TENANT IMPROVEMENT AND PUBLIC RESTROOM RENOVATION

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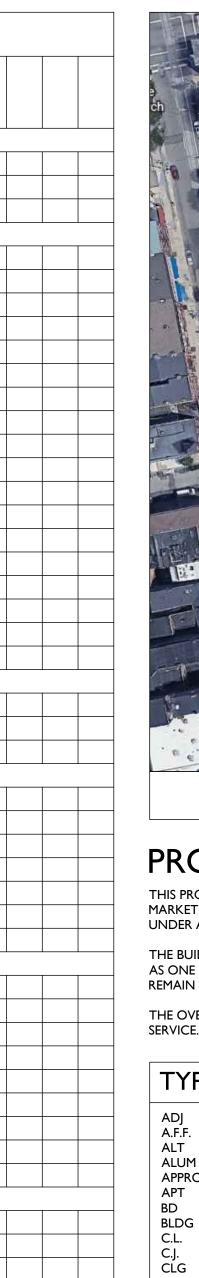
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PROJECT DESCRIPTION

THIS PROJECT IS THE TENANT IMPROVEMENT FOR A BUTCHER SHOP AND THE RENOVATION OF EXISTING PUBLIC RESTROOMS SERVING FINDLAY MARKET AT THE FIRST FLOOR OF THE HISTORIC COMMERCIAL / RESIDENTIAL BUILDING. OTHER AREAS OF THE BUILDING ARE BEING RENOVATED

THE BUILDING WAS ORIGINALLY TWO SEPARATE STRUCTURES (112-114 W. ELDER & 116 W. ELDER), THEY ARE NOW CONNECTED AND FUNCTION AS ONE BUILDING. THE PARCELS WERE PREVIOUSLY CONSOLIDATED. THE BUILDING IS 4-5 STORIES WITH A FULL BASEMENT. THE BASEMENT WILL

THE OVERALL PROJECT HAS BEEN SUBMITTED FOR HISTORIC TAX CREDITS WITH THE STATE HISTORIC PRESERVATION OFFICE AND NATIONAL PARK

SERVICE. IT	RECEIVED ZONING RELIE	F AND CER	TIFICATE OF APPROPRIATEN	IESS APPRO	DVAL ON 04-11-2022.		
TYPI	CAL ABBREVIA	ATION	1 S			TYPICAL	SYMBOLS
ADJ A.F.F. ALT ALUM APPROX APT BD BLDG C.L. C.J. CLG CLR C.M.U.	ADJACENT ABOVE FINISH FLOOR ALTERNATE ALUMINUM APPROXIMATELY APARTMENT BOARD BUILDING CENTER LINE CONTROL JOINT CEILING CLEAR DIMENSION CONCRETE MASONRY	EQ EXG EXT FDC FDN F.E. F.F.E. FLR FTG G.C. GYP H.M.	EQUAL EXISTING EXTERIOR FIRE DEPARTMENT CONNECTION FOUNDATION FIRE EXTINGUISHER FINISH FLOOR ELEVATION FLOOR FOOTING GENERAL CONTRACTOR GYPSUM HOLLOW METAL	PT. RCP	NOT TO SCALE OHIO BUILDING CODE ON CENTER OPENING OPPOSITE OVER PLYWOOD PLUMBING PRESSURE TREATED REFLECTED CEILING PLAN REQUIRED REVISED/REVISION ROUGH OPENING	01 • X'-X"	NORTH ARROW EGRESS WINDOW KEYNOTE CENTERLINE TAG FLOOR ELEVATION TAG REVISION CLOUD TAG
COL. CONT CONTR DIAG DIA or Ø DIM(S) D.O.T.E.	UNIT COLUMN CONCRETE CONTINUOUS/ CONTINUED CONTRACTOR DIAGONAL	H.M. HR HORIZ HVAC INCL INFO INSUL INT L.L. MATL MECH MEP	HOLLOW METAL HOUR HORIZONTAL HEATING, VENTILATION, & AIR CONDITIONING INCLUDED/ INCLUDING INFORMATION INSULATED/ INSULATING INTERIOR LIVE LOAD MATERIAL MECHANICAL MECHCANICAL	R.O.W. SECT &SIM SF SPEC STRUCT	RIGHT OF WAY SECTION SIMILAR SQUARE FEET SPECIFICATION STRUCTURAL	2 A4.11 3	dwg # sheet # ELEVATION TAG INTERIOR ELEVATION TAG dwg # sheet #
D.L. D.S. DTL(S) DWG(S) EA ELEC ELEV(S) E.J.	DEAD LOAD DOWNSPOUT DETAIL(S) DRAWING(S) EACH ELECTRICAL ELEVATION(S) EXPANSION JOINT	MIN MAX MANUF N/A N.I.C. N.I.S.	PLUMBING MINIMUM MAXIMUM MANUFACTURER NOT APPLICABLE NOT IN CONTRACT NOT IN SCOPE	VERT	VERTICAL	A5.00	A3.01/ dwg # SECTION CUT TAG sheet # DETAIL CALLOUT



PLATTE

ARCHITECTURE

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Design Team:

Progress Dates

RENOVATION

Job No: 22040 09.11.2023

116 W ELDER ST CINCINNATI COUNTY: HAMILTON **ZONING JURISDICTION:** CINCINNATI BLDG. DEPT. JURISDICTION: CINCINNATI

APPLICABLE CODES: 2017 OHIO BUILDING CODE AND ASSOCIATED CODES

CINCINNATI BUILDING CODE CINCINNATI ZONING CODE

PROJECT DESCRIPTION:

INTERIOR TENANT SPACE IMPROVEMENT AND RENOVATION OF PUBLIC RESTROOMS AT THE FIRST FLOOR OF THE EXISTING 4 STORY HISTORIC BUILDING.

FLOORS 2-4 ARE BEING RENOVATED UNDER A SEPARATE PERMIT: 2022P02937, WITH ASSOCIATED WORK OCCURRING AT THE BASEMENT, FIRST FLOOR, ATTIC AND ROOF.

WORK FOR THIS PERMIT OCCURS PRIMARILY AT THE FIRST FLOOR INTERIOR WITH ASSOCIATED WORK OCCURRING AT THE BASEMENT, ROOF, AND STOREFRONTS.

THE OVERALL PROJECT HAS BEEN AWARDED HISTORIC TAX CREDITS BY THE STATE HISTORIC PRESERVATION OFFICE AND NATIONAL PARK SERVICE. IT ALSO RECEIVED ZONING RELIEF AND CERTIFICATE OF APPROPRIATENESS APPROVAL ON 04-11-2022.

THE BUILDING WILL HAVE A FIRE SUPPRESSION SYSTEM.

PLUMBING, ELECTRIC, SPRINKLER + FIRE ALARM SYSTEMS WILL BE SUBMITTED UNDER SEPARATE PERMITS.

ZONING INFORMATION:

ZONING DISTRICT: CC-P - COMMERCIAL COMMUNITY - PEDESTRIAN OVER THE RHINE HISTORIC DISTRICT HISTORIC OVERLAY: PARKING OVERLAY: URBAN PARKING OVERLAY DISTRICT PARCEL ID: 009400080276

PARKING REQUIREMENTS: PARKING IS O.T.R. EXEMPT.

GROSS COMMERCIAL AREA: 4,550 SF (INCLUDING CIRCULATION & PUBLIC RESTROOMS)

2017 OHIO BUILDING CODE (OBC) - BUILDING DATA

CHAPTER 34

SECTION 3409.1 - HISTORIC BUILDINGS

THIS BUILDING IS A DESIGNATED HISTORIC BUILDING IN A DESIGNATED HISTORIC DISTRICT. THE PROPOSED EXCEPTIONS TO MANDATORY WORK/COMPLIANCE DO NOT PRESENT ANY DISTINCT LIFE SAFETY HAZARDS.

SECTION 3411.9 - HISTORIC BUILDINGS

THE PUBLIC RESTROOMS AND THEIR ACCESS WILL REMAIN ACCESSIBLE.

THE PUBLIC AREA OF THE TENANT SPACE OCCURS ACROSS TWO HISTORICALLY SEPARATE BUILDINGS WITH A FLOOR HIGHT DIFFERECE BETWEEN THEM. EACH OF THE TWO AREAS HAS ACCESSIBLE ACCESS FROM THE EXTERIOR. THERE ISN'T AN ACCESSIBLE INTERIOR CONNECTION BETWEEN THE TWO AREAS.

ACCESSIBILITY IN HISTORIC BUILDINGS

PLATTE ARCHITECTURE + DESIGN IN CONJUNCTION WITH OUR CONSULTANTS AND THE OWNER WILL ATTEMPT TO IMPROVE THE ACCESSIBILITY OF HISTORIC BUILDINGS TO THE EXTENT FEASIBLE AND WITHOUT ALTERING THE BUILDING STRUCTURE OR HISTORIC CHARACTER. BUILDING ELEMENTS THAT DO NOT FULLY MEET THE REQUIREMENTS OF ICC A117.1 AS REFERENCED IN THE 2017 OBC WILL NOT BE INDICATED OR IDENTIFIED AS ACCESSIBLE.

SECTION 302.1 - USE GROUP CLASSIFICATION

PROPOSED EXISTING NOT OCCUPIED **NOT OCCUPIED** IST FLOOR: B + A-2B + M FLOORS 2-4: (NO WORK) R2 - APARTMENTS **R2** - APARTMENTS NOT OCCUPIED NOT OCCUPIED

TABLE 508.4 - REQUIRED SEPARATION OF OCCUPANCIES (HOURS)

SEPARATED MIXED OCCUPANCY.

PROVIDED: I BETWEEN B/M & R-2: REQUIRED: I BETWEEN B & M: REQUIRED: 0 PROVIDED: 0 REQUIRED: 0 PROVIDED: 0 BETWEEN B/M & S-I:

TABLE 601 - FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS

CONSTRUCTION TYPE IIIB

EXTERIOR BEARING WALLS - EXISTING: 2-HR RATING REQUIRED. ALL ARE 8" MIN SOLID MASONRY -2-HR EQUIVALENT. OTHER ELEMENTS: 0-HR RATING REQUIRED

SECTION 602 - CONSTRUCTION CLASSIFICATION

CONSTRUCTION TYPE: IIIB

TABLE 705.8 - MAXIMUM AREA OF EXTERIOR WALL OPENINGS

EXG CONDITION TO REMAIN - NO NEW OPENINGS.

SECTION 716.5.9 - DOOR CLOSING

ALL FIRE DOORS WILL HAVE CLOSERS AND LATCHES.

SECTIONS 718.2 FIREBLOCKING & 718.3 DRAFTSTOPPING

CONTRACTOR TO PROVIDE FIRE-BLOCKING AND DRAFT-STOPPING IN COMBUSTIBLE AND CONCEALED LOCATIONS TO CUT OFF CONCEALED DRAFT OPENINGS (BOTH VERTICAL AND HORIZONTAL) AND FORM AN EFFECTIVE BARRIER BETWEEN FLOORS, BETWEEN A TOP STORY AND A ROOF OR ATTIC SPACE, AS REQUIRED IN THESE SECTIONS.

TABLE 803.11 - INTERIOR FINISH REQUIREMENTS

CORRIDORS, USE B ROOMS AND ENCLOSED SPACES, USES B&M

SECTION 903 - AUTOMATIC SPRINKLER SYSTEMS

THE BUILDING WILL HAVE AN AUTOMATIC SPRINKLER SYSTEM UNDER SEPARATE PERMIT. SYSTEM DESIGN AND/OR MODIFICATIONS REQUIRED FOR THIS PERMIT ARE BY OTHERS.

SECTION 906 - PORTABLE FIRE EXTINGUISHERS

FIRE EXTINGUISHERS WILL BE PROVIDED BY REQUIRED BY THIS SECTION IN COORDINATION WITH THE LOCAL FIRE DEPARTMENT.

907.5 - OCCUPANT NOTIFICATION SYSTEMS: FIRE ALARM SYSTEM IS REQUIRED AND WILL BE PROVIDED. SYSTEM IS TO BE DESIGN-BUILD BY CONTRACTOR. CONTRACTOR SHALL PROVIDE ALL REQUIRED DRAWINGS AND SUBMIT TO ARCHITECT FOR REVIEW BEFORE SUBMITTING TO AUTHORITIES.

SECTION 1004 - OCCUPANT LOAD

FLOOR OR AREA **OCCUPANTS** USE / O.L.F. 3291 SF BASEMENT FIRST FLOOR area a M / 60 SF 824 SF M / 300 SF AREA B 2672 SF

SECTION 1005 - MEANS OF EGRESS SIZING

THE SIZE OF ALL COMPONENTS OF THE MEANS OF EGRESS SYSTEM FROM OCCUPIED SPACES MEETS OR EXCEEDS THE REQUIREMENTS OF THIS SECTION.

SECTION 1006.3 - EGRESS BASED ON OCCUPANT LOAD & TABLE 1006.3.1 - MINIMUM NUMBER OF EXITS/STORY

OCCUPANT LOAD LESS THAN 500 - 2 EXITS REQUIRED THROUGHOUT, U.N.O.

FIRST FLOOR AREA AREA A: 4 EXITS PROVIDED AREA B: 2 EXITS PROVIDED

SECTION 1009 - ACCESSIBLE MEANS OF EGRESS

EXCEPTION I: NOT REQUIRED IN EXISTING BUILDINGS. REFER TO CHAPTER 34 NOTES.

SECTION 1010 - DOORS

ALL EGRESS DOORS ARE SIDE HINGED. HAVE A MINIMUM CLEAR OPENING WIDTH OF 32". WILL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT, AND WILL MEET OTHER APPLICABLE REQUIREMENTS OF THIS SECTION.

SECTION 1011 - STAIRWAYS

ONE EXISTING STAIRS IN AREA A CONNECTING BASEMENT TO FIRST FLOOR WILL REMAIN UNALTERED.

SECTION 1017 - EXIT ACCESS TRAVEL DISTANCE AND TABLE 1017.2 - EXIT ACCESS TRAVEL DISTANCE

ALL EXIT ACCESS TRAVEL DISTANCES ARE LESS THAN ALLOWED MAXIMUMS.

M USE: MAXIMUM TRAVEL DISTANCE - 250'. B USE: MAXIMUM TRAVEL DISTANCE - 300'. S-I USE: MAXIMUM TRAVEL DISTANCE - 250'.

SECTION 1023 - INTERIOR EXIT STAIRWAYS/EXIT ACCESS STAIRWAYS

ONE EXISTING STAIRS IN AREA A CONNECTING BASEMENT TO FIRST FLOOR WILL REMAIN UNALTERED.

SECTIONS 1104 - ACCESSIBLE ROUTES & 1105 - ACCESSIBLE ENTRANCES

REFER TO CHAPTER 34 NOTES.

SECTION 2406 - SAFETY GLAZING

SAFETY GLAZING WILL BE PROVIDED AS REQUIRED BY THIS SECTION.

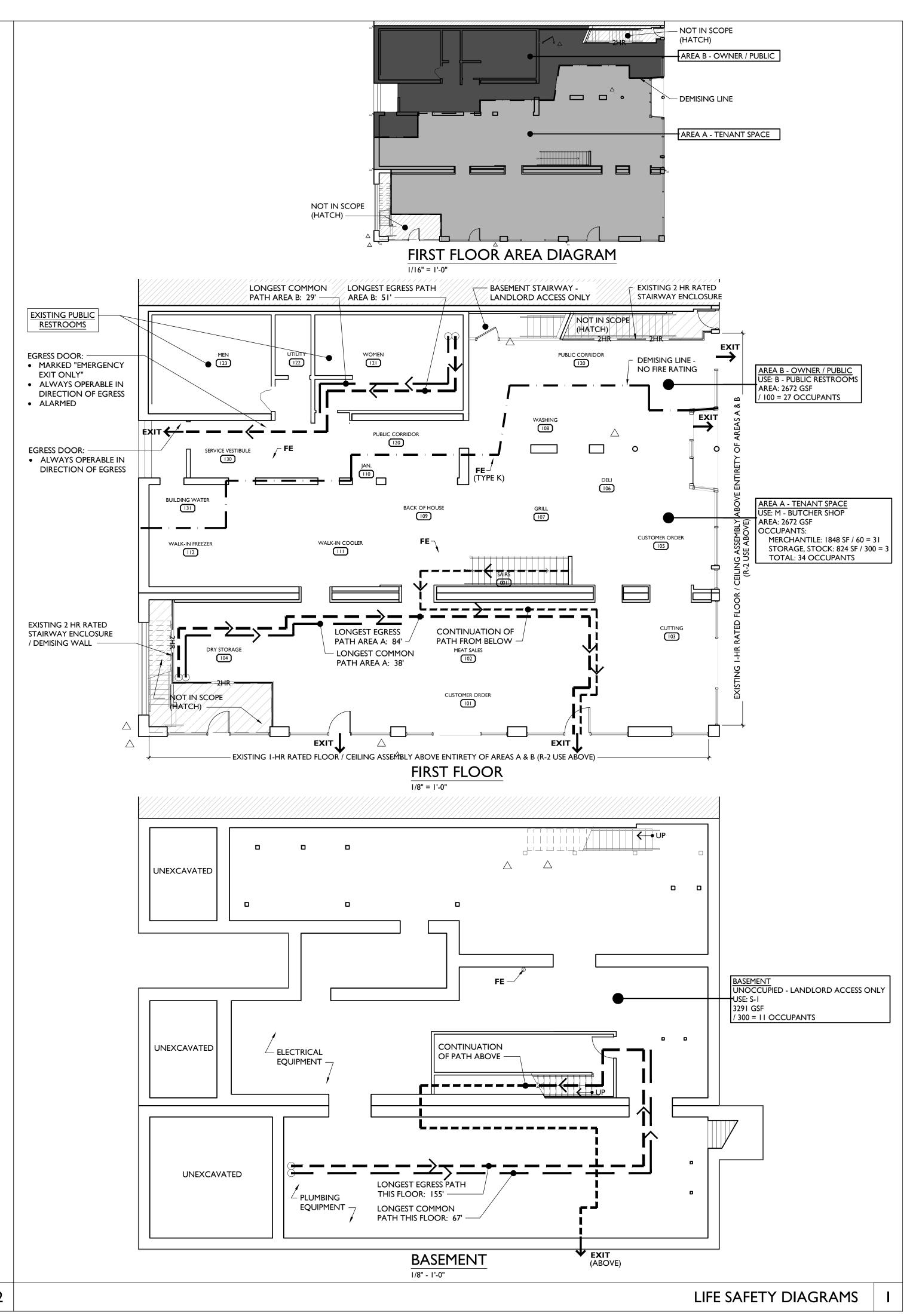
CHAPTER 29 - PLUMBING SYSTEMS

AREA B EXISTING PUBLIC RESTROOMS WILL BE RENOVATED WITH NO CHANGE TO TYPES AND NUMBERS OF FIXTURES. A MOP SINK AND DRINKING FOUNTAIN ARE INCLUDED.

AREA A TENANT HAS ACCESS TO THE PUBLIC RESTROOMS.

A MOP SINK IS PROVIDED WITHIN AREA A.

AREA A TENANT WILL MAKE DRINKING WATER AVAILABLE TO CUSTOMERS.



ARCHITECTURE

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DESIGN

Design Team: Progress Dates

Job No: 22040 09.11.2023

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installation. WHERE INFILLING EXISTING OPENINGS IN, OR EXTENDING THE LENGTH OF AN EXISTING

A. THIS PROJECT IS A NPS AND OHPO HISTORIC PRESERVATION TAX CREDIT PROJECT COORDINATE & CONFORM ALL WORK TO THE APPROVED PART 2 NARRATIVE AND AMENDMENTS. NO HISTORIC ELEMENTS ARE TO BE REMOVED OR MODIFIED UNLESS SPECIFICALLY NOTED OTHERWISE. THROUGHOUT THIS PROJECT, SOME HISTORIC DOORS, WINDOWS, AND INTERIOR TRIM REMAIN INTACT. HISTORIC ELEMENTS (TRIM, DOORS, ETC.) TO REMAIN - OR - BE SALVAGED FOR REUSE. IF ANY ELEMENTS ARE TO BE SALVAGED AND NOT REUSED, STORE IN BASEMENT. B. IF UNEXPECTED HISTORIC TRIM IS UNCOVERED DURING DEMOLITION, STOP WORK AND CONTACT ARCHITECT IMMEDIATELY FOR DOCUMENTATION AND POSSIBLE SHPO/NPS ADDITIONAL INFORMATION REGARDING ELEMENTS TO BE RETAINED: C. RETAIN HISTORIC EXTERIOR ORNAMENT- CORNICES, FRIEZES, BRACKETS, ETC. AS NOTED. D. RETAIN HISTORIC STOREFRONT ELEMENTS - COLUMNS, LINTELS, THRESHOLDS, GLAZING. RETAIN HISTORIC INTERIOR WOOD TRIM - INCLUDES MANTLES, BASEBOARDS, CROWN MOLDING. WALL PANELS. WAINSCOTING. WINDOW FRAMES. DOOR FRAMES. ETC. - CAREFULLY REMOVE & RETAIN HISTORIC TRIM AT WALLS WHERE PLASTER IS BEING REMOVED AND/OR NEW FURRING INSTALLED. - RETAIN HISTORIC INTERIOR AND EXTERIOR DOORS, FRAMES, TRANSOMS, SIDELITES, AND TRIM AS NOTED IN DRAWINGS. - RETAIN ANY REMAINING HISTORIC WOOD WINDOW SASH, FRAMES, BRICKMOLD AND SHUTTER HARDWARE. RETAIN LOCATION OF EXISTING DOWNSPOUT TIE-INS, U.N.O. CLEAR OF DEBRIS & REPAIR REMOVE THE FOLLOWING, UNLESS NOTED OTHERWISE: G. FURNITURE & DEBRIS, INTERIOR & EXTERIOR, ALL FLOOR LEVELS, SECOND FLOOR THROUGH ATTIC. NO WORK ASSUMED IN BASEMENT OR AT FIRST FLOOR, U.N.O. IN PLANS. SYSTEMS FOR EXG TENANTS TO REMAIN. H. NON-HISTORIC DOORS & DOOR FRAMES (SHOWN DASHED). UNUSED MECHANICAL SYSTEMS - BOILERS, FURNACES, CONDENSERS, DUCTS, VENTS, PANELS, ETC. BACK TO SERVICE. UNUSED ELECTRIC SYSTEMS - FIXTURES, SWITCHES, RECEPTACLES, WIRING, PANELS, ETC. BACK TO SERVICE. SYSTEMS FOR EXG TENANTS TO REMAIN. K. UNUSED PLUMBING SYSTEMS - FIXTURES, WATER HEATERS, DRAINS, PIPING, VENT STACKS, ETC. BACK TO SERVICE. SYSTEMS FOR EXG TENANTS TO REMAIN. NON-HISTORIC DOWNSPOUTS & ALUMINUM GUTTERS/GUTTER BOARDS. M. NON-HISTORIC VINYL AND ALUM WINDOWS - RETAIN WOOD FRAMES & BRICKMOLD WHERE INDICATED. N. VEGETATION FROM BRICK. O. PLASTER & LATH - REMOVE LOOSE OR DETERIORATED PLASTER THROUGHOUT. RETAIN AT EXG STAIR WALLS, U.N.O. REFER TO HISTORIC NARRATIVES FOR SPECIFIC GUIDELINES FOR REMOVAL OR RETENTION. P. AT NEW OPENINGS AND MODIFICATIONS OF EXISTING OPENINGS IN MASONRY WALLS. OR REMOVAL OF INFILL AT STOREFRONTS, SEE STRUCTURAL DWGS. - VERIFY INFILL IS NON-LOADBEARING PRIOR TO DEMOLITION. - VERIFY CONDITION OF EXG. LINTEL. IF DAMAGED, CONTACT ARCHITECT & STRUCT FNGINFFR - PROVIDE SHORING AS REQUIRED - TOOTH OUT AND KEY IN MASONRY SO NO CUT BRICK IS EXPOSED, EXCEPT WHERE NOTED IN CORRIDORS. - EXPOSED MASONRY EDGES ARE TO BE FIRED EDGES, U.N.O. Q. REMOVE ROOFING DOWN TO EXG. SUBSTRATE, U.N.O. REPLACE DAMAGED/ DETERIORATED SUBSTRATE AS REQ. R. REMOVE ANY DETERIORATED WOOD SUBFLOOR. REPLACE WITH NEW PLYWOOD S. AT COMPLETION OF DEMOLITION, ALL FLOORS SHALL BE SWEPT BROOM CLEAN. INCLUDING AMENDMENTS. SUBFLOOR - PER STRUCT DWGS.

GENERAL NOTES - EXG/DEMOLITION WORK

A. THIS IS A HISTORIC TAX CREDIT PROJECT. WORK MUST COMPLY W/ APPROVED PART 2

B. NO HISTORIC ELEMENTS SHALL BE REMOVED/MODIFIED UNLESS SPECIFICALLY INDICATED

C. REPAIR OR REPLACE EXG DAMAGED OR DETERIORATED FLOOR FRAMING &/OR WOOD

D. HISTORIC TRIM TO BE RETAINED, U.N.O. SEE DEMO & PROPOSED PLANS. RETAIN ANY REMAINING HISTORIC WOOD WINDOW SASH, FRAMES, BRICKMOLD &

SHUTTER HARDWARE, U.N.O. SEE DEMO & EXTERIOR ELEVATIONS. REPAIR MATERIALS THAT ARE DETERIORATED OR HAVE MOISTURE/FIRE DAMAGE AS REQ. IF DAMAGE IS SEVERE AND HISTORIC ELEMENTS ARE NON-SALVAGEABLE, COORDINATE REPLACEMENT ELEMENTS WITH ARCHITECT.

G. SEE CODE SHEETS FOR ROOF/FLOOR/CEILING ASSEMBLY LOCATIONS & PARTITION SCHEDULE FOR TYPES.

H. PENETRATIONS OF RATED ASSEMBLIES TO BE PROTECTED PER SECTION 713.3 & 713.4 OBC. COORD W/ MEP DWGS. PROVIDE FIRE BLOCKING PER 717.2 OBC.

PROVIDE DRAFTSTOPPING IN FLOORS, CLGS/ROOFS & ATTICS PER OBC. PROVIDE BLOCKING FOR SHELVING, CABINETS AND BATHROOM ACCESSORIES AND GRAB BARS. SEE PLANS AND INTERIOR ELEVATIONS.

USE PRESSURE TREATED WOOD IN THE FOLLOWING LOCATIONS: - EXTERIOR APPLICATIONS.

- WOOD IN CONTACT WITH MASONRY, STONE, OR CONCRETE. - AT ANY NEW FRAMING IN CONTACT W/ MASONRY OR FOUNDATION WALL, PROVIDE SEPARATION/ JOIST & BEAM END WRAPS. M. EXTERIOR TRIM, SOFFITS, CORNICE AND STOREFRONT ELEMENTS TO BE

REPAIRED/RETAINED/REPLACED AND PAINTED AS NOTED IN DRAWINGS. EXG. UN-PAINTED BRICK AND STONE TO REMAIN UNPAINTED. SEE EXTERIOR ELEVATIONS FOR SCOPE OF WORK. COORD COLORS DIRECTLY W/ ARCHITECT. N. PROVIDE SLEEVES THROUGH EXG BRICK WALL IN ATTIC AS REQUIRED FOR HVAC LINE-SET

O. ADDL OPENINGS IN EXT WALLS WILL BE REQ FOR VARIOUS MEP DUCTS/PIPES/ETC, AND ARE NOT SHOWN ON ARCH & STRUCT PLANS. COORD W/ MEP PLANS. CONTACT

ARCHITECT FOR PLACEMENT. P. PROVIDE FIRE EXTINGUISHERS PER CODE SUMMARY & NFPA REQS. COORD W/ FIRE

Q. FASTENERS INTO EXISTING HISTORIC MASONRY WALLS ARE TO BE FASTENED INTO MORTAR JOINTS. R. EXTERIOR STEEL TO BE DUPLEX-FINISH (GALVANIZED, WITH HIGH-PERFORMANCE

COMPATIBLE EPOXY PAINT). EXTERIOR WOOD TO BE PRESSURE TREATED.

WOOD FRAMED PARTITION, FINISH FACES OF THE NEW CONSTRUCTION ARE TO ALIGN WITH ADJACENT EXISTING FINISH FACES ON BOTH SIDES. U. SHEET METAL WORK TO COMPLY WITH SMACA ARCHITECTURAL SHEET METAL MANUAL. V. FLASH AND SEAL NEW ROOF PENETRATIONS THROUGH EXISTING ROOF. EMPLOY INSTALLERS ACCEPTABLE TO EXISTING ROOF MANUFACTURER AND COMPLY WITH

EXISTING ROOF MANUFACTURER REQUIREMENTS TO MAINTAIN EXISTING ROOF

W. GYPSUM BOARD: SEE PARTITION SCHEDULE. MOLD & MOISTURE RESISTANT GYPSUM BOARD IN ALL WET AREAS - RESTROOMS, KITCHENS, LAUNDRY, BASEMENTS.

GENERAL NOTES - PROPOSED WORK

GENERAL PROJECT NOTES:

I. CONTRACTOR TO VERIFY ALL DIMENSIONS AND INFORMATION IN THESE DRAWINGS.

2. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS. INCLUDING SITE CONDITIONS. ALL ERRORS, OMISSIONS, AND BEING RENOVATED. THE TERM "OWNER" INCLUDES HIS INCONSISTENCIES ARE TO BE REPORTED TO THE ARCHITECT DESIGNATED AND AUTHORIZED AGENTS AND BEFORE PROCEEDING WITH THE WORK. ANY CHANGES FROM THESE DOCUMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR, THESE DRAWINGS ARE NOT TO BE SCALED. "WORK": THE TERM "WORK" MEANS OBLIGATIONS IF INSUFFICIENT INFORMATION EXISTS, CONTACT THE THE WORK. EACH CONTRACTOR SHALL VISIT THE SITE TO OF ALL MATERIAL, LABOR, EQUIPMENT, SUPPLIES, TOOLS, BECOME FAMILIAR WITH EXISTING CONDITIONS AS MAY EFFECT HIS OWN WORK, DESIGN/BUILD OR OTHERWISE.

3. IT SHALL BE THE RESPONSIBILITY OF THE BUILDING OWNER TO SUPERVISE CONSTRUCTION AND INSURE THAT THESE DRAWINGS ARE COMPLIED IN THE EVENT THAT THIS ARCHITECT IS NOT RETAINED FOR SUCH SERVICES.

4. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODES, ORDINANCES AND REGULATIONS, INCLUDING THE AMERICANS WITH DISABILITIES ACT, HAVING AUTHORITY BY EACH RESPECTIVE TRADE.

WORK AND PAY FOR ANY RESULTANT DAMAGES TO OTHER OR INCOMPLETE CONDITION. WORK FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE.

6. CONTRACTOR SHALL SUPERVISE THE WORK DURING PROGRESS AND SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. CONTRACTOR SHALL BE BE IN ACCORDANCE WITH ALL STATE, FEDERAL AND O.S.H.A. WITH THE WORK. REGULATIONS.

7. CONTRACTOR AND ALL SUB-CONTRACTORS SHALL MAINTAIN THE JOB CLEAR OF TRASH AND DEBRIS. ALL WASTE MATERIAL, TOOLS, CONSTRUCTION EQUIPMENT AND SURPLUS MATERIAL SHALL BE REMOVED FROM THE SITE PRIOR TO SUBSTANTIAL COMPLETION AND FINAL ACCEPTANCE.

8. CONTRACTOR SHALL PRESENT THE PROJECT TO THE OWNER FOR ACCEPTANCE, CLEAN AND READY FOR USE. ALL GLASS TO BE CLEANED, FLOORS SWEPT BROOM CLEAN, FIXTURES WASHED AND LABELS REMOVED FROM ALL ITEMS.

9. ANY CONTRACTOR OF SUBCONTRACTOR WHO PERFORMS ANY WORK KNOWING IT TO BE CONTRARY TO APPLICABLE LAWS, ORDINANCES OR REGULATION, AND WITHOUT WRITTEN NOTICE TO THE ARCHITECT SHALL ASSUME FULL RESPONSIBILITY AND SHALL BEAR ALL ATTRIBUTABLE COSTS.

10. IN THE EVENT OF ANY CONFLICT BETWEEN ARCHITECTURAL DRAWINGS OR SPECIFICATIONS AND STRUCTURAL DRAWINGS OR SPECIFICATIONS, STRUCTURAL SHALL GOVERN.

II. PROJECT IS TO RECEIVE HISTORIC TAX CREDITS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE WELL VERSED IN THE APPROVED PART 2 AND SUBSEQUENT AMENDMENTS, AND TO INFORM SUBCONTRACTORS OF ANY CHANGES /APPROVALS DURING THE BIDDING AND THE CONSTRUCTION PHASES.

GENERAL NOTES: ALL TRADES

I. FURNISH ALL LABOR, MATERIAL AND APPURTENANCES NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM AS SHOWN OR REQUIRED.

2. ALL WORK SHALL CONFORM TO APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION. EACH CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, TESTS AND INSPECTIONS FOR HIS OWN WORK AS REQUIRED BY AUTHORITIES HAVING JURISDICTION.

3. PERFORM ALL TESTS, ADJUSTMENTS, ETC. AS REQUIRED BY EQUIPMENT MANUFACTURER OR AUTHORITIES HAVING JURISDICTION.

4. CONTRACTORS SHALL VISIT SITE TO BECOME FAMILIAR WITH EXISTING CONDITIONS AS MAY EFFECT HIS OWN WORK. EACH CONTRACTOR SHALL COORDINATE HIS OWN WORK WITH THAT OF OTHER TRADES.

5. EACH CONTRACTOR SHALL FURNISH ALL CUTTING AND PATCHING REQUIRED FOR HIS OWN WORK. NO CUTTING SHALL BE PERFORMED WITHOUT PRIOR APPROVAL OF GENERAL CONTRACTOR.

6. WORKMANSHIP SHALL REPRESENT THE HIGHEST STANDARD OF THE INDUSTRY. GUARANTEE ALL MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE.

GENERAL CONDITIONS

CONTRACT DOCUMENTS: INCLUDE THESE GENERAL CONDITIONS FOR CONSTRUCTION, DRAWINGS, SCHEDULES, AND SPECIFICATIONS PREPARED BY THE ARCHITECT AND CONTAINED HEREIN, AND ALL WRITTEN ADDENDA OR OTHER MODIFICATIONS ISSUED SUBSEQUENTLY BY THE ARCHITECT. THE CONTRACT DOCUMENTS SHALL NOT BE CONSTRUED TO CREATE ANY CONTRACTUAL RELATIONSHIP OF ANY KIND BETWEEN THE ARCHITECT AND THE CONTRACTOR.

CONTRACT MODIFICATIONS: THESE CONTRACT DOCUMENTS SHALL NOT BE FURTHER MODIFIED BY ANY TERMS OR CONDITIONS OTHER THAN THOSE LISTED HEREIN OR IN THE SPECIFICATIONS, OR IN ANY WRITTEN AGREEMENTS EXECUTED BY THE OWNER, CONTRACTOR AND SUBCONTRACTORS.

NOTES WRITTEN IN THE IMPERATIVE MOOD REFER TO ACTION TO BE PERFORMED BY THE CONTRACTOR. THE WORDS "THE CONTRACTOR SHALL" ARE ALWAYS IMPLIED, IF NOT STATED, UNLESS OTHERWISE NOTED. THE TERM "CONTRACTOR" SHALL ALSO APPLY TO ALL SUBCONTRACTORS OF THE CONTRACTOR.

THE CURRENT EDITION OF AIA DOCUMENT A101 SHALL BE THE FORM OF AGREEMENT TO BE SIGNED BY THE OWNER AND GENERAL CONTRACTOR, UNLESS THE OWNER AND CONTRACTOR MUTUALLY AGREE OTHERWISE. GENERAL CONDITIONS CONTAINED IN AIA DOCUMENT A201 SHALL

DEFINITIONS:

"CONTRACTOR": THE PERSON OR ENTITY CONSTRUCTING THE DESIGNATED WORK.

"OWNER": THE PERSON OR ENTITY THAT OWNS THE BUILDING REPRESENTATIVES.

UNDERTAKEN BY THE CONTRACTOR PURSUANT TO THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH CONTRACT DOCUMENTS. WORK INCLUDES THE FURNISHING SCAFFOLDING, SUPERVISION, TRANSPORTATION, INSURANCE. TAXES AND ALL OTHER SERVICES, INCIDENTALS AND EXPENSES NECESSARY FOR THE FULL PERFORMANCE AND COMPLETION OF THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

> "PROJECT": THE PROJECT IS THE TOTAL CONSTRUCTION OF WHICH THE WORK PERFORMED UNDER THE CONTRACT DOCUMENTS MAY BE THE WHOLE OR A PART.

"CONTRACT DOCUMENTS": THE INTENT OF THE CONTRACT DOCUMENTS IS TO INCLUDE ALL ITEMS REQUIRED FOR BEARING ON THE PERFORMANCE OF THE WORK, AND SHALL COMPLETION OF THE WORK, INCLUDING DRAWINGS AND BE DONE TO THE HIGHEST STANDARDS OF CRAFTSMANSHIP SPECIFICATIONS. ALTHOUGH THE CONTRACT DOCUMENTS HAVE BEEN PREPARED WITH DUE CARE AND DILIGENCE, PERFECTION CANNOT BE GUARANTEED. THE CONTRACTOR IS 5. GUARANTEES SHALL BE REQUIRED FOR ALL ASPECTS OF THE RESPONSIBLE FOR THE COORDINATION OF THE VARIOUS PARTS WORK. CONTRACTORS TO REMEDY ANY DEFECTS IN THEIR OF THE WORK SO THAT NO PART SHALL BE IN AN UNFINISHED

DRAWINGS PREPARED BY OTHERS:

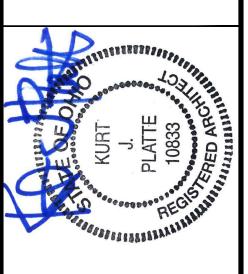
ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS SHALL BE WORKED TOGETHER, INCLUDING THE LOCATION OF DEPRESSED SLABS, SLOPES. DRAINS, REGLETS, BOLT SETTINGS, ETC. ANY DISCREPANCY RESPONSIBLE FOR CONSTRUCTION SAFETY; COMPLIANCE TO SHALL BE REPORTED TO THE ARCHITECT BEFORE PROCEEDING

> SHOP DRAWINGS PREPARED BY OTHER CONTRACTORS MAY BE REQUIRED TO SUPPLEMENT THE CONTRACT DOCUMENTS. SUCH DRAWINGS ARE FURNISHED FOR THE CONTRACTOR'S INFORMATION AND COORDINATION ONLY.

> > GENERAL PROJECT NOTES

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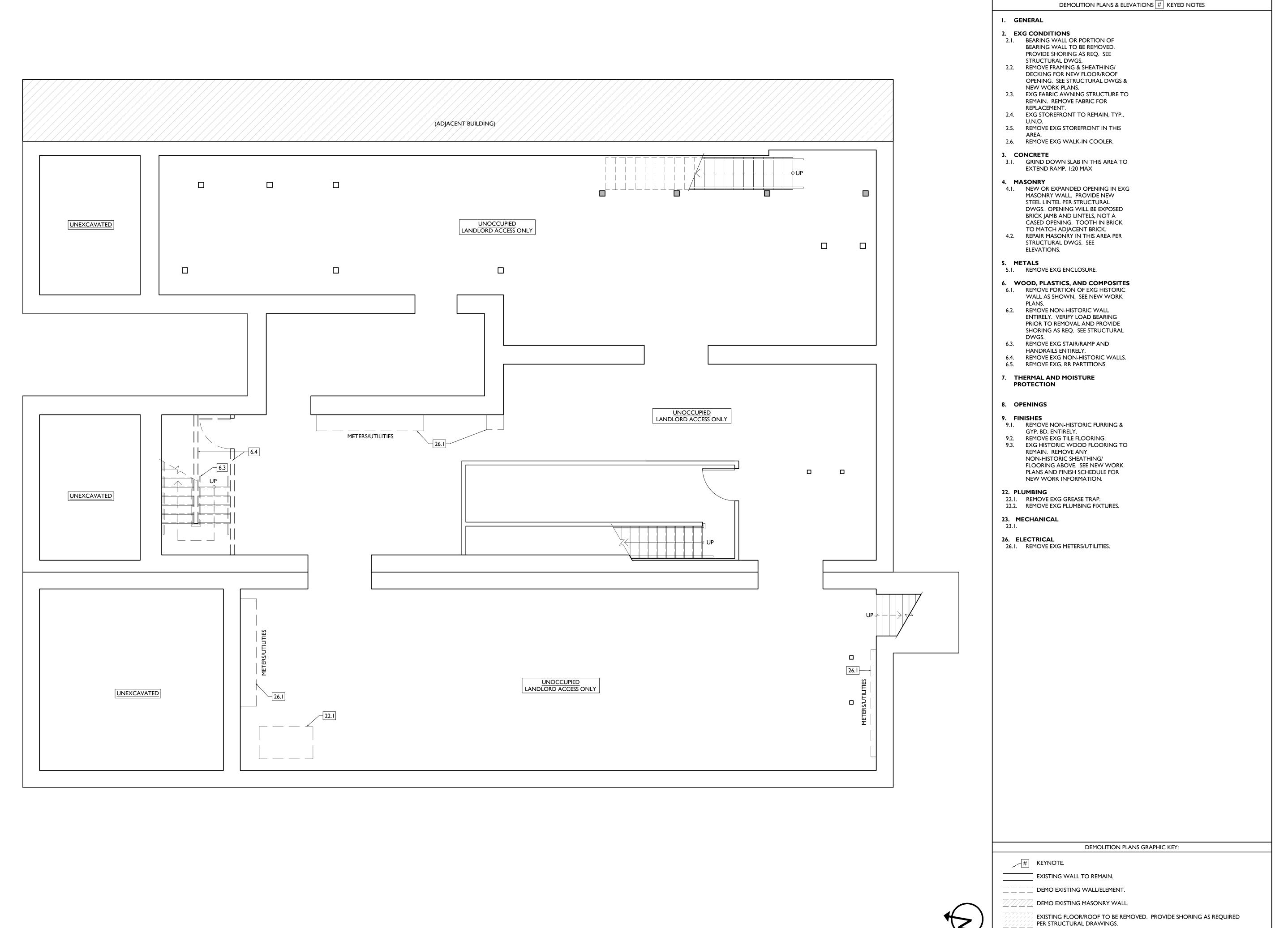
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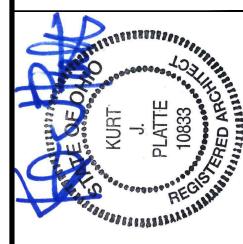
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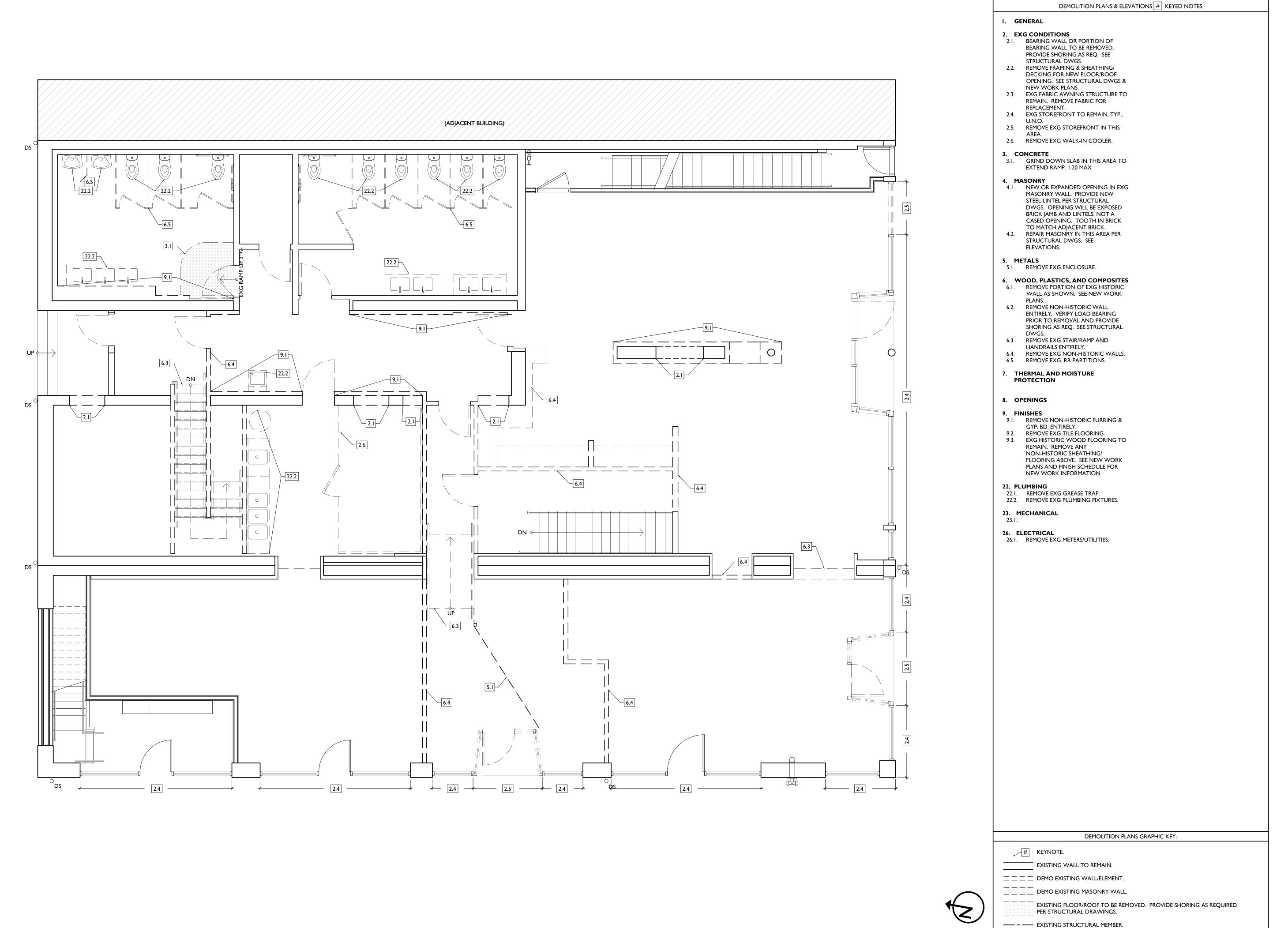
NANT IMPROVEMENT AND PUE

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AD1.00

—— – —— EXISTING STRUCTURAL MEMBER.

X'-X" ELEVATION TAG.



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

EXISTING / DEMOLITON PLAN - FIRST FLOOR

◆X'-X" ELEVATION TAG.

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PLATTE

ARCHITECTURE

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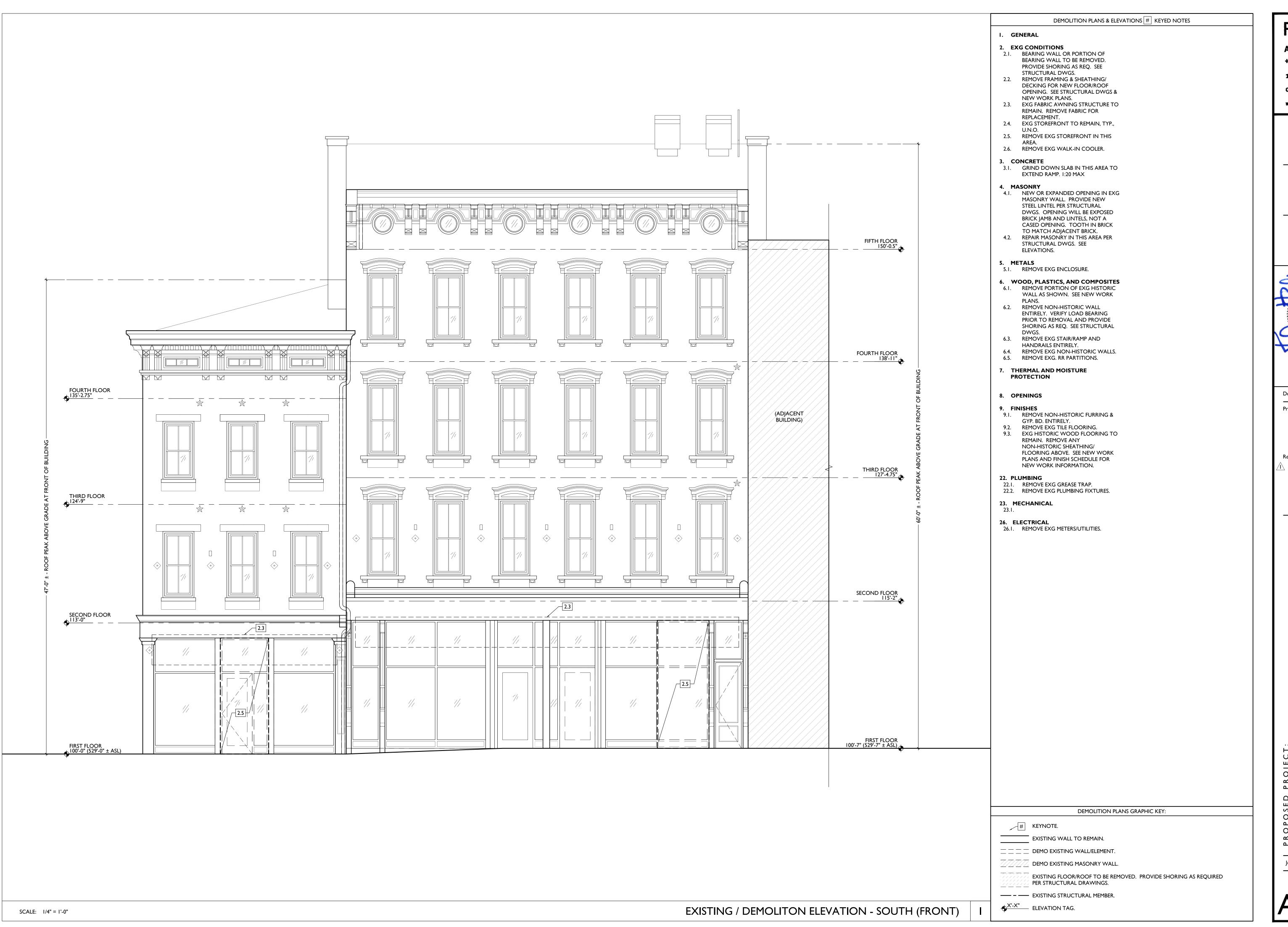
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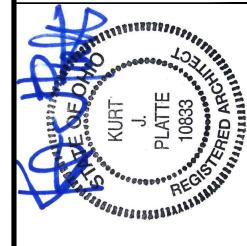
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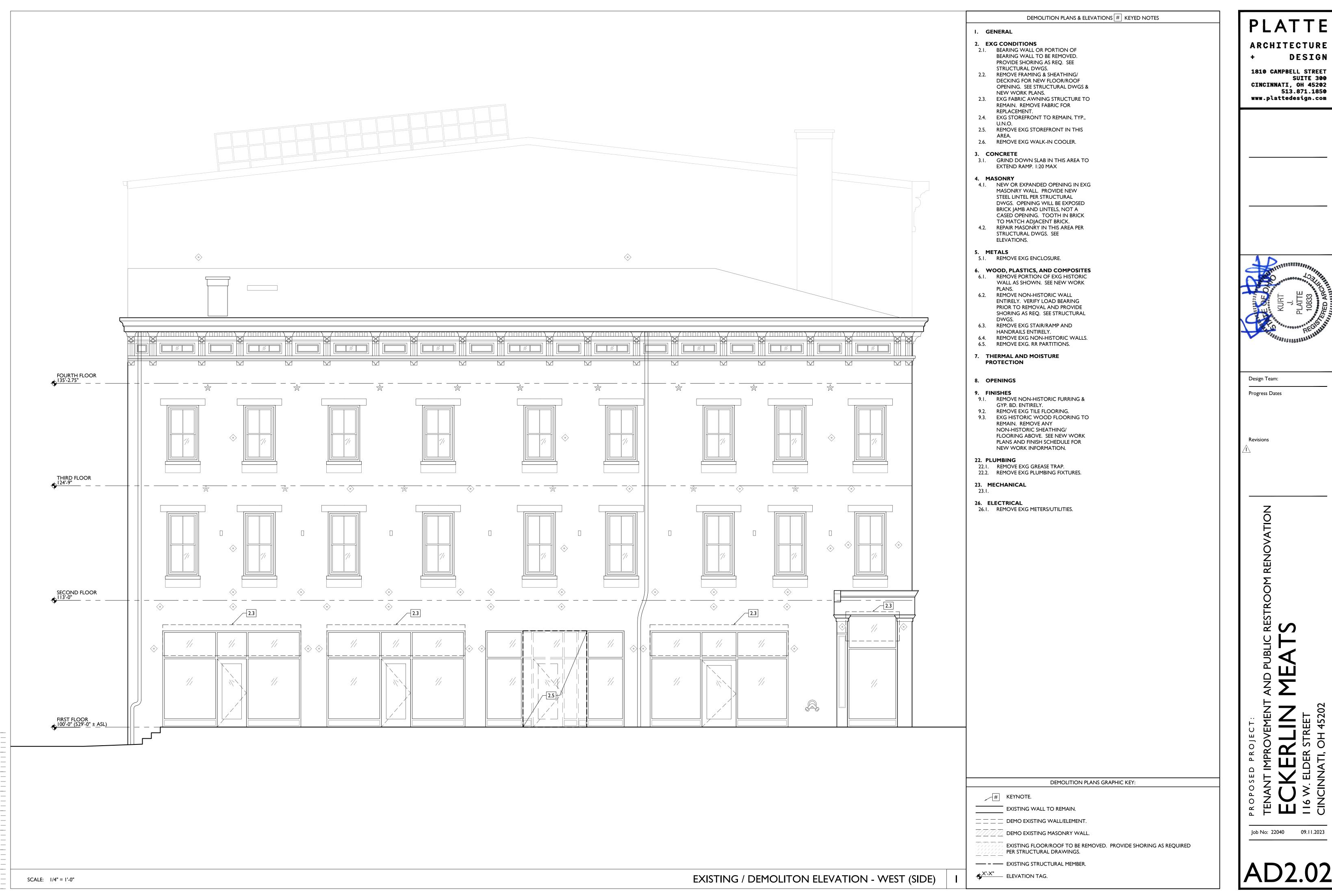
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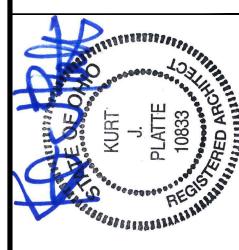
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II6 W. ELDER STREET

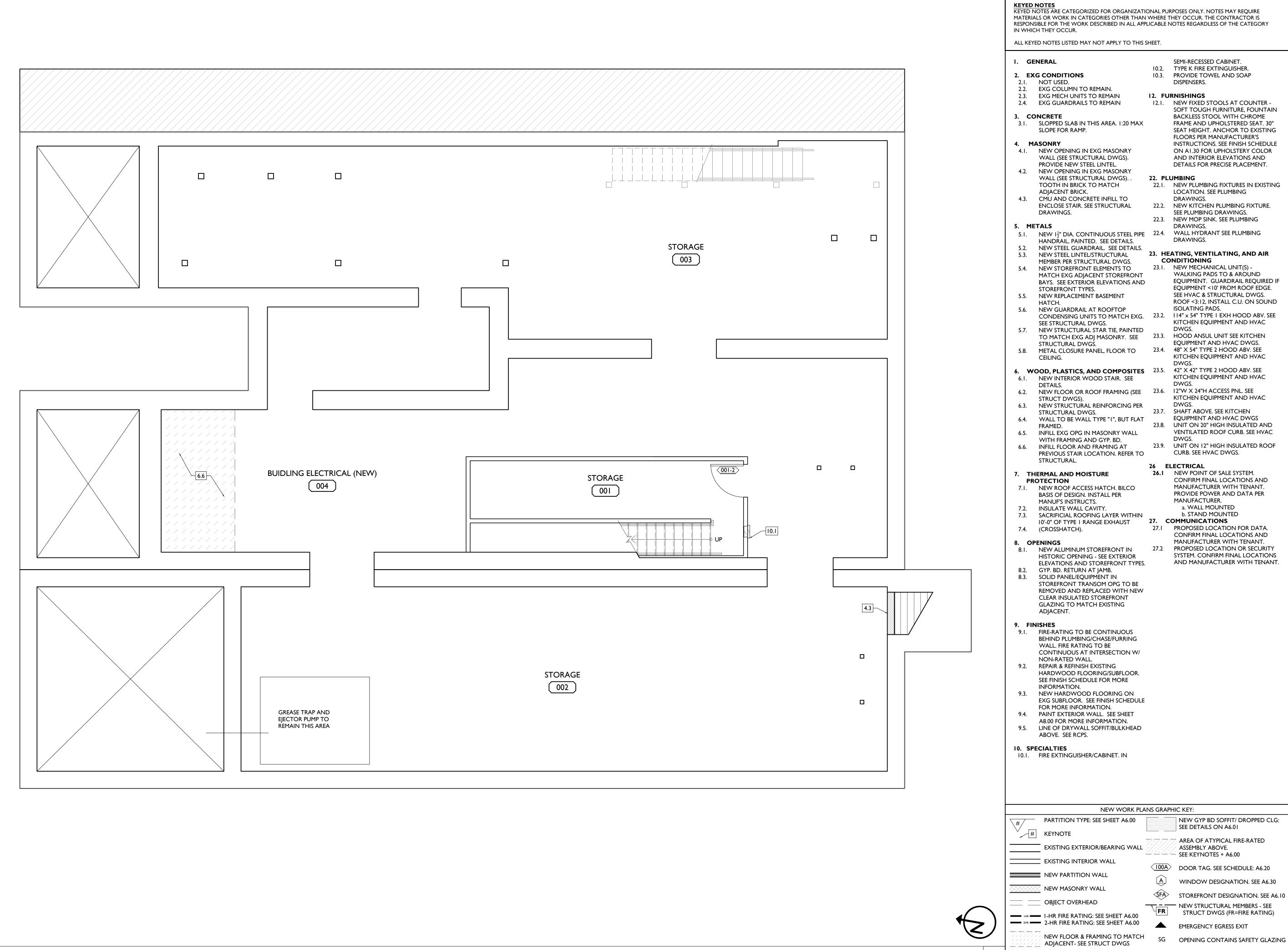
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NEW WORK PLANS & ELEVATIONS | # | KEYED NOTES

DESIGN
810 CAMPBELL STREET

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I MEATS

PROPOSED PROJECT:

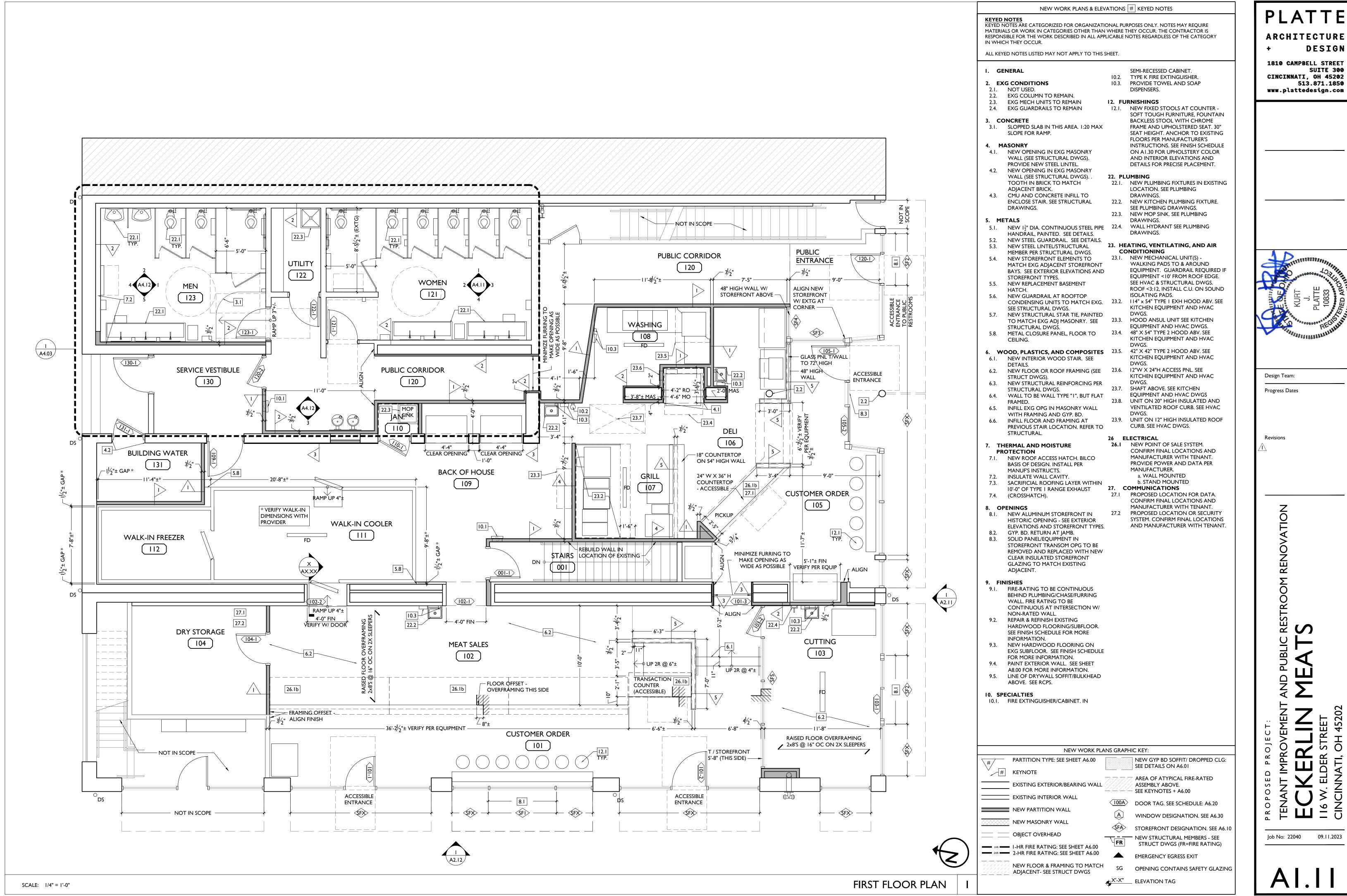
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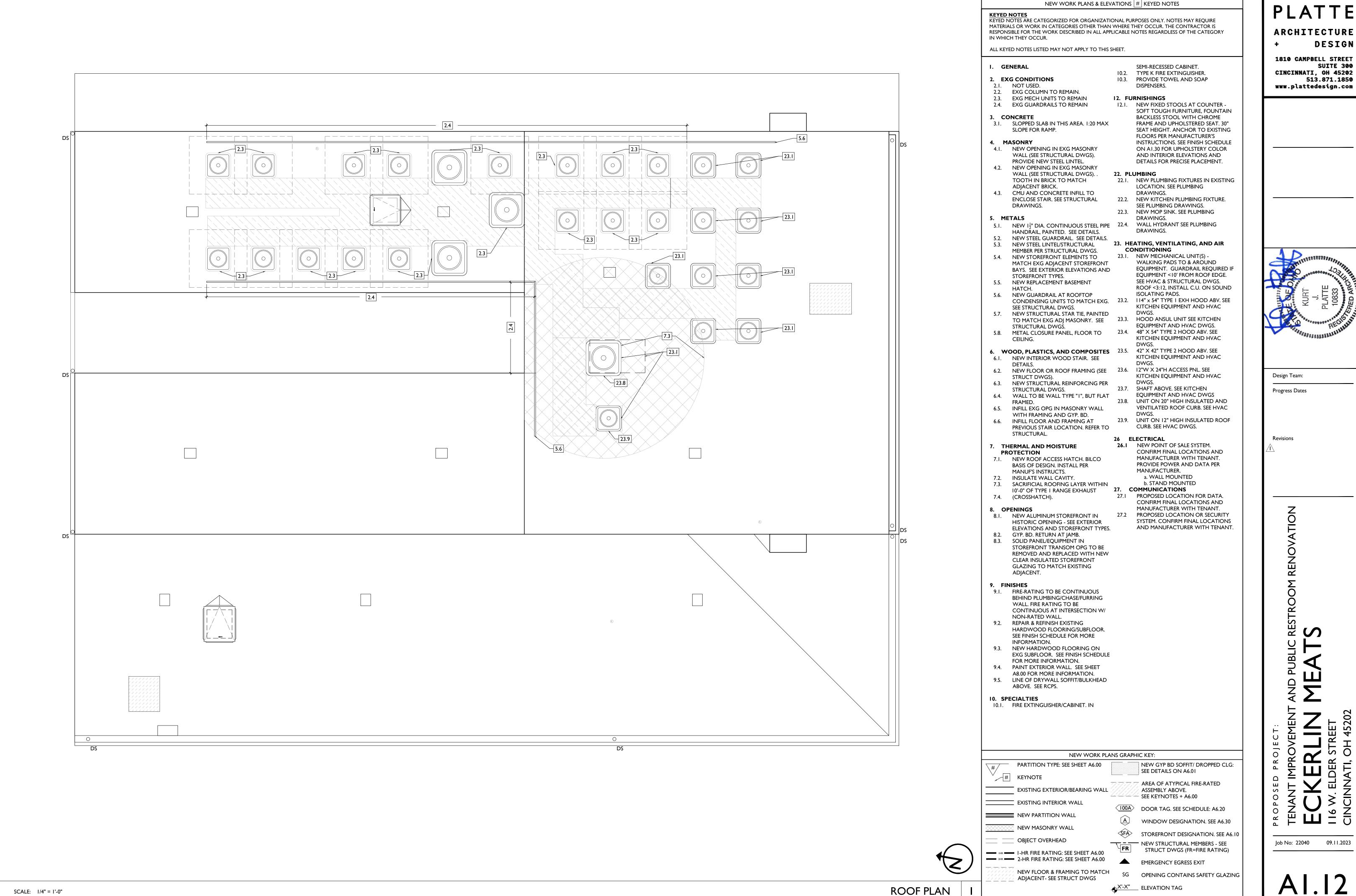
X'-X" ELEVATION TAG



