MULTIPURPOSE SENIOR CENTER FOR FAYETTE COUNTY, GEORGIA ADDITION

4 CENTER DRIVE FAYETTEVILLE, GEORGIA 30214

HOME INSTEAD SENIOR CARE ATLANTA SOUTH

INDE	EX OF DRAWINGS
ARCHIT	TECTURAL
A0.01	COVER SHEET
	GENERAL NOTES
A1.01	DEMOLITION PLAN, FOUNDATION PLAN
A1.02	/
A1.03	FRAMING PLAN / REFLECTED CEILING PLAN
A1.04	ELECTRICAL LAYOUT / FINISH PLAN
A2.01	EXTERIOR ELEVATIONS
A3.01	WALL SECTIONS / DETAILS
ELECTI	RICAL
	ELECTRICAL SPECIFICATIONS, NOTES & LEGENDS
	LIGHTING DEMOLITION PLAN / LIGHTING NEW WORK PLAN
E-3	POWER DEMOLITION PLAN / POWER NEW WORK PLAN
MECHA	NICAL
	MEQUANUOM ODEOUGIOATIONO NOTEO A LEGENZO
	MECHANICAL SPECIFICATIONS, NOTES & LEGENDS
	MECHANICAL NEW WORK PLAN & SCHEDULES
M - 3	MECHANICAL DETAILS

PROJECT DIRECTORY

OWNER
HOME INSTEAD SENIOR CARE ATLANTA—SOUTH
MULTIPURPOSE SENIOR CENTER FOR FAYETTE
COUNTY, GEORGIA
4 Center Drive
Fayetteville, Georgia 30214
(770) 461—0813

ARCHITECTURAL HARRIS FRITZ AND ASSOCIATES, INC. 141 South Avenue Marietta, Georgia 30060 (770) 426-5050

MECHANICAL, ELECTRIC., AND PLUMBING ENG.
MARSHALL & BOLLWERK ENGINEERING, INC.
950 North Point Pkwy. Suite 375
Alpharetta, Georgia 30005
(678) 795-0333

PROJECT DATA

APPLICABLE BUILDING CODES:

INTERNATIONAL BUILDING CODE — 2012 Edition with Georgia State Amendments

INTERNATIONAL FIRE CODE (IFC)— 2012 Edition with Georgia State Amendments
INTERNATIONAL MECHANICAL CODE — 2012 Edition with Georgia State Amendments

INTERNATIONAL MECHANICAL CODE — 2012 Edition with Georgia State Amendments

INTERNATIONAL PLUMBING CODE — 2012 Edition with Georgia State Amendments

NATIONAL ELECTRICAL CODE — 2011 Edition with Georgia State Amendments

INTERNATIONAL ENERGY CONSERVATION CODE — 2009 Edition with 2011 & 2012 Georgia State Supplements & Amendments

GEORGIA ACCESSIBILITY CODE FOR BUILDINGS FACILITIES (GAC) CHAPTER 120-3-20 Access to Use of Public Facilities by Handicapped Persons effective JUNE 11. 2012 OCCUPANCY CLASSIFICATION: ASSEMBLY

CONSTRUCTION TYPE VB

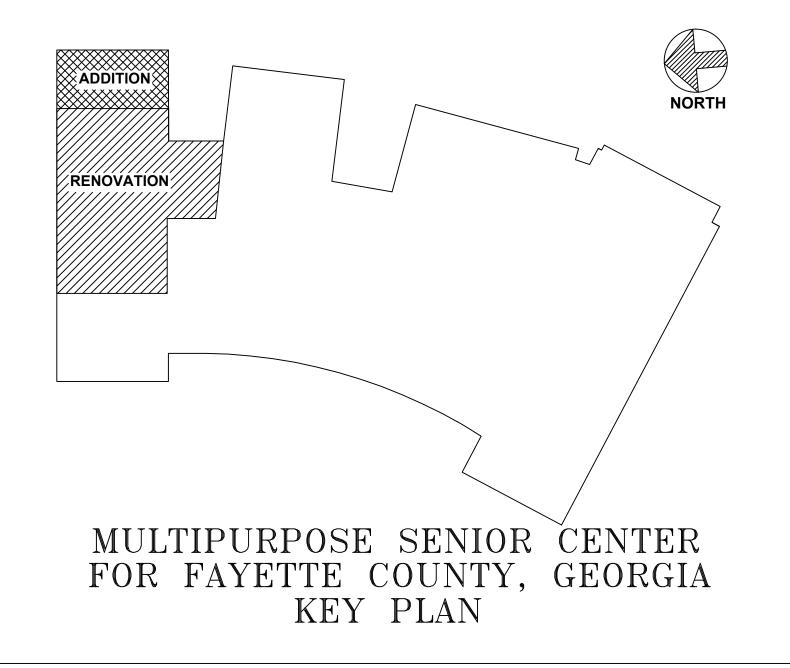
FIRE PROTECTION REQUIREMENTS:
FIRE EXTINGUISHERS 1 FOR EVERY 3000 SF/75' TRAVEL

SPRINKLERS AND STANDPIPE PER SBC 9043 & NFPA 14-1996

THIS BUILDING IS EQUIPPED WITH A FULLY AUTOMATIC FIRE
PROTECTION SPRINKLER SYSTEM (Fire alarm and Sprinkler system integrity shall be maintained during renovations)

TOTAL AREA ADDITION = 751 SFU

TOTAL EXISTING AREA TO BE RENOVATED = 2,611 SFU







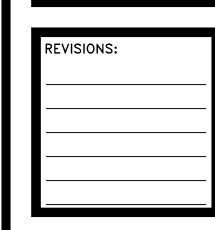
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FOR FAYETTE CO. GA. ADI FAVETTENDEIN 30214





10-27-14

DATE:
2014-009

PROJECT NUMBER

HEET NO:

AO.01

GENERAL NOTES

ALL DIMENSIONS ARE FROM FACE OF GYPSUM BOARD TO FACE OF GYPSUM BOARD, UNLESS NOTED OTHERWISE, (U.N.O.)

TYPE "A" WALLS:

NEW TYPICAL DIVIDER WALL; TO BE BUILT AT LEAST 6" PAST SUSPENDED CEILING LINE WITH 2x4 WOOD STUDS SPACED AT 16" O.C. WITH 5/8" GYPSUM BOARD EACH SIDE, GYPSUM BOARD TO BE 1/4" OFF F.F. TO PREVENT WATER DAMAGE IN CASE OF FLOOD. (THIS IS A NON RATED, NON LOAD BEARING PARTITION).

TYPE "B" WALLS:

NEW EXTERIOR WALL TO BE BUILT AS SHOWN ON 4/A3.01 &

CONSTRUCTION TYPE: 2x6 WOOD STUDS @ 16" O.C. WITH 5 1/2" R-19 FIBERGLASS BATT INSULATION BY OWENS CORNING OR APPROVED EQUAL, 5/8" GYPSUM BOARD SCREW ATTACHED WITH JOINTS STAGGERED 1/4" OFF F.F. TO PREVENT WATER DAMAGE IN CASE OF FLOOD ON INTERIOR SIDE OF WALL & 1/2" SHEATHING ON EXTERIOR SIDE, 2" AIR CAVITY & BRICK VENEER TO MATCH EXISTING BRICK AND MORTAR; THIS IS A LOAD BEARING WALL.

ROOF ASSEMBLY: MUST MATCH EXISTING ROOF ASSEMBLY, PITCH AND FINISH ASPHALT ROOF SHINGLES COLOR AND MANUFACTURER. (SEE 1/A2.01 & 2/A2.01).

WALL FLOOR TRACK

BOTTOM TRACK OF WALLS SHALL BE BUTT JOINTED.

WALLS FINISH WILL BE PAINTED. PAINT COLOR TO MATCH EXISTING.

ALL INTERIOR FINISHES TO BE CLASS "C" OR BETTER. (MEET CRITERIA OF FLAME SPREAD RATING 0-200). GC TO PROVIDE CODE OFFICIALS WITH ACCEPTABLE TEST DATA.

CEILING — PROVIDE NEW 2x2 CEILING GRID & TILE CEILING HEIGHT AT 9'-0" AFF, TO MATCH EXISTING, UNLESS NOTED OTHERWISE (U.N.O.). LAYOUT CEILING GRID AS INDICATED ON DRAWINGS. 24"x24" LAY-IN ACOUSTICAL PANELS WITH EXPOSED GRID SUSPENSION SYSTEM.

NEW CEILINGS TO MATCH EXISTING REUSE EXISTING TILES AS MUCH AS POSSIBLE.

DOORS: PROVIDE NEW DOORS AND FRAMES AS INDICATED ON PLAN, DOUBLE 36" WIDTH X 7'-0" X 1 3/4" FLUSH, MATERIAL AND FINISH TO MATCH EXISTING DOORS, SET IN HOLLOW METAL BREAK DOWN FRAME, U.N.O. PROVIDE DOUBLE STUDS AT ALL DOOR FRAMES AND CASED OPENINGS. ALL DOOR EDGES TO BE FINISHED TOP AND BOTTOM. PROVIDE LABELED DOORS AND FRAMES IN ALL RATED WALLS. PROVIDE NEW LEVER HARDWARE SETS MEETING ADA REQUIREMENTS ON ALL NEW DOORS PROVIDE NEW HARDWARE TO MATCH EXISTING BUILDING STANDARD, LEVER TYPE. KEYING, PROVIDE CYLINDERS WITH 6 ACTIVE PINS, KEYED, KEYED ALIKE, MASTER KEYED, AND GRAND MASTER KEYED. DELIVER ALL KEYS TO OWNER. U.N.O. MATCH BUILDING STANDARD FINISHES. DOORS IN EXITS SHALL NOT BE SUBJECT TO THE USE OF A KEY FOR OPERATION FROM THE INSIDE OF THE BUILDING.

ENTRY DOORS FROM MAIN COORIDOR TO MATCH EXISTING PLASTIC LAMINATE DOORS. REUSE EXISTING DOORS AND CLOSER IF POSSIBLE.

PROVIDE 18" CLEARANCE ON PULL SIDE OF DOOR.

PROVIDE 12" CLEARANCE ON PUSH SIDE OF DOOR.

CLEARANCE DETERMINED TO BE FROM FACE OF CLOSEST PROJECTION TO EDGE OF DOOR.

FLOORS, CARPET: CARPET TO BE SELECTED BY ARCHITECT. VINYL COMPOSITION TILE: TO BE SELECTED BY ARCHITECT FROM STANDARD COLORS.

CARPET/VCT RUBBER TRANSITION STRIP TO MATCH RUBBER BASE.

WALL BASE: 4" RUBBER BASE TO MATCH EXISTING.

LUMBER IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED.

PROJECTION SCREEN AND PROJECTOR IN NEW EXTENSION ROOM ARE EXISTING TO BE RELOCATED AND INSTALLED BY GC. GC TO PROVIDE ELECTRICAL J—BOX AND CONTROL SWITCH ON WALL ADJACENT TO SCREEN COORDINATE EXACT LOCATION WITH OWNER AND/OR MANUFACTURER'S GUIDELINES.

GLAZING AND STOREFRONT FOR INTERIOR CONDITIONS. PROVIDE HOLLOW METAL STOREFRONT UNO WITH 3/8" THICKNESS SHATTER RESISTANT GLAZING.

PORTIONS OF THE CONSTRUCTION MAY REQUIRE ALCOVES INTO THE EXISTING FIRE RATED PUBLIC CORRIDORS OF THE MAIN BUILDING. ALL FINISHES SHOULD BE EXTENDED INTO THE ENTRANCE ALCOVES INCLUDING CEILINGS, VWC, FLOORING, ETC. DURING THE BID USE BUDGET ALLOWANCES FOR THESE FINISHES. DURING CONSTRUCTION PHASE THE ARCHITECT WILL PROVIDE FINISH SPECIFICATIONS.

KITCHEN APPLIANCES: ALL APPLIANCES INDICATED IN THESE DRAWINGS ARE TO BE PROVIDED BY GC U.N.O. ALL FULL SIZE REFRIGERATORS AND COFFEE LOCATIONS WILL BE PROVIDED WITH WATER. WE ARE ASKING EACH GC TO INCLUDE PROVISIONS FOR ASSISTING THE OWNER/ARCHITECT AND COORDINATE WITH THE MILLWORK SUB-CONTRACTOR FOR PRECISE MILLWORK SHOP DRAWINGS AND APPLIANCE INSTALLATION SPECIFICATIONS.

OFFICE EQUIPMENT: ALL OFFICE EQUIPMENT INDICATED ON THE DRAWINGS I.E. COPIER, FAX, PRINTERS, SHREDDERS, TREADMILLS, HIGH DENSITY FILE CABINETS, ETC. WILL BE FURNISHED AND INSTALLED BY THE TENANT. THE GC IS RESPONSIBLE FOR PROVIDING POWER/DATA/PHONE LINES AS INDICATED ON THE DRAWINGS AS NEEDED. THE TENANTS HAVE NOT SELECTED ALL THE OFFICE EQUIPMENT. HOWEVER, WE HAVE INDICATED ON THE DRAWINGS THE ESTIMATED TYPE, QUANTITY AND LOCATION FOR EQUIPMENT.

ALL VOICE/DATA OUTLETS ARE 2 VOICE AND 2 DATA U.N.O. WIRELESS COMMUNICATION SYSTEM WILL BE FURNISHED AND INSTALLED BY THE TENANT. THE GC IS RESPONSIBLE FOR TO PROVIDE BOXES AND CONDUIT TO TOP OUT AT THE STUD WALLS WITH PULL—STRING. VOICE AND DATA OUTLETS SHOULD BE SAME AS EXISTING (COLOR, MATERIAL, NUMBERING, ETC.)

ELECTRICAL

REFER TO ELECTRICAL CONSTRUCTION DOCUMENTS. PROVIDE ELECTRICAL PANELS AND TELEPHONE BOARD AS INDICATED ON FLOOR PLAN. ALL ELECTRICAL SYSTEMS SHALL BE THOROUGHLY CHECKED AND TESTED. ALL ELECTRICAL INSTALLATIONS SHALL COMPLY WITH LOCAL CODES.

PROVIDE 2X4 FLUORESCENT FIXTURES U.N.O. WITH ACRYLIC LENS TO MATCH EXISTING AS INDICATED ON DRAWINGS.

EMERGENCY LIGHTING— PROVIDE 2X4 FLUORESCENT FIXTURES WITH BATTERY PACKS AS PER CODE TO MAINTAIN ILLUMINATION OF THE MEANS OF EGRESS (NOT LESS THAN 1 FOOTCANDLE FOR A PERIOD OF 1-1/2 HOURS) IN THE EVENT OF POWER FAILURE OF THE NORMAL LIGHTING. CHECK ALL EMERGENCY & EGRESS LIGHTING AND REPLACE WITH NEW COMBO PACKS, IF REQUIRED. EXIT LIGHTING—PROVIDE WITH BATTERY PACKS AS PER CODE SUCH THAT EXITS SHALL BE MARKED BY APPROVED ILLUMINATED SIGNS READILY VISIBLE FROM ANY DIRECTION OF EXIT ACCESS. (NO POINT IN THE EXIT ACCESS SHALL BE MORE THAN 100 FT. FROM THE NEAREST VISIBLE SIGN.) EXIT LIGHTS REQUIRED BY CODE SHALL HAVE BATTERY PACK ABOVE CEILING.

MECHANICAL

REFER TO MECHANICAL CONSTRUCTION DRAWINGS. ALL MECHANICAL SYSTEMS SHALL BE THOROUGHLY CHECKED AND BALANCED. PLUMBING AND MECHANICAL INSTALLATION SHALL COMPLY WITH LOCAL CODES.

FIRE EXTINGUISHERS: GC TO TO RELOCATE EXISTING FIRE EXTINGUISHERS IF REQUIRED PER FIRE MARSHAL'S REQUIREMENTS.

PERMITS: IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN ALL PERMITS AND CERTIFICATES OF OCCUPANCY. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO ENSURE THAT ALL WORK IS IN COMPLIANCE WITH ALL CODES, ORDINANCES AND REGULATIONS OF ALL CONSTITUTED PUBLIC AUTHORITIES HAVING JURISDICTION.

HANDICAP

PROVIDE FIXTURES, ACCESSORIES AND HARDWARE FOR THE HANDICAPPED MEETING THE TITLE III PROVISIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA). PROVIDE DOOR HARDWARE AND/OR ACCESSORIES DESIGNED TO COMPLY WITH STATE, LOCAL AND FEDERAL HANDICAPPED ACCESSIBILITY CODES INCLUDING ADA AND ANSI STANDARDS SECTION (GAC) CHAPTER 120-3-20 ACCESS TO USE PUBLIC FACILITIES BY HANDICAPPED PERSONS EFECTIVE JUNE 11 2012. ALL HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE. THESE PLANS HAVE BEEN PREPARED TO CONFORM WITH THE ABOVE LISTED STANDARDS, TO THE BEST OF OUR KNOWLEDGE AND INFORMATION, FOR THE SCOPE OF WORK HEREIN SUBMITTED.

GENERAL CONTRACTOR

ALL WORK SHALL BE DONE IN A WORKMANLIKE MANNER AND IN ACCORDANCE WITH ACCEPTED CONSTRUCTION STANDARDS. ALL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH PLANS AND SPECS UNLESS A VARIANCE IS APPROVED BY OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR A COMPLETE AND OPERATIONAL TENANT SPACE, INCLUDING ALL FINISHES, MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS.

