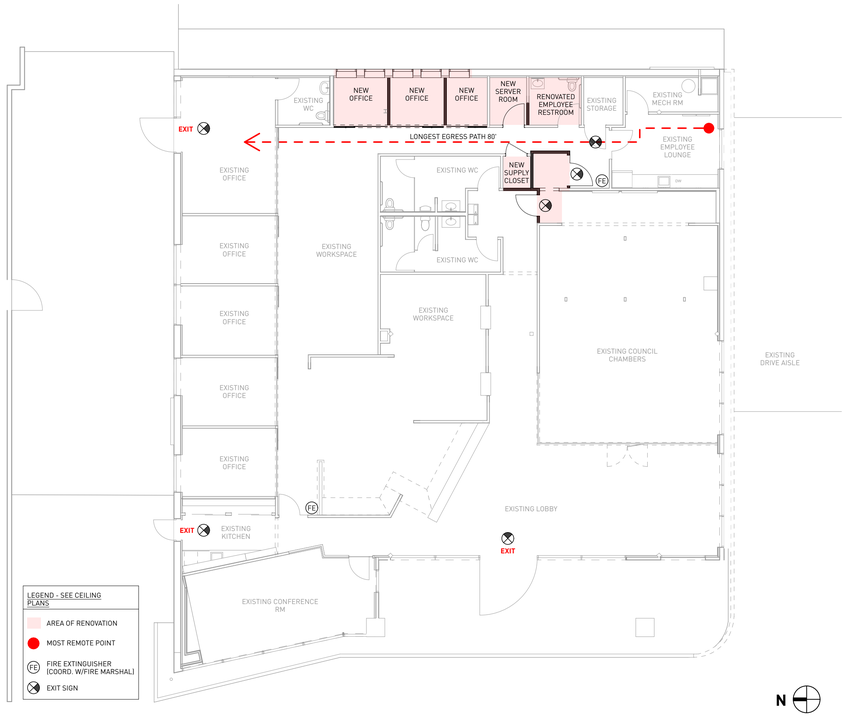
Bexley City Hall Renovations | Permit Set | 12 December, 2024



CODE PLAN 1
SCALE: 3/32" = 1'-0"

PROJECT LOCATION

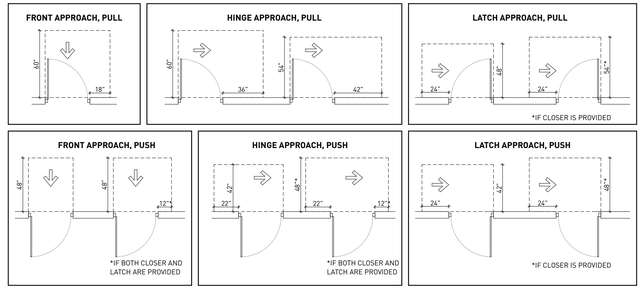


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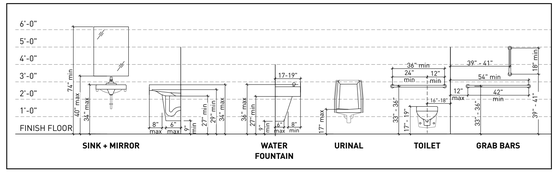
G00	COVER + CODE
G01	GENERAL NOTES
A01	DEMOLITION FLOOR PLAN AND RCP
A02	PROPOSED FLOOR PLAN
A03	STRUCTURAL PLAN
A04	PROPOSED CEILING PLAN
A05	SECTIONS AND ELEVATIONS
A06	INTERIOR ELEVATIONS
A07	INTERIOR SECTIONS + DETAILS
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E01	NEW WORK LIGHTING PLAN
E02	NEW WORK POWER PLAN
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H00	DEMOLITION HVAC PLAN
H01	NEW WORK HVAC PLAN
H02	HVAC SCHEDULES AND DETAILS
H03	HVAC SPECIFICATIONS

TYPICAL ADA MOUNTING HEIGHTS + CLEARANCE REQUIREMENTS

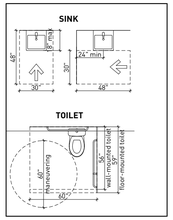
CLEARANCE @ SWING DOORS



ADA MOUNTING HEIGHTS



ADA CLEAR FLOOR SPACE



PROJECT INFORMATION

PROJECT DESCRIPTION

PROJECT DESCRIPTION	**NO CHANGE OF USE OR FOOTPRINT.** IN AN EXISTING 1-STORY BUILDING, THE FOLLOWING IMPROVEMENTS WILL BE UNDERTAKEN: - RENOVATE A PORTION OF CITY COUNCIL CHAMBERS TO PROVIDE AN ADDITIONAL DOOR - RENOVATE EXISTING SERVER ROOM AND WC TO ACCOMMODATE NEW OFFICES AND SERVER ROOM
PROJECT ADDRESS	2242 E MAIN ST BEXLEY OH 43209

PROJECT CONTACTS

OWNER				
GENERAL CONTRACTOR				
ARCHITECT	Gieseke Rosenthal Architecture + Design			
STRUCTURAL ENGINEER	Kooi LLC	Bernie Kooi, PE bernie@kooi-se.com	900 Foxcreek Road Sunbury, Ohio 43074	PH: 614.218.1607

DOOR SCHEDULE

ID	LOCATION	DESCRIPTION	SIZE
D114	NEW OFFICE 114	GLASS SLIDER - NO LOCK	3'-0" x 8'-0"
D115	NEW OFFICE 115	GLASS SLIDER - NO LOCK	3'-0" x 8'-0"
D116	NEW OFFICE 116	GLASS SLIDER - NO LOCK	2'-10" x 8'-0"
D117	NEW SERVER ROOM 117	WOOD VENEER - MATCH EXISTING	3'-0" x 7'-0"
D118	NEW SUPPLY CLOSET 118	WOOD VENEER - MATCH EXISTING	3'-0" x 7'-0"
RELOCATED D-100B	COUNCIL CHAMBERS 101	PROTECT DURING CONSTRUCTION	3'-0" x 8'-0"
RELOCATED D-101B	COUNCIL CHAMBERS 101	PROTECT DURING CONSTRUCTION	3'-0" x 8'-0"

BUILDING CODE INFORMATION

OHIO BUILDING CODE INFORMATION

Applicable Code:
2024 Ohio Building Code
2024 Ohio Plumbing Code
2024 Ohio Mechanical Code
2017 Ohio Fire Code
2021 Ohio Energy Code
2017 National Electric Code
2010 NFPA 72 for Fire Alarm Systems
2010 Americans with Disabilities Act Accessibilities Guidelines

Accessibility:
Construction to be accessible to the physically handicapped in accordance with the current Americans with Disabilities Act.

Construction Classification:
Type IIB - 1 story, non-combustable unprotected steel frame with CMU exterior walls and concrete slab on grade.

Fire Protection: Sprinkled Structure

Building Occupancy: B/A-3

Area Calculations:
Gross Project Area: 6,351 sf (Taken from face of exterior walls)
Public Area: 2,119 sf
Office Area: 3,706 sf
Restroom Area: 526 sf

Occupancy Calculations OBC 1004.1.1
Office Areas
Gross sf/Occupant 6351/200 = 32 occupants
Public Assembly Areas - Occupant 2119/15 = 141 occupants

Total Occupants = 173

Required Exits per Table 1021.1
2 Exits Required, 2 Provided

Restroom Requirements (per Table 2902.1)
Group B
Lavatories 1/80 = 2 required, 3 provided
1 service sink required, 1 provided
Water Closets 1/50 = 2 required, 3 provided
Drinking fountain 1/100 = 1 required, 2 provided

Group A-3
Lavatories 1/200 = 1 required, 1 provided
1 service sink required = 1 provided
Water Closets 1/125 men = 1 required, 1 provided
Water Closets 1/65 women = 2 required, 2 provided
Drinking Fountain 1/500 = 1 required, 2 provided

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BEXLEY CITY HALL RENOVATIONS

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COVER + CODE

G00

PROJECT GENERAL NOTES

Construction + finish notes

General

- Products, materials, and operations not specified, but indicated on drawings or required for construction, shall be provided at a level of quality that is indicated for other items in the specifications and drawings. The contractor shall provide all products, materials, and operations necessary to complete the job and achieve a consistent level of quality.
- The standard of quality for new work shall be equal or greater than that of the existing construction.
- Thoroughly clean all construction upon completion. Protect finished work from damage during construction.
- Guarantee all materials, installation, and workmanship, for a period of one year, beginning on the date of substantial completion, unless other guarantees/warranties are specifically noted.
- Where documents and/or existing conditions make execution of work as illustrated impossible – resolution of conflicting conditions to be reviewed with and approved by owner/architect prior to commencement of any work.
- All contractors shall review all drawings. Contractors are responsible for complete review. Items affecting all trades are placed throughout the set of drawings.
- All contractors shall visit site prior to submission of any bids on any phase of the work.
- The plumbing, electrical, and hvac contractors shall be under the direction of the general contractor.
- Provide wood (fire retardant treated at rated walls) blocking or metal blocking for all wall-mounted doorstops, toilet accessories, handrails, door jambs, countertops, wall cabinets, shelving, drywall catches, and similar items.
- Fire-stop all openings around pipes, conduits, etc., where they penetrate any rated assembly.
- Provide access panels at all valves, dampers, and similar areas where access is required, finish panels to match adjacent surfaces. Make access panels as inconspicuous as possible.
- Unless otherwise noted, dimensions on plan are face of concrete, stud or existing surfaces.
- This project shall comply with the current edition of the americans with disabilities act accessibility guidelines (adaag) and icca117.1-2009.
- all dimensions shown are to be verified in the field, contractor to report any discrepancies before proceeding with the work. **Do not scale drawings.**
- Contractor shall repair/replace rated assemblies and/or fire proofing found to be compromised or damaged during construction.
- Preliminary layouts shall be provided for owner/architect field approval prior to installation of:
- Wall track
- Wall and/or floor tile
- Lighting
- Racks, fixtures, and casework
- The contractor is responsible for coordination of all work including adequate pre-review of all shop drawings. Errors due to lack of review and/or coordination shall be corrected at the contractor's expense.
- The contractor is responsible for keeping the premises in a neat and orderly fashion. Construction debris removal from the site shall be the responsibility of the contractor.
- All material used in the construction of this project shall be new unless otherwise noted.
- All materials located above ceilings must be plenum rated.
- Where new construction limits access to existing building systems (serving this space or others) – gc shall make provisions for access using flush access panels with drywall beaded flanges.
- Contractor to assume all responsibility for the safe handling and/ or removal of any environmentally hazardous materials encountered during construction and hold harmless and indemnify the owner and architect from and against any claim or liability arising out of the contractor's performance.
- Contractor to coordinate work at roof with owner's representative.

The following five sections shall, in the event of a conflict, be superseded by the terms of the owner / contractor agreement.

Substitutions

- Substitutions, for cause or convenience, shall be submitted to the architect in writing with a statement indicating why the proposed product is preferred or offers cost savings to the owner. Product data and material samples, when applicable, should also be included in the contractor's submittal.

Contract modifications

- When changes are required to the work, the architect will issue a bulletin. The contractor shall prepare proposal for the work for the owner's review and approval outlining any changes in cost or schedule. No work should proceed until the cost has been negotiated and approved.
- Upon owner approval a change order shall be prepared using aia document g701. Signature by both the architect and the owner are required.

Payment

- Contractor shall submit aia document g702 application and certification of payment. Payment intervals shall be at least one month apart. All payment requests shall be less retainage (10% barring agreement stipulating a different amount). Lien waivers for work previously completed shall accompany all applications for payment. Contractor shall provide proof of insurance for any items for which payment is requested but are stored off site.

Submittals

- Provide submittals for each product specified in the contract documents. Provide submittals in pdf format or hardcopy. Two copies of all hard copies should be provided. Submittal shall include:
  - Shop drawings
  - Product data
  - Samples
  - Warranties

Closeout procedures

- Prerequisites for substantial completion include:
  - Pay request for 100% of the contract amount
  - Final cleaning
  - Record drawings, operation and maintenance manuals
  - Changeover of locks (if applicable)
  - Submission of warranties in writing
- Prerequisites for final acceptance include:
  - Lien waiver release
  - Final pay request
  - Inspection report
  - Insurance (advise owner of changeover dates)
  - Certificate of occupancy
  - Submit final photographs and record drawings
- Inspection report
  - After receipt of written notice that the work is complete the architect will verify its condition and issue a certificate of substantial completion with an inspection list of all uncompleted or unacceptable items still pending completion prior to final completion is granted.

Demolition

- Gc and relevant subcontractors are expected to visit the site prior to submitting bids and include all costs associated with remaining demolition / existing conditions.
- Patch and repair all areas where demolition has occurred (including abandoned utilities – see also mep drawings). Match existing conditions.
- Remove all unused/abandoned items including brackets, conduit, clips, fixtures, pipes, ductwork, wiring, electric boxes, etc..
- Protect work adjacent to demolition.

Metals

- Provide new metal items as shown in the drawings. Shop-fabricate. Grind smooth exposed cuts and edges. Countersink screws. Where visible, screws (including tapcons) to be stainless, black, or white (at owner's discretion).
- Material to be hand selected for minimal scale/rust and wiped down with alcohol prior to finishing.
- Welds shall conform to AISC and AWS requirements.
- At exterior and any wet locations where dissimilar metals are in contact, provide mechanical separation (neoprene gasket or approved alternative).
- See finish schedule for additional information.

Wood & Plastics

- Submit shop drawings for all finish carpentry and millwork items indicating materials, component profiles, fastening and jointing details, hardware, finishes and accessories.
- Submit samples of hardwood lumber and panels showing species, grade, profile, cut proposed for work and finish for trim and panels.
- See finish schedule for additional information.

Doors & windows

- New doors and frames to be as illustrated in drawings. Note hardware is described in hardware schedule.
- Door dimensions as illustrated.
- Comply with SDI 105 "recommended erection instructions for steel frames" at new hollow metal frames.
- Hollow metal door frames to be welded construction – no knockdown frames. Contractor responsible for coordinating door frame lead times with project schedule.
- Coordinate door frame back bends to accommodate thickness of adjacent finishes. In all cases door frame face to be flush or proud of adjacent finish.

Fire Extinguishers

- Assume a minimum of 1 fire extinguisher to be provided. Locations and quantities to be coordinated with owner and fire department officials. See Life Safety plans.

Gypsum Board Assemblies

- Level 4 finish at panel surfaces that will be exposed to view unless otherwise indicated.
- Comply with gypsum association ga-216 "recommended specifications for application and finishing of gypsum board." Metal framing systems to comply with ASTM c754.
- Do not proceed with gypsum board installation until blocking, framing, bracing and other supports for subsequently applied work (both that included as part of GC contract as well as that required for equipment install and installation of owner supplied items) have been installed, reviewed and accepted by the owner/architect.
- Do not install gypsum board until all other work concealed by gypsum board has been installed.
- New studs to be ASTM c645, galvanized steel, c-shaped, 20 ga. Unless noted otherwise.
- At all locations where framing contacts existing roof/ceiling structure – provide slip-type top track to allow for anticipated deflection.
- Use USG tapered edge face panels, 48" wide, in maximum lengths available to minimize end joint conditions, 5/8" thick unless otherwise noted attached with fasteners complying with ga 216 (ASTM c1002, USG type "s" bugle head screws). Joint treatment to comply with ASTM c476 (provide USG perf-a-tape system utilizing ready-mixed vinyl tape compound or chemical-hardening type for tape bedding and ready-mixed vinyl type for topping.
- Perimeter insulation to be installed or supplemented as required with craft faced fiberglass insulation.
- New walls and ceilings to have sound batt insulation, typical.
- At all locations to receive wall tile or tile base (and at all locations indicated in drawings) provide USG durock cement board. Follow all manufacturer's instructions for installation. At walls, fasten with screws at 8" on center. Fit ends and edges closely but not forced together. Fill joints with latex-fortified mortar or type 1 organic adhesive and immediately embed alkali-resistant, fiberglass mesh joint tape.
- At existing and new gypsum board provide preparation, primer and 2 coats of paint.

Paint:

- Paint to be Benjamin Moore, Aura or Sherwin-Williams, duration. See finish schedule.

Caulk/sealant/adhesive:

- Application of caulk/sealant to be reviewed on site with owner prior to application. No products to be applied prior to this review to be conducted as part of a weekly job meeting.
- Sealant to be applied in most minimal beads possible using painter's tape to produce crisp edges in all cases.

Ceilings:

- Paint all existing (visible) roof/floor deck. Paint all exposed conduit (new and existing to remain), fasteners, brackets, hangers, blocking, ductwork etc.

Doors/Door Frames:

- At new doorframes provide 2 coats of new enamel paint finish (light sanding between coats) over primer. Finish to match wall base trim.

Tile

- See also finish legend for floor finish types
- Provide waterproofing membrane – slab on grade
  - Design based on mapei aquadefense waterproofing and crack-isolation membrane or architect approved alternate. Base bid to include fabric reinforced waterproofing membrane backing up tile at all base conditions. Follow all manufacturer instructions:
- At base fabric to extend minimum of 12" onto floor and 12" up surface of wall (or to 1/4" below top edge of tile whichever is higher)
- Anywhere coating ends apply a bead of silicone or urethane sealant
- At floor penetrations pack/fill voids and then apply membrane around and up on to material penetrating floor. Allow to dry and reapply.
- Where tile base in not backed up by waterproofing membrane – hold substrate approximately 1/2" aff and fill void with silicone sealant. Allow to cure prior to installation of base.
- Provide a membrane at base building control joints below any finish flooring to minimize potential cracking of the flooring material.
- Typical grout joint to be 1/8" (max. 1/4"). See finish legend for grout joint size & color. Installation must utilize mechanical spacers.
- At all standard grout locations – seal with impregnator grout sealer. All non-glazed tile to receive 2 coats of sealer unless otherwise noted.
- See interior elevations and finish floor plans for tile locations and locations/details for any tile sloping requirements.
- It is critical that grout be protected post installation to avoid discoloration caused by drywall and other construction dust.
- Final cleaning of tile floors:
- First coat of sealer / enhancer to be applied immediately after installation of floor tile (granite only)
- Final clean prior to sealing of floor tile to be by Gerlach or approved alternate
- Cost of cleaning has historically been approximately $0.60/sf
- Apply newline hi-test stone safe alkaline tile & grout cleaner focusing on grout joints
- Allow to soak briefly and scrub joints and field areas with stiff brush
- Use a steam / vacuum applicator / extractor unit to apply steam at approximately 250 degrees removing all cleaning agent
- Protect floor from traffic until it is completely dry
- Apply final coat of sealer / enhancer (sealer to be applied sparingly and in accordance with manufacturer's instructions – over application will require removal and reapplication)

Metals & fasteners

- Interior ferrous metal in contact with the floor to be primed and painted with minimum 2 coats of oil based paint.
- Interior fasteners (where visible) to be of matching material and finish to the material being attached.

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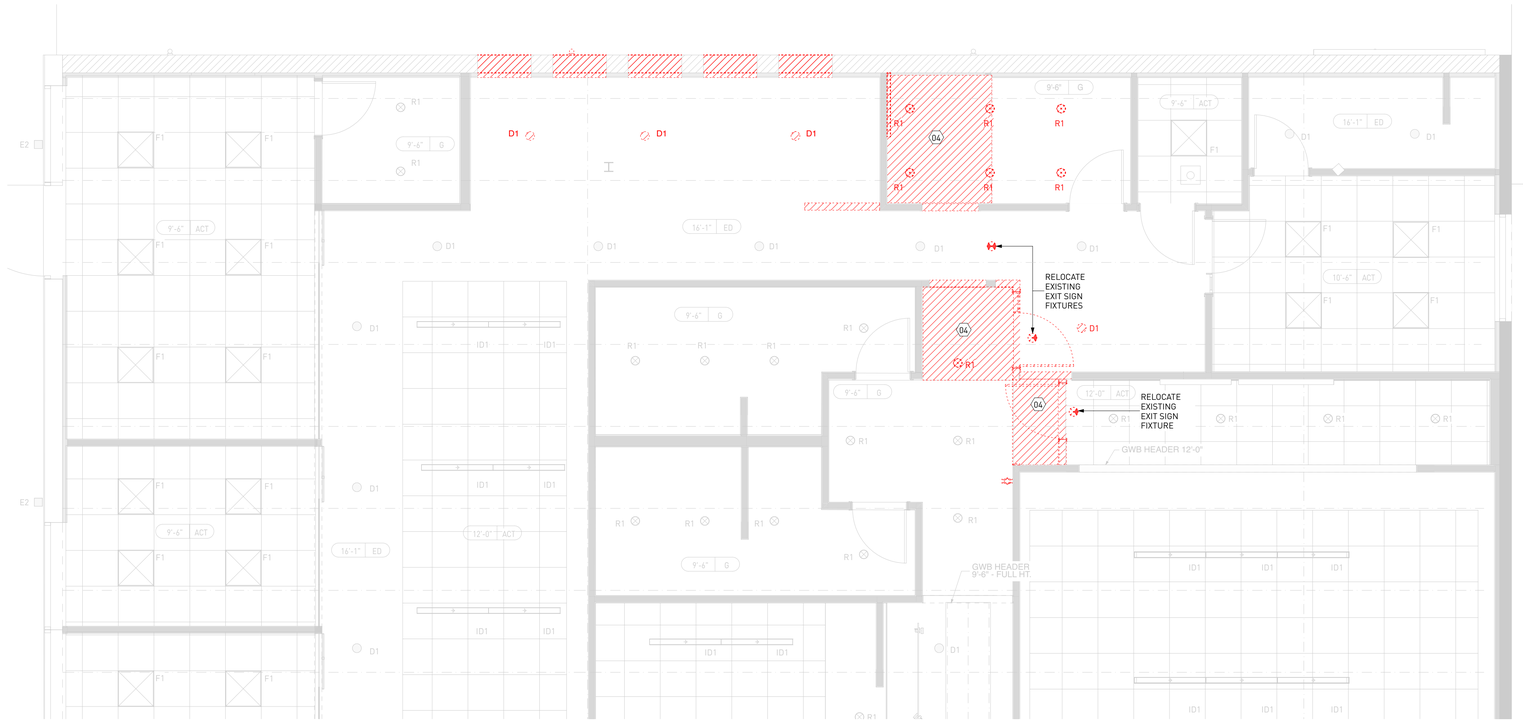
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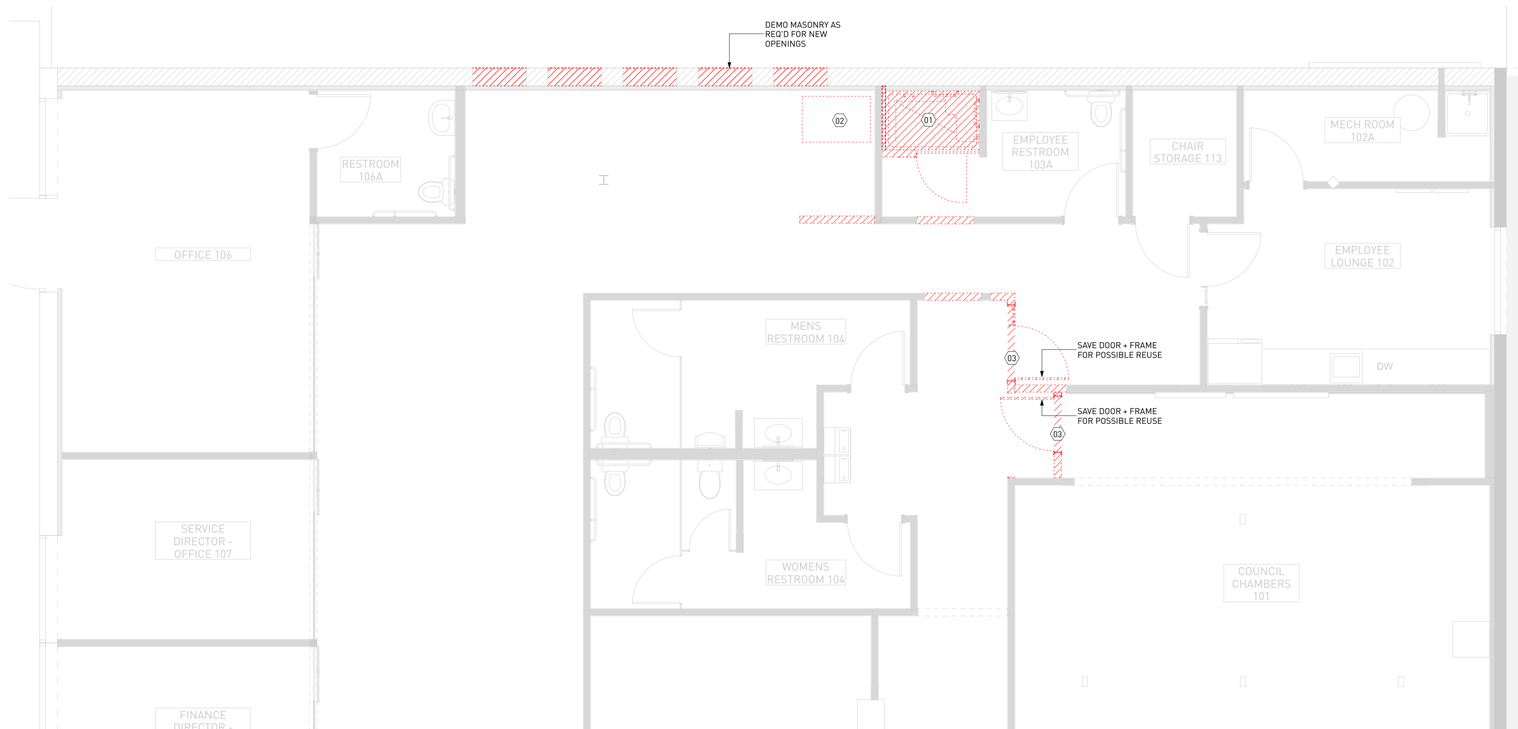
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GENERAL NOTES

G01



REFLECTED CEILING PLAN - DEMOLITION 2
SCALE: 1/4" = 1'-0"



FLOOR PLAN - DEMOLITION 1
SCALE: 1/4" = 1'-0"

DEMOLITION FLOOR PLANS - NOTES

DIMENSIONS

DRAWINGS AT 1/4" = 1'-0" ARE SHOWN TO FACE OF STUD
DRAWINGS AT 1/2" = 1'-0" ARE SHOWN TO FINISH

DEMOLITION VS EXISTING TO REMAIN - GRAPHIC INDICATIONS

EXISTING ELEMENT TO BE REMOVED. COORDINATE EXTERIOR W/PROPOSED PLANS & DETAILS.

