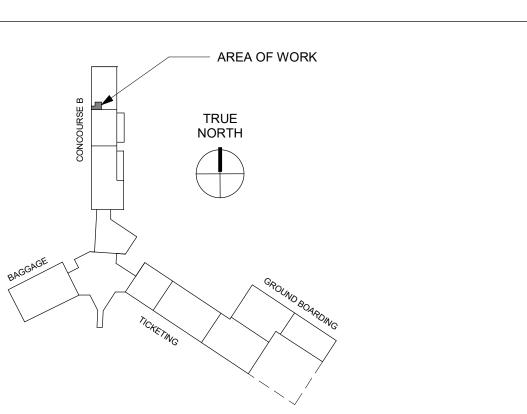
# B-R1 SHOPPES AT SIESTA KEY SARASOTA BRADENTON INTERNATIONAL AIRPORT

6000 AIRPORT CIRCLE, SARASOTA, FL 34243 ISSUED FOR PERMIT







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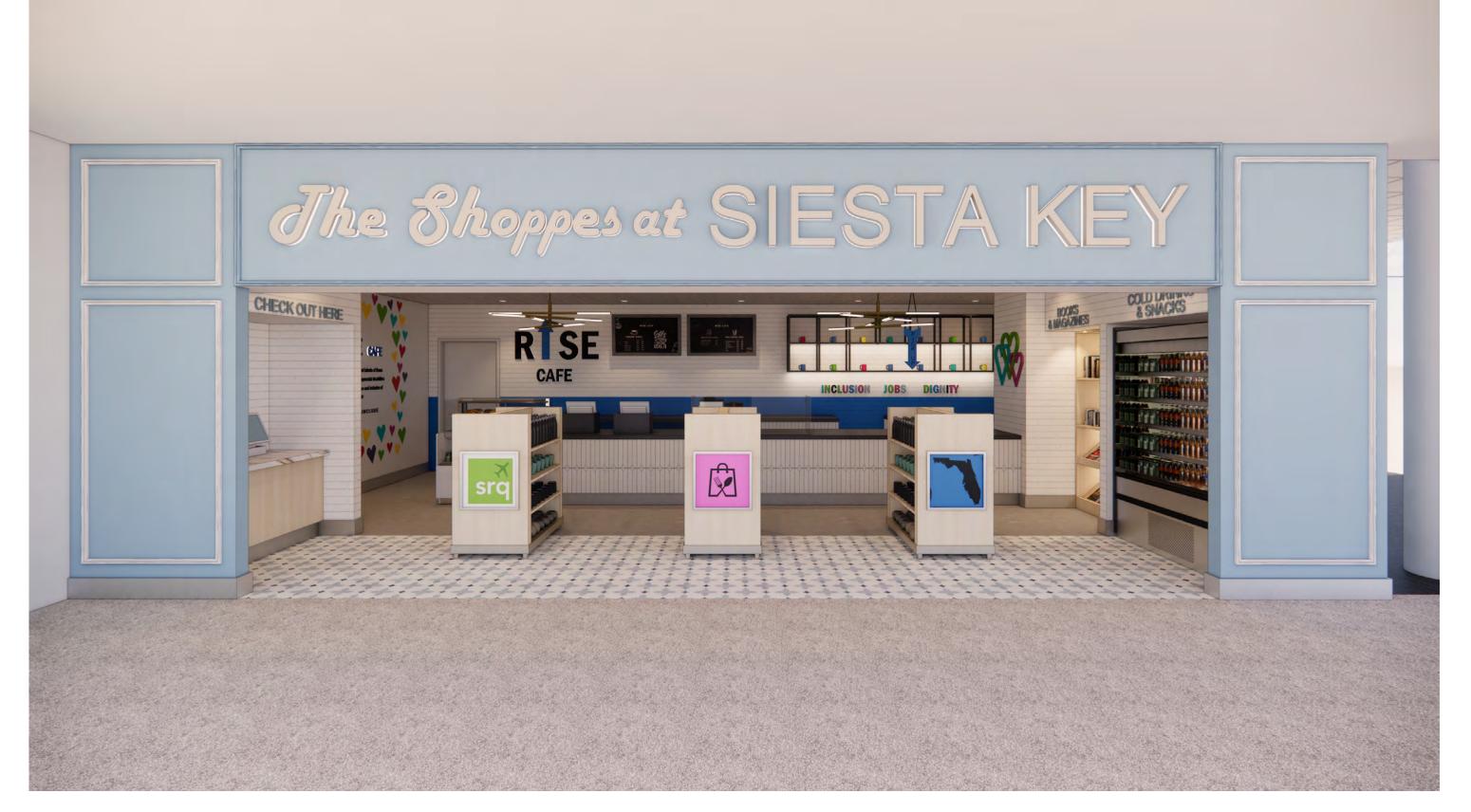
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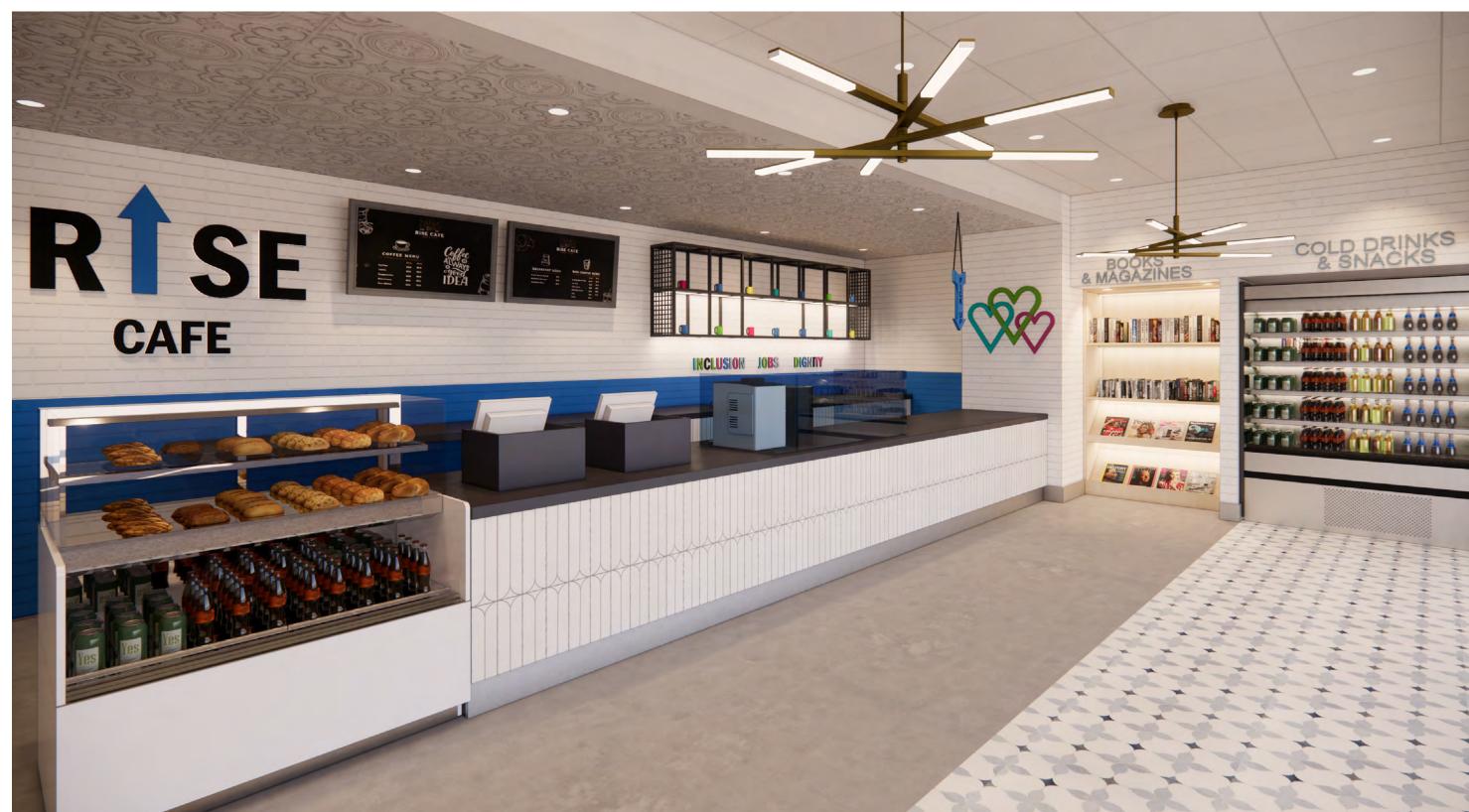
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RENDERINGS

NOTE: IMAGES ARE FOR CONCEPT ONLY, REFER TO ARCHITECTURAL SHEETS FOR ELEVATIONS AND FINISH DETAILS





180 SYLVAN AVENUE, SUITE 3 ENGLEWOOD CLIFFS, NJ 07632 ENVIRONETICS GROUP ARCHITECTS,

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SHOPPE

PERMIT 06/14/2024

**DELIVERABLE**: ISSUE DATE: PROJECT

DRAWN BY: CHECKED BY: DC

TITLE SHEET

T-100

APPLICABLE CODES

2023 FLORIDA BUILDING CODE, 8TH EDITION

2020 FLORIDA ELECTRICAL CODE

2023 FLORIDA FIRE PREVENTION CODE

2023 FLORIDA PLUMBING CODE, 8TH EDITION

2010 ADA STANDARDS FOR ACCESSIBILITY

2009 ICC A117.1- 2009 BARRIER FREE CODE

2023 FBC ENERGY CONSERVATION CODE, 8TH EDITION

2016 ADA STANDARDS FOR TRANSPORTATION FACILITIES

2023 FLORIDA MECHANICAL CODE, 8TH EDITION

BUILDING SHALL BE CONSTRUCTED TO BE IN COMPLIANCE WITH THE LISTED CODES, AND THE MOST

**REVIT 2023** 

SHEET#	SHEET NAME	30% DESIGN SUBMISSION 2024.03.01	90% CD SUBMISSION 2024.04.08	ISSUE FOR PERMIT 2024.06.14
GENERAL				
T-100	TITLE SHEET	•	•	•
T-101	SHEET INDEX	•	•	•
GN-100	GENERAL NOTES	•	•	•
GN-101	SYMBOLS AND ABBREVIATIONS	•	•	•
GN-102	ADA SHEET	•	•	•

T-101	SHEET INDEX	•	•	•
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GN-101	SYMBOLS AND ABBREVIATIONS	•	•	•
GN-102	ADA SHEET	•	•	•
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AD-101	BARRICADE AND DEMOLITION PLAN	•	•	•
AD-102	CORING PLAN		•	•
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P-601   PLUMBING SPECIFICATIONS					
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FIRE ALARM			
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B-R1 SHOPPES AT SIESTA KEY
SARASOTA BRADENTON INTERNATIONAL AIRPORT

ARCHITECTURE + DESIGN

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DESIGN DELIVERABLE: ISSUE DATE:

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SHEET TITLE:
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ISSUED FOR PERMIT 06/14/2024

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#### GENERAL NOTES

- THIS IS STANDARD LEGEND AND NOTES COLUMN. SOME OF THE ITEMS AND/OR NOTES MAY NOT BE APPLICABLE TO THIS SPACE. COORDINATE WTIH MECHANICAL, ELECTRICAL AND HVAC DRAWINGS AND REQUIREMENTS WITH CONDITIONS SHOWN ON THE ARCHITECTURAL DRAWING. VERIFY AND COORDINATE BETWEEN THE RESPECTIVE TRADES PRIOR TO THE START OF CONSTRUCTION. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING WITH THE CM THOSE ITEMS LISTED HEREIN WHICH ARE NOT APPLICABLE TO A PARTICULAR
- THE CONTRACTOR SHALL FULLY ACQUAINT HIMSELF WITH THE EXISTING CONDITIONS AND SHALL HAVE VISITED AND INSPECTED THE JOB SITE AND BE FULLY INFORMED AS TO THE NATURE OF EQUIPMENT AND FACILITIES NEEDED FOR THE PROPER EXECUTION OF THE WORK. STARTING OF DEMOLITION AND REMOVAL OPERATIONS WILL BE CONSTRUED AS EVIDENCE THAT THE CONTRACTOR HAS COMPLIED WITH THESE REQUIREMENTS. ANY LATER CLAIMS FOR DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN, WILL NOT BE RECOGNIZED.
- VERIFY ALL EXISTING ELEVATIONS, CONDITIONS AND DIMENSIONS AT THE SITE, AGAINST THE DRAWINGS, AND INFORM THE CM OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK AND SUBMISSION OF ANY SHOP DRAWINGS.
- ALL WORK, WHETHER SHOWN OR IMPLIED, UNLESS SPECIFICALLY QUESTIONED, SHALL BE CONSIDERED FULLY UNDERSTOOD IN ALL RESPECTS BY THE CONTRACTOR. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY MISINTERPRETATIONS AND/OR CONSEQUENCES THEREOF, FOR ALL WORK ON ALL DRAWINGS.
- CONTRACTOR SHALL FOLLOW ACCEPTED TRADE PROCEDURES AND MANUFACTURER'S STANDARDS AND SHALL PRODUCE THE PROJECT IN A GOOD AND WORKMANLIKE MANNER. ALL MATERIALS ARE TO BE NEW, UNLESS OTHERWISE NOTED IN THE DRAWINGS AND CONTRACTOR SHALL NOT SUBSTITUTE ANY STRUCTURAL GRADE MATERIALS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT.
- CONTRACTOR SHALL SCHEDULE ALL WORK TO CONFORM TO THE GENERAL CONSTRUCTION SCHEDULE AND SHALL COOPERATE AND NOT CONFLICT WITH THE DAY TO DAY OPERATIONS OF THE BUILDING AND OWNER.
- THE CONTRACTOR AND ALL RESPECTIVE TRADES SHALL GIVE THEIR PERSONAL SUPERINTENDENCE TO THE WORK AND SHALL FURNISH ALL LABOR, MATERIALS TRANSPORTATION, APPARATUS AND EQUIPMENT REQUIRED FOR A COMPLETE INSTALLATION. THE CONTRACTORS SHALL INSTALL ALL MATERIALS IN A MANNER SUBJECT TO APPROVAL OF THE OWNER AND THE ARCHITECT.
- THE CONTRACTOR SHALL LEAVE THE PREMISES IN A NEAT, CLEAN AND SAFE CONDITION AT THE COMPLETION OF WORK EACH DAY.
- THE CONTRACTOR SHALL CONFORM TO ALL APPLICABLE PROVISIONS OF THE NATIONAL AND STATE BUILDING CODES AND LOCAL REQUIREMENTS OF THE AIRPORT AND AHJ.
- ALL CONDITIONS WHICH OCCUR AND WHICH ARE NOT IN CONFORMANCE WITH THESE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT FOR PROMPT RESOLUTION. FAILURE TO DO SUCH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- NO MATERIAL SUBSTITUTIONS SHALL BE MADE. THE ARCHITECT WILL CONSIDER MATERIAL CHANGE REQUESTS ON AN INDIVIDUAL BASIS. SUB-CONTRACTOR SHALL SUBMIT SAMPLES AND CUTS FOR WRITTEN APPROVAL BY THE ARCHITECT PRIOR TO THE START OF ANY WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF WORK AND ESTABLISHING SCHEDULES FOR ALL TRADES. HE SHALL AFFORD OTHER SUB-CONTRACTORS REASONABLE OPPORTUNITY FOR THE INTRODUCTION AND STORAGE OF THEIR MATERIALS AND EQUIPMENT AND THE EXECUTION OF THEIR WORK.
- ALL MANUFACTURED ARTICLES, MATERIALS AND EQUIPMENT SHALL BE SUPPLIED, INSTALLED, CONNECTED, ERECTED, USED, CLEANED AND CONDITIONED AS DIRECTED BY THE MANUFACTURER, UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS.
- EACH SUBTRADE WILL BE RESPONSIBLE FOR REVIEWING THE ENTIRE SET OF DRAWINGS AND NOTING HIS WORK AS APPLICABLE. WORK INDICATED OR INFERRED ON THE DRAWINGS WILL BE DEEMED AND INCLUDED IN SUB-CONTRACTOR'S COSTS.
- THE CONTRACTOR SHALL SUBMIT, IN WRITING, ALL PROPOSALS FOR ADDITIONAL WORK TO THE ARCHITECT'S OFFICE FOR REVIEW AND APPROVAL. NO WORK IS TO PROCEED UNTIL A SIGNED PROPOSAL IS RETURNED TO THE GENERAL CONTRACTOR
- PERMITS: THE CONTRACTOR WILL SECURE REQUIRED BUILDING PERMITS PRIOR TO START OF WORK. INDIVIDUAL SUBCONTRACTORS TO SECURE NECESSARY PERMITS PRIOR TO START
- UPON COMPLETION OF THE JOB, THE CONTRACTOR SHALL SUBMIT CERTIFICATES ON INSPECTION AND A CERTIFICATE OF SUBSTANTIAL COMPLETION (A.I.A. DOCUMENT G-704).
- TEMPORARY PROTECTION: PARTICULAR ATTENTION SHALL BE GIVEN TO THE PROTECTION OF EXISTING STRUCTURE AND FINISHES SO AS TO PREVENT ANY DAMAGE OF EXISTING FINISHES NOT DESIGNATED FOR DEMOLITION. PROVIDE ALL NECESSARY, TEMPORARY CONSTRUCTION AND DUST-PROOF PROTECTION. PROTECTIONS SHALL BE IN COMPLIANCE WITH BUILDING STANDARDS. TYPE AND LOCATION OF PROTECTION SHALL BE REVIEWED WITH OWNER'S CONSTRUCTION REPRESENTATIVE PRIOR TO COMMENCING WORK. SUB-CONTRACTOR SHALL FULLY BRACE AND OTHERWISE PROTECT ALL WORK IN PROGRESS UNTIL THE BUILDING IS
- PROVIDE FULL AND COMPLETE PROTECTION REQUIRED FOR ALL AREAS REMAINING OPERATIONAL DURING ALL PHASES OF THIS PROJECT. CONTRACTOR TO TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO ANY ADJACENT PROPERTY AND/OR PERSONS. THE CONTRACTOR SHALL REPAIR AND PATCH ANY AREAS THAT ARE ALTERED OR DAMAGED DURING PROCESS OF ALTERATION.
- ANY EXISTING WORK DAMAGED BY THE CONTRACTOR OR SUBCONTRACTORS SHALL BE RETURNED TO ITS ORIGINAL CONDITION AT THE CONCLUSION OF THE PROJECT AT NO ADDITIONAL COST TO THE OWNER.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND IT'S SUB-CONTRACTORS TO KEEP THE BUILDING WEATHERTIGHT AND MAINTAIN ALL BARRICADES, SHORING, BRACING AND OTHER SAFETY MEASURES REQUIRED TO PROTECT THE BUILDING, WORKMEN AND THE PUBLIC.
- CLEAN-UP: ALL MATERIALS DEMOLISHED, EXCEPT AS INDICATED ON THE DRAWINGS TO BE SALVAGED, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED AND DISPOSED OF OFF THE SITE WITH SUCH DILIGENCE AS TO CAUSE NO INTERFERENCE WITH SUBSEQUENT BUILDING OPERATIONS, USE OF BUILDING BY OCCUPANTS OR ANY UNSIGHTLY ACCUMULATION OF DEBRIS. CONSTRUCTION DEBRIS SHALL BE REMOVED
- UPON COMPLETION OF ALL DEMOLITION AND REMOVAL WORK. REMOVE ALL TOOLS AND APPARATUS FROM THE PREMISES. REMOVE FROM THE AREA OF WORK ALL DEMOLISHED MATERIAL NOT DESIGNATED FOR RE-USE. REMOVE ALL TEMPORARY SHORING, BRACING, LINTELS PROTECTION, ETC., AS DIRECTED. LEAVE THE AREA OF WORK, BROOM-CLEAN, NEAT AND ORDERLY, TO THE SATISFACTION OF THE OWNER. STORAGE OF MATERIALS SHALL NOT INTERFERE WITH THE MEANS OF EGRESS OF THE EXISTING CORRIDOR SPACES.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR COMPREHENSIVE LIABILITY INSURANCE COVERING THE ENTIRE WORK AND COMPENSATION INSURANCE, IN ACCORDANCE WITH APPLICABLE CURRENT LAWS, PRIOR TO THE COMMENCEMENT OF THE WORK. THE SUB-CONTRACTOR SHALL SUBMIT TO THE CONTRACTOR COPIES OF ALL REQUIRED. CERTIFICATES INSURANCE.

- SHOP DRAWINGS: THE CONTRACTOR SHALL CHECK AND VERIFY ALL FIELD MEASUREMENTS AND SUBMIT, WITH PROMPTNESS, SHOP DRAWINGS, SAMPLES, MANUALS AND SCHEDULES REQUIRED FOR APPROVAL. THE ARCHITECT'S APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR DEVIATIONS AT THE TIME OF SUBMISSION, NOR SHALL IT RELIEVE HIM FROM RESPONSIBILITY FOR ERRORS IN SHOP DRAWINGS. THIS SHALL BE DONE PRIOR TO FABRICATION AND REVIEWED BY THE ARCHITECT.
- LL SUBCONTRACTOR'S SHOP DRAWINGS SHALL BE SUBMITTED TO ARCHITECT FOR APPROVAL, THROUGH THE CM, PRIOR TO WORK BEING PERFORMED, UNLESS OTHERWISE NOTED. THE SHOP DRAWINGS SHALL BE REVIEWED BY THE CM AMD VISIBLY INDICATED AS SUCH ON THE DRAWINGS, PRIOR TO SUBMISSION FOR THE ARCHITECT'S REVIEW.
- HARDWARE AND DOOR SCHEDULES TO BE SUBMITTED TO AND APPROVED BY ARCHITECT PRIOR TO FABRICATION. WHERE CONTENTS OF MANUALS INCLUDE MANUFACTURERS' CATALOG PAGES, CLEARLY INDICATED THE PRECISE ITEMS INCLUDED IN THIS INSTALLATION AND DELETE, OR OTHERWISE CLEARLY INDICATE ALL MANUFACTURER'S DATA, WITH WHICH THIS INSTALLATION IS NOT CONCERNED. UNLESS OTHERWISE SPECIFICALLY DIRECTED BY THE ARCHITECT, DELIVER SIX (6) COPIES OF THE MANUFACTURER'S MANUAL TO THE ARCHITECT AND ONE (1) COPY TO THE
- APPROVALS: THE ARCHITECT WILL REVIEW SUBMITTAL WITH REASONABLE PROMPTNESS, SO AS TO CAUSE NO DELAY, BUT ONLY FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS.
- NO PORTION OF THE WORK REQUIRING A SUBMISSION SHALL BE COMMENCED BY THE CONTRACTOR , UNTIL THE SUBMISSION HAS BEEN REVIEWED AND NOTED BY THE ARCHITECT IN WRITING. ALL SUCH PORTIONS OF THE WORK SHALL BE IN ACCORDANCE WITH APPROVED SUBMITTAL, AND IF COMMENCED, ARE AT THE CONTRACTOR'S OWN
- ALL COLOR SELECTIONS SHALL BE MADE AND COORDINATED THROUGH THE OFFICE OF THE ARCHITECT, EXCEPT AS OTHERWISE DIRECTED BY THE OWNER. COLORS: UNLESS THE PRECISE COLOR AND PATTERN IS SPECIFICALLY DESCRIBED IN THE CONTRACT DOCUMENTS, WHENEVER A CHOICE OF COLOR OR PATTERN IS AVAILABLE IN A SPECIFIED PRODUCT, SUBMIT ACCURATE COLOR CHARTS AND PATTERN CHARTS TO THE ARCHITECT FOR HIS REVIEW AND SELECTION.
- THE GENERAL CONTRACTOR SHALL SUBMIT FINAL "AS BUILT" DRAWINGS IN PDF FORMAT AS PART OF THE CONTRACT.
- 32. THE CONTRACTOR SHALL SUBMIT THE SAMPLES IN SUFFICIENT TIME TO PERMIT CHECKING, RESUBMISSION, RECHECKING, APPROVAL FABRICATION AND DELIVERY. FAILURE TO DO SO WILL NOT JUSTIFY A DELAY IN THE TIME OF COMPLETION OF WORK.
- DETAILS SHOWN IN ANY SECTION APPLY TO ALL SIMILAR SECTIONS UNLESS OTHERWISE 33.
- WHEN CERTAIN ITEMS OF EQUIPMENT AND OTHER WORK ARE INDICATED AS "NIC" (NOT IN CONTRACT) OR TO BE FURNISHED AND INSTALLED UNDER OTHER CONTRACTS, ANY REQUIREMENTS FOR PREPARATION OF OPENINGS, PROVISION OF BACKING, ETC,. FOR RECEIPT OF SUCH "NIC" WORK, SHALL BE PROVIDED TO THE GENERAL CONTRACTOR, WHO SHALL PROPERLY FORM AND OTHERWISE PREPARE HIS WORK IN A SATISFACTORY MANNER TO RECEIVE SUCH "NIC" WORK.
- UPON WRITTEN REQUEST OF CONTRACTOR, THE OWNER WILL FURNISH TO THE GENERAL CONTRACTOR A SCHEDULE INDICATING DELIVERY DATES AND INSTALLATION REQUIREMENTS OF EQUIPMENT TO BE FURNISHED AND INSTALLED UNDER SEPARATE CONTRACTS.
- 36. IT WILL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY TO SEE THAT THE BUILDING AREAS ARE MADE READY TO RECEIVE AND INSTALL THE OWNER'S EQUIPMENT, IN ACCORDANCE WITH THE DELIVERY SCHEDULE AND SPECIFIC REQUIREMENTS FURNISHED. FAILURE TO MEET THE SCHEDULE ON ITEMS OF THE OWNER-FURNISHED EQUIPMENT WILL BE CONSIDERED AS IMPORTANT TO THE COMPLETION SCHEDULE AS ANY OTHER PART OF THE WORK.
- CONTRACTOR SHALL FULLY BRACE AND OTHERWISE PROTECT ALL WORK IN PROGRESS UNTIL THE BUILDING IS COMPLETED.
- ALL FILL IS TO BE CLEAN AND COMPACTED PRIOR TO THE POURING OF ANY FLOOR SLAB
- ALL OPENINGS IN PARTITIONS OR BLOCK WALLS INCLUDING, BUT NOT LIMITED TO, DUCTWORK, PENETRATIONS, DOOR OPENINGS, ETC. SHALL BE SUPPORTED BY STEEL LINTEL UNLESS OTHERWISE INDICATED. SUB-CONTRACTOR IS TO FURNISH AND INSTALL ALL ANGLES, STRUTS, BRACKETS, TOGGLES, EYE BOLTS, ETC. WHEREVER NECESSARY TO PROPERLY SUPPORT, BRACE OR REINFORCE ALL FINSIHES. FRAMES,
- SEE PLANS FOR LOCATIONS OF ALL EXPANSION AND CONTROL JOINTS. PROVIDE EXPANSION JOINT COVERS (RECESSED) AT ALL FLOOR, WALL AND CEILING CONNECTIONS TO EXISTING CONSTRUCTION TO CONTROL JOINTS/FINISH CRACKING PROVIDE CONTINUOUS EXPANSION CONTROL AT STRUCTURE AND BUILDING FINISHES. SEE PLANS FOR WIDTH/TYPE.
- ALL BLOCK AND ADJACENT RATED WALL CONSTRUCTION SHALL MEET THE FIRE RESISTIVE RATINGS AND OTHER REQUIREMENTS OF BUILDING CODE AND REGULATIONS, LOCAL LAWS, ORDINANCES, REGULATIONS AND AUTHORITIES HAVING JURISDICTION.
- 42. ALL CUTTING AND PATCHING OF OPENINGS SHALL BE POINTED UP, AND SURFACE REPAIRED FOR AN AIRTIGHT SEAL.
- ALL EXISTING WALL FINISHES OR EQUIPMENT, ETC. WHICH ARE DISTURBED DURING CONSTRUCTION AND PROVE NOT TO BE NECESSARY AND NOT BE SPECIFICALLY INDICATED "TO REMAIN", SHALL BE REMOVED, PATCHED, REPAIRED OR COVERED. EITHER AS INDICATED ON THE PLANS OR TO CREATE A FLUSH, UNIFORM SURFACE HAVING THE INTEGRITY OF SUCH.
- ALL WALLS AND/OR PARTITIONS, INCLUDING COLUMN AND RATED WALL CONSTRUCTION, SHALL EXTEND FROM FLOOR SLAB TO UNDERSIDE OF DECK CONSTRUCTION ABOVE, UNLESS OTHERWISE NOTED.
- 45. ALL OUTSIDE CORNERS AT MASONRY AND DRYWALL PARTITIONS SHALL HAVE METAL CORNER BEADS. TAPE AND SPACKLE SMOOTH WHERE REQUIRED.
- ALIGNMENT OF NEW CONSTRUCTION TO EXISITNG WALLS AND COLUMNS SHALL BE DONE IN A MANNER AS TO VISIBLY ELIMINATE THE POINT OF CONTACT OR JOINT OF NEW AND EXISTING MATERIALS. NEW CONSTRUCTION SHALL BE FLUSHED WITH EXISTING.
- ALL WOOD PRODUCTS, FURRING STRIPS, BLOCKING ETC., SHALL BE FIRE RATED, IN ACCORDANCE WITH APPLICABLE STATE, CITY AND LOCAL BUILDING CODES.
- PLASTIC LAMINATE COUNTERS, WALL HUNG SHELVES, CLOSET SHELVES AND COAT BARS, AND DIVIDERS IN CLOSETS BY GENERAL CONTRACTOR, UNLESS OTHERWISE

- PARTITIONS SHALL BE CONTNUOUS OVER ALL BUILT-IN EQUIPMENT, WHERE SHOWN ON PLANS AND DETAILS. FURNISH NECESSARY ANGLES, HANGERS, ETC. TO CARRY THESE PARTITIONS AND PROVIDE NECESSARY CLOSURE STRIPS AND TRIM AS REQUIRED.
- 50. PATCH ALL FLOOR AND WALL CRACKS AND SURFACE IRREGULARITIES AS REQUIRED. PRIOR TO FINISH INSTALLATION SHOWN. FLASH PATCH AREAS AS REQUIRED TO PROVIDE A SMOOTH FLUSH SURFACE FOR SAME.
- 51. ALL NEW PIPING, DUCTWORK, AND ELECTRICAL CONDUITS SHALL BE CONCEALED WITHIN NEW PARTITIONS: OR THE GENERAL CONTRACTOR IS TO PROVIDE FURRING, SOFFITS, CHASES, ETC., FOR ALL DUCTWORK, PIPING, CONDUIT, ETC., UNLESS INDICATED TO BE EXPOSED.
- 52. ALL INFILL PATCHING SHALL BE FURRED OUT AS REQUIRED AND FINISHED FLUSH WITH EXISTING.
- 53. THE GENERAL CONTRACTOR SHALL PATCH ALL CUTTING BY MECHANICAL AND ELECTRICAL TRADES AND ALL ADDITIONAL CUTTING BY OTHERS. COORDINATE THE WORK PRIOR TO THESE TRADES PROCEEDING. NO EXTRAS WILL BE ALLOWED DUE TO FAILURE TO COORDINATE SUCH, OR PROCEEDING WITH WORK THAT COULD HAVE BEEN AVOID WITH SUCH/PROPER PLANNING.
- 54. ALL PIPE SPACES AND DUCT SPACES SHALL BE ENCLOSED AND FIRE STOPPED BY A PARTITION OF THE REQUIRED RATING.
- ANY STEEL AND COLUMN FIREPROOFING WHICH IS DAMAGED, LOOSE OR HAS CHIPPED-OFF, SHALL BE REPLACED PRIOR TO THE ENCLOSURE OF ANY COLUMNS TO MAINTAIN THE FIRE INTEGRITY OF SUCH.
- FIRE ALARM TO BE PROVIDED WHERE SHOWN AND INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S ACTUAL INSTRUCTIONS AND NFPA 72.
- EXIT SIGNS AND EMERGENCY LIGHTING ARE TO BE PROVIDED, MEETING ALL CODE REQUIREMENTS. ALL EXIT AREAS SHALL BE PROPERLY IDENTIFIED AND SUPPLIED WITH EMERGENCY EXIT LIGHTING TO MAINTAIN A MINIMUM OF ONE (1) FOOTCANDLE IN ACCORDANCE WITH IBC.
- SUB-CONTRACTOR IS TO LOCATE AND COORDINATE EGRESS DOOR HARDWARE WITH ALARM SYSTEM AND MAKE ALL NECESSARY CONNECTIONS/REWIRE AS
- ALL "B" LABEL DOORS ARE TO BE EQUIPPED WITH AN AUTOMATIC SELF-CLOSER AND BE UL LABELED.
- THE ELECTRICAL OUTLETS AND PLUMBING SHOWN ON THE ARCHITECTURAL DRAWING ARE ONLY THOSE WHICH HELP TO CLARIFY THE SUGGESTED FUNCTIONAL PATTERNS OF THE ROOMS. IN ALL CASES THE SUB-CONTRACTOR SHALL REFER TO THE MECHANICAL AND ELECTRICAL DRAWINGS FOR THE COMPLETE LAYOUT OF EACH RESPECTIVE SERVICE. IN ALL CASES, OR IN THE EVENT OF A CONFLICT, THE ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE.
- PROVIDE NEW ELECTRICAL WIRING/LIGHTING AS CLOSE AS POSSIBLE TO LAYOUTS SHOWN ON PLANS, UNLESS OTHERWISE DIRECTED BY CM. ELECTRICAL WIRING AND DEVICES TO MEET ALL CODE REQUIREMENTS. SUB-CONTRACTOR TO PROVIDE ALL HOOKUPS TO EXISTING, AS REQURIED AFTER VERIFYING IF MAIN SERVICE IS SUFFICIENT TO CARRY INCREASED LOAD. REPLACE AS REQUIRED AND /OR UPGRADE IF NOT ADEQUATE.
- COORDINATE NEW CONSTRUCTION WITH ALL REQUIRED MECHANICAL DUCTWORK AND PIPE PENETRATIONS. PROVIDE THROUGH WALL SLEEVES AS REQUIRED, TYPICAL ALL LOCATIONS. PENETRATING SUB-CONTRACTOR TO PROVIDE SHEET METAL SLEEVE WITH THERMO FIBER AND FIRE RATED CAULK SYSTEM.
- 63. ALL HVAC, ELECTRICAL AND PLUMBING EQUIPMENT UNCOVERED DURING DEMOLITION THAT IS NOT SHOWN TIED INTO NEW CONSTRUCTION OR TO RELOCATED UNITS, IS TO BE "CAPPED OFF", COVERED AND LOCATION NOTED FOR FUTURE USE, OR REMOVED WHERE NO FUTURE USE IS INTENDED.
- 64. CEILING SUB-CONTRACTOR SHALL SUBMIT REFLECTED CEILING PLANS FOR ALL AREAS. PLANS SHALL INDICATE CEILING TILE GRID, CEILING DIFFUSERS ELECTRICAL LIGHTING FIXTURES, STARTING POINTS, ETC. CAULK JOINTS AT VERTICAL INTERSECTIONS TO ALLOW FOR A CLEAN SHARP APPEARANCE.
- ELECTRICAL SUBCONTRACTOR SHALL SUBMIT CATALOG CUTS OF ALL FIXTURES TO CM FOR APPROVAL OF COLOR AND STYLE.
- PROVIDE ACCESS TO EXISTING ELECTRICAL AND TELEPHONE PANELS WHERE
- PHONE JACKS BY TELEPHONE SUB-CONTRACTOR. CM IS TO COORDINATE WITH ALL TRADES. INCOMING SERVICE TO BE BY THE REGIONAL TELEPHONE UTILITY
- NEW WORK IS TO MEET OR EXCEED THE ENERGY CODE, NATIONAL ELECTRIC CODE NEC, NATIONAL STANDARD PLUMBING CODE (NSP), MECHANICAL CODES, OSHA (WHERE APPLICABLE), ALL UL REQUIREMENTS, AND ICC CODES. THE MOST RECENT PUBLICATION DATE OF ALL AFOREMENTIONED CODES SHALL APPLY.
- HANDICAP NOTE: THE REQUIREMENTS OF THE "BARRIER-FREE SUBCODE" SHALL BE STRICTLY ADHERED TO.
- GUARANTEES: ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE, UNLESS SPECIFIED OTHERWISE FOR A LONGER PERIOD OF TIME FOR SPECIFIC ITEMS. EACH SUB-CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCIDENTAL THERETO INCLUDING DAMAGE TO OTHER WORK, FURNISHINGS OR EQUIPMENT. IF THE SUB-CONTRACTOR, AFTER NOTICE IN WRITING FROM THE CM AND ARCHITECT, FAILS TO PROCEED PROMPTLY TO COMPLY WITH THE TERMS OF THE GUARANTEE. THE CM MAY HAVE THE DEFECTS CORRECTED AND THE SUB-CONTRACTOR WILL BE RESPONSIBLE FOR ALL EXPENSES INCURRED.
- ACCEPTANCE OF BID WILL BE CONSTRUED AS EVIDENCE THAT THE SUB-CONTRACTOR HAS COMPLIED WITH ALL REQUIREMENTS STATED ABOVE.
- THESE DRAWINGS ARE FOR COORDINATION PURPOSES AND ARE TO BE USED IN CONJUNCTION WITH THE STRUCTURAL PLANS AND BUILDING SYSTEMS MANUFACTURERS' DETAILS/SHOP DRAWINGS. COORDINATE THESE SYSTEMS PRIOR TO COMMENCEMENT OF ANY WORK.
- ARCHITECT'S RESPONSIBILITIES DURING CONSTRUCTION PHASE OF THE WORK SHALL BE TO ANSWER QUESTONS REGARDING THE INTENT OF THE DRAWINGS. ALL REVISIONS, CONFLICTS AND SUBSTITUTIONS DURING CONSTRUCTION SHALL BE SUBMITTED TO THE CM.
- AT INTERSECTIONS OF MASONRY AND GYPSUM BOARD FINISHES CONTRACTOR SHALL PROVIDE A CONTINUOUS 1/4" "Z" REVEAL EXPANSION JOINT AND PAINT TO MATCH EXISITNG.
- GC IS TO PROVIDE ADEQUATE WALL BLOCKING BEHIND FINISH SURFACES FOR ALL KITCHEN EQUIPMENT (TYP.).

- ALL WOOD, WOOD PRODUCTS, AND PLYWOOD BACKING SHALL BE FIRE RETARDANT AS PER APPLICAHLE BUILDING CODE
- 77. ALL CONSTRUCTION MATERIALS USED MUST MEET ALL AHJ CODE REQUIREMENTS.
- 78. ALL CONSTRUCTION METHODS MUST MEET OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION STANDARDS AND ALL TRADESMEN MUST CARRY PROPER ID CREDENTIALS AT ALL
- 79. IF ANY FIELD CONDITIONS ARE EXPOSED DURING THE COURSE OF CONSTRICTION THAT MAY ALTER THE DESIGN INTENT AS INDICATED ON THESE DRAWINGS, THE OWNER (LANDLORD) MUST BE NOTIFIED AND PRESENTED WITH ALL FACTS AND DETAILS IN ORDER TO APPROVE ANY CHANGES PRIOR TO PROCEEDING WITH CONSTRUCTION.
- 80. ALL CUSTOM FABRICATED ITEMS FOR THIS PROJECT MUST MEET ALL AHJ FIRE RETARDANT AND CONSTRUCTION MATERIAL BUILDING CODE REQUIREMENTS.
- OPERATIONS ARE NOT TO BRING IN ANY FOOD PRODUCTS OR SUPPLIES IN TO THE SPACE UNTIL THE FINAL INSPECTION AND ALL ASSOCIATED PUNCH LIST ITEMS HAVE BEEN COMPLETED.
- AT FINAL INSPECTION, PROVIDE DOCUMENTATION THAT AT LEAST ONE PERSON IN CHARGE SHALL BE A CERTIFIED FOOD PROTECTION MANAGER BY AN ACCREDITED CERTIFYING PROGRAM RECOGNIZED BY THE CONFERENCE OF FOOD PROTECTION. (I.E.- SERVSAFE OR EQUIVALENT.)

#### $\cdots$ AIRPORT REQUIREMENTS

TERMINAL OPERATIONS AND AUTHORITY CONSTRUCTION WILL RESULT IN CONCESSIONAIRES BEING SUBJECTED TO RESTRICTIONS WHICH MAY BE IMPOSED BY THE AUTHORITY REGARDING THE HOURS OF WORK AND SCHEDULE FOR DELIVERIES. CONCESSIONAIRS SHALL SUBMIT A WORK AND MAJOR DELIVERY SCHEDULE FOR REVIEW BY THE AUTHORITY AT THE PRE-CONSTRUCTION CONFERENCE.

WITHIN ALL OPERATING PORTIONS OF THE TERMINAL'S CONCESSIONAIRE WILL BE REQUIRED TO WORK OFF-PEAK HOURS FOR ANY ACTIVITY OR DELIVERY THAT WILL CAUSE EXCESSIVE NOISE, DUST, DEBRIS, OR IN ANY WAY INTERFERCES WITH THE TRAVELING PUBLIC OR SRQ OPERATIONS. OFF-PEAK HOURS BEGIN AFTER THE DAY'S LAST DEPATURE AND ENDS 2 HOURS BEFORE THE FOLLOWING DAY'S FIRST DEPARTURE. THESE HOURS AND THE REQUIREMENTS FOR CONCESSIONAIRE TO WORK OFF-PEAK HOURS MAY CHANGE OR BE MODIFIED AS REQUESTED BY CONCESSIONAIRE AND APPROVED BY THE AUTHORITY.

CONCESSIONAIRE'S WORKING HOURS WITHIN AUTHROITY CONSTRUCTION PROJECTS MUST BE COORDINATED WITH THE 



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ENTON BRADI OTA **ARAS** 

07/19/2024 COUNTY AND AIRPORT COMMEN DESCRIPTION

ISSUED FOR DESIGN DELIVERABLE: PERMIT ISSUE DATE: 06/14/2024

PROJECT 24017B NUMBER: DRAWN BY: CHECKED BY: DC

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**GENERAL NOTES** 

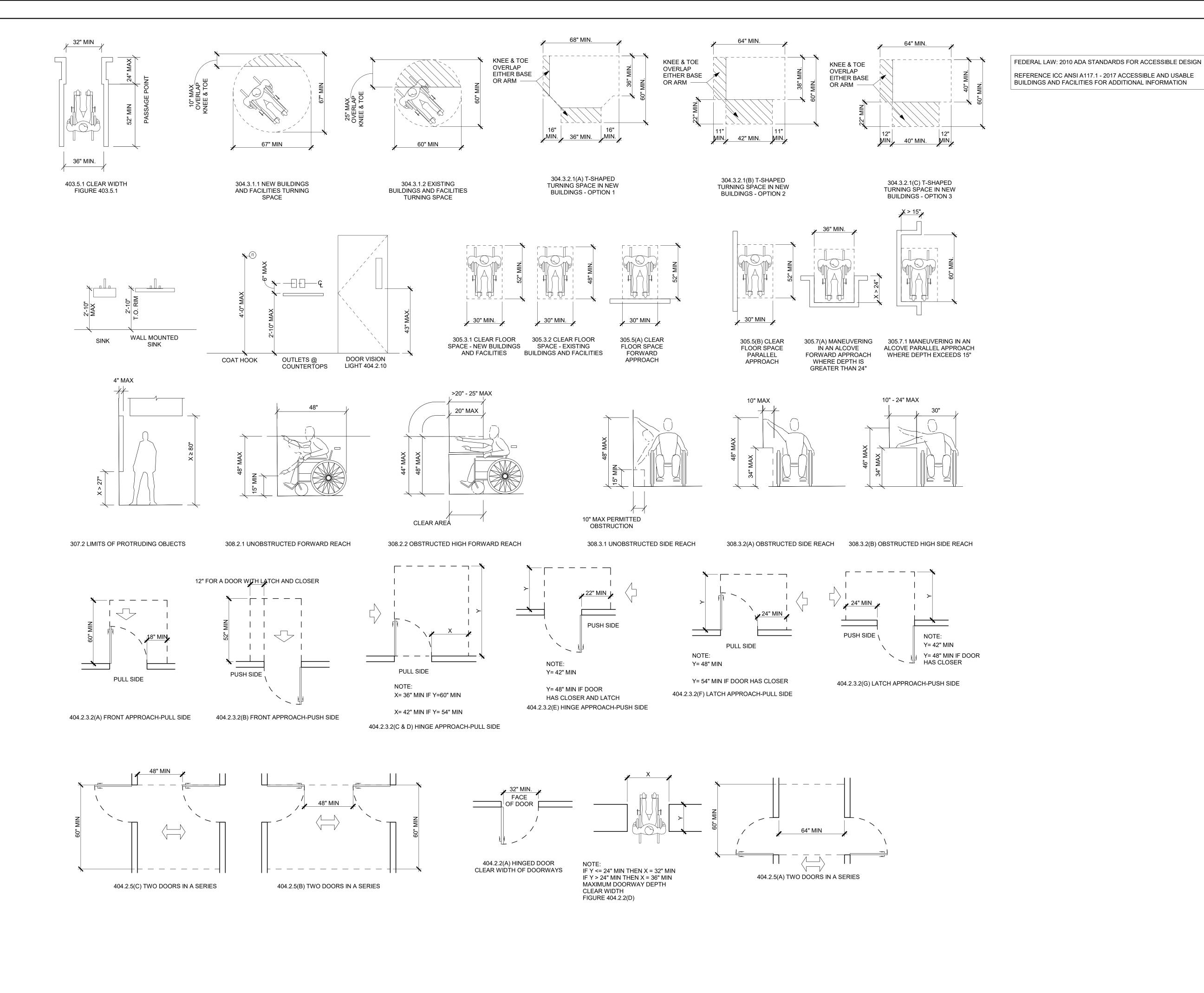
**REVIT 2023** 

	ABBREVIATIONS L	EGEND			MATERIALS	SYMBO	LS LEGEND
ABBREVIATIONS	WHEN USED IN COMPOSITION MAY INCLUDE PERIO	DDS FOR CLARIFICATION					
AB ANCHOR BOLT A/C AIR CONDITION(ING)(ED) ACS PNL ACCESS PANEL ACST ACOUSTIC(AL)	E EAST EA EACH EIFS EXTERIOR INSULATION AND	GA GAUGE GALV GALVANIZED GB (GB-) GRAB BAR	m METER MACH MACHINE MAINT MAINTENANCE MAS MASONRY	S SOUTH SAB SOUND ATTENUATION BATTS SAN SANITARY SC SOLID CORE	COMPACTED SOIL	COLUMN SYMBOLS & CENTER LINES	PARTITION TYPE      RATED
ACP (ACP-) ACOUSTICAL CEILING PANEL ACT (ACT-) ACOUSTICAL CEILING TILE TYPES AD AREA DRAIN ADA AMERICANS WITH DISABILITIES ACT	FINISH SYSTEM  EJ EXPANSION JOINT  EL ELEVATION  ELAST ELASTOMERIC  ELEC ELECTRIC(AL)	GEN GENERAL GFRC GLASS FIBER REINFORCED CONCRETE GFRG GLASS FIBER REINFORCED GYPSUM	MATL MATERIAL MAX MAXIMUM MB METAL BASE MCB METAL CORNER BEAD MDO MEDIUM DENSITY OVERLAY	SCHED SCHEDULE SD (SD-) SOAP DISPENSER SE SEALANT SECT SECTION SF SQUARE FOOT(FEET)	UNDISTURBED SOIL	A — — — —	REFER TO PARTITION WET
ADH ADHESIVE ADJ ADJUSTABLE AFF ABOVE FINISHED FLOOR AFL ACCESS FLOOR TYPES	ELEV ELEVATOR EM ENTRANCE MAT EMER EMERGENCY ENCL ENCLOSURE	GL (GL-) GLASS GD GROUND GFMU GROUND FACE MASONRY UNIT GLU LAM GLUE LAMINATED WOOD	MDF MEDIUM DENSITY FIBERBOARD MECH MECHANICAL MEMB MEMBRANE MEZZ MEZZANINE	SGNG SIGNAGE SGL SINGLE SHR SHOWER SHT SHEET	COURSE POROUS FILL		REFER TO PARTITION LOCATION SCHEDULE FOR ADDITIONAL INFORMATION
AFRE ABOVE FLOOR REFERENCE ELEV. AGGR AGGREGATE AHR ANCHOR AHU AIR HANDLING UNIT ALT ALTERNATE	ENGR ENGINEER ENTR ENTRANCE EO ELECTRIC OUTLET EOS EDGE OF SLAB EP ELECTRICAL PANEL	GR GRADE GRL GRILLE GSU GLAZED STRUCTURAL UNIT GT GREASE TRAP GWB GYPSUM WALL BOARD	MEP MECHANICAL, ELECTRICAL, PLUMBING MFR MANUFACTURER MH MANHOLE MIN MINIMUM	SIM SIMILAR SND (SND-)SANITARY NAPKIN DISPENSER SNDUSANITARY NAPKIN (SNDU-) _DISPOSAL UNIT SP STANDPIPE	SAND		BUILDING SECTION CALLOUT
AL ALUMINUM TYPES (AL-) ANOD ANODIZE(D) ANN ANNUNCIATOR APPROX APPROXIMATE	EQ EQUAL, EQUIVALENT EQUIP EQUIPMENT (EQUIP_) ES EMERGENCY SHOWER	GWT GLAZED WALL TILE GYP GYPSUM H HIGH HB HOSE BIBB	MIRR MIRROR (MIRR-) MISC MISCELLANEOUS MKR BD MARKER BOARD	SPEC SPECIFICATION SPKR SPEAKER SPS SOLID POLYMER STONE SQ SQUARE	CONCRETE	VERTICAL ELEVATION SPOT ELEVATION	SECTION DESIGNATION
APP ACRYLIC POLYMER PANEL TYPES ARC ARCHITECTURAL CAST CONCRETE ARCH ARCHITECT(URAL), ARCHITECT ASPH ASPHALT	ETC ETCETERA EW EACH WAY EWC ELECTRIC WATER COOLER EWS EXTERIOR WALL SYSTEMS EXC EXCAVATION, EXCAVATE	HC HOLLOW CORE HCP HANDICAPPED HDF HIGH DENSITY FIBERBOARD HDW HARDWARE HDWD HARDWOOD	(MKR BD-) mm MILLIMETER MO MASONRY OPENING MP METAL PANELS MTD MOUNTED	SS SERVICE SINK SSM (SSM-)SOLID SURFACE MATERIAL SST STAINLESS STEEL ST STONE STA STATION	TERRAZZO	FRE 18'-6"  SECOND FLOOR EL. 18'-6"	A300 A300
AUTO AUTOMATIC AWP (AWP-ACOUSTICAL WALL PANEL  B/B BACK TO BACK BB (BB-) BULLETIN BOARD	EXH EXHAUST EXIST EXISTING EXP EXPANSION EXPO EXPOSED	HM HOLLOW METAL HO HOLD OPEN HORIZ HORIZONTAL HP HIGH POINT	MTG MEETING MTL METAL MULL MULLION MVBL MOVABLE	STC SOUND TRANSMISSION CLASS STD STANDARD STL STEEL STN (STN-) STONE	CUT STONE	MATCH LINE  MATCH LINE	SHEET NUMBER  DETAIL/WALL SECTION CALLOUT
B BD BASE BOARD BD BOARD BE (BE-) BENCH BFRE BELOW FLOOR REFERENCE ELEV.	EXT EXTERIOR, EXTERNAL  F/ FACE OF F/F FACE TO FACE	HR HANDRAIL HT HEIGHT HTG HEATING HTR HEATER HVAC HEATING, VENTILATION,	N NORTH N/A NOT APPLICABLE NIC NOT IN CONTRACT NO NUMBER	STOR STORAGE STRUCT STRUCTURE, STRUCTURAL SUSP SUSPENDED SV (SV-) SHEET VINYL SYMM SYMMETRICAL	BRICK MASONRY	SEE XX/X-XXX  SHEET NUMBER ON WHICH CONTIUNATION	SECTION CALLOUT  SECTION DESIGNATION
BG BUMPER GUARD TYPES BITUM BITUMINOUS BLDG BUILDING BLK BLOCK BLKG BLOCKING	FA FIRE ALARM FAAP FIRE ALARM ANNUNCIATOR PANEL FAB (FAB-) FABRIC FABR FABRICATE(D)	AIR CONDITIONING  HW HOT WATER  HYD HYDRANT  ID INSIDE DIAMETER	NOM NOMINAL NTS NOT TO SCALE O/O OUT TO OUT OA OVERALL OC ON CENTER	t TREAD T/ TOP OF T&B TOP & BOTTOM	CONCRETE  MASONRY UNIT	LEASE LINE	1 A400
BM BEAM B MK BENCHMARK BOT BOTTOM BOT/ BOTTOM OF BR (BR-) BRICK	FACP FIRE ALARM CONTROL PANEL FC (FC-) FIRE CABINET FC/E FIRE CABINET W/ EXTINGUISHER FD FLOOR DRAIN FDTN FOUNDATION	IN INCH(ES) INCAND INCANDESCENT INCL INCLUDE(D), INCLUDING INS INSULATION	OD OUTSIDE DIAMETER OF/CI OWNER FURNISHED, CONTRACTOR INSTALLED OF/OI OWNER FURNISHED,	T&G TONGUE & GROOVE TA TOILET ACESSORIES TDC TRAFFIC DECK COATING TDR (TDR-) TOWEL DISPENSER/ RECEPTACLE TEL TELEPHONE	STRUCTURAL CLAY TILE UNIT MASONRY	DRAWING REVISION	SHEET NUMBER
BRG BEARING BRZ BRONZE BSMT BASEMENT BUR BUILT-UP ROOFING	FE FIRE EXTINGUISHER FEC FIRE EXTINGUISHER CABINET FF FINISHED FLOOR FH FIRE HYDRANT FHC FIRE HOSE CABINET	(INSUL-)  IAW IN ACCORDANCE WITH INT INTERIOR INTERM INTERMEDIATE	OWNER INSTALLED OFD OVERFLOW DRAIN OFF OFFICE OH OVERHEAD OPH OPPOSITE HAND	TEMP TEMPORARY TER (TER-) TERRAZZO THK THICK THRES THRESHOLD TI TENANT IMPROVEMENT	TILE UNIT MASONRY	INDICATES REVISION OF DOCUMENT SINCE PREVIOUS ISSUE	PARTIAL PLAN AND DETAIL CALLOUT
CAB CABINET CB CATCH BASIN CC CUBICLE CURTAINS CCTV CLOSED CIRCUIT TELEVISION	FHVC FIRE HOSE VALVE CABINET FHR FIRE HOSE RACK FIN FINISH(ED) FIXT FIXTURE	INV INVERT  JAN JANITOR JG JOINT GASKET	OPNG OPENING OPP OPPOSITE  PA PUBLIC ADDRESS	TKBD TACKBOARD (TKBD-) TLT TOILET TMPD TEMPERED	ALUMINUM	BREAK LINE	PLAN OR DETAIL DESIGNATION
CEM CEMENT CFS CONCRETE FLOOR SEALER CG (CG-) CORNER GUARD CH (CH-) COAT HOOK	FL FLASHING FLEX FLEXIBLE FLR (FLR_) FLOOR, FLOORING FLUOR FLUORESCENT FO FINISHED OPENING	JS JOINT FILLER JT JOINT  KD KNOCK(ED) DOWN KO KNOCK OUT	PAV PAVER PBD PARTICLE BOARD PC PRE-CAST PCC (PCC-) PRE-CAST CONCRETE PERF PERFORATED	TOPO TOPOGRAPHY, TOPOGRAPHIC TPD (TBD-) TOILET PAPER DISPENSER TRTD TREATED TS TUBE STEEL TSCD TOILET SEAT COVER DISPENSER			1 A100
CI CAST IRON CIP CAST-IN-PLACE CIRC CIRCULATION CJ CONTROL JOINT CL CENTER LINE	FP FIRE PROOFING FRE FLOOR REFERENCE ELEVATION FRTW FIRE RETARDANT TREATED WOOD FT FOOT (FEET)	KIT KITCHEN KPL (KPL-) KICK PLATE  L LONG, LENGTH LAM LAMINATE(D)	PERP PERPENDICULAR PGBD PEG BOARD PL PLATE PLAM PLASTIC LAMINATE	(TSCD-)  TYP TYPICAL	ORNAMENTAL METAL	DATUM POINT	SHEET NUMBER
CLG CEILING CLO CLOSET CLR CLEAR cm CENTIMETER	FTG FOOTING FTR FINNED TUBE RADIATION FURN FURNISH, FURNITURE FURG FURRING	LAQ LAQUER LAT LATITUDE, LATITUDINAL LAU LAUNDRY LAV LAVATORY	(PLAM-) PLA PLASTER PLBG PLUMBING PLYWD PLYWOOD PNL PANEL	UC UNDER CABINET UCL (UCL-) UNDER CABINET LIGHTING UGND UNDERGROUND UH UNIT HEATER	WOOD BLOCKING	SAMPLE ROOM TAG	EXTERIOR ELEVATION CALLOUT
CMU CONCRETE MASONRY UNIT CO CLEANOUT COL COLUMN CONC CONCRETE CONF CONFERENCE	FUT FUTURE FWP FABRIC WRAPPED PANEL	LB(S) POUND(S) LF LINEAR FOOT, (FEET) LH LEFT HAND LINO LINOLEUM LL LIVE LOAD	POL POLISHED PR PAIR PREFAB PREFABRICATE(D) PRKG PARKING	UL UNDERWRITER'S LABORATORIES UNEXC UNEXCAVATED UNFIN UNFINISHED UNO UNLESS NOTED OTHERWISE	FINISH WOODWORK	LAB ROOM NAME  2101 ROOM NUMBER	ELEVATION DESIGNATION
CONN CONNECTION CONSTR CONSTRUCTION CONT CONTINUOUS CONTR CONTRACTOR COORD COORDINATE		LKR (LKR-) LOCKER  LLH LONG LEG HORIZONTAL  LLV LONG LEG VERTICAL  LNG LONGITUDE, LONGITUDINAL	PROJ PROJECT PROJ SCRNPROJECTION SCREEN (PROJ SCRN-) PROP PROPERTY PSF POUNDS PER SQUARE FOOT	UON UNLESS NOTED OTHERWISE UR URINAL US UNDERSLAB UTIL UTILITY VB (VB-) VINYL BASE	PLYWOOD	SAMPLE ROOM FINISH TAG	A-200
CORR CORRIDOR CPT (CPT-) CARPET CR CRASH RAILS CSK COUNTERSUNK		LP LOW POINT LT(S) LIGHT(S) LTG LIGHTING LVL LEVEL LVR LOUVER	PSH (PSH-) PURSE SHELF PSI POUNDS PER SQUARE INCH PT PAINTT PTD (PTD-) PAPER TOWEL DISPENSER PTN PARTITION	VCT (VĆT-) VINYL COMPOSITION TILE VENT VENTILATION VERT VERTICAL VEST VESTIBULE VIF VERIFY IN FIELD	MDF / PARTICLE BOARD	W1 BASE FINISH	SHEET NUMBER  EGRESS PATH  PRIMARY
CT (CT-) CERAMIC TILE CTR CENTER CU CUBIC CW COLD WATER		LWC LIGHT WEIGHT CONCRETE	PVC POLYVINYL CHLORIDE PVG PAVING  QT (QT-) QUARRY TILE	VOL VOLUME VNR (VNR-) VENEER VR VAPOR RETARDER VT (VT-) VINYL TILE	GYPSUM WALLBOARD	FOR INFORMATION,SEE	
D DEEP, DEPTH DBL DOUBLE DCT (DCT-) DIAPER CHANGING TABLE DEG DEGREE DEMO DEMOLISH, DEMOLITION			qty quantity  r RISER R THERMAL RESISTANCE RAD RADIUS	VWC (VWC-I/VINYL WALL COVERING  W WEST W/ WITH W/O WITHOUT	— WATERPROOFING	MATERIALS LEGEND  CONSTRUCTION LEGEND	•
DEPT DEPARTMENT DET DETAIL DF (DF-) DRINKING FOUNTAIN DIA DIAMETER			RB (RB-) RESILIENT BASE RCP REFLECTED CEILING PLAN RCPTN RECEPTION RD ROOF DRAIN REC RECESSED	WB WOOD BASE WC WATER CLOSET WCV WALL COVERING WD (WD-) WOOD	RIGID INSULATION  BATT INSULATION	NEW DOOR  EXISTING DOOR TO REMAIN	MISC. TAG  DOOR DESIGNATION
DIAG DIAGONAL DIFF DIFFUSER DIM DIMENSION DISP DISPENSER DIV DIVISION			REF REFERENCE REFR REFRIGERATOR REINF REINFORCE, REINFORCING REQD REQUIRED	WDFL WOOD FLOOR WG (WG-) WALL GUARD WF WIDE FLANGE WH WATER HEATER WI WROUGHT IRON	CARPETING	EXISTING CONSTRUCTION  NEW WALL CONSTRUCTION	DOOR No.   (SEE DOOR SCHEDULE)  WINDOW DESIGNATION
DL DEAD LOAD DMPF DAMPPROOFING DN DOWN DR DOOR DRP DRAPERY			RESIL RESILIENT REV REVISION RFG ROOFING RF (RF-) RESILIENT FLOORING RH RIGHT HAND	WIN WINDOW WM WIRE MESH WP WATERPROOFING WPS WATERPROOFING SYSTEMS W RECPT WASTE RECEPTACLE	RESILIENT FLOORING	DIMENSION TAKEN TO FINISHED CONSTRUCTION	WINDOW No. (SEE WINDOW SCHEDULE)  KEYNOTES
DS DOWNSPOUT DW DISHWATER DWG DRAWING DWV DRAINAGE, WASTE AND VENT			RM ROOM RMX RESIN MATRIX FLOORING RO ROUGH OPENING ROW RIGHT OF WAY RS ROOFING SYSTEMS	W RECPT WASTE RECEPTABLE WSCT WAINSCOT WT WINDOW TREATMENT WV WOOD VENEER WWF WELDED WIRE FABRIC	PLASTIC LAMINATE  GLAZING	DIMENSION TAKEN TO CENTER LINE OF FRAMING  MILLWORK	TAG No. — DEMOLITION
			RTF (RTF-) RUBBER TILE FLOOR RUB RUBBER RVL REVEAL	YD YARD ZN ZINC.	ACOUSTICAL CEILING BOARD	COUNTERTOP ABOVE  — — — OUTLINE OF CANOPY ABOVE	TAG No. TAG No.
					SEALANT AND BACKER ROD		TAG No. TAG 3

180 SYLVAN AVENUE, SUITE 3 ENGLEWOOD CLIFFS, NJ 07632 TEL 201 | 894 | 1000 ENV-team.com ENVIRONETICS GROUP ARCHITECTS, P.C. COPYRIGHT © BY ENVIRONETICS. ALL RIGHTS RESERVED SSP AMERICA 20408 BASHAN DRIVE SUITE 300 ASHBURN, VA 20147 PROJECT TEAM: MEP ENGINEER: GUTH DECONZO CONSULTING ENGINEERS, PC 520 8TH AVENUE, SUITE 2201 NEW YORK, NEW YORK 10001 SARASOTA BRADENTON INTERNATIONAL AIRPORT **B-R1 SHOPPES AT SIESTA KEY** DESCRIPTION DESIGN DELIVERABLE: ISSUE DATE: ISSUED FOR PERMIT 06/14/2024 PROJECT NUMBER: DRAWN BY: 24017B CHECKED BY: DC Copyright (c) by Environetics, Inc. All Rights Reserved. SHEET TITLE:
SYMBOLS AND
ABBREVIATIONS SHEET NUMBER: GN-101

ARCHITECTURE + DESIGN

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> AIRPORT NATIONAL **BRADENTON INTER B-R1 SHOPPES AT SIESTA KEY** SARASOTA

ARCHITECTURE + DESIGN

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06/14/2024

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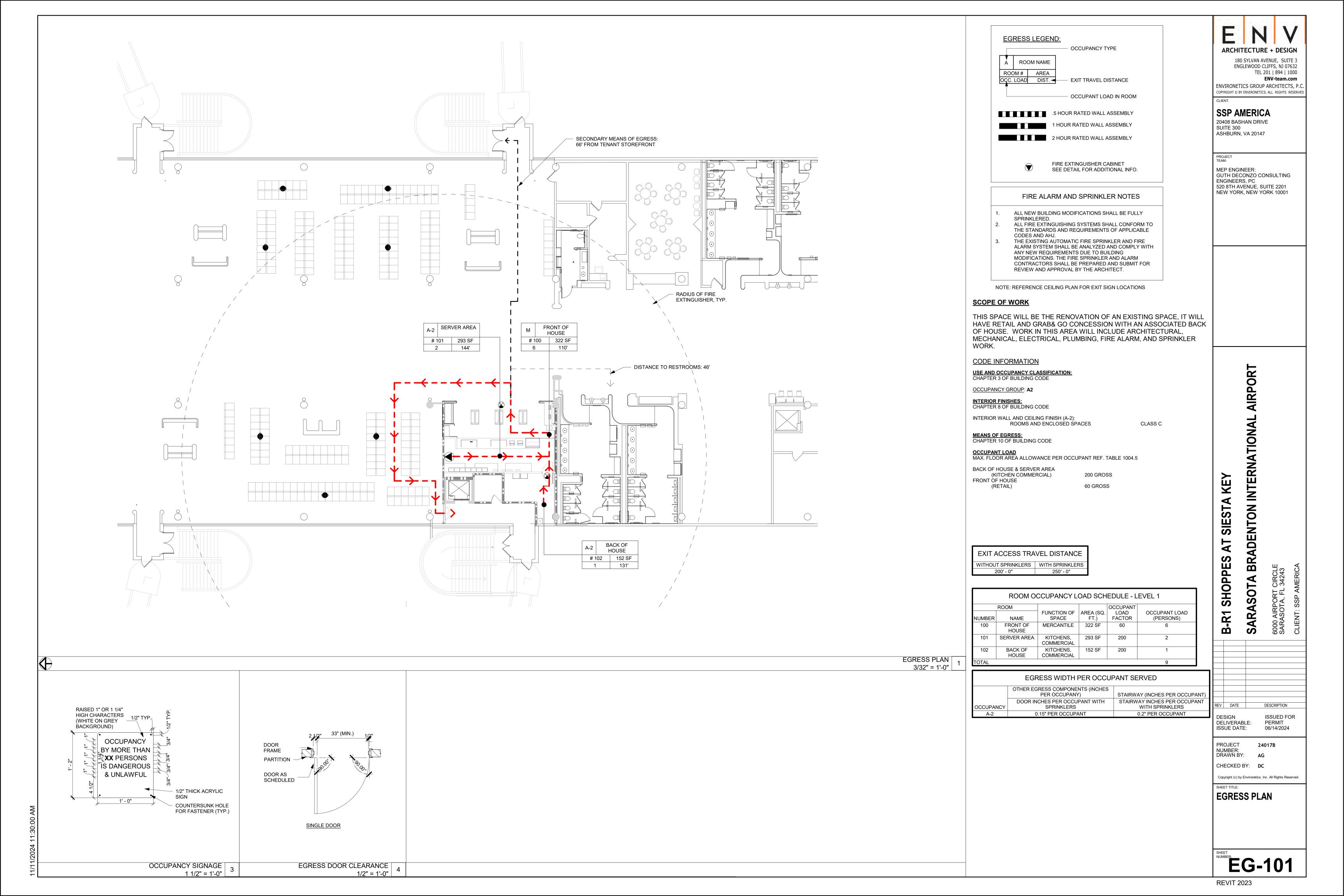
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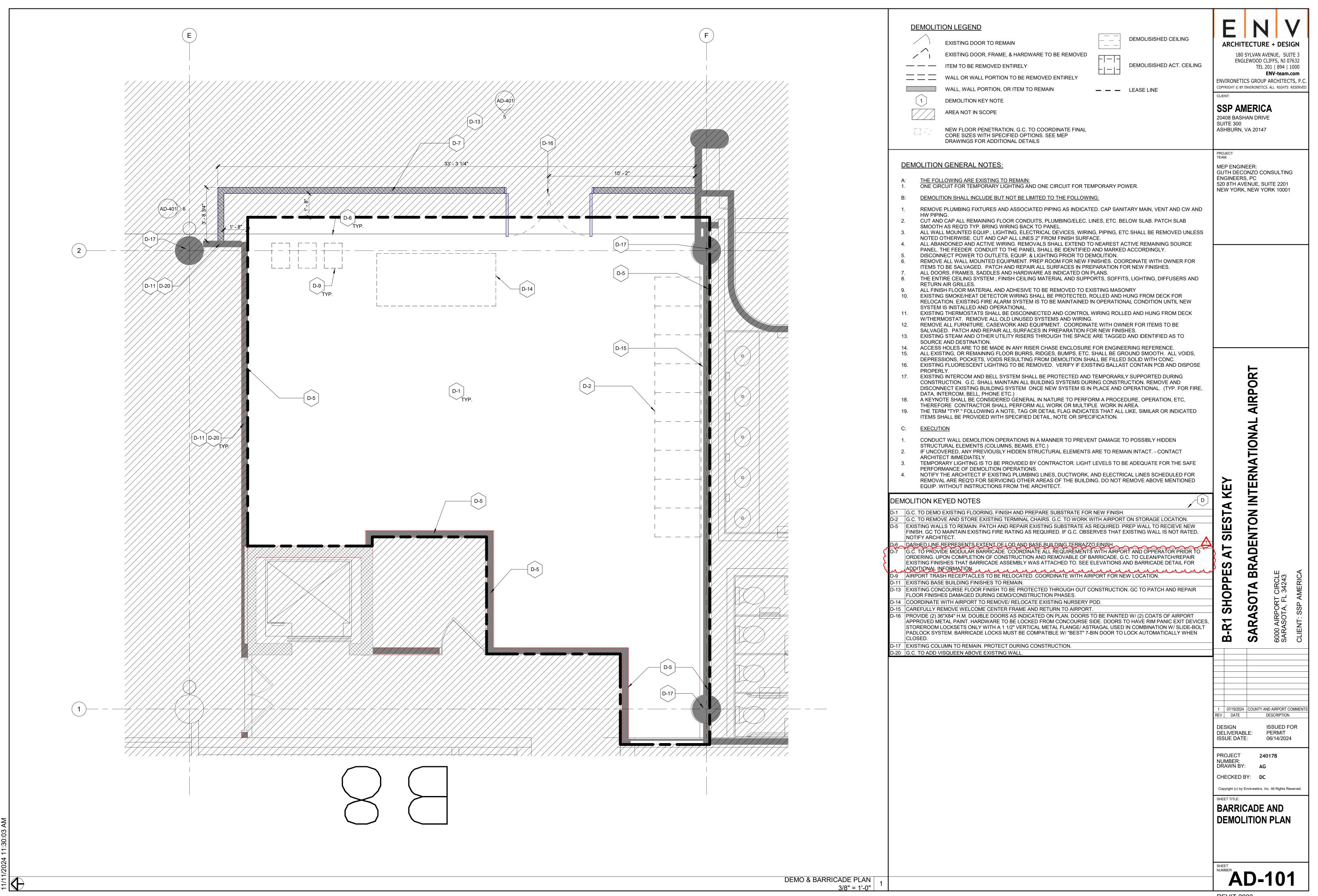
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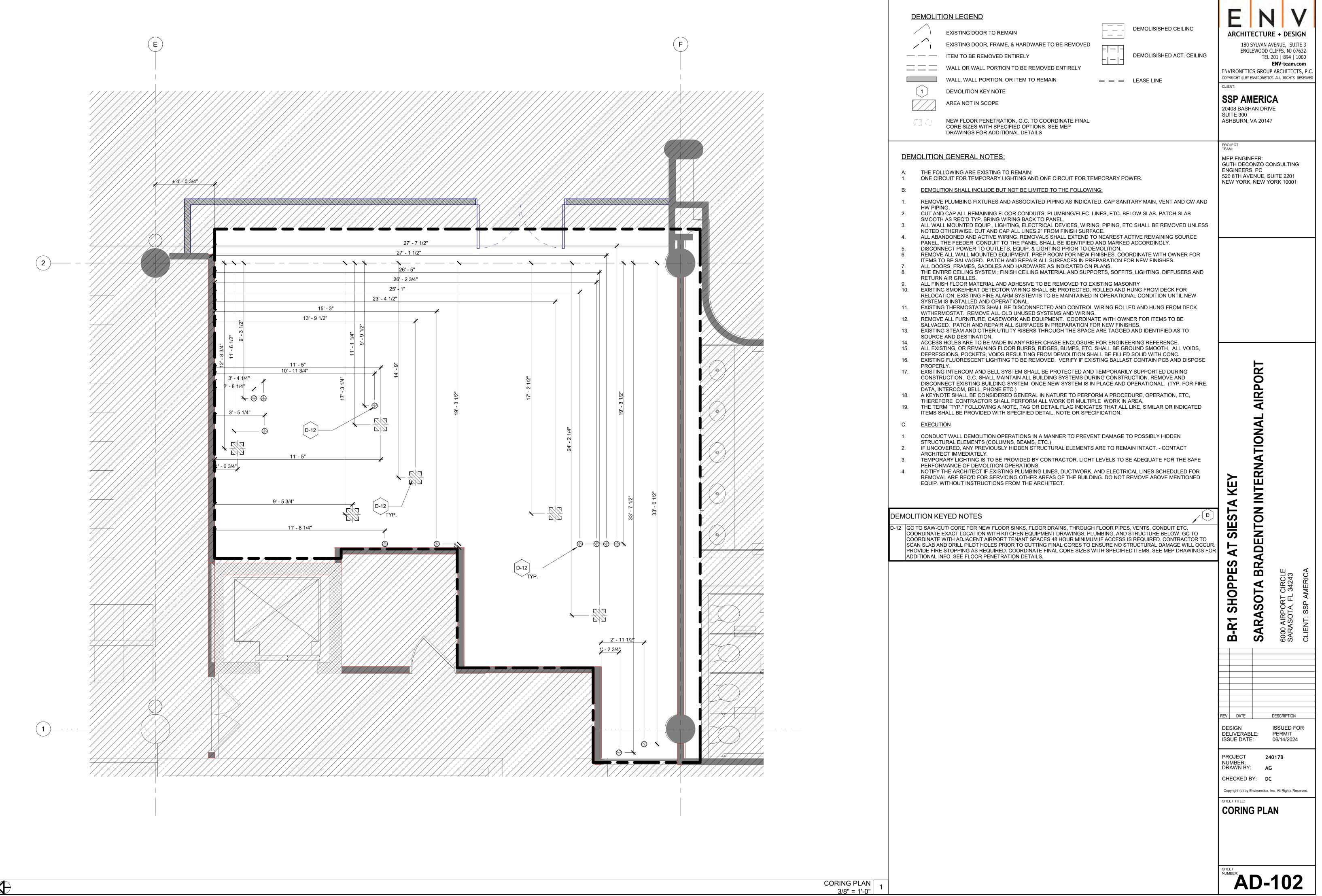
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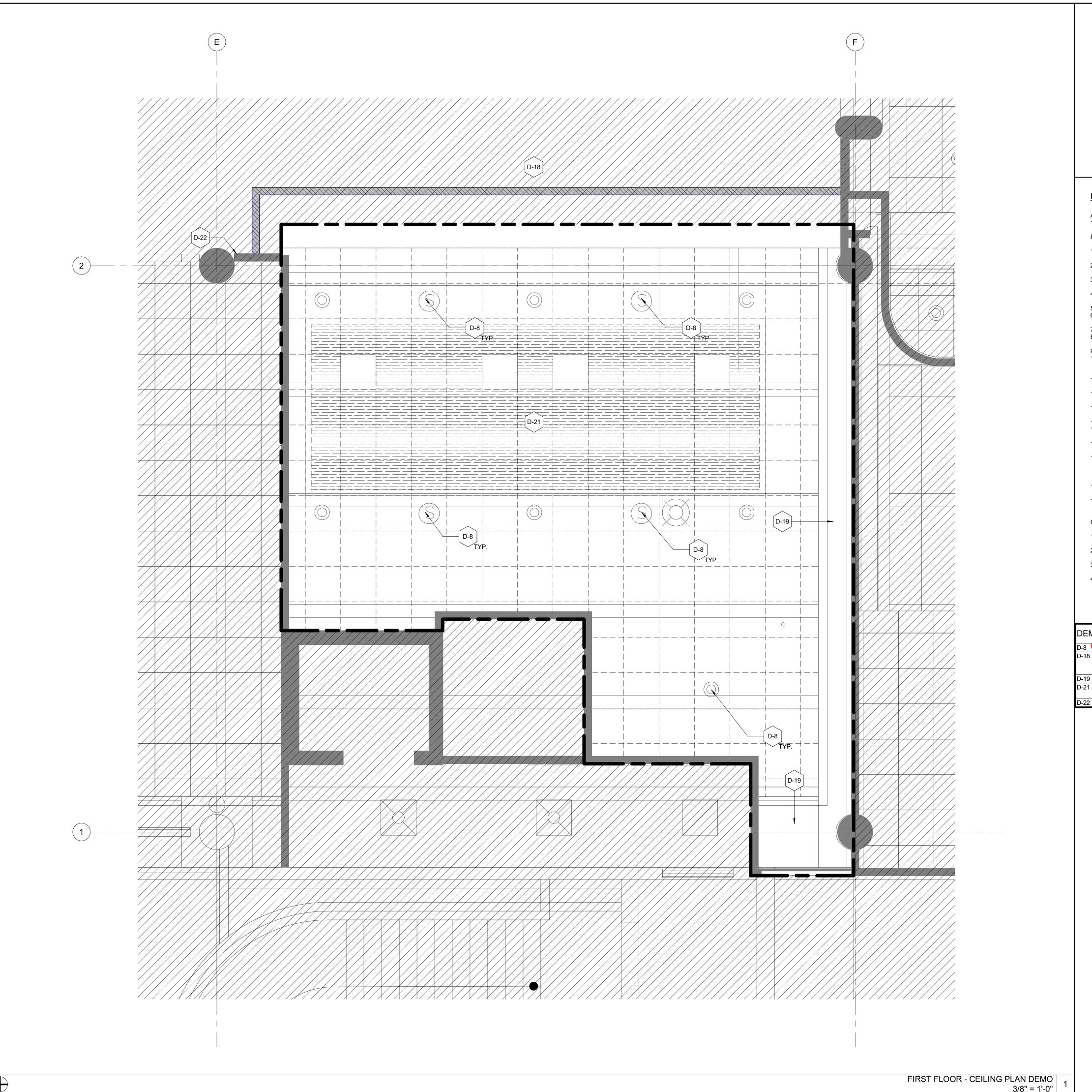
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REVIT 2023



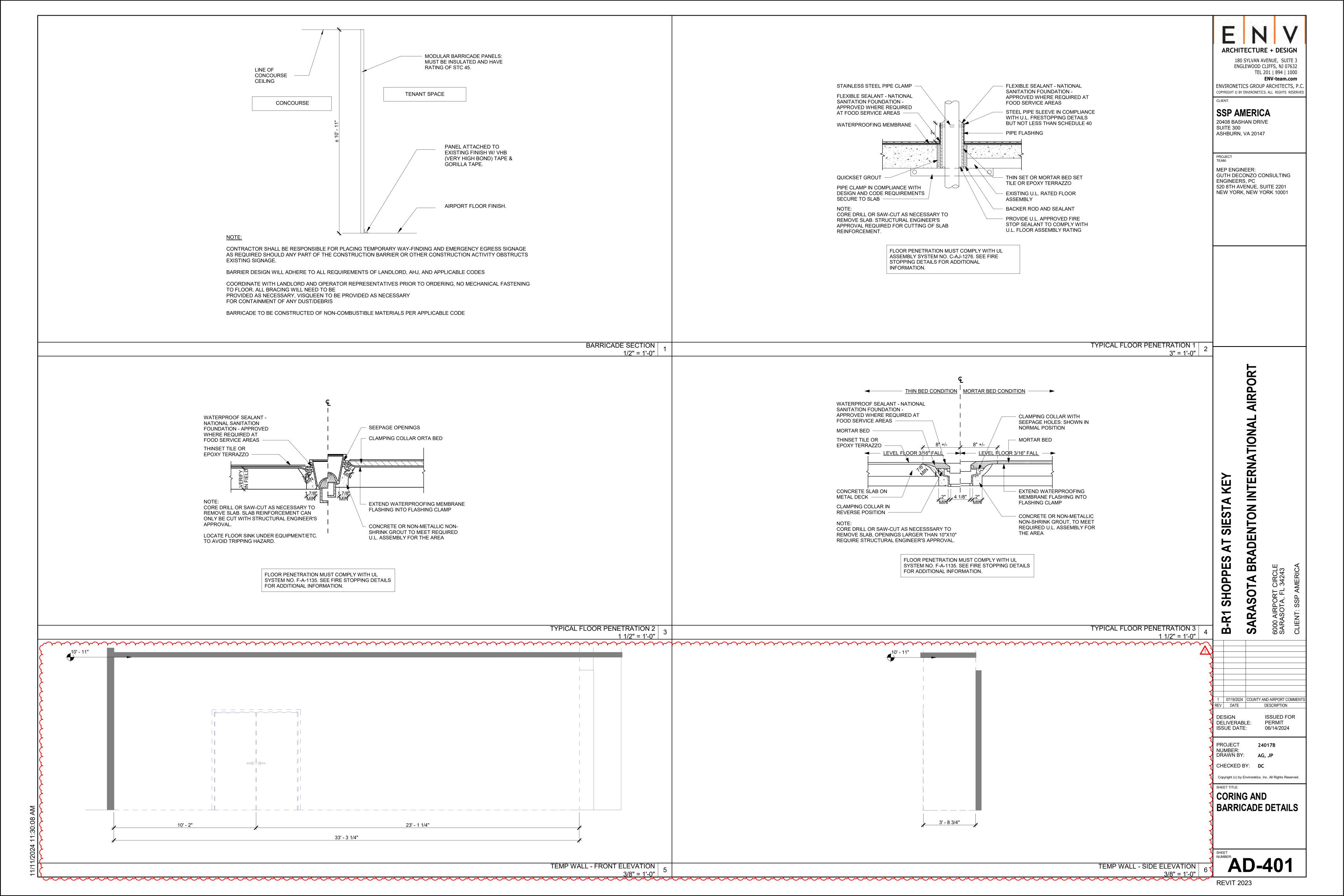
**DEMOLITION LEGEND** DEMOLISISHED CEILING EXISTING DOOR TO REMAIN ARCHITECTURE + DESIGN EXISTING DOOR, FRAME, & HARDWARE TO BE REMOVED 180 SYLVAN AVENUE, SUITE 3 ENGLEWOOD CLIFFS, NJ 07632 DEMOLISISHED ACT. CEILING ITEM TO BE REMOVED ENTIRELY TEL 201 | 894 | 1000 ENV-team.com WALL OR WALL PORTION TO BE REMOVED ENTIRELY ENVIRONETICS GROUP ARCHITECTS, P. COPYRIGHT © BY ENVIRONETICS. ALL RIGHTS RESERVE WALL, WALL PORTION, OR ITEM TO REMAIN **— —** LEASE LINE DEMOLITION KEY NOTE **SSP AMERICA** AREA NOT IN SCOPE 20408 BASHAN DRIVE SUITE 300 NEW FLOOR PENETRATION, G.C. TO COORDINATE FINAL ASHBURN, VA 20147 CORE SIZES WITH SPECIFIED OPTIONS. SEE MEP DRAWINGS FOR ADDITIONAL DETAILS **DEMOLITION GENERAL NOTES:** MEP ENGINEER: GUTH DECONZO CONSULTING ENGINEERS, PC THE FOLLOWING ARE EXISTING TO REMAIN: ONE CIRCUIT FOR TEMPORARY LIGHTING AND ONE CIRCUIT FOR TEMPORARY POWER. 520 8TH AVENUE, SUITE 2201 NEW YORK, NEW YORK 10001 DEMOLITION SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING: REMOVE PLUMBING FIXTURES AND ASSOCIATED PIPING AS INDICATED. CAP SANITARY MAIN, VENT AND CW AND CUT AND CAP ALL REMAINING FLOOR CONDUITS, PLUMBING/ELEC. LINES, ETC. BELOW SLAB. PATCH SLAB SMOOTH AS REQ'D TYP. BRING WIRING BACK TO PANEL. ALL WALL MOUNTED EQUIP., LIGHTING, ELECTRICAL DEVICES, WIRING, PIPING, ETC SHALL BE REMOVED UNLESS NOTED OTHERWISE. CUT AND CAP ALL LINES 2" FROM FINISH SURFACE. ALL ABANDONED AND ACTIVE WIRING. REMOVALS SHALL EXTEND TO NEAREST ACTIVE REMAINING SOURCE PANEL. THE FEEDER CONDUIT TO THE PANEL SHALL BE IDENTIFIED AND MARKED ACCORDINGLY. DISCONNECT POWER TO OUTLETS, EQUIP. & LIGHTING PRIOR TO DEMOLITION. REMOVE ALL WALL MOUNTED EQUIPMENT. PREP ROOM FOR NEW FINISHES. COORDINATE WITH OWNER FOR ITEMS TO BE SALVAGED. PATCH AND REPAIR ALL SURFACES IN PREPARATION FOR NEW FINISHES. ALL DOORS, FRAMES, SADDLES AND HARDWARE AS INDICATED ON PLANS. THE ENTIRE CEILING SYSTEM; FINISH CEILING MATERIAL AND SUPPORTS, SOFFITS, LIGHTING, DIFFUSERS AND RETURN AIR GRILLES. ALL FINISH FLOOR MATERIAL AND ADHESIVE TO BE REMOVED TO EXISTING MASONRY EXISTING SMOKE/HEAT DETECTOR WIRING SHALL BE PROTECTED, ROLLED AND HUNG FROM DECK FOR RELOCATION. EXISTING FIRE ALARM SYSTEM IS TO BE MAINTAINED IN OPERATIONAL CONDITION UNTIL NEW SYSTEM IS INSTALLED AND OPERATIONAL. EXISTING THERMOSTATS SHALL BE DISCONNECTED AND CONTROL WIRING ROLLED AND HUNG FROM DECK W/THERMOSTAT. REMOVE ALL OLD UNUSED SYSTEMS AND WIRING. REMOVE ALL FURNITURE, CASEWORK AND EQUIPMENT. COORDINATE WITH OWNER FOR ITEMS TO BE SALVAGED. PATCH AND REPAIR ALL SURFACES IN PREPARATION FOR NEW FINISHES. EXISTING STEAM AND OTHER UTILITY RISERS THROUGH THE SPACE ARE TAGGED AND IDENTIFIED AS TO SOURCE AND DESTINATION. ACCESS HOLES ARE TO BE MADE IN ANY RISER CHASE ENCLOSURE FOR ENGINEERING REFERENCE. ALL EXISTING, OR REMAINING FLOOR BURRS, RIDGES, BUMPS, ETC. SHALL BE GROUND SMOOTH. ALL VOIDS, DEPRESSIONS, POCKETS, VOIDS RESULTING FROM DEMOLITION SHALL BE FILLED SOLID WITH CONC. EXISTING FLUORESCENT LIGHTING TO BE REMOVED. VERIFY IF EXISTING BALLAST CONTAIN PCB AND DISPOSE **AIRPORT** EXISTING INTERCOM AND BELL SYSTEM SHALL BE PROTECTED AND TEMPORARILY SUPPORTED DURING CONSTRUCTION. G.C. SHALL MAINTAIN ALL BUILDING SYSTEMS DURING CONSTRUCTION. REMOVE AND DISCONNECT EXISTING BUILDING SYSTEM ONCE NEW SYSTEM IS IN PLACE AND OPERATIONAL. (TYP. FOR FIRE, DATA, INTERCOM, BELL, PHONE ETC.) A KEYNOTE SHALL BE CONSIDERED GENERAL IN NATURE TO PERFORM A PROCEDURE, OPERATION, ETC, THEREFORE CONTRACTOR SHALL PERFORM ALL WORK OR MULTIPLE WORK IN AREA. THE TERM "TYP." FOLLOWING A NOTE, TAG OR DETAIL FLAG INDICATES THAT ALL LIKE, SIMILAR OR INDICATED ITEMS SHALL BE PROVIDED WITH SPECIFIED DETAIL, NOTE OR SPECIFICATION. C: <u>EXECUTION</u> CONDUCT WALL DEMOLITION OPERATIONS IN A MANNER TO PREVENT DAMAGE TO POSSIBLY HIDDEN STRUCTURAL ELEMENTS (COLUMNS, BEAMS, ETC.) IF UNCOVERED, ANY PREVIOUSLY HIDDEN STRUCTURAL ELEMENTS ARE TO REMAIN INTACT. - CONTACT ARCHITECT IMMEDIATELY. TEMPORARY LIGHTING IS TO BE PROVIDED BY CONTRACTOR. LIGHT LEVELS TO BE ADEQUATE FOR THE SAFE PERFORMANCE OF DEMOLITION OPERATIONS. NOTIFY THE ARCHITECT IF EXISTING PLUMBING LINES, DUCTWORK, AND ELECTRICAL LINES SCHEDULED FOR **BRADENTON INTER** KEY REMOVAL ARE REQ'D FOR SERVICING OTHER AREAS OF THE BUILDING. DO NOT REMOVE ABOVE MENTIONED EQUIP. WITHOUT INSTRUCTIONS FROM THE ARCHITECT. STA DEMOLITION KEYED NOTES SIE -8 EXISTING CEILING TO BE REMOVED IN ITS ENTIRETY.)
-18 EXISTING CONCOURSE CEILING AND LIGHTING TO REMAIN. GC TO PATCH AND REPAIR AS NECESSARY INCLUDING BUT NO LIMITED TO WALL, CEILING, AND ANY EXISTING FINISHES DAMAGED DURING DEMO/CONSTRUCTION PHASES. PATCH AND REPAIR AS REQUIRED. D-19 EXISTING GYP SOFFIT TO BE REMOVED IN ITS ENTIRETY. DEMOLISH EXISTING LIGHTING AND EQUIPMENT THROUGHOUT. COORDINATE WITH OWNER ON ANY FIXTURES THEY WOULD LIKE TO KEEP OR REUSE. S SHOPPE 22 EXISTING BASE BUILDING SIGNAGE TO REMAIN. PROTECT DURING DEMOLITION AND CONSTRUCTION PHASE. SARASOTA **B-R1** 1 07/19/2024 COUNTY AND AIRPORT COMMEN DESIGN ISSUED FOR PERMIT DELIVERABLE: ISSUE DATE: 06/14/2024 PROJECT 24017B NUMBER: DRAWN BY: CHECKED BY: DC Copyright (c) by Environetics, Inc. All Rights Reserved.