IN AREAS ALREADY FINISHED BY THE SHELL BUILDING AND BEING FINISHED DURING THIS CONSTRUCTION:
ALL NEW DOORS AND FINISHES IN CORRIDORS ARE TO MATCH THOSE OF THE ORIGINAL TO THE BUILDING, INCLUDING CEILINGS, VINYL WALL COVERINGS, DOORS, HARDWARE AND CLOSERS.

ALL HVAC CONTROLS SHALL BE SIEMENS AND THEREFORE CONSISTENT WITH THE BUILDING ENERGY MANAGEMENT SYSTEM.

GENERAL CONTRACTOR IS TO PROVIDE NEGATIVE AIR PRESSURE IN THE REFERENCED TENANT SPACE DURING CONSTRUCTION TO PREVENT AND CONTAIN DUST AND CONTAMINATES FROM ENTERING OTHER AREAS OF THE BUILDING.

GENERAL CONTRACTOR TO PROVIDE FIELD AND PROJECT MANAGEMENT WITH A FULL TIME ON SITE SUPERINTENDENT EXCLUSIVE TO THIS PROJECT.

GENERAL CONTRACTOR TO PROVIDE ON SITE DUMPSTER FOR CONSTRUCTION DEBRIS.

GENERAL CONTRACTOR TO PROVIDE PROTECTION OF THE FINISHED SHELL BUILDING CORRIDORS AT ALL TIMES DURING CONSTRUCTION. GC IS TO PLACE 'MASONITE' PROTECTION BOARDS ON FLOORS, TAPING ALL JOINTS TO SEAL FROM DUST PENETRATION.

GC IS RESPONSIBLE FOR PROTECTING THE EXISTING BUILDING SHELL FROM HARM, DESTRUCTION, DUST, DIRT AND DAMAGE. GC WILL ENDEAVOR TO KEEP SUBCONTRACTORS FROM MAKING NOISE, ODORS OR LOUD TALKING WHEN PASSING THROUGH THE SENIOR CENTER PORTION TO DELIVER MATERIALS VIA THE CORRIDORS.

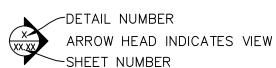
CONTACT SENIOR CENTER BUILDING MANAGER TO DETERMINE WHICH CORRIDORS MAY BE USED AND TO UNDERSTAND OTHER RULES THAT MAY APPLY CONCERNING SCHEDULING AND/OR RESTRICTIONS FOR THE DELIVERY OF MATERIALS.

AIR QUALITY

VENTILATION CONTROL AND DUST PREVENTION SUBMIT A DETAILED SCHEDULE TO MULTIPURPOSE SENIOR CENTER OF FAYETTE COUNTY REPRESENTATIVE FOR MOVING, CUTTING AND PATCHING DURING CONSTRUCTION. CONSTRUCT A SOFT WALL TO SEPARATE CONSTRUCTION AREA FROM EXISTING AREAS WITH A RIGID FRAME AND /OR PLASTIC SHEETS ACCORDING TO THE SENIOR CENTER COORDINATOR. THIS SOFT WALL MAY BE METAL STUD WALL BUILT TIGHT TO THE DECK ABOVE OR BUILT TO THE BOTTOM OF THE CEILING TILE. PROVIDE SCREW ANCHORS AND DUCT TAPE ALL CRACKS. SEAL THE ENTIRE ASSEMBLY FOR A DUST RESISTANT, NOISE RESISTANT, CLEAN AND SAFE ENVIRONMENT ON THE NON-CONSTRUCTION SIDE. THIS TEMPORARY WALL TO BE CONSTRUCTED IN A FASHION SUCH THAT REMOVAL WILL BE CLEAN AND WILL PRODUCE AS LITTLE DUST AS POSSIBLE. DURING THE CONSTRUCTION PERIOD, THE GC SHALL PROVIDE NEGATIVE AIR VENTILATION OF THE CONSTRUCTION AREA ENVELOPE WITH TEMPORARY EXHAUST FANS AND DUCTS TO THE EXTERIOR OF THE BUILDING. PROVIDE AND MAINTAIN DUST CONTROL FILTERS AND MONITOR DUST PREVENTION, CARE AND NOISE CONTROL DURING CONSTRUCTION. CLEANING WILL BE COORDINATED WITH A REPRESENTATIVE FROM THE SENIOR CENTER OF FAYETTE COUNTY TO ENSURE THAT FUMES ARE CORRECTLY ROUTED. TEMPERATURE AND HUMIDITY CONTROL IS REQUIRED DURING THE CONSTRUCTION PROCESS. CLEAN CONSTRUCTION AREA DAILY IS A MUST.

GENERAL CONTRACTOR IS TO PROVIDE ALL NECESSARY COORDINATION AND MATERIALS TO SATISFY FAYETTE COUNTY SENIOR CENTER RISK AND INFECTIOUS DISEASE REPRESENTATIVES DURING CONSTRUCTION.

CONVENTIONAL SYMBOLS USED



INDICATES WALL TYPE



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LTIPURPOSE SENIOR C R FAYETTE CO. GA. AL



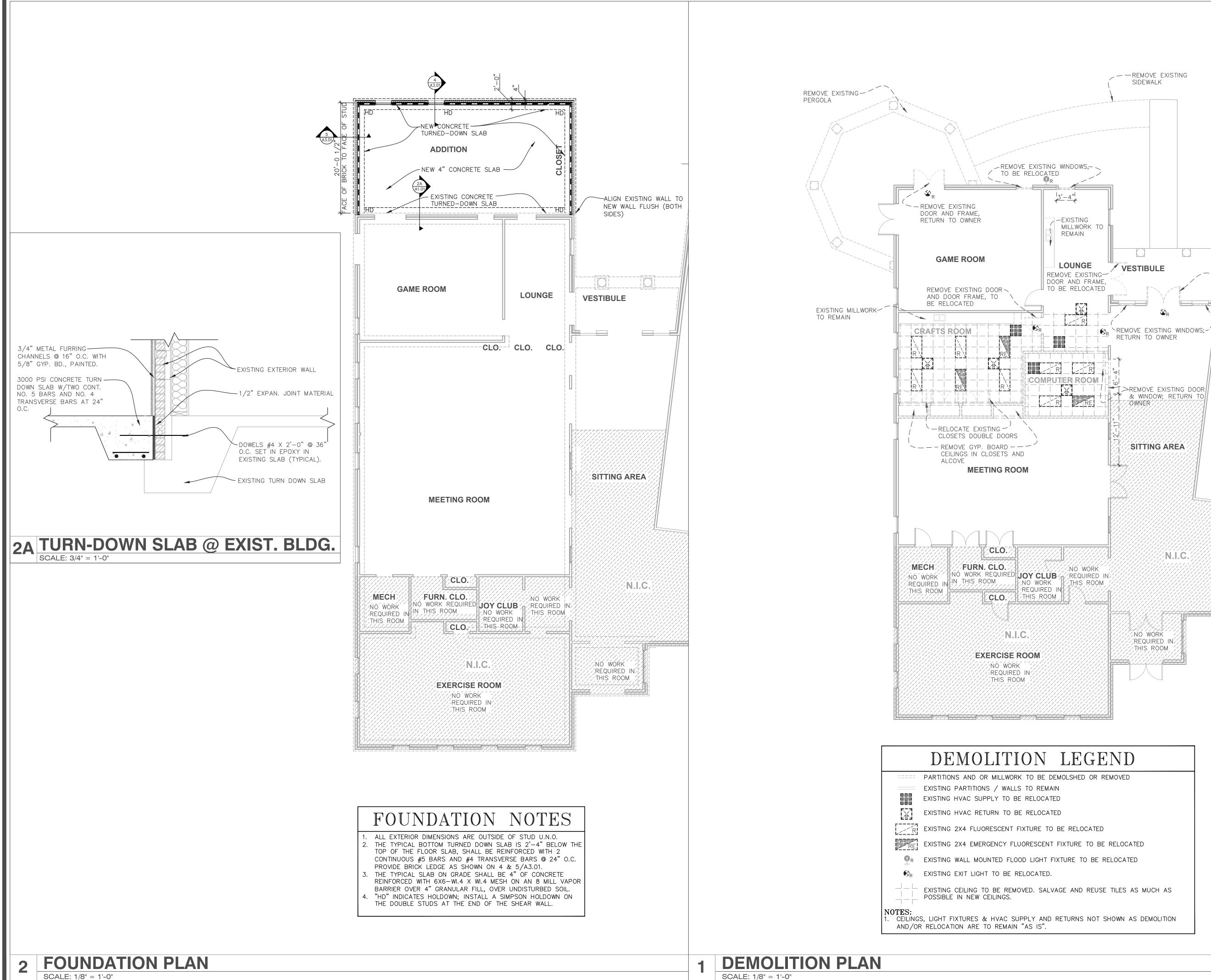
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10-27-14 DATE: 2014-009 PROJECT NUMBER

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--- REMOVE EXISTING SIDEWALK

REMOVE EXISTING DOOR

SITTING AREA

N.I.C.

/NO WORK REQUIRED IN

THIS ROOM

OWNER?

& WINDOW; RETURN TO

REMOVE EXISTING DOOR,

TO BE RELOCATED

DOOR FRAME & TRANSOM

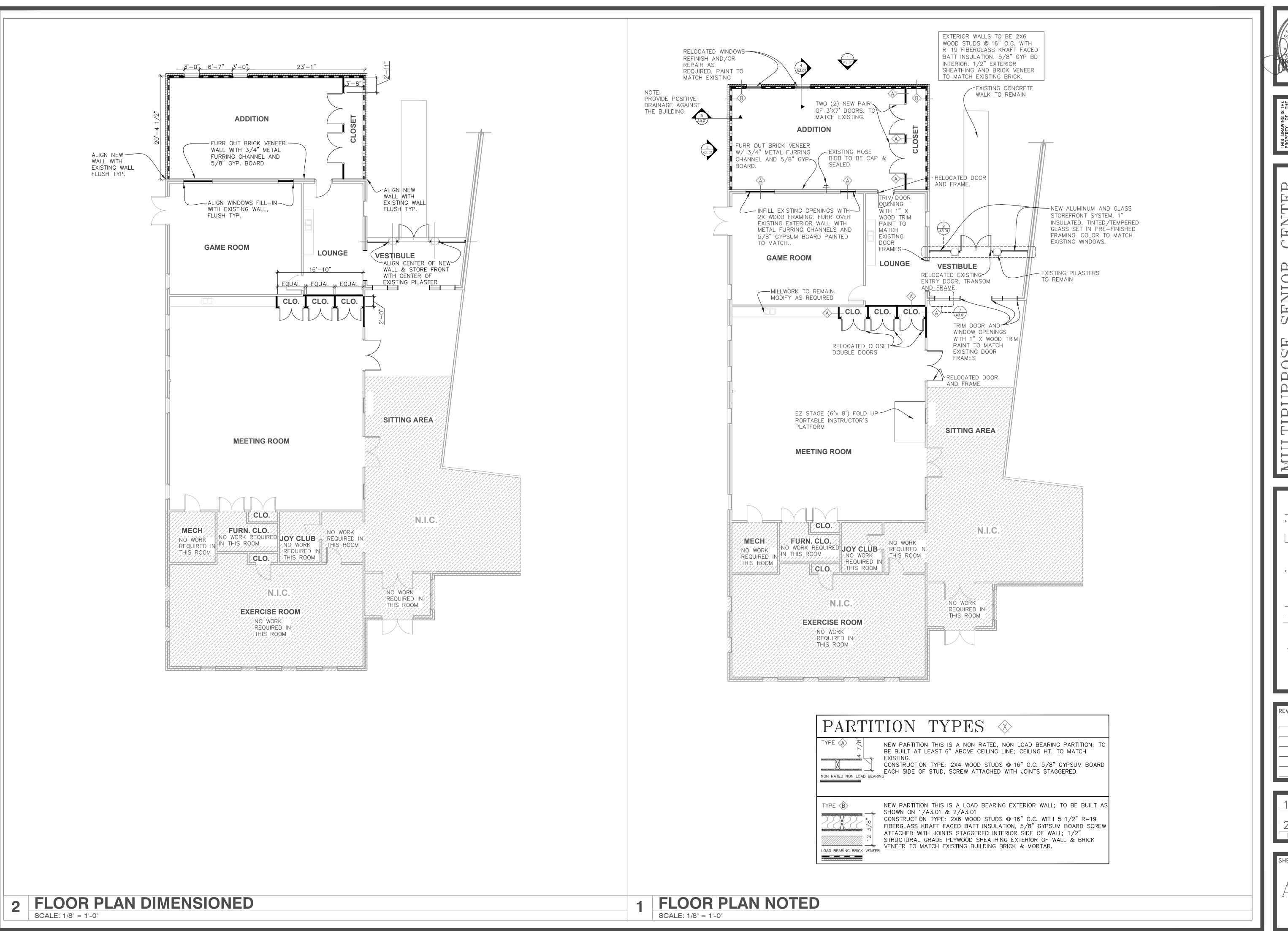


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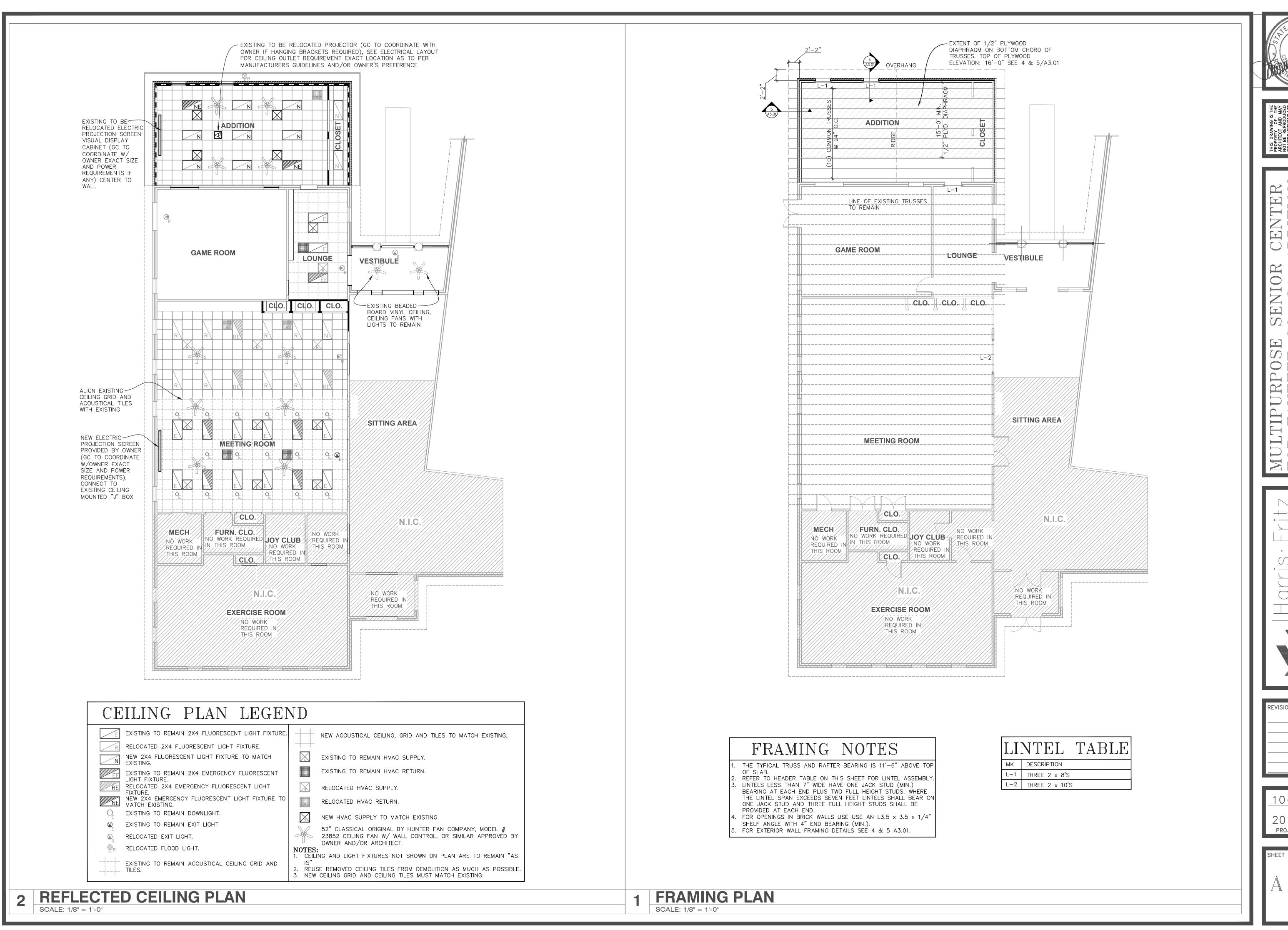