DESIGN

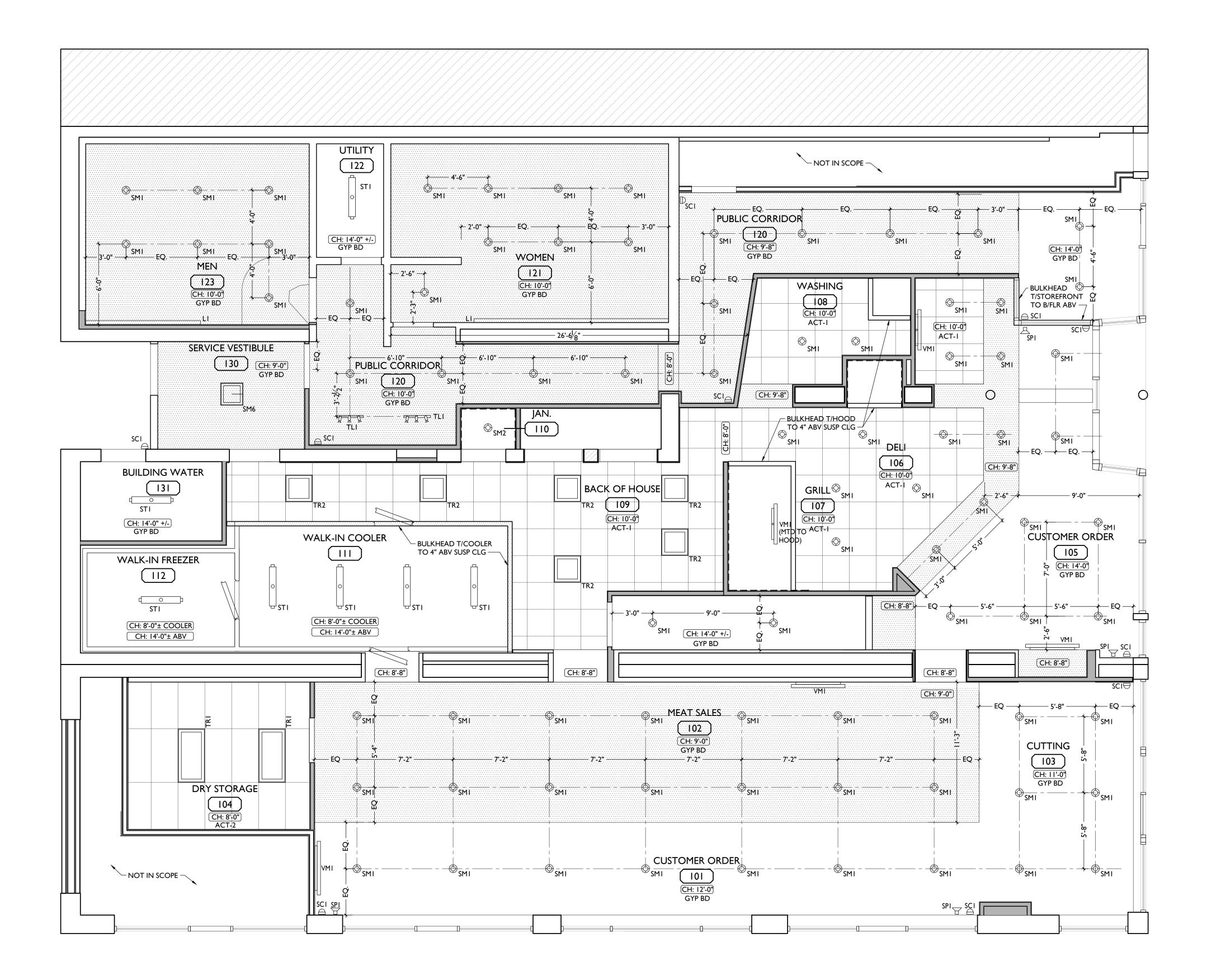
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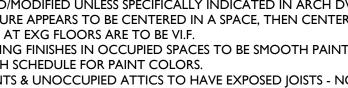
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SYMBOL	TAG	FIXTURE TYPE	REMARKS						
⊕ _{SM#}	SMI SM2	SURFACE MOUNT LED LIGHT	SMI - GENERAL LIGHTS. SM2 -						
VI	VI	VANITY LIGHT	TYP OVER BATHROOM VANITIES- SEE A4.01 FOR MOUNTING						
F	FI F2	CEILING FAN W/ LIGHT	FI - LARGE FAN F2 - SMALL FAN						
LI	LI	LED LIGHT	SURFACE MOUNTED LINEAR ABOVE RESTROOM SINKS						
 UC	UC	UNDER- CABINET LIGHT	UNDERCABINET LIGHT						
STI (O)	STI	LED STRIP LIGHT	TYPICAL SURFACE MOUNTED FIXTURE IN UTILITY AREA						
O _{ELI}	ELI	EXTERIOR LIGHT	DOWN LIGHTS						
	EL2	EXTERIOR LIGHT	GOOSENECK DOWNLIGHTS						
© EF	EF	BATHROOM VENT	SEE MECH DWGS						
ES	ES	EGRESS	EMERGENCY EGRESS EXIT SIGN W/ BATTERY BACKUP A REMOTE CAPABILITY						
ESL	ESL	EGRESS	EMERGENCY EGRESS EXIT SIGN W/ BATTERY BACKUP A REMOTE CAPABILITY W/ (2) HEAD EGRESS LIGHTS						
RHI	RHI	EGRESS	(2) HEAD REMOTE EXTERIOR EMERGENCY EGRESS LIGH						
EL	EL ELW	EGRESS	(2) HEAD EMERGENCY EGRESS LIGHT - W/ BATTERY BACKUP AND REMOTE CAPABILITY EXTERIOR-RATED						
TRI	TRI	TROFFER	2'X4' TROFFER LIGHT IN ACT CEILING						
TR2	TR2	TROFFER	2'X2' TROFFER LIGHT IN ACT CEILING						
		REFLECTED	CEILING PLAN GRAPHIC KEY:						
CH: 8'-0"	CEILING	HEIGHT TAG (TYP 8'-0" U.N.O.)						
	SOFFIT/L	OWERED GYP	BD CEILING						
	AREA OF	ATYPICAL FIR	E-RATING. SEE PLANS + A0.01						
(NL)		S NIGHT LIGH S OCCUPANC							
(OS)	СОМВО	SMOKE/CARBO	DN MONOXIDE DETECTOR: P BEDROOMS)						
		OTOELECTRIC	,						
			TURAL FEATURE						
S ●	SPRINKLI		TURE DIMMENDED LOCATIONS FOR GN. FIRE SPRINKLER						
8	WALL MOLOCATION	ACTOR TO PRO OUNTED SPRIN ONS FOR ARCH	OVIDE ENGINEERED DOCUMENTS NKLER HEAD RECOMMENDED HITECTURAL DESIGN. FIRE OR TO PROVIDE ENGINEERED						
WC O	WATER OF WINE	ENTS CURTAIN HEAI DOW. FIRE SPF	D TO PROVIDE 100% COVERAGE RINKLER CONTRACTOR TO						
SCI	SECURIT		DOCUMENTS VIEW LOCATIONS WITH						
⊖ SPI	TENANT SPEAKER		ATIONS WITH TENANT.						
VMI	_ VII		R. REVIEW LOCATIONS						
			EILING PLAN GENERAL NOTES:						
APPROVED/ REMOVED/ B. IF A FIXTUI C. CLG HTS A	D. PART 2, MODIFIED RE APPEAF AT EXG FL	INCLUDING A UNLESS SPECI RS TO BE CENT OORS ARE TO	EDIT PROJECT. ALL WORK MUST COMPLY W/ MENDMENTS. NO HISTORIC ELEMENTS SHALL BE FICALLY INDICATED IN ARCH DWGS. FERED IN A SPACE, THEN CENTER IT. BE VI.F. D SPACES TO BE SMOOTH PAINTED DRYWALL U.N.O.						

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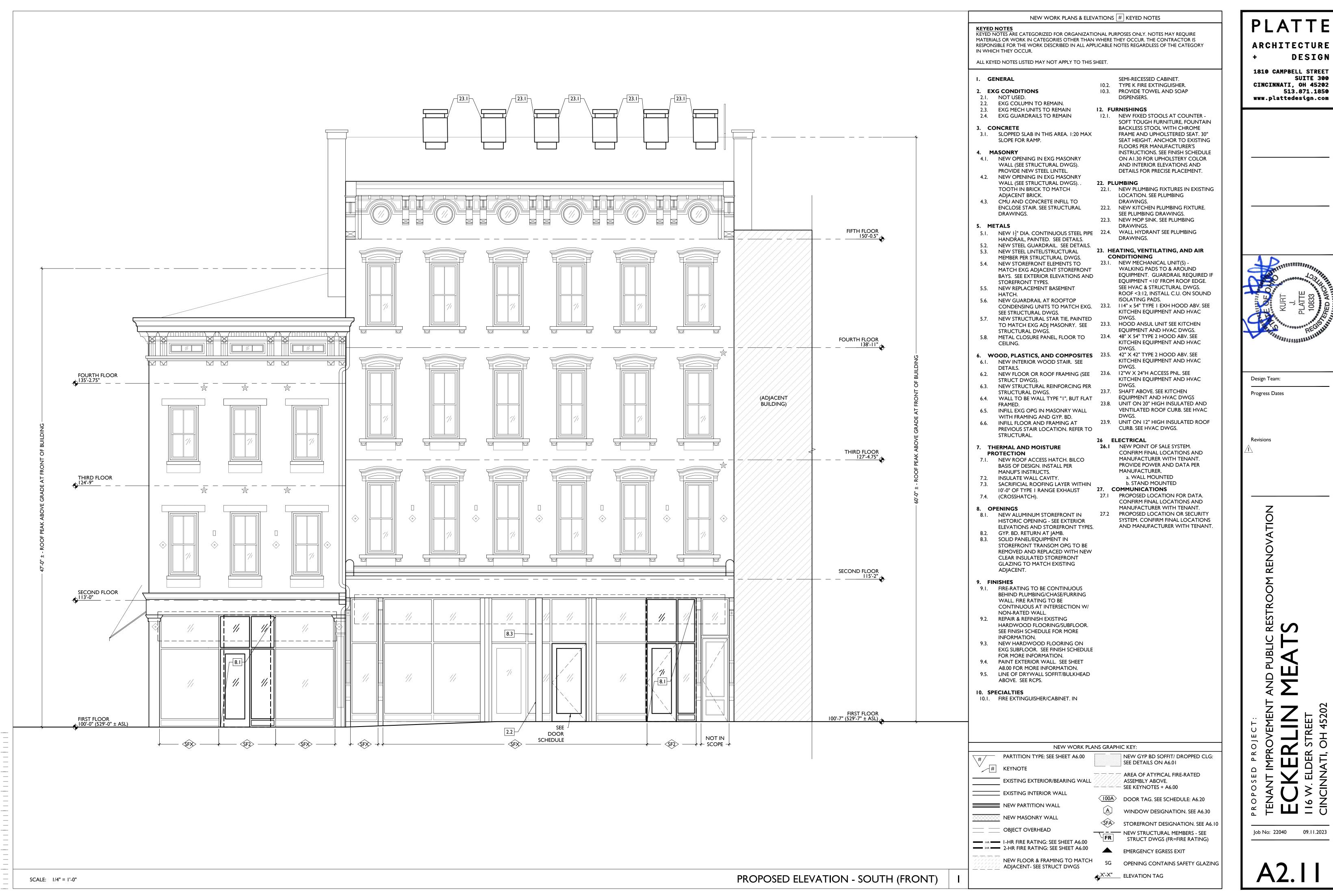
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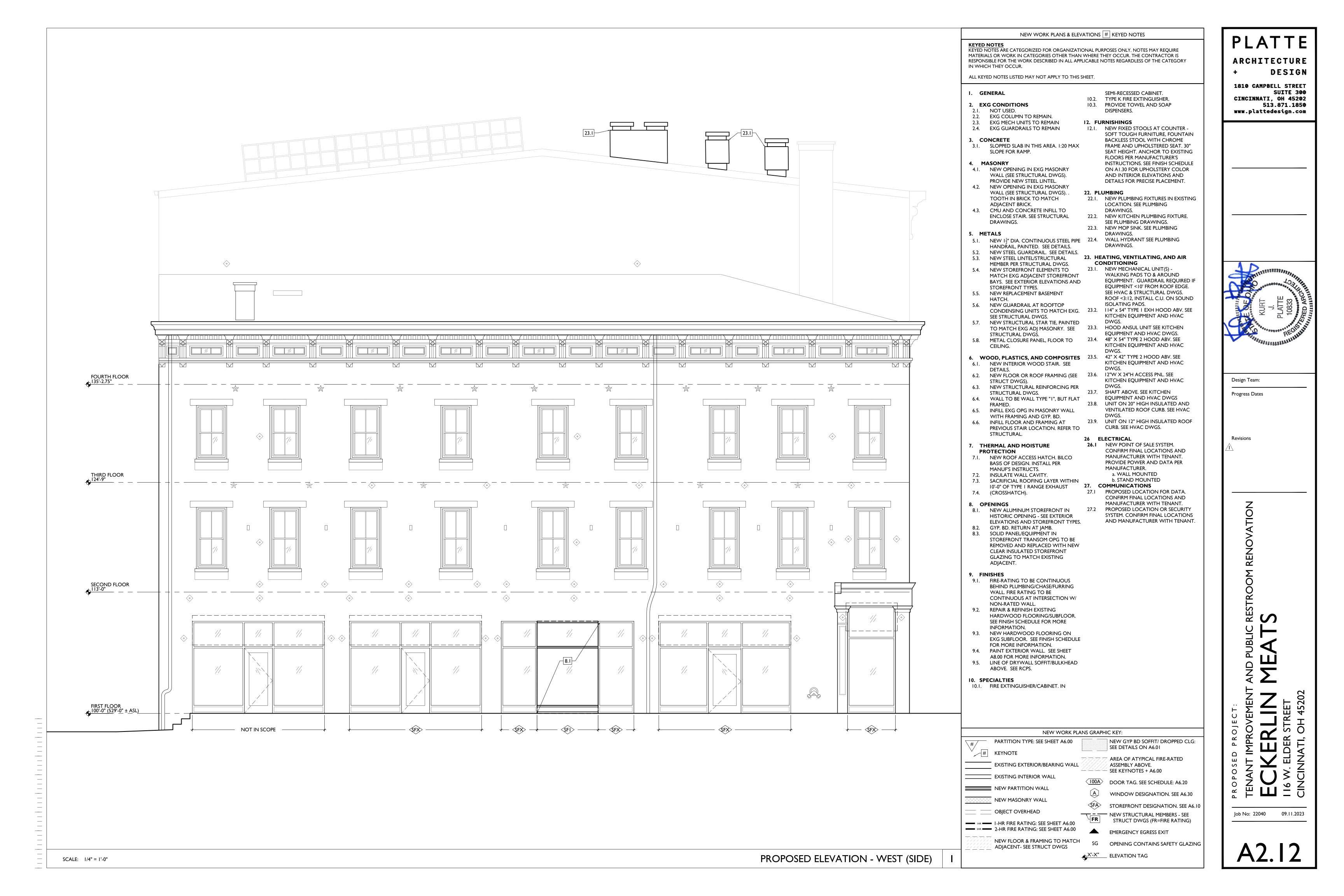
F. SEE ELECTRICAL DRAWINGS FOR FIXTURE SPECIFICATIONS.
G. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION INCLUDING NIGHT LIGHTING, EMERGENCY LIGHTS, AND EXIT SIGNS.

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PROPO



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MATERIAL/LOCATION	CODE	DESCRIPTION	NOTES	SOURCE
		FLOORING	I	
FLOORING	FL-I	MANU: SHERWIN WILLIAMS LINE: RESULFOR COLOR: METALLIC WHISKEY INFERNO	EPOXY WALL BASE	
FLOORING	FL-2	MANU: SHERWIN WILLIAMS LINE: RESULFOR COLOR: BLUEBERRY TART	EPOXY WALL BASE	
FLOORING	FL-3	MANU: BRUCE LINE: DUNDEE STAIN: MOCHA CB1277 SIZE: 3-1/4"	WB-I USED WITH THIS FLOORING	
		WALL TILE		
TILE AT COUNTER FACES	WT-I	MANU: DALTILE MOSAIC PATTERN: SBIII5 TILE I - D195 TILE 2 - D617		DAL-TILE & MARAZZI VICKI MARCH VICKI.MARCH@DALTILE.C 702.517.3335
	1	<u>PAINT</u>	T	
PAINT TYPICAL	PT-I	MANU: SHERWIN WILLIAMS COLOR: SW 7551 GREEK VILLA	WALL FINISH: SATIN TRIM FINISH: SEMI-GLOSS CEILING FINISH: FLAT MILLWORK FINISH: SEMI-GLOSS	
PAINT - DOOR OPENINGS	PT-2	MANU: SHERWIN WILLIAMS COLOR: SW 6622 HEARTY ORANGE	WALL FINISH: SATIN TRIM FINISH: SEMI-GLOSS CEILING FINISH: FLAT MILLWORK FINISH: SEMI-GLOSS	
PAINT - ACCENT	PT-3	MANU: SHERWIN WILLIAMS COLOR: SW 6188 SHADE-GROWN	WALL FINISH: SATIN TRIM FINISH: SEMI-GLOSS CEILING FINISH: FLAT MILLWORK FINISH: SEMI-GLOSS	
PAINT - WALL BASE	PT-4	MANU: SHERWIN WILLIAMS COLOR: SW 7675 SEALSKIN	WALL FINISH: SATIN TRIM FINISH: SEMI-GLOSS CEILING FINISH: FLAT MILLWORK FINISH: SEMI-GLOSS	
		WALLS	THEEVYORK THAISTI. SET II-GEOSS	
				LISE CONTINUIOLIS DEAD
FRP - ALL BOH AREA U.N.O.	FRP-I	MARLITE (OR EQUAL) SMOOTH FRP COLOR: S 100G WHITE	INSTALL PER MANUFACTURER'S INSTRUCTIONS	USE CONTINUOUS BEAD (SILICONE CAULK SEALAN' BOTTOM OF FRP PANELS TO PREVENT MOISTURE FROM COMING INTO WALL
FRP - SPECIALITY FOR CUSTOMER LOCATIONS	FRP-2	MANU: MARLITE LINE: SYMMETRIX SMART SEAM FRP W/ SANI-COAT PATTERN: WHITE W/ BLK SUBWAY HORIZONTAL 6X3	INSTALL PER MANUFACTURER'S INSTRUCTIONS	USE CONTINUOUS BEAD (SILICONE CAULK SEALAN' BOTTOM OF FRP PANELS I PREVENT MOISTURE FROM COMING INTO WALL
		WALL BASE		
TYPICAL NEW PAINTED WOOD BASE	WB-I	PROFILE: FLAT STOCK, EASED EDGE FINISH: PAINT (SEMI-GLOSS) COLOR: PT-4	0'-6" ALL WOOD FLOORS TO HAVE WOOD BASE	
		CEILINGS		
ACOUSTIC TILES	ACT-I	MANU: ARMSTRONG LINE: KITCHEN ZONE 763 SIZE: 24" X 24" COLOR: WHITE	ALUMINUM CAPPED, GALVANIZED GRID SYSTEM	
ACOUSTIC TILES	ACT-2	MANU: ARMSTRONG LINE: KITCHEN ZONE 763 SIZE: 24" X 48" COLOR: WHITE	ALUMINUM CAPPED, GALVANIZED GRID SYSTEM	
		SPECIALTIES		
CORNER GUARD	CG	MANU: VEVOR (OR COMPARABLE) FINISH: STAINLESS STEEL EDGE PROFILE: I" X I" X 48"		
PLYWOOD PANEL	PW-I	FINISHED PLYWOOD PANEL FOR MOUNTING		
COUNTERTOP- CUSTOMER BAR TOP	SS-I	MANU: FORMICA COLOR: 9685 BLACK RECYCLED KRAFT		
COUNTERTOP - MEATCASES AND TRANSACTION COUNTER	SS-2	MANU: CAFE COUNTERTOPS FINISH: EURO OAK EDGE PROFILE: EASED EDGE		
SOAP DISPENSER	A-I	MANU: CINTAS AUTOMATIC HANDSOAP SERIES: SIGNATURE		
PAPER TOWEL DISPENSER	A-2	FINISH: STAINLESS STEEL MANU: CINTAS AUTOMATIC PAPER TOWEL DISPENSERS SERIES: SIGNATURE FINISH: STAINLESS STEEL		
MOP RACK WITH SHELF	A-3	B.O.D. MANU: GRAINGER SERIES: UTILITY SHELF, IECL7, EXPOSED 5 $\frac{7}{25}$ " X 36" X 4 $\frac{23}{25}$ " FINISH: STAINLESS STEEL		
		UPHOLSTERY		
UPHOLSTERY - BAR STOOLS	UP-I	MANU: DESIGNTEX LINE: SILICONE ELEMENT COLOR: CLAY 3919703	BAR STOOLS	DESIGNTEX TRICIA HORWITZ THORWITZ@DESIGNTEX. 720.274.6007
		FURNITURE		
BAR STOOLS	FN-I	MANU: SOFT TOUCH WOOD LLC LINE: 1500-782 BACKLESS STOOL DIMENSIONS: 30"H X 14" D X 14"W ERAME FINISH: STAINI ESS STEEL	COM - USE UP-I	MELINDA LEWIS 513.478.2998 MLEWIS@KMA.BZ WWW.KMA.BZ

FRAME FINISH: STAINLESS STEEL

A: G.C. TO FIELD VERIFY ALL SIZES

C: ALL DIMENSIONS TAKEN FROM WALL FINISH FACE

FINISH SCHEDULES

WWW.KMA.BZ

PLATTE ARCHITECTURE DESIGN

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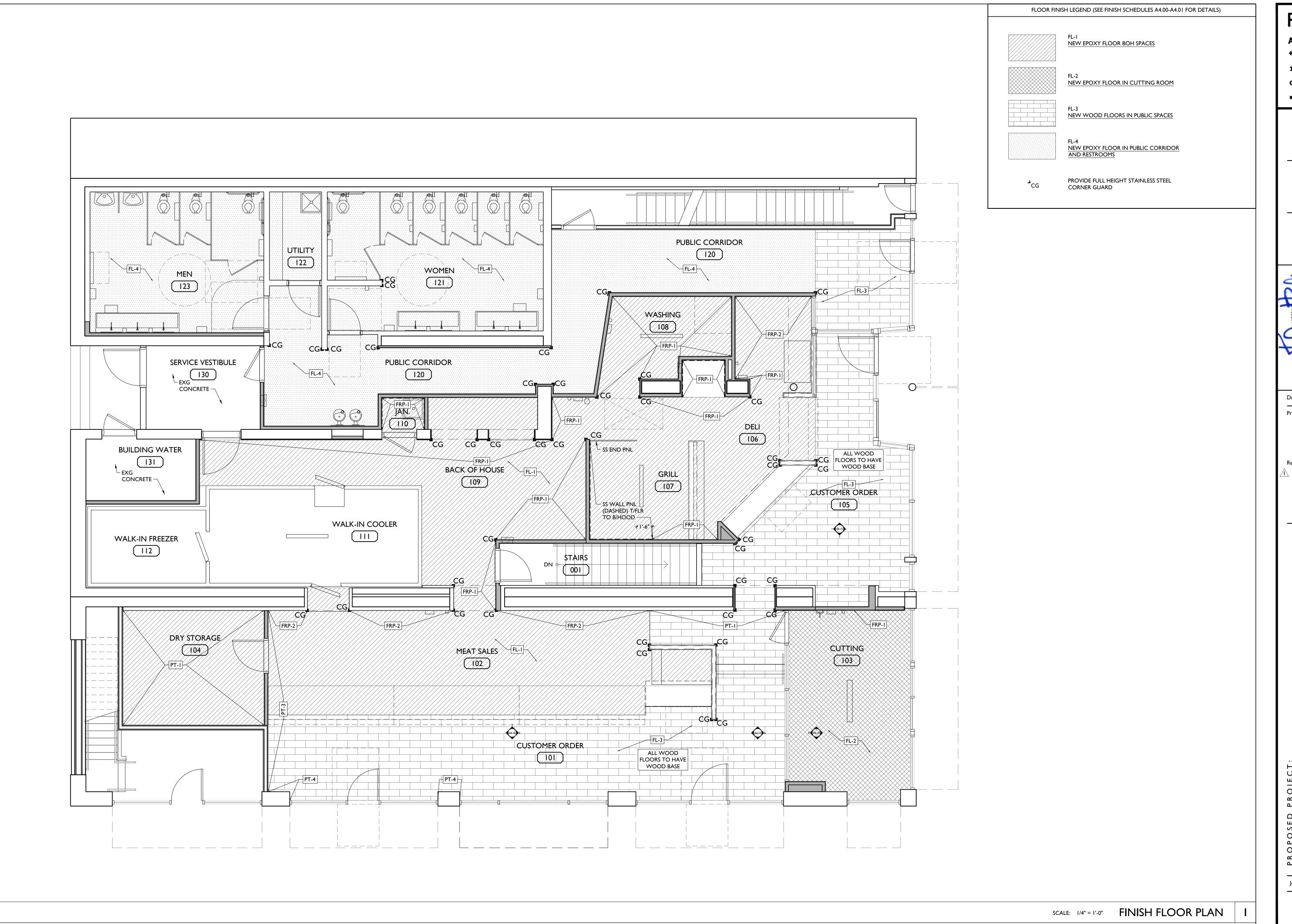
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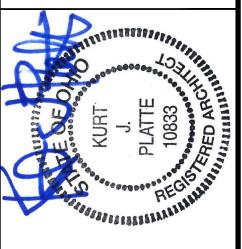
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B: PROVIDE BLOCKING FOR ALL WALL MOUNTED FIXTURES AND ACCESSORIES



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VEMENT AND PUBLIC RESTROOM RENOVATION

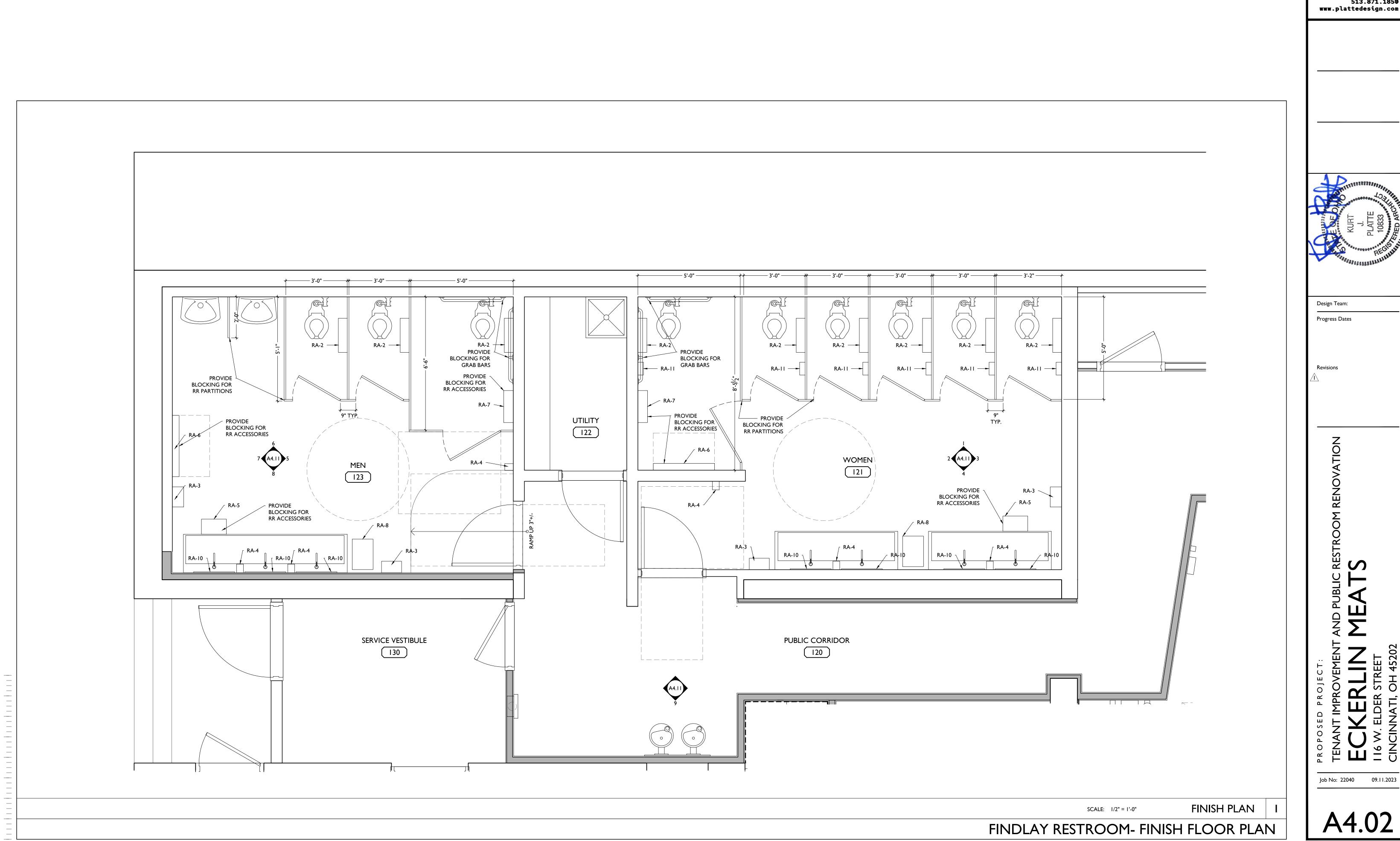
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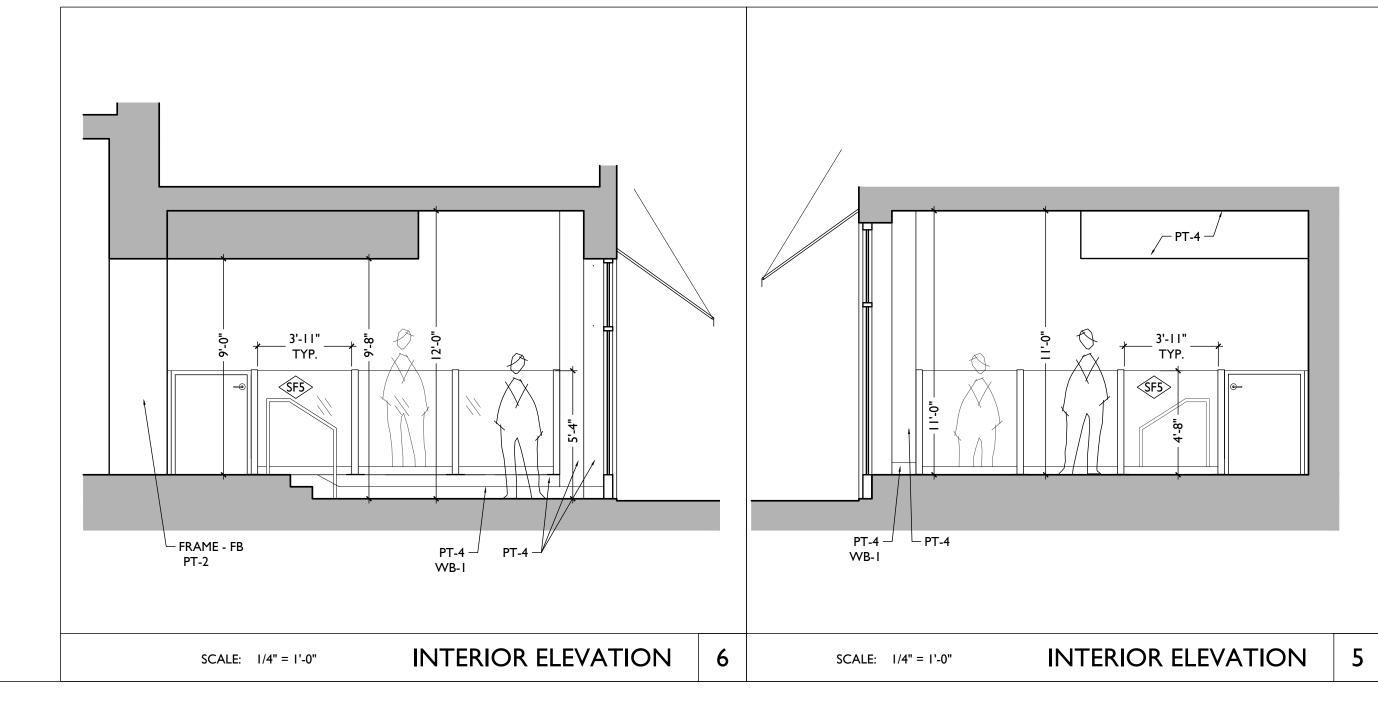
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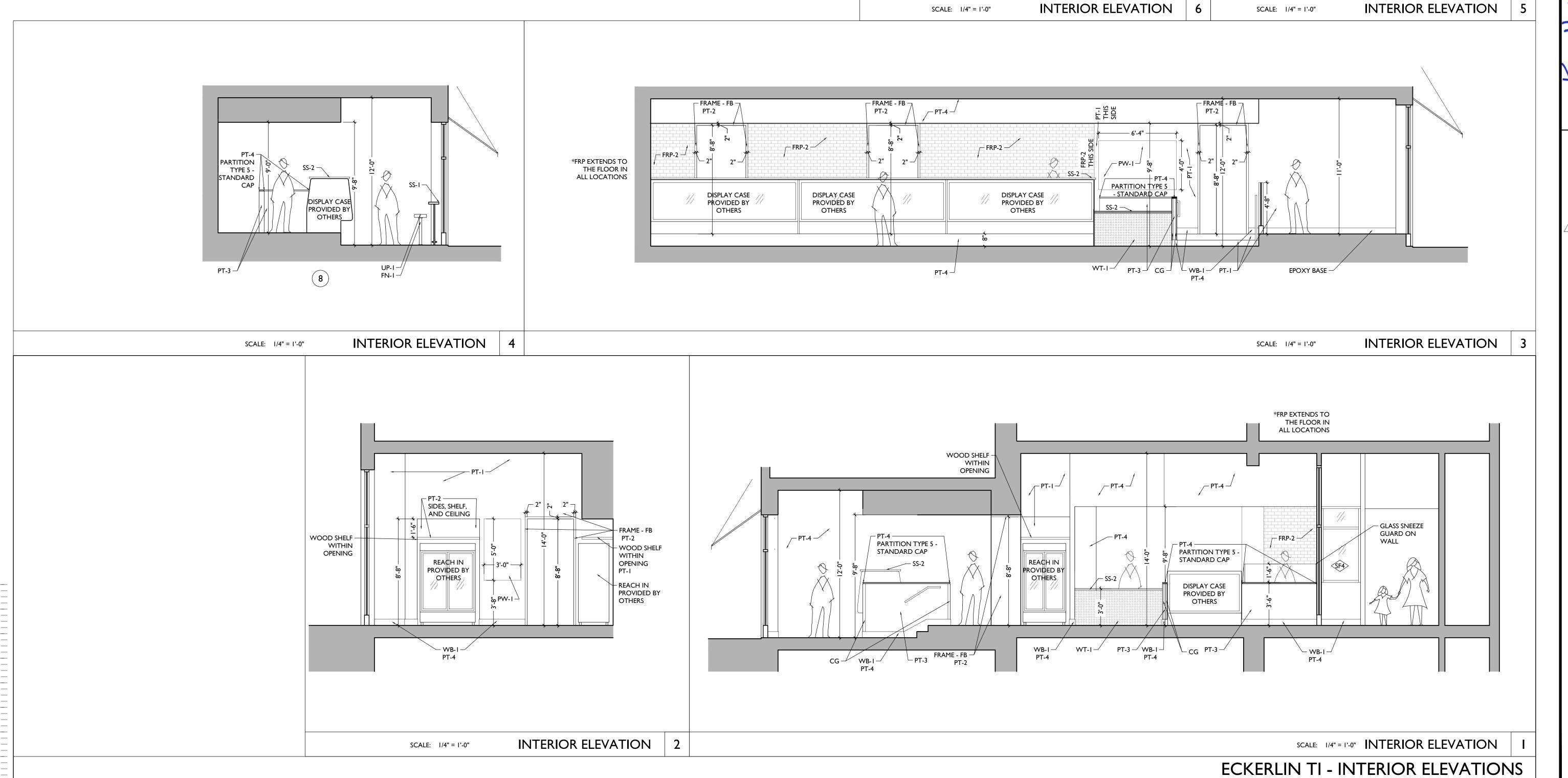
ECKERLIN TI - FINISH FLOOR PLAN



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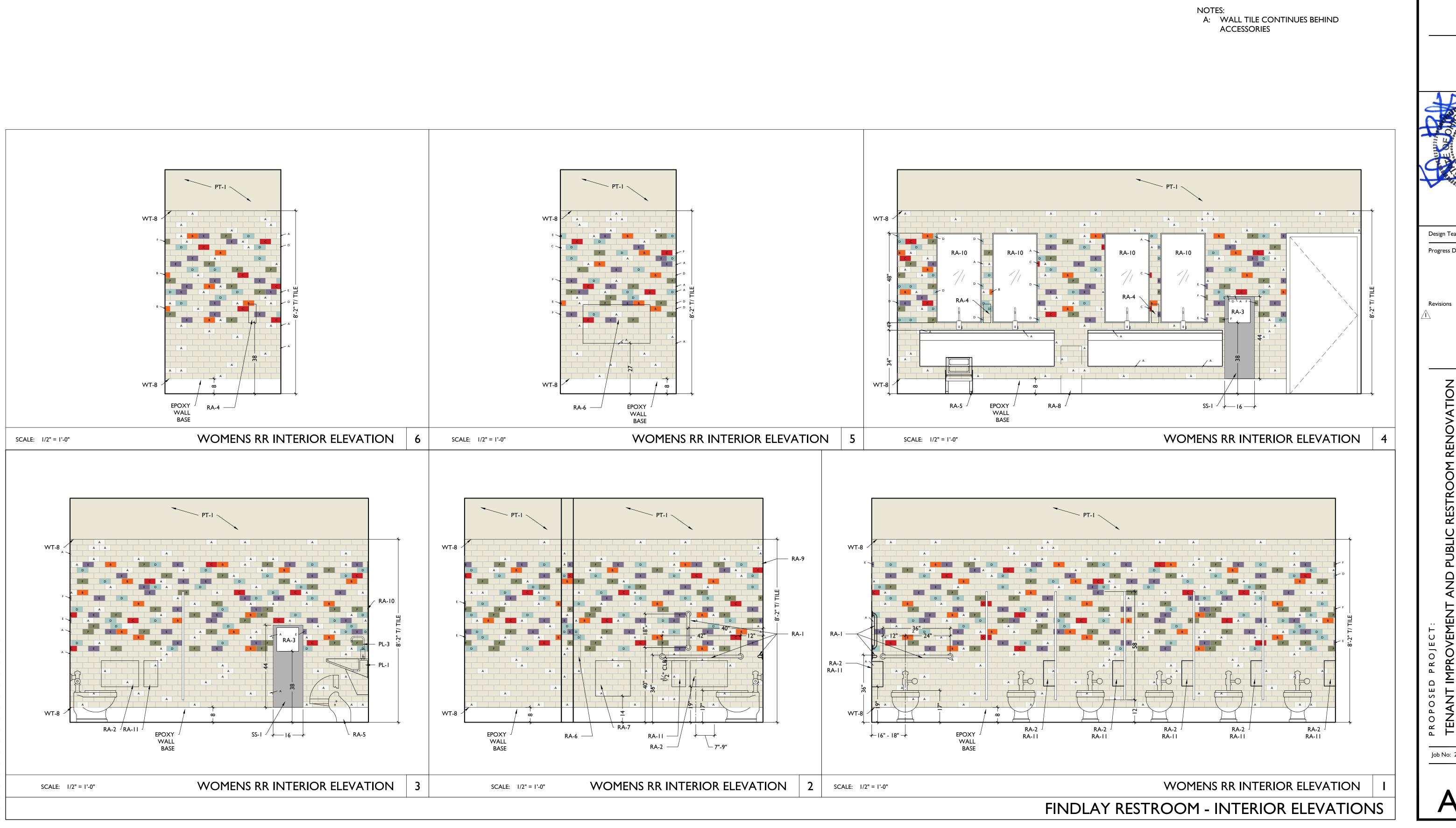
PUBLIC RESTROOM RENOVATION **EATS**

PROPOSED

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A4.10

WALL TIL	E SCHEDULE
WT-I UNLESS N	OTED OTHERWISE
TAG	ROOM NAME
Α	WT-2
В	WT-3
С	WT-4
D	WT-5
E	WT-6
F	WT-7



PLATTE ARCHITECTURE

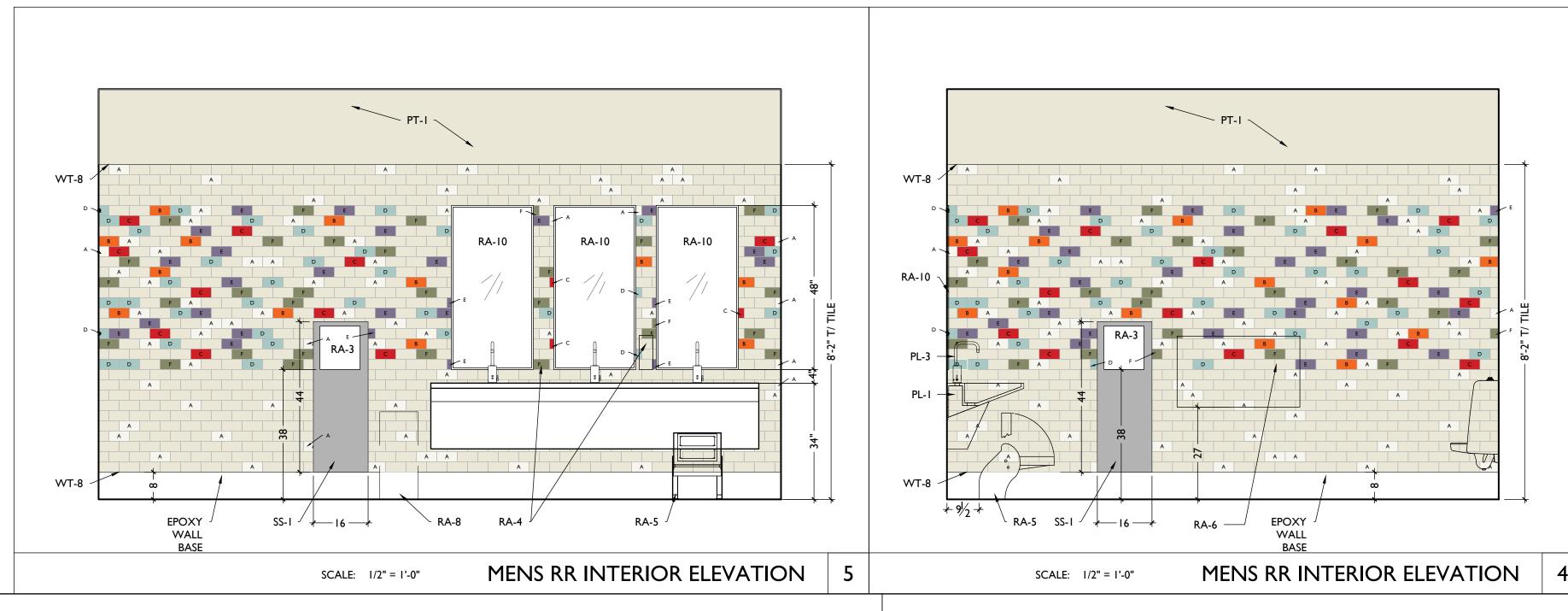
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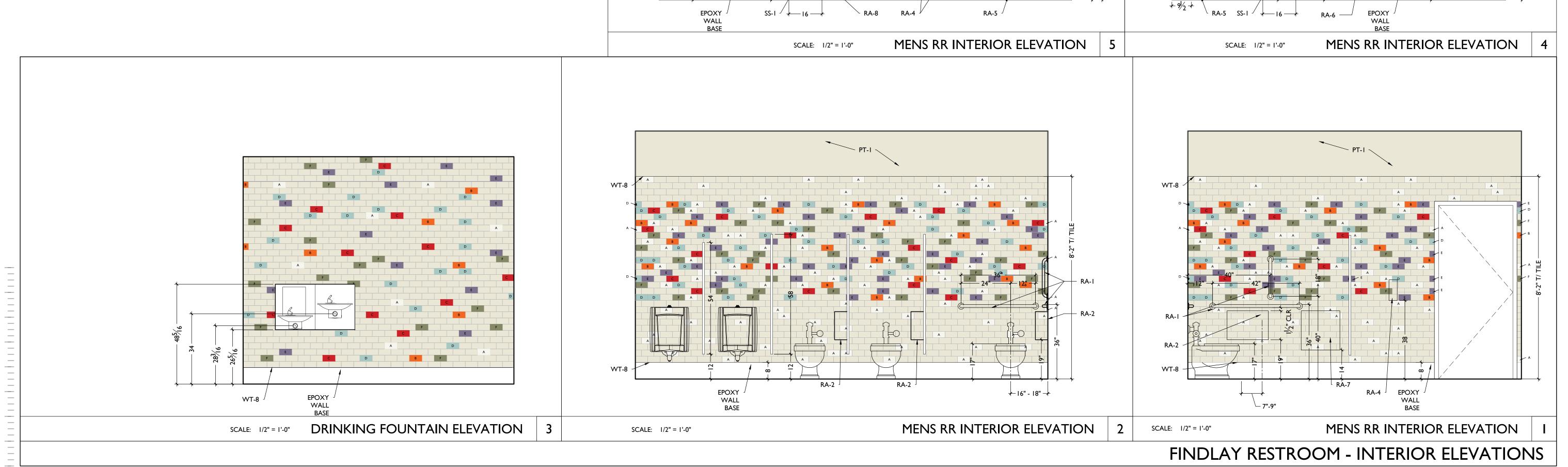
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WALL TIL	E SCHEDULE
**/ \LL	LOCITEDOLE
WT-I UNLESS N	OTED OTHERWISE
TAG	ROOM NAME
Α	WT-2
В	WT-3
С	WT-4
D	WT-5
E	WT-6
F	WT-7

NOTES:
A: WALL TILE CONTINUES BEHIND
ACCESSORIES





ARCHITECTURE + DESIGN

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KURT J. PLATTE PLATTE TOWNS THE PARCHITUTE OF STREET TOWNS TO THE PARCHITUTE OF STREET TOWNS TO THE PARCHITUTE OF STREET TOWNS THE PARCHITUTE OF STREET TOW

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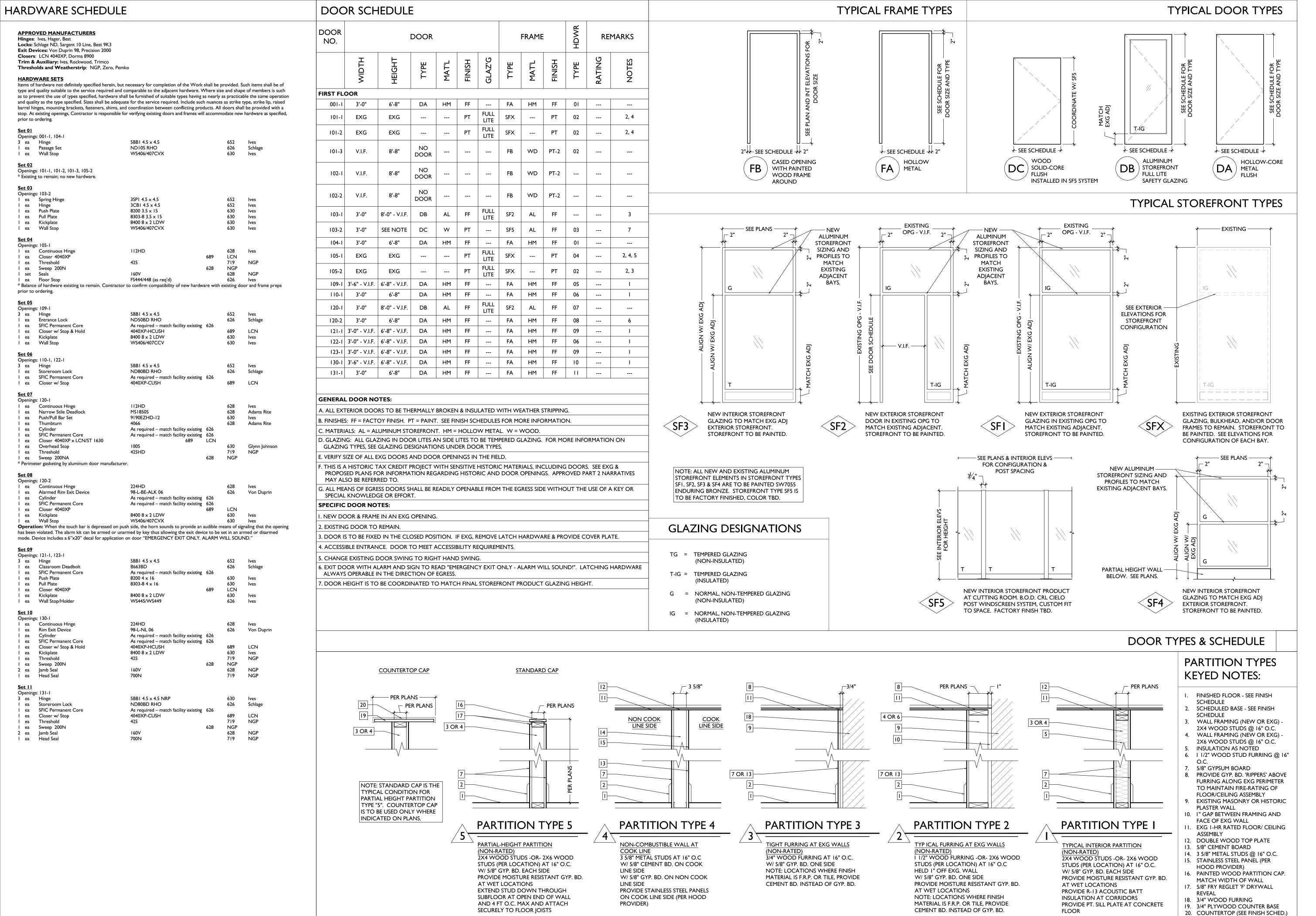
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A4.12



HARDWARE TYPES & SCHEDULE

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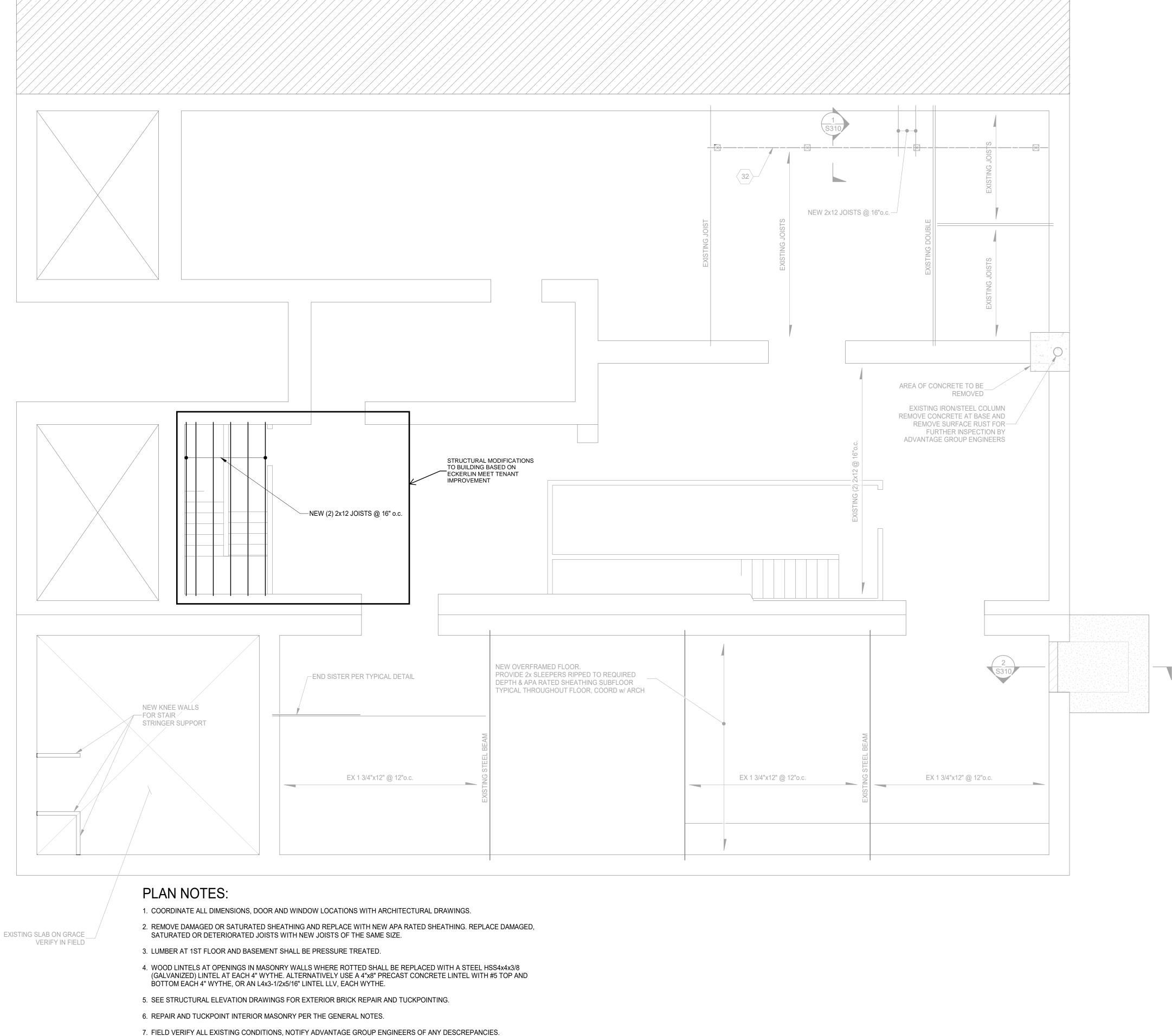
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PARTITION TYPES

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8. SWS = STRUCTURAL WOOD SCREW. ALLOWABLE SCREWS ARE 1/4" SIMPSON SDS, 1/4" SPAX POWERLAGS OR 1/4"

9. FASTEN SISTERS WITH 1/4"x3" SIMPSON SDS @ 24"o.c. STAGGERED UNLESS NOTED OTHERWISE.

FASTEN MASTER LEDGER LOK.

ADVANTAGE GROUP

ENGINEERS, INC.

1527 Madison Road
Cincinnati, Ohio 45206
Ph: (513) 396-8900

PROJECT KEYNOTES:

- INFILL EX OPENING WITH SOLID CMU OR HOLLOW CMU GROUTED SOLID, TO MATCH WALL THICKNESS ABOVE.

 GROUT/MORTAR TIGHT TO EX STONE FOUNDATION WALLS AND MASONRY ABOVE. REMOVE EX WOOD LINTELS. CUT EXISTING JOISTS BACK AND BEAR JOISTS ON NEW BEAM. REMOVED DEBREES FROM EXTERIOR WINDOW WELL OR STAIR, AND FILL WITH CDF. TOP WITH 4" CONCRETE SIDEWALK SLAB.
- REMOVE EXISTING DETERIORATED SHEATHING, REPLACE WITH NEW APA RATED SHEATHING.
- NEW (2) 1-3/4"x11-7/8" LVL HEADER w/ HHUS410 HANGER EACH END. CUT EX JOISTS AND HANG TO NEW HEADER w/LU210-R HANGERS OR U410R FOR DOUBLE JOISTS.
- 4 NEW (3) 1-3/4"x11-7/8" LVL BEAM. BEAR ON WALL EACH END.
- 5 NEW (4) 1-3/4"x11-7/8" LVL BEAM. BEAR ON WALL EACH END.
- 6 HANG EX HEADER TO NEW BEAM w/ HUS412 HANGER.
 - NEW WOOD FRAMED STAIR LANDING w/ (2) 2x12 HEADER TO SUPPORT STRINGERS. 2x12 JOISTS AT 16" o.c. HANG HEADER WITH HUC212-2 HANGERS. HANG JOISTS w/ LUS210 HANGERS.
- INFILL EXISTING OPENING WITH NEW 2x12 JOISTS AT 16" o.c. HANG EACH END WITH LUS210 HANGERS.
- 9 NEW (2) 2x12 LEDGER. CONNECT TO EXISTING WALL w/ 5/8" THREADED RODS w/ HILTI HIT-HY 270 ADHESIVE + SCREENTUBES, 6" MIN EMBEDMENT, 16" o.c. SPACING.
- 10 WOOD STAIR WITH 2x12 NOTCHED STRINGERS AT 16" o.c. MAX SPACING.
- 11 NEW STAR PLATE AND WALL TIE PER SECTIONS 4/S320 AND 5/S320.
- REBUILD INNER WYTHE OF MASONRY BELOW WINDOW AND AT DAMAGED JAMBS. REMOVE ALL WOOD FROM JAMBS, REPLACE WITH MASONRY OR GROUT. PROVIDE SPIRALOK TIES AT 16" o.c. EACH WALL BELOW WINDOW AND WITHIN 16" OF JAMB
- PROVIDE 2x12 SISTER TO DETERIORATED JOIST. EXTEND SISTER TO WITHIN 4" OF WALL EACH END. PROVIDE (4) SWS
- REPAIR MASONRY JAMB. REMOVE ALL WOOD AND DETERIORATED MASONRY AND REPLACE WITH NEW MASONRY.
 TUCK POINT DETERIORATED MORTAR JOINTS.
- PROVIDE NEW 2x12x12' LONG SISTERS TO (3) EX DETERIORATED JOISTS. SISTERS SHALL BEAR ON WEST WALL.
 FASTEN SISTERS WITH (4) 1/4" SWS 3' FROM WEST WALL AND (4) 1/2" SWS AT EAST END. ADDITIONALY FASTEN WITH
- REMOVE AND REPLACE SOFT AND DETERIORATED BRICK. SCRAP LOOSE MATERIAL FROM SOFT BRICK, IF BRICK IS
- DETERIORATED TO A DEPTH OR MORE THAN 3/4" FROM THE INTERIOR BRICK FACE, THEN IT SHOULD BE REPLACED.
- PROVIDE 2x6x6' SISTER TO EX RAFTER. BEAR ON WALL, FASTEN w/ (2) 1/4" SWS EACH END AND 24" o.c.
- 18 SISTER EXISTING JOISTS BELOW NEW CONDENSERS w/ 2x10's. HANG TO EX BEAMS w/ LUS24 HANGERS.
- NEW 2x12 SISTER EACH SIDE OF EXISTING BEAM. REMOVE EXISTING SISTERS WHERE PRESENT FOR INSTALLATION
- OF NEW FULL LENGTH SISTERS.

 NEW (2) 2x12 HEADER w/ HUS210-2 HANGERS AT EACH END. CUT EX JOISTS AND HANG TO NEW HEADER w/ LU210-R
- HANGERS.