**DEMOLITION** 

PLAN

REFLECTED CEILING

**AD-110** 



#### **PARTITION GENERAL NOTES**

- 1. WHERE WALL IS DESIGNATED WITH A RATED TAG, USE TYPE X FIRE RATED
- GYPSUM BOARD

  WHERE WALL IS DESIGNATED WITH A WET LOCATION TAG, USE 5/8" MOLD AND WATER RESISTANT GYP. BD. (USE 5/8" GLASS MESH MORTAR UNITS WHERE
- CERAMIC TILE FINISH TO BE INSTALLED

  3. WHERE WALL IS DESIGNATED WITH A RATED AND WET LOCATION TAG, USE 5/8"
  MOLD, WATER AND FIRE RATED HEAVY DUTY ABUSE RESISTANT TYPE X GYP. BD.
- 4. PARTITION TYPES APPLY TO INTERIOR PARTITIONS ONLY.
- 5. DEEP LEG DEFLECTION TRACK HEAD CONDITIONS ARE REQUIRED AT ALL
  PARTITIONS TO DECK OR STRUCTURE.
  6. GENERAL CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING THE COMPLETE
- 6. GENERAL CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING THE COMPLETE ASSEMBLY OF ALL FIRE RATED PARTITIONS IN FULL ACCORDANCE WITH UL LISTING.
- 7. ALL STUDS TO BE 20 GAUGE, UNLESS NOTED OTHERWISE. REFERENCE SPECIFICATIONS FOR FRAMED OPENING CONDITIONS.
- 8. ALL SHAFTWALL STUDS TO BE 20 GAUGE, UNLESS NOTED OTHERWISE.
  9. REFERENCE CHART BELOW FOR MINIMUM REQUIRED PARTITION BRACING
- REQUIREMENTS.

  10. REFERENCE STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR ANY ADDITIONAL REQUIREMENTS FOR CONCRETE MASONRY UNIT PARTITIONS.

#### PARTITION LEGEND

DESIGNATES FIRE RATED ASSEMBLY

WL

WL

DESIGNATES WET LOCATION

#### FOR RATED WALL ASSEMBLY USE:

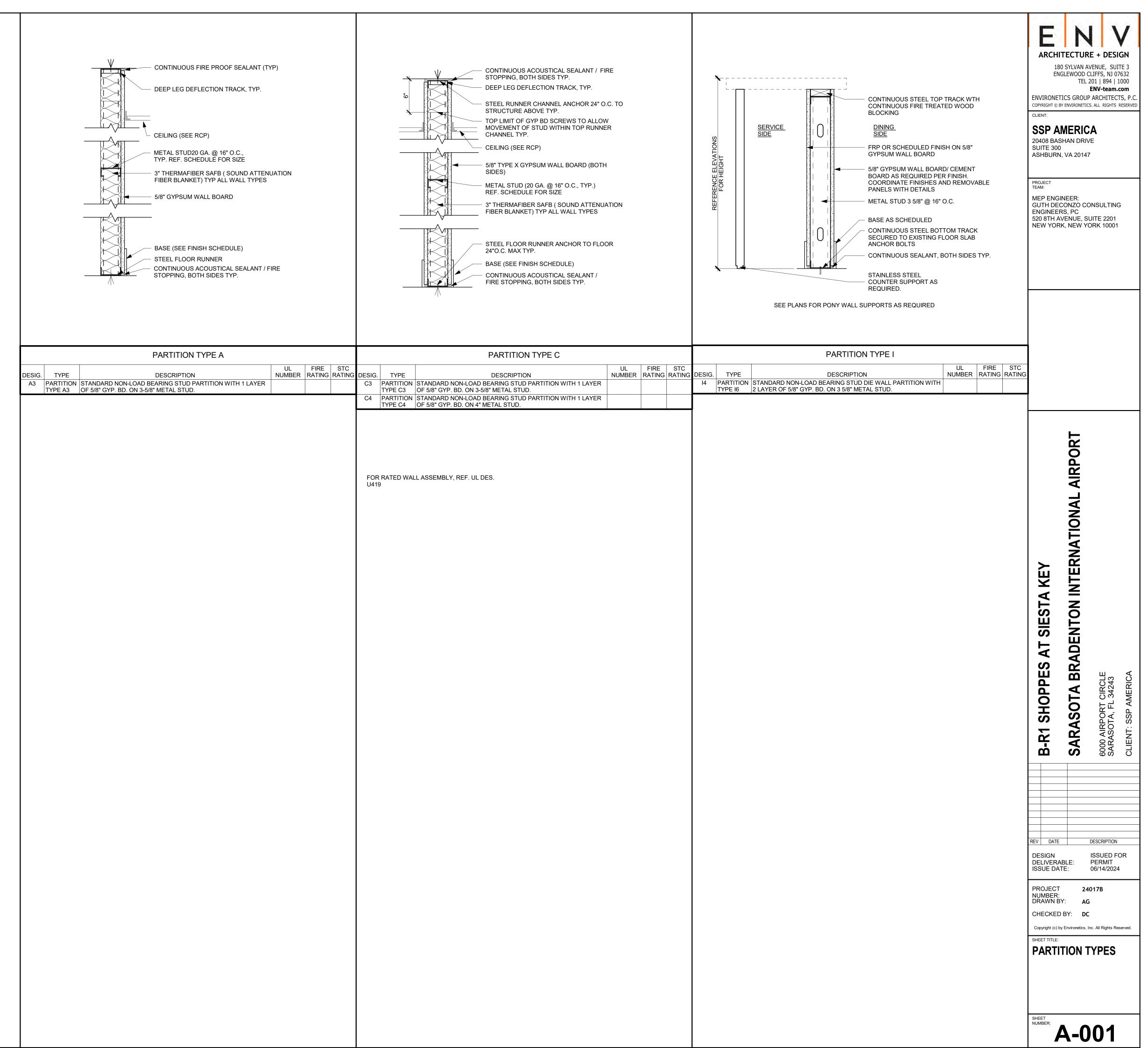
UL TYPE SCX GYPSUM AT FIRE RATED LOCATIONS, AS NOTED ON EGRESS PLANS
 CONTINUOUS ACOUSITICAL / FIRESTOPPING SEALANT AT BASE AND HEAD, TYP.

#### FOR WET LOCATIONS USE:

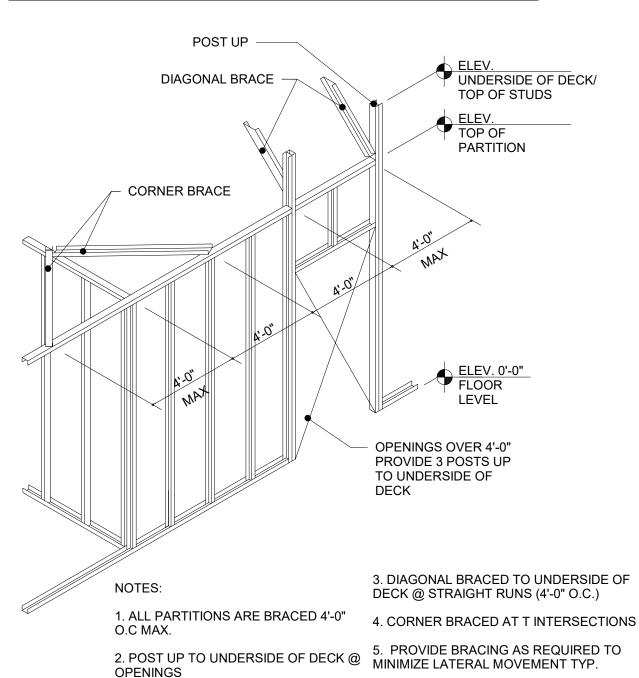
A. AT ALL WET LOCATIONS AND AREAS TO RECEIVE TILE FINISH, USE DUROCK CEMENT BOARD IN PLACE OF GYPSUM BOARD

# NOTE: WALLS NOTED AS RATED IN A WET LOCATION, THE FIRE RATED ASSEMBLY TAKES PRECEDENCE

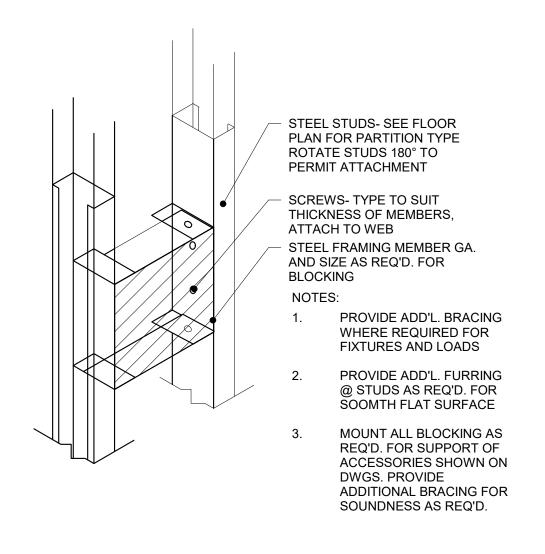
MOTE: REFERENCE EGRESS PLANS AND BUILDING SECTIONS FOR THE CODE MINIMUM FIRE-RESISTANCE RATING REQUIRED AT EACH HORIZONTAL AND VERTICAL ASSEMBLY. DUE TO THE NATURE OF FLOOR AND PARTITION CONSTRUCTION, THE ASSEMBLIES DESIGNATED MAY EXCEED THE MINIMUM CODEREQUIRED VALUES. HOWEVER WHEN EXPLORING ALTERNATES, THE MINIMUM FIRE RESISTANCE RATING REQUIREMENTS SHOWN ON THE EGRESS PLANS AND BUILDING SECTIONS MUST BE MAINTAINED.



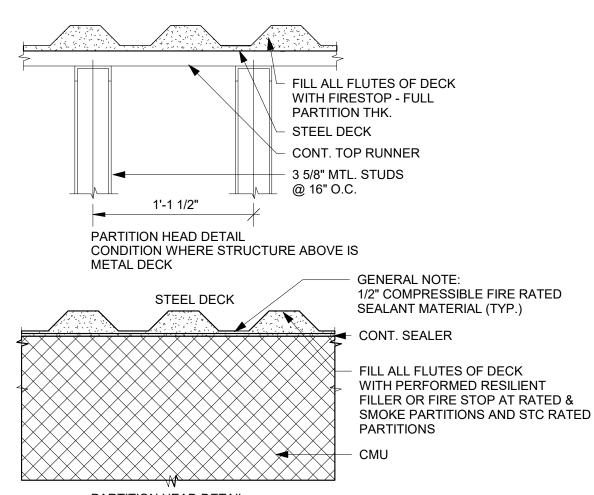
# PARTITION BRACING DETAIL WHEN STUDS



# TYPICAL WALL BLOCKING DETAIL



# PARTITION HEAD DETAILS



PARTITION HEAD DETAIL CONDITION WHERE STRUCTURE ABOVE IS

PARTITION NOTES: 1. USE WATER AND MOLD RESISTANT GYP. BD. AT KITCHENS, BATHROOMS, JANITORS CLOSETS, AND OTHER WET AREAS. 2. SUBSTITUTE GLASS MESH MORTAR UNITS FOR GYP. BD. AT ALL CERAMIC TILE

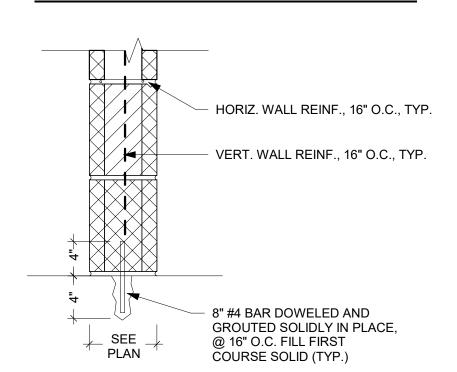
FINISH ROOMS. (SEE SPECS. FOR SPECIAL STUD AND ANCHORAGE REQ'D.) 3. USE 20ga BACKING PLATES AT HANDRAILS, GRAB BARS & OTHER WALL MOUNTED

4. PARTITION THICKNESS INDICATED ARE MINIMUM.

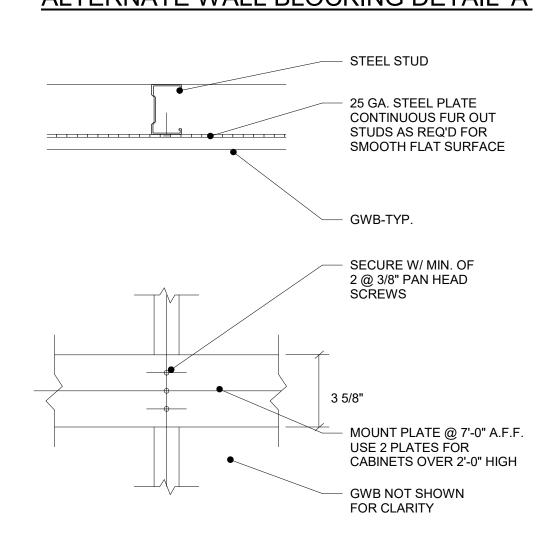
5. ALL MASONRY PARTITION TYPES TO HAVE VERTICAL MORTAR JOINTS AT BOTTOM COURSE TO BE STRUCK FLUSH.

6. UNLESS OTHERWISE NOTED, EXTEND ALL PARTITIONS TO DECK.

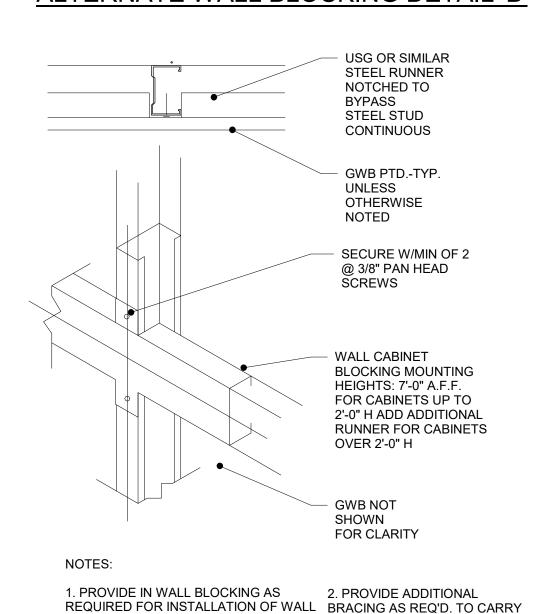
#### TYP WALL ANCHORING DETAIL



# ALTERNATE WALL BLOCKING DETAIL 'A'



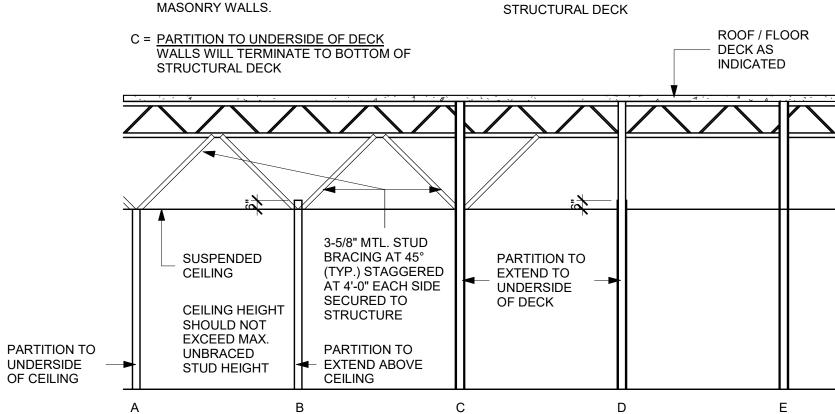
# ALTERNATE WALL BLOCKING DETAIL 'B'



MOUNTED: FIXTURES, RAILS OR OTHER FIXTURES AND MILLWORK, TYP.

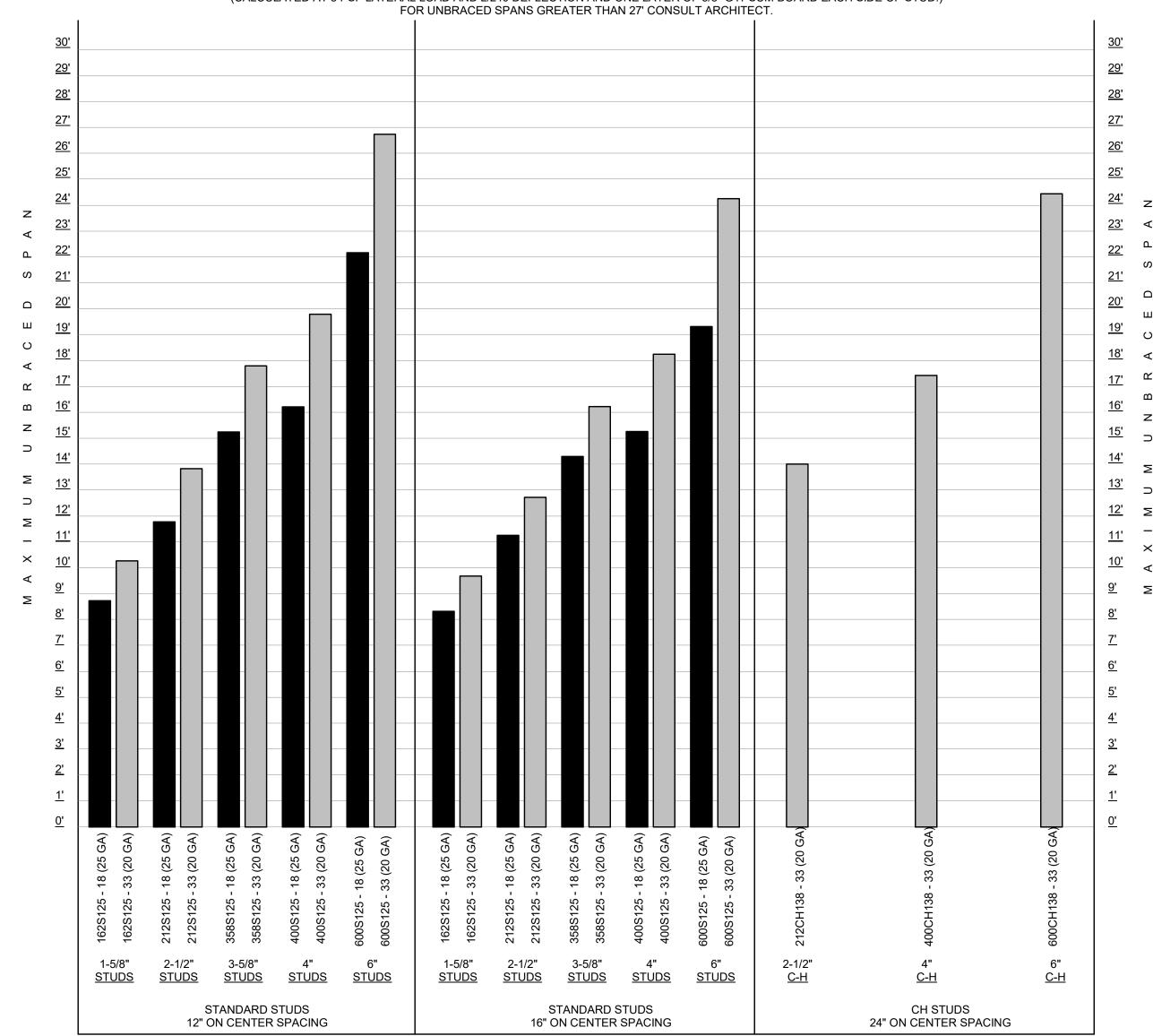
# PARTITION HEAD CONDITIONS

A = PARTITION TO BOTTOM OF CEILING
WALL EXTENDS TO UNDERSIDE OF CEILING D = PARTITION TO UNDERSIDE OF DECK GYP. BD. TO TERMINATE AT A MINIMUM OF 6" ABOVE HIGHEST ADJOINING CEILING B = PARTITION TO ABOVE HIGHEST CEILING UNLESS NOTED OTHERWISE ON PLAN. WALLS WILL TERMINATE AT A MINIMUM OF 6" ABOVE HIGHEST ADJOINING CEILING UNLESS NOTES OTERWISE ON PLAN. E = UNBRACED PARTITION TO UNDERSIDE OF DECK TERMINATE 1 FULL COURSE ABOVE AT WALLS WILL TERMINATE TO BOTTOM OF



#### INTERIOR PARTITION METAL STUD SPAN CHART

THIS DATA IS BASED ONASTM C-754-15 STANDARD SPECIFICATION FOR INSTALLATION OF STEEL FRAMING MEMBERS TO RECEIVE SCREW-ATTACHED GYPSUM PRODUCTSFOR THE PURPOSE OF LIMITING THE HEIGHTS OF UNBRACED PARTITIONS. THE USE OF THIS DATA IS SET TO MAXIMUM HEIGHT STANDARD FOR SUCH PARTITIONS. (CALCULATED AT 5 PSF LATERAL LOAD AND L/240 DEFLECTION AND ONE LAYER OF 5/8" GYPSUM BOARD EACH SIDE OF STUD.)



MAXIMUM UNBRACED SPAN IS DEFINED AS THE TOTAL DISTANCE BETWEEN THE TOP OF FINISHED FLOOR AND THE UNDERSIDE OF STRUCTURAL DECK OR APPROPRIATE LATERAL BRACE. SEE LATERAL BRACING DIAGRAM.

THESE SPANS ARE CALCULATED FOR ONE LAYER OF GYPSUM BOARD ON EACH SIDE OF A METAL STUD PARTITION. THESE MAXIMUM UNBRACED SPANS MUST BE REDUCED

BY 2'-0" IF ONLY ONE SIDEOF 5/8" GYPSUM BOARD IS USED. SUSPENDED CEILINGS OF ANY KIND ARE NOT TO BE CONSIDERED APPROPRIATE LATERAL BRACING FOR ANY PARTITION CONSTRUCTION AND SHALL REDUCE THE

MEASUREMENT OF UNBRACED SPAN. IN NO CASE SHALL THE MAXIMUM UNBRACED SPANS EXCEED THE REQUIREMENTS OF ASTM C-754.

**ARCHITECTURE + DESIGN** 180 SYLVAN AVENUE, SUITE 3 ENGLEWOOD CLIFFS, NJ 07632 TEL 201 | 894 | 1000 ENV-team.com ENVIRONETICS GROUP ARCHITECTS, P.

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SSP AMERICA

20408 BASHAN DRIVE SUITE 300 ASHBURN, VA 20147

PROJECT TEAM:

MEP ENGINEER: GUTH DECONZO CONSULTING ENGINEERS, PC 520 8TH AVENUE, SUITE 2201 NEW YORK, NEW YORK 10001

**AIRPORT ATIONAL ENTON INTER** KEY STA SIE AT BRAD S SHOPPE

**B-R1** S DESCRIPTION ISSUED FOR PERMIT

**ARASOTA** 

DESIGN **DELIVERABLE**: ISSUE DATE: 06/14/2024

PROJECT 24017B NUMBER: DRAWN BY: CHECKED BY: DC

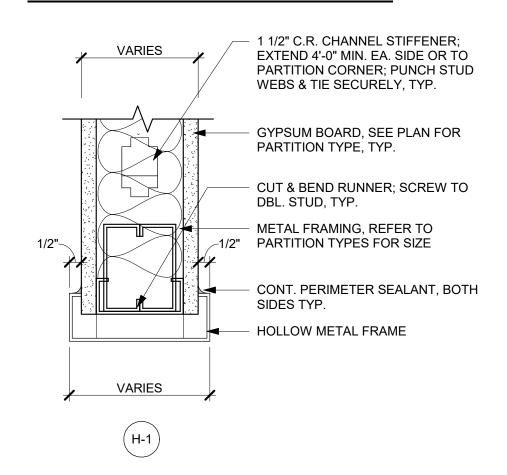
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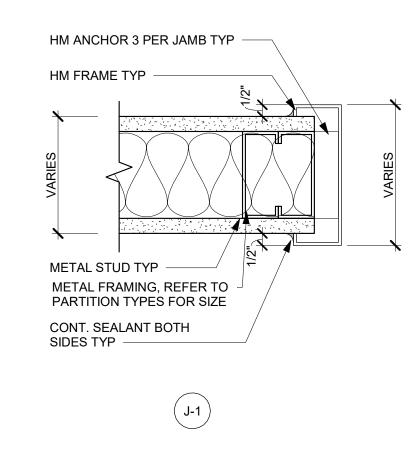
**PARTITION DETAILS** 

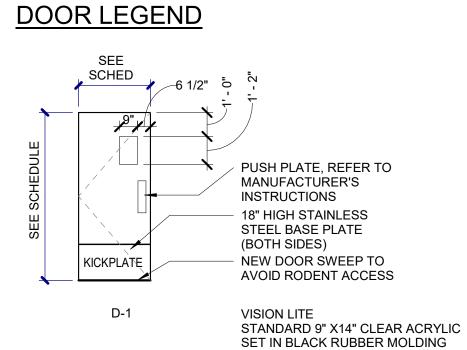
							DOOR SCI	HEDULE						
	DOOR FRAME													
		PANEL	DOOR PANEL					FRAME	DOOR FRAME			FIRE RATING	HARDWARE	
MARK	TYPE	MATERIAL	FINISH	WIDTH	HEIGHT	THICKNESS	TYPE	MATERIAL	FINISH	HEAD	JAMB	(MINUTES)	SET	COMMENTS
101	D-1	HPL	BY	3' - 0"	7' - 0"	1 3/4"	F-1	HM	BY	H1	J1		HWS1	ELIASON DOOR. INSTALL PER
			MANUFACTURER						MANUFACTURER					MANUFACTURER'S
														INSTRUCTIONS

SINGL	.E DOORS	PAIR	OF DOORS
INSIDE	INSIDE	INSIDE	INSIDE
6		/ 8	0
} \	7	7	
RH RIGHT HAND	LH LEFT HAND	RIGHT HAND ACTIVE	LEFT HAND ACTIVE
] INSIDE	ISSIDE	INSIDE	INSIDE
0	ρ		
RHR RIGHT HAND REVERSE BEVEL	LHR LEFT HAND REVERSE BEVEL	RIGHT HAND REVERSE BEVEL ACTIVE	LEFT HAND REVERSE BEVEL ACTIVE

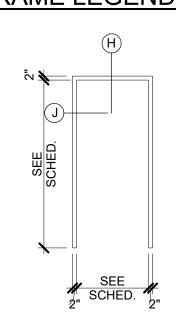
# METAL STUD HEADS + JAMBS







# **FRAME LEGEND**



# DOOR MATERIAL / SIZES /HARDWARE NOTES

MATERIAL: HARDWARE NOTES: PT EPOXY PAINT AL ALUMINUM - KNOCK DOWN FRAMES SHALL HAVE MITRED CORNERS. HM HOLLOW METAL ST STAIN FINISH - ALL HARDWARE TO BE 26D. AN ANNODIZED WD SOLID CORE WOOD STAIN FRP FIBER REINFORCED - SEE SPECIFICATIONS FOR HARDWARE SETS **GRADE 5 PLY** POLYESTER - VERIFY ALL HARDWARE WITH OWNER BEFORE PREFINISHED FF FACTORY FINISH ORDERING. DF DECORATIVE FINISH MTL METAL IN INSULATED REMARKS: FIRE DOORS: METAL GLAZING = G1 = 1/4" TEMPERED GLASS ALL FIRE RATED DOORS TO BE RATED PER NFPA 252 HPL HIGH PRESSURE PROVIDE FIRE GASKETING AT ALL RATED DOORS IN G2 = 1/4" FIRE SAFETY GLASS

G3 = 1" INSULATED TEMPERED GLASS

DOOR, FRAME & HARDWARE NOTES:

- 1. CONTRACTOR TO VERIFY ALL CONDITIONS IN FIELD. ANY DISCREPANCIES FROM WHAT IS INDICATED ON THE CONTRACT DOCUMENTS ARE TO BE BROUGHT TO THE ARCHITECTS ATTENTION. EXISTING CONDITIONS ARE TO BE INDICATED ON SHOP SUBMITTALS.
- 2. ALL HOLLOW METAL FRAMES SHALL BE WELDED IN NEW WALL CONSTRUCTION. PROVIDE KNOCK DOWN FRAMES IN EXISTING
- 3. KEY LOCKS SHALL COMPLY WITH ALL LANDLORD STANDARDS.
- 4. VERIFY ALL HARDWARE WITH OWNER BEFORE ORDERING. ALL HARDWARE TO HAVE 26D FINISH.

- 5. ALL FRAMES TO BE 16 GA HOLLOW METAL.
- 6. PROVIDE 8" MIN. BEARING AT LINTELS, TYP.
- 7. PROVIDE 3 DOOR SILENCERS PER JAMB (PER 7'-0" HIGH

ACCORDANCE WITH UL1784

8. HARDWARE SHALL BE MOUNTED AT THE LOWEST HEIGHT ALLOWED BY ICC/ANSI A117.1-2017.

LAMINATE

G.C. TO INSTALL WALL STOP

DOOR).

RATED DOORS TO INCLUDE CLOSER AND LATCH

**DOOR HARDWARE NOTES:** 

HWS1: • ELIASON DOOR HARDWARE BY MANUFACTURER

> SARASOTA BRADENTON INTERI **B-R1 SHOPPES AT SIESTA KEY**

ARCHITECTURE + DESIGN

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SSP AMERICA 20408 BASHAN DRIVE

ASHBURN, VA 20147

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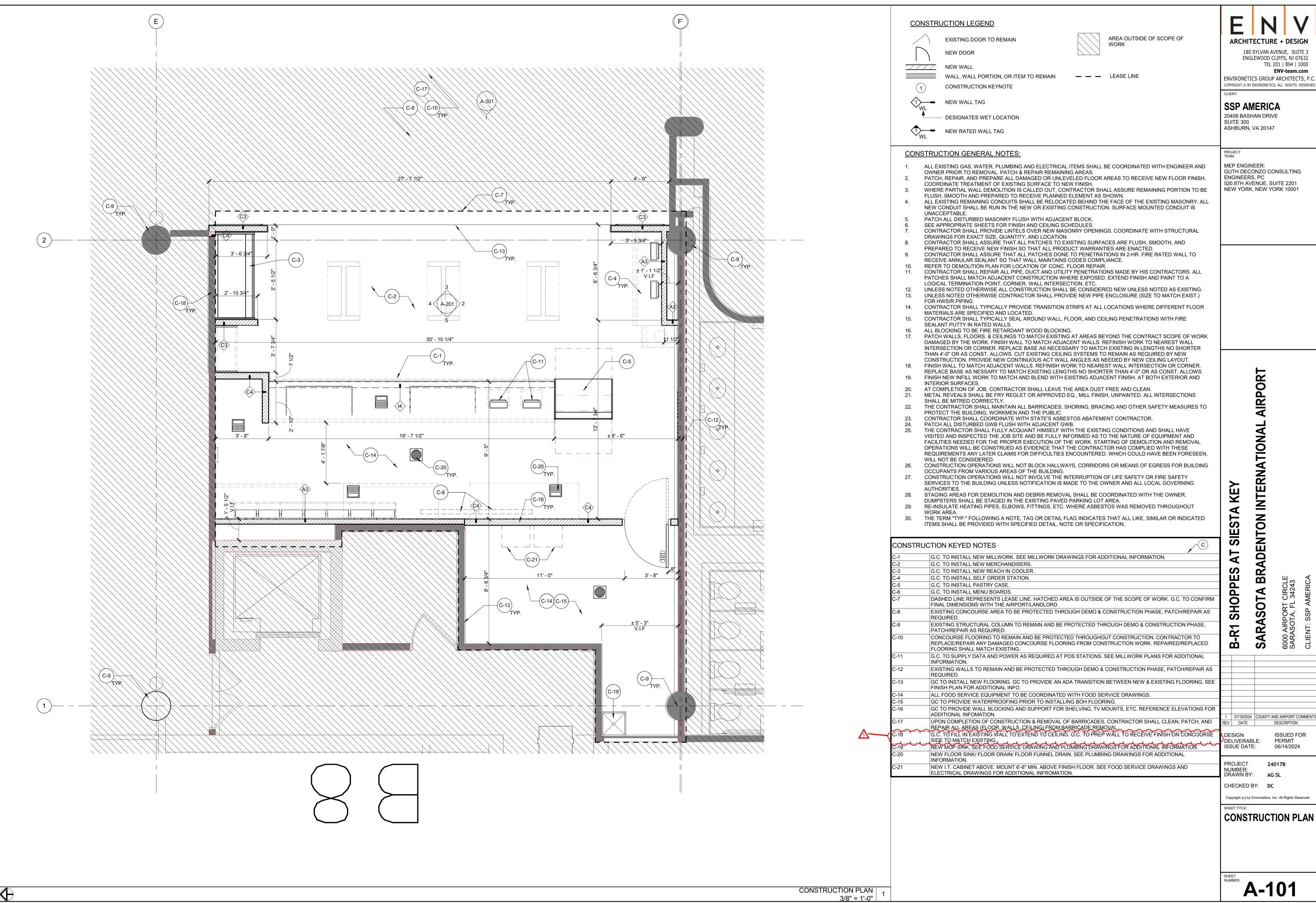
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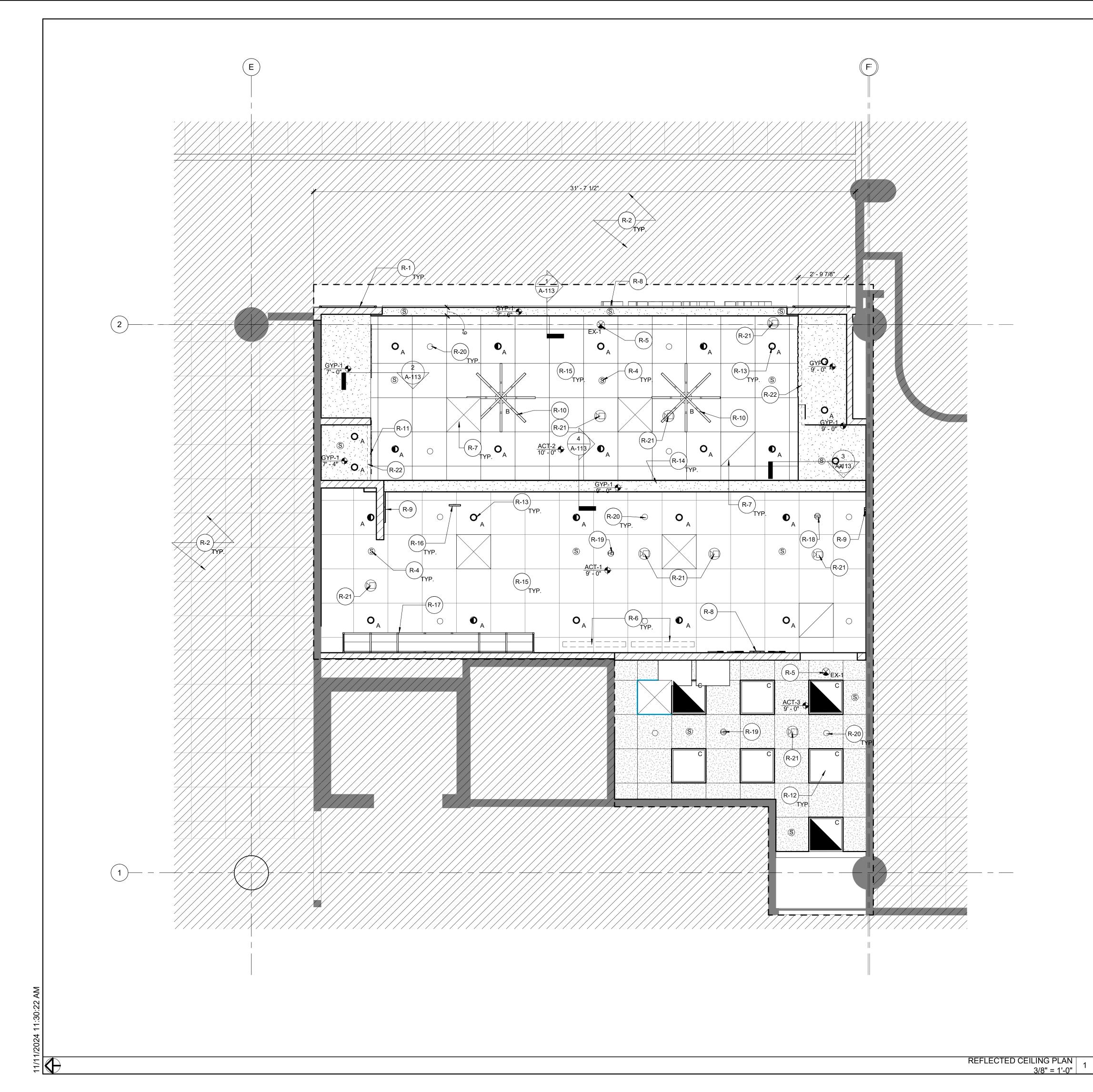
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DOOR SCHEDULES

A-005





CEILING LEGEND

 CEILING MATERIAL 9'-0"

CEILING GENERAL NOTES

HALL BE CENTERED ON THE TILE.

ALL GRIDS SHALL BE SEISMICALLY BRACED.

STEEL BEAMS, DECK, COLUMNS, ETC. IF APPLICABLE.

MATCH CEILING COLOR AFTER A.O.R. APPROVAL

- CEILING HEIGHT A.F.F.

NEW FULL HEIGHT PARTITION AS SCHEDULED SPRINKLER HEAD. SEE SPRINKLER DRAWINGS

FOR ADDITIONAL INFORMATION CEILING BASED SPEAKER, LOCATION SHOWN FOR CLARITY. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

EXISTING WALL, V.I.F. **— — —** LIMIT OF DEMISE (L.O.D)

EMERGENCY LIGHT

DIMENSION TAKEN AREA OUTSIDE OF SCOPE OF

WORK

SSP AMERICA 20408 BASHAN DRIVE

ARCHITECTURE + DESIGN

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PROJECT TEAM: MEP ENGINEER: ENGINEERS, PC 520 8TH AVENUE, SUITE 2201

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GUTH DECONZO CONSULTING NEW YORK, NEW YORK 10001

CEILING SCHEDULE

CONTRACTOR SHALL INSTALL ACOUSTIC TILE CEILING AS SHOWN ON REFLECTED CEILING PLANS.

CONTRACTOR TO PROVIDE ALL ASSOCIATED POWER/BOXES/WIRING FOR NEW LIGHT FIXTURES.

CONTRACTOR TO VERIFY ANY LOCATION AT CEILING THAT REQUIRES AN ACCESS PANEL

CEILING FINISHES ARE TO BE LRV 70% OR HIGHER AND EASILY CLEANABLE

LOCATED. COORDINATE IN FIELD EXACT LOCATIONS. SEE DETAIL DRAWINGS FOR ADDITIONAL INFO.

UNLESS OTHERWISE NOTED, ALL LIGHT FIXTURES SHOWN MOUNTED WITHIN THE SUSPENDED CEILING GRID

CONTRACTOR TO PROVIDE AND INSTALL CLG. ACCESS PANELS WHERE UTILITY VALVES, FILTERS, ETC. ARE

GC IS RESPONSIBLE TO PROVIDE NEW FIRE PROOFING IN ALL AREAS OF EXISTING FIRE PROOFING TO BE REMOVED IN ORDER TO ATTACH NEW CEILING AND WALL SUPPORTS, FRAMING, HANGERS, ETC. TYPICAL AT ALL

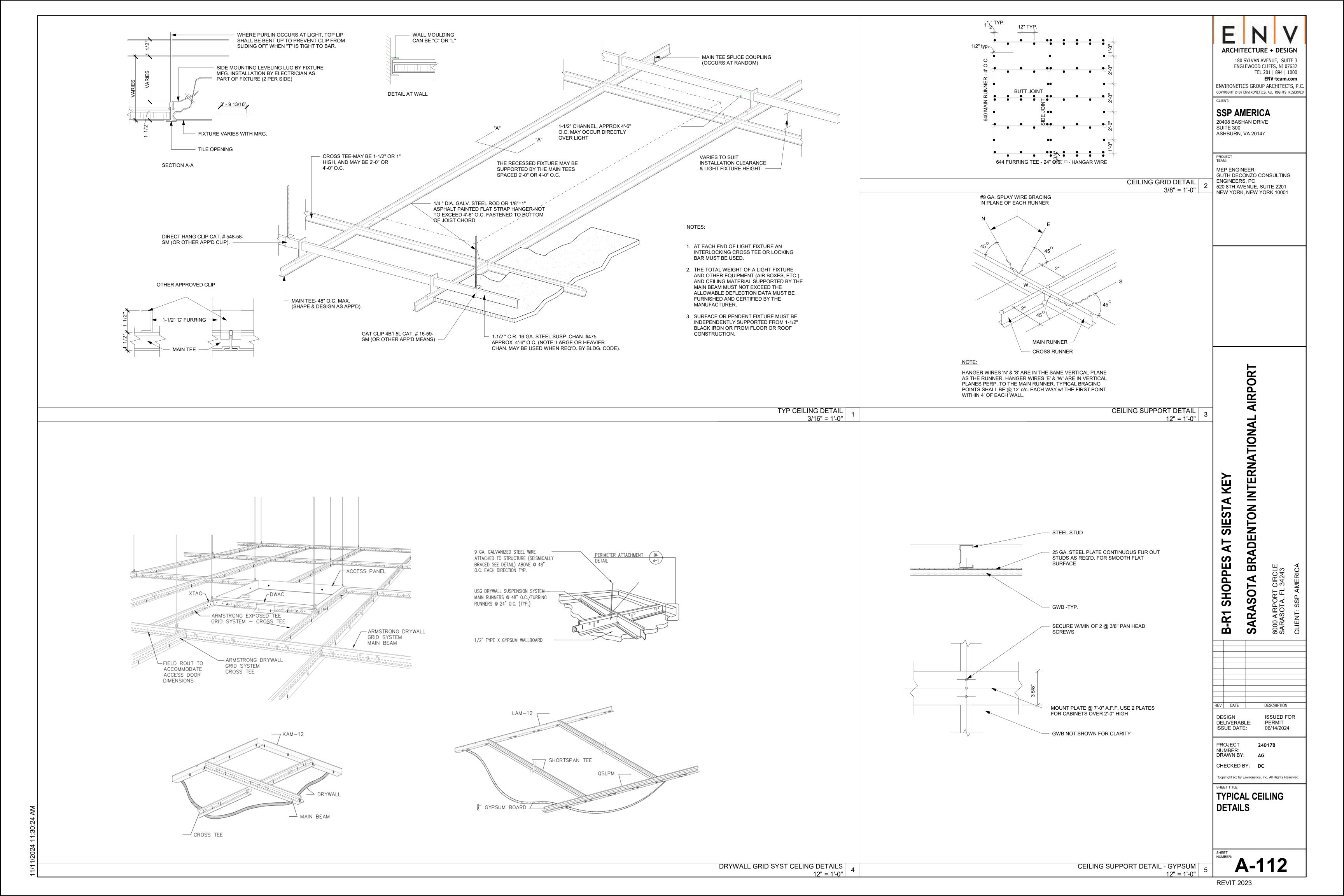
ALL DIFFUSERS, ACCESS PANELS, SPRINKLER CAPS, ETC. IN OTHER THAN WHITE CEILING TO BE PAINTED TO

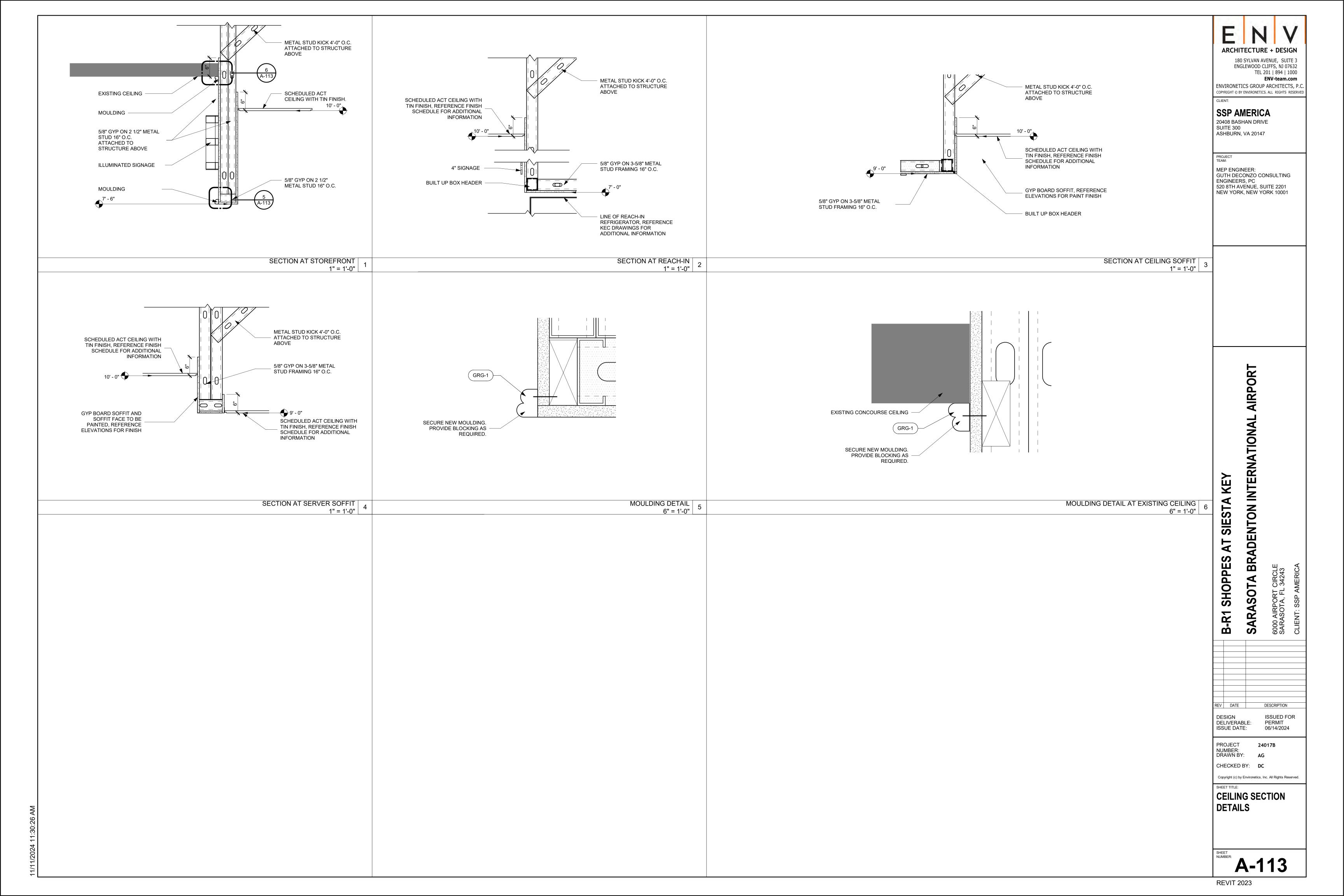
TYPE DESCRIPTION MANUFACTURER MODEL NO. COMMENTS GYPSUM CEILING ARMSTRONG 2x2 TIN CEILING PANEL AMERICAN TIN CEILINGS BRIGHT WHITE SATIN - GC TO PROVIDE PATTERN #2 ACT GRID AND BACKER FOR ATTACHMENT ACT-2 2x2 ACT TILE ARMSTRONG Ultima 1912 ACT-3 2x2 ACT TILE - WASHABLE ARMSTRONG Kitchen Zone #673 GYP-1 GYPSUM CEILING

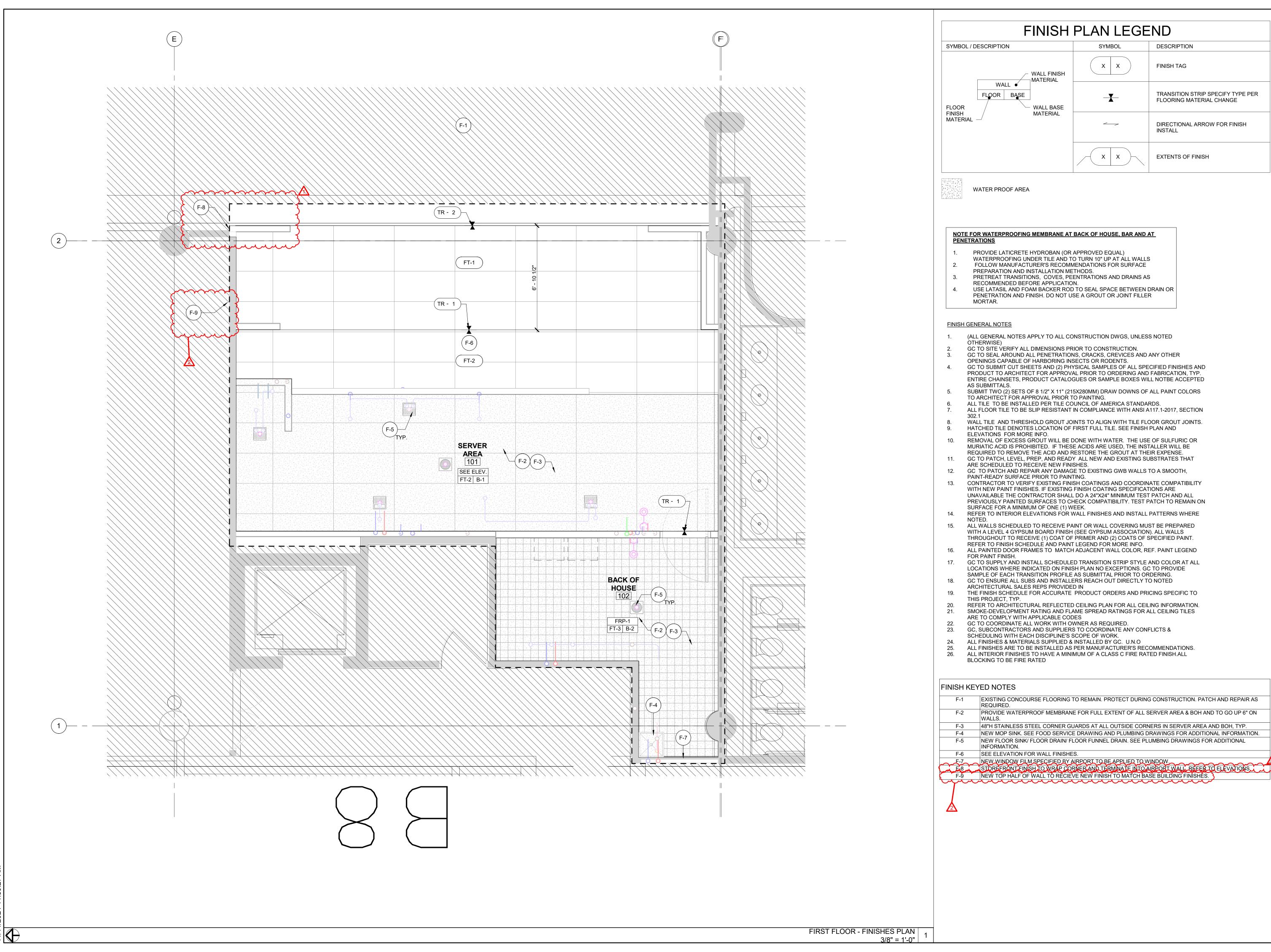
	LIGHTING FIXTURE SCHEDULE										
Type Mark	DESCRIPTION	MANUFACTURER	MODEL NO.	COMMENTS							
Α	4" ROUND RECESSED LIGHT	Acuity	GOTHAM IVO4S-D-15LM-35K-90CRI-MWD-MIN1-MVOLT-ZT-N CH-P-LSS-FWR								
В	PENDANT LIGHT	Corbett Lighting	PIENZA 373-50-VB	Provide Retrofit LED Bulb							
С	24"X24" LED TROFFER LIGHT	Acuity	CPX-2x2-ALO7-SWW7-M4								
EX-1	AC Only, Surface Mount-Ceiling, Single Face, Green Text	Philips Chloride	44RL1G								
LED-1	LED LIGHT TAPE	KLUS	WP-K-27-1210-24V								

	LIGHT					<b>-</b>			
X-1	AC Only, Surface Mount-Ceiling, Single Face, Green Text	Philips Chloride	44RL1G			KEY	INTE		
ED-1		KLUS	WP-K-27-1210-24V						
						PES AT SIESTA	BRADENTON	CIRCLE . 34243	IICA
RCP KE	YED NOTES				R	SHOPPE	ARASOTA	. CIR L 342	AMERICA
<u>-</u> 1	DASHED LINE REPRESENT FINAL DIMENSIONS WITH		TCHED AREA IS OUTSIDE O	OF THE SCOPE OF WORK.	. G.C. TO CONFIRM	一芸	SO	6000 AIRPORT SARASOTA, FL	SSP A
-2	EXISTING AIRPORT CEILIN PATCH AND REPAIR AS RE		TO REMAIN AND BE PROTEC	CTED THROUGHOUT CON	ISTRUCTION.		\$	AIRP SOT	
-4	NEW SPRINKLER. REFERE	NCE SPRINKLER I	DRAWINGS FOR ADDITIONA	L INFORMATION.		챧	7	58	CLIENT
:-5	NEW EXIT SIGN WITH EME	RGENCY LIGHT.				1 6	<b>**</b>	90 AF	Ξ
-6			LLED. CONTRACTOR TO PRI /ATIONS AND MEP DRAWIN				S	<u> </u>	
<u>-</u> 7	NEW MECHANICAL DIFFUS	SER. REFERENCE	MECHANICAL DRAWINGS F	OR ADDITIONAL INFORMA	ATION.		+		
-8	NEW ILLUMINATED SIGNA DRAWINGS FOR ADDITION		TREATED BLOCKING AND I	POWER. SEE SIGNAGE DI	RAWINGS AND MEP				
-9	NEW SIGNAGE. PROVIDE ADDITIONAL INFORMATION		OCKING. SEE SIGNAGE DRA	WINGS AND MEP DRAWIN	NGS FOR				
-10	NEW PENDANT LIGHTS. R	EFER TO ELEVATION	ONS AND LIGHT SCHEDULE	FOR MOUNTING HEIGHT	S.				
-11	NEW LED LIGHTING TO BE ELECTRICAL PLANS FOR A		HELVING. REFER TO LIGHTII	NG SCHEDULE, MILLWOR	RK DWGS AND				
-12	NEW BACK OF HOUSE TROINFORMATION.	OFFER, REFERENC	CE LIGHTING SCHEDULE AN	ID ELECTRICAL PLANS FO	OR ADDITIONAL	REV DATE		DESCRIPTION	
-13	NEW 4" RECESSED CANS ADDITIONAL INFORMATION		SHTING, REFERENCE ELEVA	ATIONS AND LIGHTING SC	HEDULE FOR	DESIGN		ISSUED FO	 DR
-14	NEW CEILING SOFFIT REF	ERNCE ELEVATION	NS AND DETAILS FOR ADDI	TIONAL INFORMATION.		DELIVERAB		PERMIT	
-15	G.C. TO COORDINATE W/ ( ACCORDING TO MANUFAC		CATION OF AUDIO SYSTEM, CTIONS.	G.C. TO INSTALL NEW AU	JDIO SYSTEM	ISSUE DATE	Ē: 	06/14/2024	
-16	NEW CEILING HUNG "PICK	( UP" SIGNAGE. RE	FER TO DETAILS FOR ADDI	TIONAL INFORMATION.		PROJECT	3.	4017B	
-17	NEW WALL MOUNTED MIL	LWORK DISPLAY V	VITH INTEGRAL LED TAPE L	JGHT.		NUMBER:	24	4017B	
-18	NEW SMOKE DETECTOR.	REFER TO FIRE AL	ARM DRAWINGS FOR ADDI	TIONAL INFORMATION.		DRAWN BY:	: A(	G	
-19			RM DRAWINGS FOR ADDITION			CHECKED	2V: P4	^	
-20	INFORMATION.		T'S CONSULTANT. REFER TO			COnveright (c) by E		L Inc. All Rights Res	served
-21	NEW 360 CAMERA SURFA ELECTRICAL DRAWINGS F		ORDINATE WITH CLIENT'S S NFORMATION.	ECURITY CONSULTANT. I	REFER TO	SHEET TITLE:	.iivii orietics,	inc. All Rights Res	ei veu.
-22	NEW RICHELIEU LOCKABL INFORAMTION.	LE TAMBOUR DOOF	R. SEE MILWORK AND SHOP	P DRAWINGS FOR ADDITION	ONAL	REFLEC	CTED	CEILIN	IG

PLAN







**ARCHITECTURE + DESIGN** 180 SYLVAN AVENUE, SUITE 3 ENGLEWOOD CLIFFS, NJ 07632 TEL 201 | 894 | 1000 ENV-team.com ENVIRONETICS GROUP ARCHITECTS, P. COPYRIGHT © BY ENVIRONETICS. ALL RIGHTS RESERVE **SSP AMERICA** 20408 BASHAN DRIVE SUITE 300 ASHBURN, VA 20147 PROJECT TEAM: MEP ENGINEER: GUTH DECONZO CONSULTING ENGINEERS, PC 520 8TH AVENUE, SUITE 2201 NEW YORK, NEW YORK 10001 **AIRPORT** ATIONAL **ENTON INTER** KEY STA SIE BRAD SHOPPE OTA **B-R1** 

11/11/2024 AIRPORT COMMENTS

REV DATE DESCRIPTION

DESIGN DELIVERABLE:

PROJECT

NUMBER: DRAWN BY:

ISSUE DATE:

CHECKED BY: DC

**FINISH PLAN** 

07/19/2024 COUNTY AND AIRPORT COMME

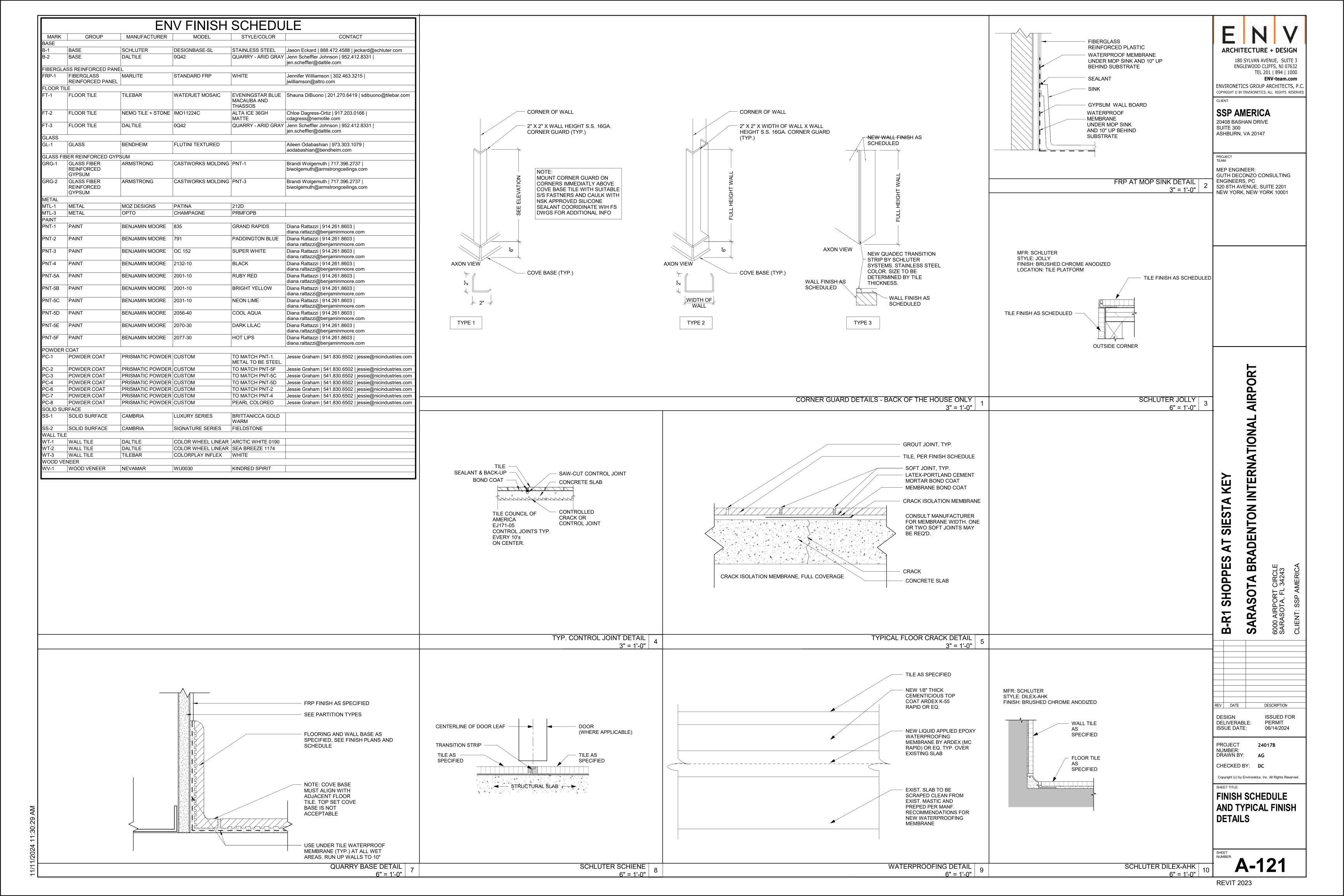
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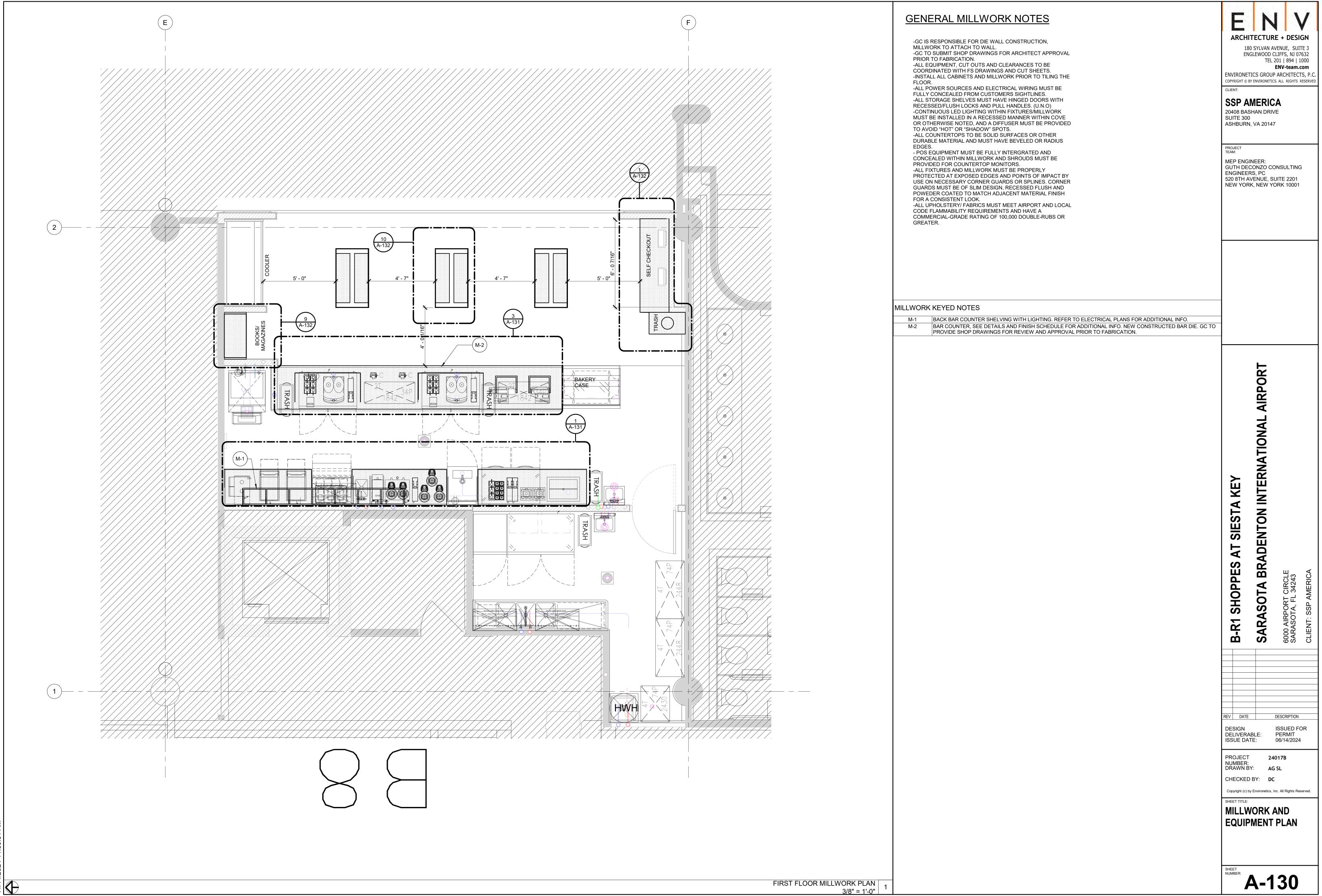
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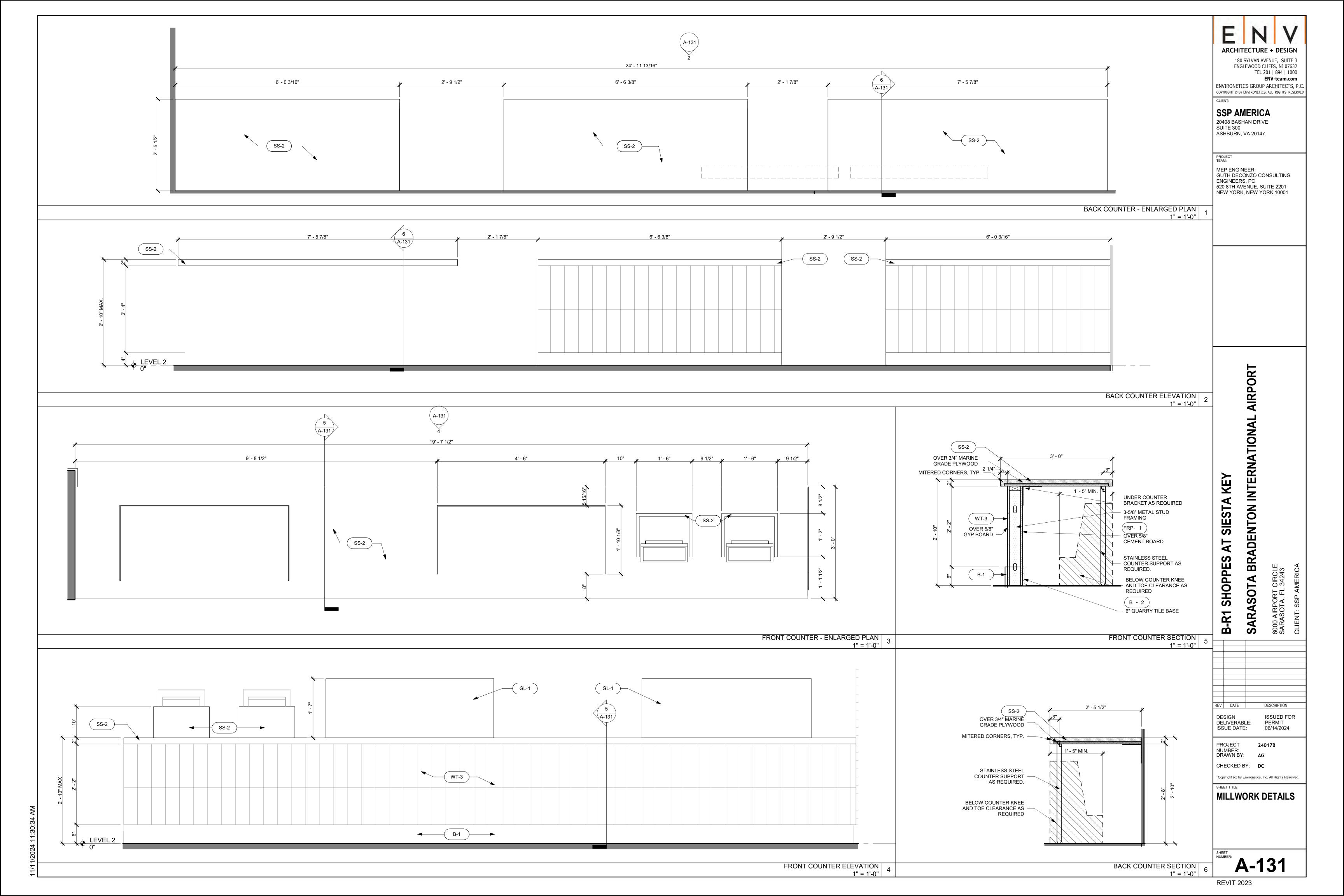
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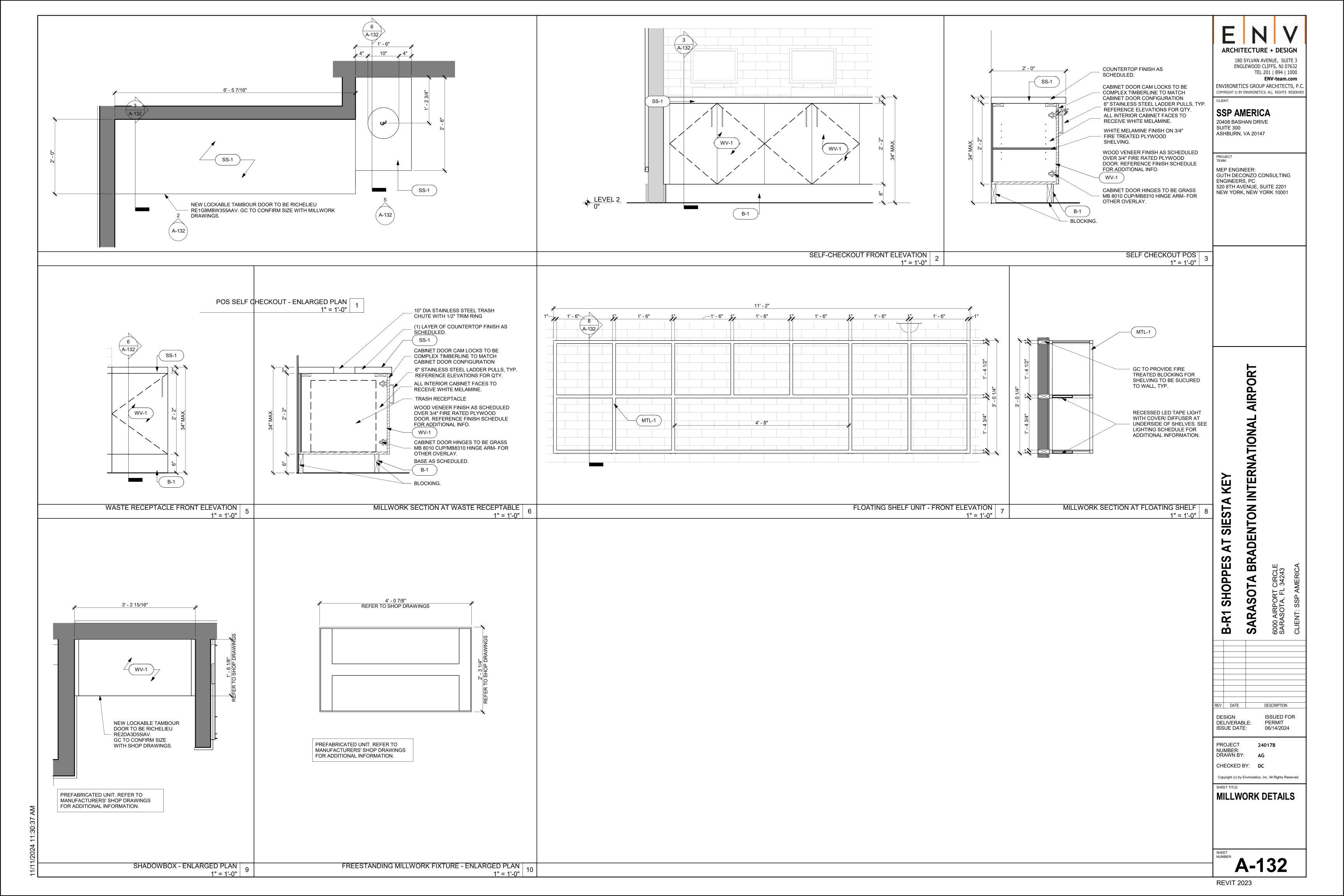
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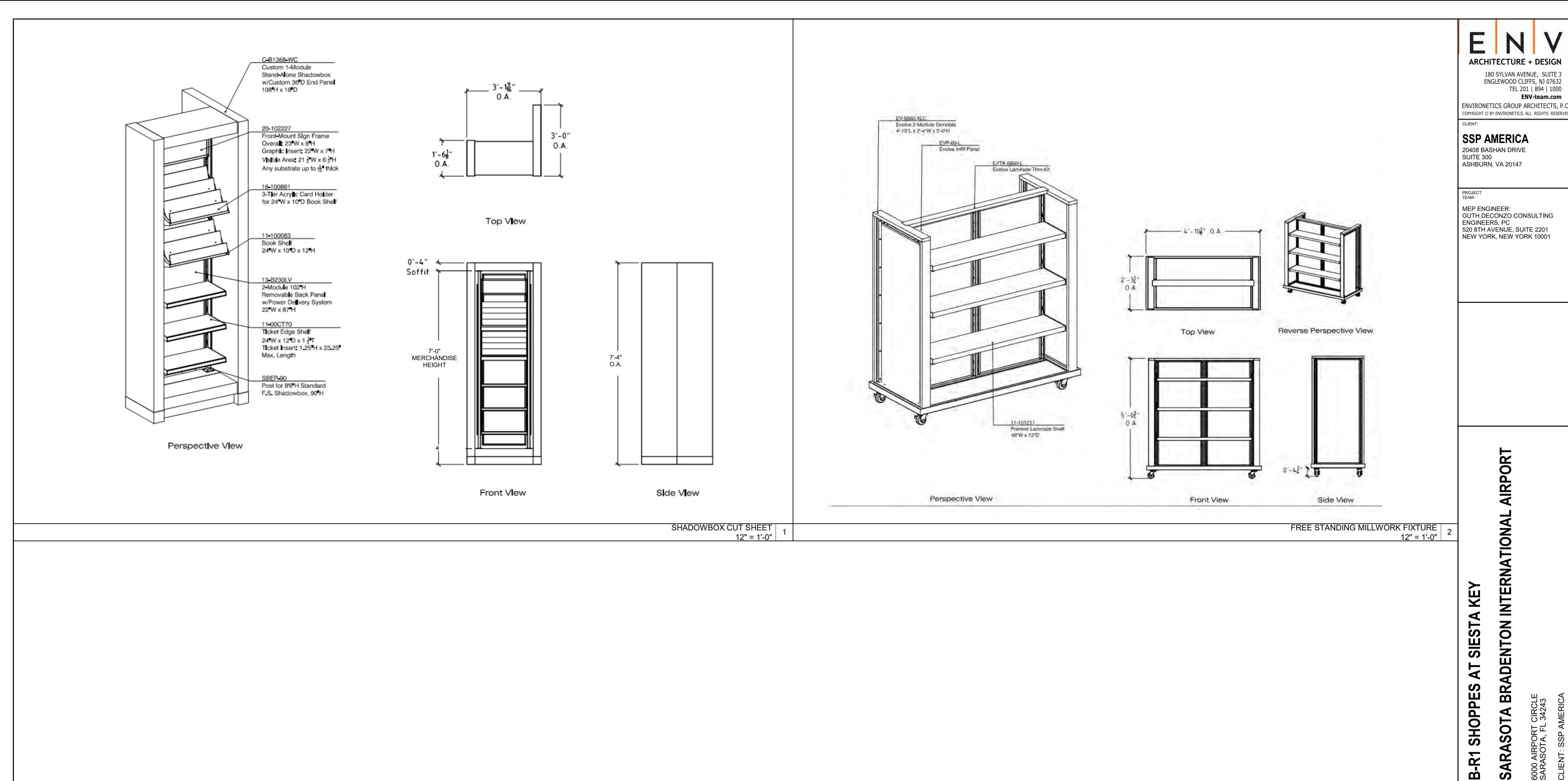
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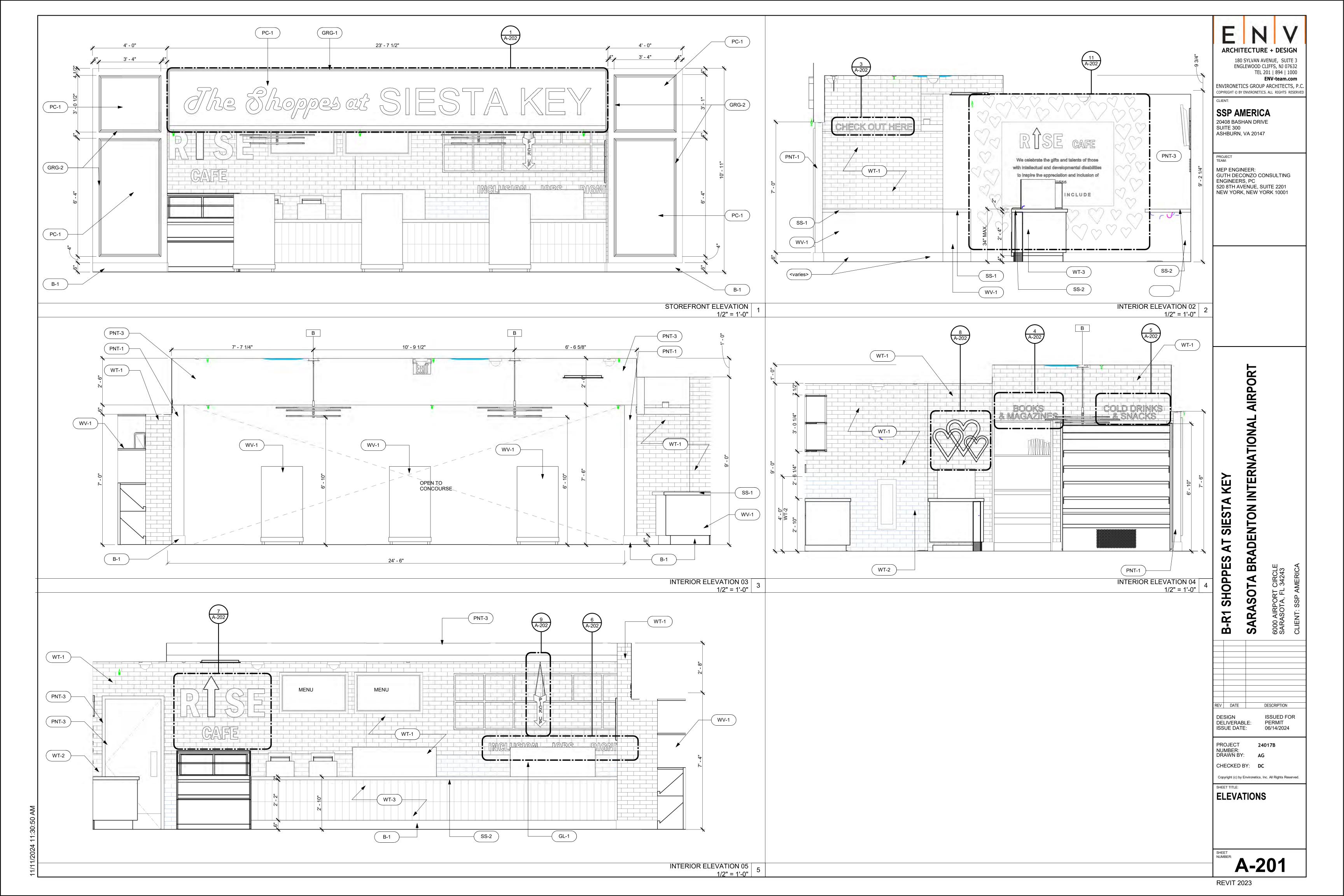
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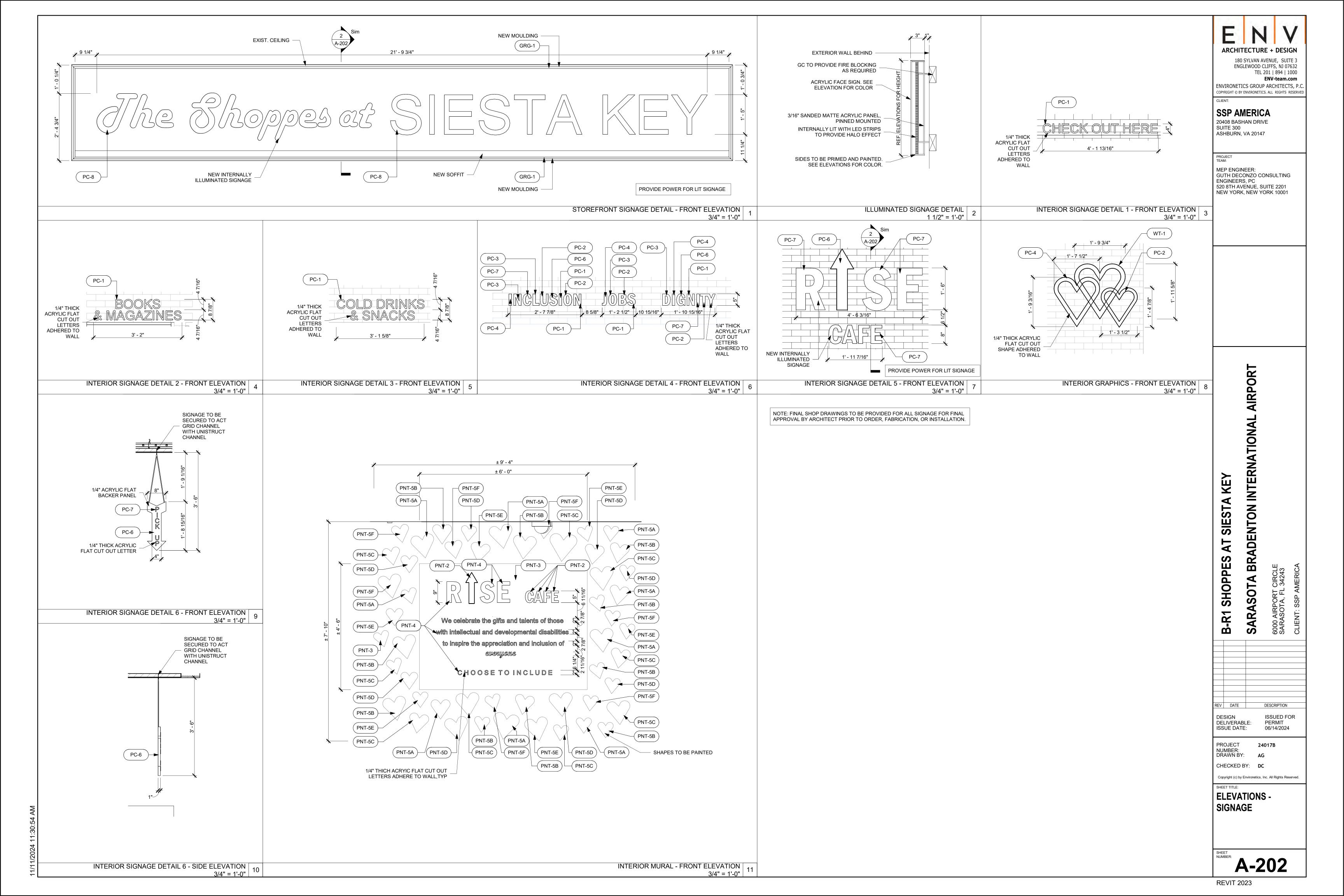
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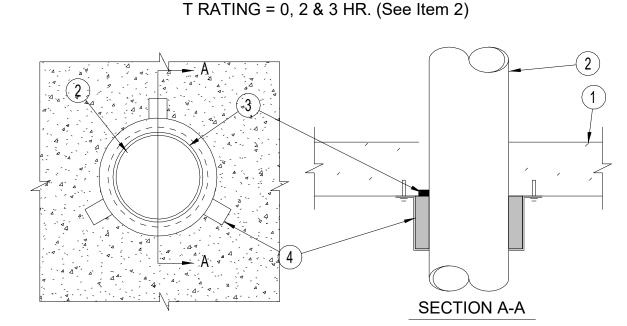
MILLWORK DETAILS

A-133





#### PLASTIC PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL System No. C-AJ-2109 F RATING = 3-HR.



1. Floor or Wall Assembly -Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall May also be constructed of any UL Classified Concrete Blocks\*. Max diam of opening is 7 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Through Penetrants -One nonmetallic pipe or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space between pipe and periphery of opening shall be min 0 in. (point contact) to max 1/2 in. Pipe to be rigidly supported on both sides of floor or wall assembly. The T Ratings are dependent on the size and/or type of pipe The following types and sizes of nonmetallic as shown in the table below. pipes may be used:

A. Polyvinyl Chloride (PVC) Pipe -Nom 6 in. diam (or smaller) Schedule 40 solidcore of cellular cor PVC pipe for use in closed (process or

supply) or vented (drain, waste or vent) piping system. B. Chlorinated Polyvinyl Chloride (CPVC) Pipe -Nom 6 in. diam (or smaller) SDR17 CPVC pipe for use in closed (process or supply) or

vented (drain, waste or vet) piping systems. Nom 6 in. diam (or C. Acrylonitrile Butadiene Styrene Pipe smaller) Schedule 40 solid-core or cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vet) piping

systems. Nom 6 in. diam (or D. Flame Retardant Polypropylene (CPVC) Pipe -

smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vet) piping systems.

Pipe Type	Nom Pipe Diam, in.	T Rating, hr
PVC, CPVC ABS, FRPP	1-1/2, 2, 3	2
PVC, CPVC ABS, FRPP	4,	3
PVC, CPVC ABS+, FRPP ABS++	6, 6,	3 0

+ - indicates solid core ABS only ++ - indicates cellular core ABS only

Min 1/2 in. thickness of fill 3. Fill, Void or Cavity Material\* - Sealant material applied within the annulus, flush with bottom surface of floor or with both surfaces of wall.

4. Firestop Device\* - Firestop Collar -Firestop collar shall be installed in accordance with the accompanying installation instructions. Collar to be installed and latched around the pipe and secured to underside of floor or both sides of wall using the anchor hooks provided with the collar. (Minimum 2 anchor hooks for 1-1/2 and 2 in. diam pipes, 3 anchor hooks for 3 and 4 in. diam pipes, and 6 anchor hooks for 6 in. diam pipes). The anchor hooks are to be secured with 1/4 in. diam by min 1-1/2 in. long steel expansion bolts, or equivalent, in conjunction with steel nuts and min 3/4 in. diam steel washers with one anchor bolt in each anchor

HILTI, Inc. - CP 643 50/1.5", CP 643 63/2".CP 643 90/3", CP 643 110/4" OR CP 642 160/6" Firestop

BLANK OPENING IN CONCRETE FLOOR/WALL OR BLOCK WALL

System No. C-AJ-0058

F RATING = 3-HR.

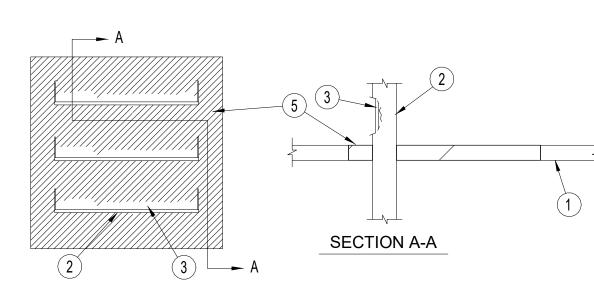
T RATING = 1-HR.

SECTION A-A

Collar \*Bearing the UL Classification Marking

#### CABLE TRAYS THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

System No. C-AJ-4017 F RATING = 3-HR. T RATING = 0-HR.



1. Floor or Wall Assembly - Min 2-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max area of opening is 1024 sq in. with max dimension of 32 in.

See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Cable Tray\* - The following types of cable trays may be used: A. Max 24 in. wide by max 4 in. deep open ladder cable tray with channel-shaped side rails formed of min 0.050 in. thick steel with

A-shaped rungs spaced 9 in. OC. B. Max 24 in. wide by max 4-3/16 in. deep open ladder cable tray formed of min 0.097 in, aluminum with 7/8 in, wide by 1 in, deep rungs

spaced 9 in. OC. A max of three cable trays to be installed in the opening. Of the three cable travs only one may be aluminum. The annular space between the cable trays shall be a min 5-1/4 in. The annular space between the cable tray and the periphery of the opening shall be min 1 in. Cable tray to be rigidly supported on both sides of floor or wall assembly.

3. Cables - Aggregate cross-sectional area of cables in cable tray shall be max 30 percent of the cross-sectional area of steel cable tray and max 20 percent of the cross-sectional area of aluminum cable tray, based on a max 3 in. cable loading depth within the cable tray. Any combination of the following types and sizes of copper conductor cables may be used:

A. Max 350 kcmil single-conductor power cables with polyvinyl chloride (PVC) insulation and jacket. B. 7/C No. 12 AWG copper conductor cable with PVC insulation and jacket.

C. Max 100 pair No. 24 AWG cable with PVC insulation and jacket.

4. Forms - (Not Shown) - Used as a form to prevent leakage of fill material during installation. Forms to be a rigid sheet material, cut to fit the contour of the penetrating item and positioned as required to accommodate the required thickness of fill materials. Forms may be removed after fill material has cured.

A3. Forming materials\* - Forming material to be

foamed into the opening as a permanent form.

Forming material to be recessed from the top

HILTI, Inc. - CF128 Foam Sealant

thickness of

surface of floor or both surfaces of wall as required

to accommodate the required thickness of putty.

B. Fill, Void or Cavity Material\* - Putty - Min 3/4 in

putty applied within the annulus, flush with top

surface of floor or with both surfaces of wall.

HILTI, Inc. - CP 618 Firestop Putty Stick

\*Bearing the UL Classification Marking

5. Fill, Void or Cavity Material\* - Trowelable Firestop Compound - Min 2-1/2 in. thickness of fill material applied within the annulus. Fill material is mixed at a rate of 2.5 parts dry mix to one part water by weight in accordance with the installation instructions supplied with fill material.

HILTI, Inc. - Type FS635 \*Bearing the UL Classification Marking

1. Floor or Wall Assembly - Min 4-1/2 in. thick reinforced lightweight or

See Concrete Blocks (CAZT) category in the Fire Resistance Directory

2. Firestop System - The firestop system shall consist of the following:

A. Packing or Forming Materials - One of the following packing or

A1. Foam backer rod tightly packed into the opening as a permanent

form. Packing material to be recessed from the top surface of

floor or both surfaces of wall as required to accommodate the

A2. Mineral wool batt insulation, min 4 pcf, tightly packed into the

to accommodate the required thickness of putty.

opening as a permanent form. Packing material to be recessed

from the top surface of floor or both surfaces of wall as required

any UL Classified Concrete Blocks\*. Max diam of opening is 4 in.

for names of manufacturers.