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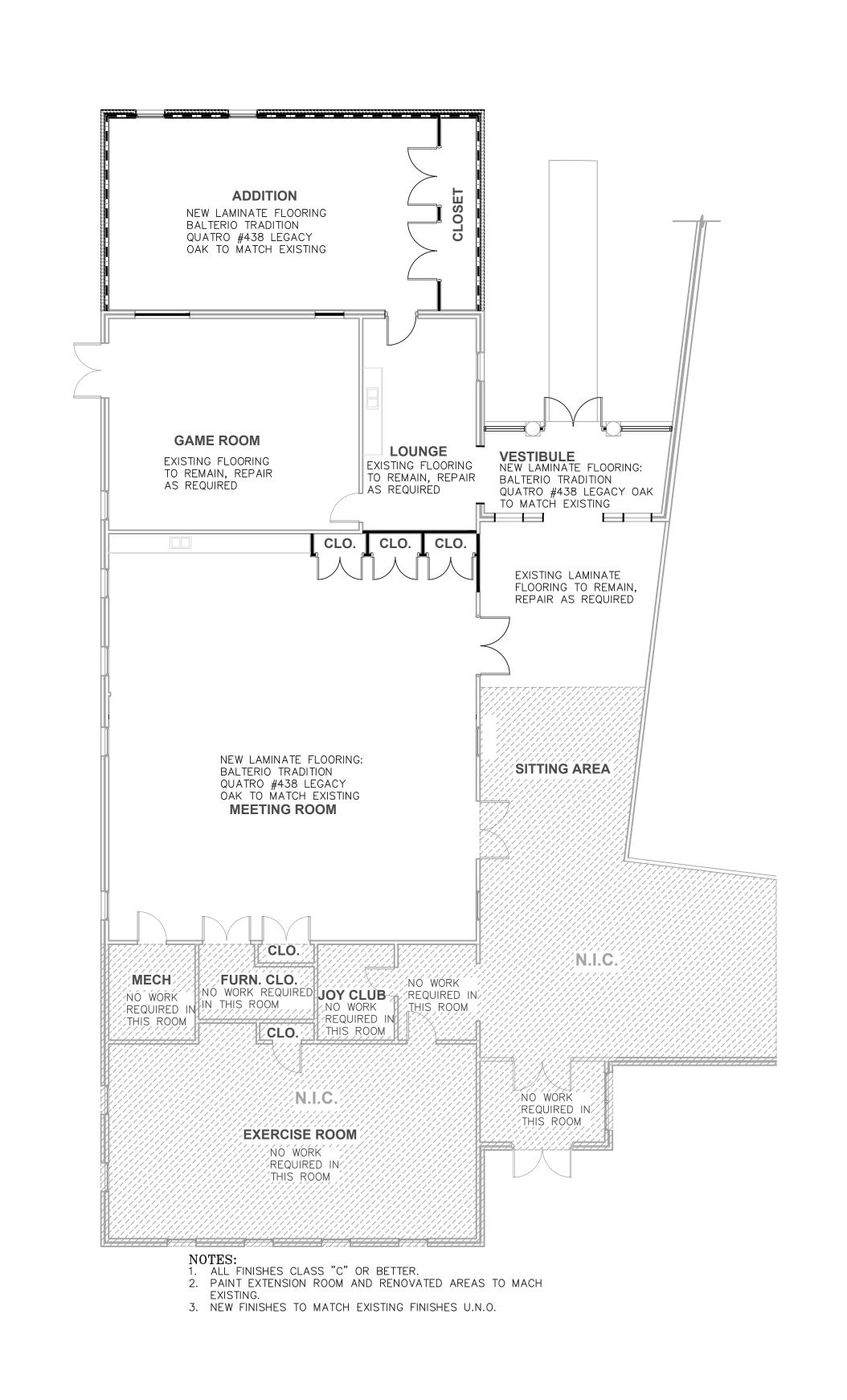


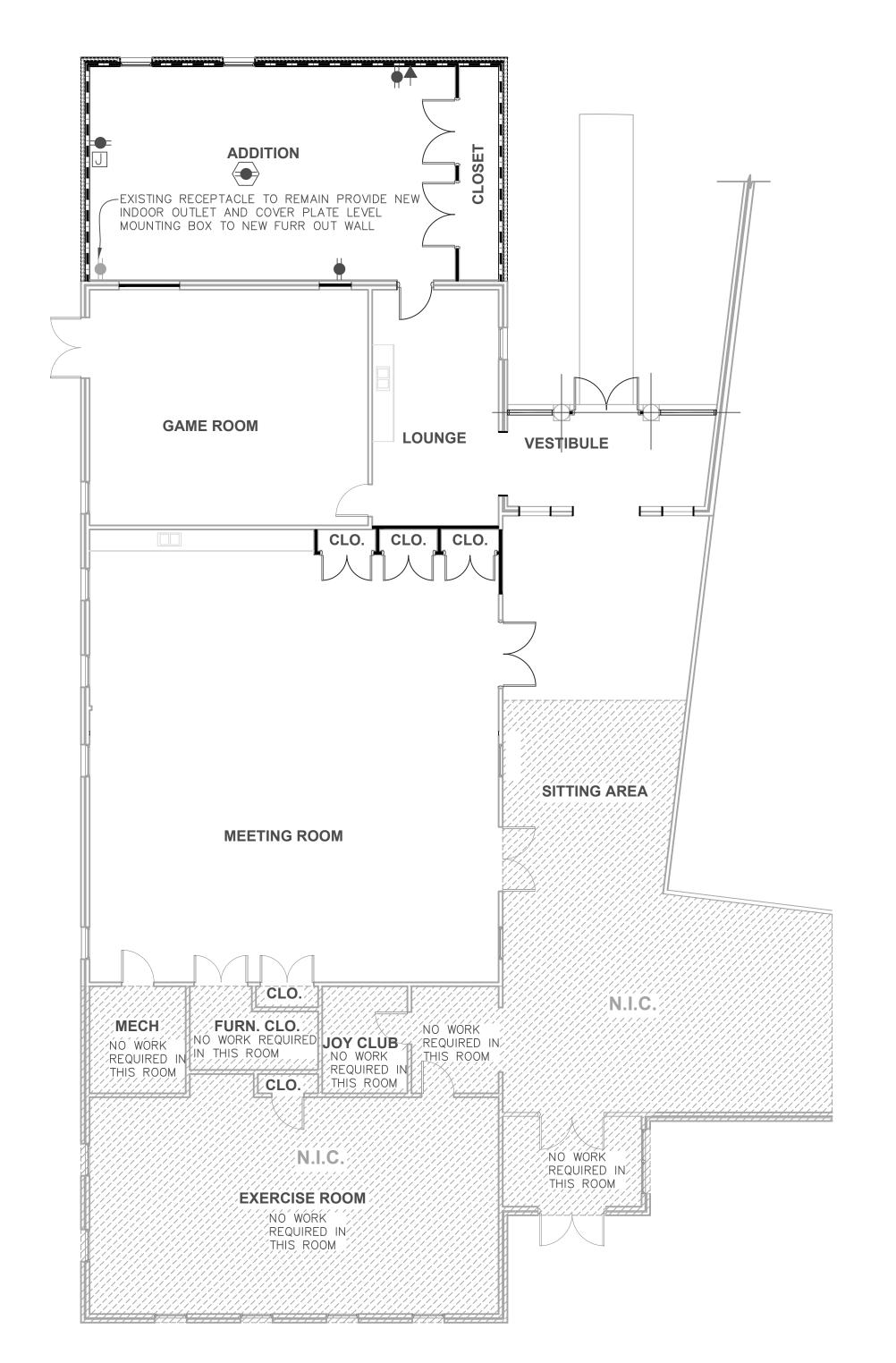
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ELECTRICAL LEGEND

- EXISTING TO REMAIN 120 DUPLEX RECEPTACLE.
- NEW 120 DUPLEX RECEPTACLE @ 12" AFF.
- NEW DATA OUTLET @ 12" AFF.
- NEW 120 DUPLEX RECEPTACLE CEILING MOUNTED, COORDINATE EXACT LOCATION WITH OWNER AND/OR PROJECTOR MANUFACTURER.
- NEW 120 JUNCTION BOX ABOVE CEILING.

1. EXISTING TO REMAIN "AS IS" POWER RECEPTACLES AND DATA DROPS NOT SHOWN FOR DRAWING CLARITY.

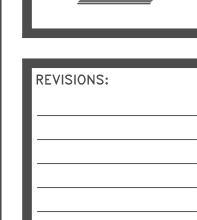
ELECTRICAL LAYOUT

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

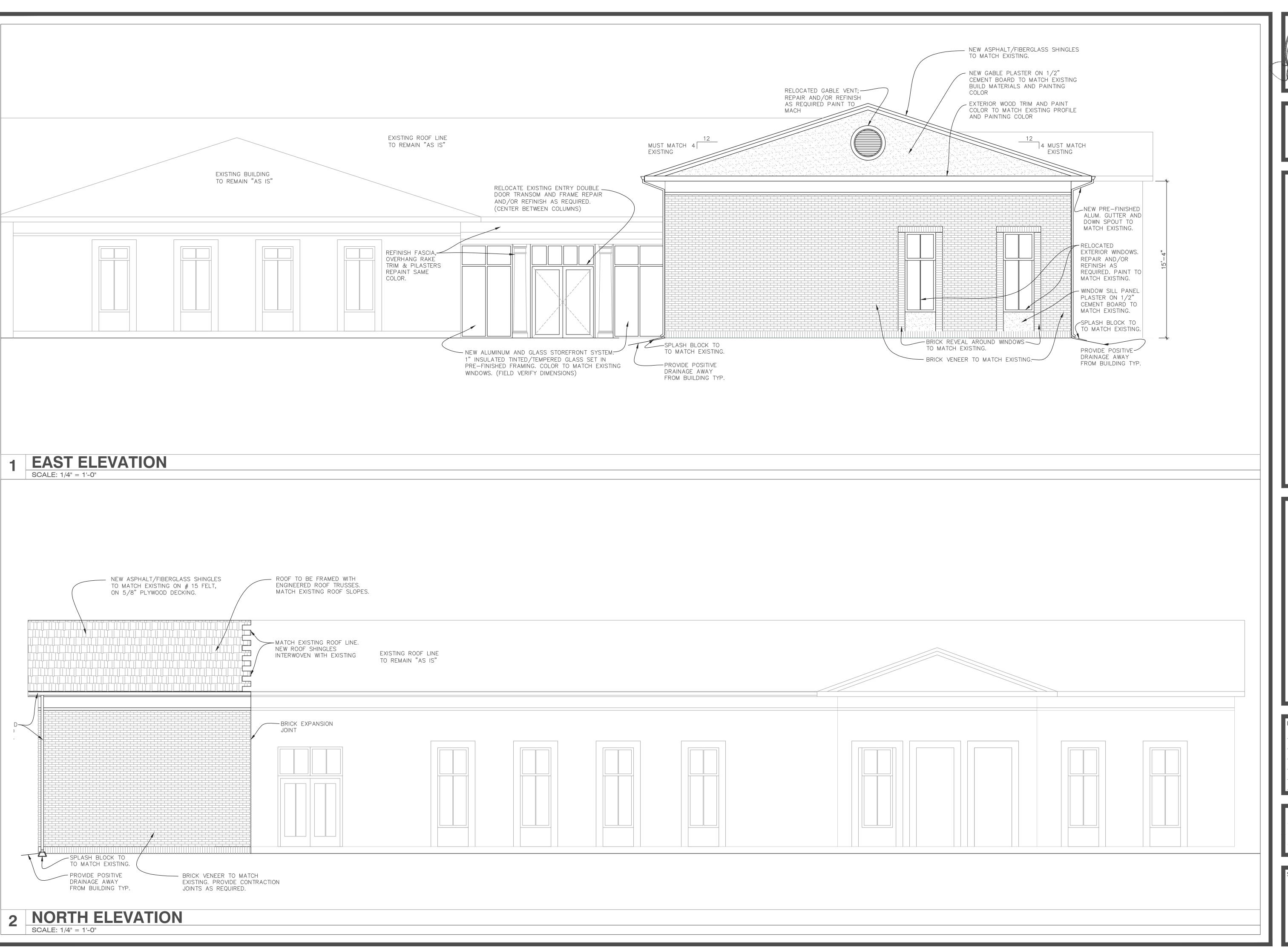




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ADDITION APPLICATION APPLICATI