 REMOVE EXISTING BRICK AT HEARTH. PROVIDE NEW 2x12 JOIST NEXT TO BRICK WALL, w/ LU90 ANGLES EACH SIDE.
- PROVIDE NEW APA RATED SHEATHING OVER OPENING. ADD A 2x4 NAILER TO EXISTING HEADER IF NEEDED FOR SHEATHING SUPPORT, w/ 10d NAIL @ 12" o.c.
- NEW 2x12 SISTER. POCKET INTO EAST WALL. EXTEND TO WITHIN 4" OF WEST WALL.
- REMOVE EX JOIST NEXT TO WALL. PROVIDE NEW (2) 1-3/4"x11-1/4" LVL BEAM, POCKET EACH SIDE. HANG EXISTING SINGLE PLY HEADERS TO NEW BEAM WITH HU9 HANGERS.
- $\left<24\right>$ NEW 2x12 SISTER. POCKET INTO WEST WALL. EXTEND TO WITHIN 4" OF EAST WALL
- 25 REMOVE EXISTING CONCRETE FLOOR AND PROVIDE NEW APA RATED SHEATHING.
- SISTER NEW 2x12 ONTO EXISTING HEADER. FASTEN w/ (2) 1/4"x3-1/2" SWS @ 8" o.c. PROVIDE NEW LU90 ANGLE TO BEAM, POCKET INTO MASONY WALL.
- NEW OPENING IN WALL, PROVIDE NEW LINTEL PER TYPICAL INTERIOR LINTEL DETAILS. FINISHED JAMBS SHALL BE IN GOOD CONDITION AND SQUARE.
- NEW 2x12 HEADER w/ LU90 ANGLE EACH END. HANG EX JOISTS TO HEADER w/ LUS210-R HANGERS.
- $\overline{\langle 29 \rangle}$ REPAIR BRICK BELOW SILL. REMOVE AND REPLACE LOOSE AND DETERIORATED BRICKS. TUCK POINT AS NEEDED.
- (2) 2x10 BEAM HANG TO EXISTING BEAMS WITH LUS26-2 WHERE APPLICABLE
- 31 NEW (2) 2x10 HEADER WITH LUS26-2 EACH END. HANG EXISTING JOISTS TO HEADER WITH LUS26 OR LUS26-R.
- NEW (3) 2x12 BEAM SUPPORTED BY 6x6 POSTS. 6x6 POSTS SHALL BE LOCATED ON EXISTING FOOTINGS. CONNECT TO FOOTINGS WITH SIMPSON ABA66Z WITH 5/8"c4" SIMPSON TITEN HD ANCHOR.
- 33 NEW 6x6 POST ON NEW 8"x2'-0"x2'-0" FOOTING.
- REMOVE EXISTING FLOOR SHEATHING. VERIFY EXISTING FRAMING IS INFILL FOR ORIGINAL STAIR OPENING.
- NEW WALL INFILL. 3 5/8"x18GA STUD @ 16"o.c. WITH 3 5/8"x18GA TRACK TOP AND BOTTOM. FASTEN TRACK WITH PAF'S
 @ 16"o.c. INTO EXISTING STEEL BEAM AND CONCRETE CURB. PROVIDE APA RATED SHEATHING, AIR GAP AND BRICK
 VENEER

: 1ST FLOOR FRAMING PLAN

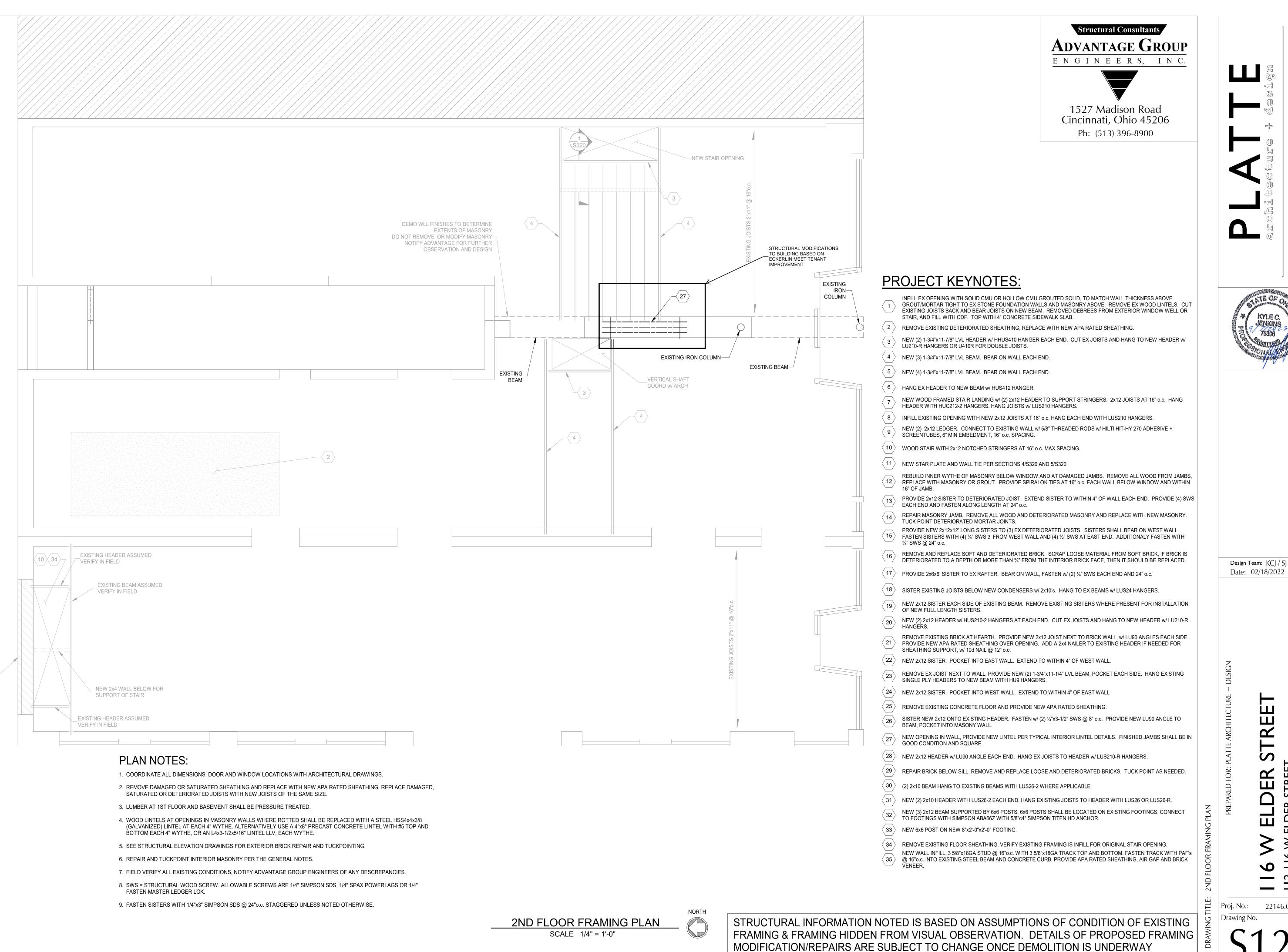
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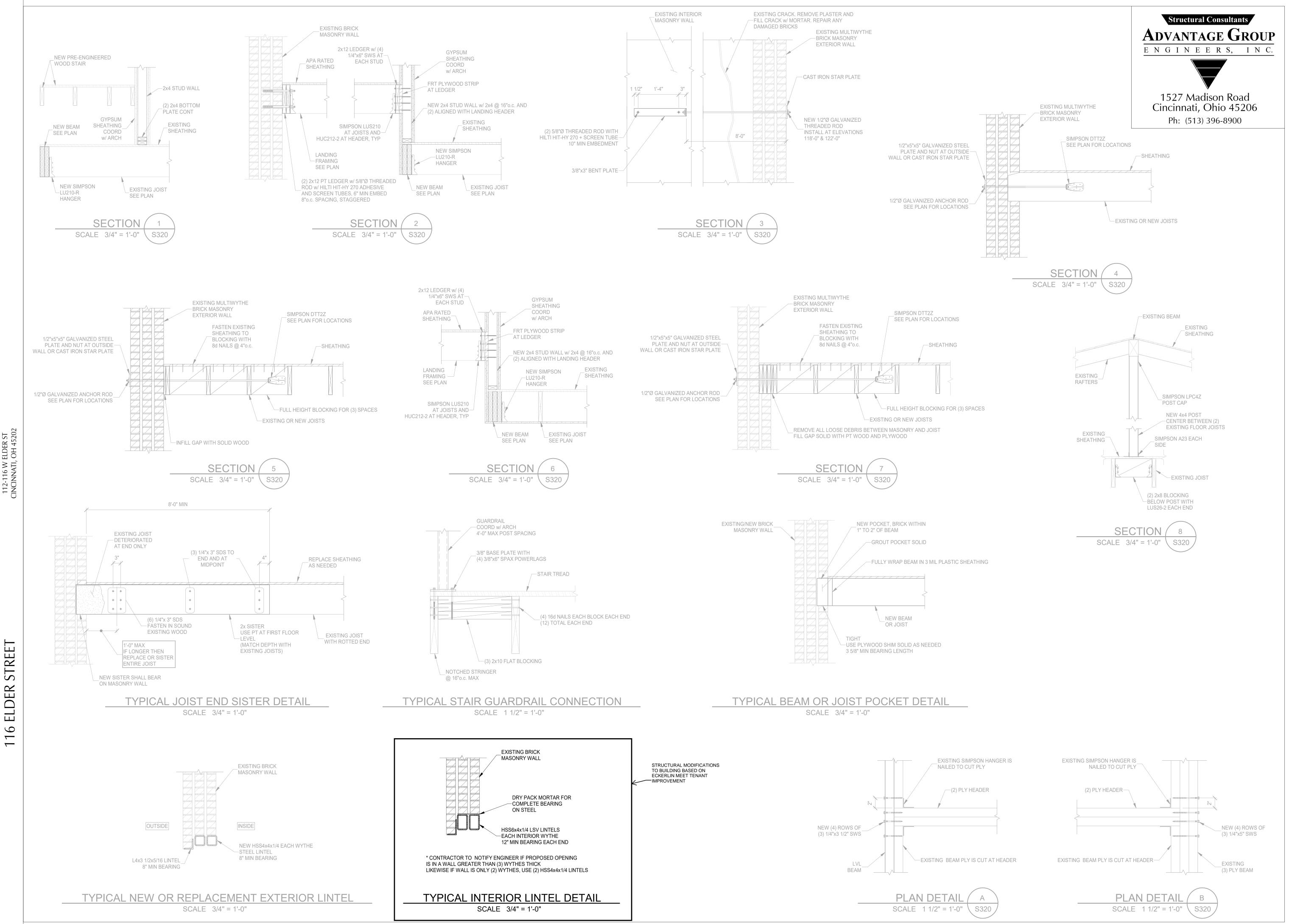
Design Team: KCJ / SJ Date: 02/18/2022

Drawing No. S 1 1 0

STRUCTURAL INFORMATION NOTED IS BASED ON ASSUMPTIONS OF CONDITION OF EXISTING FRAMING & FRAMING HIDDEN FROM VISUAL OBSERVATION. DETAILS OF PROPOSED FRAMING MODIFICATION/REPAIRS ARE SUBJECT TO CHANGE ONCE DEMOLITION IS UNDERWAY



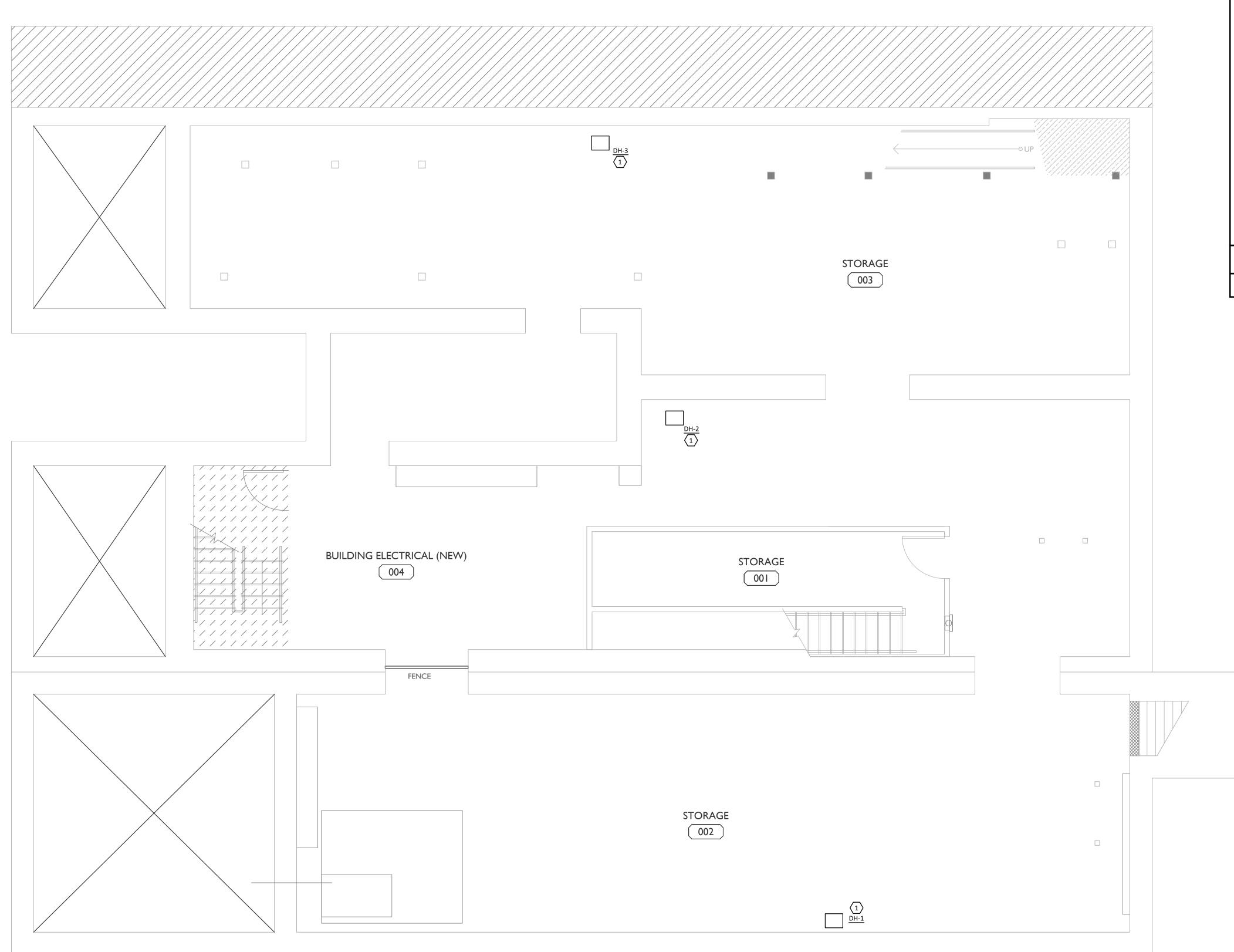
Proj. No.: 22146.05 Drawing No.



Design Team: KCJ / SJ Date: 02/18/2022

Proj. No.: 22146.05

Drawing No.



BASEMENT PLAN

M100 1/4" = 1'-0"

GENERAL NOTES

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- ALL EXPOSED MATERIALS AND EQUIPMENT SHALL BE INSTALLED AND SUPPORTED IN A FIRST-CLASS AND WORKMANLIKE FASHION. DUCTWORK SHALL RUN PARALLEL AND/ OR PERPENDICULAR TO MAIN BUILDING STRUCTURE. ANY WORK THAT IS NOT DONE IN A FIRST-CLASS OR WORKMANLIKE FASHION, IN THE ARCHITECTS OPINION, SHALL BE REDONE AT THE CONTRACTORS EXPENSE.
- INDEX NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX NOT MORE THAN 50.

 D. PROVIDE VOLUME DAMPERS AT ALL ROUND BRANCH DUCT TAKE-OFFS THAT ARE ACCESSIBLE. PROVIDE TURNING VANES AT ALL 20 DECEMBER OF THE PROVIDE TURNING VANES AT ALL 20 DECEMBER OF THE PROVIDE TO TH

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- OUTDOOR AIR INTAKES SHALL BE 10'-0" MINIMUM AWAY FROM ANY EXHAUST AND PLUMBING VENT OUTLET.
- WIRE UP ALL LOW VOLTAGE (24V) THERMOSTATS.
- CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL PIPES, DUCTWORK, UNITS, ETC. WITH ALL OTHER TRADES AND SHIFT LOCATION OR OFFSET WHERE NECESSARY. PROVIDE TRANSITIONS IN DUCTWORK TO AVOID CONFLICT WITH EXISTING DUCTWORK AND OTHER STRUCTURES.
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- INSTALL DUCTWORK AS HIGH AS POSSIBLE.
- EXHAUST AIR DUCTS SHALL BE EQUIPPED WITH BACKDRAFT DAMPERS.
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- . ALL DUCT ELBOWS SHALL BE LONG RADIUS OR MITERED.

KEYED NOTES

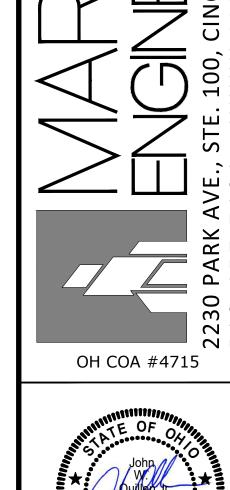
1. PROVIDE DEHUMIDIFIER. ROUTE CONDENSATE TO NEAREST HUB DRAIN. COORDINATE DRAIN LOCATION WITH PLUMBING

	HVAC LEGEND
1	DRAWING NOTE SYMBOL
26x16	NEW RECTANGULAR DUCTWORK AND SIZE
10"Ø	NEW ROUND DUCTWORK AND SIZE
	BALANCING/VOLUME DAMPER
(₩₩	FLEX DUCT
•	THERMOSTAT
$\sum \frac{\text{CD-1}}{240}$	NEW SUPPLY AIR DIFFUSER AND CFM
$\sum \frac{\text{CD-2}}{240}$	NEW PERFORATED SUPPLY AIR DIFFUSER AND CFM
RG-1	NEW RETURN GRILLE
EG-1 300	NEW EXHAUST GRILLE AND CFM
	NEW EXHAUST FAN
- \ -	AIR FLOW DIRECTION
SD	SMOKE DETECTOR
	SUPPLY DUCT UP THROUGH ROOF
	RETURN/EXHAUST DUCT UP THROUGH ROOF
M	MOTOR OPERATED DAMPER

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79076 FG/STERE ONA L ENGLISH 09/11/2023

Progress Dates 08.28.2023 - HVAC COORD. 09.06.2023 - REVIEW SET 09.11.2023 - PERMIT SET

Revisions

Design Team:

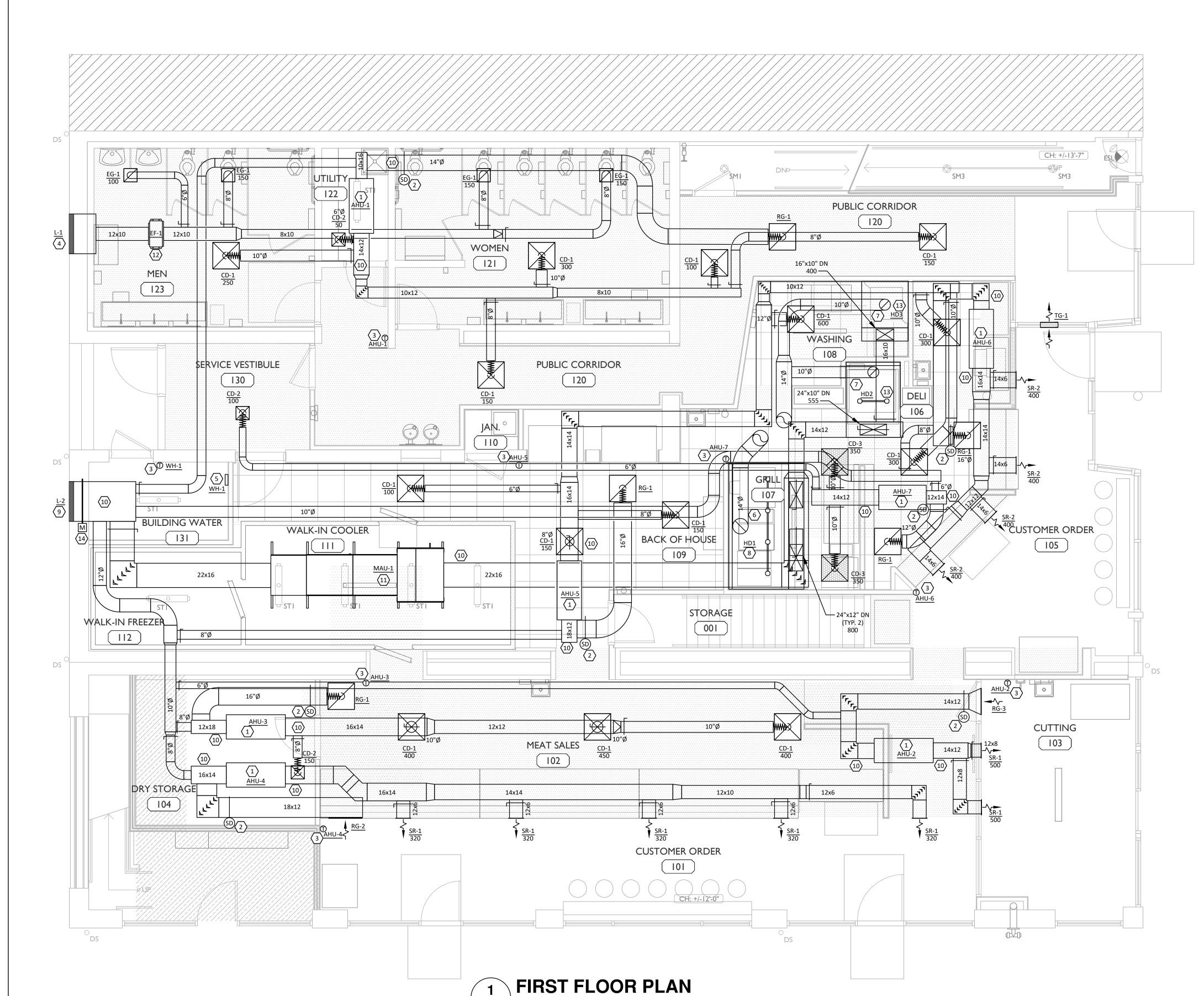
MARQUE ENGINEERING

Drawn by:

MARQUE ENGINEERING

SHANGE STREET

M100



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KEYED NOTES

ALL DUCT ELBOWS SHALL BE LONG RADIUS OR MITERED.

- PROVIDE AIR HANDLING UNIT AND LOCATE ON ANGLE IRON FRAME ABOVE CEILING. MOUNT FRAME TO STRUCTURE WITH BEAM CLAMPS, THREADED RODS AND SPRING VIBRATION ISOLATORS. ALL FILTER ACCESS TO BE ON THE SIDE OF AHU. ROUTE 3/4" CONDENSATE DRAIN LINE WITH TRAP TO FLOOR DRAIN. PROVIDE CONDENSATE PUMP AS REQUIRED AND COORDINATE ANY ADDITIONAL ELECTRICAL REQUIREMENTS WITH EC. COORDINATE FLOOR DRAIN LOCATION WITH PLUMBING PLAN. FOR UNITS ABOVE CEILINGS, PROVIDE AUXILIARY DRAIN PAN WITH HIGH LEVEL ALARM UNDER AIR HANDLING UNIT/FURNACE, IN ACCORDANCE WITH SECTION 307.2.3 OF IMC. HIGH LEVEL ALARM SHALL SHUT UNIT OFF UPON DETECTION OF CONDENSATE IN THE OVERFLOW DRAIN PAN.
- EC TO FURNISH DUCT MOUNTED SMOKE DETECTOR AND PROVIDE COMPATIBLE REMOTE ANNUNCIATOR/TEST SWITCH. MC TO INSTALL SMOKE DETECTOR IN RETURN DUCT, PRIOR TO ANY OUTDOOR AIR CONNECTIONS. MC TO PROVIDE INTERLOCK WIRING BETWEEN SMOKE DETECTOR AND UNIT TO SHUT DOWN UNIT UPON DETECTION OF SMOKE. EC SHALL PROVIDE WIRING FOR FINAL CONNECTION TO CENTRAL FIRE ALARM SYSTEM, IF APPLICABLE, AND WIRING TO REMOTE ANNUNCIATOR/TEST SWITCH.
- PROVIDE THERMOSTAT AND MOUNT ON WALL 4 FEET A.F.F. PROVIDE LOCKABLE COVER TO PROTECT THERMOSTAT (AHUS 1, 4 & 6 ONLY).
- PROVIDE RUSKIN, OR EQUIVALENT MODEL ELF375DX EXHAUST LOUVER, AND MOUNT HIGH ON WALL, COMPLETE WITH BIRDSCREEN. PROVIDE DUCTWORK PLENUM BOX BEHIND LOUVER AND SEAL WATER TIGHT.
- PROVIDE ELECTRIC WALL HEATER AND INSTALL 24" A.F.F. TO BOTTOM OF HEATER.
- PROVIDE 16 GA. STEEL DUCT, WITH SEAMS WELDED LIQUID TIGHT, IN ACCORDANCE WITH SECTION 506.3 OF INTERNATIONAL MECHANICAL CODE AND SLOPE DUCT AT $\frac{1}{4}$ "/FT TOWARDS HOOD. PROVIDE CLEANOUT AT EVERY CHANGE OF DIRECTION, EVERY 20' HORIZONTALLY AND AS REQUIRED BY NFPA 96. PROVIDE 2 LAYERS OF 3M 615+, OR EQUIVALENT, FIRE BARRIER DUCT WRAP ON EXHAUST DUCT BETWEEN HOOD AND ROOF. AS AN OPTION TO UTILIZING 16 GA STEEL DUCT, PROVIDE CAPTIVE AIRE MODEL DW ROUND 20 GAUGE
- DUCT SERVING TYPE II HOOD SHALL BE MADE OF ALUMINUM. JOINTS, SEAMS, AND PENETRATIONS SHALL BE SEALED TO PROVIDE A SMOOTH INNER SURFACE AND SHALL BE WATER TIGHT. HORIZONTAL DUCTWORK SERVING TYPE II HOOD SHALL BE SLOPED DOWN IN THE DIRECTION OF THE HOOD. SLOPE DUCT AT 1/8"/FT.
- TYPE I HOOD WITH ANSUL FIRE SUPPRESSION SYSTEM FURNISHED BY KITCHEN CONSULTANT AND INSTALLED BY MECHANICAL CONTRACTOR. MAKE ALL DUCT CONNECTIONS AS INDICATED AND INSTALL HOOD AT 80" A.F.F.. REFER TO CAPTIVE AIRE DRAWINGS FOR
- PROVIDE INTAKE WALL LOUVER, EQUIVALENT TO RUSKIN ELF-375DX, AND MOUNT HIGH ON WALL, COMPLETE WITH BIRDSCREEN.
- INTERNALLY LINE FIRST 10 FEET OF SUPPLY, OUTSIDE AIR AND RETURN AIR DUCTWORK WITH JOHN'S MANVILLE, OR EQUIVALENT, 1 INCH
- THICK SPIRACOUSTIC FIBERGLASS DUCT LINER. DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS. PROVIDE NEW MAKE UP AIR UNIT, CONTROL WIRING, AND STAND ALONE CONTROLS FOR UNIT OPERATION. LOCATE UNIT ON ANGLE IRON FRAME ABOVE CEILING. MOUNT FRAME TO STRUCTURE WITH BEAM CLAMPS, THREADED RODS AND SPRING VIBRATION ISOLATORS. ROUTE COMBUSTION AIR INTAKE AND FLUE VENT TO CONCENTRIC VENT KIT THROUGH ROOF. SIZE AND INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. LOCATE CONCENTRIC VENT KIT MINIMUM TEN FEET AWAY FROM AIR INTAKE AND EXHAUST VENTS AND PAINT TO MATCH ROOF COLOR. ROUTE 3/4" CONDENSATE DRAIN LINE WITH TRAP TO FLOOR DRAIN. PROVIDE CONDENSATE PUMP AS REQUIRED. COORDINATE FLOOR DRAIN LOCATION WITH PLUMBING PLAN. FOR UNITS ABOVE CEILINGS, PROVIDE AUXILIARY DRAIN PAN WITH HIGH LEVEL ALARM UNDER MAKEUP AIR UNIT, IN ACCORDANCE WITH SECTION 307.2.3 OF IMC. HIGH LEVEL ALARM SHALL SHUT
- UNIT OFF UPON DETECTION OF CONDENSATE IN THE OVERFLOW DRAIN PAN. PROVIDE INLINE FAN IN LOCATION INDICATED AND HANG FROM JOISTS IN ACCORDANCE WITH MANUFACTURERS INSTALLATION INSTRUCTIONS. REFER TO FAN SCHEDULE FOR ADDITIONAL INFORMATION.
- TYPE II HOOD FURNISHED BY KITCHEN CONSULTANT AND INSTALLED BY MECHANICAL CONTRACTOR. MAKE ALL DUCT CONNECTIONS AS INDICATED AND INSTALL HOOD ABOVE EQUIPMENT IT SERVES AT A HEIGHT THAT DOES NOT PROHIBIT THE OPERATION OF THE EQUIPMENT. REFER TO CAPTIVE AIRE DRAWINGS FOR ADDITIONAL INFORMATION.
- PROVIDE MOTOR OPERATED DAMPER POWERED BY A 24V HONEYWELL, OR EQUIVALENT, ACTUATOR INTERLOCKED WITH THE OPERATION OF THE EQUIPMENT THAT IT SERVES, AND BALANCED TO CFM INDICATED. MAINTAIN MINIMUM 10' SEPARATION BETWEEN OUTDOOR AIR INTAKE AND EXHAUST AIR. MOTOR OPERATED DAMPERS SHALL BE PROVIDED AND WIRED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED. PROVIDE ALL NECESSARY TRANSFORMERS, CONTACTORS, CONTROLS AND WIRING FOR INTERLOCKING HVAC EQUIPMENT TO MOTOR OPERATED DAMPERS. PROVIDE ALL DUCT TRANSITIONS AS REQUIRED OR INDICATED.

HEAT PUMP HEATING CONTROLS

WHEN THE OUTDOOR TEMPERATURE IS BELOW THE COMPRESSOR LOCKOUT TEMPERATURE, ONLY THE AUXILIARY HEAT OPERATES. WHEN THE OUTDOOR TEMPERATURE IS ABOVE THE AUXILIARY LOCKOUT TEMPERATURE, ONLY THE COMPRESSOR OPERATES. BOTH COMPRESSOR LOCKOUT AND AUXILIARY LOCKOUT TEMPERATURES TO BE THE SAME TEMPERATURE.

HVAC DESIGN CONDITIONS

COOLING: OUTDOOR = 93°FDB/74°FWB INDOOR = 72°FDB/50%RH

OUTDOOR = 5°FDB INDOOR = 70°FDB

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OH COA #4715



Progress Dates 08.28.2023 - HVAC COORD. 09.06.2023 - REVIEW SET 09.11.2023 - PERMIT SET

Revisions

Design Team:
MARQUE ENGINEERING Drawn by: MARQUE ENGINEERING



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- INDEX NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX NOT MORE THAN 50. PROVIDE VOLUME DAMPERS AT ALL ROUND BRANCH DUCT TAKE-OFFS THAT ARE ACCESSIBLE. PROVIDE TURNING VANES AT ALL 90 DEGREE SQUARE ELBOWS IN SUPPLY AIR DUCTS. PROVIDE 45 DEGREE HEEL AT ALL RECTANGULAR SUPPLY AND RETURN

ALL DUCT JOINTS, SEAMS AND CONNECTIONS SHALL BE SECURELY FASTENED AND SEALED. DUCTS SHALL BE SUPPORTED WITH APPROVED HANGERS AT INTERVALS NOT EXCEEDING TEN FEET. DUCT COVERINGS AND LININGS SHALL HAVE A FLAME-SPREAD

- BRANCH DUCT TAKE-OFFS.
- OUTDOOR AIR INTAKES SHALL BE 10'-0" MINIMUM AWAY FROM ANY EXHAUST AND PLUMBING VENT OUTLET.
- WIRE UP ALL LOW VOLTAGE (24V) THERMOSTATS.
- CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL PIPES, DUCTWORK, UNITS, ETC. WITH ALL OTHER TRADES AND SHIFT LOCATION OR OFFSET WHERE NECESSARY. PROVIDE TRANSITIONS IN DUCTWORK TO AVOID CONFLICT WITH EXISTING DUCTWORK AND OTHER STRUCTURES.
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- COORDINATE ROOF WORK WITH BUILDING OWNER'S ROOFING CONTRACTOR TO ASSURE THAT THE ROOF WARRANTY IS NOT
- INSTALL DUCTWORK AS HIGH AS POSSIBLE.
- EXHAUST AIR DUCTS SHALL BE EQUIPPED WITH BACKDRAFT DAMPERS.
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- . ALL DUCT ELBOWS SHALL BE LONG RADIUS OR MITERED.

KEYED NOTES

- PROVIDE HEAT PUMP AND LOCATE ON ROOF ON ANVIL INTERNATIONAL HAYDON H-BLOCK, OR EQUIVALENT, ROOFTOP SUPPORT SYSTEM, COMPLETE WITH ROOF PAD. MAINTAIN UNIT MINIMUM REQUIRED SERVICE AND AIRFLOW CLEARANCE. ROUTE REFRIGERANT LIQUID AND SUCTION LINES BETWEEN CONDENSING UNIT/HEAT PUMP AND FURNACE COOLING COIL/AIR HANDLING UNIT AND SEAL ROOF PENETRATIONS WEATHER-TIGHT. PROVIDE PATE, OR EQUIVALENT, PIPE CURB FOR ALL ROOF PENETRATIONS. ROUTE AND SIZE LINES AND ACCESSORIES PER MANUFACTURER'S GUIDELINES. PROVIDE A FULLY CHARGED SYSTEM AND INSULATE ALL REFRIGERANT PIPING WITH ARMAFLEX INSULATION.
- PROVIDE EXHAUST FAN AND INSTALL ON 20" HIGH INSULATED AND VENTILATED ROOF CURB. DISCHARGE OPENING SHALL BE NO LESS THAN 40" ABOVE THE ROOF. MAINTAIN MINIMUM 10' CLEARANCE FROM ANY OUTDOOR AIR INTAKES.
- PROVIDE EXHAUST FAN FOR TYPE II HOOD AND INSTALL ON 12" HIGH INSULATED ROOF CURB. DISCHARGE OPENING SHALL BE NO LESS THAN 30" ABOVE THE ROOF AND 30" FROM ANY VERTICAL WALLS. MAINTAIN MINIMUM 10' CLEARANCE FROM ANY OUTDOOR AIR INTAKES.

EXISTING CONDENSING UNIT(S) SERVING APPARTMENTS TO REMAIN. PROTECT DURING CONSTRUCTION.

ROUTE TYPE II DUCTWORK AS INDICATED IN TOP FLOOR ATTIC SPACE TO FAN LOCATION INDICATED ON ROOF AND TURN DUCTWORK UP THROUGH ROOF AND CONNECT INTO FAN, REFER TO NOTE 3 ON THIS SHEET FOR ADDITIONAL INFORMATION.

Progress Dates 08.28.2023 - HVAC COORD. 09.06.2023 - REVIEW SET 09.11.2023 - PERMIT SET

OH COA #4715

Revisions

Design Team: MARQUE ENGINEERING MARQUE ENGINEERING

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LOUVER SCHEDULE

TAG	MANUFACTURER	MODEL	FUNCTION	FACE SIZE	BORDER TYPE	MATERIAL	FINISH	REMARKS
L-1	RUSKIN	ELF-375DX	EXHAUST AIR	36x16	FLANGE	ALUMINUM	SEE ARCH.	A,B,C,D,E
L-2	RUSKIN	ELF-375DX	OUTSIDE AIR	36x48	FLANGE	ALUMINUM	SEE ARCH.	A,B,C,D,E

- A. DESIGNED TO PROTECT AGAINST WIND DRIVEN RAIN.
- B. ARCHITECT TO CHOOSE COLOR.
- C. CONTRACTOR TO PROVIDE OPENING IN EXISTING WALL.
- D. PROVIDE WITH CLEAR ANODIZED FINISH.
- E. BIRD SCREEN.

		E	XHAU	JST F	FAN S	SCHE	DULE					
TAG	MANUFACTURER	MODEL	CFM	SP	RPM	BHP	VOLTAGE	Ф	FLA	WEIGHT LBS	SONES	REMARKS
EF-1	GREENHECK	CSP-A700-VG	550	0.5	1,171	0.15	120	1	4.1	39	1.7	A,B,C,D
EF-2	CAPTIVE AIRE	DU180HFA	1900	2.25	1,359	1.638	208	3	9.5	190	18.7	E,F,G,H,I
EF-3	CAPTIVE AIRE	DU85HFA	1150	1.5	1,347	0.474	208	1	6.9	87	11.3	E,G,H,J

- A. FAN TO BE ACTIVATED BY TIME CLOCK
- B. DISCONNECT SWITCH
- . BACKDRAFT DAMPER
- D. HANGING VIBRATION ISOLATORS
- E. FAN TO BE INTERLOCKED WITH MAU-1
- . GREASE CUP.
- G. VARIABLE SPEED CONTROL.
- . WEATHERPROOF DISCONNECT.
- 24" HIGH INSULATED, HINGED, AND VENTILATED ROOF CURB.
- . 12" HIGH INSULATED ROOF CURB

ELECTRIC HEATER SCHEDULE														
TAG MANUFACTURED MODEL OF MANUFACTURED ELECTRICAL DEMANGE														
TAG	MANUFACTURER	MODEL	CFM	KW	STEPS	VOLTAGE	PHASE	FLA	MCA	МОСР	REMAR			
WH-1	QMARK	AWH4408F	-	2.0	1	208	1	9.6	12	15	А			

TYPE I HOOD EXHAUST SCHEDULE

	НО	DD EXHAU	ST				
HOOD#	CFM	DUCT SIZE	DUCT VELOCI (FPM)				
HD1	1,900	14"Ø	1,777				
DUCT VE		FALLS IN T OF 500-25	THE ALLOWABLI 00 FPM.				

AIR BALANCE SCHEDULE													
EXH	AUST	SUF	SUPPLY										
UNIT	CFM	UNIT	CFM	OA CFM									
EF-1	550	GF-1	1000	200									
EF-2	1900	GF-2	1400	170									
EF-3	1150	GF-3	1600	200									
		GF-4	1600	240									
		GF-5	1600	240									
		GF-6	800	120									
		AHU-1	1000	50									
		MAU-1	2700	2700									
TOTAL	3600		TOTAL	3920									
RESTAU	RANT IS 32	20 CFM PC	SITIVE										

					INDOOR	LIMIT	INDOOR UNIT												OUTDOOR UNIT COMBINED ARI RATING							
TAG	MANUFACTURER	MODEL	NOMINAL	1	OA CFM	Ī	AUX HEAT		ELECT			WEIGHT	TAG	MANUFACTURER			ELECT			WEIGHT		SENSIBLE		HEATING	HSPF	REMARKS
IAG	WANDI ACTORLIN	WODEL	TONNAGE	CFM	OA CI W	L.J.F	KW	VOLTAGE	PHASE	MCA	MOCP	LBS	IAG	IVIANOI ACTORLIN	WODLL	VOLTAGE	PHASE	MCA	MOCP	LBS	BTUH	BTUH	SLLIX	BTUH	ПОГІ	
AHU-1	CARRIER	FJ4DNXB30L00	2.5	1,000	200	0.75"	7.5	208	1	52.1	60	148	HP-1	CARRIER	25SCA530A003	208	1	18.2	30	207	27,830	22,470	14.3	13,420	7.7	A,B,C,D,E,F,G,H
AHU-2	CARRIER	FV4CNF003L00	3.0	1,000	50	0.75"	3.8	208	1	31.2	35	150	HP-2	CARRIER	25TPA736A003	208	1	25.2	40	273	30,290	20,630	15.0	16,980	7.8	A,B,C,D,E,F,G,H
AHU-3	CARRIER	FV4CNF005L00	4.0	1,400	170	0.75"	6.0	208	1	44.7	45	172	HP-3	CARRIER	25TPA748A003	208	1	33.5	50	324	44,240	34,740	16.5	23,140	8.1	A,B,C,D,E,F,G,H
AHU-4	CARRIER	FV4CNF005L00	4.0	1,600	200	0.75"	11.3	208	1	53.8	60	172	UD 4	HP-4 CARRIER 25TPA748A	25TDA749A002	208	4	33.5	50	324	44,280	34,750	16.5	23,140	8.1	A,B,C,D,E,F,G,H
AHU-4	CARRIER	FV4CNF005L00	4.0	1,000	200	0.75	11.3	208	1	22.7	25	1/2	ПР-4		251PA740A003	200	200	33.3		324	44,200	04,700	16.5	23,140	0.1	A,b,o,b,E,F,G,H,I
AHU-5	CARRIER	FV4CNF005L00	4.0	1,600	240	0.75"	6.0	208	1	44.7	45	172	HP-5	CARRIER	25TPA748A003	208	1	33.5	50	324	44,530	34,880	16.5	23,140	8.1	A,B,C,D,E,F,G,F
AHU-6	CARRIER	FV4CNF005L00	4.0	1,600	240	0.75"	6.0	208	1	44.7	45	172	HP-6	CARRIER	25TPA748A003	208	1	33.5	50	324	44,530	34,880	16.5	23,140	8.1	A,B,C,D,E,F,G,F
AHU-7	CARRIER	FV4CNF002L00	2.0	800	120	0.75"	3.8	208	1	31.2	35	135	HP-7	CARRIER	25TPA724A003	208	1	14.1	25	255	21,690	17,380	16.5	10,770	8.0	A,B,C,D,E,F,G,H

SPLIT SYSTEM HEAT PUMP SCHEDULE

- A. ALL HVAC EQUIPMENT TO BE FIELD LABELED TO IDENTIFY WHICH AREAS OF THE BUILDING THEY SERVE.
- B. MERV 8 PLEATED FILTER.
- C. COOLING CAPACITY BASED ON 80°F EDB/67°F EWB AND 95°F CONDENSING TEMPERATURE.
- D. COMPRESSOR START ASSIST, LIQUID SOLENOID VALVE, THERMOSTATIC EXPANSION VALVE(RPB). TIME-DELAY RELAY.
- E. PROVIDE CRANKCASE HEATER WHEN INTERCONNECTING TUBE LENGTH EXCEEDS 50 FT.
- F. FLOAT SWITCH AND CONDENSATE PUMP.
- G. LOW AMBIET COOLING KIT H. FACTORY INSTALLED, OR FIELD INSTALLED BY A TRAINED INSTALLER, RAWAL APR CONTROL, ON FIRST STAGE OF COMPRESSOR REFRIGERANT CIRCUIT. CONTACT JONATHAN LUSK AT 800-727-6447 FOR ADDITIONAL INFORMATION.
- DUAL POINT POWER CONNECTION (AHU ONLY)

MAKEUP AIR UNIT SCHEDULE

FAN UNIT NO.	TAG	FAN UNIT MODEL#	BLOWER	HOUSING	CFM	ESP.	RPM	H.P.	B.H.P.	Ø	VOLT	MCA	WEIGHT (LBS.)	SONES	BURNER EFFICIENCY(%)	GAS INPUT BTUH	GAS OUTPUT BTUH	TEMP. RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	REMARKS
1	MAU-1	A2-D.500-20D-MPU	20MF-2-MOD	A2-D.500	2,700	0.70	1,281	2.00	1.125	3	208	7.7	1518	10.6	92	201,575	185,449	66 deg F	7 in. w.c 14 in. w.c.	Natural	A,B,C,D,E,F

- A. ALL MAKEUP AIR UNITS TO BE FIELD LABELED TO IDENTIFY THE AREA OF THE BUILDING SPACE THEY SERVE.
- B. V BANK FILTER SECTION
- C. BURNER SECTION WITH ALL CONTROLS
- D. CENTRIFUGAL FAN SECTION
- E. UNIT MOUNTED NON FUSED DISCONNECT SWITCH.
- F. (2) REMOTE MOUNTED CONDENSING UNITS.

AIR DEVICE SCHEDULE
, \ D = \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \

TAG	MANUFACTURER	MODEL	FUNCTION	FACE SIZE	BORDER TYPE	MATERIAL	FINISH	REMARKS
CD-1	PRICE	SPD	SUPPLY	24x24	SURFACE/ LAY-IN	STEEL	WHITE	A,B
CD-2	PRICE	SPD	SUPPLY	12x12	SURFACE/ LAY-IN	STEEL	WHITE	A,B
CD-3	PRICE	PDDR	SUPPLY	24x24	SURFACE/ LAY-IN	STEEL	WHITE	A,B
SR-1	PRICE	520L	SUPPLY	14x6	SURFACE MOUNTED	ALUMINUM	WHITE	А
SR-2	PRICE	520L	SUPPLY	16x6	SURFACE MOUNTED	ALUMINUM	WHITE	А
RG-1	PRICE	80	RETURN	24x24	SURFACE/ LAY-IN	ALUMINUM	WHITE	В
RG-2	PRICE	630L	RETURN	30x18	SURFACE	ALUMINUM	WHITE	В
RG-3	PRICE	630L	RETURN	24x16	SURFACE	ALUMINUM	WHITE	В
EG-1	PRICE	80	EXHAUST	12x12	SURFACE MOUNTED	ALUMINUM	WHITE	В
TG-1	PRICE	630L	EXHAUST	16x12	SURFACE MOUNTED	ALUMINUM	WHITE	В
DEMA	DK6.				·		·	·

- A. PROVIDE VOLUME DAMPERS IN TAKEOFFS WHERE ACCESSIBLE. WHERE DAMPERS ARE NOT ACCESSIBLE, PROVIDE OPPOSED BLADE DAMPER AT DIFFUSER
- B. COORDINATE FRAME TYPE WITH ARCHITECTURAL REFLECTED CEILING PLAN

n Meats/Fi	ndlay Market Restroom	Rennovation	n - Cincinnati, OH			Vbz	=AzxRa+	- Rp xPz							1	
			Table 403.3.1.1				PEOPLE	AREA	OA	AIR		SA		Zp =		Vot =
		Az	OCCUPANCY	Rp	Ra	Pz	Rp xPz	Azx Ra	CFM	Eff	Voz=	CFM	OA	Voz /		Voz
ROOM #	ROOM NAME	SQFT	CATEGORY	CFM/P	CFM/SQFT	people	CFM	CFM	Vbz	Ez	Vbz/Ez	Vpz	·	Vpz	Ev	Ev
													20%			
	Men	224	Restroom	0	0	0	0	0	0	0.8	0	250	50	0.00	1.00	0
	Janitor	43	Storage	0	0.12	0	0	5	5	0.8	6	50	10	0.13	1.00	6
	Women	272	Restroom	0	0	0	0	0	0	0.8	0	300	60	0.00	1.00	0
	Public Corridor/Entrance	476	Corridor	0	0.06	0	0	29	29	0.8	36	400	80	0.09	1.00	36
	AHU-1	1015				0					42	1000	200			42
													5%			1
	Cutting	175	Occupied Storage	5	0.06	2	10	11	21	0.8	26	1000	50	0.03	1.00	26
	AHU-2	175				2	100.00			01.5533	26	1000	50			26
		- 1,1-1														1
													12%			+
	Meat Sales	459	Retail	7.5	0.12	3	23	55	78	0.8	97	1250	150	0.08	0.90	108
	Customer Order	464	Retail	7.5	0.12	20	150	56	206	0.8	257	1600	192	0.16	0.90	286
	Dry Storage	105	Storage	0	0.12	0	0	13	13	0.8	16	150	18	0.11	0.90	18
	AHUs 3 & 4	1028				23				87.557	370	3000	360			411
	11100000	1020									5,0	5000	500			111
													15%			
	Customer Order	296	Retail	7.5	0.12	20	150	36	186	0.8	232	1600	240	0.14	1.00	232
	Deli	590	Kitchen	7.5	0.12	3	23	71	93	0.8	117	1000	150	0.12	1.00	117
	Washing	87	Kitchen	7.5	0.12	1	8	10	18	0.8	22	600	90	0.04	1.00	22
	Grill	92	Kitchen	7.5	0.12	2	15	11	26	0.8	33	700	105	0.05	1.00	33
	Service Vestibule	88	Corridor	0	0.06	0	0	5	5	0.8	7	100	15	0.07	1.00	7

COMMERCIAL KITCHEN HOOD SCHEDULE

		ILIEA OTUDED MODEL LENG		MAX COOKING	ΤΟΤΔΙ	EXHAUST PLENU RISER	IM		HOOD	HANGING	
TAG	MANUFACTURER	MODEL	LENGTH	TEMP °F	EXH CFM	SIZE	CFM	SP	CONSTRUCTION		REMARKS
HD1	CAPTIVE AIRE	5424 ND-2-PSP-F	9'-6"	600	1900	4"H x 14"Ø	1900	-0.990"	430 SS WHERE EXPOSED	587	A,B,C
HD2	CAPTIVE AIRE	5424 ND-2-PSP-F	4'-1"	450	650	4"H x 10"Ø	650	-0.153"	430 SS WHERE EXPOSED	279	B,D
HD3	CAPTIVE AIRE	4224 VHB-G-PSP-F	3'-6"	700	500	4"H x 10"Ø	500	-0.063"	430 SS WHERE EXPOSED	173	B,D

- A. TYPE I HOOD. WITH GREASE EXTRACTORS, GREASE DRAIN AND CUP.
- B. LIGHT: INCANDESCENT LIGHT FIXTURE W/O WIRE GUARD.
- C. ANSUL SYSTEM WITH FIRE SUPPRESSION PIPING. D. TYPE II HOOD. NO FILTERS

CONDENSING UNIT SCHEDULE

TAG	MANUFACTURER	MODEL	TONS	NET TOT	NET SENS	SEER		EL	.ECTRICA			WEIGHT	REMARKS
IAG	WANDFACTURER	WODEL	10113	BTUH	BTUH	SEER	VOLTAGE	Ø	FLA	MCA	MOCP	WEIGHT	KEWIAKKS
CU-1	CAPTIVE AIRE	A2-D.500-20D-MPU	2.5	62.700	46,300	14.0	208	3	-	11.2	20	-	A,B,C,D,E
CU-2	CAPTIVE AIRE	A2-D.500-20D-MPU	5.0	02,700	40,300	14.0	208	3	-	21.4	30	-	A,B,C,D,E

- A. ALL HVAC EQUIPMENT TO BE FIELD LABELED TO IDENTIFY WHICH AREAS OF THE BUILDING THEY SERVE.
- B. COOLING CAPACITY BASED ON 80°F EDB/67°F EWB AND 95°F CONDENSING TEMPERATURE. C. COMPRESSOR START ASSIST, LIQUID SOLENOID VALVE, THERMOSTATIC EXPANSION VALVE(RPB). TIME-DELAY RELAY
- D. PROVIDE CRANKCASE HEATER WHEN INTERCONNECTING TUBE LENGTH EXCEEDS 50 FT. CONDENSING UNIT TO SERVE MAU-1 REFER TO HOOD DRAWINGS FOR ADDITIONAL INFORMATION.

DEHUMIDIFIER SCHEDULE

		٥		ILI (GOI ILB					
TAG	MANUFACTURER	MODEL	AREA SERVED	COVERAGE	PINTS /	El	ECTRICA	L	REMARKS
IAG	MANUFACTURER	WIODEL	AREA SERVED	COVERAGE	HOUR	VOLTAGE	PHASE	FLA	KEWAKKS
DH-1	FRIEDRICH	D50B1A	BASEMENT	UP 2000 SQ/FT	50	120	1	8.2	A,B
DH-2	FRIEDRICH	D50B1A	BASEMENT	UP 2000 SQ/FT	50	120	1	8.2	A,B
DH-3	FRIEDRICH	D50B1A	BASEMENT	UP 2000 SQ/FT	50	120	1	8.2	A,B

A. ROLL CASTERS. B. PROVIDE INTERNAL CONDENSATE PUMP.

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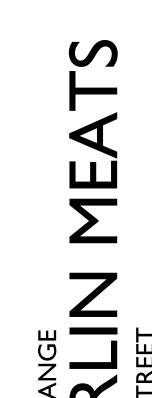


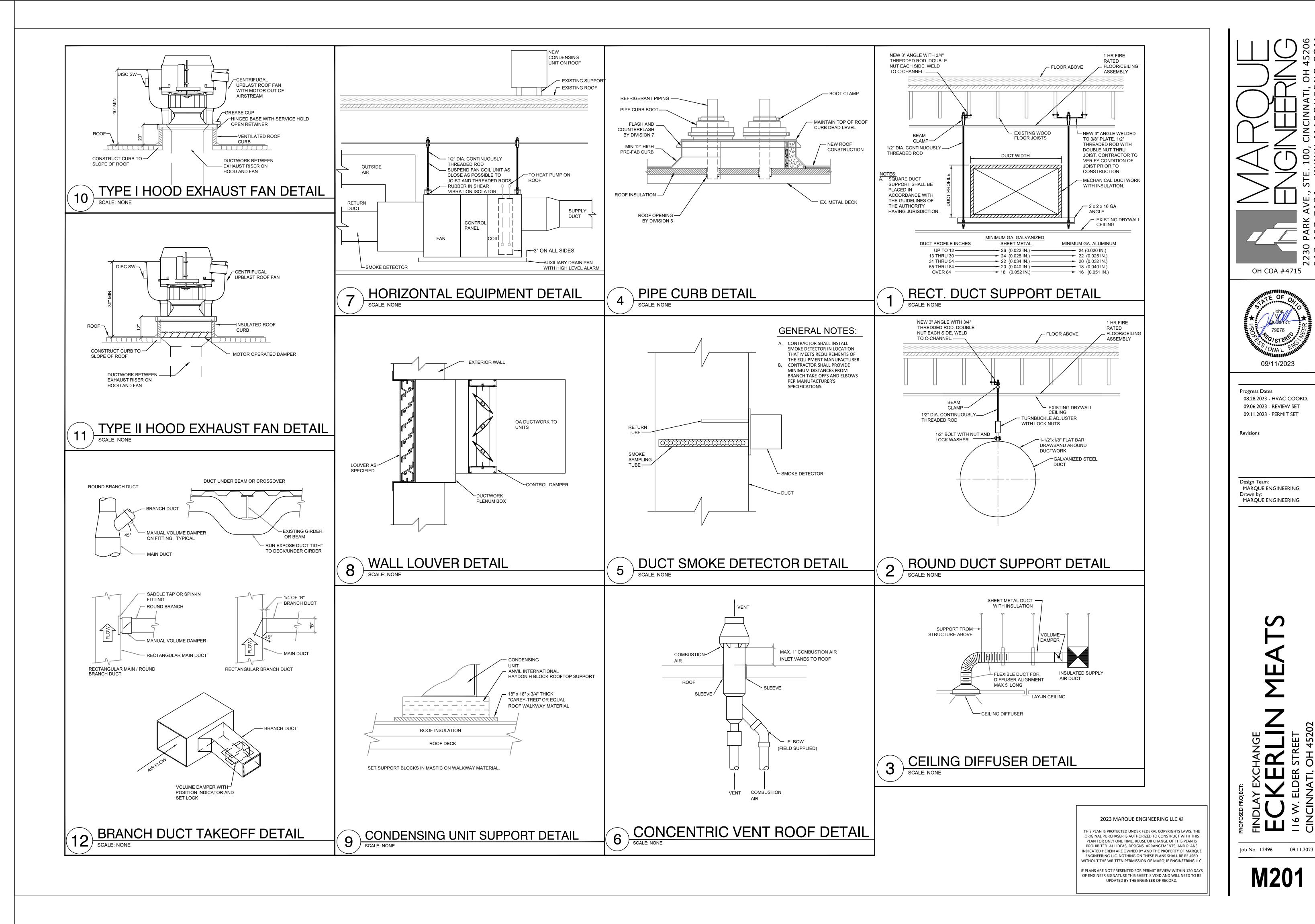


Progress Dates 08.28.2023 - HVAC COORD. 09.06.2023 - REVIEW SET 09.11.2023 - PERMIT SET

Revisions

Design Team: MARQUE ENGINEERING Drawn by: MARQUE ENGINEERING





ALL MECHANICAL WORK AND TESTS SHALL BE DONE IN STRICT ACCORDANCE WITH THE LATEST STATE, COUNTY, AND

BEFORE SUBMITTING A BID, EXAMINE DOCUMENTS OF ALL OTHER TRADES, VISIT THE SITE AND GET ACQUAINTED WITH ALL CONDITIONS THAT MAY IN ANY WAY AFFECT THE EXECUTION OF THIS CONTRACT. TAKE MEASUREMENTS AND BE RESPONSIBLE FOR EXACT SIZE AND LOCATIONS OF ALL OPENINGS REQUIRED. VERIFY INSTALLATION MAY BE MADE IN COMPLETE ACCORDANCE WITH ALL PERTINENT CODES AND REGULATIONS. IN THE EVENT OF DISCREPANCY. IMMEDIATELY NOTIFY THE PROFESSIONAL ENGINEER OF RECORD. DO NOT PROCEED WITH THE INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED

IT IS NOT THE INTENT OF THE DRAWINGS THAT EXISTING CONDITIONS BE ACCURATELY SHOWN. EXISTING MECHANICAL WORK IS SHOWN TO LIMITED EXTENT ON DRAWINGS AND IS SHOWN FOR GENERAL REFERENCE ONLY. LOCATIONS AND INFORMATION WERE DERIVED FROM CURSORY SITE VISUAL OBSERVATIONS OR FROM DOCUMENTS THAT WERE PREPARED FOR PREVIOUSLY INSTALLED WORK WHEN AVAILABLE.

THE WORK COVERED BY THESE SPECIFICATIONS SHALL CONSIST OF PROVIDING ALL NEW MATERIAL, LABOR, EQUIPMENT, AND SERVICES NECESSARY FOR A COMPLETE MECHANICAL INSTALLATION AS SPECIFIED HEREIN. WORK IN THIS SECTION

INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING ITEMS: SPLIT SYSTEM HEΔT PLIMP

LOCAL REGULATIONS, LAWS, AND, ORDINANCES WHICH MAY BE APPLICABLE.

AIR HANDLING UNITS

 TOILET EXHAUST FANS KITCHEN HOOD AND EXHAUST FAN • LOW VOLTAGE THERMOSTATS

DIFFUSERS, REGISTERS, AND LOUVERS

INTERNATIONAL MECHANICAL CODE

DAMPERS

WHENEVER THE WORDS "CONTRACTOR" APPEAR ON MECHANICAL DRAWINGS OR IN THESE SPECIFICATIONS, IT SHALL REFER TO THE MECHANICAL SUB-CONTRACTOR. WHENEVER THE WORD "PROVIDE" APPEARS IN THESE DOCUMENTS, IT SHALL BE INTERPRETED TO MEAN "FURNISH AND INSTALL"

COORDINATE ALL WORK WITH THE OWNER TO MINIMIZE INTERRUPTION OF BUILDING OPERATION.

COORDINATE THE INSTALLATION OF MECHANICAL ITEMS WITH THE SCHEDULES FOR WORK OF ALL OTHER TRADES TO PREVENT UNNECESSARY DELAYS IN THE TOTAL WORK.

THIS CONTRACTOR SHALL VERIEY AND SATISFY HIMSELF THAT ALL FOLLIPMENT FLIRNISHED WILL PROPERLY FIT IN THE SPACE PROVIDED. THAT IT WILL FUNCTION PROPERLY, AND THAT ALL PARTS OF EQUIPMENT REQUIRING SERVICE ARE

ALL PIPING SHALL BE RUN PARALLEL OR PERPENDICULAR TO BUILDING WALLS AND FRAMING SYSTEM. ALL VERTICAL RUNS SHALL BE HELD AGAINST WALLS, COLUMNS, ETC., AS POSSIBLE TO PERMIT MAKING OF PIPE JOINTS.

CONTRACTOR SHALL PROVIDE A GUARANTEE IN WRITTEN FORM STATING THAT ALL WORK SHALL BE FREE OF DEFECTS OR ERRORS, AND ALL EQUIPMENT, MATERIALS, OR PARTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF OWNER'S FINAL ACCEPTANCE AND SHALL REPAIR, REVISE OR REPLACE AT NO COST TO THE OWNER ANY SUCH DEFECTS OCCURRING WITHIN THE GUARANTEE PERIOD.

CONTRACTOR SHALL ALSO STATE IN WRITTEN FORM THAT ANY ITEMS OR OCCURRENCES ARISING DURING THE GUARANTEE PERIOD WILL BE ATTENDED TO IN A TIMELY MANNER AND WILL IN NO CASE EXCEED THREE (3) WORKING DAYS FROM DATE OF NOTIFICATION BY OWNER.

PROVIDE A COMPLETE INSTALLATION IN CONFORMANCE WITH THE FOLLOWING STANDARDS. AGA: AMERICAN GAS ASSOCIATION

ASHRAE: AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS NFPA: NATIONAL FIRE PROTECTION ASSOCIATION SMACNA: SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION. STATEWIDE BUILDING CODE

CONTRACTOR SHALL DO ALL CUTTING AND PATCHING REQUIRED FOR INSTALLATION OF THIS WORK, ALL OPENINGS IN WALLS, FLOORS OR CEILINGS SHALL BE PROPERLY SEALED AND RESTORED IN KIND. FLASH AND COUNTERFLASH AT ROOF

ALL EQUIPMENT SHALL BE LISTED AND LABELED, UNLESS OTHERWISE APPROVED.

ALL WIRING SHALL MEET THE REQUIREMENTS LISTED IN THE ELECTRICAL SPECIFICATIONS. ALL CONTROL AND INTERLOCK WIRING AND CONDUIT (120V OR 24V) SHALL BE BY THE MECHANICAL CONTRACTOR.

EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CONDITIONS OF LISTING AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND THIS CODE. CLEANING: THIS CONTRACTOR SHALL REMOVE FROM THE PREMISES ALL ACCUMULATION OF DIRT, DEBRIS, WASTE

MATERIALS AND RUBBISH CAUSED BY HIS EMPLOYEES OR WORK, AT LEAST ONCE A WEEK, EXCEPT THAT COMBUSTIBLE

DURING PROGRESS OF THE WORK, MAINTAIN ON DRAWINGS AT THE SITE, AN ACCURATE RECORD OF THE INSTALLATION OF THE MECHANICAL SYSTEM, INDICATING ALL ITEMS WHICH HAVE BEEN CHANGED OR ADDED

APPLY FOR AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED BY LOCAL AUTHORITY, FOR THE APPROVAL OF

A CERTIFICATE OF FINAL INSPECTION AND APPROVAL SHALL BE SUBMITTED WITH THE CONTRACTOR'S REQUEST FOR FINAL PAYMENT. NO FINAL PAYMENT WILL BE APPROVED WITHOUT THIS CERTIFICATE.