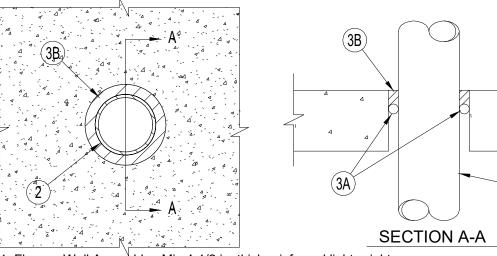
forming materials may be used.

required thickness of putty.

normal weight (100-150 pcf) concrete. Wall may also be constructed of

# METAL PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

System No. C-AJ-1276 F RATING = 3-HR. T RATING = 0-HR.



1. Floor or Wall Assembly - Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max diam of opening is 6 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Through Penetrants - One metallic pipe, conduit or tubing to be centered within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used: A. Steel Pipe - Nom 4 in. diam (or smaller) Schedule 10 (or heavier) steel pipe. A nom annular space of 3/4 in. is required within the

B. Conduit - Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit. A nom annular space of 3/4 in. is required within the

firestop system. 3. Firestop System - The firestop system shall consist of the following: A. Packing or Forming Materials - Optional - One of the following

packing or forming materials may be used: A1. Foam backer rod tightly packed into the opening as a permanent form. Packing material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.

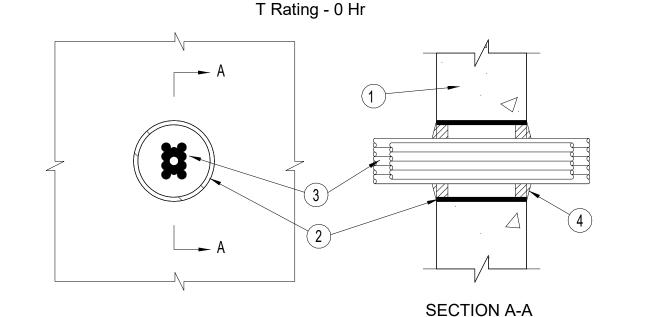
A2. Mineral wool batt insulation, min 4 pcf, tightly packed into the opening as a permanent form. Packing material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.

A3. Forming materials\* - Forming material to be foamed into the opening as a permanent form. Forming material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.

HILTI, Inc. - CF128 Foam Sealant B. Fill, Void or Cavity Material\* - Putty - Min 1 in. thickness of putty applied within the annulus, flush with top surface of floor or with

both surfaces of wall. HILTI, Inc. - CP 618 Firestop Putty Stick Bearing the UL Classification Marking

#### CABLE BUNDLE THROUGH 2-HR CONCRETE WALL ASSEMBLY System No. W-J-3036 F Rating - 1 and 2 Hr



1. Wall Assembly - Min 5 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max diam of opening is 4 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory

for names of manufacturers. 2. Metallic Sleeve - Nom 4 in. diam steel electrical metallic tubing (EMT) or Schedule 5 steel pipe friction fit into wall assembly and installed flush with wall surfaces.

3. Cables -Aggregate cross-sectional area of cables in opening to be max 25 percent of the cross-sectional area of the opening. The annular space between the cable bundle and the periphery of the opening to be min 1/8 in. to max 3/4 in. Cables to be rigidly supported on both sides of the wall assembly. Any combination of the following types and sized of cables

may be used: A. 6 pair - No. 24 AWG telephone cable with polyvinyl chloride (PVC) insulation and PVC jacket.

C. Type RGU/59 coaxial cable with polyethylene (PE) insulation and polyvinyl (PVC) jacket

B. 24 fiber optic cable with polyvinyl chloride (PVC) outer and subunit

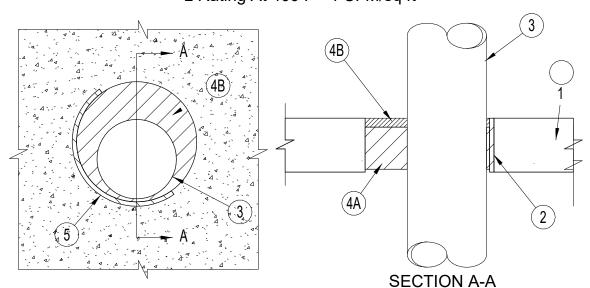
D. The 2/C No. 10 AWG cable with ground with polyvinyl (PVC) insulation E. 3/C No. 12 AWG cable with polyvinyl chloride (PVC) insulation in a nominal 1/2 in. flexible metal conduit.

4. Fill, Void or Cavity Material\* - Putty - Min 5/8 in. thickness of fill material applied within annulus flush with both surfaces of wall. Fill material to be forced into interstices of cable bundle to the max extent possible on both surfaces of wall. Additional fill material to be installed such that a min 1/4 in. crown is formed around the cable bundle and lapped over the steel sleeve.

HILTI, Inc. - CP618 Firestop Putty Stick \*Bearing the UL Classification Marking

# GLASS PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

System No. C-AJ-2118 F RATING = 3-HR. T RATING = 0-HR. L Rating At Ambient - Less Than 1 CFM/sq ft L Rating At 400 F - 4 CFM/sq ft



1. Floor or Wall Assembly - Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete floor or min 5 in. thick reinforced lightweight or normal weight concrete wall. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max diam of opening is 10 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory

for names of manufacturers. 2. Metallic Sleeve (Optional) - Nom 10 in. diam (or smaller) Schedule 10 (or heavier) steel pipe cast or grouted into floor or wall assembly, flush with floor or wall surfaces.

3. Through Penetrants\* - Glass Pipe - Nom 6 in. diam (or smaller) glass pipe used for use in closed (process or supply) or vented (drain, waste or vent) piping systems. One pipe to be installed either concentrically or eccentrically within the firestop system. The annular space shall be min 1/4 in. to max 3-1/2 in. Pipe couplings to be located min 12 in. from floor or wall surfaces. Pipe to be rigidly supported on both sides of floor or wall assembly.

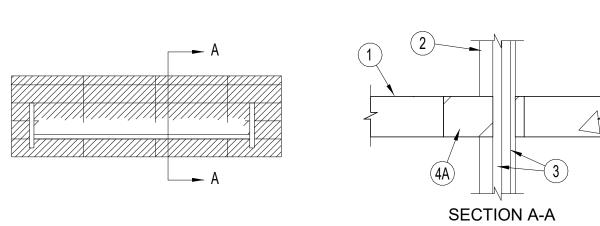
4. Firestop System - The firestop system shall consist of the following: A. Packing Material - Min 4.0 pcf mineral wool batt insulation installed in through opening as a permanent form. Pieces of batt cut to min width of 3-1/2 in. and installed edge-first into opening such that batt sections are tightly-compressed in thickness and such that the compressed batt sections are recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.

B. Fill, Void or Cavity Material\* - Sealant - Min 3/4 in. thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall.

HILTI, Inc. - FS605 or FS-ONE Sealant. (Note: L ratings apply only when FS-ONE Sealant is used). \*Bearing the UL Classification Marking

#### CABLE TRAY THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL System No. C-AJ-4035 F RATING = 3-HR.

T RATING = 0-HR.



. Floor or Wall Assembly - Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max area of opening is 270 sq in. with max dimension of 30 in.

See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

. Cable Tray\* - Max 24 in. wide by max 4 in. deep open-ladder cable tray with channel-shaped side rails formed of 0.10 in. thick aluminum or 0.060 in. thick galv steel and with 1-1/2 in. wide by 1 in. channel shape rungs spaced 9 in. OC. The annular space between the cable tray and the periphery of the opening shall be min 1 in. to max 4 in. Cable tray to be rigidly supported on both sides of floor or wall assembly.

. Cables - Aggregate cross-sectional area of cables in cable tray to be max 40 percent of the cross-sectional area of the cable tray. Any combination of the following types and sizes of copper conductor or fiber optic cables may be used: A. 1/C, 500 kcmil with thermoplastic insulation and PVC jacket. B. 300 pair-No. 24 AWG cable with PVC insulation and jacket. C. 24 fiberoptic cable with PVC subunit and jacket.

D. Three 1/C No. 12 AWG wire, insulated with polyvinyl chloride, in a

nominal 3/4 in. flexible metal conduit. I. Firestop System - The firestop system shall consist of the following: A. Fill, Void or Cavity Material\* - Fire blocks installed with the long dimension placed horizontally within the opening, flush with bottom of floor assemblies. Blocks to completely fill the entire width of opening of wall assemblies.

HILTI, Inc. - FS-Fire Block B. Fill, Void or Cavity Material\* - Fill material to be forced into interstices of cables and between cables and cable trays to max extent possible on both surfaces of the penetration.

HILTI, Inc. - FS-ONE Sealant \*Bearing the UL Classification Marking

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ENV-team.com

**AIRPORT ATIONAL BRADENTON INTER** E Y SIESTA AT

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SHOPPE

**B-R1** 

DESCRIPTION

ISSUED FOR DESIGN **DELIVERABLE**: PERMIT ISSUE DATE: 06/14/2024

PROJECT 24017B NUMBER: DRAWN BY:

CHECKED BY: DC

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**TYPICAL** FIRESTOPPING **DETAILS** 

# System No. C-AJ-8056 F RATING = 3-HR. T RATING = 0 HR. L Rating At Ambient - 5 CFM/sq ft L Rating At 400 F - 2 CFM/sq ft SECTION A-A SECTION A-A

1. Floor or Wall Assembly - Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max area of opening is 1296 sq in. with max dimension of 36 in

See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Cable Tray\* - Max 18 in. wide by max 6 in deep open-ladder cable tray with channel-shaped side rails formed of 0.060 in. thick aluminum or steel and with 1-1/2 in. wide by 1 in. channel shape rungs spaced 9 in.

OC. One cable tray to be installed in the opening. The max annular space between the

OC. One cable tray to be installed in the opening . The max annular space between the cable trays is 9 in. and between the periphery of the opening shall be min 1-1/2 in. to max 4-1/2 in. Cable tray to be rigidly supported on both sides of floor or wall assembly.

3. Cables - Aggregate cross-sectional area of cables in cable tray to be max30 percent of the cross-sectional area of the cable tray based on a max 3 in. cable loading depth within the cable tray. Any combination of thefollowing types and sizes of copper conductor or fiber optic cables may be used:

A. 7/C No. 12 AWG with polyvinyl chloride (PVC) insulation and

B. 300 pair - No. 24 AWG cable with PVC insulation and jacket.

C. 1/C, 350 kcmil with cross-linked polyethylene (XLPE) insulation and jacket.

D. 1/C, 500 kcmil with thermo plastic insulation and polyvinyl chloride

E. Twenty four fiber optic cable with PVC sub unit and jacket.

(PVC) jacket.

4. Through Penetrants - One or more pipe, conduit or tube to be installed within the opening. The total number of through-penetrants is dependent on the size of the opening and types and sizes of the penetrants. Any combination of the penetrants described below may be used provided that the following parameters relative to the annular spaces and the spacings between the pipes are maintained. The space between pipes, conduits or tubing and between the periphery of the opening and the pipes or conduits shall be min 1 in. to max 4-1/2 in. Pipe, conduit or tube to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. Nom 6 in. diam (or smaller) rigid galv steel conduit.

B. Nom 4 in. diam (or smaller) steel electrical metallic tubing.

C. Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.

D. Nom 4 in. diam (or smaller) Type L (or heavier) copper tube.

E. Nom 6 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

5. Pipe Covering\* - Nom 1-1/2 in. thick hollow cylindrical heavy density (min 3.5 pcf) glass fiber units jacketed on the outside with an all servicejacket. Longitudinal joints sealed with metal fasteners or factory applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product.

See Pipe and Equipment Covering - Materials (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

6. Cables - Max 2 in. diam tight bundle of cables centered in opening and rigidly supported on both surfaces of floor and wall. Any combination of the following types and sizes of cables may be used:

A. 7/C No. 12 AWG with polyvinyl chloride (PVC) insulation and PVCjacket.

B. 25 pair - No. 24 AWG cable with PVC insulation and jacket.
C. 2/C No. 10 AWG cable with PVC insulation and jacket.
D. 3/C No. 8 AWG aluminum clad cable with cross-linked polyethylene (XLPE) insulation and PVC jacket.

E. Type RC - 62 A/U coaxial cable with air core and PVC jacket. F. 24 fiber optic cable with PVC sub unit and jacket.

7. Firestop System - The firestop system shall consist of the following:

A. Fill, Void or Cavity Material\* - Fire blocks installed with long dimension passed through the opening extending min 1-1/2 in. from each surface. Blocks to completely fill the entire opening.

HILTI, Inc. - FS-Fire Block

B. Fill, Void or Cavity Material\* - Fill material to be forced into interstices of cables and between cables and cable trays to max extent possible on both surfaces of the

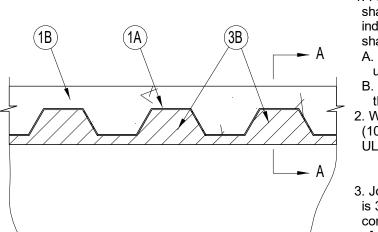
HILTI, Inc. - FS-ONE Sealant
C. Wire Mesh - (Not Shown) - When the annular space exceeds 4-1/2 in.to the periphery, a nom 2 in sq wire fencing shall be used to keep the fire blocks in place. The wire fencing is fabricated from min No. 16 SWG (0.060) galv steel wire. The wire is cut to fit the contour of the penetrating item with a min 3 in. lap beyond the periphery of the opening. Wire fencing secured to top surface of floor and both surfaces of wall assembly by meams of 1/4 in. diam by 1 in. long concrete anchors and 1/4 in. by 1-1/2 in. diam fender washers spaced max 8 in. OC.

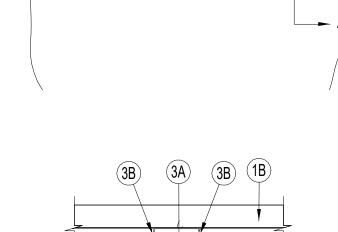
\*Bearing the UL Classification Marking

# TOP OF WALL JOINT: 2-HR CONCRETE WALL OR BLOCK WALL ASSEMBLY System No. HW-D-0080

Assembly Rating - 2 Hr Nominal Joint Width - 3/4 in.

Nominal Joint Width - 3/4 in.
Class II Movement Capabilities - 33% Compression or Extension





SECTION A-A

Floor Assembly - The fire-rated fluted steel floor unit/concrete floor assembly shall be constructed of the materials and in the manner described in the individual Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:
 A. Steel Floor and Form Units\* - Max 3 in. deep galv steel fluted floor

units.

B. Concrete - Min 2-1/2 in. thick reinforced concrete, as measured from the top plane of the floor units.

2. Wall Assembly - Min 5 in. thick reinforced lightweight or normal weight

(100-150 pcf) structural concrete. Wall may also be constructed of any UL Classified Concrete Blocks\*
See Concrete Blocks (CAZT) category in the Fire Resistance Directory

for names of manufacturers.

3. Joint System - Max separation between bottom of floor and top of wall is 3/4 in. The joint system is designed to accommodate a max 33 percent. compression or extension from its installed width. The joint system consists of a packing material and a fill material between the top of the wall and the bottom of the steel floor units, as follows:

A. Forming Material\* - Min 4-1/2 in. thickness of min 4 pcf density mineral wool batt insulation was cut to the shape of the fluted deck, approximately 20 percent larger than the area of the flutes and compressed into the flutes of the steel floor units above the wall assembly. The forming material shall be recessed 1/4 in. from each side of the wall.

Fibrex Insulations, Inc. - FBX Safing Insulation

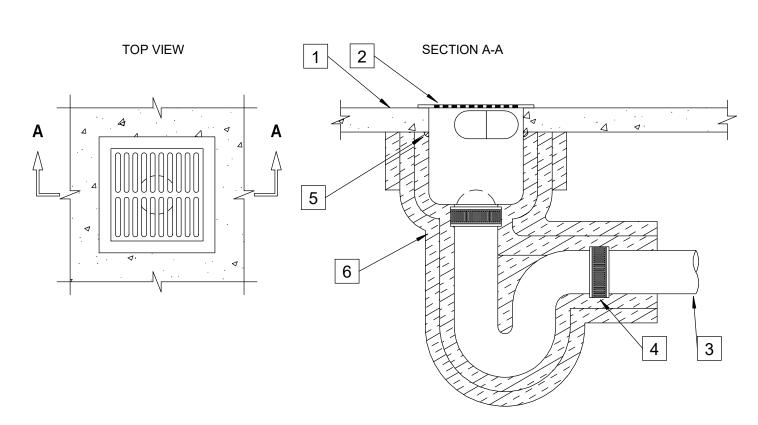
B. Fill, Void or Cavity Material\* - Sealant - Min 1/4 in. thickness of fill material installed on each side of the wall in the flutes of the steel floor units and between the top of the wall and the bottom of the steel floor units, flush with each surface of the wall.

HILTI, Inc. - CP601S Elastomeric Firestop Sealant

\*Bearing the UL Classification Marking

# CAST IRON FLOOR SINK THROUGH CONCRETE WALL ASSEMBLY

UL/cUL SYSTEM NO. F.-A-1135



F-RATING = 2-HR.
T-RATING = 2 HR.
L-RATING AT AMBIENT - LESS THEN 1 CFM / SQ FT
L-RATING AT 400 DEGREES FAHRENHEIT =4 CFM / SQ FT

1. LIGHTWEIGHT OR NORMAL WEIGHT CONCREE FLOOR ASSEMBLY (  $\tt MINIMUM$  2-1/2" THICK) (2HR.  $\tt FIRE-RATING)$ 

2. MAXIMUM 12"X12"X10" DEEP CAST IRON FLOOR SINK CAST OR GROUTED INTO FLOOR. SINK

FLANGES TO BEAR ON TOP PLANE OF FLOOR. CAST IRON FLOOR GRATING TO BE INSTALLED ON TOP OF SINK.METAL DOME STRAINER MAY BE USED IN SINK DRAIN.

3.MAXIMUM 4" NOMINAL DIAMETER CAST IRON PIPE SECURED TO OUTLET OF FLOOR SINK WITH NO-

HUB COUPLING.PIPE TO BE REGIFLY SUPPORTED BENEATH FLOOR AWAY FROM FLOOR SINK WITH

4. CORRUGATED STAINLESS STEEL "NO-HUB" CONNECTOR.

SUITABLE HANGERS.

5.MINIMUM 1/2" BEAD HILI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT APPLIED AROUND PERIPHERY OF FLOOR SINK AT FLOOR INTERFACE.

6.TWO LAYERS (NOMINAL 1-1/2" THICK) FACED OR UNFACED FIREMASTER FAST WRAP XL, FIREMASTER FASTRAP+, OR PYROSCAT DUCTWRAP XL (MANUFACTURED BY THERMAL CERAMICS) TIGHTLY WRAPPED AROUND SINK AND DRAIN PIPE. BOTH LAYERS TO EXTEND MINIMUM 24" BEYOND THE BOTTOM SURFACE OF FLOOR AND HELD IN POSTION USING 16 GA. STEEL WITE TIES SPACED MAXIMUM 8" ON CENTER AND MAXIMUM 6" BELOW FLOOR AND HELD IN POSITION USING 16 GA. STEEL TIE WIRES SPACED MAXIMUM1" FROM ENDS OF LAYER.

SIESTA KEY
ENTON INTERNATIONAL AIRPORT

ARCHITECTURE + DESIGN

ENVIRONETICS GROUP ARCHITECTS, P.O.

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6000 AIRPORT CIRC SARASOTA, FL 3424 CLIENT: SSP AMERI

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DESIGN ISSUED FOR DELIVERABLE: PERMIT 1SSUE DATE: 06/14/2024

PROJECT 24017B NUMBER: DRAWN BY: AG

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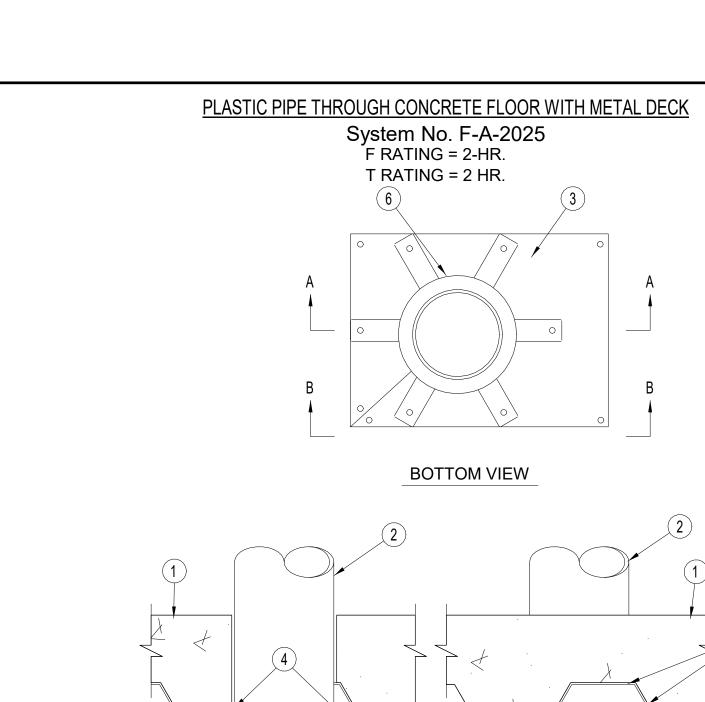
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TYPICAL FIRESTOPPING

r ER: **A A C** 

2024 44.30.EB

**DETAILS** 



SECTION A-A

SECTION B-B

1. Floor Assembly - The fire-rated unprotected concrete and steel floor assembly shall be constructed of the materials and in the manner specified in the individual D900 Series designs in the UL Fire Resistance Directory and as summarized below:

A. Normal Weight Concrete - Normal weight concrete with carbonate siliceous aggregate, 145 to 155 pcf unit weight, min 3000 psi

compressive strength. 6x6-W1.4xW1.4. B. Welded Wire Fabric -C. Steel Floor and Form Units\* -Composite or noncomposite 3 in. deep fluted galv units as specified in the individual Floor-Ceiling design.

Max diam of opening core-drilled through floor assembly is 7 in. 2. Through Penetrants -One nonmetallic pipe to be installed either concenbetween pipe and periphery of opening shall be min 0 in. (point contact) to max 1/2 in. Pipe to be rigidly supported on both sides of floor assembly.

The following types and sizes of nonmetallic pipes may be used: A. Polyvinyl Chloride (PVC) Pipe -Nom 6 in. diam (or smaller) Schedule 40

solid core of cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

B. Chlorinated Polyvinyl Chloride (CPVC) Pipe -Nom 6 in. diam (or smaller) SDR17 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

C. Acrylonitrile Butadiene Styrene (ABS) Pipe -Nom 6 in. diam (or smaller) Schedule 40 solid core or cellular core ABS pipe for use in

closed (process or supply) or vented (drain, waste or vent) piping systems.
D. Flame Retardant Polypropylene (FRPP) Pipe -Nom 6 in. diam (or

smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. 3. Metal Plate Enclosure - Min 18 ga. steel. Width of plate to be min 12 in. Length of plate (transverse to steel floor unit direction) to extend to steel floor unit valley beyond each side of core-drilled hole with a min lap of 1-1/2 in. on the floor unit valley at each end. Both ends of plate perpendicular to floor unit valleys to be cut to permit the ends to be bent upwards 90 F to follow the contour of the floor unit, enclosing the packing material (item 4) within the areas of the flutes. The contoured plate ends shall be such that the gap between the floor unit and the plate ends is no greater than 1/4 in. Circular cutout in plate to tightly follow circumference of nonmetallic pipe with side edges of plate at least 3 in. from circular cutout on all sides. Slit made in plate to permit installation around the nonmetallic pipe to be located at end of plate beneath floor unit valley nearest to the circular cutout. Plate secured to valleys of floor unit using min 1/4 in. diam by 1-3/4 in. long steel expansion bolts, or equivalent, in conjunction with min 3/4 in. diam steel washers. Fasteners to be located approx 1 in. from edges of plate at each corner, at each plate/valley intersection and at both sides of slit made to permit installation around nonmetallic pipe. Spacing of fasteners not to exceed 10 in. OC.

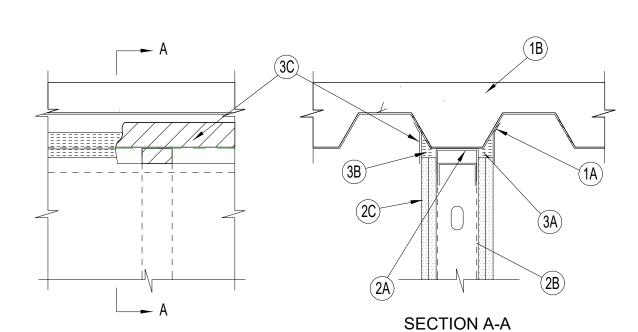
4. Packing Material - Mineral wool batt insulation having min density of 4 pcf, firmly packed into flutes of steel floor units above metal plate enclosure (Item 3) to completely fill cavities. 5. Fill, Void or Cavity Material\* - Sealant -Nom 1/2 in. bead of fill material applied around the perimeter of the metal plate enclosure at the interface of the enclosure and steel deck. HILTI, Inc. - FS601, FS611A or FS-ONE Sealant 6. Firestop Device\* - Firestop Collar -Firestop collar shall be installed in

accordance with the accompanying installation instructions. Collar to be installed and latched around the pipe and secured to the valley of the steel deck and to the metal plate enclosure using the anchor hooks provided with the collar. (Minimum 2 anchor hooks for 1-1/2 and 2 in. diam pipes, 3 anchor hooks for 3 and 4 in. diam pipes, and 6 anchor hooks for 6 in. diam pipes). Where the anchor hooks are beneath the valley of the steel floor unit, the anchor tabs are to be secured with 1/4 in. diam by min 1-1/2 in. long steel expansion bolts, or equivalent, in conjunction with steel nuts and min 3/4 in. diam steel washers with one anchor bolt in each anchor hook. Where the anchor hooks are beneath the crest of the steel deck, the anchor hooks are to be secured to the metal enclosure with No.10 by min 1/2 in. long self-drilling, self-tapping steel screws and washers.

HILTI, Inc. - CP 643 50/1.5", CP 643 63/2", CP 643 90/3", CP 643 110/4", or CP 642 160/6" Firestop Collar \*Bearing the UL Classification Marking

TOP OF WALL JOINT: 1-HR OR 2-HR GYPSUM WALL ASSEMBLY

System No. HW-D-0049 Assembly Ratings - 1 and 2 Hr (See Items 2 and 3B) Nominal Joint Width - 1 In. Class II Movement Capabilities - 50% Compression or Extension



1. Floor Assembly - The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Steel Floor and Form Units\* Max 3 in. deep galv fluted units. B. Concrete - Min 2-1/2 in. thick reinforced concrete, as measured from the top plane of the floor units.

2. Wall Assembly - The 1 or 2 hr fire-rated gypsum wallboard/steel stud assembly shall be constructed of the materials and in the manner described in the individual U400-Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction

A. Steel Floor and Ceiling Runners Floor and ceiling runners of wall assembly shall consist of min 25 gauge galv steel channels sized to accommodate steel studs (Item 2B). Ceiling runner to be provided with 2 in. flanges. Ceiling runner secured to valleys of steel floor units

(Item 1A) with steel fasteners spaced max 12 in. OC. B. Studs - Steel studs to be min 2-1/2 in. wide. Studs cut 5/8 to 3/4 in. less in length than assembly height with bottom nesting in and resting on floor runner and with top nesting in ceiling runner without

attachment. Stud spacing not to exceed 24 in. OC. C. Wallboard, Gypsum\* - Wallboard sheets installed to a min total thickness of 5/8 or 1-1/4 in. on each side of wall, for 1 and 2 hr. rated assemblies, respectively. Wall to be constructed as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory, except that a nom 1 in. gap shall be maintained between the top of the wallboard and the bottom of the steel floor units and the top row of screws shall be installed into the studs 3-1/2 to 4 in. below the

lower surface of the floor. 3. Joint System - Max separation between bottom of floor and top of wall at time of installation of joint system is 1 in. The joint system is designed to accommodate a max 50 percent compression or extension from its installed width. The joint system consists of forming

material and a fill material, as follows: A. Forming Material\* - Nom 5/8 to 1-1/4 in. wide by 1-1/2 in. high strips of min 8 pcf mineral wool batt insulation are to be cut to fill the 1 in. gap between the top of the wallboard and bottom of the steel floor units. The strips of mineral wool are compressed and firmly packed, cut edge first, into the gap between the top of the wallboard and bottom of the steel

Rock Wool Mfg. Co. - Delta-8 B. Fill, Void or Cavity Material\* - Min 1/8 in. wet thickness of fill material sprayed or troweled on each side of the wall to completely cover mineral wool forming material and to overlap a min of 1/2 in. onto wallboard and steel deck on both sides of wall.

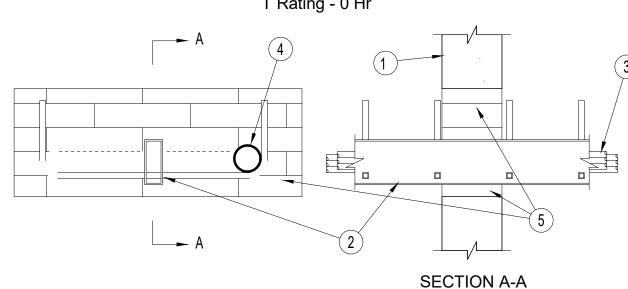
HILTI, Inc. - CP672 Firestop Spray \*Bearing the UL Classification Marking

floor units on both sides of the wall.

SPINE CABLE TRAY THROUGH 2-HR CONCRETE

WALL OR CONCRETE BLOCK WALL System No. W-J-4016

F Rating - 2 Hr T Rating - 0 Hr



1. Wall Assembly - Min 5 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max area of opening is 216 in. with a max dimension

See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers. 2. Cable Tray+ - Max 18 in. wide by 6 in. deep "spine" cable tray. The 1-1/2 in. wide by 2-3/4 in. deep tubular spine formed of 0.121 in. thick aluminum. The 6 in. deep "U" shaped rungs space 6 in. OC formed from 1/2 in. by 1/2 in. extruded aluminum tube. One cable tray to be installed in the opening. The max annular space between the periphery of the opening shall be min 1 in. to 2-5/8 in. max. Cable tray to be rigidly supported on both sides of

3. Cables -Aggregate cross-sectional area of cables in cable tray to be max 22 percent of the cross-sectional area of the cable tray based on a max 6 in. cable loading depth within the cable tray. Any combination of the following types and sized of cables may be used: A. 6 pair - No. 24 AWG telephone cable with polyvinyl chloride (PVC) insulation and PVC jacket.

wall assembly.

B. 24 fiber optic cable with polyvinyl chloride (PVC) outer and subunit C. 3 pair No. 24 AWG CMP computer cable with polyvinyl chloride (PVC)

insulation and jacket D. Type RGU/59 coaxial cable with polyethylene (PE) insulation and polyvinyl (PVC) jacket

E. The 2/C No. 10 AWG cable with ground with polyvinyl (PVC) insulation F. 3/C No. 12 AWG MC cable with polyvinyl chloride (PVC) insulation in

4. Electrical Nonmetallic Tubing (ENT) - One nom 2 in. diam (or smaller)

a nominal 1/2 in. flexible metal conduit.

\*Bearing the UL Classification Marking

+Bearing the UL Listing Marking

corrugated wall ENT constructed of polyvinyl chloride. See Electrical Nonmetallic Tubing (FKHU) category in the Electrical Construction Materials Directory for names of manufacturers. 5. Firestop System - The firestop system shall consist of the following: A. Fill, Void or Cavity Material\* - Fire blocks - Fire blocks installed

with min. 5 in. dimension passing through the opening. Blocks to completely fill the entire opening. HILTI, Inc. - FS-Fire Block B. Fill, Void or Cavity Material\* - Sealant - Fill material to be forced

into inserstices of cables, between cables and cable tray and in obvious openings between blocks and between blocks and the periphery of the opening to the max extent possible on both surfaces of wall. HILTI, Inc. - FS-ONE Sealant

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ARCHITECTURE + DESIGN

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MEP ENGINEER: GUTH DECONZO CONSULTING ENGINEERS, PC 520 8TH AVENUE, SUITE 2201 NEW YORK, NEW YORK 10001

**AIRPORT** 

**ATIONAL ENTON INTER** KEY STA SIE AT BRADI SHOPPE OTA **ARAS** 

**B-R1** DESCRIPTION

ISSUED FOR DESIGN DELIVERABLE: PERMIT ISSUE DATE: 06/14/2024

PROJECT 24017B NUMBER: DRAWN BY: CHECKED BY: DC

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**TYPICAL FIRESTOPPING** DETAILS

# PLASTIC PIPE THROUGH 1-HR OR 2-HR GYPSUM WALL ASSEMBLY System No. W-L-2078 F Ratings - 1 & 2 Hr (See Item 1) T Ratings - 1 & 2 Hr (see Item 1) SECTION A-A

1. Wall Assembly - The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the construction features noted below. The hourly F Rating and T Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed:

A. Studs- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in.

B. Wallboard, Gypsum\* - Nom 5/8 in. thick gypsum wallboard, as specified in the individual Wall and Partition Design. Max diam of opening is 7 in.

2. Through-Penetrants - One nonmetallic pipe, conduit or tubing to be installed within the firestop system. The annular space between pipe and periphery of opening shall be min 0 in. (point contact) to max 1/2 in. Pipe or conduit to be rigidly supported on both sides of the wall assembly. The following types and sizes of nonmetallic pipes may be

A. Polyvinyl Chloride (PVC) Pipe - Nom 6 in. diam (or smaller) Schedule 40 solid-core or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system. B. Chlorinated Polyvinyl Chloride (CPVC) Pipe – Nom 6 in. diam (or smaller) SDR17 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. C. Acrylonitrile Butadiene Styrene (ABS) Pipe – Nom 6 in. diam (or

smaller) Schedule 40 solid-core or cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping D. Flame Retardant Polypropylene (FRPP) Pipe – Nom 6 in. diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply)

or vented (drain, waste or vent) piping system. 3. Firestop Device\* - Firestop Collar - Firestop collar shall be installed in accordance with the accompanying installation instructions. Collar to be installed and latched around the pipe and secured to both sides of the wall using the anchor hooks provided with the collar. (Minimum 2 anchor hooks for 1-1/2 and 2 in. diam pipes, 3 anchor hooks for 3 and 4 in. diam pipes, and 6 anchor hooks for 6 in. diam pipes). The anchor hooks are to be secured to the surface of wall with 3/16 2-1/2 in. long toggle bolts

along with washers. HILTI, Inc. CP 643 50/1.5", CP 643 63/2", CP 643 90/3", CP 643 110/4" or CP 642 160/6" Firestop Collar \*Bearing the UL Classification Marking

# CABLE BUNDLE THROUGH 1-HR OR 2-HR GYPSUM WALL ASSEMBLY

System No. W-L-3111 F Ratings - 1 and 2 Hr T Rating - 0 Hr SECTION A-A

1. Wall Assembly - The fire - rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified if the individual U300 or U400 Series Wall and Partition Designs in the Fire Resistance Directory and shall include the following construction features: A. Studs - Wall framing shall consist of either wood studs or channel shaped steel studs. Wood studs to consist of 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide, fabricated from min 25 MSG galvanized steel, spaced max 24 in. OC.

B. Wallboard, Gypsum\* - 5/8 in. 4 ft wide with square or tapered edges. The gypsum wallboard type, number of layers and sheet orientation shall be as specified in the individual U300 or U400 Series Designs in the UL Fire Resistance Directory. Max diam of opening is 4 in.

2. Metallic Sleeve - The nominal 4 in. diam steel electrical metallic tubing

(EMT) or Schedule 5 steel pipe friction fit into wall assembly and installed flush with wall surfaces. 3. Cables - Aggregate cross - sectional area of cables to be max 25 percent of the cross - sectional area of the opening. The annular space between the cable bundle and the periphery of the opening to be min 1/8 in. to max 3/4 in. Cables to be rigidly supported on both sides of the wall assembly. Any combination of the following types and sizes

of cables may be used: A. 6 pair - No. 24 AWG telephone cable with polyvinyl chloride (PVC) insulation and PVC jacket.

B. 24 fiber optic cable with polyvinyl chloride (PVC) outer and subunit C. Type RGU/59 coaxial cable with polyethylene (PE) insulation and

polyvinyl (PVC) jacket. D. The 2/C No. 10 AWG cable with ground with polyvinyl (PVC) insulation and jacket.

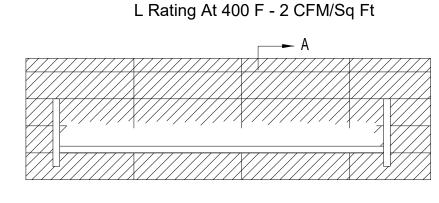
E. 3/C No. 12 AWG cable with polyvinyl chloride (PVC) insulation in a nominal 1/2 in. flexible metal conduit. 4. Fill, Void or Cavity Material\* -P+ıMin 5/8 in. thickness of fill material applied within annulus flush with both surfaces of wall. Fill material to be forced into interstices of cable bundle to the max exten

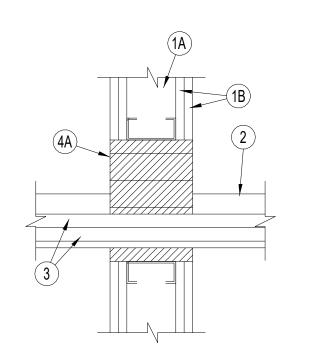
possible on both surfaces of wall. Additional fill material to be installed such that a min 1/4 in. crown is formed around the cable bundle and lapped over the steel sleeve. HILTI, Inc. - CP618 Firestop Putty Stick

\*Bearing the UL Classification Marking

## CABLE TRAY THROUGH 1-HR OR 2-HR GYPSUM WALL ASSEMBLY

System No. W-L-4011 F Rating - 1 and 2 Hr (See Item 1) T Rating - 0 Hr L Rating At Ambient - 5 CFM/Sq Ft





#### **SECTION A-A**

1. Wall Assembly - The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC. Additional framing member shall be installed in stud cavity containing through-penetrating item to form a rectangular box around

B. Wallboard, Gypsum\* - 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max size of opening 9 in. by 30 in.

The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed. Min. finished wall thickness is 5 in. 2. Cable Tray\* - Max 24 in. wide by max 4 in. deep open-ladder cable tray

with channel-shaped side rails formed of 0.10 in. thick aluminum or 0.060 in. thick steel and with 1-1/2 in. wide by 1 in. channel shape rungs spaced 9 in. OC. The annular space between the cable tray and the periphery of the opening shall be min 1 in. to max 4 in. Cable tray to be rigidly supported on both sides of floor or wall assembly. 3. Cables - Aggregate cross-sectional area of cables in cable tray to be max 40 percent of the cross-sectional area of the cable tray. Any combination of the following types and sizes of copper conductor cables may be used: A. 1/C, 500 kcmil with thermoplastic insulation and PVC jacket. B. 300 pair - No. 24 AWG cable with PVC insulation and jacket C. Twenty-four fiberoptic cable with PVC subunit and jacket. D. Max three 1/C, No. 12 AWG wire, insulated with polyvinyl chloride, in

a nom 3/4 in. Flexible Metal Conduit+. 4. Firestop System - The firestop system shall consist of the following: For walls 5 in. thick or less. Fire A. Fill, Void or Cavity Material\* blocks centered within depth of opening with the long dimension placed horizontally. For walls greater than 5 in. thick, fire blocks installed with long dimension passed through the opening. In both cases, blocks to completely fill the entire volume of the opening in the wall assembly.

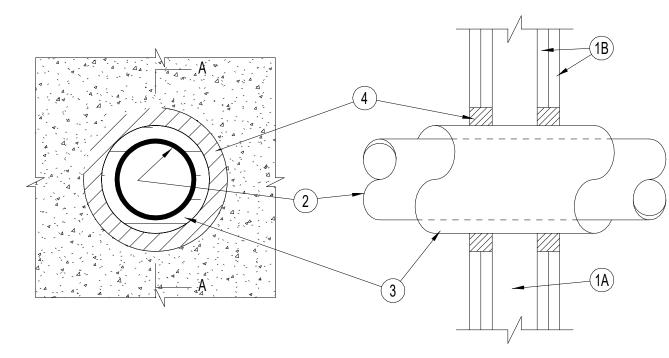
HILTI , Inc - FS-Fire Block B. Fill, Void or Cavity Material\* -Fill material to be forced into interstices of cables and between cables and cable trays to max extent possible on both surfaces of the penetration. HILTI, Inc - FS-ONE Sealant

+Bearing the UL Listing Mark

\*Bearing the UL Classification Marking

# INSULATED METAL PIPE THROUGH 1-HR OR 2-HR GYPSUM WALL ASSEMBLY System No. W-L-5028

F Ratings - 1 and 2 Hr (See Item 1) T Ratings - 1/2 and 3/4 Hr



SECTION A-A

1. Wall Assembly - The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features: 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. A. Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced

B. Wallboard, Gypsum\* - 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 7-1/2 in. The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. Through Penetrants - One metallic pipe, conduit or tubing to be centered within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used: A. Steel Pipe - Nom 4 in. diam (or smaller) Schedule 40 (or heavier) B. Conduit - Nom 4 in. diam (or smaller) electrical metallic tubing or

steel conduit. C. Copper Tubing -Nom 2 in. diam (or smaller) Type L (or heavier) copper tubing. Nom 2 in. diam (or smaller) Regular (or heavier) copper D. Copper Pipe -

3. Tube Insulation - Plastics+ -Nom 3/4 in. thick acrylonitrile butadiene/ polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. An annular space of min 0 in. (point contact) to max 1-1/2 in.

is required within the firestop system. See Plastics+ (QMFZ2) category in the Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.

The hour T Rating of the firestop system is dependent on the hourly fire rating of the wall assembly in which it is installed, the size and type of through penetrant and the pipe covering thickness, as shown in the table

Wall Assembly Through Penetrant Max Diam T Rating Rating A, B, C or D 2 3/4 1/2 A or B 4 A, B, C or D 2 3/4

+Indicates penetrant type as itemized in Item 2. 4. Fill, Void or Cavity Material\* - Sealant -Min 5/8 in. or 1-1/4 in. thickness of fill material applied within the annulus, flush with both surfaces of wall for 1 or 2 hr walls, respectively. At the point contact location between pipe covering and gypsum wallboard, a min 1/2 in. diam bead of fill material shall be applied at the pipe covering/gypsum wallboard interface on both surfaces of wall. HILTI, I nc. - FS611A or FS-ONE Sealant \*Bearing the UL Classification Marking

# **AIRPORT ATIONAL BRADENTON INTER** KEY STA SIE AT

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**B-R1** 

DESIGN

ARCHITECTURE + DESIGN

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**ARASOTA** 

DESCRIPTION ISSUED FOR DELIVERABLE: PERMIT 06/14/2024

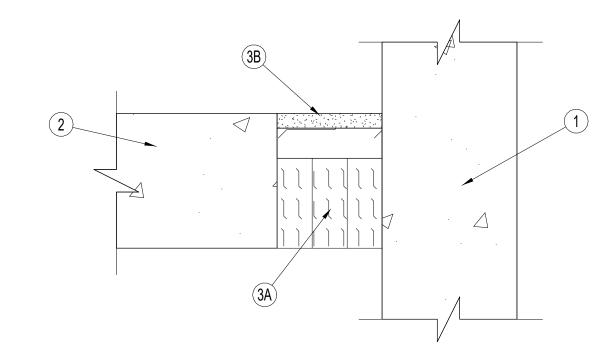
ISSUE DATE: PROJECT 24017B NUMBER: DRAWN BY:

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**TYPICAL** FIRESTOPPING **DETAILS** 

## FIRE-RATED JOINT THROUGH CONCRETE FLOOR ASSEMBLY System No. FW-D-1012

Assembly Rating - 2 Hr Nominal Joint Width - 3-3/4" Class II Movement Capabilities - 7% Compression or Extension



any UL Classified Concrete Blocks\*. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers. 2. Floor Assembly - Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete. 3. Joint System - Max separation between edge of floor and face of wall (at time of installation of joint system) is 3-3/4 in. The joint system is designed to accommodate a max 7 percent in compression or extension from its installed width. The joint system shall consist of the A. Packing Material - Min 4 pcf mineral wool batt insulation installed in joint opening as a permanent form. Pieces of batt cut to min width of 3 in. and installed edge-first into joint opening, parallel with joint direction, such that batt sections are compressed min 17 percent in thickness and that the compressed batt sections are recessed from top surface of the floor. A 1 in. thickness of packing material is placed horizontally over the installed lower layers and recessed from the top surface as required to accommodate the required thickness of fill material. Adjoining lengths of batt to be tightly-butted with butted seams spaced min 24 in. apart along the length of the joint. B. Fill, Void or Cavity Material\* - Sealant - Min 1/2 in. thickness of fill

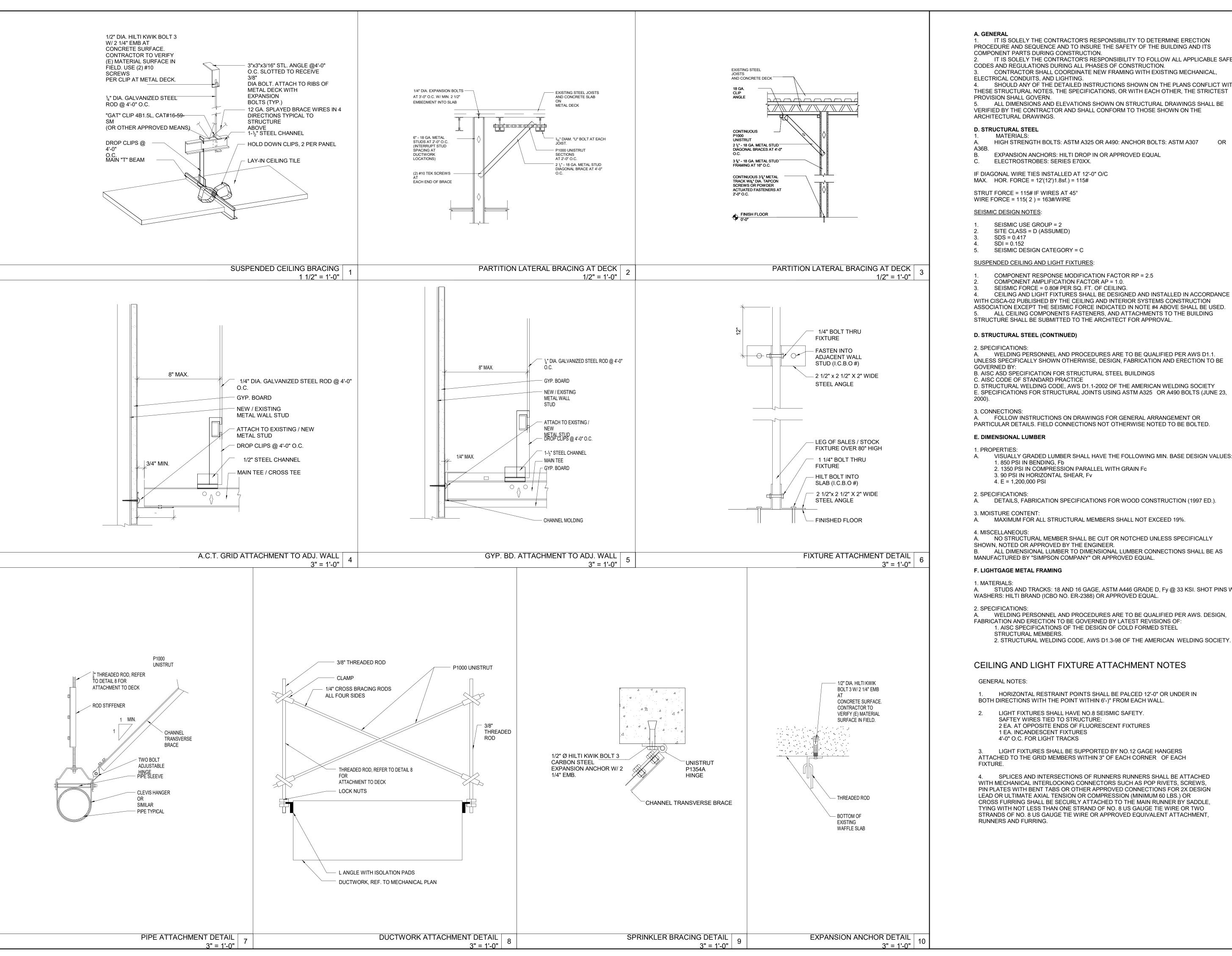
material applied within the joint, flush with top surface of floor.

HILTI, Inc. - CP606 Flexible Firestop Sealant

\*Bearing the UL Classification Marking

1. Wall Assembly - Min 4-1/2 in. thick reinforced lightweight or normal

weight (100-150 pcf) structural concrete. Wall may also be constructed of



IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE AND TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING CONSTRUCTION.

2. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION. CONTRACTOR SHALL COORDINATE NEW FRAMING WITH EXISTING MECHANICAL, ELECTRICAL CONDUITS, AND LIGHTING.

4. SHOULD ANY OF THE DETAILED INSTRUCTIONS SHOWN ON THE PLANS CONFLICT WITH THESE STRUCTURAL NOTES, THE SPECIFICATIONS, OR WITH EACH OTHER, THE STRICTEST

5. ALL DIMENSIONS AND ELEVATIONS SHOWN ON STRUCTURAL DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR AND SHALL CONFORM TO THOSE SHOWN ON THE ARCHITECTURAL DRAWINGS.

#### D. STRUCTURAL STEEL

MATERIALS: HIGH STRENGTH BOLTS: ASTM A325 OR A490: ANCHOR BOLTS: ASTM A307

EXPANSION ANCHORS: HILTI DROP IN OR APPROVED EQUAL ELECTROSTROBES: SERIES E70XX.

IF DIAGONAL WIRE TIES INSTALLED AT 12'-0" O/C

MAX. HOR. FORCE = 12'(12')1.8sf.) = 115#

STRUT FORCE = 115# IF WIRES AT 45°

## **SEISMIC DESIGN NOTES**:

SEISMIC USE GROUP = 2 SITE CLASS = D (ASSUMED)

SDS = 0.417SDI = 0.152

SEISMIC DESIGN CATEGORY = C

SUSPENDED CEILING AND LIGHT FIXTURES:

COMPONENT RESPONSE MODIFICATION FACTOR RP = 2.5 COMPONENT AMPLIFICATION FACTOR AP = 1.0. SEISMIC FORCE = 0.80# PER SQ. FT. OF CEILING.

CEILING AND LIGHT FIXTURES SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH CISCA-02 PUBLISHED BY THE CEILING AND INTERIOR SYSTEMS CONSTRUCTION ASSOCIATION EXCEPT THE SEISMIC FORCE INDICATED IN NOTE #4 ABOVE SHALL BE USED. ALL CEILING COMPONENTS FASTENERS, AND ATTACHMENTS TO THE BUILDING STRUCTURE SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL.

### D. STRUCTURAL STEEL (CONTINUED)

A. WELDING PERSONNEL AND PROCEDURES ARE TO BE QUALIFIED PER AWS D1.1. UNLESS SPECIFICALLY SHOWN OTHERWISE, DESIGN, FABRICATION AND ERECTION TO BE

B. AISC ASD SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS

C. AISC CODE OF STANDARD PRACTICE D. STRUCTURAL WELDING CODE, AWS D1.1-2002 OF THE AMERICAN WELDING SOCIETY E. SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS (JUNE 23,

A. FOLLOW INSTRUCTIONS ON DRAWINGS FOR GENERAL ARRANGEMENT OR PARTICULAR DETAILS. FIELD CONNECTIONS NOT OTHERWISE NOTED TO BE BOLTED.

#### E. DIMENSIONAL LUMBER

A. VISUALLY GRADED LUMBER SHALL HAVE THE FOLLOWING MIN. BASE DESIGN VALUES: 1. 850 PSI IN BENDING, Fb

2. 1350 PSI IN COMPRESSION PARALLEL WITH GRAIN Fo 3. 90 PSI IN HORIZONTAL SHEAR, FV

4. E = 1,200,000 PSI

2. SPECIFICATIONS: A. DETAILS, FABRICATION SPECIFICATIONS FOR WOOD CONSTRUCTION (1997 ED.).

3. MOISTURE CONTENT:

A. MAXIMUM FOR ALL STRUCTURAL MEMBERS SHALL NOT EXCEED 19%.

A. NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED UNLESS SPECIFICALLY SHOWN, NOTED OR APPROVED BY THE ENGINEER.

B. ALL DIMENSIONAL LUMBER TO DIMENSIONAL LUMBER CONNECTIONS SHALL BE AS MANUFACTURED BY "SIMPSON COMPANY" OR APPROVED EQUAL.

#### F. LIGHTGAGE METAL FRAMING

A. STUDS AND TRACKS: 18 AND 16 GAGE, ASTM A446 GRADE D, Fy @ 33 KSI. SHOT PINS W/ WASHERS: HILTI BRAND (ICBO NO. ER-2388) OR APPROVED EQUAL.

2. SPECIFICATIONS: A. WELDING PERSONNEL AND PROCEDURES ARE TO BE QUALIFIED PER AWS. DESIGN, FABRICATION AND ERECTION TO BE GOVERNED BY LATEST REVISIONS OF:

1. AISC SPECIFICATIONS OF THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS.

# CEILING AND LIGHT FIXTURE ATTACHMENT NOTES

# **GENERAL NOTES:**

HORIZONTAL RESTRAINT POINTS SHALL BE PALCED 12'-0" OR UNDER IN BOTH DIRECTIONS WITH THE POINT WITHIN 6'-)" FROM EACH WALL.

LIGHT FIXTURES SHALL HAVE NO.8 SEISMIC SAFETY. SAFTEY WIRES TIED TO STRUCTURE: 2 EA. AT OPPOSITE ENDS OF FLUORESCENT FIXTURES 1 EA. INCANDESCENT FIXTURES 4'-0" O.C. FOR LIGHT TRACKS

LIGHT FIXTURES SHALL BE SUPPORTED BY NO.12 GAGE HANGERS ATTACHED TO THE GRID MEMBERS WITHIN 3" OF EACH CORNER OF EACH

SPLICES AND INTERSECTIONS OF RUNNERS RUNNERS SHALL BE ATTACHED WITH MECHANICAL INTERLOCKING CONNECTORS SUCH AS POP RIVETS, SCREWS, PIN PLATES WITH BENT TABS OR OTHER APPROVED CONNECTIONS FOR 2X DESIGN LEAD OR ULTIMATE AXIAL TENSION OR COMPRESSION (MINIMUM 60 LBS.) OR CROSS FURRING SHALL BE SECURLY ATTACHED TO THE MAIN RUNNER BY SADDLE, TYING WITH NOT LESS THAN ONE STRAND OF NO. 8 US GAUGE TIE WIRE OR TWO STRANDS OF NO. 8 US GAUGE TIE WIRE OR APPROVED EQUIVALENT ATTACHMENT, RUNNERS AND FURRING.

# **ARCHITECTURE + DESIGN**

180 SYLVAN AVENUE, SUITE 3 ENGLEWOOD CLIFFS, NJ 07632 TEL 201 | 894 | 1000 ENV-team.com

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# **SSP AMERICA**

20408 BASHAN DRIVE SUITE 300 ASHBURN, VA 20147

PROJECT TEAM:

MEP ENGINEER: **GUTH DECONZO CONSULTING** ENGINEERS, PC 520 8TH AVENUE, SUITE 2201 NEW YORK, NEW YORK 10001

# **AIRPORT ATIONAL BRADENTON INTER** SIE SHOPPE **ARASOTA**

DESCRIPTION

ISSUED FOR PERMIT 06/14/2024

DESIGN **DELIVERABLE**: ISSUE DATE:

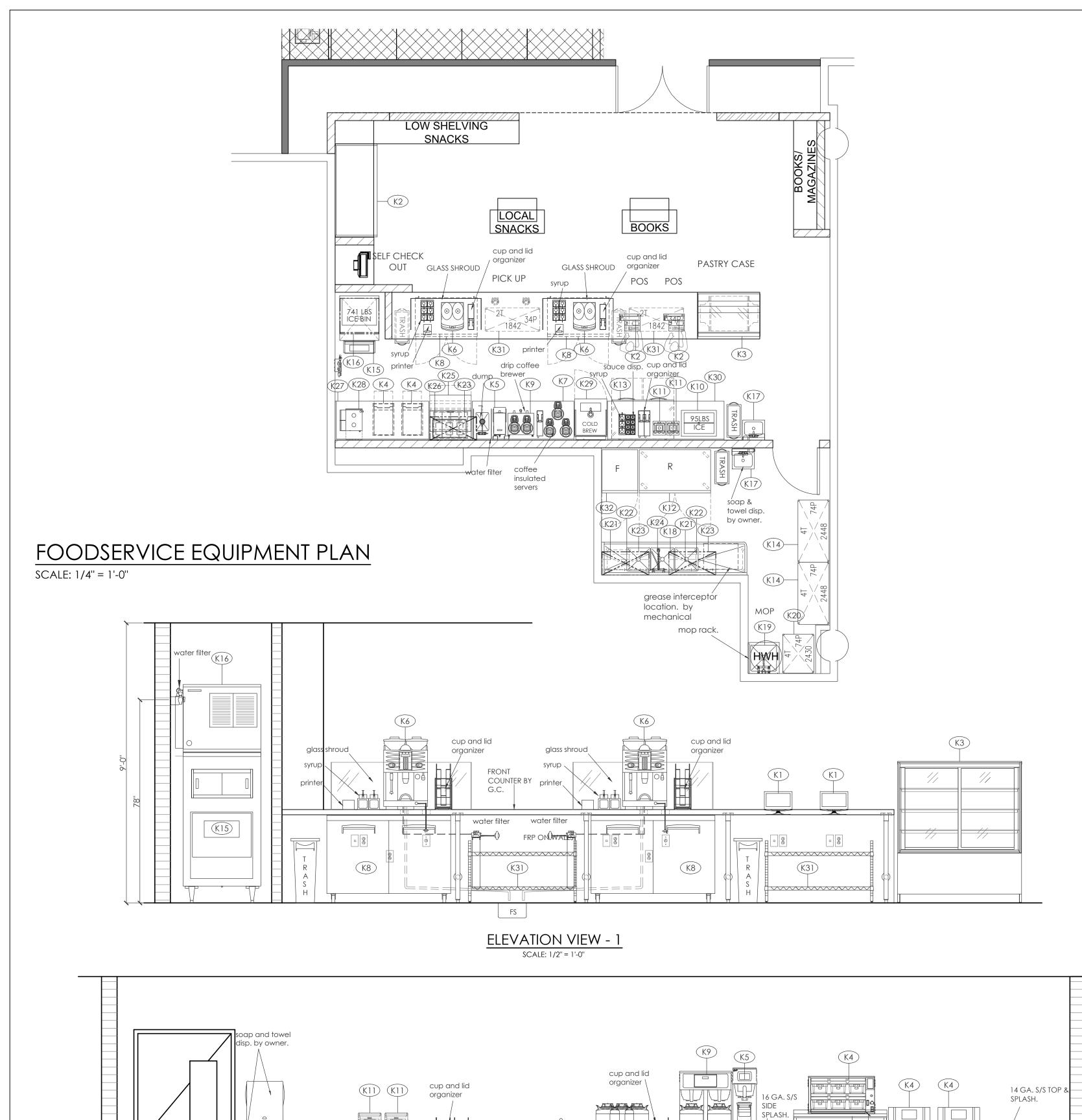
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**B-R1** 

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TYP. SEISMIC **DETAILS & NOTES** 

**A-461** 



18 GA. S/S COUNTER BODY CONSTRUCTION.

FS

**ELEVATION VIEW - 4** 

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

18 GA. S/S COUNTER BODY CONSTRUCTION.

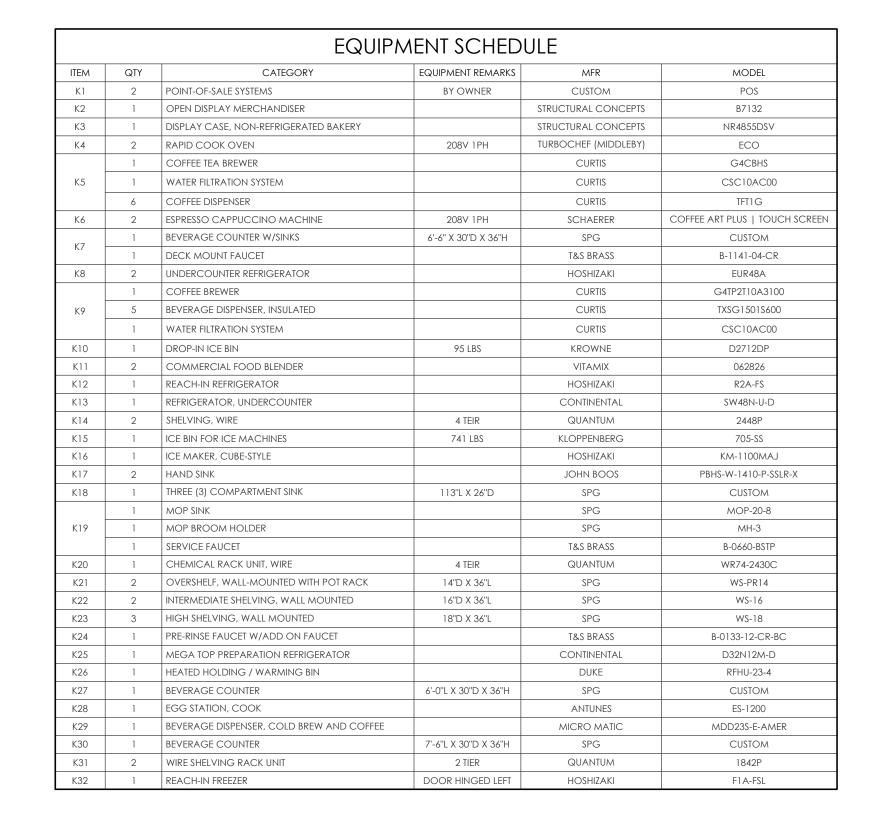
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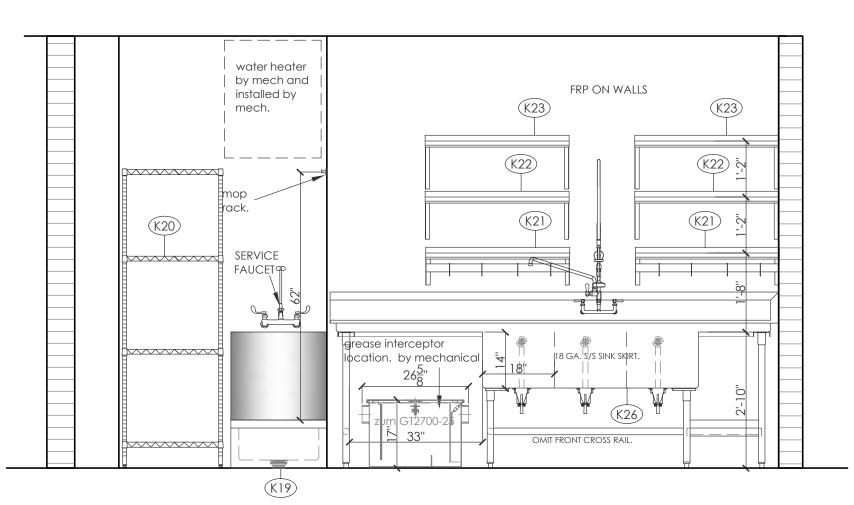
**ELEVATION VIEW - 3** 

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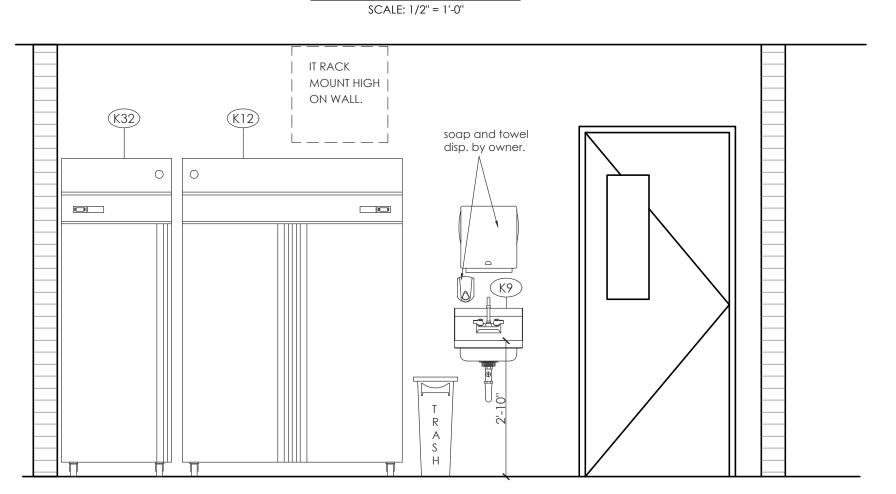
18 GA. S/S COUNTER BODY

CONSTRUCTION.





ELEVATION VIEW - 2



ELEVATION VIEW - 5
SCALE: 1/2" = 1'-0"

ARCHITECTURE + DESIGN

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CLIENT:

SSP AMERICA 20408 BASHAN DRIVE SUITE 300 ASHBURN, VA 20147

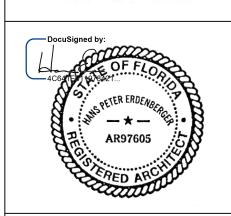
PROJECT TEAM:

IKITCHEN CONCEPTS

Foodservice Design

Edward Gonzales
Edward@ikitchenconcepts.com
mobile: 817.300.8762
8300 Crystal Lane
North Richland Hills, TX. 76182

office: 817.500.9981 fax: 817.945.9860 designs by gonzo



B-R1 SHOPPES AT SIESTA KEYS

6000 AIRPORT CIRCLE SARASOTA, FL 34243

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ISSUE DATE: 6/04/2024

JE DATE: 6/04/2024

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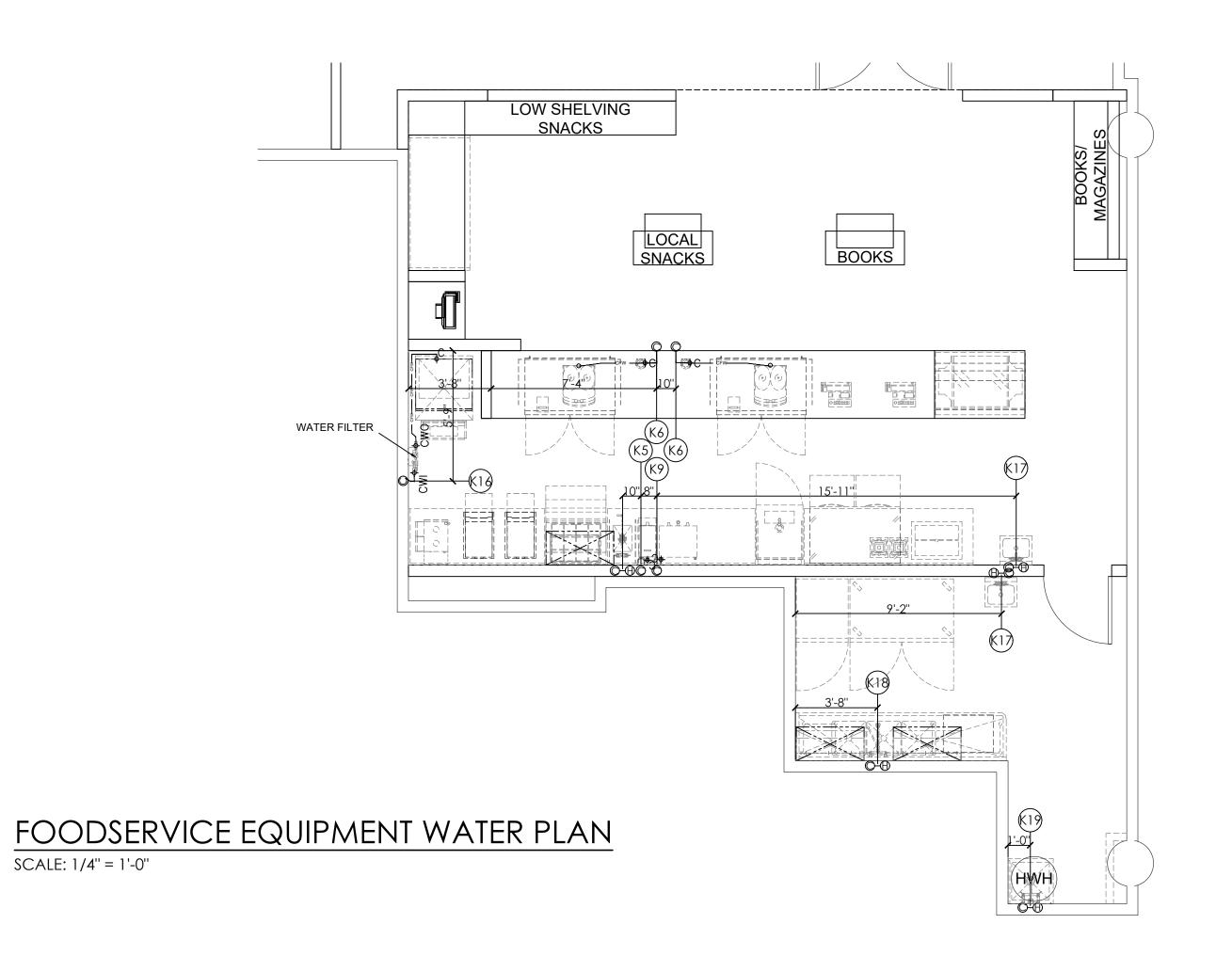
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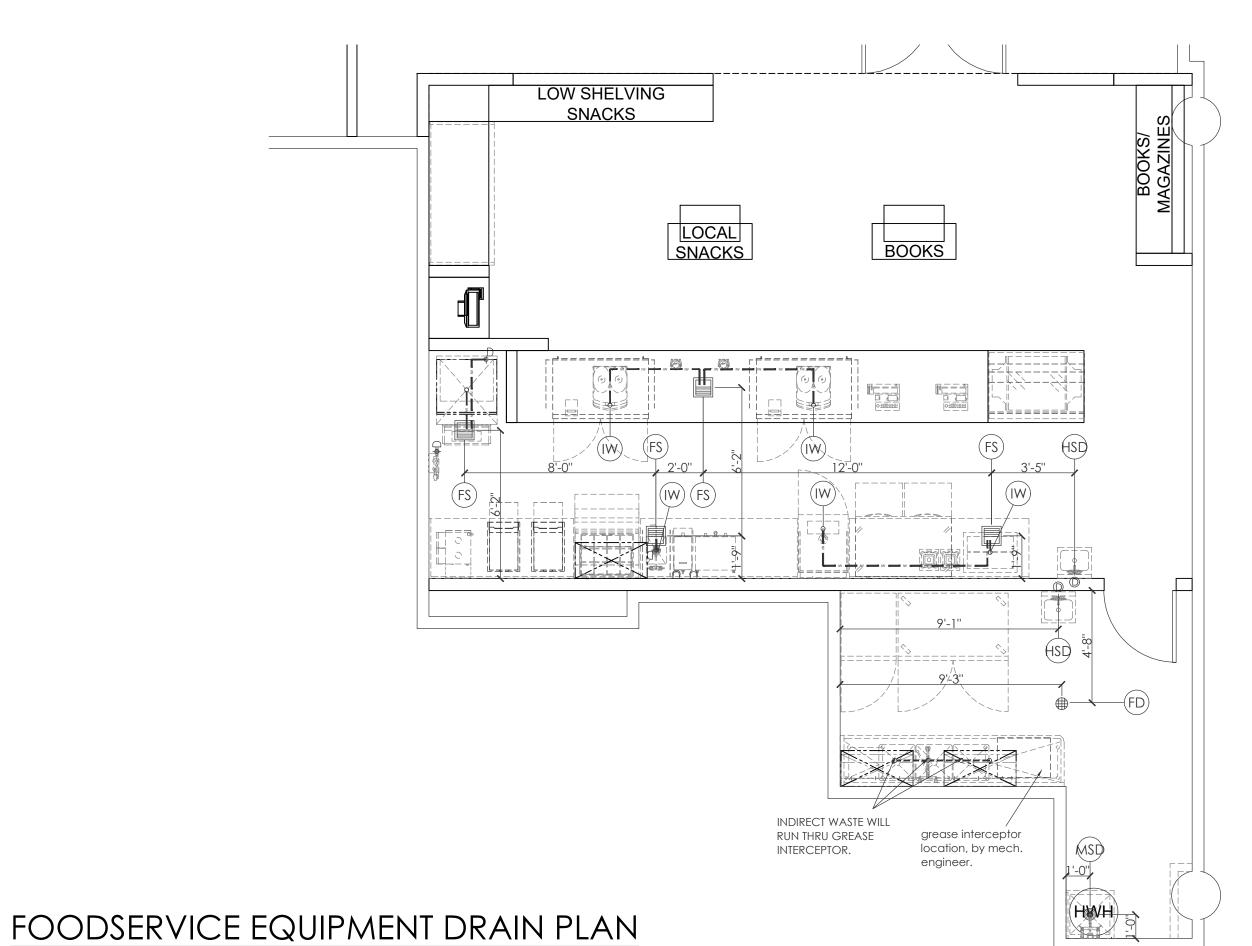
FOODSERVICE EQUIPMENT PLAN

EET MBER:

**K**1

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





		KITO	CHEN	WATE	ER SCI	HEDU	LE
ITEM	QTY	OTY CATEGORY		НОТ	LOC	AFF	PLUMBING REMARKS
K5	1	COFFEE / TEA BREWER	1/2"		WALL	24"	B.T.C. ON COFFEE / TEA THRU WATER FILTER. PROVIDE BACK FLOW PREVENTER WHEN REQUIRED.
K6	2	WATER FILTRATION SYSTEM, ESPRESSO CAPPUCCINO	1/2"		WALL	24"	B.T.C. ON FILTER, THEN TO ESPRESSO MACHINE. SHUT OFF VALVE REQ. PROVIDE BACK FLOW PREVENTER WHEN REQUIRED.
K7	1	FAUCET, HAND SINK DROP-IN W/SOAP AND TOWEL DISP.	1/2"	1/2"	WALL	18"	B.T.C. ON SINK FAUCET.
N/	1	FAUCET, DUMP SINK, DROP-IN	1/2"	1/2"	WALL	18"	B.T.C. ON SINK FAUCET.
К9	1	COFFEE BREWER	1/2"		WALL	24"	B.T.C. ON COFFEE / TEA THRU WATER FILTER. PROVIDE BACK FLOW PREVENTER WHEN REQUIRED.
K17	2	hand sink	1/2"	1/2"	WALL	18"	B.T.C. ON HAND SINK FAUCET.
K18	1	FAUCET, THREE (3) COMPARTMENT SINK	1/2"	1/2"	WALL	14"	B.T.C. ON SINK FAUCET.
K19	1	SERVICE FAUCET, MOP SINK	1/2"	1/2"	WALL	36"	B.T.C., ON SERVICE FAUCET. PROVIDE BACK FLOW PREVENTER WHEN REQUIRED.
K16	1	WATER FILTER, ICE MAKER, CUBE-STYLE	1/2"		WALL	78"	B.T.C. ON FILTER, THEN TO ICE MAKER.

# PLUMBING SYMBOLS LINES, ETC. TO FULLY CONNECT ALL EQUIPMENT AND RUN CONDENSATE LINES FROM UNITS TO DRAINS AND THESE LINES TO BE NO SMALLER THAN THE STUB-OUT OF THE FIXTURE.

	SYMBOLS		ABBREVIATIONS					
$\oplus$ $\bigcirc$	HOT/COLD WATER	EL	ELEVATION ABOVE FINISHED FLOOR					
0	DRAIN IN WALL	SU	STUB UP ABOVE FINISHED FLOOR					
0	CONNECTION	PSI	POUNDS PER SQUARE INCH					
<b>#</b>	FLOOR DRAIN AS NOTED	AFF	ABOVE FINISHED FLOOR					
<b>*</b>	FUNNEL DRAIN AS NOTED	BFF	BELOW FINISHED FLOOR					
	FLOOR SINK FULL GRATE	GPH	GALLONS PER HOUR					
	FLOOR SINK HALF GRATE	GPM	GALLONS PER MINUTE					
•	HUB DRAIN	SS	STEAM SUPPLY					
HW	HOT WATER	SR	STEAM RETURN					
CW	COLD WATER							
DFA	DOWN FROM ABOVE		BRANCH TO CONNECTION POINT AND CONNECT					
EQUIPMENT								
WATER SUPPLY REQUIREMENTS								

ALL WATER SUPPLIED KITCHEN EQUIPMENT SYSTEMS ARE SUBJECT TO CONTAMINATION AND FAILURE DUE TO MINERAL CONTENT FOUND IN MOST WATER SUPPLIES. TO MINIMIZE SERVICE PROBLEMS AND TO MEET WARRANTY REQUIREMENTS A WATER TO EXCEED LIMITS STATED BELOW AND IN OPERATORS MANUALS. RECOMMENDED MINIMUM WATER QUALITY STANDARDS ARE TOTAL DISSOLVED SOLIDS (TDS) CONTENT SHOULD NOT EXCEED 30 PARTS PER MILLION: AND WATER PH SHOULD BE 7.0 OR

		CONDENSATE LINES FROM UNITS TO DRAINS AND THESE LINES TO BE NO SMALLER THAN THE STUB-OUT OF THE FIXTURE. PLUMBER TO PROVIDE GATE VALVES, CUT-OFFS, TRAPS, HYDROSTATIC SHOCK ELIMINATORS, PRESSURE REGULATORS AND MATERIALS NECESSARY TO CONNECT ALL LINES, UNLESS OTHERWISE SPECIFIED IN THE ITEM SPECIFICATIONS. FAUCETS, DRAIN OUTLET FIITINGS IN FIXTURES AND SPECIALTY ITEMS ARE TO BE FURNISHED BY THE KITCHEN EQUIPMENT SUPPLIER AS OUTLINED IN THE ITEM SPECIFICATIONS. ALL WORK TO BE PERFORMED IN FULL ACCORDANCE WITH THE APPLICABLE CODES RELATING TO INSTALLATION AND HOOK-UP OF EQUIPMENT. OMISSIONS OR ERRORS ON THE SCHEDULE DO NOT RELIEVE THE PLUMBING CONTRACTOR FROM COMPLETE FINAL PLUMBING RESPONSIBILITY.
	D	ALL OUTLETS AND CONNECTIONS SHOWN RELATE TO KITCHEN EQUIPMENT ONLY. REFER TO ARCHITECTURAL/ENGINEERING PLANS FOR ADDITIONAL REQUIREMENTS.
	Е	ALL DIMENSIONS GIVEN ARE FROM COLUMN CENTERLINES AND/OR FINISHED WALLS AND ARE IN INCHES TO 4'-0". ELEVATIONS GIVEN ARE FROM FINISHED FLOORS. ALL ROUGH-INS SHOWN ARE TO BE RUN INSIDE WALLS (EXCEPT STUB-UPS) LOCATIONS INDICATE POINT OF EXIT FROM WALLS, CEILINGS OR FLOORS.
	F	ALL FLOOR DRAINS TO SET 1/2" BELOW FINISHED FLOOR UNLESS OTHERWISE NOTED. DO NOT SLOPE FLOORS SO CLOSE TO DRAINS AS TO CREATE "PITS" OR "DIPS" IN FLOOR. MINIMUM RADIUS OF SLOPE TO BE 24" FROM CENTERLINE OF DRAIN.
	G	PLUMBER TO RUN HARD COPPER DRAINLINE HIGH AS POSSIBLE IN WALK-IN VAULT FROM BLOWER COIL TO WALL THEN SLOPING DOWN TO A POINT 18" ABOVE FLOOR THEN THRU. WALL FORMING A "P" TRAP FLAT AGAINST WALL ABOVE DRAIN THEN EXTENDING TO DRAIN. SECURE LINES IN A NEAT MANNER AND

FINISH WITH CHROMATONE PAINT - SEAL ALL PENETRATIONS.

PLUMBING NOTES

NOTES

A PLUMBER TO PROVIDE BACKFLOW PREVENTERS IN WATER SUPPLY LINES AS REQUIRED BY LOCAL CODES

B PLUMBER TO SPECIFY AND LOCATE EQUIPMENT AND UTILITIES FOR THESE LOCATIONS.

C PLUMBER TO CONNECT ALL WATER LINES, GAS LINES, WASTE

	DRAIN SCHEDULE									
NO.			SIZE	HEIC	GHT A.F.F.					
	UTILITY	ROUGH-IN	CONNECTION	FLOOR	WALL	DFA	CONNECTED TO:/REMARKS			
FTD	FLOOR TROUGH DRAIN	3"	3"	-7 1/4"						
FD	FLOOR DRAIN	3"	3"	-1/2			PLUMBER TO RUN INDIRECT WASTES FROM EQUIPMENT TO DRAIN IN FLOOR AS REQ'D. OR IS TO BE USED FOR GENERAL CLEAN-UP			
HD	HUB DRAIN	3"	3"	6"			PLUMBER TO RUN INDIRECT WASTE FROM FIXTURE			
FS	FLOOR SINK	3"		FLUSH			12" SQUARE -1/2 GRATE (PLUMBER TO RUN INDIRECT DRAIN LINES FROM FIXTURES)			
HSD	hand sink drain	1 1/2"	1 1/2"		24 1/2"		BTC ON HAND SINK WASTE			
MSD	MOP SINK DRAIN	3"	3"	-2			BTC ON MOP SINK WASTE (VERIFY WITH PLUMBER)			
FFD	FUNNEL FLOOR DRAIN	3"	3"	FLUSH			4" HIGH FUNNEL (PLUMBER TO RUN INDIRECT DRAIN LINES FROM FIXTURES)			
IW	INDIRECT WASTE	I.D. WASTE		EQUIP			INDIRECT WASTE FROM EQUIPMENT TO DRAIN LOCATIONS.			

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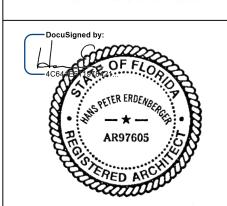
SUITE 300 ASHBURN, VA 20147

20408 BASHAN DRIVE



**Edward Gonzales** 8300 Crystal Lane North Richland Hills, TX. 76182

office: 817.500.9981 fax: 817.945.9860 designs by gonzo



KEYS SIESTA AT SHOPPES / **B-R1** 

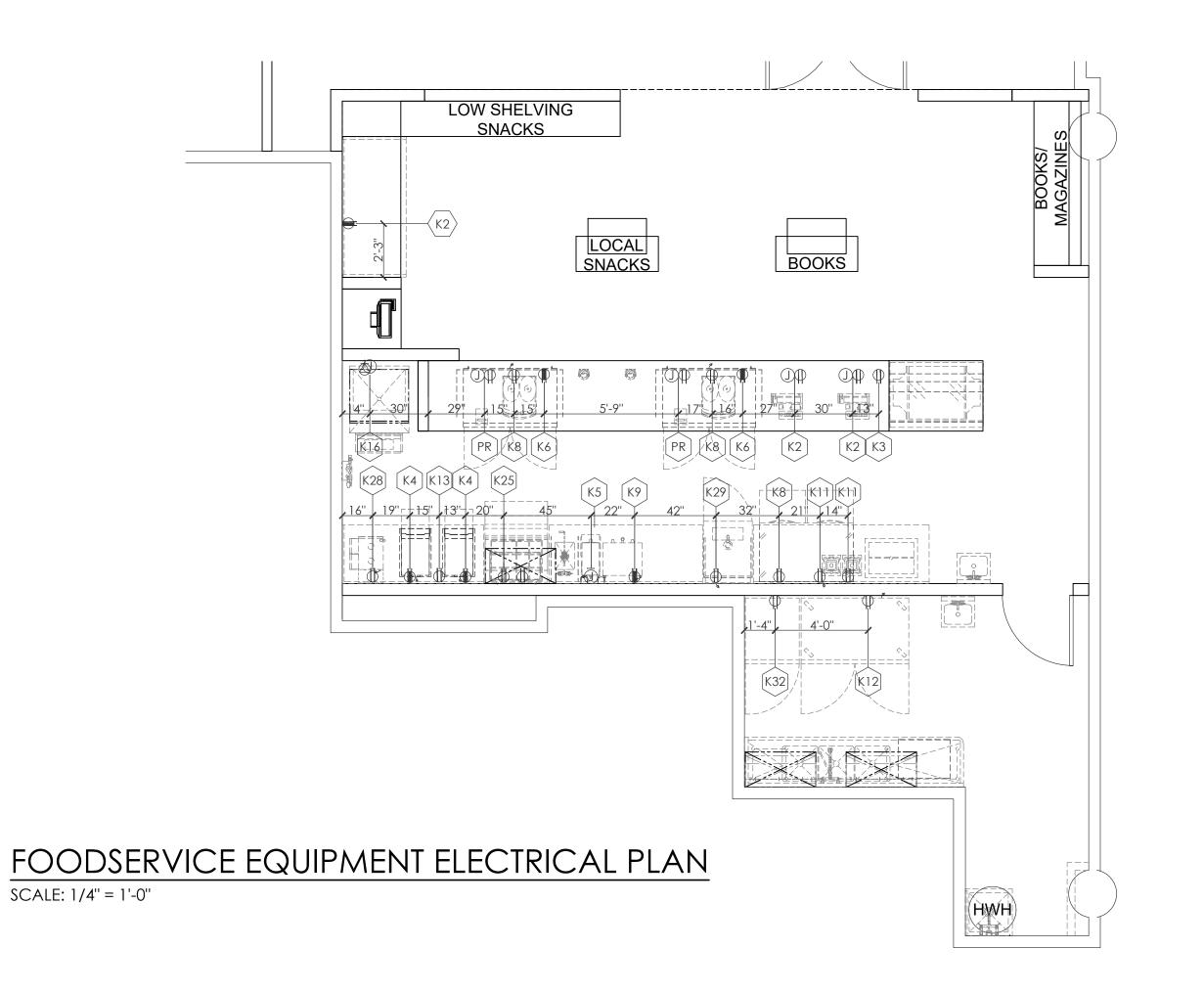
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24017B NUMBER: DRAWN BY: CHECKED BY:

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**FOODSERVICE EQUIPMENT PLUMBING PLAN** 

**K2** 



	ELECTRICAL SCHEDULE													
ITEM	QTY	CATEGORY	CONN	VOLT	HTZ	PH	AMP	KW	HP	LOC	AFF	TYPE	NEMA	ELECTRICAL REMARKS
DD	2	PRINTER	DR	120	60	1	10			WALL	24"	CORD & PLUG	5-15P	for owners pos system.
PR	2	DATA	JB							WALL	24"			EMPTY CONDUIT.
V 1	2	POINT-OF-SALE SYSTEMS	DR	120	60	1	10			WALL	24"	CORD & PLUG	5-15P	FOR OWNERS POS SYSTEM.
K1	2	DATA	JB							WALL	24"			EMPTY CONDUIT.
K2	1	OPEN DISPLAY MERCHANDISER	SPO	208	60	1	12	2.309		WALL	24"	CORD & PLUG	6-20P	2 WIRES PLUS GROUND.
К3	1	DISPLAY CASE, NON-REFRIGERATED BAKERY	DR	120	60	1	.70	.015		WALL	24"	CORD & PLUG	5-15P	2 WIRES PLUS GROUND.
K4	2	RAPID COOK OVEN	SPO	208/240	60	1	20	4		WALL	50"	CORD & PLUG	L6-20P	
K5	1	COFFEE TEA BREWER	JB	120/220	60	1	12.7	2.8		WALL	50"	CORD & PLUG		B.T.C.
К6	2	ESPRESSO CAPPUCCINO MACHINE	SPO	208	60	1	24			WALL	30"	CORD & PLUG	L6-30P	30 AMP DEDICATED SERVICE, 3 PRONG TWIST-LOCK
К8	2	UNDERCOUNTER REFRIGERATOR	DR	115	60	1	1.8		1/6	WALL	18"	CORD & PLUG	5-15P	
К9	1	COFFEE BREWER	SR	220	60	1	34.5	7.6		WALL	50"	DIRECT		3 WIRES PLUS GROUND.
K11	2	COMMERCIAL FOOD BLENDER	DR	120	60	1	13		3	WALL	50"	CORD & PLUG	5-15P	
K12	1	REACH-IN REFRIGERATOR	DR	120	60	1	7.8		1/2	WALL	24"	CORD & PLUG	5-15P	
K13	2	UNDERCOUNTER REFRIGERATOR	DR	115	60	1	2.46		1/5	WALL	24"	CORD & PLUG	5-15P	
K16	1	ICE MAKER, CUBE-STYLE	JB	115	60	1	14.9			WALL	84"	DIRECT		B.T.C 20A MAX CIRCUIT, EC TO VERIFY EXISTING VOLTAGE WITH NEW ICE MAKER.
K25	1	PREPARATION REFRIGERATOR	DR	115	60	1	2.46		1/5	WALL	24"	CORD & PLUG	5-15P	
K26	1	HEATED HOLDING / WARMING BIN	DR	120	60	1	12.5			WALL	72"	CORD & PLUG	5-15P	
K28	1	EGG STATION	SPO	208	60	1	11.4	2.38		WALL	50"	CORD & PLUG	6-20P	
K29	1	BEVERAGE DISPENSER, COLD BREW AND COFFEE	DR	115	60	1	1.5		1/10	WALL	24"	CORD & PLUG	5-15P	
K32	1	REACH-IN FREEZER	DR	115	60	1	8.46		3/4	WALL	24"	CORD & PLUG	5-15P	



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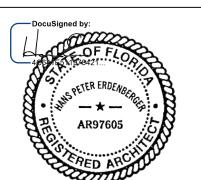


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KEYS SIESTA A SHOPPES A

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REV DATE DESCRIPTION

6/04/2024

24017B

DELIVERABLE: ISSUE DATE:

PROJECT NUMBER: DRAWN BY:

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**FOODSERVICE EQUIPMENT ELECTRICAL PLAN** 

**ELECTRICAL NOTES** 

ELECTRICAL

→ ......SINGLE RECEPTACLE (SR) 

.......FLOOR RECEPTACLE AS NOTED

SOLENOID OR CONTROL CIRCUIT ......SINGLE POWER OUTLET AS NOTED

→ .........CONVENIENCE OUTLET, TWO CIRCUIT, 120/208V/1PH, 3 WIRE OR AS NOTED

EL .....ELEVATION ABOVE FINISH FLOOR

BTC .....BRANCH TO CONNECTION POINT

SU ......STUB UP ABOVE FINISH FLOOR

AND CONNECT TO EQUIPMENT ....BRANCH TO FIXTURE, FURNISH AND INSTALL RECEPTACLE

SPECIAL OUTLET AS NOTED

① .....JUNCTION BOX (JB)

.....MOTOR OUTLET

• .....LIGHT INDICATION

© .....CONDUIT AS NOTED

.....DISCONNECT SWITCH

....PANELBOARD

A .....AMPERES

.....WATTS

AFF .....ABOVE FINISH FLOOR

DFA .....DOWN FROM ABOVE

HP .....HORSEPOWER KW .....KILOWATTS

Sw ......SWITCH AS NOTED Sp ......SWITCH AND PILOT LIGHT

V .....VOLTS

SYMBOLS AND ABBREVIATIONS

ALL ELECTRICAL OUTLETS SHOWN ON THIS PLAN ARE FOR FIXTURES SPECIFIED AS FURNISHED BY THE KITCHEN EQUIPMENT

SUPPLIER. FOR FURTHER BLDG ELECTRICAL REQUIREMENTS (TELEPHONES, CLOCKS, SIGNS, EXHAUST HOOD SWITCHING, ETC.) SEE OTHER PLANS ALL DIMENSIONS GIVEN ARE IN INCHES TO 4'-0" AND ARE FROM CENTERLINES AND/OR FINISHED WALLS. ELEVATIONS

GIVEN ARE FROM FINISHED FLOOR TO CENTERLINE OF OUTLET. ALL ROUGH-INS SHOWN ARE TO BE RUN INSIDE WALLS (EXCEPT STUB-UPS). LOCATION INDICATES POINT OF EXIT FROM WALLS, CEILINGS OR FLOORS. ALL CONVENIENCE OUTLETS ARE TO BE SET HORIZONTALLY. ALL 120 VOLT OUTLETS NOT DESIGNATED WITH SPECIFIC LOADS TO BE RATED AT

ELECTRICIAN TO CONNECT ALL ELECTRICAL EQUIPMENT AND FIXTURES AND DO ANY INTERNAL WIRING REQUIRED IN THE FIXTURES AS REQUIRED BY THE SPECIFICATIONS. ALL ELECTRICAL OUTLET COVER PLATES ARE TO BE STAINLESS STEEL AND ARE TO BE FURNISHED BY THE ELECTRICIAN, AS WELL AS THE RECEPTACLE, UNLESS OTHERWISE SPECIFIED IN THE ITEM SPECIFICATIONS. KITCHEN EQUIPMENT SUPPLIER TO FURNISH A GALVANIZED JUNCTION BOX IN THE FIXTURE CUTOUT TO RECEIVE THE RECEPTACLE, UNLESS OTHERWISE NOTED. ALL DISCONNECT SWITCHES REQUIRED ARE TO BE FURNISHED AND INSTALLED BY THE ELECTRICIAN AT TIME OF INSTALLATION.

