FAB MULL	METALIC OR METAL METAL FABRICATIONS MULLION	SM SP	SHEET METAL SHAFT PARTITION	
BS BSMT BT	BOTH SIDES BASEMENT BENT	EXIST EXTR	EXISTING EXTRUDED	N	NORTH	SPEC SPKLR SQ	SPECIFICATION SPRINKLER SQUARE	
BTWN BULLN BUR	BETWEEN BULLETIN BUILT-UP ROOFING	F/F FD	FACE TO FACE FLOOR DRAIN	N2 N20 NARC	NITROGEN NITROUS OXIDE NARCOTICS	SSK SST STA	SERVICE SINK STAINLESS STEEL STATION	
	CHANNEL	FE FEC	FIRE EXTINGUSHER FIRE EXTINGUSHER CABINET FLAT HEAD	NATL NC NE	NATIONAL NOISE CRITERIA NORTH EAST	STAG STC STD	STATION STAGGERED SOUND TRANSMISSION CLASS STANDARD	
C C TO C CA	CENTER TO CENTER COMPRESSED AIR	FHR FIN	FIRE HOSE RACK/ REEL FINSIH OR FINISHED	NFPA NIC	NATIONAL FIRE PROTECTIONA ASSOCIATION NOT IN CONTACT	STIF STL	STIFFENER STEEL	
CAB CANTL CATH	CABINET CANTILEVER CATHETERIZE CATHETER	FIP FIXT FJ	FOAMED-IN-PLACE FIXTURE FALSE JOINT	NL NO NOM	NIGHT LIGHT NUMBER OR NUMBERS NOMINAL	STOR STRUCT STRUCT STL	STORAGE STRUCTURAL STRUCTURAL STEEL	
CB CEM CER	CATCH BASIN CEMENT CERAMIC	FLASH FLG FLR	FLASHING FLANGE FLOOR	NOUR NS NSF	NOURISHMENT NURSE STATION NATIONAL SANITATION FOUNDATION	SURF SUSP SV	SURFACE SUSPENDED OR SUSPENSION SHEET VINYL	
CF/CI CF/OI	CONTRACTOR FURNISHED/ CONTRACTOR INSTALLED CONTRACTOR FURNISHED/ OWNER INSALLED	FM FNDN	FACTORY MUTUAL FOUNDATION	NW	NORTHWEST	SW SW	SOUTH WEST SWITCH	
CFMF CG CH	COLD-FORMED METAL FRAMING CORNER GUARD CORNER HOOK	FOC FR FRP	FACE OF COLUMN FIRE RATED FIRE RATED PLYWOOD	O2 O/O	OXYGEN OUT TO OUT	SWD-FR SYM	SHEATHING WOOD-FIRE RETARDANT SYMMETRICAL	
CH BD CHKD CI	CHALK BOARD CHECKERED CAST IRON	FRPFG FRW FT	FIREPROOFING FIRE RATED WOOD FOOT OR FEET	OBS OBSC GL OBW	OBSERVATION OBSCURE GLASS OBSERVATION WINDOW	T T&G	TREAD TOUNGUE & GROOVE	
CR CJ	CIRCLE CIRCULAR CIRCULATION CONTROL JOINT CENTERLINE	FTG FURN	FOOTING FURNITURE	OC OD OF	ON CENTER OUTSIDE DIAMETER OUTSIDE FACE	T & R TA	TREAD & RISER TOILET ACCESSORIES TACK BOARD	
CL CLG CLIN	CEILING CLINICAL	g	GRAM	OF/CI OF/OI	OWNER FURNISHED/ CONTRACTOR INSTALLED OWNER FURNISHED/ OWNER INSTALLED	TB TBD TEL	TO BE DETERMINED TELEPHONE	
CLO CLR CMU	CLOSET CLEAR CONCRETE MASONARY UNIT	GA GALV GCW	GAUGE GALVANIZED GLAZED CURTAINWALL	OFF OFRC OFRS	OFFICE OVERFLOW ROOF CONDUCTOR COVERFLOW ROOF SUMP	TEMP TERR THD	TEMPERATURE TERRAZZO THREAD	
CNVR CO CO2	CONVEYOR CLEANOUT CARBON DIOXIDE	GDR GEN GFCI	GUARDRAIL GENERAL GROUND FAULT CIRCUIT INTERRUPTER	OH DR OPH OPNG	OVERHEAD DOOR OPPOSITE HAND OPENING	THK THRESH TK BD	THICK OR THICKNESS THRESHOLD TACKBOARD	
COL COMO	COLUMN COMPOSITION	GFRP GHT	GLASS-FIBER REINFORCED PLSTIC GLAZED HOLLOW TILE	OPP ORIG	OPPOSITE ORIGINAL	TOC TOIL	TOP OF CONCRETE (ELEVATION) TOILET	
CONC CONF CONN	CONCRETE CONFERENCE CONNECTION	GI GL GR	GALVANIZED IRON GLASS, GLAZING GRADE	ORN OSHA Oz	ORNAMENTAL OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION OUNCE	TOIL RM TOR TOS	TOILET ROOM TOP OF RAIL (ELEVATION) TOP OF STEEL (ELEVATION)	
CONSTR CONSTR JT CONT	CONSTRUCTION CONSTRUCTION JOINT CONTINUATION, CONTINUE, CONTINOUS	GR BM GRAD GRL	GRADE BEAM GRADIENT GRILLE	PACU	POST ANESTHESIA UNIT	TOW TRAN TV	TOP OF WALL (ELEVATION) TRANSOM TELEVISION	
CONTR CORR CPRS	CONTRACTOR CORRIDOR COMPRESSIBLE, COMPRESSED	GRTG GYO	GRATING GYPSUM	PB PC PEND	PUSH BUTTON PIECE OR PIECES PENDENT	TYP	TYPICAL	
CPS CPI	CARPET (SHEET) CARPET (TILE)	Н	HIGH	PERF PERM	PERFORATED PERMANENT	UC UG	UNDERCABINET UNDERGROUND	
CPW CR CR	CARPET (WALL BASE) CARD READER CHAIR RAIL	HB HD HDW	HOSE BIBB HEAVY DUTY HARDWARE	PI PL PL GL	POINT OF INTERSECTION PROPERTY LINE PLATE GLASS	UM UL UN	UNIT HEATER UNDERWRITERS LABORATORIES UNLESS NOTED	
CRCMF CRIT CRS	CIRCUMFERENCE CRITICAL COURSE	HEX HM HNDRL	HEXAGON HOLLOW METAL HANDRAIL	PLAM PLAS PLBG	PLASTIC LAMINATE PLASTER PLUMBING	UNO UR U/S	UNLESS NOTED OTHERWISE URINAL UNDERSIDE	
CSK CSS	COUNTER SINK CLINIC SERVICE SINK	HORIZ HOSP	HORIZONTAL HOSPITAL	PLT PLTC	PLATE OR PLATED PLASTIC LAMINATE TOILET COMPARTIMENT			
CT CT CTB	CERAMIC TILE COMPUTED TOMOGRAHY CERAMIC TILE BASE	HPT HR HSKPG	HIGH POINT HOUR HOUSE KEEPING	PLYD PMF PNEU	PLYWOOD PERMANENT METAL FORM PNEUMATIC	VAC VENT VERT	VACUUM VENTILATION OR VENTILATING VERTICAL	
CTR CTRD CTRL	CENTER CENTRAL CENTERED CONTROL	HSS HT HTG	HOLLOW STRUCTURAL SECTIONS HEIGHT HEATING	PNL PORC PORT	PANEL PORCELAIN PORTABLE	VEST VIF VIT	VESTIBULE VERIFY IN FIELD VITREOUS	
CM	CUBIC COLD WATER	HVAC HW HWY	HEATING VENTAILATION AIR CONDITIONING HOT WATER HIGHWAY	POS PP PR	POSITION PANEL POINT PAIR	VOL VTR VWC	VOLUME VENT THROUGH ROOF VINYL WALL COVERING	
		HYD	HYDRANT	PREFAB PREP PROC	PREFABRICATED PREPARATION	W	WEST	
				FRUC	PROCESS OR PROCESSING	W	WIDE FLANGE SHAPES WIDE OR WIDTH	
1				i		1		



<sup>JOB NO</sup>242053



### NEW WORK KEY NOTES - FLOOR PLAN:

- PROVIDE NEW SOFFIT DROP OVER ALL DEMOUNTABLE PARTITIONS IN PURCHASING AREA ONLY. (SEE DETAIL 13 ON SHT.
- A1.1)

  REMOVE ALL GYP. BOARD AND TRIM AROUND WINDOWS. REPLACE

WINDOW SILL. CAULK BETWEEN DISSIMILAR MATERIALS.

EXISTING GYP. BRD. AND WINDOW SILL WITH NEW SOLID SURFACE

- LOCATION OF NEW WALL HUNG TV (BY OWNER). PROVIDE REINFORCING IN DE-MOUNTABLE WALL. PROVIDE POWER AND DATA FOR NEW TV. (SEE ELEC. DRAWINGS)
- EXTEND NEW PARTITION INTO EXISTING WINDOW OPENING AND TIE INTO EXISTING MULLION. CAULK BETWEEN DIS-SIMILAR MATERIAL.
- BELOW WINDOW: FUR OUT EXISTING EXTERIOR WALL W/ 2" HAT CHANNELS. INSTALL 2" RIGID INSULATION OVER ENITRE WALL AND COVER WITH (1) LAYER OF  $\frac{5}{8}$ " HIGH ABUSE GYP. BRD. PAINTED.

  ABOVE WINDOW: FUR OUT EXISTING WALL WITH 6" METAL STUDS AT 16" O.C. W/ 2" RIGID INSULATION FASTENED TO EXISTING EXTERIOR WALL. INSTALL  $\frac{5}{8}$ " HIGH ABUSE GYPSUM BOARD PAINTED. CONSTRUCT POCKETS FOR ROLLER SHADES. COORDINATE WITH SHADE MANUFACTURER AND SUPPLIER. (SEE
- CONSTRUCT NEW  $3\frac{5}{8}$ " METAL STUD HEAD W/ MINERAL WOOL INSULATION AND (1) LAYER OF  $\frac{5}{8}$ " GYP. BRD. EACH SIDE (PAINTED) ABOVE ALL DEMOUNTABLE PARTITIONS IN PURCHASING AREA ONLY. F&O AREA IS OPEN TO EXISTING STRUCTURE.
- CORE NEW HOLE IN EXISTING CONCRETE MASONRY WALL FOR NEW MECHANICAL SYSTEM. SEE MECHANICAL DRAWINGS FOR EXACT SIZE.
- OPEN EXISTING CONCRETE MASONRY WALL FOR NEW MECHANICAL SYSTEM. SEE MECHANICAL DRAWINGS FOR EXACT SIZE. PROVIDE NEW PRE-CAST CONCRETE LINTEL FOR OPENING MIN. 8" BEARING EACH SIDE.
- .09) STUFF ALL EXISTING PENETRATIONS IN EXISTING WALLS AND FIRE CAULK. INSTALL FIRE SPRAY ON ENTIRE CEILING IN VESTIBULE A103 FOR A 2 HR. FIRE SEPARATION.
- PREPARE EXISTING MASONRY WALL AND INSTALL 24"x12"
  PORCELAIN CERAMIC TILE ON WALL FROM FLOOR TO 8'-0" TALL.
  PAINT WALL ABOVE. INSTALL CUSTOM OPAQUE GLASS WITH
  ETCHED MACOMB HISTORY PROVIDED THROUGH THE COUNTY.
  PANELS OF GLASS SHALL BE INSTALLED WITH STAND-OFFS
  FASTENED TO THE NEW TILE AND MASONRY WALL.
- OPEN UP EXISTING GYPSUM BOARD WALLS FOR INSTALLATION OF NEW SANITARY LINE AND PLUMBING FIXTURES. REPAIR WALLS AS REQUIRED AND PAINT TO MATCH.
- 1.12 INFILL EXISTING DOOR W/  $3\frac{5}{8}$ " MTL. STUDS AT 16" O.C. W/ SOUND ATTENUATING INSULATION AND (1) LAYER OF  $\frac{5}{8}$ " HIGH ABUSE GYP. BRD. EACH SIDE PAINTED.
- PROVIDE 6" MIN. 35" MTL. STUD CHASE FROM CEILING TO FLOOR FOR POWER AND OTHER ITEMS TO TRANSVERSE DOWN. (TYPICAL)
- 1.14 INSTALL NEW CLUTCH OPERATED FLEX SHADE IN BOX OUT HEAD DETAIL. (SEE DETAIL)
- DEMOLISH PORTION OF EXISTING ROOF TO PREPARE FOR NEW MECHANICAL CURB INSTALLATION. PROVIDE ALL REQUIRED SUPPORT STEEL FOR ROOF DUCTWORK PENETRATIONS. AFTER NEW CURB IS INSTALLED FLASH AND ROOF IN AS REQUIRED FOR A WATERTIGHT SOLUTION. EXISTING ROOF IS MANUFACTURED BY TREMCO. PROVIDE A CERTIFIED TREMCO INSTALLER TO PERFORM WORK SO WARRANTY IS NOT VOIDED. PROVIDE TREMCO APPROVED WALK MATS AROUND ENTIRE PERIMETER OF NEW ROOF TOP UNIT.
- DEMOLISH PORTION OF EXISTING ROOF TO PREPARE FOR NEW SUN DOME AND TUNNEL BY VELUX THROUGH THE EISEN GROUP 248-319-7763. PROVIDE REQUIRED CURB AND ROOF PENETRATION INCLUDING  $3x3x_4^{4}$ " SUPPORT STEEL ANGLE FOR OPENING. FLASH AND ROOF IN AS REQUIRED FOR A WATERTIGHT SOLUTION. EXISTING ROOF IS MANUFACTURED BY TREMCO. PROVIDE A CERTIFIED TREMCO INSTALLER TO PERFORM WORK SO WARRANTY IS NOT VOIDED.

### DEMOLITION KEY NOTES - FLOOR PLAN:

REMOVE EXISTING WOOD DOOR, FRAME AND HARDWARE COMPLETE.
DISPOSE OF DOOR AND FRAME. SALVAGE ALL EXISTING HARDWARE AND
HAND OVER TO OWNER.

2 REMOVE EXISTING WALL COMPLETE.

REMOVE EXISTING FLOOR COVERING COMPLETE INCLUDING RUBBER BASE.

REMOVE EXISTING LAY-IN CEILING COMPLETE. PREP FOR NEW LAY-IN CEILING AND LIGHTING. (SEE ELEC. DRAWINGS)

REMOVE TOILET AND PLUMBING COMPLETE. SAWCUT EXISTING CONC. FLOOR AS REQ'D. CAP EXISTING PLUMBING BELOW GRADE. PATCH

EXISTING FLOOR AS REQUIRED. (SEE MECH. DRAWINGS)

REMOVE SINK AND PLUMBING COMPLETE. OPEN EXISTING WALL AS REO'D. CAP EXISTING PLUMBING BELOW GRADE. (SEE MECH. DRAWING

REQ'D. CAP EXISTING PLUMBING BELOW GRADE. (SEE MECH. DRAWINGS)

CUT A 4'-0"x4'-0" WINDOW IN EXISTING MASONRY WALL. PROVIDE NEW

PRECAST LINTEL AT EACH OPENING W/ MIN. 8" BR'G. EACH SIDE.

8 REMOVE EXISTING WALLBOARD COMPLETE INCLUDING FURRING STRIPS.

9 REMOVE EXISTING WINDOW SILL.

REMOVE ALL EXISTING TOILET ROOM ACCESSORIES AND REPLACE WITH NEW. SEE PLAN DETAILS.

REMOVE EXISTING ALUMINUM STORE FRONT SYSTEM COMPLETE INCLUDING ALL HARDWARE. PATCH EXISTING WALLS AS REQUIRED WITH LIKE MATERIALS.

REMOVE EXISTING ALUMINUM VESTIBULE SYSTEM COMPLETE. PATCH ALL EXISTING WALLS AS REQUIRED WITH LIKE MATERIALS.

SAWCUT AND REMOVE EXISTING CONCRETE FLOOR AS REQUIRED FOR NEW ELECTRICAL FLOOR BOX AND UNDERGROUND CONDUIT INSTALLATION. PROVIDE NEW 4" CONCRETE SLAB W/ #5 BARS (EACH SIDE) @12" O.C. EPOXY SET (EMBED 4" MIN.) ON 15 MIL. VAPOR BARRIER OVER 4" MIN. GRANULAR FILL. PROVIDE EXPANSION PAPER AS REQUIRED.

SAWCUT AND REMOVE EXISTING CONCRETE FLOOR AS REQUIRED FOR NEW SANITARY LINE INSTALLATION. PROVIDE NEW 4" CONCRETE SLAB W/#5 BARS (EACH SIDE) @12" O.C. EPOXY SET (EMBED 4" MIN.) ON 15 MIL. VAPOR BARRIER OVER 4" MIN. GRANULAR FILL. PROVIDE EXPANSION PAPER AS REQUIRED.

REMOVE EXISTING GYPSUM BOARD COMPLETE INCLUDING FURRING DOWN TO EXTERIOR WALL. REMOVE FIN-TUBE RADIATION. COMPLETE (SEE MECH.)

REMOVE EXISTING HORIZONTAL BLINDS AND HANGING HARDWARE COMPLETE.

### NEW WORK PLAN - GENERAL NOTES: (APPLIES TO ALL ROOMS)

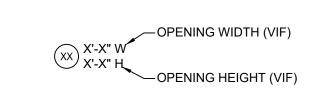
- ALL DIMENSIONS TO EXISTING ELEMENTS TO BE CONSIDERED +/- (V.I.F.)
   PATCH, PREP, & PAINT ALL AREAS DISTURBED BY CONSTRUCTION.
   REMOVE, SALVAGE, & REINSTALL ALL EXIST SIGNAGE ON EXIST DOORS TO BE REPLACED (VIF)
- PREP & PAINT EXISTING CONSTRUCTION TO MATCH EXISTING AT ALL AREAS OF DEMO'D MECH / ELEC FIXTURES (I.E. SURFACE MOUNTED LIGHTS, EXIT LIGHTING, ELEC PANELS, ETC.)
   REMOVE & REPLACE EXISTING ACOUSTIC CEILING TILES, GRILLES, REGISTERS, AND DIFFUSERS AS REQUIRED FOR NEW WORK SEE
- REGISTERS, AND DIFFUSERS AS REQUIRED FOR NEW WORK SEE MECH & ELEC DWGS.

  6. ALL OUTSIDE CORNERS OF ALL NEW PLASTIC LAMINATE COUNTERTOP TO HAVE A RADIUS.
- TO HAVE A RADIUS.

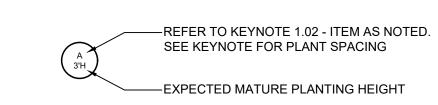
  7. IN AREAS TO RECEIVE NEW FLOORING, CONTRACTOR TO PROTECT EXISTING EQUIPMENT TO REMAIN (E.G., PROJECTORS, DIGITAL DISPLAYS, SOUND SYSTEM AMPLIFIERS, WIRELESS ACCESS POINTS, ETC.) IN EACH ROOM AFFECTED BY OTHERS.
- 8. IN AREAS TO RECEIVE NEW CEILING SYSTEMS, CONTRACTOR TO TEMPORARILY SUPPORT & PROTECT EXISTING TECHNOLOGY EQUIPMENT TO REMAIN AS REQUIRED FOR NEW WORK IN EACH ROOM AFFECTED BY OTHERS.

### KEY NOTES LEGEND:





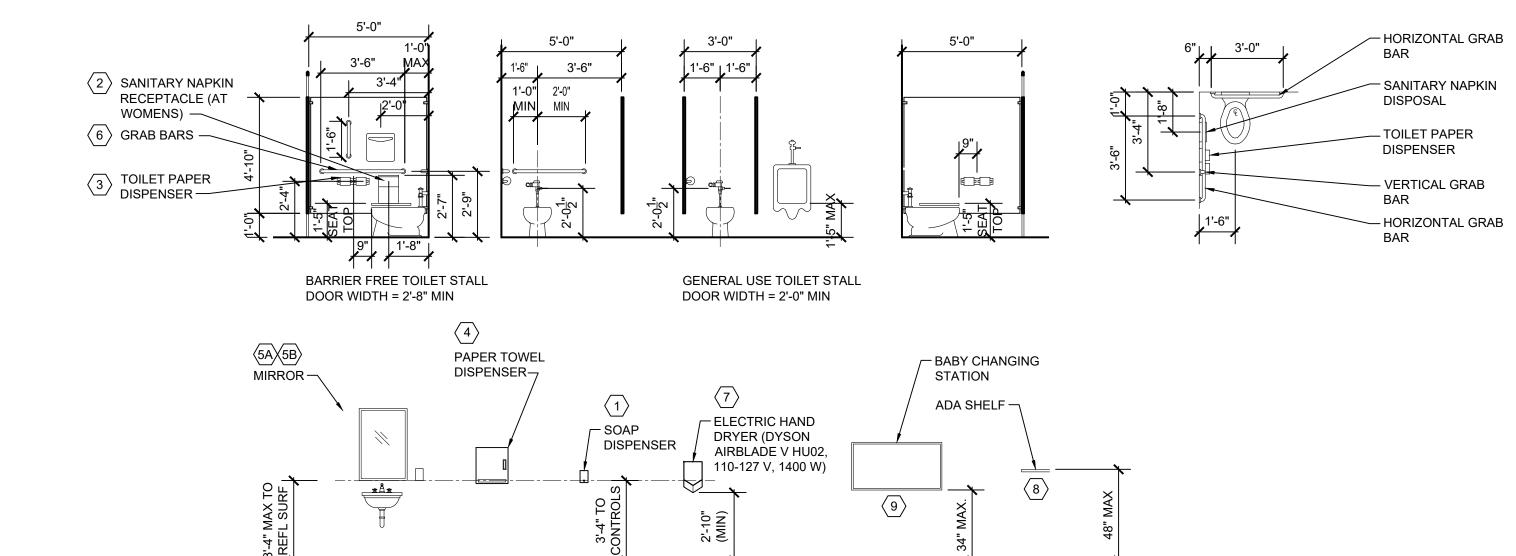
### LANDSCAPE LEGEND:



### FLOOR PLAN LEGEND:



NEW LVT (ACCENT)



### TOILET ROOM FIXTURES & ACCESSORIES

### SCALE: 1/4" = 1'-0"

### TOILET ACCESSORY KEYNOTES:

- 1 SOAP DISPENSER (OF/CI)
- 2 SANITARY NAPKIN DISPOSAL (CF/CI)
- TOILET TISSUE DISPENSER (OF/CI)PAPER TOWEL DISPENSER (OF/CI)
- √5A MIRROR (CF/CI)√5B MIRROR W/ SHELF (CF/CI)
- 6 GRAB BARS (CF/CI)
- 7 ELECTRIC HAND DRYER (CF/CI SEE KEYNOTE 2.26)
- 8 ST. STL SHELF (CF/CI)
- 9 BABY CHANGING STATION



MACOMB COUNTY

F & O / PURCHASING OFFICE RENOVA

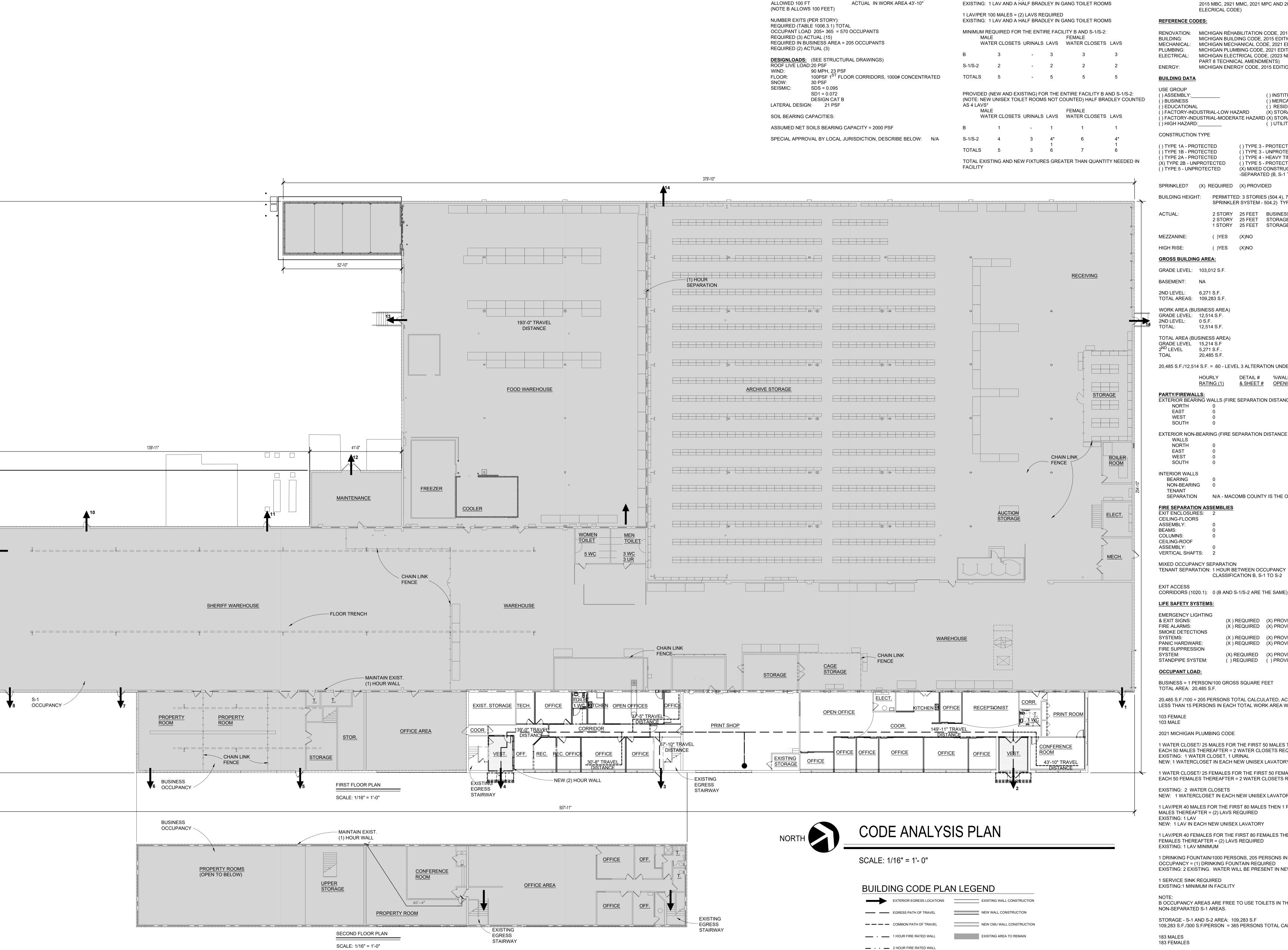
VIC WERTZ BUILDING

PRELIMINARY 
DESIGN DEVELOPMENT 
CONSTRUCTION 
FINAL RECORD

DRAWN BY \_\_\_\_DCW/NL
CHECKED BY RS/DCW
REVISIONS
ADDENDUM No. 1 11-7-2024

DATE: OCTOBER 31, 2024
SHEET NO.

G3.0
JOB NO 242053



### **BUILDING CODE SUMMARY**

MACOMB COUNTY - COUNTY WAREHOUSE

FACILITIES AND OPERATIONS AND PURCHASING OFFICE RENOVATIONS RENOVATION

COUNTY WAREHOUSE 44900 VIC WERTZ DRIVE, CLINTON ADDRESS:

TWP, MICHIGAN 48036 PROPOSED USE: EXISTING FACILITY - MIXED USE B, S-1 AND S-2 RENOVATION OF BUSINESS AREA OF THE FACILITY UNDER 2015 MRC AND

2015 MBC, 2921 MMC, 2021 MPC AND 2023 NEC (MICHIGAN

### REFERENCE CODES:

BUILDING CODE SUMMARY CONT. BUILDING CODE SUMMARY CONT.

2021 MICHIGAN PLUMBING CODE

1 LAV/PER 100 MALES = (2) LAVS REQUIRED

EXISTING: 4 WC, 3 URINALS

EXISTING: 6 WC

1 WATER CLOSET/ 100 MALES: 183/100 = (2) WATER CLOSETS REQUIRED

1 WATER CLOSET/ 100 FEMALES: 183/100 = (2) WATER CLOSETS REQUIRED

EXIT REQUIREMENTS (B AND S ARE THE SAME UNLESS NOTED OTHERWISE):

ACTUAL 15'-0" IN WORK AREA

DEAD END LIMIT-MAXIMUM CONDITION (1020.4 W/EXCEPTION #2)

TRAVEL DISTANCE TO EXIT-MAXIMUM CONDITION (TABLE 1017.2

W/SPRINKLER)ALLOWED 250FT. ACTUAL 149'-11" IN WORK AREA

COMMON PATH OF TRAVEL 1006.3.2 (2) (WITH SPRINKLER SYSTEM)

ALLOWED 50FT.

RENOVATION: MICHIGAN RÉHABILITATION CODE, 2015 EDITION MICHIGAN BUILDING CODE, 2015 EDITION MECHANICAL: MICHIGAN MECHANICAL CODE, 2021 EDITION MICHIGAN PLUMBING CODE, 2021 EDITION

PLUMBING: MICHIGAN ELECTRICAL CODE, (2023 NEC WITH PART 8 TECHNICAL AMENDMENTS) ENERGY: MICHIGAN ENERGY CODE, 2015 EDITION

ELECRICAL CODE)

### **BUILDING DATA**

() INSTITUTIONAL:\_\_\_\_\_ () ASSEMBLY: () BUSINESS () MERCANTILE () EDUCATIONAL () RESIDENTIAL: (X) STORAGE-LOW HAZARD (S-2) () FACTORY-INDUSTRIAL-LOW HAZARD ( ) FACTORY-INDUSTRIAL-MODERATE HAZARD (X) STORAGE-MOD. HAZARD (S-1) ( ) HIGH HAZARD:\_\_\_\_ ( ) UTILITY MISCELLANEOUS

**CONSTRUCTION TYPE** 

() TYPE 1A - PROTECTED () TYPE 3 - PROTECTED () TYPE 1B - PROTECTED () TYPE 3 - UNPROTECTED () TYPE 2A - PROTECTED () TYPE 4 - HEAVY TIMBER (X) TYPE 2B - UNPROTECTED () TYPE 5 - PROTECTED () TYPE 5 - UNPROTECTED (X) MIXED CONSTRUCTION TYPE -SEPARATED (B, S-1 TO S-2)

SPRINKLED? (X) REQUIRED (X) PROVIDED

PERMITTED: 3 STORIES (504.4), 75 FEET (WITH BUILDING HEIGHT: SPRINKLER SYSTEM - 504.2) TYPE 2B ACTUAL: 2 STORY 25 FEET BUSINESS (B)

2 STORY 25 FEET STORAGE (S-1)

1 STORY 25 FEET STORAGE (S-2) MEZZANINE: ( )YES (X)NO HIGH RISE: ( )YES (X)NO

**GROSS BUILDING AREA:** GRADE LEVEL: 103,012 S.F. BASEMENT: NA 2ND LEVEL: 6,271 S.F. TOTAL AREAS: 109,283 S.F.

WORK AREA (BUSINESS AREA) GRADE LEVEL: 12,514.S.F. 2ND LEVEL: 0 S.F. TOTAL: 12,514 S.F. TOTAL AREA (BUSINESS AREA)

5,271 S.F..

20,485 S.F. 20,485 S.F./12,514 S.F. = .60 - LEVEL 3 ALTERATION UNDER 2015 MRC

DETAIL # %WALL DESIGN NO. FOR & SHEET # OPENING #RATED ASSEMBLIES EXTERIOR BEARING WALLS (FIRE SEPARATION DISTANCE > 30 FEET)

WEST SOUTH

EXTERIOR NON-BEARING (FIRE SEPARATION DISTANCE > 30 FEET) WALLS NORTH

EAST WEST INTERIOR WALLS BEARING

NON-BEARING **TENANT** SEPARATION N/A - MACOMB COUNTY IS THE ONLY TENANT

FIRE SEPARATION ASSEMBLIES EXIT ENCLOSURES: **CEILING-FLOORS** ASSEMBLY: BEAMS: COLUMNS:

ASSEMBLY: VERTICAL SHAFTS: MIXED OCCUPANCY SEPARATION

CLASSIFICATION B, S-1 TO S-2 **EXIT ACCESS** 

CORRIDORS (1020.1): 0 (B AND S-1/S-2 ARE THE SAME)

LIFE SAFETY SYSTEMS: **EMERGENCY LIGHTING** 

& EXIT SIGNS: (X) REQUIRED (X) PROVIDED (X) REQUIRED (X) PROVIDED FIRE ALARMS: SMOKE DETECTIONS (X) REQUIRED (X) PROVIDED SYSTEMS: (X) REQUIRED (X) PROVIDED PANIC HARDWARE: FIRE SUPPRESSION SYSTEM: (X) REQUIRED (X) PROVIDED () REQUIRED () PROVIDED STANDPIPE SYSTEM:

**OCCUPANT LOAD:** 

BUSINESS = 1 PERSON/100 GROSS SQUARE FEET TOTAL AREA: 20,485 S.F

20,485 S.F./100 = 205 PERSONS TOTAL CALCULATED, ACTUAL OCCUPANT LOAD LESS THAN 15 PERSONS IN EACH TOTAL WORK AREA WITH A UNISEX LAV. 103 FEMALE

2021 MICHIGAN PLUMBING CODE

1 WATER CLOSET/ 25 MALES FOR THE FIRST 50 MALES THEN 1 WC FOR EACH 50 MALES THEREAFTER = 2 WATER CLOSETS REQUIRED EXISTING: 1 WATER CLOSET, 1 URINAL NEW: 1 WATERCLOSET IN EACH NEW UNISEX LAVATORY - TOTAL OF 2.