GENERAL DEMOLITION NOTES

1). BUILDING TO REMAIN OCCUPIED DURING RENOVATION.

2). CONTRACTOR TO PROTECT ALL EXISTING AND FINISHED WORK FROM DAMAGE DURING DEMOLITION AND CONSTRUCTION.

2). CONSULT MEP DRAWINGS FOR DISTINCTIONS AND LOCATIONS OF FIXTURES AND DEVICES TO BE RELOCATED.

DEMOLITION PLANS - CODED NOTES

01. REMOVE SHOWER
02. MDF TO BE DISCONNECTED BY OWNER AND PROTECTED DURING CONSTRUCTION BY GENERAL CONTRACTOR.
03. REMOVE EXISTING INTERIOR DOOR (SAVE FOR REUSE)
04. REMOVE INDICATED CEILING AND FIXTURES (SAVE FIXTURES FOR POSSIBLE REUSE)

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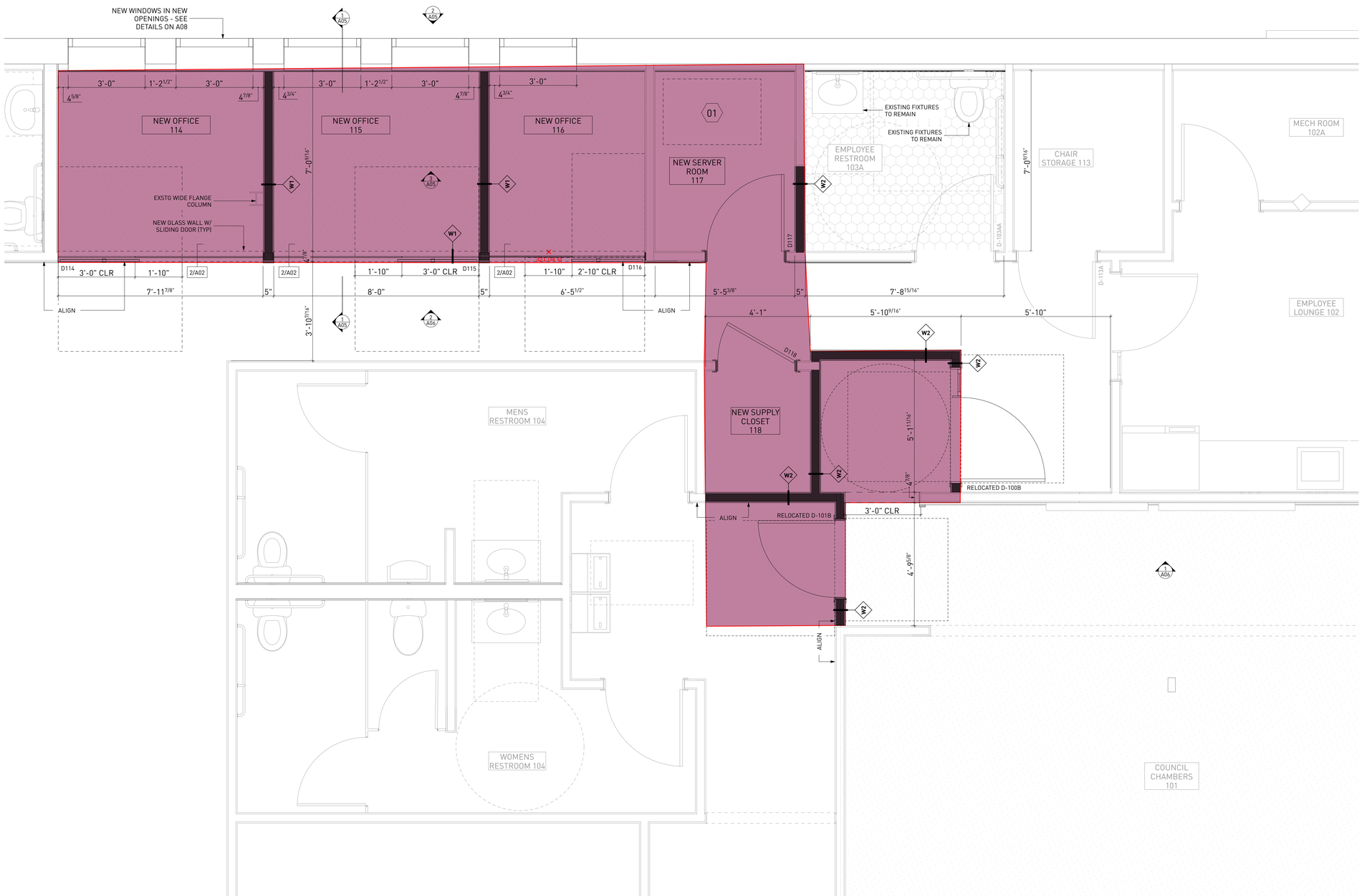
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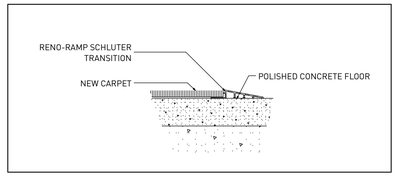
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DEMOLITION FLOOR PLAN AND RCP

A01



FLOOR PLAN - PROPOSED
SCALE: 1/2" = 1'-0" (1)



TRANSITIONS
SCALE: 3" = 1'-0" (2)

PROPOSED FLOOR PLANS - NOTES

DIMENSIONS

DRAWINGS AT 1/4" = 1'-0" ARE SHOWN TO FACE OF STUD
DRAWINGS AT 1/2" = 1'-0" ARE SHOWN TO FINISH

EXISTING VS NEW / PROPOSED ITEMS - GRAPHIC INDICATIONS

NEW/PROPOSED CONSTRUCTION
EXISTING CONSTRUCTION TO REMAIN

GENERAL NEW CONSTRUCTION NOTES

ALL NEW/PROPOSED WALLS AND CEILINGS TO RECEIVE SOUND INSULATION.

PROPOSED PLAN CODED NOTES

(01) RELOCATED AV EQUIPMENT

CONSTRUCTION ASSEMBLIES

– / x/Axx — ASSEMBLY CALLOUT TAG (PLANS, ELEVATIONS, AND SECTIONS) / DRAWING ILLUSTRATING PRINCIPAL ASSEMBLY REQUIREMENTS

NOTE: ASSEMBLIES LISTED HERE DESCRIBE THE PRINCIPAL CONSTRUCTION REQUIRED FOR THAT COMPONENT. FURTHER REQUIREMENTS AND DETAILS ARE PROVIDED IN THE PROJECT SPECIFICATIONS SHEETS AND IN PLANS, SECTIONS, AND DETAILS THROUGHOUT THE SET.

INTERIOR WALLS

W1 / 1/A07 - 5/8" GWB EA. SIDE
- 3 5/8" METAL STUDS AT 16" O.C. W/SOUND BATT INSULATION
- HEIGHT TO EXTEND 6" ABV CEILING HT PER RCP

W2 / 2/A07 - ASSEMBLY SAME AS W1
- FULL HEIGHT WALL (EXTEND TO UNDERSIDE OF ROOF DECK - PROVIDE DEFLECTION TRACK @ INTERSECTION)

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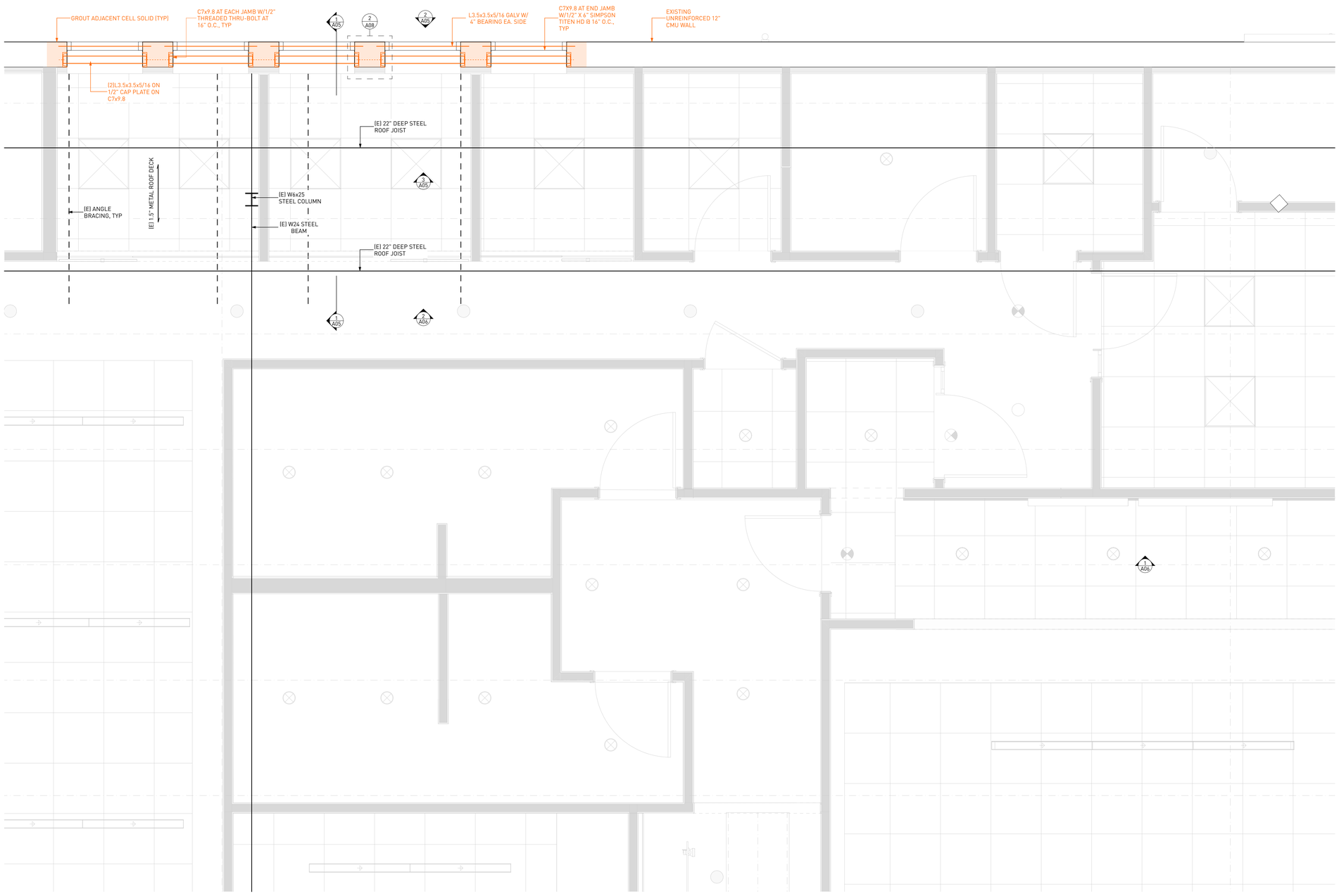
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PROPOSED FLOOR PLAN

A02



REFLECTED CEILING PLAN - STRUCTURAL (1)
SCALE: 1/2" = 1'-0"

ROOF FRAMING PLAN - NOTES

EXISTING VS NEW / PROPOSED ITEMS - GRAPHIC INDICATIONS

- NEW/PROPOSED STRUCTURE
- EXISTING STRUCTURE TO REMAIN

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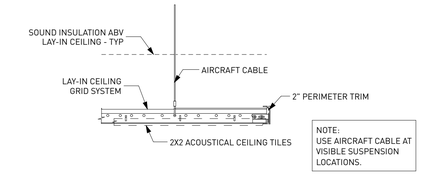
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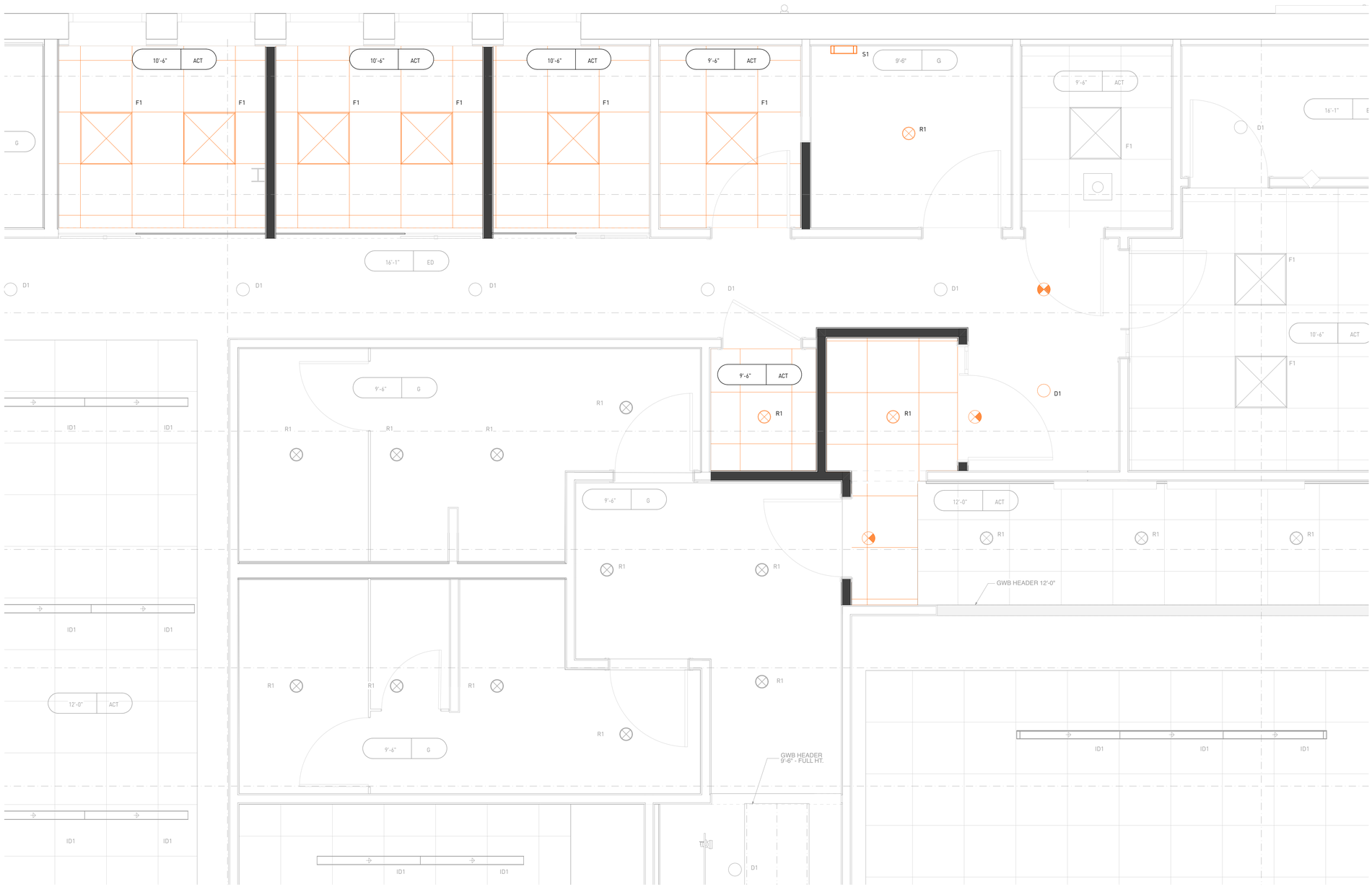
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STRUCTURAL PLAN

A03



DETAIL AT SUSPENDED CEILING 2
SCALE: 1 1/2"= 1'-0"



REFLECTED CEILING PLAN - PROPOSED 1
SCALE: 1/2" = 1'-0"

PROPOSED CEILING PLANS - NOTES

DIMENSIONS

DRAWINGS AT 1/4" = 1'-0" ARE SHOWN TO FACE OF STUD
DRAWINGS AT 1/2" = 1'-0" ARE SHOWN TO FINISH

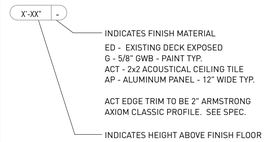
EXISTING VS NEW / PROPOSED ITEMS - GRAPHIC INDICATIONS

NEW/PROPOSED CONSTRUCTION
EXISTING CONSTRUCTION TO REMAIN

GENERAL NEW CONSTRUCTION NOTES

ALL NEW/PROPOSED WALLS AND CEILINGS TO RECEIVE SOUND INSULATION.

CEILING NOTATION



CEILING SYMBOL LEGEND

SYMBOL	TAG	FIXTURE	MOUNTING
	F1	Juno S2X2LI-3230U-WH3	Flush with Ceiling
	R1	Juno L6-1530-L600P-CL	Flush with Ceiling
	S1	Bath sconce TBD	Wall abv mirror
	E1	Exit Sign (match exstg)	Flush with Ceiling

G | R
A | D
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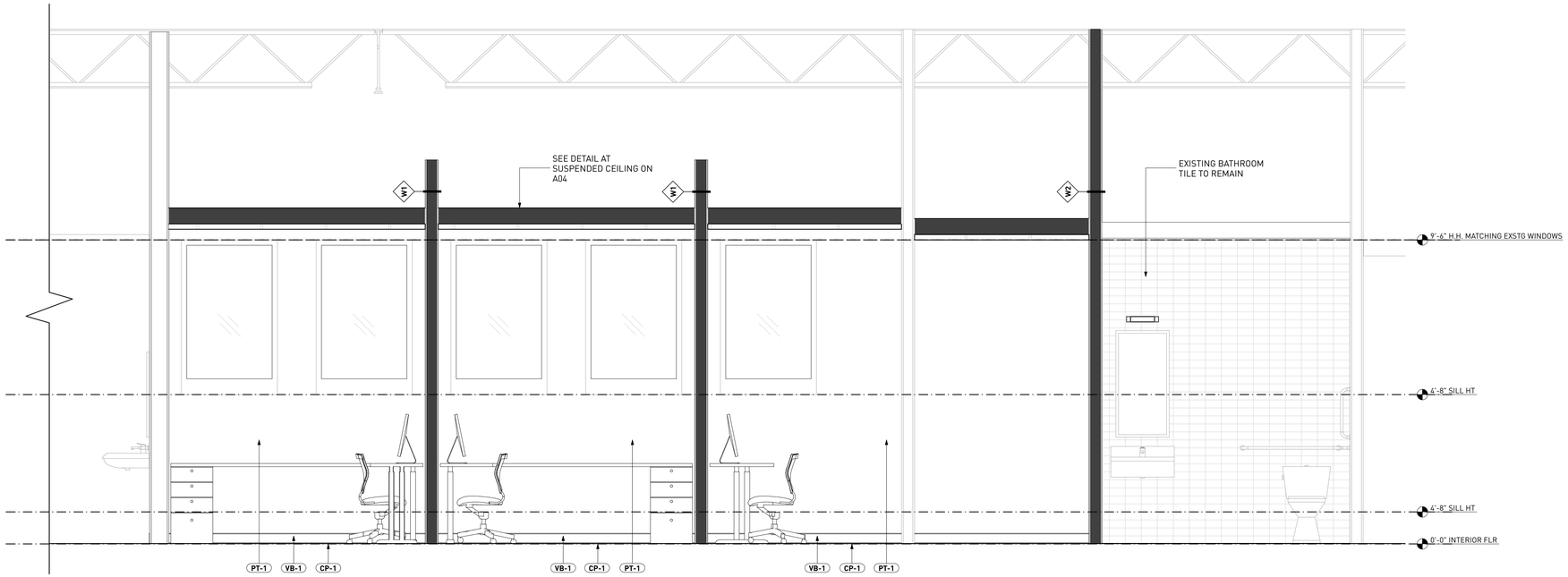
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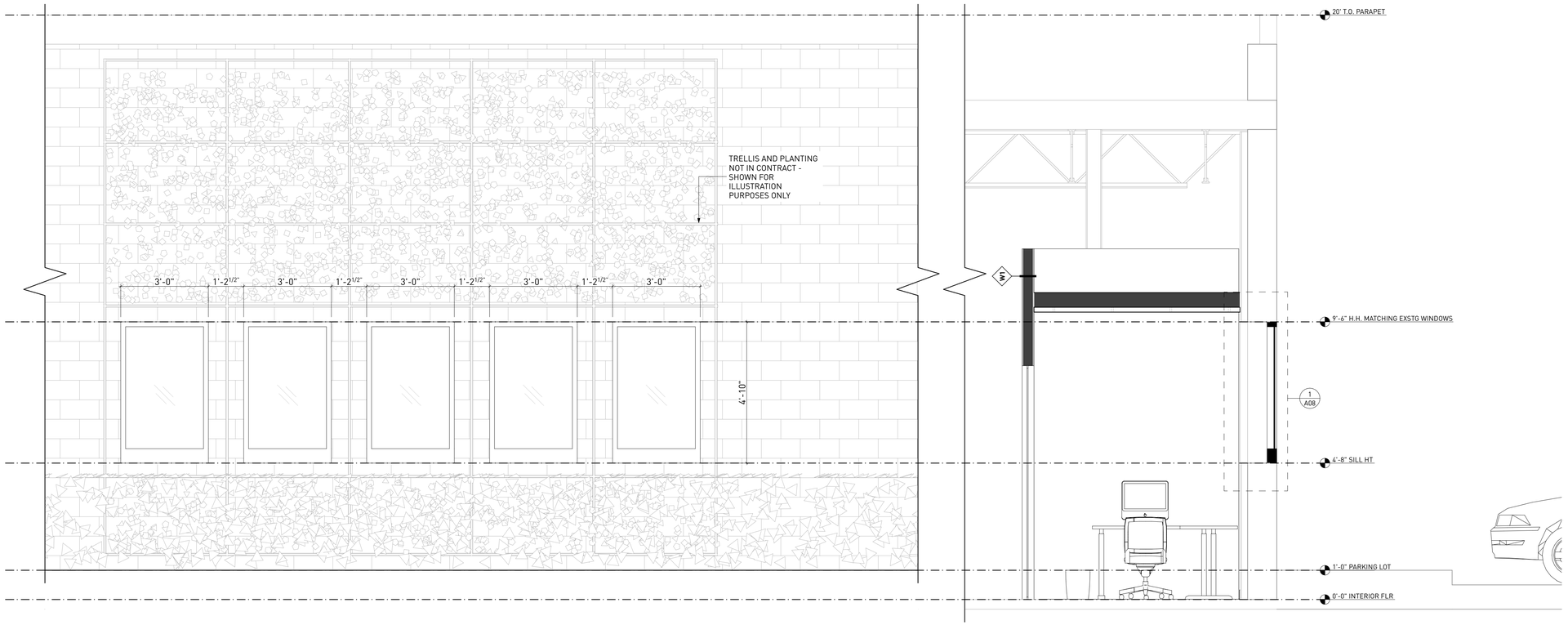
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PROPOSED CEILING PLAN

A04



NORTH-SOUTH BUILDING SECTION 3
SCALE: 1/2" = 1'-0"



EXTERIOR ELEVATION - EAST 2
SCALE: 1/2" = 1'-0"

EAST-WEST BUILDING SECTION 1
SCALE: 1/2" = 1'-0"

ELEVATIONS AND SECTIONS - NOTES

WINDOWS

MFG: MATCH EXISTING
SERIES: MATCH EXISTING
FRAME COLOR: MATCH EXISTING
GLAZING: MATCH EXISTING
SIZING: SEE EXTERIOR ELEVATIONS

CONSTRUCTION ASSEMBLIES

x/Axx — ASSEMBLY CALLOUT TAG (PLANS, ELEVATIONS, AND SECTIONS)
x/Axx — DRAWING ILLUSTRATING PRINCIPAL ASSEMBLY REQUIREMENTS

NOTE: ASSEMBLIES LISTED HERE DESCRIBE THE PRINCIPAL CONSTRUCTION REQUIRED FOR THAT COMPONENT. FURTHER REQUIREMENTS AND DETAILS ARE PROVIDED IN THE PROJECT SPECIFICATIONS SHEETS AND IN PLANS, SECTIONS, AND DETAILS THROUGHOUT THE SET.