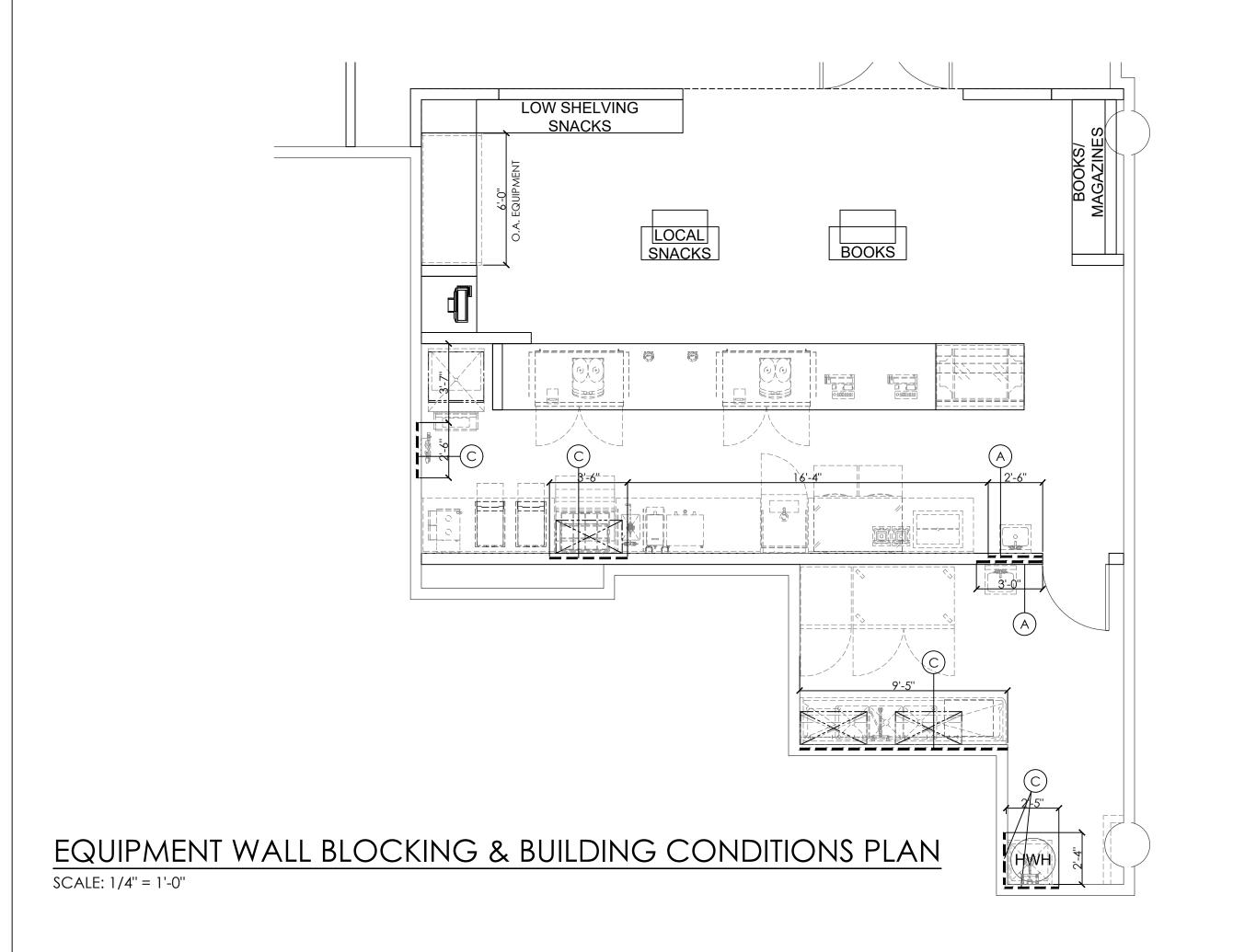
ALL WORK TO BE PERFORMED IN FULL ACCORDANCE WITH ALL APPLICABLE CODES RELATING TO HOOK-UP, INSTALLATION AND WIRING OF EQUIPMENT. OMISSIONS OR ERRORS ON THE SCHEDULE DO NOT RELIEVE THE ELECTRICIAN FROM COMPLETE FINAL CONNECTION RESPONSIBILITY.

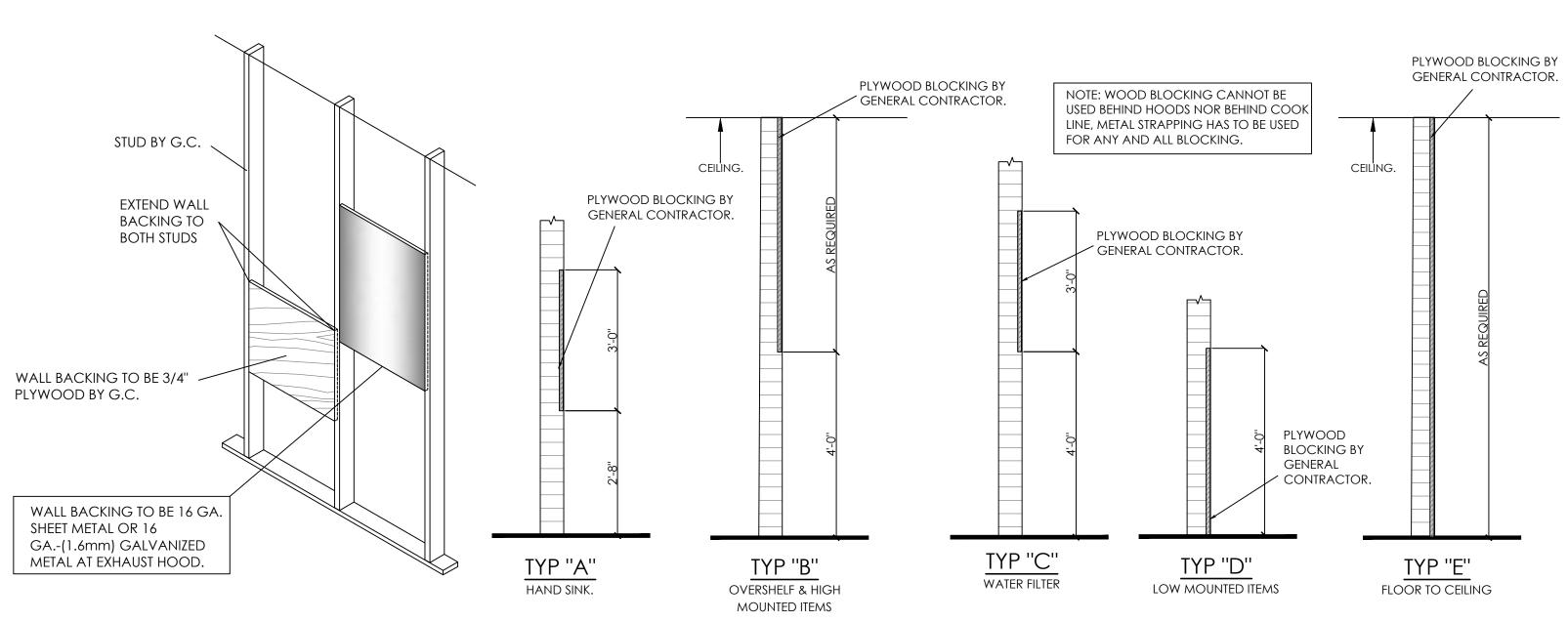
ELECTRICAL REQUIREMENTS FOR AREAS OUTSIDE OF KITCHEN (OFFICE, RESTROOMS, DINING ROOM, ETC.) SHALL BE SPECIFIED AND LOCATED BY OTHERS.

CONTROL CIRCUIT FROM ELECTRICIAN FURNISHED AND INSTALL SHUNT TRIP BREAKER(S) TO FIRE CONTROL SYSTEM MICRO-SWITCH. SHUNT TRIP BREAKER(S) TO BE UNDER EXHAUST HOOD. IN CASE OF FIRE, ALL POWER TO EQUIPMENT UNDER HOOD WILL BE SHUT OFF, SUPPLY FAN OFF & EXHAUST FAN ON. ALL GAS EQUIPMENT LOCATED UNDER HOOD WILL ALSO BE SHUT OFF IN CASE OF FIRE. MUST BE WIRED THAT IN THE EVENT OF POWER FAILURE, FIRE CONTROL SYSTEM WILL NOT BE ACTIVATED AND WHEN POWER IS RESTORED, FIRE SYSTEM WILL NOT DISCHARGE.

FIXTURE MOUNTED J-BOXES ARE EMPTY BOXES WELDED INTO THE SPLASH. ELECTRICIAN AND DATA CONTRACTOR WILL BE RESPONSIBLE RUNNING WIRES TO THE BOX AND PROVIDING RECEPTACLES AND FACE PLATES.

RECEPTACLES MOUNTED IN THE WALL TO BE HORIZONTAL UNLESS OTHERWISE NOTED.





# WALL BLOCKING SECTIONS

NO BLOCKING AT CMU WALLS NOTE: SOME APPLICATIONS MAY NOT BE USED

ARCHITECTURE + DESIGN

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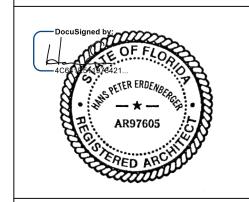
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SIESTA KEYS AT **B-R1 SHOPPES** 

REV DATE DESCRIPTION

DESIGN DELIVERABLE: ISSUE DATE: 6/04/2024

PROJECT 24017B NUMBER: DRAWN BY:

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**FOODSERVICE EQUIPMENT WALL** 

**BLOCKING & BUILDING CONDITIONS PLAN** 

K4

#### MECHANICAL ABBREVIATIONS AND SYMBOL LIST

AC	AIR CONDITIONING	L	LENGTH			GATE VALVE
ACCU	AIR-COOLED CONDENSING UNIT	LAT	LEAVING AIR TEMPERATURE			CHECK VALVE
AD	ACCESS DOOR	LBS	POUNDS		+++-	AIR VENT
AFF	ABOVE FINISHED FLOOR	LDB	LEAVING DRY BULB TEMPERATURE		$\bigcirc$	PRESSURE GAUGE
AL	ACOUSTICALLY LINED	LIN FT	LINEAR FEET			THERMOMETER
ALU	ALUMINUM	LWB	LEAVING WET BULB			BALL VALVE
AP	ACCESS PANEL	LWT	LEAVING WATER TEMPERATURE			PIPE UP
BDD	BACK DRAFT DAMPER	MAX	MAXIMUM			PIPE DOWN
BHP	BRAKE HORSEPOWER	MBH	THOUSAND BTU PER HOUR		$\rightarrow$	PIPE STUB UP
ВІ	BLACK IRON	MCC	MOTOR CONTROL CENTER			FLOW DIRECTION
BTU	BRITISH THERMAL UNIT	MER	MECHANICAL EQUIPMENT ROOM		PITCH	PITCH PIPE OR DUCT
BTUH	BTU PER HOUR	MHP	MOTOR HORSEPOWER		<u> </u>	UNDERCUT DOOR
CHW	CHILLED WATER	MIN	MINIMUM	1		FLANGED END
CD	CEILING DIFFUSER	MOT	MOTOR			DEAD END, SCREWED CAP
CFM	CUBIC FEET PER MINUTE	NC	NORMALLY CLOSED		<b>→</b>	DIRECTION OF FLOW
CG	CEILING GRILLE	NIC	NOT IN CONTRACT	DN. &		DOWN
CLG	CEILING	NO	NORMALLY OPEN			LINE BREAK
CR	CEILING REGISTER	NO.	NUMBER			NEW WORK
CU	COPPER	NTS	NOT TO SCALE			EXISTING TO REMAIN
CU FT	CUBIC FEET	OAI	OUTSIDE AIR INTAKE	<del>///</del>		EXISTING TO BE REMOVED
CU IN	CUBIC INCHES	OD	OUTSIDE DIAMETER			SUPPLY DUCT
CV	CONSTANT VOLUME	OV	OUTLET VELOCITY			RETURN OR EXHAUST DUCT
D	DROP	PD	PRESSURE DROP			RETURN OR EXHAUST DOCT
DB	DRY BULB	PHC	PREHEAT COIL			SQUARE ELBOW WITH VANES
DIAM	DIAMETER	PSIA	PSI ABSOLUTE			
DN	DOWN	PSIG	PSI GAUGE			ROUND ELBOW WITH VANES
DWG	DRAWING	R	RISE			
DX	DIRECT EXPANSION	RA	RETURN AIR	-	FD&AD	FIRE DAMPER AND ACCESS DOOR
EAT	ENTERING AIR TEMPERATURE	RF	RETURN FAN		FSD&AD	
	ENTERING DRY BULB TEMPERATURE	RM	ROOM	$\dashv$ $\vdash$	TODATE	FIRE SMOKE DAMPER AND ACCESS DOOR
EDB		RPM	REVOLUTION PER MINUTE			AND ACCESS BOOK
EF	EXHAUST FAN	RH	RELATIVE HUMIDITY	$\dashv$ $\vdash$	(SD)	DUCT SMOKE DETECTOR
ELEC.	ELECTRIC	RHC	REHEAT COIL			
ERHC	ELECTRIC REHEAT COIL	SD	SMOKE DAMPER		D&AD	SMOKE DAMPER AND
EQ	EQUAL ENTERING WET BUILD			_		ACCESS DOOR
EWB	ENTERING WATER TEMPERATURE	SDR	SMOKE DETECTOR  STRIPLINE LINEAR DIFFUSER		M	
EWT	ENTERING WATER TEMPERATURE	SP	STATIC PRESSURE	-		MOTORIZED DAMPER
EXH	EXHAUST				12X12 CD (300 CFM)	
EX	EXISTING	SPEC	SPECIFICATION		(300 CFM)	CEILING SUPPLY DIFFUSER
F	FILTER	SS	STAINLESS STEEL		12X12 CR (300 CFM)	CEILING RETURN REGISTER
F	DEGREE FAHRENHEIT	T	THROAT			DUCT MOUNTED ELECTRIC
FC	FLEXIBLE CONNECTION	TEMP	TEMPERATURE			REHEAT COIL
FD	FIRE DAMPER	TG	TOP GRILLE			REQUIRED ACCESS AREA/ACCESS DO
FA	FREE AREA (SQ. FT.)	TR	TOP REGISTER			THERMOSTAT
F.A.	FACE AREA	TRF	TRANSFER FAN		<u> </u>	REMOTE TEMPERATURE SENSOR
FLA	FULL LOAD AMPERES	TT	TOP THROAT		<u> </u>	WALL SWITCH
FPM	FEET PER MINUTE	TYP	TYPICAL		——□ BDD	BACK DRAFT DAMPER
FL.DR.	FLOOR DRAIN	TX	TOILET EXHAUST			MOTORIZED DAMPER
FIN FL	FINISHED FLOOR	UH	UNIT HEATER	HR	HOUR	
FSD	FIRE SMOKE DAMPER	V	VOLTS	HUM	HUMIDIFI	ER
FT	FEET	W	WIDTH	HZ	FREQUEN	ICY
FTR	FINNED TUBE RADIATION	W/	WITH	IN	IN OR INC	CHES
GPH	GALLONS PER HOUR	W/O	WITHOUT	KW	KILOWAT	Т
	GALLONS PER MINUTE	WB	WET BULB	VD	VOLUME	DAMPER
GPM	1	+		7/07/	VADIADI	E AID VOLUME DOV
	HEIGHT	WC	WATER COLUMN	VAV	VARIABL	E AIR VOLUME BOX
GPM H HW	HEIGHT HOT WATER	WC WG	WATER COLUMN WATER GAUGE	VAV		F DISCONNECTION

ALL ABBREVIATIONS AND SYMBOLS LISTED ABOVE ARE FOR REFERENCE AND NOT NECESSARILY USED IN THIS PROJECT.

**GENERAL NOTES** 

- 1. THE CONTRACTOR SHALL VISIT THE PREMISES TO DETERMINE EXISTING CONDITIONS AND COMPARE SAME WITH CONTRACT DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR IS TO SATISFY THEMSELVES OF ALL CONDITIONS PRIOR TO THE SUBMISSION OF A BID PROPOSAL. NO ALLOWANCE WILL BE MADE FOR FAILURE TO COMPLY WITH THESE REQUIREMENTS AND A BID PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THEY HAS
- 2. ALL HVAC WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN PIPING AND DUCTS (INCLUDING DIVIDED DUCTS) AND TRANSITIONS AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- 3. COORDINATE DUCTWORK WITH APPROVED SUBMISSION OF SUPPLY, RETURN & EXHAUST AIR TERMINAL UNIT SIZES AND ASSOCIATED INLET AND OUTLET CONNECTIONS.
- 4. PROVIDE ACCESS AS REQUIRED FOR DUCT SMOKE DETECTORS INSTALLED IN DUCTWORK.
- 5. DUCT SMOKE DETECTORS SHALL BE FURNISHED AND WIRED BY THE ELECTRICAL CONTRACTOR, MECHANICAL CONTRACTOR IS RESPONSIBLE FOR MOUNTING THE SMOKE DETECTORS IN DUCTWORK AS REQUIRED AND SHOWN ON PLANS. MECHANICAL CONTRACTOR IS RESPONSIBLE TO CONDUCT AND PROVIDE THE RESULTS THE DUCT SMOKE DETECTOR PRESSURE DIFFERENTIAL TO THE ENGINEER AND ANY OTHER AUTHORITY HAVING
- PROVIDE ACCESS PANELS UPSTREAM OF ALL ELBOWS WITH TURNING VANES.ALL ACCESS DOORS AND ACCESS PANELS ARE TO BE LABELED. ALL VALVES ARE TO BE LOCATED IN THE HORIZONTAL POSITION AND BE EASILY REACHABLE WITHOUT CLIMBING UP INSIDE THE CEILING OR A REMOTE METHOD OF OPERATION AT CEILING HEIGHT IS TO BE PROVIDED.
- 7. PROVIDE ACCESS PANELS IN DUCTWORK FOR OPERATION, ADJUSTMENT AND MAINTENANCE OF ALL FANS, VALVES AND MECHANICAL EQUIPMENT.
- ACCESS DOORS INTO DUCTWORK SHALL NOT BE SMALLER THAN 18"X18" UNLESS DUCT SIZE DOES NOT PERMIT. INDICATE SIZE AND LOCATIONS OF ALL ACCESS DOORS.
- PROVIDE VOLUME DAMPERS IN ALL SUPPLY AND RETURN BRANCH DUCTWORK. PROVIDE ONE VOLUME DAMPER FOR EACH SUPPLY DIFFUSER AND RETURN GRILLE. PROVIDE MANUAL DAMPERS IN EACH SPLIT OR TAP CONNECTION TO TRUNK DUCTS FOR BALANCING PURPOSES, EACH PROVIDED WITH OPERATOR AND LOCKING DEVICE. INSTALL DIVERTING VANES AT BRANCHES CONNECTED INTO THE MAIN WITHOUT A NECK
- 10. ALL AIR OUTLETS (DIFFUSERS, GRILLES, REGISTERS, LINEAR SLOTS, ETC.) SHALL BE COORDINATED WITH THE ARCHITECTURAL CEILING PLAN (LIGHTS, SPRINKLER HEADS, CEILING GRID), ELECTRICAL PLANS, SPRINKLER PLANS, AND WITH REVIEWED AND APPROVED AIR OUTLET SUBMITTAL.
- 11. ARCHITECT TO REVIEW AND APPROVE FACE SIZE AND EXACT LOCATION OF ALL AIR OUTLETS (DIFFUSERS, GRILLES, REGISTERS, ETC.) AND COORDINATE WITH EQUIPMENT MNFR. REQUIREMENT.
- 12. ARCHITECT & OWNER TO REVIEW AND APPROVE LOCATION OF ALL THERMOSTATS IN CONJUNCTION WITH FINAL
- 13. SHEET-METAL SHOP DRAWING CAN BE RELEASED FOR FABRICATION ONLY AFTER SHEET-METAL SHOP STANDARDS HAVE BEEN REVIEWED AND APPROVED.
- 14. SHEET-METAL SHOP DRAWINGS MUST BE COORDINATED WITH ALL TRADES (MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, STRUCTURAL ETC.) BEFORE FABRICATION.
- 15. CONTRACTOR TO COORDINATE DUCT LOCATIONS WITH STRUCTURAL STEEL AND ARCHITECTURAL DRAWINGS OF
- 16. PROVIDE BRANCH CONNECTION TAPS AS INDICATED IN DETAIL ON DETAIL DRAWINGS. ANY OTHER TAP BRANCH CONNECTIONS ARE NOT ACCEPTABLE.
- 17. ALL DUCT SIZES, SHOWN ARE INSIDE CLEAR DIMENSIONS.
- 18. ALL CONDENSATE DRAIN LINES FROM EACH UNIT WILL BE PIPED FULL SIZE OF THE DRAIN OUTLET WITH P-TRAP AND TERMINATED AT THE NEAREST DRAIN OR SLOP SINK. PROVIDE A CONDENSATE PUMP SIMILAR TO LITTLE GIANT VCC-20ULS IF GRAVITY DRAINAGE CANNOT BE UTILIZED. COORDINATE WITH ELECTRICAL CONTRACTOR AS
- 19. ALL EQUIPMENT, PIPING, DUCTWORK, ETC. SHALL BE INDEPENDENTLY SUPPORTED AS DETAILED AND SPECIFIED. ADDITIONAL SUPPORT SHALL BE PROVIDED AS REQUIRED TO PROVIDE VIBRATION-FREE INSTALLATION.
- 20. ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH ELECTRICAL PROJECT SPECIFICATIONS.
- 21. PROVIDE AS REQUIRED BY CODE (LOCAL OR NATIONAL) ANY ADDITIONAL ACCESS PANELS, OR SPECIAL SUPPORTS NOT SHOWN ON PLANS AT NO ADDITIONAL COST TO OWNER.
- 22. ANY ABANDONED EXISTING EQUIPMENT, DUCTWORK, ETC. WHICH IS NOT SHOWN TO BE REMOVED, BUT INTERFERES WITH THE NEW CONSTRUCTION IS TO BE REMOVED BY THE CONTRACTOR.
- 23. THE CONTRACTOR SHALL REMOVE, RELOCATE, REPLACE, ADJUST, ADAPT AND MODIFY EXISTING EQUIPMENT AND/OR SYSTEM AS REQUIRED BY THE DRAWINGS OR SPECIFICATIONS AND AS MAY BE REQUIRED WHEN SUCH WORK IS UNCOVERED AND FOUND TO INTERFERE WITH THE COMPLETION OF WORK IN THE CONTRACT WITHOUT ADDITIONAL COST TO THE OWNER.
- 24. THE CONTRACTOR IS TO BALANCE ALL DUCT SYSTEMS AND PROVIDE ALL NECESSARY BELTS, PULLEYS, SHEAVES, ETC TO ACHIEVE THE DESIGN AIR QUANTITIES. NEWLY DESIGNED AREAS SHALL BE BALANCED TO THE INDICATED AIR QUANTITIES ON THE DRAWINGS. ALL EXISTING AREAS SHALL BE RE-BALANCED TO THE ORIGINAL DESIGN REQUIREMENTS. ALL BALANCED AIR QUANTITIES ARE TO BE WITHIN 5% OF DESIGN AIR QUANTITIES.
- 25. ALL SQUARE ELBOWS ON DUCTWORK ARE TO HAVE DOUBLE THICK TURNING VANES.
- UL LISTED FIRESTOP ASSEMBLIES SHALL BE INSTALLED AT ALL PENETRATIONS OF FIRE RATED CONSTRUCTION.
- 27. AFTER FINAL TESTS AND ADJUSTMENTS, FULLY INSTRUCT OWNER'S OPERATING PERSONNEL IN ALL DETAILS OF OPERATION FOR EQUIPMENT INSTALLED. A SIGNED RECEIPT WHICH SHALL BE OBTAINED FROM THE OPERATOR SHALL BE CONSTRUED AS EVIDENCE THAT INSTRUCTIONS WERE SATISFACTORY
- 28. FURNISH TWO (2) COPIES OF WRITTEN DESCRIPTIONS OF ALL SYSTEMS COVERING ALL MANUAL OPERATING PROCEDURE, AUTOMATIC CONTROL DESCRIPTIONS AND AUTOMATIC CONTROL TEMPERATURE AND PRESSURE SETTINGS. WRITTEN DESCRIPTIONS SHALL INCLUDE LUBRICATION SCHEDULES, PARTS LISTS, PERFORMANCE SERVICES FOR EQUIPMENT, FILTER SIZE / QUANTITY SCHEDULE, ETC. WHEN MANUFACTURER'S STANDARD INSTRUCTIONS, ARE UTILIZED, THEY SHALL BE CLEARLY MARKED TO INDICATE APPLICABILITY.
- 29. CONTRACTOR IS RESPONSIBLE FOR THE TESTING & COMMISSIONING OF ALL HVAC SYSTEMS IN THE PRESENCE OF UNIT MANUFACTURER.
- 30. ALL DUCTWORK & PIPING TO BE LABELED AS REQUIRED BY BUILDING STANDARDS.

MECHANICAL DRAWING LIST										
Sheet Number	Sheet Name									
M001	MECHANICAL NOTES, SYMBOLS AND DRAWING LIST									
M101	MECHANICAL DUCTWORK & PIPING PLAN									
M401	MECHANICAL DETAILS									
M501	MECHANICAL SCHEDULES									
M601	MECHANICAL SPECIFICATIONS (SHEET 1 OF 3)									
M602	MECHANICAL SPECIFICATIONS (SHEET 2 OF 3)									
M603	MECHANICAL SPECIFICATIONS (SHEET 3 OF 3)									

## **COORDINATION NOTES**

- 1. COORDINATE ALL WORK WITH THE ARCHITECTURAL DRAWINGS. VERIFY LOCATION OF ALL VISIBLE DEVICES WITH ARCHITECT OR OWNER PRIOR TO INSTALLATION. INCLUDING THERMOSTATS, DIFFUSERS, GRILLES, REGISTERS, ETC. RECEIVE APPROVAL FROM THE ARCHITECT OR OWNER FOR FINISH COLOR AND MOUNTING FRAME PRIOR TO PURCHASE. RECEIVE APPROVAL FROM THE ARCHITECT FOR ALL DEVICES PRIOR TO PURCHASE.
- SHOP DRAWING NOTES:
  - ALL MECHANICAL SHOP DRAWINGS SHALL BE SUBMITTED TO DESIGN ENGINEER
- SUBMIT CAD AS-BUILT SHEETMETAL DRAWINGS (UPDATED WITH COMMENTS) FOR THE RECORD AT COMPLETION OF INSTALLATION TO DESIGN ENGINEER
- SUBMIT AIR BALANCING REPORT TO DESIGN ENGINEER

#### CODES, PERMITS, AND INSPECTIONS

- 1. ALL WORK SHALL MEET OR EXCEED LATEST REQUIREMENT OF THE LATEST EDITION OF THE 2023 FLORIDA BUILDING CODE, 2023 FLORIDA MECHANICAL CODE, 2023 SARASOTA CDM, 2023 FLORIDA ENERGY CONSERVATION CODE AND OTHER AUTHORITIES EXERCISING JURISDICTION OF THE WORK OF THIS PROJECT.
- 2. SECURE PERMITS AND INSPECTION CERTIFICATES AND TRANSMIT SAME TO THE OWNER AT THE COMPLETION OF THE WORK.
- 3. CONTRACTOR SHALL BE RESPONSIBLE FOR FILING ALL DOCUMENTS WITH ALL RESPONSIBLE AGENCIES. CONTROLLED INSPECTION SHALL BE DONE BY CONTRACTOR.

# MECHANICAL ROOF WORK NOTES

- 1. ALL ROOFING WORK IS TO BE COORDINATED WITH BUILDING MANAGEMENT. ROOFING CONTRACTOR TO BE APPROVEDEBYILDING MANAGEMENT . ALL ROOFING WORK TO BE COMPLETED IN SUCH A MANNER AS TO HAVE NO IMPACT OF THE EXISTING ROOF WARRANTY.
- 2. ROOF PENETRATIONS TO BE COORDINATED WITH STRUCTURAL ENGINEER/STRUCTURAL DRAWINGS NTRACTOR TO SUBMIT ROOF PENETRATION SHOP DRAWING FOR ENGINEER'S REVIEW AND APPROVAL.
- 3. ALL MECHANICAL EQUIPMENT TO BE PROVIDED WITH A PERMANENT WEATHERPROOF LABEL INDICATING: THE UNIT DESIGNATION, THE SPACE IT SERVES, THE SOURCE OF POWER (PANEL NAME & LOCATION) AND THE DATE OF INSTALLATION (MONTH/YEAR).
- 4. PROVIDE MECHANICAL EQUIPMENT WITH LIGHTNING PROTECTION DEVICES AND HARDWARE IN COMPLIANCE WITH UL96A AND NFPA780 STANDARDS. ALL DEVICES AND HARDWARE SHALL BE CLASS 1. CABLES TO CONNECT TO EXISTING LIGHTNING PROTECTION SYSTEM, CONTRACTOR SHALL WIRE BRUSH AND CLEAN CONNECTION POINT TO ENSURE SOLID CONDUCTIVE BOND.

# **MECHANICAL CONTRACTOR NOTES:**

- 1. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ALL SUPPORTS, INSTALLATION, LEVELING, METHODS OF HANGING, SUPPLEMENTAL STEEL AND REINFORCEMENTS, ETC. THAT WILL BE REQUIRED FOR ALL MECHANICAL EQUIPMENT UTILIZED FOR THIS PROJECT.
- 2. COORDINATE WITH GENERAL CONTRACTOR, ARCHITECT & BUILDING MANAGER/ENGINEER.
- 3. ANY EXTRAS AND DEVIATIONS APPEARED FROM THE SUBSTITUTION OF THE ORIGINALLY DESIGNED CONCEPTS OR UTILIZED EQUIPMENT, WILL HAVE TO BE THE RESPONSIBILITY OF THIS CONTRACTOR AND DONE AT NO ADDITIONAL COST TO THE CLIENT.

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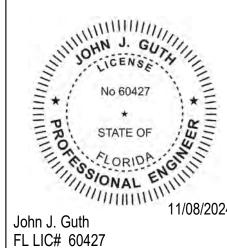
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**GD GUTH** 

CONSULTING ENGINEERS, PO

Guth DeConzo Consulting Engineers, PC 520 8th Avenue, Suite 2201 New York, NY 10018

CERTIFICATE OF AUTHORIZATION CA LIC. NO: 27747



# **AIRPOR ATIONAL** INTERI ENTON BRAD

SHOPPI

**ARASOTA** DESIGN ISSUED FOR

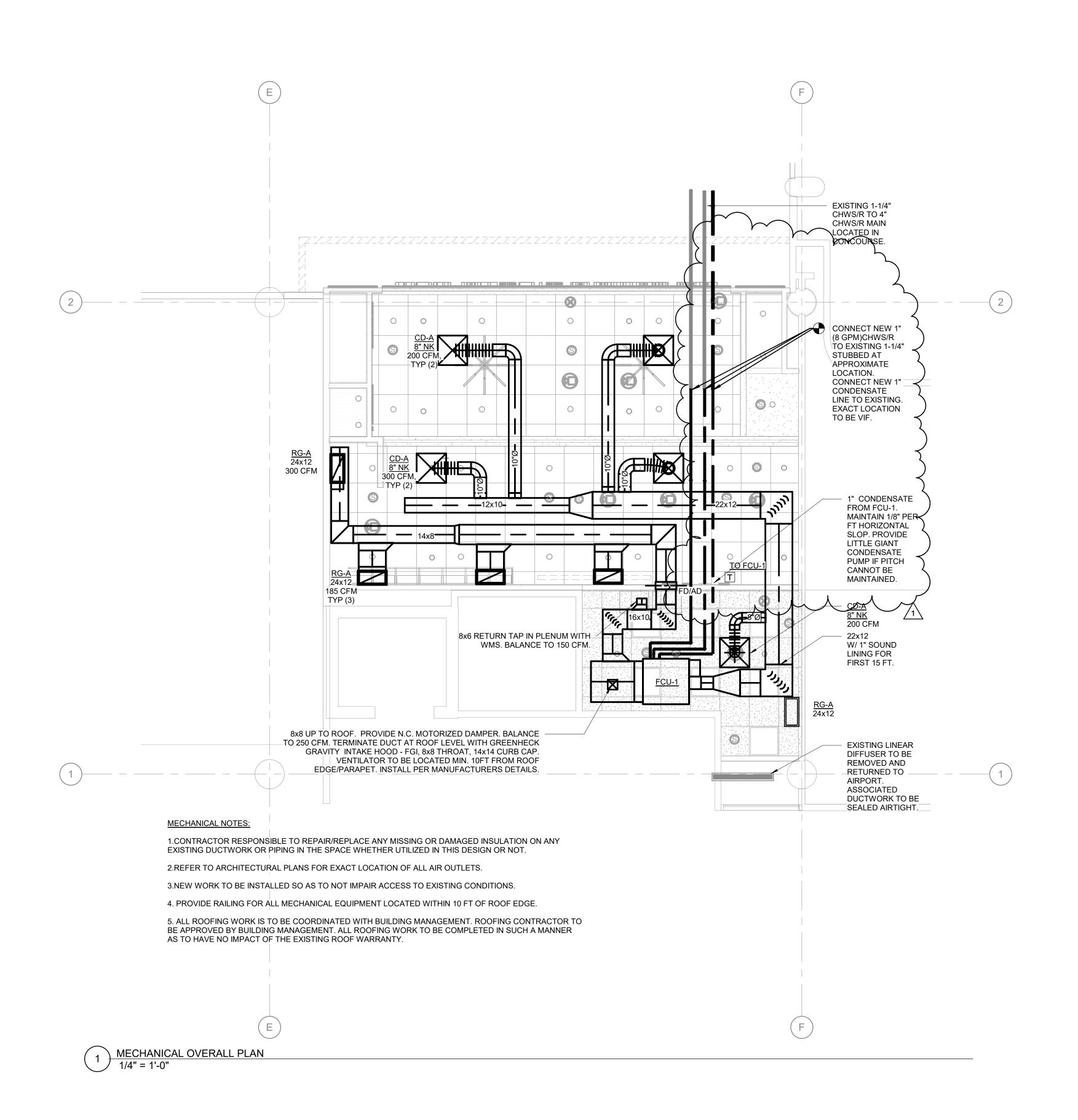
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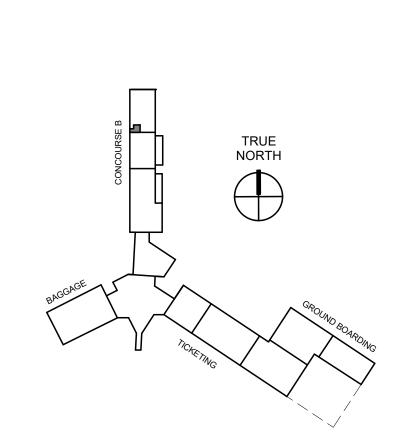
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MECHANICAL NOTES, SYMBOLS AND DRAWING LIST

M001





John J. Guth FL LIC# 60427 SARASOTA BRADENTON INTERNATIONAL AIRPORT SHOPPE

ARCHITECTURE + DESIGN

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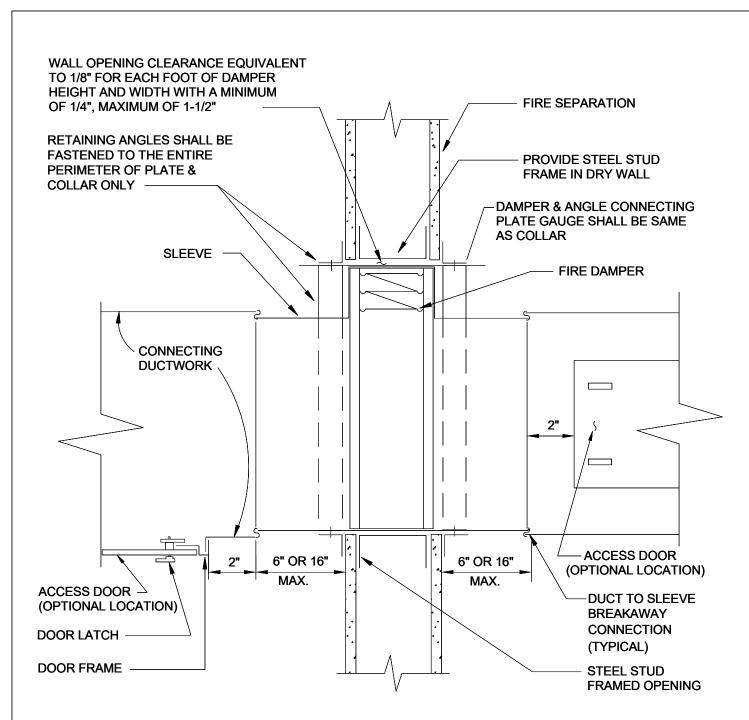
ISSUED FOR PERMIT 06/14/2024

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Copyright (c) by Environetics, Inc. All Rights Reserved. **MECHANICAL DUCTWORK & PIPING** PLAN

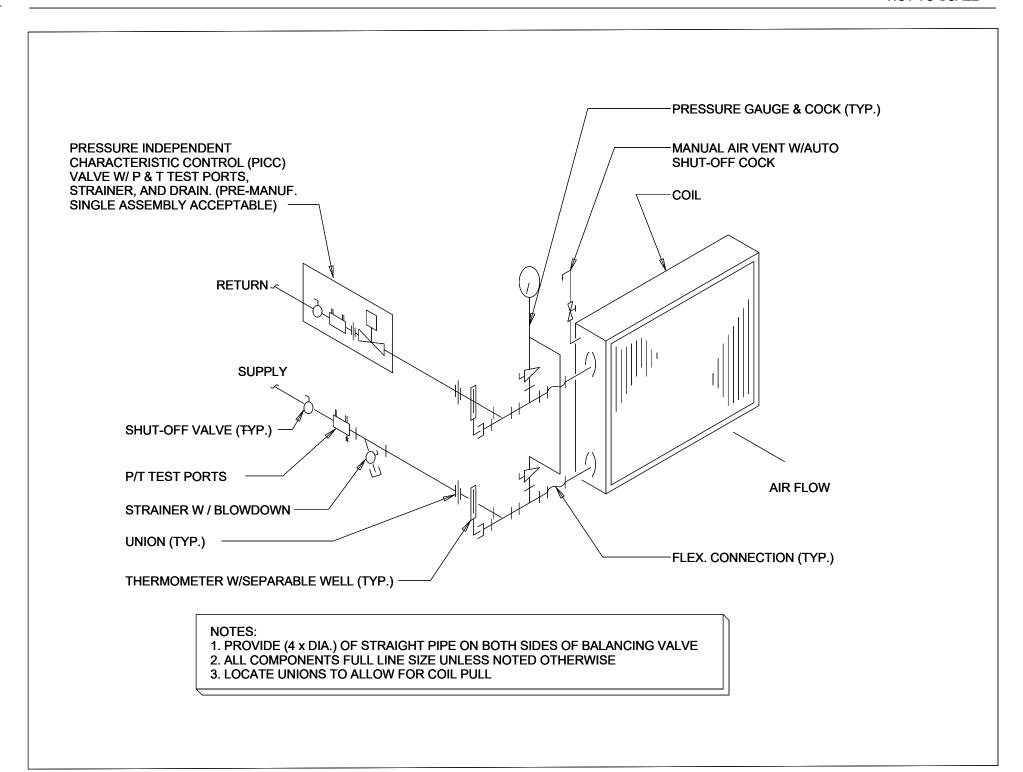
M101



# FIRE DAMPER NOTES:

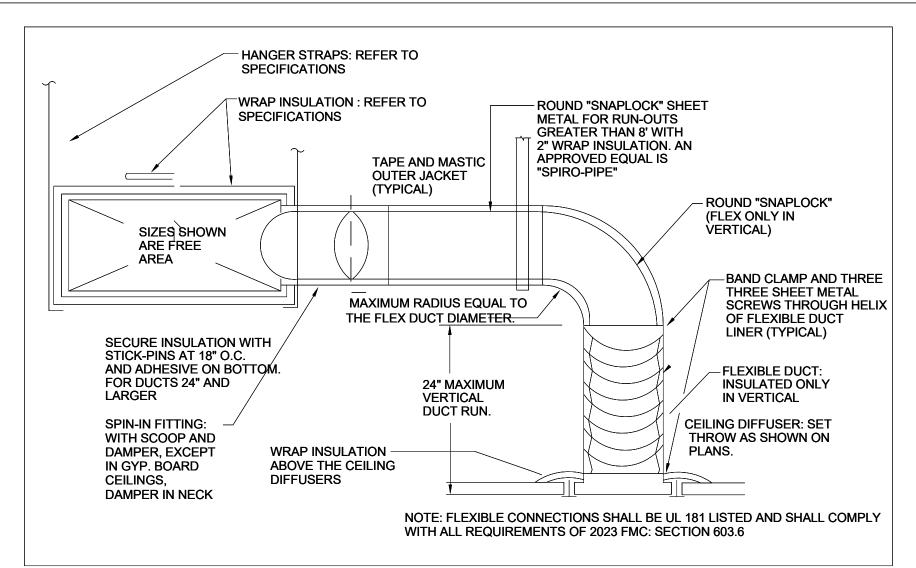
- 1. FIRE RESISTANCE RATING OF FIRE DAMPERS SHALL COMPLY WITH NFPA 90A, UL 555 AND NYBC REFERENCE STANDARD RS 13. FIRE DAMPERS SHALL BE RATED TO MAINTAIN THE RATING OF THE FIRE SEPARATION.
- 2. FIRE DAMPERS SHALL BE APPROVED FOR THIS INSTALLATION BY ALL AUTHORITIES WITH JURISDICTION AND LABELED BY UNDERWRITERS LABORATORIES (UL). THE DAMPER SHALL BE SUBMITTED TO ENGINEER FOR FOR REVIEW.
- 3. FIRE DAMPERS MUST BE DYNAMIC RATED TYPE
- 4. FIRE DAMPERS PLACED IN VERTICAL POSITION SHALL BE GRAVITY-OPERATED. FIRE DAMPERS PLACED IN HORIZONTAL POSITION SHALL BE PROVIDED WITH ALL NECESSARY SPRINGS AND LATCHES.
- 5. TEMPERATURE RATING OF FUSIBLE LINK SHALL BE 165°F UNLESS OTHERWISE NOTED
- 6. FOR WALL/PARTITIONS HAVING A FIRE RESISTANCE RATING OF LESS THAN 2 HOURS: FIRE DAMPERS SHALL BE RUSKIN MODEL D-1BD2: STYLE A, B & C, GREENHECK MODEL DFD-150, TYPE A, B, C & CR, DFD-155, TYPE C & CR, IMPERIAL IDL MODEL FD 110, FD 150, TYPE A, B, C & CR, PREFCO/HUGH RICHARDS INC. MODEL UL 75A, OR APPROVED EQUAL. THEY SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS APPROVED INSTALLATION INSTRUCTIONS. SEE ARCHITECTURAL DWG.
- 7. FOR WALL/PARTITIONS HAVING A FIRE RESISTANCE RATING OF 2 HOURS: FIRE DAMPERS SHALL BE RUSKIN MODEL D-1BD23: STYLE A, B & C, GREENHECK MODEL DFD-350, TYPE A, B, C & CR, DFD-355, TYPE C & CR, IMPERIAL IDL MODEL FD 310, FD 350, TYPE A, B, C & CR, PREFCO/HUGH RICHARDS INC. MODEL UL 75L, OR APPROVED EQUAL. THEY SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS APPROVED INSTALLATION INSTRUCTIONS.
- 8. FIRE DAMPER SLEEVE SHALL BE 16 GAUGE FOR DAMPERS WITH DIMENSIONS NOT EXCEEDING 24 IN. IN HEIGHT OR 36 IN. IN WIDTH, AND 14 GAUGE FOR LARGER SIZES. SLEEVE THICKNESS MUST NOT BE LESS THAN THE GAUGE OF THE CONNECTING DUCT. FIRE DAMPER SLEEVES THROUGH HOLLOW FIRE-RATED CONSTRUCTION BE MADE OF AT LEAST 14 GAUGE SHEET METAL.
- 9. DUCT TO DAMPER SLEEVE CONNECTIONS SHALL BE BREAKAWAY STYLE. RECTANGULAR DUCTS MUST USE ONE OR MORE OF THE FOLLOWING CONNECTIONS: "S" SLIP, OR OTHER SLIP TYPE, MODIFIED DUCTMATE TYPES (PLASTIC CLEATS, NO CORNER BOLTS), OR MODIFIED PROPRIETARY TDC BY LOCKFORMER, OR TDF BY EAGLE FLANGE SYSTEM (NO CORNER BOLTS). ROUND AND OVAL DUCTS MUST USE A 4 IN. WIDE DRAWBAND CONNECTION. ALL THE CONNECTIONS SHALL BE LISTED IN UL 555 AND DEPICTED IN THE SMACNA FIRE, SMOKE AND RADIATION DAMPER INSTALLATION GUIDE.
- 10. DAMPER SLEEVES SHALL NOT EXTEND MORE THAN 6 IN. BEYOND THE FIRE WALL OR PARTITION UNLESS FIRE DAMPER IS EQUIPPED WITH A FACTORY INSTALLED ACCESS DOOR. SLEEVE MAY EXTEND UP TO 16 IN. BEYOND THE FIRE WALL OR PARTITION ON SIDES EQUIPPED WITH FACTORY INSTALLED ACCESS DOOR.
- 11. MOUNTING ANGLES SHALL BE A MINIMUM OF 1-1/2"x1-1/2"x14 GAUGE AND FASTENED TO SLEEVE WITH NO. 10 SHEET METAL SCREWS, 1/4" BOLTS AND NUTS, 1/2" LONG WELDS, OR 3/16" STEEL POP RIVETS. SECURE SLEEVES BY PERIMETER ANGLES ON FOUR SIDES OF THE SLEEVE ON BOTH SIDES OF
- 12. THE CONTRACTOR SHALL SEAL ALL JOINTS OF THE SLEEVE WITH SEALANT. THE JOINT BETWEEN TAPS AND DUCTS SHALL BE MADE AIRTIGHT AND SECURED BY USS. NO. 10 SHEET METAL SCREWS (ONE PER SIDE OF RECTANGULAR DUCT, OR THREE PER ROUND DUCT), SEALED WITH SEALANT AND THEN TAPED. FIRE RATED SEALANT SHALL BE DOW CORNING SILICON #999, #732 RTV, GE RTV SILICON RUBBER, OR AN APPROVED EQUAL.
- 13. PROVIDE ACCESS DOORS ON EITHER SIDE OF THE SLEEVE ONLY TO PERMIT INSPECTING, TESTING AND RESETTING THE DAMPERS.
- 14. CEILING FIRE DAMPERS SHALL BE SUITABLE FOR INSTALLATION INSIDE DUCT AND SURFACE MOUNTING OF DIFFUSERS OR GRILLES. CEILING FIRE DAMPERS SHALL BE RUSKIN CFD, CFDR, GREENHECK MODEL CRD-1, CRD-2, IMPERIAL IDL MODEL 410, 420, 420R, PREFCO MODEL 5600, 5660 OR APPROVED EQUAL FOR WALL/PARTITIONS HAVING A FIRE RESISTANCE RATING OF LESS THAN 3 HOURS. CEILING FIRE DAMPERS SHALL BE RUSKIN CFD, CFDR, GREENHECK MODEL CRD-1, CRD-2, IMPERIAL IDL MODEL 410, 420, 420R, PREFCO MODEL 5610, 5680, OR APPROVED EQUAL FOR WALL/PARTITIONS.

ALL FIRE DAMPERS SHALL BE INSTALLED PER MANUFACTURERS INSTALLATION INSTRUCTIONS. SEE 2023 FMC, SECTION 607.2



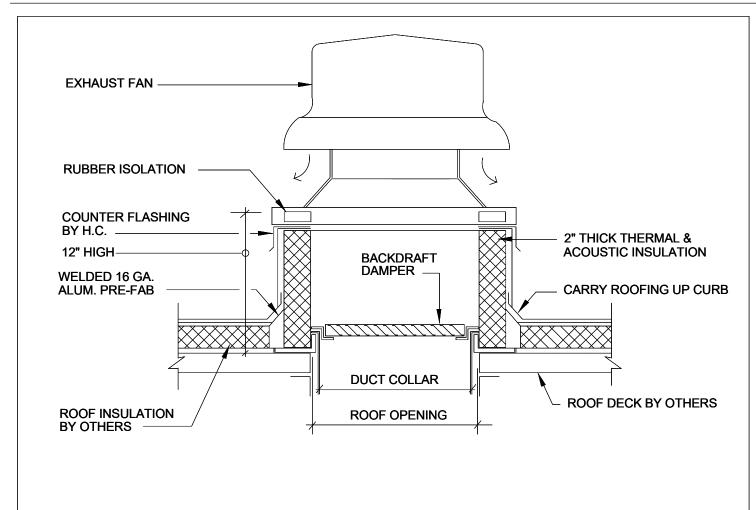
# TYPICAL DIFFUSER CONNECTION

NOT TO SCALE



# **ROOF EXHAUST FAN**

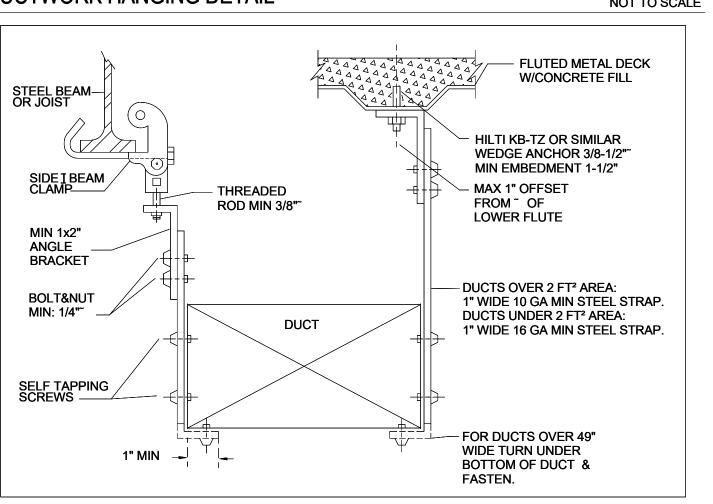
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PIVOT ON BOTH ENDS 16 GA. DAMPER BLADE 16 GA. DAMPER BLADE W/HEMMED EDGES LENGTH = W + 1/3WHEMMED EDGE -SUPPLY AIR **AIR FLOW** RETURN OR EXHAUST AIR SWIVEL FITTING 1/4"~ ROD -PIVOT HARDWARE -CLINCH CONN.-ON ALL SIDES 45° SPLAY **BRANCH DUCT** QUADRANT REGULATOR **BRANCH DUCT** SUPPLY, RETURN OR EXHAUST BRANCH SUPPLY BRANCH DUCT WITH SPLITTER TYPE DAMPER **DUCT WITH SINGLE LEAF DAMPER** -16 GA. DAMPER BLADE AIR FLOW TRUNK DUCT EDGE LENGTH CLINCH-SWIVEL - FITTING LOCKING QUADRANT REGULATOR COLLAR DAMPER AIR FLOW PIVOT-BALL CASTING W/SET-SCREW LOCK ROUND BLADE STEEL WORM GEAR DRAWBAND HOSE CLAMP -1/4" ROD FLEXIBLE ROUND DUCT -PIVOT ON BOTH ENDS SUPPLY AIR ROUND DUCT BRANCH **SUPPLY AIR SPLIT CONNECTION** WITH SPLITTER DAMPER WITH SINGLE LEAF DAMPER 1. PROVIDE ALL BRANCH DUCTS WITH MANUALLY OPERATED VOLUME DAMPERS FOR BALANCING AIR SYSTEMS. THESE DAMPERS SHALL BE INDEPENDENT OF DAMPERS FURNISHED WITH DIFFUSERS AND REGISTERS, WHICH SHALL ONLY BE UTILIZED FOR TRIM BALANCING WITHOUT GENERATING NOISE. 2. FOR DUCTS WIDER THAN 48" USE MULTIPLE SINGLE LEAF DAMPERS OR OPPOSED-ACTION MULTI-BLADE DAMPERS; EACH WITH LOCKING QUADRANT REGULATOR.

# **DUCTWORK HANGING DETAIL**

**NOT TO SCALE** 



ARCHITECTURE + DESIGN 180 SYLVAN AVENUE, SUITE 3 ENGLEWOOD CLIFFS, NJ 07632 TEL 201 | 894 | 1000 ENV-team.com ENVIRONETICS GROUP ARCHITECTS, P.O. COPYRIGHT © BY ENVIRONETICS. ALL RIGHTS RESERVED

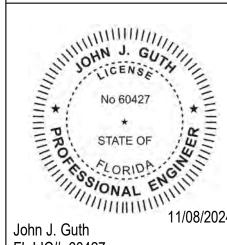
**SSP AMERICA** 

20408 BASHAN DRIVE SUITE 300 ASHBURN, VA 20147

PROJECT **Environetics Group Architects** 180 Sylvan Ave. Englewood Cliffs, NJ 07632

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520 8th Avenue, Suite 2201 New York, NY 10018 **CERTIFICATE OF AUTHORIZATION** CA LIC. NO: 27747



FL LIC# 60427 **AIRPORT ATIONAL BRADENTON INTERI** 

TA

SHOPPE

SARASOTA

DESIGN ISSUED FOR DELIVERABLE: PERMIT ISSUE DATE: 06/14/2024

PROJECT 24017B NUMBER: DRAWN BY:

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**MECHANICAL DETAILS** 

M401

# FAN COIL UNIT SCHEDULE

{	DESIGNATION	CFM H/M/L	CFM OA	NOMINAL TONS	Υ		COOLING DATA		<b>Э</b> РМ	WPD FT. H20	MOTOR POWER HP	ESP IN WG	VOLTS/PHASE/HZ	FLA (A)	MCA (A)	OPERATING WEIGHT, LBS	MODEL NO.	MNFR	DIMENSIONS (W"xH"xD")
	FCU-1	1200/1000/800	250	4.2	49.8	33.8	8	42/54	3.3	21.8	3/4	0.7	480/3/60	1.1	1.38	375	42DHE12	CARRIER	37" x 21-1/2" x 37-1/2"

1. CONTRACTOR TO PROVIDE TWO WAY FULLY MODULATING CONTROL VALVES FOR CHILLED WATER.

- 2. CONTRACTOR TO PROVIDE LEAK DETECTOR WITHIN OVERFLOW DRAIN/ INTERLOCK OVERFLOW SWITCH WITH BMS FOR SHUT DOWN.
- 3. PROVIDE SAME END PIPING CONFIGURATION.
- 4. PROVIDE ECM MOTOR WITH VARIABLE SPEED. 5. PROVIDE THERMOSTAT CAPABLE OF INTERLOCK WITH EXISTING JOHNSON CONTROLS SYSTEM.
- 6. PROVIDE MIN. MERV8 FILTER.

# DESIGN OUTSIDE AIR VENTILATION RATE

BASED ON 2023 FLORIDA MECHANICAL CODE TABLE 403.3.1.1

SPACE	TOTAL AREA (SQ FT)	OCCUPANT DENSITY (#/SQ FT)	OCCUPANTS (PEOPLE)	PEOPLE OA RATE (CFM/PERSON)	OCCUPANTS REQUIRED OA (CFM)	AREA OA RATE (CFM/SQ FT)	AREA REQUIRED OA (CFM)	TOTAL REQUIRED OA (CFM)	TOTAL OA PROVIDED (CFM)
вон	150	-	-	-	-	0.12	18	18	20
FOH	650	-	15	7.5	112.5	0.18	117	229.5	230

OUTSIDE AIR PROVIDED AT 20% OF TOTAL SUPPLY AIR.

# AIR OUTLETS

# SQUARE SUPPLY DIFFUSERS (DESIGNATED "CD-A" ON PLAN).

- TITUS

MANUFACTURER MODEL NO.

FINISH FRAME TYPE

SIZE

SIZE

- OMNI - AS PER ARCHITECTURAL REQUIREMENTS. - TO COORDINATE WITH LATEST ARCHITECTURAL REFLECTING CEILING AND

CEILING GRID PLANS. - 24x24

# SQUARE RETURN GRILLE (DESIGNATED "RG-A" ON PLAN).

MANUFACTURER - TITUS

- 350-RL

MODEL NO. - AS PER ARCHITECTURAL REQUIREMENTS. FINISH - TO COORDINATE WITH LATEST FRAME TYPE

ARCHITECTURAL REFLECTING CEILING AND

CEILING GRID PLANS. - SEE PLANS

ARCHITECTURE + DESIGN 180 SYLVAN AVENUE, SUITE 3 ENGLEWOOD CLIFFS, NJ 07632

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# SSP AMERICA

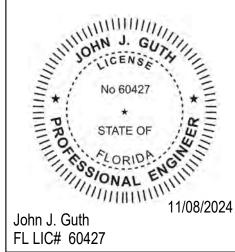
20408 BASHAN DRIVE SUITE 300 ASHBURN, VA 20147

PROJECT TEAM: Environetics Group Architects 180 Sylvan Ave. Englewood Cliffs, NJ 07632

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CONSULTING ENGINEERS, PC Guth DeConzo Consulting Engineers, PC 520 8th Avenue, Suite 2201 New York, NY 10018

CERTIFICATE OF AUTHORIZATION CA LIC. NO: 27747



# AIRPORT SARASOTA BRADENTON INTERNATIONAL **B-R1 SHOPPES AT**

DESIGN DELIVERABLE: ISSUE DATE: ISSUED FOR PERMIT 06/14/2024

PROJECT NUMBER: DRAWN BY:

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SHEET TITLE:

MECHANICAL SCHEDULES

M501

# 1. GENERAL CONDITIONS

- A. THE APPLICABLE PROVISIONS OF THE GENERAL CONSTRUCTION SPECIFICATIONS SHALL APPLY.
- B. THE BASE BUILDING GENERAL PROVISIONS AND BIDDING REQUIREMENTS ARE PART OF THIS SECTION AND CONTRACT. ALL WORK PERFORMED HEREUNDER SHALL BE SUBJECT THERETO.
- C. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE PART OF THESE SPECIFICATIONS THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SUBMITTING THE PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. THE CONTRACTOR, AT NO ADDITIONAL COST TO THE OWNER, SHALL CORRECT ANY WORK DONE BY HIM CAUSING SUCH VIOLATION
- D. THE CONTRACT DRAWINGS ARE GENERALLY DIAGRAMMATIC AND DO NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS FOR DUCTS & PIPING. THE CONTRACTOR SHALL ALLOW IN HIS PRICE FOR ROUTING OF DUCTS AND PIPING TO AVOID OBSTRUCTIONS. EXACT LOCATIONS ARE SUBJECT TO APPROVAL OF THE ARCHITECT/ENGINEER. THIS CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL NEW WORK WITH THE EXISTING SERVICES, INCLUDING THOSE OF OTHER TRADES.
- E. IT IS THE INTENTION OF THESE DRAWINGS AND SPECIFICATION TO CALL FOR FINISHED WORK TESTED AND READY FOR OPERATION. ALL MATERIALS, WORK, INCIDENTAL ACCESSORIES OR OTHER DETAILS NOT SHOWN BUT NECESSARY TO MAKE THE WORK COMPLETE AND PERFECT IN ALL RESPECTS AND READY FOR OPERATION, EVEN IF NOT PARTICULARLY SPECIFIED, SHALL BE PROVIDED BY THE CONTRACTOR WITHOUT ADDITIONAL COST TO THE AUTHORITY.
- F. THE CONTRACTOR SHALL PROVIDE ALL ITEMS OF LABOR OR MATERIALS NOT SPECIFICALLY INDICATED, BUT REQUIRED TO COMPLETE THE INTENDED INSTALLATIONS.
- G. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK MAY BE NECESSARY FOR THE PERFORMANCE OF THE NEW WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES IN MAKING UP THE WORK PROPOSAL.
- H. INVESTIGATE EACH SPACE THROUGH WHICH EQUIPMENT MUST BE MOVED. WHERE NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM THE MANUFACTURER IN SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH AVAILABLE RESTRICTIVE SPACES. ASCERTAIN FROM BUILDING OWNER AND TENANT AT WHAT TIMES OF DAY EQUIPMENT MAY BE MOVED THROUGH ALL AREAS.
- SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT A CAREFUL EXAMINATION OF THE PORTIONS OF THE EXISTING BUILDING, EQUIPMENT, ETC., WHICH EFFECT THIS WORK, AND THE ACCESS TO SUCH SPACES, HAS BEEN MADE AND THAT THE CONTRACTOR IS FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN DURING SUCH AN EXAMINATION. THE ON-SITE INSPECTION SHALL VERIFY EXISTING DUCTS (SIZES, CLEARANCES, ETC.) AND CONDITIONS. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND HIS PERFORMANCE AND WORK QUALIFICATIONS SHALL COMPLY WITH 72/10/23 FLORIDA BUILDING CONDEPA, THE APPLICABLE STANDARDS OF THE AMERICAN SOCIETY OF HEATING AND AIR CONDITIONING ENGINEERS, THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, AND THE REGULATION OF ANY OTHER AUTHORITY HAVING JURISDICTION.
- J. THE CONTRACTOR'S PROPOSAL TO BE DONE FOR ALL WORK PERFORMANCE DURING REGULAR WORKING HOURS. HOWEVER, WHEN DIRECTED BY THE CLIENT OR OWNER THIS CONTRACTOR CAN PERFORM WORK DURING OVERTIME HOURS. PRIOR TO DO SO CONTRACTOR TO OBTAIN WRITTEN AUTHORIZATION INDICATING DAYS, HOURS AND METHODS OF THE COMPENSATION FOR SUCH SERVICES.
- K. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM THE DESIGN DOCUMENTS MAY BE MADE TO ACCOMPLISH THIS AT NO ADDITIONAL COST TO THE CLIENT OR OWNER. ANY CHANGES TO THE DESIGN DOCUMENTS, THAT INVOLVE ADDING EXTRA COST TO THE PROJECT, CAN BE MADE ONLY AFTER APPROVAL FROM THE ENGINEER OF RECORD, ARCHITECT OR OWNER/CLIENT. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND HIS PERFORMANCE AND WORK QUALIFICATIONS SHALL COMPLY WITH 1216123 FLORIDA BUILDING CODE , NFPA, THE APPLICABLE STANDARDS OF THE AMERICAN SOCIETY OF HEATING AND AIR CONDITIONING ENGINEERS, THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, AND THE REGULATION OF ANY OTHER AUTHORITY HAVING JURISDICTION.
- CEILING HEIGHTS INDICATED ON DRAWINGS MUST BE MAINTAINED. THIS CONTRACTOR MUST RISE AND DROP DUCTWORK/PIPING BETWEEN EXISTING FRAMING AND UTILITIES AS REQUIRED CHANGES IN THE CROSS-SECTIONAL DIMENSIONS OF A DUCT ARE PERMISSIBLE WHEN REQUIRED TO MEET JOB CONDITIONS AND SHALL MAINTAIN AT LEAST THE SAME EQUIVALENT CROSS-SECTIONAL DUCT AREA IN ACCORDANCE WITH THE LATEST EDITION OF THE ASHRAE
- M. THE WORK UNDER THIS CONTRACT SHALL BE PERFORMED SIMULTANEOUSLY WITH WORK OF OTHER TRADES, SO AS NOT TO DELAY THE OVERALL PROGRESS OF WORK
- N. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR HIS WORK WITH ITS COMPLETION AND FINAL ACCEPTANCE AND SHALL REPLACE ANY OF SAME WHICH MAY BE DAMAGED. LOST OR STOLEN. WITHOUT ADDITIONAL COSTS TO THE OWNER.
- O. ALL MECHANICAL WORK SHALL BE FREE FROM DEFECTS IN BOTH WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE AND SHALL MEET ALL LOCAL AND STATE CODES. ALL DEFECTS, WHICH DEVELOP OR ARE DISCOVERED WITHIN THIS PERIOD SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COSTS.
- P. EXISTING DUCTS, PIPES, INSULATION, ETC., THAT ARE DAMAGED DURING CONSTRUCTION PERIOD, WHETHER OR NOT DUE TO THE CONTRACTOR'S NEGLIGENCE. SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AND LEFT IN A CONDITION SATISFACTORY TO THE BUILDING ENGINEER.
- Q. ALL WORK AND MATERIAL TO BE IN ACCORDANCE WITH BASE BUILDING SPECIFICATIONS, LEASE REQUIREMENT AND TENANT WORK LETTER UNLESS NOTED OTHERWISE ON PLANS. ALL MATERIALS AND EQUIPMENT ARE TO BE NEW AND FIRST CLASS QUALITY, UNLESS OTHERWISE NOTED, AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
- R. ALL WORK IS TO BE CONDUCTED IN ACCORDANCE WITH THE BUILDING'S RULE AND REGULATIONS. A COPY OF THE REGULATIONS CAN BE OBTAINED AT THE BUILDING OFFICE.
- S. THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, AND IN A MANNER SATISFACTORY TO THE OWNER. THE WORK SHALL BE PERFORMED SO AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO THE PRESENT OCCUPANTS.
- T. ALL PRESENT MATERIALS AND CONSTRUCTION DEBRIS TO BE REMOVED UNDER THIS CONTRACT SHALL BECOME RESPONSIBILITY OF THE CONTRACTOR. ALL REMOVED EXISTING EQUIPMENT TO BE RETURNED BACK TO THE BUILDING OR TO THE CLIENT/OWNER FOR THE DIRECTIONS AND/OR SAFE KEEPING.
- U. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. INSTALL ISOLATION VALVES AT THE POINT OF CONNECTION TO THE EXISTING PIPING AS NEEDED. PROVIDE TEMPORARY DUCT CAPS AND/OR CONNECTIONS TO MINIMIZE SHUTDOWN TIME.

- V. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND AN APPROVED MANNER. RESTORE EXISTING WORK DISTURBED WHILE INSTALLING NEW WORK TO ACCEPTABLE CONDITION AS DETERMINED BY ENGINEER.
- W. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW SYSTEM.
- X. ALL EXISTING SUPPLY, RETURN AND OUTSIDE AIR DUCTWORK AS WELL AS STEAM, HOT WATER AND CHILLED WATER PIPING WHERE INSULATION IS MISSING OR DAMAGED SHALL BE FULLY INSULATED WITH 1-1/2" THICK THERMAL INSULATION BY THIS CONTRACTOR AS PART OF THE
- Y. PROVIDE SMOKE DETECTORS AT SUPPLIES AND RETURNS FOR ALL AIR DISTRIBUTION SYSTEMS HAVING A CAPACITY OVER 2000 CFM. FOR SUPPLIES. DETECTORS SHALL BE INSTALLED DOWNSTREAM OF AIR FILTERS AND AHEAD OF ANY BRANCH CONNECTIONS. FOR RETURNS DETECTORS SHALL BE INSTALLED UPSTREAM OF ANY FILTERS, EXHAUST AIR, OUTDOOR AIR CONNECTIONS, OR DECONTAMINATION EQUIPMENT AND APPLIANCES.
- Z. WHERE RETURN AIR RISERS SERVE TWO OR MORE STORIES AS PART OF A RETURN AIR SYSTEM HAVING A DESIGN CAPACITY GREATER THAN 15,000 CFM, SMOKE DETECTORS SHALL BE INSTALLED
- AA. PROVIDE REMOVABLE ACCESS TILE AND/OR ACCESS DOORS IN HUNG CEILINGS, SHAFTS AND PROVIDE BUTTONS, TABS, AND MARKERS TO IDENTIFY LOCATION OF CONCEALED VALVES, DAMPERS AND EQUIPMENT.
- AB. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLED INSPECTION AS PART OF THIS CONTRACT. MECHANICAL CONTRACTOR SHALL PROVIDE THE NAME OF A LICENSED
- AC. THE FINAL ACCEPTANCE WILL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT BALANCED THE VARIOUS SYSTEMS. DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL REQUIRED CERTIFICATES OF
- AD. ALL OPENINGS RESULTING FROM REMOVAL OF EXISTING DUCTWORK, CEILING DIFFUSERS AND CEILING REGISTERS SHALL BE BLANKED-OFF AND CAPPED AIR TIGHT, AS PER SMACNA.
- AE. UNLESS OTHERWISE SPECIFIED, INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS. PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING. THE CONTRACTOR SHALL RESTORE THESE AREAS TO A CONDITION SATISFACTORY TO THE BUILDING MANAGER.
- AF. DESIGN AND PERFORMANCE OF COMPONENTS AND METHODS SPECIFIED HEREIN SHALL COMPLY WITH THE APPLICABLE PROVISIONS OF THE CODES, STANDARDS, AND MANUFACTURER'S

FBC	FLORIDA BUILDING CODE
ASHRAE E	AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING INGINEERS
FECC	FLORIDA ENERGY CONSERVATION CODE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE

- UL UNDERWRITER'S LABORATORIES, INC NFPA
- SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION **SMACNA**
- ASME AMERICAN SOCIETY OF MECHANICAL ENGINEERS
- AMERICAN REFRIGERATION INSTITUTE.
- MANUFACTURER'S STANDARDIZATION SOCIETY OF THE VALVE AND FITTING

# 2. OPERATING & MAINTENANCE INSTRUCTIONS

- A. AFTER FINAL TESTS AND ADJUSTMENTS, FULLY INSTRUCT OWNER'S OPERATING PERSONNEL IN ALL DETAILS OF OPERATION FOR EQUIPMENT INSTALLED.
- B. PROVIDE TO THE OWNER OPERATION AND MAINTENANCE MANUALS.
- C. GUARANTEE AND SERVICE
- 1. THE CONTRACTOR SHALL GUARANTEE THE ENTIRE INSTALLATION FOR A PERIOD OF ONE
- YEAR FROM THE DATE OF THE FINAL ACCEPTANCE OF THE INSTALLATION BY THE OWNER. 2. THE CONTRACTOR SHALL DURING THE PERIOD OF GUARANTEE REPLACE OR REPAIR AT HIS OWN EXPENSE ANY PIECE OF EQUIPMENT AND/OR MATERIAL WHICH IS FOUND TO BE DEFECTIVE. THE CONTRACTOR SHALL ALSO REPAIR ALL DAMAGE TO SURROUNDING WORK CAUSED BY THE FAILURE. REPAIR OR REPLACEMENT OF DEFECTIVE EQUIPMENT AT HIS OWN.

# SHOP DRAWINGS & EQUIPMENT SUBMISSIONS

- A. SIX (6) COPIES OF DUCTWORK AND PIPING AND CERTIFIED EQUIPMENT MANUFACTURER'S DATA SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION, ERECTION OR PURCHASE.
- B. <u>PRODUCT DATA</u> SUBMIT MANUFACTURER'S PRINTED LITERATURE, CATALOG CUTS, CERTIFIED EQUIPMENT PERFORMANCE DATA, WIRING DIAGRAMS AND INSTALLATION INSTRUCTIONS.
- C. SHOP DRAWINGS SUBMIT PLANS, SECTIONS, DETAILS, SCHEDULES AND CALCULATIONS. LAYOUTS SHALL BE DOUBLE LINE, SCALE: 3/8"=1'-0" COORDINATED WITH OTHER TRADES AND WITH BUILDING CONSTRUCTION ELEMENTS. SUBMIT ONE REPRODUCIBLE AND FIVE (5) PRINTS OF EACH DRAWING.
- D. <u>MAINTENANCE MANUALS</u> PREPARE OPERATING AND MAINTENANCE MANUAL INCLUDING THE
- **FOLLOWING** MANUFACTURER'S LITERATURE DESCRIBING EACH PIECE OF EQUIPMENT.
- COPIES OF PRODUCT WARRANTIES AND GUARANTIES. 3. OPERATING AND MAINTENANCE PROCEDURES, SERVICING INSTRUCTIONS.
- E. ALL SHOP DRAWINGS MUST BE APPROVED BY THE BUILDING MANAGEMENT OFFICE BEFORE CONSTRUCTION PROCEEDS, INCLUDING THE FOLLOWING: 1. CATALOG CUTS AND PERFORMANCE OF PROPOSED MECHANICAL EQUIPMENT (6 SETS).
- 2. CONTRACTOR 3/8"=1'-0" SCALE SHEET METAL SHOP DRAWINGS (6 SETS) SHOP DRAWINGS MUST BE APPROVED BY BUILDING MANAGEMENT OFFICE BEFORE CONSTRUCTION PROCEEDS.
- PRESSURE TEST REPORTS AND WATER PURITY TEST REPORTS (6 SETS).
- 4. AIR AND WATER BALANCE REPORTS (2 SETS). WHEN BALANCING REPORT IS SUBMITTED TO THE BUILDING, INCLUDE 1/16" SCALE HVAC DRAWING NOTING DIFFUSERS NOS. AND COLUMN NOS. REPORT MUST BE SUBMITTED WITHIN 2 WEEKS AFTER BALANCING IS COMPLETED.

# RECORD DRAWINGS

- A. REPRODUCIBLE RECORD DRAWINGS SHALL BE SUPPLIED UPON WHICH CORRECTIONS SHALL BE MADE TO PROVIDE AN ACCURATE AND COMPLETE RECORD OF THE WORK AS INSTALLED.
- B. AS-BUILT INFORMATION SHALL BE SUBMITTED AS FOLLOWS: CAD DRAWING FILES ON DISKS IN AUTOCAD VERSION 12 FORMAT.
- 2. ONE (1) SET OF REPRODUCIBLE DRAWINGS.
- 3. TWO (2) SETS OF BLUEPRINTS.

# 5. APPROVALS AND SUBSTITUTIONS

- A. IT IS THE INTENT OF THESE SPECIFICATIONS THAT WHEREVER A MANUFACTURER IS SPECIFIED AND SUBSTITUTIONS ARE MADE, THEY SHALL CONFIRM IN ALL RESPECTS TO THE SPECIFIED ITEM. CRITERIA AS DELINEATED FOR EQUIPMENT HALL BE INTERPRETED AS MINIMUM PERFORMANCE
- B. SUBSTITUTED EQUIPMENT WHERE PERMITTED MUST CONFORM TO SPACE REQUIREMENTS. ANY SUBSTITUTED EQUIPMENT THAT CANNOT MEET SPACE REQUIREMENTS, WHETHER APPROVED OR NOT, SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ANY MODIFICATION OF RELATED SYSTEMS OR ADDITIONAL COSTS THAT RESULT FROM SUBSTITUTED EQUIPMENT SHALL BE

# BORNE BY THIS CONTRACTOR. 6. VERIFYING EXISTING CONDITIONS. REMOVALS & ALTERATIONS

- A. THE CONTRACTOR SHALL VISIT THE PREMISES TO DETERMINE EXISTING CONDITIONS AND COMPARE SAME WITH DRAWINGS AND SPECIFICATIONS AND SATISFY HIMSELF OF ALL CONDITIONS PRIOR TO THE SUBMISSION OF A BID PROPOSAL. NO ALLOWANCE WILL BE MADE FOR FAILURE TO COMPLY WITH EVIDENCE HE HAS DONE SO.
- B. THE CONTRACTOR SHALL REMOVE, RELOCATE, REPLACE, ADJUST, ADAPT AND MODIFY EXISTING EQUIPMENT AND/OR SYSTEMS AS REQUIRED BY THE DRAWINGS OR SPECIFICATIONS AND AS MAY BE REQUIRED WHEN SUCH WORK IS UNCOVERED AND FOUND TO INTERFERE WITH THE COMPLETION OF WORK IN THIS CONTRACT OR OTHER CONTRACT WORK
- C. ALL REMOVED EQUIPMENT AND MATERIAL SHALL BE REMOVED FROM THE PROJECT SITE
- D. PROVIDE SHUTDOWNS, DRAINING AND REFILLING, RECONNECTIONS AND STARTUPS OF EXISTING SYSTEMS NECESSARY IN CONNECTION WITH THE NEW WORK COORDINATE SHUTDOWNS WITH
- E. TEMPORARY SERVICES: PROVIDE TEMPORARY SERVICES DURING THE INTERRUPTION IN SERVICE CREATED BY THE DEMOLITION OF THE EXISTING FACILITY AND UNTIL THE NEW FACILITY BECOMES OPERATIONAL. PROCURE RENTAL EQUIPMENT OF ADEQUATE CAPACITIES AND ASSUME ALL COSTS RELATED TO THIS INSTALLATION AND OPERATION OF SAME. ALL COSTS RELATED TO THE INSTALLATION AND PROVIDE CONNECTIONS TO BUILDING UTILITIES INCLUDING ELECTRICAL. BUILDING UTILITIES INCLUDING ELECTRICAL.

# 7. REMOVALS & ALTERATIONS

- A. THE CONTRACTOR SHALL REMOVE, RELOCATE, REPLACE, ADJUST, ADAPT AND MODIFY EXISTING EQUIPMENT AND/OR SYSTEMS AS REQUIRED BY THE DRAWINGS OR SPECIFICATIONS AND AS MAY BE REQUIRED WHEN SUCH WORK IS UNCOVERED AND FOUND TO INTERFERE WITH THE COMPLETION OF WORK IN THIS CONTRACT OR OTHER CONTRACT WORK.
- B. ALL REMOVED EQUIPMENT AND MATERIAL SHALL BE RETURNED TO THE BUILDING MANAGEMENT FOR THEIR DETERMINATION AS TO WHAT WILL HAPPEN TO SAID EQUIPMENT OR MATERIAL.

# 8. ACCESS DOORS IN FINISHED CONSTRUCTION

- A. THIS CONTRACTOR SHALL PREPARE A LIST OF ALL ACCESS DOORS REQUIRED FOR OPERATION AND MAINTENANCE OF ALL CONCEALED EQUIPMENT, DAMPERS, CONTROLS, AND OTHER SIMILAR DEVICES WHICH SHALL BE SUPPLIED TO THE GENERAL CONTRACTOR WHO SHALL FURNISH AND INSTALL SAME. ACCESS DOORS SHALL BE OF AMPLE SIZE (18x18 MINIMUM). COORDINATE LOCATION W/ ARCHITECT
- B. THIS CONTRACTOR IN ADVANCE OF CEILING INSTALLATIONS SHALL SUITABLY FIELD TAG AND IDENTIFY ALL CONCEALED EQUIPMENT, DAMPERS, ETC. WHICH REQUIRE ACCESS DOOR PROVISIONS.
- ACCESS KITS SHALL BE PROVIDED IN ACOUSTICAL TILE CEILING AS REQUIRED BY THIS CONTRACTOR FOR ACCESS TO ALL DAMPERS.
- D. ACCESS IS REQUIRED BELOW ALL DAMPERS, AC UNITS & HEAT PUMPS.
- ACCESS DOORS INSTALLED IN RATED CONSTRUCTION SHALL MATCH THE CONSTRUCTION'S RATING.

# 9. ELECTRICAL WIRING & WIRING DIAGRAMS

- A. ELECTRICAL WIRING FOR POWER AND MOTOR STARTERS SHALL BE PROVIDED BY THE ELECTRICAL
- B. THE MECHANICAL CONTRACTOR SHALL PREPARE AND SUBMIT FOR APPROVAL TERMINAL POINT TO TERMINAL POINT, COMPLETELY COORDINATED AND INTEGRATED WIRING DIAGRAMS FOR ALL WIRING REQUIRING FIELD INSTALLATIONS BY THE ELECTRICAL CONTRACTOR.
- C. SPECIFIC WIRING DIAGRAMS OF FACTORY INSTALLED EQUIPMENT WIRING SHALL ALSO BE SUBMITTED FOR APPROVAL AND FURNISHED TO THE ELECTRICAL CONTRACTOR FOR HIS INSTALLATION REQUIREMENTS AND OTHER USES.
- D. ALL CONTROL SHALL BE ELECTRIC, ALL ELECTRICAL WORK TO BE IN ACCORDANCE WITH FLORIDA STATE ELECTRICAL CODE. PROVIDE REQUIRED TRANSFORMER SWITCHES, SENSORS, RELAYS AND ALL WIRING REQUIRED TO ACCOMPLISH FULL CONTROL.
- E. ALL WIRING, STARTERS, SWITCHES, ETC. SHALL BE IN FULL ACCORDANCE WITH ALL LOCAL AND INSURANCE UNDERWRITERS' CODE REQUIREMENT.
- F. FURNISH DETAILED COMPOSITE WIRING DIAGRAMS FOR THOSE INSTALLING THE ELECTRICAL WORK AND FURNISH SUCH OTHER INFORMATION NECESSARY TO ASSURE THE PROPER CONNECTION. OPERATION AND CONTROL OF MOTORIZED EQUIPMENT, INCLUDING INTERLOCKS, AUTOMATIC OR SAFETY CONTROLS AND AUXILIARY CIRCUITS.

# 10. CODES, PERMITS AND INSPECTIONS

- BLDG. STANDARDS AND OTHER AUTHORITIES, EXERCISING JURISDICTION OF THE WORK OF THIS
- B. ANY PORTION OF WORK WHICH IS NOT SUBJECT TO THE APPROVAL OF AN AUTHORITY HAVING JURISDICTION SHALL BE PROVIDED IN ACCORDANCE WITH NATIONAL FIRE PROTECTION ASSOCIATION REQUIREMENTS.
- C. SECURE PERMITS AND INSPECTION CERTIFICATES AND TRANSMIT SAME TO THE OWNER AT THE COMPLETION OF THE WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR FILING ALL DOCUMENTS WITH ALL CITY AND STATE AGENCIES. CONTROLLED INSPECTION SHALL BE DONE BY CONTRACTOR IN THE PRESENCE OF A REPRESENTATIVE.

# 11. COORDINATION

- A. ALL NEW DUCTWORK SHALL BE KEPT AS HIGH AS POSSIBLE TO MAINTAIN CEILING HEIGHTS SHOWN ON ARCHITECTURAL DRAWINGS...
- B. MECHANICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADE.

- C. WHERE PIPING, LIGHTS AND DUCTWORK CONFLICT, DUCTWORK SHALL BE. COORDINATED TO SITE CONDITIONS.
- D. CONNECT NEW WORK TO EXISTING AS SHOWN ON THE DRAWING.
- E. CONTRACTOR SHALL COORDINATE EXACT LOCATION OF ALL AIR OUTLETS THERMOSTATS AND SWITCHES WITH ARCHITECT'S REFLECTED CEILING PLANS.
- F. COORDINATE LOCATION OF MECHANICAL EQUIPMENT, PIPING AND DUCTWORK WITH THE WORK OF OTHER TRADES, PROVIDING CLEARANCES FOR INSULATION SERVICING, REMOVAL OF COMPONENTS AND EQUIPMENT DISASSEMBLY.
- G. COORDINATE PROVISION OF OPENINGS IN WALLS AND SLABS, POURING OF CONCRETE PADS. SETTING OF SLEEVES AND CURBS.
- H. VERIFY ALL DIMENSIONS BY FIELD MEASUREMENT.
- I. SEQUENCE PHASES OF MECHANICAL WORK WITH THE WORK OF OTHER TRADES.

# 12. MOTOR STARTERS & CONTROL DEVICES

- A. FURNISH TO THE ELECTRICAL CONTRACTOR WHO SHALL ERECT AND WIRE SUITABLE STARTING AND CONTROL EQUIPMENT FOR ALL MOTORS.
- B. MOTOR STARTERS SHALL BE CUTLER HAMMER, WESTINGHOUSE OR ALLEN-BRADLEY MANUFACTURE, SUITABLE FOR WALL OR ANGLE IRON FRAME MOUNTING.
- C. GENERAL NOTES:
- 1. ALL STARTERS FOR MOTOR 1/2HP AND ABOVE SHALL BE MAGNETIC ACROSS-THE-LINE TYPE WITH SWITCH. SUCH STARTERS SHALL BE 460 VOLT, 3 PHASE, 60 CYCLE, A.C. SERVICE.
- 2. ALL MAGNETIC STARTERS SUBJECT TO MANUAL START AND IN DIRECT VIEW OF THE MOTORS THEY CONTROL SHALL HAVE MOMENTARY CONTACT START AND STOP BUTTONS AND PILOT LIGHT BUILT INTO COVER. ALL SELECTOR SWITCHES IN STARTERS SHALL BE OF THE MAINTAIN CONTACT TYPE.
- 3. WHERE STARTERS ARE NOT IN SIGHT OF MOTORS THEY CONTROL, A LOCAL DISCONNECT SWITCH WILL BE PROVIDED BY THE ELECTRICAL CONTRACTOR
- 4. ALL MAGNETIC STARTERS SHALL HAVE THERMAL OVERLOAD IN EACH PHASE LEG AND LOW VOLTAGE PROTECTION. 5. ALL COILS, CORES, RESISTANCE, INSULATION CONTACTS, TRIPPERS, ETC. OF

ALL LOCAL AND INSURANCE UNDERWRITERS' CODE REQUIREMENTS.

STARTERS AND RELAYS SHALL BE OF THE APPROVED TYPE. ALL PARTS SUBJECT TO WEAR, ARCING, ETC., SHALL BE RENEWABLE. 6. ALL WIRING, STARTERS, SWITCHES, ETC., SHALL BE IN FULL ACCORDANCE WITH

# 13. NOISE CONTROL

- A. PROVIDE ACOUSTIC DUCT LINER FOR THE FOLLOWING DUCTS: 1. ALL DUCTS UPSTREAM AND DOWNSTREAM FROM ALL FANS AND AIR CONDITIONING UNITS FOR A LENGTH OF NOT LESS THAN 15 FT.
- 2. ALL AIR TRANSFER DUCTS. 3. DOWNSTREAM AND UPSTREAM OF ALL VARIABLE AIR VOLUME AND CONSTANT
- VOLUME BOXES FOR A MINIMUM OF 10 FT. ALL MIXED AIR PLENUMS, EXCEPT WHERE MOISTURE CARRYOVER FROM
- OUTDOOR AIR LOUVER WILL OCCUR. WHERE NOTED ON THE CONTRACT DRAWINGS.
- B. MATERIAL SHALL BE FIBERGLASS, MINIMUM 3 LB. DENSITY, 1 IN. THICKNESS, MAXIMUM 0.26 K FACTOR AT 75° F MEAN TEMPERATURE WITH NEOPRENE COATED FINISH AND STENCILED IN ACCORDANCE WITH NFPA 90 MAXIMUM FLAME SPREAD SHALL BE 25, AND MAXIMUM SMOKE DEVELOPED SHALL BE 50. IT SHALL BE SIMILAR TO JOHNS-MANVILLE LINACOUSTIC, OR AN APPROVED EQUAL.
- C. ALL SOUND-LINING, ADHESIVES, FACES AND ACCESSORIES TO BE APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, EXCEPT AS OTHERWISE NOTED.
- D. PROVIDE RESILIENT SUPPORTS (ISOLATORS) FOR METAL PIPING UP STREAM AND DOWNSTREAM FROM ALL POWER DRIVEN EQUIPMENT FOR A LENGTH OF 10 FT, OR 50 PIPE DIAMETERS. WHICHEVER IS GREATER.
- E. RESILIENT ISOLATORS SHALL HAVE THE FOLLOWING MINIMUM STATIC
- DEFLECTIONS: 1 INCH FOR PIPING WITH OUTSIDE DIAMETERS 4 INCHES AND LARGER.  $\frac{1}{2}$  INCH FOR PIPING WITH OUTSIDE DIAMETERS LESS THAN 4 INCHES.
- F. EQUIPMENT SUCH AS HEAT EXCHANGERS, ABSORPTION REFRIGERATION MACHINES, OR SIMILAR EQUIPMENT THAT IS NOT POWER DRIVEN, WITHIN 50 PIPE DIAMETERS OF POWER DRIVER EQUIPMENT SHALL ALSO BE RESILIENTLY SUPPORTED. UNLESS THE EQUIPMENT IS MOUNTED ON A GRADE LEVEL FLOOR. 1. ISOLATORS WILL HAVE 1 INCH STATIC DEFLECTION AND SHALL INCORPORATE

# 14. VIBRATION ISOLATION SYSTEMS

APPROVED PADS WITHICH STATIC DEFLECTION.