1 WATER CLOSET/ 25 FEMALES FOR THE FIRST 50 FEMALES THEN 1 WC FOR EACH 50 FEMALES THEREAFTER = 2 WATER CLOSETS REQUIRED EXISTING: 2 WATER CLOSETS

NEW: 1 WATERCLOSET IN EACH NEW UNISEX LAVATORY - TOTAL OF 2. 1 LAV/PER 40 MALES FOR THE FIRST 80 MALES THEN 1 PER EACH 80 MALES THEREAFTER = (2) LAVS REQUIRED

NEW: 1 LAV IN EACH NEW UNISEX LAVATORY 1 LAV/PER 40 FEMALES FOR THE FIRST 80 FEMALES THEN 1 PER EACH 80 FEMALES THEREAFTER = (2) LAVS REQUIRED EXISTING: 1 LAV MINIMUM

1 DRINKING FOUNTAIN/1000 PERSONS, 205 PERSONS IN BUSINESS OCCUPANCY = (1) DRINKING FOUNTAIN REQUIRED EXISTING: 2 EXISTING. WATER WILL BE PRESENT IN NEW BREAKROOMS.

1 SERVICE SINK REQUIRED **EXISTING:1 MINIMUM IN FACILITY** 

B OCCUPANCY AREAS ARE FREE TO USE TOILETS IN THE NON-SEPARATED S-1 AREAS.

STORAGE - S-1 AND S-2 AREA: 109,283 S.F 109,283 S.F./300 S.F/PERSON = 365 PERSONS TOTAL CALCULATED 183 MALES 183 FEMALES



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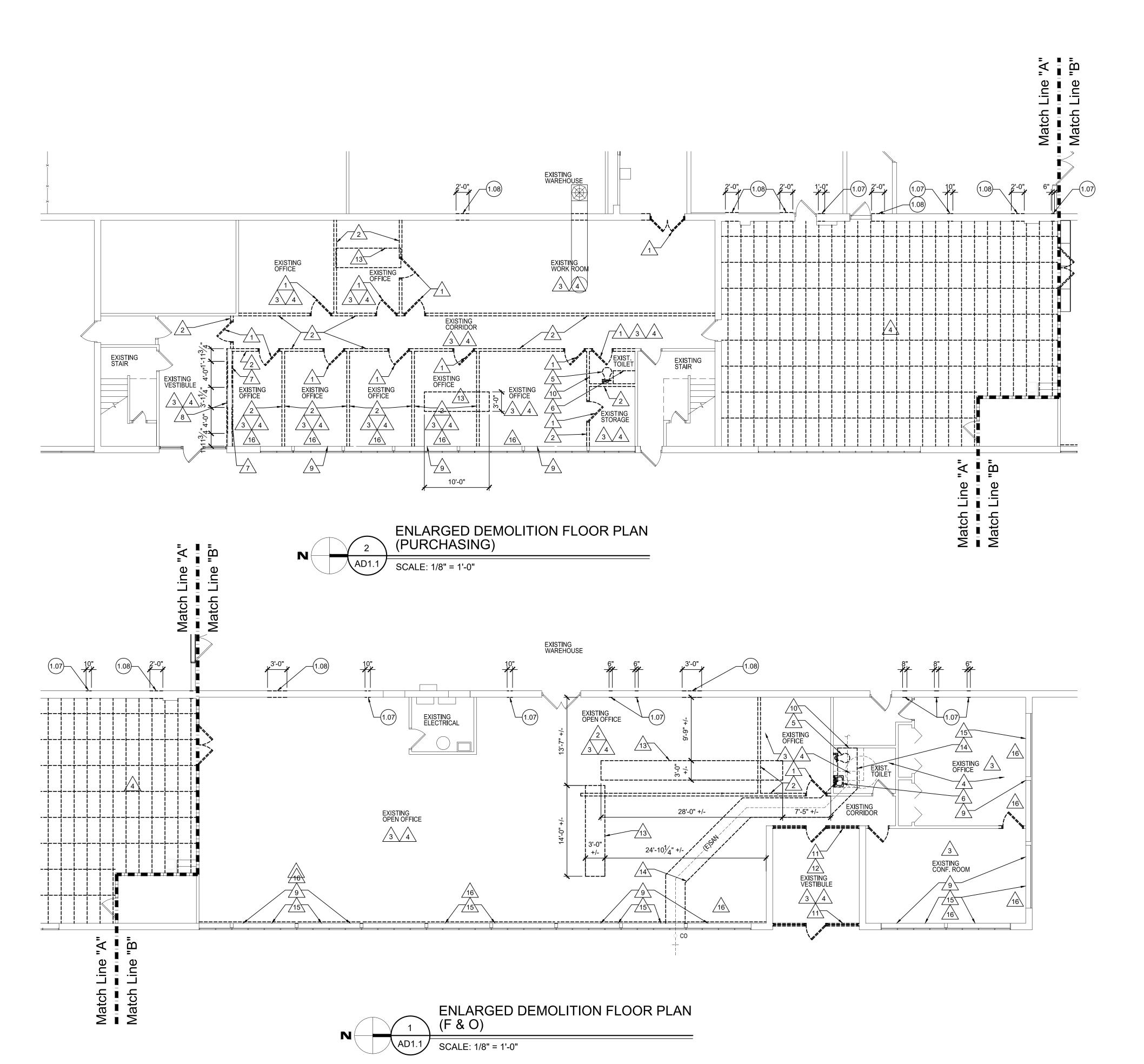
RENOV/ OFFICE OFFICE RCHASING BUILDING **め** CODE ANALYSIS PLAN

PRELIMINARY DESIGN DEVELOPMENT CONSTRUCTION FINAL RECORD DRAWN BY \_\_\_\_DCW/NL

CHECKED BY RS/DCW REVISIONS ADDENDUM No. 1 11-7-202

DATE: OCTOBER 31, 2024 SHEET NO.

<sup>OB NO</sup>242053





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MOIL

RENOVA-

OFFICE

O / PURCHASING WERTZ BUILDING

WAKELY ASSOCIATES, INC. ARCHITECTS 30500 VAN DYKE AVENUE SUITE 209 WARREN, MICHIGAN 48093 PH: 586.573.4100

PRELIMINARY DESIGN DEVELOPMENT

DEMOLITION PLAN

MACOMB F & 0 / PU VIC WERT

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2 COMPOSITE FLOOR PLAN - SECOND FLOOR
A1.0 SCALE: 1/16" = 1'-0"



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MACOMB COUNTY

F & O / PURCHASING OFFICE RENOVATIO

VIC WERTZ BUILDING

PRELIMINARY

CONSTRUCTION

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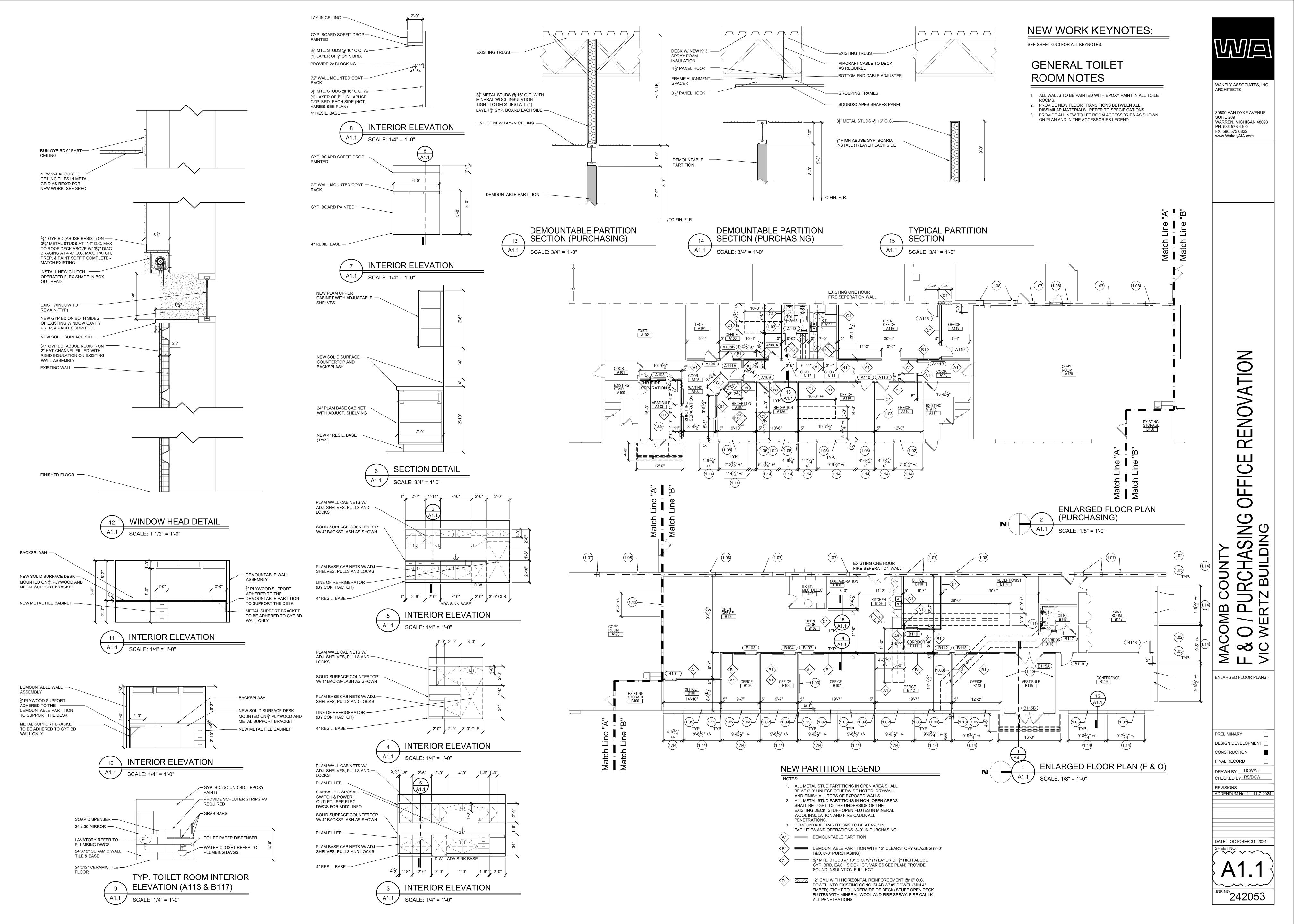
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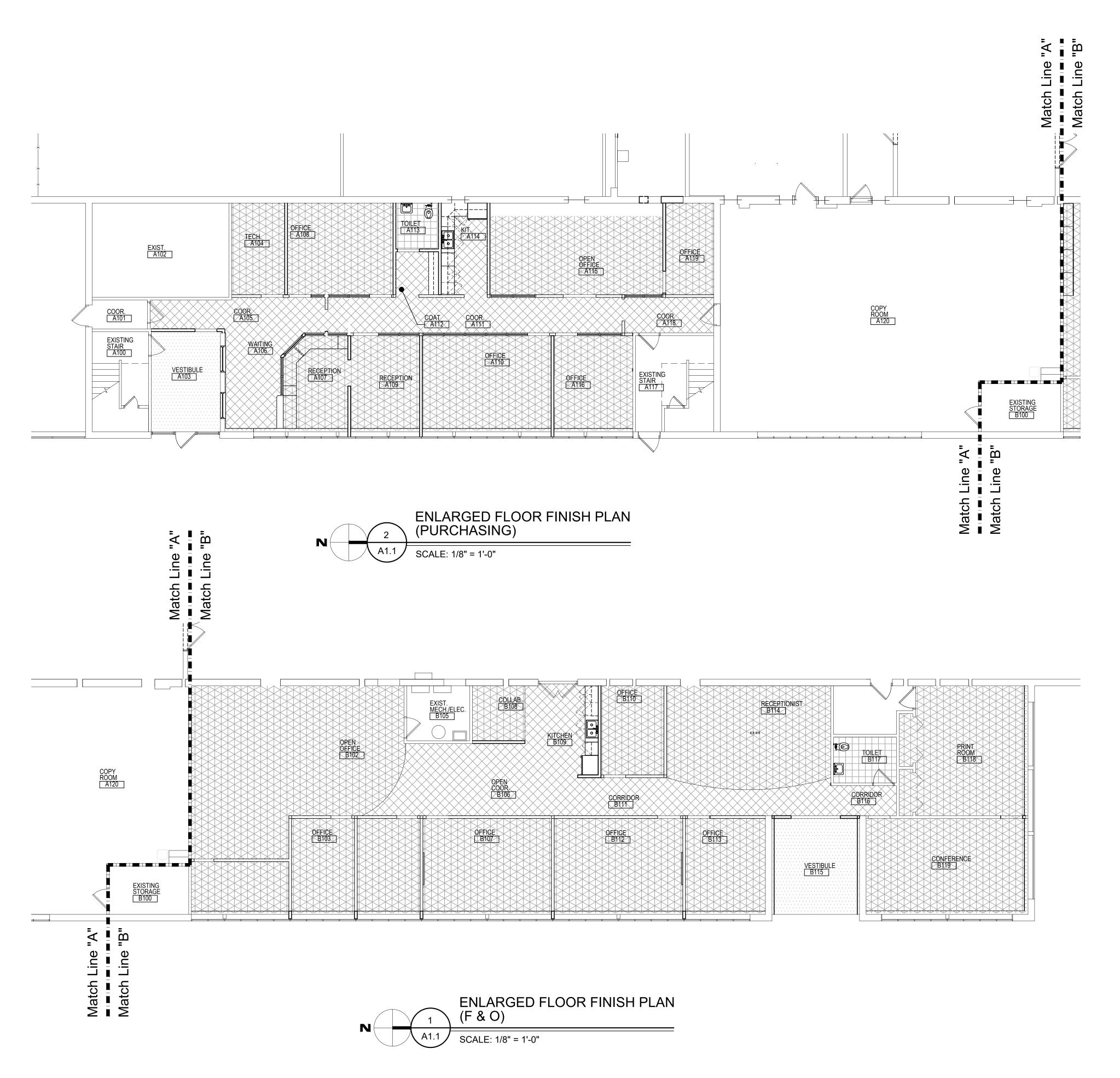
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FINAL RECORD

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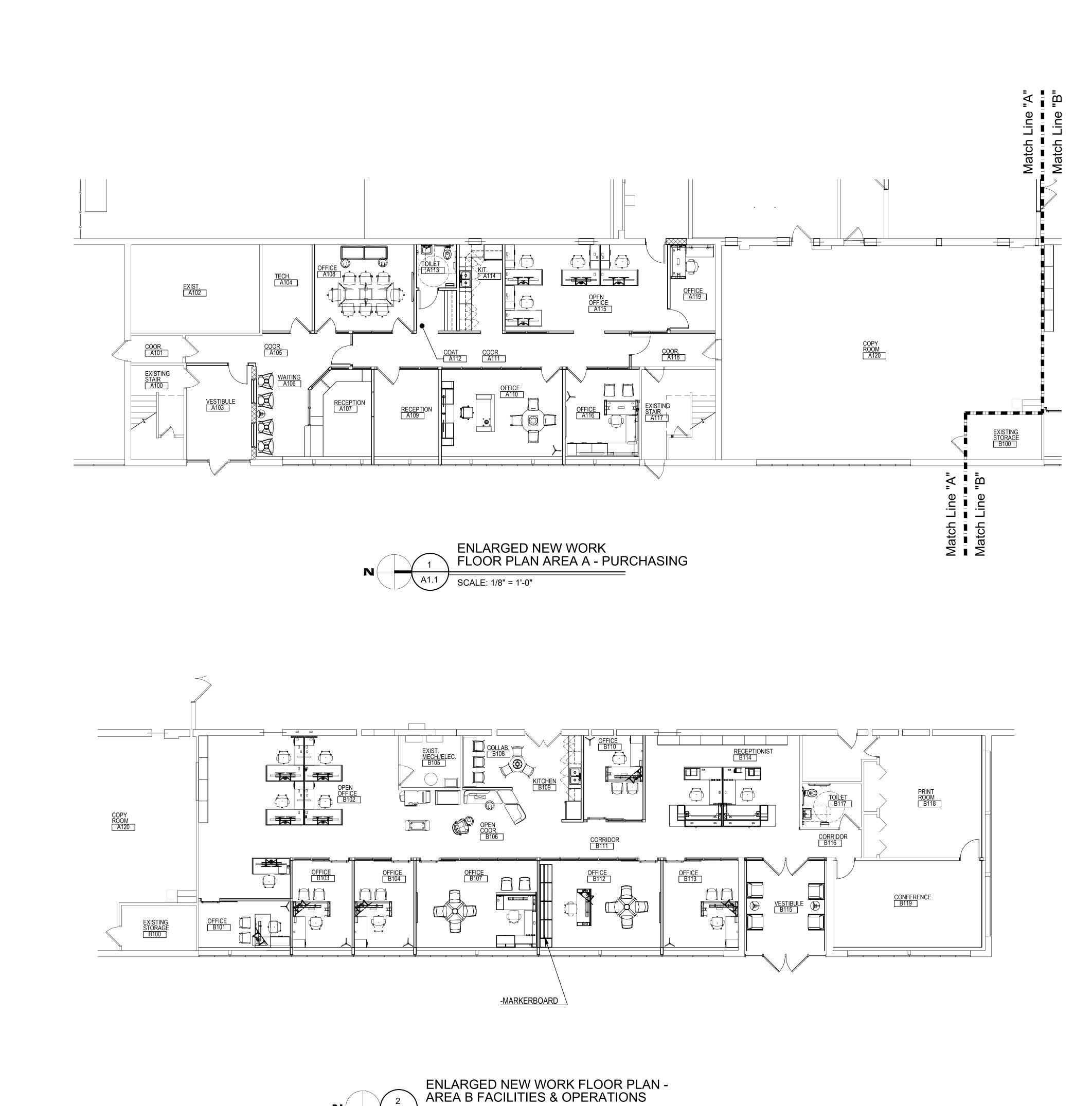
**ন** > FLOOR FINISH PLAN

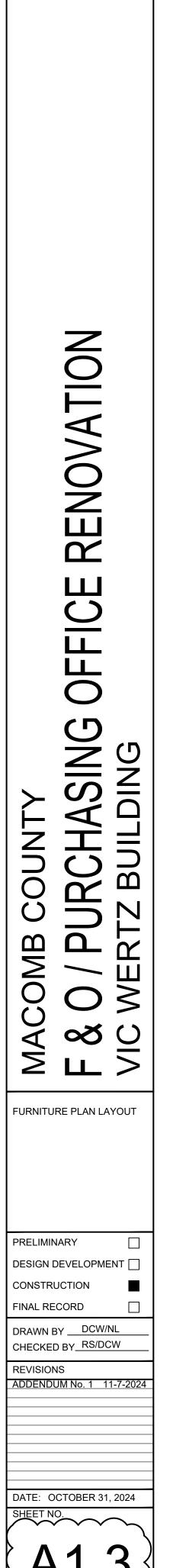
PRELIMINARY DESIGN DEVELOPMENT CONSTRUCTION

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JOB NO 242053

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RENOVA. OFFICE O / PURCHASING (
WERTZ BUILDING MACOMB F & 0 / PU VIC WERT REFLECTED CEILING PLAN

WAKELY ASSOCIATES, INC.

30500 VAN DYKE AVENUE

WARREN, MICHIGAN 48093

ARCHITECTS

SUITE 209

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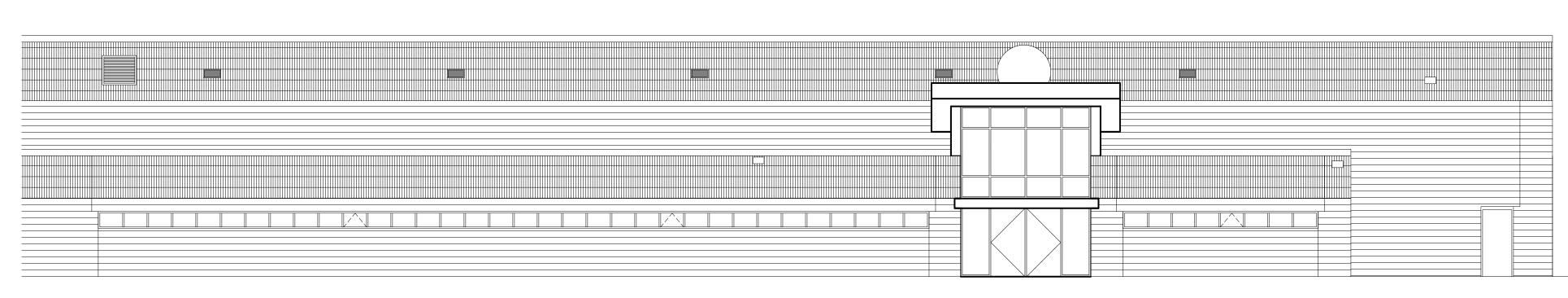
PRELIMINARY

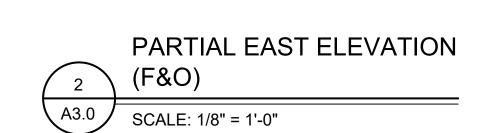
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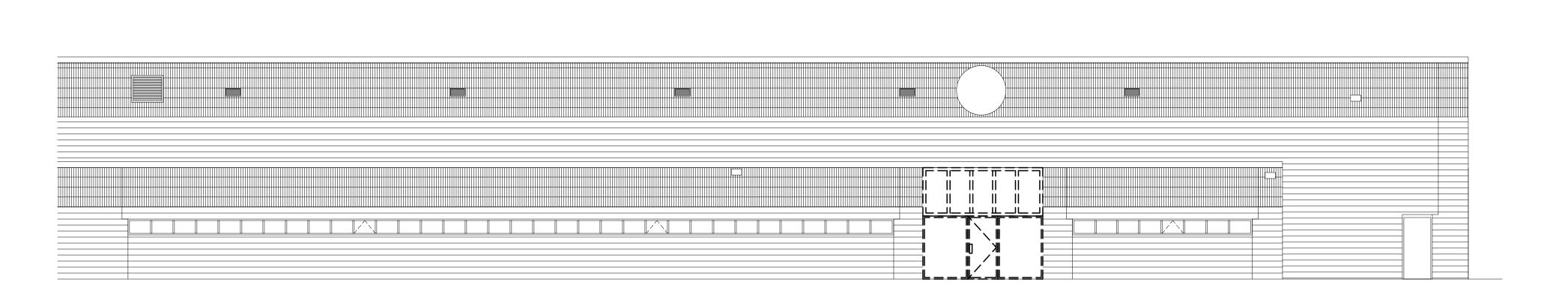
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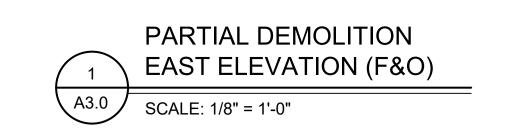
DATE: OCTOBER 31, 2024 

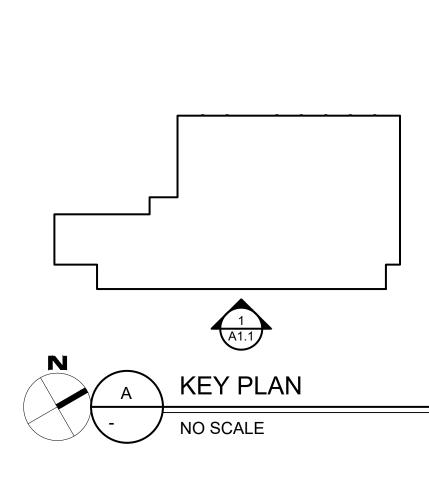
<sup>JOB NO</sup>242053











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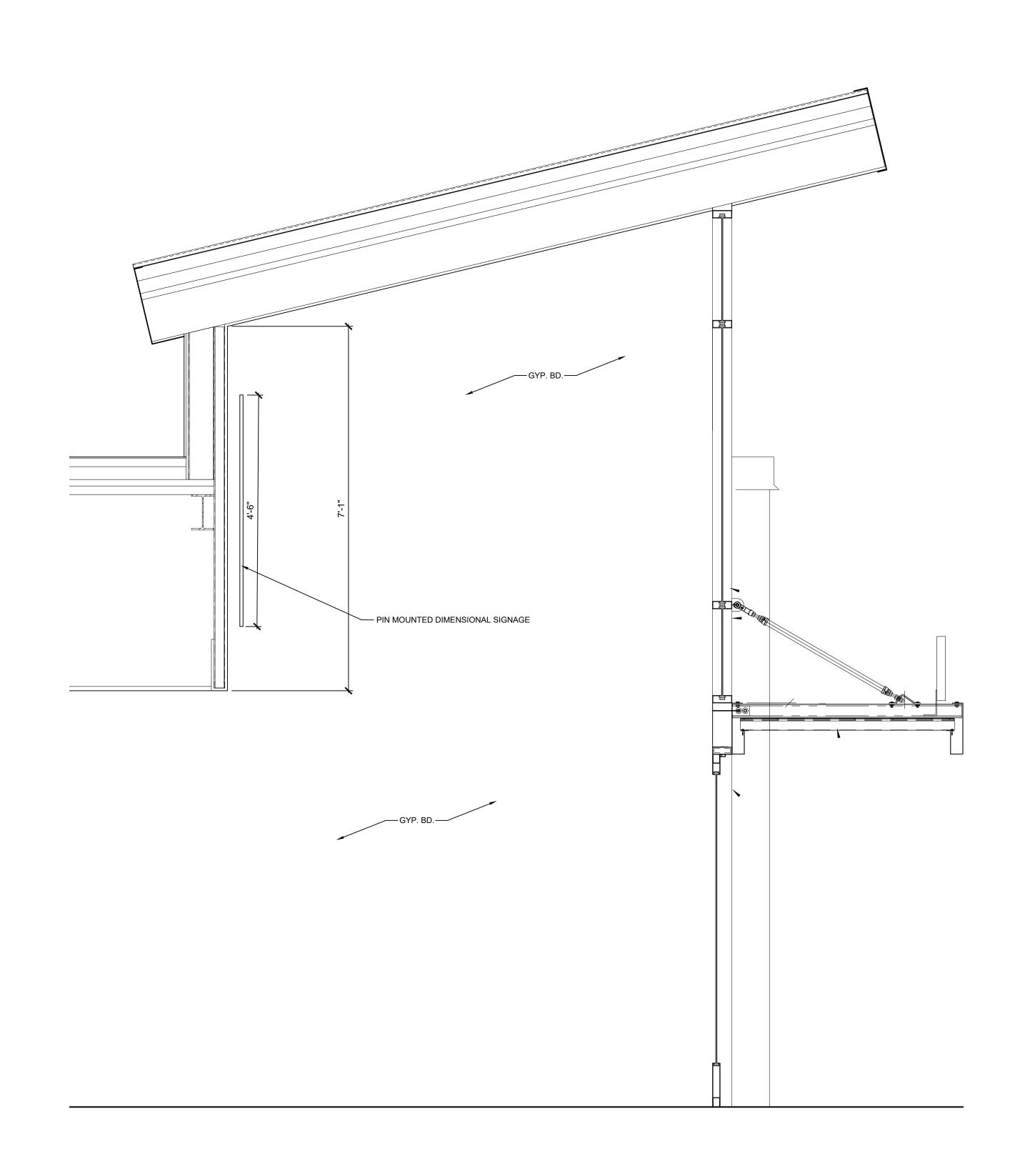
DATE: OCTOBER 31, 2024

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<sup>JOB NO</sup>242053

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PRELIMINARY

CONSTRUCTION

FINAL RECORD

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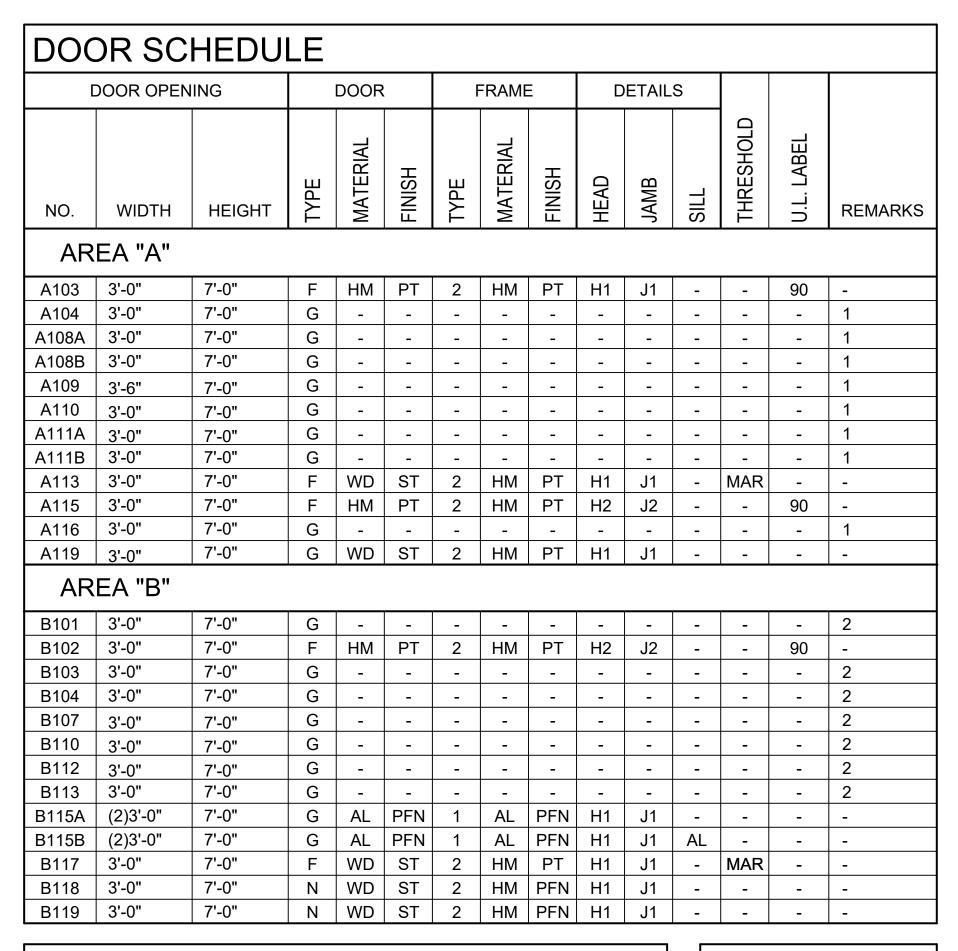
REVISIONS
ADDENDUM No. 1 11-7-2024

DATE: OCTOBER 31, 2024

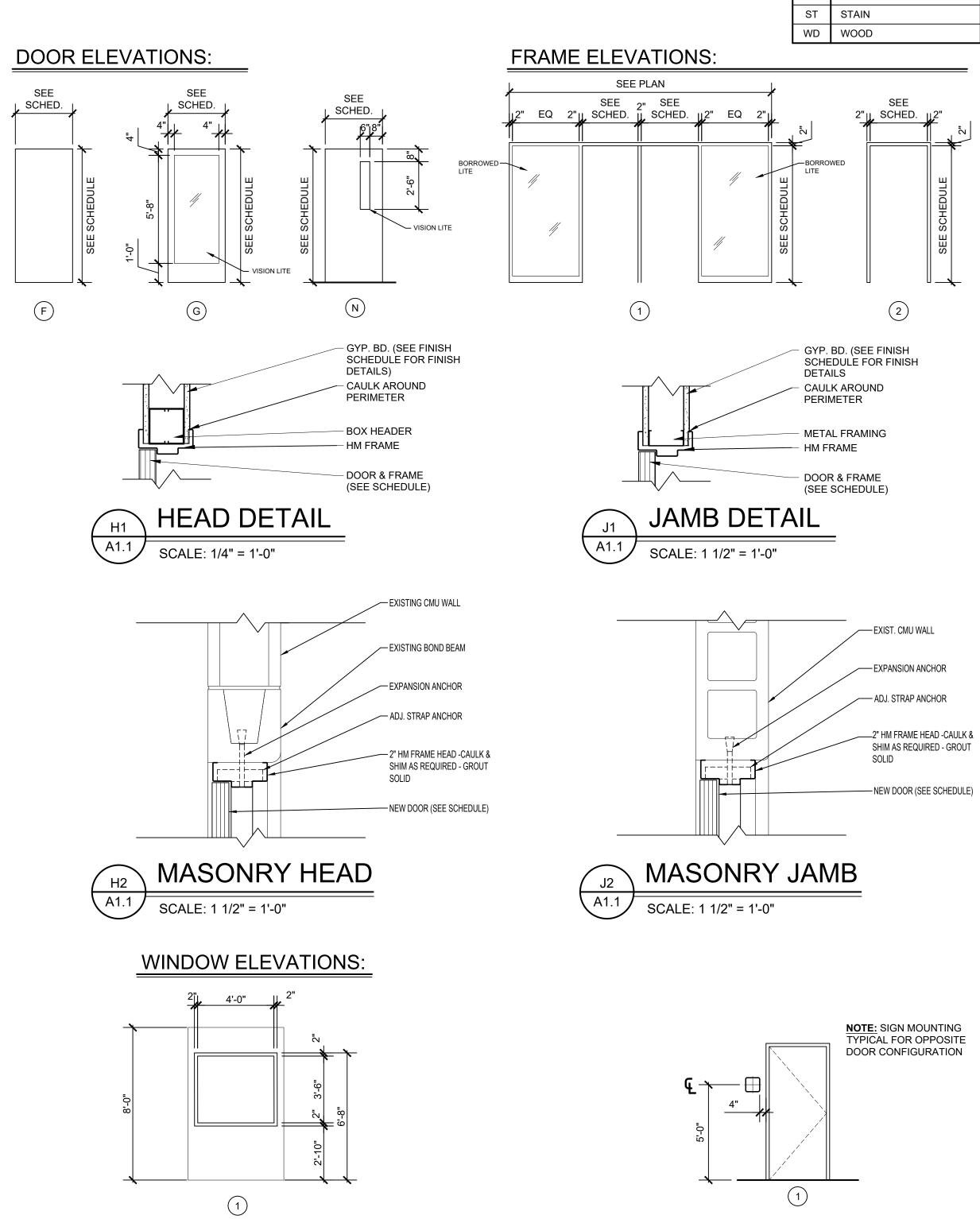
SHEET NO.