GUARANTEE ALL WORKMANSHIP, MATERIAL, AND EQUIPMENT AND REPLACE ANY FOUND DEFECTIVE WORK WITHOUT COST TO THE OWNER, FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE. **EXISTING CONDITIONS**

DO NOT REUSE REMOVED MECHANICAL MATERIALS UNLESS SPECIFICALLY INDICATED ON DRAWINGS. EXISTING SYSTEMS MAY BE UTILIZED ONLY TO THE EXTENT INDICATED ON DRAWINGS.

IF REQUIRED TO ACCOMMODATE CONSTRUCTION RELATED ACTIVITIES TEMPORARILY REMOVE, STORE IN PROTECTED LOCATION ON SITE, AND REINSTALL CONFLICTING MECHANICAL EQUIPMENT, OR DEVICES THAT ARE TO REMAIN OR TO BE

WHERE THE TERM "DEMOLITION" IS USED HEREIN, INTERPRET IT TO MEAN "DEMOLITION" OR "SELECTIVE DEMOLITION" WHERE APPLICABLE.

PROVIDE MECHANICAL DEMOLITION WORK AS REQUIRED TO ACCOMMODATE PROJECT DEMOLITION AND AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION. DISCONNECT AND REMOVE WORK TO BE ABANDONED, AND AS REQUIRED TO ACCOMMODATE WORK OF OTHER TRADES, IN AREAS AFFECTED BY THIS PROJECT.

LEGALLY DISPOSE OF MATERIALS TO SALVAGED OR RETAINED.

23 05 03 SUBMITTALS FOR MECHANICAL SYSTEMS

DESIGN BASIS MANUFACTURERS OF MATERIAL AND EQUIPMENT ARE SPECIFIED AND PLANS ARE DETAILED ACCORDING TO THIS MATERIAL. CONTRACTOR SHALL BASE HIS BID ON FURNISHING AND INSTALLING THIS MAKE OF MATERIAL AND

AN ACCEPTABLE MANUFACTURER'S NAME AND MODEL NUMBER OF A PRODUCT MAY BE PROVIDED IN THESE DOCUMENTS. THIS IS THE EQUIPMENT INCLUDED DURING THE DESIGN PROCESS AND FORMS THE BASIS OF A STANDARD OF QUALITY. WHERE MORE THAN ONE MAKE OF MATERIAL OR EQUIPMENT IS SPECIFIED, THE CONTRACTOR SHALL STATE IN HIS BID WHICH MAKE HE PROPOSES TO FURNISH AND INSTALL. SHOP DRAWING APPROVAL SHALL BE OBTAINED PRIOR TO SHIPMENT OF EQUIPMENT

VERIFY THE MODEL NUMBER OR PRODUCT IS STILL ACCURATE AND MEETS ALL REQUIREMENTS SHOWN ON THE DRAWINGS. IF THERE IS A DISCREPANCY BETWEEN THE REQUIREMENTS AND THE PRODUCT OR MODEL NUMBER, THE

SUBMIT SHOP DRAWINGS AND/OR PRODUCT DATA (ELECTRONIC COPIES) ON THE FOLLOWING ITEMS FOR REVIEW BEFORE FABRICATION OR SHIPMENT:

SPLIT SYSTEM HEAT PUMP/CONDENSING UNITS

AIR HANDLING UNITS

• TOILET EXHAUST FANS KITCHEN HOOD AND EXHAUST FAN

 LOW VOLTAGE THERMOSTATS DUCT

 DAMPERS DIFFUSERS, REGISTERS, AND LOUVERS

MAINTENANCE MANUALS: THE MANUALS SHALL INCLUDE WIRING DIAGRAMS, MAINTENANCE AND OPERATING INSTRUCTIONS, PARTS LISTINGS, AND COPIES OF OTHER SUBMITTALS INDICATED FOR INCLUSION.

REVIEW AND CORRECTIONS OR COMMENTS MADE ON SHOP DRAWINGS, PRODUCT DATA: CATALOGS, CUT SHEETS, CHARTS, AND OTHER ITEMS DURING CONSTRUCTION PHASE SUBMITTAL REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS, FOR PROVIDING A COMPLETE AND FUNCTIONING PROJECT, NOR SHALL THEY RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR DEVIATIONS OR FRRORS OF ANY SORT. THIS REVIEW IS FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH INFORMATION GIVEN AND THE DESIGN CONCEPT EXPRESSED IN THE CONTRACT DOCUMENTS. CONTRACTOR REMAINS RESPONSIBLE FOR DETERMINING THE ACCURACY AND COMPLETENESS OF OTHER DETAILS SUCH AS DIMENSIONS AND QUANTITIES, FOR SUBSTANTIATING INSTRUCTIONS FOR INSTALLATIONS, VERIFYING MATERIALS REQUIRED, OBTAINING FIELD MEASUREMENTS AND RELATED CRITERIA, COORDINATING WORK WITH OTHER DISCIPLINES AND PERFORMING WORK IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.

ANY CHANGES TO ITEMS SPECIFIED MUST BE SUBMITTED IN WRITING AS A SUBSTITUTION, WITH COMPLETE DOCUMENTATION OF PRICE DIFFERENTIAL AND EQUIPMENT DETAILS. ANY SUBSTITUTIONS PROVIDED SHALL BE REVIEWED AT MARQUE ENGINEERING'S HOURLY RATES. REVIEW SHALL BE PAID FOR BY THE CONTRACTOR TO MARQUE ENGINEERING AT NO COST TO THE OWNER. BY USING PRE-APPROVED SUBSTITUTIONS, THE CONTRACTOR ACCEPTS ALL RESPONSIBILITY AND ASSOCIATED COSTS FOR ALL REQUIRED MODIFICATIONS TO THE CONTRACT DOCUMENTS TO INCLUDE BUT NOT LIMITED TO MATERIAL OR EQUIPMENT COSTS FOR THEIR OR OTHER TRADES. AND ENSURING THAT SUBSTITUTED MATERIALS AND EQUIPMENT TO BE FURNISHED FIT INTO SPACE AVAILABLE.

EXTENSIVE REVISIONS NECESSITATED TO THE CONTRACT DOCUMENTS, OR SUBSTITUTION ACTIONS RELATED TO ANY SPECIFIED PRODUCT NOT ABLE TO BE PROVIDED DUE TO A FAILURE TO COMMENCE WORK, RELEASE PRODUCT OR COORDINATE CONSTRUCTION ACTIVITIES SHALL BE PROVIDED AT MARQUE ENGINEERING'S HOURLY RATES. COSTS SHALL BE BORN BY THE CONTRACTOR AT NO COST TO THE OWNER.

23 05 29 HANGERS AND SUPPORTS

SUPPORT ALL PIPING, DUCTWORK AND EQUIPMENT BY HANGERS OR BRACKETS. FURNISH STRUCTURAL STEEL MEMBERS

WHERE REQUIRED TO SUPPORT PIPING AND EQUIPMENT. NO PORTION OF PIPING OR VALVES SHALL BE SUPPORTED BY

DUCTWORK - SUPPORT BY MEANS OF HANGERS AS FOLLOWS: DUCT WIDTH 30 OR LESS

HANGER SIZE (16 GAUGE)

TYPE MAX. SPACING A PAIR OF HANGERS SHALL BE LOCATED AT EVERY TRANSVERSE JOINT AND ELSEWHERE ACCORDING TO THE TABLE. $23\ 05\ 93\ HVAC\ SYSTEM\ TESTING$, ADJUSTING AND BALANCING FOR HVAC

ALL SYSTEMS AND EQUIPMENT SHALL BE CAREFULLY ADJUSTED TO PROVIDE COMFORTABLE AND UNIFORM CONDITIONS IN EACH AND EVERY SPACE TO THE OWNER'S SATISFACTION. PROVIDE ANY REQUIRED DRIVES TO SATISFY QUANTITIES INDICATED. PROVIDE A CERTIFIED AIR BALANCE OF THE DIFFUSERS AND AIR HANDLERS.

AIR BALANCE AND TESTING SHALL NOT BEGIN UNTIL THE SYSTEM HAS BEEN COMPLETED AND IS IN FULL WORKING ORDER. CONTRACTOR SHALL PUT ALL HEATING, VENTILATING AND AIR CONDITIONING SYSTEM AND EQUIPMENT INTO FULL OPERATION AND SHALL CONTINUE THE OPERATION OF SAME DURING EACH WORKING DAY OF TESTING AND BALANCING. CONTRACTOR SHALL SUBMIT WITHIN 30 DAYS AFTER RECEIPT OF CONTRACT, COPIES OF SUBMITTAL DATA FOR THE TESTING AND BALANCING OF THE AIR CONDITIONING, HEATING, AND VENTILATING SYSTEMS. THE AIR BALANCE AND TESTING AGENCY SHALL PROVIDE PROOF OF HAVING SUCCESSFULLY COMPLETED AT LAST FIVE PROJECTS OF SIMILAR

CONTRACTOR SHALL PROCURE THE SERVICES OF AN INDEPENDENT AIR BALANCE AND TESTING AGENCY, APPROVED BY THE ENGINEER, AND A MEMBER OF AABC OR NEBB, WHICH SPECIALIZES IN THE BALANCING AND TESTING OF HEATING VENTILATION AND AIR CONDITIONING SYSTEMS. TO BALANCE, ADJUST AND TEST AIR MOVING EQUIPMENT AND AIR DISTRIBUTION OR EXHAUST SYSTEMS AS HEREIN SPECIFIED.

ALL WORK BY THIS AGENCY SHALL BE DONE UNDER THE DIRECT SUPERVISION OF A QUALIFIED HEATING AND VENTILATING ENGINEER EMPLOYED BY THIS AGENCY. ALL INSTRUMENTS USED BY THIS AGENCY SHALL BE ACCURATELY CALIBRATED AND MAINTAINED IN GOOD WORKING ORDER.

23 07 13 DUCT INSTALLATION

AIR SYSTEM:

INSULATE ALL SUPPLY, DIFFUSER PLENUMS, AND OUTSIDE AIR DUCTWORK OF ALL UNITS WITH OWENS CORNING "ALL SERVICE DUCT WRAP" TYPE 150 GLASS FIBER INSULATION UNLESS OTHERWISE NOTED. INSULATION SHALL BE 1-1/2" THICK (2" THICK FOR SUPPLY AND RETURN IN TRUSS SPACE), 1.5 PCF, DENSITY WITH FRK JACKET .002 THICK REINFORCED ALUMINUM FOIL VAPOR BARRIER. INSULATION SHALL CONFORM TO NFPA 90A AND 90B PER ASTM E-84 FOR FLAME SPREAD AND SMOKE DEVELOPED RATING

INSULATE ALL EXTERIOR SUPPLY AND RETURN DUCTWORK WITH RIGID FIBERGLASS BOARD INSULATION WITH OUTDOOR JACKET. INSULATION SHALL BE 2" THICK WITH A 'K' VALUE OF 0.23 AT 75 F. INSTALL ON DUCTWORK USING IMPALE ANCHORS AND WIRES. SEAL VAPOR BARRIER WITH VAPOR BARRIER ADHESIVE.

PROVIDE INSULATION ON ALL CONCEALED SUPPLY, RETURN DUCTWORK. ALL LINERS, INSULATION AND ADHESIVES SHALL HAVE A FLAME SPREAD INDEX NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50.

RIGID FIBERGLASS DUCTWORK INSULATION: GLASS FIBERS BONDED WITH A THERMOSETTING RESIN. COMPLY WITH ASTM C 612 TYPE IR WITHOUT FACING AND WITH VAPOR BARRIER ALL-SERVICE JACKET MANUFACTURED FROM KRAFT PAPER, REINFORCING SCRIM, ALUMINUM FOIL, AND VINYL FILM, INSULATION SHALL HAVE A MINIMUM R VALUE AS

FLEXIBLE FIBERGLASS DUCTWORK INSULATION: GLASS FIBERS BONDED WITH A THERMOSETTING RESIN. COMPLY WITH

ASTM C 553, TYPE II. WITHOUT FACING AND WITH VAPOR BARRIER ALL-SERVICE JACKET MANUFACTURED FROM KRAFT PAPER, REINFORCING SCRIM, ALUMINUM FOIL, AND VINYL FILM. INSULATION SHALL HAVE A MINIMUM R VALUE AS

VAPOR BARRIER MATERIAL FOR DUCTWORK: PAPER-BACKED ALUMINUM-FOIL. EXCEPT AS OTHERWISE INDICATED: STRENGTH AND PERMEABILITY RATING EQUIVALENT TO FACTORY-APPLIED VAPOR BARRIERS ON ADJOINING DUCTWORK INSULATION, WHERE AVAILABLE; WITH FOLLOWING ADDITIONAL CONSTRUCTION CHARACTERISTICS:

HIGH PUNCTURE RESISTANCE: LOW VAPOR TRANSMISSION (FOR DUCTS IN EXPOSED AREAS: MECH. ROOMS, ETC.) MODERATE PUNCTURE RESISTANCE: MEDIUM VAPOR TRANSMISSION (FOR DUCTS IN CONCEALED AREAS).

INSTALLATION IS NOT PERMITTED ABOVE DRYWALL CEILINGS AND INACCESSIBLE CEILINGS.

23 09 93 SEQUENCE OF OPERATION

AIR HANDLING UNIT

STARTUP

THE UNIT SHALL OPERATE ON A 7 DAY/NIGHT PROGRAMMABLE THERMOSTAT. DURING STARTUP, THE FAN SHALL RUN WITH THE DAMPERS IN THE FULL RECIRCULATION POSITION. PROVIDE OCCUPIED CHANGEOVER SEQUENCE WITH OPTIMUM START FUNCTION. WHEN THE RETURN AIR TEMPERATURE REACHES OCCUPIED SETPOINT (ADJUSTABLE), THE MINIMUM OUTSIDE AIR DAMPER SHALL OPEN TO THE CONTROLLED MINIMUM OUTDOOR AIR POSITION.

SUPPLY FAN CONTROL

THE SUPPLY FAN SPEED SHALL BE CONSTANT AND SET TO THE REQUIRED CFM.

SPACE TEMPERATURE CONTROL

PROVIDE LOCAL WALL MOUNTED ROOM TEMPERATURE THERMOSTAT WITH DIGITAL DISPLAY OFROOMTEMPERATURE AND SETPOINT (+/- DEG. F. ADJUSTABLE), AND OVERRIDE FEATURE.

MINIMUM OUTSIDE AIR CONTROL DURING OCCUPIED MODE THE MINIMUM OUTSIDE AIR DAMPER SHALL BE OPEN. PROVIDE MOTORIZED OUTDOOR AIR

ECONOMIZER CONTROL

DRY BULB CONTROLLED ECONOMIZER: OPERATED TO AUTOMATICALLY USE OUTDOOR AIR FOR "FREE COOLING" WHEN OUTDOOR AIR TEMPERATURE IS AT ACCEPTABLE LEVELS. AUTOMATICALLY MODULATED OUTDOOR AND RETURN AIR IPERS MAINTAIN PROPER DISCHARGE AIR TEMPERATURE INTO THE CONDITIONED SPACE. ADJUSTABLE MINIMUM POSITION CONTROL IS STANDARD. ECONOMIZER SHALL HAVE POWERED OR BAROMETRIC RELIEF, AS SCHEDULED.

COOLING CONTROL COOLING SHALL BE CONTROLLED TO MAINTAIN SPACE TEMPERATURE SETPOINT. ON A CALL FOR COOLING THE HEATING SHALL BE OFF. ON A FURTHER CALL FOR COOLING. ENABLE THE ECONOMIZER MODE. ON A FURTHER CALL FOR COOLING. DISABI F THE ECONOMIZER MODE AND THE MECHANICAL COOLING SHALL BE STAGED ON.

HEATING CONTROL

HEATING SHALL RE CONTROLLED TO MAINTAIN SPACE TEMPERATURE SETPOINT. ON A CALL FOR HEATING, THE MFCHANICAL COOLING SHALL BE OFF. ON A FURTHER CALL FOR HEATING. THE ECONOMIZER MODE SHALL BE DISABLED. ON A FURTHER CALL FOR HEATING THE GAS HEATING SHALL BE STAGED ON

SMOKE DETECTOR WHEN THE SMOKE DETECTOR IS ALARMED. THE SYSTEM SHALL BE ALARMED AND THE AIR HANDLER SHALL FAIL SAFE WITH MANUAL RESET. ELECTRICAL CONTRACTOR SHALL FURNISH, HVAC CONTRACTOR SHALL MOUNT & ELECTRICAL CONTRACTOR SHALL WIRE A UL LISTED PHOTOELECTRIC SMOKE DETECTOR PER LOCAL CODE AUTHORITY HAVING

UNOCCUPIED MODE DURING THE UNOCCUPIED MODE OF OPERATION, THE AHU SHALL GO INTO NIGHT SETBACK MODE. AT NIGHT

SETBACK/SHUTDOWN THE AHU SHALL GO TO FAIL SAFE POSITION. FAIL SAFE POSITION IS DEFINED BY THE FOLLOWING: THE SUPPLY FAN IS OFF, THE OUTDOOR AIR INTAKE DAMPER IS CLOSED, THE HEATING IS OFF AND THE MECHANICAL COOLING IS OFF. THE SUPPLY FAN SHALL CYCLE IN CONJUNCTION WITH EITHER THE HEATING OR COOLING SYSTEM TO MAINTAIN A MINIMUM/MAXIMUM SPACE TEMPERATURE DEPENDING ON THE SEASON.

LOW VOLTAGE THERMOSTATS SHALL BE PROVIDED AND WIRED BY THE HVAC CONTRACTOR. ELECTRICAL CONTRACTOR SHALL PROVIDE 4" SQUARE X 1- 1/2" DEEP WALL OUTLET BOXES (WITH SINGLE-GANG RINGS) FOR ALL THERMOSTATS/SENSORS. ELECTRICAL CONTRACTOR SHALL PROVIDE ONE 3/4" EMPTY CONDUIT FROM EACH THERMOSTAT/SENSOR LOCATION, TURNED OUT ABOVE ACCESSIBLE CEILINGS (IN JOIST SPACE OR AGAINST OVERHEAD SLAB/DECK). HVAC/TEMPERATURE CONTROL CONTRACTOR SHALL PROVIDE ALL OTHER NECESSARY CONDUIT. RACEWAY AND WIRING RELATED WORK. CONDUIT SHALL BE IDENTIFIED IN CEILING CAVITY AND SHALL BE PROVIDED WITH SWEEP BENDS, BUSHINGS AND DRAGLINE.

FXHALIST FANS SHALL RETIFD TO LIGHT SWITCH, WHICH SHALL BE FURNISHED, INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR. WHEN ACTIVATED, EXHAUST FAN MOTOR DAMPER SHALL OPEN AND FAN SHALL START.

KITCHEN HOOD EXHAUST FANS: PROVIDE HEAT DETECTOR IN HOOD COLLAR INTERLOCKED TO FAN OPERATION. DEMONSTRATE PROPER OPERATION OF UNITS AT PERFORMANCE REQUIREMENTS SPECIFIED. WHEN POSSIBLE, FIELD KITCHEN HOOD EXHAUST SYSTEM SHALL BE INITIATED BY THE HEAT DETECTOR. PROVIDE INDICATOR LIGHT ON FACE OF CORRECT MALFUNCTIONING UNITS, THEN RETEST TO DEMONSTRATE COMPLIANCE. REPLACE UNITS WHICH CANNOT BE HOOD, AT STARTUP, ENERGIZE EXHAUST FAN MOTOR, INTERLOCK TO MAKEUP AIR SYSTEM (WHETHER DEDICATED SATISFACTORILY CORRECTED. MAKEUP AIR OR MAKEUP AIR FROM HVAC SYSTEM). SO THAT MAKEUP AIR IS PROVIDED WHENEVER EXHAUST FAN IS RUNNING. EXHAUST FAN SHALL RUN CONTINUOUSLY AT CONSTANT SPEED, AT SHUTDOWN, THE EXHAUST FAN SHALL

PROVIDE ALL CONTROLS AND WIRING FOR COMPLETE INTERLOCK AND OPERATION OF KITCHEN HOOD, EXHAUST FAN, ROOFTOP UNIT, ETC. AND ALL ASSOCIATED MOTOR DAMPERS.

ALL DUCT SMOKE DETECTORS, FOR SMOKE DETECTORS, WILL BE FURNISHED PROVIDED AND WIRED BY ELECTRICAL CONTRACTOR, INSTALLED BY THE HVAC CONTRACTOR, AND WIRED BY THE ELECTRICAL CONTRACTOR PER LOCAL CODES. HVAC CONTRACTOR WILL INTERLOCK FAN WITH SMOKE DETECTOR.

MOTOR OPERATED DAMPERS: ALL FRESH AIR INTAKES AND EXHAUST LOUVERS SHALL HAVE MOTOR OPERATED DAMPERS. DAMPERS SHALL BE LOW LEAK WITH BLADE AND EDGE SEALS. 24 V MOTOR OPERATED DAMPERS SHALL BE PROVIDED AND WIRED BY THE MECHANICAL CONTRACTOR, UNLESS OTHERWISE NOTED. PROVIDE ALL NECESSARY TRANSFORMERS, CONTACTORS, CONTROLS AND WIRING FOR INTERLOCKING EQUIPMENT TO MOTOR OPERATED DAMPERS.

23 22 00 CONDENSATE DRAIN PIPING

INSTALL TRAP AT EVAPORATOR COIL DRAIN. EXTEND DRAIN LINE FROM COIL TRAP TO DRAIN. PIPING SHALL BE STANDARD WEIGHT, PVC PIPE AND FITTINGS AND WITH JOINTS OF PVC SOLVENT CEMENT. PROVIDE CLEANOUTS THROUGHOUT RUN AND AT TOPS OF TRAPS.

23 30 00 AIR DISTRIBUTION SYSTEM

CEILING AIR DIFFUSERS:

SQUARE: SQUARE HOUSING, CORE OF SQUARE CONCENTRIC LOUVERS, SQUARE OR ROUND DUCT CONNECTION.

LINEAR: EXTRUDED ALUMINUM CONTINUOUS SLOT, SINGLE OR MULTIPLE.

DIFFUSER MOUNTINGS:

SURFACE MOUNT: DIFFUSER SHALL HAVE ROLLED EDGE BELOW FINISHED CEILING FOR SURFACE MOUNTING OR DIFFUSER SHALL BE FURNISHED WITH ACCESSORY PLASTER FRAME.

LAY-IN: DIFFUSER HOUSING SIZED TO FIT BETWEEN CEILING EXPOSED SUSPENSION TEE BARS AND REST ON TOP SURFACE

DIFFUSER ACOUSTIC PERFORMANCE: NC LESS THAN OR EQUAL TO 30

DIFFUSER ACCESSORIES: PLASTER RING: PERIMETER RING DESIGNED TO ACT AS PLASTER STOP AND DIFFUSER ANCHOR.

STEEL CONSTRUCTION: MANUFACTURER'S STANDARD STAMPED SHEET STEEL FRAME AND ADJUSTABLE BLADES.

DIFFUSER FINISHES: WHITE ENAMEL: SEMI-GLOSS WHITE ENAMEL PRIME FINISH.

CEILING AND WALL REGISTERS & GRILLES:

REGISTER AND GRILLE FINISHES: WHITE ENAMEL: SEMI-GLOSS WHITE ENAMEL PRIME FINISH.

REGISTER AND GRILLE ACOUSTIC PERFORMANCE: NC LESS THAN OR EQUAL TO 30

23 31 13 METAL DUCTS

CONSTRUCTION, INSTALLATION AND SUPPORT OF ALL DUCTWORK SHALL CONFORM TO THE LATEST EDITION OF SMACNA "HVAC DUCT CONSTRUCTION STANDARD -METAL AND FLEXIBLE".

ASSEMBLE AND INSTALL DUCTWORK IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES TO ACHIEVE AIR-TIGHT (5% LEAKAGE FOR SYSTEMS RATED 3" AND UNDER: 1% FOR SYSTEMS RATED OVER 3") AND NOISELESS (NO OBJECTIONABLE NOISE) SYSTEMS. INSTALL EACH RUN WITH MINIMUM NUMBER OF JOINTS, ALIGN DUCTWORK ACCURATELY AT CONNECTIONS. WITHIN 1/8" MISALIGNMENT TOLERANCE AND WITH INTERNAL SURFACES SMOOTH.

SUPPORT VERTICAL DUCTS AT EVERY FLOOR. SUPPORT DUCT WITH APPROVED HANGERS AT INTERVALS NOT EXCEEDING

DUCTS SHALL BE GALVANIZED SHEET METAL OF STANDARD GAUGES. DUCTWORK SHALL HAVE A MINIMUM THICKNESS OF 24 GAUGE. ALL DUCT ELBOWS SHALL BE EITHER FULL RADIUS OR WITH TURNING VANES.

WHERE DUCTWORK IS INDICATED TO BE EXPOSED IN OCCUPIED SPACES, PROVIDE MATERIALS WHICH ARE FREE FROM VISUAL IMPERFECTIONS INCLUDING PITTING, SEAM MARKS, ROLLER MARKS, STAINS AND DISCOLORATIONS, AND OTHER IMPERFECTIONS, INCLUDING THOSE WHICH WOULD IMPAIR PAINTING.

EXPOSED DUCTWORK WHICH IS TO BE PAINTED SHALL HAVE PAINT GRIP APPLIED.

PROVIDE VOLUME DAMPERS IN ALL BRANCH DUCTS OR AS REQUIRED FOR BALANCING TO REQUIRED AIR FLOWS.

PROVIDE RADIUS TYPE FITTINGS FABRICATED OF MULTIPLE SECTIONS WITH MAXIMUM 15 DEG. CHANGE OF DIRECTION PER SECTION, UNLESS DETAILED OTHERWISE, USE 45 DEG. LATERALS AND 45 DEG. ELBOWS FOR BRANCH TAKEOFF CONNECTIONS. WHERE 90 DEG. BRANCHES ARE INDICATED, PROVIDE CONICAL TYPE TEES.

PROVIDE DUCT SEALANT AND/OR CEMENT WHICH IS NON-HARDENING, NON-MIGRATING MASTIC OR OF LIQUID ELASTIC SEALANT. TYPE APPLICABLE FOR FABRICATION/INSTALLATION DETAIL. AS COMPOUNDED AND RECOMMENDED BY MANUFACTURER SPECIFICALLY FOR SEALING JOINTS AND SEAMS IN DUCTWORK.

FLEXIBLE DUCTS SHALL EITHER BE SPIRAL-WOUND SPRING STEEL WITH FLAMEPROOF VINYL SHEATHING OR CORRUGATED ALUMINUM. THE MAXIMUM LENGTH OF FLEX DUCT ON THE SUPPLY EQUALS 5 FEET. FLEX IS NOT ALLOWED FOR RETURN, RELIEF OR EXHAUST APPLICATIONS.

FLEXIBLE DUCTS SHALL CONFORM TO THE REQUIREMENTS OF UL 181 FOR CLASS 0 OR CLASS 1 FLEXIBLE AIR DUCTS AND

WHERE INSTALLED IN UNCONDITIONED SPACES OTHER THAN RETURN AIR PLENUMS. PROVIDE 1" THICK 1-1/2 LB. CONTINUOUS FLEXIBLE FIBERGLASS SHEATH WITH VINYL VAPOR BARRIER JACKET.

SHOP FABRICATE DUCTWORK IN 4, 8, 10 OR 12-FT LENGTHS, OR REQUIRED TO COMPLETE RUNS.

FABRICATE DUCTWORK WITH DUCT LINER IN EACH SECTION OF DUCT WHERE INDICATED. LAMINATE LINER TO INTERNAL SURFACES OF DUCT IN ACCORDANCE WITH INSTRUCTIONS BY MANUFACTURERS OF LINING AND ADHESIVE, AND FASTEN WITH MECHANICAL FASTENERS. DUCT LINER TO BE 3-LB DENSITY FOR ACOUSTIC REQUIREMENTS 1" THICK OR AS NOTED. SIZE OF DUCTWORK SHOWN ON THE DRAWINGS IS FREE NET AREA. OUTSIDE DIMENSION OF DUCTS WILL NEED TO BE

DUCT LINER SHALL BE OF FIBROUS GLASS OF THICKNESS INDICATED. 3-LB DENSITY, ALL LINERS, INSULATION AND ADHESIVES SHALL HAVE A FLAME SPREAD INDEX NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE

23 33 13 DAMPERS

INCREASED IF LINED DUCT IS USED

SHALL BE SO IDENTIFIED.

DAMPERS WITH LOCKING DEVICE. WHERE ACCESSIBLE, SHALL BE RUSKIN MD-35. OPPOSED BLADE FOR RECTANGULAR MDRS-25 FOR ROUND DUCTS. INSTALL PER MANUFACTURER'S INSTRUCTIONS. SINGLE BLADE ROUND DAMPERS WITH LOCKING DEVICE SHALL BE IN SPIN-IN COLLARS.

FIRE DAMPERS SHALL BE RUSKIN MODEL IBD, STYLE B WITH BLADE PACKAGE OUT OF AIR STREAM. HORIZONTAL, INSTALL

WHERE INDICATED ON DRAWINGS AND AS REQUIRED BY AUTHORITY HAVING LOCAL JURISDICTION. ELECTRIC MOTORIZED DAMPER SHALL BE SIZED TO OPERATE WITH SUFFICIENT RESERVE POWER TO PROVIDE SMOOTH

MODULATING ACTION OR TWO-POSITION ACTION. INSTALL PER MANUFACTURER'S INSTRUCTIONS.

23 38 13.00 - COMMERCIAL KITCHEN HOODS AND DUCTWORK

REFER TO CAPTIVE AIRE DRAWINGS FOR SPECIFICATIONS

GENERAL: EXAMINE AREAS AND CONDITIONS UNDER WHICH EQUIPMENT IS TO BE INSTALLED. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

COORDINATE WORK WITH WORK OF ROOFING, WALLS, AND CEILINGS, AS NECESSARY FOR PROPER INTERFACING. DUCT CONNECTIONS TO BE PROVIDED BY THE HVAC CONTRACTOR.

REFER TO MANUFACTURERS INSTALLATION INSTRUCTIONS.

ELECTRICAL WIRING: INSTALL ELECTRICAL DEVICES FURNISHED BY MANUFACTURER BUT NOT SPECIFIED TO BE FACTORY-MOUNTED. FURNISH COPY OF MANUFACTURER'S WIRING DIAGRAM SUBMITTAL TO ELECTRICAL INSTALLER.

VERIFY THAT ELECTRICAL WIRING INSTALLATION IS IN ACCORDANCE WITH MANUFACTURER'S SUBMITTAL AND INSTALLATION REQUIREMENTS OF DIVISION-16 SECTIONS

ENSURE THAT ROTATION IS IN DIRECTION INDICATED AND INTENDED FOR PROPER PERFORMANCE.

DO NOT PROCEED WITH CENTRIFUGAL FAN START-UP UNTIL WIRING INSTALLATION IS ACCEPTABLE TO FAN INSTALLER TESTING: AFTER INSTALLATION OF HOOD EXHAUST SYSTEM HAS BEEN COMPLETED. TEST EACH SYSTEM TO

PROVIDE TESTING, PERMITS AND APPROVALS AS REQUIRED BY STATE AND LOCAL AUTHORITIES. ADJUSTING AND CLEANING

CLEAN FACTORY-FINISHED SURFACES.

REPAIR ANY MARRED OR SCRATCHED SURFACES. TYPE I KITCHEN GREASE DUCT SPECIFICATION

ARCHITECTURAL PLANS FOR COORDINATION.

FURNISH SINGLE WALL 16 GAUGE CARBON STEEL DUCTWORK WITH CONTINUOUS LIQUID TIGHT WELDS. ALL DUCTWORK SHALL BE WRAPPED WITH A FIRE RESISTIVE MATERIAL. THE DUCT WRAP SYSTEM SHALL BE UL LISTED PER ASTM E 2336

THE TERMINATION OF KITCHEN EXHAUST OUTLETS SHALL NOT BE LESS THAN 10 FEET HORIZONTALLY FROM PARTS OF THE SAME OR CONTIGUOUS BUILDINGS, ADJACENT PROPERTY LINES AND AIR INTAKES.

OUTLET SHALL NOT BE LESS THAN 10 FEET VERTICALLY ABOVE ADJOINING GRADE LEVEL AND 40" ABOVE THE ROOF LEVEL. THE EXHAUST FAN SHALL BE INSTALLED A MINIMUM OF 10'-0" FROM ANY ROOF EDGE REGARDLESS OF LOCATION INDICATED ON PLANS, UNLESS A SCREEN WALL OR RAILING IS INSTALLED PER THE LOCAL BUILDING CODE. SEE THE

FOR ZERO CLEARANCE TO COMBUSTIBLES AND SHALL MAINTAIN A FLAME/SMOKE RATING LESS THAN 25/50.

TYPE II KITCHEN HOOD

HOOD TO BE CONSTRUCTED OF MINIMUM 24 GAUGE STAINLESS STEEL, USING THE STANDING SEAM METHOD FOR OPTIMUM STRENGTH. ALL SEAMS, JOINTS AND PENETRATIONS OF THE HOOD ENCLOSURE SHALL BE WELDED AND/OR LIQUID TIGHT. LIGHTER MATERIAL GAUGES, ALTERNATE MATERIAL TYPES AND FINISHES ARE NOT ACCEPTABLE.

PROVIDE VAPOR PROOF, U.L. LISTED INCANDESCENT LIGHT FIXTURES WHICH SHALL BE PRE-WIRED TO A JUNCTION BOX SITUATED AT THE TOP OF THE HOOD FOR FIELD CONNECTION. WIRING SHALL CONFORM TO THE REQUIREMENTS OF NFPA 70. THE CANOPY HOOD SHALL BE BUILT IN ACCORDANCE WITH NFPA 96, UMC, AND SHALL BEAR THE NSF SEAL OF

TYPE II KITCHEN HOOD DUCT SPECIFICATION

FURNISH SINGLE WALL RIGID DUCT MADE OF ALUMINUM AND SLOPED BACK TO HOOD. DUCTWORK SUBJECT TO POSITIVE PRESSURE OR MOISTURE-LADEN AIR SHALL BE CONSTRUCTED, JOINED AND SEALED IN ACCORDANCE WITH INTERNATIONAL MECHANICAL CODE.

THE TERMINATION OF KITCHEN EXHAUST OUTLETS SHALL NOT BE LESS THAN 10 FEET HORIZONTALLY FROM PARTS OF THE SAME OR CONTIGUOUS BUILDINGS, ADJACENT PROPERTY LINES AND AIR INTAKES.

OUTLET SHALL NOT BE LESS THAN 10 FEET VERTICALLY ABOVE ADJOINING GRADE LEVEL

THE EXHAUST FAN SHALL BE INSTALLED A MINIMUM OF 10'-0" FROM ANY ROOF EDGE REGARDLESS OF LOCATION INDICATED ON PLANS. UNLESS A SCREEN WALL OR RAILING IS INSTALLED PER THE LOCAL BUILDING CODE. SEE THE ARCHITECTURAL PLANS FOR COORDINATION.

23 74 00 - AIR HANDLING UNITS

AIR HANDLING UNITS INCLUDE FAN SECTIONS WITH MOTOR AND DRIVE. HEATING AND COOLING COIL SECTIONS. FILTER SECTIONS, MIXING BOXES, ACCESS SECTIONS AND OTHER COMPONENTS AS INDICATED ON THE DRAWINGS, EXTENT OF AIR HANDLING UNIT WORK REQUIRED BY THIS SECTION IS INDICATED ON DRAWINGS AND SCHEDULES.

HANDLE UNITS AND COMPONENTS CAEFULLY TO PREVENT DAMAGE. REPLACE ANY DAMAGED UNITS OR COMPONENTS. WITH NEW, STORE LINITS AND COMPONENTS IN CLEAN DRY PLACE, OFF THE GROUND, AND PROTECT FROM WEATHER. WATER AND PHYSICAL DAMAGE. COMPLY WITH MANUFACTURER'S RIGGING AND INSTALLATION INSTRUCTIONS FOR UNLOADING UNITS AND MOVING THEM TO FINAL LOCATION.

CASING TO BE 18 GAUGE STEEL PANELS REINFORCED WITH AN INTERNAL STRUCTURAL FRAME SUPPORTING UNIT COMPONENTS. ALL CASING SECTIONS SHALL BE BOTLETD TO GETHER WITH CADMIUM PLATED BOLTS. PROVIDE REMOVABLE PANELS, LATCH-TYPE ACCESS DOORS OR HINGEDM WALK-IN ACCESS DOORS FOR ACESS TO INTERNAL MOVING PARTSAND INSPECTION OF EACH SECTION WITHOUT DISMANTLING. INTERNAL INSULATION OF 1" THICH, $\frac{3}{4}$ LB, MAT FACED GLASS FIBER BLANKET APPLIED WITH ADHESIVE. BOTH INSULATION AND ADHESIVE TO CONFORM TO REQUIREMENTS OF NEPA 90A, PROVIDE GALVANIZED STEEL DRAIN PAN INSULATED WITH CELULAR, FOAN-IN-PLACE SPRAYED INSULATION CONFORMING TO REQUIREMENTS OF NEPA 90A WITH EXTERNAL DRAIN CONNECTIONS ON BOTH

FAN SHALL BE AMCA RATED CENTRIFUGAL FAN WITH GREASE LUBRICATED FAN BEARING SELECTED FOR 200,000 HOURS AVERAGE LIFE AT MAXIMUM OPERATING CONDITIONS.

GENERAL: COILS TO BE ALUMINUM PLATE OR SPIRAL-TYPE FINS MECHAINCALLY BONDED TO COPER TUBES. ARI CERTIFIED

PERFOMANCE, PROVIDE DRAIN PAN FOR ECAH COOLING COIL SECTION, COIL TO BE PRESSURE AND LEAK TESTED AT 200 WATER HEATING COILS: HOT WATER COILS TO BE U-TUBE COIL WITH SUPPLY AND RETURN HEADERS, AND CIRCULATING AS REQUIRED, INTEGRAL FACE AND BY-PASS COIL COMPRISED OF MULTIPLE ALTERNATIN FINNED HEATING ELECMENTS AND BYPASSES WITH INTERLOCKING DAMPERS. DAMPER MOTOR AND AIRSTREAM THERMOSTAT. WATER COOLING COILS: COLD WATER COILS TO BE U-TUBE COILD WITH SUPPLY AND RETURN HEADERS, VENT AND DRAIN CONNECTIONSAND CIRCUITING AS REQUIRED AND INTERMENDIATE DRAINS FOR CONPLETELY DRAINABLE FREEZE DX COOLING COILS: DX COOLING COILS SHALL BE U-TUBE COIL WITH REFRIGERANT DISTRIBUTED EQUALLY TO MULTIPLE

CIRCUITS BY PRESSURE TYPE DISTRIBUTING HEADER WITH CIRCUITING AS REQUIRED.

CHEMICALLY CLEAN METAL PARTS OF CASING AND ALL ACCESSORIES, EXCEPT COILS, AND COAT WITH AN ENAMEL FINISH UPON COMPLETION ON FULL INSTALL.

23 74 00 - AIR HANDLING UNIT WITH ELECTRIC HEAT

UNIT TO INCLUDE STEEL PANELS REINFORCED AND BRACED WITH AN INTERNAL STRUCTURAL FRAME, INTERNAL INSULATION OF 1 INCH THICK, 3/4 LB., MAT FACED GLASS FIBER BLANKET APPLIED WITH ADHESIVE, AMCA RATED CENTRIFUGAL FAN, GALVANIZED STEEL DRAIN PAN INSULATED WITH CELLULAR, FOAM-IN-PLACE SPRAYED INSULATION CONFORMING TO REQUIREMENTS OF NFPA 90A WITH EXTERNAL DRAIN CONNECTIONS ON BOTH SIDES OF CASING ALUMINUM PLATE OR SPIRAL-TYPE FINS MECHANICALLY BONDED TO COPPER TUBES AND ELECTRIC HEATING ELEMENTS.

23 81 26 - CONDENSING UNITS/HEAT PUMP

REFRIGERANT CHARGE: R-410A

CONDENSING UNIT/HEAT PUMP: AIR COOLED CONDENSING UNIT/HEAT PUMP AS SCHEDULED, OR EQUIVALENT. COOLING CAPACITY SHALL BE AS LISTED.

CASING: STEEL, FINISHED WITH BAKED ENAMEL IN COLOR SELECTED BY ARCHITECT, WITH REMOVABLE PANELS FOR ACCESS TO CONTROLS, WEEP HOLES FOR WATER DRAINAGE, AND MOUNTING HOLES IN BASE. PROVIDE BRASS SERVICE VALVES, FITTINGS, AND GAGE PORTS ON EXTERIOR OF CASING.

COMPRESSOR: HERMETICALLY SEALED SCROLL COMPRESSOR WITH CRANKCASE HEATER AND MOUNTED ON VIBRATION ISOLATION DEVICE. COMPRESSOR MOTOR SHALL HAVE THERMAL- AND CURRENT-SENSITIVE OVERLOAD DEVICES, START CAPACITOR, RELAY, AND CONTACTOR.

REFRIGERANT COIL: COPPER TUBE, WITH MECHANICALLY BONDED ALUMINUM FINS AND LIQUID SUBCOOLER. COMPLY WITH ARI 210/240. HEAT-PUMP COMPONENTS: REVERSING VALVE AND LOW-TEMPERATURE-AIR CUTOFF THERMOSTAT.

FAN: ALUMINUM-PROPELLER TYPE, DIRECTLY CONNECTED TO MOTOR

WHICH IS MOUNTED ALL OF THE OPERATIONAL PARTS OF THE HEATER

SATISFIED AND UNTIL THE HEATING ELEMENT IS COOL

MOTOR: PERMANENTLY LUBRICATED. WITH INTEGRAL THERMAL-OVERLOAD PROTECTION.

ACCESSORIES: AUTOMATIC-RESET TIMER TO PREVENT RAPID CYCLING OF COMPRESSOR, LOW AND HIGH PRESSURE SWITCHES, CRANKCASE HEATER, TIME GUARD, COLD START, HARD START, FILTER/DRYER, SOLENOID VALVE. ONE STAGE HEAT/ONE STAGE COOL PROGRAMMABLE THERMOSTAT, FULLY CHARGED INSULATED REFRIGERANT LINES.

AND SEALED: FACTORY-INSULATED SUCTION LINE WITH FLARED FITTINGS AT BOTH ENDSLOW AND HIGH PRESSURE

REFRIGERANT LINE KITS: SOFT-ANNEALED COPPER SUCTION AND LIQUID LINES FACTORY CLEANED, DRIED, PRESSURIZED,

SWITCHES, CRANKCASE HEATER, TIME GUARD, COLD START, HARD START FILTER/DRYER, SOLENOID VALVE, ONE STAGE

INSTALLATION OF AIR CONDITIONING AND VENTILATION SYSTEMS. PROVIDE UNITS WITH FER'S AND COP'S WHICH FOLIAL

PROVIDE ADDITIONAL SUPPORT STEEL NECESSARY FOR COMPLETE INSTALLATION, PROVIDE ADEQUATE CLEARANCE FROM

HEAT/ONE STAGE COOL PROGRAMMABLE THERMOSTAT, FULLY CHARGED INSULATED REFRIGERANT LINES. TEST AND RATE IN COMPLIANCE WITH ARI STANDARD 240. AIR-SOURCE UNITARY HEAT PUMP EQUIPMENT. CONSTRUCT AND INSTALL UNITS IN ACCORDANCE WITH NFPA 70, NATIONAL ELECTRICAL CODE AND NFPA 90-A, STANDARD FOR

OR EXCEED THOSE PRESCRIBED IN OBBC MECHANICAL CODE ARTICLE 19, ENERGY CONSERVATION. INSTALLATION - INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

OTHER EQUIPMENT FOR PROPER AIRFLOW.

23 82 39 WALL HEATERS (WH) THE HEATING EQUIPMENT SHALL INCLUDE ELECTRIC. AUTOMATIC FAN FORCED AIR HEATER SUITABLE FOR LARGE AREA HEATING. THE HEATER SHALL BE DESIGNED FOR WALL RECESS OR SURFACE MOUNTING. HEATERS SHALL BE UL LISTED OR EQUIVALENT (ETL) HEATER ASSEMBLY: THE HEATER ASSEMBLY WHICH FITS INTO THE BACK BOX SHALL CONSIST OF A FAN PANEL UPON

HEATING ELEMENT: THE HEATING ELEMENT SHALL BE OF THE NON-GLOWING DESIGN CONSISTING OF A SPECIAL RESISTANCE WIRE ENCLOSED IN A STEEL SHEATH TO WHICH STEEL PLATE FINS ARE COPPER BRAZED. IT SHALL BE WARRANTED FOR 5 YEARS. FAN AND MOTOR: FAN SHALL BE FIVE-BLADED ALUMINUM. FAN MOTOR SHALL BE TOTALLY ENCLOSED. FAN DELAY SWITCH: FAN CONTROL SHALL BE OF BI-METALLIC, SNAP-ACTION TYPE AND SHALL ACTIVATE FAN AFTER HEATING

ELEMENT REACHES OPERATING TEMPERATURE. THE FAN SHALL CONTINUE TO OPERATE AFTER THE THERMOSTAT IS

THERMOSTAT: THE TAMPER-PROOF THERMOSTAT SHALL BE OF THE BI-METALLIC SNAP-ACTION TYPE WITH ENCLOSED CONTACTS. IT SHALL BE COMPLETELY CONCEALED BEHIND THE FRONT COVER TO BECOME TAMPER PROOF. THERMAL CUTOUT: A MANUAL-RESET THERMAL CUTOUT SHALL BE BUILT INTO THE SYSTEM TO SHUT OFF THE HEATER IN THE EVENT OF OVERHEATING. POWER ON/OFF SWITCH: A DOUBLE-POLE. SINGLE THROW ON/OFF SWITCH SHALL BE MOUNTED ON THE BACK BOX FOR POSITIVE DISCONNECT OF POWER SUPPLY. IT WILL BE COMPLETELY CONCEALED BEHIND THE FRONT GRILLE PANEL.

BACK BOX: THE BACK BOX SHALL BE DESIGNED FOR DUTY AS A RECESSED ROUGH-IN BOX IN EITHER MASONRY OR FRAME

INSTALLATIONS, AND IS ALSO USED WITH THE SURFACE MOUNTING FRAME IN SURFACE MOUNTING INSTALLATIONS. THE

BACK BOX SHALL BE 20-GAUGE GALVANIZED STEEL AND SHALL CONTAIN KNOCKOUTS THROUGH WHICH POWER LEADS SWITCH: A DOUBLE-POLE. SINGLE THROW ON/OFF SWITCH SHALL BE MOUNTED ON THE BACK BOX FOR POSITIVE DISCONNECT OF POWER SUPPLY. IT WILL BE COMPLETELY CONCEALED BEHIND THE FRONT GRILLE PANEL. FRONT PANEL: THE FRONT PANEL SHALL BE OF THE BAR GRILLE TYPE AND SHALL BE CONSTRUCTED OF 16-GAUGE

COLD-ROLLED STEEL, WELDED INTO A UNIFORM GRILLE TO DIRECT THE WARMED AIR TOWARD THE FLOOR.

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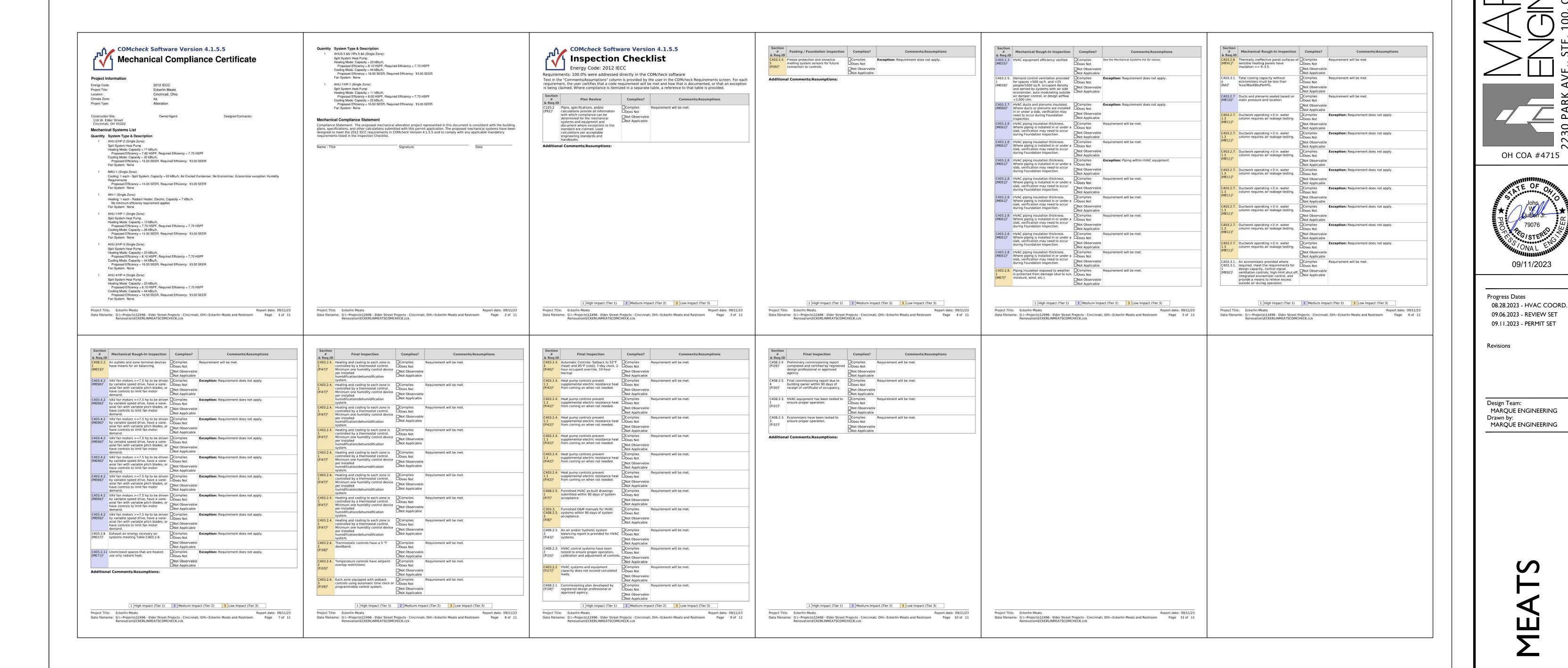
09/11/2023

Progress Dates 08.28.2023 - HVAC COORD. 09.06.2023 - REVIEW SET 09.11.2023 - PERMIT SET

Revisions

Design Team: MARQUE ENGINEERING Drawn by:

MARQUE ENGINEERING



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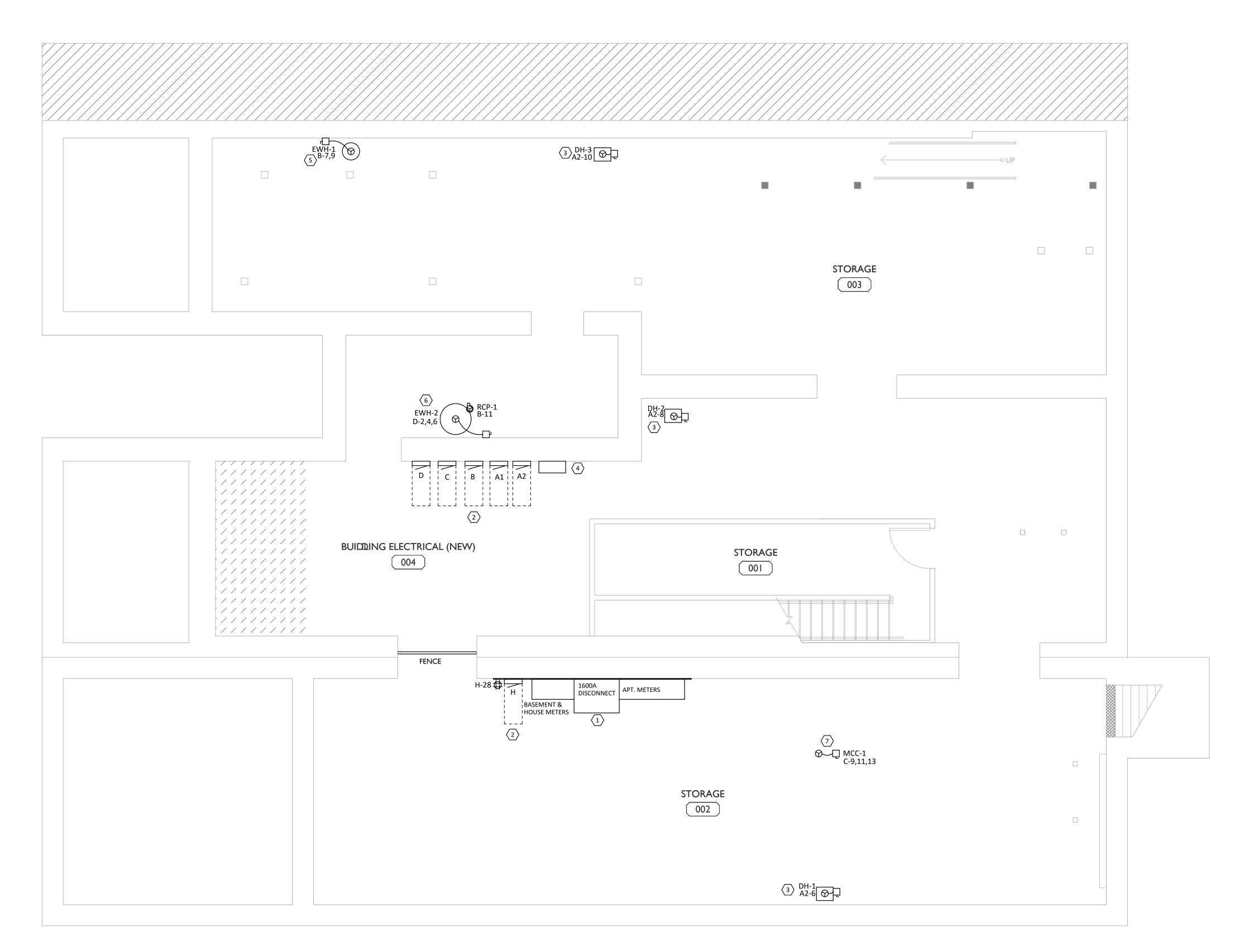
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BASEMENT POWER PLAN

E100 1/4" = 1'-0"

GENERAL NOTES

- ALL RECEPTACLES IN KITCHENS/BARS AND/OR WITHIN 6'-0" OF A WATER SOURCE MUST BE GFCI PROTECTED PER NEC. PROVIDE GFCI RECEPTACLES OR GFCI BREAKERS AS REQUIRED, REGARDLESS OF WHETHER OR NOT IT IS INDICATED ON PLANS.
- IT IS THE RESPONSIBILITY OF THE E.C. TO REVIEW ALL ARCHITECTURAL DRAWINGS, ELECTRICAL DRAWINGS AND NOTES TO INSURE THAT ALL ELECTRICAL REQUIREMENTS ARE MET.
- COORDINATE LOCATIONS AND HEIGHTS OF ALL ELECTRICAL DEVICES WITH KITCHEN EQUIPMENT CONTRACTOR DRAWINGS PRIOR TO ROUGH-IN.
- PROVIDE ALL SAW CUTTING AND PATCHING OF EXISTING FLOORS AND WALLS AS REQUIRED FOR INSTALLATION OF THIS WORK.
- UNLESS SPECIFICALLY NOTED OTHERWISE, ALL BRANCH CIRCUITS SHALL BE PROVIDED WITH (2)#12 (CU) THHN AND (1)#12 (CU) THHN GND IN 3/4" EMT CONDUIT FOR EACH 20 AMP CIRCUIT.
- PROVIDE ALL ELECTRICAL ROUGH-INS, OUTLETS, SWITCHES, DISCONNECTS, CORDS AND PLUGS, AND OTHER SIMILAR ITEMS NECESSARY TO MAKE FOOD SERVICE EQUIPMENT OPERATIONAL.
- PROVIDE ALL ROUGH-IN AND FINAL CONNECTIONS AS THEY RELATE TO WALK-IN AND REMOTE REFRIGERATION SYSTEM INCLUDING: LIGHTS, BLOWER COIL, DEFROST COIL, DRAIN LINE HEATER, DOOR HEATER AND COMPRESSORS.
- SEAL ALL PENETRATIONS THROUGH WALK-IN COOLER/FREEZERS. AVOID SEAMS IN WALK-IN COOLER/FREEZER PANELS WHEN MAKING PENETRATIONS. MAKE ALL NECESSARY CONNECTIONS TO THE LIGHTS, DEFROST TIMER, EVAPORATER, CONDENSOR, ETC. ALL WORK SHOWN IS NEW, UNLESS OTHERWISE NOTED.
- ANY PENETRATIONS THROUGH FIRE-RESISTANT/RATED WALLS, PARTITIONS, FLOORS, AND CEILINGS SHALL BE FIRESTOPPED USING APPROVED METHODS TO MAINTAIN THE FIRE RESISTANCE RATING.
- REFER TO ELECTRICAL SPECIFICATIONS FOR ELECTRICAL DEVICE TYPES AND RATINGS.
- ALL CONDUITS SHALL BE CONCEALED IN WALLS AND OUTLET BOXES SHALL BE FLUSH WITH FINISHED WALL UNLESS OTHERWISE NOTED.
- RECEPTACLES TO BE MOUNTED AT 1'-6" ABOVE FINISHED FLOOR TO CENTER OF RECEPTACLE UNLESS
- PROVIDE CABLING AND TERMINATIONS FOR OWNER FURNISHED SPEAKERS AND SYSTEMS. COORDINATE ALL WORK WITH G.C. SPEAKERS SHOWN ON ARCHITECTURAL PLANS.
- PROVIDE JUNCTION BOX AND RACEWAY FOR THERMOSTATS AND HVAC LOW VOLTAGE CONTROLS AT 48" A.F.F. THERMOSTATS AND HVAC LOW VOLTAGE CONTROLS INSTALLED AND WIRED BY M.C.. COORDINATE EXACT LOCATIONS WITH M.C.. TYPICAL OF ALL.
- REFER TO ARCHITECTURAL DRAWINGS FOR DEVICE COLORS AND PART NUMBERS. IN THE CASE OF A CONFLICT BETWEEN LOCATIONS ON THE ELECTRICAL DRAWINGS AND LOCATIONS ON THE ARCHITECTURAL DRAWINGS, THE ARCHITECTURAL DRAWINGS SHALL TAKE PRIORITY.
- ALL RECEPTACLES MOUNTED ON EXPOSED BRICK/MASONRY WALLS SHALL HAVE SURFACE MOUNT CONDUIT RUN FROM BELOW.
- REFER TO SPECIFICATIONS FOR WIRE SIZING.
- TELEPHONE AND DATA CABLING SHALL BE CAT6 CABLE AND SHALL BE BY THE G.C.
- UNLESS SPECIFICALLY NOTED OTHERWISE, ALL DATA AND TELEPHONE LOCATIONS SHALL RECEIVE 2 DATA DROPS AND 2 TELEPHONE DROPS - COORDINATE WITH OWNER PRIOR TO BID AND ROUGH-IN. PROVIDE EMPTY 1" CONDUIT TO ABOVE ACCESSIBLE CEILING WITH BUSHING TO ROUTE CABLES UP WALL. ALL CABLES SHALL BE ROUTED BACK TO DEMARCATION POINT.
- UNLESS NOTED OTHERWISE, ALL RECEPTACLES SHALL BE WHITE WITH WHITE COVERPLATES.

KEYED NOTES

MANUFACTURER AND OWNER PRIOR TO INSTALLATION.

- EXISTING METER CENTER TO REMAIN.
- EXISTING PANELS TO REMAIN.
- PROVIDE 20A/1P/NF 120V DISCONNECT SWITCH AND FINAL CONNECTION TO MECHANICAL EQUIPMENT. REFER TO PANELBOARD SCHEDULES AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- PROVIDE LIGHT ALARMS LMIU-400 INVERTER (OR EQUAL) FOR EMERGENCY LIGHTING CIRCUIT. INVERTER TO BE LOCATED ADJACENT TO ASSOCIATED PANEL.
- PROVIDE 208V/2P/30A NON-FUSED DISCONNECT SWITCH FOR ELECTRIC WATER HEATER. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH PLUMBING CONTRACTOR AND MANUFACTURER DOCUMENTATION.