OCCUPIED SPACES AND TO THE BUILDING STRUCTURES.

- A. ALL ROTATING, REVOLVING OR RECIPROCATING EQUIPMENT, SHALL BE FURNISHED WITH SEISMICALLY DESIGNED VIBRATION ISOLATORS, TO PREVENT THE TRANSMISSION OF OBJECTIONABLE NOISES, SOUND OR VIBRATIONS TO THE
- B. VIBRATION ISOLATORS FOR CEILING SUPPORTED EQUIPMENT SHALL HAVE A MAXIMUM LATERAL MOTION UNDER EQUIPMENT START-UP OR SHUTDOWN CONDITIONS OF 1/4". MOTIONS IN EXCESS SHALL BE RESTRAINED BY SPRING TYPE
- C. VIBRATION ISOLATOR SHALL BE PROVIDED BY EITHER OF THE FOLLOWING MANUFACTURERS:

AND TO WHICH SHALL BE ATTACHED TO THE HANGERS.

- MASON INDUSTRIES. 2. VIBRATION ELIMINATOR CO.
- CONSOLIDATED KINETICS CO.

CONDITIONS.

- D. MOUNTING OF CEILING SUPPORTED FANS AND AC UNITS: 1. ALL SUCH UNITS SHALL BE HUNG BY MEANS OF VIBRATION ISOLATOR HANGERS MADE OF A STEEL HOUSING OR RETAINER INCORPORATING A STEEL SPRING
- AND NEOPRENE MOUNTING. 2. IF THE EQUIPMENT TO BE MOUNTED IS NOT FURNISHED WITH INTEGRAL STRUCTURAL FRAMES AND EXTERNAL MOUNTING LUGS (BOTH OF SUITABLE STRENGTH AND RIGIDITY), APPROVED STRUCTURAL SUB-BASE SHALL BE INSTALLED IN THE FIELD WHICH SHALL SUPPORT THE EQUIPMENT TO BE HUNG
- ISOLATORS SHALL BE ONE OF THE FOLLOWING OR AS APPROVED: a. FANS - TYPE HD - M.I.I. AND SUPPLY/OUTSIDE AIR FANS. b. AIR HANDLING UNITS - TYPE 30N M.I.I. - MAXIMUM 1.75". c. STATIC DEFLECTION AT INSTALLED OPERATING WEIGHTS

HORIZONTAL MOTION TO 1/4 INCH MAXIMUM UNDER FAN OPERATING

4. DIAGONAL HANGER ROD ISOLATORS SHALL BE PROVIDED AS REQUIRE TO LIMIT

ARCHITECTURE + DESIGN 180 SYLVAN AVENUE, SUITE 3 ENGLEWOOD CLIFFS, NJ 07632 TEL 201 | 894 | 1000 ENV-team.com ENVIRONETICS GROUP ARCHITECTS, P.C

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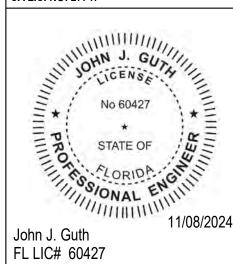
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Guth DeConzo Consulting Engineers, PC



# **AIRPOR ATIONAL** INTERI ENTON BRAD OTA

SHOP

**ARAS** DESCRIPTION DESIGN ISSUED FOR

PERMIT

06/14/2024

PROJECT 24017B NUMBER DRAWN BY: CHECKED BY: HA

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DELIVERABLE:

ISSUE DATE:

**MECHANICAL SPECIFICATIONS** (SHEET 1 OF 3)

M60<sup>4</sup>

SCOPE OF WORK AT NO ADDITIONAL COST TO THE CLIENT.

AT EACH STORY AND UPSTREAM OF THE DUCT OR PLENUM CONNECTIONS TO THE RISERS.

WALLS FOR VOLUME DAMPERS AND ALL OTHER BASE BUILDING MECHANICAL EQUIPMENT AND DEVICES THAT ARE LOCATED INSIDE THE TENANT SPACES. HVAC CONTRACTOR SHALL FURNISH ACCESS LOCATION REQUIREMENTS TO A GENERAL CONTRACTOR. ACCESS TILE IDENTIFICATION:

PROFESSIONAL ENGINEER TO ARCHITECT WHEN AWARDED CONTRACT.

INSPECTION AND APPROVAL

RECOMMENDATIONS OF THE ENTITIES LISTED BELOW:

AMERICAN NATIONAL STANDARDS INSTITUTE

NATIONAL FIRE PROTECTION ASSOCIATION

AIR MOVING AND CONTROL ASSOCIATION

- CONTRACTOR UNDER ANOTHER DIVISION OF CONTRACT WORK.

- ALL WORK SHALL MEET OR EXCEED LATEST REQUIREMENTS OF THE FLORIDA CODE, MRI MNFR.,

# MECHANICAL SPECIFICATIONS

# 15. SHEET METAL DUCTWORK

- A. ALL DUCTWORK, DAMPERS AND ALL AUXILIARY DEVICES AND WORK NECESSARY TO MAKE THE VARIOUS AIR CONDITIONING AND VENTILATING SYSTEMS COMPLETE AND READY FOR SATISFACTORY OPERATION SHALL BE FURNISHED AND INSTALLED.
- B. IN ACCORDANCE WITH SMACNA STANDARDS PROVIDE DUCTWORK CASING ACCESS AIR CONNECTION AND BRANCH DUCT TO AIR OUTLETS FOR BALANCING PURPOSES, DOORS TO ALL CONCEALED CONTROLS, FUSIBLE LINKS OF DAMPERS, ETC.
- C. PROVIDE FUSIBLE LINK FIRE DAMPERS/ COMBINATION FIRE SMOKE DAMPERS AT LOCATION SHOWN ON DRAWINGS AND WHERE NECESSARY TO COMPLY WITH LOCAL OR OTHER AGENCIES OR JURISDICTIONS REQUIRING THEIR INSTALLATIONS AND IN COMPLIANCE WITH THEIR CONSTRUCTION REQUIREMENTS.
- D. DUCTWORK LAYOUTS AND ROUTES AS SHOWN ON THE DRAWINGS ARE SCHEMATIC THEREFORE CHANGES IN DUCT SIZES AND/OR LOCATIONS SHALL BE MADE WHERE NECESSARY TO CONFORM TO SPACE CONDITIONS OR OBTAIN MAXIMUM HEADROOM CONDITIONS; WITHOUT ADDITIONAL COSTS TO THE OWNER.
- E. FLEXIBLE DUCTS SHALL NOT BE ACCEPTED.
- F. EXCEPT AS OTHERWISE SHOWN OR NOTED, ALL DUCTS AND OTHER SHEET METAL WORK SHALL BE PRIME SHEETS OF GALVANIZED STEEL AND SHALL COMPLY WITH NFPA 90A AND ASTM STANDARDS A525 AND A527.
- G. DUCTS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITIONS OF SMACNA AND ASHRAE. FOR DUCTWORK DOWNSTREAM OF AIR CONDITIONING UNITS A PRESSURE CLASSIFICATION OF 4" W.G. STATIC PRESSURE MAY BE USED. FOR DUCTWORK UPSTREAM OF THE AC UNIT A PRESSURE CLASSIFICATION OF 3" W.G. STATIC PRESSURE MAY BE USED. U.S. STANDARD GAUGES FOR DUCTWORK ARE TO CONFORM TO THE FOLLOWING REQUIREMENTS:
- 1. UP TO 30" WIDE 24 GAUGE.
- 2. 31" TO 48" WIDE 22 GAUGE.
- 49" TO 60" WIDE 20 GAUGE
- 4. 61" AND OVER 18 GAUGE. PRESSURE CLASSIFICATION REQUIREMENT WILL VARY FOR OTHER TYPE SYSTEMS DEPENDING ON THE APPLICATION
- H. MATERIALS FOR HANGERS & SUPPORTS, INCLUDING FASTENERS, ANCHORS, RODS, STRAPS TRIM HANGERS SECURED TO THE EXISTING CONCRETE SLAB ABOVE. THE EXISTING TABS THAT ARE EMBEDDED IN THE CONCRETE ARE TO BE INSPECTED AND USED IN LIEU OF NEW EXPANSION
- BOLTS WHEREVER POSSIBLE. REFER TO DETAILS SHOWN ON CONTRACT DRAWINGS. SHEETMETAL DUCTWORK SHALL BE SUPPORTED WITH APPROVED HANGERS AT NOT LESS THAN

10FT INTERVALS FROM BUILDING STRUCTURE, OR BY OTHER APPROVED SUPPORT SYSTEMS

- DESIGNED IN ACCORDANCE WITH FLORIDA BUILDING CODE. J. FLEXIBLE DUCTWORK, WHERE APPROVED, SHALL BE SUPPORTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- K. ALL DUCTWORK INSTALLED EXPOSED TO VIEW SHALL BE FABRICATED WITH SLIP-ON TRANSVERSE JOINTS AND COMPONENTS CONSTRUCTED USING MANUFACTURER'S GUIDELINES FOR MATERIAL THICKNESS, REINFORCEMENT SIZE AND SPACING, AND JOINT REINFORCEMENT. PROVIDE INTERNAL INSULATION CONFORMING TO SECTION "NOISE CONTROL" OF THIS SPECIFICATION.
- L. ALL DUCT SIZES SHOWN ON THE CONTRACT DRAWINGS ARE CLEAR INSIDE DIMENSIONS. WHERE INTERNAL ACOUSTICAL LINING IS REQUIRED, DUCT SIZES SHALL BE CORRESPONDINGLY INCREASED TO ACCOMMODATE THE LINER THICKNESS SO THAT NET CROSS-SECTIONAL AREAS WILL NOT BE REDUCED.
- M. RADIUS ELBOWS SHALL HAVE A CENTERLINE RADIUS EQUAL TO 1-1/2 TIMES DUCT WIDTH. PROVIDE SPLITTER VANES IN RADIUS ELBOWS WHERE INDICATED ON DRAWINGS SQUARE ELBOWS SHALL HAVE DOUBLE THICKNESS TURNING VANES MAXIMUM 4 IN. ON CENTER UNLESS SINGLE THICKNESS VANES ARE CLEARLY INDICATED ON THE DRAWINGS.
- N. TRANSITIONS IN DUCTWORK SHALL BE MADE WITH A SLOPE NOT TO EXCEED A RATIO OF 1 TO 5. A 1 TO 7 SLOPE RATIO IS PREFERRED.
- O. FOR DUCTS WITH A CROSS-SECTIONAL AREA 4 SQUARE FEET OR LESS, HANGERS SHALL BE NO MORE THAN 8 FEET APART; FOR DUCTS WITH A CROSS-SECTIONAL AREA OF MORE THAN 4 SQUARE FEET BUT NOT OVER 10 SQUARE FEET; HANGERS SHALL BE NO MORE THAN 6 FEET APART; AND FOR DUCTS WITH A CROSS-SECTIONAL AREA OF MORE THAN 10 FEET, HANGERS SHALL BE NO MORE THAN 4 FEET APART. THE DISTANCES BETWEEN HANGERS SHALL BE MEASURED LINEAL ALONG THE DUCT.
- P. ALL BRANCHES, TAKE-OFFS AND TIE-INS TO ALL BASE BUILDING DUCTS SHALL BE EQUIPPED WITH VOLUME CONTROLLING DEVICES. THESE SHALL BE OPPOSED BLADE DAMPERS. SPLITTER DAMPERS SHALL NOT BE ACCEPTED. PROVIDE ADJUSTABLE VOLUME EXTRACTORS WHERE SHOWN ON DRAWINGS OR WHERE REQUIRED BY SHEET METAL CONTRACTOR'S LAYOUT.
- Q. VOLUME DAMPERS CONSTRUCTION SHALL BE QUADRANT TYPE, MINIMUM 16 GAUGE, GALVANIZED STEEL, IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE SMACNA MANUAL, EXCEPT PROVIDE BEARING AT ONE END OF DAMPER ROD AND QUADRANT. INCLUDE APPROVED LEVER OPERATING AND LOCK-SCREW LOCKING DEVICES, MOUNTED AT OTHER END. AND INSTALLED IN ACCESSIBLE LOCATIONS. FOR INSULATED DUCTS, QUADRANTS SHALL BE MOUNTED ON A COLLAR TO CLEAR INSULATION.
- R. UNLESS OTHERWISE NOTED, ALL NEW AND EXISTING LOW VELOCITY DUCTS SHALL BE SEALED TO MEET THE DUCT SEALING REQUIREMENT OF SEAL CLASS A4 W.G. OF SMACNA. THE FIRE HAZARD CLASSIFICATION OF THE SEALANT SHALL BE CLASS 1 (MAXIMUM FLAME SPREAD RATE OF 25. MAXIMUM SMOKE DEVELOPED RATE OF 50).
- S. ALL ACCESS DOORS SHALL BE AS PER SMACNA STANDARDS. PROVIDE ACCESS DOORS IN INSULATED DUCTS OF INSULATED DOUBLE PANEL CONSTRUCTION, NOT LESS THAN 20 GAUGE, GALVANIZED STEEL. PROVIDE ACCESS DOORS IN UNINSULATED DUCTS OF SINGLE PANEL CONSTRUCTION NOT LESS THAN 18 GAUGE, GALVANIZED STEEL. PROVIDE ALL ACCESS DOORS WITH SPONGE RUBBER GASKETS AROUND THEIR ENTIRE PERIMETER.
- HARD DUCT CONNECTIONS TO SUPPLY AIR DIFFUSER COLLARS AND DUCTS SHALL BE SEALED WITH 3M CO. 800 SEALANT AND CLAMPED WITH STAINLESS STEEL "IDEAL" TYPE 52 CLAMP.
- U. AUTOMATIC DAMPERS SHALL BE PROVIDED COMPLETE WITH DAMPER LINKAGE, OUTSIDE AIR STREAM MOUNTED, AND AN ELECTRIC OPERATOR. OPPOSED BLADE DAMPER, GALVANIZED STEEL WITH COMPRESSIBLE EDGE SEALS TO PREVENT LEAKAGE. FACTORY-ASSEMBLED STEEL LINKAGE AND SHAFT WITH NYLON OR OIL-IMPREGNATED BRONZE BEARINGS. MOTOR WITH SUFFICIENT POWER TO LIMIT LEAKAGE TO A MAXIMUM 10 CFM PER SQ. FT. AT 1 IN. W.G. LINKAGE TO WITHSTAND LOAD EQUAL TO TWICE MAXIMUM OPERATING FORCE WITHOUT DEFLECTION. DAMPER SHALL BE MOUNTED IN WELDED STEEL CHANNEL FRAME.
- V. THE WIRE MESH SCREEN WHERE SHOWN ON DRAWINGS AND WHERE REQUIRED SHALL BE NO. 16 USSG, 3/4" SQUARE MESH, IN ONE IN. WIDE GALVANIZED STEEL ENCLOSING FRAME. FLANGED DUCT OPENING TO RECEIVE FRAME.
- W. COMBINATION FIRE/SMOKE DAMPERS MEETING OR EXEEDING THE FOLLOWING.
  - SPECIFICATIONS SHALL BE FURNISHED AND INSTALLED AT LOCATIONS SHOWN ON PLANS OR AS DESCRIBED IN SCHEDULES. DAMPERS SHALL MEET THE REQUIREMENTS OF NFPA90A AND 92B AND SHALL BE CLASSIFIED FOR USE FOR FIRE RESISTANCE RATINGS OF LESS THAN 3 HOURS, IN ACCORDANCE WITH UL555. DAMPERS SHALL FURTHER BE CLASSIFIED AS LEAKAGE CLASS 1 RATED DAMPERS (4 CFM/SQ.FT. AT 1" W/G/) FOR USE IN SMOKE CONTROL SYSTEMS IN ACCORDANCE WITH THE LATEST VERSION OF UL555S.

# 16. TESTING, ADJUSTMENTS AND BALANCING OF HYDRONIC SYSTEMS

- A. BEFORE ANY HYDRONIC BALANCING WORK IS DONE, INSTALL CLEAN STRAINERS, CHECK PROPER PUMP ROTATION, PROPER CONTROL VALVE INSTALLATION AND OPERATION, VERIFY THAT EACH SYSTEM IS ADEQUATELY BLED AND VENTED, PROPER SYSTEM STATIC PRESSURE IS AVAILABLE TO ASSURE A FULL SYSTEM, FLOW METER AND CHECK VALVE IS PROPERLY INSTALLED. MAINTAIN THROTTLING DEVICES AND CONTROL VALVES OPEN AT THIS TIME AS REQUIRED AND APPROPRIATE.
- AFTER PIPING SYSTEMS HAVE BEEN INSTALLED, TESTED, CLEANED AND FLUSHED, COMPLETE WITH ALL PUMPS, PIPING, VALVES, COILS, AND OTHER ITEMS AS HEREIN SPECIFIED, MAKE ADJUSTMENTS AS REQUIRED TO DELIVER THE WATER VOLUMES AT EACH COIL AND PIECE OF EQUIPMENT TO WITHIN 5% OF DESIGN FLOW AS SHOWN ON THE DRAWINGS, OR AS REQUIRED TO PROPERLY BALANCE THE LOAD THROUGHOUT THE CONDITIONED AREAS. DURING BALANCING SET CONTROL FOR FULL-FLOW THROUGH COILS. SET AUTOMATIC THROTTLING VALVES IN THE FULL-OPEN POSITION. CLOSE THE BYPASS PORT ON AUTOMATIC 3-WAY VALVES. CONFIRM PROPER DIFFERENTIAL PRESSURE SETTINGS AT SYSTEM BY-PASS STATION.
- C. EACH AIR HANDLING UNIT WITH MULTIPLE COILS SHALL HAVE THE FLOW THROUGH EACH COIL BALANCED. MAKE ADJUSTMENTS IN WATER VOLUMES IN A MANNER SATISFACTORY TO THE ENGINEER. SUBMIT DETAILED BALANCING PROCEDURE AND RECORDING FORMS FOR THE ENGINEER'S REVIEW MONTHS PRIOR TO COMMENCING ANY WATER BALANCING WORK.
- D. AFTER WATER FLOW IS ADJUSTED, AND WITH THE TEMPERATURE CONTROLS SET TO PRODUCE DESIGN COOLING, MEASURE AND RECORD ALL DATA NECESSARY TO COMPILE A COMPLETE REPORT TO DEMONSTRATE THE ACCEPTABILITY OF THE VARIOUS MECHANICAL SYSTEMS.
- RECORD THE FOLLOWING DESIGN REQUIREMENTS FOR PUMPS AND PUMP MOTORS FROM THE DESIGN DRAWINGS AND REVIEWED SHOP DRAWINGS:
- 1. MANUFACTURER, MODEL AND SIZE.
- WATER QUANTITY GALLONS PER MINUTE
- 3. TOTAL HEAD FEET OF WATER.
- 4. PUMP SPEED REVOLUTIONS PER MINUTE.
- 5. IMPELLER SIZE. 6. NET POSITIVE SUCTION HEAD.
- 7. MOTOR HORSEPOWER AND BRAKE HORSEPOWER.
- 8. VOLTS, HERTZ, AMPERES AND SERVICE FACTOR AT DESIGN CONDITIONS.
- AND ANGLES SHALL MATCH THE DUCT FURNISHED. HORIZONTAL DUCTS CAN BE SUPPORTED WITH F. RECORD THE FOLLOWING DATA FROM PUMPS AND PUMP MOTORS INSTALLED AT THE PROJECT: 1. MANUFACTURER, MODEL AND SIZE.
  - IMPELLER SIZE. 3. MOTOR HORSEPOWER, SERVICE FACTOR AND REVOLUTIONS PER MINUTE.
  - 4. VOLTS, HERTZ AND FULL LOAD AMPERES.
  - 5. MOTOR STARTER AND HEATER SIZE.
  - 6. EQUIPMENT LOCATION.
  - G. RECORD THE FOLLOWING DATA FOR PUMPS AND PUMP MOTORS INSTALLED AT THE PROJECT: 1. PUMP SPEED - REVOLUTIONS PER MINUTE
    - 2. TOTAL HEAD AT SHUTOFF OR DEAD-END DISCHARGE FEET OF WATER. (PLOT THIS VALUE ON PUMP CURVE AS A VERIFICATION OF IMPELLER SIZE.)
  - 3. SUCTION, DISCHARGE AND TOTAL HEAD AT FINAL ADJUSTED FLOW IN FEET OF WATER. 4. CALCULATE BRAKE HORSEPOWER AND SHOW ON PUMP CURVE
  - MOTOR AMPERAGE AND VOLTAGE ON EACH PHASE AT OPERATING CONDITIONS.
  - H. ADJUST FLOW THROUGH EQUIPMENT AND COILS BY MEANS OF PRESSURE DROP. OBTAIN CURVES FROM THE VARIOUS MANUFACTURERS INDICATING THE RELATIONSHIP BETWEEN FLOW AND PRESSURE DROP THROUGH THE COILS AND EQUIPMENT. TAKE READINGS ON CALIBRATED TEST GAUGES.
  - FOR ORIFICE PLATES RECORD THE PIPE SIZE, ORIFICE SIZE, FLOW FACTOR, REQUIRED DIFFERENTIAL PRESSURE, FINAL DIFFERENTIAL PRESSURE, AND CALCULATED FINAL FLOW QUANTITY.
  - FOR VENTURI TYPE, PITOT TUBE, OR OTHER FLOW MEASURING DEVICES, RECORD THE PIPE SIZE, MANUFACTURER AND SIZE OF DEVICE, AND THE DIRECT READING OF THE DIFFERENTIAL
  - PRESSURE, AND CALCULATED FINAL FLOW K. UPON COMPLETION OF THE WATER BALANCE, RECONCILE THE TOTAL HEAT TRANSFER THROUGH ALL COILS BY RECORDING THE ENTERING AND LEAVING WATER TEMPERATURES AND THE ENTERING AND LEAVING AIR DRY BULB AND WET BULB TEMPERATURES. ADJUST DIFFERENTIAL
  - BYPASSES FOR THE SAME PRESSURE DROP ON FULL BYPASS AS ON FULL FLOW. L. DO NOT PERFORM ADJUSTMENTS UNTIL THE ENTIRE SYSTEM HAS BEEN PRESSURE TESTED
  - M. IN CONJUNCTION WITH PUMP MANUFACTURER FOR MULTIPLE PUMP, PUMPING SYSTEMS, CONSTRUCT AND SUBMIT SYSTEM CURVES INDICATING OPERATING POINT WITH ONE PUMP OPERATING, TWO PUMPS OPERATING, THREE PUMPS OPERATING, ETC.
  - N. RECORD ALL SYSTEM PRESSURE AND TEMPERATURE READINGS.

# 17. TESTING, ADJUSTMENTS AND BALANCING OF AIR SYSTEMS

- WORK IN THIS SECTION INCLUDES THE PROVIDING OF LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY FOR COMPLETE TESTING, ADJUSTING, AND BALANCING OF ALL HVAC SYSTEMS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, PROCEDURES AND STANDARDS DESCRIBED IN THE LATEST MANUALS AS PUBLISHED BY AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS (ASHRAE) AND THE SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION, INC. (SMACNA) FOR THE FOLLOWING: ALL OF THE AIR SYSTEMS.
- ALL SUPPLEMENTARY TENANT AIR CONDITIONING UNITS.
- PERIMETER INDUCTION UNITS. ALL RETURN, TRANSFER AND EXHAUST AIR SYSTEMS.
- THE CONTRACTOR SHALL PROVIDE THE SERVICES OF AN AIR BALANCING AND TESTING SPECIALIST WHO SPECIALIZES IN HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS.
- C. ALL INSTRUMENTS USED SHALL HAVE AN UNEXPIRED CALIBRATION, AND WILL BE MAINTAINED IN GOOD WORKING ORDER.
- THE TESTING SHALL BE PERFORMED IN THE PRESENCE OF A BUILDING REPRESENTATIVE.
- THE CONTRACTOR SHALL PROVIDE ALL ADDITIONAL BALANCING DAMPERS, PRESSURE TAPS, GAUGES AND OTHER SIMILAR APPURTANCES AS REQUIRED FOR A PROPERLY BALANCED SYSTEM AND AT NO ADDITIONAL COST TO THE OWNER.
- ALL BALANCING WORK SHALL BE PERFORMED IN STRICT ACCORDANCE TO THE PROCEDURES AND STANDARDS DESCRIBED IN THE "MANUAL FOR THE BALANCING AND ADJUSTMENT OF THE AIR DISTRIBUTION SYSTEMS" AS PUBLISHED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION, INC. (SMACNA)
- THE TEST AND AIR BALANCE PROCEDURE SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
- PITOT TUBE TRAVERSE READINGS OF MAIN SUPPLY AND RETURN DUCTS. TEST AND ADJUST SYSTEM FOR THE DESIGN SUPPLY, RETURN AND EXHAUST AIR QUANTITIES.
- TEST AND RECORD SUPPLY AIR TEMPERATURES.
- TEST AND RECORD ROOM AIR TEMPERATURES.

COMPLETION WITHIN THE SPECIFIED TIME.

- ADJUST ALL MAIN SUPPLY, EXHAUST AND RETURN AIR DUCTS TO PROPER DESIGN CFM. ADJUST ALL ZONES TO PROPER DESIGN CFM - SUPPLY, RETURN AND EXHAUST TEST AND ADJUST EACH DIFFUSER, GRILLE AND REGISTER TO DESIGN REQUIREMENTS.
- H. THE CONTRACTOR SHALL HAVE THE TESTING AND BALANCING SPECIALIST COORDINATE ALL WORK OF THIS SECTION WITH THE RESPECTIVE MANUFACTURERS OF THE EQUIPMENT INVOLVED. BALANCING WORK SHALL NOT INTERFERE WITH NORMAL JOB PROGRESS SO AS TO PREVENT
- THE CONTRACTOR SHALL HAVE THE TESTING AND BALANCING SPECIALIST REVIEW HIS WORK WITH THE RESPECTIVE MANUFACTURERS, AND SHALL COORDINATE AND SCHEDULE ALL CORRECTIVE WORK

- J. IN THE EVENT THAT THE EQUIPMENT CANNOT BE PROPERLY BALANCED DUE TO LACK OF FINAL CONNECTION, THE CONTRACTOR SHALL HAVE THE TESTING AND BALANCING SPECIALIST ADVISE THE ENGINEER, IN WRITING, OF THE OMISSION PRIOR TO THE SUBMISSION OF THE FINAL BALANCING REPORT.
- K. ADJUSTMENT OR REPLACEMENT OF PARTS REQUIRED BY THE RESULTS OF THE TESTING AND BALANCING WORK SHALL BE MADE BY THE CONTRACTOR IN STRICT ACCORDANCE WITH THE RESPECTIVE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
- L. UPON COMPLETION OF WORK SPECIFIED ABOVE, ALL INFORMATION SHALL BE INSERTED ON A SHEET LISTING ALL ITEMS REQUIRED TO BE INCLUDED IN THE COMPLETE TESTING AND BALANCING REPORT. ALL SHEETS SHALL BE NEATLY TYPED. THREE (3) COPIES OF THE BALANCING REPORT MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW.
- M. ALL OPENING IN DUCTS PLENUMS AND OTHER SIMILAR ITEMS, NECESSARY TO THE BALANCING WORK, SHALL BE REPAIRED BY THE CONTRACTOR IN A SUITABLE MANNER. ALL PATCHING MUST BE SUITABLE TO THE SERVICE OF THE SYSTEM SUCH AS MAINTAINING VAPOR SEALS IN COLD DUCTWORK AND OTHER SIMILAR SERVICES.
- N. RECOMMENDATIONS AND RESULTS OF THE TESTING AND BALANCING WORK WHICH ARE NECESSARY FOR THE PROPER OPERATION OF THE SYSTEMS, SHALL BE SUBMITTED IN WRITING TO THE ENGINEER. THE SUBMITTAL SHALL INCLUDE A SCHEMATIC DIAGRAM LOCATING ALL AIR INLETS
- O. ALL AIR TERMINAL DEVICES SHALL BE BALANCED TO WITHIN FIVE PERCENT OF THEIR DESIGN REQUIREMENTS.
- P. ALL FANS AND AIR HANDLING UNITS SHALL BE BALANCED TO WITHIN TEN PERCENT OF THEIR
- Q. THE PERFORMANCE OF INDUCTION UNITS SHALL BE ADJUSTED AND BALANCED AS INDICATED ON THE DRAWINGS IN ACCORDANCE WITH THE INSTRUCTIONS PROVIDED BY THE CARRIER AIR CONDITIONING COMPANY.
- R. IN CONCOURSE AND PLAZA LEVELS, ALL TENANT PROPRIETARY HVAC SYSTEMS SHALL BE TESTED AND BALANCED IN ACCORDANCE TO THE AIR BALANCE SCHEDULE SHOWN ON THE DRAWING TO INCLUDE NORMAL, DAY, NIGHT, SUMMER, WINTER, AIR ECONOMIZER CYCLE AND SMOKE PURGE
- S. FOR RESTAURANT TENANTS, EACH KITCHEN EXHAUST HOOD PERFORMANCE DATA AND TOTAL AREA (KITCHEN/DINING) AIR BALANCE SUMMARY DATA SHALL BE INCLUDED IN THE BALANCE
- T. AUXILIARY VENTILATION AIR SYSTEM: RECORD THE STATIC PRESSURE AVAILABLE AT THE RISER TAPER BEFORE FINAL DUCT CONNECTION IS MADE.
- U. FOR DUCT TESTING, MAKE PITOT TUBE TRAVERSE OF MAIN SUPPLY DUCTS EITHER FROM THE BASE
- V. THE TEMPERATURE CONDITIONS, BOTH D.B. AND W.B. AND SOUND LEVELS SHALL BE READ AND
- W. AFTER TESTING AND BALANCING WORK IS COMPLETE, THE CONTRACTOR SHALL INSTALL A NEW

BUILDING SUPPLY SHAFTS OR AT FANS, AND OBTAIN DESIGN AIR QUANTITIES.

SET OF AIR FILTERS AND CLEAN UNIT COILS.

# 18. GRILLES, REGISTERS AND DIFFUSERS

- A. FURNISH AND INSTALL ALL METAL DIFFUSERS, GRILLES AND REGISTERS AS INDICATED ON THE CONTRACT DRAWINGS. ALL SIZES, AIR DISTRIBUTION PATTERNS AND AIR VOLUME CAPACITIES SHALL BE AS SPECIFIED ON THE CONTRACT DRAWINGS.
- B. ALL DIFFUSERS AND REGISTERS SHALL BE PRIME COATED STEEL OR EXTRUDED ALUMINUM FINISHED, UNLESS OTHERWISE NOTED.
- C. ALL CEILING TYPE AIR DIFFUSERS SHALL BE PROVIDED WITH AIR EQUALIZING DEFLECTORS FULLY ADJUSTABLE FOR HORIZONTAL TO VERTICAL AIR FLOW. ALL RETURN REGISTERS SHALL ALSO HAVE VOLUME DAMPERS. DAMPER OPERATING LEVERS SHALL BE ACCESSIBLE AT THE FACE OF AIR OUTLET.
- MARGIN TYPES AND METHODS OF ATTACHMENT FOR ALL DIFFUSERS, GRILLES AND REGISTERS SHALL BE COORDINATED WITH ARCHITECTURAL CEILING DETAILS, SPECIFICATIONS AND CEILING
- E. SUITABLE FOR OPERATION AT 20% EXCESS AND 20% LESS THAN NOTED CAPACITY FOR CONSTANT VOLUME SYSTEMS AND AT 20% EXCESS AND 60% LESS THAN NOTED CAPACITY FOR VARIABLE VOLUME SYSTEMS.
- F. UNLESS OTHERWISE SHOWN ON THE CONTRACT DRAWINGS, NOISE CRITERIA FOR ALL AIR TERMINAL DEVICES SHALL NOT EXCEED NOISE CRITERIA (NC)35, OR SOUND METER READING 40 DBA, MEASURED AT A LOCATION 42 IN. BELOW THE CENTER OF THE DEVICES. MANUFACTURER IS RESPONSIBLE FOR EXAMINING APPLICATION OF EACH OUTLET AND GUARANTEE THAT EACH WILL PROVIDE REQUIRED NC LEVELS AND COMFORT SPACE CONDITIONS WITHOUT DRAFTS THROUGHOUT OPERATING RANGE.
- G. ALL AIR TERMINAL DEVICES SHALL BE TITUS, KRUEGER, TUTTLE & BAILEY, OR AN APPROVED
- H. EXACT LOCATION FOR ALL DIFFUSERS, GRILLES AND REGISTERS SHALL BE COORDINATED WITH THE ARCHITECT. ARCHITECT'S DECISION SHALL PREVAIL.

# 19. INSULATION REQUIREMENTS

- A. INSULATION SHALL BE APPLIED TO DUCTWORK AND PIPING OF MATERIALS AS SPECIFIED BELOW.
- B. NOTE THAT DUCTWORK THAT IS INTERNALLY AND ACOUSTICALLY INSULATED/LINED NEED NOT BE INSULATED ON THE EXTERIOR.
- C. INSULATION/LINING SHALL HAVE COMPOSITE (INSULATION OR FACING AND ADHESIVE USED TO ADHERE THE FACING TO THE INSULATION) FIRE AND SMOKE HAZARD RATINGS AS TESTED BY PROCEDURE ASTM E.84, NFPA 255 OR UL 723 NOT EXCEEDING:

### FLAME SPREAD SMOKE DEVELOPED

a. ACCESSORIES SUCH AS ADHESIVES, MASTICS, CEMENTS AND TAPES FOR FITTINGS SHALL HAVE THE SAME COMPONENT RATING AS LISTED ABOVE. ALL PRODUCTS OR THEIR SHIPPING CARTONS SHALL BEAR A LABEL INDICATING THAT FLAME AND SMOKE RATINGS DO NOT EXCEED REQUIREMENTS. TREATMENT OF FACINGS TO IMPART FLAME AND SMOKE-SAFETY SHALL BE PERMANENT THE USE OF WATERSOLUBLE TREATMENTS IS PROHIBITED.

D. DUCTWORK INSULATION MATERIAL

- INSULATE INDOOR SHEET METAL AS FOLLOWS:
- a. ALL INDOOR AIR CONDITIONED AND/OR HEATED LOW PRESSURE SUPPLY DUCTWORK FROM FAN DISCHARGE AS WELL AS GENERAL EXHAUST, TO DIFFUSERS, GRILLES AND REGISTERS INCLUDING DIFFUSER PLENUMS - 1-1/2" INSULATION, WITH A MINIMUM R-4.2 INSTALLED VALUE.
- INDOOR DUCT INSULATION SHALL BE 1-1/2 LB. PER CU. FT. DENSITY GLASS FIBER WITH A MAXIMUM K FACTOR OF 0.25 AT 75F MEAN TEMPERATURE, WITH REINFORCED FOIL-FACED, FLAME RESISTANT KRAFT VAPOR BARRIER.
- c. INSULATION SHALL BE SECURED WITH DUCT ADHESIVE. ALL JOINTS SHALL BE SEALED BY ADHERING A 2" SEALING LAP AT ALL JOINTS WITH VAPOR BARRIER ADHESIVE OR 3" STRIPS OF VAPOR BARRIER JACKET APPLIED WITH VAPOR BARRIER ADHESIVE. INSULATION SHALL THEN BE FASTENED WITH 16 GAUGE COPPER-CLAD WIRE OR FIBERGLASS CORD ON 12" CENTERS. ON DUCTS OVER 24" WIDE, WELDED PINS AND CLIPS SHALL BE USED ON THE UNDERSIDE.

- APPLICATION SAME EXCEPT WIRES SHALL BE OMITTED AND BLANKET SHALL BE VAPOR BARRIER COATING.
- a. ALL SUPPLY DUCTWORK.
- c. ALL JOINTS AND VOIDS IN THE INSULATION SHALL BE FILLED WITH MINERAL WOOL CEMENT. ALL JOINTS, SPEED WASHERS AND BREAKS IN VAPOR BARRIER SHALL BE SEALED WITH 3" WIDE STRIPS OF THE VAPOR BARRIER FACING ADHERED WITH
- MATCHING STRIPS OF VAPOR BARRIER TO INSURE GOOD APPEARANCE.
- e. INSULATION SHALL BE SECURED WITH DUCT ADHESIVE. ALL JOINTS SHALL BE SEALED BY ADHERING A 2" SEALING LAP AT JOINTS WITH VAPOR BARRIER ADHESIVE OR 3" STRIPS OF VAPOR BARRIER JACKET APPLIED WITH VAPOR BARRIER ADHESIVE. INSULATION SHALL THEN BE FASTENED WITH 16 GAUGE COPPER-CLAD WIRE OR FIBER GLASS CORD ON 12" CENTERS ON DUCTS OVER 24" WIDE, WELDED PINS AND CLIPS SHALL BE USED ON THE UNDERSIDE.
- 1. INSULATE ALL PIPING, FITTINGS, AND VALVES IN ACCORDANCE WITH INSULATION

			0.01				
	PIPE I	NSULATION	SCHEI	)ULE			
	INSULATION C	ONDUCTIVITY	NC	MINAL PIF	PE OR TUB	E SIZE (IN	)
FLUID OPERATION TEMP. RANGE & USEGE (F°)	CONDUCTIVITY BTU*IN/(H*FR2*F°)	MEAN RATING TEMPERATURE, (F°)	< 1 1	TO < 1 ½"	1 ½" TO < 4	4 < 8	> 8
> 350	0.32 - 0.34	250	4.5	5.0	5.0	5.0	5.0
215 - 350	0.29 - 0.32	200	3.0	4.0	4.5	4.5	4.5
201 - 250	0.27 - 0.30	150	2.5	2.5	2.5	3.0	3.0
141 - 200	0.25 - 0.29	125	1.5	1.5	2.0	2.0	2.0
105 - 140	0.21 - 0.28	100	1.0	1.0	1.5	1.5	1.5
40 - 60	0.21 - 0.27	75	0.5	0.5	1.0	1.0	1.0
< 40	0.20 - 0.26	75	0.5	1.0	1.0	1.0	1.5

- 2. INSULATION SHALL BE MINIMUM 6 LB DENSITY MOLDED FIBERGLASS INSULATION, MAXIMUM 0.23 K-FACTOR AT 75 DEG. F MEAN TEMPERATURE WITH FACTORY-APPLIED
- ALL PURPOSED (AP) FACING OR ALUMINUM JACKET. 3. FITTINGS, VALVES AND FLANGES SHALL ALSO BE INSULATED WITH COMPRESSED
- FIBERGLASS AND WIRED IN PLACE WITH 18 GAUGE GALVANIZED STEEL WIRE. PREMOLDED PVC INSULATION COVERS FOR FITTINGS ARE NOT ALLOWED.
- 4. BEFORE APPLYING INSULATION, ALL PRESSURE AND LEAK TESTS SHALL BE COMPLETED AND APPROVED.
- ALL SEAMS SECURED WITH ADHESIVE. USE VAPOR BARRIER TAPE AND VAPOR-SEAL ADHESIVE WHERE REQUIRED. STAPLES ARE NOT PERMITTED. 6. ALL INSULATION AND VAPOR BARRIERS SHALL BE CONTINUOUS PASSING THROUGH

SLEEVES, HANGERS, ETC., OR OTHER OPENINGS. PROVIDE SADDLES OR SHIELDS FOR

5. ALL INSULATION SHALL BE BUTTED FIRMLY TOGETHER. PROVIDE 2 IN. LAMP STRIPS AT

- d. EXPOSED ROUND SHALL HAVE A WHITE VINYL REINFORCED FOIL VAPOR BARRIER. SECURED BY STAPLING 2" LONGITUDINAL LAP. STAPLES SHALL BE COATED WITH
- 2. EXTENT OF DUCTWORK INSULATION FOR NEW DUCTWORK
- b. INSULATION SHALL BE IMPALED OVER WELDED PINS APPLIED TO DUCT SURFACE ON 12" TO 18" CENTERS. USE A MINIMUM OF TWO ROWS OF FASTENERS ON EACH SIDE OF DUCT. SECURE INSULATION WITH SUITABLE SPEED WASHERS OR CLIPS FIRMLY IMBEDDED INTO INSULATION.
- VAPOR BARRIER ADHESIVE. d. EXPOSED DUCT WORK SHALL HAVE A WHITE REINFORCED FOIL VAPOR BARRIER FACING. CARE SHALL BE TAKEN IN SEALING JOINTS SPEED WASHERS, ETC. WITH

PROTECTION.

SCHEDULE FROM FECC, EXCEPT AS OTHERWISE NOTED.

No 60427  STATE OF  STATE OF  John J. Guth FL LIC# 60427

ARCHITECTURE + DESIGN

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**DELIVERABLE**:

ISSUE DATE:

PROJECT 24017B NUMBER DRAWN BY: CHECKED BY: HA

**MECHANICAL SPECIFICATIONS** 

(SHEET 2 OF 3)

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06/14/2024

# MECHANICAL SPECIFICATIONS

# 20. PIPING SYSTEMS - PIPING AND ACCESSORIES

- A. PROVIDE PIPING SYSTEMS SHOWN ON DRAWINGS COMPLETE INCLUDING PIPE, FITTINGS, VALVES, STRAINERS, MOTORIZED VALVES OPERATORS, HANGERS, SUPPORTS, SLEEVES, AND ACCESSORIES.
- B. HOT WATER PIPING SHALL BE BLACK STEEL PIPE, SCHEDULE 40, GRADE B, STANDARD WEIGHT, CONFORMING TO ASTM A53. FITTINGS SHALL HAVE A RATED WORKING PRESSURE OF 300 PSIG. FITTINGS FOR 3 IN. AND SMALLER SHALL BE THREADED MALLEABLE IRON CLASS 300 IN ACCORDANCE WITH ANSI B 16.3. FITTINGS FOR ABOVE 3 IN. SIZE SHALL BE BUTT WELD, STEEL SCHEDULE 40 AND IN ACCORDANCE WITH ANSI B 16.9.
- C. CONDENSATE DRAIN PIPING SHALL BE COPPER HARD TEMPER TYPE "L", CONFORMING TO ASTM B-88 WITH WROUGHT COPPER SOLDER JOINT, CONFORMING TO ANSI B 16.18.
- D. INSTALL DRAIN VALVES AT ALL LOW POINTS OF PIPING AND AIR VENTS AT ALL HIGH POINTS.
- E. PROVIDE MANUAL AIR VENTS LINE SIZE AIR CHAMBER WITH 1" GLOBE VALVE AT HIGH POINTS AND WHERE FLOW DIRECTION CHANGES FROM HORIZONTAL TO DOWNWARD.
- F. ALL PIPING CONNECTIONS TO EQUIPMENT SHALL BE INSTALLED WITH UNION FOR EASY REMOVAL. UNIONS FOR 3 IN. OR LESS SHALL BE SIMILAR AND EQUAL TO MALLEABLE IRON WITH BRASS SEATS, CLASS 300, AS MANUFACTURED BY STOCKHAM, GRINNEL, OR AN APPROVED EQUAL.
- G. ALL NIPPLES 6 IN. OR LESS SHALL BE EXTRA HEAVY SHOULDER TYPE. CLOSENIPPLES SHALL NOT BE USED.
- H. USE TEFLON TAPE ON MALE THREADS OF SCREWED PIPE.
- WET TAP IS PERMITTED, ONLY IF APPROVAL IS OBTAINED FROM THE BUILDING'S FACILITY DEPARTMENT.
- J. WHERE CHANGES OF SIZE OCCUR IN HORIZONTAL PIPING, PROVIDE ECCENTRIC TYPE REDUCING FITTINGS TO ATTAIN PROPER DRAINAGE AND VENTING OF PIPELINE.
- K. PROVIDE DIELECTRIC COUPLINGS AT JUNCTIONS OF DIFFERING METALS SUCH AS COPPER AND STEEL OR GALVANIZED PIPING.
- PROVIDE FOR EXPANSION AND CONTRACTION OF PIPING SYSTEMS IN THE INSTALLED SYSTEM.
- M. PITCH WATER PIPING UNLESS OTHERWISE NOTED BACK TO PUMP, RISER, OR DRAIN:
- UP to 1 IN. DIA. 1 IN. PER 40 FT. 2. 1-1/2 IN. DIA. AND LARGER - 1 IN. PER 100 FT..
- N. Y-TYPE STRAINERS
- PROVIDE SCREWED ENDS TO 2 IN. AND FLANGED 2-1/2 IN. AND LARGER WITH BODY AS
- FOLLOWS: a. TO 100 PSIG: 125 LB WSP CLASS, CAST IRON.
- b. 100 TO 250 PSIG: 250 LB. WSP CLASS, CAST IRON.

MUELLAR STEAM SPECIALTY MUESSCO NO. 751 OR NO. 752.

- c. OVER 250 PSIG: 300 LB WSP CFASS, FORGED STEEL OR CAST STEEL.
- 2. SCREENS SHALL BE 316 STAINLESS STEEL. 3. PROVIDE SCREWED WITH FACED CAP, STRAIGHT THREAD AND GASKET, SIMILAR TO MUELLER STEAM SPECIALTY MUESSCO NO. 11. PROVIDE FLANGED WITH BOLTED COVER SIMILAR TO

# 21. VALVES

- A. PROVIDE VALVES AS AND WHERE SHOWN ON THE CONTRACT DRAWINGS. THE SYSTEM SHALL BE SUPPLIED WITH VALVES IN ALL BRANCHES, MAINS AND RISERS, TANKS, REDUCING AND CONTROL ELEMENTS, RADIATION, HEATING AND COOLING SURFACES AND AT APPARATUS; SO LOCATED, ARRANGED AND OPERATED AS TO GIVE COMPLETE CONTROL. EXCEPT WHERE FLANGED VALVES ARE USED, EACH CONNECTION TO EQUIPMENT SHALL INCORPORATE AN UNION ON THE EQUIPMENT SIDE OF THE VALVE.
- B. ALL VALVES SHALL BE CAREFULLY SELECTED TO MEET THE PRESSURE OF WORKING AND TESTING (1-1/2 TIMES THE RATED WORKING PRESSURE) REQUIREMENTS IN THAT PARTICULAR APPLICATION IN THE ZONE WHERE THE VALVES ARE SERVED.
- C. PROVIDE TAG ON VALVES IN THE BASE BUILDING RISER CLOSET OR CEILING TAKE-OFF AREA INDICATING THE TENANT'S NAME, "SUPPLY" OR "RETURN", AND FLOOR SERVED. THE TAG SHAL BE MADE OF EITHER METAL OR PLEXIGLASS, 3 IN. X 6 IN. SIZE, WITH A GREEN BACKGROUND AND
- D. PROVIDE DRAIN AND VENT VALVES THAT ARE NOT SHOWN ON THE CONTRACT DRAWINGS BUT ARE NECESSARY FOR THE PROPER OPERATION OF PIPING SYSTEMS, AS FOLLOWS: 1. PROVIDE ONE INCH DRAIN VALVES WITH THREADED ENDS FOR HOSE CONNECTIONS AT DRAIN POINTS, AT MAIN SHUTOFF VALVES, LOW POINTS OF PIPING SYSTEMS, BASES OF
- VERTICAL RISERS, AND AT EQUIPMENT. 2. DRAIN VALVES AT ALL WATER PIPING LOW POINTS, CONFORMING TO THE GATE VALVES
- 3. MANUAL VENT VALVES AT HIGH POINTS OF PIPING AREAS THAT ARE DIFFICULT TO SERVICE, CONFORMING TO THE GLOBE VALVE SPECIFICATIONS FOR THE PARTICULAR SYSTEM.

# E. BALL VALVES

- 1. SHUTOFF VALVES FOR 3 IN. & SMALLER SIZES SHALL BE BALL VALVES TWO PIECE, THREADED ENDS, BRONZE BODY/BRASS BODY, FURNISHED WITH SEAT & STEM SEALS OF REINFORCED TEFLON OR PTFE, SIMILAR TO STOCKHAM S-216, CRANE CAPRI NO. 9302, OR AN APPROVED
- 2. PROVIDE LEVER FOR QUARTER TURN OPERATION; LEVER TO INDICATE OPEN OR CLOSED
- 3. WHEN USED AS DRAIN VALVES, PROVIDE WITH HOSE THREAD AND BRASS CAP WITH CHAIN. CAP TO BE RATED FOR FULL SYSTEM PRESSURE.

# F. COMBINATION BALANCING & SHUTOFF VALVES

SPECIFICATIONS FOR THE PARTICULAR SYSTEM.

- VALVE SHALL BE THE ECCENTRIC NON-LUBRICATED PLUG VALVE, WITH ADJUSTABLE MEMORY STOP AND PRESSURE TAP, AS MANUFACTURED BY DEZURIK RATED WORKING PRESSURE AND HYDROSTATIC TESTING PRESSURE (ONE AND ONE-HALF TIMES OF RATED WORKING PRESSURE) MUST BE SPECIFIED.
- 2. FOR WORKING PRESSURE UP TO 175 PSIG: a. SIZES 1 IN. THROUGH 2-1/2 IN., DEZURIK SERIES 400, SCREWED CAST IRON CONFORMING
- TO ANSI CLASS 125 IRON CONFORMING TO ANSI CLASS 125. b. SIZES 3 IN. AND UP, DEZURIK SERIES 100, FLANGED, CAST IRON CONFORMING TO ANSI
- 3. FOR WORKING PRESSURE FROM 200 PSIG THROUGH 450 PSIG: a. SIZES 2 IN. AND UNDER, DEZURIK SERIES 100, FIG.128/WG/SP SCREWED, CARBON STEEL
- CONFORMING TO ANSI CLASS 300. b. SIZES 2-1/2 IN. AND UP, DEZURIK SERIES 100, FIG.128 DFX001, FLANGED, CARBON STEEL

# CONFORMING TO ANSI CLASS 300. G. GATE VALVES

UP TO 3 IN., BRONZE THREADED ENDS, SOLID WEDGE, INSIDE SCREW, RISING STEM, UNION BONNET, SIMILAR TO STOCKHAM FIG: B-120 FOR CLASS 150, B-132 FOR CLASS 200, OR APPROVED EQUAL. BRONZE BODY AND TRIM WITH BRONZE, THREADED ENDS FOR STEEL PIPING AND TRIM AND SWEATED ENDS FOR COPPER PIPING.

2. ABOVE 3 IN., IRON BODY, FLANGED ENDS, RISING STEM, BOLTED BONNET, SOLID WEDGE DISC, OS&Y. SIMILAR TO STOCKHAM FIG: G-624 FOR CLASS 125, G667 FOR CLASS 250, OR APPROVED EQUAL. IRON BODY AND FLANGED END FOR STEEL PIPING. BRONZE BODY, BRONZE TRIM AND SWEATED ENDS FOR COPPER PIPING.

# H. GLOBE VALVES

- 1. UP TO 3 IN., BRONZE THREADED ENDS, SOLID WEDGE OR PLUG TYPE DISC, INSIDE SCREW, RISING STEM, UNION BONNET, SIMILAR TO STOCKHAM FIG: B22T FOR CLASS 150, 8-32 FOR CLASS 200, OR AN APPROVED EQUAL. BRONZE BODY AND TRIM WITH BRONZE, THREADED
- ENDS FOR STEEL PIPING AND SWEATED ENDS FOR COPPER PIPING. 2. ABOVE 3 IN., FLANGED ENDS, RENEWABLE SEAT AND DISC, BOLTED BONNET, OS&Y, SIMILAR TO STOCKHAM FIG:G-512 FOR CLASS 125 (IRON ODY), STOCKHAM FIG: 15-GPFU-S/30-GPFU-S FOR CLASS 150/300 (CAST STEEL), OR AN APPROVED EQUAL. IRON BODY AND FLANGED END FOR STEEL PIPING. BRONZE BODY, BRONZE TRIM AND SWEATED ENDS FOR COPPER PIPING.

# I. CHECK VALVES

1. SWING TYPE, BRONZE BODY & DISC, THREADED ENDS, THREADED CAP, REGRINDING, SUITABLE FOR BOTH HORIZONTAL AND VERTICAL LINES WITH UPWARD FLOW, SIMILAR TO STOCKHAM FIG. B-321 FOR CLASS 150, FIG. B-345 FOR CLASS 200 (UP TO 2 IN.), CRANE NO. 137 FOR CLASS 150, CRANE NO. 36 FOR CLASS 200 (UP TO 3 IN.), OR AN APPROVED EQUAL. SCREWED END FOR STEEL PIPING AND SWEATED END FOR COPPER PIPING.

# 22. METERS AND GAUGES

- A. THERMOMETERS
- 1. THERMOMETERS FOR PIPING SHALL BE OF THE "ALL ANGLE" (UNIVERSAL), SEPARATE SOCKET, INDUSTRIAL TYPE WITH # 304 STAINLESS STEEL EXTENSION NECK WELLS.
- THE THERMOMETER FOR CONDENSER WATER SYSTEM SHALL OPERATE AT 0 160 DEG. F RANGE, AND SHALL INCLUDE A SUFFICIENT SAFETY MARGIN AT EITHER END.
- THERMOMETER SHALL BE AS MANUFACTURED BY ALBERT A WEISS, WEKSLER INSTRUMENT CO., ASHCROFT, OR AN APPROVED EQUAL

## B. PRESSURE GAUGES

- 1. PRESSURE GAUGES SHALL BE OF THE BOURDON TUBE SPRING TYPE WITH 4-1/2 DIAL SIZES. GAUGES SHALL HAVE BLACK ALUMINUM CASES WITH BLACK NUMBERS ON WHITE BACKGROUND. THE GAUGE SHALL BE AS MANUFACTURED BY ALBERT A. WEISS, WEKSLER INSTRUMENT CO., ASHCROFT, OR AN APPROVED EQUAL.
- 2. THE PRESSURE RANGE FOR THE AUXILIARY COOLING SHALL BE 0 500 PSI, AND THE BOURDON TUBE SHALL BE BRONZE.

# 23. PIPE HANGERS, SUPPORTS, ANCHORS AND GUIDES

- A. ALL REQUIRED SUPPORTS, HANGERS, ANCHORS AND GUIDES SHALL BE PROVIDED AND INSTALLED BY THIS CONTRACTOR AND SHALL BE SEISMICALLY DESIGNED.
- B. ALL SUPPORTS AND PARTS SHALL CONFORM TO THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, ANSI B 31.9 AS APPLICABLE FOR PRESSURE PIPING, AND MSS STANDARD PRACTICE SP-58
- C. INSTALL HANGERS AND SUPPORTS TO ALLOW CONTROLLED THERMAL AND SEISMIC MOVEMENT OF PIPING SYSTEMS, TO PERMIT FREEDOM OF MOVEMENT BETWEEN PIPE ANCHORS, AND TO FACILITATE ACTION OF EXPANSION JOINTS, EXPANSION LOOPS, EXPANSION BENDS, AND SIMILAR
- D. DO NOT HANG PIPING FROM OTHER PIPING. IN NO CASE SHALL HANGERS BE SUPPORTED BY MEANS OF VERTICAL EXPANSION BOLTS.
- E. WHEN REMOVAL OF EXISTING FIRE PROOFING IS REQUIRED FOR NEW INSTALLATION PURPOSES, SUCH REMOVAL SHALL BE PERFORMED BY THE CONTRACTOR AND SHALL BE KEPT TO A MINIMUM. THE CONTRACTOR SHALL REPLACE ALL REMOVED FIREPROOFING WITH NEW FIREPROOFING TO THE SATISFACTION OF THE ENGINEER AND AT NO ADDITIONAL COST TO THE AUTHORITY.
- F. SUPPORT HANGERS FROM BUILDING STEEL FRAMING WITH AN APPROVED TYPE CLAMP INSERT. PROVIDE ANY ADDITIONAL STEEL SUPPORTS BETWEEN EXISTING FRAMING MEMBERS AS MAY BE REQUIRED. NO HANGERS SHALL BE SUPPORTED FROM METAL DECK FLOOR. WELDING TO THE BUILDING STRUCTURE MEMBERS WILL NOT BE PERMITTED UNLESS APPROVED BY THE BUILDING
- G. PIPE HANGERS RODS, INSERTS AND CLAMPS SHALL BE UL APPROVED FOR THEIR RESPECTIVE
- H. UNLESS OTHERWISE SPECIFICALLY APPROVED, HANGER SIZE AND SPACING SHALL BE AS

COPF	PER TUBING	
PIPE SIZE	MAX. HANGER SPACING	MIN. ROD SIZE
1/2" TO 1-1/4"	6 FT. O.C.	3/8"
NOTE: THE ABOVE HA STRAIGHT RUNS OF F		PLY TO

I. HANGERS AND SUPPORTS SHALL BE MANUFACTURED BY GRINNELL CORP, CARPENTER & PATTERSON INC., MICHIGAN HANGER CO. INC., OR AN APPROVED EQUAL.

# 24. EQUIPMENT SCHEDULE

A. FURNISH AND INSTALL ALL ITEMS AS HEREIN SPECIFIED OR SHOWN ON DRAWINGS AND THOSE ITEMS OF LABOR OR MATERIALS NOT SPECIFICALLY INDICATED, BUT REQUIRED TO COMPLETE THE INTENDED INSTALLATIONS.

# 25. CONTROL SYSTEM

- A. FURNISH AND INSTALL ITEMS AS HEREIN SPECIFIED OR SHOWN ON DRAWINGS AND THOSE ITEMS OF LABOR OR MATERIALS NOT SPECIFICALLY INDICATED TO PROVIDE FULLY OPERATIONAL
- B. FURNISH AND INSTALL A COMPLETE AUTOMATIC TEMPERATURE CONTROL SYSTEM OF THE ELECTRICAL TYPE CONSISTING OF BUT NOT LIMITED TO THE FOLLOWING:
- THE CONTROL SYSTEM SHALL BE COMPLETE WITH ALL NECESSARY THERMOSTAT, HUMIDISTATS, DAMPERS, VALVES, AND ELECTRICAL RELAYS, SWITCHES, ETC. CONTROL INSTRUMENT WIRING AND CAPILLARIES ARE TO BE SECURED TO THE BUILDING STRUCTURE NOT TO DUCTWORK.
- 2. ALL MODULATING AUTOMATIC DAMPERS AND CONTROL VALVES SHALL OPERATE IN SLOW GRADUAL MANNER WITHOUT JERKING OR SLAMMING.
- 3. THERMOSTAT SHALL BE SEVEN DAY PROGRAMMABLE OF THE FULLY PROPORTIONING TYPE AND SHALL HAVE ADJUSTABLE SENSITIVITY OF THE THROTTLING RANGE. THERMOSTAT SHALL BE ABLE TO CONTROL WITHIN PLUS OF MINUS 1/2 DEG. F AND SHALL MATCH TO THE AC UNIT CONTROLS THERMOSTAT SHALL HAVE A OFF-FAN-HEAT-COOL SETTINGS.
- 4. ALL TRANSMITTERS SHALL BE CAPABLE OF MEASURING THE SPACE OR DUCT TEMPERATURE AND TRANSMITTING ELECTRICAL SIGNAL DIRECTLY PROPORTIONAL TO THE TEMPERATURE ACCURACY 1% SCALE RANGE.
- 5. SHOP DRAWING INDICATING THE WIRING DIAGRAM OF THE CONTROL SYSTEM WITH SEQUENCE OF OPERATION AND RANGE OF CONTROLS FOR BOTH SUMMER AND WINTER.
- 6. GUARANTEE TO KEEP THE CONTROL SYSTEM IN REPAIR AND ADJUSTMENT FOR A PERIOD OF ONE YOUR FROM THE DATE THE EQUIPMENT HAD BEEN PUT TO ACTUAL USE BY THE OWNER, FREE FROM ANY EXPENSES TO THE OWNER AND GIVE OWNER'S REPRESENTATIVE INSTRUCTION AT THE SITE TO ITS OPERATION AND MAINTENANCE.

# 26. SEQUENCE OF OPERATION

- A. AS THE TEMPERATURE RISES ABOVE THE SETPOINT, THE UNIT WILL TURN ON AND COOL THE SPACE UNTIL THE DESIRED TEMPERATURE IS ACHIEVED.
- THE CHILLED WATER VALVES WILL OPEN TO ALLOW MORE WATER TO FLOW THROUGH THE
- COILS.
- THE FAN WILL INCREASE IN RPM TO DELIVER MORE AIR TO THE SPACE. ONCE THE TEMPERATURE IS ACHIEVED. THE FAN WILL START TO DECREASE IN RPM AND THE CHILLED WATER VALVES WILL START TO CLOSE TO REDUCE THE AMOUNT OF WATER FLOWING THROUGH THE COIL
- AS THE TEMPERATURE FALLS BELOW THE SETPOINT, THE ELECTRIC HEATER WILL TURN ON AND HEAT THE SPACE UNTIL THE DESIRED TEMPERATURE IS ACHIEVED.

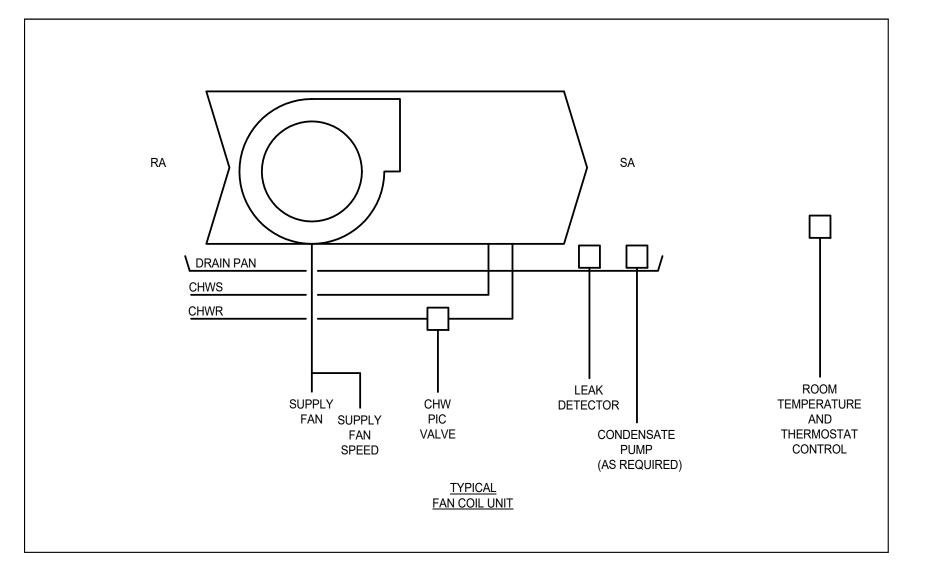
# **ISOLATION VALVES**

THE ISOLATION VALVES SHALL BE NORMALLY CLOSED (NC). WHEN FCU-1 REQUIRES COOLING, THE VALVES SHALL OPEN TO ALLOW MORE CHILLED TO WATER TO PASS THROUGH THE COIL.

WHEN FCU-1 IS TURNED OFF, ALL VALVES SHALL RETURN TO NORMALLY CLOSED.

# **OUTSIDE AIR MOTORIZED DAMPER**

MOTORIZED DAMPER SHALL BE NORMALLY CLOSED. UPON ACTIVATION OF THE FCU-1, DAMPER SHALL OPEN TO SET POSITION TO DELIVER REQUIRED OUTDOOR AIR. UPON SHUT DOWN OF UNIT, DAMPER SHALL CLOSE.



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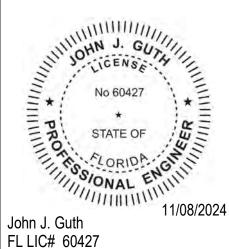
PROJECT

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**MECHANICAL SPECIFICATIONS** (SHEET 3 OF 3)

M603

# **ELECTRICAL SYMBOLS**

	WINING & CONDON STOTEM
A1#1,3,5	SINGLE PHASE CIRCUIT HOMERUN TO PANELBOARD - ARROWS DENOTE NUMBER OF CIRCUITS. DESIGNATION DENOTES PANELBOARD AND CIRCUIT NUMBERS.
	NEW CONDUIT AND WIRING, RUN CONCEALED IN WALLS OR ABOVE CEILING.
	PANELBOARD
	NEW PANELBOARD SURFACE MTD
	WIRING DEVICES
	FUSED & UNFUSED DISCONNECT SWITCH.
<b>⇒</b>	DUPLEX RECEPTACLE, 20A, 125V, 2P, 3W, GROUNDED NEMA CONFIG. 5-20R. USE HUBBELL 5362 OR APPROVED EQUAL. '2' DENOTES CIRCUITING NUMBER. 'D' DENOTES DEDICATED CIRCUIT. 'TR' DENOTES TAMPER RESISTANT
2	DOUBLE DUPLEX (QUAD) RECEPTACLE IN A 2 GANG BOX, 20A, 125V, 2P, 3W, GROUNDED NEMA CONFIG. 5-20R. USE HUBBELL 5362 OR APPROVED EQUAL. '2' DENOTES CIRCUITING NUMBER.
J	CEILING MOUNTED JUNCTION BOX
H(J)	WALL MOUNTED JUNCTION BOX
фx	SINGLE RECEPTACLE - 250V, 2P, 3W (GROUNDED), LETTER DENOTES AMPERE RATING:  'A' - (15A) NEMA CONFIG. 6-15R  'B' - (20A) NEMA CONFIG. 6-20R  'C' - (30A) NEMA CONFIG. 6-30R  'D' - (50A) NEMA CONFIG. 6-50R  'DD' - (50A) NEMA CONFIG. 14-50R  'E' - (30A) NEMA CONFIG. TWIST LOCK L15-30R  'F' - (30A) NEMA CONFIG. TWIST LOCK L14-30R  'G' - (20A) NEMA CONFIG. TWIST LOCK L15-20R  'H' - (30A) NEMA CONFIG. TWIST LOCK L6-30R  'I' - (20A) NEMA CONFIG. TWIST LOCK L6-20R  'J' - (50A) NEMA CONFIG. TWIST LOCK L6-20R
F&D	PULL BOX OR WIRE TROUGH, EC SHALL SIZE ACCORDINGLY  FIRE SMOKE DAMPER
	CONCEALITE F5000 SERIES EMERGENCY LIGHTING W/ SELF CONTAINED
	BATTERY PACK MODEL: F5-LED8-90  TRANSFORMER
С	SE 8903LG1200V02, 12 POLES LIGHTING CONTACTOR PROVIDE SSA403 OVERRIDE LIGHTING SWITCH
TC	DTS400B TIMECLOCK
CL	CURRENT LIMITING DEVICE. LEVITON MODEL: LA-23-RN-B-REG1-B
(CP)	CONDENSATE PUMP
	LEAK DETECTOR
<b>\</b> \$ <sub>VS</sub>	LOW VOLTAGE VACANCY SENSOR DIMMER SWITCH 1
\$° <sub>3</sub>	SPST TOGGLE SWITCH WATTAGE TO SUIT APPLICATION.  'a' - DENOTES SWITCH DESIGNATION  '3' - DENOTES 3-WAY SWITCH  '4' - DENOTES 4-WAY SWITCH
<b>\$</b> °	DIMMER SWITCH WATTAGE TO SUIT APPLICATION. 'a' - DENOTES SWITCH DESIGNATION
\$_	20 AMPERE, 125 VOLT, 1 POLE, 2 POLE OR 3 POLE LOCK AND TOGGLE SWITCH WITH THERMAL OVERLOAD PROTECTION.
	LIGHTING
	LIGHTING FIXTURE, SEE LIGHTING FIXTURE SCHEDULE FOR TYPE.
EM a 1 ONL	'1' - DENOTES PANEL DESIGNATION AND CIRCUIT NUMBER  'a' - DENOTES SWITCH DESIGNATION  'NL' - DENOTES UNSWITCHED LIGHTING FIXTURE.  'EM' - DENOTES LIGHTING FIXTURE EQUIPPED WITH  EMERGENCY BATTERY PACK. CONNECT TO  UNSWITCHED HOT LEG AHEAD OF LIGHT SWITCH/SENSOR.  HALF SHADED LIGHTING FIXTURE DENOTES 'EM'

HALF SHADED LIGHTING FIXTURE DENOTES 'EM'

CEILING/WALL OUTLET BOX AND EXIT LIGHT, PROVIDE DIRECTIONAL

SHADED AREA DENOTES FACE(S) UPON WHICH 'EXIT' APPEARS

ARROWS AS INDICATED:

WIRING & CONDUIT SYSTEM

# ABBREVIATIONS LIST

AC	ABOVE COUNTER
AFF	ABOVE FINISHED FLOOR
AWG	AMERICAN WIRE GAUGE
С	CONDUIT
C/B	CIRCUIT BREAKER
ETR	EXISTING TO REMAIN
EM	EMERGENCY
EC	ELECTRICAL CONTRACTOR
ERR,RR	EXISTING TO BE REMOVED AND RELOCATED
ER	EXISTING RELOCATED
R	EXISTING TO BE DISCONNECTED AND REMOVED
KVA	KILOVOLTAMP
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUG ONLY
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
Р	POLES
PH	PHASE
G/GRD/GND	GROUND
TYP	TYPICAL

# TELECOMMUNICATION

•	INDICATES WALL MOUNTED COMBINATION VOICE /DATA OUTLET PROVIDE (4) PORTS. PROVIDE 2" (U.O.N.) EMPTY CONDUIT STUBBED INTO NEAREST ACCESSIBLE HUNG CEILING. 2 PORTS FOR DATA - 2 PORTS FOR VOICE. PROVIDE (2) CAT6 CABLE FOR EACH DATA OUTLET. PROVIDE DRAG LING FOR ALL EMPTY CONDUITS AND DATA CIRCUIT LABELING AT EACH TERMINATION EC SHALL COORDINATE WITH DATA/COMM VENDOR.
	INDICATES CEILING MOUNTED COMBINATION DATA OUTLET PROVIDE (2) PORTS. PROVIDE 2" (U.O.N.) EMPTY CONDUIT STUBBED INTO NEAREST ACCESSIBLE HUNG CEILING. 2 PORTS FOR DATA - PROVIDE (2) CAT6 CABLE FOR EACH DATA OUTLET. PROVIDE DRAG LING FOR ALL EMPTY CONDUITS AND DATA CIRCUIT LABELING AT EACH TERMINATION EC SHALL COORDINATE WITH DATA/COMM VENDOR.
	CCTV CAMERAS
_	

SPEAKERS

# **ELECTRICAL GENERAL NOTES**

- 1. BEFORE SUBMITTING THE BID PROPOSAL THE CONTRACTOR SHALL:
- VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH JOB CONDITIONS. B. REVIEW A FULL SET OF BID DOCUMENTS TO MAKE HIMSELF AWARE OF THE
- TOTAL JOB BEFORE SUBMITTING HIS PRICE. C. VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND INCLUDE IN BID PRICE ALL
- WORK REQUIRED TO ACCOMMODATE THE EXISTING INSTALLATION.
- 2. REFER TO ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:
- EXACT LOCATION OF ALL ELECTRICAL OUTLETS AND LIGHTING FIXTURES.
- FINAL LOCATION OF CEILING MOUNTED EQUIPMENT. CONNECTION POINTS AND SPECS FOR ELECTRIFIED WALL PANEL SYSTEMS
- ADDITIONAL ELECTRICAL REQUIREMENTS.
- COORDINATE WITH OTHER TRADES TO DETERMINE THE EXACT LOCATION OF MOTORS, MOTOR TERMINAL BOXES, AND OTHER EQUIPMENT TO BE INSTALLED BY OTHER TRADES BEFORE CONDUIT WORK IS STARTED. REFER TO MECHANICAL, PLUMBING, FIRE PROTECTION AND FURNITURE SYSTEM DRAWINGS FOR LOCATIONS OF ALL EQUIPMENT.
- 4. CONTRACTOR IS TO FURNISH, INSTALL AND CONNECT ALL RACEWAYS AND WIRING FROM EQUIPMENT, DEVICES AND LIGHTING FIXTURES TO ITS SOURCE OF POWER AND
- 5. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS OF FINISHED CONSTRUCTION PRIOR TO FABRICATION AND INSTALLATION OF FIXTURES AND EQUIPMENT.
- 6. ELECTRICAL CONTRACTOR SHALL VERIFY SWITCHES, RECEPTACLES AND PLATE FINISHES WITH THE ARCHITECT BEFORE PERFORMING HIS INSTALLATION. ALL COVER PLATES SHALL BE AS SPECIFIED BY ARCHITECT.
- 7. PROVIDE LATEST DIRECTORY FOR PANEL BOARDS.
- 8. COORDINATE LOCATION OF OUTLETS AND SWITCHES WITH FURNITURE AND EQUIPMENT LAYOUTS AND WITH OWNERS REPRESENTATIVE.
- 9. ALL WORK REQUIRING ELECTRICAL SHUTDOWN WHICH WILL AFFECT OTHER AREAS OF THE BUILDING OR EVEN AFFECT THE NORMAL CONTINUATION OF CONSTRUCTION WORK ON THESE FLOORS, SHALL BE DONE ON OVERTIME HOURS, AND SHALL NOT DISTURB CONTINUITY OF ELECTRICAL SERVICE TO EXISTING TENANTS ON THE AFFECTED FLOORS.
- 10. WHERE MULTIPLE SWITCHES AND RECEPTACLES ARE INDICATED AT THE SAME LOCATION, THEY SHALL BE MOUNTED BEHIND A COMMON FACEPLATE.
- 11. WHERE EQUIPMENT, LIGHTING FIXTURES AND WIRING DEVICES ARE SHOWN WITH CIRCUIT NUMBERS ONLY, THE MINIMUM BRANCH CIRCUITING REQUIREMENTS SHALL BE AS FOLLOWS:
- LIGHTING FIXTURES 2 #12, #12 GRD. 3/4" C.
- RECEPTACLES 2#12, #12 GRD. 3/4" C. BRANCH CIRCUIT BREAKERS (120 VOLT) - 1P, 20A
- HOMERUNS TO PANELBOARDS SHALL CONTAIN NO MORE THAN (3) CIRCUITS. WHERE LIGHTING SWITCH INDICATIONS ARE NOT SHOWN, SWITCHES SHALL BE CONNECTED TO CONTROL ALL SWITCHED FIXTURES WITHIN THE CORRESPONDING
- 12. WHERE CONDUIT AND WIRING CONNECTIONS ARE NOT SHOWN ON THE PLANS, MAKE CONNECTIONS USE #10 AWG WIRE TO THE FIRST AND ANY OUTLET FOR BRANCH CIRCUIT RUNS MORE THAN 80 FEET (OF WIRING) FOR 120V AND 208V CIRCUITS, U.O.N.
- 13. WIRING IN AIR PLENUM HUNG CEILINGS INSTALLED WITHOUT CONDUIT OR EMT SHALL BE TEFLON JACKETED.
- 14. NO LOW VOLTAGE WIRING SHALL BE PERMITTED IN THE SAME RACEWAY AS POWER WIRING.
- 15. FOR WIRING IN METAL PARTITIONS WHERE EMT IS IMPRACTICAL, FLEXIBLE STEEL CONDUIT GALVANIZED, MINIMUM 3/4" SHALL BE USED.
- 16. PROVIDE DRAG LINES IN ALL EMPTY RACEWAYS.
- 17. ALL CONDUITS FOR BRANCH CIRCUITING AND/OR COMMUNICATIONS CABLING. INCLUDING THOSE RUN IN CEILING OF FLOOR BELOW SHALL BE IDENTIFIED AT EVERY 50 FEET OF LENGTH AND AT EACH OUTLET AND PULL BOX WITH PANEL AND CIRCUIT NUMBER OR SYSTEM NAME.
- 18. CONTRACTOR TO PROVIDE AN EMPTY CONDUIT SYSTEM WITH DRAG LINES AND OUTLET BOXES FOR INSTALLATION OF COMMUNICATIONS WIRING SYSTEMS. VERIFY EXACT REQUIREMENTS WITH SYSTEM VENDOR(S).
- 19. THE MINIMUM RATING OF DISCONNECT SWITCHES SHALL BE EQUAL TO OR GREATERTHAN THE RATING OF THE PROTECTIVE DEVICE ON THE SUPPLY SIDE OF THE DISCONNECT SWITCH. MINIMUM DISCONNECT SWITCH SIZE IS 30 AMPERES. AND TOGGLE DISCONNECT SWITCHES SHALL BE 20 AMPERES.
- 20. PROVIDE UL LISTED FLOOR POKE-THRU AND FIRE STOPPING DETAILS FOR ALL CONDUIT PENETRATIONS THROUGH FIRE RATED WALL AND FLOOR CONSTRUCTION. FIRE STOPPING AT PENETRATIONS THROUGH RATED CONSTRUCTION SHALL COMPLY WITH THE LATEST FLORIDA BUILDING CODE.

		ELECTRICAL DRAWING LIST
	Sheet Number	Sheet Name
		$\sim$
	Æ007 Y	ELECTRICAL NOTES, SYMBOLS AND DRAWING LIST
$\Lambda$	E101	ELECTRICAL POWER PLAN (
<u> </u>	E102	ELECTRICAL TELECOM PLAN
	E201	ELECTRICAL LIGHTING PLAN
	<b>E</b> 301	ELECTRICAL RISER DIAGRAM
	E401	ELECTRICAL DETAILS
	E501	ELECTRICAL SCHEDULES
	E601	ELECTRICAL SPECIFICATIONS (SHEET 1 OF 2)
	E602	ELECTRICAL SPECIFICATIONS (SHEET 2 OF 2)

# **ELECTRICAL KITCHEN NOTES**

- ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE ELECTRICAL SPECIFICATIONS, ALL APPLICABLE CODES AND OTHER AUTHORITIES HAVING
- 2. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL FINAL LOCATIONS AND POINTS OF ELECTRICAL SERVICE (JUNCTION BOX, DISCONNECT SWITCHES, RECEPTACLES,
- 3. ELECTRICAL CONTRACTOR SHALL PROVIDE THE FINAL CONNECTION TO ALL EQUIPMENT NOTED IN CONTRACT, AND SHALL PROVIDE RECEPTACLES WHERE INDICATED TO MATCH CORD-PLUG SET OF EQUIPMENT, FLEXIBLE POSITIONING OF EQUIPMENT OF TYPE INDICATED ON PLAN AND STUB-UPS AS REQUIRED FOR DIRECT CONNECTIONS. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER AND ARCHITECT FOR THE EXACT MOUNTING HEIGHTS AND TYPES OF TERMINATION TO BE
- 4. WHERE INDICATED ON PLAN OR OTHERWISE REQUIRED BY HEATING OR COOKING EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL PROVIDE APPROVED TYPE HIGH TEMPERATURE WIRE AT TERMINALS OF CONTROL CABINETS OR HEATING ELEMENTS. THE INSULATION RATING SHALL BE EQUAL OR GREATER THAN THE AMBIENT
- 5. ELECTRICAL CONTRACTOR SHALL PROVIDE A LOCAL MEANS OF DISCONNECT FOR ALL UNGROUNDED POWER CONDUCTORS FOR EQUIPMENT AS REQUIRED BY THE N.E.C.
- 6. ELECTRICAL CONTRACTOR SHALL PROVIDE LIQUID TIGHT FINAL CONNECTION FOR ALL EQUIPMENT REQUIRING FLEXIBLE FINAL CONNECTIONS AND LOCATED IN AN AREA SUBJECT TO WATER DUE TO EQUIPMENT OR CLEANING REQUIREMENTS. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR SEALING WATER PROOFING MEMBRANE
- ELECTRICAL CONTRACTOR SHALL PROVIDE CONTROL WIRING AND PENETRATIONS FOR ALL EQUIPMENT AS REQUIRED BY THE KITCHEN EQUIPMENT CONTRACTOR. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND PROVIDE CONTROL WIRING FOR ALL EQUIPMENT INCLUDING BUT NOT LIMITED TO REFRIGERATION SYSTEMS, HOOD PROTECTION AND CLEANING SYSTEM, HOT FOOD WELLS AND OTHER THERMOSTATIC CONTROLLED EQUIPMENT DISHWASHING UNIT INCLUDING REMOTE HOOD SWITCH.
- 9. ALL CONDUITS FOR BRANCH CIRCUITS TO ALL THE KITCHEN EQUIPMENT SHALL BE RUN
- 10. COORDINATE INTERCONNECTION OF RELATED EQUIPMENT WITH ARCHITECT AND
- 11. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL SEAL TIGHT FITTINGS AT ALL CONDUIT PENETRATIONS TO ALL FREEZER AND REFRIGERATION WALLS.
- 13. ALL BRANCH WIRING SHALL BE CONCEALED IN WALLS AND ABOVE HUNG CEILING, U.O.N. WHERE THERE'S NO HUNG CEILING, CONDUIT SHALL BE RUN IN A NEAT AND ORDERLY MANNER, PARALLEL AND PERPENDICULAR TO HVAC DUCTWORK. NO FLEXIBLE CONDUIT IS PERMITTED IN AREAS WHERE IT WILL BE EXPOSED, COORDINATE WITH OTHER TRADES AND FIELD CONDITIONS FOR CONDUITS ROUTING AND ELECTRICAL CONNECTIONS TO OTHER TRADES' EQUIPMENT.
- 14. THE ELECTRICAL CONTRACTOR SHALL PATCH PAINT, AND RESTORE EXISTING CEILINGS, SOFFITS, WALLS, AND OTHER FINISHES THAT WERE DISTURBED AND/OR
- 15. CONTRACTOR SHALL PROVIDE MATCHING NEMA PLUGS WITH ALL NEMA RECEPTACLES FOR KITCHEN EQUIPMENT. FURNISH 90° PLUGS WITH CORD WILL HANG IN THE
- 16. ALL EQUIPMENT LOCATED UNDER COOKING HOODS ARE TO BE PROVIDED WITH SHUNT TRIP BREAKERS. SHUNT TRIP CIRCUIT BREAKERS SHALL BE EQUIPPED WITH 120V
- 17. E.C. TO FRUNISH AND INSTALL ALL RECEPTACLES, SWITCHES AND JUNCTION BOXES WITH STAINLESS STEEL FACE PLATES.
- 18. ALL GENERAL PURPOSE AND COUNTER TOP 120V 15A AND 20A RECEPTACLES IN PREPARATION/KITEHCN AND AREAS EXPOSED WITH IN 6FT OF OPEN WATER SOURCE
- 19. E.C. TO SUPPLY ALL NECESSARY CONTACTORS, STARTERS AND DISCONNECTS.
- COOKING BATTERY TO CAUSE FAN TO TURN ON AND COOKING TO TURN OFF WHEN FIRE SYSTEM IS ACTIVATED. FURNISH AND INSTALL ADDITIONAL TO RELAYS FOR CONTROLS AS NEEDED.
- 22. ALL LIGHTING FIXTURES IN SERVERY, KITCHEN, BAR AREA SHALL BE SHATTERPROOF AND/OR COMPLETELY COVERED.
- 23. ANY EXPOSED UTILITY SERVICE LINES AND PIPES (ELECTRICAL, PLUMBING, ETC.) SHALL BE INSTALLED IN A WAY THAT DOES NOT OBSTRUCT OR PREVENT THE CLEANING OF FLOORS - MINIMUM OF 6" OFF FLOORS.

- JURISDICTION.
- STUB-UPS, ETC.) WITH THE VENDOR INSTALLER AND OWNER BEFORE INSTALLATION.
- USED FOR EQUIPMENT TO BE INSTALLED.
- TEMPERATURE OF THE ENCLOSURE IN WHICH IT IS TO BE TERMINATED.
- AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
- OF FLOOR AROUND ALL CONDUIT PENETRATIONS OF THE MEMBRANE.
- 8. ALL CIRCUIT HOME RUNS SHALL BE PROVIDED WITH A SEPARATE GROUND WIRE, AS
- CONCEALED IN WALL EXCEPT AS NOTED AND INDICATED.
- KITCHEN EQUIPMENT
- 12. COORDINATE ALL LOCATIONS OF OUTLETS AND EQUIPMENT WITH KITCHEN CONSULTANT DRAWINGS AND WITH ARCHITECTURAL DRAWINGS.
- DAMAGED DUE TO THEIR WORK.

- SHALL BE GFCI PROTECTED BY BREAKER OR DEVICE.
- 20. E.C. TO INTERWIRE HOOD FIRE EXTINGUISHING SYSTEM WITH EXHAUST FAN AND
- 21. FOR 120V GFI OUTLETS THAT ARE LOCATED BEHIND EQUIPMENT, PROVIDED GFCI OUTLET DEVICE (HUBBLE GFBFST20W) LOCATED IN ACCESSIBLE LOCATION SO THAT THE EQUIPMENT CAN BE RESET WITHOUT REMOVING THE EQUIPMENT.

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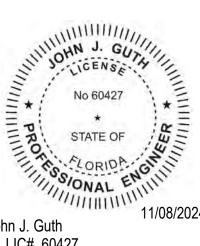
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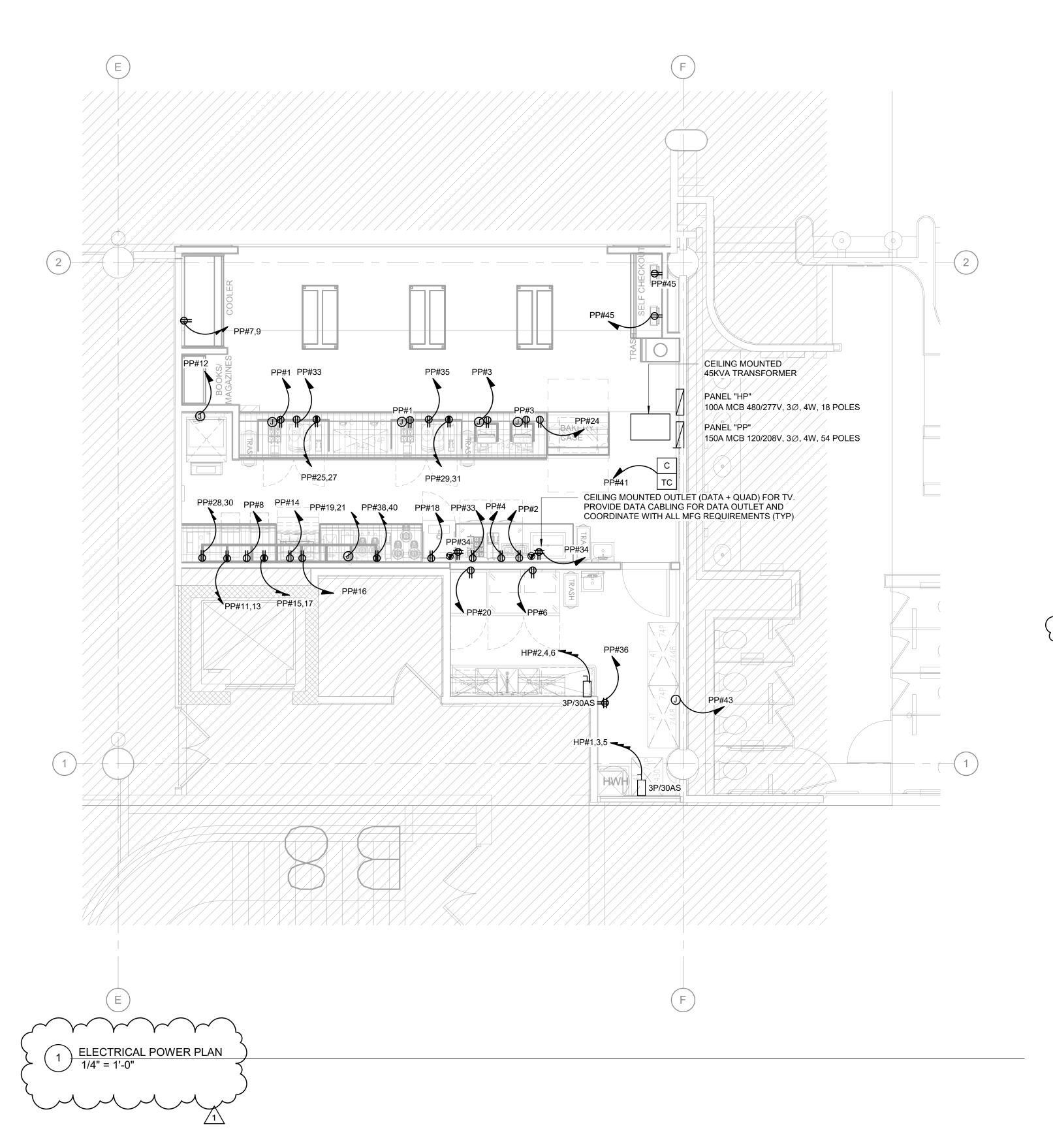
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**ELECTRICAL NOTES,** SYMBOLS AND DRAWING LIST



# **POWER NOTES:-**

FOR EXACT LOCATION AND MOUNTING HEIGHTS OF ALL RECEPTACLES, TELEPHONE AND DATA OUTLETS, SEE ARCHITECTURAL DRAWINGS AND KITCHEN CONSULTANT ELECTRICAL ROUGH-IN PLAN.