A4.0

JOB NO.
242053



RE	EMARKS - DOOR SCHEDULE	ABE	BREVIATIONS
1	SWING DOOR, FRAME, AND HARDWARE PROVIDED BY DEMOUNTABLE PARTITION COMPANY	AL	ALUMINUM
2	SLIDING DOOR, FRAME, AND HARDWARE PROVIDED BY DEMOUNTABLE PARTITION COMPANY	НМ	HOLLOW METAL
3	-	PFN	PRE-FINISHED
		PT	PAINT
		MAR	MARBLE
		ST	STAIN



\ MOUNTING DETAILS

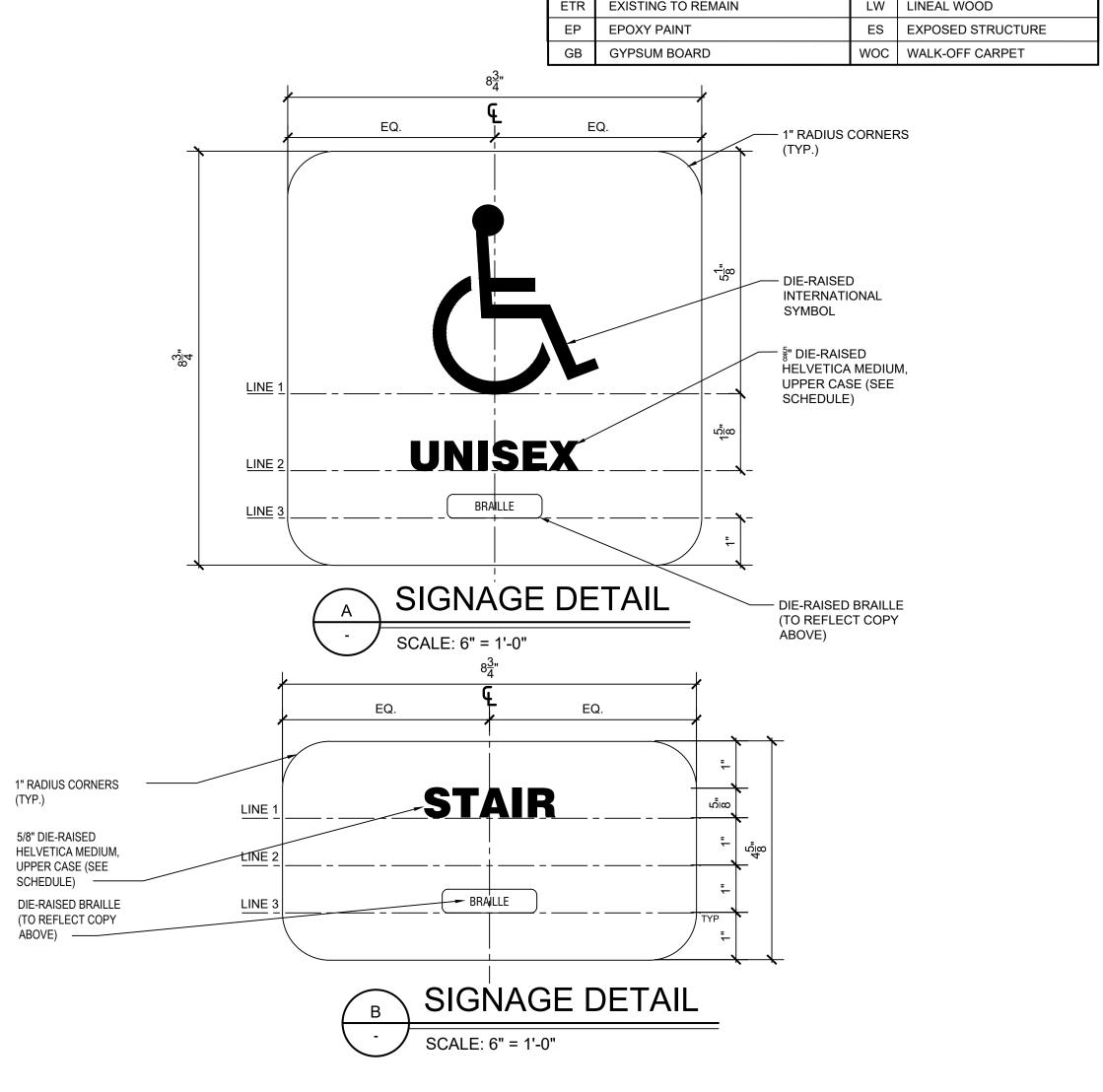
SCALE: 1/4" = 1'-0"

					WALLS	S		CEILIN	IG	
NO.	ROOM NAME	FLOOR	BASE	NORTH	SOUTH	WEST	EAST	MAT'L	HGT.	REMARKS
Α	REA "A" - PURCI	HASING								
A100	EXISTING STAIR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	-
A101	CORRIDOR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	-
A102	EXIST. STORAGE	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	-
A103	VESTIBULE	WOC	CT	PT	PT	PT	PT	ACT	9'-0"	1,3,4
A104	TECH.	LVT	RB	PT	PT	PT	PT	ETR	ETR	1,3,4,5
A105	CORRIDOR	LVT	RB	PT	PT	PT	PT	ACT	8'-0"	1,3,4,5
A106	WAITING	LVT	RB	PT	PT	PT	PT	ACT	8'-0"	1,4,5
A107	RECEPTION	CPT	RB	PT	DP	GL,PT	DP	ACT	9'-0"	1,2,4,5
A108	OFFICE	CPT	RB	PT	PT	PT	DP	ACT	9'-0"	1,2,3,4,5
A109	RECEPTION	CPT	RB	PT	PT	DP	PT	ACT	9'-0"	1,2,4,5
A110	OFFICE	CPT	RB	PT	PT	DP	PT	ACT	9'-0"	1,2,4,5
A111	CORRIDOR	LVT	RB	DP	DP	DP	DP	ACT	8'-0"	1,2,4,5
A112	COAT CLOSET	LVT	RB	PT	PT	PT	DP	ACT	8'-0"	1,2,4,5
A113	TOILET	СТ	CT	СТ	СТ	СТ	СТ	ACT	8'-0"	1,3,4,5
A114	KITCHEN	LVT	RB	PT	PT	PT	DP	ACT	8'-0"	1,2,3,4,5
A115	OPEN OFFICE	CPT	RB	PT	PT	PT	DP	ACT	9'-0"	1,2,3,4,5
		CPT	RB	PT	PT	DP	PT	ACT	9'-0"	1,2,3,4,5
A117	EXISTING STAIR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	
A118		LVT		PT	DP	DP	PT,DP	ACT	8'-0"	1,2,3,4,5
			RB	PT	PT		DP			
		CPT	RB			PT		ACT	9'-0"	1,2,3,4,5
		TITE ANI	RB D ODED	ATION	ETR	ETR	ETR	ACT	ETR	
	REA "B" - FACILI	· · · · · · · · · · · · · · · · · · ·		T						T
B100		ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	-
		CPT	RB	DP	PT	DP	PT	ACT	9'-0"	1,2,3,4,5
B102	OPEN OFFICE	CPT	RB	PT	PT	PT	DP	LW	8'-8"	2,3,4,5
		CPT	RB	DP 	DP	DP	PT	ACT	9'-0"	2,3,4,5
B104	OFFICE	CPT	RB	DP	DP	DP 	PT	ACT	9'-0"	2,3,4,5
B105		ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	-
B106		LVT	RB	PT	PT	PT	DP	ES	ETR	1,3,4,5,6
		CPT	RB	DP 	DP	DP 	PT	ACT	9'-0"	2,3,4,5
B108		CPT	RB	PT	PT	PT	PT	ES/PT	ETR	1,3,4,5
B109	KITCHEN	LVT	RB	PT	PT	PT	PT	ES/PT	ETR	1,3,4,5
B110		CPT	RB	DP	PT	PT	DP	ACT	9'-0"	1,2,3,4,5
B111	CORRIDOR	LVT	RB	PT	PT	DP	DP	ES/PT	ETR	1,3,4,5,6
B112	OFFICE	CPT	RB	DP	DP	DP	PT	ACT	9'-0"	1,2,3,4,5
B113	OFFICE	CPT	RB	PT	DP	DP	PT	ACT	9'-0"	1,2,3,4,5
B114	RECEPTIONIST	CPT	RB	PT	DP	PT	PT	LW	8'-8"	2,3,4,5
B115	VESTIBULE	СТ	CT	ETR	ETR	PT/GL	GL	ES/PT	ETR	1,3,4,6
	CORRIDOR	LVT	RB	PT	PT	PT	PT/GL	ES/PT		1,3,4,6
B116	CORRIDOR		ווט							1 ' ' '
B116 B117	TOILET	CT	CT	CT/PT	CT/PT	CT/PT	CT/PT	ACT	ETR	3,4
B117	TOILET								ETR ETR	

SIG	SIGNAGE SCHEDULE									
QTY	PLAN NO.	TYPE	MOUNTING	TEXT						
ARE	A "A" - PU	RCH	ASING							
1	A100	Α	1	LINE 1: STAIR						
1	A113	Α	1	LINE 1: UNISEX						
1	A117	Α	1	LINE 1: STAIR						
AREA "B" - FACILITIES AND OPERATION										
1	B117	Α	1	LINE 1: UNISEX						

RE	EMARKS - ROOM SCHEDULE
1	ALL GYPSUM BOARD TO BE 5/8" HIGH ABUSE BOARD UNLESS OTHERWISE NOTED.
2	DEMOUNTABLE PARTITION COMPANY TO PROVIDE CEILING CLIPS TO ANCHOR NEW CEILINGS TO NEW DEMOUNTABLE PARTITIONS
3	PATCH AND REPAINT ALL EXISTING WALLS REQUIRED.
4	PROVIDE AND INSTALL ALL REQUIRED FLOOR TRANSITIONS, PIECES, AND THRESHOLDS
5	ALL DEMOUNTABLE PARTITIONS DO NOT HAVE RUBBER BASE INSTALLED. RUBBER BASE IS ONLY ON CONSTRUCTION WALLS
6	IN ALL OPEN AREAS, PAINT ALL EXPOSED DECK, STRUCTURE, DUCTWORK, CONDUIT, ETC. COMPLETE FOR A FINISHED PRODUCT

AE	BREVIATIONS		
ACT	ACOUSTICAL CEILING TILE AND GRID	PT	PAINT
CMU	CONCRETE MASONRY UNITS	GL	GLASS
СТ	CERAMIC TILE	DP	DEMOUNTABLE PARTITION
ETR	EXISTING TO REMAIN	LW	LINEAL WOOD
EP	EPOXY PAINT	ES	EXPOSED STRUCTURE
GB	CVPSLIM BOARD	WOC	WALK-OFF CARPET





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> RENOVA. OFFICE URCHASING (TZ BUILDING <u>∞</u> ට DOOR, FINISH, AND SIGNAGE SCHEDULES

PRELIMINARY

DESIGN DEVELOPMENT CONSTRUCTION FINAL RECORD DRAWN BY \_\_\_\_DCW/NL CHECKED BY RS/DCW

REVISIONS ADDENDUM No. 1 11-7-2024

DATE: OCTOBER 31, 2024 SHEET NO. 242053

MEC	HANICAL ABBREVIATIONS	MECH	HANICAL ABBREVIATIONS	MECH	HANICAL ABBREVIATIONS	М	ECHANICAL SYMBOLS
ABBREV.	DESCRIPTION	ABBREV.	DESCRIPTION	ABBREV.	DESCRIPTION	ABBREV.	DESCRIPTION
AAV	AUTOMATIC AIR VENT / AIR ADMITTANCE VALVE	HR	HOUR	UR	URINAL	<b>├</b> ── <del>४</del>	RECTANGULAR TAKE—OFF (SINGLE LINE)
AD	ACCESS DOOR	HTG	HEATING	VD	VOLUME DAMPER (MANUALLY ADJUSTABLE)	<u></u>	, , ,
AE	AIR EXTRACTOR	HYD	HYDRANT	VTR	VENT THRU ROOF		RECTANGULAR TAKE—OFF (DOUBLE LINE)
AFF	ABOVE FINISHED FLOOR	HZ	HERTZ	W	WASTE	<b>\</b>	ROUND TAKE-OFF (SINGLE LINE)
APD ASR	AIR PRESSURE DROP  AUTOMATIC SPRINKLER RISER	ID IE	INSIDE DIAMETER INVERT ELEVATION	₩&V WB	WASTE AND VENT WET BULB TEMPERATURE		ROUND TAKE-OFF (DOUBLE LINE)
BFP	BACKFLOW PREVENTER	IN	INCHES	WC	WATER CLOSET		COIN IN FITTING (WITH VOLUME DAMPED)
ВНР	BRAKE HORSEPOWER	INST	INSTALLED	WG	WATER GAUGE		SPIN-IN FITTING (WITH VOLUME DAMPER)
BOD	BOTTOM OF DUCT	INV	INVERT	WH	WALL HYDRANT		ELBOW (WITH TURNING VANES)
BTU	BRITISH THERMAL UNIT	ISP	INTERNAL STATIC PRESSURE				RADIUS RECTANGULAR ELBOW
BTUH	BRITISH THERMAL UNITS PER HOUR	IW	INDIRECT WASTE				DADILIC BOLIND EL DOW
BWV	BACKWATER VALVE	KW	KILOWATT	MECH	ANICAL PIPING SYMBOLS		RADIUS ROUND ELBOW
CAV	CAPACITY  CONSTANT AIR VOLUME	LAT LAV	LEAVING AIR TEMPERATURE  LAVATORY	ABBREV.	DESCRIPTION		RECTANGULAR ELBOW UP
CAV CFH	CONSTANT AIR VOLUME  CUBIC FEET PER HOUR	LBS/HR	POUNDS PER HOUR		PIPE ELBOW UP		ROUND ELBOW UP
CFM	CUBIC FEET PER MINUTE	LDB	LEAVING DRY BULB TEMPERATURE	<del></del>	PIPE ELBOW DOWN		RECTANGULAR ELBOW DOWN
CIRC	CIRCULATING	LRA	LOCKED ROTOR AMPS	<del></del>	PIPE TEE DOWN		RECTANGULAR ELBOW DOWN
CLG	COOLING	LWB	LEAVING WET BULB TEMPERATURE	<b></b>	DIRECTION OF FLOW		ROUND ELBOW DOWN
СО	CLEAN OUT	MAV	MANUAL AIR VENT	——————————————————————————————————————	UNION		CONCENTRIC TRANSITION (DOUBLE LINE)
CONT	CONTINUATION OR CONTINUED	MAX	MAXIMUM		STRAINER	<b>&gt;&gt;</b>	CONCENTRIC TRANSITION (SINGLE LINE)
CONV	CONVECTOR	MBH	1000 BRITISH THERMAL UNITS PER HOUR		CONCENTRIC REDUCER	, ,	CONCENTRIC TRANSITION (SINGLE LINE)
CUH	CABINET UNIT HEATER  CONTROL VALVE	MCA MECH	MINIMUM CIRCUIT AMPACITY  MECHANICAL	——————————————————————————————————————	ECCENTRIC REDUCER  EXPANSION JOINT		ECCENTRIC TRANSITION (DOUBLE LINE)
DB	DRY BULB TEMPERATURE	MFR	MANUFACTURER		FLEXIBLE CONNECTION	<b>├</b>	ECCENTRIC TRANSITION (SINGLE LINE)
DEG	DEGREES	МН	MANHOLE	<del></del>	PIPE ANCHOR	R	INCLINED RISE IN DIRECTION OF AIR FLOW
DDC	DIRECT DIGITAL CONTROL	MIN	MINIMUM		PIPE GUIDE	· _ ·	(DOUBLE LINE)
DN	DOWN	MISC	MISCELLANEOUS		PIPE CAP OR PLUG	<u> </u>	INCLINED RISE IN DIRECTION OF AIR FLOW (SINGLE LINE)
DTC	DRAIN TILE CONNECTION	MOD	MOTOR OPERATED DAMPER (AUTOMATIC)	——⋈——	ISOLATION VALVE	D	INCLINED DROP IN DIRECTION OF AIR FLOW (DOUBLE LINE)
DWH	DOMESTIC WATER HEATER	MOP	MAXIMUM OVER-CURRENT PROTECTION		CIRCULATING PUMP	5 1 D	INCLINED DROP IN DIRECTION OF AIR FLOW
(E) EA/EXH	EXISTING  EXHAUST AIR	N.C. NIC	NOISE CRITERIA  NOT IN CONTRACT	—— <del> </del>	GLOBE VALVE BALL VALVE	<del>} + + + &gt;</del>	(SINGLE LINE)
EAT	ENTERING AIR TEMPERATURE	NC	NORMALLY CLOSED		BUTTERFLY VALVE	<u> </u>	FLEXIBLE CONNECTION
EDB	ENTERING DRY BULB TEMPERATURE	NO	NORMALLY OPEN	<b>⅓</b>	ANGLE VALVE		FLEXIBLE DUCT CONNECTION TO SUPPLY DIFFUSER
EF	EXHAUST FAN	NOM	NOMINAL	<b></b>	CHECK VALVE (SWING)	⊥ <sub>∕</sub> L	BITTOSER
EJ	EXPANSION JOINT	OA	OUTSIDE AIR		CHECK VALVE (SPRING)	<b>-</b>	SUPPLY DIFFUSER
EL	ELEVATION	OBD	OPPOSED BLADE DAMPER	——I <sub>4</sub> I——	PLUG VALVE		LINEAR SLOT DIFFUSER
ELECT	ELECTRICAL	OC	ON CENTER / CENTER TO CENTER	——————————————————————————————————————	NEEDLE VALVE	<b>S</b>	RETURN OR EXHAUST GRILLE
EMS ESP	ENERGY MANAGEMENT SYSTEM  EXTERNAL STATIC PRESSURE	OD OED	OUTSIDE DIAMETER  OPEN ENDED DUCT	——————————————————————————————————————	OUTSIDE SCREW AND YOKE VALVE (OS&Y) PRESSURE REGULATING VALVE		
EWB	ENTERING WET BULB TEMPERATURE	OED	OVERFLOW ROOF SUMP	X	SOLENOID VALVE	4	TRANSFER GRILLE
EWC	ELECTRIC WATER COOLER	OS&Y	OUTSIDE SCREW AND YOKE	——————————————————————————————————————	CONTROL VALVE (2-WAY / 3-WAY)		CROSS SECTION OF SUPPLY AIR DUCT
°F	DEGREES FAHRENHEIT	PD	PRESSURE DROP (FEET OF WATER)		CENTRIFUGAL FAN		CROSS SECTION OF EXHAUST OR RETURN AIR
FA	FACE AREA (COIL) / FREE AREA (LOUVER)	PRV	PRESSURE REDUCING VALVE	8	AUTOMATIC GAS SHUT-OFF VALVE		DUCT
FC	FLEXIBLE CONNECTION	PSIA	POUNDS PER SQUARE INCH - ABSOLUTE	oc	TRAP (PLAN VIEW)		EXISTING FIRE DAMPER (HORIZONTAL)
FD	FLOOR DRAIN	PSIG	POUNDS PER SQUARE INCH — GAUGE		FLOOR DRAIN / FUNNEL FLOOR DRAIN (PLAN VIEW)	_	NEW
FDC FH	FIRE DEPARTMENT CONNECTION  FIRE HYDRANT	PT RA	PRESSURE / TEMPERATURE PORT RETURN AIR		FLOOR DRAIN / FUNNEL FLOOR DRAIN (ELEVATION) ROOF SUMP		EXISTING FIRE DAMPER (VERTICAL)
FHC	FIRE HOSE CABINET	RH	RELATIVE HUMIDITY	—— co	CLEAN OUT (IN FLOOR)		NEW
FHR	FIRE HOSE RACK	REQD	REQUIRED	(CO	CLEAN OUT (IN LINE)		EXISTING SMOKE DAMPER
FHV	FIRE HOSE VALVE	REL.A	RELIEF AIR	wco	CLEAN OUT (WALL)		NEW
FLA	FULL LOAD AMPS	RPM	REVOLUTIONS PER MINUTE	BFP	BACKFLOW PREVENTER	7	EXISTING COMBINATION FIRE/SMOKE DAMPER
FLR	FLOOR	RPZ	REDUCED PRESSURE ZONE	M/M-M	WATER METER ASSEMBLY		NEW (VERTICAL)
FPM	FEET PER MINUTE	RS	ROOF SUMP	+	HOSE BIBB, WALL HYDRANT	_d	EXISTING COMBINATION FIRE/SMOKE DAMPER
FFD FFE	FUNNEL FLOOR DRAIN FINISHED FLOOR ELEVATION	SA SH	SUPPLY AIR SHOWER	<ul><li> </li><li> <td>DIRECTION OF PIPE PITCH  SPRINKLER HEAD (UPRIGHT)</td><td></td><td>NEW (HORIZONTAL)</td></li></ul>	DIRECTION OF PIPE PITCH  SPRINKLER HEAD (UPRIGHT)		NEW (HORIZONTAL)
FS	FLOOR SINK	SP	STATIC PRESSURE	$\odot$	SPRINKLER HEAD (SIDEWALL)		VOLUME DAMPER (MANUALLY ADJUSTABLE)
FT	FEET	SqFt / SF	SQUARE FOOT/SQUARE FEET	—FS	FLOW SWITCH	— – M	MOTORIZED DAMPER
FURN	FURNISHED	SS	SERVICE SINK	ď,	SIAMESE CONNECTION (YARD)		
FV	FACE VELOCITY	TC	TEMPERATURE CONTROL	$\rightarrow$	SIAMESE CONNECTION (WALL MOUNTED)	SD	SMOKE DETECTOR
FVC	FIRE VALVE CABINET	T & P	TEMPERATURE AND PRESSURE	⊢ <del>∐</del> 1	FIRE HYDRANT	(CO2)	CO2 SENSOR
GAL	GALLON	TSP	TOTAL STATIC PRESSURE	<u>`</u>	FLOW MEASURING DEVICE	T	THERMOSTAT OR
GPH GPM	GALLONS PER HOUR  GALLONS PER MINUTE	TYP UG	TYPICAL UNDERGROUND	<u>`</u>	BALANCING VALVE  COMBINATION FLOW MEASURING AND BALANCING DEVICE		TEMPERATURE SENSOR HUMIDISTAT OR
GРМ НВ	HOSE BIBB	UH	UNIT HEATER	⊠ ∏AAV	AUTOMATIC AIR VALVE	$\bigoplus$	HUMIDITY SENSOR
НО	HUB OUTLET	UL	UNDERWRITERS LABORATORY	L → MAV	MANUAL AIR VALVE	<b>√</b> ► -►	RETURN OR EXHAUST / SUPPLY AIR FLOW
				•			

HORSEPOWER

UNO UNLESS NOTED OTHERWISE

	PIPING LEGEND		DRAWING INDEX
ABBREV.	DESCRIPTION	SHT NO	DESCRIPTION
—— CA ——	COMPRESSED AIR PIPING	M0.00	MECHANICAL GENERAL INFORMATION
——CD——	CONDENSATE DRAIN PIPING	M1.00	MECHANICAL COMPOSITE FIRST AND SECOND FLOOR PLANS
——DT——	DRAIN TILE FIRE PROTECTION PIPING	PD1.10	PLUMBING DEMOLITION FIRST FLOOR PLAN
FOR	FUEL OIL RETURN PIPING	MD1.10	MECHANICAL DEMOLITION FIRST FLOOR PLAN
FOS	FUEL OIL SUPPLY PIPING	MD2.10	MECHANICAL DEMOLITION ROOF PLAN
——-G——	NATURAL GAS PIPING	P1.10	PLUMBING NEW WORK FIRST FLOOR PLAN
BCW	BOOSTED-DOMESTIC COLD WATER PIPING	M1.10	MECHANICAL NEW WORK FIRST FLOOR PLAN
BHW	BOOSTED-DOMESTIC HOT WATER PIPING	M2.10	MECHANICAL NEW WORK ROOF PLAN
CW	DOMESTIC COLD WATER PIPING	M5.00	MECHANICAL DETAILS
——NPCW——	NON POTABLE COLD WATER PIPING	M6 00	MECHANICAL SCHEDULES

----TW---- TEMPERED WATER PIPING

----PSAN---- PUMPED SANITARY PIPING

----ST---- STORM SEWER PIPING

----PST---- PUMPED STORM PIPING

----ORC---- OVERFLOW RAIN CONDUCTOR PIPING

——CHWR—— CHILLED WATER RETURN PIPING

——CHWS—— CHILLED WATER SUPPLY PIPING

——HHWR—— HEATING HOT WATER RETURN PIPING

——HHWS—— HEATING HOT WATER SUPPLY PIPING

-----RS------ REFRIGERANT SUCTION PIPING

----GXHS----- GEO HEAT EXCHANGE SUPPLY

-----LPS----- LOW PRESSURE STEAM PIPING

-----LPC----- LOW PRESSURE CONDENSATE PIPING

-----MA----- MEDICAL AIR PIPING

——PCR—— PUMPED STEAM CONDENSATE RETURN PIPING

----STM---- STEAM PIPING

----HGB---- HOT GAS BY-PASS PIPING

-----V------ VENT PIPING

-----HW----- DOMESTIC HOT WATER PIPING

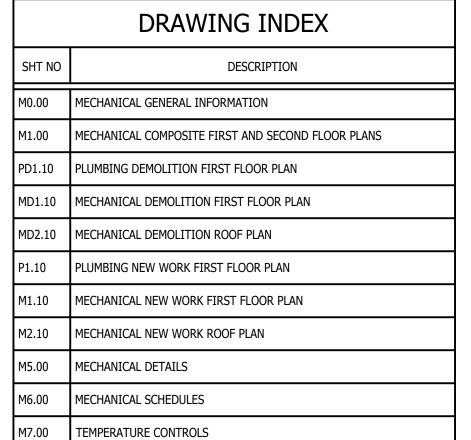
—HW(140°F)— DOMESTIC 140°F HOT WATER PIPING

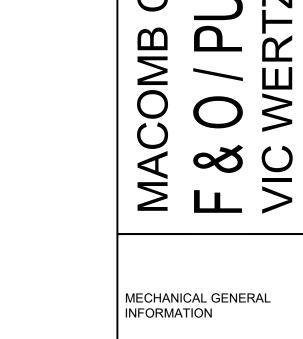
## DRAWING NOTATION

DESCRIPTION NEW WORK KEY NOTE NO. 1 DEMOLITION KEY NOTE NO. 1 EQUIPMENT TAG <u>AHU-1</u> S = SUPPLYR = RETURNAIR TERMINAL TAG: IE: DIFFUSER TYPE = S-1 E = EXHAUST NECK SIZE = 12x12 T = TRANSFER CFM = 150 (TYPICAL FOR 2)----- EXISTING DEVICES OR EQUIPMENT NEW OR MODIFIED DEVICES OR EQUIPMENT Y///S EXISTING SYSTEM COMPONENT TO BE REMOVED

POINT OF NEW CONNECTION

	APPLICABLE CODES AND REGULATIONS
YEAR	CODE
2015	MICHIGAN BUILDING CODE
2015	MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS
2021	MICHIGAN PLUMBING CODE
2021	MICHIGAN MECHANICAL CODE
2015	MICHIGAN UNIFORM ENERGY CODE
2015	INTERNATIONAL FUEL GAS CODE
2012	NFPA 101 WITH BFS AMENDMENTS





NOO

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DESIGN DEVELOPMENT	
CONSTRUCTION	
FINAL RECORD	
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WAKELY ASSOCIATES, INC.

30500 VAN DYKE AVENUE SUITE 209 WARREN, MICHIGAN 48093

UNIFIED BUILDING

SYSTEMS ENGINEERING

69 S. GRATIOT AVE. MT. CLEMENS, MI 48043

UBS PROJECT 007.24.06

RENOVA:

OFFICE

URCHASING TZ BUILDING

ARCHITECTS

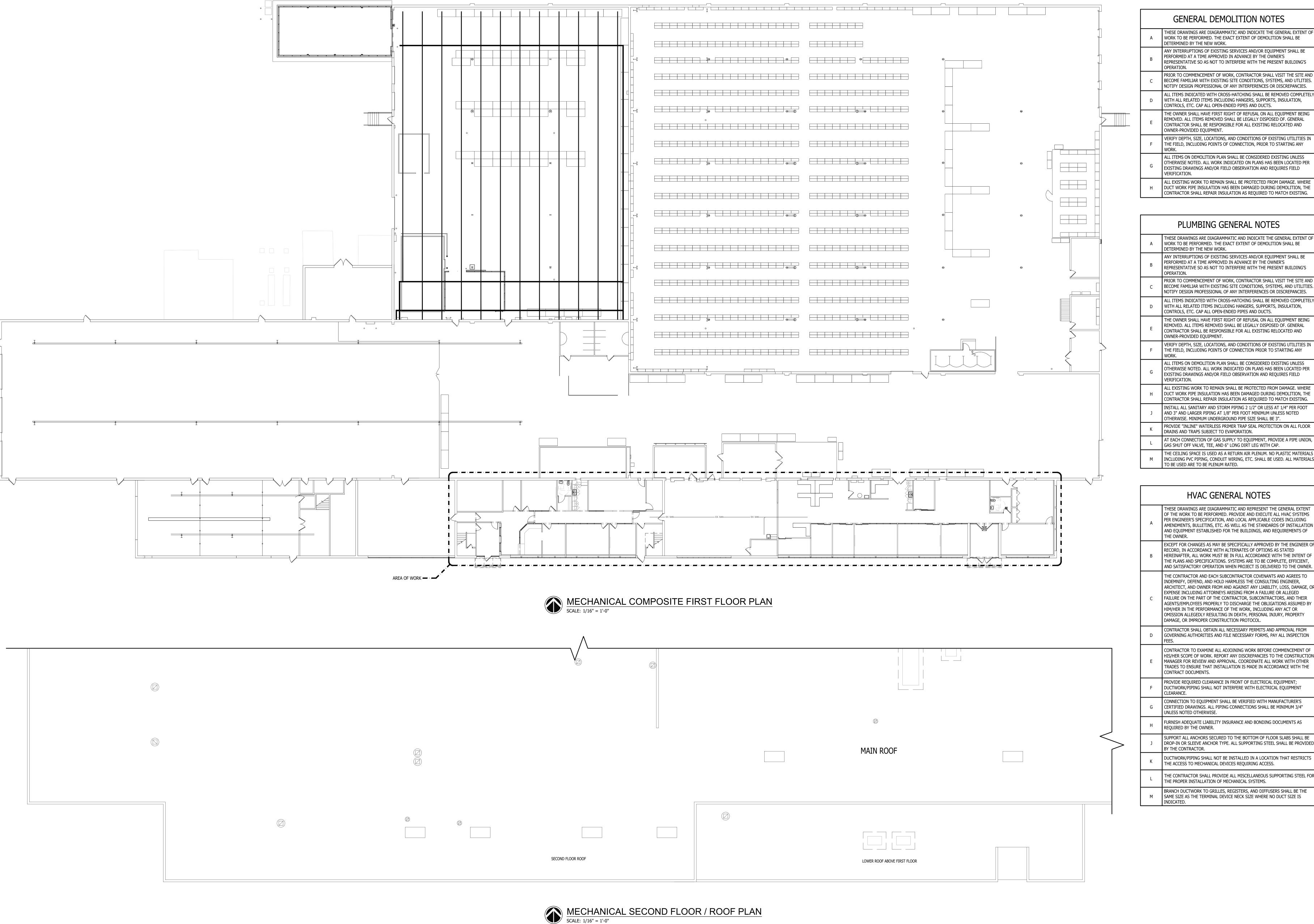
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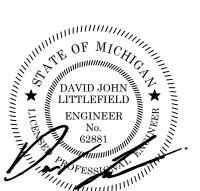
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DATE: OCTOBER 31, 2024 SHEET NO.

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GENERAL DEMOLITION NOTES

- THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF WORK TO BE PERFORMED. THE EXACT EXTENT OF DEMOLITION SHALL BE
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- ALL ITEMS INDICATED WITH CROSS-HATCHING SHALL BE REMOVED COMPLETELY WITH ALL RELATED ITEMS INCLUDING HANGERS, SUPPORTS, INSULATION, CONTROLS, ETC. CAP ALL OPEN-ENDED PIPES AND DUCTS.
- THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL EQUIPMENT BEING REMOVED. ALL ITEMS REMOVED SHALL BE LEGALLY DISPOSED OF. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING RELOCATED AND OWNER-PROVIDED EQUIPMENT.
- VERIFY DEPTH, SIZE, LOCATIONS, AND CONDITIONS OF EXISTING UTILITIES IN THE FIELD, INCLUDING POINTS OF CONNECTION, PRIOR TO STARTING ANY
- ALL ITEMS ON DEMOLITION PLAN SHALL BE CONSIDERED EXISTING UNLESS OTHERWISE NOTED. ALL WORK INDICATED ON PLANS HAS BEEN LOCATED PER EXISTING DRAWINGS AND/OR FIELD OBSERVATION AND REQUIRES FIELD VERIFICATION.
- ALL EXISTING WORK TO REMAIN SHALL BE PROTECTED FROM DAMAGE. WHERE DUCT WORK PIPE INSULATION HAS BEEN DAMAGED DURING DEMOLITION, THE CONTRACTOR SHALL REPAIR INSULATION AS REQUIRED TO MATCH EXISTING.

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- DUCT WORK PIPE INSULATION HAS BEEN DAMAGED DURING DEMOLITION, THE CONTRACTOR SHALL REPAIR INSULATION AS REQUIRED TO MATCH EXISTING. INSTALL ALL SANITARY AND STORM PIPING 2 1/2" OR LESS AT 1/4" PER FOOT
- AND 3" AND LARGER PIPING AT 1/8" PER FOOT MINIMUM UNLESS NOTED OTHERWISE. MINIMUM UNDERGROUND PIPE SIZE SHALL BE 3".
- PROVIDE "INLINE" WATERLESS PRIMER TRAP SEAL PROTECTION ON ALL FLOOR DRAINS AND TRAPS SUBJECT TO EVAPORATION.
- AT EACH CONNECTION OF GAS SUPPLY TO EQUIPMENT, PROVIDE A PIPE UNION, GAS SHUT OFF VALVE, TEE, AND 6" LONG DIRT LEG WITH CAP.
- THE CEILING SPACE IS USED AS A RETURN AIR PLENUM. NO PLASTIC MATERIALS INCLUDING PVC PIPING, CONDUIT WIRING, ETC. SHALL BE USED. ALL MATERIALS TO BE USED ARE TO BE PLENUM RATED.