INTERIOR WALLS

W1 / 1/A07 - 5/8" GWB EA. SIDE
- 3 5/8" METAL STUDS AT 16" O.C. W/SOUND BATT INSULATION
- HEIGHT TO EXTEND 6" ABV CEILING HT PER RCP

W2 / 2/A07 - ASSEMBLY SAME AS W1
- FULL HEIGHT WALL (EXTEND TO UNDERSIDE OF ROOF DECK - PROVIDE DEFLECTION TRACK @ INTERSECTION)

CODED FINISHES

PT-1	PAINT - MATCH EXISTING PAINT IN FILING ROOM
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CP-1	CARPET TILE - MATCH CARPET TILE IN EXISTING OFFICES
VB-1	VINYL BASE - MATCH EXISTING

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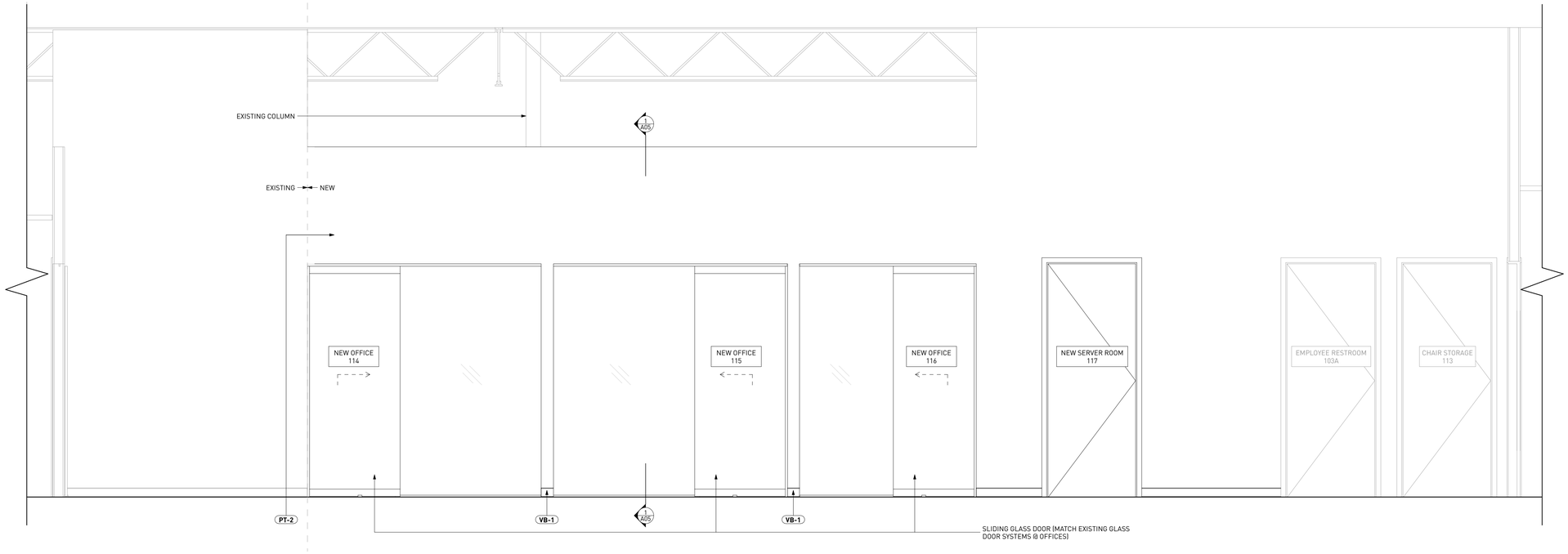
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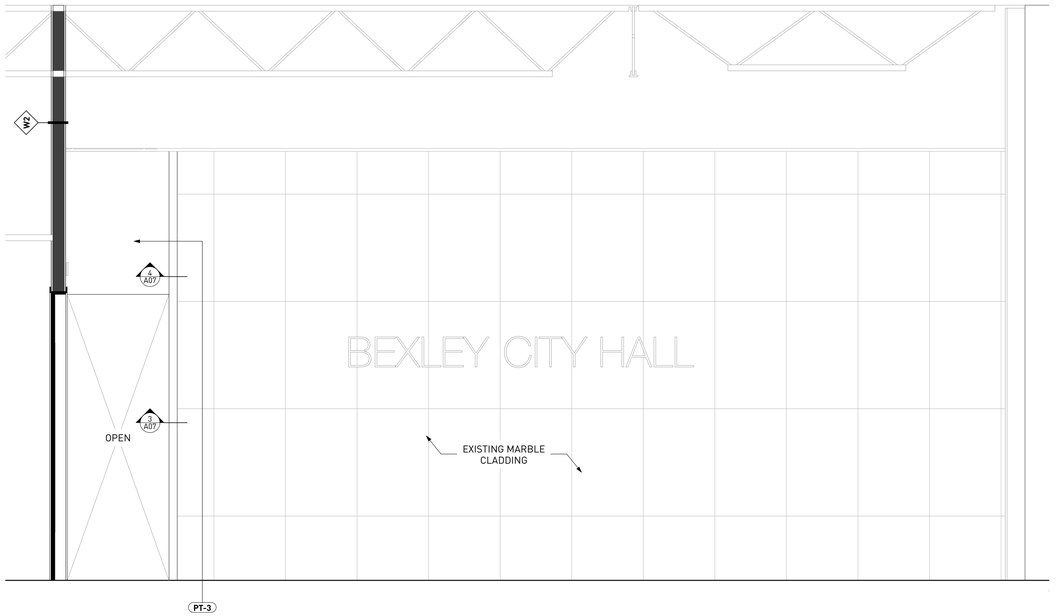
SECTIONS AND ELEVATIONS

A05



INTERIOR ELEVATION - PROPOSED OFFICES 2

SCALE: 1/2" = 1'-0"



INTERIOR ELEVATION - COUNCIL CHAMBERS 1

SCALE: 1/2" = 1'-0"

ELEVATIONS AND SECTIONS - NOTES

WINDOWS

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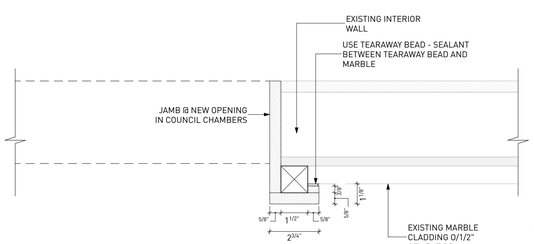
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INTERIOR ELEVATIONS

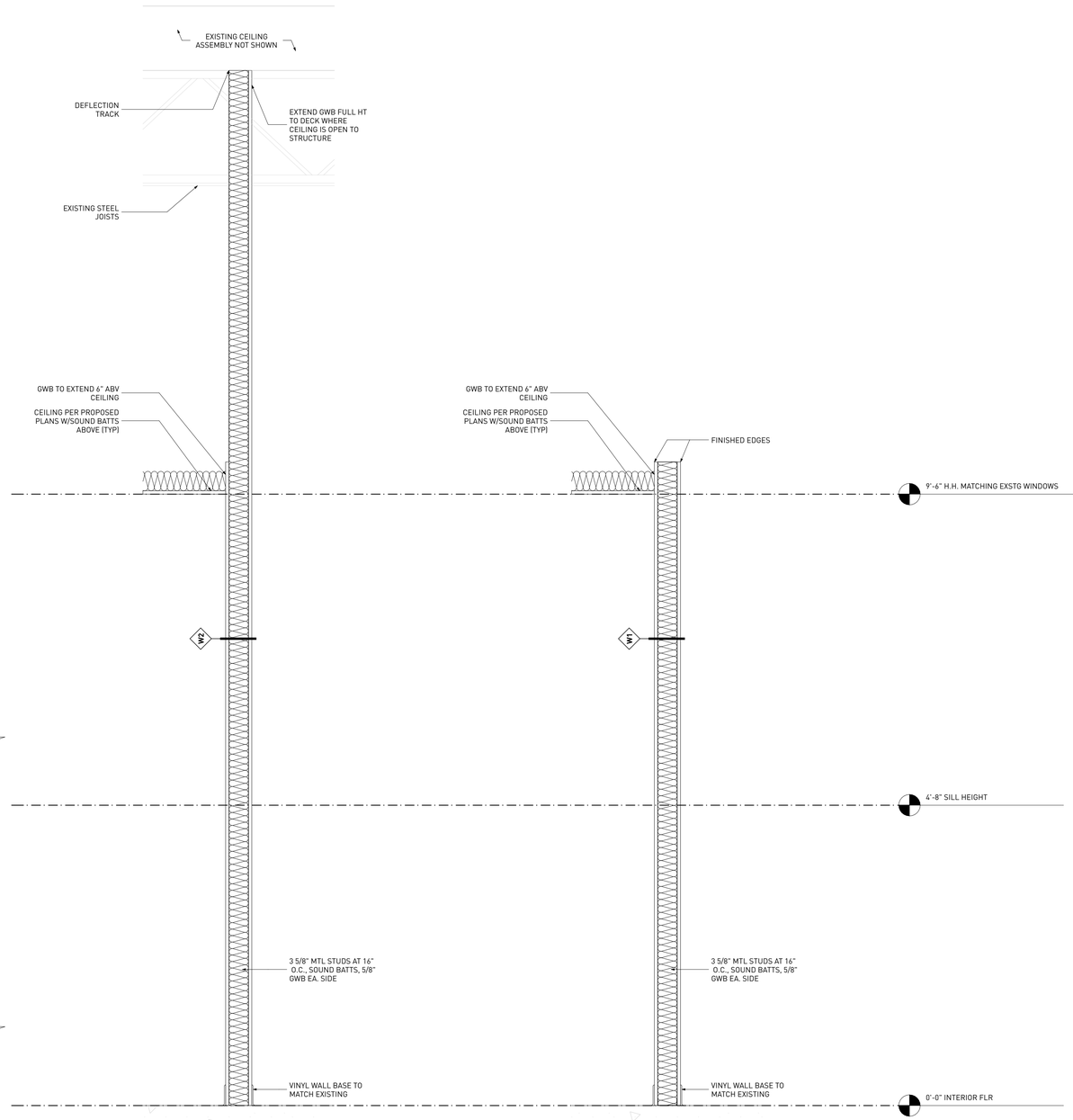
A06



TRANSITION @ COUNCIL CHAMBERS MARBLE WALL 4
SCALE: 3" = 1'-0"



TRANSITION @ COUNCIL CHAMBERS MARBLE WALL 3
SCALE: 3" = 1'-0"



WALL SECTIONS W2 2
SCALE: 1" = 1'-0"

WALL SECTIONS W1 1
SCALE: 1" = 1'-0"

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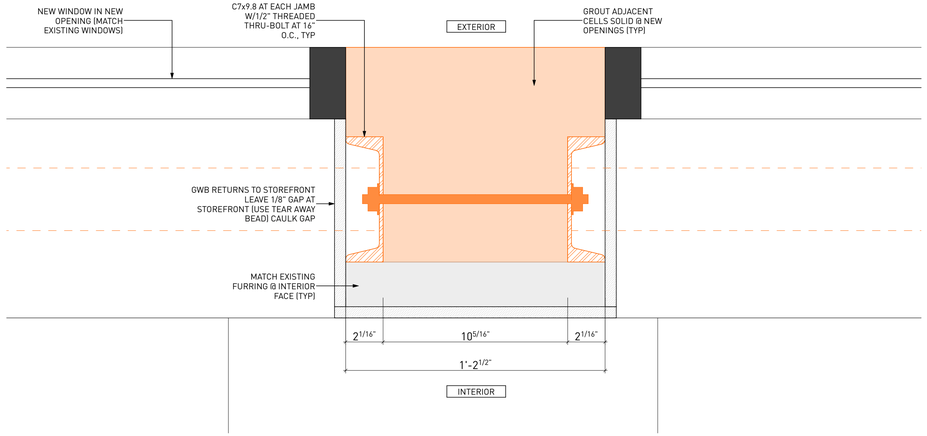
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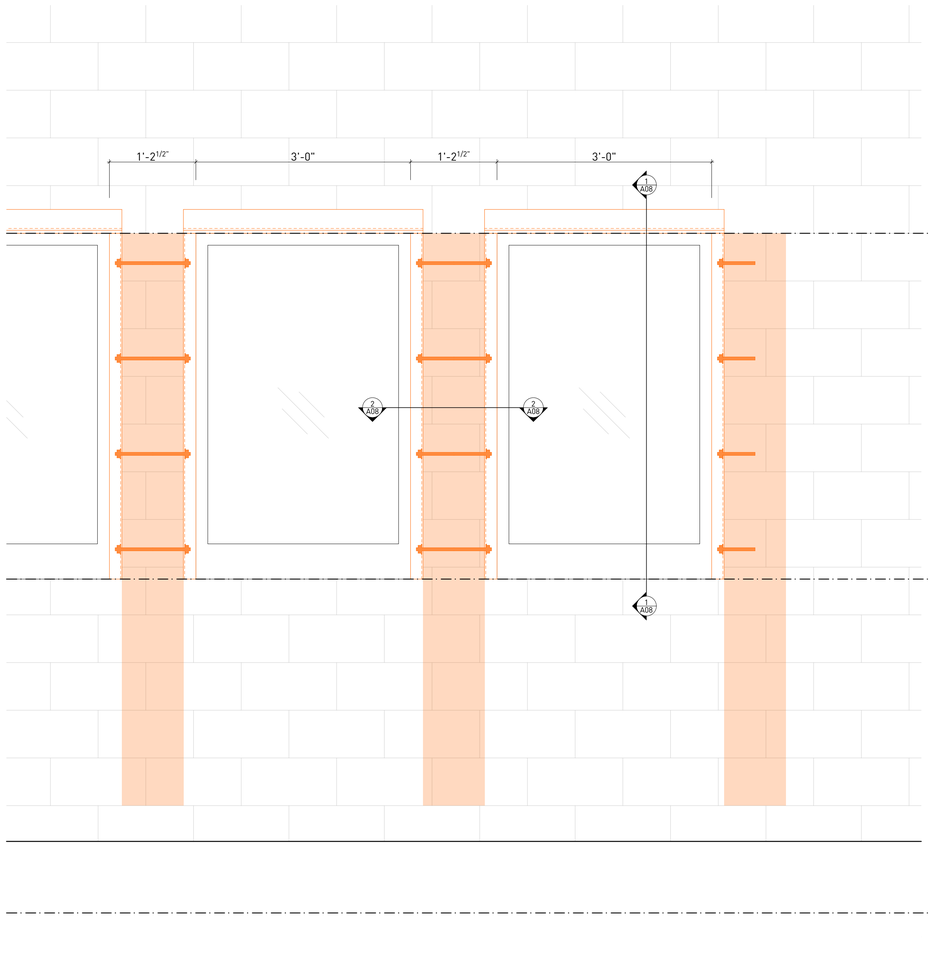
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INTERIOR SECTIONS + DETAILS

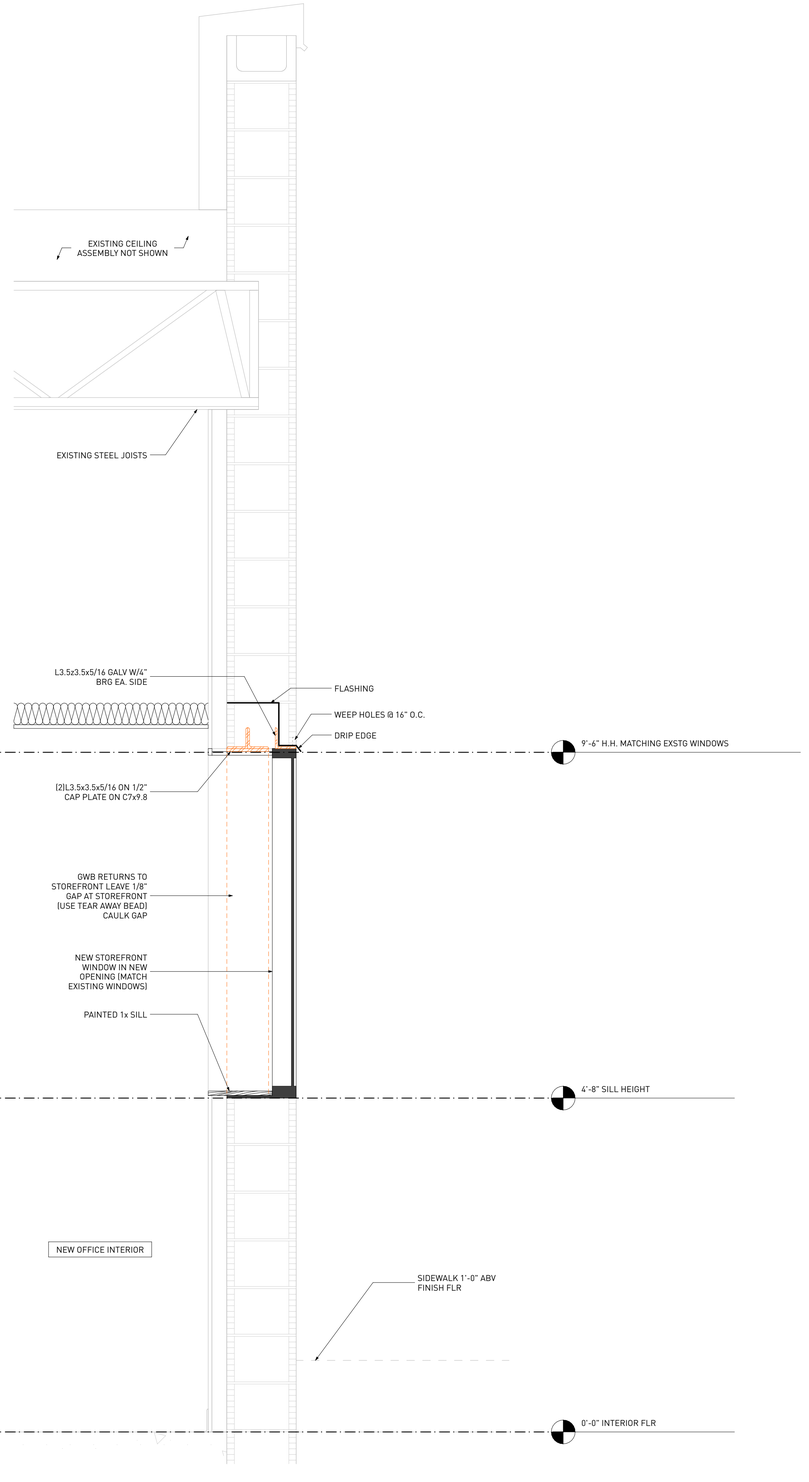
A07



JAMB DETAIL @ NEW WINDOWS (2)
SCALE: 3" = 1'-0"



EAST ELEVATION @ NEW WINDOWS (3)
SCALE: 1" = 1'-0"



WALL SECTION @ NEW WINDOWS (1)
SCALE: 1" = 1'-0"

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CONSTRUCTION ASSEMBLIES

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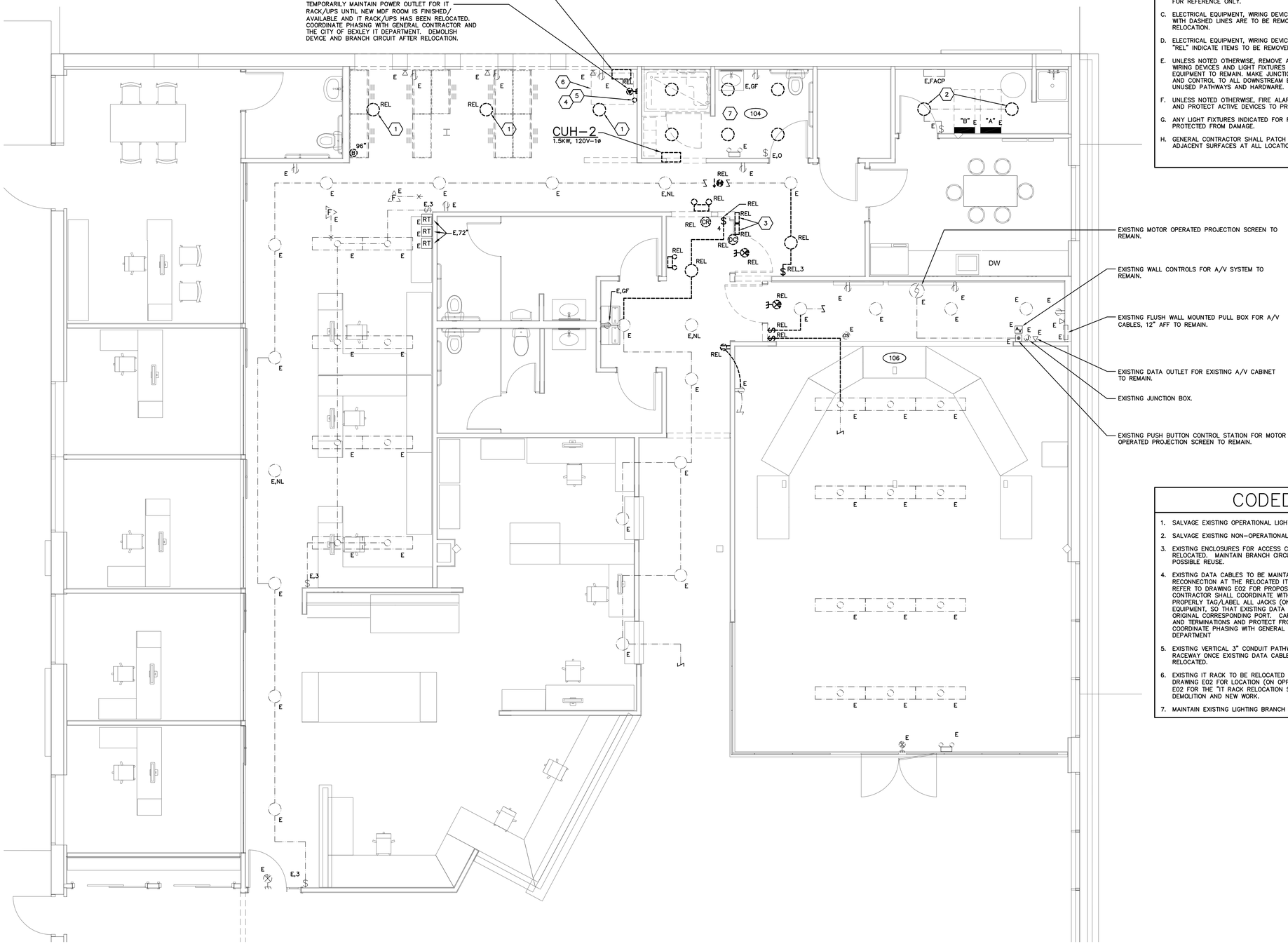
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EXTERIOR SECTIONS + DETAILS

A08



DEMOLITION NOTES

A. THIS BUILDING WILL REMAIN OCCUPIED AND IN USE THROUGHOUT CONSTRUCTION. EXISTING LIGHTING, POWER, TELE/DATA, SPECIAL SYSTEMS, ETC. TO BE MAINTAINED DURING NORMAL BUSINESS HOURS. ANY SYSTEM OUTAGES TO BE COORDINATED WITH THE CITY OF BEXLEY A MINIMUM OF 72 HOURS PRIOR TO ANY INTERRUPTIONS. SERVICE INTERRUPTIONS REQUIRED FOR THE RELOCATION OF THE IT EQUIPMENT SHALL OCCUR OUTSIDE OF NORMAL BUSINESS HOURS, ON PREMIUM TIME.

B. ALL ELECTRICAL EQUIPMENT, WIRING DEVICES, LIGHT FIXTURES, ETC SHOWN ON THIS PLAN IN THIN LINES WITH A SUBSCRIPT "E" ARE EXISTING TO REMAIN AND SHOWN FOR REFERENCE ONLY.

C. ELECTRICAL EQUIPMENT, WIRING DEVICES, LIGHT FIXTURES, ETC SHOWN BOLD, OR BOLD WITH DASHED LINES ARE TO BE REMOVED AND WHERE NOTED, SALVAGED FOR RELOCATION.

D. ELECTRICAL EQUIPMENT, WIRING DEVICES, LIGHT FIXTURES, ETC WITH A SUBSCRIPT "REL" INDICATE ITEMS TO BE REMOVED AND STORED FOR RELOCATION.

E. UNLESS NOTED OTHERWISE, REMOVE ALL WIRE AND CONDUIT FROM DEMOLISHED WIRING DEVICES AND LIGHT FIXTURES BACK TO SOURCE OR NEXT UPSTREAM EQUIPMENT TO REMAIN. MAKE JUNCTIONS AND EXTEND CIRCUITRY TO MAINTAIN POWER AND CONTROL TO ALL DOWNSTREAM EQUIPMENT TO REMAIN. REMOVE ALL ASSOCIATED UNUSED PATHWAYS AND HARDWARE.

F. UNLESS NOTED OTHERWISE, FIRE ALARM SYSTEM IS EXISTING TO REMAIN. MAINTAIN AND PROTECT ACTIVE DEVICES TO PREVENT INADVERTENT BUILDING EVACUATION.

G. ANY LIGHT FIXTURES INDICATED FOR RELOCATION SHALL BE STORED ON SITE & PROTECTED FROM DAMAGE.

H. GENERAL CONTRACTOR SHALL PATCH AND REPAIR WALLS AND PAINT TO MATCH ADJACENT SURFACES AT ALL LOCATIONS WHERE DEVICES ARE REMOVED.