- CONTRACTOR SHALL FURNISH AND INSTALL ALL REQUIRED CONDUITS, WIRES, ARMORED CABLE AND BOXES TO ENERGIZE EQUIPMENT AND DEVICES INDICATED.
- ALL BRANCH WIRING SHALL BE CONCEALED IN WALLS AND ABOVE HUNG CEILING, U.O.N. WHERE THERE'S NO HUNG CEILING, CONDUIT SHALL BE RUN IN A NEAT AND ORDERLY MANNER, PARALLEL AND PERPENDICULAR TO HVAC DUCTWORK AND FIRE PROTECTION SPRINKLER PIPES. NO FLEXIBLE CONDUIT IS PERMITTED IN AREAS WHERE IT WILL BE EXPOSED.
- MAINTAIN CONTINUITY IN ALL EXISTING CIRCUITRY TO REMAIN WHICH IS AFFECTED BY THE SCOPE OF WORK. CONTRACTOR TO FURNISH AND INSTALL ALL NECESSARY WIRES, CONDUITS AND JUNCTION BOXES REQUIRED TO KEEP CONTINUITY.
- COORDINATE WITH OTHER TRADES AND FIELD CONDITIONS FOR CONDUITS ROUTING AND ELECTRICAL CONNECTIONS TO OTHER TRADES' EQUIPMENT.
- THE ELECTRICAL CONTRACTOR SHALL PATCH PAINT, AND RESTORE EXISTING CEILINGS, SOFFITS, WALLS, AND OTHER FINISHES THAT WERE DISTURBED AND/OR DAMAGED DUE TO THEIR WORK.
- CIRCUIT NUMBERS INDICATED ARE FOR GROUPING PURPOSES ONLY. CONTRACTOR SHALL VERIFY THE EXACT CIRCUIT NUMBER IN THE FIELD. CONTRACTOR SHALL RUN ALL CIRCUITS TO CORRESPONDING PANEL, UNLESS OTHERWISE NOTED IN TENANT SPACE.
- ALL RECEPTACLES LOCATED NOT DIRECTLY ATTACHED TO WALL SHALL BE CHASED TO CLOSEST ADJACENT WALL. EC SHALL PROVIDE DRAG LINE FOR EMPTY CONDUIT. CHASE SHALL CONSIST OF (1)-3/4"C FOR POWER OUTLETS (1)-1"C FOR DATA OUTLETS
- CONTRACTOR SHALL FOLLOW PROJECT CORE DRILLING APPROVAL PROCEDURE AND OBTAIN APPROVAL PRIOR TO EXECUTING WORK IN THE FIELD. CONFIRM CONDITIONS BELOW LEASE PREMISE AND COORDINATE CORE LOCATIONS.
- WALL MOUNTED OUTLETS (MOUNTED AT 18" ABOVE FINISHED FLOOR, (UNLESS OTHERWISE NOTED), SHALL BE INSTALLED PER LAYOUT AND EQUIPMENT REQUIREMENTS. PROVIDE STUB-UP CONDUITS, SIZED AS REQUIRED FOR ALL OUTLET LOCATIONS. FINISHES OF ALL COVER & SWITCHES PLATES, ETC TO MATCH WALL COLOR. PROVIDE CONVENIENCE OUTLETS AS REQUIRED. COORDINATE WITH ARCHITECT.
- 11. CONTRACTOR SHALL PREPARE CHALK-LINE LAYOUT FOR EXACT LOCATION AND MOUNTING HEIGHTS OF ALL RECEPTACLES, SWITCHES, JUNCTION BOXES, DISCONNECT SWITCHES, AND ELECTRICAL EQUIPMENT FOR ARCHITECT AND OWNER REVIEW AND APPROVAL.
- 12. ALL ELECTRICAL WORK FOR FABRICATED FOODSERVICE EQUIPMENT SHALL BE COMPLETELY WIRED BY THE FABRICATION CONTRACTOR TO A COMMON JUNCTION BOX, PULL BOX, OR CONTROL PANEL ON THE EQUIPMENT IN A ACCESSIBLE LOCATION. FINAL CONNECTIONS TO THE EQUIPMENT AND ALL ELECTRICAL WORK FROM THE MAIN PANEL BOARDS SHALL BE BY THE ELECTRICAL CONTRACTOR (E.C.).
- THAL CONNECTIONS TO ALL FOODSERIVCE EQUIPMENT SHALL BE BY THE ELECTRICAL OQUITRACTOR, HICLUDING ALL MATERIALS. ALL BELOW AND ABOVE COUNTER 120V 15A AND 20A RECEPTACLES IN ALL AREAS WITHIN THE FOOD SERVICE AND AREA EXPOSED WITH IN 6FT OF OPEN
- COORDINATION WITH THE TERMINAL OPERATOR FOR DATA/INTERNET ACCESS SUPPORTING THE EDGE SWITCH LOCATED IN THE A/V EQUIPMENT CABINET IS REQUIRED.
- 17. ELECTRICAL CONTRACTOR OR EQUIVALENT SHALL FURNISH AND INSTALL THE FOLLOWING:
  - 17.1. ALL JUNCTION BOXES, OUTLETS, COVER PLATES, SWITCHES, ETC... NOT BUILT INTO THE KITCHEN EQUIPMENT 17.2. ALL JUNCTION BOXES, OUTLETS, COVER PLATES, ETC... IN DISHROOMS OR AS NOTED ON THE SCHEDULE SHALL BE MOISTURE PROOF. 17.3. ALL PLUGS AND CORDS AS NOTED ON THE SCHEDULE. ALL CORDS SHALL BE NEMA RATED AND UL APPROVED FOR MANUFACTURED AND
  - 17.4. SHUNT TRIP CIRCUIT BREAKERS OR DISCONNECTS FOR FIRE CONTROL SYSTEM SHUT-OFF OF FOODSERVICE EQUIPMENT BENEATH EXHAUST HOODS AS REQUIRED BY N.F.P.A.-96, LATEST EDITION AND LOCAL CODES.
  - 17.5. DISCONNECTS OR OTHER DEVICES AS REQUIRED BY CODES.
- 17.7. ALL CONTROL WIRING FOR KITCHEN EQUIPMENT SYSTEMS.

FURNISH AND INSTALL ALL NECESSARY ELECTRICAL CONNECTIONS.



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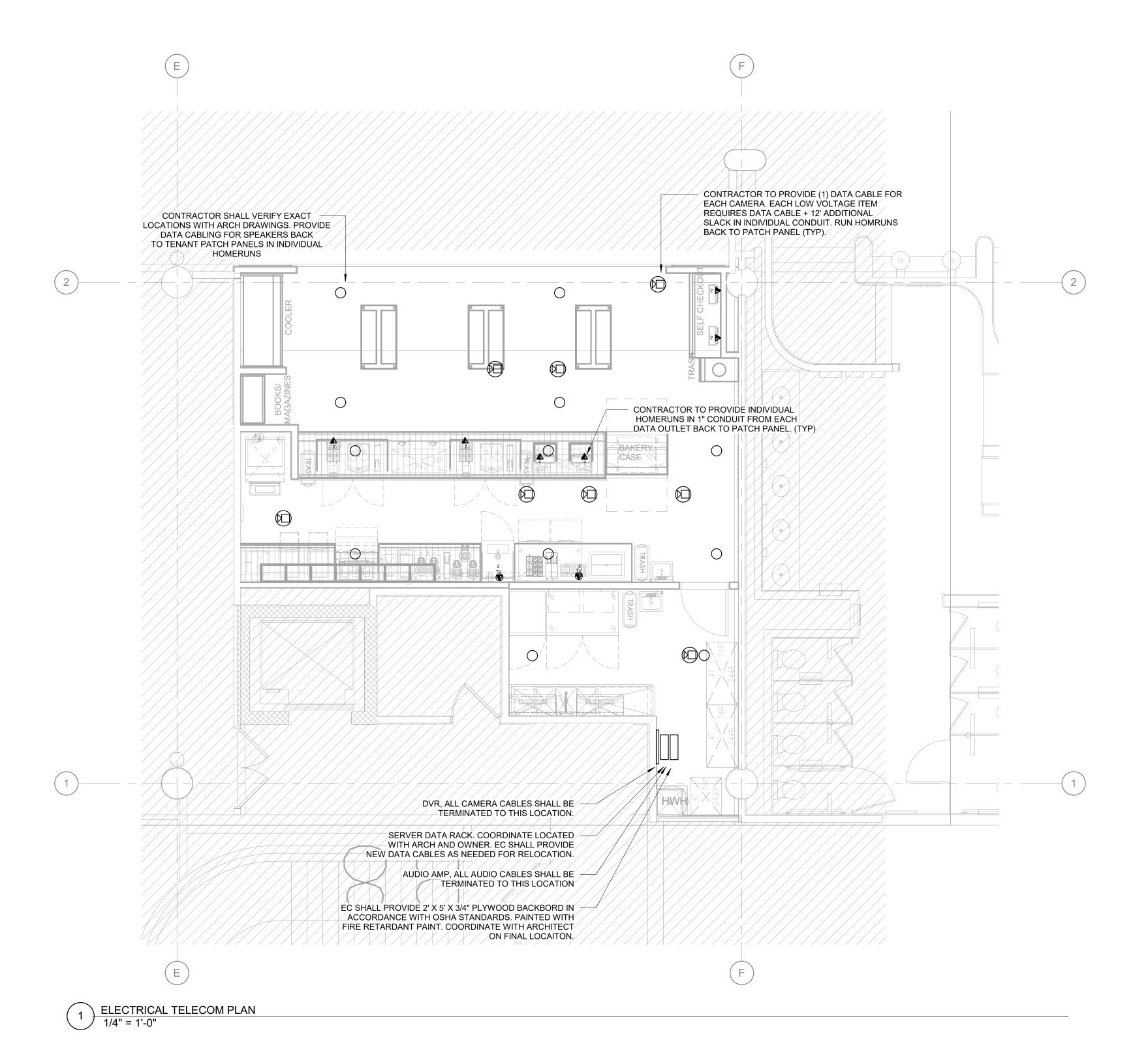
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**ELECTRICAL POWER** 



# DATA & COMMINICATION NOTES:-

PULL FOUR (4) CAT6 CABLES FOR [T1 CONNECTION / DSL CONNECTION / VOICE HANDOFF / 1 SPARE] BUILDING NEAREST EXISTING DATA/TELECOM ROOM TO DATA COMMUNICATION RACK PATCH PANEL INSIDE SPACE SHALL BE COORDINATED WITH BUILDING MANAGEMENT ON LOCATION OF NEAREST DATA/TELECOM ROOM. (PROVIDE 10FT OF ADDITIONAL SLACK COILED AT STORE TERMINATION SIDE)

PULL FOUR (4) CAT6 CABLES FROM THE 24 PORT PATCH PANEL TO EACH REGISTER AND TERMINATED BOTH ENDS WITH RJ45 JACKS CONNECTION INTO 4-PORT PLATE.

4-PORT PLATE SHALL BE IN GANG BOX THAT SHALL BE SECURELY ATTACH TO MILL WORK.

PROVIDE 5FT OF ADDITIONAL SLACK OF CAT6 CABLE COILED FOR FUTURE NEEDS; TYP FOR EACH RUN.

- INDICATE WITH A LABEL EACH PORT ON THE WALL PLATE CORRESPONDING TO THE PORT IN THE PATCH PANEL CERTIFY CONTINUITY OF EACH PHONE LINE.
- FOLLOW ALL LOCAL AND/OR BUILDING CODES AND ADJUST THE ABOVE INSTALLATION TO MEET THOSE CODES.
- GC IS RESPONSIBLE TO COORDINATE ACCESS TO COMMUNICATIONS CLOSET WITH THE LOCAL COMMUNICATION COMPANY WHO IS RESPONSIBLE FOR THE CLOSET.
- GC IS RESPONSIBLE TO PULL COMMUNICATION WIRING AND CONDUIT FROM EXISTING AND NEW IT/COMMUNICATION ROOMS INTO THE SHOPPES SPACE AND TO TERMINATE ON BOTH SIDES. GC IS RESPONSIBLE FOR THE EXACT RUN AND ROUTING OF CONDUITS FROM IT/COMMUNICATION ROOM INTO CONCESSION SPACE.
- OWNER WILL PROVIDE AND INSTALL ALL CASH REGISTERS, MODEMS AND HUBS. CONTRACTOR TO COORDINATE LOCATIONS WITH OWNER.
- ALL DATA CABLE RUN UNDER THE CASH WRAP TO BE IN CONDUIT, TERMINATE CONDUIT ON THE LOWER SHELF AT EACH CASH REGISTER LOCATION. PROVIDE ENOUGH CABLE TO REACH TO THE TOP OF THE CASH WRAP AND PLUG INTO THE CASH REGISTER. PROVIDE 12" OF SLACK AT THE MODEM HUB END OF EACH CABLE.
- 8. PLENUM RATED CABLE IS ALLOWED ABOVE THE CEILING.

- EC SHALL CONNECT ALL DATA CABLES BACK TO TOGETHER BACK BONE RACK LOCATED IN STORE. COORDINATE WITH OWNER ON LOCATION PRIOR TO BID. HORIZONTAL CABLES OVER 290 LINEAR FEET WILL BE INTERCONNECTED WITH FIBER MULTIMODE CONNECTION EC SHALL PROVIDE ALL EQUIPMENT AS NEEDED FOR INSTALLATION.
- EC SHALL FURNISH AND INSTALL ALL EQUIPMENT AS NEEDED FOR AUDIO VISUAL DATA DEVICES, WHICH ARE REQUIRED FOR COMPLETE INSTALLATION. PLEASE REFER TO VENDOR CUT SHEET AND DRAWINGS FOR ADDITIONAL INFORMATION.
- EC SHALL COORDINATE WITH VENDOR PRIOR TO BID TO VERIFY ALL CONDUIT DROP LOCATIONS AND TERMINATIONS.

4. IN ADDITION TO ABOVE, EC SHALL PROVIDE BUSHING FOR DATA CONDUITS, CAT5E/CAT6 CABLING AND DRAG LINES FOR EMPTY CONDUIT.



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SSP AMERICA 20408 BASHAN DRIVE

ARCHITECTURE + DESIGN

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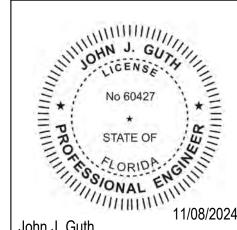
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CERTIFICATE OF AUTHORIZATION CA LIC. NO: 27747



John J. Guth FL LIC# 60427

> **AIRPORT** IATIONAL **BRADENTON INTERI** SHOPPE

SARASOTA

DESIGN ISSUED FOR DELIVERABLE: PERMIT ISSUE DATE: 06/14/2024

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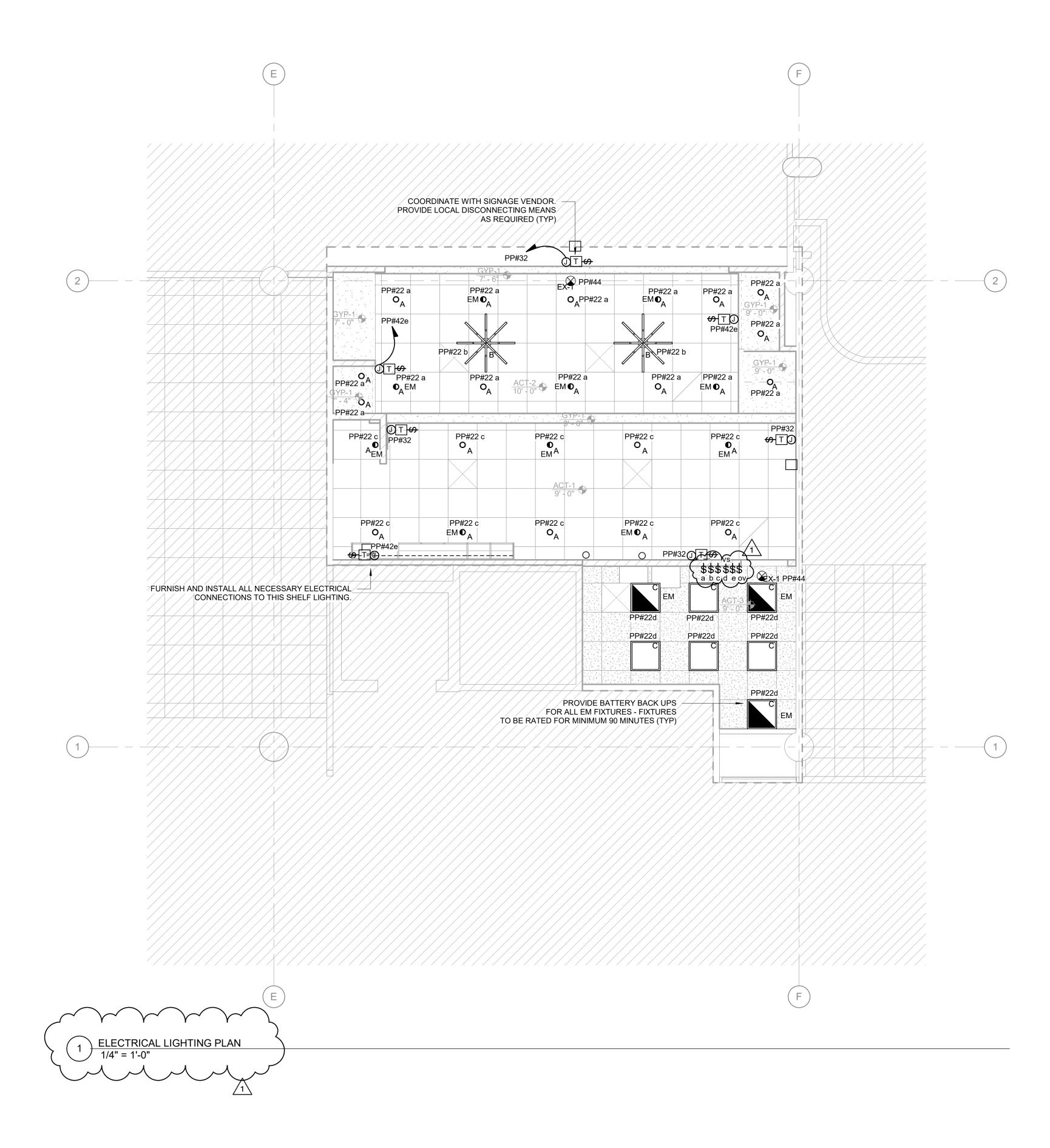
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**TELECOM PLAN** 

E102

NORTH



# LIGHTING NOTES:

- 1. FOR EXACT LOCATION AND MOUNTING HEIGHTS OF ALL LIGHTING FIXTURES AND SWITCHES SEE ARCHITECTURAL DRAWINGS.
- CIRCUIT NUMBERS INDICATED ARE FOR IDENTIFICATION PURPOSES ONLY. CONTRACTOR SHALL RUN ALL CIRCUITS TO CORRESPONDING PANEL
- CONTRACTOR SHALL FURNISH AND INSTALL ALL REQUIRED CONDUIT, WIRE AND BOXES AS WELL AS CEILING OUTLETS AND WHIPS TO ENERGIZE LIGHTING FIXTURES AS SHOWN.
- ALL BRANCH CIRCUIT WIRING SHALL BE RUN CONCEALED IN WALLS AND ABOVE HUNG CEILING. WHERE THERE IS NO HUNG CEILING CONDUIT SHALL BE RUN IN A NEAT AND ORDERLY MANNER PARALLEL AND PERPENDICULAR TO HVAC DUCTWORK AND FIRE PROTECTION SPRINKLER PIPING. NO FLEXIBLE CONDUIT IS PERMITTED IN AREAS WERE IT WILL BE EXPOSED.
- CONTRACTOR SHALL MAINTAIN CONTINUITY IN ALL EXISTING CIRCUITRY TO REMAIN WHICH IS AFFECTED BY THE SCOPE OF WORK. CONTRACTOR TO FURNISH AND INSTALL ALL REQUIRED WIRES, CONDUIT AND JUNCTION BOXES REQUIRED TO KEEP CONTINUITY.
- REFER TO ARCHITECTURAL DRAWING FOR THE EXACT LOCATION OF SWITCH BOX. FINAL LOCATION TO BE COORDINATED WITH ARCHITECT.
- MULTIPLE SWITCHES AT A COMMON LOCATION SHALL BE INSTALLED IN A COMMON MULTIGANG BOX WITH A COMMON FACLEPLATE. GROUP
- THEM AS REQUIRED TO MEET MANUFACTURER'S REQUIREMENT. COORDINATE WITH ARCHITECT FOR FINAL LOCATIONS OF SWITCHES.
- EC SHALL PROVIDE 90 MINUTE BATTERY PACKS FOR ALL LIGHTING FIXTURES DESIGNATED WITH "EM."
- ALL FIXTURES IN WORK ROOM, BACK AND FRONT LINE, ABOVE CONDIMENT CART, AND ANY OTHER AREAS WHERE EXPOSED FOOD, CLEAN EQUIPMENT OR UTENSILS, OR UNWRAPPED SINGLE SERVICE ITEMS WILL BE EXPOSED, SHALL HAVE SHATTERPROOF LAMPS IF THE FIXTURE IS NOT LENSED. ARCHITECT OF RECORD TO INCLUDE APPROPRIATE LAMPS / FIXTURES ON DRAWINGS AND SCHEDULES, AND COMPLY WITH ANY ADDITIONAL JURISDICTIONAL LIGHTING REQUIREMENT.
- ADJUST FOCUS OF ALL TRACK AND RECESSED DIRECTIONAL LIGHTING TO FULLY ILLUMINATE ALL ARTWORK, MENU BOARDS, AND MERCHANDISE BAYS. COORDINATE AIMING WITH OWNER.
- 11. BALLAST BOXES, TRANSFORMERS, JUNCTION BOXES, AND WIRING FOR ALL LIGHT FIXTURES TO BE INSTALLED HIDDEN FROM VIEW.
- 12. CONTRACTOR TO CIRCUIT ALL EXIT SIGNS TO PP#44.
- CONTRACTOR SHALL FURNISH AND INSTALL NEW DTS400B TIME CLOCK, NEW SE 8903LG1200V02 LIGHTING CONTACTOR, NEW SSA403 OVERRIDE SWITCH, (5) PILOT LIGHT DIMMER SWITCHES, ADJACENT TO ELECTRICAL PANEL. CIRCUITS 22, 32 & 42 TO BE CONTROLLED VIA LIGHTING CONTACTOR ON CHANNEL 1. CIRCUIT 32 TO BE CONTROLLED VIA CHANNEL 2.
- 14. CONTRACTOR TO PROTECT EXISTING BASE-BUILDING LIGHTING FIXTURES DURING CONSTRUCTION.

CONTRACTOR SHALL DISCONNECT AND REMOVE ALL LIGHT FIXTURES NOT BEING USED ALONG WITH ALL ASSOCIATE CONDUIT AND WIRING BACK TO SOURCE AND CANNOT BE ABANDONED IN PLACE WITHIN WALL AND CEILING CAVITIES, U.N.O.



# Project Information

Energy Code: Project Title: Project Type:

2018 IECC **B-R1 SHOPPES AT SIESTA KEYS** New Construction

Construction Site: 6000 AIRPORT CIRCLE SARASOTA,, FL 34243

Additional Efficiency Package(s) Credits: 1.0 Required 0.0 Proposed

Allowed Interior Lighting Power Area Category Floor Area

	(ft2)	Watts / ft	2	(B X C)
1-Common Space Types:Dining Area - Family Restaurant	940	0.71		667
	Т	otal Allowed V	/atts =	667
Proposed Interior Lighting Power				
A	В	C	D	E
Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	Lamps/	# of	Fixture	(C X D)
	Fixture	Fixtures	Watt.	
1-Common Space Types:Dining Area - Family Restaurant				100
LED 1: A: 4" DOWNLIGHT: Other;	1	25	16	392
LED 2: B: PENDANT: Other:	1	2	25	50
LED 3: C: 2X2 TROFFER: Other:	1	7	32	220
		Total Propos	sed Watts =	663

Designer/Contractor:

# Interior Lighting PASSES: Design 1% better than code

# Interior Lighting Compliance Statement

Name - Title

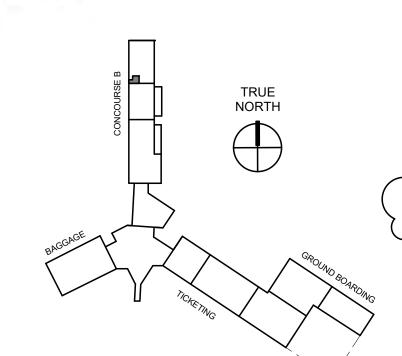
Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Signature

Project Title: B-R1 SHOPPES AT SIESTA KEYS

Data filename: P:\7063-E01\Documents\Calcs\Comcheck 2024-04-03.cck

Report date: 04/03/24 Page 2 of 9



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PROJECT Environetics Group Architects

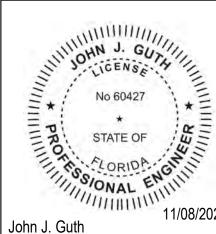
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FL LIC# 60427

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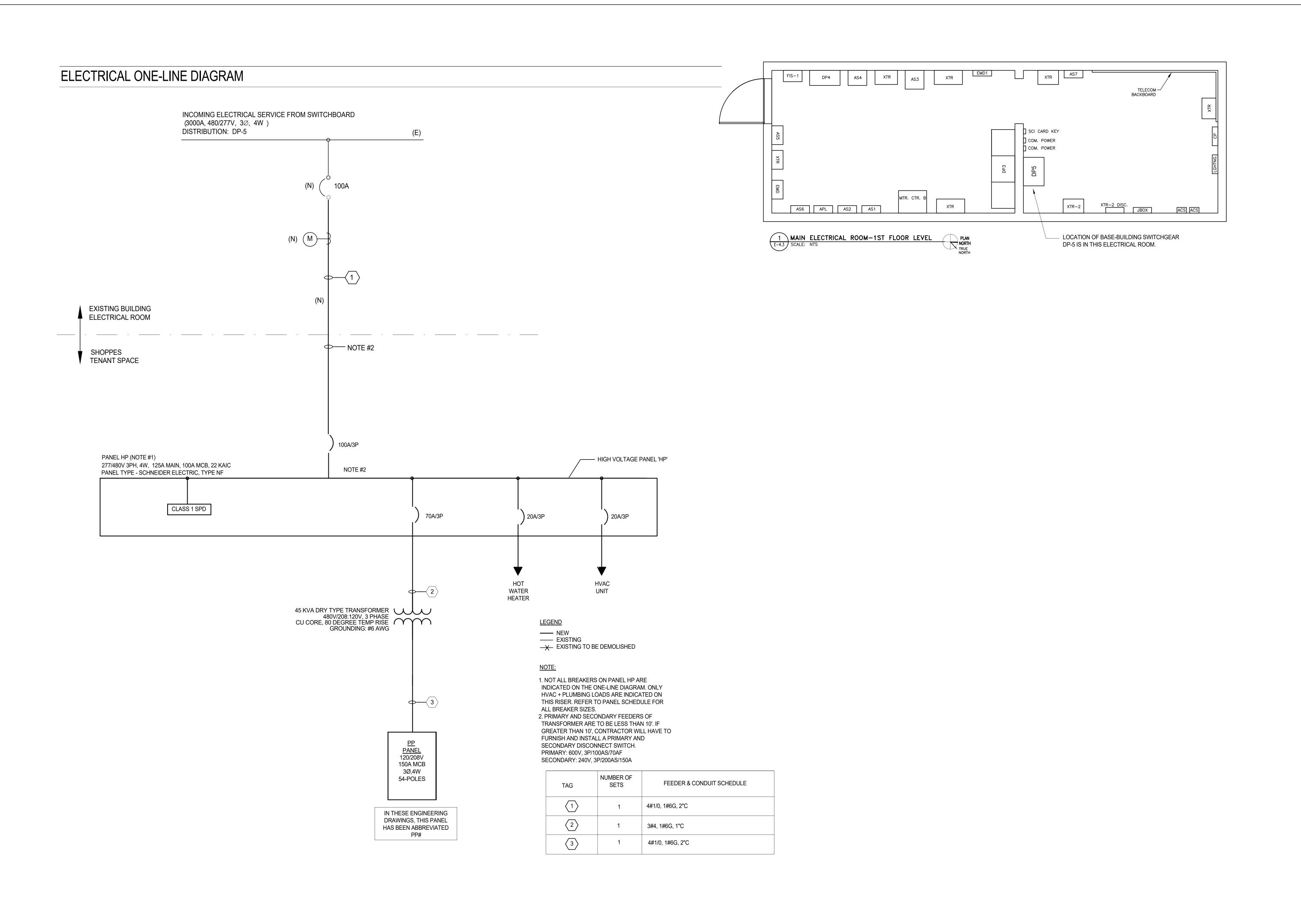
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John J. Guth FL LIC# 60427

SARASOTA BRADENTON INTERNATIONAL AIRPORT SHOPPE

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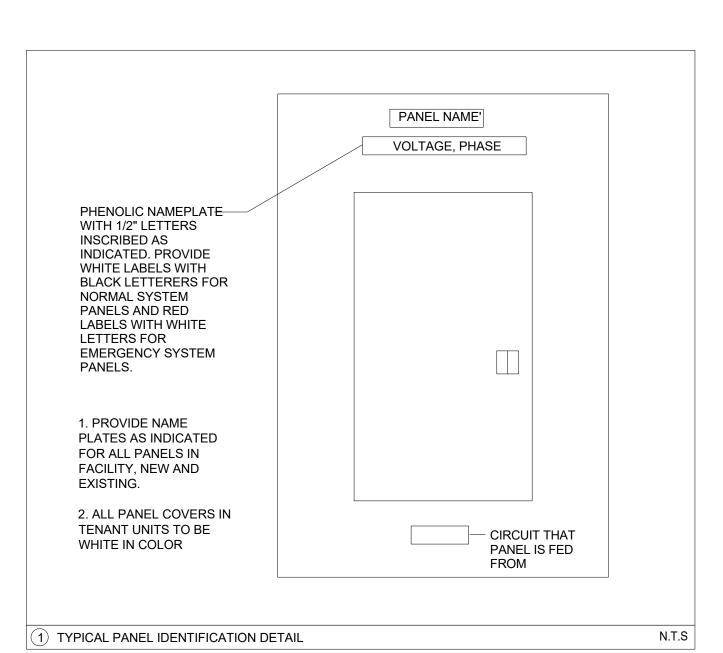
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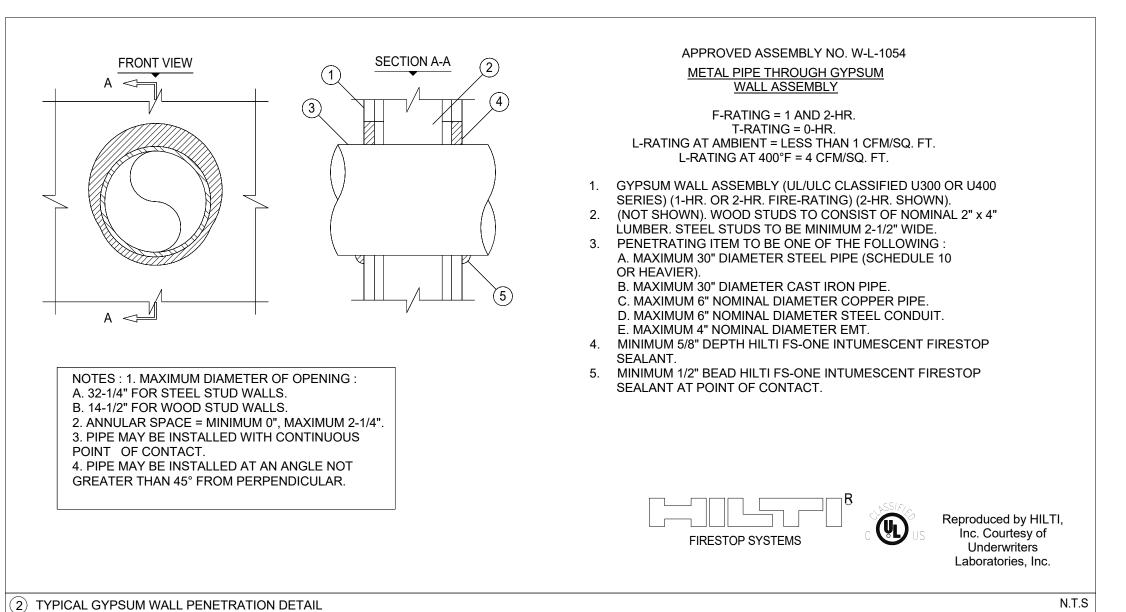
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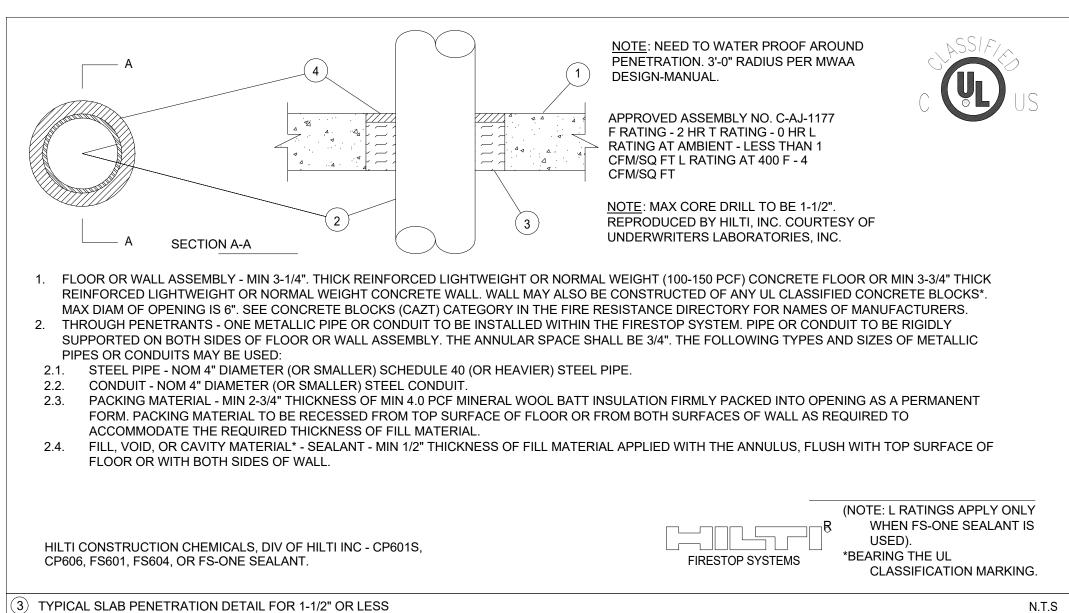
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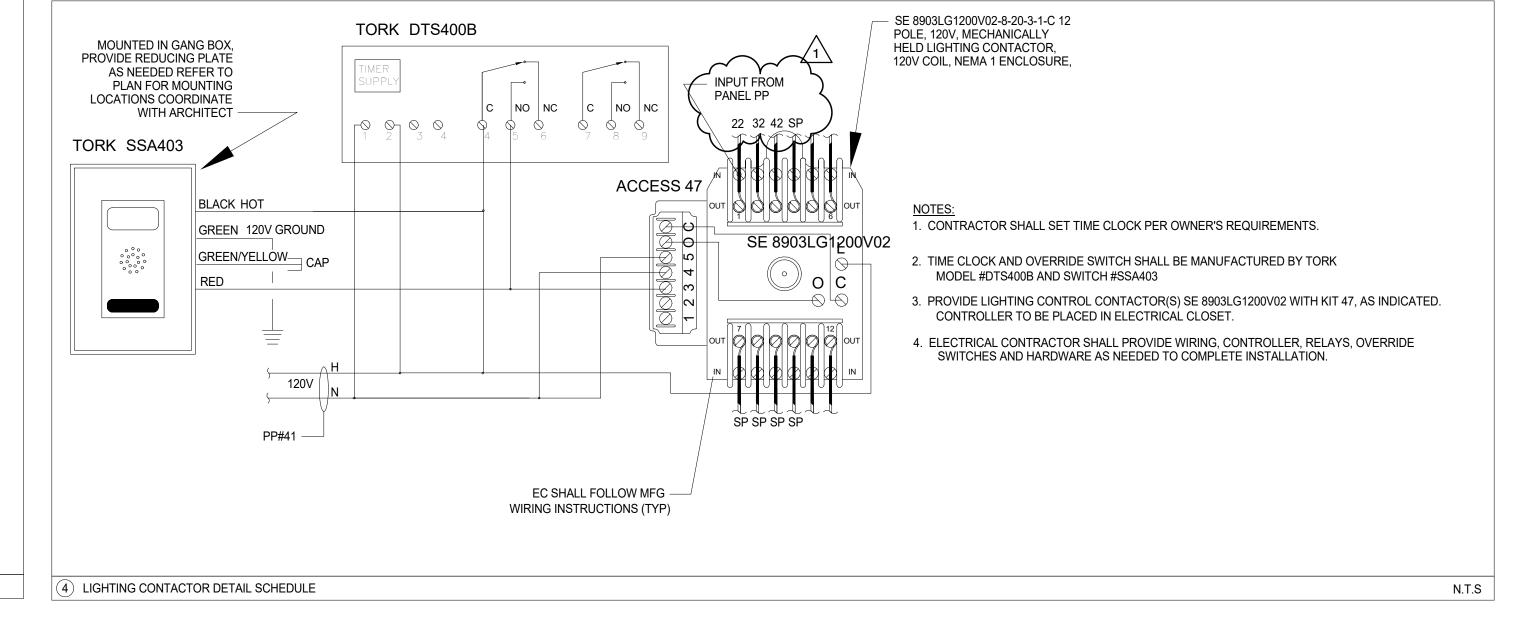
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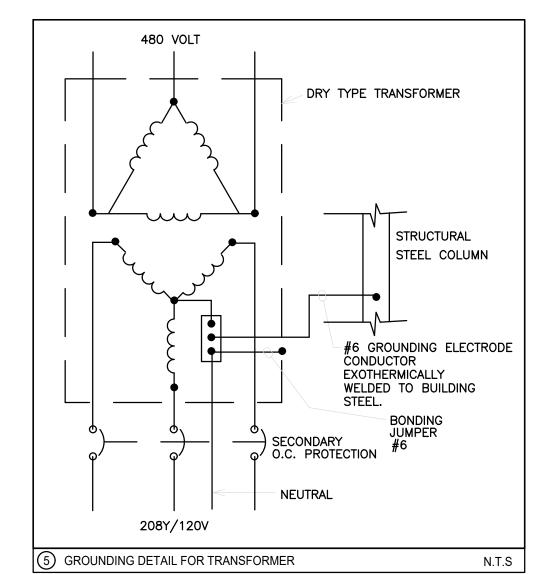
**ELECTRICAL RISER** DIAGRAM

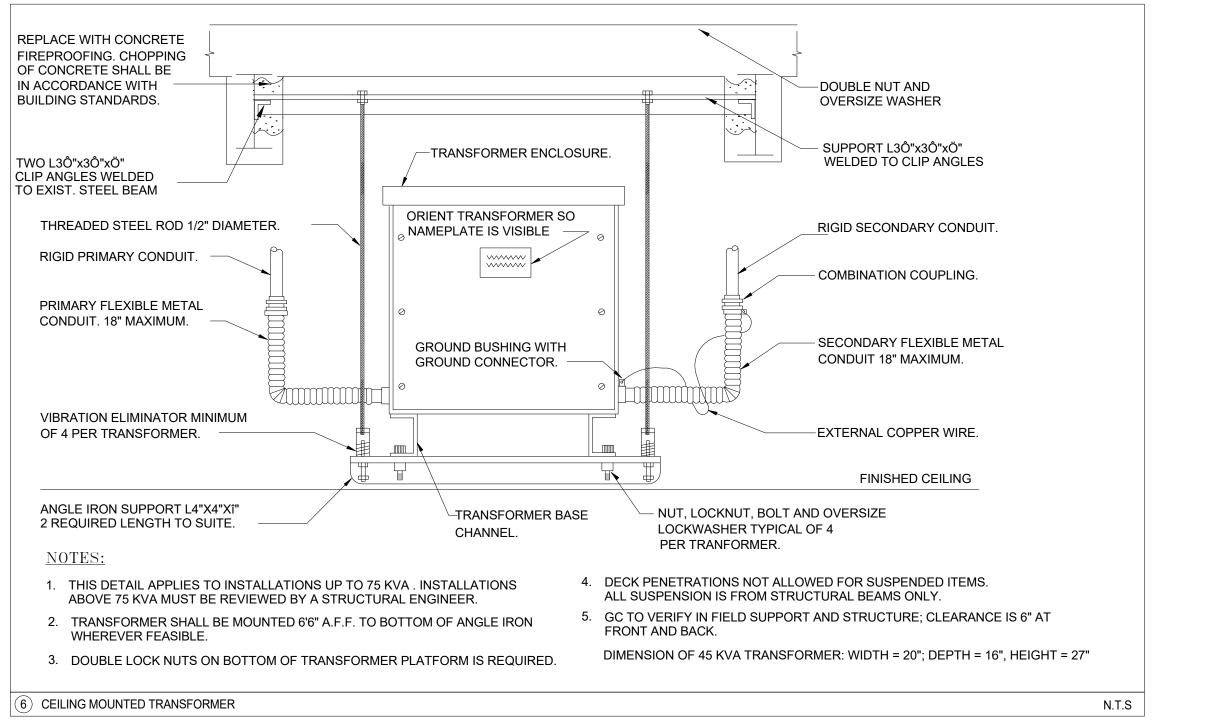












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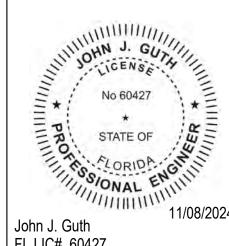
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**ELECTRICAL DETAILS** 

PANEL DESIGNATION:	LOCATION	: ELEC	TRICA	L ROOM			REMA	ARKS:	22 KAIC	
DANEL 55	SERVICE		VOLTS		4 WIRE	NEUTRAL BUS: 100%				
PANEL PP	112		225 AMP							
	MAIN CIRC			SURFAC 150 AMP			N			IOO% EQUIPMENT GROUND BUS: YES
NEW		NLUGS						0,,,,,		- CONTROL OF STREET
SERVICE TO:	LOAD	TRIP	NO.	A	В	С	NO.	TRIP	LOAD	SERVICE TO:
PR: PRINTER	360	20	_1	1920			2	20	1560	K11: FOOD BLENDER
K1: POS	360	20	3		1920		4	20	1560	K11: FOOD BLENDER
SPARE		20	5			960	6	20	960	K12: REFRIGERATOR
K2: OPEN DISPLAY MERCHANDISER	1200	20	7	1560			8	20	360	K13: UNDERRCOUNTER REFRIGERATOR
(Nema 6-20) 3#12_1#12G, 3/4"C)	1200	200	9		2500		10	20	1300	V40, 10E MAKER (2#42, 4#420, 4#0)
K4: RAPID COOK OVEN (Nema 6-20)	2000		11			3300	12	20	1300	K16: ICE MAKER (3#12, 1#12G, 1"C)
(3#10, 1#10G,, 3/4"C)	2000	20	13	2360			14	20	360	K25: REFRIGERATOR
K4: RAPID COOK OVEN (Nema 6-20)	2000	10.0	15		3500		16	20	1500	K26: WARMING BIN
(3#10, 1#10G,, 3/4"C)	2000	20	17			2240	18	20	240	K29; BEVERAGE DISPENSER
Water was a literated to the second	1400		19	2415.2			20	20	1015.2	K32 FREEZER
K5: COFFEE/TEA BREWER (3#10, 1#10G,	1"C) 1400	30	21		2538		22	20	1138	LIGHTING* 1
SPARE		20	23			180	24	20	180	K3 DISPLAY CASE
	2500	5	25	2500			26	20		SPARE
K6: ESPRESSO MACHINE (3#10, 1#10G,	1"C) 2500	30	27		3700		28	552	1200	K28: EGG STATION (NEMA 6-20)
	2500	li Pour	29			3700	30	20	1200	(3#12, 1#12G, 3/4"C)
K6: ESPRESSO MACHINE (3#10, 1#10G,	1"C) 2500	30	31	3500			32	20	1000	SIGNAGES
K8: UNDERCOUNTER REFRIGERATO	R 216	20	33		936		34	20	720	TV OUTLETS
K8: UNDERCOUNTER REFRIGERATO		20	35		100	1216	36	20	1000	DATA RACK
SPARE		20	37	3800			38		3800	
SPARE		20	39		3800		40	40	3800	K9: COFFEE BREWER (3#8, 1#10G, 1"C)
TIMECLOCK / CONTACTOR	180	20	41			380	42	20	200	SHELF LIGHTING* 1
MOTORIZED DAMPER	100	20	43	200		337	44	20	100	EXIT LIGHTS
SELF CHECKOUT	360	20	45	200	360		46	20	100	SPARE
SPARE		20	47		555	0	48	20		SPARE
SPARE		20	49	0		Ť	50	20	-	SPARE
SPARE		20	51		0	-	52	20		SPARE
SPARE		20	53			0	54	20		SPARE
OF PINE			- 55				94			STARE
	SEC.1	TOTA		DEM	AND FACT	TORS	DEM		AD (VA)	
CONNECTED LIGHTING LOAD		2438		4 4 1414 (*	125%	****		3047.		C TTO THE WAY
CONNECTED RECEPTACLE LOAD (VA): CONNECTED KITCHEN LOAD (VA):		2260		1St 10kVA	+ 50% RE	MAINDER		2260		Channel 1: Contactor 1 (Marked with *)
CONNECTED MISC. LOAD		100		-	100%			100		Channel 2: Spare
CONNECTED ELEC. HEAT LOAD	7 1 2 10 1	(			100%			0		Channel 3: Spare
CONNECTED A/C LOAD					100%		0			Channel 4: Signage
			PANEL	TOTAL DI		AD (kVA):	- 5	34.454	18	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
		P		TOTAL DEN				96		
		- 3	The second			T SPARE :		20%		<u>/1</u> \
			DAN	NEL TOTAL				115		
			CAL	VILL TOTAL	CIVIEACIT	AINIT OIL		113		

PANEL HP	SERVICE:	27	7/480	VOLTS 125 AMP	3 PHASE		KEIVI	AKNO:	22 KAIC	
NEW	MOU MAIN CIRCU	NTING '	TYPE:	SURFAC 100 AMP	E		N			100% EQUIPMENT GROUND BUS: YES ISOLATED GROUND BUS: NO
SERVICE TO:		TRIP	NO.	Α	В	C	NO.	TRIP		SERVICE TO:
	4000	6	1	6494.08			2		2494.08	
HOT WATER HEATER 4#12, 1#12G, 3/4"C	4000	20	3		6494.08		4	20	2494.08	HVAC EQUIPMENT 4#12, 1#12G, 3/4"C
4#12, 1#120, 3/4 0	4000		5			6494.08	6		2494.08	4#12, 1#120, 3/4 0
	11484.7	1.2	7	11484.7			8	11-4		SPARE
45KVA TRANSFORMER	11484.7	70	9		11484.7		10			SPARE
	11484.7		11			11484.7	12			SPARE
SPARE		20	13	0			14			SPARE
SPARE		20	15		0		16			SPARE
SPARE		20	17			0	18			SPARE
	SEC.1	TOTAL	(VA)	DEM	AND FAC	TORE	DEM	VNDT	DAD (VA)	
CONNECTED LIGHTING LOAD		0		DEIVI	125%	UKS	DEM	0	DAD (VA)	
CONNECTED RECEPTACLE LOAD		0		1st 10kVA		MAINDER	0	0	0	
CONNECTED KITCHEN LOAD	(VA): 0	0	1	10-0-1-0	65%			0		
CONNECTED MISC. LOAD	(VA): 53936.4	53936			100%			53936	.42	
CONNECTED ELEC. HEAT LOAD	The second of th	0			100%			0		
CONNECTED A/C LOAD	(VA): 0	0			100%	101000		0		
				TOTAL DE				54 65		
		PA	WEL I	OTAL DEN		T SPARE :		21%		
			PAN	EL TOTAL						
			PAN	EL TOTAL	AMPACIT	Y (AMPS):	-	79	*	

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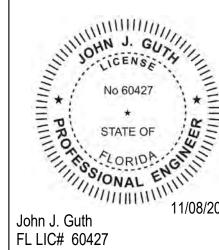
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SARASOTA BRADENTON INTERNATIONAL AIRPORT **B-R1 SHOPPES AT SIESTA KEY** 

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SHEET TITLE:
ELECTRICAL
SCHEDULES

# **ELECTRICAL SPECIFICATIONS**

# PART 1 - GENERAL

1.01 CODES AND STANDARDS ALL WORK SHALL BE SYSTEMATICALLY, CAREFULLY AND NEATLY PERFORMED AND SHALL CONFORM TO THE FOLLOWING STANDARDS:

> FLORIDA ELECTRICAL CODE 2020 2023 FLORIDA BUILDING CODE 2023 FLORDIA BUILDING CODE 2023 FLORIDA BUILDING ENERGY CODE, 8TH EDITION FLORIDA FIRE ALARM CODE 2019 FLORIDA FIRE CODE 2021 FLORIDA LIFE SAFETY CODE 2021

# 1.02 WORK SCOPE

THE SCOPE OF WORK CONSISTS OF BUT NOT LIMITED TO THE FOLLOWING:

- A. REMOVE EXISTING LIGHT FIXTURES, RECEPTACLES AND TELECOMMUNICATION OUTLETS AND SMOKE DETECTOR IN AREA OF WORK.
- B. FURNISHING, INSTALLING AND CONNECTING ALL PANELBOARDS, FEEDERS, POWER OUTLETS, LIGHT FIXTURES, SWITCHES AND ASSOCIATED WIRING AND CONDUIT.
- C. FURNISHING AND INSTALLING NEW TELEPHONE/COMMUNICATION OUTLETS AND RACEWAY.
- D. FURNISHING AND INSTALLING FIRE ALARM SYSTEM AND SECURITY SYSTEM.
- E. OTHER WORK SHOWN ON DRAWING AND INDICATED IN SPECIFICATIONS.
- F. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND APPROVALS AND SHALL PAY ALL ASSOCIATED COSTS AND FEES.
- G. VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND INCLUDE IN THE BID PRICE ALL WORK REQUIRED TO ACCOMMODATE THE EXISTING INSTALLATION.

# 1.03 SUBMITTALS

A. SUBMIT THE FOLLOWING INFORMATION AS APPLICABLE AND AS REQUIRED FOR ALL WORK SPECIFIED UNDER THIS DIVISION:

1) MANUFACTURERS' PRODUCT DATA SHEETS AND SAMPLES WHERE REQUIRED. 2) SHOP DRAWINGS INCLUDING DIMENSIONED EQUIPMENT LAYOUTS, POINT-TO-POINT 3) WIRING DIAGRAMS AND SEQUENCES OF OPERATION. 4) REPRODUCIBLE AS-BUILT DRAWINGS. 5) OPERATION AND MAINTENANCE MANUALS.

6) CERTIFIED FACTORY AND FIELD TEST REPORTS. 7) MANUFACTURERS' CERTIFICATIONS, WARRANTIES AND SPARE PARTS.

B. SUBSTITUTIONS TO SPECIFIED ITEMS MUST COMPLY WITH ALL SPECIFICATION REQUIREMENTS AND WILL ONLY BE PERMITTED WHERE SUBMITTED AND APPROVED IN WRITING.

# 1.04 AS-BUILT DRAWINGS

A. THE CONTRACTOR SHALL, AT THE COMPLETION OF THE PROJECT AND PRIOR TO REQUESTING FINAL PAYMENT, SUBMIT REPRODUCIBLE AS-BUILT DRAWINGS AND/OR CAD FILES OF THE ACTUAL INSTALLATION OF THE ELECTRICAL WORK. THE CONTRACTOR MAY, AT HIS OWN EXPENSE, OBTAIN REPRODUCIBLE COPIES OR CAD FILES OF THE CONTRACT DOCUMENTS FOR PREPARATION OF AS-BUILT DRAWINGS.

A. ANY SUBSTITUTION TO ELECTRICAL ITEMS DESCRIBED IN THE CONTRACT DOCUMENTS WILL ONLY BE PERMITTED UPON WRITTEN APPROVAL OF THE ENGINEER.

# 1.06 QUALITY ASSURANCE

- A. MATERIALS, EQUIPMENT AND INSTALLATION SHALL CONFORM TO THE LATEST EDITION OF ALL APPLICABLE CODES AND THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE [WITH THE BUILDING STANDARDS AND THE REQUIREMENTS OF THE LOCAL UTILITY COMPANY.]
- B. MATERIALS, EQUIPMENT AND INSTALLATION SHALL CONFORM TO THE LATEST EDITION OF THE APPLICABLE REFERENCE STANDARDS PUBLISHED BY THE NFPA, UL. ANSI, IEEE AND NEMA
- C. THE CONTRACTOR SHALL HAVE COMPLETED AT LEAST TWO PROJECTS OF SIZE AND COMPLEXITY SIMILAR TO THOSE REQUIRED UNDER THIS CONTRACT. ALL WORKMEN SHALL BE SKILLED IN THEIR RESPECTIVE TRADE.
- D. ALL WORK SHALL BE WARRANTED IN WRITING TO BE FREE FROM DEFECTS IN MATERIALS AND/OR WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER. WARRANTY SHALL INCLUDE ALL COSTS OF PARTS, LABOR, TRAVEL AND LIVING EXPENSES REQUIRED TO REPAIR OR REPLACE DEFECTIVE ITEMS.

# 1.07 FIELD REVIEW

- A. ALL STAGES OF THE INSTALLATION WILL BE INSPECTED FOR COMPLIANCE WITHTHE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS. ANY PORTION OF THE CONSTRUCTION NOT MEETING THOSE REQUIREMENTS TO THE SATISFACTION OF THE ENGINEER SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- B. PROVIDE PROPER EQUIPMENT AND REASONABLE ASSISTANCE AS THE ENGINEER MAY REQUIRE TO FACILITATE ACCESS AND INSPECTION AT THE CONSTRUCTION SITE.

# 1.08 BASIC MATERIAL AND METHODS

- A. COORDINATE ALL WORK WITH THE WORK OF OTHER TRADES PRIOR TO INSTALLATION. ASSIST IN THE PREPARATION OF COORDINATION DRAWINGS AS REQUIRED BY THE GENERAL CONDITIONS.
- B. ALL SHUTDOWN OF BUILDING POWER, FIRE ALARM AND SIGNAL SYSTEMS SHALL BE COORDINATED WITH BUILDING OPERATING PERSONNEL. WORK TO ACCOMMODATE OFF-HOUR SHUTDOWNS SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE
- C. CUT AND PATCH SURFACES AS REQUIRED. REPAIRS SHALL MATCH ORIGINAL FINISH, PENETRATIONS OF FIRE RATED PARTITIONS SHALL BE SEALED WITH APPROVED MATERIAL TO PROVIDE THE SAME RATING AS THE PARTITION. [REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE RATED PARTITIONS.]
- D. PROVIDE EXPANSION FITTINGS WHERE RACEWAYS CROSS BUILDING EXPANSION
- E. EQUIPMENT, DEVICES AND ENCLOSURES SHALL BE RATED NEMA 1 FOR INTERIOR LOCATIONS, NEMA 3R FOR DAMP LOCATIONS, AND NEMA 4X FOR WET LOCATIONS.
- F. PROVIDE 4" HIGH SEALED CONCRETE HOUSEKEEPING PADS BELOW ALL FLOOR MOUNTED EQUIPMENT AND AROUND ALL CONDUITS ENTERING FLOORS OF MECHANICAL EQUIPMENT ROOMS.

# 1.09 DELIVERY, STORAGE AND HANDLING

A. ALL EQUIPMENT SHALL BE DELIVERED IN MANUFACTURER'S ORIGINAL PROTECTIVE PACKAGING AND STORED IN A CLEAN, DRY PLACE PROTECTED FROM WEATHER, FUMES, WATER, DUST AND PHYSICAL DAMAGE. TOUCH UP DAMAGED FINISHES TO MATCH THE ORIGINAL FINISH.

# 1.10 SUMMARY

- PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES REQUIRED FOR COMPLETE INSTALLATION OF ALL WORK INDICATED ON THE DRAWINGS OR SPECIFIED HEREIN.
- B. OBTAIN ALL PERMITS AND APPROVALS REQUIRED BY AUTHORITIES HAVING JURISDICTION AND PAY THE ASSOCIATED PRINTING AND FILING COSTS.
- C. VERIFY EXISTING CONDITIONS IN FIELD AND INCLUDE IN THE BID PRICE ALL WORK REQUIRED TO ACCOMMODATE THE EXISTING INSTALLATION.
- D. PROVIDE TEMPORARY LIGHTING AS REQUIRED BY THE GENERAL CONDITIONS. REMOVE ALL TEMPORARY SERVICES AT THE COMPLETION OF WORK.

## PART 2 - PRODUCTS

# 2.01 RACEWAYS

- A. RIGID METALLIC CONDUIT (RMC) SHALL CONFORM TO UL 6. FITTINGS SHALL BE
- B. INTERMEDIATE METALLIC CONDUIT (IMC) SHALL CONFORM TO UL 1242. FITTINGS SHALL
- C. ELECTRICAL METALLIC TUBING (EMT) SHALL CONFORM TO UL 797. FITTINGS SHALL BE SET SCREW OR GLAND AND RING COMPRESSION TYPE.
- D. FLEXIBLE METALLIC CONDUIT SHALL CONFORM TO UL 1. LIQUID TIGHT FLEXIBLE METAL
- E. ARMORED CABLE SHALL BE 90°C RATED CODE TYPE AC-THHN WITH A SEPARATE GREEN INSULATED GROUND CONDUCTOR IN ACCORDANCE WITH UL 4. JACKET SHALL BE GALVANIZED STEEL ARMOR.
- F. ALL CONDUIT FITTINGS AND CONNECTORS SHALL BE STEEL WITH INSULATED THROATS. DIE-FORMED ZINC FITTINGS ARE NOT ACCEPTABLE. BUSHINGS SHALL BE PROVIDED AT ALL CONDUIT TERMINATIONS. BUSHINGS LARGER THAN 1" SHALL BE GROUNDING TYPE. PVC BUSHINGS MAY BE UTILIZED ONLY FORBRANCH CIRCUIT CONDUITS TERMINATING AT PANEL BOARDS.
- G. MINIMUM RACEWAY SIZE SHALL BE 34". RACEWAYS SHALL BE RUN PARALLEL TO BUILDING STRUCTURAL LINES. RACEWAYS SHALL NOT BE RUN HORIZONTALLY BELOW 8'-0" A.F.F. IN PARTITIONS. ALL EMPTY RACEWAYS SHALL BE FURNISHED WITH A 200LB. TEST NYLON DRAG LINE.
- H. ALL WIRING BETWEEN JUNCTION BOXES AND FOR CIRCUIT HOMERUNS BETWEENM FIRST OUTLET SERVED BY THE BRANCH CIRCUIT AND THE PANELBOARD SHALL BE RUN IN IMC OR EMT.
- I. CONDUIT UTILIZATION SHALL BE AS FOLLOWS:

CONDUIT SHALL CONFORM TO UL 360.

- 1.1. RIGID METALLIC CONDUIT (RMC) IN CONCRETE SLABS; EXPOSED IN MECHANICAL EQUIPMENT ROOMS BELOW 8'-0" A.F.F.; FOR FIRE ALARM SYSTEMS.
- INTERMEDIATE METALLIC CONDUIT (IMC) MAY BE USED IN LIEU OF RGS WHERE PERMITTED BY THE AUTHORITY HAVING JURISDICTION.
- ELECTRICAL METALLIC TUBING (EMT) INTERIOR CONCEALED AND EXPOSED LOCATIONS; EXPOSED IN MECHANICAL ROOMS ABOVE 8'-0" A.F.F. INTERIOR
- 1.4. FLEXIBLE METALLIC CONDUIT FINAL CONNECTIONS TO TRANSFORMERS AND LIGHTING FIXTURES IN INTERIOR LOCATIONS (MIN. LENGTH 18", MAXIMUM LENGTH 6'-0"); WHERE APPROVED BY THE ENGINEER.
- LIQUID TIGHT FLEXIBLE CONDUIT FINAL CONNECTIONS TO MOTORS AND MECHANICAL EQUIPMENT.
- ARMORED CABLE FINAL CONNECTIONS ONLY FROM JUNCTION BOXES ABOVE CEILINGS TO RECEPTACLES (MAXIMUM LENGTH 20'-0"). NOT TO BE USED FOR HOMERUNS OR FEEDERS TO MECHANICAL EQUIPMENT.
- J. WIREWAYS AND AUXILIARY GUTTERS SHALL BE TWO-PIECE STEEL CONSTRUCTION WITH ANSI 61 GRAY ENAMEL FINISH. COVERS SHALL BE COMBINATION HINGED AND SCREW-ON TYPE. HOUSINGS SHALL HAVE REGULARLY SPACED KNOCKOUTS FOR CONDUIT ENTRY. WIREWAYS SHALL BE MANUFACTURED BY SQUARE D OR APPROVED EQUAL. PROVIDE ALL END PIECES, CONNECTORS AND REQUIRED ACCESSORIES.
- K. ALL CONDUIT AND TUBING SHALL BE CUT SQUARE AND REAMED AT THE ENDS. RED LEAD SHALL BE APPLIED TO ALL EXPOSED THREADS AS A FINAL PROCEDURE AFTER JOINTS HAVE BEEN MADE UP CLEAN AND TIGHT.
- L. CONDUIT AND TUBING RUNS SHALL BE MECHANICALLY AND ELECTRICALLY CONTINUOUS FROM SERVICE STARTING TO ALL OUTLETS AND EQUIPMENT. CONDUIT SHALL ENTER AND BE SECURELY CONNECTED TO A CABINET, JUNCTION BOX, PILL BOX OR OUTLET BOX BY MEANS OF LOCKNUTS ON THE OUTSIDE AND INSIDE AND AN INSULATED BUSHING ON THE INSIDE. IN TUBING OR FLEXIBLE METAL CONDUIT THE ONE COMPRESSION LOCKNUT SHALL BE MADE WRENCH-TIGHT. ALL LOCKNUTS SHALL BE THE BONDING TYPE WITH SHARP EDGES FOR DIGGING INTO THE METAL WALL OF AN ENCLOSURE AND SHALL BE INSTALLED IN A MANNER THAT WILL ASSURE A LOCKING AND ELECTRICALLY CONTINUOUS INSTALLATION. LOCKNUTS AND BUSHINGS ARE NOT REQUIRED WHERE CONDUITS ARE SCREWED INTO TAPPED CONNECTIONS.
- M. ALL VERTICAL RUNS OF CONDUIT OR TUBING TERMINATING IN THE BOTTOMS OF WAE METAL C€LL372.002 BOXES OR CABINETS, OR SIMILAR LOCATIONS, SHALL BEPROTECTED FROM THE ENTRANCE OF FOREIGN MATERIAL PRIOR TO THE INSTALLATION OF CONDUCTORS.
- N. UNLESS OTHERWISE SPECIFIED, ALL CONDUIT AND TUBING SHALL BE INSTALLED CONCEALED. IN GENERAL, ALL CONDUIT AND TUBING SHALL BE RUN IN HUNG CEILINGS AND FURRED SPACES WHERE THEY EXIST. WHERE CONDUIT IS RUN EXPOSED IT SHALL BE SECURELY SUPPORTED WITH ZINC COATED MALLEABLE IRON PIPE STRAPS OR OTHER APPROVED MEANS. ALL CONDUITS SHALL BE SUPPORTED FROM STRUCTURAL MEMBERS.
- O. EVERY CONDUIT SYSTEM SHALL BE INSTALLED COMPLETE BEFORE ANY CONDUCTORS ARE DRAWN IN. WIRE PULLING LUBRICANTS, WHEN UTILIZED, SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF UNDERWRITERS' LABORATORIES, INC. APPLICABLE TO THE SPECIFIC CONDUCTOR OR CABLE INSULATION AND RACEWAY MATERIAL.
- P. WHERE REQUIRED AND APPROVED BY THE ENGINEER, EXTRA DEEP OR EXTRA SHALLOW OUTLET BOXES SHALL BE USED TO FACILITATE THE INSTALLATION OF THE CONDUIT SYSTEM.

# 2.02 BOXES

- A. OUTLET, PULL AND JUNCTION BOXES SHALL BE FABRICATED FROM STEEL AND CONFORM TO UL 50, UL 514 AND NEMA OS1. BOXES FOR INTERIOR LOCATIONS SHALL BE CODE GAUGE, GALVANIZED SHEET STEEL. BOXES FOR MECHANICAL ROOMS SHALL BE CAST STEEL WITH GASKETED COVERS.
- B. BOXES SHALL CONTAIN SUITABLE KNOCKOUTS. BARRIERS SHALL BE FURNISHED AS REQUIRED BY CODE AND TO SEPARATE SWITCHES FOR 277 VOLT CIRCUITS ON DIFFERENT PHASES.
- C. BOXES SHALL BE SIZED AS REQUIRED BY CODE FOR NUMBER AND GAUGE OF CONDUCTORS THEREIN, EXCEPT WHERE NOTED TO BE LARGER, THE MINIMUM SIZE BOX SHALL BE 4" SQUARE BY DEEP. COVERS GREATER THAN 50 LBS. SHALL BE DIVIDED INTO MULTIPLE SECTIONS.

# 2.03 FASTENERS

A. PROVIDE INSERTS, EXPANSION SHIELD LUGS, ANCHORS, BOLTS WITH NUTS AND WASHERS, SHIMS OR ANY OTHER TYPE OF FASTENING DEVICES REQUIRED TO FASTEN PANELS OR OTHER EQUIPMENT TO FLOORS, WALLS OR CEILINGS. UNLESS OTHERWISE SPECIFIED HEREIN OR SHOWN ON THE CONTRACT DRAWINGS, ALL FASTENERS SHALL BE HOT-DIPPED GALVANIZED, OF SIZES AND TYPES RECOMMENDED BY THE EQUIPMENT MANUFACTURER AND AS APPROVED BY THE ENGINEER.

# 2.04 WIRES, CABLES, SPLICES AND TERMINATIONS

- A. POWER AND CONTROL WIRING SHALL BE TINNED COPPER. MINIMUM 98% CONDUCTIVITY, WITH TYPE THHN INSULATION RATED 600 VOLTS. MINIMUM WIRE SIZE SHALL BE #12 AWG. CONDUCTORS SHALL BE SOLID FOR WIRE SIZED #10 AWG AND SMALLER AND STRANDED FOR WIRE SIZES #8 AWG AND LARGER.
- B. CONDUCTORS SHALL BE COLOR CODED AS FOLLOWS:

208/120V 480/277V BLACK RED ORANGE BLUE NEUTRAL GRAY OR WHITE WITH TRACER WHITE GREEN GROUND NEUTRAL FOR GFI CIRCUIT WHITE WITH TRACER

- A. CONDUCTOR SIZES SHALL BE INCREASED WHERE REQUIRED TO COMPENSATE FOR VOLTAGE DROP AND HIGH AMBIENT TEMPERATURE.
- B. COMMUNICATIONS CABLING RUN EXPOSED IN AIR HANDLING PLENUMS SHALL BE TYPE CMP PLENUM RATED.
- C. SPLICES FOR WIRE SIZES #10 AWG AND SMALLER SHALL BE MADE WITH SPRING CONNECTORS AND TAPE. SPLICES FOR WIRE SIZES #8 AWG AND LARGER SHALL BE COMPRESSION TYPE WITH PRE-MOLDED COVER AND TAPE.
- D. TERMINATIONS OF POWER AND CONTROL WIRING SHALL BE COMPRESSION TYPE, WITH TWO-HOLE LUGS FOR WIRE SIZES #8 AWG AND LARGER. MECHANICAL LUGS MAY ONLY BE UTILIZED FOR TERMINATIONS AT BRANCH CIRCUIT PANELBOARDS.

# 2.05 WIRING DEVICES

- A. WIRING DEVICES SHALL BE SPECIFICATION GRADE WITH NEMA CONFIGURATIONS AS INDICATED ON THE DRAWINGS. COLOR OF DEVICES SHALL BE AS SELECTED BY THE ARCHITECT. WIRING DEVICES SHALL BE MANUFACTURED BY ARROW-HART, HUBBELL LEVITON, PASS & SEYMOUR OR APPROVED EQUAL.
- B. PILOT LIGHT SWITCHES SHALL BE FURNISHED WITH LIGHTED HANDLE OR SEPARATE GLASS JEWEL INDICATING LIGHT WIRED TO BE ILLUMINATED WHEN THE SWITCH IS ON AND SHALL BE LABELED "FAN".
- C. FACEPLATES SHALL BE NON-MAGNETIC STAINLESS STEEL WITH BRUSHED FINISH. FACEPLATES SHALL BE FURNISHED FOR ALL COMMUNICATIONS OUTLETS AND SHALL BE CONFIGURED TO SUIT THE SYSTEM SUPPLIERS' REQUIREMENTS.
- D. DEVICES MOUNTED ADJACENT TO EACH OTHER SHALL BE FURNISHED WITH A COMMON FACEPLATE AND BE GANGED IN ONE BOX WITH FAN SWITCH FURTHEST
- E. WALL MOUNTED DIMMER SWITCHES SHALL BE LUTRON "NOVA-T" SERIES OR APPROVED EQUAL. SWITCHES SHALL BE RATED FOR EITHER INCANDESCENT, ELECTRONIC OR MAGNETIC LOW VOLTAGE AND/OR FLUORESCENT DIMMING BALLASTS. COORDINATE SWITCH TYPE WITH LIGHT FIXTURES BEING CONTROLLED. MULTIPLE SWITCHES SHALL ALIGNED AND BUTTED TOGETHER WITH MULTI-GANG OUTLET BOX. PROVIDE MATCHING LUTRON ON/OFF SWITCHES FOR NON-DIMMED SWITCHED FIXTURES.
- F. WHERE AN EXHAUST FAN SWITCH AND/OR PROJECTION SCREEN RAISE LOWER (120V OR LOW VOLTAGE) ARE LOCATED, CONTROLS ADJACENT TO DIMMER SWITCHES PROVIDE LUTRON "NOVA-T" SERIES CONTROLS.
- G. WALL MOUNTED INTERVAL TIME SWITCH FOR TEMPORARY BYPASS OF TIME CLOCKS WITH SETTING RANGE OF 0 TO 2 HOURS SHALL BE TORK MODEL No. A502HHW OR
- H. ALL DEVICES SHALL BE MOUNTED AT LOCATIONS AND HEIGHTS AS INDICATED ON ARCHITECTURAL DRAWINGS.
- I. WHERE NEW, EXISTING OR NEW AND EXISTING SWITCHES ARE MOUNTED AT SAME LOCATION, MOUNT SWITCHES BEHIND COMMON FACEPLATE.
- J. ARMORED CABLE IS ALLOWED FOR BRANCH CIRCUITS: A.AS PER NEC AND FLORIDA ELECTRICAL CODE B.FOR ASSEMBLY SPACES, ARMORED CABLE MUST HAVE INSULATED GROUND C. THE USE OF EMT IN LIE OF RIGID CONDUIT: IS NOT PERMITTED FOR MAIN FEEDERS, D. 120/208V POWER CONNECTIONS FOR FA MUST BE IN RIGID CONDUIT. E. ALL SUPERVISED LOW VOTLAGE FA WIRING SHALL BE PLENUM RATED CABLE,

# 2.06 BRANCH CIRCUIT PANELBOARDS

- A. BRANCH CIRCUIT PANELBOARDS SHALL BE 208/120V, 3 PHASE, 4-WIRE BUS BONDED TO PANEL ENCLOSURE. PROVIDE 200% SIZE NEUTRAL BUS AND MECHANICAL TYPE. PANELBOARDS SHALL BE MANUFACTURED BY DELTA SWITCHBOARD, LINCOLN ELECTRIC OR MAC PRODUCTS.
- B. CIRCUIT BREAKERS SHALL BE MOLDED CASE, BOLT-IN-PLACE WITH THERMAL-MAGNETIC TRIP ELEMENT. MINIMUM INTERRUPTING RATINGS SHALL BE 10,000 AIC FOR 208/120 AND 14,000 AIC FOR 480/277V. CIRCUIT BREAKERS FOR UNSWITCHED LIGHTING CIRCUITS SHALL BE RATED FOR SWITCHING DUTY. MAIN
- C. PANELBOARD ENCLOSURES SHALL BE GALVANIZED CODE GAUGE STEEL. TRIMS SHALL BE SURFACE TYPE IN UNFINISHED SPACES AND FLUSH TYPE IN FINISHED SPACES, WITH ANSI 61 GRAY ENAMEL FINISH. DOORS SHALL BE LOCKABLE AND ALL LOCKS SHALL BE KEYED ALIKE. FURNISH TWO KEYS FOR EACH PANEL. FURNISH TYPEWRITTEN DIRECTORIES MOUNTED BEHIND FRAME INSIDE DOOR. PANELBOARD SHALL HAVE DOOR IN DOOR ENCLOSURE. ALL PANELBOARDS OVER 36" SHALL HAVE
- E. PANEL RATED OVER 100A, SHALL HAVE A MINIMUM OF 5-3/4" GUTTER SPACE ON
- F. FURNISH AND INSTALL 8"x11" DIRECTORIES IN PROTECTIVE SLEEVES FOR EACH
- G. PANELS NOT MOUNTED ON MASONRY WALLS SHALL BE SUPPORTED FROM THE
- H. YEALOWS MOUNTED ON MASONRY WALLS SHALL BE SHIMMED WITH WASHERS TO PROVIDE A 1/2" SPACE BETWEEN PANELBOARD AND WALL.

# 2.07 SAFETY SWITCHES

- A. SAFETY DISCONNECT SWITCHES SHALL BE 250V OR 600V AS REQUIRED, HEAVY DUTY, HORSEPOWER RATED, QUICK-MAKE, QUICK-BREAK DESIGN IN NEMA-1 ENCLOSURE. ENCLOSURES EXPOSED TO WET OR RAIN CONDITIONS SHALL BE IN NEMA 3R
- B. PROVIDE INTERLOCKS TO PREVENT OPENING THE COVER WITH THE SWITCH IN THE "ON" POSITION OR CLOSING OF THE SWITCH WITH THE DOOR OPEN, EXCEPT THAT THE INTERLOCK SHALL BE TOOL RELEASABLE BY A QUALIFIED PERSON FOR INSPECTION OR THE CONTACTS OF MECHANISM.
- C. PROVIDE FOR PADLOCKING HANDLE IN THE OFF POSITION.
- D. PROVIDE NEUTRAL ASSEMBLY WHERE REQUIRED.
- ROUTE 2 NO. 14 CONTROL WIRES FROM AUXILIARY SWITCH TO STARTER WITH POWER FEEDER AND WIRED TO BREAK THE CONTROL CIRCUIT UPON OPERATION OF THE
- F. SWITCHES SHALL BE CAPABLE OF WITHSTANDING THE AVAILABLE FAULT OR LET RATING. THE SHORT CIRCUIT INTERRUPTING RATING OF THE FUSE SWITCH COMBINATION SHALL BE 100,000 RMS SYMMETRICAL AMPERES AND 12 TIMES THE CONTINUOUS CURRENT RATING WHEN UNFUSED AT RATED VOLTAGE.
- G. FUSE CLIPS SHALL BE OF THE REJECTION TYPE, SHALL ACCOMMODATE DUAL ELEMENT, CURRENT LIMITING FUSES ONLY AND SHALL BE SIZED TO ACCEPT FUSES
- H. PROVIDE GROUND LUG IN EACH SWITCH.

# 2.08 FUSES

- A. FUSES SHALL BE SILVER-SAND CONSTRUCTION, TIME DELAY, CURRENT LIMITING AND HAVE AN INTERRUPTING CAPACITY OF AT LEAST 200,000 AMPERES RMS
- C. FUSE VOLTAGE RATINGS SHALL BE 600V OR 250V AS REQUIRED.
- D. INDIVIDUAL MOTOR CIRCUIT AND TRANSFORMER PRIMARY FUSES BELOW 600 AMPERES SHALL BE REJECTION TYPE, CONFIRM TO U.L. CLASS RK-5 STANDARDS AND BE BUSSMANN TYPE FRS-R OR FRN-R "FUSETRON" OR GOULD-SHAWMUT DUAL ELEMENT "AMP-TRAP". FUSES 601 AMPERES AND LARGER SHALL CONFORM TO U.L CLASS L STANDARDS AND BE BUSSMANN TYPE KRP-C "HI-CAP", GOULD-SHAWMUT FORM 480 "AMP-TRAP", OR APPROVED EQUAL.
- E. FUSES, WHERE REQUIRED FOR CIRCUIT BREAKER BACK-UP PROTECTION AND FOR FEEDER PROTECTION OTHER THAN FOR INDIVIDUAL MOTOR OR TRANSFORMER SHALL BE LOW PEAK, TYPE RK-1 FOR 600A AND UNDER, BUSS KRP-C FOR CLASS L,

# 2.09 LIGHTING FIXTURES AND EQUIPMENT

- A. LIGHTING FIXTURES SHALL BE SPECIFICATION GRADE AND FURNISHED COMPLETE WITH ALL REQUIRED MOUNTING HARDWARE. FIXTURES SPECIFIED IN THE LIGHTING FIXTURE SCHEDULE ESTABLISH THE PERFORMANCE REQUIREMENTS. SUBSTITUTIONS MUST MEET OR EXCEED THE PERFORMANCE OF THE SPECIFIED FIXTURE.
- B. SUBMIT SCALED LAYOUT DRAWINGS FOR CONTINUOUS FIXTURES. SUBMIT SAMPLES WHEN REQUIRED BY THE LIGHTING FIXTURE SCHEDULE OR WHEN REQUESTED FOR SUBSTITUTIONS. SUBMIT BS&A AND/OR MEA APPROVALS FOR ALL EXIT AND EMERGENCY FIXTURES
- C. LAMPS SHALL BE OF THE TYPES SPECIFIED IN THE LIGHTING FIXTURE SCHEDULE. ALL LAMPS OF ANY ONE TYPE SHALL BE THE PRODUCT OF ONE MANUFACTURER. FURNISH
- D. BALLASTS SHALL BE CBM CERTIFIED, UL CLASS P, RAPID START, HIGH POWER. FACTOR, ENERGY EFFICIENT TYPE, NEMA SOUND RATING A OR BETTER AND COMPATIBLE WITH THE LAMPS FURNISHED. ELECTRONIC BALLASTS SHALL BE FULLY SOLID STATE, HIGH FREQUENCY WITH RFI PROTECTION. THREE AND FOUR LAMP FIXTURES SHALL UTILIZE ONE AND TWO LAMP BALLASTS.
- CONTRACTOR SHALL ENSURE COMPATIBILITY BETWEEN FIXTURE TRIMS AND CEILING SYSTEMS. FIXTURES RECESSED IN ACCESSIBLE CEILINGS SHALL BE FURNISHED WITH TWO EARTHQUAKE CLIPS. FIXTURES RECESSED IN NON-ACCESSIBLE CEILINGS SHALL BE DESIGNED FOR BALLAST OR TRANSFORMER ACCESS THROUGH THE FIXTURE

- CONFIGURATION WITH COPPER BUS BARS, NEUTRAL BUS AND SEPARATE GROUND ISOLATED GROUND BUS WERE INDICATED ON DRAWINGS. CABLE LUGS SHALL BE
- CIRCUIT BREAKERS SHALL BE MOUNTED SEPARATELY FROM BRANCH BREAKERS AT TOP OR BOTTOM.
- D. PANELS SHALL HAVE A MINIMUM OF 4" GUTTER SPACE ON BOTH SIDES.
- BOTH SIDES.
- PANELBOARD, NEW AND EXISTING.
- FLOOR INDEPENDENTLY OF WALL CONSTRUCTION BUT LATERALLY SECURED TO WALL FLUSH MOUNTED PANELBOARDS SHALL BE PROVIDED WITH (3) 1" EMPTY BROWN CONDUITS TERMINATED ABOVE THE FINISHED CEILING.

- ENCLOSURE.

- E. PROVIDE AUXILIARY CONTACTS FOR ALL SWITCHES USED AS MOTOR DISCONNECTS.
- THROUGH CURRENT BEFORE THE FUSE OPERATES WITHOUT DAMAGE OR CHANGE IN
- OF THE PROPER AMPERE RATING FOR COORDINATION WITH OVERLOAD PROTECTION.

- B. THE TIME-CURRENT CHARACTERISTICS AND RATINGS SHALL BE SUCH THAT POSITIVE SELECTIVE COORDINATION IS ASSURED.
- OR APPROVED EQUAL.
- 10% SPARE LAMPS OF EACH TYPE SPECIFIED.
- LAMPS AND BALLASTS FURNISHED SHALL BE APPROVED BY THE LOCAL UTILITY COMPANY FOR ANY APPLICABLE HIGH-EFFICIENCY LIGHTING REBATE PROGRAMS CONTRACTOR SHALL SUBMIT ALL REQUIRED DOCUMENTATION, INCLUDING RECEIPTS WITH UNIT PRICES, FOR FILING OF REBATE FORMS

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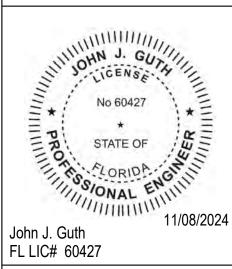
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AIRPO TIONAL INTERI ENTON BRAD OTA SHOP

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06/14/2024

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NUMBER:

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# **ELECTRICAL SPECIFICATIONS**

### 2.10 CABLE SUPPORT

- A. CABLE SUPPORT SHALL BE J-HOOK SPACED 5' ON CENTER. J-HOOKS SHALL BE CADDY CAT21 AND CAT32 AS REQUIRED.
- B. J-HOOKS SHALL BE FURNISHED COMPLETE WITH ALL PIECES REQUIRED TO ACHIEVE THE LAYOUT INDICATED. SUPPORTS SHALL BE SUPPORTED FROM BUILDING STEEL WITH SUPPORTS SPACED NO GREATER THAN 5' ON CENTER.

### 2.11 TRANSFORMER

- A. THREE PHASE TRANSFORMERS SHALL BE 480 VOLT DELTA PRIMARY AND 208/120 VOLT WYE SECONDARY IN A NEMA 1 VENTILATED ENCLOSURE, UNLESS OTHERWISE NOTED. TRANSFORMERS SHALL HAVE A MINIMUM OF TWO 2-1/2% FULL CAPACITY PRIMARY TAPS ABOVE AND FOUR 2-1/2% FULL CAPACITY PRIMARY TAPS BELOW NORMAL PRIMARY VOLTAGE. ADJUST SECONDARY VOLTAGE TO BE 208/120 WHEN INSTALLED.
- B. TRANSFORMERS 15KVA AND ABOVE SHALL BE 115 DEGREE CENTIGRADE TEMPERATURE RISE ABOVE 40 DEGREES CENTIGRADE AMBIENT BASED UPON A 220°C INSULATION SYSTEM.
- C. WHERE CALLED FOR ON DRAWINGS IN RISER, SCHEDULES, OR PANEL SCHEDULES, ALL TRANSFORMERS SERVING PANELBOARDS CONTAINING NON LINEAR LOADS (I.E. COMPUTERS, SERVERS, LASER PRINTERS, ETC) SHALL HAVE A K-FACTOR OF NO LESS THAN 13.
- D. ALL NON LINEAR LOAD TRANSFORMERS SHALL BE INSTALLED WITH NEUTRAL CONDUCTORS SIZED AT TWICE THE AMPACITY OF THE PHASE CONDUCTORS.
- E. TRANSFORMERS SHALL BE PROVIDED WITH COPPER WINDINGS.
- F. 112.5 KVA TRANSFORMERS & LOWER SHALL BE SUSPENDED FROM SLAB.
- G. TRANSFORMERS NOTED AS FLOOR MOUNTED SHALL BE INSTALLED WITH VIBRATION ISOLATION.

# PART 3 - EXECUTION

# 3.01 GROUNDING

- A. THE DISTRIBUTION SYSTEM SHALL BE COMPLETELY AND PROPERLY GROUNDED USING APPROVED FITTINGS. SEPARATE INSULATED GROUND CONDUCTORS SHALL BE RUN WITH ALL FEEDERS, RECEPTACLE BRANCH CIRCUITS AND FLEXIBLE CONNECTIONS TO LIGHTING FIXTURES AND EQUIPMENT.
- B. METAL RACEWAYS, METAL ENCLOSURES OF ELECTRICAL DEVICES AND OTHER EQUIPMENT SHALL BE COMPLETELY GROUNDED IN AN APPROVED MANNER. PROPER HARDWARE REQUIRED FOR A COMPLETE GROUNDING SYSTEM SHALL BE INSTALLED BY THE CONTRACTOR.
- C. WYE-CONNECTED TRANSFORMER SECONDARIES SHALL BE GROUNDED TO BUILDING STEEL, COLD WATER PIPING OR A DRIVEN GROUND ROD IN ACCORDANCE WITH CODE
- REQUIREMENTS FOR DERIVED SYSTEMS. D. CONDUITS TERMINATING AT CABLE TRAYS SHALL BE BONDED TO THE TRAY WITH A #6
- E. GROUND RODS SHALL BE 3/4 X 10'-0" COPPERWELD TYPE WITH EXOTHERMICALLY WELDED CONNECTIONS.
- F. RAISED FLOORS SHALL BE GROUNDED WITH #6 AWG BARE COPPER CONDUCTORS BONDED TO EVERY SECOND PEDESTAL IN EVERY OTHER ROW OF PEDESTALS. TWO (2) DIAGONAL CORNER PEDESTALS OF THE FLOOR SYSTEM SHALL BE BONDED WITH AB APPROVED GROUNDING CLAMP AND #6 GROUNDING CABLE TO NEAREST BUILDING STEEL EXOTHERMIC WELD CABLE TO FLANGE OF BUILDING STEEL. FLOOR GROUND CONDUCTOR LAYOUT SHALL NOT CREATE LOOPS.

# 3.02 SPLICES AND TERMINATIONS

- A. NO SPLICES OR JOINTS WILL BE PERMITTED IN EITHER FEEDER OR BRANCHES EXCEPT AT OUTLETS OR ACCESSIBLE TERMINAL, SPLICE OR JUNCTION BOXES.
- B. ALL MATERIALS REQUIRED FOR MAKING SPLICES AND/OR TERMINATIONS SHALL BE SUPPLIED IN COMPLETE KITS NOT OLDER THAN 6 MONTHS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ENSURING THAT ALL MATERIALS FURNISHED WILL NOT ADVERSELY AFFECT THE PHYSICAL OR ELECTRICAL PROPERTIES OF OTHER MATERIALS FURNISHED OR OF THE WIRE OR CABLE ITSELF.
- C. WHERE THE CONTRACTOR MAKES CONNECTIONS TO EXISTING WIRES, HE SHALL OPEN AND DISCONNECT THE EXISTING SPLICES FROM SUCH WIRES AND INSTALL NEW SPLICES TO INCLUDE THE EXISTING WIRES AS REQUIRED.
- D. ALL SPLICES FOR WIRE SIZES #10 AWG AND SMALLER SHALL BE MADE WITH INSULATED SPRING CONNECTOR APPLIED TO TWISTED CONDUCTORS. TWO HALF LAPPED LAYERS OF VINYL TAPE EXTENDING A DISTANCE OF NOT LESS THAN ONE INCH FROM THE CONNECTOR SHALL BE APPLIED. SPLICES OTHER THAN THE AFOREMENTIONED WILL BE PERMITTED AT THE DISCRETION OF THE ENGINEER.
- E. ALL SPLICES FOR WIRE SIZES #8 AND LARGER SHALL BE MADE WITH COM-PRESSION TYPE CONNECTORS WITH PRE-MOLDED COVER OVER WHICH TWO HALF LAPPED LAYERS OF VINYL TAPE EXTENDING A DISTANCE OF NOT LESS THAN ONE INCH FROM THE CONNECTOR SHALL BE APPLIED.

# 3.03 REMOVALS

- A. NOTES AND GRAPHIC REPRESENTATIONS ON THE DRAWINGS SHALL NOT LIMIT THE EXTENT OF REMOVALS REQUIRED. THE CONTRACTOR SHALL VISIT THE SITE AND CAREFULLY EXAMINE EXISTING CONDITIONS AND SHALL PERFORM ALL WORK REQUIRED TO ACHIEVE THE FINAL DESIGN INTENT AS REQUIRED BY THE CONTRACT DOCUMENTS. THE EXTENT OF ALL REMOVAL WORK SHALL BE COORDINATED WITH THE
- B. WHERE PORTIONS OF AN EXISTING BRANCH CIRCUIT ARE REMOVED, WIRING TO REMAIN DEVICES ON THE CIRCUIT SHALL BE RECONNECTED OR MODIFIED IN AN APPROVED MANNER AS REQUIRED TO MAINTAIN CONTINUITY OF THE AFFECTED BRANCH CIRCUIT AND OPERATION OF THE REMAINING DEVICES.
- C. ALL WORK REQUIRED TO REMAIN IN SERVICE BUT INTERFERING WITH THE ALTERATION SHALL BE RELOCATED AND RECONNECTED USING MATERIALS AND STANDARDS OF THIS CONTRACT.
- D. THE REMOVAL OF ALL TELEPHONE AND DATA DEVICES AND ASSOCIATED CABLE SHALL BE COORDINATED WITH THE APPROPRIATE BUILDING OPERATING PERSONNEL.
- E. IN THE PROCESS OF REMOVING WIRING DEVICES, LIGHTING FIXTURES AND OTHER ELECTRICAL EQUIPMENT AND MATERIALS, THIS CONTRACTOR SHALL EXERCISE EXTREME CAUTION TO PREVENT DAMAGE TO ARCHITECTURAL SURFACES AND MATERIALS WHICH ARE TO REMAIN, INCLUDING WALLS, FLOORS, CEILINGS, WINDOWS, DOORS, MOLDINGS, STRUCTURAL MEMBERS, ETC. THE COST TO REPAIR OR REPLACE ANY MATERIAL DEEMED BY THE ARCHITECT TO HAVE BEEN UNDULY DAMAGED BY THIS CONTRACTOR DURING DEMOLITION OR CONSTRUCTION SHALL BE PAID BY THIS CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- ALL EXISTING UNUSED CONDUIT AND WIRING SHALL BE DROPPED TO THE FLOOR BY THE ELECTRICIAN FOR REMOVAL FROM THE BUILDING BY DEMOLITION OR GENERAL CONTRACTOR.