HVAC GENERAL NOTES

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- THE CONTRACTOR AND EACH SUBCONTRACTOR COVENANTS AND AGREES TO INDEMNIFY, DEFEND, AND HOLD HARMLESS THE CONSULTING ENGINEER, ARCHITECT, AND OWNER FROM AND AGAINST ANY LIABILITY, LOSS, DAMAGE, OR EXPENSE INCLUDING ATTORNEYS ARISING FROM A FAILURE OR ALLEGED FAILURE ON THE PART OF THE CONTRACTOR, SUBCONTRACTORS, AND THEIR AGENTS/EMPLOYEES PROPERLY TO DISCHARGE THE OBLIGATIONS ASSUMED BY HIM/HER IN THE PERFORMANCE OF THE WORK, INCLUDING ANY ACT OR OMISSION ALLEGEDLY RESULTING IN DEATH, PERSONAL INJURY, PROPERTY
- CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVAL FROM GOVERNING AUTHORITIES AND FILE NECESSARY FORMS, PAY ALL INSPECTION
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- PROVIDE REQUIRED CLEARANCE IN FRONT OF ELECTRICAL EQUIPMENT; DUCTWORK/PIPING SHALL NOT INTERFERE WITH ELECTRICAL EQUIPMENT CLEARANCE
- CONNECTION TO EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURER'S CERTIFIED DRAWINGS. ALL PIPING CONNECTIONS SHALL BE MINIMUM 3/4" UNLESS NOTED OTHERWISE.
- FURNISH ADEQUATE LIABILITY INSURANCE AND BONDING DOCUMENTS AS REQUIRED BY THE OWNER.
- SUPPORT ALL ANCHORS SECURED TO THE BOTTOM OF FLOOR SLABS SHALL BE DROP-IN OR SLEEVE ANCHOR TYPE. ALL SUPPORTING STEEL SHALL BE PROVIDED BY THE CONTRACTOR.
- DUCTWORK/PIPING SHALL NOT BE INSTALLED IN A LOCATION THAT RESTRICTS THE ACCESS TO MECHANICAL DEVICES REQUIRING ACCESS.
- THE CONTRACTOR SHALL PROVIDE ALL MISCELLANEOUS SUPPORTING STEEL FOR THE PROPER INSTALLATION OF MECHANICAL SYSTEMS.
- BRANCH DUCTWORK TO GRILLES, REGISTERS, AND DIFFUSERS SHALL BE THE M SAME SIZE AS THE TERMINAL DEVICE NECK SIZE WHERE NO DUCT SIZE IS

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SYSTEMS ENGINEERING 69 S. GRATIOT AVE. MT. CLEMENS, MI 48043 UBS PROJECT 007.24.06

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PLANS

MECHANICAL COMPOSITE

FIRST AND SECOND FLOOR

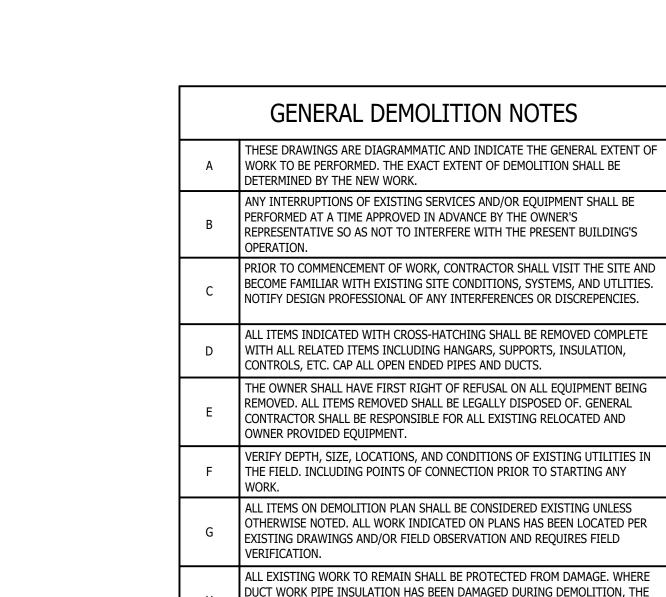
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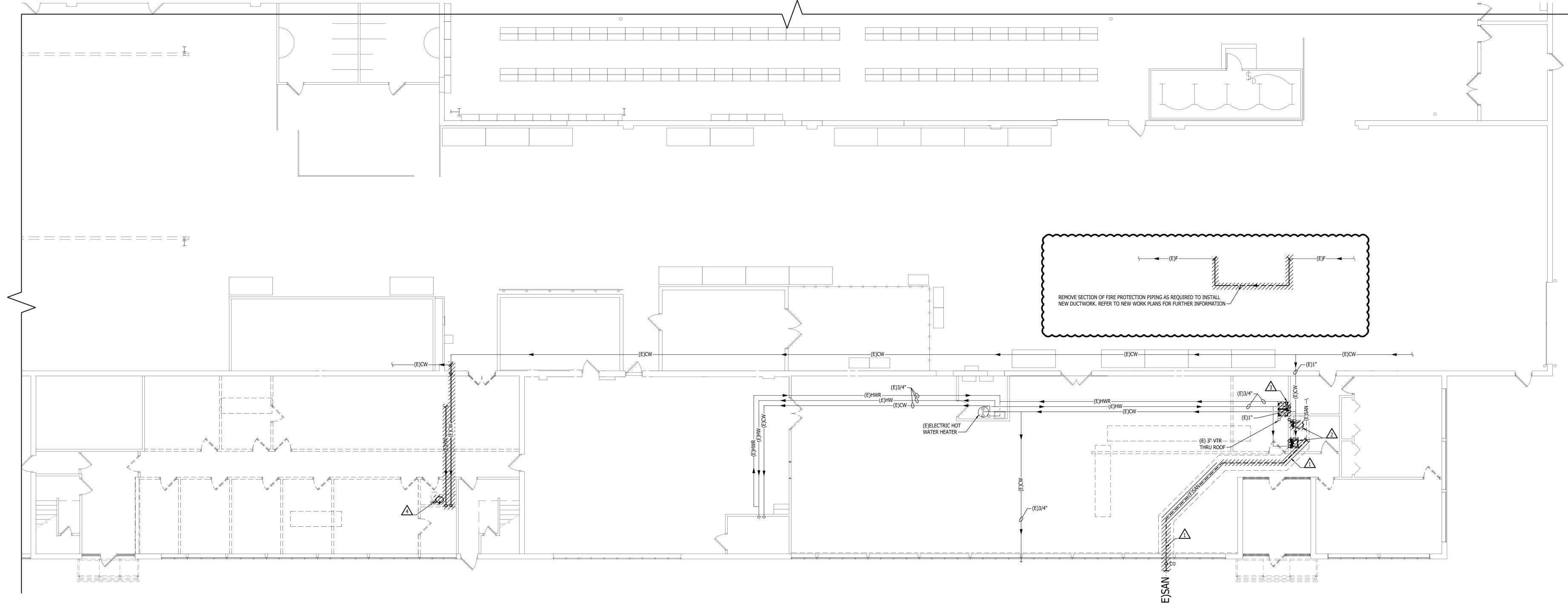


### △ DEMOLITION KEYED NOTES

- REMOVE SANITARY PIPING FROM OUTSIDE CLEANOUT TO EXTENTS SHOWN.
  FIELD VERIFY EXACT LOCATION AND SIZE OF PIPE PRIOR TO REPLACEMENT.
  CONTACT ENGINEER IF EXISTING CONDITIONS VARY GREATLY FROM WHAT IS INDICATED ON DOCUMENTS.
- REMOVE EXISTING PLUMBING FIXTURE AND ALL ASSOCIATED COMPONENTS COMPLETE. REMOVE COLD WATER, HOT WATER, SANITARY, AND VENT PIPING AS REQUIRED FOR NEW INSTALLATION.

CONTRACTOR SHALL REPAIR INSULATION AS REQUIRED TO MATCH EXISTING.

- REMOVE EXISTING KITCHEN SINK AND ALL ASSOCIATED COMPONENTS
  COMPLETE. SANITARY AND VENT PIPING IN WALL SERVING SINK SHALL REMAIN.
  RE-CONFIGURE SANITARY AS REQUIRED TO ALLOW FOR PUMPED SANITARY
  DISCHARGING INTO OUTLET TO REMAIN.
- REMOVE EXISTING PLUMBING FIXTURE AND ALL ASSOCIATED COMPONENTS COMPLETE. REMOVE SANITARY TO GROUND AND CAP. REMOVE COLD WATER PIPING AND HOT WATER TO SOURCE AND CAP.



PLUMBING DEMOLITION FIRST FLOOR PLAN

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

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PLUMBING DEMOLITION FIRST FLOOR PLAN

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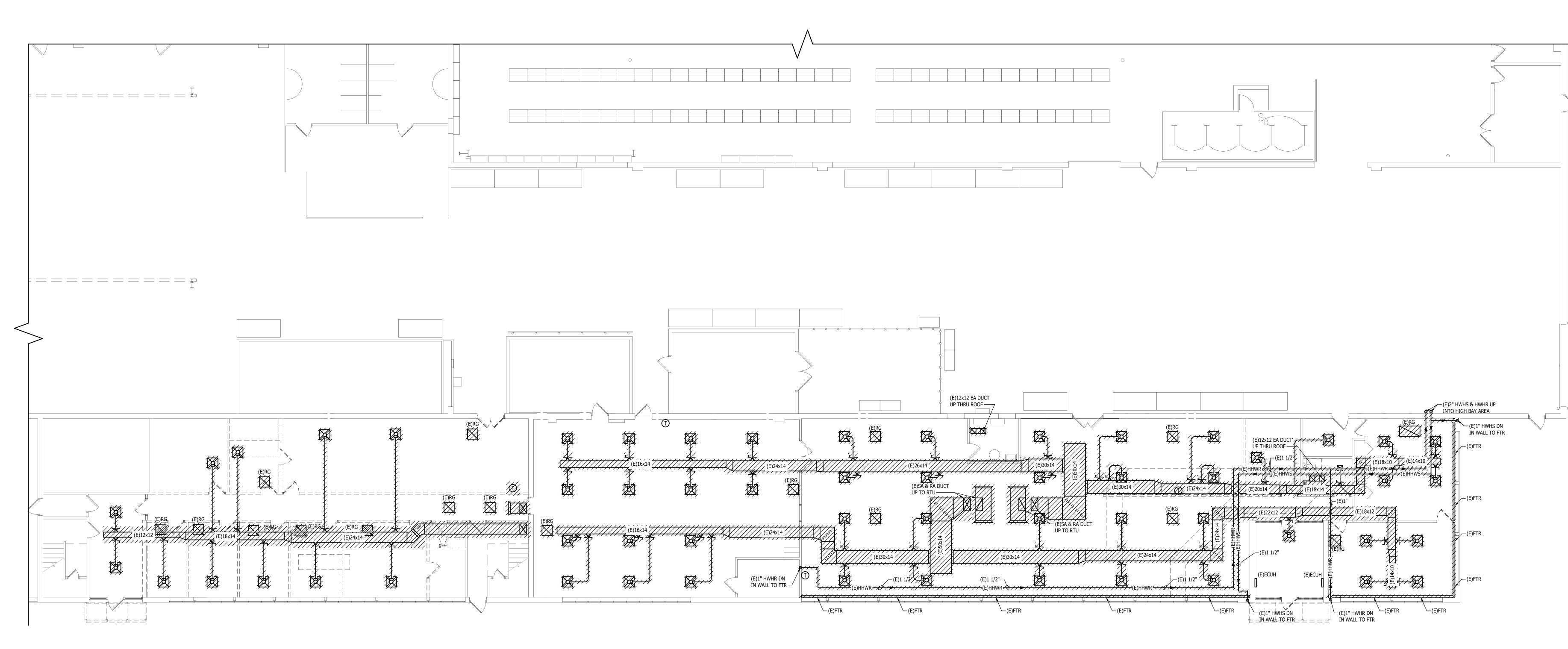
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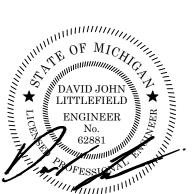
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MECHANICAL DEMOLITION FIRST FLOOR PLAN

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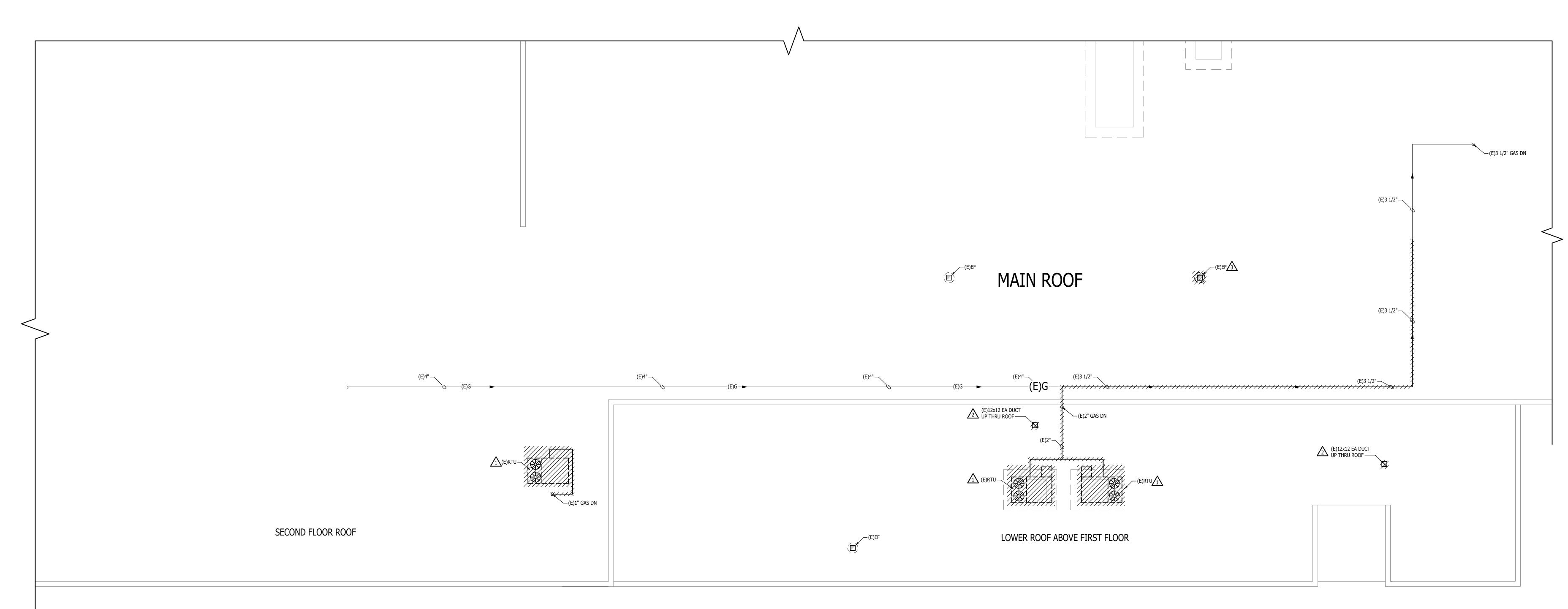
<sup>JOB NO</sup> 242053

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△ DEMOLITION KEYED NOTES

- DEMO ROOF TOP UNIT COMPLETE INCLUDING ALL DUCT WORK, CURB, CONTROLS
  AND ACCESSORIES. COORDINATE WITH ARCHITECTURAL FOR INFILL AND SEAL
  ROOF WEATHER TIGHT.
- DEMO EXHAUST DUCT COMPLETE INCLUDING ALL DUCT WORK, CURB, AND ACCESSORIES. COORDINATE WITH ARCHITECTURAL FOR INFILL AND SEAL ROOF WEATHER TIGHT.
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VATION

MACOMB COUNTY

F & O / PURCHASING OFFICE RENOVATION WERTZ BUILDING

MECHANICAL DEMOLITION ROOF PLAN

PRELIMINARY
DESIGN DEVELOPMENT

PRELIMINARY

DESIGN DEVELOPMENT 

CONSTRUCTION

FINAL RECORD

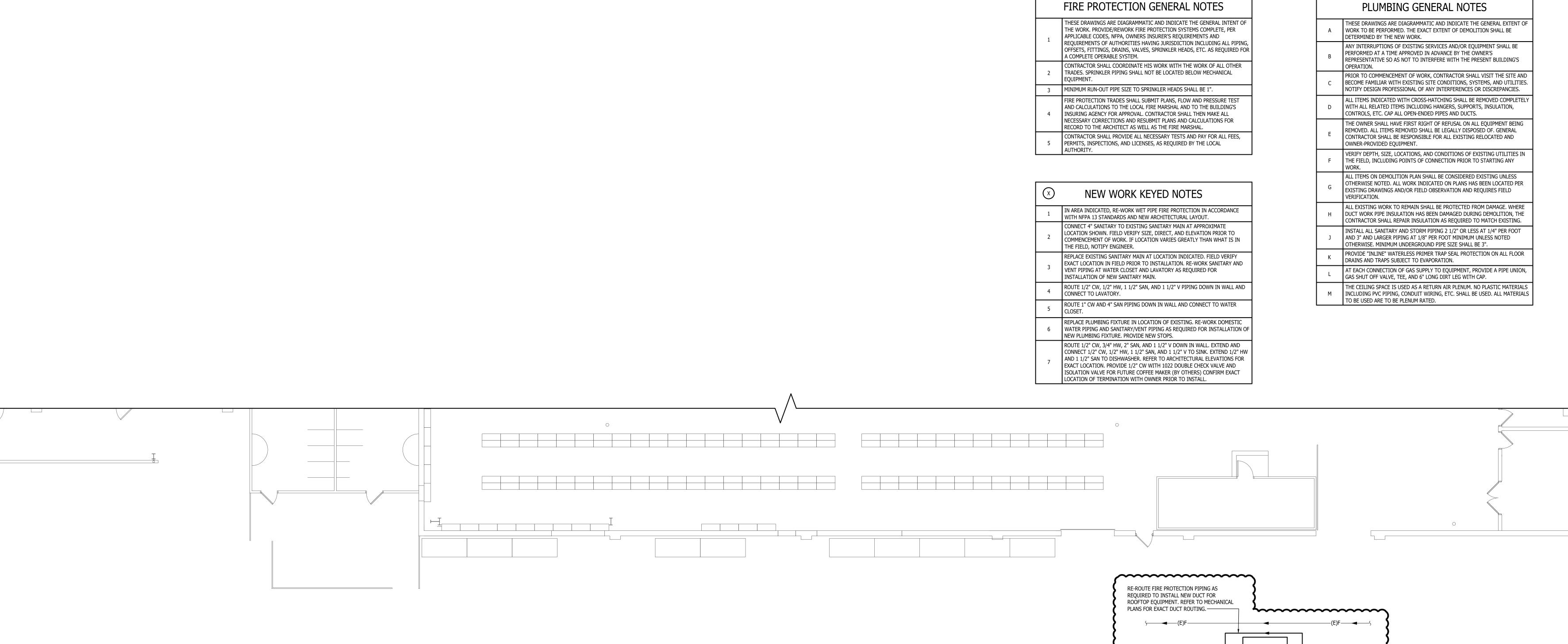
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PLUMBING NEW WORK FIRST FLOOR PLAN

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

(E)ELECTRIC HOT WATER HEATER —

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WARREN, MICHIGAN 48093

ARCHITECTS

SUITE 209

PH: 586.573.4100

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PLUMBING NEW WORK FIRST FLOOR PLAN

PRELIMINARY DESIGN DEVELOPMENT [

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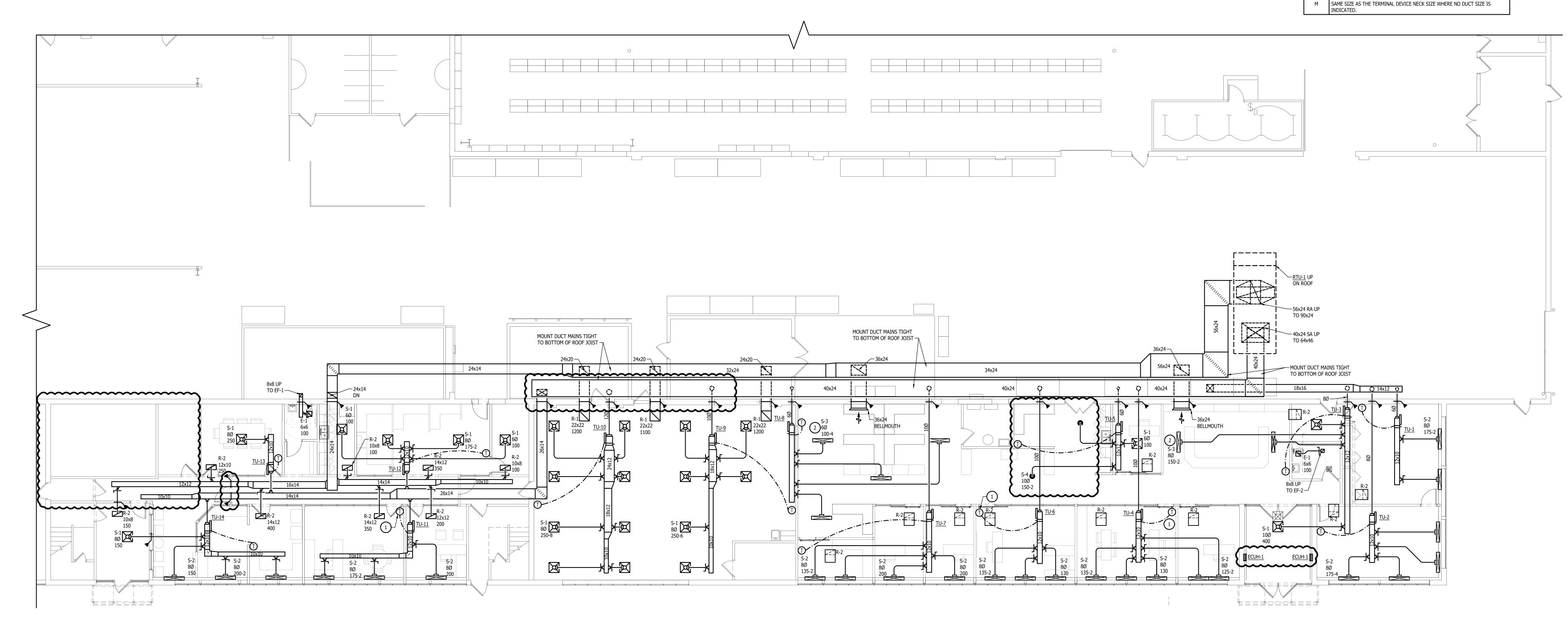
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THE PROPER INSTALLATION OF MECHANICAL SYSTEMS.



MECHANICAL NEW WORK FIRST FLOOR PLAN

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



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MECHANICAL NEW WORK FIRST FLOOR PLAN

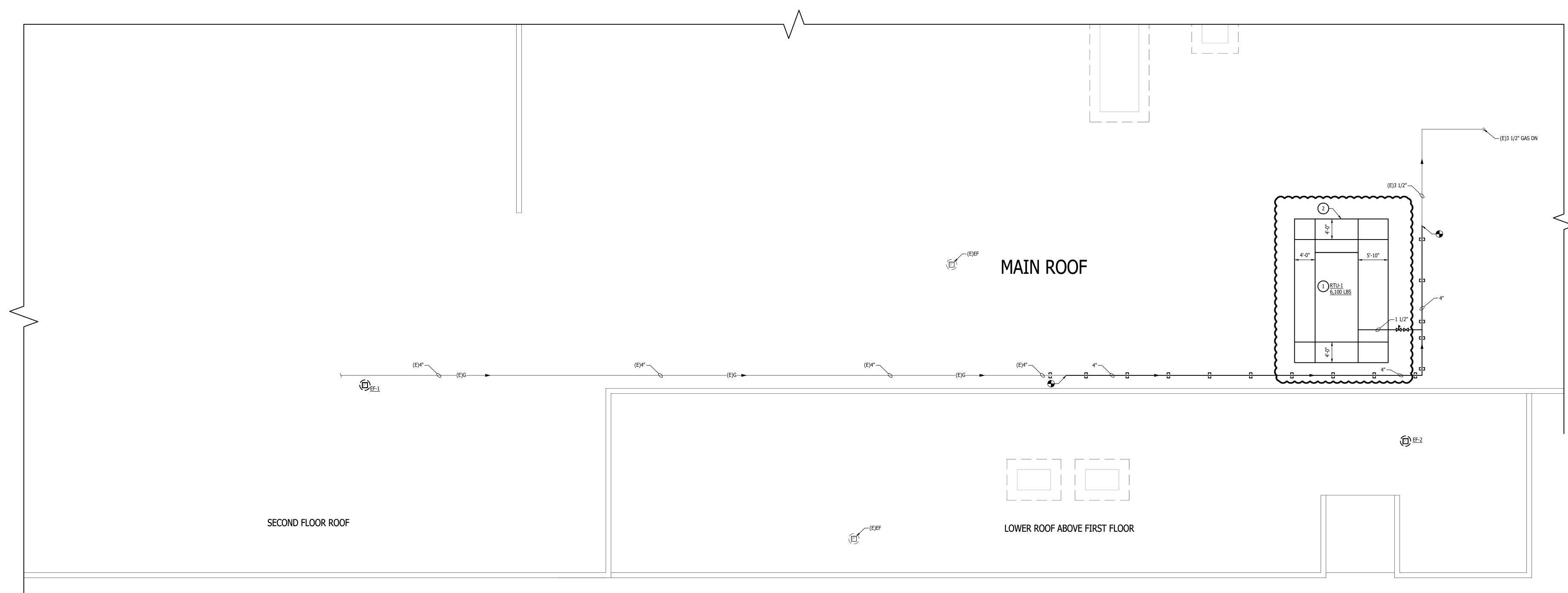
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- CONTRACTOR TO EXAMINE ALL ADJOINING WORK BEFORE COMMENCEMENT OF HIS/HER SCOPE OF WORK. REPORT ANY DISCREPANCIES TO THE CONSTRUCTION MANAGER FOR REVIEW AND APPROVAL. COORDINATE ALL WORK WITH OTHER TRADES TO ENSURE THAT INSTALLATION IS MADE IN ACCORDANCE WITH THE
- PROVIDE REQUIRED CLEARANCE IN FRONT OF ELECTRICAL EQUIPMENT; DUCTWORK/PIPING SHALL NOT INTERFERE WITH ELECTRICAL EQUIPMENT
- CERTIFIED DRAWINGS. ALL PIPING CONNECTIONS SHALL BE MINIMUM 3/4"
- DROP-IN OR SLEEVE ANCHOR TYPE. ALL SUPPORTING STEEL SHALL BE PROVIDED BY THE CONTRACTOR.
- DUCTWORK/PIPING SHALL NOT BE INSTALLED IN A LOCATION THAT RESTRICTS THE ACCESS TO MECHANICAL DEVICES REQUIRING ACCESS.
- THE CONTRACTOR SHALL PROVIDE ALL MISCELLANEOUS SUPPORTING STEEL FOR THE PROPER INSTALLATION OF MECHANICAL SYSTEMS.
- BRANCH DUCTWORK TO GRILLES, REGISTERS, AND DIFFUSERS SHALL BE THE SAME SIZE AS THE TERMINAL DEVICE NECK SIZE WHERE NO DUCT SIZE IS INDICATED.







WAKELY ASSOCIATES, INC. ARCHITECTS

30500 VAN DYKE AVENUE SUITE 209 WARREN, MICHIGAN 48093 PH: 586.573.4100 FX: 586.573.0822 www.WakelyAlA.com

SYSTEMS ENGINEERING 69 S. GRATIOT AVE. MT. CLEMENS, MI 48043

UBS PROJECT 007.24.06

RENOVA-JRCHASING OFFICE

Z BUILDING

MECHANICAL NEW WORK ROOF PLAN

PRELIMINARY DESIGN DEVELOPMENT

CONSTRUCTION FINAL RECORD

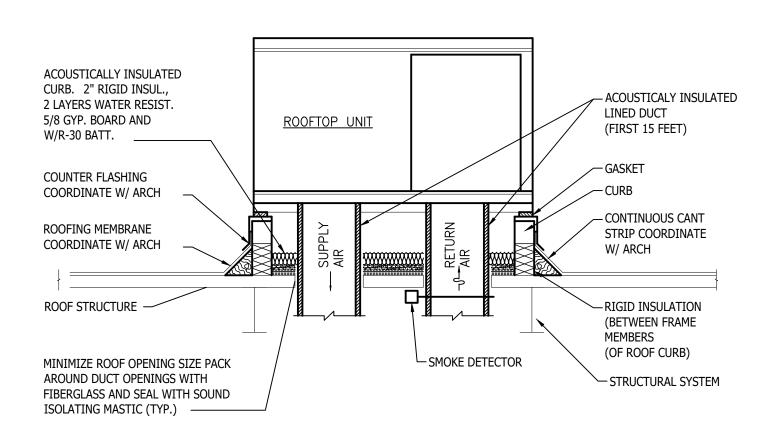
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ADDENDUM No. 1 11-7-2024

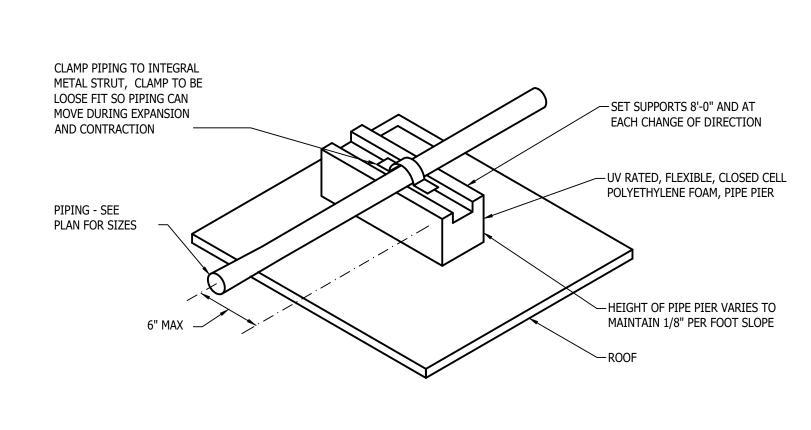
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# ELECTRIC WATER HEATER ON SHELF WITH EXPANSION TANK

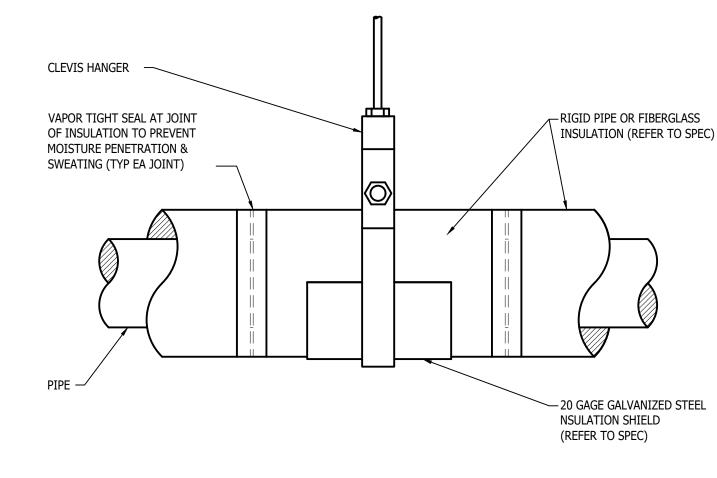
NO SCALE



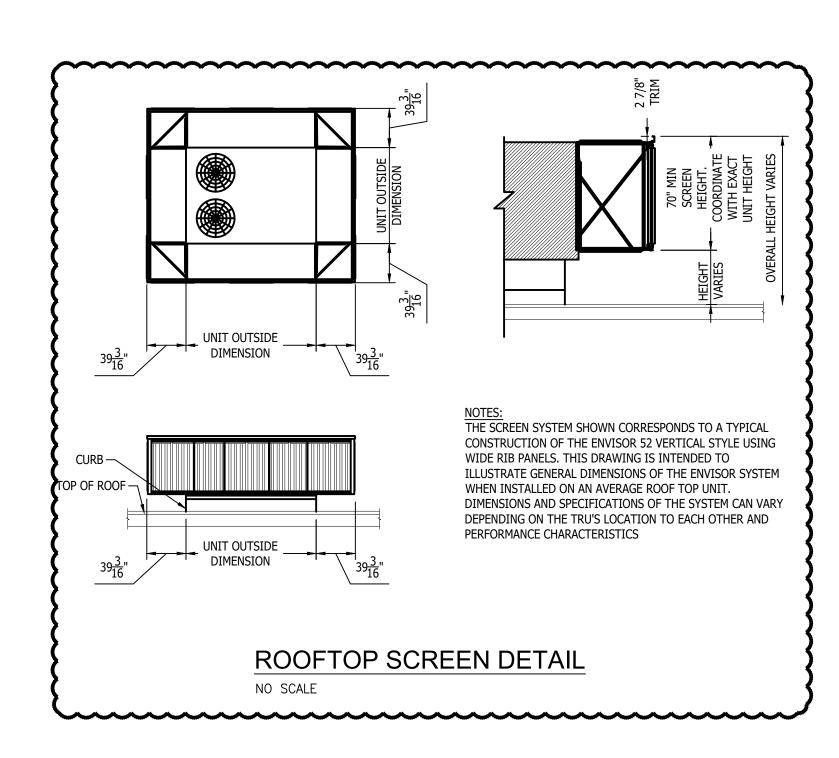
# ROOFTOP UNIT - CURB MOUNTING DETAIL NO SCALE

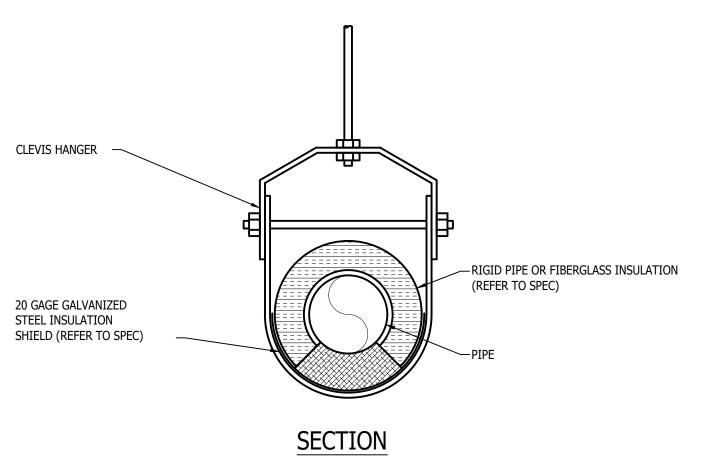


ROOF GAS PIPE SUPPORT DETAIL



**ELEVATION** 

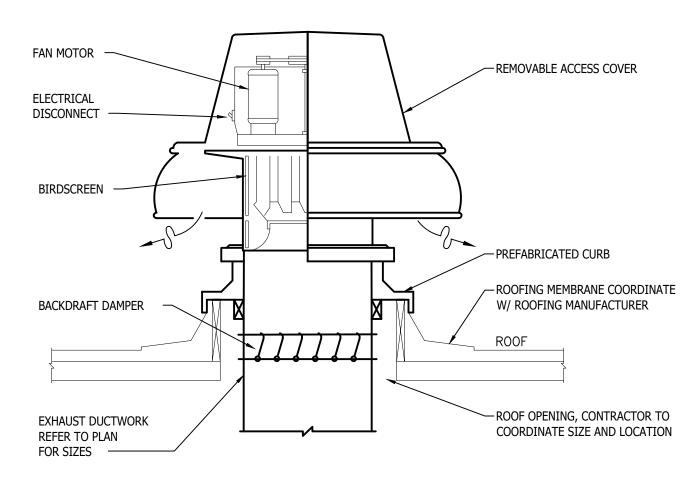




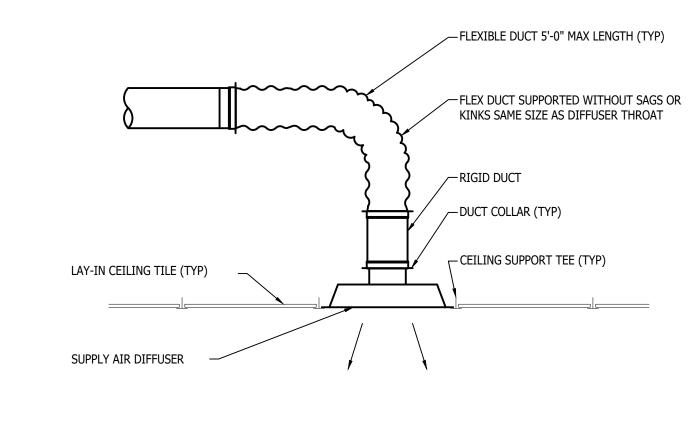
NOTES:

PRE-INSULATED PIPE SUPPORTS SHALL BE USED TO ALLOW PROPER ALIGNMENT OF PIPING DURING INSTALLATION. PRE-INSULATED HANGERS SHALL BE PIPE SHIELDS INCORPORATED OR APPROVED EQUAL, REFER TO SPECIFICATIONS.