FOR FAYETTE CO. GA.
4 CENTER DRIVE
FAYETTEVILLE, GEORGIA 30214

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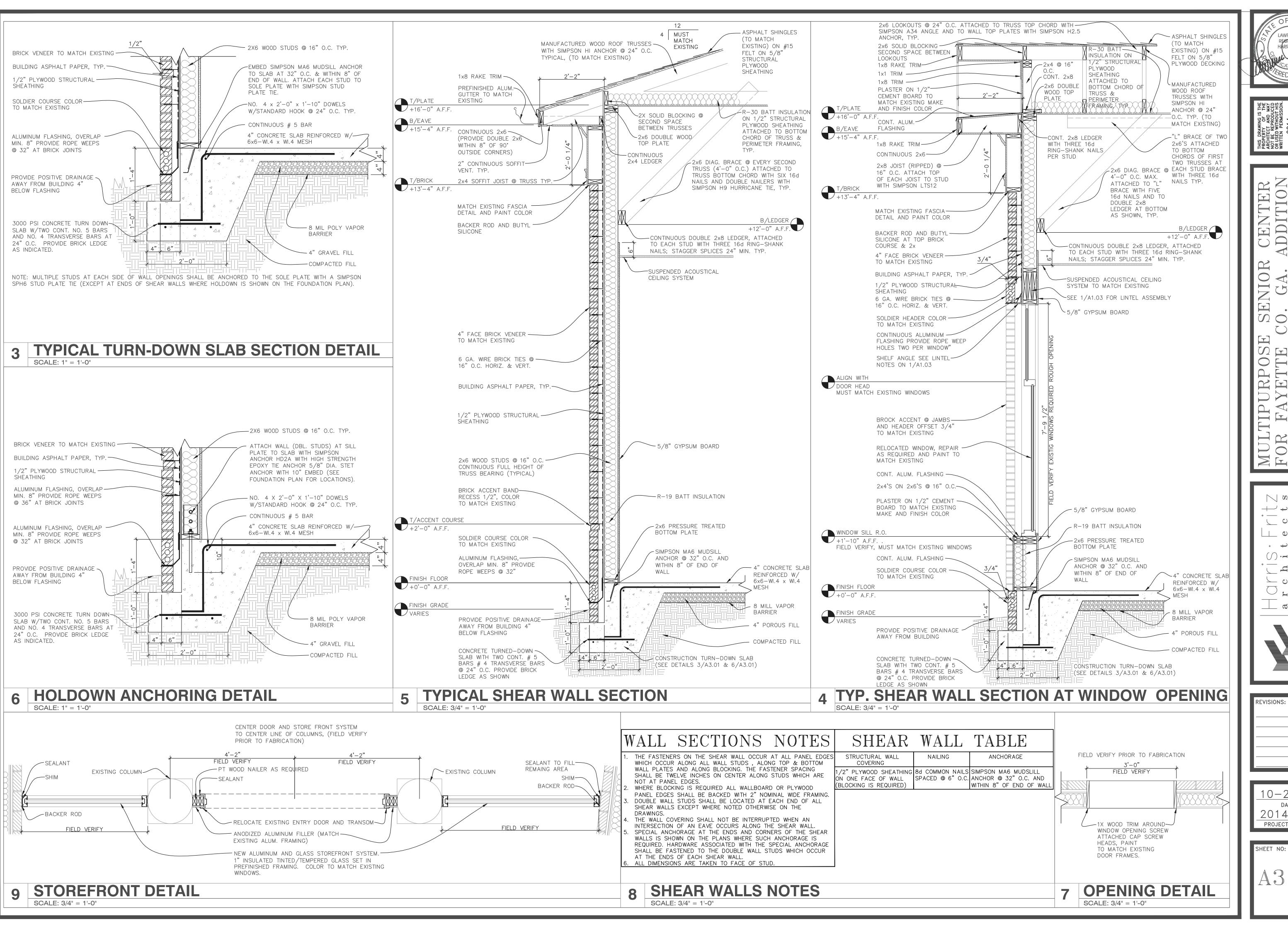
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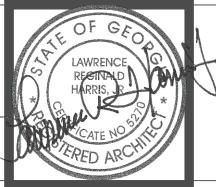
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ELECTRICAL SPECIFICATIONS AND NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2011 NATIONAL ELECTRICAL CODE (NFPA 70), AS MODIFIED BY THE STATE, COUNTY, CITY AND/OR OTHER LOCAL CODES. THE SERVICE AND METERING ARE EXISTING.
- THE CONTRACTOR SHALL PROVIDE ALL MATERIAL, LABOR, AND EQUIPMENT NECESSARY TO FURNISH A COMPLETE AND OPERABLE ELECTRICAL SYSTEM. ALL WORK SHALL BE PERFORMED IN A NEAT AND PROFESSIONAL MANNER.
- THE CONTRACTOR SHALL OBTAIN, PURCHASE, AND MAINTAIN ALL PERMITS, AND INSPECTIONS REQUIRED BY THE GOVERNING AUTHORITIES FOR THE DURATION OF THIS
- THE CONTRACTOR SHALL COORDINATE ALL ELECTRICAL REQUIREMENTS, AND MAKE ALL FINAL CONNECTIONS, TO EQUIPMENT FURNISHED BY OTHER TRADES. THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS, EQUIPMENT, AND WORKMANSHIP FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE OF THE COMPLETED PROJECT
- ELECTRICAL EQUIPMENT SHALL BE INSTALLED AS SHOWN ON THE PLANS, UNLESS NOTED OTHERWISE. WORKING CLEARANCES SHALL BE 36" (FOR 208 VOLT SYSTEM) AND WIDTH OF EQUIPMENT OR 30" MINIMUM, WHICHEVER IS GREATER, WIDE, PER NEC ARTICLE 110.26. WHERE A PANELBOARD OR LOADCENTER IS LOCATED IN A STORAGE OR EQUIPMENT ROOM (NOT A CORRIDOR) THAT IS NOT PARTITIONED FROM OTHER USES, PAINT THE LIMITS OF THE WORKING CLEARANCES FROM NEC ARTICLE 110.26 ON THE FLOOR IN FRONT OF THE EQUIPMENT.
- THE CONTRACTOR SHALL COORDINATE THE WIDTH, DEPTH, HEIGHT, DOOR SWINGS, AND NEC ARTICLE 110.26 CLEARANCES FOR ALL PANELBOARDS, TRANSFORMERS, STARTERS, AND SAFETY SWITCHES TO INSURE THAT ALL EQUIPMENT FITS WITHIN THE SPACE
- IDENTIFY PANELBOARDS, SAFETY SWITCHES, STARTERS, CONTROLS, AND OTHER ELECTRICAL EQUIPMENT WITH ENGRAVED PLASTIC NAMEPLATES HAVING CONTRASTING 1/4" HIGH (OR LARGER) LETTERS, WITH NAMES TO MATCH THE SCHEDULES OR OTHER DRAWING REFERENCES. TYPEWRITTEN PANEL DIRECTORIES SHALL BE PROVIDED IN ALL PANELBOARDS, AND SHALL REFLECT AS-BUILT CONDITIONS.
- ALL WIRING, CONSISTING OF INDIVIDUAL CONDUCTORS, SHALL BE INSTALLED IN CONDUIT, EXCEPT WHERE SPECIFICALLY SHOWN ON THE DRAWINGS. ALL EXTERIOR CONDUITS AND EXPOSED CONDUITS SHALL BE RIGID GALVANIZED STEEL, OR INTERMEDIATE METAL CONDUIT, BUT THEY SHALL NOT BE MIXED ON THIS PROJECT. WHERE USED INDOORS MAY BE EMT. CONCEALED CIRCUITS MAY BE RUN IN EMT OR BE TYPE MC CABLE (BX). NON-METALLIC SHEATHED (TYPE NM) CABLE IS NOT PERMITTED. IN FINISHED AREAS WITH CAVITY TYPE WALL CONSTRUCTION, ALL CONDUIT SHALL BE CONCEALED. UNLESS NOTED OTHERWISE. IN FINISHED AREAS WITH NON-CAVITY TYPE WALL CONSTRUCTION, SURFACE MOUNTED GRS, IMC, OR EMT SHALL BE USED. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH A NYLON PULL CORD RATED FOR 200 POUND TENSION. ANY OF THE FOLLOWING TYPES OF RACEWAYS MAY BE USED. SUBJECT TO THE NEC AND THE ADDITIONAL RESTRICTIONS LISTED, IF ANY.
- A. CONCEALED: GRS, OR IMC.
- EMT. COMPRESSION, OR SET SCREW FITTINGS, BUT NOT BOTH TYPES.
- TYPE MC CABLE. ONLY ABOVE ACCESSIBLE CEILINGS, IN WALL CAVITIES, AND ADDITIONAL USAGES AS APPROVED BY AUTHORITY HAVING JURISDICTION, AND OWNER.
- B. EXPOSED:
- 1). GRS, OR IMC.
- EMT. COMPRESSION FITTINGS. ONLY WHERE USED INDOORS AND NOT SUBJECT TO PHYSICAL DAMAGE.
- FLEXIBLE METAL CONDUIT.
- LIQUIDTIGHT FLEXIBLE METAL CONDUIT. OUTSIDE AND WHERE MOISTURE IS
- PROVIDE EXPANSION FITTINGS IN ALL RIGID RACEWAYS CROSSING STRUCTURAL EXPANSION JOINTS. FURNISH AND INSTALL ALL SUPPORTS REQUIRED FOR CONDUIT, MATERIALS, DEVICES, EQUIPMENT AND THE LIKE, WHERE THE BUILDING STRUCTURE IS NOT ADAPTED OR SUITABLE FOR MOUNTING SAME DIRECTLY THEREON. RACEWAYS SHALL NOT BE USED AS SUPPORTS FOR BOXES OR OTHER ELECTRICAL EQUIPMENT PLENUM CABLE SUPPORT BRACKETS SHALL BE OPEN ON ONE SIDE. AND CABLES SHALL BE ATTACHED WITH PLASTIC CABLE TIES. ALL RACEWAY PENETRATIONS, THROUGH FIREWALLS, SHALL BE SEALED WITH UL LISTED SEALING COMPOUNDS TO MAINTAIN THE FIRE RATING OF THE WALL. ALL RACEWAYS/SLEEVES PASSING THROUGH AREAS OF DIFFERENT TEMPERATURES, I.E. FROM INSIDE TO OUTSIDE OF BUILDINGS, SHALL BE SEALED WITH AN APPROVED PUTTY OR DUCT-SEAL TO PREVENT THE CIRCULATION OF WARM AIR TO A COLDER SECTION OF THE RACEWAY OR SLEEVE. ALL RACEWAY PENETRATIONS THROUGH EXTERIOR AND INTERIOR WALLS SHALL BE PROPERLY SEALED.
- 10. LOW VOLTAGE WIRING IS NOT A PART OF THIS WORK. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH A NYLON PULL CORD.
- 11. ALL WIREWAYS, PULL BOXES, DEVICE BOXES, AND JUNCTION BOXES SHALL BE SIZED PER JIC. NEMA. AND THE NATIONAL ELECTRICAL CODE. ALL WIRING WITHIN BOXES AND WIREWAYS SHALL BE TAGGED WITH PANEL AND CIRCUIT NUMBERS.
- 12. TWENTY AMP BRANCH CIRCUITS MAY BE SHOWN WITH EITHER SINGLE CIRCUIT. OR THREE CIRCUIT (MULTIWIRE BRANCH CIRCUIT) HOME RUNS. THREE CIRCUIT HOME RUNS SHARE A COMMON NEUTRAL, UNLESS NOTED OTHERWISE AND GROUND IN A SINGLE CONDUIT. THE CONTRACTOR MAY ELECT TO COMBINE SINGLE CIRCUIT HOME RUNS TO MAKE THREE CIRCUIT HOME RUNS. OR TO CHANGE THREE CIRCUIT HOME RUNS TO SINGLE CIRCUIT HOME RUNS. ALL MULTIWIRE BRANCH CIRCUITS SHALL HAVE A MEANS TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE PANEL TO COMPLY w/NEC 210.4(B).
- PROVIDE SEPARATE GREEN, INSULATED GROUND WIRE IN ALL RACEWAYS.
- 14. ALL WIRING SHALL BE 600 VOLT, COPPER, STRANDED, WITH TYPE THHN/THWN INSULATION. MINIMUM SIZE FOR POWER AND LIGHTING CIRCUITS BE 12 AWG. SIZES 10 AWG AND SMALLER SHALL BE SOLID. PROVIDE AN EQUIPMENT GROUND WIRE IN ALL RACEWAYS, AND CABLE ASSEMBLIES. SIZE EQUIPMENT GROUNDS PER TABLE 250.122 OF THE NATIONAL ELECTRICAL CODE.
- CONDUCTOR COLOR CODES SHALL MATCH EXISTING FACILITY. USE CONDUCTORS #8 AND SMALLER WITH COLOR FACTORY-APPLIED THE ENTIRE LENGTH OF THE CONDUCTORS. COLOR CODING FOR THE LARGER SIZES MAY BE ACCOMPLISHED BY USING COLORED. 1 INCH WIDE. PRESSURE-SENSITIVE PLASTIC TAPE IN HALF-LAPPED TURN FOR A DISTANCE OF 6 INCHES FROM TERMINAL POINTS. APPLY THE LAST TWO LAPS OF TAPE WITH NO TENSION TO PREVENT POSSIBLE UNWINDING.
- 16. ALL ELECTRICAL EQUIPMENT SHALL BE LISTED BY UNDERWRITERS LABORATORIES (OR OTHER INDEPENDENT NATIONALLY RECOGNIZED TESTING AGENCY, WHERE APPLICABLE), AND SHALL BE RATED FOR THE MAXIMUM AVAILABLE VOLTAGE AND AVAILABLE FAULT CURRENT FOR THIS PROJECT.
- 17. ALL DEVICE BOXES SHALL BE INSTALLED FLUSH, AND CONDUITS RUN CONCEALED IN FINISHED AREAS, EXCEPT AS SPECIFICALLY SHOWN OR NOTED OTHERWISE. VERIFY ALL DOOR SWINGS BEFORE INSTALLING SWITCH BOXES. SEE ARCHITECTURAL DRAWINGS FOR CABINET WORK, WALL SECTIONS, ELEVATIONS, AND OTHER DETAILS AFFECTING THE MOUNTING HEIGHT AND LOCATION OF OUTLET BOXES.
- WIRING DEVICES: DUPLEX RECEPTACLES SHALL BE 20A., 125 VOLTS, CONSTRUCTION SERIES, HEAVY DUTY, SPECIFICATION GRADE, BACK AND SIDE WIRED, WITH GROUNDING TERMINAL AND SHALL BE IVORY UNLESS NOTED OTHERWISE, HUBBELL CR5362I OR APPROVED EQUAL, CONTINGENT UPON FULL COMPLIANCE WITH ALL CRITERIA. ISOLATED GROUND DUPLEX RECEPTACLES SHALL BE 20A., 125 VOLTS, HUBBELL IG5362I OR APPROVED EQUAL, CONTINGENT UPON FULL COMPLIANCE WITH ALL CRITERIA. AC TOGGLE SWITCHES SHALL BE 20A., 120-277 VOLTS, CONSTRUCTION SERIES, HEAVY DUTY, SPECIFICATION GRADE, BACK AND SIDE WIRED, WITH GROUNDING TERMINAL AND SHALL BE IVORY UNLESS NOTED OTHERWISE, HUBBELL CS1221I, THREE WAY, HUBBELL CS1223I OR APPROVED EQUAL, CONTINGENT UPON FULL COMPLIANCE WITH ALL CRITERIA. GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLES SHALL BE 20A., 125 VOLTS, COMMERCIAL SPECIFICATION GRADE, HUBBELL GF5352I OR APPROVED EQUAL, CONTINGENT UPON FULL COMPLIANCE WITH ALL CRITERIA. GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLES SHALL NOT BE THE FEED THROUGH TYPE, BUT STAND ALONE GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLES. NEW

- NEW INTERIOR EXPOSED DEVICE PLATES, IN ALL LOCATIONS WHERE SPECIFIED SHALL BE NYLON, STANDARD SIZE, AND GANGED FOR MULTIPLE DEVICES AT A SINGLE LOCATION. VERIFY THE DECOR THEME WITH THE ARCHITECT AND COORDINATE COLOR AS REQUIRED. WHERE USED OUTDOORS, IN DAMP AND/OR WET AREAS, THE OUTLET COVERS FOR 15 OR 20A, 125 OR 250V DEVICES SHALL BE "WEATHERPROOF WHILE IN USE", HUBBELL WP26MH OR APPROVED EQUAL, CONTINGENT UPON FULL COMPLIANCE WITH ALL
- 19. OUTLETS WITHIN 6'-0" OF ANY PLUMBING FIXTURE, AND/OR WHERE INDICATED, SHALL BE 20A., 125 VOLTS, CONSTRUCTION SERIES, HEAVY DUTY, SPECIFICATION GRADE, BACK AND SIDE WIRED, WITH GROUNDING TERMINAL GROUND FAULT INTERRUPTER OUTLETS, HUBBELL GF5352I, OR APPROVED EQUAL, CONTINGENT UPON FULL COMPLIANCE WITH ALL CRITERIA.
- . ALL UNIT EQUIPMENT FOR EMERGENCY LIGHTING SHALL BE CONNECTED TO BRANCH CIRCUITS FOR NORMAL LIGHTING IN THE SAME AREA, UNLESS NOTED OTHERWISE, AHEAD OF ANY LOCAL SWITCHES OR CONTACTORS PER NEC ARTICLE 700.12(F)
- 21. ELECTRICAL DRAWINGS ARE IN PART DIAGRAMMATIC. LOCATE LIGHTING FIXTURES SYMMETRICALLY OR IN PROPER RELATION TO FINISHED AREAS UNLESS OTHERWISE DIMENSIONED OR DETAILED. THE CONTRACTOR SHALL COORDINATE ALL LUMINAIRE LOCATIONS AND CLEARANCES WITH THE DUCTWORK, THE REFLECTED CEILING PLAN, HVAC PLAN, AND OTHER DRAWINGS TO AVOID CONFLICTS.
- 22. A NUMERAL BESIDE BRANCH CIRCUIT OUTLET INDICATES PANELBOARD CIRCUIT CONNECTION. UPPER-CASE LETTER OR LETTER-GROUP BESIDE LIGHTING FIXTURE INDICATES FIXTURE TYPE. ELECTRICAL SYMBOLS USED ARE APPLICABLE GENERALLY; FOR EXACT REQUIREMENTS REFER TO APPLICABLE SCHEDULES AND DETAILS AND TO THE SPECIFICATIONS. HOWEVER. COMBINING OF CIRCUITS IN RACEWAYS. OTHER THAN DETAILED, WILL NOT BE PERMITTED. RUNNING OF BRANCH CIRCUITS, OTHER THAN THE ONE SERVING THE FIXTURE, THROUGH LIGHTING FIXTURE CHANNELS OR HOUSINGS WILL NOT BE PERMITTED.
- 23. ALL SAFETY SWITCHES SHALL BE FURNISHED BY THE CONTRACTOR, UNLESS NOTED OTHERWISE AND SHALL NOT BE MOUNTED ON ACCESS PANELS OF EQUIPMENT. SAFETY SWITCHES SHALL BE GENERAL ELECTRIC, SQUARE D, EATON CORPORATION, SIEMENS ENERGY & AUTOMATION, OR APPROVED EQUAL, CONTINGENT UPON FULL COMPLIANCE WITH ALL CRITERIA, AND SHALL BE FUSED AND/OR NOT FUSED AS INDICATED, 250 VOLT, THREE POLE, GENERAL DUTY, IN A NEMA 3R ENCLOSURE FOR OUTDOOR USE OR WHERE MOISTURE IS PRESENT, AND NEMA 1 ENCLOSURE FOR INDOOR USE. UNLESS NOTED OTHERWISE. ALL FUSES SHALL BE NON-RENEWABLE, DUAL ELEMENT, TIME DELAY, CURRENT LIMITING, CLASS RK-5, OR RK-1, WITH A 200,000 AMP AC RMS INTERRUPTING RATING, AND SHALL MEET UL STANDARD 198E.
- 24. ALL PANELBOARDS ARE EXISTING.
- 25. THE BRANCH CIRCUITS SHALL BE PHASE ADJUSTED TO PROVIDE APPROXIMATE BALANCED LOADING ON PANEL
- 26. SUBSTITUTIONS: ALL COSTS INCURRED BY THE ACCEPTANCE OF SUBSTITUTIONS SHALL BE BORNE BY THE CONTRACTOR. THE ONUS SHALL BE ON THE CONTRACTOR TO PROVE THAT THE SUBSTITUTIONS ARE EQUAL TO THE BASIS OF DESIGN SPECIFIED.
- MAINTAIN AS-BUILT DRAWINGS, UPDATED DAILY DURING CONSTRUCTION, AND PRESENT THE OWNER, WITHIN 30 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE, WITH TWO SETS OF AS-BUILT DRAWINGS. PROVIDE THE OWNER'S PERSONNEL WITH ON-SITE INSTRUCTION IN THE OPERATION AND MAINTENANCE OF THE COMPLETED ELECTRICAL SYSTEM PRIOR TO SYSTEM ACCEPTANCE.
- 28. ALL COMMUNICATIONS [CONDUITS] CABLES SHALL BE ROUTED AND SECURED AT LEAST 12" FROM FLUORESCENT FIXTURES AND POWER CIRCUITS. CROSS OTHER CIRCUITS AT 90 DEGREE ANGLE.
- MOUNT OUTLET BOXES, ABOVE ACCESSIBLE CEILINGS FOR RECESSED LUMINAIRES, ON THE BOTTOM OF BAR JOISTS, WOOD JOISTS, OR BEAMS, AND ROUTE FOUR TO SIX FOOT (4' TO 6'), TYPE MC CABLE WHIPS TO EACH FIXTURE, AS REQUIRED. COORDINATE THE LOCATIONS OF OUTLET/JUNCTION BOXES WITH THE HVAC CONTRACTOR AND OTHER TRADES TO AVOID INTERFERENCE WITH THE INSTALLATION OF DUCT WORK.
- VERIFY THE AMPACITY REQUIREMENTS (FLA. MCA. AND MOCP), POLES (1, 2, OR 3), AND VOLTAGE FOR ALL HVAC EQUIPMENT WITH THE MECHANICAL CONTRACTOR PRIOR TO THE PURCHASE AND INSTALLATION OF THE SAFETY SWITCHES, RACEWAYS, WIRING, AND BRANCH CIRCUIT BREAKERS.