CODED NOTES ⬡

1. SALVAGE EXISTING OPERATIONAL LIGHTING FIXTURE FOR RELOCATION/SPARE PARTS.
2. SALVAGE EXISTING NON-OPERATIONAL LIGHTING FIXTURE FOR SPARE PARTS.
3. EXISTING ENCLOSURES FOR ACCESS CONTROL POWER AND CONTROLS TO BE RELOCATED. MAINTAIN BRANCH CIRCUIT AND ACCESS CONTROL CABLES FOR POSSIBLE REUSE.
4. EXISTING DATA CABLES TO BE MAINTAINED FOR REUSE, RELOCATION AND RECONNECTION AT THE RELOCATED IT EQUIPMENT (ON OPPOSITE SIDE OF WALL). REFER TO DRAWING E02 FOR PROPOSED IT RACK LOCATION. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE CITY OF BEXLEY IT DEPARTMENT TO PROPERLY TAG/LABEL ALL JACKS (ON DATA CABLES) AND ALL PORTS ON THE IT EQUIPMENT, SO THAT EXISTING DATA CABLES CAN BE PROPERLY LANDED ONTO THE ORIGINAL CORRESPONDING PORT. CAREFULLY SALVAGE THE EXISTING DATA CABLES AND TERMINATIONS AND PROTECT FROM DAMAGE, DIRT, DUST AND DEBRIS. COORDINATE PHASING WITH GENERAL CONTRACTOR AND THE CITY OF BEXLEY IT DEPARTMENT
5. EXISTING VERTICAL 3" CONDUIT PATHWAY FOR EXISTING DATA CABLES. DEMOLISH RACEWAY ONCE EXISTING DATA CABLES ARE REMOVED FROM PATHWAY AND RELOCATED.
6. EXISTING IT RACK TO BE RELOCATED INTO THE PROPOSED MDF ROOM. REFER TO DRAWING E02 FOR LOCATION (ON OPPOSITE SIDE OF WALL). REFER TO DRAWING E02 FOR THE "IT RACK RELOCATION SCOPE" FOR SCOPE OF WORK FOR BOTH DEMOLITION AND NEW WORK.
7. MAINTAIN EXISTING LIGHTING BRANCH CIRCUIT FOR REPLACEMENT LIGHTING.

DEMOLITION ELECTRICAL PLAN
SCALE: 1/4"=1'-0"

E00-24339.DWG

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praterengineering.com

DESIGNED BY	DRAWN BY	CHECKED BY	JOB NUM.
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12/6/2024

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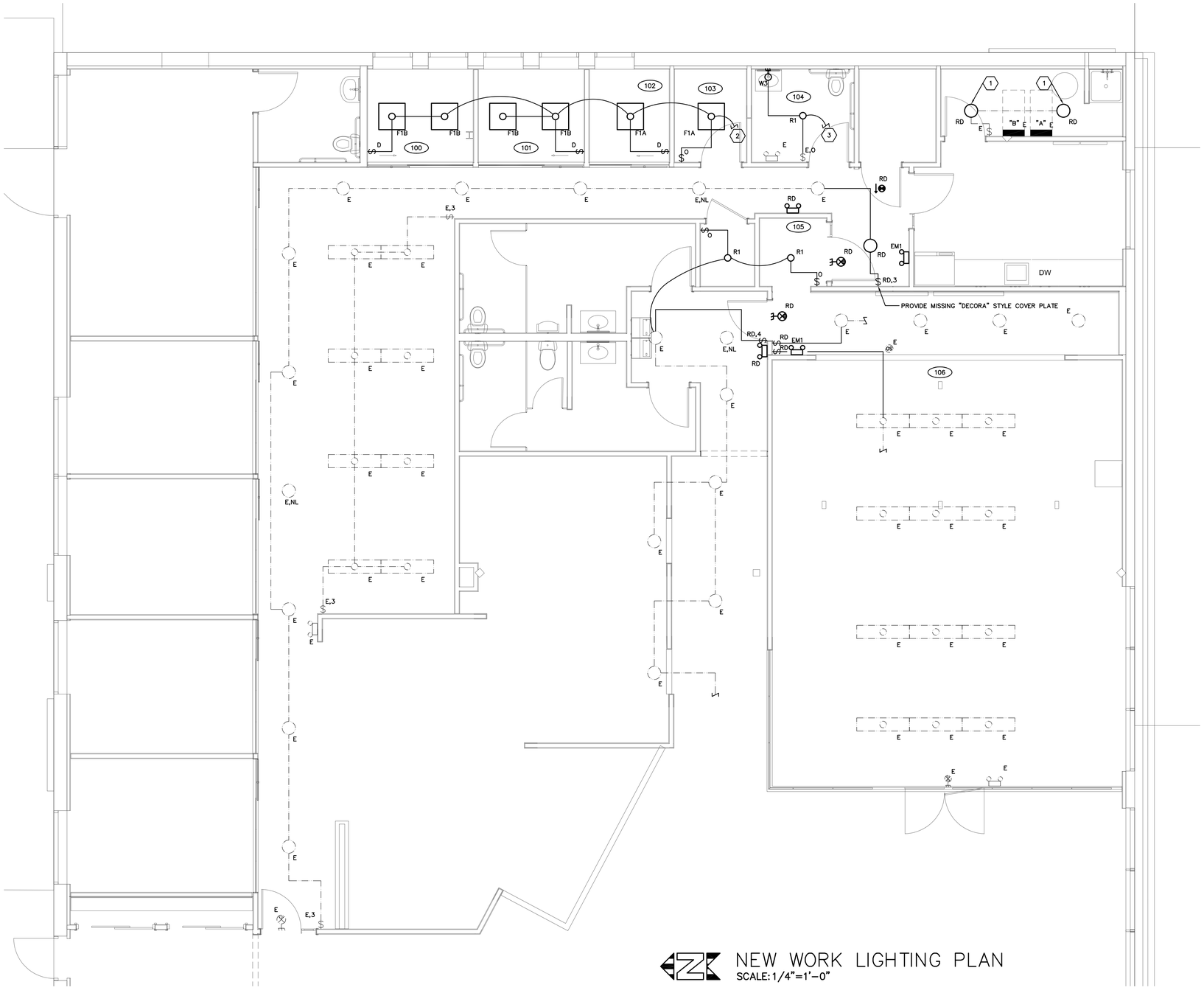
SHEET TITLE
DEMOLITION ELECTRICAL PLAN

E00

FIXTURE SCHEDULE

SEE REMARKS COLUMN FOR TYPE OF MOUNTING.

FIXTURE NUMBER	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	LAMPS	REMARKS
R1	6"ø RECESSED DOWNLIGHT WITH CLEAR SPECULAR PARABOLIC CONE REFLECTOR. INCLUDE BAR HANGERS.	JUNO	L6-15-35-MVOLT-G4-80CRI-P-CS-PF-HBTL SERIES	LED's 1500 LUMENS 3500°K. 19W.	CONFIRM KELVIN COLOR TEMPERATURE WITH EXISTING FIXTURES PRIOR TO ORDERING. 10% 0-10V DIMMING
F1A	2' x 2' RECESSED TROFFER w/ CENTER POLYCARBONATE RADIAL DIFFUSER PANEL AND (2) SLOPING POLYCARBONATE SIDE PANELS.	LITHONIA	2BLT2-48L-ADSM-GZ10-LP835 SERIES	LED's 4800 LUMENS 3500°K. 36W.	CONFIRM KELVIN COLOR TEMPERATURE WITH EXISTING FIXTURES PRIOR TO ORDERING. 10% 0-10V DIMMING
F1B	2' x 2' RECESSED TROFFER w/ CENTER POLYCARBONATE RADIAL DIFFUSER PANEL AND (2) SLOPING POLYCARBONATE SIDE PANELS.	LITHONIA	2BLT2-40L-ADSM-GZ10-LP835 SERIES	LED's 4000 LUMENS 3500°K. 36W.	CONFIRM KELVIN COLOR TEMPERATURE WITH EXISTING FIXTURES PRIOR TO ORDERING. 10% 0-10V DIMMING
W3	WALL MOUNTED BATHROOM SCONCE	TBD	TBD	TBD	MOUNTED ABOVE MIRROR
EM1	SURFACE MTD. EM BATTERY PACK WITH (2) SQUARE HEADS AND NICAD BATTERY. WHITE IN COLOR. BATTERY SHALL PROVIDE ILLUMINATION FOR 90 MINUTES.	NAVILITE	N1LWH SERIES – TO MATCH EXISTING	BY MFGR.	90 MINUTE BATTERY POWER SUPPLY. MATCH MOUNTING HEIGHT OF EXISTING EMERGENCY LIGHTING UNITS



NEW WORK LIGHTING PLAN
SCALE: 1/4"=1'-0"

GENERAL NOTES

A. ALL ELECTRICAL EQUIPMENT, LIGHT FIXTURES, WIRING DEVICES, ETC. SHOWN ON THIS PLAN IN THIN LINES AND SUBSCRIPT "E" ARE EXISTING TO REMAIN AND SHOWN FOR REFERENCE ONLY.

B. ALL ELECTRICAL EQUIPMENT, LIGHT FIXTURES, WIRING DEVICES, ETC. SHOWN ON THIS PLAN IN BOLD LINES ARE NEW UNLESS NOTED OTHERWISE.

C. DEVICES WITH A SUBSCRIPT "REL" INDICATE DEVICES TO BE RELOCATED.

D. DEVICES WITH A SUBSCRIPT "RD" INDICATE RELOCATED DEVICES.

E. ALL MATERIALS INSTALLED ABOVE CEILING MUST BE PLENUM RATED.

F. NEW DEVICES AND COVERPLATES TO BE COLOR WHITE. PRIOR TO ORDERING ANY DEVICES, GENERAL CONTRACTOR TO VERIFY COLOR MATCHES EXISTING.

G. ALL BRANCH CIRCUIT CONDUCTORS/RACEWAY SHALL BE NEW, BACK TO SOURCE PANELBOARD, UNLESS NOTED OTHERWISE TO BE REUSED.

H. BRANCH CIRCUIT HOMERUNS TO BE IN EMT CONDUIT.

I. MAINTAIN EXISTING BRANCH CIRCUIT TO ALL EMERGENCY EGRESS LIGHTING.

J. WHERE MULTIPLE WIRING DEVICES ARE SHOWN ADJACENT TO EACH OTHER, DEVICES SHALL BE PROVIDED IN A MULTI-GANG OUTLET BOX WITH A COMMON COVERPLATE.

K. UNLESS NOTED OTHERWISE, ALL NEW/RELOCATED EXIT SIGNS AND EMERGENCY EGRESS LIGHTING FIXTURES IN THE TENANT SPACE SHALL BE CONNECTED TO THE EXISTING EMERGENCY LIGHTING BRANCH CIRCUIT, FEEDING EXISTING EMERGENCY LIGHTING ON THIS FLOOR.

L. ALL EXPOSED CONDUIT IN ROOMS HAVING NO CEILINGS/EXPOSED STRUCTURE TO BE EMT CONDUIT, RUN IN A NEAT AND ORGANIZED MANNER.

M. SECURE ALL EQUIPMENT AND HORIZONTAL CONDUIT RUNS FROM STRUCTURAL STEEL. DO NOT SECURE EQUIPMENT AND CONDUIT TO THE ROOF DECK ABOVE..

N. PROVIDE THREAD-ON TYPE CONNECTORS FOR JOINTS WITH CONDUCTOR SIZES #8 AND SMALLER. SCREWLESS TYPE CONNECTORS AND "PUSH IN" TYPE PRESSURE CONNECTORS (E.G. WAGO CONNECTORS, ETC.) ARE NOT ACCEPTABLE.

CODED NOTES ⬡

1. REPAIR OR REPLACE EXISTING LIGHTING FIXTURE TO MAKE OPERABLE, REUSING SALVAGED LIGHTING FIXTURES FOR PARTS OR AS A REPLACEMENT FIXTURE. UNUSED SALVAGED LIGHTING FIXTURES/PARTS TO BE PROPERLY DISPOSED OF, OFF OF THE PROJECT SITE IF NOT REQUESTED TO BE TURNED OVER TO THE TENANT AS ATTIC STOCK. CONFIRM WITH AUTHORIZED TENANT REPRESENTATIVE PRIOR TO DISPOSAL.
2. EXTEND TO EXISTING CORRIDOR LIGHTING BRANCH CIRCUIT AHEAD OF LOCAL CONTROLS. MINIMUM WIRE SIZE SHALL BE 2-#12 AND 1-#12 GROUND IN 3/4" EMT CONDUIT IN EXPOSED CEILING AREAS.
3. EXTEND TO EXISTING RESTROOM LIGHTING BRANCH CIRCUIT. MINIMUM WIRE SIZE SHALL BE 2-#12 AND 1-#12 GROUND IN 3/4" CONDUIT OR MC CABLE.

LINE TYPE LEGEND

- - - - - - LINE TYPE INDICATES EXISTING LIGHTING FIXTURES, ELECTRICAL EQUIPMENT/DEVICES TO REMAIN.

———— LINE TYPE INDICATES NEW LIGHTING FIXTURES, ELECTRICAL EQUIPMENT/DEVICES TO BE PROVIDED.

LIGHTING CONTROL LEGEND

OS OCCUPANCY SENSOR WITH 360° FIELD OF VIEW.

VD DIMMING VACANCY SENSOR, LOW VOLTAGE WALL MOUNTED, SELF ADJUSTING 300 SQ. FT. DUAL TECH. 0-10V DIMMING SENSOR WITH 180° FIELD OF VIEW, SET FOR MANUAL ON, AUTO OFF. nLIGHT nWSX PDT LV DX.

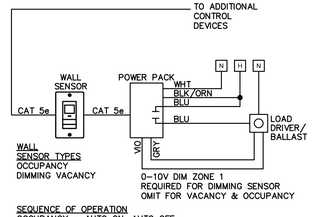
OD OCCUPANCY SENSOR, LINE VOLTAGE WALL MOUNTED, SELF ADJUSTING 300 SQ. FT. DUAL TECH. SENSOR WITH 180° FIELD OF VIEW, SET FOR MANUAL ON, AUTO OFF. WATT STOPPER DW-100.

NOTES:

1. REFER TO WIRING DIAGRAMS ON THIS SHEET.
2. SET SENSORS FOR MAXIMUM SENSITIVITY AND TIME DELAYS FOR 30 MINUTES. COORDINATE FINAL SETTINGS WITH OWNER/TENANT.
3. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
4. APPROVED EQUALS SHALL BE BY WATTSTOPPER DLM, LUTRON ENERGI TRI-PAK, LSI AIRLINK, CRESTRON ZUM, SENSOR SWITCH OR NX LIGHTING.

LIGHTING CONTROL NOTES

1. ENCLOSED OFFICES SHALL BE MANUAL ON, AUTO OFF, & MANUAL RAISE/LOWER.
2. CORRIDORS AND EQUIPMENT ROOMS SHALL BE AUTO ON, AUTO OFF, NO DIMMING.
3. STRAIGHT LINES BETWEEN DEVICES/LUMINAIRES INDICATE SWITCHED CIRCUIT. ARCED LINES INDICATE UNSWITCHED CIRCUIT.
4. MOUNT LIGHT SWITCHES AT 44" AFF.



SEQUENCE OF OPERATION
OCCUPANCY – AUTO ON, AUTO OFF
DIMMING VACANCY – MANUAL ON, AUTO OFF, MANUAL RAISE/LOWER

WALL SENSOR

CAT 5e NON-BOOTED PLENUM CABLES, 2 CAT 5e PORTS PER DEVICE
APPROX. 16 DEVICES MAX PER POWER PACK
ADDITIONAL SWITCHES & SENSORS DAISY CHAINED

E01-24339.DWG

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BEXLEY CITY HALL RENOVATIONS

2242 E Main St
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12.06.2024 DRAWING PRINT DATE

MARK	DATE	DESCRIPTION
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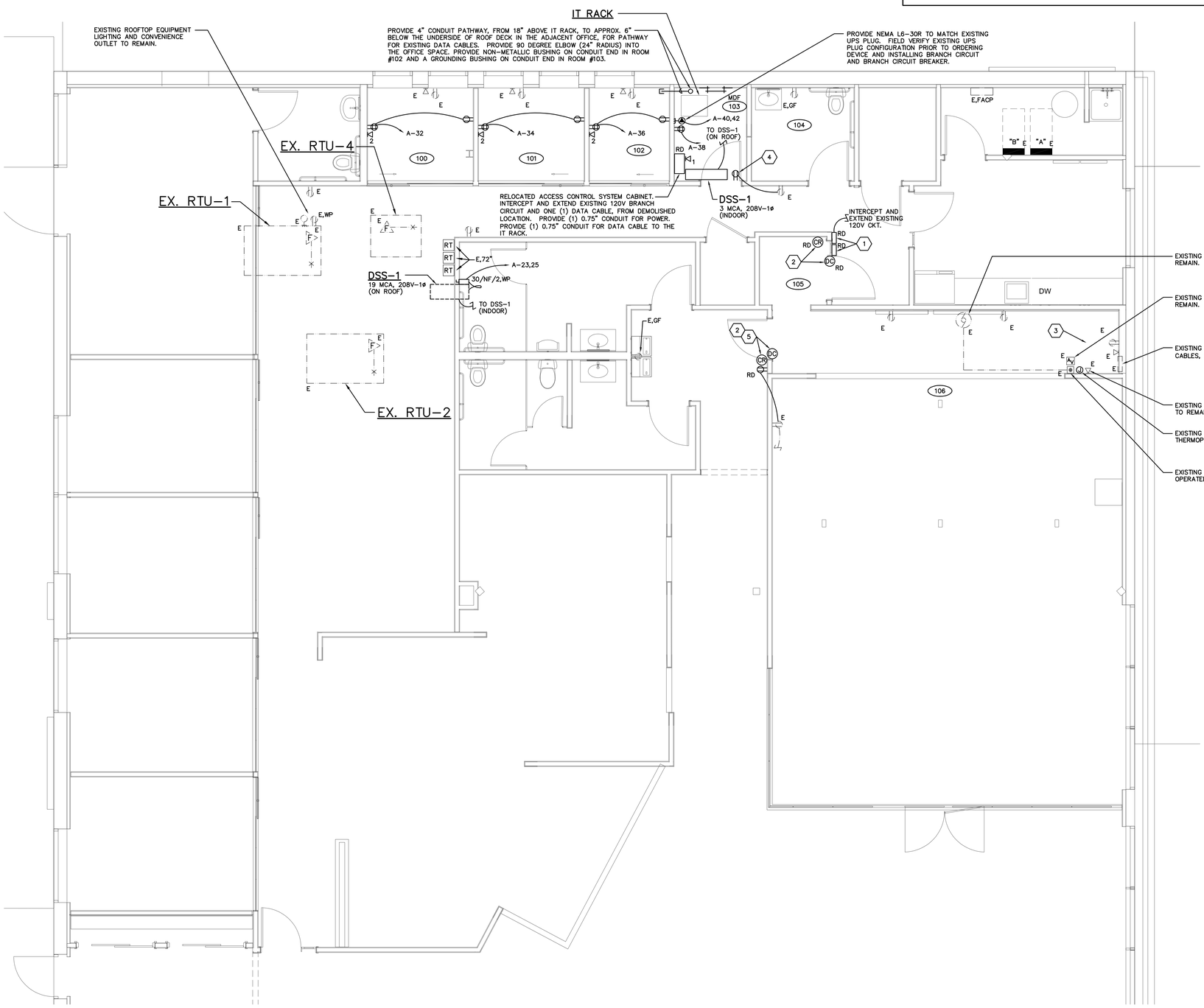
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SHEET SIZE: 24" x 36"

SHEET TITLE

NEW WORK LIGHTING PLAN

E01



NEW WORK POWER PLAN
SCALE: 1/4"=1'-0"

TELE / DATA CABLING

FROM THE THE IT RACK IN THE MDF ROOM #103, FURNISH AND INSTALL PLENUM RATED CABLING TO THE TELE/DATA ROUGH-INS. ROUGH-INS WILL IDENTIFY SPECIFIC QUANTITY OF CABLES REQUIRED FOR THAT LOCATION (1, 2, ETC.). AT THE IT RACK, COIL 5'-0" OF SLACK FOR EACH CABLE. AT THE DEVICE ROUGH-IN, COIL 1'-0" OF SLACK FOR EACH CABLE. CABLING SHALL BE PLENUM RATED CAT6E WITH BLUE JACKET. WEST PENN, COMMSCOPE, OR BELDEN IS ACCEPTABLE. ALL DEVICES, COVERPLATES, TERMINATIONS, ETC. WILL BE BY THE CITY OF BEXLEY IT DEPARTMENT..

CODED NOTES

1. RELOCATION OF ENCLOSURES FOR DOOR ACCESS CONTROL POWER AND CONTROL WIRING PROVIDED BY THE ELECTRICAL CONTRACTOR. INSTALL ENCLOSURES APPROX. 6" BELOW BOTTOM OF JOIST. INTERCEPT AND EXTEND EXISTING 120 VOLT ACCESS CONTROL BRANCH CIRCUIT. MAINTAIN EXISTING FIRE ALARM RELAY. INTERCEPT AND EXTEND ASSOCIATED FIRE ALARM CONTROL WIRING (WITHOUT SPLICES OR TEE -TAPS) OR PROVIDE NEW FIRE ALARM CABLE AS REQUIRED. PROVIDE FIRE ALARM SYSTEM PROGRAMMING FOR RELOCATED CARD READER/MODIFIED ACCESS CONTROL SYSTEM. ACCESS CONTROL SYSTEM COMPONENTS AND ACCESS CONTROL WIRING TO BE PROVIDED BY THE TENANT'S SECURITY VENDOR. PROGRAM ACCESS CONTROL SYSTEM TO UNLOCK UPON FIRE ALARM CONDITION OR LOSS OF POWER.
2. REFER TO ELECTRIC STRIKE ROUGH-IN DETAIL ON DRAWING E03.
3. EXISTING A/V SYSTEM TO REMAIN.
4. PROVIDE RECEPTACLE FOR CONDENSATE PUMP, INSTALLED AT APPROX. 90" AFF. COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH HVAC CONTRACTOR PRIOR TO ROUGH-IN. CONNECT TO EXISTING CORRIDOR RECEPTACLE BRANCH CIRCUIT.
5. PROVIDE ROUGH-IN FOR FUTURE CARD READER.
6. TELECOMMUNICATIONS GROUNDING BAR. MOUNT AT 7'-9" AFF. PROVIDE #2 AWG COPPER GROUNDING CONDUCTOR TO BUILDING GROUNDING ELECTRODE SYSTEM. PROVIDE #10 AWG GROUND TO GROUNDING BUSHING ON CONDUIT SLEEVE ABOVE IT RACK. REFER TO DETAIL ON DRAWING E400.

GENERAL NOTES

A. ALL ELECTRICAL EQUIPMENT, WIRING DEVICES, ETC. SHOWN ON THIS PLAN IN THIN LINES AND SUBSCRIPT "E" ARE EXISTING TO REMAIN AND SHOWN FOR REFERENCE ONLY.

B. ALL ELECTRICAL EQUIPMENT, WIRING DEVICES, ETC. SHOWN ON THIS PLAN IN BOLD LINES ARE NEW UNLESS NOTED OTHERWISE.

C. DEVICES WITH A SUBSCRIPT "RD" INDICATE RELOCATED DEVICES.

D. ALL MATERIALS INSTALLED ABOVE CEILING MUST BE PLENUM RATED.

E. NEW DEVICES AND COVERPLATES TO BE COLOR WHITE. PRIOR TO ORDERING ANY DEVICES, THE GENERAL CONTRACTOR TO VERIFY COLOR MATCHES EXISTING.

F. ALL BRANCH CIRCUIT CONDUCTORS/RACEWAY SHALL BE NEW, BACK TO SOURCE PANELBOARD, UNLESS NOTED OTHERWISE TO BE REUSED.

G. BRANCH CIRCUIT HOMERUNS TO BE IN EMT CONDUIT.

H. WHERE MULTIPLE WIRING DEVICES ARE SHOWN ADJACENT TO EACH OTHER, DEVICES SHALL BE PROVIDED IN A MULTI-GANG OUTLET BOX WITH A COMMON COVERPLATE.

I. DATA/COMMUNICATIONS RACEWAY SHALL HAVE NOT MORE THAN TWO (2) 90 DEGREE BENDS BETWEEN PULL BOXES.

J. ALL LOW VOLTAGE CABLE (VOICE/DATA/AV, FIRE ALARM, ACCESS CONTROL, SECURITY WIRING, HVAC CONTROL, ETC.) IN FINISHED AREAS WITH EXPOSED STRUCTURE SHALL BE CONCEALED IN CONTINUOUS CONDUIT. UNLESS NOTED OTHERWISE, HOMERUN ALL TO TENANT'S IT CLOSET.

K. ALL EXPOSED CONDUIT IN ROOMS HAVING NO CEILINGS/EXPOSED STRUCTURE TO BE EMT CONDUIT, RUN IN A NEAT AND ORGANIZED MANNER.

L. SECURE ALL EQUIPMENT AND HORIZONTAL CONDUIT RUNS FROM STRUCTURAL STEEL. DO NOT SECURE EQUIPMENT AND CONDUIT TO THE ROOF DECK ABOVE.

M. PROVIDE THREAD-ON TYPE CONNECTORS FOR JOINTS WITH CONDUCTOR SIZES #8 AND SMALLER. SCREWLESS TYPE CONNECTORS AND "PUSH IN" TYPE PRESSURE CONNECTORS (E.G. WAGO CONNECTORS, ETC.) ARE NOT ACCEPTABLE.

IT RACK RELOCATION SCOPE

A. THE EXISTING IT RACK PROVIDES NETWORK SERVICE FOR THE ENTIRE CITY OF BEXLEY. ALL SERVICE INTERRUPTIONS SHALL BE SCHEDULED A MINIMUM OF SEVEN (7) DAYS IN ADVANCE, UNLESS APPROVED IN WRITING BY THE CITY OF BEXLEY IT DEPARTMENT. SCHEDULING SHALL INCLUDE THE ANTICIPATED DURATION OF THE SERVICE OUTAGE.