# INSULATED PIPE HANGER DETAIL NO SCALE

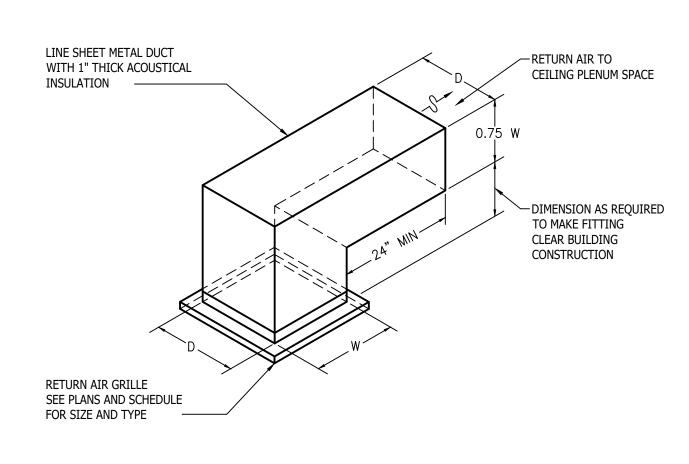


ROOF EXHAUST FAN MOUNTING DETAIL
NO SCALE



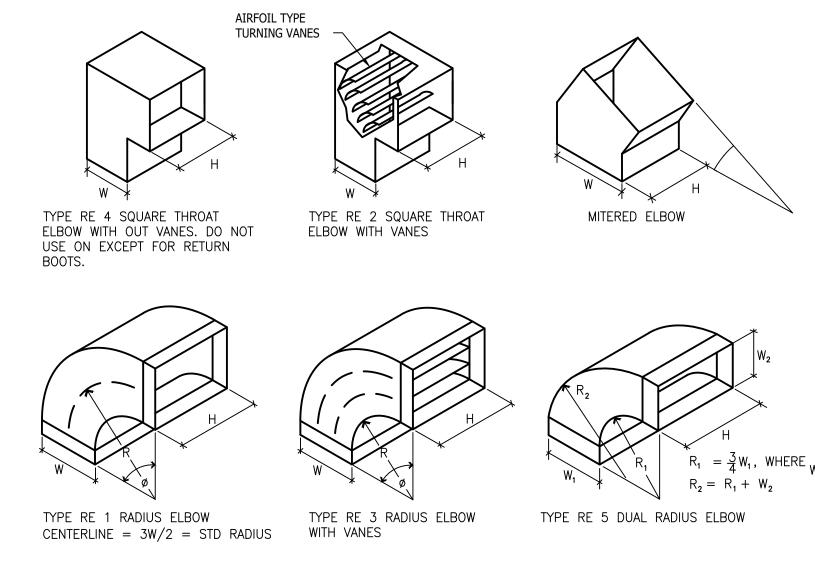
SUPPLY AIR DIFFUSER DETAIL

NO SCALE



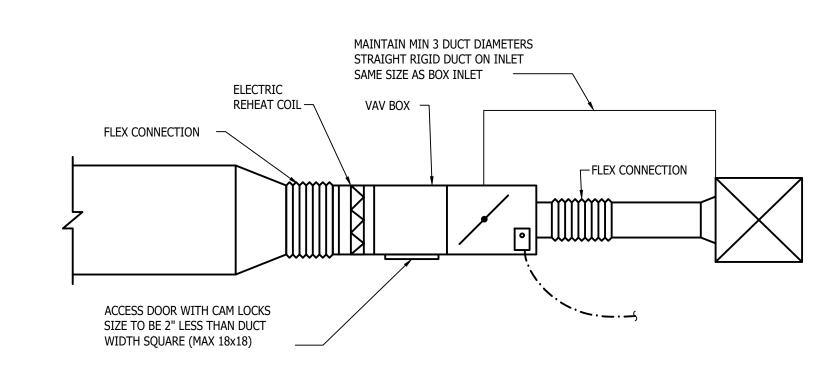
PLENUM RETURN GRILLE/BOOT DETAIL

NO SCALE



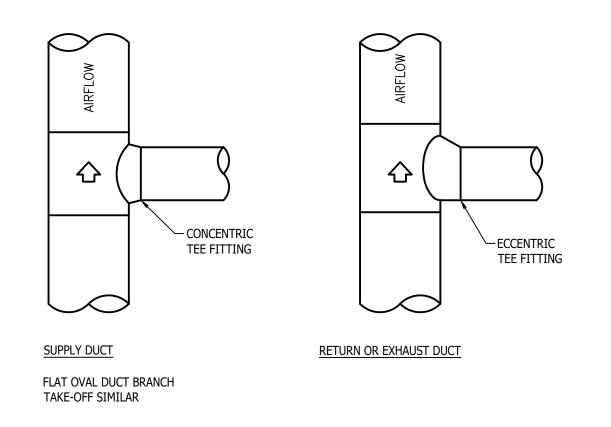
RECTANGULAR SHEET-METAL ELBOWS

NO SCALE



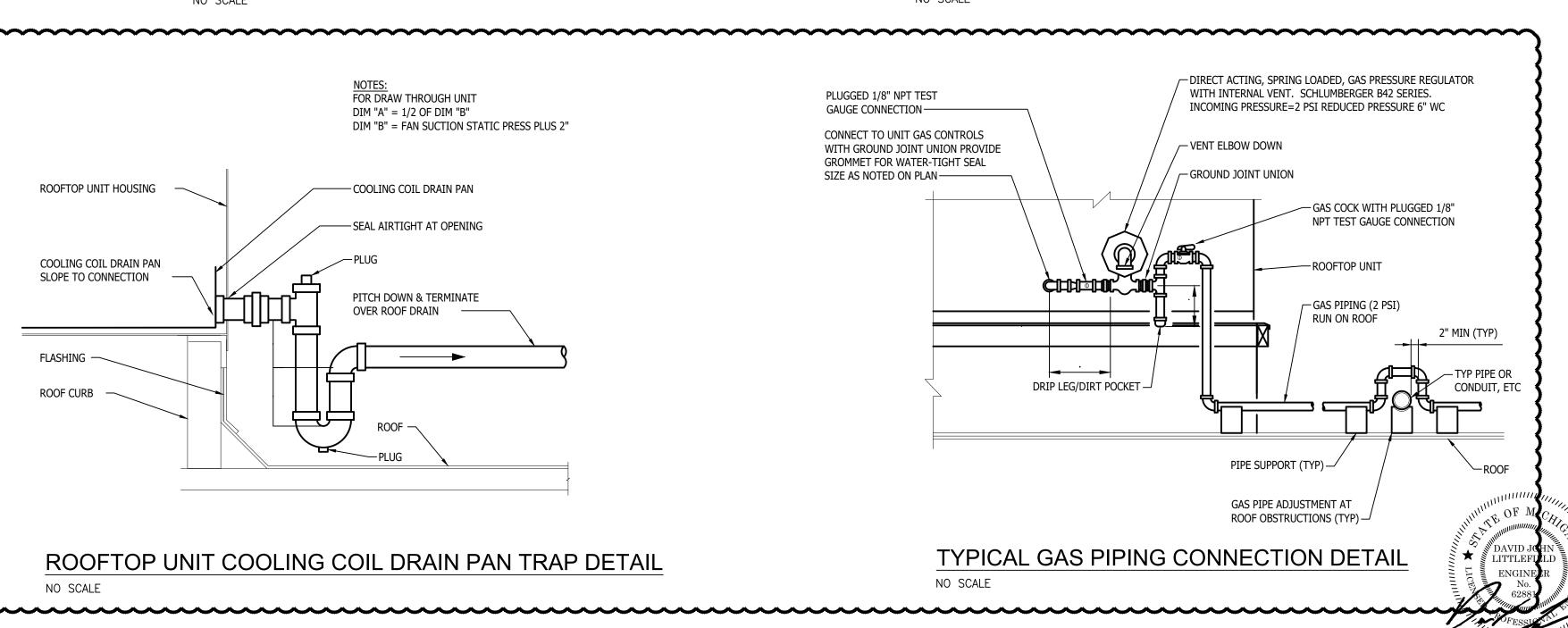
VAV BOX INSTALLATION DETAIL

NO SCALE



ROUND DUCT BRANCH TAKE-OFF DETAILS

NO SCALE





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MB COUNTY

/ PURCHASING OFFICE RENOVATION

=RTZ BUILDING

MECHANICAL DETAILS

PRELIMINARY

<u>න</u> ට

PRELIMINARY

DESIGN DEVELOPMENT

CONSTRUCTION

FINAL RECORD

DRAWN BY \_\_TDD

CHECKED BY \_\_DJL

REVISIONS

ADDENDUM No. 1 \_\_11-7-2024

CHECKED BY \_\_DJL \_\_\_\_\_

REVISIONS

ADDENDUM No. 1 \_\_11-7-2024

DATE: OCTOBER 31, 2024
SHEET NO.

M5.00

242053

	PACKAGED COMMERCIAL ROOFTOP UNIT SCHEDULE - (DX - GAS)																																
				SU	PPLY FAN						D	X COOLING	COIL					NATURAL	GAS HEATING SECT	TION			POWER			ELECTR	ICAL		DISC	ONNECT			
UNIT ID	TOTAL SUPPLY	MINIMUM OA	ESP	FAN	DRIVE				SENSIBLE CAPACITY			AIR		MIN.	REFRIGERANT	INPUT	OUTPUT	GAS PRESS.	STAGES OR	BURNER	EAT	LAT	EXHAUST OR	FILTER TYPE					_ FURN	INST.	CURB HEIGHT	MANUFACTURER/ MODEL NO.	REMARKS
	(CFM)	(CFM)	(IN WG)	TYPE	TYPE	BHP H	CAP.	IBH)	(MBH)	EDB (°F)	EWB (°F)	LDB LW (°F) (°	B APD (IN WG	EFFICIENCY (EER)	TYPE	(MBH)	(MBH)	(IN WG)	MODULATION TURNDOWN	TYPE	(°F)	(°F)	BAROMETRIC RELIEF		MOCP M	CA FLA	A VOL	TS PHAS	BY	BY	(IN)		
RTU-1	10,600	1,700	1.5	SWSI	DIRECT	8.05 15.	) 34	16.6	275.4	77.4	64.3	55.1 53	7 0.19	10.68	R-454B	600.0	486.0	4-14	10:1	INDIRECT	57.2	99.4	POWER EXHAUST	2" MERV 8	100 8	8 83	460	0 3	MC	MC	14	AAON / RNA-031-D-A-3-GAB0B-CB2L0:00-0AHAL-G00-00000-ABNBJ-EC-CB0 A-00-00-0-AN0-E0-N000-00-5W0-A00A00-C0000B-000000B	

NOTES:

DUAL INPUT ENTHALPY CONTROL ECONOMIZER.
 PROVIDE WITH REFRIGERATION CONTROLS ONLY. UNIT DDC CONTROLLER TO BE FIELD INSTALLED BY TCC.

3. 2" PLEATED MEDIA FILTERS.
4. PROVIDE WITH FACTORY MOUNTED DISCONNECT SWITCH.

5. REFRIGERATION COMPRESSORS SHALL BE VARIABLE SPEED SCROLL.

	PLUMBING FIXTURE SCHEDULE												
TAG	BARRIER	ITEM	F	PIPE CONNE	CTION SIZES	5	MANUFACTURER &	ACCESSORIES					
	FREE		WASTE	VENT	CW	HW	MODEL NO.						
SK-1	Y	SINGLE COMPARTMENT UNDERMOUNT SINK W/ DISPOSAL	1 1/2"	1 1/2"	1/2"	1/2"	ELKAY: LRAD332155	FAUCET: KOHLER STRIVE K-5285-NA, CHROME PLATED P-TRAP AND GARBAGE DISPOSAL IN-SINKERATOR EVOLUTION EXCEL.					
WC-1	Y	FLOOR MOUNTED TANK TYPE TOILET	4"	2"	1"	-	KOHLER: K-3998-0	1.28 GPF					
LAV-1	Y	COUNTED MOUNTED LAVATORY	1 1/2"	1 1/2"	1/2"	1/2"	KOHLER K-2330-G	FAUCET: PARALLEL K-23484-4N-CP; PROVIDE WITH ASSE 1070 MIXING VALVE.					
0750			-				•	•					

1. PROVIDE ALL ACCESSORIES NECESSARY FOR COMPLETE AND OPERABLE INSTALLATION.
2. ALL FIXTURES SHALL MEET MICHIGAN DEPT. OF PUBLIC HEALTH REQUIREMENTS, AND SHALL BE SUITABLE FOR FOOD PREPARATION AREAS.

	DOMESTIC WATER HEATER SCHEDULE (ELECTRIC TANK TYPE)												
	LOCATION/	STORAGE	RECOVERY	EL	ECTRICAL			DISCONNE	:CT	MANUFACTURER/			
UNIT ID	AREA SERVED	CAPACITY (GAL)	AT 100°F (GPH)	INPUT (KW)	VOLTS	PHASE	FURN. BY	INST. BY	TYPE	MODEL NO.	REMARKS		
EWH-1	PURCHASING	10	-	2.5	480	3	EC	EC	SWITCH	AO SMITH / DEL-10			
NOTES:		-											

	ELECTRIC HEATER SCHEDULE													
UNIT ID	МВН	kW	CFM	VOLTS	ELECTRICA PHASE	AMPS	PHY LENGTH/ DEPTH	'SICAL SIZE HEIGHT	(IN) WIDTH	MOUNTING	MANUFACTURER / MODEL NO.	REMARKS		
ECUH-1	10.2	3	100	208	1	14.0	14	19	4	2" RECESSED	QMARK / SSAR4808			
NOTEC					,			-						

NOTES:
ABBREVIATIONS: EBB = ELECTRIC BASEBOARD; ECH = ELECTRIC COVE HEATER; ECUH = ELECTRIC CABINET UNIT HEATER; EUH = ELECTRIC UNIT HEATER; ERCP = ELECTRIC RADIANT CEILING PANEL.

1. MANUFACTURER TO PROVIDE BUILT-IN CONTROLS & FACTORY MOUNTED DISCONNECT. (IF REMOTE THERMOSTAT IS SHOWN ON DRAWINGS, PROVIDE REMOTE THERMOSTAT.

	VAV TERMINAL UNIT SCHEDULE WITH TEMPERING COIL - (ELECTRIC)															
	AIRFLOV	V RANGE	INLET CD	DUCT CON	NECTIONS			ELE	CTRIC TE	MPERING	COIL (MAN	UFACTURER	.)			
UNIT ID	MIN (CFM)	MAX (CFM)	INLET SP (IN WG)	INLET SIZE (IN)	OUTLET SIZE (IN)	Max NC Level	HTG (CFM)	APD (IN WG)	EAT (°F)	LAT (°F)	KW	VOLTS	PHASE	STAGES OF HEAT	MANUFACTURER/ MODEL NO.	REMARKS
TU-1	145	350	0.25	6Ø	12x8	25	350	0.25	65	90	2.8	480	3	-	PRICE / SDV6	
TU-2	250	700	0.25	8ø	12x10	25	700	0.25	65	90	5.5	480	3	-	PRICE / SDV8	
TU-3	250	900	0.25	8ø	12x10	25	900	0.25	65	90	7.1	480	3	-	PRICE / SDV8	
TU-4	250	650	0.25	8ø	12x10	25	650	0.25	65	90	5.1	480	3	-	PRICE / SDV8	
TU-5	145	400	0.25	6Ø	12x8	25	400	0.25	65	90	3.2	480	3	-	PRICE / SDV6	
TU-6	145	400	0.25	6Ø	12x8	25	400	0.25	65	90	3.2	480	3	-	PRICE / SDV6	
TU-7	250	670	0.25	8¢	12x10	25	670	0.25	65	90	5.3	480	3	-	PRICE / SDV8	
TU-8	145	400	0.25	6Ø	12x8	25	400	0.25	65	90	3.2	480	3	-	PRICE / SDV6	
TU-9	375	1500	0.25	10Ø	14x12	25	1500	0.25	65	90	11.9	480	3	-	PRICE / SDV10	
TU-10	580	2000	0.25	12Ø	16x14	25	2000	0.25	65	90	15.8	480	3	-	PRICE / SDV12	
TU-11	145	550	0.25	8ø	12x10	25	550	0.25	65	90	4.4	480	3	-	PRICE / SDV8	
TU-12	145	550	0.25	8ø	12x10	25	550	0.25	65	90	4.4	480	3	-	PRICE / SDV8	
TU-13	80	250	0.25	6Ø	12x8	25	350	0.25	65	90	2.8	480	3	-	PRICE / SDV6	
TU-14	250	700	0.25	8ø	12x10	25	700	0.25	65	90	5.5	480	3	-	PRICE / SDV8	

NOTES:

1. MINIMUM AND MAXIMUM AIRFLOW SHALL BE SET TO THE CFM INDICATED ON FLOOR PLANS. MAXIMUM N.C. LEVEL BASED ON 3" PRESSURE DROP WITH NO ALLOWANCE FOR EXTERNAL ATTENUATION. MAXIMUM RADIATED NC LEVEL SHALL NOT EXCEED 25.

2. DISCONNECT TO BE PROVIDED BY MANUFACTURE.

3. FIELD MOUNT CONTROLLER BY TEMPERATURE CONTROLS CONTRACTOR.

	EXHAUST FAN SCHEDULE														
	MOTOR ELECTRICAL  SERVING TYPE CEM ESP FAN DDM														
UNIT ID	SERVING	TYPE	CFM	(IN WG)	FAN RPM	BHP	НР	RPM	DRIVE TYPE	VOLTS	PHASE	МОСР	MODEL NO.		REMARKS
EF-1	BATHROOM	DOWNBLAST	100	0.25	1,485	0.01	1/15	-	DIRECT	120	1	15	G-060-VG	(	DISCONNECT BY MANUFACTURE
EF-2	BATHROOM	DOWNBLAST	100	0.25	1,485	0.01	1/15	-	DIRECT	120	1	15	G-060-VG	(	DISCONNECT BY MANUFACTURE
NOTES:															

1. MODEL NUMBERS ARE GREENHECK UNLESS OTHERWISE NOTED.
2. INSTALL VARIGREEN CONTROLLER BELOW ROOF.
3. INSTALL ON 14" CURB.

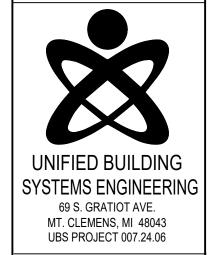
	G	RILLE, I	REGISTE	ER ANI	D DIFF	JSER SCH	HEDULE
UNIT ID	FACE SIZE	NECK SIZE	MOUNTING	FINISH	MATERIAL	PRICE/ MODEL NO.	REMARKS
S-1	24x24	SEE PLANS	CEILING	WHITE	STEEL	SPD	
S-2	48x6	SEE PLANS	CEILING	WHITE	STEEL	TBD7	2 SLOT, 2 WAY
S-3	48x6	SEE PLANS	CEILING	MATCH CEILING COLOR	STEEL	TBD7	2 SLOT, 1 WAY, COORDINATE WITH CEILING DESIGN AND ARCHITECTURAL FOR PROPER INSTALLATION IN TO CEILING.
S-4	22-1/2"	SEE PLANS	DUCT MOUNTED	WHITE	STEEL	RCD	
R-1	24x24	22x22	CEILING	WHITE	STEEL	PDDR	PROVIDE WITH SOUND ATTEN. BOOT IF NOT DUCTED.
R-2	24"x12"	22x12	CEILING	WHITE	STEEL	PDDR or 80	PROVIDE WITH SOUND ATTEN. BOOT IF NOT DUCTED.
E-1	24x24	SEE PLANS	CEILING	WHITE	STEEL	PDDR	

1. COORDINATE WITH LIGHTING AND FRAME TYPE ACCORDINGLY WITH ARCHITECTURAL CEILING LAYOUT.



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MECHANICAL SCHEDULES

DESIGN DEVELOPMENT

PRELIMINARY

CONSTRUCTION

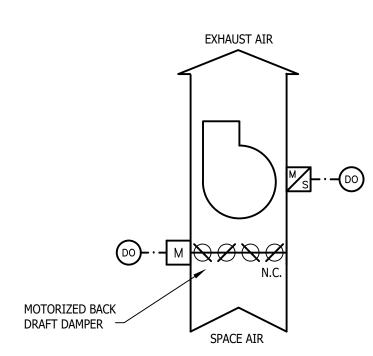
DRAWN BY \_\_TDDD CHECKED BY \_\_DJL

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ADDENDUM No. 1 11-7-2024

FINAL RECORD

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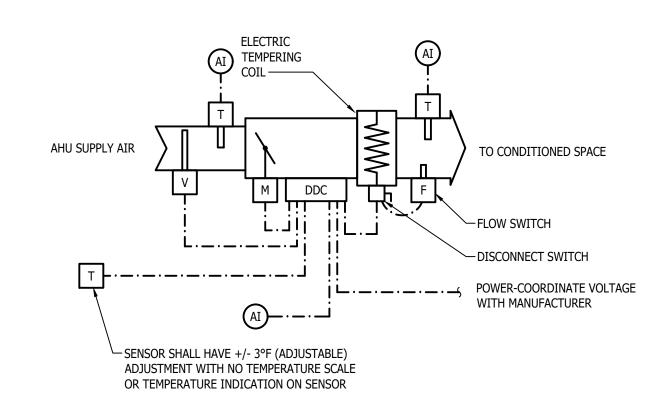
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#### EXHAUST FAN CONTROL DIAGRAM NO SCALE

NOTE: ALL SETPOINTS AND TIME INTERVALS SHALL BE ADJUSTABLE BY THE SYSTEM OPERATOR. ONLY ACCEPTABLE CONTROLS CONTRACTOR IS METRO CONTROLS.

- WITH THE EXHAUST FAN'S HAND/OFF/AUTO SWITCHES IN THE "AUTO" POSITION, THE SUPPLY FAN SHALL BE AUTOMATICALLY STARTED AND STOPPED WITH THE DDC SYSTEM OCCUPANCY
- 2. UPON A SIGNAL TO ENERGIZE THE VENTILATION FAN, THE ISOLATION DAMPERS SHALL OPEN
- 3. FAN STATUS SHALL BE CONFIRMED BY A CURRENT SWITCH. UPON A FAN FAILURE, THE DDC SYSTEM SHALL ISSUE AN ALARM TO THE DDC SYSTEM.
- 4. WHEN THE EXHAUST FAN IS DE-ENERGIZED, ITS ISOLATION DAMPER SHALL FULLY CLOSE.



### VAV BOX WITH ELECTRIC REHEAT

## INDIVIDUAL SPACE TEMPERATURES ARE MAINTAINED BY THE MODULATION OF THE PRIMARY AIR DAMPER. TH ELECTRIC REHEAT IS NORMALLY OFF. CONTROLLER SHALL BE FIELD INSTALLED BY TEMPERATURE CONTROLS

IF SPACE TEMPERATURE RISES ABOVE SETPOINT, THE DAMPER OPENS. IF SPACE TEMPERATURE DECREASES, THE DAMPER CLOSES TO A PRESET MINIMUM AIRFLOW. ON A FURTHER DECREASE IN SPACE TEMPERATURE, THE DAMPER SHALL OPEN TO ACHIEVE THE HEATING AIRFLOW SETPOINT AND THE FIRST STAGE OF REHEAT SHALL BE ENABLED. IF REQUIRED THE SECOND STAGE OF REHEAT SHALL BE ENABLED (IF AVAILABLE).

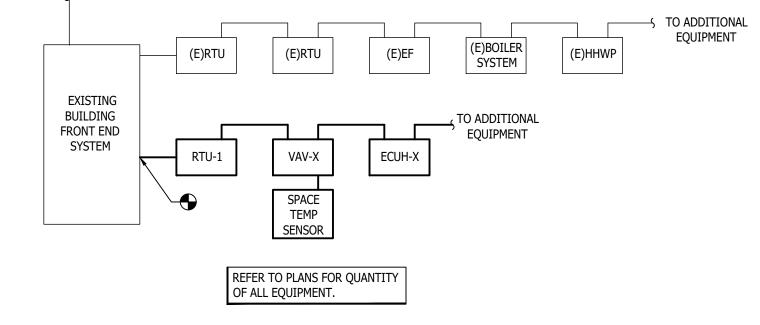
DURING UNOCCUPIED HOURS THE ELECTRIC REHEAT STAGES SHALL BE ENABLED TO MAINTAIN NIGHT SETBACK

ELECTRIC HEATING COILS SHALL NOT OPERATE WHEN SUFFICIENT AIRFLOW IS NOT PRESENT.

ALL TERMINAL UNITS SHALL BE MONITORED BY THR EXISTING BUILDING ENERGY MANAGEMENT SYSTEM (EMS). EMS SHALL BE ABLE TO READ AIRFLOW AND DISCHARGE AIR TEMPERATURE COORDINATE EXISTING SYSTEM REQUIREMENTS WITH OWNER.

CONTRACTOR.

#### BACNET OVER IP NETWORK TO SUPERVISORY SYSTEM.



# BUILDING AUTOMATION SYSTEM RISER DIAGRAM

### **BUILDING AUTOMATION SYSTEM NOTES:**

1. CONFIGURATION AND ORDER OF CONTROLLER CONNECTION IS FOR REPRESENTATION PURPOSES ONLY. UPDATE CONTROL SYSTEM DRAWINGS TO REFLECT ACTUAL AS-BUILT CONDITIONS, INCLUDING ORDER IN WHICH CONTROLLERS ARE CONNECTED WITHIN THE NETWORK.

## BUILDING AUTOMATION SYSTEM FRONT END SYSTEM REQUIREMENTS

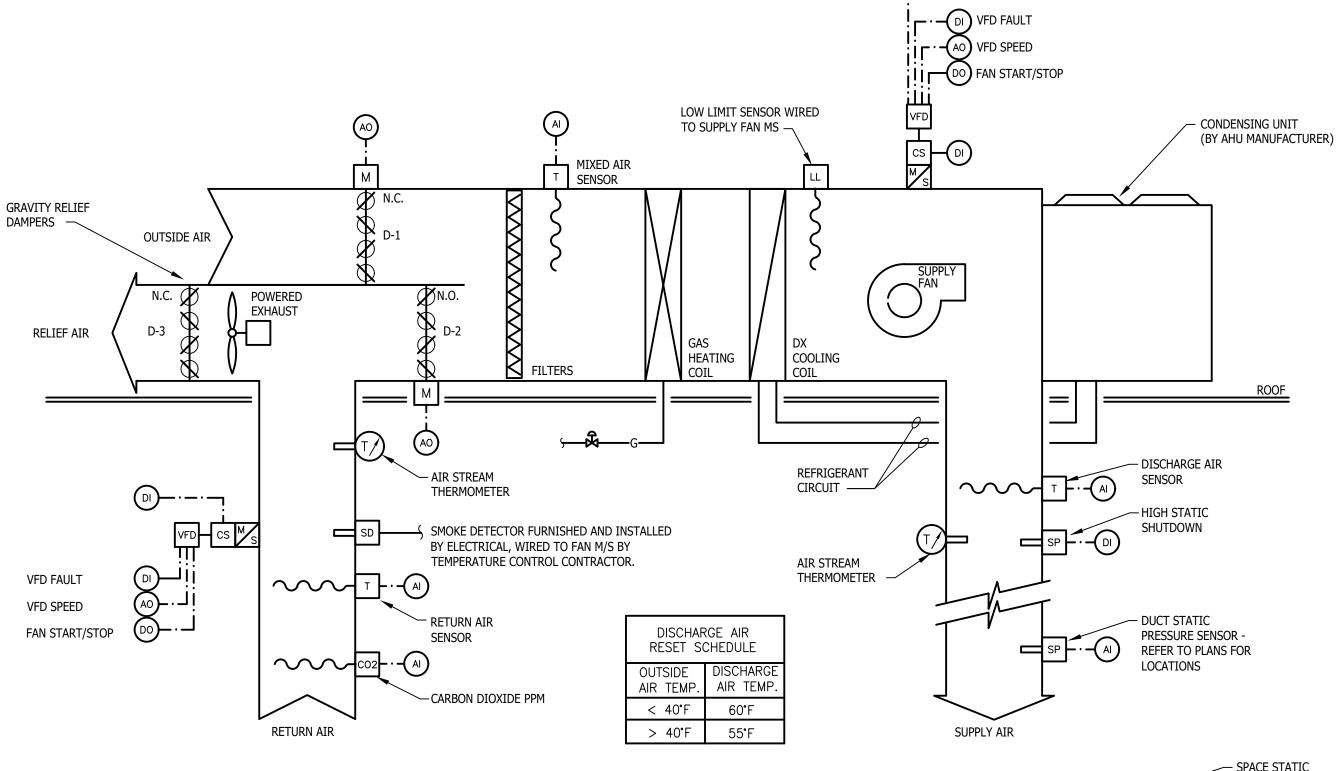
1. INTEGRATE MECHANICAL EQUIPMENT INTO THE EXISTING AUTOMATED LOGIC SUPERVISORY SYSTEM, INCLUDING GRAPHICS. EACH UNIT SHALL DISPLAY PERTINENT INFORMATION FOR CONTROL AND TROUBLE SHOOTING, INCLUDING:

A) SPACE TEMPERATURE B) SPACE TEMPERATURE SETPOINT C) UNIT STATUS

D) HIGH AND LOW REFRIGERANT PRESSURE ALARMS E) HEATING HOT WATER VALVE COMMAND

F) OCCUPIED/UNOCCUPIED COMMAND G) MODE OF OPERATION

THE ONLY ACCEPTABLE CONTROLS CONTRACTOR IS METRO CONTROLS.



VAV ROOFTOP UNIT CONTROL DIAGRAM (TYP. OF RTU-1)

- SPACE STATIC PRESSURE SENSOR

EXHAUST HOOD CONTROL

VAV ROOFTOP UNIT SEQUENCE OF OPERATIONS NOTE: ALL SETPOINTS AND TIME INTERVALS SHALL BE ADJUSTABLE BY THE SYSTEM OPERATOR. UNIT SHALL BE PROVIDED WITH TERMINAL STRIP. CONTROLLER AND CONTROL COMPONENTS BY TEMPERATURE CONTROLS CONTRACTOR. REFRIGERATION SAFETIES BY UNIT MANUFACTURER. ONLY ACCEPTABLE CONTROLS CONTRACTOR IS METRO CONTROLS.

- WITH THE SUPPLY FAN'S VFD HAND/OFF/AUTO SWITCH IN THE "AUTO" POSITION, THE SUPPLY FAN SHALL BE AUTOMATICALLY STARTED AND STOPPED WITH THE DDC SYSTEM OCCUPANCY SCHEDULE. SUPPLY FAN SHALL ALSO BE ENERGIZED WHENEVER THE HOOD EXHAUST FAN IS ALSO ENERGIZED VIA WALL SWITCH OR HEAT SENSOR.
- OCCUPIED MODE: WHEN THE DDC SYSTEM ENERGIZES THE SUPPLY FAN, THE FAN SHALL RUN CONTINUOUSLY. THE RETURN, RELIEF AND RETURN DAMPERS WILL MODULATE TO MAINTAIN MINIMUM OUTSIDE AIRFLOW AS DETERMINED BY THE DDC SYSTEM AND CO2 SENSOR.