DEMOLITION NOTES:

- CONTRACTOR SHALL VISIT SITE BEFORE BID TO BECOME FAMILIAR WITH SCOPE OF WORK AND TO VERIFY EXISTING CONDITIONS, LOCATION OF EXISTING EQUIPMENT AND LIGHTING FIXTURES IN ORDER TO PERFORM THE ELECTRICAL WORK NEEDED TO BE DONE TO OBTAIN PERMIT.
- 2. ELECTRICAL DEVICES, CONDUIT, AND CONDUCTORS SHALL BE REMOVED COMPLETE FROM EXISTING WALLS THAT ARE TO BE DEMOLISHED. REMOVE CIRCUITS BACK TO NEAREST DEVICE ON SAME CIRCUIT THAT SHALL REMAIN IN TACT OR COMPLETELY BACK TO PANELBOARD. RECONNECT NEW WIRING TO EXISTING DEVICES ON SAME CIRCUIT "DOWNSTREAM" IN ORDER THAT THEY OPERATE IN SAME MANNER AS BEFORE RENOVATION.
- ELECTRICAL EQUIPMENT REMOVED AS PART OF REQUIRED DEMOLITION SHALL BE TURNED OVER TO LANDLORD/OWNER.
- 4. ALL JUNCTION BOXES COVERPLATES SHALL BE PAINTED AND LABELED OR MARKED WITH PERMANENT MARKER INDICATING THE CIRCUIT NUMBERS ASSOCIATED WITH THE CONDUCTORS CONTAINED WITHIN BOX.
- 5. CONTRACTOR SHALL REMOVE AND/OR RELOCATE AS DIRECTED ALL ELECTRICAL APPURTENANCES ASSOCIATED WITH NEW CONSTRUCTION. DIVERT, EXTEND, REPLACE, RECONNECT, OR OTHERWISE MAKE GOOD. LEAVE IN SAFE WORKING ORDER ALL PORTIONS OF THE EXISTING ELECTRICAL INSTALLATION REQUIRED TO REMAIN IN USE DURING AND AFTER THE COMPLETION OF THE ALTERATION WORK. COORDINATE THE REMOVAL AND DISPOSAL OF ALL EXISTING ELECTRICAL MATERIAL WHICH IS NOT TO BE REUSED ON THE PROJECT WITH THE LANDLORD/OWNER.
- 6. CONTRACTOR SHALL REMOVE AND STORE ANY ELECTRICAL MATERIAL IF SO DIRECTED BY OWNER. PATCH AND PAINT WALLS AND CEILINGS AS REQUIRED BY REMOVALS OF APPURTENANCES. REMOVE AND STORE ALL LIGHTING FIXTURES TO BE REUSED.
- 7. WORK IS TO BE CARRIED OUT WITHOUT ANY UNNECESSARY INTERFERENCE WITH OWNER'S EXISTING FACILITIES AND OPERATIONS. POWER INTERRUPTIONS SHALL BE SCHEDULED WITH OWNER AND SHALL BE TAKEN ONLY DURING THOSE PERIODS WHICH HE HAS APPROVED IN WRITING.
- 8. CONTRACTOR MAY REUSE EXISTING RACEWAYS FOR INSTALLATION OF NEW CIRCUITS IF RACEWAY IS IN COMPLIANCE WITH N.E.C. AND FOLLOWS APPROPRIATE ROUTE.

WIRING SIZE CHART

CONTRACTOR SHALL PROVIDE WIRING FOR 120 V., 15 & 20 A. CIRCUITS (LINE TO NEUTRAL) OF SIZES BELOW DEPENDING UPON CIRCUIT LENGTH BELOW:

< 100 FT 100-160 FT 160-250 FT #8 AWG (CU) USE #8 FOR ALL TRAVELERS AND SPLICE

#12 AWG (CU) #10 AWG (CU) WHERE #8 AWG CONDUCTORS ARE REQUIRED

w/ #10 IN A CODE SIZED JUNCTION BOX

FINAL CONNECTIONS.

WITHIN 10' OF DEVICE &/OR BREAKER FOR

ELECTRICAL LEGEND

\$	SINGLE POLE, SINGLE THROW, 20A/120V LIGHT SWITCH, MOUNT 48" A.F.F.	FA	FURNACE
\$ _M	MOTOR RATED, SINGLE THROW, 20A/120V TOGGLE SWITCH	CUA	CONDENSING UNIT
⇌	DUPLEX RECEPTACLE, 20A., 125V. MOUNT 18" A.F.F. U.O.N.	G	GROUND
\$	DUPLEX RECEPTACLE — CEILING MOUNTED	GFI or GF	GROUND FAULT CIRCUIT INTERRUPTER TYPE
•	TELEPHONE/DATA WALL OUTLET, PROVIDE SINGLE GANG BOX WITH 1" CONDUIT WITH PULL WIRE TO ABOVE CEILING.	N.T.S.	NOT TO SCALE
	MOUNTING HEIGHT AS DIRECTED BY OWNER.	U.N.O.	UNLESS NOTED OTHERWISE

IF THE CONTRACTOR ELECTS TO PROVIDE AND/OR INSTALL ELECTRICAL SYSTEMS AND EQUIPMENT

TO THE AUTHORITY HAVING JURISDICTION, THERE WILL BE A MINIMUM FEE OF \$1,000.00, MADE

APPROVAL LETTER OR DRAWING REVISIONS FROM MARSHALL & BOLLWERK ENGINEERING, INC. (MBE),

PAYABLE TO MARSHALL & BOLLWERK, IN ADVANCE BY THE CONTRACTOR. ACTUAL FEE WILL DEPEND

ON THE COMPLEXITY OF THE DEVIATION. ALLOW MINIMUM OF TEN (10) WORKING DAYS FOR LETTER

ELECTRICAL CONTRACTOR MUST VISIT THE JOB SITE AND VERIFY ALL EXISTING

ELECTRICAL CONTRACTOR SHALL REFER TO ARCHITECTURAL, MECHANICAL AND

ALL LOW VOLTAGE WIRING AND SYSTEMS WILL BE PROVIDED BY THE OWNER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING THE COST

FOR ALL NECESSARY TEMPORARY ELECTRICAL POWER FOR CONSTRUCTION USE.

PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION AND WORK REQUIRED

CONDITIONS BEFORE PLACING A BID. REPORT ANY DISCREPANCIES TO THE

FOR THIS PROJECT, DIFFERENTLY FROM THESE CONTRACT DOCUMENTS, WHICH REQUIRES AN

AND/OR REVISED DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL

NECESSARY INFORMATION BEFORE ANY EVALUATION WILL BE STARTED.

2 #12, 1 #12 E.G. CONDUCTORS IN 1/2" CONDUIT MIN. U.O.N. HOME RUN TO PANEL AND CIRCUIT INDICATED.

PANELBOARD 208/120 VOLT - SURFACE MOUNTED

FUSED DISCONNECT SWITCH, NEMA 1 UNLESS OTHERWISE NOTED ON DRAWINGS, RATING AND FUSE SIZE GIVEN. FWE = FURNISHED W/EQUIPMENT

CONDUIT, OR CABLE, CONCEALED IN WALL OR ABOVE CEILING WITH

NOTE: MOUNTING HEIGHTS NOTED ARE TO CENTERLINE OF DEVICE SHOWN. U.O.N. MOUNTING HEIGHTS SHOWN ARE MAXIMUM/MINIMUM HANDICAPPED ACCESSIBILITY STANDARDS - THEY SHALL NOT BE ALTERED WITHOUT WRITTEN AUTHORIZATION.

NOTE

ARCHITECT AND ENGINEER.

BY THIS CONTRACTOR.

NOTE:

GENERAL NOTE:

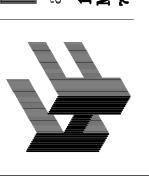
GENERAL NOTE:



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REVISIONS:

10-27-14 DATE: 2014-009 PROJECT NUMBER

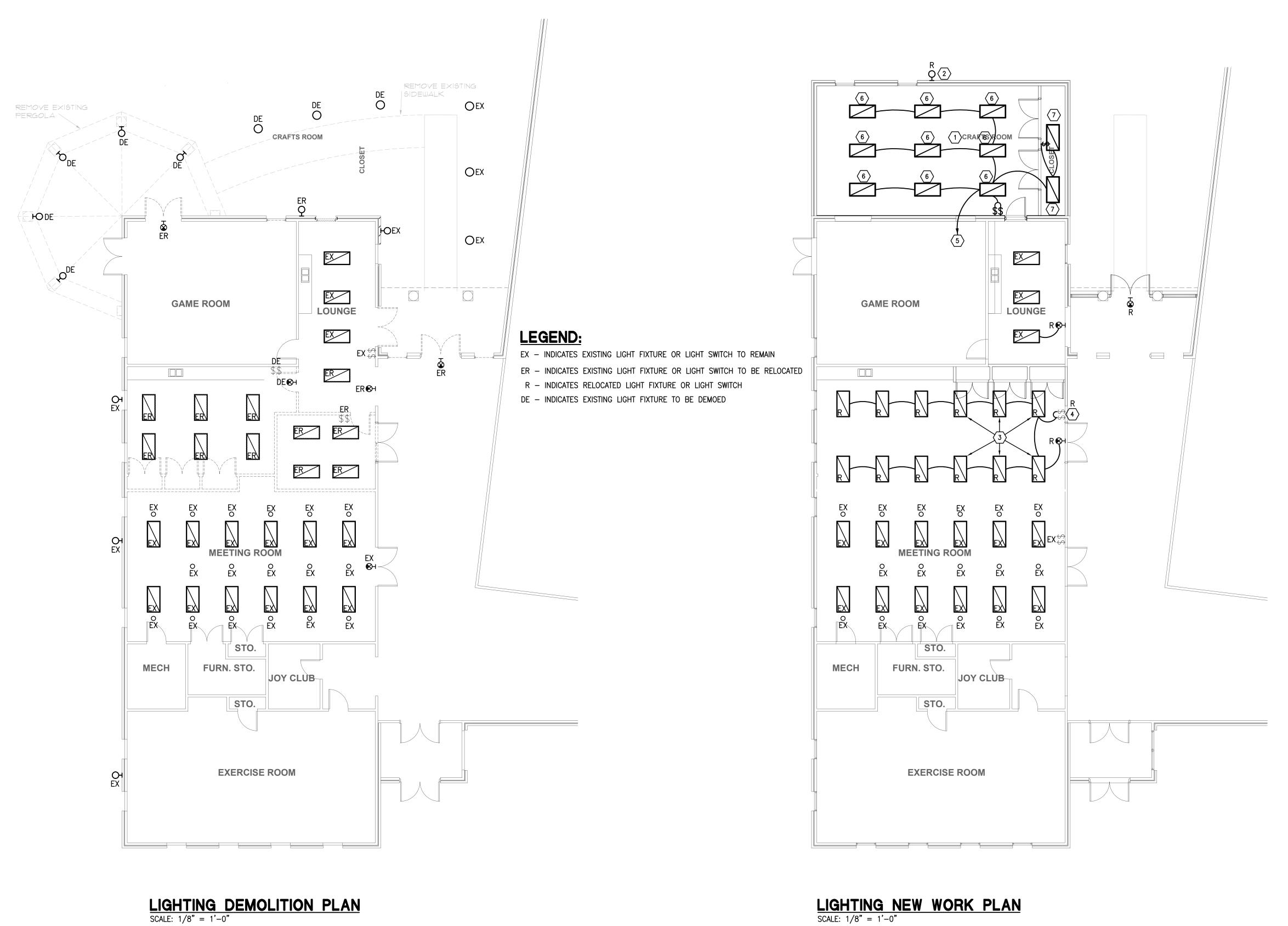
HEET NO:

MARSHALL & BOLLWERK **ENGINEERING, INC.** 🗬 🜓 950 North Point Pkwy, Suite 375 Alpharetta, Ga. 30005 p: (678) 795-0333, f: (678) 795-0063 e: mbe@mbeinc.net

WEATHERPROOF

ABOVE FINISH FLOOR

FURNISHED WITH EQUIPMENT



LIGHTING NEW WORK PLAN SCALE: 1/8" = 1'-0"

KEYED NOTES:

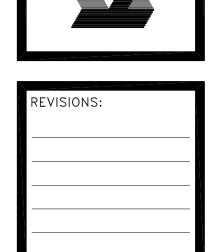
- (1) LIGHTING FIXTURES IN THIS ROOM SHALL HAVE TWO BALLASTS PER FIXTURE, FOR DUAL LEVEL SWITCHING.
- 2 RECONNECT RELOCATED LIGHT FIXTURE TO EXTERIOR LIGHT CIRCUIT.
- 3 RECONNECT RELOCATED LIGHT FIXTURE TO EXISTING CIRCUIT.
- 4 RECONNECT RELOCATED LIGHT SWITCHES TO EXISTING CIRCUIT.
- (5) CONNECT TO EXISTING PANEL "EA", 20A/1P CIRCUIT BREAKER MADE SPARE BY DEMO WORK.
- PROVIDE LIGHT FIXTURE, SUCH AS LITHONIA MODEL #2PM3N-GB-332-18-LD-MVOLT-GEB10IS W/TWO BALLASTS FOR DUAL LEVEL SWITCHING.
- 7 PROVIDE LIGHT FIXTURE, SUCH AS LITHONIA MODEL #2GT8-232-A12125-MVOLT-GEB10IS

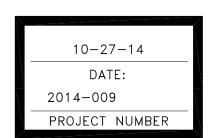




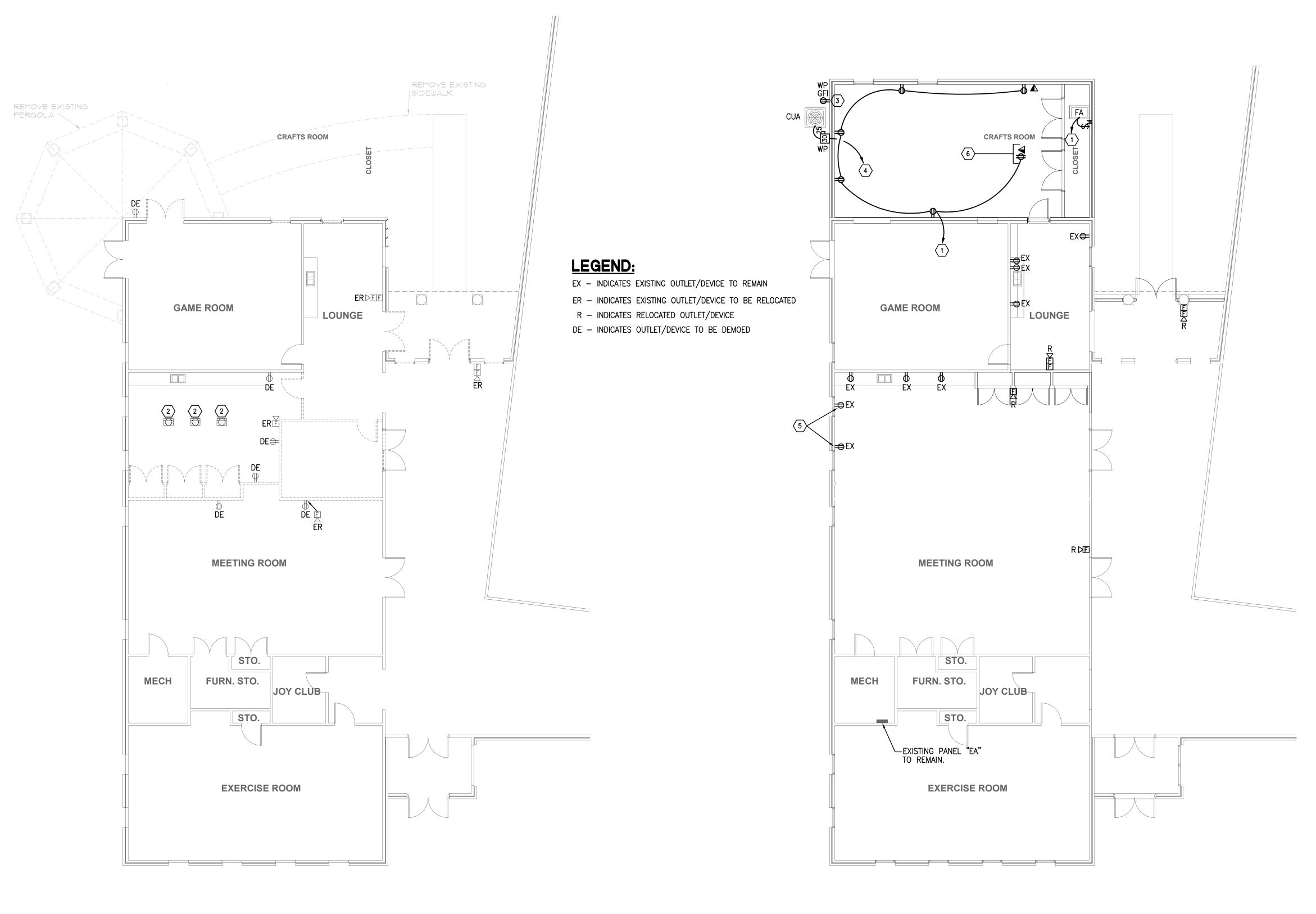


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POWER DEMOLITION PLAN

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

KEYED NOTES:

- (1) CONNECT TO EXISTING PANEL "EA", 20A/1P CIRCUIT BREAKER MADE SPARE BY DEMO WORK.
- 2 ABANDON IN PLACE EXISTING FLOOR OUTLET VERIFY WITH OWNER.
- (3) CONNECT TO AN EXISTING EXTERIOR RECEPTACLE CIRCUIT.
- (4) EXTEND 2#10,1#10G.,3/4"C. TO EXISTING PANEL "EA", PROVIDE 25A/2P CIRCUIT BREAKER.
- 5 RECONNECT EXISTING RECEPTACLES TO RECEPTACLE CIRCUIT IN THE AREA.
- MOUNT RECEPTACLE AND TEL/DATA OUTLETS FLUSH IN THE CEILING COORDINATE FINAL LOCATION WITH OWNER BEFORE ROUGH—IN.