B. SERVICE INTERRUPTIONS ARE TO BE PLANNED IN ADVANCE TO MINIMIZE DOWNTIME TO THE GREATEST EXTENT POSSIBLE AND SHALL OCCUR OUTSIDE OF NORMAL BUSINESS HOURS.

C. THE CITY OF BEXLEY IT DEPARTMENT IS RESPONSIBLE FOR LABELING OF CABLES AND PORTS AS WELL AS DISCONNECTING DATA CABLES FROM THE EXISTING IT RACK PRIOR TO RELOCATION.

D. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PULLING/PROTECTING/ RELOCATING THE DISCONNECTED DATA CABLES FROM ABOVE THE EXISTING IT RACK AND EXTENDING THEM THROUGH THE WALL, VIA THE PROPOSED PATHWAY, TO THE NEW IT RACK LOCATION.

E. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATING THE IT RACK AND ASSOCIATED HARDWARE UNDER THE DIRECT SUPERVISION OF THE CITY OF BEXLEY IT DEPARTMENT.

F. THE CITY OF BEXLEY IT DEPARTMENT SHALL BE RESPONSIBLE FOR CABLE TESTING AND RECONNECTION OF DATA CABLES IN THE RELOCATED IT RACK.

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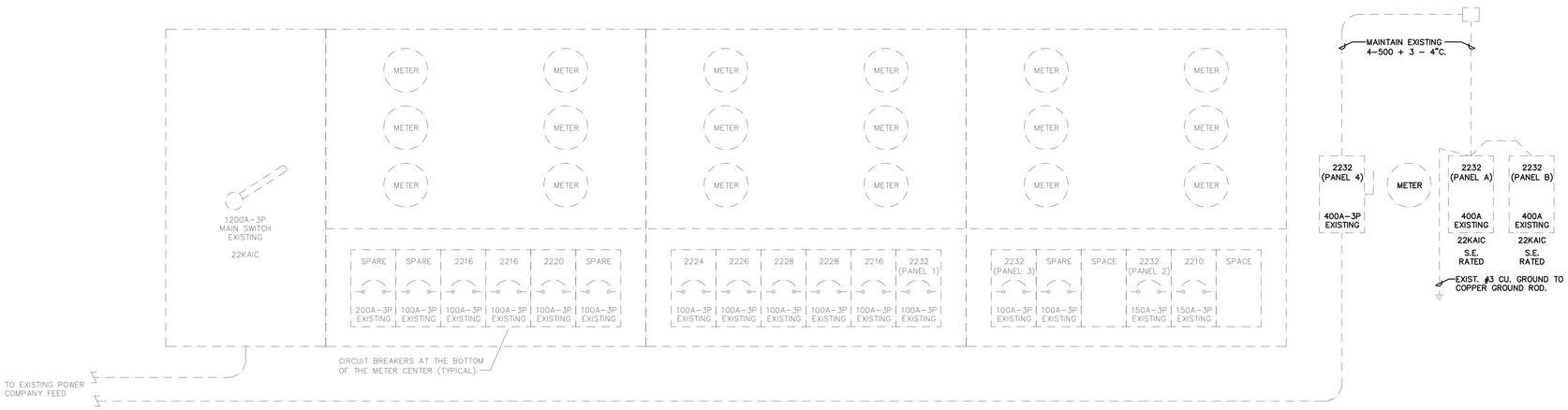
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SHEET SIZE: 24" x 36"

SHEET TITLE

NEW WORK POWER PLAN

E02



Panel ID: A | Voltage: 208 / 120 | Panel Type: LIGHTING AND POWER PANEL
Location: ELEC. ROOM | Phase: 3 | Enclosure: NEMA-1
Mounting: SURFACE | Wire: 4
Main Type: MCB | Main Size: 400 Amps

Note: Unless the CKT BKR OPTION is E (Existing to Remain), the existing circuit breaker shall be replaced with the new one that is shown.
Minimum breaker AIC to match existing.
All circuit breakers shall be standard bolt-on type, unless noted otherwise.
** = Refer to one line diagram for wire sizes.

GND SIZE	WIRE SIZE	BRANCH CIRCUIT DESCRIPTION	CKT BKR SIZE	CKT BKR OPTION	CONN. LOAD (KVA)	CKT NO.	PHASE	CKT NO.	CONN. LOAD (KVA)	CKT BKR OPTION	CKT BKR SIZE	BRANCH CIRCUIT DESCRIPTION	WIRE SIZE	GND SIZE
-	-	SPARE	20/1	E	0.000	1	A	2	2.760	E	35/3	EXISTING RTU2	E	E
-	-	SPARE	20/1	E	0.000	3	B	4	2.760	E	-	-	E	-
E	E	EXISTING RECEPT	20/1	E	1.000	5	C	6	2.760	E	-	-	E	-
-	-	SPARE	20/1	E	0.000	7	A	8	2.760	E	35/3	EXISTING RTU1	E	E
E	E	EXISTING RECEPT	20/1	E	1.000	9	B	10	2.760	E	-	-	E	-
E	E	EXISTING RECEPT	20/1	E	1.000	11	C	12	2.760	E	-	-	E	-
E	E	EXISTING RECEPT	20/1	E	1.000	13	A	14	1.450	E	20/2	EXISTING RTU4	E	E
E	E	EXISTING RECEPT	20/1	E	1.000	15	B	16	1.450	E	-	-	E	-
E	E	EXISTING RECEPT	20/1	E	0.600	17	C	18	0.800	E	20/1	EXISTING RECEPT	E	E
-	-	SPARE	20/1	E	0.000	19	A	20	0.200	E	20/1	EXISTING RECEPT	E	E
-	-	SPARE	20/1	E	0.000	21	B	22	1.000	E	20/1	EXISTING RECEPT	E	E
10	10	DSS-1 ROOF/INDOOR	20/2	NB	1.976	23	C	24	1.000	E	20/1	EXISTING RECEPT	E	E
10	-	-	-	NB	1.976	25	A	26	0.200	E	20/1	EXISTING RECEPT	E	E
E	E	EXISTING RECEPT	20/1	E	1.000	27	B	28	0.200	E	20/1	EXISTING RECEPT	E	E
E	E	EXISTING RECEPT	20/1	E	0.800	29	C	30	1.200	E	20/1	A/V RACK	12	12
E	E	EXISTING RECEPT	20/1	E	0.600	31	A	32	0.540	E	20/1	RECEPT-OFFICE #1	12	12
-	-	SPARE	20/1	E	0.000	33	B	34	0.540	E	20/1	RECEPT-OFFICE #2	12	12
E	E	EXISTING WC	20/1	E	0.800	35	C	36	0.540	E	20/1	RECEPT-OFFICE #3	12	12
E	E	EXISTING RECEPT	20/1	E	0.800	37	A	38	0.360	E	20/1	IT RACK RECEPT	12	12
E	E	EXISTING EWH2	50/2	E	4.250	39	B	40	2.250	NB	30/2	RELOCATED IT UPS	10	10
-	E	-	-	E	4.250	41	C	42	2.250	NB	-	-	10	-

Demand Load Panel Summary: 50.1 KVA, 139.1 AMPS

Connected Load Panel Summary

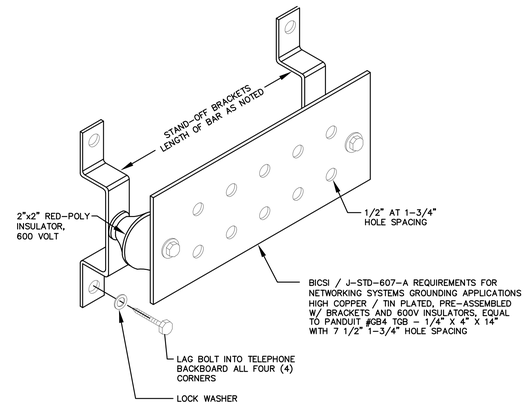
	KVA	AMPS
Phase A:	12.6	105.4
Phase B:	18.2	151.8
Phase C:	21.7	181.1
Total:	52.6	146.0

Break: EXISTING RECEPT

TC - Time Clock Control
LO - Lock-On Device
GF - GND Fault CKT Interrupter
E - Existing to Remain
SH - Shunt Trip Breaker

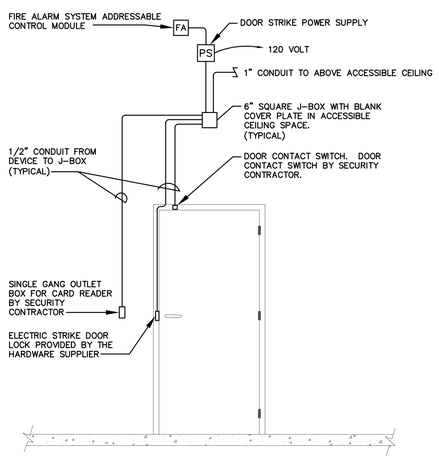
EXISTING METER CENTER ELEVATION (FOR REFERENCE ONLY)

SCALE: NO SCALE



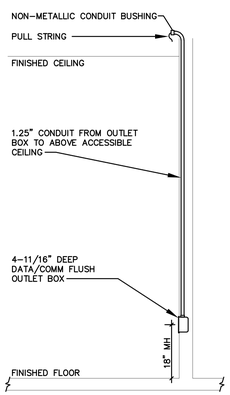
TELECOMMUNICATIONS GROUNDING BAR DETAIL

SCALE: NONE



TYPICAL CARD ACCESS WITH ELECTRIC STRIKE ROUGH–IN

SCALE: N.T.S.



TYP DATA/COMM OUTLET CONDUIT ELEVATION

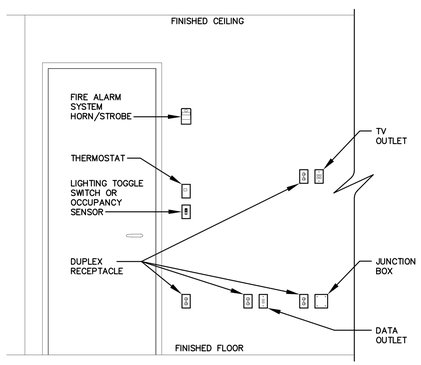
SCALE: N.T.S.

ELECTRICAL ABBREVIATIONS

AWG	AMERICAN WIRE GAUGE	FACP	FIRE ALARM CONTROL PANEL
A	AMPERE	FDR	FEEDER
ABV	ABOVE	FIX	FIXTURE
AFC	AVAILABLE FAULT CURRENT	FOD	FIRE–OPERATED DAMPER
AFF	ABOVE FINISHED FLOOR	GRD	GROUND
AFG	ABOVE FINISHED GRADE	JUNC	JUNCTION
BFG	BELOW FINISHED GRADE	LTG	LIGHTING
BRKR	BREAKER	MFGR	MANUFACTURER
BLDG	BUILDING	MECH	MECHANICAL
CAB	CABINET	OPER	OPERATOR/OPERATED
CLG	CEILING	PNL	PANEL
CIRC	CIRCUIT	RECEPT	RECEPTACLE
C	CONDUIT	REQ'D	REQUIRED
CONN	CONNECTION / CONNECTOR	STAT	THERMOSTAT
CONTR	CONTRACTOR	SW	SWITCH
CONT	CONTROL	TELE	TELEPHONE
DTL	DETAIL	TFMR	TRANSFORMER
DIAG	DIAGRAM	TYP	TYPICAL
DISC	DISCONNECT	WP	WEATHERPROOF
E	EXISTING TO REMAIN		

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION	MOUNTING HGT. TO CENTER UNLESS OTHERWISE NOTED
R1	FLUORESCENT LIGHT FIXTURE; TYPE "R1" SEE LIGHTING FIXTURE SCHEDULE; WIRED TO SWITCH "a"	
R1	CEILING OR WALL MOUNTED LIGHTING FIXTURE TYPE "R2", "W2"; SEE LIGHTING FIXTURE SCHEDULE	SEE DRAWINGS
NL	LIGHTING FIXTURE ON NIGHT LIGHTING CIRCUIT	
	EMERGENCY LIGHTING UNIT	MATCH EXISTING
	EXIT SIGN FIXTURE (WITH DIRECTIONAL ARROWS AS SHOWN) (TYPE AND MOUNTING AS NOTED: SEE LIGHTING FIXTURE SCHEDULE)	94"
$2;3;4;K;P	SPECIAL SWITCH: 2–WAY; 3–WAY; 4–WAY; KEY OPERATED; SWITCH WITH PILOT LIGHT	42"
	DUPLEX RECEPTACLE; 3 WIRE GROUND TYPE	18"
GF	DUPLEX RECEPTACLE W/ GROUND FAULT INTERRUPTER	18"
	DOUBLE DUPLEX RECEPTACLE	18"
	SPECIAL PURPOSE RECEPTACLE AS NOTED	18"
J J_F	JUNCTION BOX; WALL / CEILING MOUNTED: FLOOR MOUNTED	SEE DRAWINGS
T^E T^2	COMBINATION TELEPHONE / DATA OUTLET; "E" DENOTES EXISTING TO REMAIN; "NUMERAL" DENOTES QUANTITY OF CABLE DROPS	18"
B	OUTLET BOX WITH BLANK COVER PLATE	
M	MOTOR – 1 PHASE	AS REQUIRED
M	MOTOR – 3 PHASE	AS REQUIRED
	ELECTRICAL PANEL – SURFACE MOUNT, FLUSH MOUNT	6'–0" TO TOP
	PLYWOOD TELEPHONE BACKBOARD	AS REQUIRED
	PUSH BUTTON CONTROL STATION	EXISTING
	SAFETY DISCONNECT SWITCH	AS REQUIRED
TV	TV OUTLET – SEE SPEC.S	SEE DRAWINGS
	SMOKE DETECTOR – DUCT MOUNTED	SEE DRAWINGS
RT	DUCT MOUNTED SMOKE DETECTOR REMOTE TEST STATION	SEE DRAWINGS
AM	FIRE ALARM ADDRESSABLE MONITORING MODULE	SEE DRAWINGS
DR	DOOR RELEASE BUTTON	42"
CR	CARD READER KEY PAD	42"
RX	ACCESS CONTROL DOOR CONTACT	
RQ	ACCESS CONTROL REQUEST TO EXIT SENSOR	
	TELECOMMUNICATIONS GROUNDING BAR	SEE DRAWINGS



DEVICE MOUNTING DETAIL

SCALE: NONE

DOOR SHOWN FOR ENCLOSED ROOMS. ALIGNMENT SHALL APPLY IN CORRIDORS, LOBBIES, ETC.

E03–24339.DWG

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NEW WORK LIGHTING PLAN

E03

ELECTRICAL SPECIFICATIONS

A. GENERAL

1. FURNISH AND INSTALL ALL NECESSARY MATERIALS, LABOR TOOLS, TRANSPORTATION, INCIDENTALS AND APPURTENANCES NOT INDICATED ON THE DRAWINGS BUT WHICH ARE REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM IN CONJUNCTION WITH THE WORK SHOWN ON THE ACCOMPANYING DRAWINGS.
2. WIRING LAYOUT IS SCHEMATIC AND EXACT LOCATIONS SHALL BE DETERMINED BY STRUCTURAL AND OTHER TRADES. MAKE MINOR ADJUSTMENTS IN DEVICE LOCATIONS AS NECESSARY. LOCATIONS OF STRUCTURAL SYSTEMS, HEATING WORK, AND PLUMBING LINES SHALL TAKE PREFERENCE OVER LOCATIONS OF CONDUIT LINES WHERE CONFLICT OCCURS.
3. THE CONTRACTOR SHALL VISIT THE SITE AND FULLY INFORM HIMSELF CONCERNING ALL CONDITIONS AFFECTING THE SCOPE OF THE WORK. CLEARANCES, WHEN POSSIBLE, SHALL BE GREATER THAN THOSE REQUIRED BY CODE.
4. ELECTRICAL WORK SHALL MEET OR EXCEED THE STANDARDS OF INSTALLATION AND WORKMANSHIP SET FORTH IN THE LATEST EDITION OF THE NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION ENTITLED "NECA STANDARD FOR GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION", NATIONAL ELECTRIC CODE, NATIONAL ELECTRICAL SAFETY CODE, STANDARDS OF NATIONAL BUREAU OF FIRE UNDERWRITERS AND ANY FEDERAL, STATE, OR LOCAL CODES CODES APPLYING.
5. THE ARCHITECT OR OWNER RESERVE THE RIGHT TO DIRECT THE REMOVAL OR REPLACEMENT OF ANY ITEM WHICH, IN HIS OPINION, DOES NOT PRESENT AN ORDERLY, NEAT, OR WORKMANLIKE APPEARANCE PROVIDED THAT SUCH AN ITEM CAN BE INSTALLED IN AN ORDERLY WAY BY METHODS USUAL IN SUCH WORK.
6. LOCATE EXISTING UTILITIES PRIOR TO BEGINNING WORK AND REROUTE OR REPLACE UTILITIES AS NECESSARY TO COMPLETE WORK. PROVIDE ADEQUATE MEANS OF PROTECTION DURING WORK.
7. AVOID CUTTING OF CONCRETE, MASONRY, AND OTHER WORK BY USE OF INSERTS AND SLEEVES, AND WHEN NECESSARY SHALL BE DONE BY THIS CONTRACTOR WITH SUCH TOOLS AND METHODS AS TO PREVENT UNNECESSARY DAMAGE TO THE SURROUNDING AREA.
8. OBTAIN AND PAY FOR ALL PERMITS REQUIRED BY ALL LAWS AND REGULATIONS OR PUBLIC AUTHORITY HAVING SUCH JURISDICTION. FILE DRAWINGS NECESSARY TO OBTAIN PERMITS.
9. TEMPORARY WIRING AND LIGHTING SHALL BE INSTALLED BY THE ELECTRICAL CONTRACTOR IN ACCORDANCE WITH NEC AND OSHA.
10. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR REVIEW, WITHIN TWO WEEKS AFTER DATE OF CONTRACT, SIX (6) COPIES OF MANUFACTURER'S DRAWINGS FOR LIGHTING FIXTURES, LIGHTING CONTROL EQUIPMENT AND DISCONNECT SWITCHES.
11. AT THE COMPLETION OF THE JOB, BEFORE FINAL PAYMENT IS MADE, THE CONTRACTOR SHALL SUBMIT SIX (6) COPIES OF THE MANUFACTURER'S "AS-BUILT" DRAWINGS. INCLUDED WITH THE DRAWINGS SHALL BE THE OPERATING AND MAINTENANCE MANUALS.
12. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS AND REPLACEMENTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER FINAL WRITTEN ACCEPTANCE BY THE OWNER.
13. SUBMIT THREE (3) BOUND COPIES OF OPERATION AND MAINTENANCE MANUALS, 8 1/2" BY 11" IN 3-RING HARDBACK BINDER. 23 IN X 25 IN. AND LARGER SHEETS SHALL BE FOLDED AND INDEXED IN REAR OF BINDER.
    FORMAT:
    a) TITLE PAGE: TITLE OF PROJECT, OWNER, ADDRESS, DATE OF SUBMITTALS, NAME AND ADDRESS OF CONTRACTOR, NAME OF ARCHITECT, NAME OF ENGINEER.
    b) SECOND PAGE: INDEX OF MANUAL CONTENTS.
    c) FIRST SECTION: A COPY OF EACH APPROVED SHOP DRAWING AND SUBMITTAL WITH AN INDEX AT THE BEGINNING OF THE SECTION.
    d) SECOND SECTION: A LIST (SAME AS THE SUBMITTAL DRAWINGS) OF ALL EQUIPMENT USED ON THE PROJECT, TOGETHER WITH THE SUPPLIERS NAME AND ADDRESS.

B. EXISTING WORK AND DEMOLITION

1. SUITABLY AND ADEQUATELY PROTECT THE EXISTING WORK WITHIN, AND IMMEDIATELY ADJACENT TO, THE NEW WORK AREAS FROM DAMAGE AND INJURY DURING THE PROCESS OF INSTALLING THE WORK UNDER THIS CONTRACT. EXISTING WORK THAT HAS BEEN HARMED, DAMAGED OR INJURED AS A RESULT OF THE ELECTRICAL CONTRACTOR'S OPERATIONS SHALL BE REPAIRED, RESTORED OR REPLACED AT THE ELECTRICAL CONTRACTOR'S EXPENSE.
2. REVISE EXISTING WIRING AS INDICATED OR REQUIRED. EXISTING WORK WHICH REMAINS SHALL BE LEFT IN FIRST CLASS CONDITION AND PROPERLY RECONNECTED.
3. CONDUIT AND WIRING FROM REMOVED ELECTRICAL EQUIPMENT/DEVICES SHALL BE REMOVED BACK TO SOURCE.

C. CONDUIT

1. ALL WIRING IN BUILDING INTERIOR, INCLUDING FEEDERS, BRANCH CIRCUITS AND AUXILIARY WIRING SHALL BE RUN IN THIN WALL (EMT) CONDUIT. MINIMUM 1/2" TRADE SIZE.
2. ALL STEEL CONDUIT SHALL BE GALVANIZED AND ALL CONDUIT SHALL HAVE THE MANUFACTURER'S NAME AND U.L. LABEL ATTACHED TO OR STAMPED ON EACH PIECE.
3 ALL CONDUIT ON BUILDING EXTERIOR, IN EXTERIOR PARTITIONS, IN POURED CONCRETE, OR BURIED BENEATH CONCRETE SLABS, SHALL BE RIGID OR INTERMEDIATE (IMC) STEEL.
4. FLEXIBLE NEOPRENE-CLAD GALVANIZED STEEL CONDUIT SHALL BE USED FOR "MAKEUP" CONNECTIONS TO ROTATING MACHINERY AND HEATING ELEMENTS. LIGHTING FIXTURES MAY BE SUPPLIED WITH SHORT LENGTHS (MAX. 6'-0") OF FLEXIBLE CONDUIT WITH GREEN GROUND WIRE. FLEXIBLE CONDUIT MAY BE USED IN DRYWALL PARTITIONS.
5. ALL THINWALL CONNECTORS SHALL BE OF THE INSULATED THROAT TYPE, SIMILAR TO THOMAS AND BETTS NO. 5123-1/2". ALL FITTINGS SHALL BE STEEL. NO DIE CAST FITTINGS WILL BE ALLOWED. CONTRACTOR MAY USE THOMAS AND BETTS, RACO STEEL CITY OR MIDWEST FITTINGS.
   ALL RIGID AND IMC CONDUITS SHALL HAVE THREADED CONNECTIONS.
6. NO MORE THAN FOUR (4) 90 DEGREE BENDS WILL BE ALLOWED IN ANY ONE CONDUIT RUN. WHERE MORE BENDS ARE NECESSARY IN ANY SINGLE RUN, A PULL BOX SHALL BE INSTALLED; PULL BOXES SHALL ALSO BE INSTALLED IN LONG RUNS AT A MAXIMUM SEPARATION OF 100'-0". ALL CONDUIT EXCEPT IN CONCRETE SLAB OR EARTH SHALL BE ROUTED PARALLEL OR PERPENDICULAR TO THE LINES OF THE BUILDING AND NO OUT OF PLUMB OR DIAGONAL LINES WILL BE ACCEPTED.
7. UNLESS OTHERWISE NOTED, ALL CONDUIT SHALL BE RUN CONCEALED WITHIN THE BUILDING CONSTRUCTION WHEN INSTALLED IN FINISHED INTERIOR OR EXTERIOR AREAS. CONDUIT IN EQUIPMENT ROOMS TO BE RMC OR EMT AND MAY BE RUN EXPOSED. EXPOSED WIRING IN FINISHED AREAS IS NOT PERMITTED EXCEPT WHEN DIRECTED BY OWNER.

D. WIRING

1. ALL CONDUCTORS SHALL BE STRANDED AND OF THE AWG SIZE AND TYPE SHOWN ON THE DRAWINGS. WHERE NO SIZE OR TYPE IS SHOWN, CONDUCTORS SHALL NOT BE LESS THAN #12 TYPE XHHW, THHN, THWN, OR THW. ALL CONDUCTORS SHALL BE COPPER AND HAVE 600 VOLT INSULATION; BE UL LABELED AND OF AMERICAN MANUFACTURER.
2. THE FOLLOWING WIRE COLOR CODE SHALL BE USED:
   208/120 VOLT = PHASE A ; BLACK: PHASE B; RED: PHASE C; BLUE:
   NEUTRAL: WHITE; GROUND: GREEN.
3. UNLESS NOTED OTHERWISE HEREIN, MC TYPE CABLE WITH GREEN GROUNDING CONDUCTOR MAY BE RUN ABOVE ACCESSIBLE CEILINGS AND IN STUD WALLS USING #12 AWG SIZE CONDUCTORS. SUPPORT FROM STRUCTURE - NOT FROM GRID, PIPES, DUCT, ETC.
4. BRANCH CIRCUIT HOMERUNS TO BE IN EMT CONDUIT.
5. RACEWAY IN EQUIPMENT ROOMS TO BE RUN IN RMC OR EMT CONDUIT.
6. JOINTS AND CONNECTORS:
   a) IN #8 AND SMALLER WIRE SHALL BE MADE USING THE FOLLOWING TYPES OF THREAD-ON CONNECTORS: 3M "SCOTCHLOK", IDEAL INDUSTRIES, INC. "WING NUT", OR THOMAS AND BETTS "PT". SCREWLESS TYPE CONNECTORS AND "PUSH IN" TYPE PRESSURE CONNECTORS (E.G. WAGO CONNECTORS, ETC.) ARE NOT ACCEPTABLE.
   b) JOINTS IN #6 AND LARGER WIRE OR JOINTS IN ANY WIRES ABOVE THE RANGE OF THREADED-ON CONNECTORS SHALL BE MADE USING PRESSURE TYPE MECHANICAL CONNECTORS APPLIED AFTER WIRES ARE CLEANED AND THEN INSULATED USING TWO (2) LAYERS OF "SCOTCHFIL" BRAND ELECTRICAL INSULATION PUTTY AND COVERED BY TWO (2) HALF-LAPPED LAYERS OF "SCOTCH 88", OR PLYMOUTH SLIPKNOT GRAY VINYL-PLASTIC ELECTRICAL TAPE. CONNECTORS CAN BE INSTALLED AND SEALED AGAINST MOISTURE BY INSTALLING RAYCHEM "TCS" (INDOOR) OR "WCSM" (EXTERIOR) WCSM (EXTERIOR) AYCHEM "TCS (INDOOR) OR "WCSM (EXTERIOR) SEALANT-COATED HEAT SHRINK TUBING.