3. THE DDC SYSTEM SHALL MONITOR THE SPACE CO2 (THROUGH THE RETURN AIR CO2 SENSOR) AND

TEMPERATURE LOW LIMIT TEMPERATURE OF 45°F. 4. THE SUPPLY FAN WILL PROVE FLOW TO THE DDC SYSTEM WITH ITS CURRENT SENSING SWITCH. IF THE FAN

MODULATE THE MIXED AIR DAMPERS TO MAINTAIN A MAXIMUM LEVEL OF 1000 PPM, SUBJECT TO A MIX AIR

- FAILS, THE SYSTEM WILL BE DE-ENERGIZED AND AN ALARM WILL BE SENT TO THE DDC SYSTEM. 5. THE SUPPLY FAN VSD SHALL BE MODULATED BY THE REMOTE SUPPLY DUCT STATIC PRESSURE SENSOR TO MAINTAIN A CONSTANT STATIC PRESSURE SETPOINT THAT IS DETERMINED BY THE TEST AND BALANCE AGENCY. IF A CONTROL SIGNAL IS LOST, THE FAN'S VFD WILL OPERATE AT 50% AND AN ALARM WILL BE
- 6. THE DISCHARGE HIGH STATIC PRESSURE SENSOR (LOCATED AT THE RTU) SHALL MODULATE THE SUPPLY FAN VFD TO PREVENT THE DISCHARGE STATIC PRESSURE FROM EXCEEDING THE HIGH LIMIT SETPOINT OF 4.0" W.G. IF THE DISCHARGE HIGH STATIC PRESSURE SENSOR REACHES 5.0" W.G., THE SUPPLY FAN SHALL

SENT TO THE DDC SYSTEM.

BE DE-ENERGIZED.

- 7. THE DISCHARGE AIR TEMPERATURE SENSOR SHALL MODULATE THE DX STAGES OF COOLING, MIXED AIR DAMPERS (D-1, D-2, D-3), AND THE STAGES OF AS HEAT TO MAINTAIN THE DISCHARGE AIR TEMPERATURE.
- 8. THE POWERED EXHAUST FAN SHALL BE ENERGIZED WHENEVER THE SPACE STATIC PRESSURE IS OVER 0.1"w.c. THE EXHAUST FAN'S VSD SHALL MODULATE THE FAN TO MAINTAIN A MAXIMUM PRESSURIZATION OF 0.1" w.c.
- ECONOMIZER MODE: WHEN THE OUTSIDE AIR TEMPERATURE IS LESS THAN THE RETURN AIR TEMPERATURE, DDC SHALL MODULATE THE MIXED AIR DAMPERS (D-1, D-2, D-3) AND DX STAGES OF COOLING TO MAINTAIN THE DISCHARGE AIR TEMPERATURE WHILE MAINTAINING THE MINIMUM OUTSIDE AIRFLOW. WHEN THE OUTSIDE AIR TEMPERATURE IS GREATER THAN THE RETURN AIR TEMPERATURE, DDC SHALL MODULATE THE MIXED AIR DAMPERS TO MAINTAIN THE MINIMUM OUTSIDE AIRFLOW.
- 10. UNOCCUPIED MODE: IF ANY OF THE SPACE TEMPERATURE SENSORS DROPS BELOW 60°F, THE SUPPLY AND RETURN FANS SHALL BE ENERGIZED, THE OUTSIDE AND RELIEF DAMPERS SHALL REMAIN CLOSED, THE RETURN DAMPER SHALL BE FULLY OPENED AND STAGES OF GAS HEAT SHALL FIRE. THE SUPPLY/RETURN FAN OFFSET SHALL BE ZERO DURING UNOCCUPIED OPERATION. AFTER ALL OF THE SPACES HAVE REACHED 63°F (ADJ), THE UNIT SHALL BE DE-ENERGIZED.
- 11. IF THE FREEZE-STAT SETPOINT IS REACHED (35°F OR BELOW), THEN THE SUPPLY AND RETURN FANS SHALL BE DE-ENERGIZED. IF THE DUCT MOUNTED SMOKE DETECTORS DETECT SMOKE, THEN THE SUPPLY AND RETURN FANS SHALL BE DE-ENERGIZED.
- 12. WHEN THE SUPPLY FAN IS DE-ENERGIZED, THE OUTSIDE AND RELIEF DAMPERS SHALL BE CLOSED. THE RETURN AIR DAMPER SHALL BE OPEN.
- 13. POINTS THAT SHALL BE GRAPHICALLY SHOWN: FAN STATUS, DUCT PRESSURE, DUCT PRESSURE SETPOINT, DISCHARGE AIR TEMPERATURE, DISCHARGE AIR TEMPERATURE SETPOINT, COOLING STAGES, HEATING HOT WATER CONTROL VALVE POSITION.
- 14. O2 CONTROL: THE SPACE CO2 SENSOR WILL SUPPLY A PPM READING TO THE UNIT CONTROLLER. THE UNIT CONTROLLER WILL OPEN THE OA DAMPER TO PROVIDE MORE VENTILATION AIR AS REQUIRED TO MAINTAIN A DEADBAND OF 700 PPM(ADJ.).



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www.WakelyAlA.com

TEMPERATURE CONTROLS

PRELIMINARY DESIGN DEVELOPMENT

FINAL RECORD

CONSTRUCTION

CHECKED BY DJL

M7.00

		LUMINAIRE S	CHEDULE		
FIXTURE SYMBOL	FIXTURE TAG	DESCRIPTION	MANUFACTURER(S)	LAMP SOURCE	WATTS
	A	2'x2' LOW PROFILE TROFFER VOLUMETRIC DISTRIBUTION LED LUMINAIRE, CENTER SQUARE SMOOTH DIFFUSER OPTION SUITABLE FOR RECESS MOUNTING IN LAY—IN TYPE GRID CEILING, DIE FORMED ENCLOSURE, HIGH REFLECTANCE BAKED MATTE WHITE ENAMEL FINISH, HIGH OPTICAL GRADE ACRYLIC LENS AND DIRECTED OPTICAL DISTRIBUTION, 3800 LUMENS, ELECTRONIC DRIVER, 3500K. 0—10V DIMMING CAPABLE, UNIVERSAL VOLTAGE.	COOPER METALUX CRUZE     LITHONIA BLT SERIES	LED 80CRI 3800 LUMENS	26.9
	B	1.5" WIDE X 3" HIGH PENDANT MOUNTED DIRECT ONLY LED FIXTURE, SQUARE SHAPE CONTINUOUS RUN, WITH LIGHTED CORNERS. LENGTH AS SHOWN ON PLANS. EXTRUDED ALUMINUM BODY. FINSIH TO BE SELECTED BY ARCHITECT, FLUSH DOWNLIGHT DIFFUSER. USING 600 LM/FT OUTPUT PACKAGE. 3500K, 80 CRI. SINGLE CIRCUIT, UNIVERSAL VOLTAGE, 0-10V 1% DIMMING.	1. AXIS SCULPT 2. LUMENWERX VIA 1.5	LED 80CRI 600 LM/FT	6.6 W/FT
		4" WIDE RECESSED LINEAR SUITABLE FOR INSTALLATION IN LAY-IN TYPE GRID CEILING. LED FIXTURE, SQUARE SHAPE CONTINUOUS RUN. LENGTH AS SHOWN ON PLANS. EXTRUDED ALUMINUM BODY. FLUSH DIFFUSER. USING 600 LM/FT OUTPUT PACKAGE. 3500K, 80 CRI. UNIVERSAL VOLTAGE, 0-10V 1% DIMMING.	1. AXIS BEAM 4 2. FINELITE HP-4	LED 80CRI 600 LM/FT	4.9 W/FT
		1.25" WIDE X 2.25" LINEAR LED FIXTURE FOR USE IN ARMSTRONG WOODWORKS CEILINGS. LENGTH AS SHOWN ON PLANS. EXTRUDED ALUMINUM BODY. FINISH TO BE SELECTED BY ARCHITECT, FLUSH DOWNLIGHT DIFFUSER. USING 400 LM/FT OUTPUT PACKAGE. 3500K, 80 CRI. UNIVERSAL VOLTAGE, 0-10V 1% DIMMING.	1. AXIS SLATE 1 2. APPROVED EQUAL	LED 80CRI 400 LM/FT	4.1 W/FT
	F	1.5" WIDE X 3" GEOMETRIC RECESSED LED FIXTURE FOR USE IN ARMSTRONG SOUNDSCAPES CEILINGS. SHAPE/LENGTH AS SHOWN ON PLANS. EXTRUDED ALUMINUM BODY. FLUSH DOWNLIGHT DIFFUSER. USING 600 LM/FT OUTPUT PACKAGE. 3500K, 80 CRI. SINGLE CIRCUIT, UNIVERSAL VOLTAGE, 0-10V 1% DIMMING.	<ol> <li>AXIS GEOMETRIC</li> <li>APPROVED EQUAL</li> </ol>	LED 80CRI 600 LM/FT	6.6 W/FT
0	G	6" DIAMETER HIGH BRIGHTNESS LIGHT EMITTING DIODES (LED'S) RECESS MOUNTED LED DOWNLIGHT SUITABLE FOR INSTALLATION IN DRYWALL OR LAY—IN TYPE CEILING CONSTRUCTION. WIDE DISTRIBUTION, MATT DIFFUSE ALUMINUM REFLECTOR WITH CLEAR APERTURE/TRIM, CONSTANT CURRENT LED DRIVER, 0—10V DIMMING DRIVER DOWN TO 1% MVOLT OPERATION. NOMINAL 2500 LUMEN OUTPUT.	1. HALO COMMERCIAL 2. GOTHAM EVO	LED 85CRI 2500 LUMENS	28.9
ш	H	4'L X 2.6"W X 2.7" D LED LINEAR STRIP FIXTURE. ROLLED STEEL HOUSING, END CAPS, WHITE FINISH, FLAT DIFFUSED LENS, LED ELECTRONIC DRIVER 0-10V DIMMING DOWN TO 10%. 5000 LUMENS, 3500K, 80 CRI. CABLE HUNG, 120V OPERATION.	1. COOPER METALUX SLSTP 2. LITHONIA CLX48	LED 80CRI 5000 LUMENS	40.0
		24" X 36" TRACK LIGHTED MIRROR. 6300 LUMENS, 3500K, 85 CRI, 120V OPERATION.	1. OXYGEN 2. APPROVED EQUAL	LED 85CRI 6300 LUMENS	102.4
	Æ	SAME AS TYPE # EXCEPT THIS FIXTURE WILL BE CONNECTED THROUGH EXISTING EMERGENCY GENERATOR SYSTEM CIRCUIT IN THE AREA. PROVIDE GENERATOR TRANSFER SWITCH (GTS) IN ALL ROOMS.			
<b>↑</b> ⊗	X	EXIT LIGHT EMERGENCY LIGHT SHALL BE UNIVERSAL MOUNT, DIECAST ALUMINUM, HIGH OUTPUT LED DIFFUSE LIGHT PANEL, RED LETTERS WITH MAINTENANCE FREE NICKEL CADIUM BATTERY CAPABLE OF PROVIDING 90 MINUTE FULL LIGHT OPERATION.	1. LITEALARMS GRANDE SERIES CAT# 1 XDPC N W RW	120-277V	2.3
>	X1	EMERGENCY LIGHT REMOTE HEAD TO BE CONNECTED TO EXIT SIGN WITH HIGH OUTPUT BATTERY	1. LITEALARMS CAT # SAF2 LD1 B 6	120-277V	2.3
↔	X2)	CONTEMPORARY COMMERCIAL LED EMERGENCY LIGHT. TWO HIGH PERFORMANCE LEDS PROVIDING 640 TOTAL LUMENS. MAINTENANCE FREE NICKEL CADIUM BATTERY CAPABLE OF PROVIDING 90 MINUTE FULL LIGHT OPERATION.	1. LITHONIA LIGHTING ELM4L 2. SURELITES	120-277V	3.2

#### LIGHTING SYMBOL LIST

DESCRIPTION

LIGHT FIXTURE — CEILING/GRID MOUNT LIGHT FIXTURE — INTERIOR WALL MOUNT LINEAR LIGHT FIXTURE - DOWNLIGHT WITH WALLWASH DIST. LIGHT FIXTURE - INTERIOR WALL SCONCE LIGHT FIXTURE - INTERIOR SURFACE MOUNT LIGHT FIXTURE — INTERIOR WALL MOUNTED LIGHT FIXTURE - INTERIOR PENDANT MOUNT LIGHT FIXTURE - INTERIOR PENDANT MOUNT CYLINDER TRACK AND TRACK MOUNTED LIGHT FIXTURES EXIT LIGHT - CEILING MOUNTED - ARROWS AS INDICATED ON PLAN (SHADED AREA INDICATES

FACE(S) OF FIXTURE) EXIT LIGHT — WALL MOUNTED — ARROWS AS INDICATED ON PLAN (SHADED AREA INDICATES

FACE(S) OF FIXTURE) EMERGENCY LIGHT FIXTURE - EMERGENCY BATTERY UNIT EMERGENCY LIGHT FIXTURE - BATTERY UNIT/EXIT SIGN LIGHT FIXTURE — EXTERIOR POLE MOUNT TYPE LIGHT FIXTURE - EXTERIOR WALL MOUNT TYPE LIGHT FIXTURE - EXTERIOR POST TOP TYPE LIGHT FIXTURE - EXTERIOR BOLLARD TYPE

NOTES:

1. LIGHTING SYMBOLS AS INDICATED ON PLANS ARE NOT DRAWN TO SCALE UNLESS NOTED OTHERWISE.

#### LIGHTING CONTROLS LEGEND

DESCRIPTION SWITCH SINGLE POLE OCCUPANCY SENSOR SWITCH VACANCY SENSOR SWITCH

VACANCY DIMMER SENSOR SWITCH LOW VOLTAGE DIMMER SWITCH

CEILING MOUNTED OCCUPANCY SENSOR CEILING MOUNTED VACANCY SENSOR

SWITCH THREE-WAY SINGLE POLE KEY SWITCH

WIRELESS SWITCH WIRELESS DIMMING SWITCH

# DRAWING NOTATION

DESCRIPTION

LIGHTING FIXTURE TAG CONSTRUCTION KEY NOTE NUMBER 1

DEMOLITION KEY NOTE NUMBER 1

(REFER TO FEEDER SCHEDULE ON THIS SHEET) EQUIPMENT DESIGNATION,

(I.E. EXHAUST FAN NUMBER 1)

----- EXISTING DEVICES OR EQUIPMENT

NEW OR MODIFIED DEVICES OR EQUIPMENT

---- NEW OR MODIFIED UNDERGROUND WIRING

Y////////S EXISTING SYSTEM COMPONENT TO BE REMOVED

### POWER S

SYMBOL	DESCRIPTION
•	CONDUIT DOWN
0	CONDUIT UP
C	CONTACTOR
4	DISCONNECT SWITCH - NON FUSED
4	DISCONNECT SWITCH - FUSED
	DISCONNECT SWITCH - COMB. MOTOR STARTER
	ELECTRICAL PANEL - 208/240 VOLTS
	ELECTRICAL PANEL - 480 VOLTS
•	GROUNDING ROD
=	GROUND
<del></del>	GROUNDING BAR
J	JUNCTION BOX
	JUNCTION BOX WITH HARDWIRED CONNECTION
M	METER
$\searrow$	MOTOR - SINGLE PHASE
	MOTOR - THREE PHASE
\$м	MOTOR RATED SWITCH
φ	POWER RECEPTACLE - SIMPLEX TYPE
•	

POWER RECEPTACLE - DUPLEX TYPE POWER RECEPTACLE - DUPLEX 6" ABOVE COUNTER

POWER RECEPTACLE - USB/DUPLEX COMBO. DEVICE POWER RECEPTACLE - QUADRUPLEX TYPE POWER RECEPTACLE - RECESSED FLOOR TYPE

POWER RECEPTACLE - SPECIALTY TYPE CORD REEL SURGE PROTECTION DEVICE

TIME CLOCK TRANSFORMER (REFER TO SCHEDULES FOR INFO) VSD VARIABLE SPEED DRIVE

1. ALL DEVICE RATINGS/SIZES SHALL BE COORDINATED WITH PLANS AND SCHEDULES.

#### AUXILIARY SYST. SYMBOL LIST

SYMBOL	DESCRIPTION
	CAMERA
CR	CARD READER
₩	COMMUNICATIONS DEVICE - 6" ABOVE COUNTER
lacktriangledown	COMMUNICATIONS DEVICE - FLOOR
▼	COMMUNICATIONS DEVICE - WALL
DH	MAGNETIC DOOR HOLDER
•	PUSH BUTTON
S	SPEAKER
$\vdash \bigcirc$	WALL CLOCK - SINGLE FACE

. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR BOX AND CONDUIT FOR ALL DEVICES INDICATED. 2. LOW VOLTAGE CONTRACTOR SHALL PROVIDE EXACT SPECIFICATIONS AND LOCATIONS OF ALL DEVICES.

WALL CLOCK - DOUBLE FACE

WALL CLOCK AND SPEAKER UNIT

# FIRE ALARM SYMBOL LIST

SYMBOL	DESCRIPTION	RMC
^		RP
(S)	DETECTION DEVICE	SPEC/SPECS
<u>s</u>	DETECTION DEVICE - DUCT MOUNTED	TBB
(FS)	DETECTION DEVICE - FLOW SWITCH	TYP.
TS	DETECTION DEVICE - TAMPER SWITCH	UC
FAA	FIRE ALARM ANNUNCIATOR PANEL	UL
FACP	FIRE ALARM CONTROL PANEL	UPS
√FD	FIRE DEPARTMENT COMMUNICATION OUTLET	USB
F	MANUAL DEVICE - PULL STATION	V
$\overline{\mathbb{F}} \triangleleft$	NOTIFICATION DEVICE - WALL MOUNTED	VA
E	NOTIFICATION DEVICE - CEILING MOUNTED	W
<u>ES:</u> DRAWINGS_I	NDICATE DESIGN INTENT ONLY, FINAL LOCATIONS AND	WG

DEVICE SPECIFICATIONS SHALL BE PROVIDED BY FIRE ALARM MANUFACTURER. REFER TO PROJECT SPECIFICATIONS FOR APPROVED MANUFACTURERS.

FIRE ALARM CONTROL PANEL

GROUND FAULT CIRCUIT INTERRUPTER

FULL LOAD AMPS

HAND-OFF-AUTO

ISOLATED GROUND

KILOVOLT AMPERE

KILOWATT HOUR

LIGHTING PANEL

MAIN LUG ONLY

NEUTRAL

NON-FUSIBLE

NORMALLY CLOSED

NOT IN CONTRACT

NORMALLY OPEN

POWER FACTOR

MAIN CIRCUIT BREAKER

MAIN DISTRIBUTION PANEL

NATIONAL ELECTRICAL CODE

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

OWNER FURNISHED / CONTRACTOR INSTALLED

OWNER FURNISHED / OWNER INSTALLED

RELOCATED EXISTING ELECTRICAL EQUIPMENT

POLYVINYL CHOLRIDE (PLASTIC)

REMOVE AND REINSTALL

RIGID METALLIC CONDUIT

TELEPHONE BACKBOARD

UNDERWRITERS LABORATORIES

UNIVERSAL SERIAL BUS

UNINTERRUPTIBLE POWER SUPPLY

RECEPTACLE PANEL

SPECIFICATIONS

UNDER COUNTER

TYPICAL

VOLT

VOLT AMPERE

WIRE GUARD

WEATHERPROOF

TRANSFORMER

HORSEPOWER

KILOVOLT

KILOWATT

FUSE

GROUND

G/GRD

KW

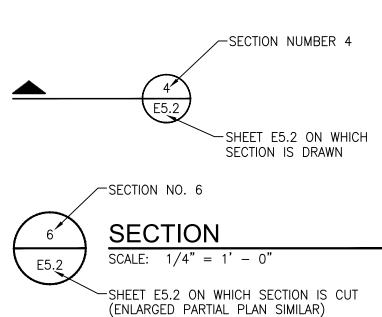
MDP

N/NEU

PH. OR Ø PHASE

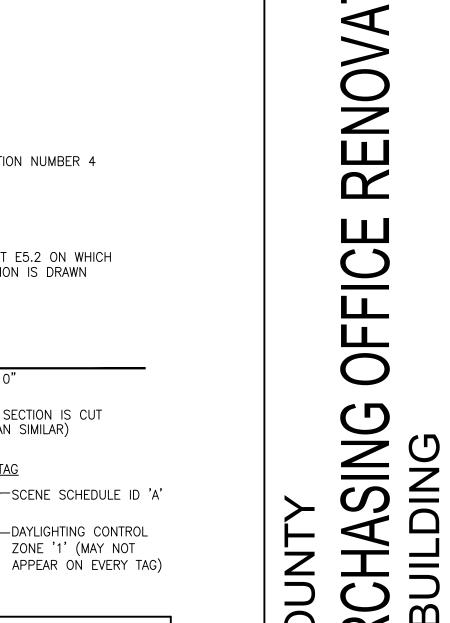
POLE

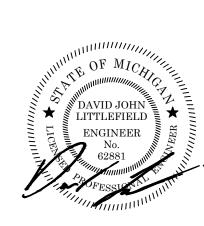
SYMBOL LIST	ELEC	CTRICAL ABBREVIATIONS		DRAWING INDEX
DESCRIPTION	ABBREV.	DESCRIPTION	SHT NO	DESCRIPTION
OWN	AFF	ABOVE FINISHED FLOOR	E0.00	ELECTRICAL GENERAL INFORMATION AND LIGHTING SCHEDULE
Р	А	AMPERE	E1.00	ELECTRICAL POWER COMPOSITE FIRST AND SECOND FLOOR PLANS
	AF	AMPERE FUSE/AMPERE FRAME	EPD1.10	ELECTRICAL POWER DEMOLITION FIRST FLOOR PLAN
T SWITCH - NON FUSED	AWG	AMERICAN WIRE GAUGE	ELD1.10	ELECTRICAL LIGHTING DEMOLITION FIRST FLOOR PLAN
T SWITCH - FUSED	AT	AMPERE TRIP	ED2.10	ELECTRICAL POWER DEMOLITION ROOF PLAN
T SWITCH - COMB. MOTOR STARTER	ATS	AUTOMATIC TRANSFER SWITCH	EP1.10	ELECTRICAL POWER NEW WORK FIRST FLOOR PLAN
PANEL - 208/240 VOLTS	AIC	AVAILABLE INTERRUPTING CURRENT (AMPS)	EL1.10	ELECTRICAL LIGHTING NEW WORK FIRST FLOOR PLAN
PANEL - 480 VOLTS	С	CONDUIT OR CEILING MOUNTED		
ROD	СВ	CIRCUIT BREAKER	E2.10	ELECTRICAL POWER NEW WORK ROOF PLAN
	CU	COPPER	E5.00	ELECTRICAL DETAILS
BAR	СТ	CURRENT TRANSFORMER	E6.00	ELECTRICAL PANEL SCHEDULES
30X	DIA	DIAMETER	E7.00	ONE-LINE RISER DIAGRAMS
BOX WITH HARDWIRED CONNECTION	DISC	DISCONNECT		
	EMT	ELECTRICAL METALLIC TUBING		
SINGLE PHASE	EWC	ELECTRIC WATER COOLER		
THREE PHASE	EPO	EMERGENCY POWER OFF		
ED SWITCH	(E)	EXISTING ELECTRICAL EQUIPMENT OR WORK		
CEPTACLE - SIMPLEX TYPE	FA	FIRE ALARM		



LIGHTING CONTROL TAG SCENE SCHEDULE ID 'A' LIGHTING CONTROL SPACE TYPE '1' 1A DAYLIGHTING CONTROL ZONE '1' (MAY NOT

	APPLICABLE CODES AND REGULATIONS
YEAR	CODE
2015	MICHIGAN BUILDING CODE
2015	MICHIGAN ENERGY CODE
2023	MICHIGAN ELECTRICAL CODE RULES, PART 8
2021	NATIONAL ELECTRICAL CODE (NFPA 70)
2013	NFPA 20
2013	NFPA 72
2012	NFPA 101
2013	NFPA 110
2009	ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS & FACILITIES





ARCHITECTS

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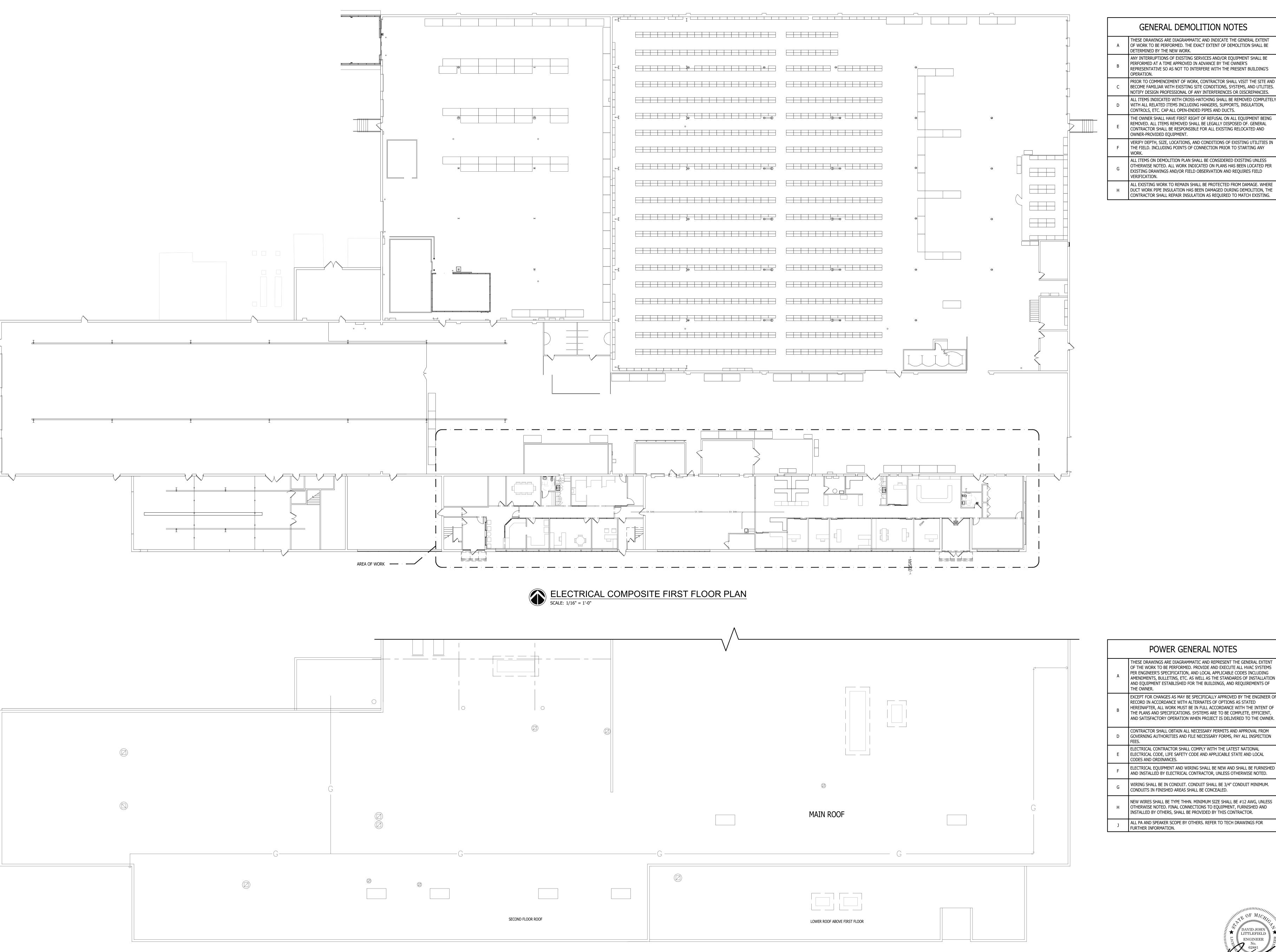


ELECTRICAL GENERAL INFORMATION AND LIGHTING SCHEDULE

PRELIMINARY DESIGN DEVELOPMENT CONSTRUCTION FINAL RECORD

CHECKED BY DJL REVISIONS
ADDENDUM No. 1 11-7-202

E0.00



ELECTRICAL SECOND FLOOR / ROOF PLAN

SCALE: 1/16" = 1'-0"

#### GENERAL DEMOLITION NOTES

- THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT
- OF WORK TO BE PERFORMED. THE EXACT EXTENT OF DEMOLITION SHALL BE DETERMINED BY THE NEW WORK.
- ANY INTERRUPTIONS OF EXISTING SERVICES AND/OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE PRESENT BUILDING'S
  - PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING SITE CONDITIONS, SYSTEMS, AND UTLITIES.
- NOTIFY DESIGN PROFESSIONAL OF ANY INTERFERENCES OR DISCREPANCIES. ALL ITEMS INDICATED WITH CROSS-HATCHING SHALL BE REMOVED COMPLETELY WITH ALL RELATED ITEMS INCLUDING HANGERS, SUPPORTS, INSULATION, CONTROLS, ETC. CAP ALL OPEN-ENDED PIPES AND DUCTS.
- REMOVED. ALL ITEMS REMOVED SHALL BE LEGALLY DISPOSED OF. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING RELOCATED AND OWNER-PROVIDED EQUIPMENT.
- VERIFY DEPTH, SIZE, LOCATIONS, AND CONDITIONS OF EXISTING UTILITIES IN THE FIELD. INCLUDING POINTS OF CONNECTION PRIOR TO STARTING ANY
- ALL ITEMS ON DEMOLITION PLAN SHALL BE CONSIDERED EXISTING UNLESS OTHERWISE NOTED. ALL WORK INDICATED ON PLANS HAS BEEN LOCATED PER EXISTING DRAWINGS AND/OR FIELD OBSERVATION AND REQUIRES FIELD VERIFICATION.
- ALL EXISTING WORK TO REMAIN SHALL BE PROTECTED FROM DAMAGE. WHERE DUCT WORK PIPE INSULATION HAS BEEN DAMAGED DURING DEMOLITION, THE CONTRACTOR SHALL REPAIR INSULATION AS REQUIRED TO MATCH EXISTING.

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www.WakelyAlA.com



**RENOVA** 

OFFICE

IASING LDING

POWER GENERAL NOTES THESE DRAWINGS ARE DIAGRAMMATIC AND REPRESENT THE GENERAL EXTENT OF THE WORK TO BE PERFORMED. PROVIDE AND EXECUTE ALL HVAC SYSTEMS PER ENGINEER'S SPECIFICATION, AND LOCAL APPLICABLE CODES INCLUDING AMENDMENTS, BULLETINS, ETC. AS WELL AS THE STANDARDS OF INSTALLATION

RECORD IN ACCORDANCE WITH ALTERNATES OF OPTIONS AS STATED HEREINAFTER, ALL WORK MUST BE IN FULL ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS. SYSTEMS ARE TO BE COMPLETE, EFFICIENT, AND SATISFACTORY OPERATION WHEN PROJECT IS DELIVERED TO THE OWNER.

CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVAL FROM GOVERNING AUTHORITIES AND FILE NECESSARY FORMS, PAY ALL INSPECTION

ELECTRICAL CONTRACTOR SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE, LIFE SAFETY CODE AND APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.

ELECTRICAL EQUIPMENT AND WIRING SHALL BE NEW AND SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED.

WIRING SHALL BE IN CONDUIT. CONDUIT SHALL BE 3/4" CONDUIT MINIMUM. CONDUITS IN FINISHED AREAS SHALL BE CONCEALED.

NEW WIRES SHALL BE TYPE THHN. MINIMUM SIZE SHALL BE #12 AWG, UNLESS OTHERWISE NOTED. FINAL CONNECTIONS TO EQUIPMENT, FURNISHED AND

ALL PA AND SPEAKER SCOPE BY OTHERS. REFER TO TECH DRAWINGS FOR FURTHER INFORMATION.