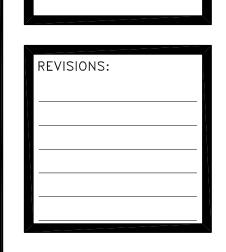
POWER NEW WORK PLAN
SCALE: 1/8" = 1'-0"

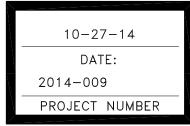


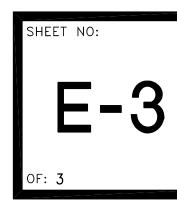




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MECHANICAL NOTES:

GENERAL:

- 1. "VERIFY" SHALL MEAN CHECK CONDITIONS ON SITE AGAINST DRAWINGS AND SPECIFICATION AND ADJUST WORK TO MATCH EXISTING. OBTAIN RULING FROM OWNER ON ANY ITEMS REQUIRING CLARIFICATION
- 2. PROVIDE A COMPLETE FUNCTIONAL HVAC SYSTEM WITH ALL ACCESSORIES REQUIRED FOR PROPER OPERATION ALL IN ACCORDANCE WITH THE APPLICABLE STATE AND LOCAL AUTHORITY CODES, LAWS & ORDINANCES AND STATE AND LOCAL AUTHORITY ACCESSIBILITY LAWS AND ORDINANCES. 3. THE SYSTEMS SHALL BE FREE FROM ANY OBJECTIONABLE NOISES AND VIBRATIONS.
- 4. ALL MECHANICAL WORK & EQUIPMENT SHALL CONFORM TO THE CURRENT REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION. MECHANICAL WORK SHALL COMPLY WITH THE CURRENT EDITION OF THE INTERNATIONAL MECHANICAL CODE, STATE & LOCAL AMENDMENTS, NFPA-54, NFPA-90A,
- SMACNA & ASHRAE GUIDELINES. 5. CONTRACTOR SHALL SECURE ALL PERMITS, INSPECTION CERTIFICATES, AUTHORITY APPROVALS AND PAY ALL RELATED FEES AND CHARGES.
- 6. ALL NEW MECHANICAL EQUIPMENT AND SYSTEMS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE BY THE OWNER. COMPRESSORS SHALL HAVE AN EXTENDED 4 YEAR COMPRESSOR (ONLY)
- 7. THE CONTRACTOR SHALL CONFIRM AND ENSURE THAT ALL MECHANICAL WORK CONFORMS TO THE CURRENT REQUIREMENTS OF THE LOCAL BUILDING INSPECTION DEPARTMENT.
- 8. ALL MECHANICAL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS.
- 9. WALL, FLOOR OR CEILING SURFACES DISTURBED DURING THE COURSE OF THE MECHANICAL WORK SHALL BE REPAIRED TO MATCH NEW &/OR EXISTING SURROUNDING CONDITIONS.
- 10. REFER TO ARCHITECT'S REFLECTED CEILING PLANS FOR LOCATION OF LIGHTS AND OTHER CEILING MOUNTED DEVICES. COORDINATE AIR DISTRIBUTION DEVICES WITH THIS REFLECTED CEILING PLAN. IF A PARTICULAR ITEM CANNOT BE LOCATED APPROXIMATELY AS SHOWN ON THE HVAC LAYOUT THE CONTRACTOR SHALL PREPARE A DRAWING SHOWING A PROPOSED LOCATION AND SHALL SUBMIT IT TO THE OWNER FOR APPROVAL.
- 11. COORDINATE THE INSTALLATION OF THE DUCTWORK, EQUIPMENT, PIPING, ETC., TO FIT WITHIN THE SPACE ALLOWED BY THE ARCHITECTURAL & STRUCTURAL CONDITIONS. CUTTING OR ALTERING ANY STRUCTURAL MEMBER SHALL NOT BE PERMITTED.
- 12. DO NOT SCALE DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL SIZES, MATERIALS, TEMPERATURES AND PRESSURES BEFORE ORDERING OR FABRICATION OF ANY MATERIALS.
- 13. WHERE DUCT OR PIPE SECTION SIZE IS NOT INDICATED, IT SHALL BE THE SAME SIZE AS THE LAST SIZED UPSTREAM SECTION.
- 14. THE SCHEDULED "BASIS OF DESIGN" IS INTENDED TO INDICATE THE PERFORMANCE REQUIRED FOR THE PARTICULAR ITEM OF EQUIPMENT. SUBSTITUTIONS WILL BE PERMITTED. SUBSTITUTIONS SHALL BE DEEMED TO INCLUDE ALL ASSOCIATED CHANGES TO BUILDING, STRUCTURE & OTHER SERVICES WITHOUT ANY ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT SUBSTITUTIONS SHALL FIT INTO THE SPACE AVAILABLE WITH PROVISIONS FOR PROPER ACCESS, MAINTENANCE, PARTS REPLACEMENT, WEIGHT ALLOWANCE & FOR COORDINATION WITH OTHER TRADES (INCLUDING ELECTRICAL, PLUMBING, STRUCTURAL AND ARCHITECTURAL).
- 15. ALL EQUIPMENT PROVIDED SHALL BE COMMERCIALLY AVAILABLE PRODUCTS SPECIFICALLY MADE FOR THE APPLICATION FOR WHICH IT IS INTENDED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION AND START-UP INSTRUCTIONS.
- 16. A TECHNICIAN, FACTORY TRAINED AND CERTIFIED BY THE MANUFACTURER OF THE HVAC EQUIPMENT PROVIDED SHALL PERFORM PRE START-UP CHECKS AND SHALL SUBMIT A REPORT TO THE OWNER ON THE EXISTING SYSTEM. THIS REPORT SHALL INCLUDE CERTIFICATION, IN WRITING, THAT EQUIPMENT IS CORRECTLY INSTALLED, INCLUDING PROPER DRAINAGE FROM DRAIN PANS AND SEALING OF ALL AIR LEAKS, ELECTRICAL CONNECTIONS AND TERMINALS TIGHTNESS, GAS PIPING IS LEAK FREE, INDOOR FILTER ARE CLEAN, IN PLACE AND EASILY REPLACEABLE, FANS AND COMPRESSORS ROTATE CORRECTLY. ELECTRICAL AMP DRAWS SHALL BE RECORDED AND CERTIFIED WITHIN MANUFACTURERS RECOMMENDED LIMITS. REFRIGERANT SUCTION AND DISCHARGE PRESSURES FOR ALL CIRCUITS WITH STATEMENT THAT SYSTEMS ARE CORRECTLY CHARGED.

ELECTRICAL/CONTROLS:

- 17. THE CONTRACTOR SHALL VERIFY THE ELECTRICAL SUPPLY VOLTAGES AND PHASES ON THE ELECTRICAL PLANS AND ON SITE BEFORE ORDERING ANY ELECTRICALLY OPERATED EQUIPMENT. ALL MECHANICAL EQUIPMENT REQUIRING ELECTRICAL POWER SHALL BE PROVIDED & INSTALLED WITH SUITABLY PROTECTED AND RATED DISCONNECT SWITCHES.
- 18. MOUNT THERMOSTATS AS INDICATED ON PLANS 48" A.F.F. UNLESS OTHERWISE NOTED OR AS REQUIRED FOR ACCESSIBILITY CODE COMPLIANCE. COORDINATE LOCATION OF THERMOSTATS WITH CABINETRY AND OTHER SERVICES. THE THERMOSTATS SHALL NOT BE INSTALLED ON OUTSIDE WALLS. IN THE DIRECT AIR STREAM FROM ANY DIFFUSER OR WHERE IT MAY BE INFLUENCED BY HEAT GIVEN OFF FROM EQUIPMENT.

DUCTWORK:

- 19. NEW SUPPLY, RETURN, OUTDOOR AND EXHAUST AIR DUCTWORK SHALL BE GALVANIZED SHEET METAL, FABRICATED AND INSTALLED PER THE LATEST ISSUE OF THE SMACNA DUCT HVAC DUCT CONSTRUCTION STANDARDS, METAL AND FLEXIBLE, FIRST EDITION, 1985 CONSTRUCTION MANUAL. SEAL ALL SUPPLY AIR DUCT JOINTS TO SMACNA SEAL CLASS "A". DUCT LEAKAGE SHALL NOT EXCEED 1 PERCENT OF THE SPECIFIED AIR FLOWS WHEN TESTED AT 1" WG.
- 20. SEAL ALL LONGITUDINAL & TRANSVERSE SEAMS ON ALL DUCTWORK WITH
- UL 181A OR 181B TAPES AND MASTICS. 21. DUCT SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS

CAPPED DUCTS ARE NOT ACCEPTABLE.

- 22. ALL NEW DUCTWORK, AND EQUIPMENT SHALL BE SUPPORTED INDEPENDENTLY FROM STRUCTURAL MEMBERS. PROVIDE ADDITIONAL SUPPORT MEMBERS WHERE REQUIRED TO ACHIEVE SMACNA RECOMMENDED
- SUPPORT SPACING. 23. ALL DUCT TRANSITION FROM SQUARE TO ROUND SHALL BE SMOOTH SQUARE TO ROUND TRANSITIONS. SPIN-IN FITTINGS AT THE END OF
- 24. DUCTWORK SHALL BE RIGID SHEETMETAL EXCEPT FOR 12 FOOT MAXIMUM FLEXIBLE DUCTS AT AIR REGISTERS.
- 25. WHERE FLEXIBLE DUCT IS CONNECTED TO CEILING DIFFUSERS, THE
- CONTRACTOR SHALL USE ONE OF THESE THREE METHODS: A. INSULATED FLEXIBLE DUCT WITH TITUS FLEXRIGHT FLEXIBLE DUCT
- SUPPORT, UL LISTED, TO FORM DUCT ELBOW. . A SHEET METAL ELBOW, EXTERNALLY INSULATED. C. INSULATED FLEXIBLE METAL DUCT CONSISTING OF FLEXIBLE METAL CORE

OF CORRUGATED ALUMINUM WITH EXTERNAL INSULATION.

IN ALL CASES DUCT CONNECTION/ELBOW SHALL BE MADE WITH A BEND THAT HAS NOT LESS THAN ONE DUCT DIAMETER CENTERLINE REDIAL. 26. TRANSITION RECTANGULAR DUCTWORK ON THE BOTTOM AND THE SIDES.

MAINTAIN DUCTWORK LEVEL AND AS HIGH AS POSSIBLE UNLESS NOTED

OTHERWISE. 27. THE FINISH ON DIFFUSERS & GRILLES SHALL BE APPROVED BY THE ARCHITECT.

- 28. CHANGES IN ELEVATION, ACCESS DOORS AND TRANSITIONS IN DUCT SIZES ARE. OR MAY NOT. ALL BE SHOWN ON THE DRAWINGS. DUCT CROSS-OVERS IMPLY CHANGES IN ELEVATION IN ONE OR BOTH DUCTS; TRANSITIONS IN DUCT SIZE AND SHAPE ARE IMPLIED BY SIZES SHOWN ON DRAWINGS. BIDDERS SHALL MAKE ALLOWANCE FOR THESE IN THEIR PRICE.
- 29. TRANSFORM DUCT SIZE SHOWN TO SUIT EQUIPMENT CONNECTION SIZE AT CONNECTIONS TO EQUIPMENT.
- 30. ALL NEW RIGID SHEETMETAL SUPPLY, RETURN AND OUTDOOR AIR DUCTWORK, SHALL BE INSULATED WITH 2" THICK, 1 LB DENSITY DUCT INSULATION WITH FIRE RATED VAPOR BARRIER (INSTALLED R=6).
- 31. INSULATION SHALL HAVE FLAME AND SMOKE RATING OF 25 AND 50 RESPECTIVELY. OVERLAP BUTTING EDGES, FOLD, SEAL AND TAPE AND PROVIDE A CONTINUOUS VAPOR BARRIER.
- 32. EXHAUST DUCT SHALL NOT BE INSULATED UNLESS OTHERWISE NOTED. 33. FLEXIBLE DUCT BE UL LISTED, CLASSIFIED AS A CLASS 1 AIR DUCT, TESTED UNDER UL STANDARD 181 AND MEET LOCAL CODE REQUIREMENTS. FLEXIBLE SUPPLY DUCTS SHALL HAVE FACTORY INSTALLED FIBER GLASS INSULATION AND A FIRE RETARDANT VAPOR BARRIER JACKET WITH A PERM RATING OF NOT OVER 0.1, A MINIMUM "R" VALUE OF 6, AND WHICH COMPLY WITH NFPA STANDARD 90A.
- 34. SPIN-IN COLLARS SHALL BE PROVIDED AT ALL ROUND TAPPINGS FROM RECTANGULAR DUCTS; SHALL BE CONSTRUCTED OF GALVANIZED STEEL AND SHALL BE CONICAL TYPE EQUIPPED WITH A MANUAL BALANCING DAMPER. DO NOT PROVIDE AIR SCOOP.
- 35. DUCT BRANCH RUN-OUTS TO THE DIFFUSERS UNLESS OTHERWISE NOTED SHALL BE THE SAME AS THE DIFFUSER NECK SIZES.
- 36. THE CONTRACTOR SHALL PROVIDE ALL FRAMING REQUIRED FOR THE INSTALLATION OF CEILING, WALL AND FLOOR AIR REGISTERS TO SUIT THE
- CONSTRUCTION. 37. PRIOR TO FINAL CONNECTION TO EQUIPMENT. BRANCH DUCTS. DIFFUSERS, ETC. ALL OPENINGS IN DUCTWORK SHALL BE SEALED TO PREVENT DIRT, DUST, DEBRIS FROM ENTERING THE AIR DISTRIBUTION SYSTEM.

- 38. REFRIGERANT PIPING SHALL BE HARD-DRAWN TYPE K SEAMLESS COPPER TUBING, ASTM B88-74. FITTINGS SHALL BE WROUGHT, ANSI B16-22-63, COPPER WITH A WORKING PRESSURE OF NOT LESS THAN 300 PSIG. REFRIGERANT PIPING SHALL BE SIZED AND INSTALLED IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURERS RECOMMENDATIONS. CONTRACTOR SHALL PROVIDE WRITTEN CERTIFICATION FORM EQUIPMENT MANUFACTURER AS TO THE CORRECTNESS OF THE LINE SIZES.
- 39. INSULATE ALL SUCTION LINES AND FITTINGS WITH PRE-FORMED ARMAFLEX AP INSULATION, 1" THICK. USE ARMAFLEX 520 ADHESIVE ON ALL JOINTS. ALL INSULATION MATERIALS SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS, SMOKE DEVELOPED RATING OF 50 OR LESS WHEN TESTED PER ASTM E 84 & THERMAL CONDUCTIVITY OF NO GREATER THAN 0.27 (BTU*IN)/(HR*FT2* F) PER ASTM C
- 40. PENETRATING EXTERIOR WALLS. SEAL VOIDS WATER—TIGHT AROUND PIPING WITH A WEATHER TIGHT PERMANENT NON-SHRINKING SEALANT.
- 41. ENSURE PROPER CONDENSATE REMOVAL FROM ALL AIR HANDLING UNIT DRAINS. CONDENSATE DRAIN PIPING AND FITTINGS REQUIRED SHALL BE TYPE PVC. INSTALL WITHOUT ANY SAGGING TO ENSURE COMPLETE DRAINAGE. PROVIDE A P-TRAP ON CONDENSATE DRAINS AT EACH UNIT. THE CONDENSATE DRAIN SHALL BE THE SAME SIZE AS THE UNIT DRAIN CONNECTION BUT SHALL NOT BE LESS THAN 3/4" DIAMETER PIPE. SLOPE CONDENSATE DRAIN PIPING MIN. 1/8" PER FOOT.
- 42. PROVIDE MIN. 1-1/2" SECONDARY DRAIN PANS UNDER EACH AIR HANDLING UNIT. PROVIDE A FLOAT SWITCH THAT WILL SHUT-DOWN UNIT IF CONDENSATE REACHES MAXIMIMUM 1/2" IN PAN
- 43. GAS PIPING: PIPE SHALL BE CODE APPROVED BLACK IRON, SCHEDULE 40. ASTM A120 OR A53, WITH THREADED JOINTS, AND A MINIMUM PRESSURE RATING OF 250 PSI. FITTINGS SHALL BE SCREWED END. PROVIDE A GAS COCK AT EACH PIECE OF GAS EQUIPMENT AND ONE MAIN SHUT-OFF GAS COCK AT THE GAS METER OR TAP IN THE EXISTING GAS LINE. COORDINATE LOCATION AND TYPE WITH THE LOCAL NATURAL GAS SUPPLY COMPANY. IN GENERAL, GAS PIPING SHALL BE EXPOSED IN ALL EQUIPMENT ROOMS, AND CONCEALED IN ALL FINISHED SPACES. WHERE GAS PIPING IS EXPOSED, IT SHALL BE RUN SO AS TO ALLOW MAXIMUM HEADROOM CONSISTENT WITH PROPER PITCH. NO PIPING SHALL CROSS BELOW THE HEAD OF ANY WINDOW OR DOOR.