## 3.04 IDENTIFICATION OF WORK

- A. ALL PANELBOARDS, EQUIPMENT AND CABINETS SPECIFIED HEREIN SHALL BE CLEARLY IDENTIFIED WITH THE EQUIPMENT DESIGNATION, VOLTAGE AND AMPERE RATING, FUSE RATING, EQUIPMENT SERVED AND ORIGIN OF THE INCOMING FEED. IDENTIFICATION SHALL BE WHITE ON BLACK PLASTIC NAMEPLATE WITH MINIMUM LETTERING ATTACHED BY SCREWS.
- B. FACEPLATES OF SWITCHES FOR EQUIPMENT SUCH AS REMOTE FANS AND MOTORIZED SCREENS SHALL BE IDENTIFIED WITH THE NAME OF THE DEVICE CONTROLLED. IDENTIFICATION SHALL BE BY INDELIBLE MARKER IN CONCEALED LOCATIONS AND ADHESIVE LABELS IN EXPOSED LOCATIONS. EMERGENCY DEVICES SHALL BE IDENTIFIED IN RED.
- C. EMPTY CONDUITS SHALL BE IDENTIFIED WITH TAGS AT BOTH ENDS INDICATING THE LOCATION OF TERMINATION AT THE OPPOSITE END.
- D. BALLAST COMPARTMENTS FOR FIXTURES OPERATING AT GREATER THAN 120 VOLTS SHALL BE IDENTIFIED WITH A BRIGHT ORANGE ADHESIVE WARNING LABEL.
- E. ALL WIRES SHALL BE IDENTIFIED BY PANEL AND CIRCUIT NUMBER AT ALL TERMINATION AND SPLICE POINTS BY THE USE OF BRADY B-500 VINYL CLOTH TAPE OR EQUIVALENT METHOD.
- F. ALL JUNCTION BOXES SHALL BE IDENTIFIED WITH PANEL AND CIRCUIT NUMBERS OF ALL CIRCUITS OR NAME OF COMMUNICATIONS SYSTEM CABLING CONTAINED WITHIN. JUNCTION BOXES IN EXPOSED LOCATIONS SHALL BE CLEARLY MARKED WITH LABELS. JUNCTION BOXES IN CONCEALED LOCATIONS SHALL BE MARKED WITH A BOLD, INDELIBLE MARKING PEN. LETTERING SHALL BE NEATLY AND LEGIBLY PRINTED, JUNCTION BOXES ON EMERGENCY SERVICE SHALL BE PAINTED RED AND LABELED AS EMERGENCY.
- G. CONDUIT RUNS FOR BRANCH CIRCUITING AND/OR COMMUNICATIONS CABLING SHALL BE IDENTIFIED AT EVERY 50 FEET OF LENGTH, AND AT EACH OUTLET AND PULL BOX WITH CIRCUIT NUMBER OR SYSTEM NAME.
- H. ALL OUTLETS AND SWITCHES SHALL BE LABLED WITH CIRCUIT AND PANEL INFORMATION USING P-TOUCH TYPE LABEL. 3.05 INSTALLATION OF LIGHTING FIXTURES
  - A. LOCATIONS OF LIGHTING FIXTURES INDICATED ON THE DRAWINGS ARE APPROXIMATE. CONTRACTOR SHALL REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF ALL LIGHTING FIXTURES PRIOR TO INSTALLATION.
  - B. RECESSED FIXTURES SHALL BE FURNISHED COMPLETE WITH MOUNTING DEVICES AND
  - C. FIXTURES SHALL BE ATTACHED TO CEILING SUPPORTING MEMBERS, AND SHALL NOT DEPEND UPON LATHING OR PLASTER FOR ALIGNMENT OR SUPPORT. FIXTURES IN SUSPENDED CEILINGS SHALL BE SUPPORTED BY SADDLE HANGERS OR TIE-BARS ATTACHED TO RUNNERS OR BETWEEN CROSSBARS OF CEILING SYSTEMS. MOUNTING SPLINES OR OTHER POSITIVE MEANS OF MAINTAINING ALIGNMENT AND RIGIDITY SHALL BE PROVIDED. SUPPORTING MEMBERS SHALL BE SURFACE PASSIVATED AND SHALL BE PRIMED OR PAINT DIPPED TO RESIST CORROSION. FASTENING DEVICES SHALL BE OF A POSITIVE, LOCKING TYPE, AND SHALL NOT REQUIRE THE USE OF SPECIAL TOOLS TO REMOVE. TIE WIRES SHALL NOT BE USED IN PLACE OF FASTENING
  - D. HANGING OF LIGHTING FIXTURES IS TO BE DONE IN ACCORDANCE WITH THE FLORIDA <u>ELECTRICAL CODE.</u> LIGHTING FIXTURES WEIGHING UP TO AND INCLUDING 40 POUNDS MAY BE SUPPORTED FROM THE STEEL "Z" BARS. LIGHTING FIXTURES WEIGHING FROM 41 POUNDS UP TO AND INCLUDING 80 POUNDS MAY BE SUPPORTED FROM THE PURLINS. LIGHTING FIXTURES WEIGHING OVER 80 POUNDS SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE AND NOT FROM THE CEILING SUSPENSION SYSTEM.
  - E. SPLICES SHALL NOT BE PERMITTED IN ANY RUN OF LIGHTING FIXTURE HOOKUP WIRE.
  - F. SEPARATELY MOUNTED OUTLET BOXES AND FLEXIBLE CONDUIT PIGTAIL CONNECTIONS (MAXIMUM LENGTH OF 6'-0") SHALL BE PROVIDED FOR LIGHTING FIXTURES RECESSED IN HUNG CEILINGS WITH ACCESSIBLE TILES. ONE (1) OUTLET BOX MAY SERVE UP TO A MAXIMUM OF FOUR (4) RECESSED LIGHTING FIXTURES.
  - G. ALL LIGHTING FIXTURES OPERATING AT 120V SHALL BE IDENTIFIED WITH AN ADHESIVE WARNING LABEL ATTACHED TO COVER A BALLAST COMPARTMENT.

# 3.06 CUTTING AND PATCHING

- A. ALL CUTTING AND PATCHING REQUIRED FOR EQUIPMENT INCLUDED IN THESE SPECIFICATIONS SHALL BE DONE BY THIS CONTRACTOR.
- B. THIS CONTRACTOR SHALL NOT DO ANY CUTTING THAT MAY IMPAIR THE STRENGTH OF BUILDING CONSTRUCTION. NO HOLES ARE TO BE DRILLED INTO ANY STRUCTURAL MEMBERS. CLAMPS OR OTHER APPROVED HOLDING DEVICES ARE TO BE USED.
- C. ALL CUTTING OF EXISTING FLOORS, CEILINGS AND WALLS SHALL BE PERFORMED IN A MANNER SO AS TO MINIMIZE DAMAGE TO ADJACENT MATERIALS. PATCHING OF ALL SURFACES SHALL BE PERFORMED IN A MANNER APPROVED BY THE ARCHITECT TO INSURE COMPLETE MATCHING WITH ADJACENT FINISHES AFTER FINAL TREATMENT

# 3.08 SEALING OF PENETRATIONS

- A. ALL PENETRATIONS OF WALLS, FLOORS OR CEILINGS MUST BE SEALED IN AN APPROVED MANNER USING AN OUTER CIRCUMFERENTIAL SLEEVE FILLED INSIDE AND
- B. ALL PENETRATIONS OF FIRE RATED WALLS, FLOORS OR CEILINGS SHALL BE SEALED WITH APPROVED MATERIAL TO PROVIDE SAME RATING AS FLOOR, WALL OR CEILING ASSEMBLY. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE RATED PARTITIONS.

# 3.09 HANGERS AND SUPPORTS

- A. THREADED RODS SHALL BE FULLY GALVANIZED, MINIMUM 3/8" DIAMETER. MODULAR CHANNEL SUPPORTS SHALL BE GALVANIZED STEEL. SUPPORT CLIPS AND FASTENERS SHALL BE LISTED AND APPROVED FOR THE APPLICATION. STRAPS AND CLAMPS SHALL BE MALLEABLE IRON.
- B. SUPPORTS SHALL BE SIZED TO ACCOMMODATE THE LOAD REQUIRED. ALL WORK SHALL BE SUPPORTED INDEPENDENTLY OF THE WORK OF OTHER TRADES, INCLUDING CEILING SYSTEM SUPPORTS.
- C. PANELS AND EQUIPMENT LOCATED ON OTHER THAN MASONRY WALLS SHALL BE MOUNTED WITH MODULAR CHANNEL SUPPORTS SECURED TO THE BUILDING
- D. APPROVED SEISMIC RESTRAINTS RATED TO RESIST 1/2G OF FORCE SHALL BE FURNISHED FOR ALL ELECTRICAL WORK WHERE REQUIRED BY LOCAL BUILDING CODES AND THE AUTHORITIES HAVING JURISDICTION.

# 3.10 POWER INTERRUPTION NOTE

- A. ELECTRICAL POWER MUST BE SHUT OFF PRIOR TO THE CONTRACTOR PERFORMING ANY WORK IN RACEWAYS WITH LIVE ELECTRICAL CIRCUITS OR ANY OTHER LIVE ELECTRICAL CIRCUITS OR EQUIPMENT. ANY POWER INTERRUPTION SHALL BE COORDINATED WITH THE OWNER AND BUILDING OPERATING PERSONNEL.
- B. TAPS INTO LIVE RISERS ARE NOT PERMITTED.

# 3.11 TEMPORARY LIGHT AND POWER

A PROVIDE TEMPORARY LIGHT AND POWER SYSTEM (AS PART OF THE CONTRACT) ADEQUATE FOR THE REQUIREMENTS OF ALL TRADES DURING CONSTRUCTION. TEMPORARY SYSTEM SHALL BE DISCONNECTED AND REMOVED WHEN PERMANENT SERVICE IS IN OPERATION.

# 3.12 FINAL CLEANUP AND FIELD TESTS

A. AFTER COMPLETION OF THE ENTIRE ELECTRICAL INSTALLATION:

1) THE CONTRACTOR, PRIOR TO FINAL ACCEPTANCE, SHALL CLEAN ALL SWITCHES, CABINETS, DEVICES PLATES, FIXTURES AND OTHER ITEMS FURNISHED UNDER THIS CONTRACT AND SHALL ENSURE THAT ALL PANELBOARD DIRECTORIES ARE IN PLACE AND COMPLETED OR REVISED AS REQUIRED BY THE WORK, AND THAT ALL IDENTIFICATION AND MARKING OF EQUIPMENT, CABLES, ALL JUNCTION BOXES AND OTHER ITEMS IS COMPLETED.

2) THE CONTRACTOR SHALL REPAIR OR REPLACE, AS DIRECTED BY THE ENGINEER, ANY ITEM DAMAGED DUE TO INSTALLATION OR RELOCATION OF EQUIPMENT OR DEVICES AT NOT ADDITIONAL COST TO THE OWNER.

B. IN ADDITION TO OTHER TESTS WHICH MAY BE REQUIRED BY OTHER DIVISIONS, PERFORM FIELD TESTS IN THE PRESENCE OF THE ENGINEER, TO DEMONSTRATE THE PROPER FUNCTIONING OF THE ELECTRICAL INSTALLATION. THE ENGINEER SHALL BE GIVEN A MINIMUM OF 48 HOURS ADVANCE NOTICE OF ALL TESTS. REQUIRED FIELD TESTS SHALL INCLUDE, BUT NOT BE LIMITED TO THE

1) OPERATION OF ALL ELECTRICAL EQUIPMENT FOR A PERIOD FOR A PERIOD OF 24 HOURS WITHOUT INTERRUPTION.

2) 1,000 VOLT MEGOHMMETER TEST FOR ALL WIRES AND CABLES FURNISHED CONTRACTOR SHALL FURNISH A TEST REPORT TO THE ENGINEER INDICATING TEST METHOD USED AND RESULTS.

- C. ALL DEFECTIVE FIXTURES CABLES OR OTHER EQUIPMENT ENCOUNTERED DURING THE COURSE OF TESTING SHALL BE PROMPTLY REPLACED AND RE-TESTED TO THE SATISFACTION OF THE ENGINEER.
- D. ELECTRIC WIRING FOR INSTALLATION AND RELOCATION OF FIRE ALARM DEVICES SHALL BE APPROVED BY THE FIRE DEPARTMENT. CONTRACTOR MUST FILE FORM AS REQUIRED WITH THE FIRE DEPARTMENT.

# 3.13 UNIT PRICE NOTES

- A. CONTRACTOR IS TO SUBMIT UNIT PRICES FOR THE FOLLOWING LISTED ITEMS:
- 1) ALL CONDUITS REQUIRED FOR THIS JOB
- 2) ALL RECEPTACLES, WALL AND WORKSTATION MOUNTED
- 3) ALL LIGHT FIXTURES 4) ALL SWITCHES 5) TELEPHONE OUTLETS

# 3.14 PROJECT CLOSE OUT

A. AFTER COMPLETION OF PROJECT AND PRIOR TO REQUESTING FINAL PAYMENT, THE CONTRACTOR SHALL GIVEN WRITTEN NOTICE THAT THE FOLLOWING ITEMS HAVE BEEN

1) REQUIRED AGENCY APPROVALS.

- 2) FINAL CLEANING AND ADJUSTMENT OF LIGHTING FIXTURES AND EQUIPMENT. 3) RESOLUTION OF OUTSTANDING SUBMITTALS AND PUNCH LIST ITEMS.
- 4) AS-BUILT DRAWINGS 5) TURNOVER OF SPARE LAMPS, KEYS, AND ANY REQUIRED SPARE PARTS OR
- 6) SYSTEM STARTUP, TESTING AND ADJUSTMENT.
- 7) MANUFACTURER'S CERTIFICATIONS, WARRANTIES AND O&M MANUALS.
- 8) DEMONSTRATIONS AND OWNER INSTRUCTION.

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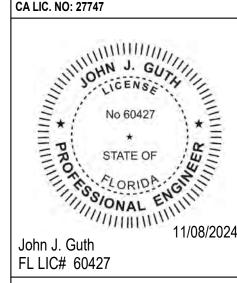
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PROJECT 24017B NUMBER: DRAWN BY:

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**ELECTRICAL SPECIFICATIONS** (SHEET 2 OF 2)

# **FLORIDA PLUMBING CODE NOTES**

ALL PLUMBING WORK SHALL MEET THE REQUIREMENTS OF THE 2023 FLORIDA BUILDING CODE & 2023 FLORIDA PLUMBING CODE.

- PROTECTION OF PIPING AS OUTLINED IN PC 305 SHALL BE PROVIDED AS REQUIRED.
- 2. TESTING AND INSPECTION OF PLUMBING WORK SHALL BE AS PER SECTION PC 312.
- CONDENSATE DISPOSAL FROM HIGH EFFICIENCY FUEL BURNING APPLIANCES, EVAPORATORS AND COOLING COILS SHALL BE A PER SECTION PC 314.
- 4. WATER HEATER INSTALLATION SHALL COMPLY WITH PC 502
- 5. ALL PIPING AND MATERIALS SHALL BE AS DIRECTED IN PC 303.
- 6. PIPING JOINTS AND CONNECTIONS SHALL BE AS APPROVED IN PC 605, PC 705, PC 804 AND PC 1004.
- CONSTRUCTION, QUANTITIES, DEVICES, FIXTURES, FAUCETS, VALVES AND FACILITIES FOR THE DISABLED SHALL BE AS OUTLINED IN PC 403.
- TRAPS AND CLEANOUTS SHALL BE AS PER PC 1002.
- 9. CONSTRUCTION AND SPACING OF HANGERS AND SUPPORTS, AND SEISMIC SUPPORTS SHALL BE IN ACCORDANCE WITH SECTION PC 308 AND PC TABLE 308.5
- 10. WATER SUPPLY SYSTEM, VALVES, TESTS SHALL BE AS DIRECTED IN CHAPTER 6.
- 11. WATER SUB-METER SHALL CONFORM TO SECTION PC 606.7.
- 13. SANITARY DRAINAGE PIPING, SIZING, GRADING AND OFFSETS SHALL BE AS OUTLINED SECTIONS

12. HOT WATER DISTRIBUTION AND RE-CIRCULATION SYSTEM SHALL BE AS PER SECTION PC 607.

- PC 303 AND PC 702. 14. TRAPS SHALL BE AS PER SECTION PC 1002.
- 15. SIZING AND INSTALLATION OF DRAINAGE PIPING, FITTINGS AND OFFSETS SHALL BE AS PER CHAPTER 7 OF THE PLUMBING CODE.
- 16. VENT SIZING, GRADING, CONNECTIONS, LOCATIONS AND OFFSETS SHALL BE AS DIRECTED IN CHAPTER 9 OF THE PLUMBING CODE.
- 17. STORM DRAINAGE PIPING AND SIZING SHALL BE IN ACCORDANCE WITH CHAPTER 11.
- 18. SPECIAL AND MISCELLANEOUS PIPING SHALL BE AS DIRECTED IN PC 803.
- 19. INDIRECT WASTE PIPING SHALL BE AS DIRECTED IN CHAPTER 8 OF THE PLUMBING CODE.
- 20. GAS PIPING INSTALLATION, MATERIAL AND SIZES SHALL ADHERE TO CHAPTER 4 OF THE FUEL GAS
- 21. ALL PLUMBING DRAINAGE PIPING, INCLUDING AN EQUIPMENT CONNECTED THERETO, SHALL BE SEISMICALLY RESTRAINED AS PER SECTION BC 1613 AND ASCE 7-2010.
- 22. CLEAN OUTS FOR SANITARY DRAINAGE SHALL BE AS PER SECTION PC 708.
- 23. ALL SANITARY DRAINAGE PIPING SHALL BE PITCHED IN ACCORDANCE WITH SECTION PC 704.1
- 24. ALL PLUMBING FIXTURES SHALL COMPLY WITH LOCAL LAW 29/89 LOW FLOW FIXTURES.
- 25. THE OWNER SHALL ENGAGE THE SERVICES OF AN AGENCY APPROVED BY THE LOCAL DEPARTMENT OF BUILDINGS TO PERFORM ALL REQUIRED SPECIAL INSPECTIONS (BC 1704) AND PROGRESS INSPECTIONS (BC 109). SPECIAL INSPECTION (CODE REFERENCES ARE TO THE DECEMBER 31, 2022 CODE).
- 26. ALL INSPECTIONS AND TESTS WILL BE MADE IN COMPLIANCE WITH BC 1704.

# 27. PROJECTION OF POTABLE WATER SYSTEM PER SECTION PC 608

28. ALL PLUMBING WORK SHALL BE DONE BY OR UNDER THE DIRECT SUPERVISION OF A LICENSED

- PLUMBING ROUGHING FOR BAR EQUIPMENT AS DEDICATED ON THE DRAWINGS ARE APPROXIMATE, THIS CONTRACTOR SHALL REFER TO THE APPROVED BAR EQUIPMENT ROUGHING SHOP DRAWING FOR EXACT LOCATION OF CONNECTION TO EQUIPMENT.
- THIS CONTRACTOR SHALL EXTEND AS REQUIRED, THE NECESSARY SUPPLIES (I.E. WATER, WASTE, INDIRECT WASTE, VENT, ETC.) FROM THE LOCATION ON THIS DRAWING TO FINAL CONNECTION OF ALL FLOOR DRAINS, ETC.
- THIS CONTRACTOR SHALL COOPERATE AND COORDINATE WITH THE EQUIPMENT CONTRACTOR AND CONTRACTORS OF OTHER TRADES FOR THE EXACT LOCATION OF ALL FLOOR DRAINS, ETC.
- 4. WHERE POSSIBLE BRANCH PIPING TO EQUIPMENT CONNECTION SHALL BE INSTALLED CONCEALED FROM VIEW. ALL PIPING (WASTE, VENT, HOT & COLD WATER) EXPOSED TO VIEW IS TO BE CHROME PLATED.
- PROVIDE NECESSARY SHOCK ABSORBERS, VACUUM BREAKERS, PRESSURE REDUCING VALVES, RELIEF VALVES, ETC... ON EACH BRANCH WATER LINE TO EQUIPMENT REQUIRING SAME, SEE SPECIFICATION.
- THE ITEM NUMBERS INDICATED ON THESE DRAWINGS CORRESPOND TO THOSE ITEM NUMBERS SHOW ON THE EQUIPMENT ROUGHING DRAWINGS.
- AT FINAL INSPECTION THE CONTRACTOR SHALL, PROVIDE COPY OF WATER POTABILITY TEST RESULTS FROM A LICENSED LAB AFTER LINES HAVE BEEN CHLORINATED AS REQUIRED BY THE NATIONAL STANDARD PLUMBING CODE OR EQUIVALENT.
- WATER TEMPERATURE FOR HANDWASHING SHALL BE SET AT 110 DEGREES F. WATER TEMPERATURE FOR SANITIZING SHALL BE SET AT 120 DEGREES F.
- WATER POTABILITY MUST BE TESTED BY A LOCAL LICENSED LAB AFTER LINES HAVE BEEN CHLORINATED. A COPY OF THE TEST RESULTS SHALL BE PROVIDED AT FINAL INSPECTION.
- 10. ALL FLOOR DRAINS/FLOOR SINKS SHALL BE EASILY ACCESSIBLE AND VISIBLE.
- 11. FLOOR DRAINS/FLOOR SINKS LOCATED WITHIN THE FOOTPRINT OF ANY CABINET SHALL BE BOXED OUT WITH A SURROUNDING COVE FOR ACCESSIBILITY/CLEANING.
- 12. ALL EXPOSED UTILITY SERVICE LINES AND PIPES SHALL BE INSTALLED IN A WAY THAT DOES NOT OBSTRUCT OR PREVENT THE CLEANING OF FLOORS (MIN 6" OFF FLOOR).

# PLUMBING GENERAL NOTES

- ALL MATERIALS AND APPARATUS SHALL BE INSTALLED IN ACCORDANCE WITH ALL THE RULES AND REGULATIONS OF THE 2023 FLORIDA BUILDING CODE, 2023 FLORIDA PLUMBING CODE.
- 1. BEFORE SUBMITTING PROPOSAL, BIDDERS SHALL CAREFULLY EXAMINE EXISTING FIELD CONDITIONS AND CONTRACT DRAWINGS OF ALL TRADES. SUBMISSION OF PROPOSAL WILL BE CONSTRUCTED AS EVIDENCE THAT REQUIRED EXAMINATION HAS BEEN MADE. LATER CLAIMS FOR EXTRA LABOR, EQUIPMENT AND MATERIALS REQUIRED DUE TO EXISTING FIELD CONDITIONS, WHICH COULD HAVE BEEN FORESEEN, WILL NOT BE RECOGNIZED.
- 2. PROCUREMENT OF ALL PERMITS AND CERTIFICATES FOR THE INSTALLATION OF THESE SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH ALL THE RULES AND REGULATIONS OF THE 2023 FLORIDA BUILDING CODES AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
- 3. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER AT NO EXTRA TRADES AND ALL EXISTING CONDITIONS, AND PROVIDE REQUIRED TO OFFSET COST, ALL ADDITIONAL PIPING AND FITTINGS SYSTEM TO AVOID EXISTING/NEW STRUCTURAL, ARCHITECTURAL, MECHANICAL AND ELECTRICAL INTERFERENCES, WHETHER INDICATED OR NOT, BEFORE INSTALLING WORK.
- 4. ALL EXISTING PIPING IS SHOWN IN APPROXIMATE LOCATIONS. CONTRACTOR TO VERIFY IN FIELD ALL SIZES, LOCATIONS AND ELEVATIONS OF ALL NEW POINTS OF CONNECTION TO EXISTING PIPING. COORDINATE HIS WORK WITH ALL OTHER TRADES.
- 5. CONNECTION TO EXISTING SERVICES SHALL BE PERFORMED DURING OFF-WORK HOURS OR ON WEEKENDS IN PREMIUM TIME. CONNECTION PERFORMED IN NEAT OF NEW WORK TO EXISTING WORK SHALL BE AND APPROVED MANNER, RESTORING EXISTING WORK DISTURBED TO ORIGINAL CONDITION.
- 6. ALL NEW PIPING SHALL BE RUN CLOSE TO BEAMS, WALLS AND SLABS, SQUARE TO BUILDING CONSTRUCTION, CONCEALED ABOVE HUNG CEILINGS AND WITHIN FURRED SPACES.
- 7. ALL EXISTING PIPING, INDICATED AND/OR NOTED TO BE REMOVED, SHALL BE REMOVED BACK TO EXISTING STACKS, RISERS OR MAINS AND CAPPED/PLUGGED AT TERMINAL POINT UNLESS OTHERWISE DIRECTED BY OWNER OR ENGINEER.
- 8. THE CONTRACTOR SHALL NOT INTERRUPT ANY OF SERVICES OF THE EXISTING BUILDING WITHOUT THE EXPRESSED WRITTEN PERMISSION OF THE OWNER, AND SUCH INTERRUPTIONS SHALL BE AS BRIEF AS POSSIBLE, AND AT THE TIME AGREED TO WITH THE OWNER.
- 9. UNDER NO CIRCUMSTANCES WILL THIS CONTRACTOR, OR HIS WORKMEN BE PERMITTED TO USE ANY PART OF THE BUILDING AS A SHOP EXCEPT AREAS DESIGNATED BY OWNER.
- 10. EXISTING PIPING DAMAGED AS A RESULT OF PERFORMING THE WORK OF SHALL BE REPAIRED OR REPLACED AS REQUIRED WITH THIS CONTRACT EXISTING. MATERIAL AND FINISH TO MATCH.
- 11. ALL SHUT DOWNS AND TIE-INS SHALL BE COORDINATED WITH THE BUILDING MANAGEMENT PRIOR TO COMMENCEMENT. BUILDING MANAGEMENT SHALL DICTATE SCHEDULE OF TIE-INS AND SHUT DOWNS AS REQUIRED.
- 12. ALL PLUMBING WORK INDICATED OUTSIDE OF TENANT SPACES SHALL BE APPROVED BY **BUILDING MANAGEMENT**
- 13. AT FINAL INSPECTION, PROVIDE A COPY OF THE WATER POTABILITY TEST RESULTS FROM A LOCAL LICENSED LAB AFTER LINES HAVE BEEN CHLORINATED AS REQUIRED BY THE NATIONAL STANDARD PLUMBING CODE OR EQUIVALENT.

# FLORIDA ENERGY COMPLIANCE:

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2023 FLORIDA ECC.

# **BUILDING STANDARD CONTRACTOR NOTES:**

I.THERE SHALL BE NO CUTTING OR CHANNELING INTO THE BUILDING STRUCTURAL FLOOR CEILING, COLUMNS, OR BEAMS.

CONSENT OF THE BUILDING MANAGER.

2. THERE SHALL BE NO INTERRUPTION OR RE-LOCATION OF BUILDING SERVICES, EXCEPT WITH THE

3. ALL EXISTING AND NEW VALVES MUST BE ACCESSIBLE, EITHER EXPOSED OR FROM ACCESS PANELS.

# SAFETY NOTES

- CONSTRUCTION WORK WILL BE CONFINED TO THE INTERIOR, AND WILL NOT CREATE DUST, DIRT, OR OTHER SUCH INCONVENIENCES TO OTHER TENANTS WITHIN THE BUILDING.
- 2. CONSTRUCTION OPERATION WILL NOT BLOCK HALLWAYS OR MEANS OF EGRESS FOR TENANTS OF
- CONSTRUCTION OPERATIONS WILL NOT INVOLVE INTERRUPTION OF HEATING, WATER, OR ELECTRICAL SERVICES TO OTHER TENANTS OF THE BUILDING.
- CONSTRUCTION OPERATIONS WILL BE CONFINED TO NORMAL WORKING HOURS. 8 AM TO 5 PM MONDAYS THROUGH FRIDAYS, EXCEPT LEGAL HOLIDAYS.

# PLUMBING DEMOLITION & ALTERATION NOTES

- ALL PLUMBING FIXTURES TO BE REMOVED SHALL BE TURNED OVER TO THE OWNER. THEY SHALL NOT BE REMOVED FROM THE PREMISES OR DISPOSED OF WITHOUT THE OWNER'S
- ALL PIPING TO BE REMOVED SHALL BE PROPERLY PLUGGED OR CAPPED SO THAT UPON COMPLETION OF ALL NEW WORK, ALL ABANDONED PIPING SHALL BE CONCEALED IN FINISHED AREAS.
- NO DEAD ENDS SHALL BE LEFT ON ANY PIPING UPON COMPLETION OF THE PROJECT
- 4. EXISTING EXPOSED PIPING NOT TO BE REUSED AND NOT SPECIFICALLY NOTED OR SHOWN ON DRAWINGS TO BE ABANDONED SHALL BE COMPLETELY REMOVED.
- THE EXISTING SYSTEMS SHALL BE LEFT IN PERFECT WORKING ORDER UPON COMPLETION OF ALL NEW
- LOCATIONS AND SIZES OF EXISTING PIPING ARE APPROXIMATE. EXACT SIZES AND LOCATIONS OF ALL EXISTING PIPING SHALL BE VERIFIED AT THE SITE.
- NO REMOVED EXISTING PIPING, EQUIPMENT, ETC. SHALL BE REUSED.
- ALL EXISTING EXPOSED, UNNECESSARY PIPING RELATED TO WORK BEING DONE SHALL BE
- THIS CONTRACTOR SHALL NOT INTERRUPT ANY OF THE SERVICES OF THE EXISTING FACILITY, NOR INTERFERE WITH THE SERVICES IN ANY WAY WITHOUT THE EXPRESS PERMISSION OF THE OWNER. SUCH INTERRUPTIONS AND INTERFERENCES SHALL BE MADE AS BRIEF AS POSSIBLE AND ONLY AT HE TIME STATED BY THE OWNER.
- 10. UNDER NO CIRCUMSTANCES SHALL THIS CONTRACTOR OR HIS WORKMEN BE PERMITTED TO USE ANY PART OF THE BUILDING AS A SHOP, EXCEPT PARTS DESIGNATED BY THE OWNER FOR SUCH PURPOSES.
- REROUTE OR REMOVE ALL EXISTING PIPING WHERE NECESSARY TO AVOID NEW EQUIPMENT, STRUCTURAL, MASONRY OR CARPENTRY WORK AS REQUIRED BY THE PROPOSED ALTERATION.

# PLUMBING FIELD EXAMINATION AND **COORDINATION REQUIREMENTS**

- THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEM AND WORK INDICATED UNDER THIS SECTION. THE CONTRACTOR SHALL CONSULT THE ARCHITECTURAL DRAWINGS & DETAILS FOR EXACT LOCATIONS OF FIXTURES, AND EQUIPMENT.
- THE CONTRACTOR SHALL FOLLOW THE DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACES IN WHICH WORK WILL BE INSTALLED AND MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS. WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, THE ARCHITECT SHALL BE NOTIFIED IN WRITING . THE INSTALLATION SHALL NOT PROCEED BEFORE RECEIVING THE ARCHITECT'S WRITTEN INSTRUCTIONS.
- IF DIRECTED BY THE ARCHITECT, THE CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN THE APPROVED LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF OTHER TRADES, MAINTAIN REQUIRED HEADROOM AND SPACE CONDITIONS, OR FOR PROPER EXECUTION OF THE WORK.
- WHERE THE PLUMBING WORK WILL BE INSTALLED IN CLOSE PROXIMITY TO THE WORK OF OTHER TRADES, OR WHERE THERE IS EVIDENCE THAT THE WORK OF THE CONTRACTOR WILL INTERFERE WITH THE WORK OF OTHER TRADES, HE SHALL ASSIST IN WORKING OUT SPACE CONDITIONS TO MAKE A SATISFACTORY ADJUSTMENT. IF THE CONTRACTOR INSTALLS THE WORK BEFORE COORDINATION WITH OTHER TRADES OR SO AS TO CAUSE INTERFERENCE WITH WORK OF OTHER TRADES, HE SHALL MAKE NECESSARY CHANGES IN HIS WORK TO CORRECT THE CONDITION WITHOUT EXTRA CHARGE.
- 5. STUDY THE DRAWINGS AND SPECIFICATIONS IN ORDER TO INSURE COMPLETENESS OF THE WORK REQUIRED UNDER THIS SECTION. INCIDENTAL WORK ITEMS NORMAL AND NECESSAR' TO COMPLETE THE WORK, THOUGH NOT SHOWN OR SPECIFIED SHALL BE INCLUDED.
- VERIFY ALL MEASUREMENTS AND CONDITIONS IN THE FIELD BEFORE STARTING WORK. INFORMATION REGARDING THE EXISTING FIRE PROTECTION SPRINKLER SYSTEM SHOWN ON THE PLANS HAVE BEEN TAKEN FROM PREVIOUS BUILDING SHOP DRAWINGS. ANY DEVIATIONS FOUND IN THE FIELD SHOULD BE REPORTED TO THE ARCHITECT.
- THIS CONTRACTOR SHALL SUBMIT LAYOUT DRAWINGS FOR APPROVAL BEFORE BEGINNING WORK. THESE DRAWINGS SHALL DEPICT ACTUAL FIELD CONDITIONS VERIFIED UNDER THIS CONTRACT. THEY MUST ALSO INDICATE ALL NEW AND EXISTING PIPING, FIXTURES, ETC. DRAWINGS SHALL BE TO SCALE (1/4"=1'-0") AND INDICATE ALL PERTINENT DIMENSIONS, AND PIPE SIZES. THIS CONTRACTOR SHALL SUBMIT PRINTS OF THE LAYOUT AND ALL CALCULATIONS TO THE ARCHITECT. QUANTITIES SHALL BE AS DIRECTED BY THE ARCHITECT.

ANY EXTRAS AND DEVIATIONS RESULTED FROM THE SUBSTITUTION OF THE ORIGINALLY DESIGNED CONCEPTS OR UTILIZED EQUIPMENT. WILL HAVE TO BE THE RESPONSIBILITY OF THIS CONTRACTOR AND DONE AT NO ADDITIONAL COST TO THE CLIENT.

	PLUMBING DRAWING LIST	
Sheet Number	Sheet Name	
P-001	PLUMBING NOTES, SYMBOLS AND DRAWINGS LIST	
P-101	PLUMBING PLAN - LEVEL 1	
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P-401	PLUMBING DETAILS (1 OF 2)	
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# PLUMBING SYMBOLS AND ABBREVIATIONS

DOMESTIC COLD WATER PIPING

	DOMESTIC HOT WATER PIPING
	DOMESTIC HOT WATER RETURN PIPING
	SANITARY PIPING
GW	GREASE WASTE PIPING
	INDIRECT WASTE PIPING
	VENT PIPING
G	GAS PIPING
	EXISTING PIPING TO REMAIN
	NEW CONNECTION TO EXISTING
	CHECK VALVE
<u> </u>	PIPING UP - PIERCES FLOOR
<u> </u>	PIPING DROP - PIPING DROPS WITHIN STORY HEIGHT
	PIPING RISE - PIPING RISES WITHIN STORY HEIGHT
	BOTTOM OF PIPE TAKE-OFF
T	SHUT-OFF VALVE
	CLEANOUT
	FLOOR DRAIN
OC	TRAP
	HOSE BIBB
	MIXING VALVE
A.D.	ACCESS DOOR
BVR	BALANCING VALVE RIG
DCW	COLD WATER
DHW	HOT WATER
U. SAN.	UNDER SLAB SANITARY WASTE PIPING
EX. SAN.	EXISTING SANITARY WASTE PIPING
SAN	SANITARY PIPING
CO	CLEAN OUT
V	VENT PIPING
DN	DOWN
FD	FLOOR DRAIN
FS 🗌	FLOOR SINK
FCW	FILTERED COLD WATER
FWD	FUNNEL WALL DRAIN
FND	FUNNEL DRAIN
RPZ	REDUCED PRESSURE ZONE ASSEMBLY
Gl	GREASE INTERCEPTOR
GPM	GALLONS PER MINUTE
	THERMOSTATIC MIXING VALVE
TMV VTR	VENT THROUGH ROOF
<u> </u>	VACUUM BREAKER
	WATER HAMMER ARRESTOR
NFWH	NON FREEZE WATER HYDRANT
HB	HOSE BIB

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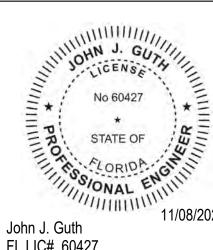
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# FL LIC# 60427 **AIRPORT** ATIONAL

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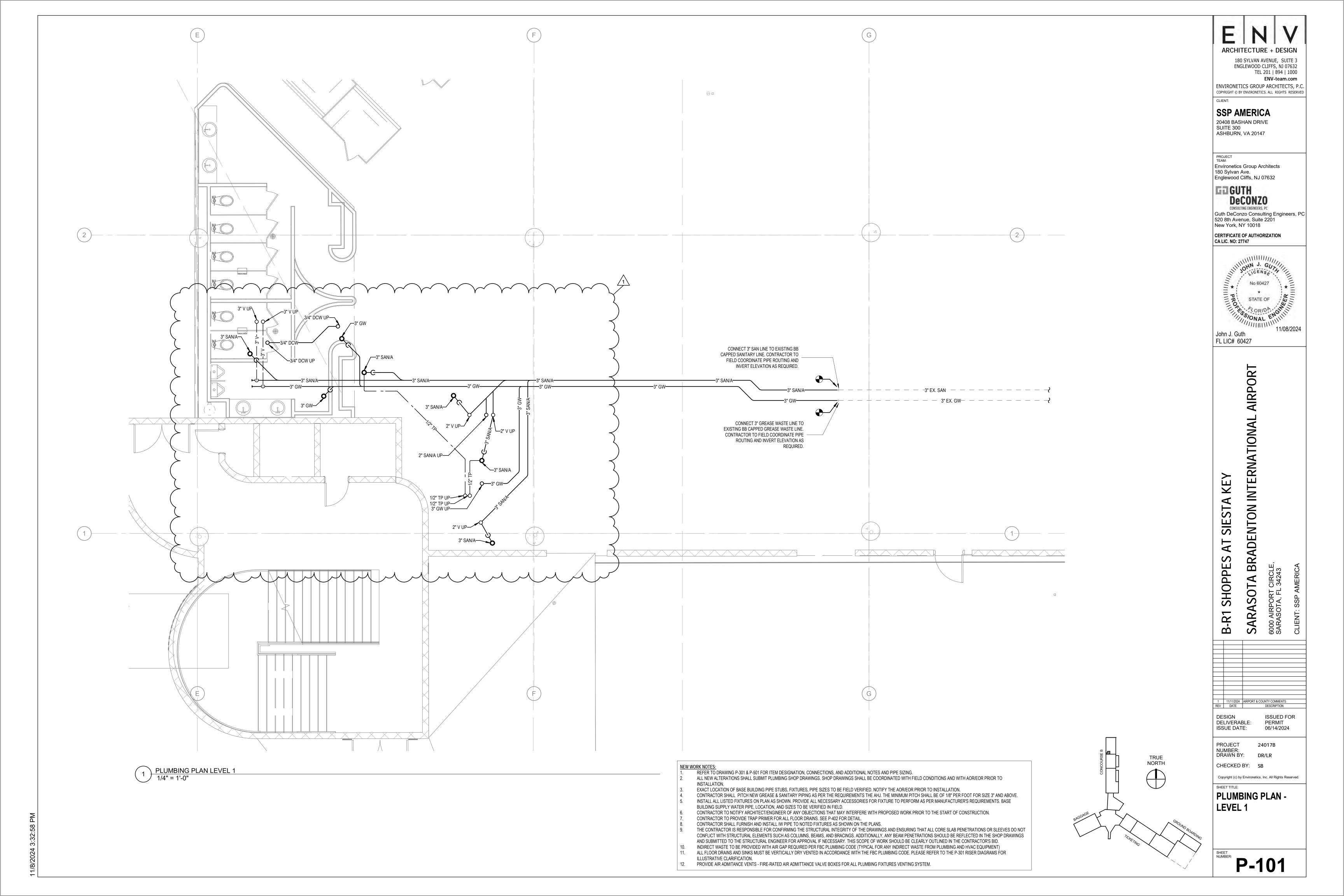
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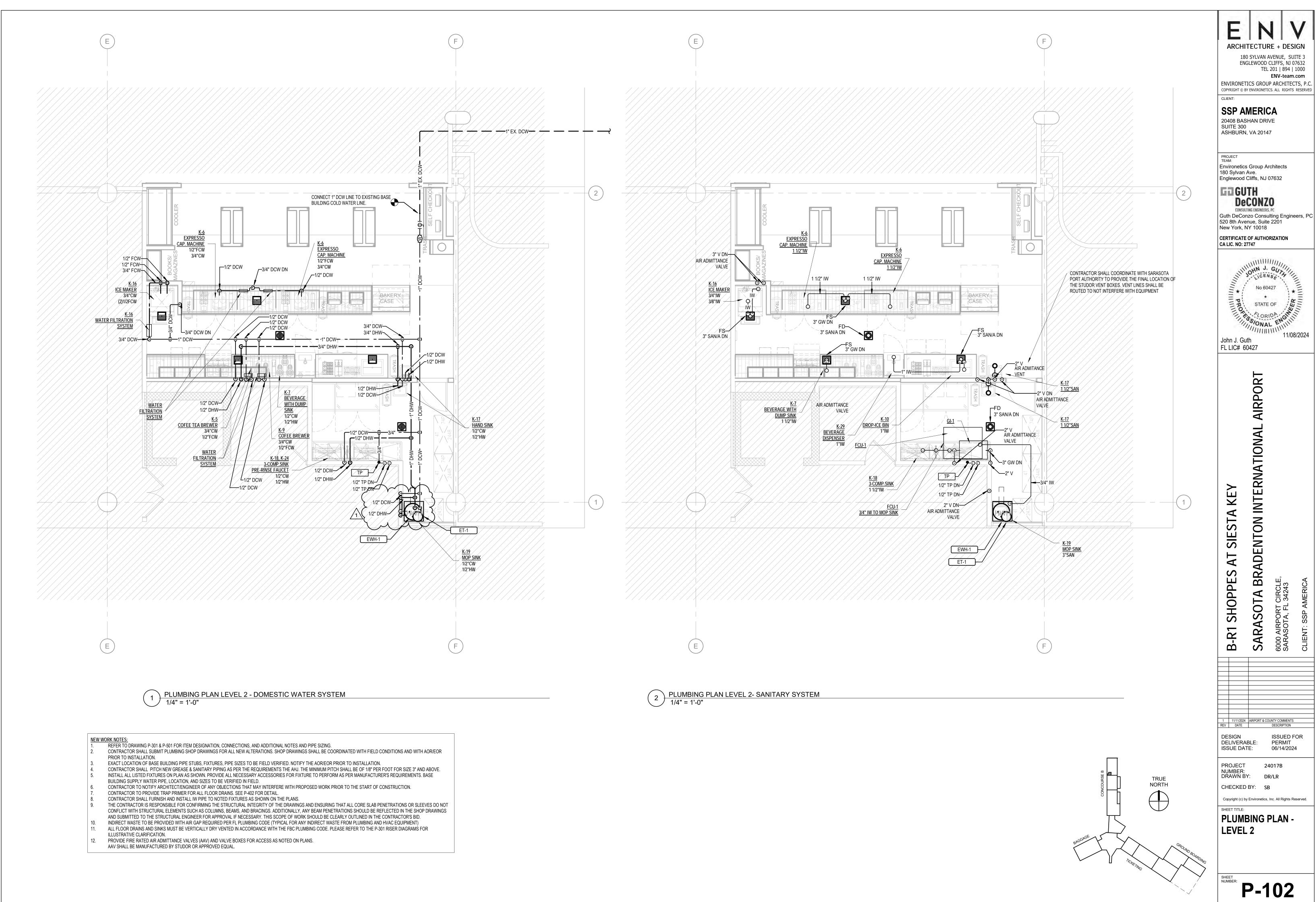
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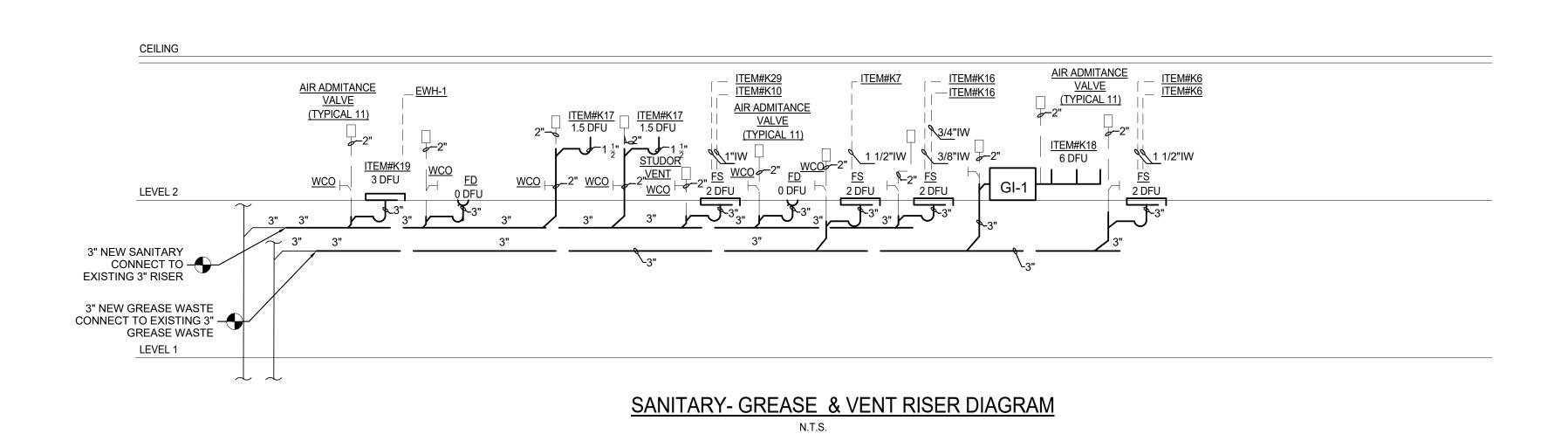
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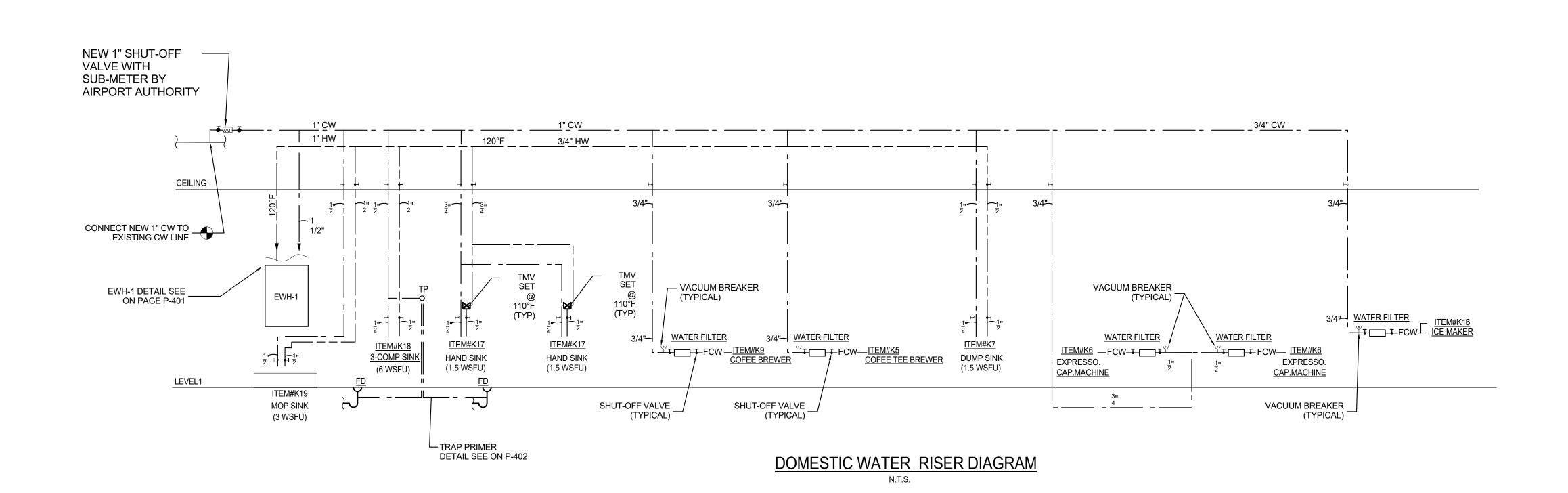
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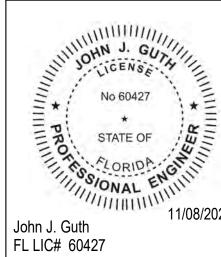
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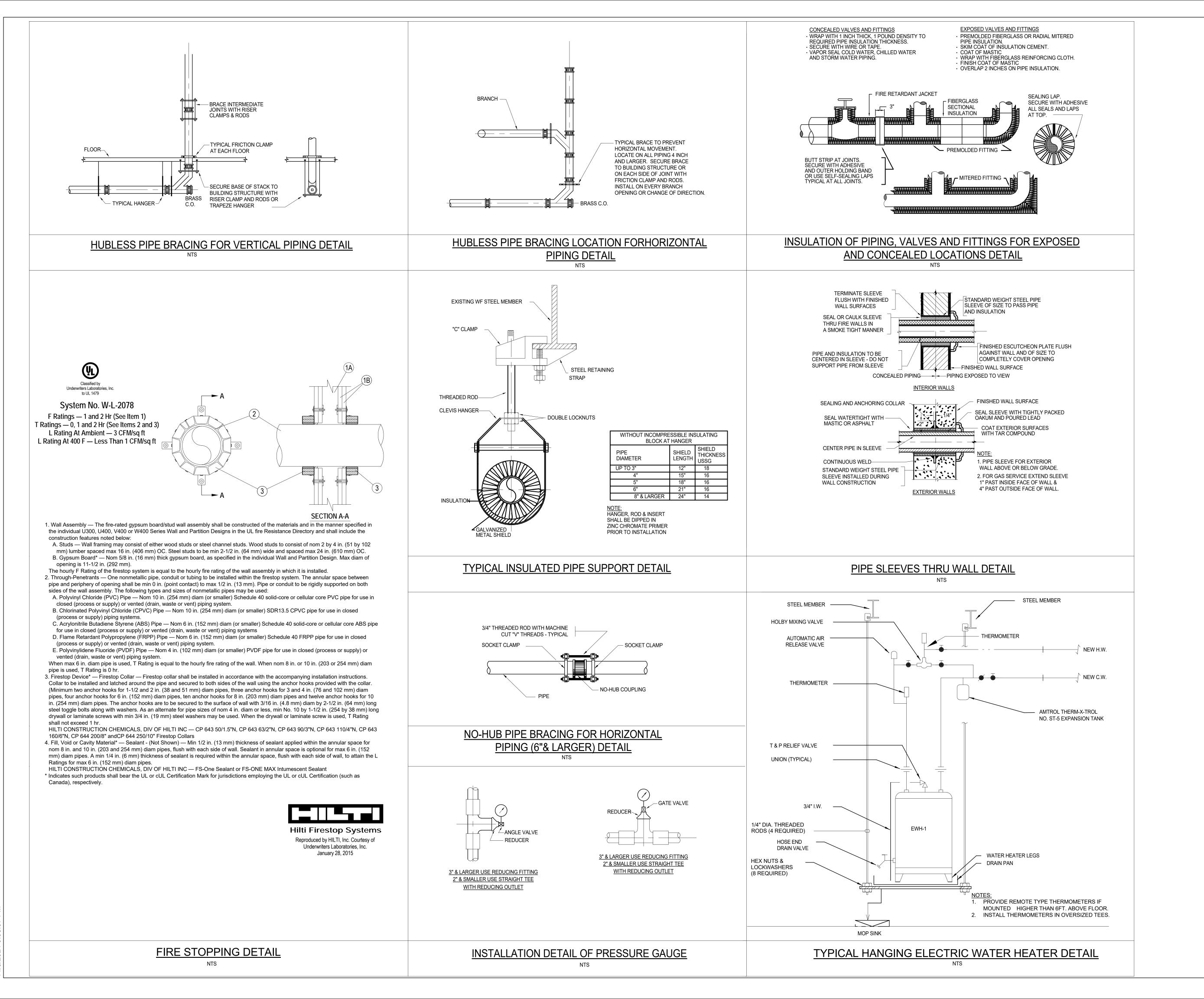
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PLUMBING RISER DIAGRAM

P-301



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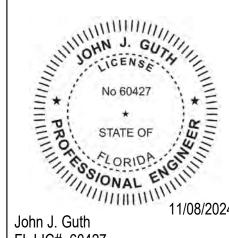
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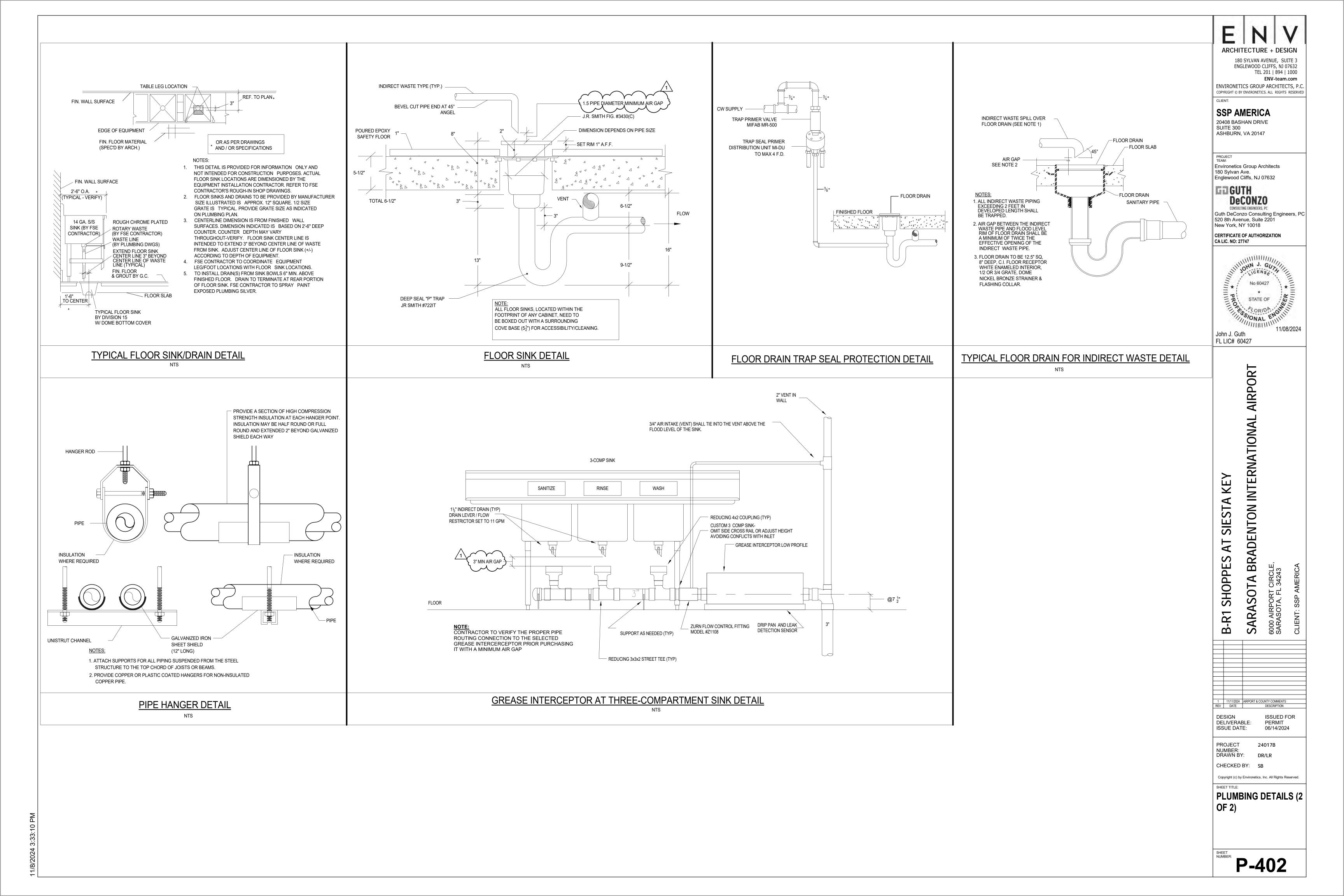
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PLUMBING DETAILS (1 OF 2)

P-401



		PLUMBII	NG FI	XTUR	e sc	HED	ULE	(KITC	HEN	<u> </u>	
ITEM #	ΔΤΥ	EQUIPMENT CATEGORY	COLD WATER SIZE (IN)	FILTERED COLD WATER SIZE (IN)	HOT WATER 110° SIZE (IN)	HOT WATER 120° SIZE (IN)	DIRECT WASTE   C	INDIRECT WASTE SIZE (IN)	GAS SIZE	NATURAL GAS (BTU)	REMARKS
K5	1	COFFEE TEA BREWER		1 <sub>11</sub> 2							
No	1	WATER FILTRATION SYSTEM	3 <sub>11</sub> 4								VACUUM BREAKER
K6	2	ESPRESSO CAPPUCCINO MACHINE		<u>1</u> "				1 ½"			INDIRECT WASTE TO FLOOR SINK. VACUUM BREAKER
Ko	1	WATER FILTER	3" 4								VACUUM BREAKER
K7	1	BEVERAGE COUNTER W/ DUMP SINK	1" 2			<u>1</u> "		1 <del>1</del> "			INDIRECT WASTE TO FLOOR SINK
140	1	COFFEE BREWER		<u>1</u> "							VACUUM BREAKER
K9	1	WATER FILTRATION SYSTEM	3" 4								VACUUM BREAKER
K10	1	DROP-IN ICE BIN						1"			INDIRECT WASTE TO FLOOR SINK
K15	1	ICE BIN FOR ICE MACHINE						1"			INDIRECT WASTE TO FLOOR SINK
K16	1	ICE MAKER		(2) <sup>1</sup> "				3" & 1"			INDIRECT WASTE TO FLOOR SINK.
N IO	1	WATER FILTER	3" 4								VACUUM BREAKER
K17	2	HAND SINK	1" 2		<u>1"</u>		1 ½"				
K18	1	3-COMP SINK	<u>1</u> "			1" 2		1 ½"			INDIRECT WASTE TO FLOOR SINK
K19	1	MOP SINK	1" 2			1" 2	2"				
K24	1	PRE-RINSE FAUCET OF 3-COMP. SINK	1" 2			<u>1</u> "					
K29	1	BEVERAGE DISPENSER						1"			INDIRECT WASTE TO FLOOR SINK

				ELE	CTF	RIC V	VATE	RH	EATE	R S	CHED	ULE
ITEM#	TAG	MANUFACTURER	QTY	MODEL#	STORAGE CAPACITY (GAL)	RECOVERY IN GPH AT 100 °F TEMP RISE	DOMESTIC HW TEMP. OUT	ELEC1	PHASE/FREQUENCY TA	DATA ≩	MAX WORKING PRESSURE (PSI)	REMARKS
EWH-1	DSE-40A	A.O.SMITH	1	DSE-40A	40	49	120	480	3	12	160	DIMENSIONS:54.75" H X 22" DIA . WEIGHT:~ 245 LBS EXPANSION TANK: MODEL NO. AMTROL ST-5 PROVIDE DRIP PAN AND OVERFLOW ALARM

			GREAS	E INTEI	RCEPTO	R SC	HEDU	LE	
DESIGNATION	TAG	ΔTY	MANUFACTURER	MODEL#	MAX INLET FLOW RATE (GPM)	CAPACITY (LB)	ORIFICE SIZE (IN)	INLET/OUTLET SIZE (IN)	REMARKS
LOW ROUGH IN GREASE INTERCEPTOR	GI-1	1	WATTS	WD-20-L	20	40	2	3	DIMENSIONS: 34 7/8"L " X 22 7/8" W" X 11 3/4"H GREASE INTERCEPTOR SHALL BE EQUIP WITH A FLOW CONTROL DEVICE PER THE NSP SECTION 6.2.1.2.C. INLET/OUTLET 7-1/2" ABOVE FINISHED FLOOR

ITENA''	DECODIDATION	<b>&gt;</b>	MOELI	TOTAL
ITEM#	DESCRIPTION	QTY	WSFU	WSFU
K5	COFFEE TEA BREWER	1	1.0	1.0
K6	ESPRESSO CAPPUCCINO MACHINE	2	0.5	1.0
K7	BEVERAGE COUNTER W/ DUMP SINK	1	3.0	3.0
K9	COFFEE BREWER	1	0.5	0.5
K16	ICE MAKER	1	0.5	0.5
K17	HAND SINK	2	2.0	4.0
K19	MOP SINK	1	3.0	3.0
K24	PRE-RINSE FAUCET OF 3-COMP. SINK	1	4.0	4.0
	GRAND TOTAL			17
TOTAL WSF	U C.W.+H.W. = 17 W.S.F.U. = 12.5 GPN	1		

FL	OOR SINK & FLOC	
ITEM#	EQUIPMENT CATEGORY	MODEL
FS	FLOOR SINK	JR SMITH #3430 (C)
FD	FLOOR DRAIN	ZURN #Z415

		DOMESTIC HOT		ATER STOF		
AL U	TEM#	EQUIPMENT CATEGORY	QTY	TYPE OF EQUIPMENT	GPH	TOTAL
	E K7	BEVERAGE COUNTER W/ DUMP SINK	1	SINK	15	GPH 15
	K17	HAND SINK	2	HAND SINK	10	20
	K19	MOP SINK	1	MOP SINK	20	20
	K24	3-COMP.SINK	1	3 COMPARTMENT SINK	60	60
		POSSIBLE TOTAL DEMAND				115
		DEMAND FACTOR	0.3			34.5
		STORAGE CAPACITY FACTOR	1.0			34.5
		HEATER STORAGE CAPACITY, GAL				40
		WATER HEATER 1 HR SUPPLY, GPH				89

	GREASE INTERCEP CALCULATION	TOR	<b>X</b>
			REASE RCEPTOR
ITEM#	DESCRIPTION	QTY	VOLUME (CU. IN)
1.36	3-COMP SINK (18"X18"X14"X3)	1	13,608
	TOTAL CAPACITY (CUBIC IN.)		13,608
	TOTAL CAPACITY (US GAL.) X 75% FILL FACTOR		41
	DRAINAGE PERIOD (MINUTES)		2.0
	DRAINAGE LOAD BY VOLUME (GPM) / 2 MIN DRAIN DOWN PERIOD		20.6
ТОТА	L DRAINAGE LOAD (GPM)		20



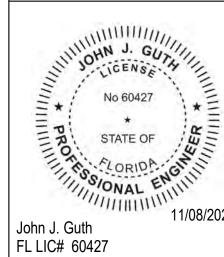
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PLUMBING

SCHEDULES

P-501

# PLUMBING SPECIFICATIONS

# GENERAL

- A. FURNISHED AND INSTALL ALL ITEMS REQUIRED FOR COMPLETE AND OPERABLE SYSTEM AS SHOWN ON THE DRAWING. THIS CONSISTS OF FURNISHING ALL MATERIALS, EQUIPMENT LABOR, AND TRANSPORTATION REQUIRED AND ALL ITEMS INCIDENTAL THERETO, INCLUDING
- B. ALL REFERENCES TO EXISTING PIPING, RISERS OR FIXTURES HAS BEEN DERIVED FROM AVAILABLE EXISTING DRAWINGS AND A LIMITED FIELD SURVEY. ACTUAL SIZES AND LOCATIONS SHOULD BE FIELD VERIFIED BY THE CONTRACTOR.
- C. THE CONTRACTOR SHALL FILE AND PAY FOR ALL REQUIRED PERMITS, INSPECTIONS, CERTIFICATES AND ALL ADDITIONAL FEES REQUIRED TO PERFORM THIS WORK.
- D. ALL WORK IS SHOWN DIAGRAMMATICALLY AND IS NOT INTENDED TO SHOW THE EXACT LAYOUT. EXACT LOCATION OF SYSTEM COMPONENTS SHALL BE DETERMINED IN THE FIELD AND BY ACTUAL BUILDING CONDITIONS.
- E. ADHERE TO THE APPLICABLE CONDITIONS INDICATED IN THE ARCHITECTURAL SPECIFICATIONS.
- F. EXAMINE THE ARCHITECTURAL DRAWINGS AND THE DRAWINGS OF ALL OTHER TRADES AND FIELD VERIFY THE LOCATION OF ALL OTHER EQUIPMENT THAT AFFECTS THIS WORK.
- G. VISIT AND CAREFULLY EXAMINE THE EXISTING SPACE SO AS TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT, OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.
- H. BASE ALL LABOR PRICING ON REGULAR TIME (NON-PREMIUM TIME). HOWEVER, ALL CONNECTION SCHEDULING MUST BE APPROVED BY THE CLIENT PRIOR TO INTERRUPTION OF ANY BUILDING'S SERVICES. SUBMIT ADDITIONAL COST FOR EVALUATION TO MAKE EACH NEW CONNECTION ON PREMIUM TIME.
- I. REMOVE EXISTING PLUMBING FIXTURES WHERE INDICATED ON PLUMBING AND/OR ARCHITECTURAL DRAWING. PLUG AND CAP ASSOCIATED PIPING BEHIND FINISHED SURFACES. LEAVE ALL PLUGGED ENDS OF DRAINS AND VENTS LESS THAN 2 FEET LONG TO AVOID DEAD ENDS.
- J. REPAIR OR REPLACE ALL DAMAGED PIPING AND FIXTURES DAMAGED AS A RESULT OF PERFORMING THE WORK OF THIS CONTRACT WITH MATERIALS MATCHING THE EXISTING.
- K. ALL INSTALLED PLUMBING SYSTEMS SHALL BE COMPLETE WITH ALL PIPES, FITTINGS. TRAPS, SUPPLIES, VALVES, HANGERS AND SUPPORTS, INSULATION, ETC. AND ALL OTHER ITEMS NECESSARY FOR COMPLETE, SATISFACTORY OPERATING AND APPROVED TYPE
- L. INSTALL ALL PLUMBING WORK IN STRICT ACCORDANCE WITH FLORIDA CODE AND CONFORM TO THE REQUIREMENTS OF THE BUILDING STANDARDS, AND ALL OTHER
- AUTHORITIES HAVING JURISDICTION. M. ALL PIPE FITTINGS, VALVES, FIXTURES, HANGERS, SUPPORTS, INSULATION, ETC. SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL BUILDING CODE.

N. OBTAIN ALL THE NECESSARY PERMITS AND APPROVALS TO PROVIDE A COMPLETE JOB. TRANSMIT CERTIFICATION AND PERMITS TO THE OWNER AT THE COMPLETION OF THE WORK

- O. SUPPORT ALL PIPING FROM THE STRUCTURE. DO NOT HANG PIPE FROM ANY OTHER
- A. TEST ALL PLUMBING PIPING IN ACCORDANCE WITH THE RULES AND REGULATIONS OF FLORIDA.

# 3. CLEANING

- A. AT COMPLETION OF THE WORK AND BEFORE THE FINAL INSPECTION IS MADE. THOROUGHLY CLEAN ALL FIXTURES, APPARATUS, APPURTENANCES, PIPING, BRASS AND CHROME WORK AND LEAVE SAME FREE FROM ALL MARKS. STAINS, SCRATCHES, ETC. REMOVE ALL TOOLS, DEBRIS, ETC., FROM THE PREMISES.
- 4. SHOP DRAWINGS

PIPING, DUCTS OR EQUIPMENT.

- A. PRIOR TO PURCHASING ANY EQUIPMENT OR MATERIALS, SUBMIT A LIST OF PROPOSED MANUFACTURERS FOR APPROVAL. SUBMIT FIVE (5) COPIES OF THE LIST.
- B. SUBMIT SIX (6) PRINTS OF PIPING SHOP DRAWINGS.
- C. PRIOR TO INSTALLING OR SUBMITTING FOR APPROVAL ANY PORTION OF THE WORK, COORDINATE WORK WITH ALL OTHER TRADES. AFFIX INDICATION OF THIS COORDINATION TO EACH SHOP DRAWING SUBMITTED FOR APPROVAL.
- 5. RECORD DRAWINGS
- A. SUPPLY REPRODUCIBLE RECORD DRAWINGS INDICATING AN ACCURATE AND COMPLETE RECORD OF THE WORK AS INSTALLED.
- 6. CLEANOUTS
- A. PROVIDE CLEANOUTS AT ALL CHANGES IN DIRECTION OF HORIZONTAL SANITARY PIPING. ALL CLEAN OUT PLUGS TO BE BRASS AND LUBRICATED WITH GRAPHITE BEFORE INSTALLING.
- 7. PIPES AND FITTINGS
- A. CONFORM TO THE LATEST ASTM AND/OR FS STANDARDS AND FLORIDA BUILDING
- B. SOIL, WASTE, VENT AND LEADER PIPE AND FITTINGS -ABOVE GROUND AND WHERE INDICATED
- 1) ALL ABOVE GROUND SOIL, WASTE, AND VENT PIPING SHALL BE "NO-HUB" SERVICE WEIGHT CAST IRON PIPE AND FITTINGS AND DWV COPPER TUBING AND FITTINGS EXCEPT AS NOTED
- 2) ALL JOINTS AND CONNECTIONS SHALL BE ASSEMBLED BY MEANS OF SEALING SLEEVES AND STAINLESS STEEL CLAMPS AND SHIELD ASSEMBLIES.
- 3) PIPE AND FITTINGS SHALL BE CENTRAL FOUNDRY COMPANY, TYLER PIPE COMPANY, EAST PENN FOUNDRY OR APPROVED EQUAL.
- 4) EXPOSED PIPE AT FIXTURES TO BE CHROME PLATED.
- C. COLD WATER AND HOT WATER PIPE AND FITTINGS ABOVE GROUND AND WHERE
- 1) DOMESTIC COLD WATER, HOT WATER AND HOT WATER CIRCULATION PIPE SHALL BE TYPE "L", HARD DRAWN (EXCEPT EXPOSED AT FIXTURES SHALL BE CPCB), COPPER TUBING WITH WROUGHT BRONZE FITTINGS FOR 150 POUND WATER WORKING PRESSURE AND WITH JOINTS OF 95-5 (TIN-ANTIMONY) SOLDER. NO SOLDER CONTAINING LEAD IS PERMITTED.
- 2) ALL SUPPLIES THROUGH WALLS TO FIXTURES SHALL BE 85% RED BRASS WITH THREADED BRASS FITTINGS. ALL EXPOSED PIPING IN FINISHED SPACES SHALL BE CHROME PLATED 85% RED

# D. INDIRECT WASTE PIPING.

- 1) PROVIDE ALL INDIRECT WASTE PIPING EXCEPT THAT FROM HVAC EQUIPMENT
- 2) INDIRECT WASTE PIPING MATERIAL TO BE CHROME PLATED BRASS PIPE OR TUBING WHEN EXPOSED AND IN CABINETS. ARRANGED INDIRECT WASTE PIPING TO CAUSE AS LITTLE CONGESTION BELOW EQUIPMENT AND FIXTURES AS POSSIBLE.
- 3) TERMINATE INDIRECT WASTE PIPING ABOVE FLOOR DRAIN OR FLOOR SINK WITH AIR GAP OF TWO DIAMETERS OF PIPING. CUT END OF INDIRECT PIPE ON 45 DEGREE ANGLE. 8. VALVES
- A. CONTROL/SHUT OFF AND BALANCING VALVES.
- 1) THE ENTIRE PLUMBING INSTALLATION SHALL BE PROVIDED WITH VALVES LOCATED TO PERMIT EASY OPERATION, REPLACEMENT AND REPAIR. VALVES SHALL BE PROVIDED WHERE REQUIRED BY CODE AND AS SHOWN ON THE DRAWINGS.
- 2) BALL VALVES SHALL BE WATTS LFB-6080/LFB-6081-SS FOR 2-1/2 INCH AND SMALLER, TWO PIECE, FULL PORT. ENDS TO SUIT.
- 3) CHECK VALVES: 2-1/2" AND SMALLER, SOLDER ENDS, STOCKHAM FIG. # B-309.
- 4) PRESSURE REDUCING VALVES: JRG/USE FIG. 1130. PROVIDE ON ALL CONNECTIONS WHERE PRESSURE EXCEEDS 85 PSIG.
- 5) MIXING VALVE: LEONARD CO. OR EQUAL. MINIMUM CAPACITY OF 0.5 GPM MAXIMUM CAPACITY OF 20 GPM FOR 120 DEGREES F, 5 GPM FOR 140 DEGREES F.
- 6) HOSE BIBB: CHICAGO MODEL # 952 FAUCET.

# VALVE TAGS AND CHART

- A. EACH VALVE, EXCEPT VALVES AT FIXTURES, SHALL HAVE A 2 INCH DIAMETER BRASS TAG WITH 1 INCH HIGH NUMERAL STAMPED THEREON, SECURED TO THE VALVE BY MEANS OF BRASS'S HOOK OR BRASS CHAIN. EACH SYSTEM TO VALVE BY MEANS OF BRASS'S HOOK OR BRASS CHAIN. EACH SYSTEM TO HAVE A LETTER DESIGNATION IDENTIFYING SOURCE AS WELL. HAVE A LETTER DESIGNATION IDENTIFYING SOURCE AS WELL.
- B. THE CONTRACTOR SHALL FURNISH AN APPROVED, NEATLY DRAWN VALVE CHART, PROPERLY FRAMED, SHOWING THE USE AND LOCATION OF EACH VALVE THAT IS TAGGED. 10. EXPANSION JOINTS AND ANCHORS
- A. PROPER PROVISIONS SHALL BE MADE FOR EXPANSION AND CONTRACTION OF ALL PIPES AND THE PIPING SHALL BE ARRANGED WITH ALL NECESSARY PIPE EXPANSION LOOPS AND SWING JOINTS.
- B. MAINS AND BRANCHES MUST BE SO INSTALLED WITH SWING CONNECTIONS SO AS TO PERMIT FREE EXPANSION OF PIPING.
- 11. WATER HAMMER ARRESTERS A. INSTALL WATER HAMMER ARRESTER ON WATER PIPING IMMEDIATELY ADJACENT TO ALL EQUIPMENT WITH QUICK-CLOSING SHUT-OFF VALVES INCLUDING DISHWASHERS AND CLOTHES WASHERS, AND ON COLD WATER HEADER FEEDING FLUSH VALVE WATER CLOSETS. SHOCK ABSORBERS SHALL BE SIMILAR OR EQUAL TO J.R. SMITH SERIES 5000.

# 12. CUTTING AND PATCHING

- A. DO NOT DISTURB ANY EXISTING STRUCTURE, PIPING, APPARATUS, OR OTHER WORK. WHERE CUTTING, DRILLING, OR REMOVALS ARE REQUIRED IN EXISTING WALL, FLOOR OR ROOF CONSTRUCTION. PERFORM THE WORK IN A MANNER THAT WILL SAFEGUARD AND NOT ENDANGER THE STRUCTURE. PRIOR TO ANY CUTTING, DRILLING OR REMOVALS, INVESTIGATE BOTH SIDES OF THE SURFACE INVOLVED AND DETERMINE THE EXACT LOCATION OF ADJACENT STRUCTURAL MEMBERS BY VISUAL EXAMINATION. ALL CUTTING AND PATCHING MUST BE COORDINATED BY THE GENERAL CONTRACTOR. REFER TO GENERAL CONSTRUCTION SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
- B. EMPLOY MAXIMUM USE OF CORE DRILLING FOR PENETRATIONS THROUGH THE EXISTING STRUCTURE. DO NOT JACK HAMMER OR USE ANY OTHER CHOPPING METHODS EXCEPT WHERE AND WHEN SPECIFICALLY APPROVED BY THE ARCHITECT.

# 13. INSULATION

- A. EXCEPT WHERE OTHERWISE INDICATED, COVER ALL COLD WATER PIPING AND ALL DRINKING FOUNTAIN WASTE WITH 1/2" AND HOT WATER PIPING WITH 1" OWENS-CORNING FIBERGLASS LOW PRESSURE PIPE INSULATION 7-1/4 POUNDS PER CUBIC FOOT DENSITY WITH A MAXIMUM K FACTOR OF 0.24 AT 75°F. PROVIDE INSULATION WITH A FACTORY APPLIED ALL PURPOSE FIBERGLASS REINFORCED KRAFT PAPER AND FOIL FIRE TREATED JACKET WITH SEAL STRIP FIRE TREATMENT FOR A COMPOSITE TO BE MAXIMUM 25 FLAME SPREAD AND 50 SMOKE DEVELOPED. JACKET TO BE VAPORPROOF.
- B. FITTING AND VALVE INSULATION: SAME THICKNESS AND DENSITY AS ADJACENT PIPES AND COVERED WITH A GLASS JACKET OR APPROVED EQUAL.
- C. SEAL ALL ENDS OF INSULATION WITH BENJAMIN FOSTER BF 30-35 SEALANT.
- D. PROVIDE RIGID HIGH TEMPERATURE HYDROUS CALCIUM SILICATE INSULATION 12 LBS PER CUBIC FOOT ON ALL HOT AND COLD WATER PIPES PASSING THROUGH FIRE PROOF WALLS OR FLOORS. 14. SLEEVES
- A. PROVIDE SLEEVE FOR ALL PIPING PENETRATIONS THROUGH WALLS AND POURED FLOORS.
- B. SLEEVES TO HAVE AN INTERNAL DIAMETER 1" LARGER THAN THE OUTSIDE DIAMETER OF THE PIPE, INCLUDING COVERING, UNLESS OTHERWISE NOTED
- C. CARRY INSULATION THROUGH PIPE SLEEVES. HEREIN.
- D. INSTALL CAULKING BETWEEN PIPES AND PIPE SLEEVES AS FOLLOWS: 1) FLOORS: OAKUM HEMP OR LEAD OR AS SPECIFIED FOR FIRE RATED SHAFT WALLS
- 2) WATERPROOF WALLS: PERMANENT PLASTIC WATERPROOF CAULKING COMPOUND, OR FIBERGLASS TO WITHIN 1/2" OF SURFACE AND FINISH WITH CAULKING COMPOUND.
- 3) FIRE RATED SHAFT WALLS: MINERAL WOOL SEALED WITH JOHNS-MANVILLE "DUXSEAL". INSTALL ESCUTCHEON WITH SET SCREW ON BOTH SIDES OF THE WALL.
- E. PROVIDE SLEEVES AND CP ESCUTCHEONS FOR ALL EXPOSED PIPE PENETRATIONS, WITH SET SCREW, SLEEVES TO HAVE ONE INCH CLEARANCE. TO TESTING AND APPROVAL. TEST WATER PIPING TO 150 PSIG, AND SOIL, WASTE PACKED TO ENSURE FIRE RATINGS, STANDARD WEIGHT STEEL, 18 GAUGE GALVANIZED FOR INTERIOR WALLS (FLUSH).

# 15. HANGERS, ANCHORS, INSERTS

- A. PROVIDE SUBSTANTIAL SUPPORT AND FASTENING FOR ALL EQUIPMENT AND APPARATUS. STRAP IRON OR PERFORATED STRAPS ARE NOT ACCEPTABLE. ATTACH TO BUILDING STRUCTURE WITH BEAM CLAMPS, SHOT OR POURED INSERTS OF PHILLIPS OR OTHER 3/4" EXPANSION BOLTS AND SHIELDS.
- B. FURNISH ALL NECESSARY HANGERS, SUPPORTS, INSERTS, CLAMPS, ETC. AS REQUIRED. ALL HANGERS AND SUPPORTS SHALL BE OF HEAVY CONSTRUCTION AND SUITABLE FOR THE SIZE OF PIPE TO BE SUPPORTED. ALL INSERTS AND HANGERS SHALL BE INSTALLED TO CLEAR WORK OF OTHER TRADES.
- C. ALL HORIZONTAL CAST IRON PIPING SHALL BE SUPPORTED ON FIVE (5) FOOT CENTERS AND AT ALL JOINTS. ALL HORIZONTAL SCREWED PIPING SHALL BE SUPPORTED BY HANGERS SPACED NOT OVER TEN (10) FEET APART. ALL BRANCHES SHALL HAVE SEPARATE HANGERS. HANGERS SHALL BE CLEVIS TYPE, CONSTRUCTED OF HEAVY BAR STEEL STOCK, WITH PROPER SIZE SUSPENSION ROD AND LOCKNUTS. WHERE PIPING IS SUPPORTED FROM THE FLOOR, PROVIDE ADJUSTABLE PIPE SADDLE SUPPORT WITH
- D. WHERE PIPES ARE TO BE INSULATED, THE HANGERS SHALL BE OF AMPLE SIZE TO PROVIDE FOR THE COVERING SPECIFIED AND BE PROVIDED WITH GALVANIZED STEEL
- E. ALL HANGERS, RODS, BEAM CLAMPS, ETC. SHALL BE SHOP ZINC COATED.
- F. ALL HORIZONTAL COPPER TUBING SHALL BE SUPPORTED BY HANGERS NOT OVER SIX (6) FEET APART FOR PIPING 1-1/4 INCH AND SMALLER AND NOT OVER TEN (10) FEET APART FOR PIPING 1-1/2 INCH AND LARGER. ALLO BRANCHES SHALL HAVE SEPARATE HANGERS. HANGERS SHALL BE CLEVIS TYPE WITH COPPER BOTTOM SUPPORT. IF CHANNEL OR ANGLE IRON TRAPEZE HANGERS ARE USED. THE SPACE ON HANGERS FOR THE COPPER TUBING SHALL BE WRAPPED WITH LEAD SHIELDS TO ISOLATE TUBING.
- G. IN AREAS OF STEEL CONSTRUCTION, PIPE HANGERS SHALL BE SUPPORTED BY BEAM CLAMPS. COORDINATE WITH ENGINEER FOR MAXIMUM LOADING. BEAM CLAMPS SHALL BE STEEL WITH BOLT, NUT AND SOCKET THREADED FOR ROD CONNECTION AND SHALL BE F & S MANUFACTURING COMPANY FIG. #45, CENTRAL IRON, GRINNELL COMPANY, OR APPROVED EQUAL.

# 16. CONNECTION TO MISCELLANEOUS EQUIPMENT

A. PROVIDE ALL NECESSARY PIPE, FITTINGS, VALVES, ETC. EXCEPT AS OTHERWISE SPECIFIED AND MAKE ALL FINAL PLUMBING PIPING CONNECTIONS, INCLUDING WASTE, VENT, HOT AND COLD WATER, ETC., TO ALL EQUIPMENT REQUIRING SAME, FURNISHED "UNDER ANOTHER SECTION OF THE SPECIFICATIONS".

B. KITCHEN EQUIPMENT CONTRACTOR WILL PROVIDE, FOR INSTALLATION BY THE PLUMBING CONTRACTOR, ALL FAUCETS, OVERFLOW AND DRAIN ASSEMBLIES, VACUUM BREAKERS EXCEPT AS HEREIN SPECIFIED, COFFEE STATION WATER FILTERS, BOOSTER

# HEATER. 17. PLUMBING FIXTURES AND TRIM

- A. PROVIDE ALL PLUMBING FIXTURES COMPLETE WITH ALL SUPPLY FITTINGS, TRAPS, VALVES, CARRIERS AND APPURTENANCES NECESSARY FOR OPERATION.
- B. PROVIDE CHROME PLATED SUPPLIES THROUGH WALL, WHEEL HANDLE STOPS AND FLEXIBLE SUPPLY RISERS, TAIL PIECES, CAST BRASS P-TRAPS, WASTE TO WALL AND ESCUTCHEONS AS REQUIRED FOR A COMPLETE INSTALLATION. ALL CHROME PLATED.
- C. ALL FIXTURES TO BE IN COMPLIANCE WITH LOCAL MUNICIPAL AND STATE HANDICAP REQUIREMENTS IN GENERAL ANSI A 117.1 IS TO BE FOLLOWED. COORDINATE REQUIRED CLEARANCES BEFORE INSTALLATION. PROVIDE INSULATION ON ALL TRAPS AND HOT WATER SUPPLIES WHERE REQUIRED.
- D. MOUNT ALL HANDICAP LAVATORIES, WATER CLOSETS AND DRINKING FOUNTAINS IN ACCORDANCE WITH GOVERNING BARRIER FREE LAWS.
- F. WHERE APPLICABLE, SEAL ALL FIXTURES TO WALLS AND FLOORS USING G.F. SILICONE SEALANT. MATCH SEALANT COLOR TO FIXTURE COLOR.
- G. CLEAN FIXTURES, TRIM AND STRAINERS USING MANUFACTURER'S RECOMMENDED CLEANING METHODS AND MATERIALS.
- H. PROVIDE AN ACCESSIBLY LOCATED STOP VALVE ON EACH WATER CONNECTION TO EACH FIXTURE WHETHER FIXTURE IS FURNISHED BY THIS CONTRACTOR OR NOT. 18. TRAP PRIMERS
- A. PROVIDE TRAP PRIMERS WHERE INDICATED OR AS REQUIRED BY CODE.
- B. TRAP PRIMERS SHALL BE PRECISION PLUMBING PRODUCTS # PR01-500 OR EQUAL. PROVIDE ONE PER ROOM, TRAP SEAL INSERTS ELSEWHERE.

# 20. GUARANTEE

- A. THIS CONTRACTOR SHALL GUARANTEE FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE BY THE OWNERS, ALL MATERIALS, APPARATUS AND WORKMANSHIP WHETHER FURNISHED BY HIMSELF OR BY HIS SUBCONTRACTORS AND HE SHALL REPLACE OR REPAIR IN A MANNER APPROVED BY THE ARCHITECTS. WITHOUT COST TO THE OWNER, ANY PARTS OR PARTS OF THE WORK WHICH MAY PROVE DEFECTIVE OR UNSATISFACTORY WITHIN THE PERIOD OF THE GUARANTEE.
- B. WHERE SPECIAL GUARANTEES COVERING INSTALLATION, OPERATION OR PERFORMANCE OF ANY SYSTEMS OR APPLIANCES FURNISHED UNDER THIS CONTRACTOR ARE REQUIRED, THE FULL RESPONSIBILITY FOR THE FULFILLMENT OF SUCH GUARANTEES MUST BE ASSUMED BY THE CONTRACTOR, WHO SHALL OBTAIN WRITTEN GUARANTEES, IN TRIPLICATE, WHICH SHALL BE FILED WITH THE ARCHITECT BEFORE FINAL ACCEPTANCE.
- C. CONTRACTOR WILL BE RESPONSIBLE FOR ALL LEAKS IN ALL PIPES FOR A PERIOD OF ONE YEAR FROM THE DATE OF COMPLETION OF WORK UNDER THIS CONTRACT. CONTRACTOR SHALL REPAIR AT NO COST TO THE OWNER, ALL SUCH LEAKS WHICH OCCUR AFTER COMPLETION OF THIS CONTRACT UPON 24 HOURS NOTICE THEREOF BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR. LEAKS WHICH OCCUR PRIOR TO THE COMPLETION OF THIS CONTRACT SHALL BE REPAIRED AT ONCE. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED BY SUCH LEAKS AND THE REPAIR THEREOF AND WILL REIMBURSE THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR FOR ALL EXPENSE INCORRED THEREBY.
- D. DISINFECTION THE POTABLE WATER SYSTEM SHALL BE DISINFECTED PRIOR TO USE BY A METHOD OF DISINFECTION IN ACCORDANCE WITH FLORIDA BUILDING CODE. THE POTABLE WATER PURITY TEST RESULT FROM A LOCAL CERTIFIED TESTER SHALL BE SUBMITTED FOR ENGINEER'S REVIEW AND APPROVAL.

# 21. ACCESS DOORS

- A. PROVIDE ACCESS PANEL (SHALL BE INSTALLED BY OTHERS) FOR ALL CONCEALED ITEMS SUCH AS CLEANOUTS, VALVES, SHOCK ABSORBERS, TRAP PRIMERS, ETC., MINIMUM 12 INCH X 12 INCH, PRIME PAINTED, CYLINDER LOCK WITH TWO KEYS. MILCOR OR APPROVED EQUAL. ACCESS PANEL SHALL BE COORDINATED WITH ARCHITECT.
- B. IN ADVANCE OF CEILING INSTALLATIONS, SUITABLY FIELD TAG AND IDENTIFY ALL CONCEALED EQUIPMENT, VALVES, DAMPERS, ETC., WHICH REQUIRE ACCESS DOOR PROVISIONS.

# 22. EXECUTION

- A. WORK MAY BE PERFORMED IN PHASES AND THE PLUMBING CONTRACTOR SHALL PROVIDE NECESSARY TEMPORARY VALVES, FITTINGS, PIPING, SHUTDOWNS, LABOR TOOLS, ETC., TO COMPLY WITH THE APPROVED PHASING SCHEDULE. PIPING AND DEVICES INSTALLED IN ONE PHASE, TO SERVE FUTURE PHASES, SHALL BE VALVED AND CAPPED TO ALLOW SYSTEM TO REMAIN CLEAN AND OPERATIONAL AND FACILITATE EXTENSIONS IN FUTURE PHASES WITHOUT SHUT DOWN OF THE PREVIOUS PHASES.
- B. THE PLUMBING CONTRACTOR SHALL WORK WITH THE PA IN MAINTAINING INTEGRITY OF ALL PLUMBING SYSTEMS IN ALL AREAS OF WORK, AS WELL AS FLOORS NOT UNDER RENOVATION, COORDINATE AND MINIMIZE ANY AND ALL SHUTDOWNS OF THE PLUMBING SYSTEM AS FOLLOWS:
- 1) GIVE PROPER NOTICE TO TERMINAL MANAGER AND PROPER NOTICE TO ALL OTHER AUTHORITIES HAVING JURISDICTION WHEN MAKING SHUTDOWNS AND PAY ALL FEES REQUIRED.
- 2) PERFORM ALL DUTIES REQUIRED BY OWNER WHEN MAKING SHUTDOWN.
- LOCATION OF SHUTDOWN, SYSTEMS AFFECTED, AREAS AFFECTED, ETC., WHEN REQUESTING A
- 5) SYSTEM SHALL BE RETURNED TO NORMAL OPERATING CONDITIONS AT END OF EACH WORK DAY.
- 6) DO NOT INTERRUPT EXISTING SERVICE WITHOUT PA AND NOTIFICATION OF ALL AUTHORITIES HAVING JURISDICTION.
- 7) SCHEDULE INTERRUPTIONS IN ADVANCE TO PA INSTRUCTIONS. SUBMIT, REQUEST FOR INTERRUPTION WITH METHOD PROPOSED TO MINIMIZE LENGTH OF INTERRUPTION IN WRITING.
- 8) WATER SHUTDOWNS: ANY PROPOSED WATER SHUTDOWNS SHALL BE SUBMITTED ON A WORK PLAN. IN ADDITION, THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SHUTDOWN WITH THE BUILDING MANAGER A MINIMUM OF FIVE WORKING DAYS IN ADVANCE OF THE PROPOSED SHUTDOWN.

- 3) FILL OUT A SHUTDOWN NOTICE FORM ANSWERING ALL ITEMS REQUESTED SUCH AS TIME AND
- 4) DURATION OF SHUT DOWN SHALL BE KEPT TO A MINIMUM.
- WHEN REQUESTING A SHUTDOWN.