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ELECTRICAL POWER

COMPOSITE FIRST AND

SECOND FLOOR PLANS

DESIGN DEVELOPMENT ☐

PRELIMINARY

CONSTRUCTION

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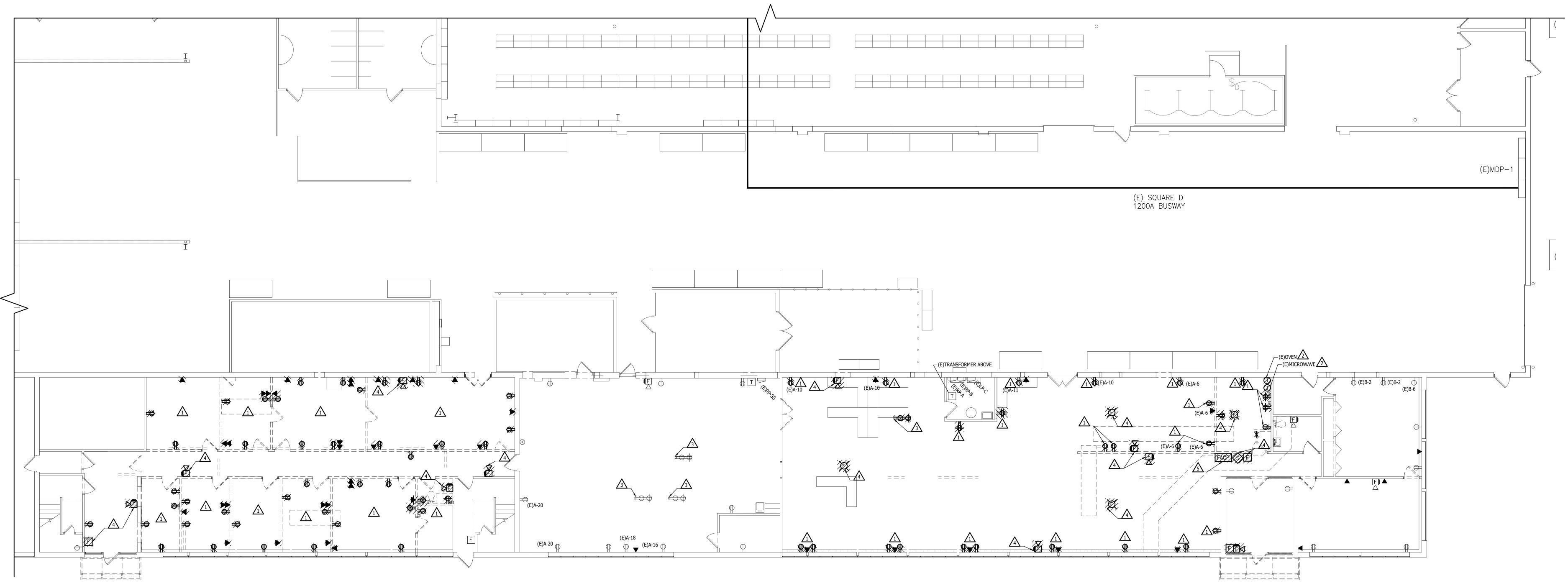
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FINAL RECORD

REVISIONS

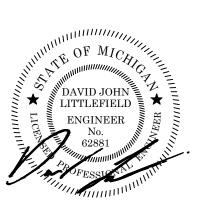
$\triangle$	DEMOLITION KEYED NOTES
1	DEMO ALL RECEPTACLES, RACEWAYS, AND DATA OUTLETS IN ROOM COMPLETE BACK TO SOURCE. REMOVE CONDUIT AND WIRING COMPLETE. RETAIN BREAKER AS SPARE. UPDATE PANEL SCHEDULE.
2	KITCHEN EQUIPMENT BEING REMOVED COMPLETE. REMOVE CONDUIT AND WIRING COMPLETE. RETAIN BREAKER AS SPARE. UPDATE PANEL SCHEDULE.
3	POWER POLE TO BE SUPPORTED IN PLACE PRIOR TO REMOVAL OF THE CEILING. PROTECT POWER POLE AND ALL ASSOCIATED WIRING.
4	FIRE ALARM DEVICE TO BE REMOVED COMPLETE. TAKE CONDUIT AND WIRING BACK TO SOURCE.
5	RELOCATE EXISTING FIRE ALARM CONTROL PANEL TO NEW LOCATION SHOWN ON NEW WORK PLAN. CAPTURE EXISTING WIRING/CONDUIT AND EXTEND TO

NEW LOCATION AS REQUIRED.



ELECTRICAL POWER DEMOLITION FIRST FLOOR PLAN

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



WAKELY ASSOCIATES, INC. ARCHITECTS

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RENOVA-JRCHASING OFFICE Z BUILDING

ELECTRICAL POWER
DEMOLITION FIRST FLOOR
PLAN

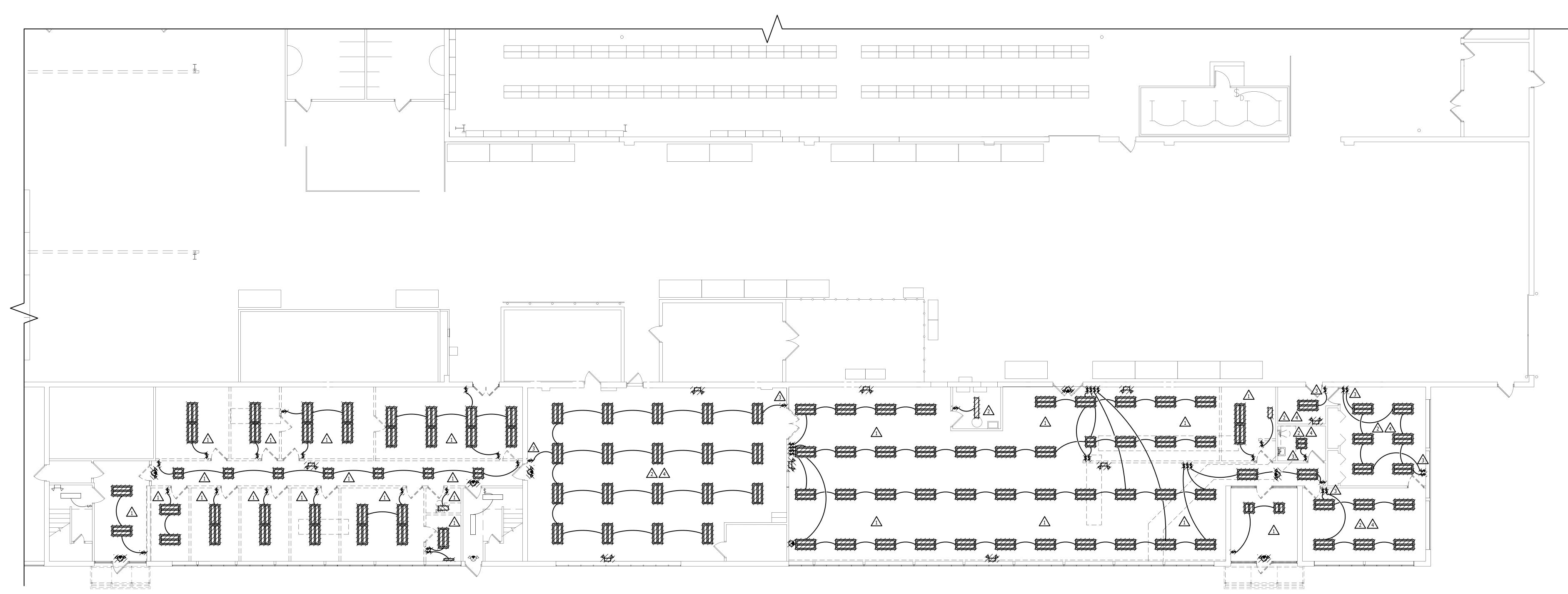
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DESIGN DEVELOPMENT

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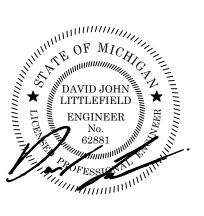
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$\triangle$	DEMOLITION KEYED NOTES
1	LIGHT FIXTURES, ASSOCIATED CONTROLS, EXIT SIGNS, AND EBU'S SHALL BE REMOVED COMPLETE BACK TO SOURCE INCLUDING ALL CONDUIT AND WIRING.
2	LIGHT FIXTURES TO BE REMOVED COMPLETE. REMOVE CONDUIT AND WIRING COMPLETE BACK TO JUNCTION BOX FEEDING THIS AREA. PREPARE FOR CONNECTION TO NEW LIGHTING FROM JUNCTION BOX AS INDICATED ON NEW WORK PLANS.
3	SWITCHES AND LIGHTING CONTROLS TO BE REMOVED COMPLETE. PATCH AND PAINT AS REQUIRED.
4	AFTER REMOVAL OF CEILING IN THIS AREA, CONTRACTOR SHALL REMOVE ALL CONDUIT AND LOOSE WIRING NOT BEING USED COMPLETE. ANY EXISTING CONDUIT, LIVE CIRCUITS, AND LOW VOLTAGE WIRING TO REMAIN SHALL BE SUPPORTED TO MEET CODE.



ELECTRICAL LIGHTING DEMOLITION FIRST FLOOR PLAN

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



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MACOMB COUNTY

F & O / PURCHASING OFFICE RENOVATIONIC WERTZ BUILDING

ELECTRICAL LIGHTING DEMOLITION FIRST FLOOR

PRELIMINARY
DESIGN DEVELOPMEN

PRELIMINARY

DESIGN DEVELOPMENT 

CONSTRUCTION

FINAL RECORD

DRAWN BY \_\_TJO
CHECKED BY \_\_DJL
REVISIONS

REVISIONS
ADDENDUM No. 1 11-7-2024

DATE: OCTOBER 31, 2024

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RENOVA-

OFFICE

O / PURCHASING (
WERTZ BUILDING

## DEMOLITION KEYED NOTES

	GENERAL DEMOLITION NOTES
А	THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF WORK TO BE PERFORMED. THE EXACT EXTENT OF DEMOLITION SHALL BE DETERMINED BY THE NEW WORK.
В	ANY INTERRUPTIONS OF EXISTING SERVICES AND/OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE PRESENT BUILDING'S OPERATION.
С	PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING SITE CONDITIONS, SYSTEMS, AND UTLITIES. NOTIFY DESIGN PROFESSIONAL OF ANY INTERFERENCES OR DISCREPENCIES.
D	ALL ITEMS INDICATED WITH CROSS-HATCHING SHALL BE REMOVED COMPLETE WITH ALL RELATED ITEMS INCLUDING HANGARS, SUPPORTS, INSULATION, CONTROLS, ETC. CAP ALL OPEN ENDED PIPES AND DUCTS.
E	THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL EQUIPMENT BEING REMOVED. ALL ITEMS REMOVED SHALL BE LEGALLY DISPOSED OF. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING RELOCATED AND OWNER PROVIDED EQUIPMENT.
F	VERIFY DEPTH, SIZE, LOCATIONS, AND CONDITIONS OF EXISTING UTILITIES IN THE FIELD. INCLUDING POINTS OF CONNECTION PRIOR TO STARTING ANY WORK.
G	ALL ITEMS ON DEMOLITION PLAN SHALL BE CONSIDERED EXISTING UNLESS OTHERWISE NOTED. ALL WORK INDICATED ON PLANS HAS BEEN LOCATED PER EXISTING DRAWINGS AND/OR FIELD OBSERVATION AND REQUIRES FIELD VERIFICATION.
Н	ALL EXISTING WORK TO REMAIN SHALL BE PROTECTED FROM DAMAGE. WHERE DUCT WORK PIPE INSULATION HAS BEEN DAMAGED DURING DEMOLITION, THE CONTRACTOR SHALL REPAIR INSULATION AS REQUIRED TO MATCH EXISTING.

PACKAGED ROOF TOP UNIT BEING REMOVED COMPLETE BY MECHANICAL TRADES.
ELECTRICAL CONTRACTOR TO DISCONNECT AND REMOVE COMPLETE BACK TO
SOURCE INCLUDING CONDUIT AND WIRING. RETAIN BREAKER AS SPARE, UPDATE
PANEL SCHEDULE.

EXHAUST FAN BEING REMOVED COMPLETE BY MECHANICAL TRADES. ELECTRICAL
CONTRACTOR TO DISCONNECT AND REMOVE COMPLETE BACK TO SOURCE
INCLUDING CONDUIT AND WIRING. RETAIN BREAKER AS SPARE, UPDATE PANEL

ELECTRICAL POWER
DEMOLITION ROOF PLAN

PRELIMINARY

DESIGN DEVELOPMENT

CONSTRUCTION

FINAL RECORD

DRAWN BY <u>TJO</u> CHECKED BY <u>DJL</u>

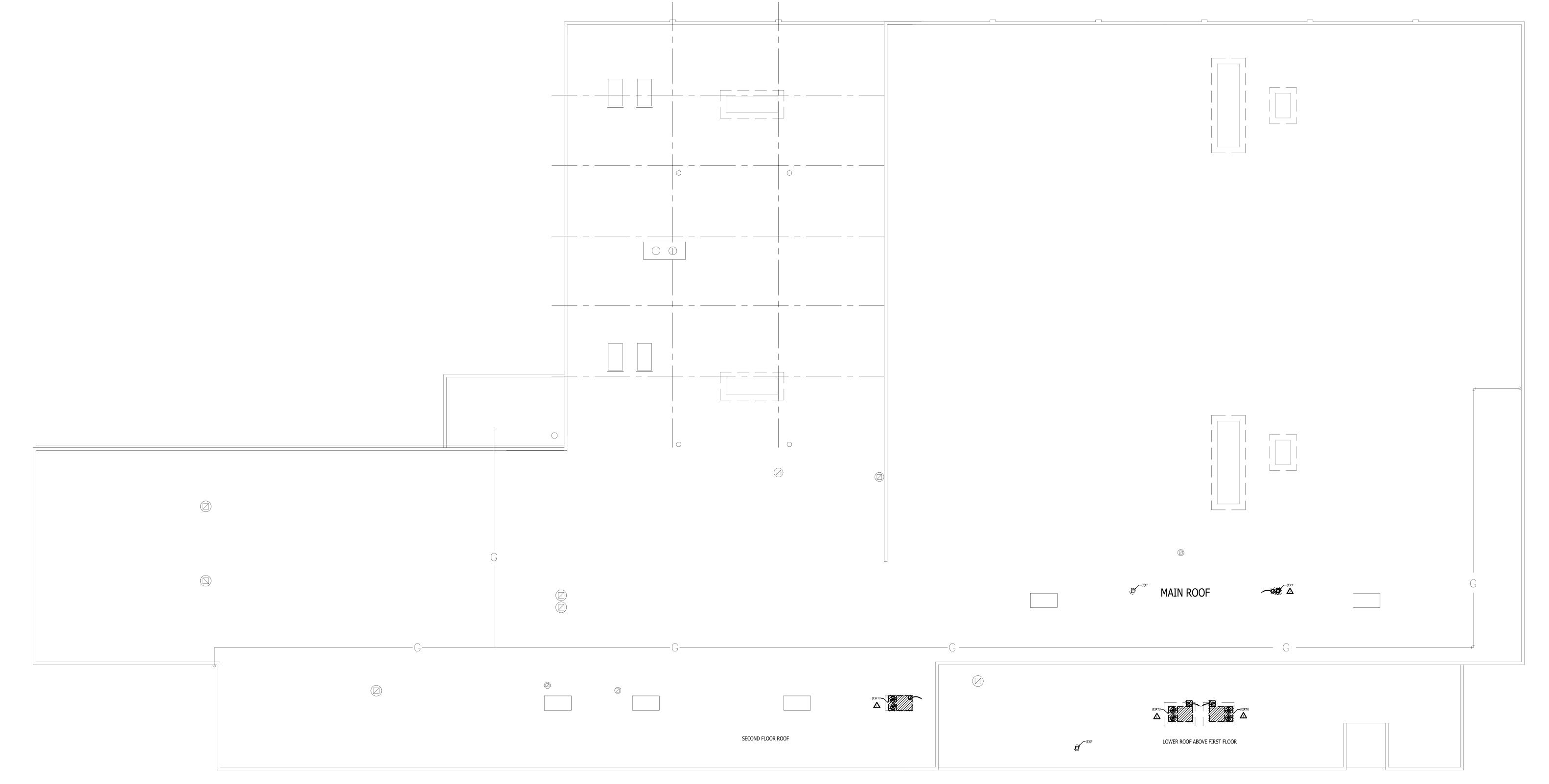
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X	NEW WORK KEYED NOTES
1	NEW JUNCTION BOX (1) FOR POWER AND (1) FOR DATA. VERIFY EXACT LOCATION WITH FURNITURE PLANS PRIOR TO ROUGH IN.
2	RELOCATED FIRE ALARM CONTROL PANEL.
3	PROVIDE NEW BUS PLUG FOR RTU-1
4	PROVIDE NEW BUS PLUG FOR PANEL LP-N
5	RE-SUPPORT POWER POLE AFTER INSTALLATION OF NEW GRID CEILING.
6	INSTALL NEW DOUBLE GANG COMBINATION FLOOR BOX WITH (1)DUPLEX RECEPTACLE AND (1) DATA PORT (LEGRAND: OMNIBOX OR SIMILAR) IN EXIST FLOOR. CONFIRM EXACT LOCATION WITH FURNITURE PLANS. NEW WIRING AN CONDUIT IN FLOOR. REFER TO ARCHITECTURAL FOR SAW CUTTING. PROVIDE 20A OUTLET.
7	DATA ON DEMOUNTABLE WALL SHALL BE ROUTED FROM THE DATA JUNCTION BOX TO BE INSTALLED ON SOUTH GYPSUM WALL THROUGH BUILT-IN RACEWAY AND TERMINATED IN MODULAR DATA OUTLETS. BUILT-IN RACEWAY IS PART OF THE MODULAR DEMOUNTABLE WALL.
8	JUNCTION BOX FOR TV POWER. TV SHALL BE MOUNTED ON DEMOUNTABLE W. POWER SHALL BE ROUTED THROUGH BUILT-IN RACEWAY. BUILT-IN RACEWAY PART OF THE MODULAR DEMOUNTABLE WALL.
9	REFER TO DETAILS SHEET FOR ROUGH IN DETAILS FOR TV AND TV-1. COORDINATE EXACT HEIGHT IN THE FIELD PRIOR TO ROUGH IN.

	_
ORK KEYED NOTES	
OR POWER AND (1) FOR DATA. VERIFY EXACT JRE PLANS PRIOR TO ROUGH IN.	
CONTROL PANEL.	
FOR RTU-1	
FOR PANEL LP-N	-
AFTER INSTALLATION OF NEW GRID CEILING.	
NG COMBINATION FLOOR BOX WITH (1)DUPLEX A PORT (LEGRAND: OMNIBOX OR SIMILAR) IN EXISTING LOCATION WITH FURNITURE PLANS. NEW WIRING AND ER TO ARCHITECTURAL FOR SAW CUTTING. PROVIDE	
WALL SHALL BE ROUTED FROM THE DATA JUNCTION I SOUTH GYPSUM WALL THROUGH BUILT-IN RACEWAY DULAR DATA OUTLETS. BUILT-IN RACEWAY IS PART OF ABLE WALL.	
OWER. TV SHALL BE MOUNTED ON DEMOUNTABLE WALL.  O THROUGH BUILT-IN RACEWAY. BUILT-IN RACEWAY IS  DEMOUNTABLE WALL.	
FOR ROUGH IN DETAILS FOR TV AND TV-1. SHT IN THE FIELD PRIOR TO ROUGH IN.	<b>}</b>

	POWER GENERAL NOTES
А	THESE DRAWINGS ARE DIAGRAMMATIC AND REPRESENT THE GENERAL EXTENT OF THE WORK TO BE PERFORMED. PROVIDE AND EXECUTE ALL HVAC SYSTEMS PER ENGINEER'S SPECIFICATION, AND LOCAL APPLICABLE CODES INCLUDING AMENDMENTS, BULLETINS, ETC. AS WELL AS THE STANDARDS OF INSTALLATION AND EQUIPMENT ESTABLISHED FOR THE BUILDINGS, AND REQUIREMENTS OF THE OWNER.
В	EXCEPT FOR CHANGES AS MAY BE SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD IN ACCORDANCE WITH ALTERNATES OF OPTIONS AS STATED HEREINAFTER, ALL WORK MUST BE IN FULL ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS. SYSTEMS ARE TO BE COMPLETE, EFFICIENT, AND SATISFACTORY OPERATION WHEN PROJECT IS DELIVERED TO THE OWNER.
D	CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVAL FROM GOVERNING AUTHORITIES AND FILE NECESSARY FORMS, PAY ALL INSPECTION FEES.
E	ELECTRICAL CONTRACTOR SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE, LIFE SAFETY CODE AND APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.
F	ELECTRICAL EQUIPMENT AND WIRING SHALL BE NEW AND SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED.
G	WIRING SHALL BE IN CONDUIT. CONDUIT SHALL BE 3/4" CONDUIT MINIMUM. CONDUITS IN FINISHED AREAS SHALL BE CONCEALED.

NEW WIRES SHALL BE TYPE THHN. MINIMUM SIZE SHALL BE #12 AWG, UNLESS

H OTHERWISE NOTED. FINAL CONNECTIONS TO EQUIPMENT, FURNISHED AND

INSTALLED BY OTHERS, SHALL BE PROVIDED BY THIS CONTRACTOR.

FURTHER INFORMATION.

ALL PA AND SPEAKER SCOPE BY OTHERS. REFER TO TECH DRAWINGS FOR

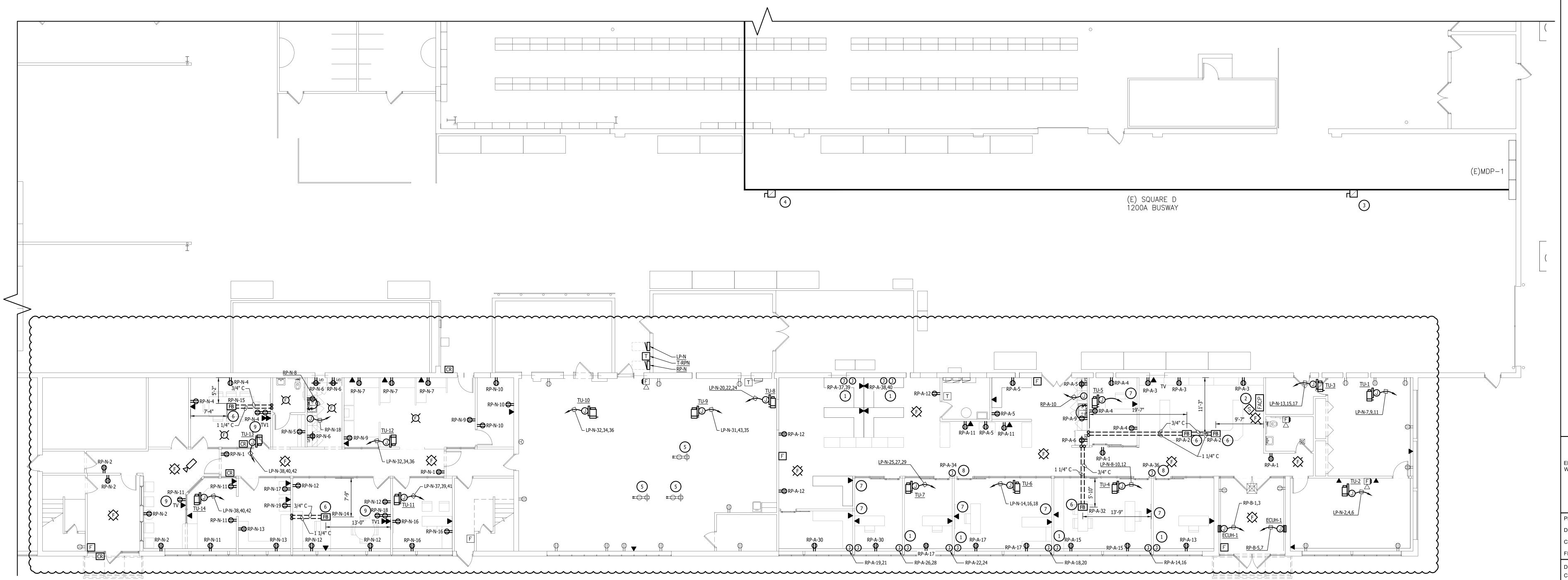
www.WakelyAlA.com SYSTEMS ENGINEERING 69 S. GRATIOT AVE. MT. CLEMENS, MI 48043 UBS PROJECT 007.24.06

WAKELY ASSOCIATES, INC.

30500 VAN DYKE AVENUE SUITE 209 WARREN, MICHIGAN 48093

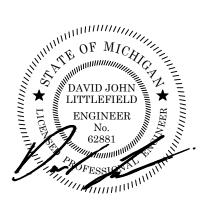
PH: 586.573.4100 FX: 586.573.0822

ARCHITECTS



ELECTRICAL POWER NEW WORK FIRST FLOOR PLAN

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



OFFICE ELECTRICAL POWER NEW WORK FIRST FLOOR PLAN PRELIMINARY DESIGN DEVELOPMENT CONSTRUCTION FINAL RECORD CHECKED BY DJL REVISIONS
ADDENDUM No. 1 11-7-2024

EP1.10

NEW LED FIXTURES. PROVIDE NEW CONTROL SENSORS AND SWITCHING AS SHOWN. PROVIDE NEW WIRELESS LIGHTING CONTROL SYSTEM. PROVIDE ALL PROGRAMMING AS REQUIRED FOR A COMPLETE SYSTEM.

NEW LED FIXTURES TO REPLACE EXISTING FIXTURES. PROVIDE NEW CONTROL SENSORS AND SWITCHING AS SHOWN, CONNECT TO EXISTING CIRCUIT AVAILABLE AS A RESULT OF DEMOLITION IN THIS AREA. ALL WIRING AND CONDUIT SHALL BE NEW. RE-USE EXISTING SWITCH LOCATIONS FOR NEW SWITCHES. PROVIDE NEW WIRELESS LIGHTING CONTROL SYSTEM. PROVIDE ALL PROGRAMMING AS REQUIRED FOR A COMPLETE SYSTEM.

JUNCTION BOX FOR BACK LIT SIGN. COORDINATE EXACT ROUGH IN LOCATIONS

PRIOR TO TERMINATION.

WITH SIGN MANUFACTURE PRIOR TO INSTALLATION. VERIFY SIGN VOLTAGE

ELECTRICAL LIGHTING NEW WORK FIRST FLOOR PLAN

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



WAKELY ASSOCIATES, INC. ARCHITECTS

30500 VAN DYKE AVENUE SUITE 209 WARREN, MICHIGAN 48093 PH: 586.573.4100 FX: 586.573.0822



RCHASING OFFICE RENOVATION BUILDING

LECTRICAL LIGHTING NEV

ELECTRICAL LIGHTING NEW WORK FIRST FLOOR PLAN

PRELIMINARY [
DESIGN DEVELOPMENT [
CONSTRUCTION [

FINAL RECORD [

DRAWN BY \_\_TJO

CHECKED BY DJL

REVISIONS

REVISIONS
ADDENDUM No. 1 11-7-202

DATE: OCTOBER 31, 202

EL1.10

POWER GENERAL NOTES THESE DRAWINGS ARE DIAGRAMMATIC AND REPRESENT THE GENERAL EXTENT OF THE WORK TO BE PERFORMED. PROVIDE AND EXECUTE ALL HVAC SYSTEMS

PER ENGINEER'S SPECIFICATION, AND LOCAL APPLICABLE CODES INCLUDING AMENDMENTS, BULLETINS, ETC. AS WELL AS THE STANDARDS OF INSTALLATION AND EQUIPMENT ESTABLISHED FOR THE BUILDINGS, AND REQUIREMENTS OF THE OWNER. EXCEPT FOR CHANGES AS MAY BE SPECIFICALLY APPROVED BY THE ENGINEER OF

HEREINAFTER, ALL WORK MUST BE IN FULL ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS. SYSTEMS ARE TO BE COMPLETE, EFFICIENT, AND SATISFACTORY OPERATION WHEN PROJECT IS DELIVERED TO THE OWNER.

RECORD IN ACCORDANCE WITH ALTERNATES OF OPTIONS AS STATED

CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVAL FROM GOVERNING AUTHORITIES AND FILE NECESSARY FORMS, PAY ALL INSPECTION

ELECTRICAL CONTRACTOR SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE, LIFE SAFETY CODE AND APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.

ELECTRICAL EQUIPMENT AND WIRING SHALL BE NEW AND SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED. WIRING SHALL BE IN CONDUIT. CONDUIT SHALL BE 3/4" CONDUIT MINIMUM.

CONDUITS IN FINISHED AREAS SHALL BE CONCEALED. NEW WIRES SHALL BE TYPE THHN. MINIMUM SIZE SHALL BE #12 AWG, UNLESS OTHERWISE NOTED. FINAL CONNECTIONS TO EQUIPMENT, FURNISHED AND

INSTALLED BY OTHERS, SHALL BE PROVIDED BY THIS CONTRACTOR. ALL PA AND SPEAKER SCOPE BY OTHERS. REFER TO TECH DRAWINGS FOR FURTHER INFORMATION.

NEW WORK KEYED NOTES

NEW PACKAGED ROOF TOP UNIT INSTALLED BY MECHANICAL TRADES.
ELECTRICAL CONTRACTOR SHALL PROVIDE FINAL ELECTRICAL CONNECTIONS TO EXISTING BUSWAY USING NEW CONDUIT AND WIRING. PROVIDE DUCT SMOKE DETECTORS FOR RTU. PROVIDE NEW GFCI SERVICE RECEPTACLE WITH WHILE IN

NEW EXHAUST FAN INSTALLED BY MECHANICAL TRADES. ELECTRICAL CONTRACTOR SHALL PROVIDE FINAL ELECTRICAL CONNECTIONS USING NEW CONDUIT AND WIRING.

ALL FEEDERS TO MECHANICAL EQUIPMENT ON ROOF SHALL BE RUN ABOVE CEILING AND STUB UP TO DISCONNECT. NO CONDUIT TO BE RUN EXPOSED ON THE ROOF.

ELECTRICAL POWER NEW WORK ROOF PLAN

SCALE: 1/16" = 1'-0"

MAIN ROOF

LOWER ROOF ABOVE FIRST FLOOR

SECOND FLOOR ROOF



URCHASING TZ BUILDING ELECTRICAL POWER NEW WORK ROOF PLAN

PRELIMINARY

CONSTRUCTION

CHECKED BY DJL

REVISIONS
ADDENDUM No. 1 11-7-2024

<sup>JOB NO</sup> 242053

FINAL RECORD

DESIGN DEVELOPMENT

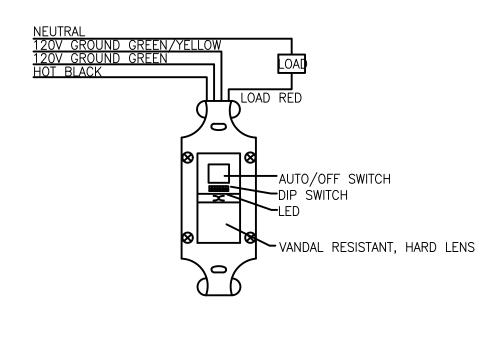
RENOVA.

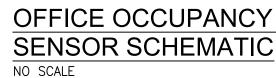
#### T-GRID FIXTURE MOUNTING DETAIL NO SCALE

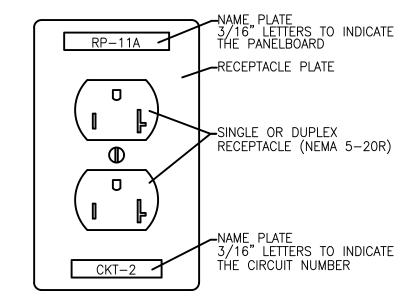
#### ELECTRICAL FIXTURES

1. PENDANT MOUNTED FIXTURES SHALL BE DIRECTLY SUPPORTED FROM THE STRUCTURE ABOVE USING A 9 GAUGE WIRE OR AN APPROVED ALTERNATE SUPPORT WITHOUT USING THE CEILING SUSPENSION SYSTEM FOR DIRECT SUPPORT.

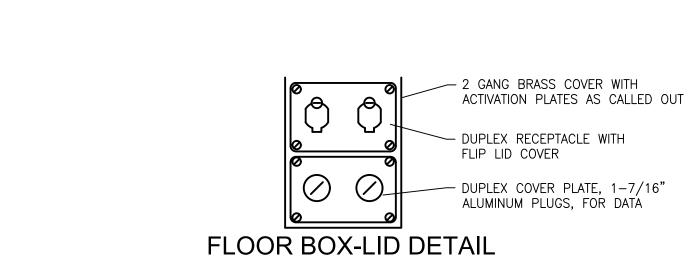
2. TANDEM FIXTURES MAY UTILIZE COMMON WIRES.