OWNERS MANUAL:

- 44. FOUR COPIES OF AN OWNERS MANUAL SHALL BE FORWARDED TO THE OWNER WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTABLE. OWNERS MANUAL SHALL INCLUDE AS MINIMUM:
- a. DATA STATING EQUIPMENT SIZE AND ALL INSTALLED OPTIONS FOR EACH NEW ITEM OF MECHANICAL EQUIPMENT PROVIDED.
- b. COPIES OF THE INSTALLATION & PERFORMANCE REPORT BY THE REPRESENTATIVE OF THE EXISTING SPLIT SYSTEM.
- c. COPIES OF THE TEST & BALANCE REPORT. NOTATIONS OF
- CORRECTIVE ACTION SHALL BE INCLUDED. d. COPIES OF THE MECHANICAL SUBCONTRACTOR'S FIRST YEAR INSTALLATION AND EQUIPMENT WARRANTIES. NOTATION SHALL BE INCLUDED TO SHOW THE EXPIRATION OF THE FIRST YEAR PARTS & LABOR GUARANTEE.
- OPERATION AND MAINTENANCE MANUALS FOR EACH NEW ITEM OF EQUIPMENT REQUIRING MAINTENANCE, EXCEPT FOR EQUIPMENT NOT FURNISHED AS PART OF THE PROJECT. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED

TEST AND BALANCE:

- 45. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF AN INDEPENDENT TEST, ADJUSTMENT AND BALANCE (TAB) AND COMMISSIONING AGENCY TO TEST. ADJUST, BALANCE AND COMMISSION:
- EACH SUPPLY AIR, RETURN, EXHAUST AND OUTDOOR AIR DISTRIBUTION SYSTEM. B. EACH CONTROL SYSTEM INCLUDING CALIBRATE ALL CONTROL ELEMENTS AND CHECK OPERATION INCLUDING ALL INTERLOCKS.
- 46. TESTING AND BALANCING OF AIR DISTRIBUTION SYSTEMS SHALL BE PERFORMED, AT MINIMUM, IN ACCORDANCE WITH AABC NATIONAL STANDARDS, FIFTH EDITION, 1989. TEST AND BALANCE SHALL INCLUDE ALL EQUIPMENT AND DISTRIBUTION SYSTEMS AND SHALL BE REPORTED, AS A MINIMUM, ON FORMS AS PUBLISHED BY THE AABC (PAGE 213 AND 214 OF THE STANDARDS MANUAL); NEBB EQUIVALENT OR OTHER APPROVED
- 47. THE AGENCY SHALL, UNLESS APPROVED OTHERWISE BY THE OWNER, BE AN AABC OR NEBB MEMBER AND THE TAB WORK SHALL BE DONE BY AN AABC OR NEBB CERTIFIED TEST AND BALANCE TECHNICIAN AND
- COMMISSIONING AGENT. 48. INSTRUMENTS USED FOR TESTING AND BALANCING SHALL HAVE BEEN CALIBRATED WITHIN A PERIOD OF SIX MONTHS OF THE TIME OF THE TESTING AND BALANCING AND SUCH INSTRUMENTS SHALL BE CHECKED FOR ACCURACY PRIOR TO START OF WORK. SUBMIT VERIFICATION OF CERTIFICATION TO THE OWNER.
- 49. FOUR COPIES OF THE COMPLETE TEST REPORT SHALL BE SUBMITTED TO
- THE OWNER PRIOR TO FINAL INSPECTION OF THE PROJECT. 50. THE TAB REPORT SHALL INCLUDE A LIST OF ALL DEFICIENCIES FOUND DURING THE PRELIMINARY TESTING AND A CONTRACTOR RESPONSE INDICATING REMEDIAL ACTION TAKEN FOR EACH ITEM. THE TAB WORK SHALL NOT BE DEEMED DONE WITHOUT THIS REPORT.

SYMBOL	MECHANICAL LEGEND
	RIGID DUCTWORK
	FLEX DUCT
—G—	EXISTING GAS LINE
—G—	NEW GAS LINE
	BALANCING DAMPER
X	EXISTING SUPPLY DIFFUSER TO BE RELOCATED
\boxtimes	RELOCATED SUPPLY DIFFUSERS
∑ <u>285</u>	NEW SUPPLY AIR DIFFUSER W/ AIRFLOW & NECK SIZE NEW TO MATCH EXISTING
Ø	EXISTING RETURN AIR GRILLE TO BE RELOCATED
	EXISTING RETURN AIR GRILLE
	NEW RETURN AIR GRILLE
А①	NEW THERMOSTAT W/ DESIGNATION OF SYSTEM CONTROLLED
1①	EXISTING THERMOSTAT W/ DESIGNATION OF SYSTEM CONTROLLED
15	NEW TEMPERATURE SENSOR W/ DESIGNATION OF SYSTEM CONTROLLED

ABBREVIATIONS

AFF = ABOVE FINISHED FLOOR

BFC = BELOW FINISHED CEILING BTUH = BRITISH THERMAL UNITS PER HOUR

CFM = CUBIC FEET PER MINUTE

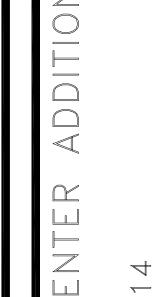
DB = DRY BULB*F = DEGREES FAHRENHEIT

DIA = DIAMETER

EMS = ENERGY MANAGEMENT SYSTEM ESP = EXTERNAL STATIC PRESSURE

MBH = 1000 BTUH

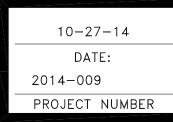
SA = SUPPLY AIRTAB = TEST AND BALANCE

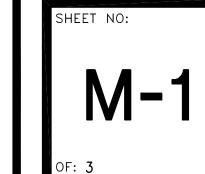


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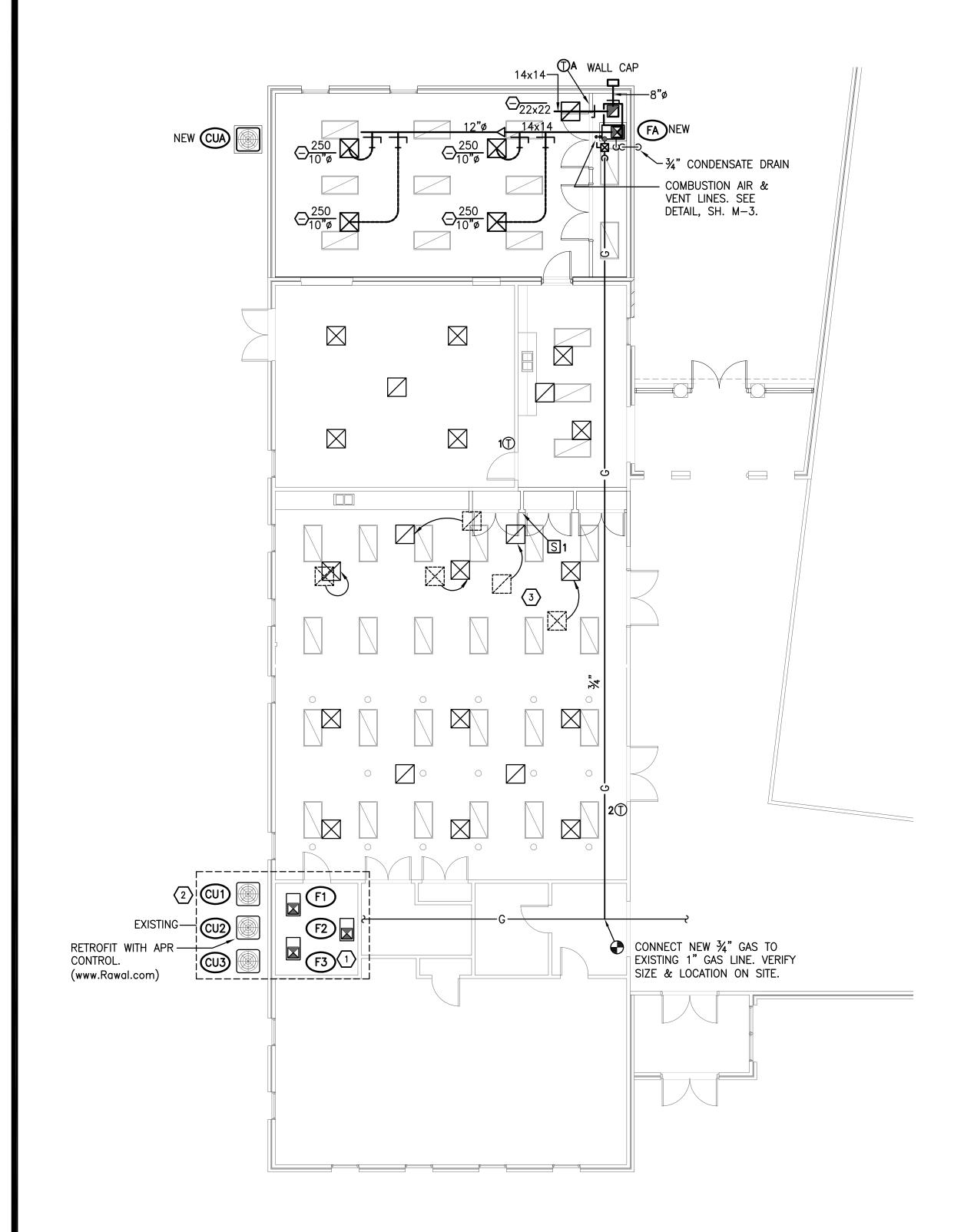












MECHANICAL NEW WORK PLAN SCALE: 1/8" = 1'-0"

FURNACE SCHEDULE

							. •	,									
			FAN DATA		FAN DATA HEATING DATA		COOLING DATA			ELECTRICAL DATA							
MARK	SUPPLY CFM	O.A. CFM	ESP In. Wg	MOTOR HP	INPUT CAPACITY MBH	OUTPUT CAPACITY MBH	GAS CONN SIZE	AFUE	COIL Model	TOTAL RESISTANCE IN WG	TOTAL CAPACITY MBH	SENSIBLE CAPACITY MBH	CARRIER Basis of Design	V/PH/HZ	MCA	MOCP	NOTE8
FA	1000	150	0.50	1/2	60	58	1/2"	92.1%	CNPVP3024	0.388	27.8	21.9	59SC2A060S17	115/1/60	11.5	15	1,2,3,4,5,6,7,8
																	_

- 1) SPECIFIED CAPACITIES ARE BASED ON 80°F DB/67°F WB ENTERING AIR AND 95°F OUTDOOR AMBIENT TEMPERATURE.
- 2 COMPLY WITH THE EQUIPMENT MANUFACTURERS "LONG LINE" INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS. PROVIDE ALL ACCESSORIES
- 3 STATIC PRESSURE (SP) SHOWN IS EXTERNAL TO FURNACE'S, FOR SUPPLY & RETURN AIR DUCTING AND REGISTERS ONLY. COOLING COIL, FILTER PRESSURE DROP TO BE INCLUDED IN THE TOTAL PRESSURE DROP FOR EQUIPMENT PROVIDED TO ACHIEVE THE CFM'S SPECIFIED (AS MINIMUM).
- (4) COMPLY WITH THE MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS FOR FLUE VENT SIZING, ROUTING AND MATERIALS.
- PROVIDE INTERNALLY, ACOUSTICALLY, LINED RETURN AIR INTAKE PLENUMS FOR ALL UNITS. PLENUMS SHALL MATCH THE CROSS SECTIONAL SIZE OF THE UNITS AND SHALL BE 24" HIGH MINIMUM, OR AS REQUIRED TO SUIT THE RETURN AIR DUCT CONNECTIONS. MOUNT ENTIRE ASSEMBLY OVER A 2" DEEP DRIP TRAY.
- 6 CONTRACTOR SHALL VERIFY SELECTION OF MODELS SELECTIONS FOR FURNACE, COOLING COILS & CONDENSING UNITS WITH THE MANUFACTURERS REPRESENTATIVE TO ENSURE CORRECT MATCH. ADVISE OWNER OF ANY DISCREPANCY. PROVIDE DUCT ADAPTERS BETWEEN FURNACE & COIL CASINGS AS REQUIRED & AS RECOMMENDED BY THE MANUFACTURER.
- 7 PROVIDE WITH CONCENTRIC VENT & CONDENSATE TRAP.
- 8 THERMOSTAT ELECTRONIC PROGRAMMABLE THERMOSTAT WITH CLEAR LOCKING COVER.

	CONDENSING UNIT SCHEDULE								
MARK TONS TOTAL SUCTION TEMP SEER VOLTS//HZ MCA MOCP BASIS OF DESIGN								NOTES	
CUA	2.5	27.8	45	13.0	240/1/60	16.8	25	24ACB330	1,2

NOTES:

1. ALL CONDENSING UNITS SHALL BE PROVIDED WITH CYCLE PROTECTOR, HIGH PRESSURE SWITCH, TIME DELAY RELAY, CRANKCASE HEATER, THERMOSTATIC EXPANSION VALVE & SUPPORT FEET.

OUTSIDE AIR REQUIREMENTS

THE HVAC SYSTEM OUTDOOR AIR QUANTITY IN THE BUILDING MEETS THE REQUIREMENTS FOR THE VENTILATION RATE PROCEDURE OF ASHRAE STANDARD 62.1 (VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY). ASHRAE VENTILATION RATES ARE ACCEPTABLE PER THE GEORGIA STATE AMENDMENTS

CRAFTS ROOM

DAY ROOM

OF PEOPLE = 680 SF * (30 PEOPLE/1000 SF) = 21 PEOPLE

OCCUPANCY OUTDOOR AIR RATE: 5 CFM/PERSON

OUTSIDE AIR REQUIRED FOR PEOPLE: 5 CFM/PERSON * 21 PEOPLE = 105 CFM

AREA OUTDOOR AIR RATE: 0.06 CFM/SF OUTSIDE AIR REQUIRED FOR AREA: 0.06 CFM/SF * 680 SF = 41 CFM

TOTAL OUTDOOR AIR REQUIRED: 146 CFM TOTAL OUTSIDE AIR PROVIDED BY FA: 150 CFM

GAS LOAD S	CHEDULE
EQUIPMENT	BTUH INPUT
EXISTING F1 FURNACE	100,000
EXISTING F2 FURNACE	100,000
EXISTING F3 FURNACE	100,000
NEW FA FURNACE	60,000
TOTAL USAGE	360,000
APPROX. DISTANCE FROM REGULA TO FARTHEST TAKE OFF 300' (VE	TOR ERIFY ON SITE)
GAS TYPE:	NATURAL GAS
DELIVERY PRESSURE	7" W.C.

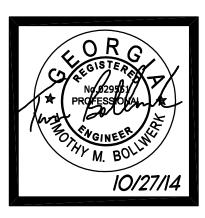
GAS LINE SIZING NOTES:

1. GAS LINES HAVE BEEN SIZED PER TABLE 402.4(3) OF THE 2012 INTERNATIONAL GAS CODE - FUEL GAS FOR PRESSURES OF 2 PSI, A PRESSURE DROP OF 1 PSI AND 0.6 SPECIFIC GRAVITY.

KEYED NOTES:

- 1 EXISTING FURNACES. VERIFY OPERATION ON SITE. REPAIR AS REQUIRED TO PROPER WORKING CONDITION. CLEAN P-TRAP, CONDENSATE DRAIN LINES & DRAIN PAN.
- (2) EXISTING CONDENSING UNITS. VERIFY PROPER OPERATION. REPAIR AS REQUIRED TO PROPER WORKING CONDITION. RECHARGE REFRIGERANT IF REQUIRED. VERIFY REFRIGERANT LINE ARE LEAK FREE. REINSULATE REFRIGERANT LINES AS REQUIRED.
- RELOCATE EXISTING DIFFUSERS AND GRILLES AS SHOWN. PROVIDE NEW FLEX DUCT AS REQUIRED.