E. DEVICES

1. ALL WIRING DEVICE OUTLET BOXES SHALL BE MINIMUM 4"x2-1/8" DEEP SQUARE, STEEL BOXES.
2. COORDINATE MATERIAL AND FINISH OF SWITCH PLATES ON FLUSH AND CAST BOXES WITH ARCHITECT.
3. COORDINATE MATERIAL AND FINISH OF RECEPTACLE PLATES ON FLUSH AND CAST BOXES WITH ARCHITECT.
4. PLATES FOR EXPOSED OUTLETS IN UNFINISHED SPACES SHALL HAVE STEEL CITY SERIES RS-4" SQUARE GALVANIZED SURFACE COVERS FOR APPLICATION REQUIRED. COVERS SHALL BE RAISED 1/2" AND EDGES FIT FLUSH TOP OF BOX.
5. DUPLEX GROUNDING TYPE RECEPTACLE - 20 AMP, 125 VOLT - NEMA 5-20R.
   HUBBELL - 5352-W
   COOPER - 5352-W
6. G.F.I. RECEPTACLE - 15 AMP, 125 VOLT - NEMA 5-15R.
   HUBBELL - GF 5262-W WITH S26 OR PJ26 PLATE OR WP-26 W.P. COVER.
7. OCCUPANCY SENSORS - REFER TO OCCUPANCY SENSOR LEGEND DRAWN E01.
8. CONTRACTOR TO VERIFY THAT DEVICE COLOR WHITE MATCHES EXISTING DEVICES. PRIOR TO ORDERING ANY DEVICES, ADVISE LANDLORD IF EXISTING DEVICES ARE NOT WHITE.

F. DISCONNECTS

1. SWITCHES SHALL BE MOUNTED IN A GENERAL PURPOSE ENCLOSURE UNLESS OTHERWISE NOTED. THEY SHALL BE NEMA HEAVY-DUTY TYPE AND SHALL HAVE THE RATING, CAPACITY AND NUMBER OF POLES FOR THE SERVICE CONCERNED.
2. SWITCHES IN EXTERIOR LOCATIONS SHALL BE NEMA 3R.
3. FUSIBLE SWITCHES SHALL HAVE CLASS R FUSE CLIPS.
4. SWITCHES FOR USE ON MOTOR CIRCUITS SHALL BE HORSEPOWER RATED.
5. SWITCHES WILL GENERALLY BE NON-FUSIBLE UNLESS OTHERWISE NOTED.

G. IDENTIFICATION

1. EACH PIECE OF SERVICE EQUIPMENT AND INDIVIDUAL SWITCHES, ALL DISCONNECTS, STARTERS, ALL POWER AND LIGHTING PANELS SHALL BE IDENTIFIED ON THE FRONT COVER OR TRIM WITH ITS NAME AND/OR DESIGNATION NUMBER OR LETTER AS SHOWN ON THE DRAWINGS.
2. IDENTIFICATION SHALL BE IN THE FORM OF LAMINATED PLASTIC NAMEPLATES, BLACK FACE, WITH LETTERS ENGRAVED INTO THE WHITE BACKGROUND, MINIMUM 1/4" HIGH. PLATES SHALL BE DRILLED ON EACH END FOR SHEET METAL SCREW ATTACHMENT.
3. UPDATE DIRECTORIES OF ALL PANELBOARDS MODIFIED AS PART OF THIS PROJECT. BRANCH CIRCUIT DESCRIPTION TO INCLUDE LOAD SERVED AND ASSOCIATED LOCATION/ROOM NUMBER(S). NEW DIRECTORIES SHALL BE TYPED AND SECURED TO FRAME INSIDE PANEL DOOR.

H. GROUNDING

1. ALL FEEDERS AND BRANCH CIRCUITS OVER 100 VOLTS SHALL INCLUDE A GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH NEC TABLE 250-95, EXCEPT NOT BE SMALLER THAN #12 FOR POWER AND LIGHTING CIRCUITS AND #14 FOR CONTROL CIRCUITS.
2. THE GROUND CONDUCTOR SHALL BE CONNECTED TO THE NEUTRAL IN ONLY TWO LOCATIONS - ON THE SUPPLY SIDE OF THE SERVICE DISCONNECT MEANS PER NEC-250-23 AND ON SEPARATELY DERIVED SYSTEMS PER NEC 250-26.
3. ENCLOSURES NOT REQUIRING A GROUND BAR SHALL HAVE ALL GROUND CONDUCTORS CONNECTED TOGETHER AND A PIGTAIL THE SIZE OF THE LARGEST CONDUCTOR BONDED TO THE ENCLOSURE WITH A SINGLE GROUND CONNECTOR USED FOR NO OTHER PURPOSE.
4. AT EACH RECEPTACLE BOX, THE GROUND CONDUCTOR SHALL ENTER AND CONNECT, WITH NORMAL WIRING CONNECTOR, TO: 1) THE GROUND PIGTAIL TO RECEPTACLE; 2) THE GROUND PIGTAIL TO BOX GROUND SCREW; AND 3) THE OUTGOING GROUND CONDUCTOR TO NEXT DEVICE, IF NOT AT END OF RUN. METAL TO METAL CONTACT BETWEEN THE DEVICE YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE AS A BOND FOR EITHER SURFACE MOUNTED BOXES OR FLUSH TYPE BOXES.
5. MOTOR TERMINAL BOXES SHALL BE GROUNDED BY THE USE OF MANUFACTURER SUPPLIED GROUND LUG OR BY DRILLING AND TAPPING A HOLE FOR A GROUND SCREW. REMOVE PAINT PRIOR TO MAKING THE CONNECTION.
6. LIGHTING FIXTURES SHALL BE GROUNDED BY THE USE OF A MANUFACTURER SUPPLIED GROUND LUG OR PIGTAIL OR BY THE USE OF GROUND CLIPS FASTENED ON BARE METAL THAT IS FREE OF PAINT.
7. CONDUIT SYSTEM SHALL BE ELECTRICALLY CONTINUOUS. ALL LOCKNUTS SHALL CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES. WHERE ENCLOSURES AND NON-CURRENT CARRYING METALS ARE ISOLATED FROM THE CONDUIT SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPS. WHERE REDUCING WASHERS ARE USED AND WHERE CONCENTRIC OR ECCENTRIC KNOCKOUTS ARE NOT COMPLETELY REMOVED BONDING BUSHINGS SHALL BE REQUIRED.

I. LIGHTING FIXTURES

1. ALL LED FIXTURES SHALL HAVE INTEGRAL 0-10V DIMMING, 120-277V POWER SUPPLIES, AND SHALL BE U.L. APPROVED. LUMEN OUTPUT AND COLOR TEMPERATURE SHALL BE AS LISTED ON THE LIGHTING FIXTURE SCHEDULE. FIELD CONFIRM SPECIFIED COLOR TEMPERATURE MATCHES EXISTING ADJACENT LAMPS. ADVISE ENGINEER OF ANY INCONSISTENCIES IN COLOR TEMPERATURE. LED FIXTURE SHALL BE FULLY SERVICEABLE WITH UPGRADEABLE LED LIGHT ENGINE, RATED FOR 50,000 HOUR LIFE, AND BE COVERED BY A 5-YEAR WARRANTY.
2. LAMPS IN EXIT SIGNS SHALL BE LED TYPE.
3. LUMINAIRES SHOWN TO BE RELOCATED OR RE-INSTALLED TO BE PROVIDED WITH BALLAST DISCONNECTING MEANS SIMILAR TO IDEAL 102 FOR 2 WIRE CONNECTION AND 103 FOR 3 WIRE CONNECTION.

J. DATA/COMMUNICATIONS CONDUIT SYSTEM

1. DATA/COMM OUTLET BOXES SHALL BE A MINIMUM OF 4-11/16" SQUARE, 2-1/8" DEEP OUTLET BOXES WITH SINGLE GANG PLASTER RING. PLATES AND DATA/COMM JACKS SHALL BE FURNISHED AND INSTALLED BY OWNER'S DATA/COMM CONTRACTOR.
2. CONDUIT FOR DATA/COMM WALL OUTLET SHALL BE A MINIMUM OF 1" UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
3. CONDUIT SHALL BE ROUTED FROM OUTLET BOX AND STUBBED ABOVE ACCESSIBLE CEILING SPACE. CONDUIT SHALL BE INSTALLED CONCEALED IN WALLS AND BUILDING CONSTRUCTION UNLESS INDICATED OTHERWISE ON PLANS. INSTALL PULL STRINGS IN ALL EMPTY CONDUITS AND PROVIDE CONDUIT BUSHINGS ON CONDUIT ENDS.

K. FIRE ALARM SYSTEM

1. EXPAND THE EXISTING ADDRESSABLE, MICROPROCESSOR BASED FIRE ALARM SYSTEM, LOCATING ALL UNITS OF EQUIPMENT AS SHOWN ON THE DRAWINGS.
2. THE EXISTING FIRE ALARM SYSTEM IS A "DMP" FIRE ALARM SYSTEM. ALL NEW DEVICES SHOWN ON THE DRAWINGS SHALL BE AS MANUFACTURED BY DMP AND U.L. RATED FOR USE IN CONJUNCTION WITH EXISTING SYSTEM. SYSTEM COMPONENTS SHALL BE AS FURNISHED BY DMP. IN FINAL ELECTRICAL BID, INCLUDE QUOTATION FROM A FACTORY TRAINED, DMP FIRE ALARM SYSTEM AUTHORIZED REPRESENTATIVE.
3. REPROGRAM THE EXISTING SYSTEM TO INCLUDE ALL NEW DEVICES, INTERLOCKS AS REQUIRED TO PROVIDE A COMPLETE OPERATING SYSTEM.
4. THE MATERIALS, WIRING AND EQUIPMENT SHALL BE DESIGNED AND BUILT IN ACCORDANCE WITH THE BEST PRACTICES OF THE ELECTRICAL INDUSTRY AND SHALL CONFORM TO THE STANDARDS OF:
   a) NATIONAL ELECTRICAL CODE
   b) THE NATIONAL ELECTRICAL SAFETY CODE
   c) APPLICABLE STATE AND LOCAL CODES
   d) NATIONAL FIRE PROTECTION ASSOCIATION
   e) UL LISTED OR ASSOCIATED FACTORY MUTUAL INSURANCE COMPANY LISTED
5. EQUIPMENT SHALL BE DMP TO MATCH EXISTING SYSTEM.
6. HORN/STROBES
   NOT APPLICABLE.
7. SHOP DRAWINGS SUBMITTAL SHALL INCLUDE A COMPLETE BUILDING F.A. SYSTEM WIRING DIAGRAM SHOWING ALL DEVICES AND CONDUIT RUNS, IN THE SYSTEM, AS IT IS TO BE WIRED, COMPLETE WITH VOLTAGE DROP CALCULATIONS, BATTERY CALCULATIONS, FLOOR PLANS SHOWING DEVICE LOCATIONS, ETC. PROVIDE SIGNATURE WITH OHIO CERTIFICATION NUMBER ON EACH DRAWING. DIAGRAMS/DRAWINGS SHALL BE ON APPROXIMATELY A 24" X 36" SHEETS AND SHALL BE IN THE FORM OF A FLOOR PLAN SO AS TO SHOW ZONE IDENTIFICATION AND DEVICES CLEARLY. IDENTIFY DEVICE LOCATIONS BY ROOM OR CORRIDOR NUMBERS AS SHOWN ON THE PROJECT DRAWINGS.
8. SUBMIT FIRE ALARM WIRING DIAGRAMS CLEARLY INDICATING FIELD CONNECTIONS.
9. AT THE COMPLETION OF THE PROJECT, FURNISH SIX (6) COMPLETE BOUND SETS OF "AS BUILT" DRAWINGS AND WIRING DIAGRAMS TO THE OWNER. THESE SHALL SHOW EACH STATION, AUTOMATIC DETECTOR AND OTHER DEVICES INSTALLED IN THE SYSTEM AS A PART OF THE SYSTEM. PARTS AND SERVICE MANUALS SHALL BE INCLUDED.
10. ALL WIRING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. THIS CONTRACTOR SHALL PROVIDE FOR THE SERVICES OF THE EQUIPMENT MANUFACTURER'S REPRESENTATIVE TO ASSIST IN FINAL CONNECTIONS, ADJUSTMENTS AND TESTS.
11. WIRE AND CABLE SHALL BE SIZED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ALL FIRE ALARM SYSTEM WIRE AND CABLE SHALL HAVE RED JACKET.
12. CONNECTION INTO BUILDING FACP (FOR ANNUNCIATION, TROUBLE ALARMS, ETC. SHALL BE AS DIRECTED IN FIELD BY THE PROPERTY OWNERS FIRE ALARM CONTRACTOR).
13. ALL ADDITIONAL EQUIPMENT NECESSARY FOR INTERFACE OF SIGNALS TO THE EXISTING FIRE ALARM SYSTEM IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR COORDINATED THROUGH AND COMPLETED BY THE BUILDING FIRE ALARM MANUFACTURER.
14. THE ELECTRICAL CONTRACTOR SHALL DETERMINE IF ANY HARDWARE ADDITIONS NEED TO BE MADE TO THE EXISTING FIRE ALARM SYSTEM PRIOR TO SUBMITTING THE PROJECT BID.
15. THE ELECTRICAL CONTRACTOR AND THE MANUFACTURER REPRESENTATIVE SHALL DEMONSTRATE AND REVIEW THE SYSTEM OPERATIONS WITH THE OWNER OR HIS REPRESENTATIVE IN THE PRESENCE OF THE ENGINEER TO ASSURE THEIR COMPLETE UNDERSTANDING OF THE SYSTEM.
16. PRIOR TO THE DEMONSTRATION TEST ABOVE, THE FINAL FIRE ALARM SYSTEM SHALL BE COMPLETELY CHECKED OUT FOR OPERATION, ZONE INDICATION, ALARM SIGNAL, FAN SHUTDOWN, ETC., AND TESTED BY A QUALIFIED FIELD REPRESENTATIVE OF EQUIPMENT VENDOR IN THE PRESENCE OF THE CONTRACTOR, THE ENGINEER AND THE OWNER'S REPRESENTATIVE. A REPORT SHALL BE SUBMITTED TO THE ENGINEER BY THE VENDOR'S REPRESENTATIVE INDICATING THE RECORDED DATA AND THE RESULTS OF SUCH FINAL CHECKOUT AND TEST. FINAL PAYMENT WILL NOT BE APPROVED UNTIL SUCH REPORT IS SUBMITTED.
17. SYSTEM TESTING SHALL BE SCHEDULED FOR OTHER THAN NORMAL WORKING HOURS TO MINIMIZE DISRUPTION FOR THE OWNER. NOTIFY OWNER 10 WORKING DAYS PRIOR TO TESTING THE SYSTEM. THE ELECTRICAL CONTRACTOR SHALL ASSUME ALL COST ASSOCIATED WITH THE TEST.
18. ALL MATERIALS AND INSTALLATION SHALL BE GUARANTEED TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR ONE YEAR FROM THE DATE OF THE OWNER'S ACCEPTANCE.

E04-24339.DWG

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BEXLEY CITY HALL RENOVATIONS

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12.06.2024 DRAWING PRINT DATE

MARK	DATE	DESCRIPTION
	12.06.2024	PERMIT SET

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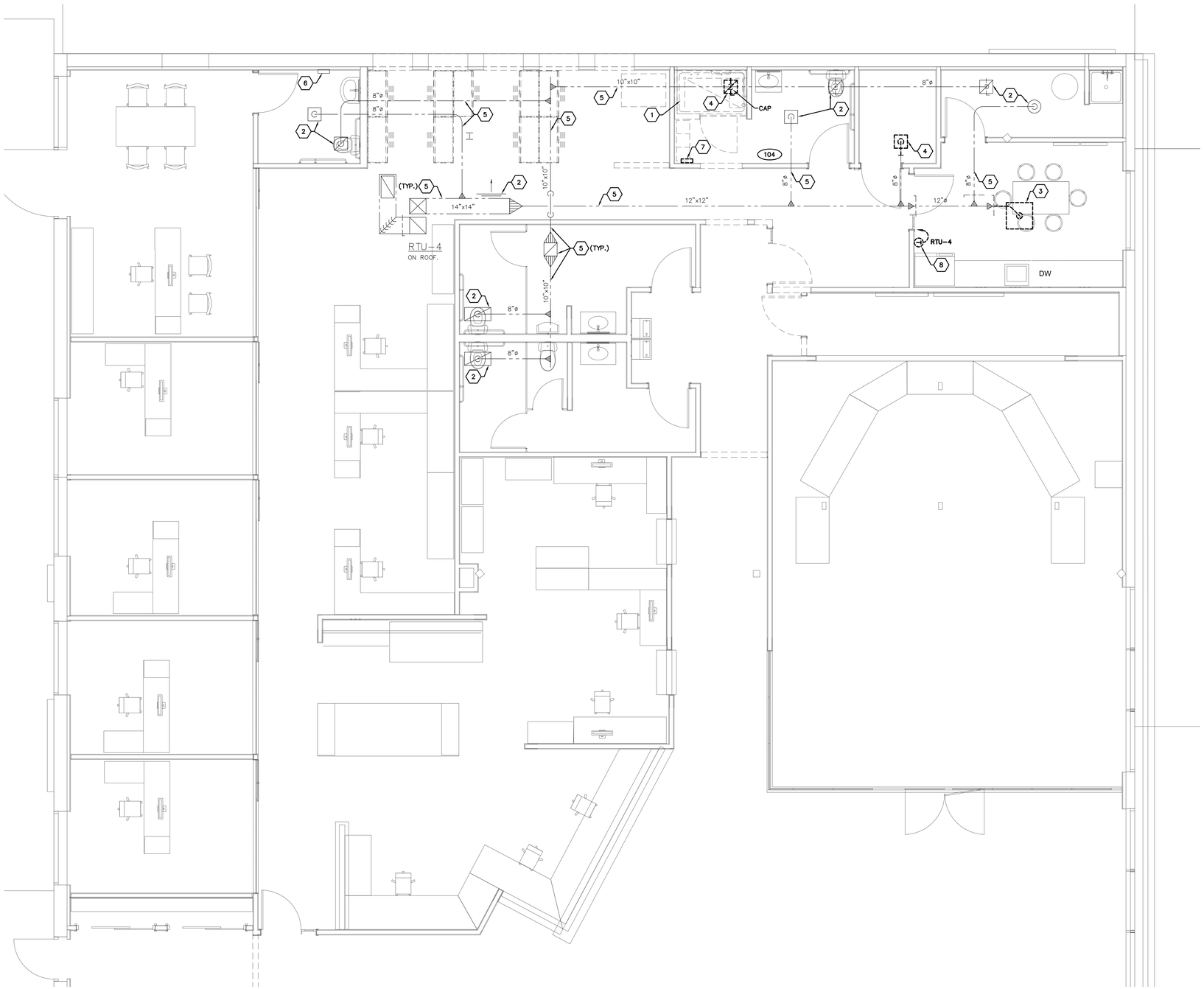
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SHEET SIZE: 24" x 36"

SHEET TITLE

ELECTRICAL SPECIFICATIONS

E04



CODED NOTES

1. EXISTING SHOWER AND CONTROLS TO BE REMOVED. THIS CONTRACTOR TO REMOVE ALL ASSOCIATED SANITARY AND VENT PIPING BACK TO WITHIN 2 L.F. OF NEAREST ACTIVE LATERAL BELOW SLAB/AB. CLG., CAP, AND ABANDON IN PLACE. REMOVE ALL ASSOCIATED COLD AND HOT WATER BACK TO ABOVE CLG., TO WITHIN 2 L.F. OF NEAREST ACTIVE SUPPLY MAINS, CAP, INSULATE AND ABANDON IN PLACE.
2. EXISTING AIR DEVICE TO REMAIN.
3. EXISTING AIR DEVICE TO BE RELOCATED IN NEW CLG. GRID.
4. REMOVE EXISTING AIR DEVICE. CAP DUCT AT MAIN.
5. EXISTING DUCTWORK TO REMAIN.
6. EXISTING CABINET UNIT HEATER TO REMAIN.
7. REMOVE EXISTING CABINET UNIT HEATER.
8. EXISTING THERMOSTAT TO BE RELOCATED. SEE SHEET H01 FOR NEW LOCATION.

DEMOLITION HVAC PLAN

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

H00-24339.DWG

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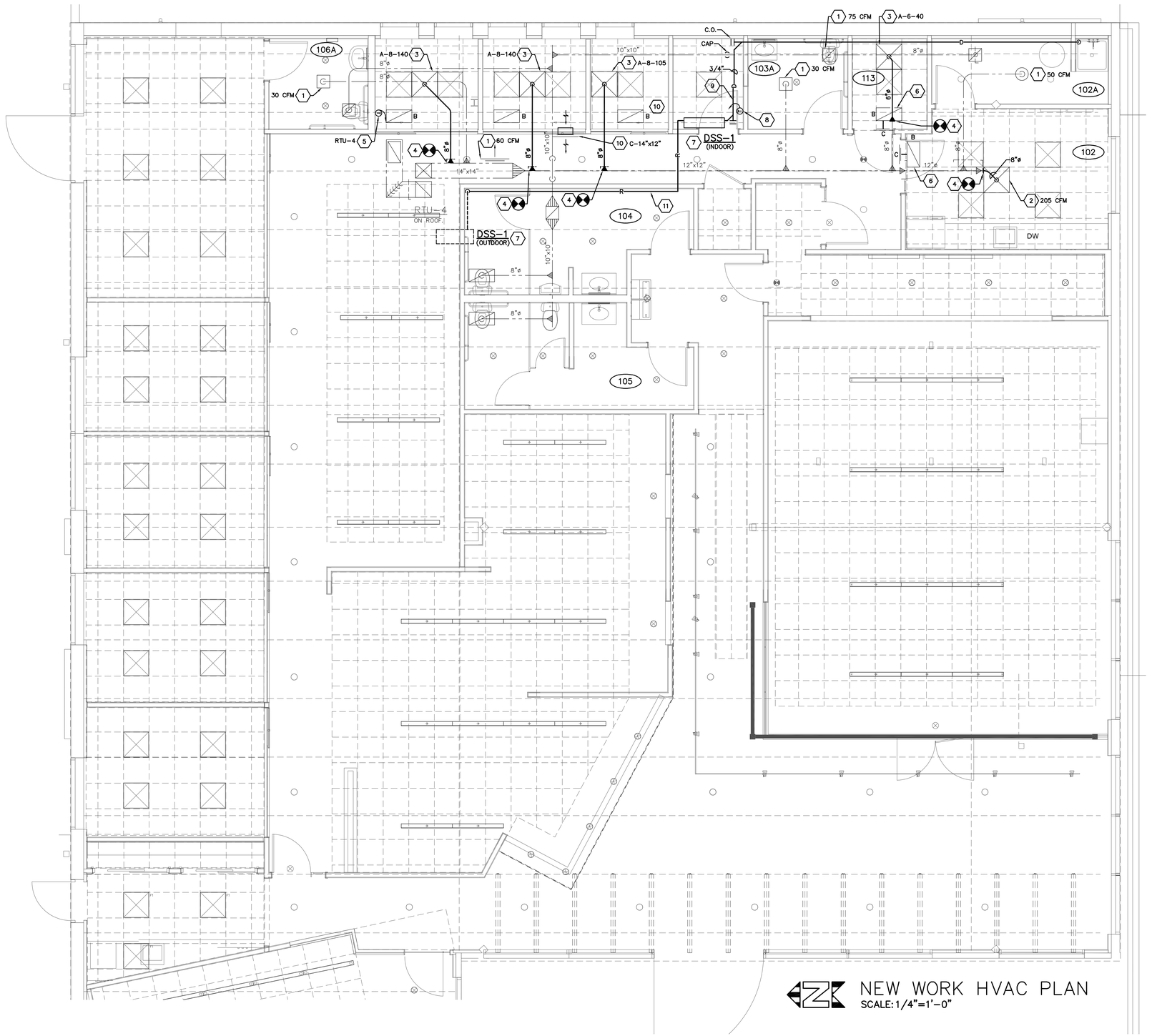
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SHEET SIZE: 24" x 36"

SHEET TITLE

DEMOLITION HVAC PLAN

H00



NEW WORK HVAC PLAN
SCALE: 1/4"=1'-0"

CODED NOTES

1. RE-BALANCE EXISTING AIR DEVICE TO AIR FLOW NOTED ON PLAN.
2. RE-BALANCE RELOCATED AIR DEVICE TO AIR FLOW NOTED ON PLAN.
3. PROVIDE NEW SUPPLY AIR DEVICE. SEE SHEET H02 FOR ADDITIONAL INFORMATION.
4. PROVIDE NEW DUCTWORK CONNECTED TO EXISTING MAIN.
5. RELOCATED THERMOSTAT, SEE SHEET HD-101 FOR ORIGINAL LOCATION. EXTEND CONTROL WIRING AS NECESSARY. VERIFY EXACT LOCATION IN FIELD WITH OWNER'S REPRESENTATIVE.
6. PROVIDE RETURN AIR DEVICES AND TRANSFER DUCT. REFER TO DETAIL ON SHEET H02.
7. PROVIDE DUCTLESS MINI-SPLIT HEAT PUMP SYSTEM. LOCATE INDOOR UNIT HIGH ON WALL ABOVE DOOR. LOCATE OUTDOOR UNIT ON ROOF 12" HIGH. COORDINATE EXACT LOCATION IN FIELD TO PROVIDE MINIMUM 10'-0" CLEARANCE FROM ROOF EDGE AND 5'-0" FROM EXISTING EQUIPMENT INCLUDING HVAC ROOFTOP UNITS AND SOLAR PANELS. PROVIDE EQUIPMENT SUPPORT RAILS AND PIPE CURB. ALL ROOF WORK BY GENERAL TRADES CONTRACTOR.
8. PROVIDE NEW THERMOSTAT FURNISHED WITH MINI-SPLIT HEAT PUMP SYSTEM. VERIFY EXACT LOCATION IN FIELD WITH OWNER'S REPRESENTATIVE.
9. PROVIDE CONDENSATE PUMP AND EXTEND DRAIN LINE TO THE MOP SINK. PROVIDE DRAINAGE TEES WITH CLEAN-OUT PLUGS AT ALL CHANGES IN DIRECTION.
10. PROVIDE RETURN AIR GRILLE AND DUCT STUB INTO RETURN AIR PLENUM ABOVE OFFICES.
11. PROVIDE REFRIGERANT PIPING FROM INDOOR TO OUTDOOR UNIT. SIZE PER MANUFACTURER'S INSTRUCTIONS.