PROVIDE 208V/3P/100A NON-FUSED DISCONNECT SWITCH FOR ELECTRIC WATER HEATER. COORDINATE

EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH PLUMBING CONTRACTOR AND MANUFACTURER DOCUMENTATION. PROVIDE FINAL CONNECTION TO MEAT CASE CONDENSING UNIT. VERIFY EXACT LOCATION IN FIELD. COORDINATE CONDENSER VOLTAGE, PHASE, AND ALL ELECTRICAL INSTALLATION REQUIREMENTS WITH

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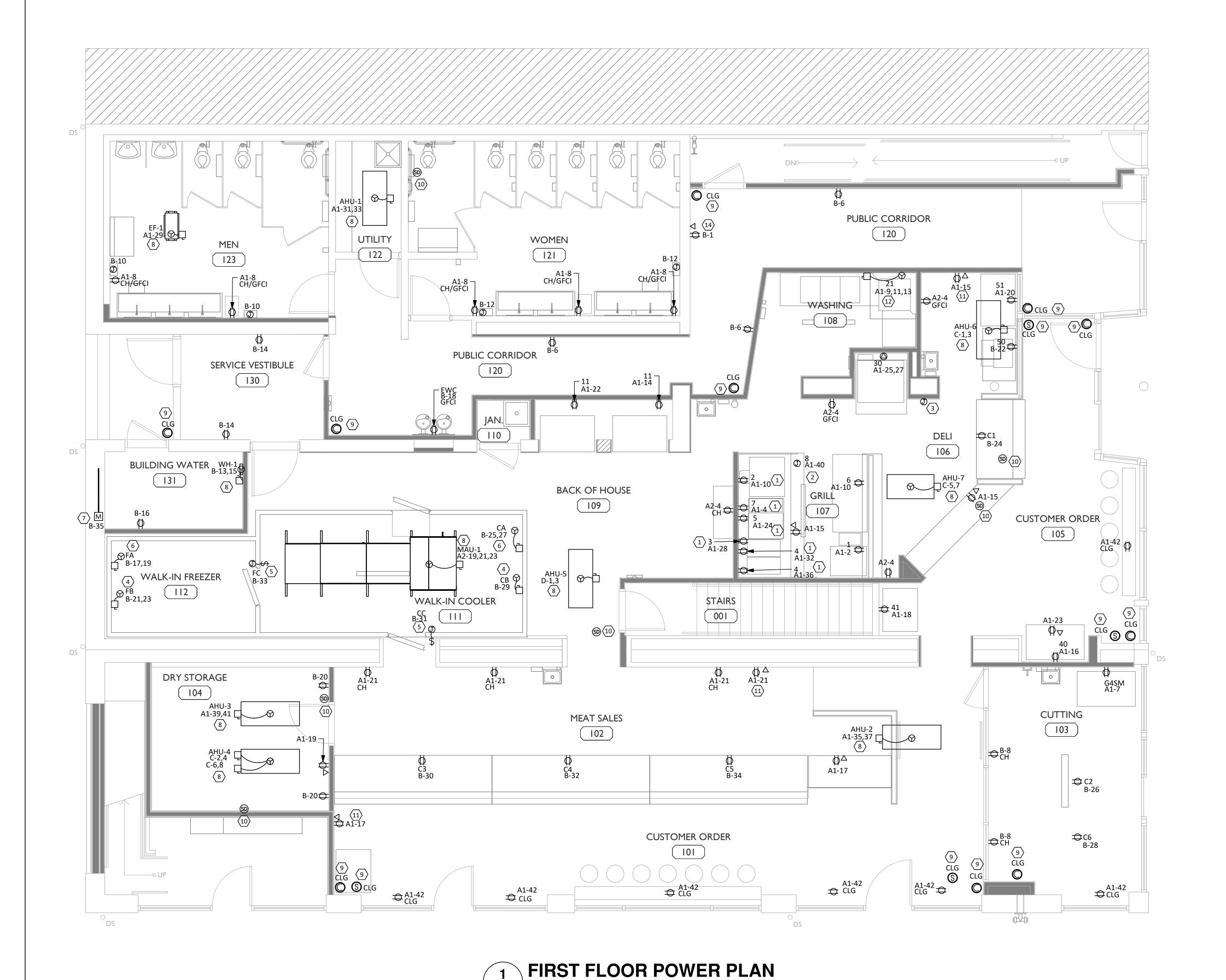
OH COA #4715

Progress Dates 08.28.2023 - HVAC COORD.

09.06.2023 - REVIEW SET 09.11.2023 - PERMIT SET

Revisions

Design Team:
MARQUE ENGINEERING Drawn by: MARQUE ENGINEERING



GENERAL NOTES

- A. ALL RECEPTACLES IN KITCHENS/BARS AND/OR WITHIN 6'-0" OF A WATER SOURCE MUST BE GFCI PROTECTED PER NEC. PROVIDE GFCI RECEPTACLES OR GFCI BREAKERS AS REQUIRED, REGARDLESS OF WHETHER OR NOT IT IS INDICATED ON PLANS.
- B. IT IS THE RESPONSIBILITY OF THE E.C. TO REVIEW ALL ARCHITECTURAL DRAWINGS, ELECTRICAL DRAWINGS AND NOTES TO INSURE THAT ALL ELECTRICAL REQUIREMENTS ARE MET.
- C. COORDINATE LOCATIONS AND HEIGHTS OF ALL ELECTRICAL DEVICES WITH KITCHEN EQUIPMENT CONTRACTOR DRAWINGS PRIOR TO ROUGH-IN.
- D. PROVIDE ALL SAW CUTTING AND PATCHING OF EXISTING FLOORS AND WALLS AS REQUIRED FOR INSTALLATION OF THIS WORK.
- E. UNLESS SPECIFICALLY NOTED OTHERWISE, ALL BRANCH CIRCUITS SHALL BE PROVIDED WITH (2)#12 (CU) THHN AND (1)#12 (CU) THHN GND IN 3/4" EMT CONDUIT FOR EACH 20 AMP CIRCUIT.
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- K. REFER TO ELECTRICAL SPECIFICATIONS FOR ELECTRICAL DEVICE TYPES AND RATINGS.
- L. ALL CONDUITS SHALL BE CONCEALED IN WALLS AND OUTLET BOXES SHALL BE FLUSH WITH FINISHED WALL UNLESS OTHERWISE NOTED.
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- N. PROVIDE CABLING AND TERMINATIONS FOR OWNER FURNISHED SPEAKERS AND SYSTEMS. COORDINATE ALL WORK WITH G.C. SPEAKERS SHOWN ON ARCHITECTURAL PLANS.
- O. PROVIDE JUNCTION BOX AND RACEWAY FOR THERMOSTATS AND HVAC LOW VOLTAGE CONTROLS AT 48"
 A.F.F. THERMOSTATS AND HVAC LOW VOLTAGE CONTROLS INSTALLED AND WIRED BY M.C.. COORDINATE
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- UNLESS NOTED OTHERWISE, ALL RECEPTACLES SHALL BE WHITE WITH WHITE COVERPLATES.

KEYED NOTES

- 1. PROVIDE SHUNT TRIP BREAKERS TO SERVE EQUIPMENT AND INTERCONNECT WITH THE FIRE SUPPRESSION CONTROL PANEL FOR AUTOMATIC SHUT DOWN DURING A FIRE.
- 2. PROVIDE 120V CONNECTION FOR HOOD CONTROL PANEL AND LIGHTS (SWITCHES PROVIDED BY HOOD MANUFACTURER). PANEL SHALL BE MOUNTED HIGH ON WALL. VERIFY EXACT LOCATION AND REQUIREMENTS WITH HOOD DRAWINGS.
- PROVIDE OCTAGON JUNCTION BOX FOR ANSUL PULL STATION. COORDINATE WITH MANUFACTURER.
- 4. PROVIDE FINAL CONNECTION FOR WALK-IN COOLER/FREEZER EVAPORATOR UNIT. COORDINATE EXACT
- LOCATION AND REQUIREMENTS WITH PROJECT MANAGER AND KITCHEN EQUIPMENT INSTALLER.

 5. PROVIDE JUNCTION BOX AND FINAL CONNECTION FOR WALK-IN COOLER/FREEZER LIGHTS AND DOOR HEATER. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH KITCHEN EQUIPMENT INSTALLER.

PROVIDE J-BOX AND MAKE FINAL CONNECTION TO CONDENSATE LINE HEAT TRACE TAPE.

- 6. PROVIDE FINAL CONNECTION FOR WALK-IN COOLER/FREEZER CONDENSER UNIT. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH PROJECT MANAGER AND KITCHEN EQUIPMENT INSTALLER.
- . PROVIDE BRANCH CIRCUIT AND J-BOX FOR MOTOR OPERATED DAMPER. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL CONTRACTOR.
- PROVIDE FINAL CONNECTIONS FOR HVAC EQUIPMENT AS INDICATED. REFER TO SPECIFICATIONS FOR BRANCH CIRCUIT WIRE AND CONDUIT SIZES. REFER TO MECHANICAL AND PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
- COORDINATE INSTALLATION OF CAMERA/SPEAKER WITH THE OWNER/VENDOR.
- 10. FURNISH NEW ADDRESSABLE DUCT MOUNTED SMOKE DETECTOR. M.C. SHALL INSTALL SMOKE DETECTOR. M.C. SHALL PROVIDE WIRING TO FAN INTERLOCK. E.C. SHALL PROVIDE WIRING FOR FINAL CONNECTION TO THE CENTRAL FIRE ALARM SYSTEM (IF REQUIRED) AND REMOTE ANNUNCIATORS.
- COORDINATE MOUNTING HEIGHT AND LOCATION FOR MONITOR WITH OWNER PRIOR TO ROUGH-IN.
 PROVIDE 208/3P/100A NON-FUSED DISCONNECT SWITCH FOR DISHWASHER. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH ELECTRICAL CONTRACTOR AND MANUFACTURER

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08.28.2023 - HVAC COORD.
09.06.2023 - REVIEW SET

09.11.2023 - PERMIT SET

Revisions

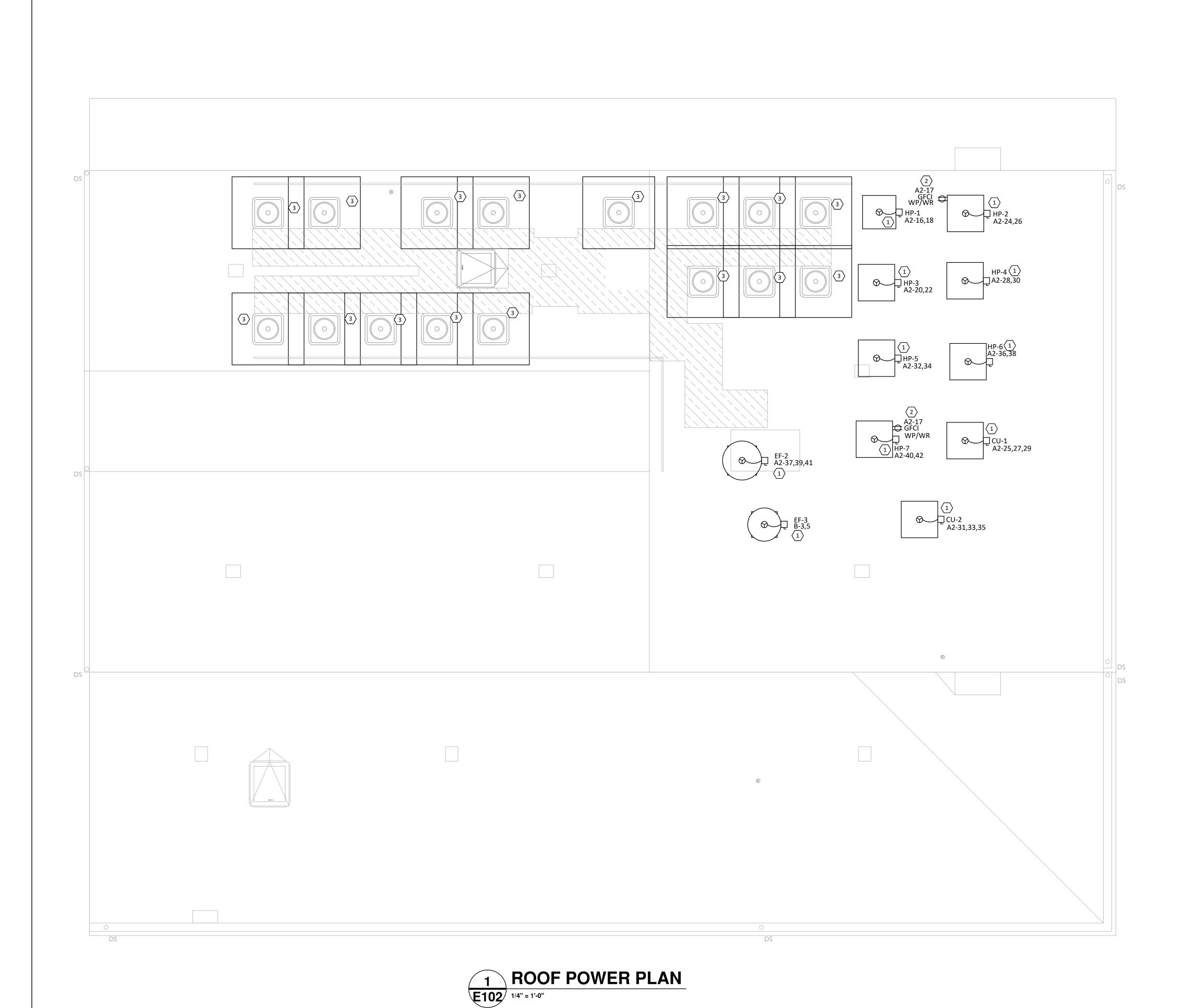
Design Team:

MARQUE ENGINEERING

Drawn by:

MARQUE ENGINEERING

ERLIN MEATS



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- J. UNLESS NOTED OTHERWISE, ALL RECEPTACLES SHALL BE WHITE WITH WHITE COVERPLATES.

KEYED NOTES

- PROVIDE FINAL CONNECTION AND NEMA-3R NON-FUSED DISCONNECT SWITCH TO MECHANICAL EQUIPMENT. REFER TO PANELBOARD SCHEDULES AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- PROVIDE 120V GFCI WP/WR SERVICE RECEPTACLE FOR ROOFTOP HVAC EQUIPMENT.
- EXISTING RESIDENTIAL CONDENSING UNITS TO REMAIN. SHOWN FOR REFERENCE ONLY.



OH COA #4715



Progress Dates
08.28.2023 - HVAC COORD.
09.06.2023 - REVIEW SET
09.11.2023 - PERMIT SET

Revisions

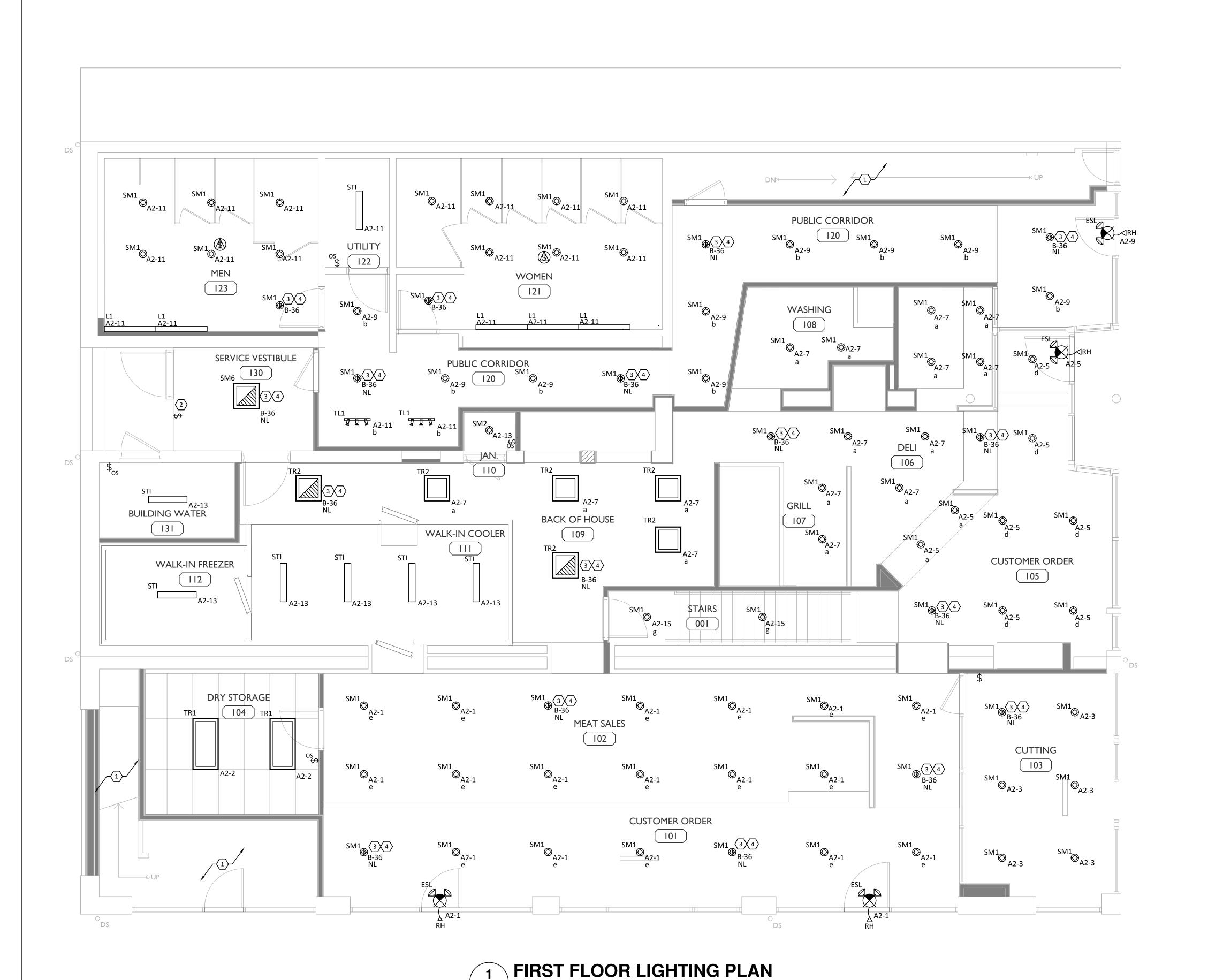
Design Team:
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Drawn by:
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E201 1/4" = 1'-0"

LIGHTING GENERAL NOTES

- A. EMERGENCY AND EXIT FIXTURES SHALL BE INSTALLED AND CIRCUITED PER LOCAL AND LATEST NATIONAL
- EMERGENCY DEVICES SHALL BE PROVIDED WITH AN UNSWITCHED "HOT" TO PROVIDE CONTINUOUS POWER TO DEVICE EVEN WHEN FIXTURE IS OFF.
- PROVIDE EMERGENCY LIGHTS TO PROVIDE A MINIMUM OF 1 FOOT CANDLE FOR 90 MINUTES AT FLOOR LEVEL FOR EMERGENCY EGRESS
- COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO ROUGH-IN. VERIFY EXACT LOCATIONS AND MOUNTING HEIGHTS FOR ALL DEVICES PRIOR TO ROUGH-IN.
- PROVIDE DIMMABLE CIRCUITS WITH A DEDICATED NEUTRAL NO SHARED NEUTRALS.
- ALL NIGHT LIGHTS (SHOWN WITH "NL" DESIGNATION) SHALL BE WIRED AHEAD OF SWITCHING.
- LABEL JUNCTION BOXES WITH THE PANEL AND CIRCUIT USED TO FEED THE LUMINARES. AS BUILTS SHALL REFLECT AND SHOW THE CIRCUIT USED BY EACH FIXTURE.

ALL LUMINAIRES, LIGHT SWITCH COVERPLATES, EXIT SIGNS SHALL MATCH ARCHITECTURAL DECOR.

- PROVIDE PRODUCT SUBMITTAL FOR ARCHITECT AND OWNER APPROVAL. LUMINAIRES IN CONTACT WITH INSULATION SHALL BE U.L. LISTED FOR THERMAL BARRIER OR BE
- PROVIDED WITH 3" MINIMUM CLEARANCE. LIGHTS AND PANELS SHALL NOT BE RECESSED IN FIRE RATED ASSEMBLIES UNLESS BOXED WITH
- EQUIVALENT CONSTRUCTION AS UTILIZED TO MAINTAINED INTEGRITY OF FIRE RATING. ALL WIRING AND LAMPS INSTALLED IN HIGH TEMPERATURE HOOD OR IN OTHER AREAS SUBJECT TO HIGH TEMPERATURES SHALL BE RATED FOR THAT USAGE.
- LIGHTING SHALL BE CIRCUITED AS SHOWN ON PLANS. CIRCUITING SHALL BE THRU-WIRING WHEREVER POSSIBLE. MULTIPLE CONNECTIONS TO A SINGLE LIGHT FIXTURE FOR VOLTAGE DROP CONDITIONS OR AS A RESULT OF A FIELD CONDITION ARE ACCEPTABLE. LUMINAIRES SHALL BE MANUFACTURED TO ACCOMMODATE THRU-WIRING, ANY RELATED COSTS FOR MULTIPLE CONNECTIONS SHALL BE INCLUDED IN
- PROVIDE LIFTING MEANS TO ACCESS ALL LUMINAIRES DURING FINAL AIMING. AIM DIRECTIONAL LUMINAIRES AFTER INSTALLATION PER DIRECTION FROM OWNER.
- COORDINATE ALL SIGNAGE REQUIREMENTS WITH SIGNAGE VENDOR AS IT RELATES TO POWER, PLACEMENT, AND ANY OTHER PERTINENT INFORMATION.
- PROVIDE UPDATED PANEL SCHEDULES UPON COMPLETION OF WORK
- ALL CONDUITS RUN IN AREAS WITHOUT SUSPENDED CEILINGS SHALL BE RUN INCONSPICUOUSLY AS POSSIBLE, HIDDEN BEHIND BEAMS, TIGHT TO DECK, ETC. PAINT ALL CONDUIT TO MATCH FINISH OF EACH
- CONDUIT SHALL NOT BE INSTALLED WITHIN FIRE PROOFING. PROVIDE ALL REQUIRED DROP HANGERS.
- ALL WIRING SHALL BE COPPER, MINIMUM SIZE SHALL BE #12, UNLESS OTHERWISE NOTED.
- BRANCH CIRCUIT CONDUCTORS SHALL BE SIZED FOR A MAXIMUM OF 3% VOLTAGE DROP. LOCATIONS OF LUMINAIRES WITHIN MECHANICAL EQUIPMENT ROOMS SHALL BE COORDINATED IN FIELD
- WITH INSTALLED EQUIPMENT. LUMINAIRES SHALL BE LOCATED OVER ACCESS PATHWAYS AROUND EQUIPMENT AND NOT OVER TOP OF DUCTWORK WHERE INACCESSIBLE. DO NOT SUSPEND LUMINAIRES FROM PIPING OR DUCTWORK. PROVIDE APPROPRIATE MOUNTING HARDWARE, UNISTRUT, ALL THREAD, ETC., AS REQUIRED TO SUPPORT FIXTURES.
- ALL LUMINAIRES WITHIN A ROOM OR AREA SHALL BE CONTROLLED BY SWITCHES/OCCUPANCY SENSORS SHOWN IN THAT ROOM OR AREA UNLESS OTHERWISE NOTED.
- POWER PACKS AND SATELLITE PACKS FOR OCCUPANCY SENSORS ARE NOT SHOWN. AS PRODUCTS REQUIRE, PROVIDE POWER AND SATELLITE PACKS WITHIN EACH ROOM ABOVE CEILING ADJACENT TO
- N. LOWER CASE LETTER DENOTES LIGHTING CONTROL (I.E. (a)). REFER TO DETAIL THIS SHEET.
- OCCUPANCY SENSOR LOCATIONS SHOWN FOR SCHEMATIC INTENT AND COVERAGE PURPOSES ONLY. VERIFY EXACT SPACING WITH SELECTED OCCUPANCY SENSOR'S MANUFACTURER RECOMMENDATIONS TO PROVIDE ADEQUATE COVERAGE IN CORRIDORS.

ALL EXPOSED CABLING SHALL BE BLACK.

KEYED NOTES

- EXISTING LIGHTING IN THIS AREA TO REMAIN.
- LOCATION OF MASTER SWITCHBANK. REFER TO DETAIL 2 ON SHEET E302 FOR ADDITIONAL
- FIXTURE SHALL BE UNSWITCHED TO PROVIDE NORMAL POWER EGRESS ILLUMINATION AS REQUIRED PER
- LUMINAIRES SHALL OPERATE 24 HOURS PER DAY AND ARE UTILIZED FOR EMERGENCY EGRESS ILLUMINATION. CONNECT LUMINAIRE TO INVERTER FOR CONSTANT OPERATION.

OH COA #4715



Progress Dates 08.28.2023 - HVAC COORD. 09.06.2023 - REVIEW SET 09.11.2023 - PERMIT SET

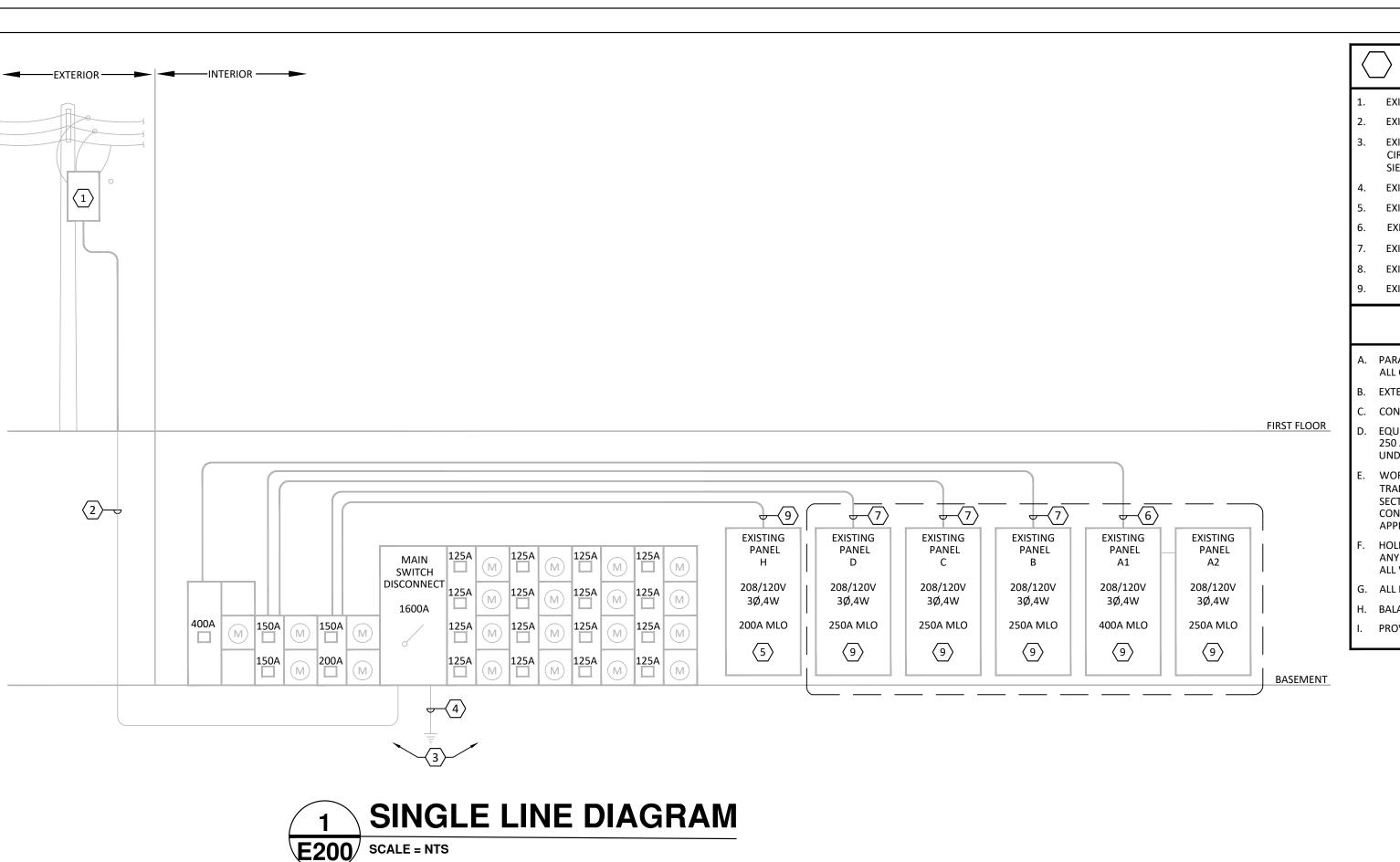
Design Team:
MARQUE ENGINEERING MARQUE ENGINEERING

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LUMINAIRE SCHEDULE

SYMBOL

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DESCRIPTION

ACUITY LITHONIA ELM2L

T.B.D.

T.B.D.

METALUX: 4BCLED-LD4-36SL-F-UNV-L835-CD-1

ACUITY BRANDS LIGHTING LHQM LED G ELMRW LP220L DWHXD SGL

HALO: SMD4 LED 4" ROUND SURFACE MOUNT DOWNLIGHT

METALUX: 4SNLED-LD5-28SL-UNV-L835-CD1-U

EMERGENCY LUMINAIRE

REMOTE HEAD

SURFACE MOUNT LED DOWNLIGHT

SURFACE MOUNT LED DOWNLIGHT

SURFACE MOUNT LED DOWNLIGHT

SURFACE MOUNT LED DOWNLIGHT

2' X 2' LED FLAT PANEL

4' LED STRIP LIGHT

2' X 4' LED FLAT PANEL

2' X 2' LED FLAT PANEL

TRACK FIXTURE

CALLOUT

KEYED NOTES

- EXISTING POLE MOUNTED UTILITY TRANSFORMER TO REMAIN.
- EXISTING (5) SETS OF (4)#400 KCMIL CU AWG IN 3" CONDUIT EACH TO REMAIN
 - EXISTING 1600A 208/120V 3P 4W METER CENTER CONSISTING OF (19) SINGLE PHASE METERS WITH INDICATED 208V/2P CIRCUIT BREAKERS & (6) THREE PHASE METER WITH INDICATED 208V/3P CIRCUIT BREAKERS TO REMAIN. BASIS OF DESIGN: SIEMENS POWER MOD MODULAR METERING CENTER.
- EXISTING #3/0 CU GND. ELECTRODE PER NEC 250 TO REMAIN.
- EXISTING ELECTRIC PANEL TO REMAIN. SHOWN FOR REFERENCE ONLY.
- EXISTING (4)#600 KCMIL CU AWG & (1)#4 CU AWG GND. IN 3-1/2" CONDUIT TO REMAIN.
- EXISTING (4)#1/0 CU AWG & (1)#6 CU AWG GND. IN 2" CONDUIT TO REMAIN.
- EXISTING SERVICE ENTRANCE RATED (4)#3/0 CU AWG & (1)#4 CU AWG GND. IN 2-1/2" CONDUIT TO REMAIN.
- EXISTING ELECTRIC PANEL TO REMAIN. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.

GENERAL NOTES

- PARALLEL FEEDER CONDUCTORS SHALL BE CUT TO EXACTLY THE SAME LENGTHS AND SHALL BE FROM THE SAME FACTORY RUN. ALL CONNECTIONS FOR SAME SHALL BE TORQUED TO IDENTICAL VALUES.
- EXTERIOR ELECTRICAL WORK SHALL NOT ONLY BE WEATHERPROOF AND WATER-TIGHT, BUT SHALL ALSO BE RUST-RESISTANT.
- CONDUCTORS BELOW GRADE OR SUBJECT TO MOISTURE SHALL BE "XHHW-2".
- EQUIPMENT GROUNDING CONDUCTORS SHALL BE PROVIDED IN STRICT COMPLIANCE WITH N.E.C., INCLUDING N.E.C. ARTICLE 250 AND TABLE 250-122. THESE CONDUCTORS MAY NOT BE INDICATED ON RISERS OR SINGLE-LINES, BUT SHALL BE PROVIDED UNDER BASE BID NEVERTHELESS.
- WORKING CLEARANCES SHALL BE PROVIDED FOR ALL ELECTRICAL EQUIPMENT (SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, STARTERS, DISCONNECTS, ETC. AS APPLICABLE) IN STRICT COMPLIANCE WITH N.E.C. CHAPTER 1, PART B, SECTION 110-26(a). LOCATIONS SHOWN ON FLOOR PLANS ARE SCHEMATIC AND DIAGRAMMATIC IN NATURE. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING COMPLIANCE WITH THE ABOVE N.E.C. REFERENCE. THIS REQUIREMENT APPLIES TO EQUIPMENT ON FLOOR PLANS AS WELL AS TO EQUIPMENT SHOWN ON RISER.
- HOLD ALL NEW OVERHEAD ELECTRICAL WORK AS TIGHT AS POSSIBLE TO THE BOTTOM OF THE OVERHEAD STRUCTURE. LOCATE ANY RELATED PULLBOXES SO THAT THEY WILL BE FULLY ACCESSIBLE AFTER ALL CONSTRUCTION WORK IS COMPLETE. AS WITH ALL WORK, COORDINATE IN ADVANCE WITH ALL OTHER TRADES.

VOLTS

120

120

120

120

120

120

120

120

120

120

120

INPUT WATTS

9.5

DAMP RATED

ALWAYS ON

FLUSHMOUNT

REFER TO ARCHITECTURAL PLAN FOR SELECTION

- ALL PANELS HAVE NEMA 1 ENCLOSURES UNLESS NOTED OTHERWISE.
- BALANCE ALL PANEL LOADS SO PHASES ARE WITHIN 10% OF EACH OTHERS.

LED (INTEGRAL)

64W MAX LED

LED (INTEGRAL)

(3) 20W MAX LED

64W MAX LED

64W MAX LED

PROVIDE HACR CIRCUIT BREAKER FOR ALL MOTOR LOADS.

GENERAL PROJECT NOTES

A. ALL DEVICES SHOWN ON THE EXTERIOR OF THE BUILDING SHALL BE WEATHER PROOF TYPE.

B. REFER TO ALL OTHER CONSTRUCTION TRADES' DRAWINGS' AND SPECIFICATIONS' FOR ADDITIONAL ELECTRICAL WORK THAT IS INCLUDED IN DIVISION 26'S SCOPE.

C. ALL CONDUITS RUN IN AREAS WITHOUT SUSPENDED CEILINGS SHALL BE RUN INCONSPICUOUSLY AS POSSIBLE, HIDDEN BEHIND BEAMS, TIGHT TO DECK, ETC. PAINT ALL CONDUIT TO MATCH FINISH OF EACH SPECIFIC AREA.

- D. CONDUIT SHALL NOT TO BE INSTALLED WITHIN FIRE PROOFING. PROVIDE ALL REQUIRED DROP HANGERS.
- E. BRANCH CIRCUIT CONDUCTORS SHALL BE SIZED FOR A MAXIMUM OF 3% VOLTAGE DROP.
- PROVIDE ALL RACEWAY FOR HVAC THERMOSTATS AND SENSORS. THERMOSTAT AND SENSORS ARE FURNISHED AND INSTALLED UNDER

G. PROVIDE ALL TELECOMMUNICATION RACEWAYSTELECOMMUNICATION SYSTEMS ARE UNDER DEFERRED SUBMITTAL UNLESS OTHERWISE

MOUNTING HEIGHTS

ALL MOUNTING HEIGHTS ARE BASED ON NECA-1, NATIONAL ELECTRICAL CONTRACTOR'S ASSOCIATION STANDARD PRACTICE OF GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION, UNLESS OTHERWISE NOTED. ALL HEIGHTS ARE MEASURED FROM FINISHED FLOOR TO

WALL SWITCHES 48" (120 cm)

RECEPTACLE OUTLETS (GENERAL) 18" (45 cm) RECEPTACLE OUTLETS (COUNTER HEIGHT) 42" (105 cm) OR 6" (15 cm) ABOVE COUNTERTOP. INSTALL ABOVE BACKSPLASH,

IF APPLICABLE SPECIAL PURPOSE OUTLET WITHIN 72" (180 cm) OF INTENDED USE TELEPHONE OUTLETS 18" (45 cm) WALL INTERCOM STATIONS 48" (120 cm)

18" (45 cm) NIGHT LIGHTS WALL LIGHTING OUTLETS 84" (210 cm) THERMOSTATS 48" (120 cm) **PUSH BUTTONS** 48" (120 cm)

BELLS, BUZZERS, CHIMES 96" (240 cm) PREFERRED, OR 6" (15 cm) BELOW CEILING

ELECTRIC ABBREVIATIONS

ıt					_
	1Ø	SINGLE-PHASE	LV	LOW VOLTAGE	
	1P	SINGLE POLE	MC	METAL-CLAD	
	3Ø	THREE-PHASE	MCA	MINIMUM CIRCUIT AMPS	
	4W	FOUR-WIRE	MCB	MAIN CIRCUIT BREAKER	
	AF	AMPERE FRAME OR AMP FUSE	MDP	MAIN DISTRIBUTION PANEL	
	AFF	ABOVE FINISHED FLOOR	MOCP	MAXIMUM OVERCURRENT PROTECTION	
	AHJ	AUTHORITY HAVING JURISDICTION	MLO	MAIN LUGS ONLY	
	AIC	AMPERE INTERRUPTING CAPACITY	MTD	MOUNTED	
	ALT	ALTERNATE	MTG	MOUNTING	
	Α	AMPERE	NA	NOT APPLICABLE	
	AT	AMPERE TRIP	NEC	NATIONAL ELECTRICAL CODE	
	AV	AUDIO VISUAL	NEMA	NATIONAL ELECTRICAL MANUFACTURERS	
	С	CONDUIT		ASSOCIATION	
	cd	CANDELA	NEUT	NEUTRAL	
	CD	CONSTRUCTION DOCUMENTS	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION	
	CH	COUNTER HEIGHT	NIC	NOT IN CONTRACT	
	CLG	CEILING	NL	NIGHT LIGHT	
	COMM	COMMUNICATION	NM	NON-METALLIC	
	CRI	COLOR RENDERING INDEX	NTS	NOT TO SCALE	
	CT	CURRENT TRANSFORMER	OC	ON CENTER	
	CU	COPPER	OD	OUTSIDE DIAMETER	
	DISC	DISCONNECT	PC	PHOTOCELL	
	EC	ELECTRICAL CONTRACTOR	PNL	PANEL	
	EG	EQUIPMENT GROUND	PWR	POWER	
	EMT	ELECTRICAL METALLIC TUBING	RCP	REFLECTED CEILING PLAN	
П	EPO	EMERGENCY POWER OFF	RMC	RIGID METAL CONDUIT	
	ETR	EXISTING TO REMAIN	RMS	ROOT MEAN SQUARE	
	FA	FIRE ALARM	SE	SERVICE ENTRANCE	
	FAAP	FIRE ALARM ANNUNCIATOR PANEL	SER	SERVICE ENTRANCE RATED	
	FACP	FIRE ALARM CONTROL PANEL	SF	SQUARE FOOT (FEET)	
	FC	FOOTCANDLE	SW	SWITCH	
	FLA	FULL LOAD AMPS	SWBD	SWITCHBOARD	
	FMC	FLEXIBLE METALLIC CONDUIT	SWGR	SWITCHGEAR	
	GND	GROUND	TC	TIME CLOCK	
	GFI/GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TV	TELEVISION AND/OR MONITOR	
	HP	HORSEPOWER	TYP	TYPICAL	
	IMC	INTERMEDIATE METAL CONDUIT	UL	UNDERWRITERS LABORATORY	
	IR	INFRARED	V	VOLT	
	JBOX	JUNCTION BOX	VA	VOLT AMPERE	
	kV	KILOVOLT	VOLT	VOLTAGE	
	kVA	KILOVOLT AMPERE	W	WATT	
	kW	KILOWATT	WH	WATER HEATER	
	kWH	KILOWATT HOUR	WP	WEATHERPROOF	
			XFMR	TRANSFORMER	

LUMINAIRE SCHEDULE NOTES

- A. REFER TO ARCHITECTURAL RCP(S), ELEVATIONS, AND DETAILS. FULLY COORDINATE WITH ALL MATERIAL.
- 3. COORDINATE WITH ALL TRADES PRIOR TO INSTALLATION TO AVOID CONFLICTS AND ENSURE SUFFICIENT SPACE ABOVE CEILINGS.
- ALL LUMINAIRES WITHIN A ROOM OR AREA SHALL BE CONTROLLED BY SWITCHES/OCCUPANCY SENSORS SHOWN IN THAT ROOM OR
- LUMINAIRES IDENTIFIED AS NIGHT LIGHT (NL) SHALL BE CONNECTED AHEAD OF ANY SWITCHING FOR CONTINUOUS OPERATION. LOCATIONS OF LUMINAIRES WITHIN MECHANICAL EQUIPMENT ROOMS SHALL BE COORDINATED IN FIELD WITH INSTALLED EQUIPMENT. LUMINAIRES SHALL BE LOCATED OVER ACCESS PATHWAYS AROUND EQUIPMENT AND NOT OVER TOP OF DUCTWORK
- DO NOT SUSPEND LUMINAIRES FROM PIPING OR DUCTWORK.
- 5. PROVIDE APPROPRIATE MOUNTING HARDWARE, UNISTRUT, ALL THREAD, ETC., AS REQUIRED TO SUPPORT ALL LUMINAIRES.
- H. ALL LUMINAIRES SHALL BE U.L. LISTED.

WHERE INACCESSIBLE.

- INSTALL LUMINAIRES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- PROVIDE ALL EXIT SIGNAGE WITH APPROPRIATE MOUNTING HARDWARE AND DIRECTIONAL CHEVRONS.
- PROVIDE ALL HANGING/MOUNTING HARDWARE AS REQUIRED TO INSTALL FIXTURES IN LOCATIONS SHOWN, EVEN IF NOT SPECIFICALLY LISTED IN SCHEDULE.
- UNLESS OTHERWISE NOTED, ALL LED DRIVERS AND LAMPS SHALL BE 3500K COLOR TEMPERATURE. IF FIXTURE LISTED IS NOT AVAILABLE IN SPECIFIED COLOR TEMPERATURE, CONTACT ENGINEER FOR RECOMMENDATIONS.
- 1. CONTRACTOR IS ALLOWED TO USE COMBINATION EXIT SIGN AND UNITARY BATTERY POWERED EGRESS EMERGENCY LIGHTING UNITS. NOTE: IN INSTANCES WHERE THERE IS A "HIGH CAPABLE" DEVICE FEEDING AN EXTERIOR EXGRESS LUMINAIRE, THE CONTRACTOR SHALL MAINTAIN THE HIGH CAPABLE FUNCTION OR FEED WITH ANOTHER UNITARY BATTERY DEVICE.
- N. REFER TO ARCHITECTURAL LIGHTING SPECIFICATIONS FOR LUMINAIRE MODEL INFORMATION.

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OH COA #4715



Progress Dates 08.28.2023 - HVAC COORD. 09.06.2023 - REVIEW SET 09.11.2023 - PERMIT SET

Revisions

MARQUE ENGINEERING

MARQÚE ENGINEERING

ИOU					VOLTS BUS AMPS NEUTRAL	5 160		N			AIC 42,000 MAIN BKR LUGS STAN	1600			
KT #	BREAK TRIP/PC		CIRCUIT DESCRIPTIO	ON.		T	A L	OAD KVA	С	FEEDER RA	ACEWAY AND CON	DUCTORS			
1	200/		PANEL H				13.9	11.3	11.2	2"C,3#3/0	0,#3/0N,#6G				
<u>?</u> }	400/3 150/3		EXISTING PANEL A1 EXISTING PANEL B				42.5 14.6	44.9 12.1	49 14.8		3#600kcmil,#600 0,#1/0N,#4G	Okcmil N,#4G			
, ļ	150/		EXISTING PANEL C				20	14.4	9.74		0,#1/0N,#4G 8#1/0,#1/0N,#60	G			
;	150/		EXISTING PANEL D				11	15.7	15.7		3#1/0,#1/0N,#60				
7	125/: 125/:		PANEL 201 PANEL 202				17.9 18.1	15.8	17.5		2#1/0,#1/0N,#60 2#1/0,#1/0N,#60				
3	125/	2 1	PANEL 203					17	17.6		2#1/0,#1/0N,#60				
) O	125/: 125/:		PANEL 204 PANEL 205			ļ	18.1	17.9	17.6		2#1/0,#1/0N,#60 2#1/0,#1/0N,#60				
1	125/	2 1	PANEL 206					18.4	17.1	1-1/2"C,2	2#1/0,#1/0N,#60	G			
2 3	125/: 125/:		PANEL 301 PANEL 302				17.7 18.4	16	17.6		2#1/0,#1/0N,#60 2#1/0,#1/0N,#60				
4	125/		PANEL 303				10.4	17.1	17.5		2#1/0,#1/0N,#60				
5 6	125/		PANEL 304 PANEL 305				18 17.9	18.2	17.7		2#1/0,#1/0N,#60				
o 7	125/: 125/:		PANEL 305 PANEL 306				17.9	17.2	18.4		2#1/0,#1/0N,#60 2#1/0,#1/0N,#60				
8	125/		PANEL 401				17.7		17.6		2#1/0,#1/0N,#60				
9 0	125/: 125/:		PANEL 402 PANEL 403				18.4	16 16.9	17.7		2#1/0,#1/0N,#60 2#1/0,#1/0N,#60				
1	125/		PANEL 404				17.9		17.5		2#1/0,#1/0N,#60				
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				,	,	С	WELLIN	G UNIT L	OADS						
				KVA		11 CF		CON	NECTED I	040		KVA			
.IGI	HTING AND	RECEPT	ACLES	25.8	-,-	11 SF /A/SF)			NECTED LO			513			
	ALL-APPLIA	NCE		48					LLING UNI AND FACT			16 (39%)			
	NDRY LIANCES			5 253				CALC	CULATED L	.OAD		200			
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							HOU	SE LOAD	S						
			CONN KVA	CALC K							CONN KVA				
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ΝO	GEST MOTO TORS	OR	27	2.8 27	•	0%)		HEAT		OUS	0.2 146	0.2 146	(100 (100	%)	
MO REC	TORS EPTACLES		27 19.8	27 14.9	(10 (50	0%) %>10)		HEAT COO	TING LING		0.2 146 138	0.2 146 0	(100 (0%)	%)	
MO REC	TORS		27	27	(10	0%) %>10)		HEAT COO MET	TING LING ERED DEM	1AND	0.2 146	0.2 146 0 43	(100	%)	
MO REC	TORS EPTACLES		27 19.8	27 14.9	(10 (50	0%) %>10)	тот	HEAT COO MET	TING LING ERED DEM AL HOUSE	1AND	0.2 146 138	0.2 146 0	(100 (0%)	%)	
MO REC	TORS EPTACLES		27 19.8	27 14.9	(10 (50 (65	0%) %>10)	тот	HEAT COO METI TOTA	TING LING ERED DEM AL HOUSE	1AND	0.2 146 138	0.2 146 0 43	(100 (0%)	%)	
MO REC (IT(TORS EPTACLES	PMENT	27 19.8 15.5	27 14.9 10	(10 (50 (65	0%) %>10)	тот	HEAT COO METI TOTA AL LOAD	TING LING ERED DEM AL HOUSE	1AND	0.2 146 138 34.4	0.2 146 0 43 264	(100 (0%)	%)	
MO REC KITC	TORS EPTACLES CHEN EQUII	PMENT	27 19.8 15.5	27 14.9 10 KVA	(10 (50 (65	0%) %>10)	тот	HEAT COO METI TOTA AL LOAD	TING LING ERED DEM AL HOUSE	IAND LOAD	0.2 146 138 34.4	0.2 146 0 43 264 KVA	(100 (0%)	%)	
MO REC KITK	TORS EPTACLES CHEN EQUII	PMENT ING UNIT LOAD	27 19.8 15.5	27 14.9 10 KVA	(10 (50 (65	0%) %>10) %)		HEAT COO METI TOTA AL LOAD TOTA BALA	TING LING ERED DEM AL HOUSE	IAND LOAD	0.2 146 138 34.4	0.2 146 0 43 264 KVA 464 1,290 A	(100 (0%)	%)	
MO REC KITCO TO TO TO TO TO TO TO TO TO TO TO TO TO	TORS EPTACLES CHEN EQUII	PMENT ING UNIT	27 19.8 15.5	27 14.9 10 KVA	(10 (50 (65	0%) %>10) %)	0V 3P 4\	HEAT COO METI TOTA AL LOAD TOTA BALA	TING LING ERED DEM AL HOUSE	IAND LOAD	0.2 146 138 34.4	0.2 146 0 43 264 KVA 464 1,290 A	(100 (0%)	%)	
	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE M BASEM NTING FL ROM M	PMENT ING UNIT	27 19.8 15.5	27 14.9 10 KVA	(10 (50 (65	0%) %>10) %>) %)	OV 3P 4\	HEAT COO METI TOTA AL LOAD TOTA BALA	TING LING ERED DEM AL HOUSE	IAND LOAD	0.2 146 138 34.4	0.2 146 0 43 264 KVA 464 1,290 A	(100 (0%)	%)	
MO REC (IT()	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE M BASEM NTING FL FROM M CKT	PMENT ING UNIT LOAD JENT LUSH JETER CE	27 19.8 15.5	27 14.9 10 KVA	VOLTS BUS AMPS	0%) %>10) %>) %)	0V 3P 4V)	HEAT COO METH TOTA AL LOAD TOTA BALA	TING LING ERED DEM AL HOUSE AL LOAD ANCED 3-P	IAND LOAD HASE LOAI	O.2 146 138 34.4 D AIC EXISTIN MAIN BKR LUGS STAN	0.2 146 0 43 264 KVA 464 1,290 A	(100 (0%) (125	%)	Ą
MO'RECKITOT	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE M BASEM NTING FL ROM M CKT BKR	PMENT ING UNIT LOAD IENT LUSH METER CE	27 19.8 15.5 F LOAD ENTER	27 14.9 10 KVA	VOLTS BUS AMPS NEUTRAL	0%) %>10) %>10) %)	0V 3P 4V)	HEAT COO MET! TOTA AL LOAD TOTA BALA	CKT BKR	IAND LOAD THASE LOAI	O.2 146 138 34.4 D AIC EXISTIN MAIN BKR LUGS STAN	0.2 146 0 43 264 KVA 464 1,290 A	(100 (0%) (125	%) %)	A C
TOTE OUT	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE M BASEM NTING FL FROM M CKT	PMENT ING UNIT LOAD JENT LUSH JETER CE	27 19.8 15.5 F LOAD ENTER	27 14.9 10 KVA	VOLTS BUS AMPS NEUTRAL	0%) %>10) %>10) %) 208Y/12 5 400 100%	0V 3P 4\) 5	HEAT COO METH TOTA AL LOAD TOTA BALA	TING LING ERED DEM AL HOUSE AL LOAD ANCED 3-P	CIRCUI FREEZE (ST) CH	O.2 146 138 34.4 D AIC EXISTIN MAIN BKR LUGS STAN	0.2 146 0 43 264 KVA 464 1,290 A	(100 (0%) (125	%) %) LOAD KV	1
MO'REC KITK	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE M BASEM NTING FL ROM M CKT BKR	PMENT ING UNIT LOAD IENT LUSH METER CE	27 19.8 15.5 F LOAD ENTER	27 14.9 10 KVA	VOLTS BUS AMPS NEUTRAL	0%) %>10) %>10) %) 208Y/12 5 400 100% LOAD KV	0V 3P 4\) 5	HEAT COO MET! TOTA AL LOAD TOTA BALA	CKT BKR 20/1	CIRCUI FREEZE (ST) CH GAS	O.2 146 138 34.4 D AIC EXISTIN MAIN BKR LUGS STAN T DESCRIPTION IR, UNDERCOUN	0.2 146 0 43 264 KVA 464 1,290 A	(100 (0%) (125	LOAD KVA	С
TOTE OUT	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE M BASEM NTING FL ROM M CKT BKR 250/3 20/1	PMENT ING UNIT LOAD IENT LUSH METER CE CIRCUI PANEL	27 19.8 15.5 F LOAD ENTER IT DESCRIPTION A2	27 14.9 10 KVA 200 264	VOLTS BUS AMPS NEUTRAL	208Y/12 5 400 100% LOAD KV B	0V 3P 4V	HEAT COO MET! TOTA AL LOAD TOTA BALA	CKT BKR 20/1 20/1 20/1 20/1	CIRCUI FREEZE (ST) CH GAS SPACE RESTRO	O.2 146 138 34.4 D AIC EXISTIN MAIN BKR LUGS STAN T DESCRIPTION ER, UNDERCOUN IARBROILER, CO FOR SHUNT TRI DOM RECEPTAC	0.2 146 0 43 264 KVA 464 1,290 A NG MLO NDARD	(100 (0%) (125	LOAD KVAB	С
TOTE OUT	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE M BASEM NTING FL ROM M CKT BKR 250/3	PMENT ING UNIT LOAD IENT LUSH METER CE CIRCUI PANEL	27 19.8 15.5 F LOAD ENTER IT DESCRIPTION A2	27 14.9 10 KVA 200 264	VOLTS BUS AMPS NEUTRAL A 20.8	0%) %>10) %>10) %) 208Y/12 5 400 100% LOAD KV	0V 3P 4V	HEAT COO MET! TOTA AL LOAD TOTA BALA	CKT BKR 20/1 -/1	CIRCUI FREEZE (ST) CH GAS SPACE RESTRC (ST) RA REFRIG	O.2 146 138 34.4 D AIC EXISTIN MAIN BKR LUGS STAN T DESCRIPTION ER, UNDERCOUN IARBROILER, CO FOR SHUNT TRI	0.2 146 0 43 264 KVA 464 1,290 A NG MLO NDARD	(100 (0%) (125	LOAD KVA	С
TOTION OUT BE SEED OF SEED OUT BE SEED OUT BUT BUT BUT BUT BUT BUT BUT BUT BUT B	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE M BASEM NTING FL ROM M CKT BKR 250/3 20/1	PMENT ING UNIT LOAD IENT LUSH METER CE CIRCUI PANEL G4SM WARE	27 19.8 15.5 F LOAD ENTER IT DESCRIPTION A2	27 14.9 10 KVA 200 264	VOLTS BUS AMPS NEUTRAL A 20.8	208Y/12 5 400 100% LOAD KV B	OV 3P 4V	HEATI COO METI TOTA AL LOAD TOTA BALA N CKT # 2 4 6 8 10	CKT BKR 20/1 20/1 20/1 20/1	CIRCUI FREEZE (ST) CH GAS SPACE RESTRC (ST) RA REFRIG TABLE	O.2 146 138 34.4 D AIC EXISTIN MAIN BKR LUGS STAN T DESCRIPTION IR, UNDERCOUN IARBROILER, CO FOR SHUNT TRI DOM RECEPTAC INGE, RESTAURA ERATOR, SAND	O.2 146 O 43 264 KVA 464 1,290 A NG MLO NDARD ITER UNTERTOP, P LE ANT, GAS, WICH PRE.	(100 (0%) (125	LOAD KVAB	0
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TOTE OF THE STATE	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE M BASEM NTING FL ROM M CKT BKR 250/3 20/1	PMENT ING UNIT LOAD IENT LUSH METER CE CIRCUI PANEL G4SM WARE TEMP	27 19.8 15.5 F LOAD ENTER IT DESCRIPTION A2	27 14.9 10 KVA 200 264	VOLTS BUS AMPS NEUTRAL L A 20.8	208Y/12 5 400 100% LOAD KV B	OV 3P 4V	HEAT COO MET! TOTA AL LOAD TOTA BALA CKT # 2 4 6 8 10 12	CKT BKR 20/1 20/1 20/1 -/1	CIRCUI FREEZE (ST) CH GAS SPACE RESTRO (ST) RA REFRIG TABLE SPACE REFRIG REFRIG	O.2 146 138 34.4 D AIC EXISTIN MAIN BKR LUGS STAN T DESCRIPTION IARBROILER, CO FOR SHUNT TRI DOM RECEPTAC INGE, RESTAURA ERATOR, SAND FOR SHUNT TRI ERATOR, REACHERATOR,	O.2 146 O 43 264 KVA 464 1,290 A NG MLO NDARD ITER UNTERTOP, P LE ANT, GAS, WICH PRE. P H - IN	(100 (0%) (125 ————————————————————————————————————	LOAD KVAB	0
MOORE TO THE TOTAL TO THE TENT OF THE TENT	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE M BASEM NTING FL ROM M CKT BKR 250/3 20/1 70/3	PMENT ING UNIT LOAD IENT LUSH METER CE CIRCUI PANEL G4SM WARE TEMP	27 19.8 15.5 I LOAD ENTER IT DESCRIPTION A2 WASHER, DOOR TYPE	27 14.9 10 KVA 200 264	VOLTS BUS AMPS NEUTRAL L A 20.8	208Y/12 6 400 100% LOAD KV B 21.6	OV 3P 4V	HEAT COO MET TOTA AL LOAD TOTA BALA 4 6 8 10 12 14 16	CKT BKR 20/1 20/1 20/1 20/1 20/1 20/1 20/1	CIRCUI FREEZE (ST) CH GAS SPACE RESTRO (ST) RA REFRIG TABLE SPACE REFRIG MERCH	O.2 146 138 34.4 D AIC EXISTIN MAIN BKR LUGS STAN T DESCRIPTION IR, UNDERCOUN IARBROILER, CO FOR SHUNT TRI DOM RECEPTAC INGE, RESTAURA ERATOR, SAND	O.2 146 O 43 264 KVA 464 1,290 A NG MLO NDARD ITER UNTERTOP, P LE ANT, GAS, WICH PRE. P H - IN	(100 (0%) (125 ————————————————————————————————————	M) KOAD KV/ B 0.5	0
OOO DE LE	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE CKT BKR 250/3 20/1 70/3	PMENT ING UNIT LOAD IENT LUSH METER CE CIRCUI PANEL G4SM WARE TEMP FOOD WAITII RECEP	27 19.8 15.5 T LOAD T LOAD T LOAD T LOAD WASHER, DOOR TYF PREP MONITOR REC	27 14.9 10 KVA 200 264	VOLTS BUS AMPS NEUTRAL A 20.8 0.648	208Y/12 6 400 100% LOAD KV B 21.6	OV 3P 4V	HEAT COO MET! TOTA AL LOAD TOTA BALA N CKT # 2 4 6 8 10 12 14 16 18	CKT BKR 20/1 20/1 20/1 20/1 20/1 20/1 20/1	CIRCUI FREEZE (ST) CH GAS SPACE RESTRO (ST) RA REFRIG TABLE SPACE REFRIG MERCH REFRIG MERCH	AIC EXISTIN MAIN BKR LUGS STAN T DESCRIPTION IR, UNDERCOUN IARBROILER, CO FOR SHUNT TRI DOM RECEPTAC INGE, RESTAURA ERATOR, SAND FOR SHUNT TRI ERATOR, REACH ERATOR, HANDISER/DISPL ERATOR, HANDISER/DISPL ERATOR, HANDISER/DISPL	O.2 146 O 43 264 KVA 464 1,290 A NG MLO NDARD ITER UNTERTOP, P LE ANT, GAS, WICH PRE. P H - IN .AY CASE .AY CASE	A 0.54 0.9 0.36	M) KOAD KV/ B 0.5	0
OOO DE LE	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE CKT BKR 250/3 20/1 70/3	PMENT ING UNIT LOAD IENT LUSH METER CE CIRCUI PANEL G4SM WARE TEMP FOOD WAITII RECEP	27 19.8 15.5 T LOAD T LOAD T LOAD T LOAD T LOAD T MASHER, DOOR TYPE PREP MONITOR RECORDER MONITOR RECORDER MONITOR TACLE TORAGE MONITOR	27 14.9 10 KVA 200 264	VOLTS BUS AMPS NEUTRAL L A 20.8	208Y/12 6 400 100% LOAD KV B 21.6	OV 3P 4V	HEAT COO MET TOTA AL LOAD TOTA BALA 4 6 8 10 12 14 16	CKT BKR 20/1 20/1 20/1 20/1 20/1 20/1	CIRCUI FREEZE (ST) CH GAS SPACE RESTRO (ST) RA REFRIG TABLE SPACE REFRIG MERCH REFRIG MERCH	AIC EXISTIN MAIN BKR LUGS STAN T DESCRIPTION IR, UNDERCOUN IARBROILER, CO FOR SHUNT TRI DOM RECEPTAC INGE, RESTAURA ERATOR, SAND FOR SHUNT TRI ERATOR, REACH ERATOR, HANDISER/DISPL ERATOR,	O.2 146 O 43 264 KVA 464 1,290 A NG MLO NDARD ITER UNTERTOP, P LE ANT, GAS, WICH PRE. P 1 - IN .AY CASE .AY CASE	(100 (0%) (125 ————————————————————————————————————	M) KOAD KV/ B 0.5	0
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MOOD TO	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE OF THE TENT OF THE	PMENT ING UNIT LOAD IENT LUSH IETER CE CIRCUI PANEL G4SM WARE' TEMP FOOD WAITII RECEP' DRY ST RECEP' MEAT WAITII RECEP' MEAT WAITII RECEP'	27 19.8 15.5 T LOAD T LOAD	27 14.9 10 KVA 200 264 PE, HIGH CEPTACLE TOR	VOLTS BUS AMPS NEUTRAL A 20.8 0.648	208Y/12 6 400 100% 20.07 0.54	OV 3P 4V	HEAT COO MET TOTA AL LOAD TOTA BALA 4 6 8 10 12 14 16 18 20 22 24	CKT BKR 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20/1	CIRCUI FREEZE (ST) CH GAS SPACE RESTRO (ST) RA REFRIG TABLE SPACE REFRIG MERCH REFRIG MERCH REFRIG MERCH REFRIG TABLE REFRIG MERCH REFRIG TABLE REFRIG MERCH REFRIG TABLE REFRIG TABLE REFRIG TABLE REFRIG TABLE REFRIG	AIC EXISTIN MAIN BKR LUGS STAN T DESCRIPTION IR, UNDERCOUN IARBROILER, CO FOR SHUNT TRI DOM RECEPTAC INGE, RESTAURA ERATOR, SAND FOR SHUNT TRI ERATOR, REACH ERATOR, SAND	O.2 146 0 43 264 KVA 464 1,290 A NG MLO NDARD ITER UNTERTOP, P LE ANT, GAS, WICH PRE. P 1 - IN .AY CASE .AY CASE WICH PREP. H - IN HEF BASE	A 0.54 0.9 0.36	%) %) LOAD KV/ B 0.5 1.38	0 0.5
MOODING TO	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE CKT BKR 250/3 20/1 70/3	PMENT ING UNIT LOAD IENT LUSH IETER CE CIRCUI PANEL G4SM WARE' TEMP FOOD WAITII RECEP' DRY ST RECEP' MEAT WAITII RECEP' MEAT WAITII RECEP'	27 19.8 15.5 T LOAD T LOAD	27 14.9 10 KVA 200 264 PE, HIGH CEPTACLE TOR	VOLTS BUS AMPS NEUTRAL A 20.8 0.648	0%) %>10) %>10) %>10) %> 208Y/12 6 400 100%	OV 3P 4V	HEAT COO MET TOTA AL LOAD TOTA BALA 4 6 8 10 12 14 16 18 20 22 24 26	CKT BKR 20/1 20/1 20/1 20/1 20/1 20/1 -/1	CIRCUI FREEZE (ST) CH GAS SPACE RESTRO (ST) RA REFRIG TABLE SPACE REFRIG MERCH REFRIG MERCH REFRIG MERCH REFRIG SPACE REFRIG SPACE REFRIG SPACE REFRIG SPACE REFRIG SPACE REFRIG SPACE	AIC EXISTIN MAIN BKR LUGS STAN T DESCRIPTION IR, UNDERCOUN IARBROILER, CO FOR SHUNT TRI DOM RECEPTAC INGE, RESTAURA ERATOR, SAND FOR SHUNT TRI ERATOR, REACH ERATOR, IANDISER/DISPL ERA	O.2 146 O 43 264 KVA 464 1,290 A NG MLO NDARD ITER UNTERTOP, P LE ANT, GAS, WICH PRE. P 1 - IN AY CASE WICH PREP. H - IN HEF BASE P	A 0.54 0.9 0.36	%) %) %) LOAD KV/ B 0.5 1.38	0 0.5
AOOON TO	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE OF THE TENT OF THE	PMENT ING UNIT LOAD IENT LUSH METER CE CIRCUI PANEL G4SM WARE' TEMP FOOD WAITII RECEP' DRY ST RECEP' MEAT WAITII RECEP' OVEN- GAS	27 19.8 15.5 T LOAD T LOAD	27 14.9 10 KVA 200 264 PE, HIGH CEPTACLE TOR	VOLTS BUS AMPS NEUTRAL A 20.8 0.648	208Y/12 6 400 100% 20.07 0.54	OV 3P 4V	HEAT COO MET TOTA AL LOAD TOTA BALA 4 6 8 10 12 14 16 18 20 22 24 26 28	CKT BKR 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20/1	CIRCUI FREEZE (ST) CH GAS SPACE RESTRO (ST) RA REFRIG TABLE SPACE REFRIG MERCH REFRIG MERCH REFRIG MERCH REFRIG SPACE REFRIG (ST) RE SPACE (ST) RE	AIC EXISTIN MAIN BKR LUGS STAN T DESCRIPTION IR, UNDERCOUN IARBROILER, CO FOR SHUNT TRI DOM RECEPTAC INGE, RESTAURA ERATOR, SAND FOR SHUNT TRI ERATOR, REACH ERATOR, SAND	O.2 146 O 43 264 KVA 464 1,290 A NG MLO NDARD ITER UNTERTOP, P LE ANT, GAS, WICH PRE. P 1 - IN -AY CASE WICH PREP. H - IN HEF BASE P ERTOP, GAS	A 0.54 0.9 0.36	%) %) LOAD KV/ B 0.5 1.38	1
MOOD TO	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE OF THE TENT OF THE	PMENT ING UNIT LOAD IENT LUSH METER CE CIRCUI PANEL G4SM WARE' TEMP FOOD WAITII RECEP' DRY ST RECEP' MEAT WAITII RECEP' OVEN- GAS	27 19.8 15.5 T LOAD T LOAD	27 14.9 10 KVA 200 264 PE, HIGH CEPTACLE TOR	VOLTS BUS AMPS NEUTRAL A 20.8 0.648	0%) %>10) %>10) %>10) %> 208Y/12 6 400 100% 21.6 2.07 0.54	OV 3P 4V	HEAT COO MET! TOTA AL LOAD TOTA BALA N CKT # 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32	CKT BKR 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20/	CIRCUI FREEZE (ST) CH GAS SPACE RESTRO (ST) RA REFRIG TABLE SPACE REFRIG MERCH REFRIG MERCH REFRIG CST) RE SPACE (ST) RE SPACE (ST) FR	AIC EXISTIN MAIN BKR LUGS STAN T DESCRIPTION IR, UNDERCOUN IARBROILER, CO FOR SHUNT TRI DOM RECEPTAC INGE, RESTAURA ERATOR, SAND FOR SHUNT TRI ERATOR, REACH ERATOR, HANDISER/DISPL ERATOR E	O.2 146 O 43 264 KVA 464 1,290 A NG MLO NDARD ITER UNTERTOP, P LE ANT, GAS, WICH PRE. P H - IN AY CASE WICH PREP. H - IN HEF BASE P GRAS	A 0.54 0.9 0.36	M) M) LOAD KV/ B 0.5 1.38 0.72	0 0.3
TOTE OUT	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE TAL HOUSE CKT BKR 250/3 20/1 70/3 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20/1	PMENT ING UNIT LOAD IENT LUSH METER CE CIRCUI PANEL G4SM WARE' TEMP FOOD WAITII RECEP' DRY ST RECEP' MEAT WAITII RECEP' OVEN- GAS EXHAL	27 19.8 15.5 T LOAD T LOAD	27 14.9 10 KVA 200 264 PE, HIGH CEPTACLE TOR	VOLTS BUS AMPS NEUTRAL A 20.8 0.648 1.56	0%) %>10) %>10) %>10) %> 208Y/12 6 400 100%	OV 3P 4V	HEAT COO MET! TOTA AL LOAD TOTA BALA 10 12 14 16 18 20 22 24 26 28 30 32 34	CKT BKR 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20/1	CIRCUI FREEZE (ST) CH GAS SPACE RESTRO (ST) RA REFRIG TABLE SPACE REFRIG MERCH REFRIG MERCH REFRIG CST) RE SPACE (ST) RE SPACE (ST) FR' SPACE (ST) FR' SPACE	AIC EXISTIN MAIN BKR LUGS STAN T DESCRIPTION IR, UNDERCOUN IARBROILER, CO FOR SHUNT TRI DOM RECEPTAC INGE, RESTAURA ERATOR, SAND FOR SHUNT TRI ERATOR, BANDISER/DISPL ERATOR, HANDISER/DISPL ERATOR, HANDISER	O.2 146 O 43 264 KVA 464 1,290 A NG MLO NDARD ITER UNTERTOP, P LE ANT, GAS, WICH PRE. P H - IN AY CASE WICH PREP. H - IN HEF BASE P GAS P GAS P	A 0.54 0.9 0.36	%) %) %) LOAD KV/ B 0.5 1.38	0 0.4
1000 OUD F F 7 7 9 1 1 3 3 5 7 7 9 7 1 3 3 5 7 7 9 7 1 3 3 5 5 7 7 9 1 1 3 3 5 7 7 9 1 1 3 3 5 7 7 9 1 1 3 3 5 7 7 9 1 1 3 3 5 7 7 9 1 1 3 3 5 7 7 9 1 1 3 3 5 7 7 9 1 1 3 3 5 7 7 9 1 1 3 3 5 7 7 9 1 1 3 3 5 7 7 9 1 1 3 3 5 7 7 9 1 1 3 3 5 7 7 9 1 1 3 3 5 7 7 9 1 1 3 3 5 7 7 9 1 1 3 3 5 7 7 9 1 1 3 3 5 7 7 9 1 1 3 3 7 7 9 1 1 3 3 7 7 9 1 1 3 3 7 7 9 1 1 3 3 7 7 9 1 1 3 3 7 7 9 1 1 3 3 7 7 9 1 1 3 3 7 7 9 1 1 3 3 7 7 9 1 1 3 3 7 7 9 1 1 3 3 7 7 9 1 1 3 3 7 7 9 1 1 3 3 7 7 9 1 1 3 3 7 7 9 1 1 3 7 7 9 1 1 1 3 7 7 9 1 1 1 3 7 7 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE OF THE PROPERTY OF THE PROPERT	PMENT ING UNIT LOAD IENT LUSH METER CE CIRCUI PANEL G4SM WARE TEMP FOOD WAITII RECEP DRY ST RECEP MEAT WAITII RECEP OVEN- GAS EXHAU AHU-1 AHU-2	27 19.8 15.5 T LOAD T LOAD	27 14.9 10 KVA 200 264 PE, HIGH CEPTACLE TOR	VOLTS BUS AMPS NEUTRAL A 20.8 0.648 1.56	0%) %>10) %>10) %>10) %) 208Y/12 6 400 100% 21.6 2.07 0.54 0.72 1.56 5.42	OV 3P 4V 0 6 6 7 20.7 2.07 0.36	HEAT COO MET! TOTA AL LOAD TOTA BALA N CKT # 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38	CKT BKR 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20/	CIRCUI FREEZE (ST) CH GAS SPACE RESTRO (ST) RA REFRIG TABLE SPACE REFRIG MERCH REFRIG MERCH REFRIG (ST) GR SPACE (ST) FR SPACE (ST) FR SPACE (ST) FR SPACE (ST) FR	AIC EXISTIN MAIN BKR LUGS STAN T DESCRIPTION TRIPLED TO THE PROPERTY OF THE PR	O.2 146 O 43 264 KVA 464 1,290 A NG MLO NDARD ITER UNTERTOP, P LE ANT, GAS, WICH PRE. P 1 - IN LAY CASE WICH PREP. 1 - IN HEF BASE P GAS P GAS P GAS P	A 0.54 0.9 0.36	M) %) %) %) LOAD KV/ B 0.5 1.38 0.72 0.36 0.12 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1000 OUD F F T T T T T T T T T T T T T T T T T	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE TAL HOUSE CKT BKR 250/3 20/1 70/3 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20/1	PMENT ING UNIT LOAD IENT LUSH METER CE CIRCUI PANEL G4SM WARE TEMP FOOD WAITII RECEP DRY ST RECEP MEAT WAITII RECEP OVEN- GAS EXHAU AHU-1	27 19.8 15.5 T LOAD T LOAD	27 14.9 10 KVA 200 264 PE, HIGH CEPTACLE TOR	VOLTS BUS AMPS NEUTRAL A 20.8 0.648 1.56 5.42	0%) %>10) %>10) %>10) %> 208Y/12 6 400 100% 21.6 2.07 0.54	OV 3P 4V 0 6 6 7 20.7 2.07 0.36	HEAT COO MET! TOTA AL LOAD TOTA BALA N CKT # 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40	CKT BKR 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20/	CIRCUI FREEZE (ST) CH GAS SPACE RESTRO (ST) RA REFRIG TABLE SPACE REFRIG MERCH REFRIG MERCH REFRIG (ST) GR SPACE (ST) FR SPACE (ST) FR SPACE (ST) FR SPACE (ST) FR	AIC EXISTIN MAIN BKR LUGS STAN T DESCRIPTION ER, UNDERCOUNTERATOR, SANDY FOR SHUNT TRICERATOR, SANDY ERATOR, CITCON SHUNT TRICERATOR, CITCON SHUNT TRICERATOR, CITCON SHUNT TRICERATOR, SANDY ERATOR, SANDY ERATOR, SANDY ERATOR, COUNTERATOR, SANDY ERATOR, COUNTERATOR, SHUNT TRICERATOR, SHUNT TRICERATOR SHUTT TRICERATOR SHUNT TRICERATOR SHUNT TRICERATOR SHUNT TRICERATOR	O.2 146 O 43 264 KVA 464 1,290 A NG MLO NDARD ITER UNTERTOP, P LE ANT, GAS, WICH PRE. P 1 - IN LAY CASE WICH PREP. 1 - IN HEF BASE P GAS P GAS P GAS P	(100 (0%) (125 ————————————————————————————————————	M) M) LOAD KV/ B 0.5 1.38 0.72	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1000 OUD F F T T T T T T T T T T T T T T T T T	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE OF THE PROPERTY OF THE PROPERT	PMENT ING UNIT LOAD IENT LUSH METER CE CIRCUI PANEL G4SM WARE TEMP FOOD WAITII RECEP DRY ST RECEP MEAT WAITII RECEP OVEN- GAS EXHAU AHU-1 AHU-2	27 19.8 15.5 T LOAD T LOAD	27 14.9 10 KVA 200 264 PE, HIGH CEPTACLE TOR	VOLTS BUS AMPS NEUTRAL A 20.8 0.648 1.56 5.42	0%) %>10) %>10) %>10) %) 208Y/12 6 400 100% 21.6 2.07 0.54 0.72 1.56 5.42	OV 3P 4V 00 6 7A C 20.77 2.07 0.36 0.492 3.24	HEAT COO MET! TOTA AL LOAD TOTA BALA N CKT # 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40	CKT BKR 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20/	CIRCUI FREEZE (ST) CH GAS SPACE RESTRO (ST) RA REFRIG TABLE SPACE REFRIG MERCH REFRIG MERCH REFRIG (ST) RE SPACE (ST) FR SPACE (ST) FR SPACE (ST) FR SPACE (ST) FR REFRIG	AIC EXISTIN MAIN BKR LUGS STAN T DESCRIPTION ER, UNDERCOUNTERATOR, SANDY FOR SHUNT TRICERATOR, SANDY ERATOR, CITCON SHUNT TRICERATOR, CITCON SHUNT TRICERATOR, CITCON SHUNT TRICERATOR, SANDY ERATOR, SANDY ERATOR, SANDY ERATOR, COUNTERATOR, SANDY ERATOR, COUNTERATOR, SHUNT TRICERATOR, SHUNT TRICERATOR SHUTT TRICERATOR SHUNT TRICERATOR SHUNT TRICERATOR SHUNT TRICERATOR	O.2 146 O 43 264 KVA 464 1,290 A ITER UNTERTOP, P LE ANT, GAS, WICH PRE. P 1 - IN LAY CASE WICH PREP. H - IN HEF BASE P ERTOP, GAS P GAS P GAS P GAS P NTROLS	(100 (0%) (125 ————————————————————————————————————	M) %) %) %) LOAD KV/ B 0.5 1.38 0.72 0.36 0.12 0	0.4 0.4 0.1.2
MOOD TO	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE OF THE PROPERTY OF THE PROPERT	PMENT ING UNIT LOAD IENT LUSH METER CE CIRCUI PANEL G4SM WARE TEMP FOOD WAITII RECEP DRY ST RECEP MEAT WAITII RECEP OVEN- GAS EXHAU AHU-1 AHU-2	27 19.8 15.5 T LOAD T LOAD	27 14.9 10 KVA 200 264 PE, HIGH CEPTACLE TOR	VOLTS BUS AMPS NEUTRAL A 20.8 0.648 1.56 5.42 3.24	0%) %>10) %>10) %>10) %) 208Y/12 6 400 100% 21.6 2.07 0.54 0.72 1.56 5.42	OV 3P 4V 00 6 7A C 20.77 2.07 0.36 0.492 3.24	HEAT COO MET! TOTA AL LOAD TOTA BALA N CKT # 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40	CKT BKR 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20/	CIRCUI FREEZE (ST) CH GAS SPACE RESTRO (ST) RA REFRIG TABLE SPACE REFRIG MERCH REFRIG MERCH REFRIG (ST) RE SPACE (ST) FR SPACE (ST) FR SPACE (ST) FR SPACE (ST) FR REFRIG	AIC EXISTIN MAIN BKR LUGS STAN T DESCRIPTION IR, UNDERCOUN IARBROILER, CO FOR SHUNT TRI DOM RECEPTAC INGE, RESTAURA ERATOR, SAND FOR SHUNT TRI ERATOR, REACH ERATOR, IANDISER/DISPL ERATOR, SAND ERATOR	O.2 146 O 43 264 KVA 464 1,290 A NG MLO NDARD ITER UNTERTOP, P LE ANT, GAS, WICH PRE. P H - IN LAY CASE WICH PREP. H - IN HEF BASE P ERTOP, GAS P GAS P NTROLS KVA BY PHASE	(100 (0%) (125 ————————————————————————————————————	M) %) %) %) LOAD KV/ B 0.5 1.38 0.72 0.36 0.12 0 1	0.3 0.4 0.9
1000 D F F F F F F F F F F F F F F F F F	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE OF THE PROPERTY OF THE PROPERT	PMENT ING UNIT LOAD IENT LUSH METER CE CIRCUI PANEL G4SM WARE TEMP FOOD WAITII RECEP DRY ST RECEP MEAT WAITII RECEP OVEN- GAS EXHAU AHU-1 AHU-2	27 19.8 15.5 F LOAD T LOAD	27 14.9 10 KVA 200 264 PE, HIGH CEPTACLE FOR	VOLTS BUS AMPS NEUTRAL 1.56 1.56 5.42 3.24	0%) %>10) %>10) %>10) %) 208Y/12 6 400 100% 21.6 2.07 0.54 0.72 1.56 5.42	OV 3P 4V 00 6 7A C 20.77 2.07 0.36 0.492 3.24	HEAT COO MET TOTA AL LOAD TOTA BALA 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42	CKT BKR 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20/	CIRCUI FREEZE (ST) CH GAS SPACE RESTRO (ST) RA REFRIG TABLE SPACE REFRIG MERCH REFRIG MERCH REFRIG (ST) RE SPACE (ST) FR SPACE (ST) FR SPACE (ST) FR TABLE REFRIG TABLE REFRI	AIC EXISTIN MAIN BKR LUGS STAN T DESCRIPTION ER, UNDERCOUNTERATOR, SANDY FOR SHUNT TRIDOM RECEPTAC, IGERATOR, ERATOR, IANDISER/DISPLERATOR, IANDISER/DISPLERATOR, IANDISER/DISPLERATOR, SANDY IERATOR, ERATOR, IANDISER/DISPLERATOR, IANDISER/DISPLERATOR, CITCH SHUNT TRIDUBLE, COUNTER FOR SHUNT TRIVER, DEEP FAT, FOR SHUTT TRIVER, DEEP FAT, F	O.2 146 O 43 264 KVA 464 1,290 A NG MLO NDARD ITER UNTERTOP, P LE ANT, GAS, WICH PRE. P H - IN LAY CASE WICH PREP. H - IN HEF BASE P ERTOP, GAS P GAS P NTROLS KVA BY PHASE	(100 (0%) (125 ————————————————————————————————————	M) %) %) %) %) LOAD KV/ B 0.5 1.38 0.72 0.36 0.12 0 1 49	0.4 0.4 0.1.2
OOD TO	TORS EPTACLES CHEN EQUII TAL DWELLI TAL HOUSE OF THE STATE OF THE ST	PMENT ING UNIT LOAD IENT LUSH METER CE CIRCUI PANEL G4SM WARE' TEMP FOOD WAITII RECEP' DRY ST RECEP' MEAT WAITII RECEP' OVEN- GAS EXHAU AHU-1 AHU-2 AHU-3	27 19.8 15.5 T LOAD T LOAD	27 14.9 10 KVA 200 264 PE, HIGH CEPTACLE OR TOR ATION,	VOLTS BUS AMPS NEUTRAL A 20.8 0.648 1.56 5.42 3.24 VA (12 (25)	0%) %>10) %>10) %>10) %>10) %>10) % 208Y/12 S 400 100% 2.07 0.54 0.72 1.56 5.42 4.65	OV 3P 4V 00 6 7A C 20.77 2.07 0.36 0.492 3.24	HEAT COO MET TOTA AL LOAD TOTA BALA 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42	CKT BKR 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20/	CIRCUI FREEZE (ST) CH GAS SPACE RESTRO (ST) RA REFRIG TABLE SPACE REFRIG MERCH REFRIG MERCH REFRIG (ST) RE SPACE (ST) FR SPACE (ST) FR SPACE (ST) FR TABLE REFRIG TABLE REFRI	O.2 146 138 34.4 AIC EXISTIN MAIN BKR LUGS STAN T DESCRIPTION ARBROILER, CO FOR SHUNT TRI COM RECEPTAC ANGE, RESTAURA ERATOR, SAND FOR SHUNT TRI ERATOR, BANDISER/DISPL ERATOR, HANDISER/DISPL ERATOR HANDISER/DISPL ERAT	O.2 146 O 43 264 KVA 464 1,290 A ITER UNTERTOP, P LE ANT, GAS, WICH PRE. P 1 - IN LAY CASE WICH PREP. H - IN HEF BASE P GRTOP, GAS P GAS P GAS P NTROLS KVA BY PHASE CALC KVA	(100 (0%) (125 (125 (125 (125 (125 (125 (125 (125	COAD KV/B B 0.5 1.38 0.72 0.36 1.49	0.4 0.4