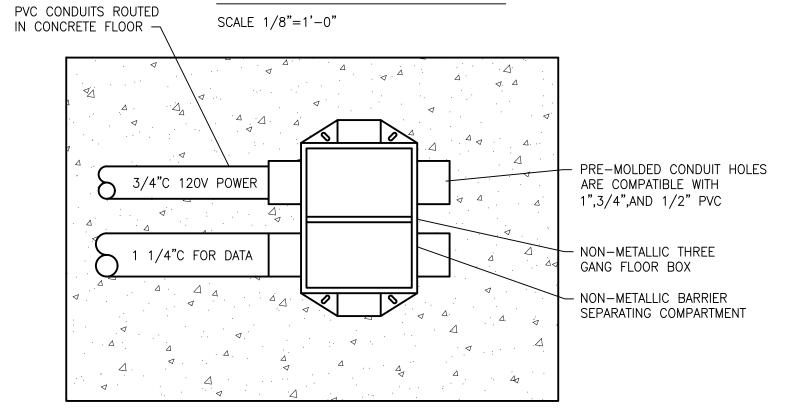


DETAIL OF BRANCH CIRCUIT NUMBER ON RECEPTACLE PLATE



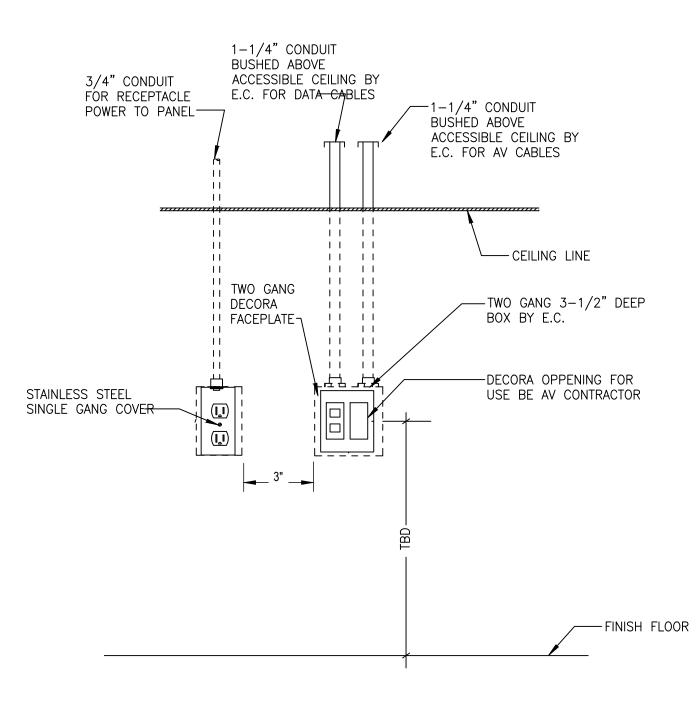
FLOOR BOX-LID DETAIL

SCALE 1/8"=1'-0"

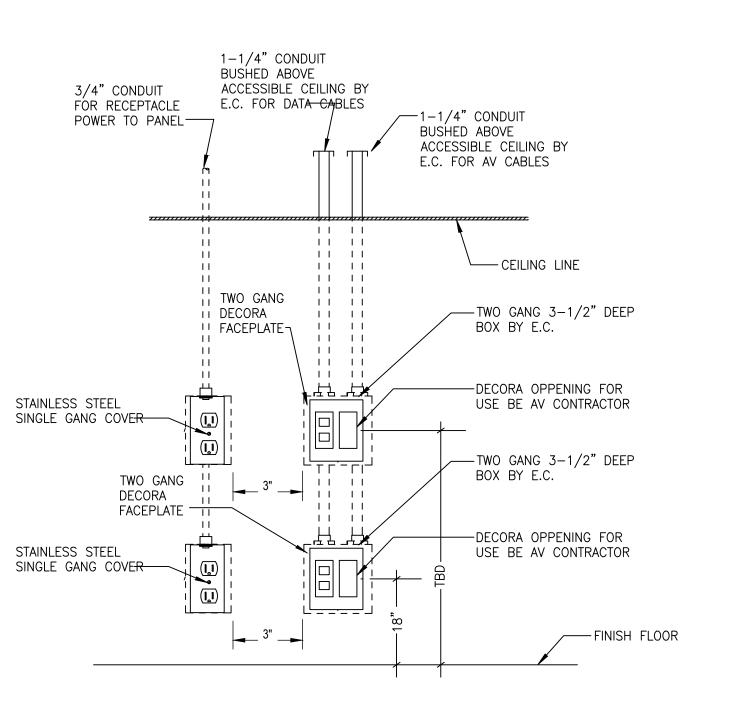


2 GANG FLOOR BOX DETAIL

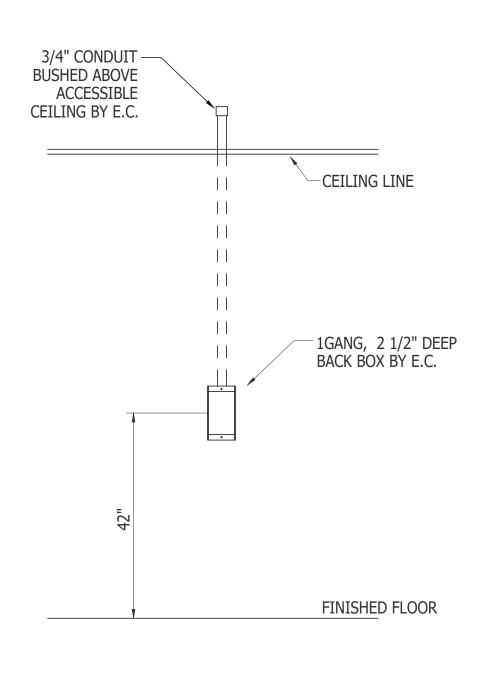
SCALE 1/8"=1'-0"



TYPICAL TV POWER AND LOW VOLTAGE DETAIL NO SCALE

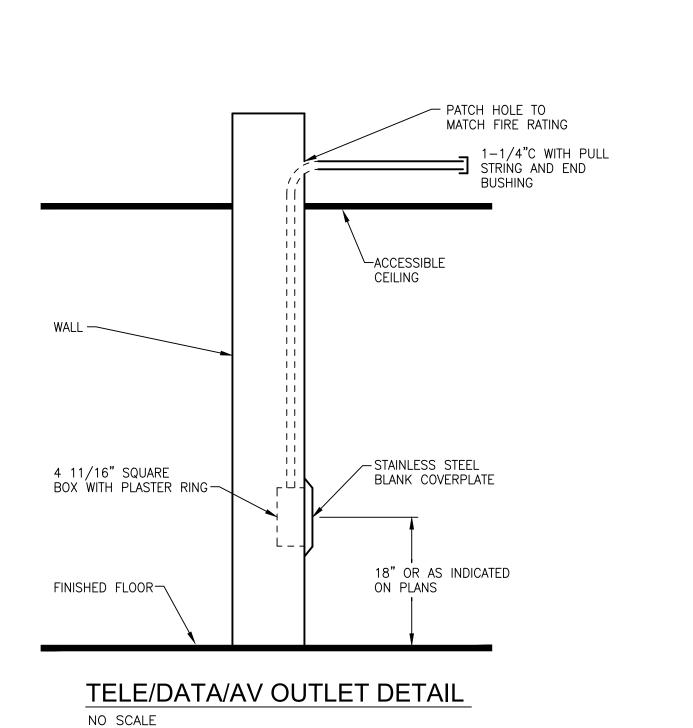


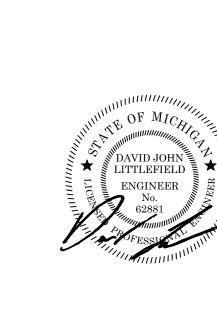
TYPICAL TV1 POWER AND LOW VOLTAGE DETAIL NO SCALE



SINGLE CARD READER ROUGH-IN

N.T.S. SYMBOLS: CR







30500 VAN DYKE AVENUE

SUITE 209

WARREN, MICHIGAN 48093 PH: 586.573.4100 FX: 586.573.0822 www.WakelyAlA.com

SYSTEMS ENGINEERING 69 S. GRATIOT AVE. MT. CLEMENS, MI 48043 UBS PROJECT 007.24.06

**RENOVA** OFFICE URCHASING TZ BUILDING <u>න</u> ට

DESIGN DEVELOPMENT CONSTRUCTION FINAL RECORD DRAWN BY <u>TJO</u>

PRELIMINARY

ELECTRICAL DETAILS

CHECKED BY DJL REVISIONS ADDENDUM No. 1 11-7-20

DATE: OCTOBER 31, 2024

E5.00

242053

Panel Loc Fed Feeder	r Size: EXISITNG	Main: 200 Bussing: 200 Ground Bus: STA Nounting: SUR	A NDARD FACE	W	ge: 277 ase: 3	Fed I Feeder	ation: SEE FLOOR PLANS From: BUS DUCT r Size: SEE ONE LINE DIAGRAM	Main: 200A MCB Bussing: 250A Ground Bus: STANDARD Nounting: SURFACE	P-P Voltage: 480 P-N Voltage: 277 Phase: 3 Wire: 4	
EXISTING F	Light Recept Co	Neutral: 100 ont nonC OC CKT Ø Ø Ø ad Load Prot CKT A B C		SC Interrupting Rat		NEW LOCA	ATION  Light Recept Cont nonC  Load Load Load Load	Neutral: 100%   OC	Min SC Interrupting Rating: 42,000 anC Cont Recept Light	Remarks
PRIOR SHOP HOUTS	Load Load Lo			Load Load Lo			And the state of the state of			184,000,000,000,000,000
RICE SHOP LIGHTS  ORRIDOR LIGHTS		20 1 X 20 3 X	2 20		MICROFILM LIGHTS MICROFILM LIGHTS	XFMR TO PANEL RP-N	0 2480 0 500 0 2340 0 0	7.50	3.33 TU-2	
ORTH OFFICEE LIGHTS		20 <b>3 X</b> 20 <b>5 X</b>	4 20		EAST EXTERIOR LIGHTS	VITAIN IO I VIAFFINI -IN	0 2160 0 1500		33.33	
JAIT OFFICEE LIGHTS		20 5 X			LAST LATERIOR LIGHTS		933.333		700	
TU #3		60 0 1	10 60		RTU #4	T()-1	933.333		700 TU-4	
		60 <b>9 X</b>	12				933,333		700	
ESTIUBLE N. HEATER		20 13 X	14				1066.67	13 X 14 106	6.67	
STIUBLE S. HEATER		20 13 X 20 15 X 20 17 X	16 20		HOT WATER TANK	TU-3	1066.67		6.67 TU-6	
GHTS - B106 , B104, B102	1415	20 17 X	18				1066.67	17 X 18 106	6.67	
GHTS - B101, B103 & B105	211	20 19 X	20 20	5	88 LIGHTS - B107-B112		933,333	19 X 20 106	6.67	
GHTS - VESTIBULE	751	20 21 X	22 -		SPACE	TU-5	933.333		6.67 TU-8	
ACE	The state of the s	20 <b>23</b> X	24 –		SPACE		933.333	23 X 24 106	6.67	
ACE		20 <b>25</b> X	26		SPACE		1766.67		6.67	
PACE		20 <b>27</b> X	28 -		SPACE	TU-7	1766.67	20 <b>27 X 28</b> 25 526	.6.67 TU-10	
PACE		20 <b>29</b> X	30 –		SPACE		1766.67		6.67	
	" 1				II.		3966.67	31 X 32 146	6.67	
	Connected L	oad Demand		Demand Load		TU-9	3966.67		6.67 TU-12	
ad Description	ØA ØB Ø	C Total Factor	ØA	ØB ØC To	tal		3966.67	<b>35 X 36</b> 146	6.67	
ghting or Continous Load (Volt-Amps)	799 751 14	15 2966 1.00	799	751 1415 29	66		1466.67	37 X 38 183 20 39 X 40 20 183	3.33	
BOVA Receptacle Load (Volt-Amps)	0 0 0	0 1.00 (First 10k	(A) 0	0 0	Receptacle Demand Factor per Article 220.44 of the	TU-11	1466.67	20 <b>39 X 40</b> 20 183	3.33 TU-14	
	Amount over 10	VA 0 0.50 (> 10kV	0	0 0	National Electrical Code.		1466.67		3.33	
ontinuous Load (Volt-Amps)	0 0 0	0 1.00	0	0 0			933,333	20 <b>43 X 44</b> 20		
on-Continuous Load (Volt-Amps)	0 0 (	0 0.90		0 0		TU-13	933.333	20 <b>45 X 46</b> 20	SPARE	
rtal Load (kVA)	0.80 0.75 1.	42 2.97 125% of Light/Conf a	ther lead	0.75 1.42 2.	97		933,333	47 X 48		
otal Ampacity (Amps)	2.9 2.7 5.	1 3.6 (<10kVA) load plus		2.7 5.1 3	.6	LIGHTS-EXIT VESTIBULE, ROOMS A108 & A109	161	20 <b>49 X 50</b> 20	323 LIGHTS - A100	
Ninimum Feeder Sizing (Amps)	3.6 3.4 6.	4 4.5	3.6	3.4 6.4 4	.5	LIGHTS - A110 & A111	215	20 <b>51 X 52</b> 20	212 LIGHTS A103 8	A104
						LIGHTS - A106 & A107	215	20 <b>53 X 54</b> 20	SPARE	
						SPARE		20 <b>55</b> X <b>56</b> 20	SPARE	
						ICD A DE				

Panel Designa	tion (F) D	Ρ. Λ				A	A air	n. 1	504	∕/CB			D D V	'oltage	208
	. ,	1 - A				-									
Panel Loca					_			_	50A				P-N V	oltage	
Fed I	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7				G				s: STANDARD					Phase	
Feeder	Size: EXISTIN	IG			Mounting: SURFACE									Wire	: 4
EXISTING P	ANEL					Ne	utra	d: 1/	00%	6	Min	SC Inte	rrupting	Rating	: EXISTING
Remarks	Light Load	Recept Load	Cont Load	nonC Load	OC Prot	СКТ	Ø Ø	Ø B	ğ C	KT OC Prot	nonC Load	Cont Load	Recept Load	Light Load	Remarks
HALLWAY AND BATHROOM B101		540			20	1	X		7	2 20			360		B 102 FLOORBOXES
B 102 RECEPTACLES		540			20	3	7	X	4	4 20			360		B 103 RECEPTACLES
B 104 RECEPTACLES		720			20	5		X	X (	6 20	500				B104 REFRIGERATOR
ELECTRICAL ROOM LGTS	1000				20	7	X		8	8 20		700			FIRE ALARM
B 104 DISPOSER		500			20	9		X	1	0 20	1000				B104 DISHWASHER
B 106 COPIERS		1000			20	11		X	X 1	20					B106 RECEPTACLES
B 107 RECEPTACLES		180			20	13	X		1	4 20			360		B108 POWERED WALL
B 108 RECEPTACLES		360			20	15	2	X	1	6 20			360		B108 POWERED WALL
B109/B110 RECEPTACLES		360			20	17		X	X 1	8 20			360		B109 POWERED WALL
B112 POWERED WALL		360			20	19	X		2	20 20			360		B109 POWERED WALL
B112 POWERED WALL		360			20	21	7	X	2	20			360		B110 POWERED WALL
						23		X	X 2	24 20			360		B110 POWERED WALL
surge supression unit					30	25	X		2	26 20			360		B111 POWERED WALL
					1	27	7	X	2	28 20			360		B111 POWERED WALL
NAC PNL #1					20	29		У	X 3	20			180		B110/B112 RECEPTACLES
Warehouse exh fan#1					20	31	X		3	20			180		B108 FLOORBOX
Warehouse exh fan#2					20	33	)	X	3	20			500		B106 TV
WAREHOUSE RECEPT					20	35		Х	X 3	36 20			500		HALLWAY TV
B 106 POWERED DESKS		360			20	37	X		3	8 20			360		B106 POWERED DESKS
B 106 POWERED DESKS		360			20	39		X	4	10 20			360		B106 POWERED DESKS
SPARE					20	41		Х	X 4	20					SPARE
		Connec	ted Load				Don	nano	a d			Deman	dload	· 	1
Load Description	ØA	ØB	ØC	Total	-			nanc ctor			ØA	ØB	ØC	Total	1
Lighting or Continous Load (Volt-Amps)	1000	0	0	1000				.00			1000	0	0	1000	=
180VA Receptacle Load (Volt-Amps)	3420	4420	3480	11320		1.00	-		0kVA	4)	3021	3905	3074	10000	Pacantacle Demand Easter nor Article 220 44 of the
1007A Receptacie Loud (Voll-Allips)		nount ove		1320					kVA)		199	258	203	660	Receptacle Demand Factor per Article 220.44 of the National Electrical Code.
	AII	100111 076	IUKVA	1320		0.0	0 1-	100	K V A)	I.	177	200	200	000	Hamonai Liecinicai Code.

 5.12
 5.42
 3.98
 14.52
 125% of Light/Cont and Recept 42.6
 4.92
 4.96
 3.68
 13.56

 42.6
 45.1
 33.1
 40.3
 (<10kVA) load plus other load 41.0</td>
 41.3
 30.6
 37.6

 51.0
 53.3
 39.5
 47.9
 ---- per NEC Article 215.2 ---->
 49.3
 49.4
 37.0
 45.3

Continuous Load (Volt-Amps) Non-Continuous Load (Volt-Amps)

Total Load (kVA)
Total Ampacity (Amps)
Minimum Feeder Sizing (Amps)

				ROOM A109 COPIER			20   <b>19</b>   <b>X</b>			180	ROOM A110 TV
				SPARE			20 <b>21 X</b>				SPARE
Panel Design	nation: (E) RP-B Main: 100A	MLO P-P Vo	Iltage: 208	SPARE			20 <b>23</b> X				SPARE
	cation: SEE FLOOR PLANS Bussing: 100A		Itage: 120	SPARE				<b>26</b> 20			SPARE
	From: Ground Bus: STAN		Phase: 3	SPACE			- 27 X	28			SPACE
			Wire: 4	SPACE			- 29 X	30			SPACE
	_			SPACE				32			SPACE
EXISTING I	60 (C. 60) (C.			SPACE			- 33 X				SPACE
Remarks	Light Recept Cont nonC OC CKT Ø Ø Ø C	KT OC nonC Cont Recept Load Load	Light Remarks	SPACE			- 35 X				SPACE
	Load Load Load Prot CKI A B C	Prof Load Load Load		SPACE			- 37 X	38			SPACE
ECUH-1	1456 20 1 X 2 3 1 X 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 20	SPARE	SPACE			- 39 X	40			SPACE
	1456 25 3 X	4 20	SPARE	SPACE			- 41 X	42			SPACE
ECUH-1	1456 20 5 X	<b>5</b> 20 360	ELECT RM GFCI			•					
	1456 <b>7 X</b> 8	<b>3</b> 20	SPARE		Connecte	ed Load	Demand		Den	nand Load	
SPARE	20 <b>9 X 1</b>	0 20	SPARE	Load Description	ØA ØB	ØC Total	Fa ctor		ØA Ø	B ØC Tot	al
SPARE	20 11 X 1		ROOF GFCI & OFFICE RECEPT	Lighting or Continous Load (Volt-Amps)	0 0	0 0	1.00		0	0 0	
SPARE	20 13 X 1	4 20	SPARE	180VA Receptacle Load (Volt-Amps)	2480 2340	2160 6980	1.00 (First 10k)	'A)		40 2160 698	Receptacle Demand Factor per Article 220.44 of
SPARE	20 15 X 1	6 20	SPARE		Amount over	10kVA 0	0.50 (> 10kV	4)	0	0 0	National Electrical Code.
SPARE	20 <b>17</b> X 1	8 20	SPARE	Continuous Load (Volt-Amps)	0 0	0 0	1.00		0	0 0	
SPARE	20 19 X 2		SPARE	Non-Continuous Load (Volt-Amps)	500 0	1500 2000	0.90		450	0 1350 180	00
SPARE	20 <b>21 X 2</b>	2 20	SPARE	Total Load (kVA)	2.98 2.34	3.66 8.98	125% of Light/Cont a	nd Recept	2.93 2.	34 3.51 8.7	78
SPARE	20 <b>23 X</b> 2	4 20	SPARE	Total Ampacity (Amps)	24.8 19.5	30.5 24.9	(<10kVA) load plus	ther load	24.4	25 29.2 24	.4
SPARE	20 <b>25 X 2</b>	6		Minimum Feeder Sizing (Amps)	30.0 24.4	35.0 29.8 <	per NEC Article	215.2	29.6 24	1.4 33.7 29	2
SPARE	20 <b>27</b> X 2		surge supression unit			<u> </u>				<u> </u>	'
SPARE	20 <b>29</b> X 3	0									
	Connected Load Demand	Demand Load									
Load Description	ØA ØB ØC Total Factor	ØA ØB ØC	Total								
Lighting or Continous Load (Volt-Amps)	0 0 0 0 1.00	0 0 0	0								
180VA Receptacle Load (Volt-Amps)	0 0 900 900 1.00 (First 10kVA	0 0 900	900 Receptacle Demand Factor per Article 220.44 of the								
	Amount over 10kVA 0 0.50 (> 10kVA)	0 0 0	0 National Electrical Code.								
Continuous Load (Volt-Amps)	2912 1456 1456 5824 1.00	2912 1456 1456	5824								
Non-Continuous Load (Volt-Amps)	0 0 0 0 0.80	0 0 0	0								
Total Load (kVA)	2.91 1.46 2.36 6.72 <b>125% of Light/Cont and</b>	d Recept 2.91 1.46 2.36	6.72								
Total Ampacity (Amps)	24.2 12.1 19.6 18.7 (<10kVA) load plus of	her load 24.2 12.1 19.6	18.7								
Minimum Feeder Sizing (Amps)	24.2 12.1 21.5 19.3 < per NEC Article 2	<b>15.2&gt;</b> 24.2 12.1 21.5	19.3								

	. IDA							_	00.									
Panel Designat						MCB				oltage								
Panel Locat				ssing				P-N Voltage: 277										
	om: BUS DU				G				AND		Phase: 3							
	ize: SEE ON	IE LINE D	IAGRA	M										Wire				
NEW LOCAT	ION						utra				Min	: 42,000						
Remarks	Light	Recept		nonC	ОС	СКТ	Ø	Ø	СКТ	ос	nonC		Recept		Remarks			
	Load	<b>Load</b> 2480	Load	Load	Prot	_		ВС	_	Prot	<b>Load</b> 1833.33	Load	Load	Load	14.50.000.000			
(FMR TO PANEL RP-N	0	2340	0	500	50	3	X	<u>,                                    </u>	4	20	1833.33				TU-2			
JAK TO I MALERI AN	0	2160	0	1500	30	5		^ x	6	20	1833.33				10-2			
	—	2100	0	933.333			X	<del> ^</del>	8		1700							
U-1				933.333	20	9	,	x	10	20	1700				- TU-4			
				933.333		11		Х	_	1	1700							
				1066.67		13	X		14		1066.67							
U-3				1066.67	20	15		X	16	20	1066.67				TU-6			
				1066.67		17		X	18	1	1066.67							
				933.333		19	X		20		1066.67							
U-5				933.333	20	21	7	X	22	20	1066.67				TU-8			
				933.333		23		X	24	1	1066.67							
				1766.67		25	X		26		5266.67							
TU-7				1766.67	20	27		X	28	25	5266.67				TU-10			
				1766.67		29		X	30		5266.67							
				3966.67		31	X		32		1466.67							
U-9				3966.67	20	33	)	X	34	20	1466.67				TU-12			
				3966.67		35		X			1466.67							
				1466.67			X		38		1833.33							
U-11				1466.67	20	39	)	X	40	20	1833.33				TU-14			
				1466.67		41		X			1833.33							
				933.333		43			44									
TU-13				933.333	20	45	)	_	46	20					SPARE			
TOLITE EVIT VECTIBILE DOOME ALOO 0 ALOO	171			933.333	00	47	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	X		00				000	LIGHTS A100			
LIGHTS- EXIT VESTIBULE, ROOMS A108 & A109	161				20		X		50	20				323	LIGHTS - A100			
IGHTS - A110 & A111	215				20	51	1 1	X	52	20				212	LIGHTS A103 & A104			
LIGHTS - A106 & A107	215				20	53	X	^	54 56	20					SPARE SPARE			
SPARE SPARE					20	57		x	58	20					SPARE SPARE			
SPARE					20	59	++	^ <del>                                    </del>	60						SPACE			
SPACE					<u></u>		X	+^	62						SPACE SPACE			
SPACE						63	-	x	64						SPACE			
SPACE						65		X	66	-					SPACE SPACE			
SPACE						67	X	^	68						SPACE			
SPACE						69		x	70						SPACE SPACE			
SPACE						71		X	72						SPACE			
SPACE							X		74						SPACE			
SPACE						75		x	76						SPACE			
SPACE					_	77		X	78						SPACE			
SPACE					_		X		80						SPACE			
SPACE					_	81		x	82						SPACE			
SPACE					_	83		X	84						SPACE			
	и														_			
			ted Load				Den		ı			Demand						
oad Description	ØA	ØB	øс	Total				ctor			ØA	ØB	øс	Total				
ighting or Continous Load (Volt-Amps)	373	427	215	1016				.00	-		373	427	215	1016				
80VA Receptacle Load (Volt-Amps)	2480	2340	2160	6980			0 (Firs				2480	2340	2160	6980	Receptacle Demand Factor per Article 220.44 of th			
		nount ove		0		0.	50 (>		VA)		0	0	0	0	National Electrical Code.			
Continuous Load (Volt-Amps)	0	0	0	0				.00			0	0	0	0				
Non-Continuous Load (Volt-Amps)	25800	25300	26800	77900				.90			23220	22770	24120	70110				
Total Load (kVA)	28.65	28.07	29.18	85.90						Recept	26.07	25.54	26.50	78.11				
Total Ampacity (Amps)	103.4	101.3	105.3	103.3						r load	94.1	92.1	95.6	93.9	1			
Minimum Feeder Sizing (Amps)	106.0	103.8	107.4	105.7	·	per N	EC A	TICIO	e 215.	.2>	96.7	94.6	97.7	96.3				

Panel Desig		٨	<b>Nain</b> :	100	A AC	<b>MCB</b>			P-P V	oltage:	208								
Panel Loc	cation: SEE FLC	OR PLA	NS			Bus	sing	100	A				120						
Fed		Gr	round	Bus	STAI	NDA	ARD				Phase:	3							
Feede	er Size: SEE ON	E LINE D	IAGRAN	М		Nour	nting	SUR	RFAC	CE		Wire: 4							
NEW			utral				Min	SC Inte	rrupting	22,000									
Remarks	Light	Recept	Cont	nonC	ос	CKT Ø Ø Ø CKT OC					nonC	Cont	Recept	Light					
0.000 0.000 0.000	Load	Load	Load	Load	Prot					Prot	Load	Load	Load	Load					
SPARE					20	-	X	+-+	2	20			720		A101 RECEPTACLES				
SPARE					20	3	X		4	20			720		CONF. ROOM A 103 RECEPTACLES				
BATHROOM A104 RECEPTACLES		180			20	5		X	6	20			540		BREAKROOM A 105 RECEPTACLES				
OPEN OFFICE A106 RECEPTACLES		540			20	7	X		8	20			500		BREAKROOM A 105 DISPOSER				
OPEN OFFICE A106 RECEPTACLES		360			20	9	X		10	20			540		OFFICE A107 RECEPTACLES				
ROOM A108 RECEPTACLES		720			20	11		X	12	20			720		ROOM A110 RECEPTACLES				
ROOM A109 RECEPTACLES		360			20	13	X		14	20			180		ROOM A110 FLOORBOX				
CONF. ROOM A 103 FLOORBOX		180			20	15	X		16	20			540		ROOM A111 RECEPTACLES				
ROOM A109 COPIER				500	20	17		X	18	20	1000				BREAKROOM A 105 DISHWASHER				
ROOM A109 COPIER				500	20	19	X		20	20			180		ROOM A110 TV				
SPARE					20	21	X		22	20					SPARE				
SPARE					20	23		X	24	20					SPARE				
SPARE					20	25	X		26	20					SPARE				
SPACE					_	27	X		28						SPACE				
SPACE					_	29		Х	30						SPACE				
SPACE					_	31	X		32						SPACE				
SPACE					_	33	X		34						SPACE				
SPACE					_	35		X	36	-					SPACE				
SPACE					_	37	X		38						SPACE				
SPACE					_	39	X		40						SPACE				
SPACE					_	41		X	42						SPACE				
													•						
	-1		ed Load				Dem					Demand							
Load Description	ØA	ØB	øс	Total			Fac				ØA	ØB	øс	Total					
Lighting or Continous Load (Volt-Amps)	0	0	0	0		1 0 -	1.0				0	0	0	0					
180VA Receptacle Load (Volt-Amps)	2480	2340	2160	6980			(First				2480	2340	2160	6980	Receptacle Demand Factor per Article 220.44 of the				
		ount ove		0		0.5	0 (>		A)		0	0	0	0	National Electrical Code.				
Continuous Load (Volt-Amps)	0	0	0	0			1.0				0	0	0	0					
Non-Continuous Load (Volt-Amps)	500	0	1500	2000			0.9				450	0	1350	1800					
Total Load (kVA)	2.98	2.34	3.66	8.98	1	_				ecept	2.93	2.34	3.51	8.78					
Total Ampacity (Amps)	24.8	19.5	30.5	24.9	•	(VA) I					24.4	19.5	29.2	24.4					
Minimum Feeder Sizing (Amps)	30.0	24.4	35.0	29.8	<	oer NE	C Ar	ticle:	215.2	2>	29.6	24.4	33.7	29.2					



WAKELY ASSOCIATES, INC. ARCHITECTS

30500 VAN DYKE AVENUE SUITE 209 WARREN, MICHIGAN 48093 PH: 586.573.4100 FX: 586.573.0822 www.WakelyAIA.com



RENOVA. OFFICE KCHASING BUILDING

ELECTRICAL PANEL SCHEDULES

PRELIMINARY DESIGN DEVELOPMENT □ CONSTRUCTION FINAL RECORD DRAWN BY \_TJO
CHECKED BY \_DJL REVISIONS
ADDENDUM No. 1 11-7-2024

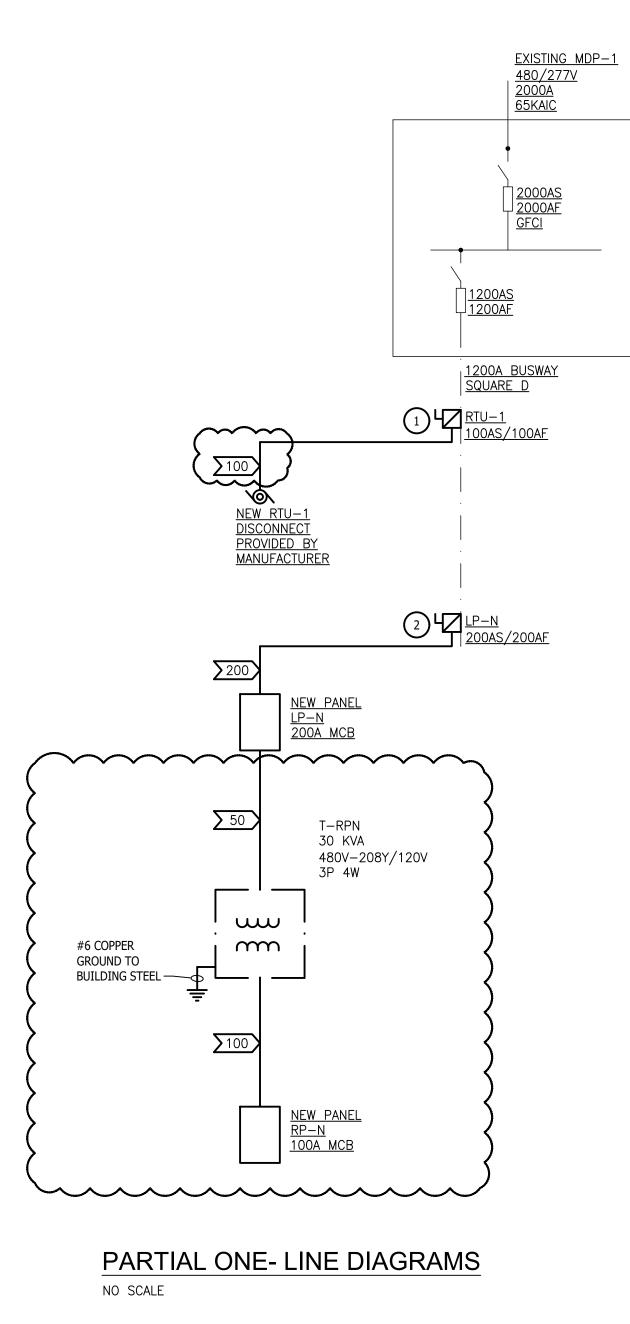
DATE: OCTOBER 31, 2024
SHEET NO.

E6.00

# 1200A BUSWAY SERVICE LOAD SUMMARY

	CONNECTED LOAD	DEMAND LOAD
RTU-1	73.2 KVA	73.2 KVA
LP-N	78.1 KVA	70.3 KVA
TOTAL	151.3 KVA	143.5 KVA

TOTAL DEMAND LOAD: 143.5 KVA / 172.6 AMPS



FEEDER COND.		COPPER FEEDER AND CONDUIT SIZES	
(AMPS)	SIZE	3 WIRE WITH GROUND	4 WIRE WITH GROUND
30	10	3#10, 1#10 GND IN 3/4"C	4#10, 1#10 GND IN 3/4"C
<b>&gt;</b> 50 <b>&gt;</b>	8	3/4"C, 3#8 & 1#10 GRD.	3/4"C, 4#8 & 1#10 GRD.
<b>&gt;</b> 60 <b>&gt;</b>	6	3/4"C, 3#6 & 1#10 GRD.	3/4"C, 4#6 & 1#10 GRD.
80	4	1"C, 3#4 & 1#8 GRD.	1"C, 4#4 & 1#8 GRD.
100	3	1 1/4"C, 3#3 & 1#8 GRD.	1 1/4"C, 4#3 & 1#8 GRD.
<b>)</b> 125 <b>)</b>	1	1 1/2"C, 3#1 & 1#6 GRD.	1 1/2"C, 4#1 & 1#6 GRD.
<b>)</b> 150 <b>)</b>	1/0	2"C, 3#1/0 & 1#6 GRD.	2"C, 4#1/0 & 1#6 GRD.
<b>)</b> 175 <b>)</b>	2/0	1 1/2"C, 3#2/0 & 1#6 GRD.	1 1/2"C, 4#2/0 & 1#6 GRD.
<b>&gt;</b> 200 <b>&gt;</b>	3/0	2"C, 3#3/0 & 1#6 GRD.	2"C, 4#3/0 & 1#6 GRD.
225	4/0	2-1/2"C, 3#4/0 & 1#4 GRD.	2-1/2"C, 4#4/0 & 1#4 GRD.
250	1-250	2 1/2"C, 3#250 & 1#4 GRD.	2 1/2"C, 4#250 & 1#4 GRD.
300	1-350	2 1/2"C, 3#350 & 1#4 GRD.	2 1/2"C, 4#350 & 1#4 GRD.
<b>&gt;</b> 400	1-600	3"C, 3#600 & 1#3 GRD.	3 1/2"C, 4#600 & 1#3 GRD.
<b>&gt;</b> 500 <b>&gt;</b>	2-250	(2) 2 1/2"C, 3#250 & 1#2 GRD.	(2) 3"C, 4#250 & 1#2 GRD.
<b>&gt;</b> 600 <b>&gt;</b>	2-350	(2) 3"C, 3#350 & 1#1 GRD.	(2) 3"C, 4#350 & 1#1 GRD.
<b>&gt;</b> 800 <b>&gt;</b>	2-600	(2) 3"C, 3#600 & 1#2/0 GRD.	(2) 3 1/2"C, 4#600 & 1#2/0 GRD.
<b>)</b> 1000 <b>)</b>	3-500	(3) 3"C, 3#500MCM & 1#1/0 GRD.	(4) 3"C, 3#500MCM & 1#1/0 GRD.

X	NEW WORK KEYED NOTES
1	PROVIDE NEW 100A FUSIBLE SWITCH BUS PLUG IN EXISTING SQUARE D BUSWAY. MATCH EXISTING BUSWAY AIC RATING.
2	PROVIDE NEW 200A FUSIBLE SWITCH BUS PLUG IN EXISTING SQUARE D BUSWAY. MATCH EXISTING BUSWAY AIC RATING.



WAKELY ASSOCIATES, INC. ARCHITECTS

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RENOVA-OFFICE 0 / PURCHASING WERTZ BUILDING MACOMB (F & O / PU

ONE-LINE RISER DIAGRAMS

PRELIMINARY DESIGN DEVELOPMENT CONSTRUCTION FINAL RECORD

DRAWN BY \_TJO
CHECKED BY \_DJL

REVISIONS
ADDENDUM No. 1 11-7-2024

DATE: OCTOBER 31, 2024
SHEET NO. **E7.00**