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NEW WORK HVAC PLAN

H01

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OUTSIDE AIR VENTILATION CALCULATIONS

RTU-4	Multi Zone Recirculating System			ASHRAE 62.1-2019 Ventilation Rate Procedure								Design Case: Heating								
Room Name	Occupancy Category	Pz Zone Population (# of people)	Az Zone Floor Area (SF)	Rp People O.A. Required (cfm / person)	Ra Area O.A. Required (cfm / SF)	Rp*Pz People Outside Air Component (cfm)	Ra*Az Area Outside Air Component (cfm)	Rp*Pz + Ra*Az Breathing Zone Outdoor Airflow (cfm)	Ez Zone Air Distribution Effectiveness	Voz Zone Outdoor Airflow (cfm)	Vpz Zone Primary Airflow (cfm)	Recirculated Airflow (cfm)	Er Fraction of Recirculated Representative of System Return Air	Zpz min Minimum Zone Primary Airflow (cfm)	Simplified Procedure Check	Vdz Zone Discharge Airflow (cfm)	Zpz Primary Outdoor Air Fraction	Fb = Ep Primary Air Fraction to the Zone	Fa Fraction of Supply Air to zone from sources outside the zone	Fc Fraction of outdoor air to the zone from sources outside the zone	Evz Zone Ventilation Efficiency
101 - NEW OFFICE	Office space	1	56	5	0.06	5	4	9	0.8	12	**140**	0	0.00	18	Pass	140	0.09	1.00	1.00	1.00	1.01
102 - NEW OFFICE	Office space	1	56	5	0.06	5	4	9	0.8	12	**140**	0	0.00	18	Pass	140	0.09	1.00	1.00	1.00	1.01
103 - NEW OFFICE	Office space	1	43	5	0.06	5	3	8	0.8	10	**105**	0	0.00	15	Pass	105	0.10	1.00	1.00	1.00	1.00
105 - RENOVATED RR	Exhaust Required Only	0	55	0	0	0	0	0	0.8	0	**30**	0	0.00	0	Pass	30		1.00	1.00	1.00	
106 - EXISTING STORAGE	Unoccupied	0	41	0	0	0	0	0	0.8	0	**40**	0	0.00	0	Pass	40		1.00	1.00	1.00	
107 - EXISTING MECH ROOM	Unoccupied	0	70	0	0	0	0	0	0.8	0	**50**	0	0.00	0	Pass	50		1.00	1.00	1.00	
108 - Corridor	Corridors	0	192	0	0.06	0	12	12	0.8	15	**60**	0	0.00	23	Pass	60	0.25	1.00	1.00	1.00	0.85
109 - Existing EM Lounge	Break rooms	6	171	5	0.06	30	11	41	0.8	52	**205**	0	0.00	78	Pass	205	0.25	1.00	1.00	1.00	0.85
110 - Existing RR	Unoccupied	0	55	0	0	0	0	0	0.8	0	**30**	0	0.00	0	Pass	30		1.00	1.00	1.00	
System Totals:		Sum of Zone Populations 9.0	Sum of Zone Areas 739			Sum of People Outdoor Air Components 45	Sum of Area Outdoor Air Components 34				800										

(Zpz) - Critical Space O.A. Fraction	0.25	
Peak People (SUM of Pz)	9.0	people
System People	9.0	people
(D) - Diversity	1.00	
(Ev) - System Ventilation Efficiency (Appendix A)	0.85	
(Ev) - System Ventilation Efficiency (Simplified Procedure)	0.75	
(Vou) - Uncorrected Outdoor Air Intake	79	cfm
(Xs) - Average Outdoor Air Fraction	0.10	
(Vot) - Outdoor Air Required	**94**	**cfm**
Outdoor Air Provided	**95**	**cfm**
Percentage of Outdoor Air Provided	**12%**	
Outdoor Air CFM Per Square Foot	**0.128552**	

NOTE:

1. EXISTING ROOFTOP UNIT RTU-4 SHALL BE ADJUSTED TO 95 CFM O.A.

ROOFTOP UNIT SCHEDULE

UNIT NUMBER	LOCATION	NOM. TONS	SUPPLY CFM	OUTSIDE AIR	
				MIN %	CFM
RTU-4	ROOF	2	800	12	95

AIR TERMINAL SCHEDULE

ROUND AND SQUARE DEVICES: TYPE OF OUTLET — A – 8 – 300 — AIR QUANTITY IN C.F.M. (DIFF. & REG. ONLY)
SIZE OF OUTLET (NECK SIZE DIAMETER FOR DIFFUSERS)

TYPE	DESCRIPTION
A	SUPPLY AIR DIFFUSER, LAY-IN, 24"x24", PRICE MODEL SCDA: DIFFUSERS SHALL HAVE ADJUSTABLE HORIZONTAL-TO-VERTICAL PATTERN WITH EQUALIZING GRID.
B	RETURN/TRANSFER AIR GRILLE, LAY-IN, PRICE MODEL 530: 24"x12" UNLESS OTHERWISE NOTED. FURNISH WITH BLADES PARALLEL TO "LONG" DIMENSION. PROVIDE PRICE MODEL RAC LINED RETURN AIR CANOPY SILENCER ABOVE RETURN AIR GRILLE.
C	RETURN/EXHAUST AIR GRILLE, SURFACE MOUNTED, PRICE MODEL 530: 12"x12" UNLESS OTHERWISE NOTED. FURNISH WITH BLADES PARALLEL TO "LONG" DIMENSION.

NOTES: PROVIDE A SHEET METAL PLENUM ABOVE/BEHIND EACH AIR DEVICE FOR MAKING A CONNECTION TO THE BRANCH DUCT.

COORDINATE THE GRID FACE DIMENSION OF ALL LAY-IN TYPE CEILING SUSPENSION SYSTEMS WITH THE GENERAL CONTRACTOR. PROVIDE NARROW TEE TYPE DEVICES WHERE REQUIRED.

EQUIPMENT NOTES

DSS-1

DUCTLESS SPLIT SYSTEM HEAT PUMP. BASIS OF DESIGN IS BRYANT.

OUTDOOR UNIT:
MODEL: 37MAHAQ18AA3
ELECTRICAL: 208V 1-PHASE, 60 HZ, 19 MCA, 20 MOPA
OPERATING RANGE: COOLING MODE -22°F TO 122°F, HEATING MODE -22°F TO 75°F
REFRIGERANT: R-454b
RATED COOLING PERFORMANCE: 18 MBH, 21.2 SEER2, 12.5 EER2
RATED HEATING PERFORMANCE @ 47 °F: 18 MBH, 3.26 COP
RATED HEATING PERFORMANCE @ 17 °F: 15 MBH, 2.55 COP

INDOOR UNIT:
MODEL: 615AHAQ18XA3
ELECTRICAL: 208V 1-PHASE, 60 HZ, 3 MCA (FED FROM OUTDOOR UNIT)
OPERATING RANGE: COOLING MODE 60°F TO 90°F, HEATING MODE 32°F TO 86°F

PROVIDE WITH KSACN1201AAA WIRED REMOTE CONTROL WITH TIMER FUNCTION.

MECHANICAL LEGEND

SYMBOL	DESCRIPTION
CW	DOMESTIC COLD WATER LINE
CWR	CHILLED WATER RETURN
CWS	CHILLED WATER SUPPLY
D	DRAIN LINE
G	GAS LINE
HG	HOT GAS LINE
HW	DOMESTIC HOT WATER LINE
LIQ	LIQUID REFRIGERANT LINE
MW	MAKE-UP WATER LINE
SUCT	SUCTION REFRIGERANT LINE
V	VENT LINE
	PENDANT TYPE SPRINKLER HEAD
	UPRIGHT TYPE SPRINKLER HEAD
	P-TRAP (PLAN VIEW)
	HOSE BIBB
	EXISTING WORK TO REMAIN
	EXISTING WORK TO BE REMOVED
	HEATING WATER RETURN
	HEATING WATER SUPPLY
	PIPE FLANGES
	45° BOOT BRANCH TAKEOFF

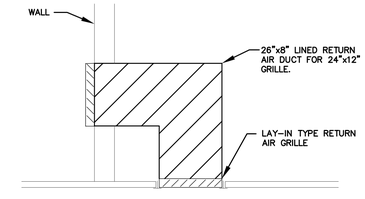
SYMBOL	DESCRIPTION
	PIPE UNION
	Y-TYPE STRAINER
	COMB. BALANCE & STOP VALVE
	GATE VALVE (SCREWED BODY)
	BALL VALVE
	CHECK VALVE
	GAS COCK OR BALANCE VALVE
	FLOOR OR AREA DRAIN
T	THERMOSTAT
	CONNECT TO EXISTING
	THRU FLOOR AS SHOWN
H.B.	JANITOR OR SHOWER TRIM
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	R.A., O.A., OR EXH. DUCT UP
	R.A., O.A., OR EXH. DUCT DOWN
	ROUND DUCT
	ELBOW WITH TURNING VANES
	MAN. DAMPER
	SPIN-IN FITTING WITH BALANCE DAMPER

MECHANICAL ABBREVIATIONS

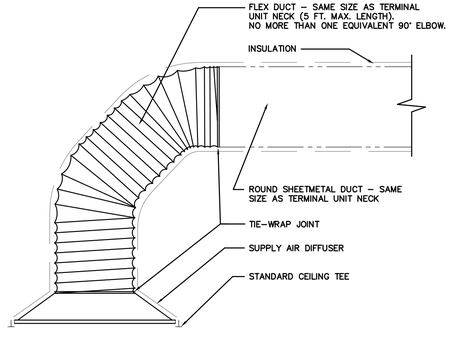
AB.	ABOVE
A.D.	ACCESS DOOR
A.F.F.	ABOVE FINISHED FLOOR
BTM.	BOTTOM
BLDG.	BUILDING
CLG.	CEILING
CONC.	CONCRETE
C.O.	CLEANOUT
CONN.	CONNECT
CONTR.	CONTRACTOR
DTL.	DETAIL
DIFF.	DIFFUSER
DN.	DOWN
ELEC.	ELECTRICAL
EXH.	EXHAUST
EXIST.	EXISTING
E.W.C.	ELECTRIC WATER COOLER
FLEX.	FLEXIBLE
FLR.	FLOOR
F.D.	FLOOR DRAIN
FURN.	FURNISH
	GRILLE
H.B.	HOSE BIBB
HTR.	HEATER
INV. ELEV.	INVERT ELEVATION
J.R.	JANITOR RECEPTOR
LAV.	LAVATORY
MAN. DPR.	MANUAL DAMPER
MECH.	MECHANICAL
M. A.	MIXED AIR
O.A.	OUTSIDE AIR
PLBG.	PLUMBING
REG.	REGISTER
REQD.	REQUIRED
R.A.	RETURN AIR
RM.	ROOM
S.A.	SUPPLY AIR
SHT.MTL.	SHEET METAL
S.S.	SERVICE SINK
TYP.	TYPICAL
T.C.C.	TEMP. CONTROL CONTRACTOR
UR.	URINAL
V.T.R.	VENT THRU ROOF
VIB. ISOL.	VIBRATION ISOLATION
W/	WITH
W.C.	WATER CLOSET

HVAC NOTES

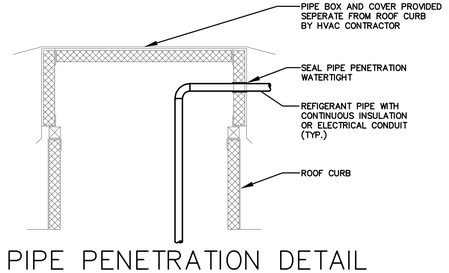
1. DUCT LAYOUT IS ONLY SCHEMATIC, EXACT LOCATION OF DUCTS TO BE COORD. ON JOB W/ BLDG. STRUCTURE AND WORK OF OTHER CONTRACTORS AS REQUIRED TO PROVIDE THE CEILING HEIGHTS INDICATED ON THE ARCHITECTURAL DRAWINGS.
2. ALL DUCTS AB. CLG. UNLESS OTHERWISE NOTED.
3. OFFSET DUCTS INTO BEAM SPACE FOR CLEARANCE WHERE SPACE AB. CLG. IS NOT SUFFICIENT FOR DUCTS TO CROSS OTHER DUCTS OR WORK OF OTHER CONTRS.
4. INSTALL BALANCING DAMPERS AS SHOWN AND AS REQUIRED FOR PROPER BALANCING OF AIR HANDLING SYSTEMS.
5. DUCT DIMENSION GIVEN IS ACTUAL INSIDE OPNG. AFTER INSUL. OR LINING IS APPLIED AND SHALL NOT BE SMALLER.
6. PROVIDE AIRTIGHT A.D. IN DUCTS ADJACENT TO ALL AUTOMATIC DPRS. AND TEMP. CONTROL DEVICES.
7. REFER TO ARCH. REFLECTED CLG. PLAN FOR EXACT LOCATION OF DIFFUSERS, GRILLES, ETC.
8. ALL DPRS. INCLUDING "MOTORIZED DPRS." ARE TO BE PROVIDED BY HTG. CONTR., UNLESS OTHERWISE NOTED.
9. ALL DUCTWORK SHALL BE INSTALLED TIGHT TO STRUCTURE.
10. THERMOSTATS SHALL BE LINED UP VERTICALLY WITH OUTLETS &/OR FIRE ALARM DEVICES. COORD. FINAL LOCATION AND ELEVATION OF ALL THERMOSTATS W/ ARCH. DRAWINGS.



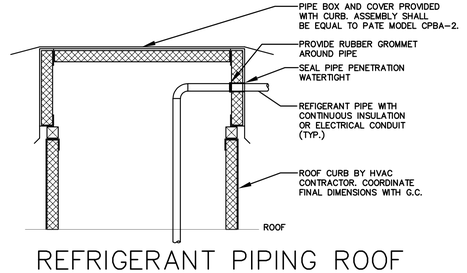
RETURN AIR GRILLE DETAIL
N.T.S.



SUPPLY AIR DIFFUSER DETAIL
SCALE: N.T.S.



PIPE PENETRATION DETAIL
N.T.S.



REFRIGERANT PIPING ROOF PENETRATION DETAIL
SCALE: N.T.S.

H02-24339.DWG

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12/6/2024

BEXLEY CITY HALL RENOVATIONS

2242 E Main St
Bexley, OH 43209

12.06.2024 DRAWING PRINT DATE

MARK	DATE	DESCRIPTION
	12.06.2024	PERMIT SET

FILE INFO
CAD FILE:
COPYRIGHT: GRA+D ARCHITECTS, 2024
SHEET SIZE: 24" x 36"

SHEET TITLE
HVAC SCHEDULES AND DETAILS

H02

MECHANICAL SPECIFICATIONS

1.

I. GENERAL CONDITIONS

1.

GENERAL

1. EXCEPT AS SPECIFIED TO THE CONTRARY, THIS CONTRACTOR SHALL INCLUDE FURNISHING, INSTALLING, CONNECTING AND OPERATION OF ALL EQUIPMENT WHICH IS PART OF MECHANICAL SYSTEMS.

2. GENERAL AND SPECIAL CONDITIONS OF AIA (AMERICAN INSTITUTE OF ARCHITECTS) AND OWNER'S GENERAL REQUIREMENTS SHALL APPLY UNLESS NOTED OTHERWISE.

3. THE REQUIREMENTS SET FORTH UNDER "GENERAL CONDITIONS". "MODIFICATIONS TO GENERAL CONDITIONS" AND "SPECIAL CONDITIONS" ARE PART OF THIS CONTRACT.

4. THIS CONTRACT SHALL INCLUDE A VISIT TO THE JOB SITE AND TAKE INTO CONSIDERATION MECHANICAL, ELECTRICAL AND GENERAL TRADE WORK IN PLACE AND WORK TO BE PUT INTO PLACE PRIOR TO BIDDING. REROUTING OF DUCTWORK, PIPING, AND EQUIPMENT, AS REQUIRED TO MISS THIS WORK SHALL BE ACCOMPLISHED AT NO ADDITIONAL COST TO THE OWNER.

5. ALL MOTORS FOR SUCH EQUIPMENT (IF AND WHERE SPECIFIED ON THE DRAWINGS) SHALL BE FURNISHED AND INSTALLED AS PART OF THIS CONTRACT. CONTROLS FOR SUCH MOTORS SHALL BE FURNISHED UNDER THIS CONTRACT AND INSTALLATION OF CONTROLS AND ALL ELECTRICAL WIRING NOT SHOWN ON ELECTRICAL DRAWINGS, SHALL BE PERFORMED UNDER THIS CONTRACT.

SUBSTITUTIONS AND MISCELLANEOUS EQUIPMENT

1. THE BIDDING OF THIS WORK WILL CONTEMPLATE THE USE OF EQUIPMENT AND MATERIALS EXACTLY AS SPECIFIED HEREIN. WHERE ONE OR MORE NAMES OF MANUFACTURERS ARE MENTIONED ANY ONE MAY BE UTILIZED.

2. ALTERNATE EQUIPMENT MAY BE BID AS A SUBSTITUTION TO THAT SPECIFIED WITH THE APPROPRIATE DEDUCT NOTED. HOWEVER; THE EQUIPMENT SUBSTITUTED SHALL MEET ALL SPECIFICATIONS IN DESIGN AND BE SUBJECT TO OWNER AND/OR ENGINEER APPROVAL. ANY ADDITIONAL COST INCURRED DUE TO SUBSTITUTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO EXPENSE TO THE OWNER.

3. MISCELLANEOUS ITEMS NECESSARY TO COMPLETE THE PIPING SYSTEMS SUCH AS FITTING, HANGERS, ETC., CAN BE OF ANY RECOGNIZED MANUFACTURER PROVIDED THESE ITEMS MEET MINIMUM STANDARDS AS SET BY THE ENGINEER.

ORDINANCES, PERMIT CERTIFICATES AND OWNER REQUIREMENTS

1. ALL WORK UNDER THIS CONTRACT SHALL BE INSTALLED IN FULL ACCORDANCE WITH THE OWNER'S REQUIREMENTS, ALL LAWS, ORDINANCES AND ALL REGULATIONS OF THE STATE, COUNTY, AND MUNICIPALITY WHICH IN ANY WAY AFFECTS THIS WORK. THE ARCHITECT WILL OBTAIN THE GENERAL BUILDING, MECHANICAL, ELECTRICAL, AND PLUMBING PERMITS. ANY OTHER PERMITS AND CERTIFICATES OF INSPECTION REQUIRED FOR THE PROJECT WILL BE OBTAINED BY THE CONTRACTOR PERFORMING THE WORK. FEES WILL BE INCLUDED IN THE BID PRICE. ALL WORK SHALL ALSO BE INSTALLED IN ACCORDANCE WITH REGULATIONS OF THE FIRE UNDERWRITERS HAVING JURISDICTION AND LOCAL UTILITIES. CONTRACTOR SHALL ALSO SECURE ANY PERMITS OR PAY ANY FEES TO THE LOCAL UTILITY COMPANIES FOR THE WORK REQUIRED.

DRAWINGS

1. MECHANICAL DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW THE APPROXIMATE LOCATION OF OUTLETS, EQUIPMENT AND PIPING.

2. THE EXACT LOCATION OF OUTLETS, EQUIPMENT AND PIPING MAY BE CHANGED FROM TIME TO TIME AS WORK PROGRESSES. UNDER THIS CONTRACT ALL LOCATIONS SHALL BE VERIFIED WITH ALL TRADES AND THAT THEY ARE ACCORDING TO THE LATEST INFORMATION AVAILABLE. SHOULD THIS NOT BE DONE THE WORK WILL BE CHANGED AT NO ADDITIONAL EXPENSE TO THE OWNER.

3. THE OWNER RESERVES THE RIGHT TO MAKE MINOR CHANGES IN LOCATION OF EQUIPMENT OF PIPING ARRANGEMENTS UP TO THE TIME OF ROUGH-IN WITHOUT ADDITIONAL COSTS TO THE OWNER.

4. THE DRAWINGS AND SPECIFICATION ARE INTENDED TO SUPPLEMENT EACH OTHER AND ANY MATERIALS OR LABOR CALLED FOR IN ONE SHALL BE FURNISHED EVEN THOUGH NO MENTIONED IN BOTH. ANY MATERIAL OR LABOR WHICH IS NEITHER SHOWN ON THE DRAWINGS NOR CALLED FOR IN THE SPECIFICATIONS BUT WHICH IS OBVIOUSLY NECESSARY TO COMPLETE THE WORK AND WHICH IS USUALLY INCLUDED IN WORK OF A SIMILAR CHARACTER SHALL BE FURNISHED UNDER THIS CONTRACT.

5. AS PART OF THIS WORK THE CONTRACTOR SHALL SUBMIT ONE (1) BLUE LINE SET AND ONE SET OF SEPIAS OF AS BUILT DRAWINGS INDICATION THE EXACT LOCATION OF ALL WORK INSTALLED. ACCEPTANCE SHALL NOT OCCUR UNTIL RECEIPT OF THESE DRAWINGS IS OBTAINED BY THE OWNER.

SHOP DRAWINGS

1. AS PART OF THIS WORK INCLUDING UNDER EACH MECHANICAL SECTION, WITHOUT CAUSING ANDY DELAY IN WORK, SHOP DRAWINGS OF ALL EQUIPMENT AND MATERIAL SHALL BE SUBMITTED FOR ENGINEER'S REVIEW.

2. SUBMITTAL SHALL INCLUDE WIRING DIAGRAMS, PERFORMANCE CURVES AND DATA SPECIFIC TO THIS PROJECT AND BEAR CONTRACTOR'S APPROVAL STAMP CERTIFYING THAT THEY HAVE VERIFIED CONFORMANCE TO THE CONTRACTUAL DOCUMENTS.

3. IN THE ENGINEER'S REVIEW IF SHOP DRAWINGS, REVIEW IS FOR CONFORMANCE WITH THE GENERAL DESIGN CONCEPT AND ARRANGEMENT ONLY. COMMENTS, CORRECTIONS OR MARKING SO NOT CONSTITUTE WAIVER OF THE CONTRACT DOCUMENTS REQUIREMENTS. DIMENSIONS, QUANTITIES AND COORDINATION ARE THE RESPONSIBILITY OF THE CONTRACTOR.

4. THIS CONTRACTOR IS TO PROVIDE 1/4" SCALE REPRODUCIBLE DRAWINGS (CONSTRUCTION SET) OF SHEET METAL DRAWINGS FOR USE IN COORDINATING WORK OF PLUMBING, FIRE PROTECTION AND ELECTRICAL WITH LAYOUT OF AIR DISTRIBUTIONS SYSTEM AND RELATED WORK. LIGHTING, CEILING GRID AND CEILING ACCESS DOORS WILL BE SHOWN LIGHTLY TO VERIFY COORDINATION. HVAC CONTRACTOR TO PROVIDE INITIAL DRAWINGS WITHIN 60 DAYS OF AWARD OF CONTRACT. EACH PRIME CONTRACTOR IS RESPONSIBLE FOR OVERLAYING THEIR WORK ONTO THESE DRAWINGS; FOR PROVIDING INFORMATION AS TO SIZE, ELEVATION AND LOCATION PROPOSED FOR ALL COMPONENTS; AND FOR COORDINATION OF THEIR WORK WITH THAT OF OTHER CONTRACTORS. FINAL RESOLUTION OF ALL ITEMS TO BE DETERMINED AT PROJECT MEETINGS HELD BY ARCHITECT OR OWNER.