BALANCED 3-PHASE LOAD

TOTAL LOAD

389 A

	-		VOLTS BUS AMP NEUTRAL					AIC EXISTING MAIN BKR MLO LUGS STANDARD			
CKT #	CKT BKR	CIRCUIT DESCRIPTION		LOAD KVA		CKT #	CKT BKR	CIRCUIT DESCRIPTION		LOAD KV	A
1	20/1	WAITING ROOM 1 LIGHTING	0.166	В	С	2	20/1	LIGHTING	0.128	В	+
3	20/1	CUTTING ROOM LIGHTING		0.048	0.076	4	20/1	KITCHEN RECEPTACLE		0.72	
5 7	20/1 20/1	WAITING ROOM 2 LIGHTING KITCHEN LIGHTING	0.361		0.076	6 8	20/1 20/1	DEHUMIDIFIER 1 DEHUMIDIFIER 2	0.984		0
9 11	20/1 20/1	CORRIDOR LIGHTING RESTROOM LIGHTING		0.087	0.394	10 12	20/1 20/1	DEHUMIDIFIER 1 SPARE		0.984	
13	20/1	WALK-IN AND WATER ROOM	0.118		0.554	14	20/1	SPARE	0		
15	20/1	LIGHTING STAIRWELL LIGHTING		0.019		16	30/2	HP-1		1.89	
17 19	20/1 20/3	ROOF-TOP RECEPTACLE MAKEUP AIR UNIT	0.925		0.36	18 20	 50/2	HP-3	3.48		1
21	20/3	WAREOF AIR ONT	0.923	0.925		22	30/2	nr-5	3.40	3.48	
23 25	 20/3	CONDENSING UNIT 1	1.35		0.925	24 26	40/2 I	HP-2	2.62		2
27				1.35		28	50/2	HP-4		3.48	
29 31	ا 30/3	CONDENSING UNIT 2	2.57		1.35	30 32	l 50/2	HP-5	3.48		3
33 35				2.57	2.57	34	 50/2	HD C	ļ	3.48	3
37	ا 20/3	EXHAUST FAN 2	1.14		2.57	36 38	50/2	HP-6	3.48		3
39 41				1.14	1.14	40 42	25/2 I	HP-7		1.47	1
	<u>'</u>				1.1.		1	TOTAL CONNECTED KVA BY PHASE	20.8	21.6	2
		CONN KVA CAI	l _C KVA			<u> </u>		CONN KVA CALC KV			
LIGH	TING	1.39 1.74	(12	25%)		RECE	PTACLES	1.08	— (50%	%>10)	
	GEST MOT	OR 7.71 1.93 3.42 3.42		5%) 00%)		HEAT		42.6 0 57.3 57.3	(0%) (100	•	
IVIO	UNS	5.42 5.42	(10	JU /6 J			L LOAD	65.5		1/0]	
								HASE LOAD 182 A			
B	1 BASEM	IENT	VOLTS	208Y/120)\/ 3 D /\\\			AIC EXISTING			
MOUI	NTING F	LUSH	BUS AMP	S 150	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			MAIN BKR MLO			
FED FI NOTE		METER CENTER	NEUTRAL	100%				LUGS STANDARD ISO GND BUS			
СКТ	CKT			LOAD KVA	4	СКТ	CKT			LOAD KV	A
#	BKR	CIRCUIT DESCRIPTION	A	В	С	#	BKR	CIRCUIT DESCRIPTION	A	В	+
1	20/1	PUBLIC CORRIDOR MONITOR RECEPTACLE	0.18			2	20/1	SPARE	0		
3 5	20/2	EXHAUST FAN 3		0.718	0.718	4 6	20/1 20/1	SPARE PUBLIC CORRIDOR RECEPTACLE		0	C
7	30/2	ELECTRIC WATER HEATER	2.25		0.718	8	20/1	CUTTING ROOM RECEPTACLE	0.36		'
9 11	 20/1	CIRCULATOR PUMP		2.25	0.039	10 12	30/1 30/1	HAND DRYER HAND DRYER		2	
13	15/2	ELECTRIC HEATER	1.25		0.039	14	20/1	SERVICE VESTIBULE RECEPTACLE	0.36		
15 17	 25/2	FREEZER CONDENSER	-	1.25	2.08	16 18	20/1 20/1	BUILDING WATER RECEPTACLE WATER-COOLER		0.18	١,
19	Ì		2.08		2.00	20	20/1	STORAGE RECEPTACLE	0.36		'
21 23	20/2 	FREEZER EVAPORATOR		0.104	0.104	22 24	20/1 30/1	SLICER RECEPTACLE CASE 1	-	0.18	
25	30/2	COOLER CONDENSER	2.08		0.104	26	30/1	CASE 2	2.4		'
27 29	 20/1	COOLER EVAPORATOR		2.08	0.096	28 30	30/1 30/1	CASE 6 CASE 3	-	2.4	
31	20/1	DOOR HEATER	0.2			32	30/1	CASE 4	2.4		
33 35	20/1 20/1	DOOR HEATER DAMPER		0.2	0.1	34 36	30/1 20/1	CASE 5 EMERGENCY LIGHTING		2.4	0.
37	20/1	SPARE	0			38	20/1	SPARE SPARE	0		
39 41	20/1 20/1	SPARE SPARE		0	0	40 42	20/1 20/1	SPARE		0	
								TOTAL CONNECTED KVA BY PHASE	14.8	14.6	1
		CONN KVA CAI	_C KVA					CONN KVA CALC KV	A		
	TING	0.328 0.41	•	25%)			INUOUS	13.1 16.4	(125	•	
	GEST MOT ORS	OR 2.4 0.6 8.37 8.37		5%) 00%)		HEAT		2.5 0 12 12	(0%) (100	•	
	PTACLES	2.56 2.56	•)%>10)			RED DEM		(125	•	
							L LOAD	43.6			
						BALAI	NCED 3-PF	HASE LOAD 121 A			
\overline{C}											
	1 BASEN			208Y/120)V 3P 4W			AIC EXISTING			
MOUI FED F	NTING F ROM N	LUSH 1ETER CENTER	BUS AMP NEUTRAL					MAIN BKR MLO LUGS STANDARD			
NOTE											
CKT #	CKT BKR	CIRCUIT DESCRIPTION		LOAD KVA	1	CKT #	CKT BKR	CIRCUIT DESCRIPTION		LOAD KV	A T
1	50/2	AHU-6	4.65	В	С	2	60/2	AHU-4	5.6	В	+
3	Ì			4.65	225	4	Ī			5.6	
5 7	35/2 	AHU-7	3.24		3.24	6 8	25/2 	AHU-4	2.36		2
9	30/3	MEAT CASE CONDENSOR		2.88	2.00	10	-/1 -/1	SPACE		0	
11 13			2.88		2.88	12 14	-/1 -/1	SPACE SPACE	0		
15 17	-/1 -/1	SPACE SPACE		0	_	16	-/1	SPACE	-	0	
17 19	-/1 -/1	SPACE	0		0	18 20	-/1 -/1	SPACE SPACE	0		
21 23	-/1 -/1	SPACE SPACE		0	0	22 24	-/1 -/1	SPACE SPACE	-	0	
25	-/1	SPACE	0	1		26	-/1	SPACE	0		
27 29	-/1 -/1	SPACE SPACE		0	0	28 30	-/1 -/1	SPACE SPACE	-	0	
31	-/1	SPACE	0			32	-/1	SPACE	0		
33 35	-/1 -/1	SPACE SPACE		0	0	34 36	-/1 -/1	SPACE SPACE		0	
37	-/1	SPACE	0			38	-/1	SPACE	0		
39 41	-/1 -/1	SPACE SPACE		0	0	40 42	-/1 -/1	SPACE SPACE	-	0	
	/ -	1 332		 		74	/ 1	TOTAL CONNECTED KVA BY PHASE	20	14.4	9
		CONN KVA CAI	 _C KVA	1	l	1		CONN KVA CALC KV	_	1 - "-	
LARG	SEST MOT	OR 11.2 2.8	(25	5%)		HEAT	NG	31.7 31.7	(100	1%)	
LAR(OR 11.2 2.8 8.65 8.65		5%) 00%)		COOL	ING	31.7 0	(0%))	
						COOL METE		31.7 0)	

TOTAL LOAD BALANCED 3-PHASE LOAD

47.9 133 A

NOTE		IENT LUSH METER CENTER		VOLTS BUS AMP NEUTRAL						AIC EXISTING MAIN BKR M LUGS STANDA	1LO ARD			
CKT	CKT				LOAD KVA	4	СКТ	СКТ					LOAD KVA	4
#	BKR	CIRCUIT DESCRIPT	ION	А	В	С	#	BKR	CIRCUIT	DESCRIPTION		Α	В	
1	45/2	AHU-5		4.65			2	110/3	EWH-2			10		
3	1				4.65		4						10	
5	-/1	SPACE				0	6	ĺ						:
7	-/1	SPACE		0			8	-/1	SPACE			0		
9	-/1	SPACE			0		10	-/1	SPACE				0	
11	-/1	SPACE		Ī		0	12	-/1	SPACE					
13	-/1	SPACE		0			14	-/1	SPACE			0		
15	-/1	SPACE		i	0		16	-/1	SPACE				0	
17	-/1	SPACE		Ì	İ	0	18	-/1	SPACE					
19	-/1	SPACE		0			20	-/1	SPACE			0		
21	-/1	SPACE		1	0		22	-/1	SPACE				0	
23	-/1	SPACE				0	24	-/1	SPACE					
25	-/1	SPACE		0			26	-/1	SPACE			0		
27	-/1	SPACE			0		28	-/1	SPACE				0	
29	-/1	SPACE				0	30	-/1	SPACE					
									TOTAI	CONNECTED KV	'A BY PHASE	15.7	15.7	1
		CON	N KVA CALO	KVA						CONN KVA	CALC KVA			
LAR	GEST MOT	OR 9.3	2.32	(25	5%)		HEAT COOL			39.3 9.3	39.3 0	— (100 (0%)	•	
								RED DEMA	AND	3.1	3.88	(125		
					TOTAL LOAD BALANCED 3-PHASE LOA			ACE OAS		45.5 126 A				

PANEL SCHEDULE LEGEND

(G) = PROVIDE GROUND-FAULT CIRCUIT INTERRUPTER (GFCI) CIRCUIT BREAKER. (GE) = PROVIDE GROUND-FAULT EQUIPMENT PROTECTION (GFEP) CIRCUIT BREAKER.

(ST) = PROVIDE SHUNT TRIP CIRCUIT BREAKER.

(A) = PROVIDE ARC-FAULT CIRCUIT INTERRUPTER (AFCI) CIRCUIT BREAKER.

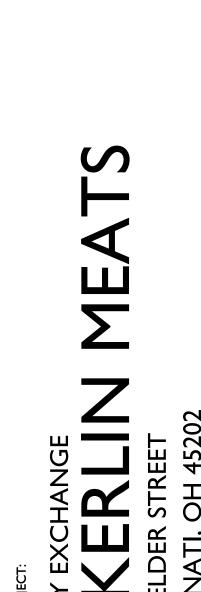
(L) = PROVIDE LOCK-ON DEVICE. (LT) = PROVIDE LOCK-OUT/TAG-OUT DEVICE.

PANEL SCHEDULE GENERAL NOTES

A. PROVIDE HACR RATED BREAKERS FOR ALL MOTOR LOADS. B. PROVIDE LOCKING TYPE BREAKER (LOCK-ON) FOR ALL LIFE SAFETY AND NIGHT LIGHTING BRANCH CIRCUITS, EVEN IF NOT SPECIFICALLY CALLED OUT CASE-BY-CASE.

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> IF PLANS ARE NOT PRESENTED FOR PERMIT REVIEW WITHIN 120 DAYS OF ENGINEER SIGNATURE THIS SHEET IS VOID AND WILL NEED TO BE UPDATED BY THE ENGINEER OF RECORD.



Job No: 12496 09.11.2023

OH COA #4715

09/11/2023

08.28.2023 - HVAC COORD. 09.06.2023 - REVIEW SET 09.11.2023 - PERMIT SET

Design Team:

MARQUE ENGINEERING

Drawn by:

MARQUE ENGINEERING

Progress Dates

Revisions

GENER	RAL SCH	EDULE				
CALLOUT	SYMBOL	DESCRIPTION	VOLTS	AMPS	KVA	CIRCUIT
1		FREEZER, UNDERCOUNTER	120V 1P 2W	4.5	0.54	A1-2
2	***	RANGE, RESTAURANT, GAS	120V 1P 2W	8	0.96	A1-10
3	\$	GRIDDLE, COUNTERTOP, GAS	120V 1P 2W	1	0.12	A1-28
4	***	FRYER, DEEP FAT, GAS	120V 1P 2W	4.17	0.5	A1-32
4	\$	FRYER, DEEP FAT, GAS	120V 1P 2W	4.17	0.5	A1-36
5	\$	REFRIGERATOR, CHEF BASE	120V 1P 2W	3.5	0.42	A1-24
6	\$	REFRIGERATOR, SANDWICH PRE. TABLE	120V 1P 2W	3.5	0.42	A1-10
7	Ф	CHARBROILER, COUNTERTOP, GAS	120V 1P 2W	4.17	0.5	A1-4
11	#	REFRIGERATOR, REACH - IN	120V 1P 2W	3	0.36	A1-22
11	#	REFRIGERATOR, REACH - IN	120V 1P 2W	3	0.36	A1-14
21	& 	WAREWASHER, DOOR TYPE, HIGH TEMP	208V 3P 3W	17.25	6.22	A1-9,11,13
30	0	OVEN-STEAMER, COMBINATION, GAS	208V 2P 2W	15	3.12	A1-25,27
40	ф	REFRIGERATOR, MERCHANDISER/DISPLAY CASE	120V 1P 2W	6	0.72	A1-16
41	\$	REFRIGERATOR, MERCHANDISER/DISPLAY CASE	120V 1P 2W	2.5	0.3	A1-18
51	\$	REFRIGERATOR, SANDWICH PREP. TABLE	120V 1P 2W	3.5	0.42	A1-20
C1	Ф	CASE 1	120V 1P 2W	20	2.4	B-24
C2	Ф	CASE 2	120V 1P 2W	20	2.4	B-26
C3	*	CASE 3	120V 1P 2W	20	2.4	B-30
C4	**	CASE 4	120V 1P 2W	20	2.4	B-32
C5	**	CASE 5	120V 1P 2W	20	2.4	B-34
C6	*	CASE 6	120V 1P 2W	20	2.4	B-28
CA	8∕□	COOLER CONDENSER	208/120V 2P 3W	20	4.16	B-25,27
СВ	⊗ ^□	COOLER EVAPORATOR	120V 1P 2W	0.8	0.1	B-29
FA	⊗ ^□	FREEZER CONDENSER	208/120V 2P 3W	20	4.16	B-17,19
FB	8∕□	FREEZER EVAPORATOR	208/120V 2P 3W	1	0.21	B-21,23
G4SM	**	G4SM	120V 1P 2W	5.4	0.65	A1-7
MCC-1	⊗ ^□	MEAT CASE CONDENSOR	208V 3P 3W	24	8.65	C-9,11,13

RECEPTACLE SCHEDULE SYMBOL \Rightarrow DUPLEX **(** J-BOX

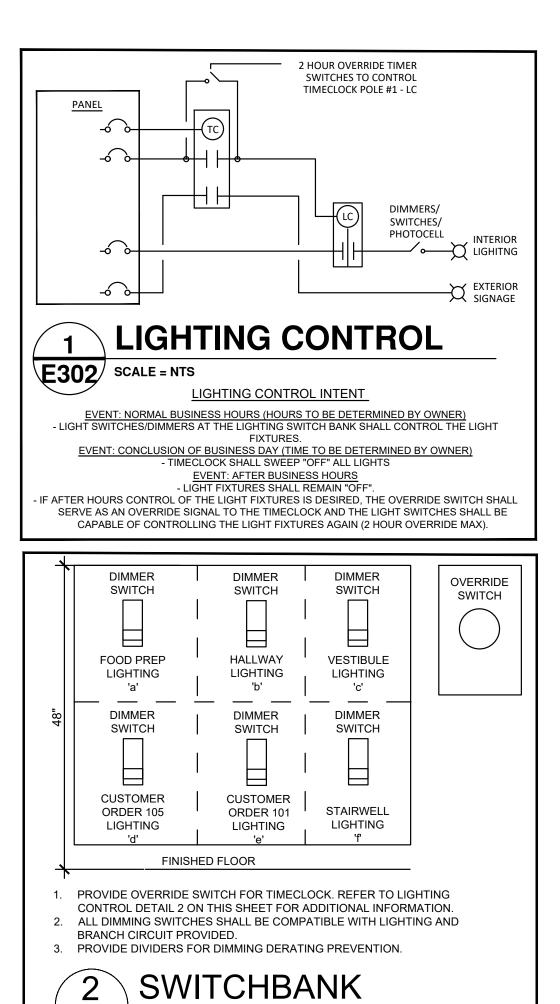
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J BOX (EXHAUST HOOD)

QUAD

SWITCH SCHEDULE		
CALLOUT	SYMBOL	
CEILING OCCUPANCY SENSOR		
TOGGLE SWITCH	\$	



E302 SCALE: NTS



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Job No: 12496 09.11.2023

OH COA #4715

09/11/2023

08.28.2023 - HVAC COORD.

09.06.2023 - REVIEW SET

09.11.2023 - PERMIT SET

Design Team: MARQUE ENGINEERING

Drawn by: MARQUE ENGINEERING

Progress Dates

Revisions

DIVISION 26 ELECTRICAL SPECIFICATIONS

26 05 01 COMMON REQUIREMENTS FOR ELECTRIC

ALL ELECTRICAL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF NFPA 70 AND ALL REGULATIONS, LAWS, AND ORDINANCES WHICH MAY BE APPLICABLE AND BY TRAINED AND LICENSED ELECTRICIANS

BEFORE SUBMITTING A BID, EXAMINE DOCUMENTS OF ALL OTHER TRADES, VISIT THE SITE AND GET ACQUAINTED WITH ALL CONDITIONS THAT MAY IN ANY WAY AFFECT THE EXECUTION OF THIS CONTRACT. TAKE MEASUREMENTS AND BE RESPONSIBLE FOR EXACT SIZE AND LOCATIONS OF ALL OPENINGS REQUIRED. VERIFY INSTALLATION MAY BE MADE IN COMPLETE ACCORDANCE WITH ALL PERTINENT CODES AND REGULATIONS. IN THE EVENT OF DISCREPANCY, IMMEDIATELY NOTIFY THE PROFESSIONAL ENGINEER OF RECORD. DO NOT PROCEED WITH THE INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED

IT IS NOT THE INTENT OF THE DRAWINGS THAT EXISTING CONDITIONS BE ACCURATELY SHOWN. EXISTING ELECTRICAL WORK IS SHOWN TO LIMITED EXTENT ON DRAWINGS AND IS SHOWN FOR GENERAL REFERENCE ONLY, LOCATIONS AND INFORMATION WERE DERIVED FROM CURSORY SITE VISUAL OBSERVATIONS OR FROM DOCUMENTS THAT WERE PREPARED FOR PREVIOUSLY INSTALLED WORK WHEN

LIST OF EQUIPMENT, TABULATIONS OF DATA, SCHEDULES, ETC. APPEARING IN THE SPECIFICATIONS OR ON THE DRAWINGS ARE INCLUDED FOR REFERENCE BY THE CONTRACTOR IN ARRIVING AT A MORE COMPLETE UNDERSTANDING OF THE INTENDED INSTALLATION. THEY ARE NOT INTENDED OR TO BE CONSTRUED AS RELIEVING THE RESPONSIBILITY OF THE CONTRACTOR IN MAKING HIS/HER OWN TAKE-OFF AND

THE WORK COVERED BY THESE SPECIFICATIONS SHALL CONSIST OF PROVIDING ALL NEW MATERIAL, LABOR, EQUIPMENT, AND SERVICES NECESSARY FOR A COMPLETE ELECTRICAL INSTALLATION AS SPECIFIED HEREIN. WORK IN THIS SECTION INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING ITEMS:

- TELEPHONE CONDUIT SYSTEM
- DATA COMMUNICATIONS CONDUIT SYSTEM WIRING DEVICES

GROUNDING

- BRANCH CIRCUITING
- CONNECTION OF HVAC EQUIPMENT TEMPORARY ELECTRICAL WIRING LIGHTING

FINAL TERMINATIONS NECESSARY

WHENEVER THE WORDS "CONTRACTOR" APPEAR ON ELECTRICAL DRAWINGS OR IN THESE SPECIFICATIONS. IT SHALL REFER TO THE ELECTRICAL SUB-CONTRACTOR. WHENEVER THE WORD "PROVIDE" APPEARS IN THESE DOCUMENTS, IT SHALL BE INTERPRETED TO MEAN

COORDINATE ALL WORK WITH THE OWNER TO MINIMIZE INTERRUPTION OF BUILDING OPERATION. SCHEDULE OF ALL POWER OUTAGES MUST BE APPROVED BY THE OWNER PRIOR TO THE BEGINNING OF ANY WORK.

PRIOR TO ALL WORK, CARFELLLY INSPECT THE INSTALLED WORK OF ALL OTHER TRADES AND VERIEY THAT ALL SLICH WORK IS COMPLETE TO THE POINT WHERE THIS INSTALLATION MAY PROPERLY COMMENCE. COORDINATE THE INSTALLATION OF ELECTRICAL ITEMS WITH THE SCHEDULES FOR WORK OF ALL OTHER TRADES TO PREVENT UNNECESSARY DELAYS IN THE TOTAL WORK.

COORDINATE EXACT ELECTRICAL REQUIREMENTS (VOLTAGE, PHASE, AMPS, WIRING, CONNECTIONS, AND ETC.) OF EQUIPMENT FURNISHED BY OTHERS PRIOR TO PERFORMING WORK. COORDINATE MANUFACTURER'S ELECTRICAL WIRING AND CONNECTION REQUIREMENTS WITH PRODUCT DATA AND/OR SUBMITTAL DRAWINGS PRIOR TO ROUGH-IN AND FURNISHING EQUIPMENT'S OVER-CURRENT PROTECTIVE DEVICES. ALL WIRING REQUIREMENTS SHOWN ARE SCHEMATIC IN NATURE.

 COORDINATE SPECIALITY RECEPTACLE AND/OR OUTLET TYPES WITH FOUIDMENT REQUIREMENTS. WHEN LOOSE DISCONNECT SWITCHES ARE FURNISHED UNDER MECHANICAL CONTRACT, RECEIVE AND INSTALL AND PROVIDE ALL

VERIFY ALL EQUIPMENT LOCATIONS, SWITCHES, RECEPTACLES, LIGHTING FIXTURES, ETC., IN FIELD. THE OWNER RESERVES THE RIGHT TO CHANGE LOCATION OF ANY OUTLET OR FIXTURE FOR A DISTANCE OF 15 FT. IN ANY DIRECTION FROM DRAWING LOCATION, BEFORE THE WORK IS ACTUALLY ROUGHED IN, AT NO EXTRA CHARGE

WHERE LIGHT FIXTURE AND OTHER ELECTRICAL ITEMS ARE SHOWN IN CONFLICT WITH LOCATIONS OF STRUCTURAL MEMBERS AND MECHANICAL OR OTHER EQUIPMENT, PROVIDE ALL REQUIRED SUPPORTS AND WIRING TO CLEAR THE ENCROACHMENT

PROVIDE ALL MISCELLANEOUS HARDWARE AND MATERIAL NOT SPECIFIED BUT NECESSARY TO PROVIDE A COMPLETE AND WORKING ELECTRICAL SYSTEM. THIS HARDWARE SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL MISCELLANEOUS CONDUIT FITTINGS AND MOUNTING HARDWARE, LUMINAIRE MOUNTING HARDWARE, BRACKETS, CONNECTORS, CORDS AND PLUGS.

PROVIDE ACCESS DOORS TO PROVIDE ACCESS TO ALL I-BOXES, PULL BOXES, AND OTHER EQUIPMENT AS REQUIRED. ACCESS DOORS FOR INSTALLATION IN FIRE RATED CONSTRUCTION SHALL HAVE APPROPRIATE FIRE RATING.

DURING PROGRESS OF THE WORK, MAINTAIN ON DRAWINGS AT THE SITE, AN ACCURATE RECORD OF THE INSTALLATION OF THE ELECTRICAL SYSTEM, INDICATING ALL ITEMS WHICH HAVE BEEN CHANGED OR ADDED.

APPLY FOR AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED BY LOCAL AUTHORITY, FOR THE APPROVAL OF WORK.

A CERTIFICATE OF FINAL INSPECTION AND APPROVAL SHALL BE SUBMITTED WITH THE CONTRACTOR'S REQUEST FOR FINAL PAYMENT. NO FINAL PAYMENT WILL BE APPROVED WITHOUT THIS CERTIFICATE.

GUARANTEE ALL WORKMANSHIP, MATERIAL, AND EQUIPMENT AND REPLACE ANY FOUND DEFECTIVE WORK WITHOUT COST TO THE OWNER, FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE.

ALL MATERIALS, APPARATUS AND FOLIPMENT SHALL BEAR THE SEAL OF LINDERWRITERS LABORATORIES INC. (UL) OR A SIMILAR CREDIBLE TESTING AGENCY DESIGN BASIS MANUFACTURERS OF MATERIAL AND FOLUPMENT ARE SPECIFIED AND PLANS ARE DETAILED ACCORDING TO THIS MATERIAL. CONTRACTOR SHALL BASE HIS BID ON FURNISHING AND INSTALLING THIS MAKE OF MATERIAL AND EQUIPMENT.

AN ACCEPTABLE MANUFACTURER'S NAME AND MODEL NUMBER OF A PRODUCT MAY BE PROVIDED IN THESE DOCUMENTS. THIS IS THE EQUIPMENT INCLUDED DURING THE DESIGN PROCESS AND FORMS THE BASIS OF A STANDARD OF QUALITY. WHERE MORE THAN ONE MAKE OF MATERIAL OR EQUIPMENT IS SPECIFIED, THE CONTRACTOR SHALL STATE IN HIS BID WHICH MAKE HE PROPOSES TO FURNISH AND INSTALL. SHOP DRAWING APPROVAL SHALL BE OBTAINED PRIOR TO SHIPMENT OF EQUIPMENT

VERIFY THE MODEL NUMBER OR PRODUCT IS STILL ACCURATE AND MEETS ALL REQUIREMENTS SHOWN ON THE DRAWINGS. IF THERE IS A DISCREPANCY BETWEEN THE REQUIREMENTS AND THE PRODUCT OR MODEL NUMBER, THE STRICTER OF THE TWO SHALL GOVERN

26 05 03 SUBMITTALS FOR ELECTRICAL SYSTEMS

SUBMIT SHOP DRAWINGS AND/OR PRODUCT DATA (ELECTRONIC COPIES) ON THE FOLLOWING ITEMS FOR REVIEW BEFORE FABRICATION

- PANEL BOARDS AND CIRCUIT BREAKERS DISCONNECT SWITCHES
- WIRING DEVICES LIGHTING
- LIGHTING CONTROLS (SWITCHES TOGGLE, DIMMER, OCCUPANT SENSORS, ETC.)

MAINTENANCE MANUALS: THE MANUALS SHALL INCLUDE WIRING DIAGRAMS, MAINTENANCE AND OPERATING INSTRUCTIONS, PARTS LISTINGS, AND COPIES OF OTHER SUBMITTALS INDICATED FOR INCLUSION.

REVIEW AND CORRECTIONS OR COMMENTS MADE ON SHOP DRAWINGS, PRODUCT DATA: CATALOGS, CUT SHEETS, CHARTS, AND OTHER ITEMS DURING CONSTRUCTION PHASE SUBMITTAL REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS, FOR PROVIDING A COMPLETE AND FUNCTIONING PROJECT, NOR SHALL THEY RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR DEVIATIONS OR ERRORS OF ANY SORT. THIS REVIEW IS FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH INFORMATION GIVEN AND THE DESIGN CONCEPT EXPRESSED IN THE CONTRACT DOCUMENTS. CONTRACTOR REMAINS RESPONSIBLE FOR DETERMINING THE ACCURACY AND COMPLETENESS OF OTHER DETAILS SUCH AS DIMENSIONS AND QUANTITIES. FOR SUBSTANTIATING INSTRUCTIONS FOR INSTALLATIONS, VERIFYING

MATERIALS REQUIRED. OBTAINING FIELD MEASUREMENTS AND RELATED CRITERIA. COORDINATING WORK WITH OTHER DISCIPLINES AND PERFORMING WORK IN COMPLIANCE WITH THE CONTRACT DOCUMENTS. ANY CHANGES TO ITEMS SPECIFIED MUST BE SUBMITTED IN WRITING AS A SUBSTITUTION. WITH COMPLETE DOCUMENTATION OF PRICE DIFFERENTIAL AND EQUIPMENT DETAILS. SUBSTITUTIONS PROVIDED SHALL BE REVIEWED AT MARQUE ENGINEERING'S HOURLY RATES. REVIEW SHALL BE PAID FOR BY THE CONTRACTOR TO MARQUE ENGINEERING AT NO COST TO THE OWNER. BY USING PRE-APPROVED

CONTRACT DOCUMENTS TO INCLUDE BUT NOT LIMITED TO MATERIAL OR EQUIPMENT COSTS FOR THEIR OR OTHER TRADES, AND

ENSURING THAT SUBSTITUTED MATERIALS AND EQUIPMENT TO BE FURNISHED FIT INTO SPACE AVAILABLE. EXTENSIVE REVISIONS NECESSITATED TO THE CONTRACT DOCUMENTS, OR SUBSTITUTION ACTIONS RELATED TO ANY SPECIFIED PRODUCT NOT ABLE TO BE PROVIDED DUE TO A FAILURE TO COMMENCE WORK, PROCURE PRODUCT OR COORDINATE CONSTRUCTION ACTIVITIES SHALL BE PROVIDED AT MARQUE ENGINEERING'S HOURLY RATES. COSTS SHALL BE BORNE BY THE CONTRACTOR AT NO COST TO THE

SUBSTITUTIONS, THE CONTRACTOR ACCEPTS ALL RESPONSIBILITY AND ASSOCIATED COSTS FOR ALL REQUIRED MODIFICATIONS TO THE

26 05 05 - EXISTING CONDITIONS & DEMOLITION

TRADES, IN AREAS AFFECTED BY THIS PROJECT.

DO NOT REUSE REMOVED ELECTRICAL MATERIALS UNLESS SPECIFICALLY INDICATED ON DRAWINGS. EXISTING WIRING SYSTEMS MAY BE UTILIZED ONLY TO THE EXTENT INDICATED ON DRAWINGS.

IF REQUIRED TO ACCOMMODATE CONSTRUCTION RELATED ACTIVITIES TEMPORARILY REMOVE, STORE IN PROTECTED LOCATION ON SITE, AND REINSTALL CONFLICTING ELECTRICAL EQUIPMENT, LUMINAIRES, OR DEVICES THAT ARE TO REMAIN OR TO BE RELOCATED.

PROVIDE ELECTRICAL DEMOLITION WORK AS REQUIRED TO ACCOMMODATE PROJECT DEMOLITION AND AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION. DISCONNECT AND REMOVE WORK TO BE ABANDONED, AND AS REQUIRED TO ACCOMMODATE WORK OF OTHER

WHERE THE TERM "DEMOLITION" IS USED HEREIN, INTERPRET IT TO MEAN "DEMOLITION" OR "SELECTIVE DEMOLITION" WHERE

MAINTAIN EXISTING ELECTRICAL SERVICE AND FEEDERS TO OCCUPIED AREAS AND OPERATIONAL FACILITIES. UNLESS OTHERWISE INDICATED, OR WHEN AUTHORIZED OTHERWISE IN WRITING BY OWNER'S REPRESENTATIVE, PROVIDE TEMPORARY SERVICE DURING INTERRUPTIONS TO EXISTING FACILITIES, SCHEDULE MOMENTARY OUTAGES WHEN NECESSARY FOR REPLACING EXISTING WIRING SYSTEMS WITH NEW WIRING SYSTEMS. WHEN THAT "CUTTING-OVER" HAS BEEN SUCCESSFULLY ACCOMPLISHED. REMOVE RELATED WIRING THAT

CAREFULLY COORDINATE WORK AND SYSTEM SHUTDOWNS IN ADVANCE WITH OWNER'S REPRESENTATIVE, AND WITH AFFECTED TRADES SO THAT NORMAL BUILDING ACTIVITIES AND OTHER CONSTRUCTION TRADES ARE MINIMALLY AFFECTED. PERFORM ELECTRICALLY RELATED CONSTRUCTION WORK, WHICH WILL AFFECT AN OCCUPIED AREA (INCLUDING THOSE WHICH ARE LOCATED OUTSIDE THE IMMEDIATE AREA OF PROJECT WORK) AT SPECIAL TIMES AS DIRECTED BY OWNER'S REPRESENTATIVE IN FIELD.

PROVIDE WORK IN A MANNER THAT ENSURES EXISTING SYSTEMS AND COMPONENTS REMAIN FULLY OPERATIONAL IN OCCUPIED SPACES

PROVIDE AND MAINTAIN TEMPORARY PARTITIONS AND DUST BARRIERS ADEQUATE TO PREVENT THE SPREAD OF DUST AND DIRT TO ADJACENT FINISHED AREAS AND OTHER SYSTEM COMPONENTS. PROTECT ADJACENT INSTALLATIONS DURING CUTTING AND PATCHING

OPERATIONS. REMOVE PROTECTION AND BARRIERS AFTER DEMOLITION OPERATIONS ARE COMPLETE.

INSPECT EXISTING FLECTRICAL WORK IN AREAS ACCESSED LINDER THIS PROJECT AND BRING INTO COMPLIANCE WITH CURRENT NEPA 70. THIS APPLIES ONLY TO THE EXTENT THAT SUCH WORK IS UNCOVERED IN THE IMMEDIATE PROJECT AREAS AFFECTED BY CONSTRUCTION ACTIVITIES, AND ONLY TO THE LIMITED EXTENT THAT IT APPLIES TO PRE-EXISTING GENERAL INSTALLATION METHODS SUCH AS MISSING JUNCTION BOX PLATE, OPEN JUNCTION BOX KNOCKOUT. MINOR CONDUIT RE-ANCHORING AND MINOR FXPOSED WIRING/CONNECTIONS IE MORE EXTENSIVE CODE OR SAFETY VIOLATIONS ARE DISCOVERED. IMMEDIATELY BRING THEM TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE (DETAILED IN WRITING) ALONG WITH PROPOSED COST FOR CORRECTIONS AND IMPACT (IF ANY) ON THE CONSTRUCTION

THE FOLLOWING APPLIES TO ELECTRICAL MATERIALS THAT WILL REMAIN OR BE REUSED UNDER THIS PROJECT: PROTECT DURING

 DETERMINE WHICH EXISTING BRANCH CIRCUITS MUST REMAIN ACTIVE. RECONNECT (OR MAINTAIN IN OPERATION WHERE APPLICABLE) AND SCHEDULE THEM IN THE PANELBOARD(S).

- EXISTING BRANCH CIRCUIT AND SYSTEMS CONDUIT, NOT CONFLICTING WITH NEW CONSTRUCTION AND NOT CONFLICTING WITH OVERHEAD OR CEILING CAVITY REQUIREMENTS, MAY BE RE-USED AT THE DISCRETION OF THE ELECTRICAL INSTALLER (AFTER ALL ABANDONED CONDUCTORS AND CABLES HAVE BEEN REMOVED FROM THEM). DO NOT EXCEED NFPA 70 REQUIRED CONDUIT FILL AND DO NOT INSTALL WIRING FED FROM DIFFERENT SOURCES IN COMMON CONDUIT
- COMPLETELY RE-TYPE PANELBOARD DIRECTORIES FOR PANELBOARD(S) AFFECTED BY THIS PROJECT USING ACCURATE "AS-BUILT"
- INFORMATION. WHERE APPLICABLE ENSURE THAT RECONNECTED SHARED NEUTRALS ARE PROPERLY BALANCED WITH THE CORRECT PHASE
- CONDUCTORS. WHERE APPLICABLE, PROVIDE CORRECT COLOR-CODING FOR INSULATION OF RECONNECTED CONDUCTORS IN A MANNER COMPLIANT WITH NFPA 70. • FOR ALL EXISTING LUMINAIRES SCHEDULED FOR REUSE, REMOVE FROM EXISTING CEILINGS DURING DEMOLITION; PROTECT DURING CONSTRUCTION; CLEAN, SERVICE (IF REQUIRED), RE-LAMP (WITH LAMPS TO MATCH BUILDING STANDARD OR PER THIS SECTION AS NOTED) AND REINSTALL AT LOCATIONS INDICATED. RE-LAMP LUMINAIRES IMMEDIATELY PRIOR TO OCCUPANCY OF THE FINISHED.
- CLEAN COMPONENTS TO BE REUSED INSIDE AND OUT, AND REINSTALL WHERE INDICATED ON DRAWINGS. MODIFY AND EXTEND RELATED EXISTING BRANCH WIRING AND/OR CONTROL WIRING ACCORDINGLY TO INCLUDE CONDUIT, CABLING, ETC.

CONSTRUCTION AREA.

DISCONNECT AND REMOVE WORK TO BE ABANDONED, AND AS REQUIRED TO ACCOMMODATE WORK OF OTHER TRADES, IN AREAS AFFECTED BY THIS PROJECT UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS OR DETERMINED OTHERWISE DURING PRE-DEMOLITION

REMOVE ACCESSIBLE ABANDONED, INACTIVE AND OBSOLETE RACEWAY SYSTEMS, REMOVE ABANDONED, INACTIVE AND OBSOLETE WIRING AND CONTROLS, REMOVE ABANDONED, INACTIVE AND OBSOLETE EQUIPMENT, LUMINAIRES AND DEVICES, ABANDONED RACEWAYS EMBEDDED IN FLOORS. WALLS. AND CEILINGS MAY REMAIN IF SUCH MATERIALS DO NOT INTERFERE WITH NEW INSTALLATIONS. REMOVE ABANDONED ELECTRICAL MATERIALS ABOVE ACCESSIBLE CEILINGS.

REMOVE RELATED ABANDONED UNUSED RACEWAY BACK TO THE NEAREST RESPECTIVE "UPSTREAM" JUNCTION BOX THAT REMAINS ACTIVE EVEN IF OUTSIDE OF THE CONFINES OF THE PROJECT AREA.

REMOVE ABANDONED UNUSED WIRING BACK TO ITS SOURCE EVEN IF SOURCES ARE OUTSIDE THE CONFINES OF THE PROJECT AREA. EXTEND RACEWAY AND WIRING AS REQUIRED TO ACCOMMODATE NEW OR RELOCATED ELECTRICAL WORK.

LOCATE. IDENTIFY. AND PROTECT ELECTRICAL SERVICES PASSING THROUGH DEMOLITION AREAS AND SERVING OTHER AREAS OUTSIDE THE DEMOLITION LIMITS. MAINTAIN SERVICES TO AREAS OUTSIDE DEMOLITION LIMITS. WHEN SERVICES MUST BE INTERRUPTED, INSTALL TEMPORARY SERVICES FOR AFFECTED AREAS.

IT IS RECOGNIZED THAT THERE MAY BE SOME CONDUIT SYSTEMS RENDERED INACTIVE BY DEMOLITION, CAUSING DISCONNECTION OF "DOWNSTREAM" OUTLETS, ETC., INVESTIGATE THESE TYPES OF CONDITIONS (FOR ALL SYSTEMS) PRIOR TO DEMOLITION, PROVIDE NECESSARY CORRECTIVE ELECTRICAL WORK PRIOR TO DEMOLITION TO ENSURE THAT SUCH "DOWNSTREAM" DEVICES REMAIN PERMANENTLY ACTIVE THROUGHOUT DEMOLITION. DURING NEW CONSTRUCTION. AND AFTER PROJECT COMPLETION.

PERFORM CUTTING AND PATCHING REQUIRED FOR DEMOLITION.

COORDINATE WORK CAREFULLY WITH OWNER PRIOR TO BEGINNING ELECTRICAL DEMOLITION WORK.

MAINTAIN (OR RECONNECT IF APPLICABLE) REMAINING WIRING.

REMOVE AND RELOCATE WIRING, DEVICES, CONDUIT, ETC. THAT CONFLICT WITH CONSTRUCTION RELATED WORK OF OTHER TRADES AS NECESSARY TO ACCOMMODATE NEW WORK OF RESPECTIVE TRADE.

PROVIDE ELECTRICAL DISCONNECTIONS, AND RECONNECTIONS WHERE APPLICABLE, FOR EQUIPMENT TO BE REMOVED (OR RELOCATED) BY

REFER TO OWNER'S REPRESENTATIVE FOR DISPOSAL INSTRUCTIONS FOR ABANDONED ELECTRICAL MATERIALS REMOVED DURING DEMOLITION AND THEREAFTER. NEATLY STORE ELECTRICAL MATERIALS THAT THE OWNER ELECTS TO RETAIN AT THE SITE AS DESIGNATED

BY THE OWNER'S REPRESENTATIVE. LEGALLY DISPOSE OF MATERIALS THAT THE OWNER ELECTS NOT TO RETAIN. DISCONNECT AND REMOVE ELECTRICAL MATERIALS DESIGNATED FOR SALVAGE (REMOVAL AND REUSE, OR FOR TURNING OVER TO

OWNER) UNDAMAGED. DISCONNECT AND REMOVE WIRING AND "WHIPS" FROM EQUIPMENT TERMINAL POINTS.

CAREFULLY TRANSPORT SALVAGED ELECTRICAL MATERIALS TO A PROTECTED ON-SITE STORAGE LOCATION AS DIRECTED IN FIELD AND NEATLY STORE THEM GROUPED BY SYSTEM TYPE

LEGALLY DISPOSE OF MATERIALS TO SALVAGED OR RETAINED.

26 05 08 - ELECTRICAL SITE REQUIREMENTS

EXISTING UTILITIES: THE INFORMATION SHOWN CONCERNING EXISTING UTILITIES IS APPROXIMATE. THE LOCATION, SIZES AND OTHER INFORMATION INDICATED IS ONLY AS ACCURATE AS THAT PROVIDED BY THE OWNERS OF THE UTILITIES. THIS INFORMATION IS NOT WARRANTED OR GUARANTEED TO BE COMPLETE OR ACCURATE. THE ENGINEER DOES NOT INDEPENDENTLY VERIFY NOR FIELD LOCATE UTILITIES. THE CONTRACTOR IS RESPONSIBLE TO PHYSICALLY LOCATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES, WHETHER SHOWN ON PLANS OR NOT, PRIOR TO BEGINNING CONSTRUCTION.

- THE CONTRACTOR SHALL SUPPORT, PROTECT AND RESTORE ALL EXISTING UTILITIES AND THEIR ASSOCIATED ITEMS PROTECT EXCAVATED OPENINGS WITH SUBSTANTIAL RAILINGS, SIGNAGE, SHORING, AND STEEL ROADWAY PLATES IN STRICT
- COMPLIANCE WITH OSHA/NIOSH, WITH LOCAL DEPARTMENT OF TRANSPORATION (DOT) STANDARDS, WITH AUTHORITY HAVING JURISDICTION, AND AS DIRECTED BY OWNER'S REPRESENTATION IN FIELD. PROVIDE TRAFFIC DETOURS PER DOT STANDARDS DURING ACTIVE CONSTRUCTION WORK SHIFT TIME PERIODS.
- PROTECT STEEL ROADWAY PLATES, PROPERLY INSTALLED AND ANCHORED PER DOT STANDARDS, OVER ROADWAY CUTS DURING INACTIVE PERIODS.

• FINISH WORK AFFECTING THE ROADWAYS, AND RESTORE/PAVE ROADWAY CUTS AS QUICKLY AS POSSIBLE AFTER STARTING THOSE SEGMENT OF WORK. THE CONTRACTOR SHALL NOTIFY THE REGISTERED UTILITY PROTECTION SERVICE AND ALL UTILITY OWNERS HAVING FACILITIES IN THE

CONSTRUCTION AREA WHO ARE NOT MEMBERS OF A REGISTERED UNDERGROUND PROTECTION SERVICE. THE CONTRACTOR SHALL GIVE NOTIFICATION AS REQUIRED BY CODE, AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS, EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS. THE CONTRACTOR SHALL COORDINATE THE WORK WITH THE UTILITY OWNERS UNTIL THE WORK IS COMPLETED. THE CONTRACTOR SHALL PROVIDE THE PROJECT OWNER WITH EVIDENCE OF HAVING NOTIFIED THE UTILITIES AND PROVIDED THEM WITH THE WORK SCHEDULE PRIOR TO CONSTRUCTION COMMENCEMENT.