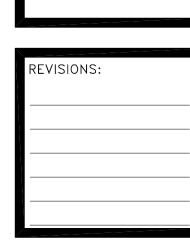




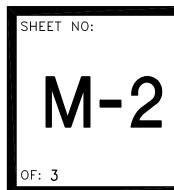


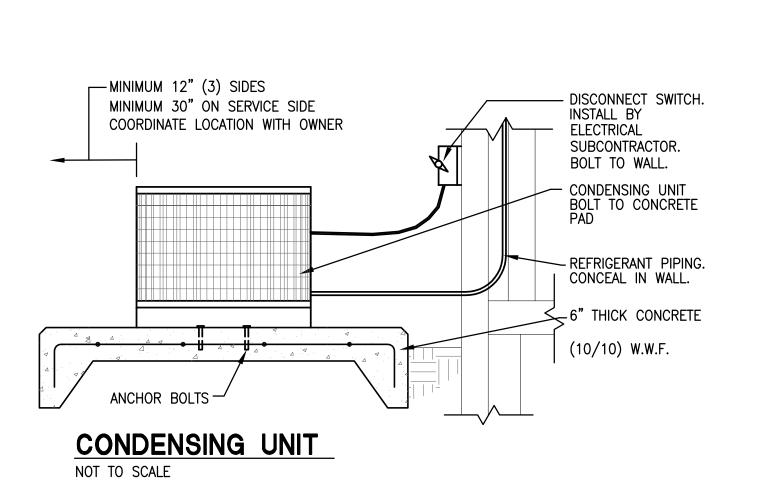
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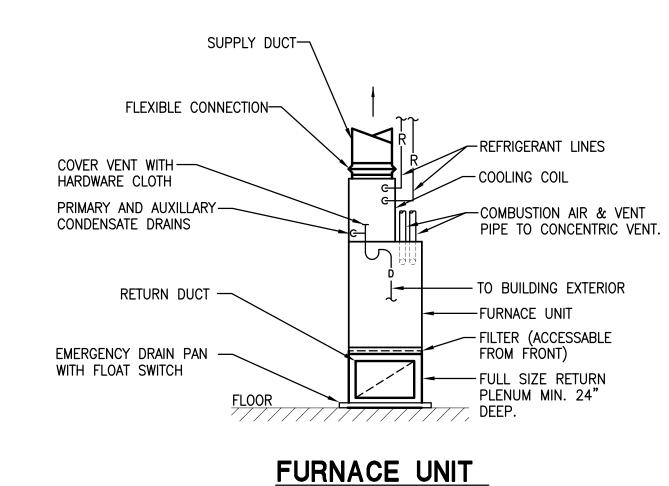
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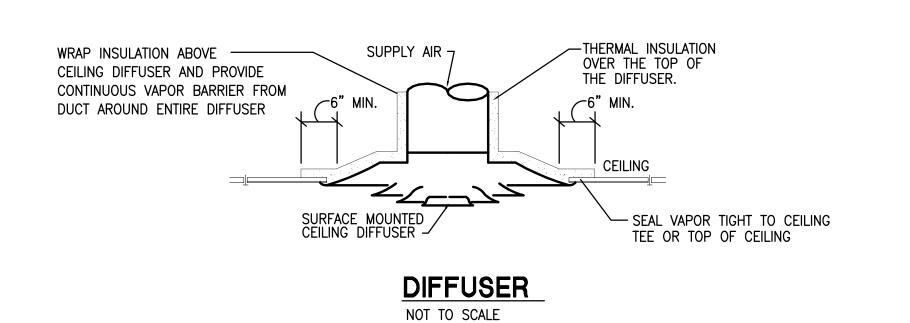
10-27-14 DATE: 2014-009 PROJECT NUMBER

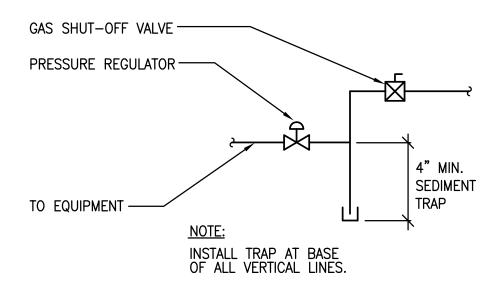






NOT TO SCALE





GAS CONNECTION NOT TO SCALE

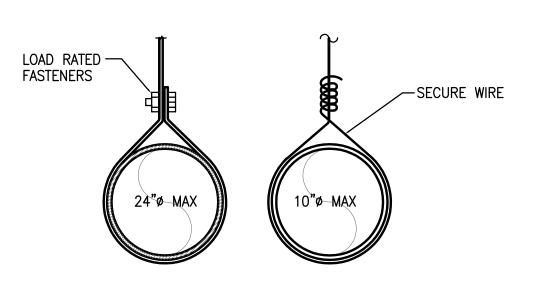
STRAP HANGERS (TABLE 1)	– 12" MAX SPACING
1" MIN.	2,

TABLE	1 STRAP HA	ANGERS (PAI	R) SPACED
W+D MAX.	10"-0" MAX.	8'-0" MAX.	5'-0" OR LESS
72"	1"x 22 GA	1"x 22 GA	1"x 22 GA
96"		1"x 20 GA	1"x 22 GA
120"		1"x 18 GA	1"x 22 GA
168"			1"x 18 GA
192"			1"x 16 GA
192+"	SPECIAL	ANALYSIS RE	EQUIRED

NOTES:
1. TABULATED DATA FROM SMANCA ALLOWS FOR DUCT REINFORCING AND INSULATION, BUT NO EXTERNAL LOAD. 2. PROVIDE HIGH DENSITY INSERT AT TRAPEZE FOR INSULATED DUCTS.

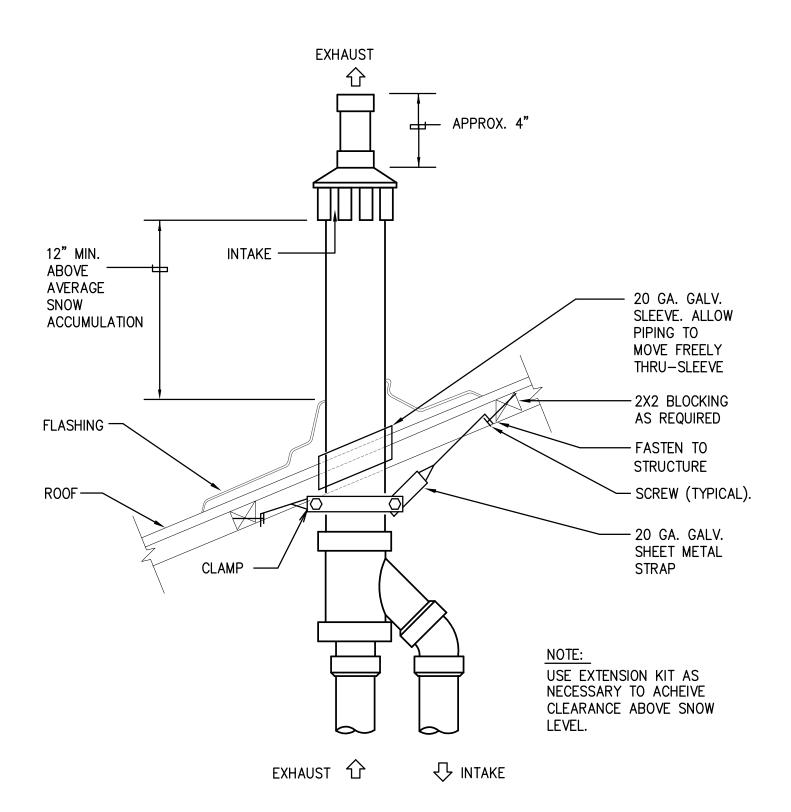
RECTANGULAR DUCT HANGERS:

NOT TO SCALE



MINIMUM HANGER SIZE FOR ROUND DUCT								
DIA.	WIRE DIA.	MAXIMUM SPACING	STRAPS	RODS				
10" dn	(1) 12 GA.	10'	1"x 22 GA	1/4"				
11–18"	(2) 12 GA.	10'	1"x 22 GA	1/4"				
19-24"	(2) 10 GA	10'	1"x 22 GA	1/4"				
25-36"	(2) 8 GA.	10'	1"x 20 GA	3/8"				

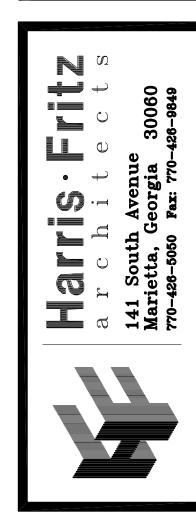
ROUND DUCT HANGERS:
NOT TO SCALE

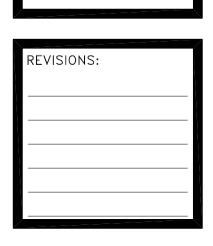


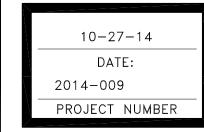
CONCENTRIC ROOF TERMINATION SCALE: NONE

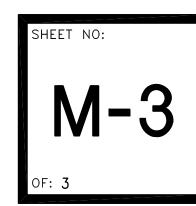


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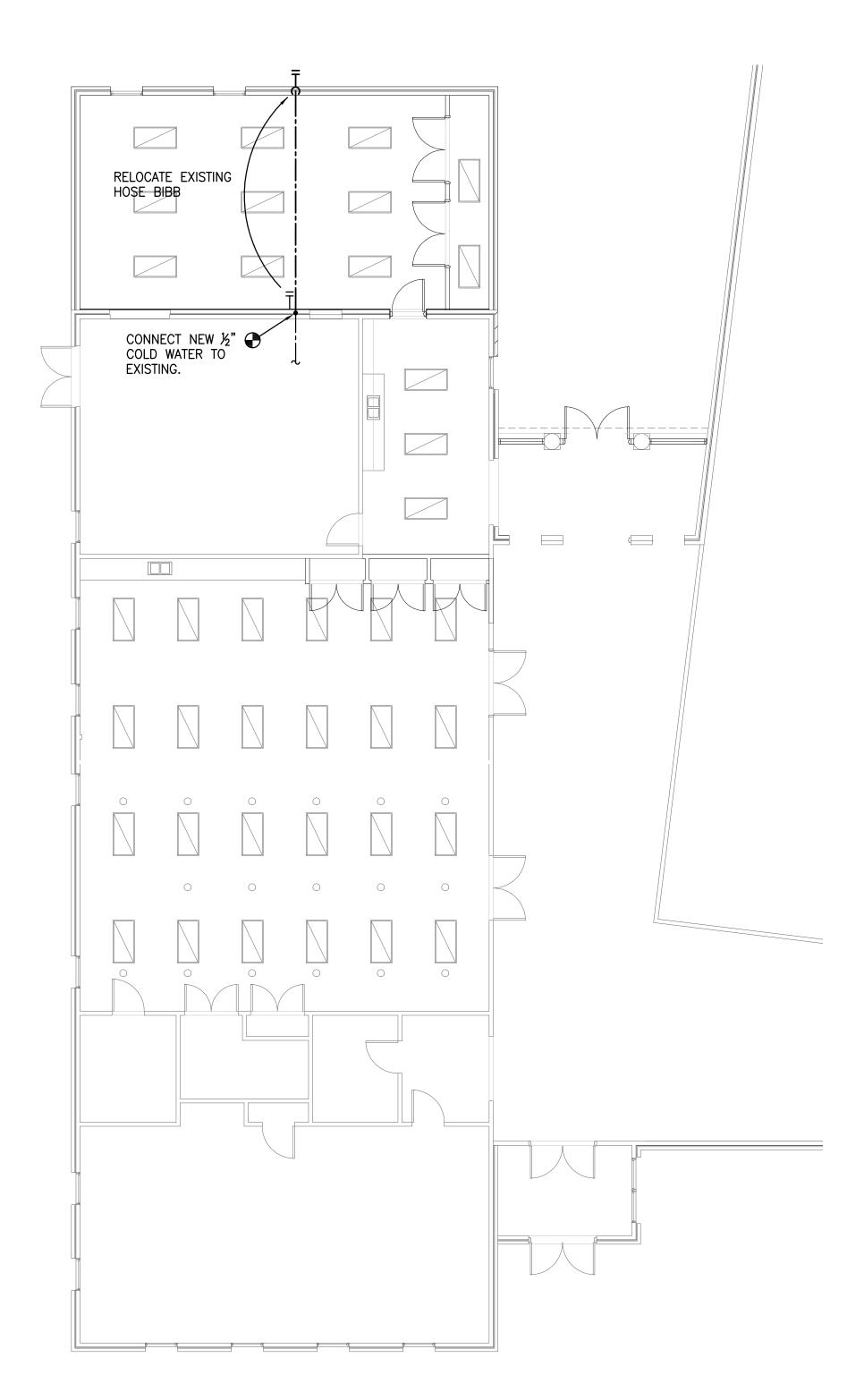












PLUMBING NEW WORK PLAN

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

PLUMBING NOTES:

GENERAL:

- 1. VERIFY" SHALL MEAN CHECK CONDITIONS ON SITE AGAINST DRAWINGS AND SPECIFICATION AND ADJUST WORK TO MATCH EXISTING. OBTAIN RULING FROM OWNER ON ANY ITEMS REQUIRING CLARIFICATION
- 2. THE NEW PLUMBING SYSTEM (DOMESTIC COLD WATER) SHALL BE INSTALLED COMPLETE AND IN ACCORDANCE WITH ALL APPLICABLE CODES, LAWS AND REGULATIONS, LOCAL HEALTH DEPARTMENT STANDARDS AND THE OWNER'S REQUIREMENTS.
- 3. THE SYSTEM SHALL BE FREE OF ANY NOISE AND VIBRATIONS.
- 4. THE PLUMBING WORK SHALL COMPLY WITH THE LATEST EDITION OF THE INTERNATIONAL PLUMBING CODES, GA STATE AMENDMENTS, THE GEORGIA STATE ACCESSIBILITY CODE & ALL APPLICABLE SECTIONS OF NFPA AND ANSI AND THE GUIDELINES OF ASPE.
- 5. THE CONTRACTOR SHALL CONFIRM AND ENSURE THAT ALL PLUMBING WORK CONFORMS TO THE CURRENT REQUIREMENTS OF THE LOCAL BUILDING INSPECTION DEPARTMENT.
- 6. ALL PLUMBING EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS.
- 7. ALL FIXTURES AND EQUIPMENT SHALL BE INSTALLED LEVEL, PLUMB AND RUN PARALLEL OR PERPENDICULAR TO THE BUILDING WALLS UNLESS INDICATED OTHERWISE.
- 8. CONTRACTOR SHALL SECURE ALL PERMITS, INSPECTION CERTIFICATES, AUTHORITY APPROVALS AND PAY ALL RELATED FEES AND CHARGES.
- 9. ALL NEW PLUMBING EQUIPMENT AND SYSTEMS SHALL BE GUARANTEED FOR
- A PERIOD OF ONE YEAR AFTER ACCEPTANCE BY THE OWNER.

 10. IT IS THE INTENT OF THESE SPECIFICATIONS TO PROVIDE FINISHED WORK, TESTED AND READY FOR OPERATION. ANY APPARATUS, APPLIANCE OR MATERIAL WHICH MAY BE NECESSARY TO MAKE THE WORK COMPLETE AND FULLY OPERATIONAL, EVEN IF NOT EXPLICITLY STATED, SHALL BE
- PROVIDED FOR BY THE CONTRACTOR.

 11. ALL PLUMBING WORK SHALL BE INSTALLED SO AS TO AVOID
 INTERFERENCE WITH ALL ELECTRICAL AND MECHANICAL WORK AND
 STRUCTURAL MEMBERS.
- 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING AND REPAIRING ALL AREAS WHICH WERE DAMAGED BY HIS OPERATION.
- 13. EXACT LOCATIONS & ROUGH—IN REQUIREMENTS FOR ALL FIXTURES & EQUIPMENT SHALL BE DETERMINED FORM ARCHITECTURAL DRAWINGS. LARGE SCALE ARCHITECTURAL DETAILS & APPROVED MANUFACTURER'S SHOP DRAWINGS. PARTICULAR ATTENTION SHALL BE DIRECTED TO FIXTURES OR EQUIPMENT FURNISHED BY OTHER TRADES.
- 14. PIPING IS SHOWN IN ITS GENERAL LOCATION (UNLESS DIMENSIONED).
 EXACT LOCATIONS SHALL BE DETERMINED BY JOB CONDITIONS.
 CONTRACTOR SHALL COORDINATE THE INSTALLATION OF HIS WORK WITH
 THAT OF OTHER TRADES & ARRANGE PIPING TO CLEAR STRUCTURAL
 MEMBERS & DUCTWORK. DO NOT RESTRICT ACCESS TO ANY EQUIPMENT.

DOMESTIC WATER PIPING:

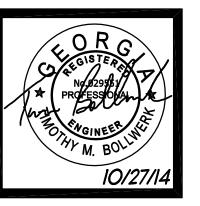
- 15. DOMESTIC COLD WATER PIPING ABOVE GRADE SHALL BE TYPE
 L COPPER TUBING. FITTINGS SHALL BE WROUGHT COPPER WITH LEAD
 FREE SOLDER. PIPING SHALL NOT TOUCH FERROUS MATERIALS. FIRMLY
 SUPPORT PIPING USING NON FERROUS PIPE SUPPORTS.
- 16. PROVIDE A BALL—COCK STOP ON WATER SUPPLY IN BRANCH PIPE TO EACH PLUMBING FIXTURE WHETHER SHOWN ON THE DRAWINGS OR NOT.
 17. UNIONS SHALL BE PROVIDED AFTER EACH SCREW TYPE VALVE AND AT EQUIPMENT CONNECTIONS. PROVIDE ISOLATION UNIONS ON ALL

CONNECTIONS BETWEEN DISSIMILAR METALS.

INSULATION:

- 18. INSULATE ALL ABOVE GROUND HOT AND COLD WATER PIPING AND FITTINGS
- A. PRE-FORMED ARMAFLEX AP INSULATION, 1" THICK. USE ARMAFLEX 520 ADHESIVE ON ALL JOINTS. INSULATION CONDUCTIVITY SHALL BE MAXIMUM 0.27 (BTU*IN)/(HR*FT2**F) PER ASTM C 177.
- B. PRE-FORMED NOMALOCK EPFI INSULATION INSULATION, 1" THICK. WITH A PRE-GLUED PRESSURE SENSITIVE ADHESIVE CLOSURE SYSTEM. INSULATION CONDUCTIVITY SHALL BE MAXIMUM 0.27
- (BTU*IN)/(HR*FT2**F) PER ASTM C 177.

 C. PRE—FORMED MICRO—LOK FIBER GLASS INSULATION, 1" THICK. WITH FACTORY APPLIED LONGITUDINAL ACRYLIC CLOSURE SYSTEM & FACTORY SUPPIED BUTT STRIPS. INSULATION CONDUCTIVITY SHALL BE MAXIMUM 0.24 (BTU*IN)/(HR*FT2**F) PER ASTM C 177.





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archites Fritz

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770-428-5050 Fer. 770-428-9849



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DATE:
2014-009

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