CLEANING UP

1. UNLESS OTHERWISE NOTED, ALL EXCESS MATERIALS AND DEBRIS CAUSED BY THIS WORK SHALL BE COME THE PROPERTY OF THE CONTRACTOR AND PROMPTLY BE REMOVED FROM THE SITE. ALL FIXTURES AND EQUIPMENT INSTALLED SHALL BE THOROUGHLY CLEANED WEEKLY. ALL MOTORS AND EQUIPMENT SHALL BE COVERED OR OTHERWISE PROTECTED FORM CONSTRUCTION DUST AND DEBRIS. NO EQUIPMENT OTHER THAN THOSE DESIGNED TO ARE TO BE EXPOSED TO INCLEMENT WEATHER. TOUCH UP ALL SCRATCHES AND REPAIR ANY DENTS IN EQUIPMENT.

CUTTING AND PATCHING

1. CUTTING FOR OPENINGS, WHEN NECESSARY, SHALL BE DONE BY THIS CONTRACTOR WITH SUCH TOOLS AND METHODS AS TO PREVENT UNNECESSARY DAMAGE TO SURROUNDING AREAS OR EQUIPMENT.

2. FILL SPACE IN ALL AREAS PACKING WHERE REQUIRED TO MAINTAIN FIRE RATING, OPENINGS SHALL BE TEMPORARILY FIRE STOPPED UNTIL PERMANENT FIRE STOPPING IS DONE. THIS INCLUDES HOLES LEFT DUE TO REMOVAL OF PIPING.

3. PATCHING SHALL MATCH EXISTING SURFACES IN KIND AND FINISH, AND SHALL BE DONE BY THE GENERAL CONTRACTOR.

4. NO STRUCTURAL MEMBER WILL BE CUT INTO WITHOUT THE EXPRESSED PERMISSION THE OWNER'S REPRESENTATIVE.

FIRESTOPPING

1. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR FIRESTOPPING AROUND ALL OPENINGS FOR PIPES, DUCTS, CONDUITS ETC. INSTALLED BY THEM AT ALL FIRE WALLS. FIRESTOPPING SHALL BE PERFORMED BY AN INSTALLER WHO HAS BEEN TRAINED BY THE MANUFACTURER, OR MANUFACTURER'S REPRESENTATIVE, IN THE INSTALLATION PROCEDURES BASED ON PUBLISHED UL TESTED FIRE STOP SYSTEMS.

2. FIRESTOPPING SHALL MEET THE REQUIREMENTS OF ASTM E-814 OR UL 1479 FIRE TESTS BY A RECOGNIZED TESTING AGENCY. FIRESTOPPING SHALL ALSO CONFORM TO THE FOLLOWING GOVERNING CODES;OHIO BUILDING CODE, NFPA 101 LIFE SAFETY CODE AND NFPA 70 – NATIONAL ELECTRIC CODE.

3. PENETRATION

   a. CLEAN PENETRATION HOLE OF DIRT, LOOSE MATERIALS AND FOREIGN MATTER WHICH MAY AFFECT BOND OR INSTALLATION.

   b. REMOVE COATINGS SUCH AS PAINT, CURING COMPOUNDS, WATER REPELLENT AND SEALERS AS REQUIRED.

   c. INSTALL BACKING MATERIALS TO PREVENT LIQUID MATERIAL LEAKAGE.

4. APPLICATION

   a. PREPARE AND APPLY PENETRATION SEALING SYSTEMS IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS.

   b. EMPLOY INSTALLATION TECHNIQUES WHICH WILL ENSURE THAT FIRESTOPPING IS DEPOSITED TO FILL AND SEAL HOLES AND OPENINGS.

   c. TOOL EXPOSED SURFACES OF APPLIED SEALANT TO SMOOTH FINISH.

   d. PROTECT MATERIALS FROM DAMAGE ON SURFACES SUBJECTED TO TRAFFIC.

5. PROVIDE INTUMESCENT SEALANT AND COLLARS AT OPENINGS INVOLVING PLASTIC OR INSULATED PIPE SIMILAR TO THE METACAULK SERIES 880 AND 950.

6. FIRESTOPPING BY HILTI, DOW CORNING, 3M, OR METACAULK MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.

GUARANTEE

1. ALL LABOR AND MATERIALS FURNISHED UNDER THIS CONTRACT SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FORM THE DATE OF FINAL ACCEPTANCE BY THE OWNER WHICH WILL COMMENCE UPON THE FINAL INSPECTION BY THE ENGINEER. DURING THIS TIME, ALL LEAKS, CORRECTION OF ALL THE FAILURES TO SUCH MATERIAL AND THE CORRECTION OF ALL DISCREPANCIES WITH DRAWING CODE, AND THE PROJECT SPECIFICATIONS SHALL BE DONE UNDER THIS CONTRACT AT NO ADDITIONAL EXPENSE TO THE OWNER.

RECORD DRAWINGS

1. THIS CONTRACTOR SHALL KEEP AN ACCURATE RECORD OF ALL DEVIATIONS FROM CONTRACT DRAWINGS AND SPECIFICATIONS. THEY SHALL NEATLY AND CORRECTLY ENTER IN COLORED PENCIL ANY DEVIATIONS ON THE BLUEPRINTS OR BLUELINE DRAWINGS. AT COMPLETION OF THE PROJECT DELIVER DRAWINGS TO OWNER'S REPRESENTATIVE.

II. HVAC

1.

HVAC INSULATION

1. INSULATION THICKNESSES ARE BASED ON INSULATION HAVING THERMAL RESISTANCE IN THE RANGE OF 4.0 HR F FT.2/BTU TO 4.6 HR F FT2/BTU PER INCH OF THICKNESS ON A FLAT SURFACE AT A MEAN TEMPERATURE OF 75'F. MINIMUM INSULATION THICKNESS SHALL BE INCREASED FOR MATERIALS HAVING R VALUES LESS THAN 4.0 OR MAY BE REDUCED FOR MATERIALS HAVING R VALUES GREATER THAN 4.6 TO GIVE EQUIVALENT "R" VALUES. ALL INSULATING MATERIALS, INCLUDING JACKETS, CEMENTS, ADHESIVES, VAPOR BARRIERS, ETC., SHALL BE U.L. LISTED WITH A FLAME SPREAD RATING NOT TO EXCEED 25 AND A SMOKE DEVELOPED RATING NOT TO EXCEED 50. MOLDED PLASTIC FITTING COVERS SHALL BE U.L. APPROVED WITH A FLAME SPREAD RATING NOT TO EXCEED 25 AND A SMOKE DEVELOPED RATING NOT TO EXCEED 50. PIPE INSULATION SHALL BE SCHUELLER "MICRO-LOK" GLASS FIBER INSULATION RATED FOR 850'F. WITH FACTORY APPLIED AP-1 ALL PURPOSE, SELF-SEALING VAPOR BARRIER JACKET. BUTT STRIPS SHALL BE MINIMUM 3" WIDE OF SAME MATERIAL AS JACKET. DUCT INSULATION SHALL BE SCHUELLER RIGID TYPE AS NOTED WITH FSK GLASS FIBER REINFORCED FOIL FACED FLAME RESISTANT KRAFT PAPER VAPOR BARRIER FACING. ALL COVER ABOVE SHALL BE BY SCHUELLER. EQUIVALENT TYPE THICKNESS AND CONDUCTIVITY INSULATION BY OWENS CORNING, KNAUF, OR CERTAINTEED MEETING ALL REQUIREMENTS MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.

2. COVER ALL DUCTWORK AS FOLLOWS:

   a. ALL ROUND DUCTWORK IN THE CEILING SPACE SHALL BE INSULATED W/ 1 1/2" THICK, 1 LB. DENSITY BLANKET FLEXIBLE DUCT INSULATION.

   b. ALL RECTANGULAR MEDIUM AND LOW PRESSURE DUCTWORK IS TO BE LINED.

   c. LINED DUCTS WITHIN THE CEILING PLENUM SPACE DO NOT REQUIRE WRAPPING. SEE DUCT LINER SECTION FOR REQUIREMENTS. ALL OUTSIDE AIR DUCTS SHALL BE INSULATED W/ 3" THICK, 1 LB. DENSITY BLANKET FLEXIBLE DUCT INSULATION. ADHERE INSULATION TO DUCT SURFACE WITH FOSTER NO. D. 85-20 ADHESIVE APPLIED IN 6" WIDE STRIPS ON 12" CENTERS. BUTT ALL EDGES OF INSULATION AND SEAL ALL JOINTS WITH A FOIL-SKRIM-KRAFT TAPE OR FLANGE ADHERED OVER THE JOINT.

   d. SECURE INSULATION WITH FLARE DOOR STAPLES UNTIL THE ADHESIVE SETS. SEAL ALL BREAKS AND JOINTS IN VAPOR BARRIER WITH 2-1/2" WIDE PRESSURE SENSITIVE TAPE TO MATCH VAPOR BARRIER FACING. ADHERE WITH FOSTER 85-20 ADHESIVE WHERE NECESSARY.

3. COVER CONDENSATION DRAIN PIPING AS FOLLOWS:

   a. COVER ALL PIPING WITH 1/2" THICKNESS GLASS FIBER PIPE INSULATION.

   b. SEAL ALL LAPS AND BUTT STRIPS WITH WHITE VAPOR BARRIER CEMENT OR FACTORY SELF-SEALING LAPS.

   c. FITTINGS SHALL BE WRAPPED WITH COMPRESSED FIBERGLASS TO SAME THICKNESS AND DENSITY AS ADJACENT PIPE INSULATION AND COVERED WITH A MOLDED PLASTIC FITTING.

LOW PRESSURE DUCTWORK AND ACCESSORIES

1. DUCTWORK AND ACCESSORIES SHALL BE FABRICATED AND INSTALLED IN STRICT ACCORDANCE WITH THE 2" W.G. TABLE IN THE LATEST EDITION OF SMACNA EXCEPT AS HEREIN NOTED AND/OR AS DETAILED ON THE DRAWINGS.

   a. ALL ROUND DUCTS SHALL BE SPIRAL LOCKSEAM CONSTRUCTION OF GAUGES AS RECOMMENDED BY SMACNA. FIBERGLASS DUCT BOARD SHALL NOT BE UTILIZED.

   b. DUCTWORK, PLENUM, ETC. SHALL BE CONSTRUCTED OF SHEET METAL.

   c. VANED ELBOWS ARE TO UTILIZE DOUBLE THICKNESS VANES WITH THE ELBOW HEAL RADIUSED THE SAME AS THE TURNING VANE. ELBOW CHEEKS ARE TO BE MINIMUM OF 3". VANED ELBOWS ARE NOT TO BE UTILIZED IN DUCTWORK WHERE VELOCITY EXCEEDS 2000 FPM.

   d. RADIUS ELBOWS, 1/3 RADIUS OR FULL RADIUS ARE TO BE UTILIZED EXCEPT WITHIN 20' OF ANY AIR OUTLET. 1/3 RADIUS ELBOWS SHALL HAVE A TURNING VANE ONE GAGE HEAVIER THAN DUCT CONSTRUCTION.

   e. ALL DUCTWORK DIMENSIONS INDICATED ON PLANS ARE CLEAR INSIDE DIMENSIONS. WHERE DUCTS ARE LINED, DUCTWORK IS TO BE INCREASED TO MAINTAIN THAT FREE AREA.

   f. FLEXIBLE CONNECTIONS TO ALL EQUIPMENT SHALL BE MADE WITH 3" WIDE DOUBLE NEOPRENE COATED FLAME RETARDANT FIBER GLASS FLEXIBLE CONNECTION. FLEXIBLE TO HAVE A MINIMUM OF 24" GUAGE, 3" WIDE SHEET METAL COLLARS PERMANENTLY ATTACHED TO EACH SIDE.

   g. MITERED OFFSETS GREATER THAN 30' IN EITHER DIRECTION SHALL NOT BE PERMITTED.

   h. CHANGES IN DUCT SIZES SHALL BE MADE BY UNIFORM TAPER SECTION WITH A MAXIMUM INCLUDED ANGLE OF DIVERGENCE OF 15'.

   i. SPLITTER DAMPERS SHALL NOT BE PERMITTED UNLESS SPECIFICALLY NOTED ON THE DRAWING.

   j. VOLUME DAMPERS SHALL BE SINGLE BLADE UP TO 6" IN WIDTH AND MULTIBLADE FOR LARGER SIZES. VOLUME DAMPERS SHALL HAVE BALL BEARINGS AND SHALL INCORPORATE LOCKING TYPE INDICATING ADJUSTMENT.

   k. FLEXIBLE DUCTS TO BE THERMAFLEX M-KC INSULATED FLEXIBLE DUCTWORK RATED AT 10" POSITIVE STATIC PRESSURE MINIMUM. MAXIMUM LENGTH OF FLEXIBLE DUCT TO BE 5'-0". FLEXMASTER TYPE 3M INSULATED FLEXIBLE DUCT MEETING ALL SPECIFIED REQUIREMENTS MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.

   l. ALL DUCT JOINTS IN DUCT SYSTEMS SHALL BE MADE TIGHT. DUCT SEALER SHALL BE USED TO SEAL JOINTS.

GRILLES, REGISTERS AND DIFFUSERS

1. REFER TO DRAWINGS FOR BASIS OF DESIGN.

2. AIR DEVICES BY ANEMOSTAT, KRUEGER OR PRICE, MEETING ALL SPECIFIED REQUIREMENTS MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.

3. ALL LINEAR DIFFUSER PLENUM BOXES ARE TO BE SUPPORTED FROM THE STRUCTURE ABOVE.

AIR SYSTEM BALANCING

1. CONTRACTOR SHALL ARRANGE AND PAY FOR A CERTIFIED TEST AND AIR BALANCE FOR THE PROJECT, WITHIN TWO WEEKS AFTER COMPLETION OF THE CONSTRUCTION. A CERTIFIED AIR BALANCE REPORT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.

2. AIR QUANTITIES AT INDIVIDUAL REGISTERS OR DIFFUSERS SHALL BE ADJUSTED TO WITHIN 10% OF QUANTITIES SHOWN ON THE DRAWINGS AND TOTAL AIR QUANTITY HANDLED BY EACH SYSTEM TO WITHIN 5% OF THE QUANTITY SHOWN OR SPECIFIED.

3. THE PRELIMINARY RESULTS OF BALANCING WORK SHALL BE SUBMITTED TO THE ENGINEER BEFORE THE FINAL BALANCE REPORT IS PREPARED. THIS REPORT SHALL INCLUDE ANY PROBLEMS ENCOUNTERED DURING BALANCING OR MAJOR DEVIATIONS FROM SPECIFIED CONDITIONS.

4. IF REQUIRED, A MEETING SHALL BE ARRANGED BETWEEN THIS CONTRACTOR, THE BALANCE SUBCONTRACTOR AND THE ENGINEER TO RESOLVE ANY PROBLEMS OR DEVIATIONS FROM THE CONTRACT DRAWINGS AND SPECIFICATIONS BEFORE THE FINAL BALANCE WORK

CONDENSATION DRAIN PIPING

1. PROVIDE CONDENSATION DRAIN PIPING FROM DRAIN CONNECTIONS OF ALL AIR CONDITIONING EQUIPMENT AND RUN INDIRECT TO FLOOR DRAINS AND ELSEWHERE AS SHOWN ON THE DRAWINGS.

2. PROVIDE DRAIN PIPING FROM DRAIN VALVES AND OVERFLOWS TO FLOOR DRAINS AND ELSEWHERE AS INDICATED ON THE DRAWINGS.

3. PROVIDE DRAIN PIPING FROM ALL PUMP CASING DRAINS AND RUN INDIRECT TO FLOOR DRAINS AND ELSEWHERE AS SHOWN ON THE DRAWINGS.

4. PIPE TO BE TYPE DWV HARD DRAWN COPPER DRAINAGE TUBING FOR DRAINS. PVC PIPING SHALL NOT BE USED.

5. FITTINGS SHALL BE CAST BRASS DRAINAGE FITTINGS.

6. ALL CONDENSATION DRAIN LINES SHALL BE TRAPPED. TRAPS SHALL BE PIPED AS DETAILED ON THE DRAWINGS.

7. PITCH ALL CONDENSATION AND OTHER DRAIN LINES DOWN A MINIMUM OF 1" PER 8' IN THE DIRECTION OF FLOW.

8. PRIOR TO LEAVING THE JOBSITE, THE HVAC CONTRACTOR SHALL FLOOD THE COOLING COIL DRAIN PANS WITH THE UNITS OPERATING TO VERIFY THAT THE DRAIN PANS ARE DRAINING PROPERLY.

9. PROVIDE DRAINAGE TEES WITH CLEAN-OUT PLUGS AT ALL CHANGES OF DIRECTION.

REFRIGERANT PIPING

1. PROVIDE A COMPLETE SYSTEM OF REFRIGERANT PIPING FROM OUTDOOR CONDENSING UNITS TO INTERIOR AIR CONDITIONING UNITS AND TO OTHER POINTS AS SHOWN ON DRAWINGS.

2. ALL REFRIGERANT PIPING SHALL BE INSTALLED FOR MINIMAL PRESSURE DROP.

3. PIPE – TYPE L-ACR HARD DEHYDRATED SCALE FREE COPPER TUBING.

4. FITTINGS – WROUGHT COPPER, SOLDER TYPE.

5. PRECHARGED TUBING FURNISHED WITH UNITS PROPERLY SIZED AND INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, MAY BE INSTALLED AT THE CONTRACTOR'S OPTION.

6. SHUT-OFF VALVES IN REFRIGERANT LINES – SHALL BE SIMILAR TO HENRY, BALANCED-ACTING DIAPHRAGM TYPE WITH BRASS BODY, SOLDER TYPE ENDS, COMPOSITION SEAT DISC, A LAMINATED METAL DIAPHRAGM, POSITIVE BACK SEAT WITH VALVE IN FULL OPEN POSITION AND BALL CHECK FOR SEALING BALANCING CHANNEL DURING DIAPHRAGM INSPECTION.

7. CHARGING AND DRAIN VALVES SHALL BE SAME AS SHUT-OFF VALVES ABOVE, EXCEPT ONE (1) END TO HAVE FLARE CONNECTION WITH REMOVABLE SEAL CAP CHAINED TO VALVE BODY.

8. FILTER DRYERS SIMILAR TO SPORLAN "CATCH-ALL", REPLACEABLE CORE TYPE, SOLDER CONNECTIONS, FLANGED END, HIGH CAPACITY CORE.

9. SIGHT GLASS – SIMILAR TO SPORLAN "SEE-ALL" MOISTURE AND LIQUID INDICATOR WITH SOLDER TYPE CONNECTIONS. INSTALL SIGHT GLASS OF THE SAME SIZE AS THE LIQUID LINE.

10. PROPERLY CLEAN ENDS OF ALL TUBING BEFORE SOLDERING.

11. ALL JOINTS SHALL BE MADE WITH 95/5 SOLDER.

12. DURING CONSTRUCTION, THIS CONTRACTOR SHALL TAKE PRECAUTION TO MINIMIZE CONTAMINATION OF SYSTEM BY DIRT, SCALE, MOISTURE OR OTHER FOREIGN MATTER. ALL FOREIGN MATERIAL AND MOISTURE IN THE SYSTEM SHALL BE REMOVED.

13. THIS CONTRACTOR SHALL PROVIDE OIL FOR COMPRESSORS AND PROPER REFRIGERANT CHARGES FOR SYSTEMS.

14. REFRIGERANT PIPE SIZE AND CONFIGURATION SHALL BE PER THE MANUFACTURER'S RECCOMMENDATIONS BASED ON THE TOTAL EQUIVALENT LINE LENGTH AND ELEVATION DIFFERENCE BETWEEN THE INDOOR AND OUTDOOR UNITS.

15. HORIZONTAL SECTIONS OF PIPING INDOORS SHALL BE SLOPED TOWARDS THE VERTICAL RISER, 1"SLOPE PER 20' OF HORIZONTAL MINIMUM.

16. HORIZONTAL SECTIONS OF PIPING OUTDOORS SHALL BE PITCHED TOWARDS THE CONDENSING UNITS.

17. ALL REFRIGERANT SUCTION LINES SHALL BE INSULATED PER SPECIFICATION 23 07 00, INSIDE AND OUTSIDE OF THE BUILDING.

18. SUPPORT ALL REFRIGERANT PIPING ABOVE THE ROOF WITH POLYCARBONATE PILLOW BLOCK TYPE PIPE STANDS EQUAL TO MIRO INDUSTRIES MODEL 1.5 OR MODEL 3-R. SUPPORT ALL PIPING A MINIMUM OF 6 FEET ON CENTER.

19. PIPING INSULATION OUTSIDE THE BUILDING SHALL BE COVERED WITH 2 COATS ARMSTRONG TYPE WB FINISH TO MAKE WEATHER RESISTANT.

TESTS AND ADJUSTMENTS

1. CONTRACTOR SHALL ARRANGE AND PAY FOR A CERTIFIED TEST AND AIR BALANCE FOR THE PROJECT, WITHIN TWO WEEKS AFTER COMPLETION OF THE CONSTRUCTION. A CERTIFIED AIR BALANCE REPORT SHALL BE SUBMITTED TO THE OWNER FOR REVIEW AND APPROVAL. IN THE EVENT THAT THE OWNER REQUIRED ADJUSTMENTS TO OWNER'S AIR DISTRIBUTION, CONTRACTOR SHALL PAY ALL COSTS RELATED THERETO.

HVAC MINI-SPLIT HEAT PUMP SYSTEM

1. BASED ON BRYANT MODEL 615AHAQ18XA3 EXPOSED DUCTLESS HIGH-WALL INDOOR UNITS AND MODEL 37MAHAQ18AA3 OUTDOOR UNITS.

2. PROVIDE SPLIT SYSTEM HEAT PUMP (INCLUDING INDOOR AND OUTDOOR UNITS). MODEL NUMBERS AND CAPACITIES AS SHOWN ON THE DRAWINGS.

3. UNITS SHALL BE RATED PER AHRI STANDARDS 210/240 AND LISTED IN THE AHRI DIRECTORY AS A MATCHED SYSTEM.

4. UNITS MUST COMPLY WITH LOCAL ENERGY CODE IN REGARDS TO COP, EER, ETC.

5. THE COMPRESSOR SHALL HAVE AN EXTENDED WARRANTY OF 6 YEARS FROM DATE OF INSTALLATION.

6. INDOOR HIGH-WALL DUCTLESS UNITS SHALL BE COMPLETE WITH COIL, FAN, FAN MOTOR, PIPING CONNECTORS, AND ELECTRICAL CONTROLS. COIL SHALL BE COPPER TUBE WITH ALUMINUM FINS. MOTORS SHALL BE OPEN DRIP-PROOF, PERMANENTLY LUBRICATED BALL BEARINGS WITH INHERENT OVERLOAD PROTECTION.

7. FACTORY ASSEMBLED OUTDOOR, SINGLE-PIECE, AIR-COOLED HEAT PUMPS SHALL BE COMPLETE WITH COIL, FACTORY WIRING, PIPING, CONTROLS, AND COMPRESSOR. OUTDOOR FANS SHALL BE THE DIRECT DRIVE PROPELLER TYPE AND SHALL DISCHARGE AIR HORIZONTALLY. FAN MOTORS SHALL BE TOTALLY ENCLOSED, SINGLE PHASE MOTORS WITH CLASS E INSULATION AND PERMANENTLY LUBRICATED BALL BEARINGS. COMPRESSOR SHALL BE A FULLY HERMETIC ROTARY TYPE AND SHALL BE EQUIPPED WITH AN OIL SYSTEM, OPERATING OIL CHARGE, AND A NEMA RATED CLASS E MOTOR SUITABLE FOR OPERATION IN A REFRIGERANT ATMOSPHERE. COIL SHALL BE CONSTRUCTED OF ALUMINUM HYDROPHILIC PRE-COATED FINS MECHANICALLY BONDED TO SEAMLESS COPPER TUBES. REFRIGERANT CIRCUIT COMPONENTS SHALL INCLUDE A BRASS EXTERNAL LIQUID LINE SERVICE VALVE WITH SERVICE GAGE PORT CONNECTIONS, A SUCTION LINE SERVICE VALVE WITH A SERVICE GAGE CONNECTION PORT, SERVICE GAGE PORT CONNECTIONS ON COMPRESSOR SUCTION AND DISCHARGE LINES WITH SCHRADER TYPE FITTINGS WITH BRASS CAPS, ACCUMULATOR, AND REVERSING VALVE.

8. PRE-CHARGED INSULATED TUBING FURNISHED WITH UNIT, PROPERLY SIZED AND INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS, SHALL BE USED. CONTRACTOR HAS THE OPTION TO PROVIDE A FIELD-PIPED SYSTEM. SERVICE VALVES AND SIGHT GLASS SHALL BE FIELD INSTALLED. THE FILTER DRIER SHALL BE FACTORY INSTALLED.

9. INSTALL ALL REFRIGERANT PIPING SPECIALTIES FURNISHED WITH UNITS.

10. INSTALL OUTDOOR UNIT ON RAISED PADS TO PREVENT WATER INGRESS, AS SPECIFIED BY THE MANUFACTURER.

11. SUPPORT INDOOR UNITS FROM STRUCTURE.

12. SPLIT SYSTEM HEAT PUMPS MEETING ALL REQUIREMENTS BY TRANE, PANASONIC, OR LG ELECTRONICS INC. MAY BE FURNISHED AT THE CONTRACTOR'S OPTION.

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12/6/2024

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12.06.2024 DRAWING PRINT DATE

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	12.06.2024	PERMIT SET

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HVAC SPECIFICATIONS

H03