DO NOT USE EXPLOSIVES. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL

MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY EXCAVATION OPERATIONS. BACKFILL AND FILL MATERIALS: IN GENERAL, USE EXCAVATED MATERIAL FOR BACKFILL, PRIOR TO BACKFILLING, REMOVE ROCK AND GRAVELLARGER THAN 2 INCHES IN ANY DIMENSION DERRIS WASTE FROZEN MATERIALS VEGETABLE MATTER AND OTHER DELETERIOLIS MATTER. PROVIDE PRE-MIXED, FACTORY PACKAGED, NON-STAINING, NON-CORROSIVE, NONGASEOUS GROUT, RECOMMENDED FOR INTERIOR AND EXTERIOR APPLICATIONS. PROVIDE SUB-BASE CONSISTING OF GRADED MIXTURE OF CRUSHED GRAVEL, CRUSHED STONE

TRENCHING: EXCAVATE TRENCHES TO THE UNIFORM WIDTH, SUFFICIENTLY WIDE TO PROVIDE AMPLE WORKING ROOM. EXCAVATE TRENCHES TO DEPTH AND WIDTH INDICATED OR OTHERWISE NECESSARY TO FULFILL PROJECT REQUIREMENTS.

COMPACT EACH LAYER OF BACKFILL OR FILL MATERIAL TO 95% STANDARD COMPACTION.

TOPSOIL AND SEEDING: SEPARATELY STOCKPILE EXCAVATED TOPSOIL ADJACENT TO TRENCH AND UTILIZE IN THE FINAL STAGE OF BACKFILLING. GRADE EXPOSED EARTH AND OTHER ERODIBLE AREAS TO A REASONABLY UNIFORM, AND SATISFACTORY, CROSS SECTION AND SLOPE, AS SOON AS PRACTICABLE.

CONCRETE ENCASEMENT: PROVIDE AS INDICATED OR OTHERWISE NECESSARY TO FULFILL PROJECT REQUIREMENTS.

IN GENERAL, UNLESS DIRECTED OTHERWISE IN FIELD, USE THE SIDES OF EXCAVATED TRENCHES AS FORMS FOR CONCRETE ENCASEMENT. DO NOTE REMOVE FORMS FOR 24 HOURS AFTER CONCRETE HAS BEEN PLACED. PROVIDE SUFFICIENT QUANTITY OF FORMS TO ALLOW CONTINUOUS PROGRESS OF WORK. IF REQUIRED FOR SPECIAL APPLICATIONS IN FIELD, PROVIDE FORMS MADE OF STEEL, WOOD, OR OTHER SUITABLE MATERIAL OF SIZE AND STRENGTH TO RESIST MOVEMENT DURING CONCRETE PLACEMENT. AND TO RETAIN HORIZONTA AND VERTICAL ALIGNMENT UNTIL REMOVAL. CLEAN ALL FORMS AFTER EACH USE AND COAT WITH FORM RELEASE AGENT TO ENSURE SEPARATION FROM CONCRETE WITHOUT DAMAGE. FORM AREAS THAT INVOLVE TERMINATION OF SPARE CONDUITS BELOW GRADE, OR THAT INVOLVE CONTINUATION OF CONDUITS BY OTHERS, ACCORDINGLY TO ACCOMMODATE EASY FUTURE ACCESS TO THE ENDS OF

PROVIDE REINFORCEMENT TO INCLUDE WELDED WIRE MESH, REINFORCING BARS, AND JOINT DOWEL BARS IF DEEMED NECESSARY. DESIGN MIX TO PRODUCE NORMAL-WEIGHT CONCRETE CONSISTING OF PORTLAND CEMENT, AGGREGATE, AIR-ENTRAINING ADMIXTURE,

- AND WATER TO PRODUCE THE FOLLOWING PROPERTIES: AGGREGATE: 3/8" COMPRESSIVE STRENGTH: 3000 PSI, MINIMUM AT 28 DAYS • SLUMP RANGE: 7" - 8" (PROVIDE ENOUGH SLUMP TO FLOW TO BOTTOM OF THE FORMATION AND YET NOT BE SO WET AS TO CAUSE
- THE DUCTS TO FLOAT

CONDUITS FOR FUTURE EXTENSIONS.

- AIR CONTENT: 5% 8% PORTLAND CEMENT: ANSI/ASTM C 150, TYPE 1.
- DYE: PROVIDE BRIGHT RED DYE, CENTRALLY MIXED.

EXPANSION JOINTS: PROVIDE PRE-MOLDED JOINT FILLER FOR EXPANSION JOINTS ABUTTING MANHOLES, CABLE PITS, AND SIMILAR

CONCRETE FINISHING: PROVIDE SMOOTH BROOM FINISHED CONCRETE SURFACE BY SCREEDING AFTER STRIKING-OFF AND CONSOLIDATING CONCRETE. PROTECT CONCRETE FROM DAMAGE UNTIL ACCEPTANCE OF WORK.

26 05 19 LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

FURNISH AND INSTALL ALL NECESSARY CABLE OF THE SIZE AND TYPE INDICATED ON THE DRAWINGS. ALL WIRE SHALL BE COPPER UNLESS

NO CONDUCTOR SMALLER THAN NO. 12 AWG SHALL BE USED UNLESS OTHERWISE INDICATED. IN GENERAL, CONDUCTORS SMALLER THAN NO. 12 WILL BE PERMITTED ONLY FOR COMMUNICATION, SIGNAL, OR CONTROL CIRCUITS.

PROVIDE THE FOLLOWING MINIMUM AWG CONDUCTOR SIZES FOR GENERAL BRANCH CIRCUITING AND GROUNDS THAT ARE NOT INDICATED ON DRAWINGS. ALL WIRING IS BASED ON USING COPPER CONDUCTORS UNLESS OTHERWISE INDICATED. WHERE APPLICABLE INCREASE AS REQUIRED TO ACCOMMODATE VOLTAGE DROP AND TO ACCOMMODATE SPECIAL CONDITIONS. DO NOT DERATE ANY GROUNDED (NEUTRAL) CONDUCTORS. TEMPERATURE RATINGS LISTED BELOW PERTAIN TO BOTH WIRE AND TERMINATIONS.

Solver (Neothae) conductors. Telvirenatore natives eisted below Fer					
	60 DEG. C RATING	EQUIPMENT GROUNDING			
URCE BREAKER/FUSE	AWG WIRE SIZE	AWG WIRE SIZE			
15 AMPERE	#12	#12			
20 AMPERE	#12	#12			
25 AMPERE	#10	#10			
30 AMPERE	#10	#10			
35 AMPERE	#8	#10			
40 AMPERE	#8	#10			
45 AMPERE	# 6	#10			
50 AMPERE	# 6	#10			
60 AMPERE	# 4	#10			
70 AMPERE	# 4	#8			
80 AMPERE	# 3	#8			
90 AMPERE	# 2	#8			
100 AMPERE	# 1	#8			

CONDUCTORS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET, NO SPLICES SHALL BE PERMITTED EXCEPT AT OUTLETS. ALL ELECTRICAL CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH NEC.

COLOR CODING IS REQUIRED FOR ALL SERVICE, FEEDER, BRANCH, CONTROL, AND SIGNALING CIRCUIT CONDUCTORS. INSULATION COLOR FOR NEUTRALS SHALL BE WHITE FOR 120 VOLT CIRCUITS. EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN. THE COLOR OF THE INSULATION OF THE UNGROUNDED CONDUCTORS SHALL BE AS FOLLOWS:

208Y/120V SYSTEM: BLACK, RED. BLUE AND WHITE (NEUTRAL)

480Y/277V SYSTEM: BROWN, ORANGE, YELLOW AND GRAY (NEUTRAL)

EQUIPMENT GROUNDING: GREEN ALL UNGROUNDED CONDUCTORS OF THE SAME COLOR SHALL BE CONNECTED TO THE SAME UNGROUNDED FEEDER CONDUCTOR.

USE NO WIRE SMALLER THAN NO. 12 AWG, RATED AT 600 VOLTS, FOR POWER AND LIGHTING CIRCUITS AND NO SMALLER THAN NO. 14 FOR CONTROL WIRING. BRANCH CIRCUIT CONDUCTORS FOR 20 AMPERE, 120 VOLT CIRCUITS SHALL BE NO. 12 AWG, WITH CONDUCTOR FROM PANEL BOARD TO THE FIRST OUTLET AS FOLLOWS:

0 - 75 FEET----75 -150 FFFT--------#10 AWG 150-250 FFFT--------# 8 AWG 250-350 FEET-------# 6 AWG

ALL JOINTS AND SPLICES SHALL BE MADE MECHANICALLY AND ELECTRICALLY SECURE. ALL SPLICES AND JOINTS SHALL BE MADE WITH APPROVED SOLDERLESS CONNECTORS, PROPERLY INSTALLED.

TYPE MC CABLE MAY MAY BE USED FOR SHORT (LESS THAN 6 FEET) FINAL CONNECTIONS ONLY.

26 05 26 GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

ALL WIRE FOR GROUNDING PURPOSE SHALL BE STRANDED COPPER, OR COPPER CLAD STEEL AS REQUIRED FOR TYPE AND SIZES INDICATED

BUILDING ELECTRODE GROUND RODS SHALL BE 10'-0" LONG X 3/4" DIAMETER (MINIMUM DIMENSIONS). GROUND RODS SHALL BE STEEL WITH A MOLECULARLY BONDED OUTER LAYER OF ELECTROLYTICALLY APPLIED COPPER JACKET OF GALVANIZED STEEL AS REQUIRED. ALL GROUND RODS SHALL BE TESTED WITH PROPER TEST EQUIPMENT FOR ROD TO EARTH RESISTANCE BEFORE CONNECTING GROUND WIRE.

METAL RACEWAYS MAY NOT BE USED FOR EQUIPMENT GROUNDING CONDUCTOR. PROVIDE A SEPARATE DRIVEN GROUND FOR THE NEUTRAL BUSS ON THE ELECTRICAL DISTRIBUTION SYSTEM.

PROVIDE A SEPARATE DRIVEN GROUND FOR USE AS EQUIPMENT GROUND. TIE DRIVEN GROUND TO INCOMING CITY WATER LINE THROUGH A #4/0 BAR STRANDED COPPER CONDUCTOR. USE APPROVED GROUND CLAMPS.

PROPERLY GROUND ALL MOTORS, TRANSFORMERS, EQUIPMENT, CONDUITS, SWITCH GEAR, ETC. GROUND ALL LUMINAIRES BY INSTALLING A SEPARATE GREEN GROUND WIRE IN ANY FLEXIBLE CONDUIT BETWEEN OUTLET BOX AND

26 05 29 HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

CONDUIT SHALL BE SUPPORTED BY APPROVED STRAPS, FASTENERS AND HANGERS. HANGERS SHALL BE SUSPENDED FROM RODS. PERFORATED STRAPS WILL NOT BE ACCEPTABLE. FASTENERS SHALL BE LEAD EXPANSION SHIELDS IN BLOCK OR CONCRETE, TOGGLE BOLTS IN HOLLOW WALLS, MACHINE SCREWS ON METAL SURFACES AND WOOD SCREWS ON WOOD CONSTRUCTION.

ALL CONDUIT SHALL RE SUPPORTED INDEPENDENTLY FROM ALL OTHER BUILDING SYSTEMS AND SHALL RE SUPPORTED DIRECTLY FROM STRUCTURAL COMPONENTS. AT BUILDING EXPANSION JOINTS AND WHERE DEFLECTION IS EXPECTED, CONDUITS SHALL BE PROVIDED WITH EXPANSION FITTINGS WITH BONDING IUMPERS. CONDUITS PASSING THROUGH STRUCTURAL MEMBERS SHALL BE PROVIDED WITH STUB AND COUPLING OR SLEEVE IN THE MEMBER, WHERE MOISTURE CONDITIONS ARE ENCOUNTERED. A HOLE SHALL BE DRILLED AT THE LOWEST POINT IN THE CONDUIT RUN.

26 05 33 RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

CONCEAL CONDUIT AND EMT WITHIN FURNISHED WALLS, CEILINGS, AND FLOORS UNLESS OTHERWISE INDICATED. INSTALL CONDUITS PARALLEL OR PERPENDICULAR TO BUILDING LINES.

INTERIOR CONDUIT SHALL BE OF SUFFICIENT SIZE AND INSTALLED SO THE REQUIRED NUMBER OR CONDUCTORS CAN BE INSERTED OR REMOVED WITHOUT INJURY TO, OR EXCESSIVE STRAIN UPON, THE INSULATION. THE MINIMUM CONDUIT SIZE SHALL BE 3/4" UNLESS

CONDUITS SHALL BE RUN CONTINUOUS FROM OUTLET TO OUTLET AND SHALL BE FASTENED TO ALL BOXES AND CABINETS WITH DOUBLE LOCKOUTS, TO PROVIDE CONTINUITY OF GROUND, AND A BUSHING. THE FULL NUMBER OF THREADS MUST PROJECT BEYOND LOCKOUT IN BOXES AND CABINETS TO ALLOW THE BUSHING TO BUTT UP TIGHT AGAINST THE END OF THE CONDUIT.

CONDUIT RUN EXPOSED SHALL RUN PARALLEL, OR PERPENDICULAR TO WALLS, CEILINGS, OR PRINCIPAL FRAMING MEMBERS. IT IS REQUIRED THAT ALL CONDUIT BE INSTALLED TO REFLECT NEAT, CAREFUL WORKMANSHIP, THROUGHOUT THE IOB., CONDUIT WHICH HAS BEEN CRUSHED, DAMAGED, OR DEFORMED IN ANY WAY SHALL NOT BE INSTALLED IN THE JOB. CONDUIT SHALL BE INSTALLED IN SUCH A MANNER AS TO INSURE AGAINST TROUBLE FROM COLLECTION OF TRAPPED CONDENSATE, AND ALL RUNS OF CONDUIT SHALL BE FREE OF

ALL CONDUIT HANGERS AND SUPPORTS SHALL BE RIGIDLY FASTENED TO THE BUILDING STRUCTURE. NO CONDUIT SHALL BE SUPPORTED FROM DUCTWORK, PIPING, OR CEILING GRID SYSTEMS.

PROVIDE FIRE SEALS WHEREVER CONDUIT PENETRATES FIRE WALLS, CEILING OR RATED FLOOR SLABS.

RIGID STEEL CONDUIT SHALL BE USED FOR ALL CONDUIT RUNS INSTALLED IN CONCRETE SLABS, IN ALL POURED CONCRETE CONSTRUCTION AND ALL APPLICATIONS INSIDE BUILDING REQUIRING 2" OR LARGER IN SIZE. CONDUIT SHALL BE SUPPORTED AT INTERVALS NOT-TO-EXCEED 7 FEET FOR 3/4" CONDUIT, 8 FEET INTERVALS FOR CONDUIT ON 1" TO AND INCLUDING 2", AND 10 FEET FOR CONDUITS 2-1/2" OR LARGER.

RIGID CONDUIT (ALUMINUM) SHALL NOT BE INSTALLED IN POURED CONCRETE. ALUMINUM CONDUIT MAY BE USED FOR SWITCH LEGS

AND BRANCH CIRCUITS IN PARTITIONS, ABOVE CEILING, AND WHERE CONDUIT RUN IS EXPOSED. CONDUIT SHALL BE SUPPORTED AT INTERVALS NOT-TO-EXCEED 7 FEET FOR 3/4" CONDUIT, 8 FEET INTERVALS FOR CONDUIT 1" TO AND INCLUDING 2". ELECTRICAL METALLIC TUBING (THIN WALL) MAY BE USED FOR SWITCH LEGS (EXCEPT IN POURED CONCRETE WALLS) AND BRANCH CIRCUITS IN PARTITIONS, ABOVE CEILINGS, AND WHERE CONDUIT RUN IS EXPOSED. CONDUIT SHALL BE SUPPORTED AT INTERVALS

PLASTIC CONDUIT (PVC): PLASTIC CONDUIT MAY BE USED FOR UNDERGROUND CONDUIT RUNS OUTSIDE BUILDING AND BELOW FLOOR SLAB. UNDERGROUND CONDUIT RUNS OUTSIDE BUILDING SHALL BE A MINIMUM OF 2'-6" BELOW GRADE. CONDUIT RUN BELOW FLOOR SLAB SHALL BE A MINIMUM OF 12" BELOW FLOOR SLAB

NOT-TO-EXCEED 7 FEET FOR 3/4" CONDUIT, 8 FEET INTERVALS FOR CONDUIT 1" TO AND INCLUDING 1-1/2". EMT LARGER THAN 1-1/2"

FLEXIBLE CONDUIT SHALL BE USED BETWEEN OUTLET BOXES IN HUNG OR FURRED CEILINGS AND RECESSED LIGHTING FIXTURES. FLEXIBLE CONDUIT SHALL NOT EXCEED 6 FEET IN LENGTH LIQUID TIGHT FLEXIBLE CONDUIT SHALL BE USED FOR FINAL CONNECTIONS TO ALL MOTORS. LIQUID TIGHT FLEXIBLE CONDUIT SHALL BE USED FOR FINAL CONNECTIONS TO ALL MOTORS OR DEVICES WHICH DO OR MAY VIBRATE. LIQUID TIGHT FLEXIBLE CONDUIT SHALL NOT

PROVIDE SEALING BUSHINGS IN ALL UNDERGROUND CONDUITS AS REQUIRED TO PREVENT THE ENTRY OF MOISTURE INTO ELECTRICAL

PROVIDE CONDUIT EXPANSION FITTINGS WHERE CONDUIT CROSSES A BUILDING EXPANSION JOINT, AND IN ALL STRAIGHT CONDUIT RUNS

ALL OUTLET, SWITCH, JUNCTION AND PULL BOXES SHALL BE MADE OF CODE GALVANIZED STEEL COMPLETE WITH RINGS AND SCREW

COVER PLATES AND LOCATED WHERE SHOWN AND NOTED ON DRAWINGS. WHERE CONDUIT IS CONCEALED, BOXES SHALL NOT BE LESS THAN 4" SQUARE X 1-1/2" DEEP. ALL BOXES SHALL BE EQUIPPED WITH PROPER COVERS TO BRING FLUSH WITH FINISHED WALL SURFACE.

USE GANG BOXES WHERE MORE THAN ONE DEVICE IS TO BE INSTALLED AT THE SAME LOCATION. ALL BOXES FOR CONCRETE WORK SHALL BE OF TYPE ESPECIALLY DESIGNED FOR INSTALLATION IN CONCRETE.

PROVIDE OUTLET BOX ACCESSORIES AS REQUIRED FOR EACH INSTALLATION, INCLUDING MOUNTING BRACKETS, WALLBOARD HANGERS, EXTENSION RINGS, FIXTURE STUDS, CABLE CLAMPS, AND METAL STRAPS FOR SUPPORTING OUTLET BOXES, COMPATIBLE WITH OUTLET BOXES BEING USED AND MEETING REQUIREMENTS OF INDIVIDUAL WIRING SITUATIONS.

PULL BOXES (NOT SHOWN ON THE CONTRACT DRAWINGS) SHALL BE INSTALLED AS REQUIRED TO FACILITATE PULLING OF CONDUCTORS ON LONG RUNS. PULL BOXES LOCATED IN FLOORS SHALL BE FLUSH WITH FINISHED FLOOR, AND OF CAST WROUGHT IRON, ALUMINUM, OR BRONZE WITH SEALED WATERPROOF COVER. CONDUIT ENTRANCES SHALL BE THREADED.

PROVIDE CORROSION RESISTANT CAST METAL WEATHERPROOF OUTLET WIRING BOXES, OF THE TYPE, SHAPE, AND SIZE REQUIRED FOR EACH APPLICATION, WITH THREADED CONDUIT ENDS, CAST METAL FACE PLATE WITH SPRING-HINGE WATERPROOF CAP, SUITABLE CONFIGURED FOR EACH APPLICATION, INCLUDING FACE PLATE GASKET AND CORROSION PROOF FASTENERS.

PROVIDE WATERPROOF OUTLETS FOR INTERIOR AND EXTERIOR LOCATIONS EXPOSED TO WEATHER OR SUBJECT TO FREQUENT WASHING.

SECURE BOXES RIGIDLY TO THE SUBSTRATE UPON WHICH THEY ARE BEING MOUNTED. OR SOLIDLY EMBED BOXES IN CONCRETE OR

26 05 53 IDENTIFICATION FOR ELECTRICAL SYSTEMS

PROVIDE MANUFACTURERS STANDARD SELF-ADHESIVE VINYL TAPE NOT LESS THAN 3 MILS THICK BY 1-1/2" WIDE. INSTALL ON ALL CONCEALED RACEWAYS AT CONNECTION TO ALL JUNCTION BOXES, PULL BOXES, EQUIPMENT, WALL/FLOOR/ROOF PENETRATIONS, ETC.

PROVIDE CIRCUIT IDENTIFICATION BANDS FOR ALL CABLES AND CONDUCTORS. PROVIDE ON ALL CONDUCTORS OF ALL SYSTEMS. INSTALL ENGRAVED PLASTIC-LAMINATE SIGN ON ELECTRICAL EQUIPMENT, INCLUDING PANELBOARDS, DISCONNECTS, STARTERS, CONTROL PANELS, ETC. PROVIDE SINGLE LINE OF TEXT, 1/2" HIGH LETTERING, ON 1-1/2" HIGH SIGN (2" HIGH WHERE 2 LINES ARE REQUIRED), WHITE LETTERING IN BLACK FIELD.

26 05 84 MECHANICAL EQUIPMENT

PROVIDE ALL NECESSARY ELECTRICALLY RELATED WORK AS REQUIRED TO RENDER ALL MECHANICAL EQUIPMENT (INCLUDING PLUMBING, HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT) FULLY OPERATIONAL AND FULLY COMPLIANT WITH ALL LOCAL AND NATIONAL CODES. THIS INCLUDES, PRIOR TO ORDERING MATERIALS OR COMMENCING WITH ROUGH-IN, REVIEWING EQUIPMENT SUBMITTAL DATA AND COORDINATING WITH INSTALLING CONTRACTORS TO ENSURE THE CORRECT SIZE, RATING AND QUANTITY OF

CONDUCTORS ARE PROVIDED. 26 27 26 WIRING DEVICES

ALL WIRING DEVICES SHALL BE UL LISTED, COMMERCIAL SPECIFICATION GRADE.

SWITCHES IN THE SAME LOCATION SHALL BE GANGED BEHIND A SINGLE PLATE. DUPLEX RECEPTACLES SHALL BE 20 AMP., 125 VOLT, 3 WIRE GROUNDING TYPE, PROVIDE SMOOTH THERMOPLASTIC COVER PLATE AND MATCHING SCREWS, DEVICES AND COVER PLATES SHALL MATCH ADJACENT ARCHITECTURAL FINISHES UNLESS SPECIFICALLY NOTED

OTHERWISE, APPROVED PRODUCTS: HUBBELL, LEVITON, BRYANT OR EQUAL. WEATHERPROOF RECEPTACLES SHALL BE DUPLEX, 20 AMP., 125 VOLT, GROUND FAULT 3 WIRE GROUNDING TYPE WITH WEATHERPROOF COVER. APPROVED PRODUCTS: HUBBELL, LEVITON, BRYANT OR EQUAL.

A MINIMUM OF 3.6A CHARGING CAPACITY AND TWO 20A RATED OUTLETS. APPROVED PRODUCTS: HUBBELL, LEVITON, BRYANT OR EQUAL. WALL SWITCHES SHALL BE 20 AMP., 120-277 VOLT, QUIET, HIGH CAPACITY, TOGGLE TYPE. SINGLE POLE SWITCHES - APPROVED PRODUCTS ARE HUBBELL, LEVITON, BRYANT OR EQUAL. THREE-WAY SWITCHES - APPROVED PRODUCTS HUBBELL, LEVITON, BRYANT OR EQUAL.

DIMMER SWITCHES SHALL BE COMPATIBLE WITH LIGHTING TO BE CONTROLLED (I.E. - 120V LINE OR 0-10V LOW VOLTAGE) AND SHALL BE

WALL PLATES FOR SWITCHES. TELEPHONE OUTLETS AND OTHER SPECIAL OUTLETS SHALL MATCH THE WALL PLATES PREVIOUSLY SPECIFIED.

WITH THE RECEPTACLES. ALL PLATES IN EACH ROOM SHALL MATCH. APPROVED PRODUCTS: HUBBELL, LEVITON, BRYANT OR EQUAL.

RATED FOR THE LIGHTING LOAD INDICATED. APPROVED PRODUCTS ARE LEVITON, LUTRON, HUBBELL, OR EQUAL.

USB RECEPTACLES SHALL BE DUPLEX, 20 AMP., 125 VOLT, GROUND FAULT 3 WIRE GROUNDING TYPE WITH TWO VERTICAL USB PORTS WITH

NEMA 3R (RAIN TIGHT) ON EXTERIOR OF BUILDING UNLESS SPECIFICALLY NOTED ELSEWHERE IN THE CONTRACT DRAWINGS. DISCONNECT SWITCHES LOCATED ON THE EXTERIOR OF THE BUILDING IN AN AREA ACCESSIBLE TO THE PUBLIC OR SUBJECT TO VANDALISM SHALL BE CAPABLE OF BEING LOCKED IN THE CLOSED (ON) POSITION, THE AMPERE RATING. FUSIBLE OR NOT FUSIBLE AND VOLTAGE CHARACTERISTICS SHALL BE AS SHOWN ON THE CONTRACT DRAWINGS, APPROVED PRODUCTS: SQUARE D COMPANY, GE BY ABB.

INSTALLATION OF WIRING DEVICES: OUTLET HEIGHTS GIVEN BELOW, OR AS SHOWN ON DRAWINGS, ARE TO THE CENTER OF THE OUTLET BOX. IN UNPLASTERED MASONRY WALLS WHERE OUTLETS ARE NOT DIMENSIONED, ADJUST HEIGHT TO THE NEXT HIGHER COURSE, AND ADJUST LOCATION TO THE NEAREST CENTER OF THE MASONRY UNIT.

TESTING: TEST WIRING DEVICES TO ENSURE ELECTRICAL CONTINUITY OF GROUNDING CONNECTIONS, AND AFTER ENERGIZING CIRCUITRY, TO DEMONSTRATE COMPLIANCE WITH REQUIREMENTS.

PROVIDE FUSES OF TYPES. SIZES, RATINGS, AND AVERAGE TIME-CURRENT AND PEAK LET-THROUGH CURRENT CHARACTERISTICS

PROVIDE FACTORY FUSE IDENTIFICATION LABELS, INSTALLED ON THE INSIDE OF THE DOOR OF EACH SWITCH INDICATING TYPE AND SIZE OF

EACH FUSE SHALL BE CLEARLY FACTORY MARKED WITH CLASSIFICATION, CHARACTERISTICS, AMPERE RATINGS, VOLTAGE RATINGS, ETC. FUSES SHALL NOT BE SHIPPED INSTALLED IN SWITCHES NOR SHALL THEY BE INSTALLED IN THE EQUIPMENT UNTIL THE EQUIPMENT UNTIL

PRIOR TO INSTALLING FUSES FOR PROTECTION OF SPECIFIC EQUIPMENT, MOTORS, ETC., VERIFY RECOMMENDED FUSE SIZE/TYPE IN FIELD FROM RESPECTIVE EQUIPMENT MANUFACTURER. IF A CONFLICT IN FUSE SIZE/TYPE RESULTS BETWEEN MANUFACTURER'S

DIVISION 27 COMMUNICATIONS

ADHERE TO FACTORY LOAD CAPACITIES.

THE OWNER SHALL MAKE ARRANGEMENTS WITH THE DATA COMMUNICATIONS AND/OR TELEPHONE COMPANY FOR INSTALLATION OF THE DATA COMMUNICATION AND/OR TELEPHONE EQUIPMENT AND WIRING. INSTALL A FISH WIRE IN ALL EMPTY CONDUITS TO FACILITATE PULLING OF WIRE BY UTILITY COMPANY.

PUBLISHED PRODUCT INFORMATION, AND WITH INDUSTRY STANDARDS AND CONFIGURATIONS.

PENETRATIONS SECURELY ANCHOR (MECHANICAL NOT ADHESIVE) I-HOOKS DIRECTLY TO STRUCTURAL COMPONENTS OF THE RUIL DING DO NOT ANCHOR TO DUCTWORK, CONDUIT, PIPING, FIXTURES, EQUIPMENT, CEILING SUPPORTS (RODS, WIRES, T-BARS), ETC. STRICTLY

PROVIDE (1) 3/4" NON-METALLIC CONDUIT IN ALL WALLS WHERE THE CABLING DROPS DOWN RACEWAY PATH FROM THE CEILING ABOVE TO THE DATA/TELEPHONE OUTLET LOCATION. PROVIDE CONDUIT WITH SWEEP BENDS AND PULL-STRING.

DISCONNECT SWITCHES SHALL BE HEAVY DUTY, SINGLE THROW DISCONNECT SWITCHES. ENCLOSURE SHALL BE NEMA 1 INDOOR AND

ALL FUSES SHALL BE OF THE SAME MANUFACTURER. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE FUSES OF ONE OF THE

FOLLOWING: BUSSMAN, LITTELFUSE, SHAWMUT, INDICATED, WHICH COMPLY WITH MANUFACTURER'S STANDARD DESIGN, MATERIALS, AND CONSTRUCTED IN ACCORDANCE WITH

THE EQUIPMENT IS READY TO BE ENERGIZED.

RECOMMENDATIONS AND ABOVE SPECIFICATIONS, CONTACT ENGINEER.

27 13 01 COMMUNICATION INFORMATION TECHNOLOGY SYSTEMS

PROVIDE STANDARD DEVICE BOXES AND COVER PLATES INSTALLED IN WALLS, FLOOR AND CEILINGS. PROVIDE J-HOOK SYSTEMS COMPLETE WITH NECESSARY FITTINGS, AND ACCESSORIES AS REQUIRED TO MAKE COMPLETE AND CONTINUOUS SYSTEMS. PROVIDE J-HOOK SYSTEM COMPONENTS THAT ARE PLENUM-RATED (REGARDLESS OF WHETHER OR NOT AIR PLENUM CEILINGS EXIST ON THE PROJECT). PROVIDE J-HOOK SUPPORT AT FOUR FOOT INTERVALS AND AT OFFSETS. ROUTE J-HOOKS ABOVE CEILINGS THROUGH CORRIDORS AND SIMILAR OPEN AREAS WHEREVER POSSIBLE TO MINIMIZE ABOVE-CEILING WALL

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OH COA #4715

09/11/2023

08.28.2023 - HVAC COORD

09.06.2023 - REVIEW SET

09.11.2023 - PERMIT SET

Progress Dates

Revisions

Drawn by:

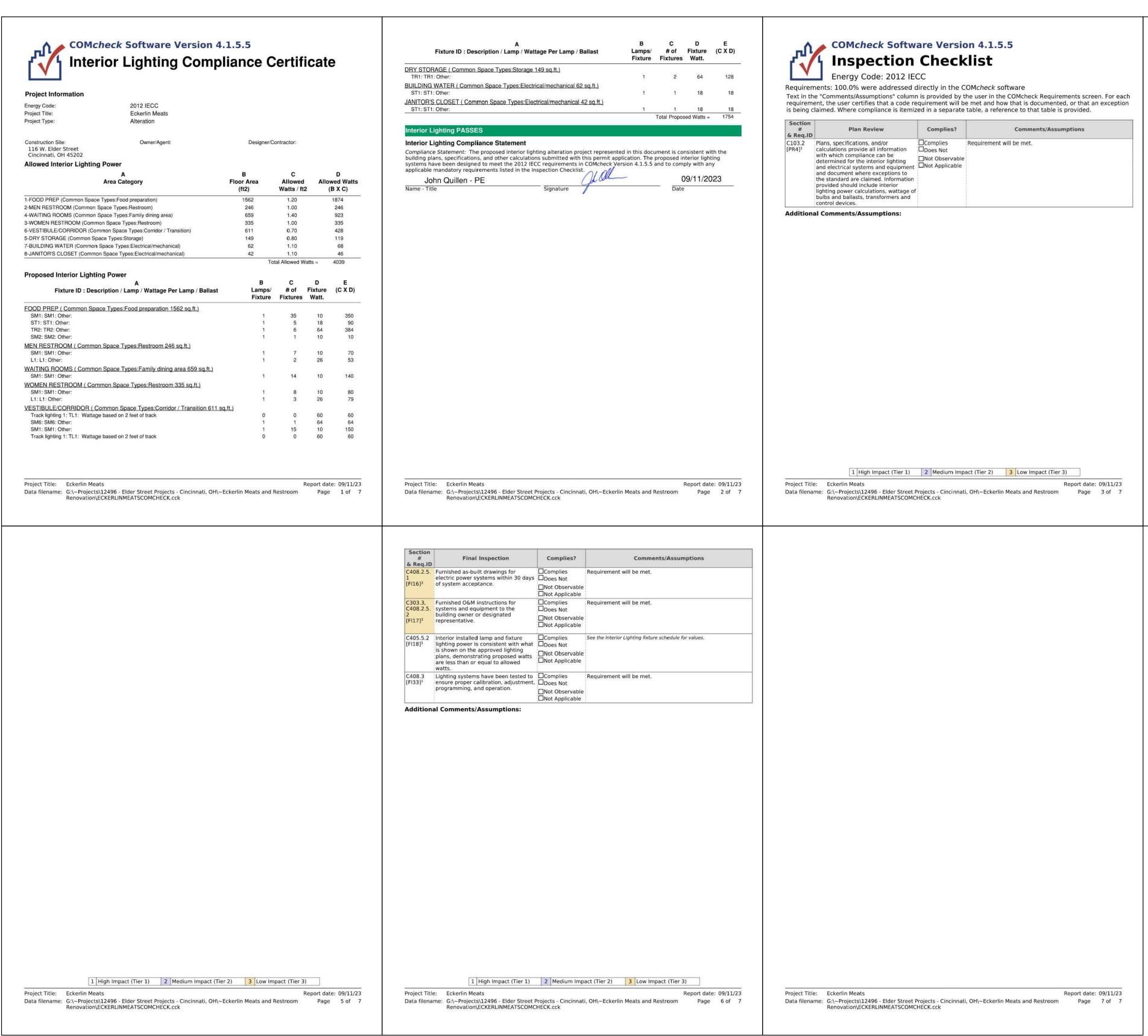
Design Team: MARQUE ENGINEERING

MARQUE ENGINEERING

WITHOUT THE WRITTEN PERMISSION OF MARQUE ENGINEERING LLO

09.11.2023

Job No: 12496



Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions	
	Automatic controls to shut off all building lighting installed in all buildings.	Complies Does Not	Requirement will be met.	
[EL22] ²		□Not Observable □Not Applicable		
1	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	Does Not	Requirement will be met.	
[EL23] ²		□Not Observable □Not Applicable		
C405.2.1. 2	Lighting controls installed to uniformly reduce the lighting load by at least	□Complies □Does Not	Requirement will be met.	
[EL15] ¹	50%.	□Not Observable □Not Applicable		
3	Daylight zones provided with individual controls that control the	□Complies □Does Not	Exception: Requirement does not apply.	
[EL16] ²	lights independent of general area lighting.	□Not Observable □Not Applicable		
C405.2.3 [EL17] ³	Sleeping units have at least one master switch at the main entry door	□Complies □Does Not	Exception: Requirement does not apply.	
	that controls wired luminaires and switched receptacles.	□Not Observable □Not Applicable		
C405.2.2. 2	Occupancy sensors installed in required spaces.	□Complies □Does Not	Requirement will be met.	
[EL18] ¹		□Not Observable □Not Applicable		
C405.2.2. 3	Primary sidelighted areas are equipped with required lighting controls.	□Complies □Does Not	Exception: Requirement does not apply.	
[EL20] ¹		□Not Observable □Not Applicable		
C405.2.2. 3	Enclosed spaces with daylight area under skylights and rooftop monitors	□Complies □Does Not	Exception: Requirement does not apply.	
[EL21] ¹	are equipped with required lighting controls.	□Not Observable □Not Applicable		
C405.2.3 [EL4] ¹	specific uses installed per approved lighting plans.	□Complies □Does Not	Requirement will be met.	
		□Not Observable □Not Applicable		
C405.3 [EL19] ³	Fluorescent luminaires with odd numbered lamp configurations that	□Complies □Does Not	Exception: Requirement does not apply.	
	are within 10 feet center to center (if recess mounted) or are within 1 foot edge to edge (if pendant or surface mounted) shall be tandem wired.	□Not Observable □Not Applicable		
C405.4 [EL6] ¹	Exit signs do not exceed 5 watts per face.	□Complies □Does Not	Requirement will be met.	
		□Not Observable □Not Applicable		
C405.2.3 [EL8] ¹	Additional interior lighting power allowed for special functions per the	□Complies □Does Not	Requirement will be met.	
	approved lighting plans and is automatically controlled and separated from general lighting.	□Not Observable □Not Applicable		
Addition	al Comments/Assumptions:			

Data filename: G:\-Projects\12496 - Elder Street Projects - Cincinnati, OH\~Eckerlin Meats and Restroom Page 4 of 7
Renovation\ECKERLINMEATSCOMCHECK.cck

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DLAY EXCHANGE

CKERIN

W. ELDER STREET

OH COA #4715

09/11/2023

08.28.2023 - HVAC COORD.

09.06.2023 - REVIEW SET 09.11.2023 - PERMIT SET

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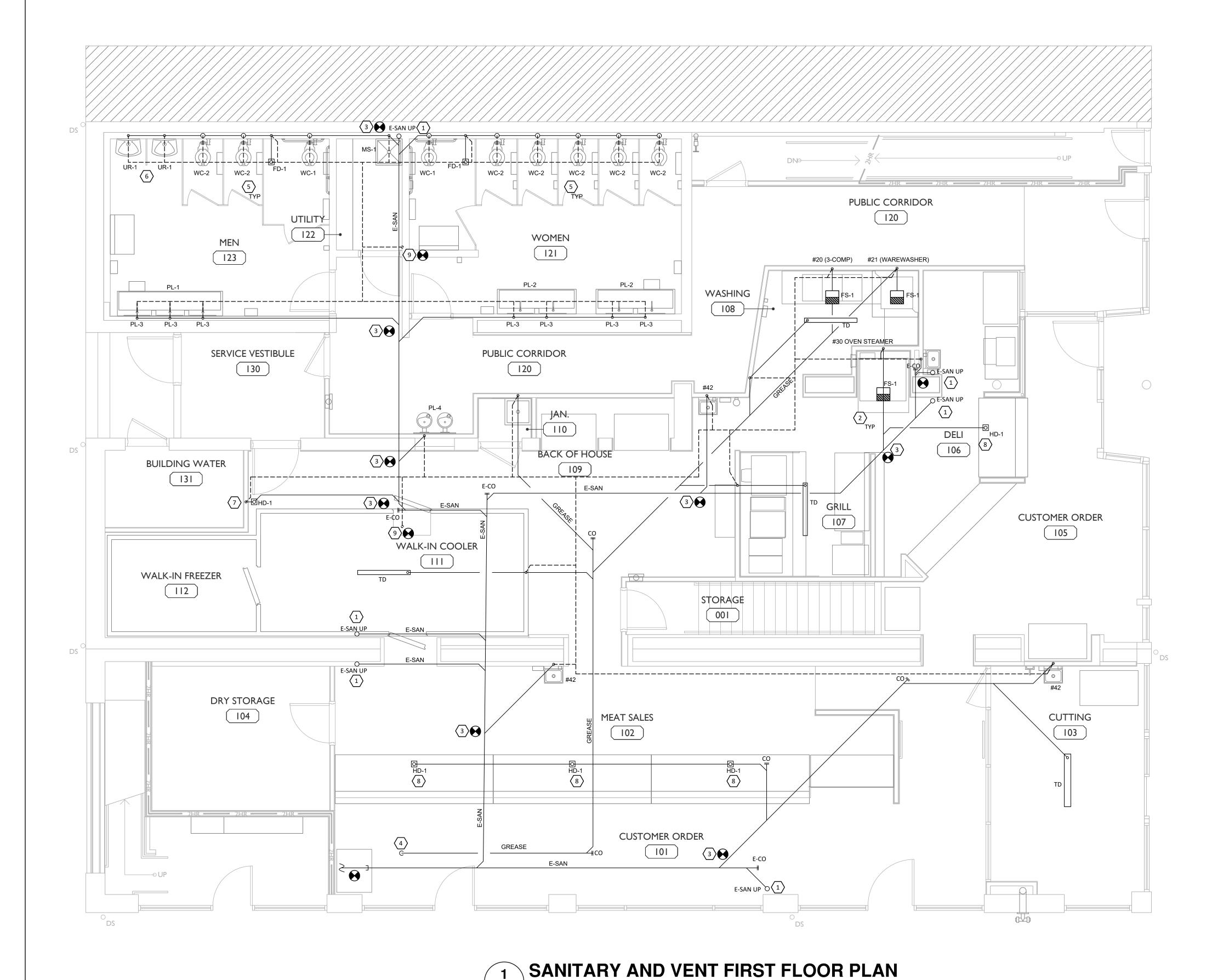
MARQUE ENGINEERING

Progress Dates

Revisions

Drawn by:

E500



GENERAL NOTES

- FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO START OF WORK. VERIFY ALL DIMENSIONS. DRAWINGS ARE ILLUSTRATIVE AND MAY NOT REFLECT EXACT CONDITIONS OR DIMENSIONS.
- DO NOT SCALE THE DRAWINGS. DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL ARRANGEMENT OF EQUIPMENT AND SYSTEMS. THEY ARE NOT INTENDED TO SHOW EVERY OFFSET, FITTING AND COMPONENT. DO NOT USE THE PLANS FOR EXACT LOCATION OF EQUIPMENT, FIXTURES OR ARCHITECTURAL ITEMS SUCH AS WALLS, WINDOWS, SOFFITS, AND PILASTERS. SPECIFIC LOCATIONS, MOUNTING HEIGHTS AND OVERALL DIMENSIONS OF DEVICES AND FIXTURES ARE TO BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS AND DETAILS WHEN
- DRAWINGS SPECIFIC TO THIS TRADE DO NOT LIMIT THE RESPONSIBILITY OR WORK REQUIRED BY THE CONTRACT DOCUMENTS REFER TO DRAWINGS AND SPECIFICATIONS OF OTHER TRADES FOR COMPLETE INFORMATION PRIOR TO BID.
- WHERE CONFLICTS EXIST AMONG DRAWINGS, SPECIFICATIONS AND EQUIPMENT SCHEDULES, THE MORE STRINGENT SHALL APPLY. NOTIFY THE ENGINEER OF ALL CONFLICTS FOR RESOLUTION OR INTERPRETATION.
- NOTIFY THE OWNER IN WRITING AND FIELD VERIFY CONDITIONS BEFORE PERFORMING ANY SAWCUTTING, TRENCHING, CORING OR ANY OTHER STRUCTURAL MODIFICATIONS. INSURE THAT NO ADVERSE EFFECT TO THE BUILDING'S STRUCTURAL INTEGRITY WILL OCCUR.
- ANY EXISTING CONDITION DISCOVERED DURING THE DEMOLITION OR CONSTRUCTION PROCESS WHICH, BY GENERALLY ACCEPTED CONSTRUCTION PRACTICES, SHOULD BE REMEDIED, SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER/ARCHITECT IMMEDIATELY, IN WRITING.
- OBTAIN WRITTEN APPROVAL FROM THE ENGINEER BEFORE REUSING ANY EXISTING EQUIPMENT, COMPONENTS OR OPENINGS.
- INSULATE PLUMBING LINES IN EXTERIOR WALLS TO PREVENT FREEZING.
- COORDINATE ROOF WORK WITH ROOFING CONTRACTOR TO ASSURE THAT THE ROOF WARRANTY IS NOT VOIDED.

PLUMBING LEGEND

---- SANITARY VENT PIPING — — — — — — UNDERGROUND WATER PIPING DOMESTIC COLD WATER PIPING DOMESTIC HOT WATER PIPING DOMESTIC HOT WATER RETURN PIPING — ST— STORM DRAINAGE PIPING —— NATURAL GAS CHECK VALVE CO o CLEAN OUT wco T WALL CLEAN OUT FD 🖸 FLOOR DRAIN FWH 📈 FROSTPROOF WALL HYDRANT VTR ٥ VENT THROUGH ROOF DRAWING NOTE SYMBOL ELBOW DOWN EWH ELECTRIC WATER HEATER BFP BACKFLOW PREVENTER HOSE BIBB CONNECT TO EXISTING

KEYED NOTES

EXISTING SANITARY DOWN FROM FLOOR ABOVE (REFER TO APARTMENT SEPARATE PERMIT).

EXISTING

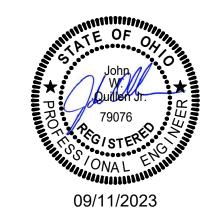
- PROVIDE CAST IRON SANITARY PIPING FOR ALL KITCHEN EQUIPMENT.
- CONNECT TO EXISTING SANITARY PIPING (REFER TO APARTMENT SEPARATE PERMIT). VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION.
- ROUTE GREASE WASTE DOWN AND CONNECT TO EXISTING SCHIER GB-250.
- VERIFY EXISTING WATER CLOSET CONNECTION LOCATIONS BEFORE CONSTRUCTION. CONNECT TO EXISTING PIPING AND PATCH TO COMPLETE THE SYSTEM. VERIFY PIPING IS IN GOOD CONDITION AND
- NOTIFY GC IF CONDITION IS INSUFFICIENT. PROVIDE NEW URINALS IN LOCATION OF EXISTING URINALS. CONNECT TO EXISTING PIPING AND PATCH TO COMPLETE THE SYSTEM. VERIFY EXISTING HANGERS WILL SUFFICE FOR NEW URINALS.
- ROUTE 3/4" INSULATED CONDENSATE LINE FROM WALK-IN TO HUB DRAIN. TERMINATE WITH AIR GAP.
- PROVIDE HUB DRAINS FOR DISPLAY CASE DRAINAGE PIPING WITH AIR GAP. COORDINATE EXACT LOCATION WITH EQUIPMENT CUTSHEET.
- EXTEND AND CONNECT TO EXISTING 3" VENT STACK FROM APARTMENTS ABOVE (SEPARATE PERMIT). COORDINATE WITH GC ON EXACT LOCATION OF TIE-IN.

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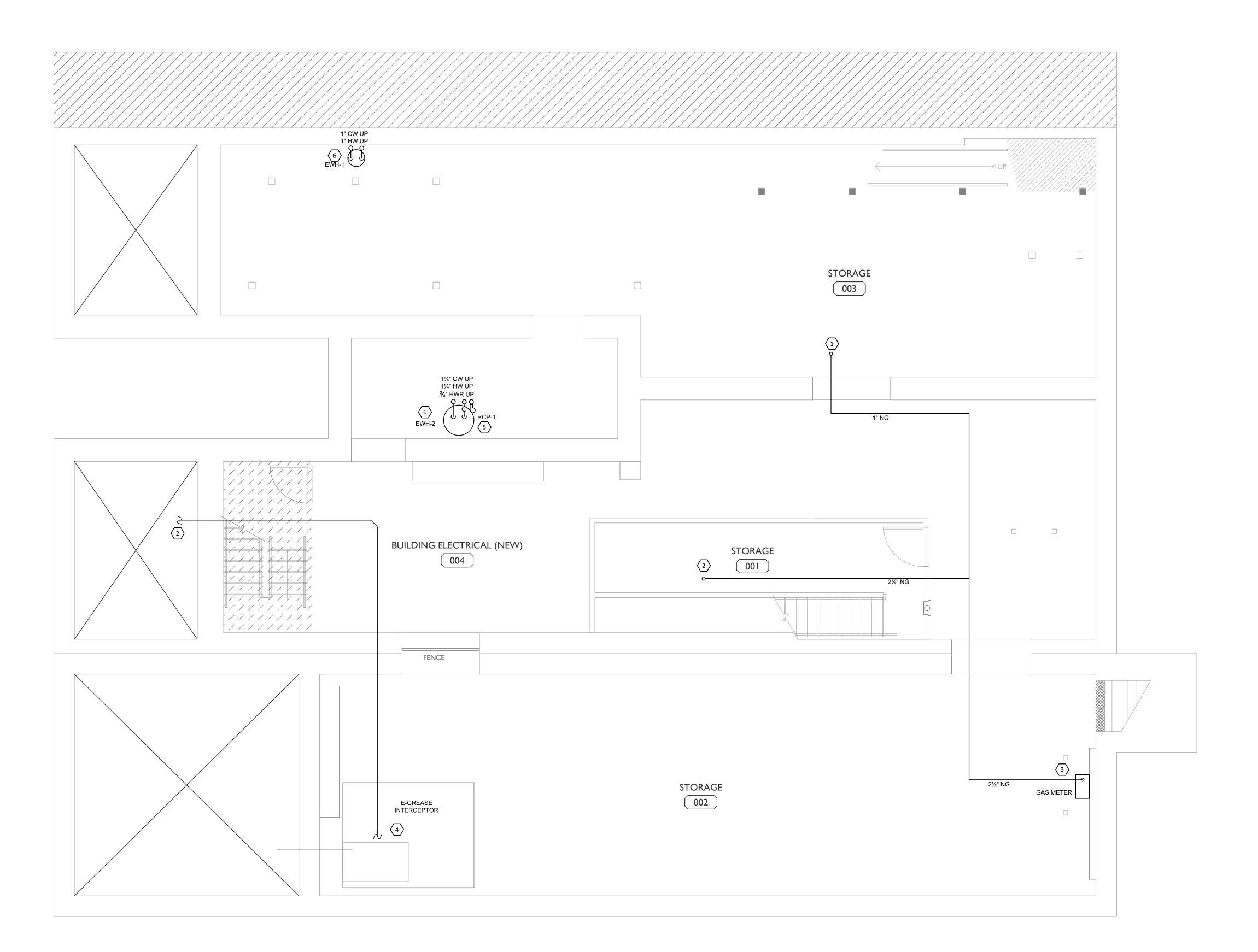
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WATER AND GAS BASEMENT PLAN

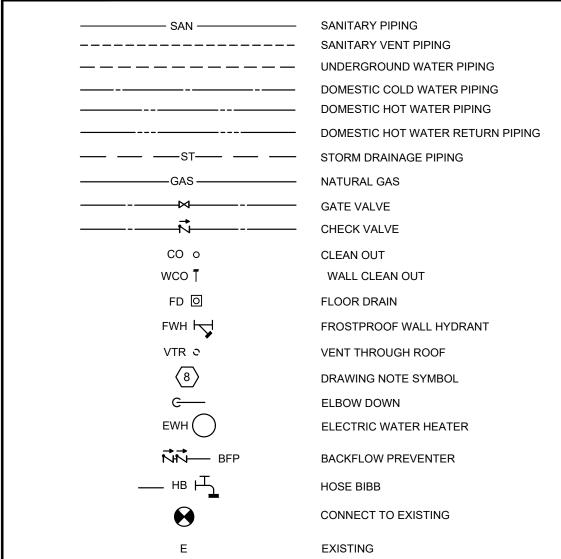
P200 1/4" = 1'-0"

GENERAL NOTES

- FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO START OF WORK. VERIFY ALL DIMENSIONS. DRAWINGS ARE ILLUSTRATIVE AND MAY NOT REFLECT EXACT CONDITIONS OR DIMENSIONS.
- B. DO NOT SCALE THE DRAWINGS. DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL ARRANGEMENT OF EQUIPMENT AND SYSTEMS. THEY ARE NOT INTENDED TO SHOW EVERY OFFSET, FITTING AND COMPONENT. DO NOT USE THE PLANS FOR EXACT LOCATION OF EQUIPMENT, FIXTURES OR ARCHITECTURAL ITEMS SUCH AS WALLS, WINDOWS, SOFFITS, AND PILASTERS. SPECIFIC LOCATIONS, MOUNTING HEIGHTS AND OVERALL DIMENSIONS OF DEVICES AND FIXTURES ARE TO BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS AND DETAILS WHEN
- C. DRAWINGS SPECIFIC TO THIS TRADE DO NOT LIMIT THE RESPONSIBILITY OR WORK REQUIRED BY THE CONTRACT DOCUMENTS REFER TO DRAWINGS AND SPECIFICATIONS OF OTHER TRADES FOR COMPLETE INFORMATION PRIOR TO BID.
- D. WHERE CONFLICTS EXIST AMONG DRAWINGS, SPECIFICATIONS AND EQUIPMENT SCHEDULES, THE MORE STRINGENT SHALL APPLY. NOTIFY THE ENGINEER OF ALL CONFLICTS FOR RESOLUTION OR INTERPRETATION.
- NOTIFY THE OWNER IN WRITING AND FIELD VERIFY CONDITIONS BEFORE PERFORMING ANY SAWCUTTING, TRENCHING, CORING OR ANY OTHER STRUCTURAL MODIFICATIONS. INSURE THAT NO ADVERSE EFFECT TO THE BUILDING'S STRUCTURAL INTEGRITY WILL OCCUR.
- ANY EXISTING CONDITION DISCOVERED DURING THE DEMOLITION OR CONSTRUCTION PROCESS WHICH, BY GENERALLY ACCEPTED CONSTRUCTION PRACTICES, SHOULD BE REMEDIED, SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER/ARCHITECT IMMEDIATELY, IN WRITING.

 OBTAIN WRITTEN APPROVAL FROM THE ENGINEER REFORE RELISING ANY EXISTING FOLLOPMENT.
- G. OBTAIN WRITTEN APPROVAL FROM THE ENGINEER BEFORE REUSING ANY EXISTING EQUIPMENT, COMPONENTS OR OPENINGS.
- H. INSULATE PLUMBING LINES IN EXTERIOR WALLS TO PREVENT FREEZING.
- I. COORDINATE ROOF WORK WITH ROOFING CONTRACTOR TO ASSURE THAT THE ROOF WARRANTY IS NOT VOIDED.

PLUMBING LEGEND



KEYED NOTES

- 1. ROUTE GAS THROUGH CEILING TO GROUND FLOOR (IN WALL) TO #30 OVEN STEAMER. VERIFY EXACT ROUTING PRIOR TO CONSTRUCTION.
- ROUTE GAS THROUGH CEILING TO GROUND FLOOR (IN WALL) TO #2 RANGE, #3 GRIDDLE, #4 FRYER, #4 FRYER, #7 CHARBROILER, AND MAU-1. VERIFY EXACT ROUTING PRIOR TO CONSTRUCTION.
- 3. CONNECT NEW GAS LINE TO EXISTING GAS METER. COORDINATE WITH UTILITY COMPANY WITH NEW
- GAS METER IF REQUIRED BY NEW LOADS.
- PROVIDE PUMP OUT KIT FOR EXISTING SCHIER GB-250 INTERCEPTOR TO WATER ROOM FOR CLEANING OPERATIONS PER MANUFACTURER'S INSTRUCTIONS.
- PROVIDE RECIRCULATING PUMP AS REQUIRED PER MANUFACTURER'S INSTRUCTIONS.
 PROVIDE NEW ELECTRIC WATER HEATER AND INSTALL ON DRAINAGE PAN. ROUTE RELIEF PIPING AND

DRAIN PAN PIPING TO NEAREST APPROVED RECEPTACLE.

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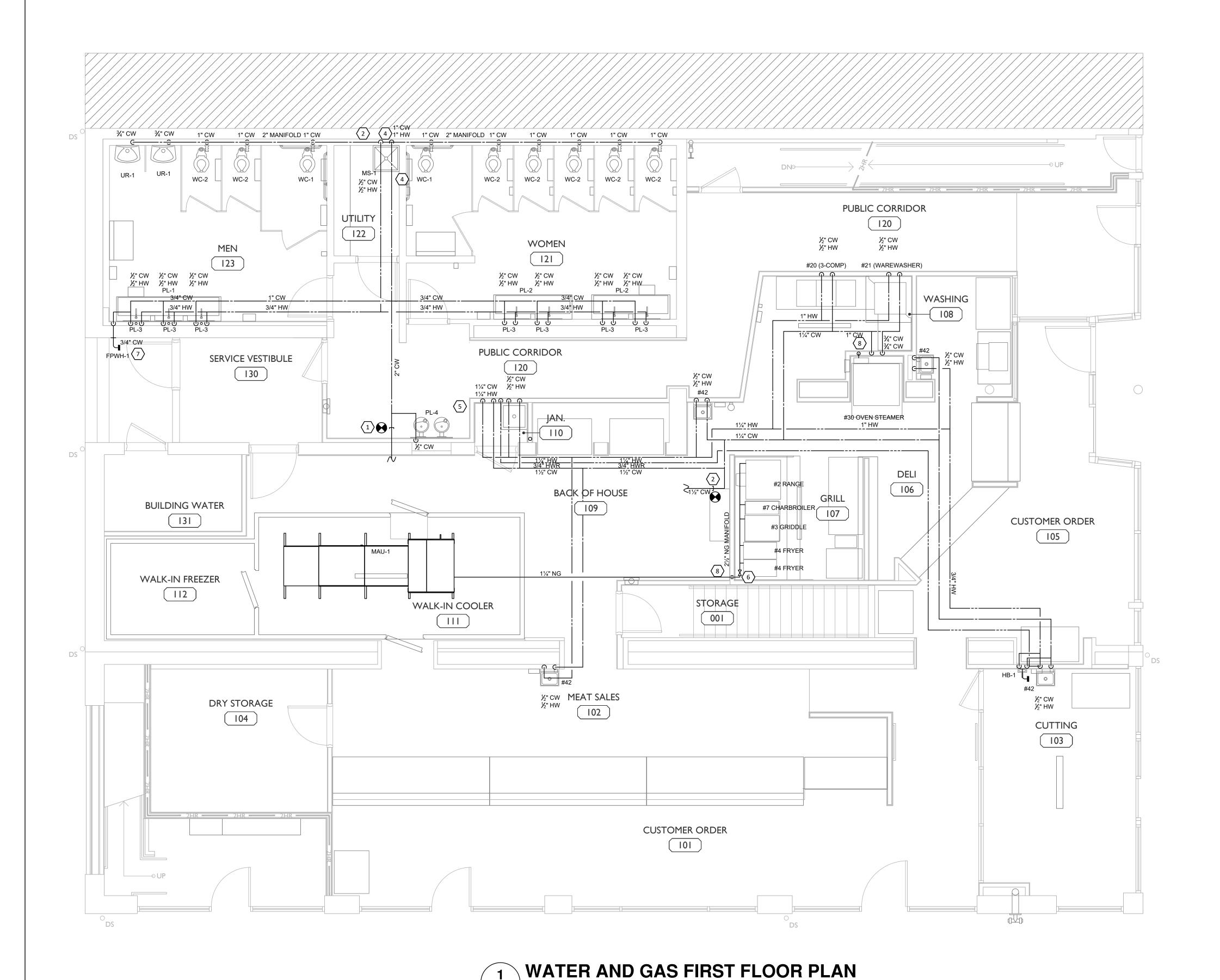
Revisions

Design Team:

MARQUE ENGINEERING
Drawn by:

MARQUE ENGINEERING

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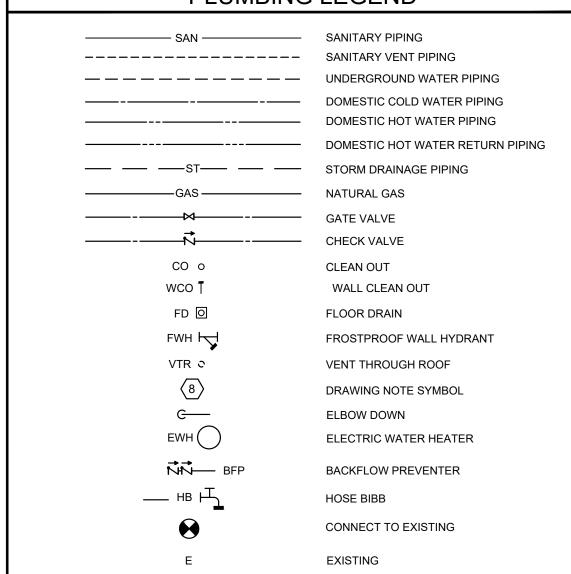


P201 1/4" = 1'-0"

GENERAL NOTES

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- DO NOT SCALE THE DRAWINGS. DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL ARRANGEMENT OF EQUIPMENT AND SYSTEMS. THEY ARE NOT INTENDED TO SHOW EVERY OFFSET, FITTING AND COMPONENT. DO NOT USE THE PLANS FOR EXACT LOCATION OF EQUIPMENT, FIXTURES OR ARCHITECTURAL ITEMS SUCH AS WALLS, WINDOWS, SOFFITS, AND PILASTERS. SPECIFIC LOCATIONS. MOUNTING HEIGHTS AND OVERALL DIMENSIONS OF DEVICES AND FIXTURES ARE TO BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS AND DETAILS WHEN
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- WHERE CONFLICTS EXIST AMONG DRAWINGS, SPECIFICATIONS AND EQUIPMENT SCHEDULES, THE MORE STRINGENT SHALL APPLY. NOTIFY THE ENGINEER OF ALL CONFLICTS FOR RESOLUTION OR INTERPRETATION.
- NOTIFY THE OWNER IN WRITING AND FIELD VERIFY CONDITIONS BEFORE PERFORMING ANY SAWCUTTING, TRENCHING, CORING OR ANY OTHER STRUCTURAL MODIFICATIONS. INSURE THAT NO ADVERSE EFFECT TO THE BUILDING'S STRUCTURAL INTEGRITY WILL OCCUR.
- ANY EXISTING CONDITION DISCOVERED DURING THE DEMOLITION OR CONSTRUCTION PROCESS WHICH, BY GENERALLY ACCEPTED CONSTRUCTION PRACTICES, SHOULD BE REMEDIED, SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER/ARCHITECT IMMEDIATELY, IN WRITING.
- OBTAIN WRITTEN APPROVAL FROM THE ENGINEER BEFORE REUSING ANY EXISTING EQUIPMENT, COMPONENTS OR OPENINGS.
- INSULATE PLUMBING LINES IN EXTERIOR WALLS TO PREVENT FREEZING.
- COORDINATE ROOF WORK WITH ROOFING CONTRACTOR TO ASSURE THAT THE ROOF WARRANTY IS NOT VOIDED.

PLUMBING LEGEND



KEYED NOTES

- CONNECT TO EXISTING 2" WATER LINE ROUTED TO APARTMENTS ABOVE (UNDER SEPARATE PERMIT).
- CONNECT TO EXISTING 1½" WATER LINE STUB (PROVIDED UNDER SEPARATE PERMIT).
- PROVIDE 2" MANIFOLD FOR ALL WATER CLOSETS. PROVIDE WATER HAMMER ARRESTORS AS REQUIRED. REFER TO P201 FOR WATER HAMMER ARRESTOR SIZING TABLE.
- 1" HW AND CW DOWN WALL TO ELECTRIC WATER HEATER IN BASEMENT.
- 1¼" HW AND CW DOWN WALL TO ELECTRIC WATER HEATER IN BASEMENT. PROVIDE SOLENOID VALVE. CONNECT TO HOOD SUPPRESSION SYSTEM.
- PROVIDE 3/4" SHUT OFF VALVE FOR WINTERIZATION OF FROST PROOF HOSE BIB.
- GAS ROUTED UP WALL FROM BASEMENT. VERIFY EXACT ROUTING IN FIELD PRIOR TO CONSTRUCTION.

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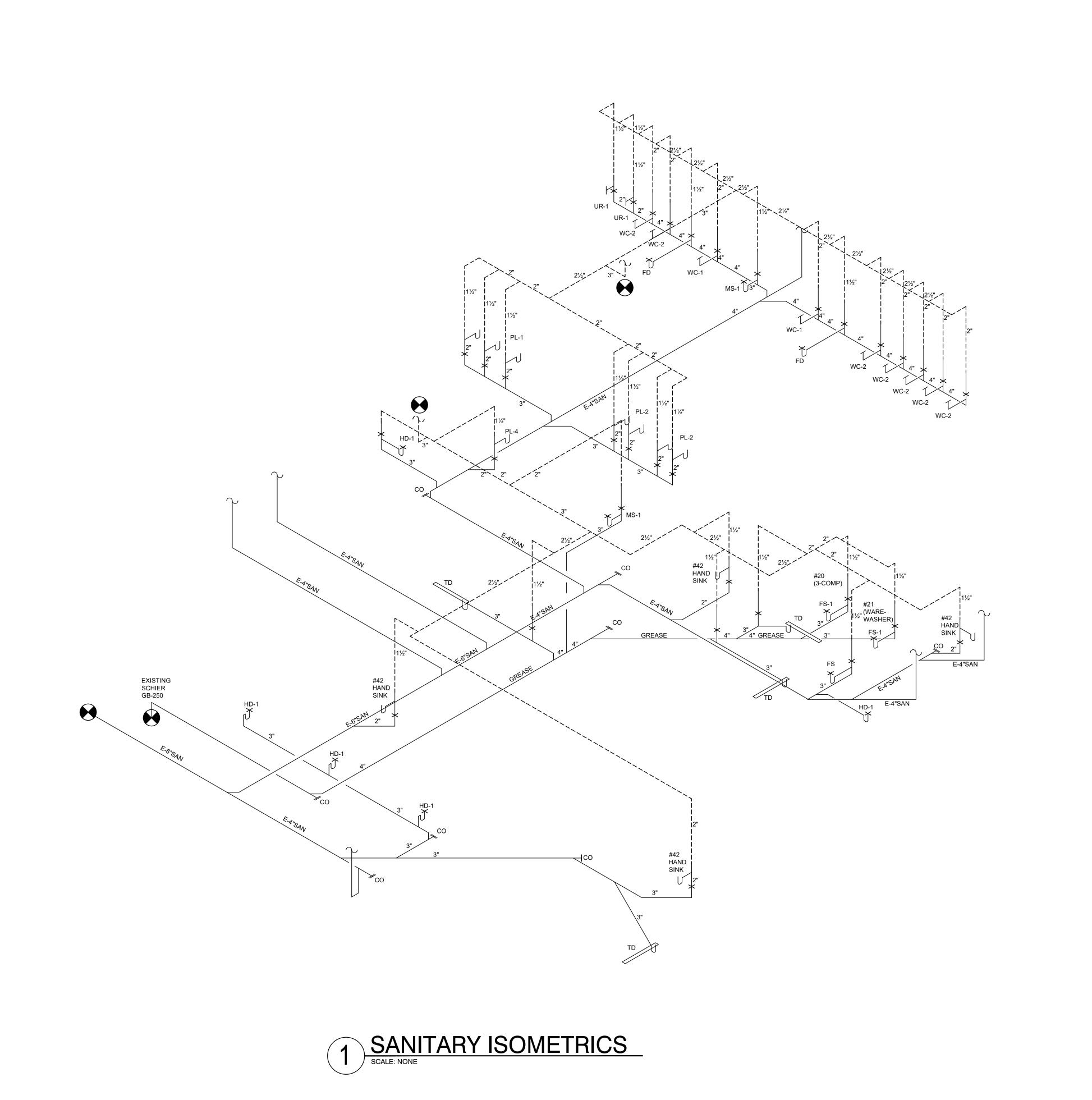
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Revisions

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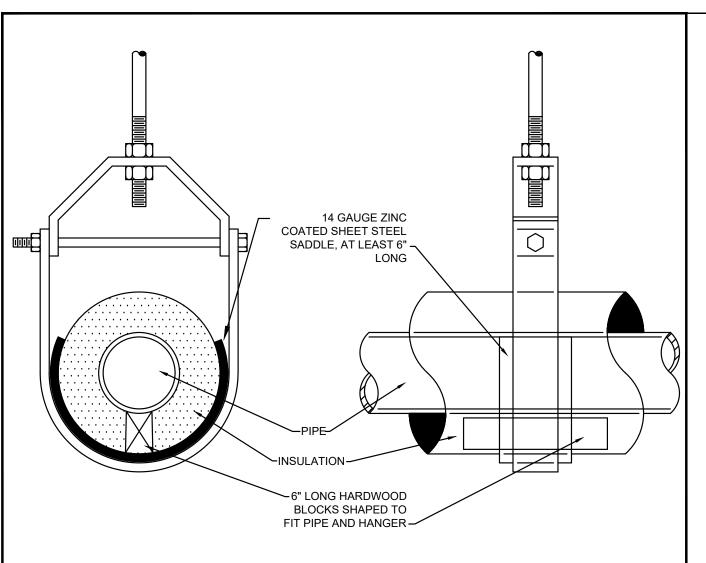
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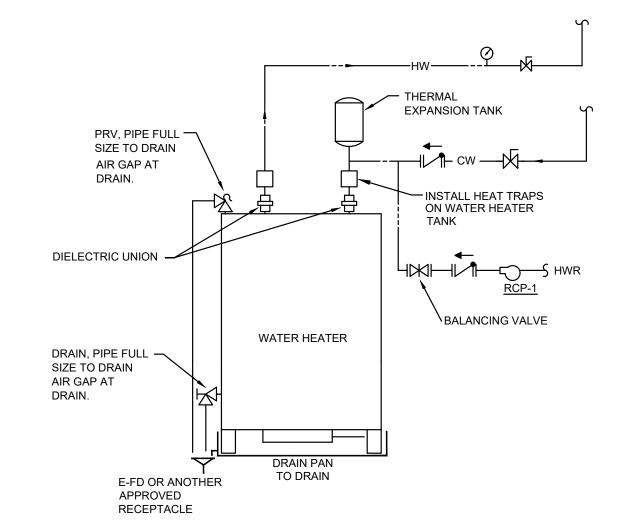
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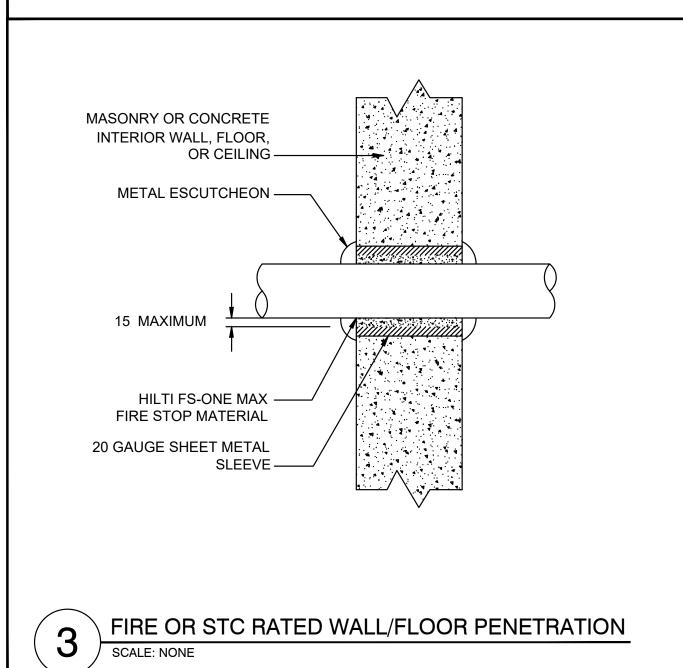
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1 PIPE HANGER DETAIL SCALE: NONE

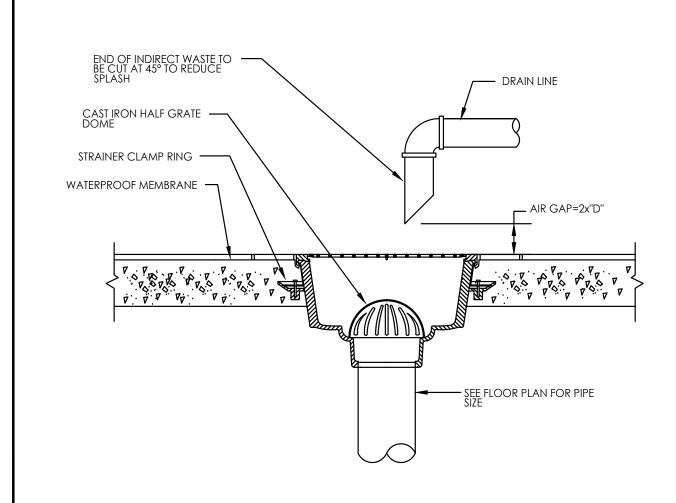






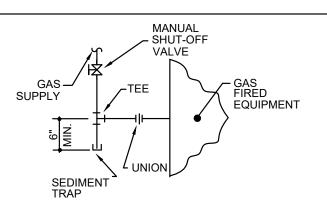
WATER HAMMER ARRESTOR TABLE				
INLET SIZE (INCHES)	PDI SYMBOL	FIXTURE UNITS		
1/2"	А	1-11		
3/4"	В	12-32		
1"	С	33-60		
1-1/4"	D	61-113		
1-1/2"	Е	114-154		
2"	F	155-330		

WATER HAMMER ARRESTOR CHART SCALE: NONE



5 INDIRECT WASTE DETAIL
SCALE: NONE

	PLUMBING FIXTURE SCHEDULE					
MARK	<u>DESCRIPTION</u>	<u>SAN</u>	<u>VENT</u>	<u>CW</u>	HV	
WC-1	WATER CLOSET: SLOAN ELONGATED FLUSH VALVE FLOOR-MOUNTED REAR OUTLET WATER CLOSET MODEL #ST-2229-STG. MOUNT TO ADA STANDARD AND PROVIDE LEVER ON APPROACH SIDE.	4"	2"	1"	-	
WC-2	WATER CLOSET: SLOAN ELONGATED FLUSHVALVE FLOOR-MOUNTED REAR OUTLET WATER CLOSET MODEL #ST-2229-STG. SELECT NON-ADA MODEL IF APPLICABLE.	4"	2"	1"	-	
UR-1	URINAL: AMERICAN STANDARD WASHBROOK FLOWISE UNIVERSAL URINAL. VITREOUS CHINA, 1.0GPF, ¾" INLET SPUD WITH (2) WALL HANGERS. PROVIDE 6590.001 UNIVERSAL TOP SPUD.	2"	1½"	3⁄4"	-	
PL-1	3 STATION TROUGH SINK: NEO-METRO MODEL 9163 WEDGE 96" SOLID SURFACE BASIN. FINISH: CORTERRA SOLID SURFACE COLOR - PARCHMENT - OCC18. PROVIDE KOHLER GOOSENECK K-13474 FAUCET WITH POLISHED CHROME FINISH (PL-3)	1½"	1½"	1/2"	1/2'	
PL-2	2 STATION TROUGH SINK: NEO-METRO MODEL 9162 WEDGE 72" SOLID SURFACE BASIN. FINISH: CORTERRA SOLID SURFACE COLOR - PARCHMENT - OCC18. PROVIDE KOHLER GOOSENECK K-13474 FAUCET WITH POLISHED CHROME FINISH (PL-3).	1½"	1½"	1/2"	1/2'	
PL-4	WATER FOUNTAIN: OASIS - MMRSLEBF DUAL HEIGHT FOUNTAIN WITH RECESSED ELECTRONIC BOTTLE FILLER.	1½"	1½"	1/2"	1/2'	
FS-1	FLOOR SINK: SIOUX CHIEF 861 SERIES CAST IRON FLOOR SINK WITH ACID RESISTING PORCELAIN ENAMEL COATING. CONNECTION TO PIPE AND TRAP ASSEMBLY TO BE MADE BY MEANS OF NO-HUB COUPLING. MODEL 861-23Xi2W OR 861-23XFi2W (VERIFY IF FLANGE AND CLAMPING COLLARS/BOLTS ARE REQUIRED). 12" X 12" X 6" DEEP WITH 3" CAST IRON OUTLET, OPEN-HALF PORCELAIN-COATED CAST IRON GRATE WITH STAINLESS STEEL DEBRIS SCREEN.	3"	1½"	-	-	
EWH-1	ELECTRIC WATER HEATER: EQUAL TO A.O. SMITH DURA-POWER DEN-30, 4500 WATT ELECTRIC ELEMENT, 208V/1P. 30 GALLON STORAGE TANK, 20 GPH RECOVERY @ 90° TEMPERATURE RISE, 118 LBS, 49-3/4" HEIGHT, 20-1/2" DIAMETER.	-	-	1"	1"	
EWH-2	ELECTRIC WATER HEATER: EQUAL TO A.O. SMITH DRE-52-30. 50 US GALLONS, 30 KW, 141 USGH RECOVERY @ 90° F. 6 ELEMENTS AT 5,000 WATTS.	-	-	11⁄4"	11/4	
FD-1	FLOOR DRAIN: SIOUX CHIEF FINISH LINE 832-3DNQV. 3" CONNECTION SIZE, IRON NO-HUB, SQUARE NICKEL-BRONZE STRAINER, VANDAL RESISTANT STRAINER SCREWS. PROVIDE TRAP PRIMER AS REQUIRED BY LOCAL CODE.	3"	1½"	-	-	
TD	TRENCH DRAIN: ZURN Z886-HDS 4" (6-3/4" OUTSIDE WIDTH). 4'-0" LONG STAINLESS STEEL EXTRA HEAVY-DUTY FRAME ASSEMBLY.	3"	1½"	-	-	
MS-1	MOP SINK: FIAT 24" X 24" X 10" ONE PIECE WHITE MOLDED STONE MOP SERVICE BASIN WITH 3" DRAIN, FIAT 832AA CHROME PLATED FAUCET WITH VACUUM BREAKER, PAIL HOOK, AND ADJUSTABLE BRACE. INCLUDE MOP HANGER 889-CC AND CHROME DOME STRAINER.	3"	1½"	1/2"	1/2'	
НВ	HOSE BIB: WOOD FORD ANTI-SIPHON WALL FAUCET MODEL 24.	-	-	3/4"	-	
RCP-1	CIRCULATOR PUMP: BELL & GUSSETT BRONZE CIRCULATOR NBF-8S/LW. PART NO. 103257. 1/2" SWEAT CONNECTION. 39 WATT, 0.39 FL, 115 VOLTS. 9 POUNDS. SUPPLY WITH AUTOMATIC TIMER KIT MODEL TC-1.	-	-	-	-	
FPWH-1	FROST PROOF WALL HYDRANT: WOODFORD ANTI-SIPHON FREEZELESS WALL HYDRANT MODEL B65. CHROME BOX & DOOR. PROVIDE OWNER WITH KEYS.	-	-	3/4"	-	
HB-1	WOODFORD MODEL H22 HORIZONTAL HOT AND COLD WALL FAUCET, FREEZELESS, SEPARATE HOT AND COLD INLET TUBES AND TEMPERATURE CONTROLS, INTEGRAL PRESSURE RELIEF AND BACKFLOW PROTECTION.	-	-	1/2"	1/2'	
HD-1	HUB DRAIN: SIOUX CHIEF FINISH LINE ADJUSTABLE SCHEDULE 40 HUB DRAIN 832-3HHD. 3" CONNECTION SIZE.	3"	1½"	-	-	



EQUIPMENT GAS PIPING NOT TO SCALE

1011000122			
GAS LOADS			
EQUIPMENT	MBH		
#2 RANGE	215		
#3 GRIDDLE	180		
#4 FRYER	114		
#4 FRYER	114		
#7 CHARBROILER	180		
#30 OVEN STEAMER	106.5		
MAU-1	202		
TOTAL	1,111.5		

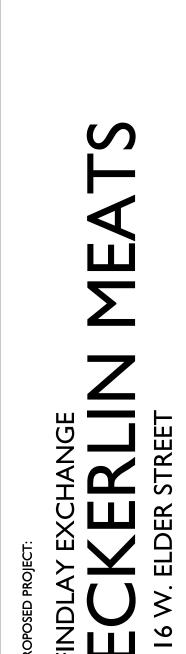
GAS NOTES:

- A. GAS LINE SIZING BASED ON INLET PRESSURE OF LESS
 THAN 2 PSI AND PRESSURE DROP OF 0.3" WC. 2015 IFGC
 TABLE 402.4(1) SCHEDULE 40 METALLIC PIPE.
- INDICATED LENGTHS OF PIPE ARE EQUIVALENT
 DEVELOPED LENGTHS. MAXIMUM DEVELOPED LENGTH IS
 125'. IF THE ANTICIPATED LENGTH EXCEEDS THE
 MAXIMUM DEVELOPED LENGTH IS GREATER THAN THE
 ABOVE LENGTH, CONTACT MARQUE ENGINEERING PRIOR
 TO CONSTRUCTION.
- ALL GAS PIPING OTHER THAN BLACK STEEL SHALL BE PERMANENTLY IDENTIFIED BY A YELLOW LABEL AT INTERVALS OF NOT MORE THAN 5'-0".
- ALL OUTSIDE EXPOSED GAS PIPING SHALL BE COATED WITH A RUST INHIBITOR TO PREVENT ATMOSPHERIC CORROSION.
- GAS PIPING SHALL BE INSPECTED AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS PER IFGC 406.1, NFPA 54 AND ANSI B 31.2.
- F. MAINTAIN 3 FEET AWAY FROM ELECTRIC LINE.
 G. PROVIDE ANVIL H-BLOCK HBS SUPPORT WITH H-164 STEEL CHANNEL ROOFTOP SUPPORT SYSTEM WHEN PIPING IS INSTALLED ON ROOFTOP.

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Job No: 12496 09.11.2023

OH COA #4715

Progress Dates

08.28.2023 - HVAC COORD.

09.06.2023 - REVIEW SET 09.11.2023 - PERMIT SET

Design Team: MARQUE ENGINEERING

MARQUE ENGINEERING

Drawn by:

22 05 00 COMMON WORK RESULTS FOR PLUMBING

ALL PLUMBING WORK AND TESTS SHALL BE DONE IN STRICT ACCORDANCE WITH THE LATEST STATE, COUNTY, AND LOCAL REGULATIONS, LAWS, AND ORDINANCES WHICH MAY BE

BEFORE SUBMITTING A BID, EXAMINE DOCUMENTS OF ALL OTHER TRADES, VISIT THE SITE AND GET ACQUAINTED WITH ALL CONDITIONS THAT MAY IN ANY WAY AFFECT THE EXECUTION OF THIS CONTRACT. TAKE MEASUREMENTS AND BE RESPONSIBLE FOR EXACT SIZE AND LOCATIONS OF ALL OPENINGS REQUIRED. VERIEY INSTALLATION MAY BE MADE IN COMPLETE ACCORDANCE WITH ALL PERTINENT CODES AND REGULATIONS. IN THE EVENT OF DISCREPANCY, IMMEDIATELY NOTIFY THE PROFESSIONAL ENGINEER OF RECORD. DO NOT PROCEED WITH THE INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES

IT IS NOT THE INTENT OF THE DRAWINGS THAT EXISTING CONDITIONS BE ACCURATELY SHOWN. EXISTING PLUMBING WORK IS SHOWN TO LIMITED EXTENT ON DRAWINGS AND IS SHOWN FOR GENERAL REFERENCE ONLY, LOCATIONS AND INFORMATION WERE DERIVED FROM CURSORY SITE VISUAL OBSERVATIONS OR FROM DOCUMENTS THAT WERE PREPARED FOR PREVIOUSLY

THE WORK COVERED BY THESE SPECIFICATIONS SHALL CONSIST OF PROVIDING ALL NEW MATERIAL, LABOR, EQUIPMENT, AND SERVICES NECESSARY FOR A COMPLETE PLUMBING INSTALLATION AS SPECIFIED HEREIN. WORK IN THIS SECTION INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING ITEMS:

PLUMBING FIXTURES

WHENEVER THE WORDS "CONTRACTOR" APPEAR ON PLUMBING DRAWINGS OR IN THESE SPECIFICATIONS, IT SHALL REFER TO THE PLUMBING SUB-CONTRACTOR. WHENEVER THE WORD "PROVIDE" APPEARS IN THESE DOCUMENTS, IT SHALL BE INTERPRETED TO MEAN "FURNISH

COORDINATE ALL WORK WITH THE OWNER TO MINIMIZE INTERRUPTION OF BUILDING

COORDINATE THE INSTALLATION OF PLUMBING ITEMS WITH THE SCHEDULES FOR WORK OF ALL OTHER TRADES TO PREVENT UNNECESSARY DELAYS IN THE TOTAL WORK.

THIS CONTRACTOR SHALL VERIFY AND SATISFY HIMSELF THAT ALL EQUIPMENT FURNISHED WILL PROPERLY FIT IN THE SPACE PROVIDED, THAT IT WILL FUNCTION PROPERLY, AND THAT ALL PARTS OF EQUIPMENT REQUIRING SERVICE ARE READILY ACCESSIBLE.

ALL PIPING SHALL BE RUN PARALLEL OR PERPENDICULAR TO BUILDING WALLS AND FRAMING SYSTEM. ALL VERTICAL RUNS SHALL BE HELD AGAINST WALLS, COLUMNS, ETC., AS POSSIBLE TO

CONTRACTOR SHALL PROVIDE A GUARANTEE IN WRITTEN FORM STATING THAT ALL WORK SHALL BE FREE OF DEFECTS OR ERRORS, AND ALL EQUIPMENT, MATERIALS, OR PARTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF OWNER'S FINAL ACCEPTANCE AND SHALL REPAIR, REVISE OR REPLACE AT NO COST TO THE OWNER ANY SUCH DEFECTS OCCURRING WITHIN THE GUARANTEE PERIOD.

CONTRACTOR SHALL ALSO STATE IN WRITTEN FORM THAT ANY ITEMS OR OCCURRENCES ARISING DURING THE GUARANTEE PERIOD WILL BE ATTENDED TO IN A TIMELY MANNER AND WILL IN NO CASE EXCEED THREE (3) WORKING DAYS FROM DATE OF NOTIFICATION BY OWNER.

PROVIDE A COMPLETE INSTALLATION IN CONFORMANCE WITH THE FOLLOWING STANDARDS:

ASPE: AMERICAN SOCIETY OF PLUMBING ENGINEERS NFPA: NATIONAL FIRE PROTECTION ASSOCIATION

STATEWIDE BUILDING CODE

AGA: AMERICAN GAS ASSOCIATION

INTERNATIONAL PLUMBING CODE

CONTRACTOR SHALL DO ALL CUTTING AND PATCHING REQUIRED FOR INSTALLATION OF THIS WORK. ALL OPENINGS IN WALLS, FLOORS OR CEILINGS SHALL BE PROPERLY SEALED AND RESTORED IN KIND. FLASH AND COUNTERFLASH AT ROOF OPENINGS.

ALL EQUIPMENT SHALL BE LISTED AND LABELED, UNLESS OTHERWISE APPROVED.

ALL WIRING SHALL MEET THE REQUIREMENTS LISTED IN THE ELECTRICAL SPECIFICATIONS. ALI CONTROL AND INTERLOCK WIRING AND CONDUIT (120V OR 24V) SHALL BE BY THE PLUMBING

EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CONDITIONS OF LISTING AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND THIS CODE.

CLEANING: THIS CONTRACTOR SHALL REMOVE FROM THE PREMISES ALL ACCUMULATION OF DIRT, DEBRIS, WASTE MATERIALS AND RUBBISH CAUSED BY HIS EMPLOYEES OR WORK, AT LEAST ONCE A WEEK, EXCEPT THAT COMBUSTIBLE MATERIALS SHALL BE REMOVED DAILY.

DURING PROGRESS OF THE WORK, MAINTAIN ON DRAWINGS AT THE SITE, AN ACCURATE RECORD OF THE INSTALLATION OF THE MECHANICAL SYSTEM, INDICATING ALL ITEMS WHICH

APPLY FOR AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED BY LOCAL AUTHORITY, FOR

A CERTIFICATE OF FINAL INSPECTION AND APPROVAL SHALL BE SUBMITTED WITH THE

CONTRACTOR'S REQUEST FOR FINAL PAYMENT. NO FINAL PAYMENT WILL BE APPROVED WITHOUT THIS CERTIFICATE.

GUARANTEE ALL WORKMANSHIP, MATERIAL, AND EQUIPMENT AND REPLACE ANY FOUND DEFECTIVE WORK WITHOUT COST TO THE OWNER, FOR A PERIOD OF ONE YEAR AFTER FINAL

DO NOT REUSE REMOVED PLUMBING MATERIALS UNLESS SPECIFICALLY INDICATED ON DRAWINGS. EXISTING SYSTEMS MAY BE UTILIZED ONLY TO THE EXTENT INDICATED ON

IF REQUIRED TO ACCOMMODATE CONSTRUCTION RELATED ACTIVITIES TEMPORARILY REMOVE, STORE IN PROTECTED LOCATION ON SITE, AND REINSTALL CONFLICTING PLUMBING EQUIPMENT, OR DEVICES THAT ARE TO REMAIN OR TO BE RELOCATED.

WHERE THE TERM "DEMOLITION" IS USED HEREIN, INTERPRET IT TO MEAN "DEMOLITION" OR "SELECTIVE DEMOLITION" WHERE APPLICABLE.

PROVIDE PLUMBING DEMOLITION WORK AS REQUIRED TO ACCOMMODATE PROJECT DEMOLITION AND AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION. DISCONNECT AND REMOVE WORK TO BE ABANDONED, AND AS REQUIRED TO ACCOMMODATE WORK OF OTHER TRADES, IN AREAS AFFECTED BY THIS PROJECT.

LEGALLY DISPOSE OF MATERIALS TO SALVAGED OR RETAINED.

22 05 03 SUBMITTALS FOR PLUMBING

PLUMBING FIXTURES

DESIGN BASIS MANUFACTURERS OF MATERIAL AND EQUIPMENT ARE SPECIFIED AND PLANS ARE DETAILED ACCORDING TO THIS MATERIAL. CONTRACTOR SHALL BASE HIS BID ON FURNISHING AND INSTALLING THIS MAKE OF MATERIAL AND EQUIPMENT.

SHOP DRAWINGS SHALL INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: MAKE, MODEL NUMBER, DIMENSIONS, ELECTRICAL CHARACTERISTICS (RATING). SHOP DRAWINGS SHALL BEAR NAME OF PROJECT AND LOCATION.

THE MAKE, TYPE, AND FINISH OF ALL MATERIALS, EQUIPMENT AND APPARATUS SHALL BE APPROVED BY THE ENGINEER/ ARCHITECT IN WRITING BEFORE THE CONTRACTOR INSTALLS IT. ANY SUBSTITUTION FOR ANY SPECIFIED EQUIPMENT OR MATERIAL SHALL FIRST BY APPROVED BY THE ENGINEER/ARCHITECT IN WRITING.

SUBMIT SHOP DRAWINGS ON THE FOLLOWING ITEMS FOR REVIEW BEFORE FABRICATION OR SHIPMENT:

MAINTENANCE MANUALS: FURNISH THREE FINAL COPIES, INCLUDING WIRING DIAGRAMS, MAINTENANCE AND OPERATING INSTRUCTIONS, PARTS LISTINGS, AND COPIES OF OTHER SUBMITTALS INDICATED FOR INCLUSION.

ANY CHANGES TO ITEMS SPECIFIED MUST BE SUBMITTED AS A SUBSTITUTION, WITH COMPLETE DOCUMENTATION OF PRICE DIFFERENTIAL AND EQUIPMENT DETAILS.

- 1. CERTAIN MAKES OF MATERIALS AND EQUIPMENT ARE SPECIFIED AND DRAWINGS ARE DETAILED ACCORDING TO THIS MATERIAL. CONTRACTOR SHALL BASE HIS BID ON FURNISHINGS AND INSTALLING THE SPECIFIED MAKE AND MODEL OR THE "EQUIVALENT" MODEL OF ANOTHER OF THE SPECIFIED MANUFACTURERS WHICH MEETS ALL THE QUALIFICATIONS OF THE SPECIFIED ITEMS.
- 2. WHERE MORE THAN ONE MAKE OF MATERIAL OR EQUIPMENT IS SPECIFIED, THE CONTRACTOR SHALL STATE IN HIS BID WHICH MAKE HE PROPOSES TO FURNISH. SHOP DRAWING APPROVAL SHALL BE OBTAINED PRIOR TO SHIPMENT OF
- 3. "EQUIVALENT" MATERIALS AND EQUIPMENT ARE THOSE OF MANUFACTURER WHICH MEET THE SAME STANDARDS OF PERFORMANCE, HAVE EQUAL OR BETTER MATERIALS OF CONSTRUCTION, AND EQUAL OR BETTER MAINTENANCE CHARACTERISTICS. ALL EQUIVALENTS MUST FIT THE SPACE PROVIDED IN THE BUILDING STRUCTURE. WHERE THE USE OF EQUIVALENTS RESULTS IN CHANGES. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR SUCH CHANGES AND ANY COSTS RESULTING FROM THEM.
- 4. IF THE CONTRACTOR INTENDS TO USE EQUIPMENT OR MATERIALS NOT SPECIFIED, HE MUST RECEIVE APPROVAL FROM THE ENGINEER/ARCHITECT PRIOR TO THE AWARD OF THE CONTRACT. THIS PRIOR APPROVAL ONLY PERMITS SUBMITTAL OF A PARTICULAR MANUFACTURER'S EQUIPMENT IN GENERAL. THE SPECIFIED ITEM TO BE USED MUST AGAIN BE SUBMITTED FOR FINAL REVIEW AS SPECIFIED UNDER "SHOP DRAWINGS".

22 05 23 GENERAL DUTY VALVES

PROVIDE STOPS OR ISOLATION VALVES ON DOMESTIC WATER SUPPLIES TO ISOLATE HOT AND COLD WATER TO EACH FIXTURE, INCLUDING ALL EQUIPMENT AND EQUIPMENT PROVIDED BY

FIXTURES, ITEM OR UNITS FURNISHED BY THE MANUFACTURER WITH INTEGRAL STOPS OR STOPS SPECIFIED WITH THE FIXTURE ARE CONSIDERED TO BE PROPERLY VALVED AT THE

ACCESS SHALL BE PROVIDED TO ALL VALVES.

VALVES ON DOMESTIC WATER PIPING SHALL BE BALL VALVES.

[BALL VALVES - 1 INCH AND SMALLER: 2-PIECE BODY, 600 PSI CWP, 150 PSI SWP, CAST BRONZE BODY, FULL PORT, TEFLON SEATS, BLOWOUT-PROOF STEM, ADJUSTABLE PACKING GLAND, CHROME PLATED BRONZE BALL, WITH SCREWED ENDS, AND VINYL-COVERED STEEL HANDLE. PROVIDE SOLDER ENDS. PROVIDE EXTENDED VALVE STEMS FOR VALVES USED ON INSULATED LINES. PROVIDE NIBCO SERIES 585-70-NS.]

[BALL VALVES: 1-1/4 INCH TO 3 INCH: 3-PIECE BODY, 600 PSI CWP, 150 PSI SWP, CAST BRONZE BODY, CONVENTIONAL PORT, TEFLON SEATS, BLOWOUT-PROOF STEM, ADJUSTABLE PACKING GLAND, CHROME PLATED BRONZE BALL, SCREWED ENDS, AND VINYL-COVERED STEEL HANDLE. PROVIDE SOLDER ENDS. PROVIDE EXTENDED VALVE STEMS FOR VALVES USED ON INSULATED

MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, AND ARE LIMITED TO, THE FOLLOWING:

AMERICAN VALVE, INC. CONBRACO INDUSTRIES, INC.; APOLLO VALVES. CRANE CO.; CRANE VALVE GROUP; CRANE VALVES.

HAMMOND VALVE. MILWAUKEE VALVE COMPANY.

NIBCO INC.

RED-WHITE VALVE CORPORATION.

WATTS REGULATOR CO.; A DIVISION OF WATTS WATER TECHNOLOGIES, INC

CHECK VALVES

SWING CHECK VALVES - CLASS 125, CAST BRONZE BODY AND CAP, HORIZONTAL SWING, Y-PATTERN, WITH A BRONZE DISC, AND HAVING THREADED OR SOLDER ENDS. PROVIDE SOLDER ENDS FOR DOMESTIC HOT AND COLD WATER SERVICE. PROVIDE NIBCO S-413.

22 05 29 HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT

SUPPORT ALL PIPING AND EQUIPMENT BY HANGERS OR BRACKETS. PROVIDE STRUCTURAL STEEL MEMBERS WHERE REQUIRED TO SUPPORT PIPING AND EQUIPMENT. NO PORTION OF PIPING OR VALVES SHALL BE SUPPORTED BY EQUIPMENT.

DELEGATED DESIGN

FOR EQUIPMENT SUPPORTS, THIS CONTRACTOR SHALL RETAIN A QUALIFIED PROFESSIONAL ENGINEER TO PROVIDE SUPPORT CALCULATIONS OF STATIC AND DYNAMIC LOADING DUE TO OPERATING EQUIPMENT WEIGHT, SEISMIC AND WIND FORCES. THE SIGNED AND SEALED CALCULATIONS AND DETAILS SHALL BE SUBMITTED BY THE RETAINED PROFESSIONAL ENGINEER.

PROVIDE HANGERS, SUPPORTS, CLAMPS AND ATTACHMENTS TO SUPPORT PIPING PROPERLY FROM BUILDING STRUCTURE. ARRANGE FOR GROUPING OF PARALLEL RUNS OF HORIZONTAL PIPING SUPPORTED TOGETHER ON FIELD-FABRICATED. HEAVY-DUTY TRAPEZE HANGERS WHERE POSSIBLE. WHERE PIPING OF VARIOUS SIZES IS SUPPORTED TOGETHER BY TRAPEZE HANGERS. SPACE HANGERS FOR SMALLEST PIPE SIZE OR PROVIDE INTERMEDIATE SUPPORTS FOR SMALLER

DIAMETER PIPE AS SPECIFIED ABOVE FOR INDIVIDUAL PIPE HANGERS. INDIVIDUAL PIPE HANGERS TO BE ANVIL INTERNATIONAL CLEVIS HANGER FIG. 260, ELCEN. ROD SIZES TO CONFORM TO THE FOLLOWING: 3/8" RODS FOR 3/4" TO 2" PIPE: 1/2" RODS FOR 2-1/2" TO 3" PIPE; 5/8" RODS FOR 4" TO 5" PIPE; 3/4" RODS FOR 6" PIPE.

HANGERS SHALL BE SIZED TO ALLOW INSULATION TO PASS THROUGH UNOBSTRUCTED, PROVIDE SADDLE SUPPORT FOR INSULATION AT ALL HANGERS. HANGER SPACING FOR STEEL PIPING UNLESS OTHERWISE NOTED IS TO BE AS FOLLOWS: 1-1/4" OR SMALLER TO BE 8' ON CENTER: 1-1/2" TO 2" TO BE 10' ON CENTER: 2-1/2" AND LARGER TO

BE 12' ON CENTER AND AT EACH CHANGE OF DIRECTION. HANGER SPACING FOR COPPER PIPE TO BE AS FOLLOWS: 1" OR SMALLER 6' ON CENTER; 1-1/4" OR LARGER 8' ON CENTER. HANGER SPACE FOR CPVC AND PVC PIPE TO BE AS FOLLOWS: 1" AND SMALLER TO BE 3' ON CENTER; 1-1/4" OR LARGER TO BE 4' ON CENTER.

PIPING SHALL ALSO BE SUPPORTED AT EACH CHANGE IN DIRECTION, VALVES AND EQUIPMENT.

22 05 53 IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT

PROVIDE SELF-ADHESIVE PIPE LABELS WITH WHITE BACKGROUND AND BLACK LETTERING, CONTACT TYPE WITH PERMANENT ADHESIVE BACKING. INCLUDE IDENTIFICATION OF PIPING SERVICE USING SAME DESIGNATIONS OR ABBREVIATIONS AS USED ON THE DRAWINGS AND AN ARROW INDICATING FLOW DIRECTION.

EQUIPMENT PROVIDE SELF-ADHESIVE PLASTIC EQUIPMENT LABELS WITH WHITE BACKGROUND AND BLACK LETTERING, CONTACT TYPE WITH PERMANENT ADHESIVE BACKING, 160 DEGREE F TEMPERATURE. INCLUDE EQUIPMENT'S DRAWING DESIGNATION AND SPECIFICATION SECTION NUMBER WHERE EQUIPMENT IS SPECIFIED.

22 07 19 PLUMBING SYSTEM INSULATION

INSULATION SHALL BE LISTED AND LABELED PER ASTM E 84 FOR PLENUM INSTALLATIONS EMPLOYING SLIP ON TECHNIQUES. PROVIDE INSULATION MATERIALS, ACCESSORIES, AND FINISHES WITH SMOOTH, STRAIGHT,

AND EVEN SURFACES; FREE OF VOIDS THROUGHOUT THE LENGTH OF PIPING INCLUDING FITTINGS, VALVES, AND SPECIALTIES. SURFACE PREPARATION: CLEAN AND DRY SURFACES TO RECEIVE INSULATION. REMOVE MATERIALS THAT WILL ADVERSELY AFFECT INSULATION APPLICATION.

PIPING SYSTEMS REQUIRING INSULATION INSULATE DOMESTIC COLD WATER PIPING, ASSOCIATED FITTINGS AND VALVES WITH FLEXIBLE ELASTOMERIC 1/2" WALL THICKNESS INSULATION.

INSULATE DOMESTIC HOT WATER PIPING, ASSOCIATED FITTINGS AND VALVES WITH 1" THICK FLEXIBLE ELASTOMERIC, 1" THICK MINERAL WOOL, 1-1/2" THICK FIBERGLASS INSULATION OR PER LOCAL ENERGY CODE, WHICHEVER GREATER. INSULATE DOMESTIC HOT WATER RETURN PIPING, ASSOCIATED FITTINGS AND VALVES WITH 1"

WALL THICKNESS INSULATION OR PER LOCAL ENERGY CODE, WHICHEVER GREATER. INSULATE WASTE PIPING ABOVE CEILINGS THAT RECEIVE CONDENSATE WITH 1/2" WALL THICKNESS INSULATION. INSULATE EXPOSED SANITARY DRAINS, DOMESTIC WATER, DOMESTIC HOT WATER, AND STOPS

FOR PLUMBING FIXTURES FOR PEOPLE WITH DISABILITIES. FLEXIBLE ELASTOMERIC INSULATION CLOSED-CELL, SPONGE- OR EXPANDED-RUBBER MATERIALS. COMPLY WITH ASTM C 534, TYPE I

FOR TUBULAR MATERIALS AND TYPE II FOR SHEET MATERIALS. ADHESIVES, SEALERS, AND PROTECTIVE FINISHES: AS RECOMMENDED BY INSULATION MANUFACTURER FOR APPLICATIONS INDICATED. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, AND ARE LIMITED TO, THE

AEROFLEX USA, INC.; AEROCEL. ARMACELL LLC; AP ARMAFLEX.

K-FLEX USA; INSUL-LOCK, INSUL-TUBE, AND K-FLEX LS.

FIBERGLASS INSULATION

FIBERGLASS PIPING INSULATION: ASTM C 547, CLASS 1 ENCASE PIPE FITTINGS INSULATION WITH ONE-PIECE PRE-MOLDED PVC FITTING COVERS. VAPOR BARRIER MATERIAL: PAPER-BACKED ALUMINUM FOIL. EXCEPT AS OTHERWISE INDICATED, STRENGTH AND PERMEABILITY RATING EQUIVALENT TO ADJOINING PIPE

STAPLES, BANDS, WIRES, AND CEMENT: AS RECOMMENDED BY INSULATION MANUFACTURER

ADHESIVES, SEALERS, AND PROTECTIVE FINISHES: AS RECOMMENDED BY INSULATION MANUFACTURER FOR APPLICATIONS INDICATED. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, AND ARE LIMITED TO, THE

ARMSTRONG WORLD INDUSTRIES, INC. OWENS-CORNING FIBERGLASS CORP.

FOR APPLICATIONS INDICATED.

KEENE CORP. CERTAINTEED.

JOHNS MANVILLE. **ADHESIVES**

MATERIALS SHALL BE COMPATIBLE WITH INSULATION MATERIALS, JACKETS, AND SUBSTRATES AND FOR BONDING INSULATION TO ITSELF AND TO SURFACES TO BE INSULATED, UNLESS OTHERWISE INDICATED.

INSULATION FOR HANDICAP ACCESSIBLE FIXTURES ALL HANDICAP LAVATORY P-TRAP AND ANGLE STOP ASSEMBLIES SHALL BE INSULATED WITH TRAP WRAP PROTECTIVE KIT MANUFACTURED BY PROFLO MODEL PF202WH. ABRASION RESISTANT, ANTI-MICROBIAL VINYL EXTERIOR COVER SHALL BE SMOOTH. FOR TRAPS, THE INSULATION SHALL HAVE A CLEANOUT NUT CAP TO ALLOW SERVICE TO THE TRAP WITHOUT DISASSEMBLY. FOR STOPS, THE INSULATION SHALL HAVE A LOCK LID THAT PREVENTS TAMPERING BUT ALLOWS ACCESS WITHOUT REMOVAL OF THE INSULATION. FASTENERS SHALL REMAIN SUBSTANTIALLY OUT OF SIGHT.

MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS PROFLO

PLUMBEREX

TRUEBRO

INSTALL PIPING CONCEALED FROM VIEW UNLESS NOTED OTHERWISE, FREE OF SAGS AND BENDS. DO NOT ENCLOSE, COVER, OR PUT PIPING INTO OPERATION UNTIL IT HAS BEEN INSPECTED AND APPROVED BY AUTHORITIES HAVING JURISDICTION. CLEAN AND DISINFECT POTABLE DOMESTIC WATER PIPING USING APPROVED PROCEDURES BY AUTHORITIES HAVING

INSTALL AT RIGHT ANGLES; DIAGONAL RUNS ARE PROHIBITED UNLESS OTHERWISE SHOWN. INSTALL PIPING ABOVE ACCESSIBLE CEILINGS TO ALLOW SUFFICIENT SPACE FOR CEILING PANEL REMOVAL. COORDINATE ALL PIPING WITH ALL OTHER TRADES. PROVIDE WATER PRESSURE REGULATORS WHERE NECESSARY TO LIMIT THE INCOMING WATER PRESSURE TO 80 PSI INSIDE THE BUILDING.

DOMESTIC WATER PIPING ABOVE GROUND: HARD COPPER TUBE, ASTM B 88, TYPE L; WROUGHT-COPPER, SOLDER-JOINT FITTINGS; AND SOLDERED JOINTS.

SOLDER FILLER METALS: ASTM B 32, LEAD-FREE ALLOYS. FLUX: ASTM B 813, WATER FLUSHABLE. TYPE "L"; COPPER PRESSURE-SEAL JOINT; AND PRESSURE-SEAL JOINT SYSTEMS.

PROVIDE DIELECTRIC INSULATION AT POINTS WHERE COPPER OR BRASS PIPE COMES IN CONTACT WITH FERROUS PIPING, REINFORCING STEEL OR OTHER DISSIMILAR METAL IN

22 11 19 DOMESTIC WATER PIPING SPECIALTIES

REDUCED PRESSURE BACKFLOW PREVENTERS BACKFLOW PREVENTER (2" AND SMALLER) - PROVIDE A REDUCED PRESSURE BACKFLOW PREVENTER ON WATER SERVICE MAIN WHERE THE WATER SERVICE ENTERS THE BUILDING. REDUCED PRESSURE BACKFLOW PREVENTER SHALL BE SIZED EQUAL TO THE SIZE OF THE WATER SERVICE AND CONFORM TO ASSE 1013. PIPE BACKFLOW PREVENTER DISCHARGE TO APPROVED

PLACE OF DISPOSAL.

DUAL CHECK VALVE BACKFLOW PREVENTER PROVIDE A DUAL CHECK VALVE BACKFLOW PREVENTER THAT COMPLIES WITH ASSE 1022 AT CONNECTION OF DOMESTIC WATER SUPPLY TO ANY PERMANENTLY CONNECTED CARBONATED BEVERAGE DISPENSER OR WHERE INDICATED IN THE CONTRACT DOCUMENTS. PROVIDE A DUAL CHECK VALVE BACKFLOW PREVENTER THAT COMPLIES WITH ASSE 1024 AT CONNECTION OF DOMESTIC WATER SUPPLY TO ANY POTABLE WATER DISPENSING EQUIPMENT

SUCH AS ICE MAKERS, COFFEE MACHINES, TEA MACHINES, ESPRESSO MACHINES OR WHERE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, AND ARE LIMITED TO, THE

AMES FIRE & WATERWORKS; A DIVISION OF WATTS WATER TECHNOLOGIES, INC. CONBRACO INDUSTRIES, INC.

FEBCO; A DIVISION OF WATTS WATER TECHNOLOGIES, INC. FLOMATIC CORPORATION. WATTS; A DIVISION OF WATTS WATER TECHNOLOGIES, INC.; WATTS REGULATOR COMPANY.

PROVIDE BALANCING VALVES WHERE REQUIRED FOR PROPER BALANCING OF WATER SYSTEMS AS SHOWN ON THE CONTRACT DOCUMENTS.

ZURN INDUSTRIES, LLC; PLUMBING PRODUCTS GROUP; WILKINS WATER CONTROL PRODUCTS.

BALANCING VALVES SHALL BE RED-WHITE VALVE CORPORATION MODEL 9517AB (NPT) OR MODEL 9519 (SOLDER). VALVE SHALL HAVE BRASS BODY, GLOBE VALVE REGULATION AND ISOLATION PROPERTIES, FIXED ORIFICE DESIGN FOR PRECISE MEASUREMENT, INTEGRAL MEMORY STOP TO ENSURE REPEATABLE SETTING, FULL SHUTOFF WITHOUT AFFECTING MEMORY SETTINGS, HIGH AND LOW PRESSURE METERING POINTS, PRECISION INDICATOR WINDOWS, RUGGED TOP SET HAND-WHEEL ASSEMBLY, PRESSURE RATING OF 300 PSI, AND TEMPERATURE RATING OF 15 DEG. F TO 260 DEG. F.

MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, AND ARE LIMITED TO, THE FOLLOWING: CRANE CO.; CRANE VALVE GROUP; CRANE VALVES

HAMMOND VALVE MILWAUKEE VALVE COMPANY. NIBCO INC.

WATTS RED-WHITE VALVE CORP.

PRIER PRODUCTS, INC.

VACUUM BREAKERS VACUUM BREAKERS SHALL BE WATTS MODEL LF288A FOR PIPING CONNECTIONS OR WATTS LF8 SERIES FOR HOSE CONNECTIONS. VACUUM BREAKERS SHALL COMPLY WITH ASSE 1001 FOR PIPED CONNECTIONS, ASSE 1011 FOR HOSE CONNECTIONS, BRONZE BODY AND THREADED

CONNECTIONS WITH ROUGH BRONZE FINISH. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, AND LIMITED TO, THE FOLLOWING: MIFAB, INC.

PRESSURE REDUCING VALVES

WATTS; A DIVISION OF WATTS WATER TECHNOLOGIES, INC.; WATTS REGULATOR COMPANY. ZURN INDUSTRIES, LLC; PLUMBING PRODUCTS GROUP; LIGHT COMMERCIAL PRODUCTS. ZURN INDUSTRIES, LLC; PLUMBING PRODUCTS GROUP; WILKINS WATER CONTROL PRODUCTS

EXCESSIVE OF 80 PSIG. PRESSURE REDUCING VALVE SHALL BE WATTS MODEL LF223S, COMPLY WITH ASSE 1003, INITIAL WORKING PRESSURE OF 300 PSIG, INTEGRAL STRAINER, LEAD-FREE BRASS BODY WITH THREADED CONNECTIONS MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE

PROVIDE PRESSURE REDUCING VALVE TO REGULATE INCOMING DOMESTIC WATER PRESSURE IN

MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, AND LIMITED TO, THE FOLLOWING: CASH ACME; A DIVISION OF RELIANCE WORLDWIDE CORPORATION.

CONBRACO INDUSTRIES, INC. HONEYWELL INTERNATIONAL INC

WATTS; A DIVISION OF WATTS WATER TECHNOLOGIES, INC.; WATTS REGULATOR COMPANY. ZURN INDUSTRIES, LLC; PLUMBING PRODUCTS GROUP; WILKINS WATER CONTROL PRODUCTS. PROVIDE LEAD-FREE WYE-PATTERN STRAINER WATTS MODEL LFS777S RATED FOR 125 PSIG

MINIMUM, BRONZE BODY, THREADED CONNECTIONS, STAINLESS STEEL SCREEN WITH ROUND PERFORATIONS OF 0.020 INCH AND PIPE PLUG DRAIN. PROVIDE STRAINERS ON SUPPLY SIDE OF EACH PRESSURE REDUCING VALVE, SOLENOID VALVE AND PUMP. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, AND LIMITED TO, THE FOLLOWING: MIFAB, INC.

PRIER PRODUCTS, INC. WATTS; A DIVISION OF WATTS WATER TECHNOLOGIES, INC.; WATTS REGULATOR COMPANY. ZURN INDUSTRIES, LLC; PLUMBING PRODUCTS GROUP; LIGHT COMMERCIAL PRODUCTS. ZURN INDUSTRIES, LLC; PLUMBING PRODUCTS GROUP; WILKINS WATER CONTROL PRODUCTS

WHERE APPLICABLE AND POSSIBLE, INSTALL ALL HOSE BIBS 24"-30" ABOVE FINISHED FLOOR TO FACILITATE FILLING OF MOP BUCKET WITHOUT A HOSE. FURNISH TO OWNER WITH RECEIPT ONE VALVE KEY FOR EACH KEY OPERATED HOSE BOB INSTALLED.

MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, AND LIMITED TO, THE FOLLOWING:

SMITH, JAY R. MFG. CO.; DIVISION OF SMITH INDUSTRIES, INC.

TYLER PIPE; WADE DIV WATTS DRAINAGE PRODUCTS

WOODFORD MANUFACTURING COMPANY; A DIVISION OF WCM INDUSTRIES, INC. ZURN INDUSTRIES, LLC; PLUMBING PRODUCTS GROUP; LIGHT COMMERCIAL PRODUCTS. ZURN INDUSTRIES, LLC; PLUMBING PRODUCTS GROUP; SPECIFICATION DRAINAGE PRODUCTS.

WALL HYDRANTS

PROVIDE NONFREEZE WALL HYDRANTS WOODFORD MODEL B-67 WITH CHROME FINISH ON BRASS CASTING WITH BOX AND HINGED DOOR. CONCEAL WITHIN INTERIOR PARTITIONS. FURNISH TO OWNER WITH RECEIPT ONE VALVE KEY FOR EACH KEY

MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, AND LIMITED TO, THE FOLLOWING: JOSAM COMPANY

<u>SMITH, JAY R. MFG. CO.; DIVISION OF SMITH INDUSTRIES, INC.</u>

<u>TYLER PIPE; WADE DIV</u>

WATTS DRAINAGE PRODUCTS WOODFORD MANUFACTURING COMPANY; A DIVISION OF WCM INDUSTRIES, INC.

ZURN INDUSTRIES, LLC; PLUMBING PRODUCTS GROUP; LIGHT COMMERCIAL PRODUCTS ZURN INDUSTRIES, LLC; PLUMBING PRODUCTS GROUP; SPECIFICATION DRAINAGE

TRAP-SEAL PRIMER DEVICE

THE PLUMBING CONTRACTOR SHALL PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS TRAP PRIMER SHALL BE MIFAB MR-500 TRAP PRIMER VALVE. PROVIDE ACCESS PANEL IN WALL OR CEILING FOR ALL CONCEALED TRAP PRIMERS. INSTALL TRAP SEAL PRIMER VALVES WITH OUTLET PIPING PITCHED DOWN TOWARD DRAIN TRAP A MINIMUM OF 1% AND CONNECT TO FLOOR DRAIN BODY, TRAP OR INLET FITTING.COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.

MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, AND LIMITED TO, THE FOLLOWING:

PRECISION PLUMBING PRODUCTS, INC.

SIOUX CHIEF MANUFACTURING COMPANY, INC. SMITH, JAY R. MFG. CO.; DIVISION OF SMITH INDUSTRIES, INC. WATTS; A DIVISION OF WATTS WATER TECHNOLOGIES, INC.; WATTS REGULATOR

WATER TAB METERS DISPLACEMENT-TYPE WATER METERS:

PLUMBING CONTRACTOR TO COORDINATE WITH OWNER FOR EXACT MODEL AND MANUFACTURER.

DESCRIPTION: DISPLACEMENT-TYPE WATER METER COMPLYING WITH AWWA C700. REMOTE REGISTRATION SYSTEM: DIRECT-READING TYPE COMPLYING WITH AWWA C706; MODIFIED WITH SIGNAL-TRANSMITTING ASSEMBLY, LOW-VOLTAGE CONNECTING WIRING, AND REMOTE REGISTER ASSEMBLY AS REQUIRED BY LANDLORD OR OWNER. MOUNT READER IN AN ACCESSIBLE LOCATION.

WATER HAMMER ARRESTERS PROVIDE WATER-HAMMER ARRESTERS IN WATER PIPING ACCORDING TO PDI-WH 201. STANDARD: ASSE 1010 OR PDI-WH 201. TYPE: METAL BELLOWS OR COPPER TUBE WITH PISTON.

SIZE: ASSE 1010, SIZES AA AND A THROUGH F, OR PDI-WH 201, SIZES A THROUGH F.

MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, AND ARE LIMITED TO, THE FOLLOWING: AMTROL, INC. JOSAM COMPANY PRECISION PLUMBING PRODUCTS, INC.

SMITH, JAY R. MFG. CO.; DIVISION OF SMITH INDUSTRIES, INC.

SIOUX CHIEF MANUFACTURING COMPANY, INC.

EXISTING SANITARY SEWER.

22 13 16 SANITARY, WASTE AND VENT PIPING SYSTEM PROVIDE A COMPLETE SOIL. WASTE AND VENT SYSTEM IN THE BUILDING AND ON THE SITE AS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN. ABOVE GROUND SOIL, WASTE AND VENT PIPING WITHIN BUILDINGS INCLUDING SOIL STACKS. VENT STACKS, HORIZONTAL BRANCHES, TRAPS, AND CONNECTIONS TO FIXTURES AND DRAINS. UNDERGROUND BUILDING DRAIN PIPING INCLUDING MAINS, BRANCHES, TRAPS, CONNECTIONS TO FIXTURES AND DRAINS, AND CONNECTIONS TO STACKS, TERMINATING AT CONNECTION TO

INTERIOR PIPING LINE SHALL BE SCHEDULE 40 CELLULAR-CORE PVC PIPE. ASTM F891, WITH ALL COMPATIBLE PVC SOCKET FITTINGS. MAKE TO ASTM D3311, DRAIN, WASTE, AND VENT PATTERNS PROVIDE DRAIN LINE TEMPERING KIT ON FOUIPMENT WHERE DISCHARGE WATER EXCEEDS 140°F. WHEN TEMPERING KIT IS NOT PERMISSIBLE, INSTALL 10' OF CAST IRON PIPING DOWNSTREAM OF EQUIPMENT'S WASTE RECEPTOR. ALTERNATIVELY, LINE SHALL BE CLASS 125 SERVICE WEIGHT, NO-HUB, CAST IRON WITH

ALL COMPATIBLE FITTINGS WHERE TEMPERATURE EXCEEDS EXCEEDS 140°F. PIPING ALIGNMENT SHALL BE AS INDICATED ON THE DRAWINGS USING APPROVED WYE BRANCHES OR EIGHT BANDS FOR DIRECTION CHANGES AND SHALL BE SURELY SUPPORTED OR SECURED TO MAINTAIN SUCH ALIGNMENT. PITCH OF SANITARY PIPING SHALL BE UNIFORM AT A MINIMUM OF 1/8" PER FOOT FOR BUILDING DRAINS, DRAINAGE PIPING GREATER THAN 2" AND AS INDICATED ON THE

DRAWINGS. PITCH OF SANITARY PIPING SHALL BE UNIFORM AT A MINIMUM OF 1/4" PER FOOT FOR DRAINAGE PIPING 2" AND SMALLER AND AS INDICATED ON THE DRAWINGS. PROTECTION SHALL BE GIVEN ALL FOOTINGS, OTHER STRUCTURAL ELEMENTS DURING UNDERGROUND WORK ADJACENT TO SUCH ITEMS. REFER TO ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS FOR LOCATIONS VENT ALL FIXTURES, CONNECT BRANCH VENTS TO MAIN VENT RISERS AT LEAST SIX INCHES ABOVE FLOOD RIM OF FIXTURES. PITCH VENT LINES BACK TO SOIL OR WASTE PIPE, FREE OF

EACH RIGHT ANGLE TURN AND AT INTERVALS NOT TO EXCEED FIFTY FEET. IN FLOORS, INSTALL FLUSH WITH FINISH FLOOR WITH EXTENSION PIPE FROM CLEANOUT WYE.

CLEANOUTS SHALL BE FULL SIZE OF PIPE UP TO 4", AND 4" FOR LARGER SIZES. FOR

UNDERGROUND AND CONCEALED LINES, PROVIDE CLEANOUTS IN ACCESSIBLE POSITIONS AT

STORM SEWER PIPING - ALL STORM SEWER LINES SHALL BE PVC ASTM D-3034 WITH

SDR-35 GASKETS. 22 13 19 SANITARY WASTE PIPING SPECIALTIES

CLEANOUTS FLOOR CLEANOUT: AS SCHEDULED.

WALL CLEANOUT: AS SCHEDULED. PROVIDE A SANITARY TEE AND THREADED CAP CLEANOUT PLUG IN SUSPENDED WASTE PIPING. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, AND ARE LIMITED TO, THE FOLLOWING:

WATTS REGULATOR CO.; A DIVISION OF WATTS WATER TECHNOLOGIES, INC MIFAB

ZURN

DROPS AND SAGS.

SIOUX CHIEF FLOOR DRAINS

JOSAM, SMITH, ZURN, WATTS, MIFAB, SIOUX CHIEF, OR OATEY ALL FLOOR DRAINS LOCATED IN ROOMS WHICH HAVE TILE FLOORS SHALL HAVE SQUARE

REFER TO PLUMBING FIXTURE AND EQUIPMENT SCHEDULE FOR PROJECT SPECIFIC FLOOR DRAIN MANUFACTURERS AND MODELS 22 30 01 POINT OF USE THERMOSTATIC MIXING VALVES

ROUTE TEMPERED WATER TO HOT WATER SIDE OF SINK AND LAVATORIES.

THERMOSTATIC MIXING VALVES SHALL BE PROVIDED FOR ALL PUBLIC HAND WASHING SINKS AND LAVATORIES AND SHALL BE ASSE 1070 LISTED, LEAD FREE, SWEAT CONNECTIONS, 125 PSI OPERATING PRESSURE. MOUNT UNDER SINK OR LAVATORY. SET OUTLET TEMPERATURE OF THERMOSTATIC MIXING VALVE TO 110 DEGREES F. POINT-OF USE THERMOSTATIC MIXING VALVES SHALL BE POWERS HYDROGUARD LFe480.

MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE

MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK

INCLUDE, AND ARE LIMITED TO, THE FOLLOWING:

SYMMON: LAWLER

POWERS BRADLEY

22 33 00 COMMERCIAL ELECTRIC, DOMESTIC WATER HEATERS

PROVIDE COMMERCIAL ELECTRIC TANK TYPE WATER HEATER AS SCHEDULED. COMPLY WITH UL 1453 STANDARD PROVIDE CORROSION RESISTANT METAL DRAIN PAN WITH RAISED EDGE SIZED NOT LESS THAN

PROVIDE FIELD FABRICATED PIPING HEAT TRAP ARRANGEMENT ACCORDING TO ASHRAE/IESNA

PROVIDE COMBINATION TEMPERATURE AND PRESSURE RELIEF VALVE, ASME RATED AND STAMPED WITH RELIEVING CAPACITY AT LEAST AS GREAT AS HEAT INPUT AND PRESSURE SETTING LESS THAN WATER HEATER'S RATED OPERATING PRESSURE. PROVIDE WATER HEATER STANDS OR MOUNTING BRACKETS WITH MANUFACTURER'S FACTORY

FACTORY-INSTALLED BUTYL RUBBER DIAPHRAGM, PRE-CHARGED TO MINIMUM SYSTEM OPERATING PRESSURE AT TANK. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE

BRADFORD WHITE CORPORATION

LOCHINVAR CORPORATION.

22 40 00 PLUMBING FIXTURES

INCLUDE, AND ARE LIMITED TO, THE FOLLOWING:

KOHLER CO.

FIKAY SLOAN. FIAT.

LEONARD

THE BASE OF THE WATER HEATER AND INCLUDE DRAIN OUTLET NOT LESS THAN NPS 3/4 WITH ASME B1.20.1 PIPE THREADS.

FABRICATED STEEL CAPABLE OF SUPPORTING WATER HEATER AND WATER. PROVIDE STEEL PRESSURE-RATED EXPANSION TANK CONSTRUCTED WITH WELDED JOINTS AND

MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, AND ARE LIMITED TO, THE FOLLOWING:

RHEEM MANUFACTURING COMPANY SMITH, A. O. WATER PRODUCTS CO.; A DIVISION OF A. O. SMITH CORPORATION.

REFER TO PLUMBING FIXTURE SCHEDULE. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK

AMERICAN STANDARD AMERICA. CRANE PLUMBING, LLC.

TOTO USA, INC. ZURN INDUSTRIES, LLC; COMMERCIAL BRASS AND FIXTURES STERLING; A KOHLER COMPANY.

09/11/2023

08.28.2023 - HVAC COORD.

09.06.2023 - REVIEW SET

09.11.2023 - PERMIT SET

Progress Dates

OH COA #4715

Drawn by:

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