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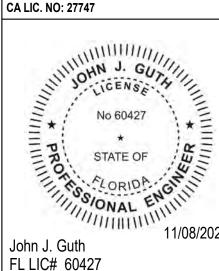
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# AIRPO **ATIONA** $\simeq$ Ш ENTON AD BR. OTA SHOPI

ARA S 11/11/2024 AIRPORT & COUNTY COMMENTS ISSUED FOR DESIGN **DELIVERABLE**: PERMIT ISSUE DATE: 06/14/2024

PROJECT 24017B DR/LR DRAWN BY: CHECKED BY: SB

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**SPECIFICATIONS** 

# FIRE PROTECTION SYMBOLS

•	NEW CONCEALED SPRINKLER HEAD
○ 1" <b>EX</b> .	EXISTING SPRINKLER HEAD TO BE RELOCATED
<del>*</del> *	REMOVE EXISTING SPRINKLER PIPING
	EXISTING SPRINKLER PIPING TO REMAIN
	NEW SPRINKLER PIPING
•	CONNECT NEW PIPING TO EXISTING
•	CUT AND CAP CONNECTION
$\boxtimes$	FLOOR CONTROL VALVE ASSEMBLY (FCVA)
Ľ,	FIRE DEPARTMENT CONNECTION (FDC)
$\bigcirc$	SPRINKLER NODE

# SPRINKLER ABBREVIATIONS

BOP CV DIA DR DN EXIST FCVA FL	BOTTOM OF PIPE  CHECK VALVE  DIAMETER  DRAIN  DOWN (PENETRATES FLOOR SLAB)
DIA DR DN EXIST FCVA	DIAMETER  DRAIN  DOWN (PENETRATES FLOOR SLAB)
DR DN EXIST FCVA	DRAIN  DOWN (PENETRATES FLOOR SLAB)
DN EXIST FCVA	DOWN (PENETRATES FLOOR SLAB)
EXIST FCVA	· · · · · · · · · · · · · · · · · · ·
FCVA	
	EXISTING
ЕІ	FLOOR CONTROL VALVE ASSEMBLY
FL	FLOOR
FSP	FIRE STANDPIPE
FT	FEET
GC	GENERAL CONTRACTOR
GV	GATE VALVE
GAL	GALLONS
GPM	GALLONS PER MINUTE
NIC	NOT IN THIS CONTRACT
NTS	NOT TO SCALE
OS&Y	OUTSIDE SCREW & YOKE GATE VALVE
PSI	POUNDS PER SQUARE INCH (GAUGE)
PRV	PRESSURE REDUCING VALVE
SD	STANDPIPE
SP	SPRINKLER
TS	TAMPER SWITCH
UON	UNLESS OTHERWISE NOTED
UP	UP (PENETRATES FLOOR SLAB)
WFS	WATER FLOW SWITCH

# SPRINKLER NOTES

- THE INSTALLATION, COMPONENTS, SIZING, SPACING, LOCATION, CLEARANCES, POSITION AND TYPE OF SYSTEMS SHALL CONFORM TO 2023 FLORIDA BUILDING CODE, NFPA 13 (2022) AND FLORIDA FIRE CODE 2021
- 2. ONLY APPROVED MATERIALS SHALL BE USED AS PER CHAPTER 6 OF NFPA 13.
- ALL REQUIRED INSULATION ON ANY PIPING LOCATED IN AN AREA EXPOSED TO THE ELEMENTS.
- 4. INSPECTION AND TESTS OF SPRINKLER SYSTEM SHALL BE CONDUCTED AS PER FLORIDA BC SECTION 901.5.
- 5. THE OCCUPANCY OF THE AREAS TO BE SPRINKLE RED IN ACCORDANCE WITH NFPA 13 CHAPTER 19.3.
- 6. WATER SUPPLY TEST PIPES AND GAUGES SHALL BE PROVIDED AS PER NFPA 13 CHAPTER 10.
- 7. PIPING SPECIFICATIONS, SYSTEM TEST CONNECTIONS, PROTECTION AGAINST CORROSION, DAMAGE, FITTINGS, VALVES, HANGERS. SPRINKLERS, GUARDS AND SHIELDS SHALL BE AS PER NFPA 13 CHAPTERS 10 THROUGH 18.
- 8. PIPE SCHEDULE SYSTEMS SHALL NOT BE USED.
- 10. SPRINKLER ALARM WILL BE IN ACCORDANCE WITH SECTION 16.11.2 OF NFPA 13.
- 11. SPACING, LOCATION AND POSITION OF SPRINKLERS WILL BE IN AS PER CHAPTER 10 THROUGH 18 OF NFPA 13.
- 12. ALL CONCEALED SPACES EXCEEDING 6 IN. IN WIDTH OR DEPTH WHICH CONTAIN COMBUSTIBLE MATERIAL WILL BE
- 13. ALL PIPE PASSING THROUGH WALLS WILL COMPLY WITH NFPA 13 CHAPTER 10 THROUGH 18.
- 14. THERE IS NO HIGH PILED STORAGE AS DEFINED IN NFPA 13.
- 15. DISTANCE OF SPRINKLERS FROM HEAT SOURCES SHALL BE IN ACCORDANCE WITH TABLES IN NFPA 13.
- 16. AUTOMATIC INTERLOCK CUTOFF SWITCH FOR VENTILATION WILL CONFORM TO CHAPTER 6 OF THE FLORIDA MECHANICAL CODE (APPLICABLE ONLY IF THERE IS AN AIR SYSTEM UTILIZING RECIRCULATED AIR AND REQUIRING A THERMOSTATIC
- 17. ALL PIPES PASSING THROUGH FOUNDATION WALLS SHALL BE PROTECTED AS REQUIRED BY THE BUILDING CODE AND AUTHORITY HAVING JURISDICTION
- 18. ALL FIRE PROTECTION VALVES SHALL BE IDENTIFIED TO INDICATE PORTION OF BUILDING SERVED AS REQUIRED BY
- 19. HYDRAULICALLY DESIGNED SPRINKLER SYSTEMS SHALL BE IN ACCORDANCE WITH CHAPTER 28 OF NFPA 13.
- 21. ALL VALVES ON CONNECTIONS TO WATER SUPPLIES AND IN SUPPLY TO SPRINKLERS SHALL BE APPROVED O.S. & Y. OR
- 22. WHEN SPRINKLER SYSTEMS ARE CONNECTED TO STANDPIPE SYSTEMS, VALVES SHALL COMPLY WITH SECTION FLORIDA
- 23. DRAIN VALVES AND TEST VALVES SHALL BE APPROVED TYPE AS PER CHAPTER 16 OF NFPA 13.
- 24. HANGERS SHALL BE OF A TYPE APPROVED FOR USE WITH THE PIPE OR TUBE INVOLVED, SPRINKLER PIPING SHOULD BE SUPPORTED BY APPROVED ADJUSTABLE HANGERS, AS PER CHAPTER 17 OF NFPA 13.
- 25. PROVISIONS SHOULD BE MADE TO FACILITATE FLUSHING OF THE SYSTEM PIPING BY PROVIDING FLUSHING CONNECTIONS CONSISTING OF A CAPPED 4" LONG NIPPLE ON THE END OF THE CROSS MAIN AS PER NFPA 13.
- 26. SPRINKLER HEADS SHALL BE AN APPROVED TYPE AS PER NFPA 13.
- 27. TEMPERATURE RATING SHALL COMPLY WITH NFPA 13.

APPROVED INDICATOR TYPE.

- 28. 18" MINIMUM CLEARANCE TO BELOW SPRINKLER DEFLECTOR AS PER NFPA 13.
- 29. 1" TO 12" MINIMUM CLEARANCE OF SPRINKLER DEFLECTOR TO CEILING FOR STANDARD UPRIGHT AND PENDENT SPRINKLERS UNDER UNOBSTRUCTED CONSTRUCTIONS AS PER NFPA 13.
- 30. SPRINKLER SYSTEM COMPLIES WITH NFPA 13 (2022).
- 31. THIS PLAN IS APPROVED ONLY OR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.
- 32. ALL NEW PIPES TO BE MINIMUM OF ONE INCH IN ACCORDANCE WITH NFPA 13 CHAPTER 8.
- 33. ALL SPRINKLER PIPING FROM THE MAIN PROVIDED BY AUTHORITY TO SPRINKLER AND APPURTENANCES ASSOCIATED
- 34. ALL REQUIRED DRAIN VALVES AT LOW POINTS IN PIPING.

# SPRINKLER HEAD LEGEND

SYMBOL	RESPONSE TYPE	K-FACTOR	MANUFACTURER MODEL NO. & STYLE	SIN	TEMPERATURE RATING	ESCUTCHEON TYPE/FINISH
	QUICK RESPONSE	5.6	RELIABLE CONCEALED	RA3415	155°F	WHITE/COORDINATE WITH

# TEMPORARY FIRE SAFETY AND PROTECTION MEASURES

- 1. FULL COMPLIANCE WITH RULES OF THE 2023 FLORIDA BUILDING CODE.
- 2. FULL COMPLIANCE WITH 2023 FLORIDA BUILDING CODE CHAPTER 33, SAFEGUARDS DURING CONSTRUCTION AND DEMOLITION.
- 3. COMPLIANCE WITH 2021 FLORIDA FIRE CODE 901. 7: THE BUILDING OWNER SHALL DESIGNATE AN IMPAIRMENT COORDINATOR, A SPECIFIC PERSON RESPONSIBLE FOR ENSURING PROPER SAFETY PRECAUTIONS ARE TAKEN WHEN A FIRE PROTECTION SYSTEM IS OUT OF SERVICE. IF THE BUILDING OWNER HAS NOT DESIGNATED A SPECIFIC PERSON, THE OWNER OF THE BUILDING SHALL BE CONSIDERED THE IMPAIRMENT COORDINATOR AS PER FLORIDA FC 901.7.
- 4. THE IMPAIRMENT COORDINATOR AND THE FIRE DEPARTMENT CERTIFICATE OF FITNESS HOLDER FOR THE AFFECTED FIRE PROTECTION SYSTEM SHALL BE MADE AWARE OF AND AUTHORIZE ANY WORK THAT WOULD PLACE THE SYSTEM OR ANY PORTION OF A SYSTEM OUT OF SERVICE.
- 5. NOTIFICATION TO THE PORT AUTHORITY SHALL BE MADE FOR ANY FIRE PROTECTION SYSTEM THAT WILL BE OUT OF SERVICE FOR MORE THAN 8 HOURS.
- 6. TEMPORARY SPRINKLER SYSTEM SHALL BE MAINTAINED IN SERVICE UNTIL WORK NEW SPRINKLER SYSTEM IS PROPERLY INSTALLED. TEMPORARY SYSTEM TO BE PROVIDED BY CONTRACTOR.
- 7. NOTIFICATION OF AN OUT OF SERVICE FIRE PROTECTION SYSTEM SHALL BE MADE BY ONE OF THE FOLLOWING: IMPAIRMENT COORDINATOR/BUILDING OWNER, AUTHORITY OF FLORIDA REPRESENTATIVE OR THE PERSON RESPONSIBLE FOR INSPECTING, MAINTAINING OR SUPERVISING THE OPERATION OF
- 8. ALL SPRINKLER WATER-FLOW ALARMS SHALL BE MAINTAINED OPERATIONAL
- 9. ANY FIRE ALARM SYSTEM SHALL REMAIN FUNCTIONAL AND CONNECTED TO THE BUILDINGS FIRE ALARM
- 10. ANY MANUAL PULL STATIONS SHALL BE MAINTAINED OPERATIONAL AND CONNECTED TO THE BUILDING'S FIRE ALARM SYSTEM.
- 11. AS PER FLORIDA 1415.1 BUILDINGS OR STRUCTURES UNDER CONSTRUCTION, ALTERATION OR DEMOLITION SHALL BE PROVIDED WITH NOT LESS THAN ONE APPROVED PORTABLE FIRE EXTINGUISHER IN ACCORDANCE WITH SECTION 906 AND SIZED FOR NOT LESS THAN ORDINARY HAZARD AS FOLLOWS:
- 11.1. AT EACH STAIRWAY ON ALL FLOOR LEVELS WHERE COMBUSTIBLE MATERIALS ARE BEING STORED OR COMBUSTIBLE WASTE IS BEING GENERATED.
- 11.2. AT THE ENTRANCE OF EACH STORAGE AND CONSTRUCTION SHED.
- 11.3. ADDITIONAL PORTABLE FIRE EXTINGUISHERS SHALL BE PROVIDED WHERE FLAMMABLE AND COMBUSTIBLE LIQUIDS ARE STORED, HANDLED AND USED.
- 12. A WATCH PERSON SHALL BE REQUIRED DURING ALL HOURS WHEN CONSTRUCTION OPERATIONS ARE NOT IN PROGRESS OR CERTIFIED FIRE GUARDS ARE NOT PRESENT. A WATCH PERSON SHALL NOT BE REQUIRED IN BUILDINGS THAT PROVIDE 24- HOUR SECURITY OR CONCIERGE.
- 13. EXITS SHALL BE CLEARLY VISIBLE AND MARKED INCLUDING DIRECTIONAL EXIT SIGNS WHERE NECESSARY. ALL EXIT STAIRWELL DOORS SHALL BE MAINTAINED CLOSED
- 14. ALL SHAFT OPENINGS, INCLUDING ELECTRICAL, UTILITY AND COMMUNICATION MUST BE SEALED WITH A 2- HOUR FIRE RATED ASSEMBLY BETWEEN CONSTRUCTION FLOOR AND OCCUPIED FLOORS EXCEPT WHEN ACTIVELY WORKING ON SHAFT.
- 15. REMOVE ALL COMBUSTIBLE MATERIAL FROM THE CONSTRUCTION FLOOR AND MAINTAIN SAME FREE AT ALL TIMES. OLD LUMBER AND OTHER COMBUSTIBLE DEBRIS IN AND AROUND THE SITE SHALL NOT BE ALLOWED TO ACCUMULATE. ALL FLOORS SHALL BE THOROUGHLY CLEARED OF ALL OTHER COMBUSTIBLE PROPERTY AND ALL FIXTURES AND EQUIPMENT.
- 16. COMBUSTIBLE WASTE SHALL BE REMOVED AT LEAST ONCE DAILY.
- 17. COMBUSTIBLE BUILDING MATERIALS MUST NOT BE STORED IN UN-SPRINKLERED AREAS, ELEVATOR LOBBIES OR MEANS OF EGRESS.
- 18. SMOKING SHALL BE PROHIBITED ON SITE. "NO SMOKING" SIGNS SHALL BE CONSPICUOUSLY POSTED THROUGHOUT. IN ACCORDANCE WITH FLORIDA FC 310.
- 19. CYLINDERS OF COMBUSTIBLE GAS, IF USED, MUST BE LIMITED TO THOSE ACTUALLY IN USE AND THOSE CYLINDERS MUST BE REMOVED FROM THE FLOOR AT THE END OF EACH DAY.
- 20. IN THE INTEREST OF PUBLIC SAFETY, THE AUTHORITY OF FLORIDA MAY REVOKE, MODIFY OR REQUIRE ADDITIONAL SAFEGUARDS NOT EXPRESSED IN THIS DOCUMENT.
- 21. SURVEILLANCE INSPECTIONS MAY BE PERFORMED BY THE AUTHORITY OF FLORIDA TO DETERMINE COMPLIANCE WITH THE CONDITIONS, RESTRICTIONS AND LIMITATIONS STIPULATED IN THIS CONDITIONAL APPROVAL LETTER.
- 22. ANY AND ALL OTHER AUTHORITY OF FLORIDA RULES, REGULATIONS, LAWS ETC. RELATING TO CONSTRUCTION OPERATIONS AND SITE SAFETY SHALL BE COMPLIED WITH.

	SPRINKLER DRAWING LIST
Sheet Number	Sheet Name
SP-001	SPRINKLER NOTES, SYMBOLS AND DRAWING LIST
SP-101	SPRINKLER PLAN
SP-401	SPRINKLER DETAILS
SP-402	SPRINKLER DETAILS
SP-601	SPRINKI ER SPECIFICATIONS

# **CONSTRUCTION GENERAL NOTES**

- 2. ALL MATERIALS AND APPARATUS SHALL BE INSTALLED IN ACCORDANCE WITH ALL THE RULES AND REGULATIONS OF THE FLORIDA 2023 BUILDING CODES AND ALL OTHER AUTHORITIES HAVING JURISDICTION & NFPA.
- 3. PROCUREMENT OF ALL PERMITS AND CERTIFICATES FOR THE INSTALLATION OF THESE SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH ALL THE RULES AND REGULATIONS OF THE FLORIDA BUILDING CODES & ALL OTHER AUTHORITIES
- 4. THE SPRINKLER CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER STRUCTURAL, ARCHITECTURAL, MECHANICAL & ELECTRICAL INTERFERENCES,
- PROVIDE COMPLETE SPRINKLER COVERAGE IN ALL AREAS, REFER TO AND COORDINATE WITH THE LATEST ARCHITECTURAL REFLECTED CEILING PLANS AND DETAILS. SPRINKLER HEADS SHALL BE CENTERED IN TILE OR ALIGNED WITH LIGHTS, DIFFUSERS, ETC. ANY SPRINKLER HEAD MODIFICATIONS REQUIRED TO MEET THE
- 6. PROVIDE SPRINKLER HEAD COMPLETE WITH PIPING, FITTINGS, HANGERS WITH
- 7. PIPING DAMAGES AS A RESULT OF PERFORMING THE WORK OF THIS CONTRACT SHALL BE REPAIRED OR REPLACED AS REQUIRED WITH MATERIAL & FINISH TO
- 8. ALL AREAS WITHOUT HUNG CEILINGS ELECTRICAL ROOMS, MECHANICAL ROOMS, STORAGE AREAS ETC. PROVIDE WITH EXPOSED UPRIGHT OR PENDENT SPRINKLER
- 9. CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPLETE SPRINKLER COVERAGE IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA STATE CONSTRUCTION CODE
- 10. LOCATION AND TYPE OF SPRINKLER HEADS IN THE AREAS WITHOUT HUNG CEILINGS SHALL BE FULLY COORDINATED WITH THE EXPOSED STRUCTURAL (BEAMS, COLUMNS, ETC.) LIGHTING EQUIPMENT AND HVAC EQUIPMENT (DUCTWORK, UNIT HEATERS, ETC.) ALL OF THE ABOVE ELEMENTS WHICH IMPACT THE SPRINKLER SYSTEM MUST BE INDICATED ON THE SHOP DRAWINGS FOR REVIEW AND APPROVAL.
- DUCTS, PIPES OR CONDUITS OVER 48" WIDE.
- 13. BASE BUILDING ARCHITECT AND STRUCTURAL ENGINEERS SHALL REVIEW METHOD

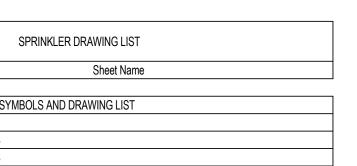
1. SPRINKLER SYSTEM LAYOUT AND CALCULATIONS SHALL COMPLY WITH NFPA-13 [2022], LOCAL BUILDING CODE FLORIDA STATE CONSTRUCTION CODE 2023, LOCAL FIRE DEPARTMENT OWNERS INSURANCE UNDERWRITERS AND ALL OTHER

2. DESIGN CRITERIA FOR CEILING PROTECTION PLAN: PIPE SIZES SHALL BE REQUIRED

1. OCCUPANCY CLASSIFICATION: = ORDINARY HAZARD, GROUP 1 DENSITY

= 820 SQ.FT 3. AREA OF APPLICATION 4. COVERAGE/SPRINKLER = 130 SQ.FT.

- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECEIVING FLOW TEST INFORMATION TO PREPARE HYDRAULIC CALCULATIONS AND OBTAIN APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION OVER THE SPRINKLER WORK, INCLUDING THE OWNERS INSURANCE CO. IN ADDITION, OBTAIN AGENCY APPROVALS FOR HYDRAULICS PRIOR TO INSTALLATION
- 5. MINIMUM PRESSURE AT ANY SPRINKLER HEAD SHALL BE AS REQUIRED FOR THE MINIMUM DISCHARGE OF THE HEAD, BUT IN NO CASE LESS THAN 7 PSI.



- 1. THE SPRINKLER CONTRACTOR WILL BE HELD RESPONSIBLE TO HAVE VISITED AND EXAMINED THE PREMISES BEFORE SUBMITTING HIS PROPOSAL, IN ORDER TO UNDERSTAND THE CONDITIONS RELATED TO HIS WORK.
- HAVING JURISDICTION.
- TRADES AND ALL CONDITIONS, AND PROVIDE OFFSETS IN PIPING SYSTEM TO AVOID WHETHER INDICATED OR NOT.
- DESIGN CRITERIA MUST BE PROVIDED AND APPROVED BY THE ARCHITECT.
- ATTACHMENT TO BUILDING STRUCTURE.
- MATCH EXISTING.
- HEADS WITH SPRINKLER GUARDS IN AREAS SUBJECT TO ACCIDENTAL DAMAGE.
- & NFPA STANDARDS, LOCAL FIRE DEPARTMENT & THE DESIGN CRITERIA.
- 11. PROVIDE SPRINKLER HEADS ABOVE AND BELOW ALL DUCTS OR CLUSTERS OF
- 12. ALL FLOOR PENETRATIONS, CORE DRILLING, ETC. SHALL BE APPROVED BY LANDLORD.
- OF SUPPORTING SPRINKLER PIPING.
- 14. CONTRACTOR SHALL SUBMIT ALL FINAL COORDINATED DRAWINGS IN AUTOCAD

# SPRINKLER DESIGN CRITERIA

AUTHORITIES HAVING JURISDICTIONS.

BY THE AUTHORITIES HAVING JURISDICTION AND SHALL BE CALCULATED AS FOLLOWS:

= 0.15 GPM/SQ.FT

OF NEW WORK.

DESCRIPTION DESIGN ISSUED FOR **DELIVERABLE**: PERMIT ISSUE DATE: 06/14/2024 PROJECT 24017B

DR/LR

ARCHITECTURE + DESIGN

ENVIRONETICS GROUP ARCHITECTS, P.C.

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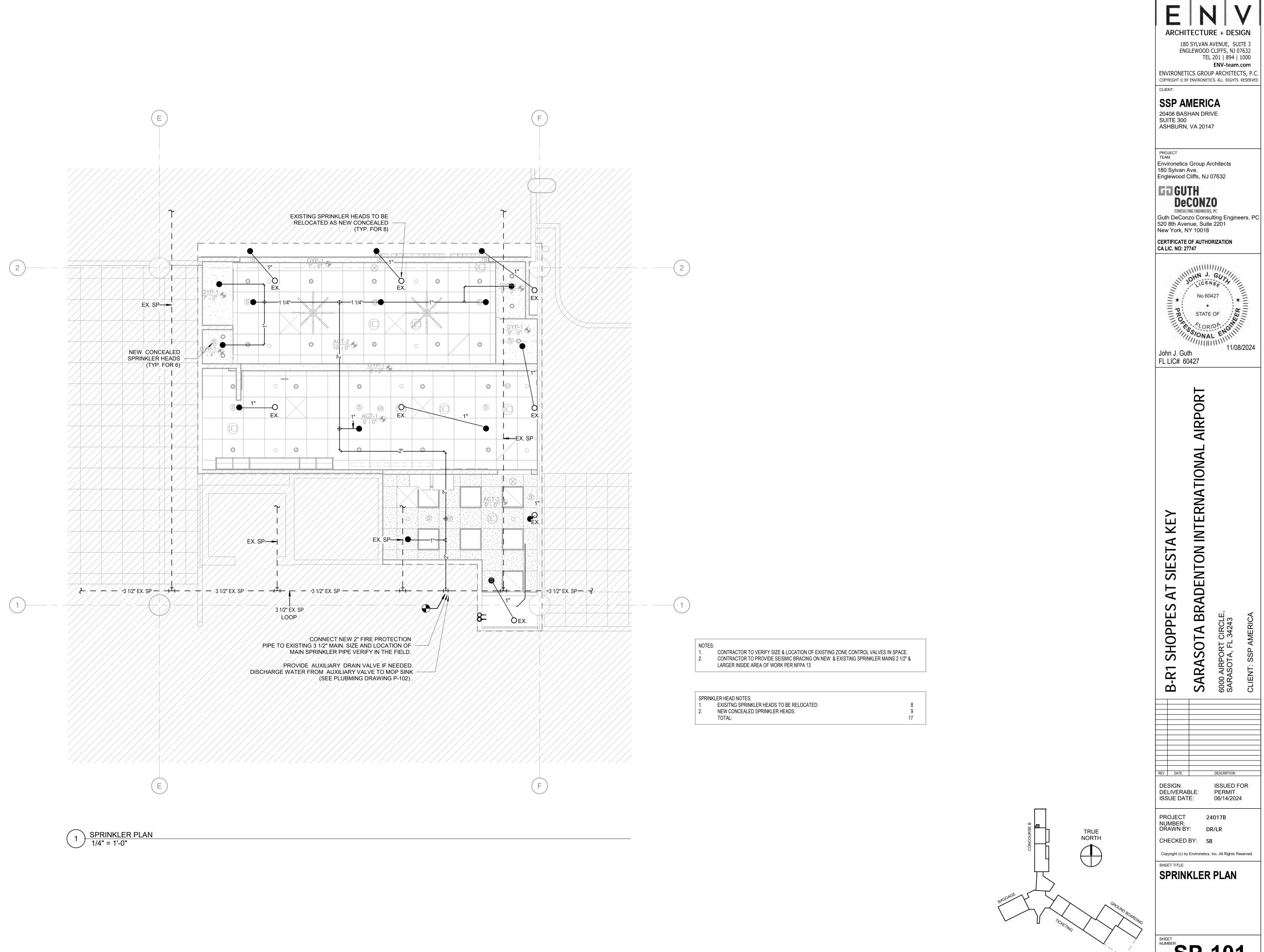
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TEL 201 | 894 | 1000 ENV-team.com

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DRAWING LIST



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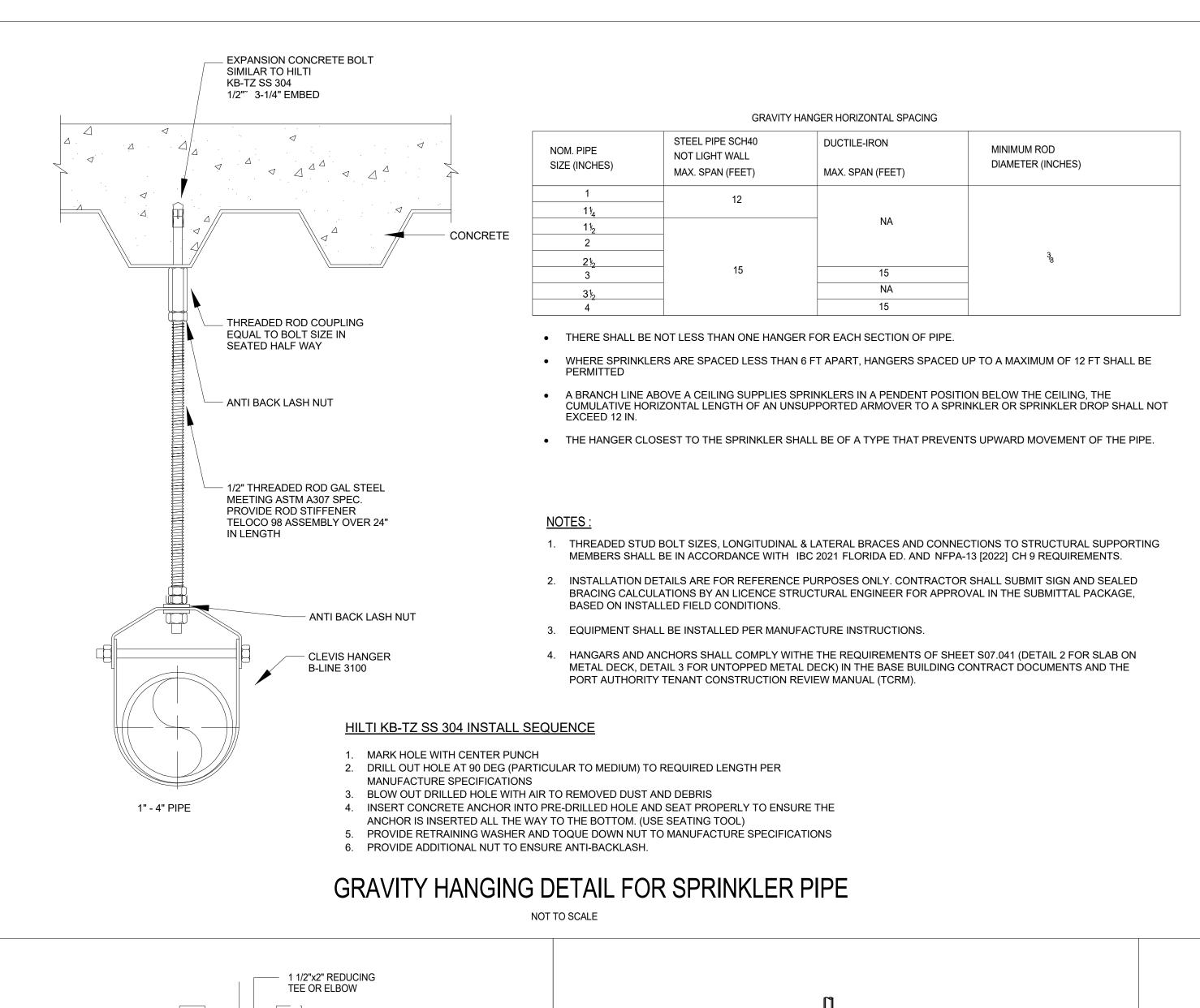
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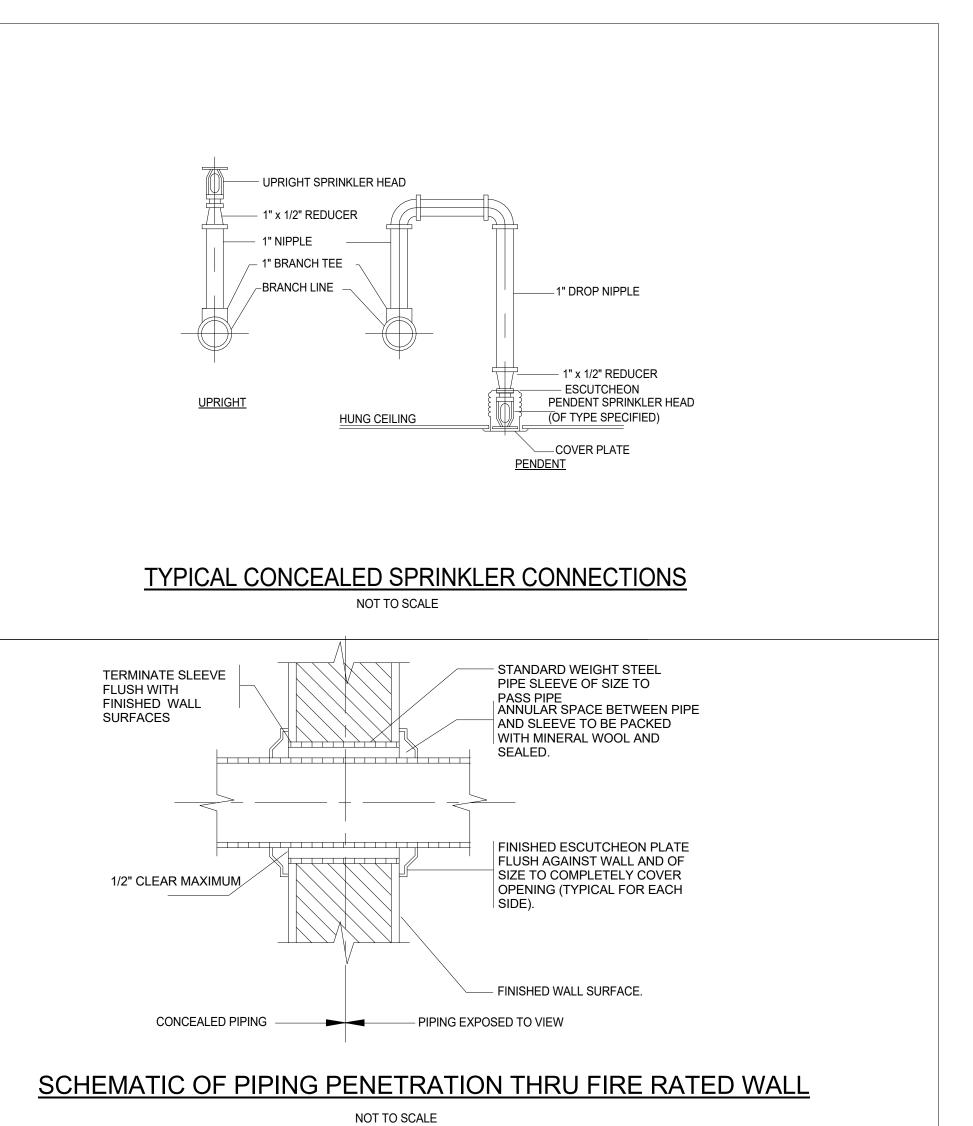
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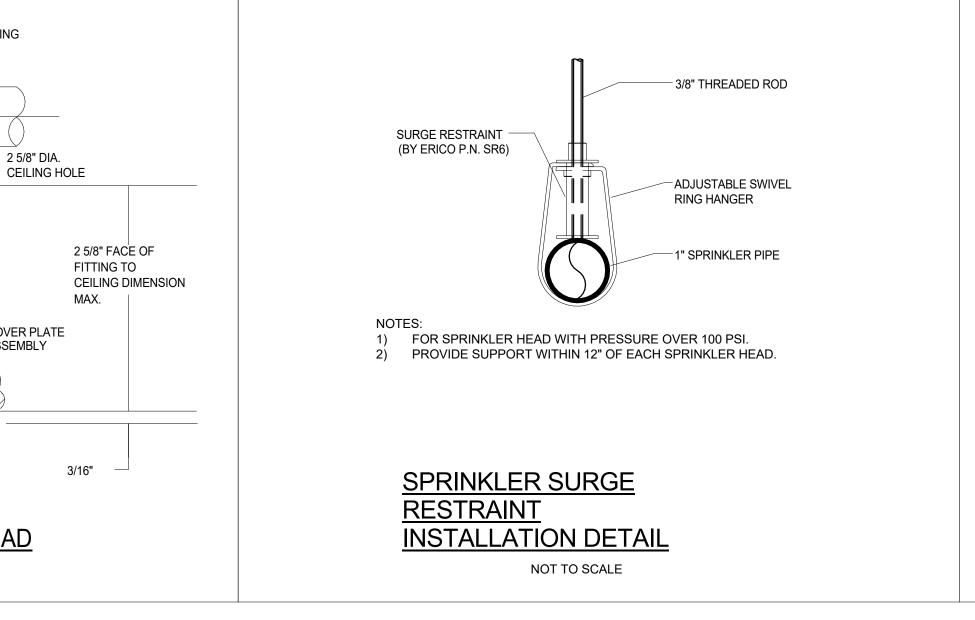
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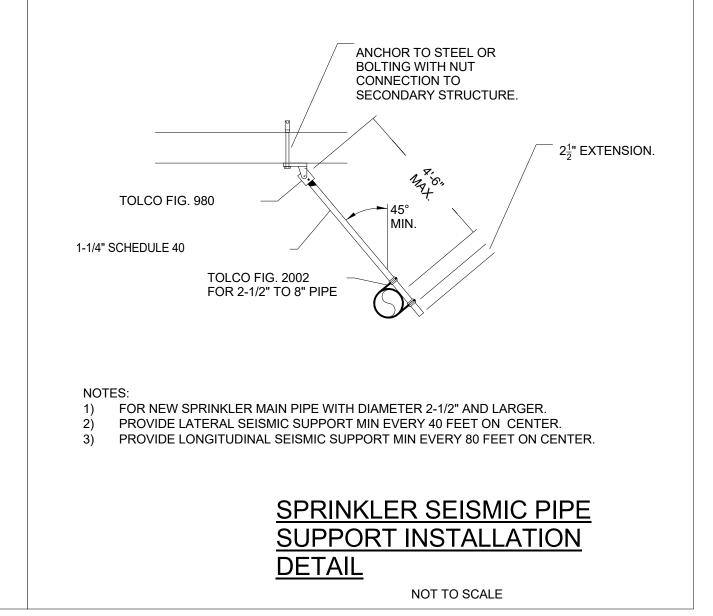
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SPRINKLER PLAN











SP-401

SPRINKLER CUP

**ASSEMBLY** 

CASTING

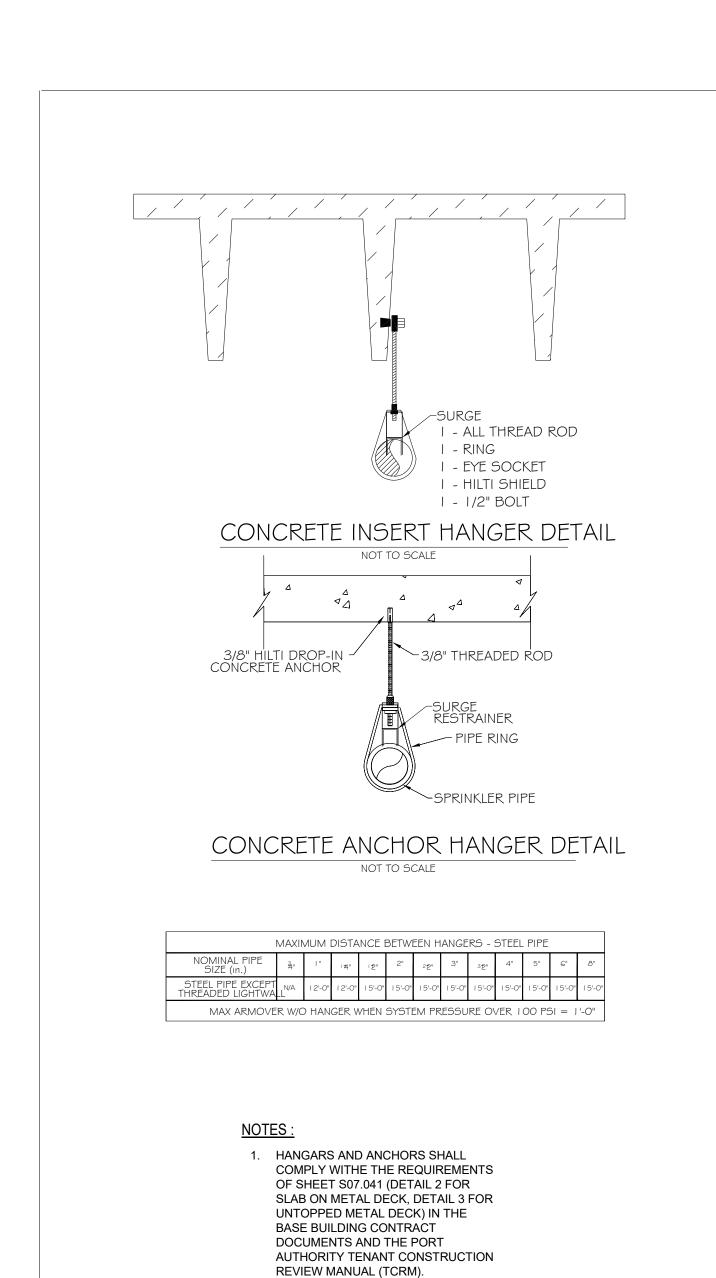
1/2" COVER

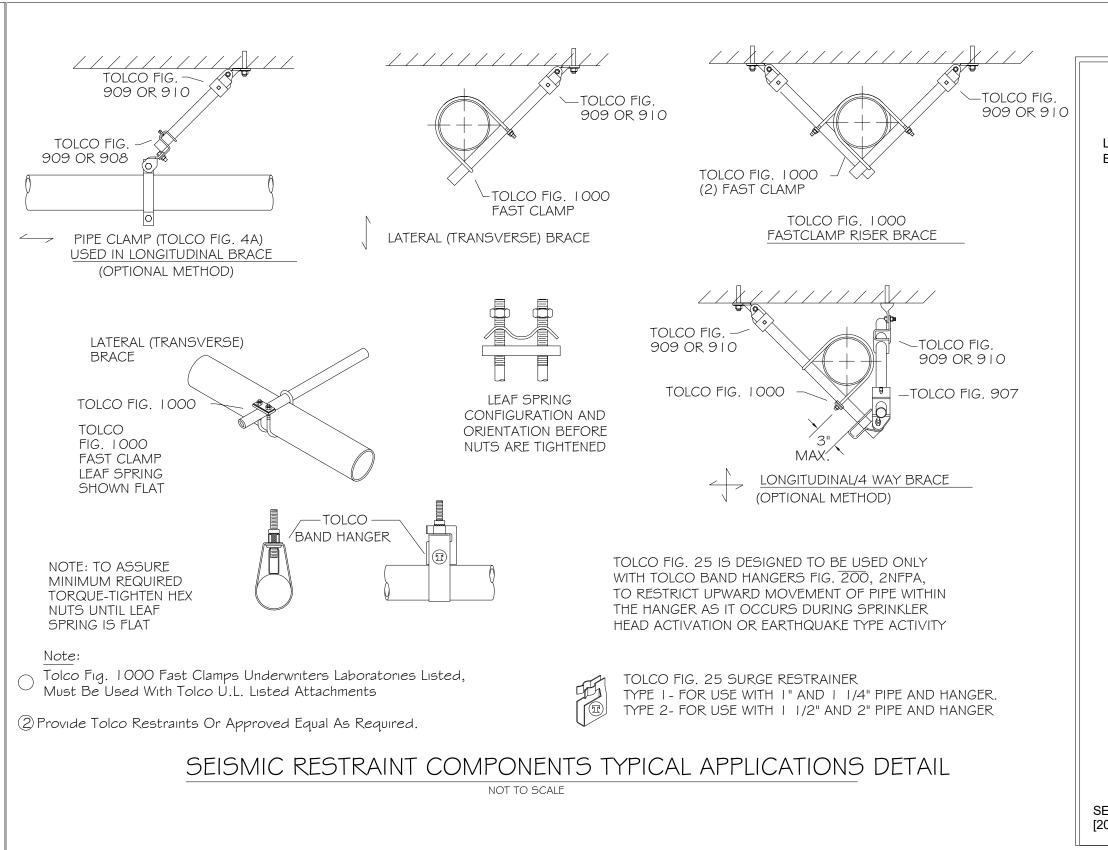
ADJUSTMENT

ASSEMBLY

**CONCEALED SPRINKLER HEAD** 

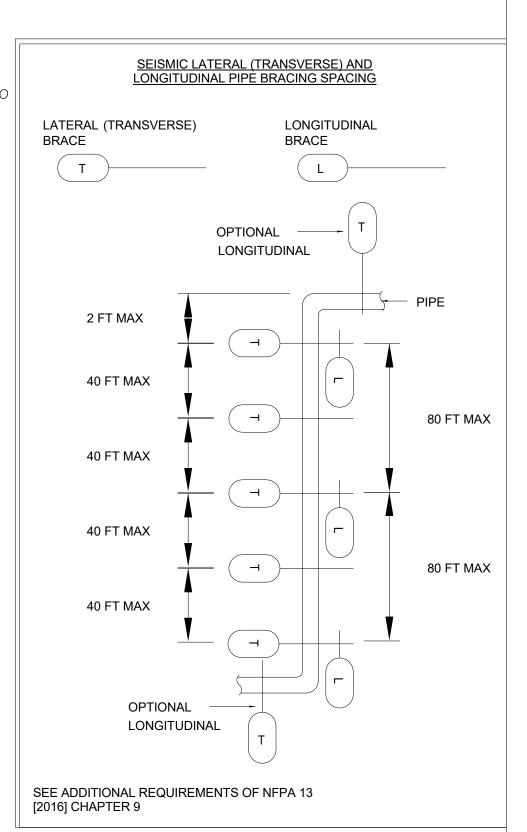
NOT TO SCALE

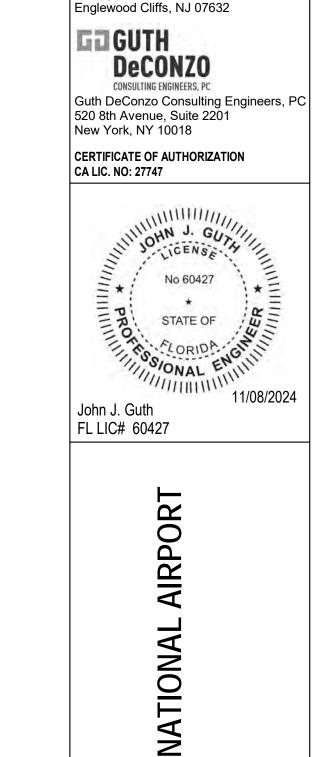




# NOTES :

- THREADED STUD BOLT SIZES, LONGITUDINAL & LATERAL BRACES AND CONNECTIONS TO STRUCTURAL SUPPORTING MEMBERS SHALL BE IN ACCORDANCE WIBIG 2021 FLORIDA ED BUILDING CODE AND NFPA-13 [2022] REQUIREMENTS.
- INSTALLATION DETAILS ARE FOR REFERENCE PURPOSES ONLY. CONTRACTOR SHALL SUBMIT SIGN AND SEALED SEISMIC BRACING CALCULATIONS BY AN LICENCE STRUCTURAL ENGINEER FOR APPROVAL IN THE SUBMITTAL PACKAGE, BASED ON INSTALLED FIELD CONDITIONS.
- 3. CONTRACTOR SHALL FURNISH AND INSTALL NEW SEISMIC BRACING ON NEW AND EXISTING FIRE PROTECTION MAINS 2.5"-4" AND FEED MAINS COMPLAINT WITHPA-13 [2022] CHAPTER 9
- 4. EQUIPMENT SHALL BE INSTALLED PER MANUFACTURE INSTRUCTIONS.
- EQUIPMENT SHALL BE INSTALLED FER MANOPACTORE INSTRUCTIONS.
   HANGARS AND ANCHORS SHALL COMPLY WITHE THE REQUIREMENTS OF SHEET S07.041 (DETAIL 2 FOR SLAB ON METAL DECK, DETAIL 3 FOR UNTOPPED METAL DECK) IN THE BASE BUILDING CONTRACT DOCUMENTS AND THE PORT AUTHORITY TENANT CONSTRUCTION REVIEW MANUAL.





ARCHITECTURE + DESIGN

ENVIRONETICS GROUP ARCHITECTS, P.C.

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DR/LR

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SPRINKLER DETAILS

SP-402

PROJECT

CHECKED BY: SB

NUMBER: DRAWN BY:

# SPRINKLER SPECIFICATIONS

# GENERAL

- A. THE SPRINKLER CONTRACTOR SHALL BE A LICENSED, AUTHORIZED INSTALLER OF SPRINKLER SYSTEMS AND SHALL HAVE HAD A MINIMUM OF FIVE YEARS EXPERIENCE IN THE INSTALLATION
- B. BEFORE SUBMITTING HIS BID, THE SPRINKLER CONTRACTOR SHALL VISIT THE SITE AND SHALL FULLY FAMILIARIZE HIMSELF WITH THE STRUCTURAL LAYOUT OF THE EXISTING BEAMS IN RELATIONSHIP TO THE NEW HVAC DUCT LAYOUT AND NEW LIGHTING FIXTURES AND HUNG CEILING HEIGHTS AND BECOME FAMILIAR WITH THE DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THIS WORK. CONTRACTOR SHALL PERFORM THIS PRIOR TO SUBMITTING HIS BID. SUBMISSION OF A BID WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE, AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.
- C. UPON REVIEW OF SPRINKLER DRAWINGS PRIOR TO SUBMITTING HIS PROPOSAL, THE SPRINKLER CONTRACTOR SHALL INFORM ARCHITECT AND/OR ENGINEER OF ANY DISCREPANCIES OR REQUEST CLARIFICATION IN WRITING, IF NECESSARY, CONCERNING THE INTENT OF THE PLANS AND SPECIFICATIONS TO PROVIDE A COMPLETE SPRINKLER INSTALLATION. LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS SHOULD SUCH PROCEDURE NOT BE FOLLOWED.
- THE SCHEDULING OF THE SPRINKLER WORK SHALL BE COORDINATED WITH THE BUILDING OWNER, WITH OTHER CONTRACTORS AND WITH CLIENT.
- E. NECESSARY SHUT-DOWNS OF BASE BUILDING SPRINKLER SYSTEM MUST BE COORDINATED WITH THE BUILDING OWNER AND CLIENT. SHUT-DOWNS OF BASE BUILDING SYSTEMS SHALL TAKE PLACE AFTER OR BEFORE NORMAL BUSINESS HOURS AND SHALL BE CONSIDERED OVERTIME WORK.
- THE SPRINKLER SYSTEM SHALL BE COMPLETE WITH ALL PIPE, FITTING, VALVES DRAINAGE SYSTEM AND VALVES, SPRINKLER HEADS, HANGERS AND SUPPORTS, ALSO MISCELLANEOUS WORK ITEMS, SUCH AS, SIGNS AS REQUIRED, VALVE TAGS, ETC., AND ALL OTHER RELATED EQUIPMENT, APPARATUS, AND MATERIAL ITEMS NECESSARY FOR COMPLETE, SATISFACTORY OPERATING AND APPROVED TYPE SYSTEM.
- G. ALL PIPE FITTINGS, HANGERS, SUPPORTS, SPRINKLER HEADS, ETC., SHALL CONFORM TO THE FLORIDA 2023 BUILDING CODE AND NATIONAL FIRE PROTECTION ASSOCIATION'S REQUIREMENTS AS TO TYPES OF MATERIALS, ARRANGEMENT, SIZES, AND INSTALLATION EXCEPT THAT NO FACE OR FLUSH BUSHING SHALL BE USED. REDUCING FITTINGS SHALL BE PROVIDED IN LIEU OF BUSHINGS.

# 2. WORK INCLUDED

- A. WORK SHALL INCLUDE ALL SPRINKLER WORK FURNISHED AND INSTALLED FOR THE CLIENT.
- 1) ALL WORK SHALL COMPLY WITH REQUIREMENTS OF THE FLORIDA 2023 BUILDING CODE.
- 2) WORK SHALL ALSO INCLUDE THE REMOVAL OF EXISTING SPRINKLER PIPING, HEADS, AND
- 3) WORK SHALL ALSO INCLUDE FURNISHING AND INSTALLING A COMPLETE WET SPRINKLER SYSTEM AS INDICATED ON THE PLANS. CONTRACTOR'S ELECTRICIAN SHALL BE FULLY FAMILIAR WITH THE OPERATION OF THE WET SYSTEM AND IT'S INTERCONNECTIONS.
- B. SPRINKLER SYSTEM SHALL BE:
- 1) A HYDRAULICALLY DESIGNED SYSTEM IN ACCORDANCE WITH THE STANDARDS OF THE NATIONAL FIRE PROTECTION ASSOCIATION, THE BUILDING CODE OF FLORIDA.
- 2) DESIGN SYSTEM TO CONFORM WITH BUILDING STRUCTURAL, MECHANICAL AND ELECTRICAL SYSTEMS, FITHER EXISTING OR PROPOSED.
- C. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL LOCATION OF WORK. SCALED DIMENSIONS SHALL NOT BE USED. ANY DIMENSIONS NOT SHOWN SHALL BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS. FOR EXACT LOCATIONS, MOUNTING HEIGHTS, ETC. REFER TO ARCHITECTURAL DRAWINGS AND DETAILS. ALL DIMENSIONS, ETC., SHALL BE VERIFIED BY FIELD CHECK.

# 3. SHOP DRAWINGS AND DATA

- A. THE CONTRACTOR SHALL SUBMIT, FOR APPROVAL, FULLY COORDINATED SHOP DRAWINGS, CAPACITY DATA, HYDRAULIC CALCULATIONS AND CATALOG CUTS OF THE FOLLOWING:
- 1) PIPE AND FITTINGS
- 2) SPRINKLER HEADS
- 3) HANGERS AND SUPPORTS 4) SPRINKI FR AND PIPING I AYOUT
- 5) HYDRAULIC CALCULATIONS
- 6) VALVES, O.S.& Y. FLOOR CONTROL VALVE, PRESSURE REDUCING VALVE AND PRESSURE RELIEF VALVE 7) TAMPER SWITCH

# 4. BUILDING DEPARTMENT FILING, PERMITS, AND CERTIFICATES

A. THE SPRINKLER CONTRACTOR SHALL FILE ALL REQUIRED DRAWINGS AND SPECIFICATIONS WITH THE PORT AUTHORITY AND BE RESPONSIBLE FOR OBTAINING FINAL APPROVAL. THIS CONTRACTOR SHALL SUBMIT THE REQUIRED WITH THE FIRE DEPARTMENT AND OBTAIN ALL FINAL APPROVALS. IN ADDITION THIS CONTRACTOR IS TO SUBMIT TO THE FIRE DEPARTMENT FOR THEIR APPROVAL. A SHOP DRAWING INDICATING ALL OF THE SYSTEMS COMPONENTS. THIS DRAWING SHALL INCLUDE ALL OF THE NECESSARY SYMBOLS, NOTES AND WIRING DIAGRAMS AS REQUIRED FOR APPROVAL. THIS DRAWING IS TO BE SIGNED AND SEALED BY THE CONTRACTORS LICENSED ENGINEER AS REQUIRED FOR THE FINAL BUILDING AND FINAL FIRE DEPARTMENT APPROVALS.

# 5. INSPECTION AND TESTING

- A. THE SPRINKLER SYSTEM SHALL BE INSPECTED AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE.
- B. THE SPRINKLER SYSTEM SHALL BE SUBJECTED TO A HYDROSTATIC PRESSURE FOR A PERIOD OF ONE HOUR AT A PRESSURE OF AT LEAST 200 PSIG OR 50 PSI IN EXCESS OF THE MAXIMUM PRESSURE TO BE MAINTAINED WHEN THE MAXIMUM PRESSURE IN THE SYSTEM IS IN EXCESS OF 150 PSI AS PER NFPA 2022.
- C. BEFORE SPRINKLER SYSTEM IS CONCEALED, THE BUILDING DEPARTMENT SHALL BE NOTIFIED THAT THE SYSTEM IS READY FOR INSPECTION AND TESTING. THE BUILDING DEPARTMENT INSPECTOR SHALL WITNESS THE TEST. FINAL APPROVAL OF THE SPRINKLER SYSTEM SHALL BE OBTAINED FROM BUILDING DEPARTMENT.

# 6. FLUSHING

A. ALL FIRE PROTECTION PIPING SHALL BE FLUSHED OUT IN ACCORDANCE WITH REQUIREMENT OF THE NATIONAL FIRE PROTECTION ASSOCIATION PAMPHLET NO. 13 AND 14, LATEST EDITION.

# 7. SPRINKLER PIPING

- A. ALL SPRINKLER PIPING 2" AND LESS SHALL BE SCHEDULE 40 BLACK STEEL PIPE. SPRINKLER PIPE SIZES 2 1/2" AND UP SHALL BE SCHEDULE 40 BLACK STEEL. ALL FITTINGS AND FLANGES SHALL BE AMERICAN STANDARD BLACK CAST IRON SPRINKLER FITTINGS, FLANGED OR SCREWED AS REQUIRED, DESIGNED AND MANUFACTURED FOR A WATER WORKING PRESSURE OF 175 POUNDS. VICTAULIC TYPE GROOVED FITTINGS ARE ACCEPTED TO BE INSTALLED AS PER THE MANUFACTURER'S INSTRUCTIONS.
- B. SCHEDULE 10 & SCHEDULE 30 BLACK STEEL PIPE IS NOT ACCEPTABLE.

# 8. TAMPER SWITCHES

A. WHERE INDICATED ON THE DRAWINGS, FURNISH AND INSTALL VALVE TAMPER SWITCHES FOR SUPERVISION OF O.S.& Y. SHUT OFF VALVES. TAMPER SWITCHES SHALL BE ADT, ITT GRINNELL CORP., AUTO-CALL OR APPROVED EQUAL. COORDINATE TAMPER SWITCHES WITH BASE BUILDING FIRE ALARM SIEMENS

# 9. CUTTING AND PATCHING

- A. DO ALL CUTTING NECESSARY FOR THE INSTALLATION OF SPRINKLER WORK. ACCURATELY LAYOUT WORK FOR WHICH CUTTING IS REQUIRED, SO AS TO AVOID UNNECESSARY LARGE OPENINGS. CUTTING OF BEAMS, JOISTS, FLOORS OR WALLS OF THE BUILDING WILL NOT BE PERMITTED EXCEPT AFTER RECEIVING
- APPROVAL OF THE BUILDING MANAGER. B. ROUGH PATCHING WILL BE DONE BY THIS CONTRACTOR IN A MANNER TO ACCOMMODATE FINISHED PATCHING WORK. FINISHED PATCHING WILL BE DONE "UNDER ANOTHER SECTION OF THE

# 10. INSERTS, HANGERS, ETC.

- A. ALL SPRINKLER PIPING SHALL BE SUBSTANTIALLY SUPPORTED AND SHALL COMPLY WITH THE STANDARDS OF THE NATIONAL FIRE PROTECTION ASSOCIATION FOR THE INSTALLATION OF SPRINKLER SYSTEMS AND AS REQUIRED BY THE FLORIDA BUILDING CODE AND FACTORY MUTUAL.
- B. HANGERS AND THEIR COMPONENTS SHALL BE FERROUS. HANGERS SHALL BE ADJUSTABLE, FLAT IRON
- C. SPRINKLER PIPING OR HANGERS SHALL NOT BE USED TO SUPPORT NON-SYSTEM COMPONENTS.
- D. SPRINKLER PIPING SHALL BE SUBSTANTIALLY SUPPORTED FROM THE BUILDING STRUCTURE WHICH MUST SUPPORT THE ADDED LOAD OF THE WATER-FILLED PIPE PLUS A MINIMUM OF 250 LBS. APPLIED AT THE POINT OF HANGING.
- E. SPRINKLER PIPING SHALL BE SUPPORTED INDEPENDENTLY OF THE CEILING SHEATHING.
- F. WHEN SPRINKLER PIPING IS INSTALLED BELOW DUCTWORK, PIPING SHALL BE SUBSTANTIALLY
- SUPPORTED FROM THE BUILDING STRUCTURE, NOT FROM THE DUCTWORK. G. MAXIMUM DISTANCE BETWEEN HANGERS SHALL NOT EXCEED 6 FT. FOR 1 AND 1-1/4 IN. SIZES OR 10 FT.
- H. EXPANSION SHIELDS FOR SUPPORTING PIPES UNDER CONCRETE CONSTRUCTION MAY BE USED IN A HORIZONTAL POSITION IN THE SIDES OF BEAMS. IN CONCRETE HAVING GRAVEL OR CRUSHED STONE AGGREGATE, EXPANSION SHIELDS MAY BE USED IN THE VERTICAL POSITION TO SUPPORT PIPES 4 IN. OR LESS IN DIAMETER.

# 11. SPRINKLER HEADS

- A. ALL SPRINKLER HEADS TO BE CONSISTENT WITH BUILDING STANDARDS. MATCH EXISTING BUILDING
- B. RECESSED PENDENT SPRINKLER HEADS-RELIABLE MODEL 'F1FR56', FM APPROVED AND UL LISTED, ADJUSTABLE TYPE MAY BE USED. HEADS SHALL BE 1/2" ORIFICE, K5.6, 155 DEG. TEMPERATURE RATING, QUICK RESPONSE, SIN RA1414.

# 12. ESCUTCHEONS

A. PROVIDE ESCUTCHEONS ON ALL EXPOSED PIPING PASSING THROUGH WALLS, PARTITIONS, FLOORS AND CEILINGS. ESCUTCHEON SHALL BE HELD IN PLACE BY INTERNAL TENSION OR SET SCREW.

# 13. SYSTEM SUPERVISION

- A. ALL VALVES IN SUPPLY PIPES TO SPRINKLER SYSTEMS SHALL BE SUPERVISED BY:
- 1) CENTRAL STATION, PROPRIETARY, OR REMOTE STATION SIGNALING SERVICE. OR,
- 2) LOCAL SIGNALING SERVICE THAT WILL CAUSE THE SOUNDING OF AN AUDIBLE SIGNAL AT A CONSTANTLY ATTENDED POINT. OR,

# 3) VALVES LOCKED IN THE CORRECT POSITION. OR,

4) VALVES LOCATED WITHIN FENCED ENCLOSURES UNDER THE CONTROL OF THE OWNER, SEALED IN THE OPEN POSITION, AND INSPECTED WEEKLY AS PART OF AN APPROVED PROCEDURE.

# 14. FIRE WATCH

- A. FIRE SYSTEM INTERRUPTIONS: FIRE WATCH REQUIREMENTS FOR FIRE SYSTEM OUTAGES SHALL BE DETERMINED BASED ON EXTEND OF THE INTERRUPTION AND EXPECTED OUTAGE TIME OF THE INTERRUPTION. HOWEVER, IN GENERAL, A FIRE WATCH IS TO FULFILL THE INTENT OF NFPA-72 AS
- 1) FIRE WATCH PERSONNEL ARE TO BE FAMILIAR WITH FACILITIES AND PROCEDURES FOR SOUNDING AN ALARM IN THE EVENT OF A FIRE.
- 2) FIRE WATCH PERSONNEL ARE TO HAVE FIRE EXTINGUISHING EQUIPMENT READILY AVAILABLE AND BE TRAINED IN ITS USE, INCLUDING PRACTICE ON TEST FIRES.
- 3) NOTIFY OCCUPANTS TO EVACUATE WHEN THERE IS A FIRE IN THE BUILDING.
- 4) NOTIFY THE CENTRAL MONITORING STATION TO INITIATE EMERGENCY PERSONNEL RESPONSE.
- 5) ACTIVATE FIRE PROTECTION SYSTEMS, E.G., IN ORDER TO RELEASE DOOR HOLDERS, CLOSE SMOKE DAMPERS AND SHUT DOWN FANS.
- 6) THE PERSONS PERFORMING THIS TYPE OF FIRE WATCH ARE NOT TO BE PERMITTED TO PERFORM ANY OTHER DUTIES

# 15. GUARANTEE

A. THE CONTRACTOR SHALL GUARANTEE FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF ACCEPTANCE BY THE ARCHITECT/ENGINEER, ALL MATERIALS, APPERATUS AND WORKMANSHIP WHETHER FURNISHED BY HIMSELF OR BY HIS SUBCONTRACTORS AND HE SHALL REPLACE OR REPAIR IN A MANNER APPROVED BY THE ARCHITECTS, WITHOUT COST TO THE TENANT, ANY PART OR PARTS OF THE WORK WHICH MAY PROVE DEFECTIVE OR UNSATISFACTORY WITHIN THE PERIOD OF THE GUARANTEE.

# 16. SYSTEM DESIGN CRITERIA

- A. SPRINKLER SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH FLORIDA BUILDING CODE 2023 AND NFPA-13-2022. DESIGN CRITERIA SHALL MEET BASE BUILDING REQUIREMENTS OF ORDINARY HAZARD I.
- 17. AS-BUILT DRAWINGS
- A. PREPARE AND SUBMIT "AS-BUILT" DRAWINGS AT THE COMPLETION OF THE PROJECT.
- 18. INSTALLATION
- A. ALL EQUIPMENT AND MATERIALS SUITABLE AND RATED FOR SYSTEM WATER WORKING
- B. SPRINKLER SYSTEM SHALL BE HYDRAULICALLY CALCULATED TO DETERMINE THE SPRINKLER SYSTEM DEMAND AND REQUIRED PRESSURE.
- C. THE DRAWINGS AND INFORMATION INCLUDED IN THIS SPECIFICATION ARE GIVEN AS A GUIDE ONLY, AND THEY THEREFORE DO NOT RELIEVE THIS CONTRACTOR FROM PROVIDING ALL WORK AND EQUIPMENT NECESSARY TO COMPLETE THE INSTALLATION ACCORDING TO THE REQUIREMENTS. THE NUMBER AND SPACING OF SPRINKLER HEADS, HYDRAULIC CALCULATIONS METHOD OF DRAINING LINES, ALARM VALVES, AND ALL OTHER DETAILS AND WORK SHALL BE REQUIRED BY THE LOCAL BUILDING CODE, OWNERS UNDERWRITERS, N.F.P.A. AND ALL OTHER GOVERNING AUTHORITIES.
- D. THE SPRINKLER HEADS IN ALL AREAS ARE TO BE INSTALLED IN THE CENTER OF THE TILE OR CENTERED WITH LIGHTS, DIFFUSERS OR SIMILAR ELEMENTS AS INDICATED ON THE ARCHITECTURAL REFLECTED CEILING DRAWINGS. SPRINKLER HEADS MUST ALSO BE INSTALLED ON A TRUE AXIS LINE IN BOTH DIRECTIONS WITH A MAXIMUM DEVIATION FROM THE AXIS LINE OF 1/2" PLUS OR MINUS. AT THE COMPLETION OF THE INSTALLATION, IF ANY HEADS ARE FOUND TO EXCEED THE ABOVE MENTIONED TOLERANCE, SAME SHALL BE REMOVED AND REINSTALLED BY THIS CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- E. NO PIPES, VALVES OR OTHER APPARATUS SHALL BE INSTALLED SO AS TO INTERFERE IN ANY WAY WITH THE FULL SWING OF THE DOORS.
- F. THE ARRANGEMENT, POSITIONS AND CONNECTIONS OF PIPES, DRAINS, VALVES, ETC., SHOWN ON THE DRAWINGS SHALL BE TAKEN AS A CLOSE APPROXIMATION AND WHILE THEY SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE, THE RIGHT IS RESERVED BY THE ARCHITECT AND/OR DESIGN ENGINEER TO CHANGE THE LOCATIONS, TO ACCOMMODATE ANY CONDITIONS WHICH MAY ARISE DURING THE PROGRESS OF THE WORK WITHOUT ADDITIONAL COMPENSATION TO THIS CONTRACTOR FOR SUCH CHANGES, PROVIDED THAT THE CHANGES ARE REQUESTED PRIOR TO THE INSTALLATION OF THIS CONTRACTOR'S WORK. THE RESPONSIBILITY FOR ACCURATELY LAYING OUT THE WORK RESTS WITH THIS CONTRACTOR. SHOULD IT BE FOUND OUT THAT ANY OF HIS WORK IS SO LAID OUT THAT INTERFERENCES WILL OCCUR, HE SHALL ALSO REPORT THAT TO THE ARCHITECT BEFORE INSTALLATION.
- G. WHERE SO SHOWN, OR REQUIRED, PIPING SHALL BE INSTALLED CONCEALED IN BUILDING
- H. ALL SCREWED PIPE THROUGHOUT THE JOB SHALL BE REAMED SMOOTH BEFORE BEING INSTALLED. PIPE SHALL NOT BE SPLIT, BENT, FLATTENED NOR OTHERWISE INJURED EITHER BEFORE OR DURING THE INSTALLATION. PROVIDE ALL SPRINKLER HEADS AND WORK IN STRICT CONFORMANCE WITH APPROVED SHOP DRAWINGS. THE ARCHITECT AND/OR DESIGN ENGINEER RESERVES THE RIGHT TO REJECT ANY AND ALL WORK NOT IN ACCORDANCE WITH THE APPROVED SHOP DRAWING.
- I. WHETHER OR NOT THE SYSTEM SHOWN ON THE CONTRACT DRAWINGS MEETS THE REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION. THESE SPECIFICATION REQUIRE THE FURNISHING AND INSTALLATION OF SPRINKLER SYSTEMS COMPLETE IN ALL DETAILS AND IN ACCORDANCE WITH THE STANDARDS OF THE NATIONAL FIRE PROTECTION ASSOCIATION.
- PERFORM THE FOLLOWING IN AREAS WHERE PAINTING OCCURS OR WHEN SPRINKLER PIPING IS PAINTED. AS SOON AS SPRINKLER HEADS ARE IN PLACE AND THE CONTRACTOR SHALL COVER EACH HEAD WITH A SMALL BAG OF AN UNDERWRITER'S APPROVED TYPE. WHICH SHALL BE REMOVED ONLY AFTER ALL PAINTING IS COMPLETE. AFTER THE BAG IS REMOVED, ALL HEADS SHALL BE CLEANED AND POLISHED.
- K. PIPING MAY BE HUNG FROM STRUCTURAL STEEL BY MEANS OF BEAM ATTACHMENTS. ALL AUXILIARY STEEL REQUIRED FOR SUPPORT SHALL BE PROVIDED BY THIS TRADE. DO NOT HANG PIPING FROM DUCTWORK, EXCEPT A 1" DROP BRANCH TO A MAXIMUM OF TWO HEADS.
- L. THE CONTRACTOR MAY COORDINATE WITH OTHER CONTRACTORS TO USE COMMON MEANS OF SUPPORT. SUBMIT FOR APPROVAL ALL PERTINENT DESIGN DATA RELATING TO THE SUPPORT AS I WELL AS VERIFICATION OF THE RESPONSIBILITY FOR THE SUPPORT.

# 19. STOCK OF SPARE SPRINKLER HEADS

- A. SUPPLY AT LEAST SIX SPARE SPRINKLERS (NEVER FEWER THAN SIX) SHALL BE MAINTAINED ON THE PREMISES SO THAT ANY SPRINKLERS THAT HAVE OPERATED OR BEEN DAMAGED IN ANY WAY CAN BE PROMPTLY REPLACED.
- B. THE SPRINKLERS SHALL CORRESPOND TO THE TYPES AND TEMPERATURE RATINGS OF THE SPRINKLERS IN THE PROPERTY.
- C. THE SPRINKLERS SHALL BE KEPT IN A CABINET LOCATED WHERE THE TEMPERATURE TO WHICH THEY ARE SUBJECTED WILL AT NO TIME EXCEED 100° F.
- D. ONE SPRINKLER WRENCH AS SPECIFIED BY THE SPRINKLER MANUFACTURER SHALL BE PROVIDED IN THE CABINET FOR EACH TYPE OF SPRINKLER INSTALLED TO BE USED FOR THE REMOVAL AND INSTALLATION OF SPRINKLERS IN THE SYSTEM.
- E. A LIST OF THE SPRINKLERS INSTALLED IN THE PROPERTY SHALL BE POSTED IN THE SPRINKLER
- F. THE LIST SHALL INCLUDE THE FOLLOWING:

4. ISSUE OR REVISION DATE OF THE LIST

- 1. SPRINKLER IDENTIFICATION NUMBER (SIN) IF EQUIPPED; OR THE MANUFACTURER, MODEL, ORIFICE, DEFLECTOR TYPE, THERMAL SENSITIVITY AND PRESSURE RATING.
- GENERAL DESCRIPTION QUANTITY OF EACH TYPE TO BE CONTAINED IN THE CABINET

# SPRINKLER FIELD EXAMINATION AND COORDINATION REQUIREMENTS

- ARRANGEMENT OF SYSTEMS AND WORK INDICATED UNDER THIS SECTION. THE CONTRACTOR SHALL CONSULT THE ARCHITECTURAL DRAWINGS AND DETAILS FOR EXACT LOCATIONS OF FIXTURES, AND EQUIPMENT.
- 2. THE CONTRACTOR SHALL FOLLOW THE DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACES IN WHICH WORK WILL BE INSTALLED AND MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS. WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE THE ENGINEER SHALL BE NOTIFIED IN WRITING. THE INSTALLATION SHALL NOT PROCEED BEFORE RECEIVING THE ENGINEER'S WRITTEN INSTRUCTIONS.
- 3. IF DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN THE APPROVED LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF OTHER TRADES, MAINTAIN
- 4. WHERE THE FIRE PROTECTION WORK WILL BE INSTALLED IN CLOSE PROXIMITY TO THE WORK OF OTHER TRADES, OR WHERE THERE IS EVIDENCE THAT THE WORK OF THE CONTRACTOR WILL INTERFERE WITH THE WORK OF OTHER TRADES, HE SHALL ASSIST IN WORKING OUT SPACES CONDITIONS TO MAKE A SATISFACTORY ADJUSTMENT. IF THE CONTRACTOR INSTALLS HIS WORK BEFORE COORDINATION WITH OTHER TRADES OR SO AS TO CAUSE INTERFERENCE WITH WORK OF OTHER TRADES, HE SHALL MAKE NECESSARY
- 5. STUDY THE DRAWINGS AND SPECIFICATIONS IN ORDER TO INSURE COMPLETENESS OF THE WORK REQUIRED UNDER THIS SECTION. INCIDENTAL WORK ITEMS NORMAL AND NECESSARY TO COMPLETE THE WORK, THOUGH NOT
- 6. VERIFY ALL MEASUREMENTS AND CONDITIONS IN THE FIELD BEFORE STARTING SYSTEM SHOWN ON THE PLANS HAVE BEEN TAKEN FROM PREVIOUS BUILDING
- THIS CONTRACTOR SHALL SUBMIT LAYOUT DRAWINGS FOR APPROVAL BEFORE BEGINNING WORK. THESE DRAWINGS SHALL DEPICT ACTUAL FIELD CONDITIONS VERIFIED UNDER THIS CONTRACT. THEY MUST ALSO INDICATE ALL NEW AND EXISTING PIPING, SPRINKLER HEADS, ETC. DRAWINGS SHALL BE TO SCALE (1/4"=1'-0") AND INDICATE ALL PERTINENT DIMENSIONS, AND PIPE SIZES. THIS CONTRACTOR SHALL SUBMIT SEPIAS AND PRINTS OF THIS LAYOUT PLAN AND ALL CALCULATIONS TO THE ARCHITECT. QUANTITIES SHALL BE AS DIRECTED BY THE
- SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER FOR APPROVAL TO THE PORT AUTHORITY THE OWNERS INSURANCE CARRIER CONTRACTOR SHALL OBTIAN REQUIRED FIRE PROTECTION PLANS AND RISER ADEQUATE.

- 1. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL
- REQUIRED HEADROOM AND SPACE CONDITIONS, OR FOR PROPER EXECUTION
- CHANGES IN HIS WORK TO CORRECT THE CONDITION WITHOUT EXTRA CHARGE.
- SHOWN OR SPECIFIED SHALL BE INCLUDED.
- WORK. INFORMATION REGARDING THE EXISTING FIRE PROTECTION SPRINKLER SHOP DRAWINGS. ANY DEVIATIONS FOUND IN THE FIELD SHOULD BE REPORTED TO THE ENGINEER.
- 8. THIS CONTRACTOR SHALL SUBMIT DRAWINGS AND HYDRAULIC CALCULATIONS AND OBTAIN ALL REQUIRED APPROVALS PRIOR TO THE INSTALLATION OF WORK. DIAGRAMS FROM THE BUILDING OWNER.THIS CONTRACTOR SHALL VERIFY WITH BUILDING MANAGEMENT IF THE EXISTING BUILDING FIRE RESERVE CAPACITY IS

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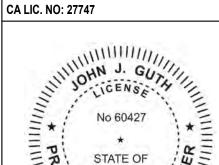
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Guth DeConzo Consulting Engineers, PC 520 8th Avenue, Suite 2201 New York, NY 10018 CERTIFICATE OF AUTHORIZATION



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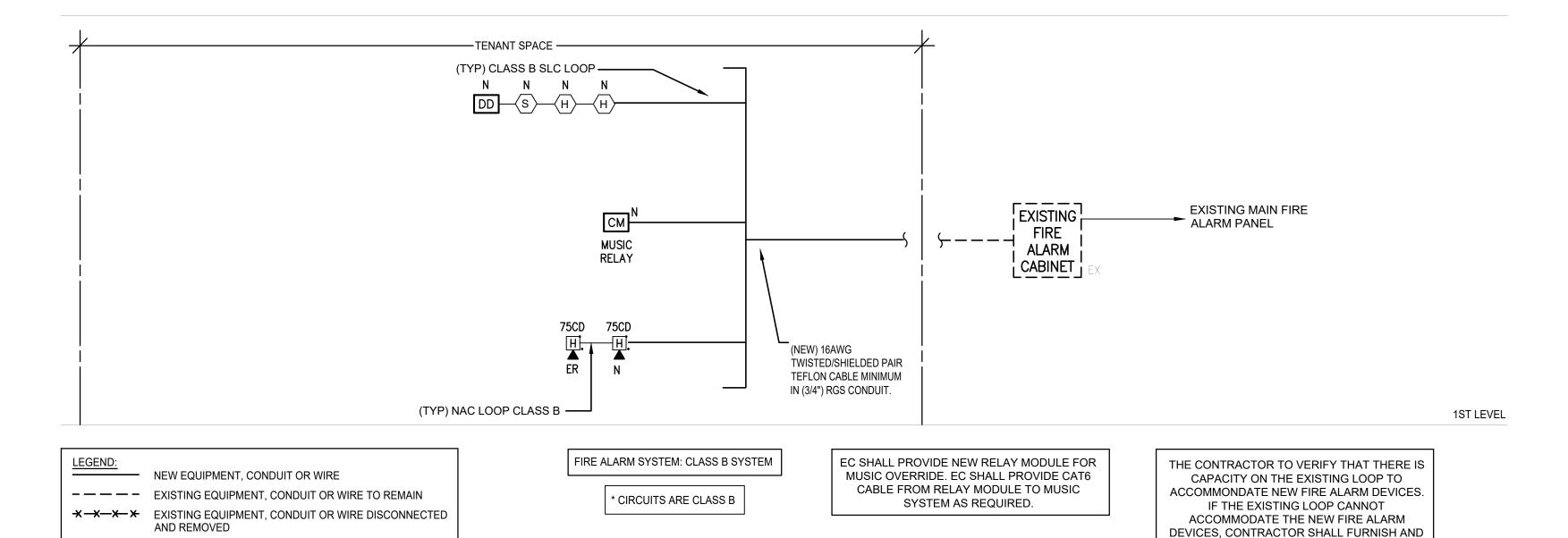
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**SPECIFICATIONS** 

# FIRE ALARM RISER DIAGRAM



# FIRE ALARM (FA) NOTES

ELECTRICAL CONTRACTOR.

- 1. DASHED LINES INDICATE EXISTING EQUIPMENT TO REMAIN. SOLID LINES INDICATE NEW.
- 2. COMPLETE INSTALLATION OF THE FIRE ALARM SYSTEM SHALL BE COORDINATED WITH THE BUILDING'S FIRE ALARM SYSTEM MAINTENANCE CONTRACTOR.
- 3. THE ELECTRICAL CONTRACTOR MUST CONTACT THE BUILDING'S FA MAINTENANCE CONTRACTOR PRIOR TO BID TO CONFIRM FINAL CONNECTION POINTS AND EQUIPMENT REQUIREMENTS. ALL MODIFICATIONS ARE TO BE APPROVED BY PA/AIRPORT.
- 4. THE ELECTRICAL CONTRACTOR MUST SUBMIT WIRING DIAGRAMS (PRODUCED BY THE BASE BUILDING FA CONTRACTOR) TO THE ENGINEER FOR ANY MODIFICATIONS TO THE FIRE ALARM SYSTEM. THE ELECTRICAL CONTRACTORS BID SHALL INCLUDE TESTING BY THE BASE BUILDING FA CONTRACTOR.
- 5. FINAL CONNECTION OF WIRING AT THE EXISTING TERMINAL BOX OR CONTROL PANEL SHALL BE MADE BY ELLENCO. ALI RELAYS, CIRCUIT EXTENDER PANELS, SUB-PANELS ETC. REQUIRED FOR A COMPLETE INSTALLATION AND AS DIRECTED BY THE BUILDING'S FIRE ALARM SYSTEM MAINTENANCE CONTRACTOR SHALL BE FURNISHED AND INSTALLED BY THE
- 6. ANY RELATED CONNECTION CHARGES AND PROGRAMMING CHARGES SHALL BE INCLUDED IN THE ELECTRICAL CONTRACTOR'S BID.
- 7. ALL 120V REQUIREMENTS FOR ADDITIONAL EQUIPMENT REQUIRED BY THE BUILDING'S FA CONTRACTOR SHALL BE INCLUDED IN THE ELECTRICAL CONTRACTOR'S BID.
- 8. WALL MOUNTED STROBES SHALL BE MOUNTED 80 INCHES ABOVE THE FLOOR OR 6" BELOW THE CEILING WHICHEVER IS
- 9. INSTALL FIRE ALARM EQUIPMENT, FIRE ALARM HORN AND STROBE LIGHTS (ADA TYPE, 75 CANDELA) UNITS AT LOCATION INDICATED ON THE PLAN. COORDINATE WITH ARCHITECT PRIOR TO INSTALLATION.
- 10. FIRE ALARM SYSTEM TERMINAL AND JUNCTION LOCATIONS SHALL BE IDENTIFIED IN ACCORDANCE WITH NFPA STANDARD 70. TERMINAL BOXES SHALL BE PAINTED RED AND STENCILED IN WHITE LETTERS "FIRE ALARM".
- 11. ELECTRICAL CONDUITS SHALL ENTER ONLY AT THE SIDES OR BOTTOM OF THE FIRE ALARM TERMINAL BOXES, CONTROL PANELS ETC. UNLESS DESIGNED AND APPROVED FOR ENTRY ON THE TOP.
- 12. EXPOSED CONDUITS IN FINISHED AREAS ARE NOT ALLOWED. WHERE REQUIRED CHOP WALL AND PATCH TO CONCEAL CONDUIT AND RECESS DEVICE.
- 13. ALL WIRING TYPES SHALL BE COORDINATED WITH THE BUILDING'S FA MAINTENANCE CONTRACTOR, SHALL BE APPROVED BY THE LOCAL FIRE DEPARTMENT AND ALL AUTHORITIES HAVING JURISDICTION.
- 14. ALL BATTERY INSTALLATIONS SHALL BE DATED.
- 15. ALL NEW FIRE DETECTION, NOTIFICATION, & ACTIVATION DEVICES MUST BE FLORIDA FIRE DEPARTMENT APPROVED. PROVIDE UL NUMBERS.
- 16. ALL FIRE ALARM DEVICES SHALL BE BARCODED AND LABELED ON THE OUTSIDE OF THE DEVICE.
- 17. FIRE ALARM SYSTEM MANUFACTURER IS ELLENCO.
- 18. EC SHALL PROVIDE NEW PROGRAMMING AS NEEDED SO THAT ALL NEW & EXISTING DEVICES ACTIVATE TERMINAL MAIN FACP AND SCARESDALE CENTRAL MONITORING STATION STATION AS ADDRESSABLE DEVICES.
- 19. ALL NEW AND/OR RELOCATED FIRE DETECTION AND SUPPRESSION DEVICES SHALL BE INSTALLED, TESTED, AND ACCEPTED PRIOR OCCUPANCY. THIS ALSO APPLIES TO WIRING TO EXISTING DEVICES, WHICH ARE CUT AND RECONNECTED DURING THE PROPOSED WORK.
- 20. EACH ALARM POINT MUST SEND THE CENTRAL STATION A RESTORE CODE FOR EACH POINT
- 21. EC MUST PROVIDE A CONTINUOUS FIRE WATCH IF THERE IS A FIRE ALARM SYSTEM IMPAIRMENT IN THE SPACE DURING CONSTRUCTION.
- 22. PAINT ALL FIRE ALARM CONDUIT JUNCTION BOXES & CONDOLETS RED.

23. ALL PULL STATIONS MUST BE DOUBLE ACTION ACTIVATED. PAINT WHITE STRIPE FROM TOP LEFT TO BOTTOM RIGHT ON ALL PULL STATIONS.

INSTALL A NEW FIRE ALARM BOOSTER PANEL

- 24. ALL FIRE ALARM DETECTION AND SUPPRESSION DEVICES SHALL TRANSMIT SIGNALS TO THE FIRE ALARM PANEL AND THE CENTRAL MONITORING STATION AS ADDRESSABLE DEVICES AND ALL ALARM POINTS MUST BE TRANSMITTED TO THE CENTRAL STATION
- 25. WHERE RGS CONDUIT IS USED TO HOUSE WIRING, ALL ENDS SHALL BE CONNECTED USING COMPRESSION TYPE FITTINGS.
- 26. LABEL ALL DEVICES CONTAINING END OF LINE RESISTORS (EOL)
- 27. THE FIRE ALARM SYSTEM CONSISTS OF A FULLY ADDRESSABLE SYSTEM WITH AN INTELLIGENT FIRE ALARM NETWORK. FA SYSTEM SHALL BE MAINTAINED TO THE STANDARDS OF FLORIDA FIRE PREVENTION CODE AND THE UNIFORM STATEWIDE BUILDING CODE UNDER THE PROVISIONS APPLICABLE TO EXISTING BUILDINGS. TENANT FA DESIGN WILL BE SUBJECT TO REVIEW AND APPROVAL BY PA/AIRPORT PRIOR TO INSTALLATION.
- 28. IN EXISTING FACILITIES, INSTALLATION OF NEW, AND/OR MODIFICATION OF FIRE ALARM SYSTEMS OR SPECIAL EXTINGUISHING SYSTEMS SHALL NOT BE UNDERTAKEN UNLESS WRITTEN PERMISSION IS OBTAINED FROM THE AIRPORT BUILDING CODES, ENGINEERING & MAINTENANCE DEPARTMENT AND THE AUTHORITY FIRE MARSHAL.
- 29. THE FIRE ALARM SYSTEM SHALL BE DESIGNED, INSTALLED, CONFIGURED, PROGRAMMED, COMMISSIONED AND TESTED IN ACCORDANCE WITH THE EDITION OF NFPA 72, AS SPECIFIED IN THE FLORIDA FIRE CODE AND NFPA 72-2022, AIRPORT INSURANCE CARRIER GUIDELINES, AND IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS.
- 30. THE FACP SHALL PROVIDE POWER, ANNUNCIATION, SUPERVISION, AND CONTROL FOR THE COMPLETE DETECTION, ALARM, AND MONITORING SYSTEM.
- 31. FACP OPERATES FROM A 3 WIRE 120 VOLT SUPPLY FROM AN EMERGENCY SOURCE IF AVAILABLE AND BE PROVIDED WITH INTERNAL 24 VOLT UNINTERRUPTIBLE POWER SUPPLY (UPS) AND BACK-UP BATTERY.
- 32. ALL FIRE ALARM WIRING SHALL BE WITHIN RACEWAY. INITIATING AND INDICATING CIRCUITS SHALL NOT UTILIZE THE SAME RACEWAY UNLESS THE INITIATING CIRCUIT IS SHIELDED. NO WIRING OTHER THAN THAT DIRECTLY ASSOCIATED WITH FIRE ALARM SYSTEM SHALL BE PERMITTED IN FIRE ALARM RACEWAYS. ALL FIRE ALARM SYSTEM INITIATING DEVICES SHALL BE MARKED WITH A DEVICE ADDRESS ON BOTH BASE AND DEVICE. ALL FIRE ALARM JUNCTION AND PULL BOXES SHALL BE PAINTED RED; ALL BOX COVERS SHALL BE MARKED WITH THE CIRCUIT NUMBERS. ALL FIRE ALARM SYSTEM CONDUITS SHALL BE IDENTIFIED WITH RED MARKING EVERY 20'.
- 33. THE ROOM NUMBERS AND BUILDING NUMBERS MUST BE INCLUDED ON THE FIRE ALARM SHOP DRAWINGS.
- 34. FIRE ALARM OUTAGES REQUIRE 72 HOURS ADVANCE NOTICE TO FACILITIES ENGINEERING DIVISION.
- 35. FIRE ALARM SHOP DRAWING PLANS ARE REQUIRED IF THERE ARE ANY DEVICES ADDED OR REMOVED WITH THE PROJECT.
- 36. THE BUILDING FIRE ALARM SYSTEM SHALL TRANSMIT ALL ADDRESSABLE POINTS TO THE BUILDING'S FIRE ALARM SYSTEM IN ORDER TO PROVIDE THE COMPLETE STATUS OF ALL ALARMS, SUPERVISORY AND TROUBLE SIGNALS. THE AUDIBLE AND VISUAL DEVICES IN THE BUILDING SHALL BE FULLY INTEGRATED WITH THE BUILDING SYSTEM AND WORK IN CONJUNCTION WITH BUILDING AUDIBLE AND VISUAL DEVICES SO THAT ALL DEVICES IN A FIRE ZONE ARE ACTIVATED SIMULTANEOUSLY. EC SHALL FOLLOW ALL FLORIDA BUILDING CODE REQUIREMENTS.
- 37. IN THE EVENT OF AN IMPAIRMENT TO THE FIRE PROTECTION SYSTEM IN THE AREA OF THE PROPOSED WORK DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE FACILITIES MANGER WHOM SHALL COMPLETE AN IMPAIRMENT NOTIFICATION FORM AND FORWARD IT TO THE PERSONS INDICATED ON THAT FORM, AND MUST PROVIDE A CONTINUOUS FIRE WATCH.
- 38. GC MUST HIRE BASE BUILDING FA CONTRACTOR FOR THEIR WORK. FINAL CONNECTIONS BY FLORIDA LICENSED FIRE PROTECTION COMPANY.
- 39. CONNECTIONS ARE TO EXISTING BASE BUILDING CIRCUITS (INITIATING CIRCUITS AND ANNUNCIATION CIRCUITS). SIEMENS TO CONFIRM PANEL DESIGNATION AND LOCATION.
- 40. FIRE ALARM OUTTAGES REQUIRE 72 HOURS ADVANCE NOTICE TO FACILITIES ENGINEERING DEVISION.
- 41. CONTRACTOR TO PROVIDE RE-PROGRAMMING OF ALL FIRE ALARM DEVICE PROGRAMMING IS ACCOMPLISHED BY SIEMENS BUILDING TECHNOLOGIES, 301-837-2852 FOR FURTHER INFO AND COORDINATION.
- 42. CONTRACTOR TO PROVIDE FIRE ALARM SHOP DRAWING TO ENGINEER DURING CONSTRUCTION FOR REVIEW AND
- 43. COORDINATE WITH SIEMENS FOR ANY MODIFICATION TO THE EMS CONNECTION.

  44. CONTRACTOR WILL NEED TO FILE A SEPARATE FIRE ALARM PERMIT FOR THIS PROJECT AND PROVIDE IT FOR INSPECTIONS.

FIRE ALARM DRAWING LIST				
Sheet Number	Sheet Name			
FA001	FIRE ALARM NOTES, SYMBOLS AND DRAWING LIST			
FA101	FIRE ALARM OVERALL PLAN			

# FIRE ALARM SYMBOLS LIST

	H 75 CD	COMBINATION WALL MOUNTED BUILDING STANDARD HORN STROBE FIRE ALARM DEVICE WITH A MIN OF 75 CANDELA). COVERPLATE SHALL BE RED WITH WHITE LETTERS. MAXIMUM 80 INCHES ABOVE FINISHED FLOOR OR 6 INCHES BELOW CEILING WHICHEVER IS LOWER.  'CD'- CANDELA RATING			
		DUCT DETECTOR			
	<u>(S)</u>	CEILING MOUNTED AREA SMOKE DETECTOR			
	$\bigoplus$	CEILING MOUNTED AREA HEAT DETECTOR			
	TS	TAMPER SWITCH			
	PS	FIRE ALARM PULL STATION			
	СМ	MUSIC SHUTDOWN RELAY			
	MM	MONITORING MODULE			
	N	NEW			
	ETR, EX	EXISTING TO REMAIN			
	ER	EXISTING RELOCATED			
	ERR	EXISTING TO BE REMOVED AND RELOCATED			
	R	EXISTING TO BE DISCONNECT AND REMOVED			
	NAC	NOTIFICATION APPLIANCE CIRCUIT			
	SLC	SIGNAL LINE CIRCUIT			
	MFACP	MAIN FIRE ALARM CONTROL PANEL			
_	ALL FIRE ALARM DEVICES SHALL BE NEW LLO N				

ALL FIRE ALARM DEVICES SHALL BE NEW U.O.N.

# FIRE ALARM WIRING

- ALL FIRE ALARM WIRING MUST BE HOUSED IN A MINIMUM OF 3/4"C. RGS.
   ALL CABLES SHALL MATCH BASE-BUILDING FA SYSTEM. COORDINATE WITH BASE BUILDING FIRE ALARM VENDOR FOR THE CABLE TYPE.
  - WIRE AND CABLE:
    STROBE CIRCUITS 14AWG TWISTED/SHIELDED PAIR TEFLON CABLE MINIMUM 150 DEG C
    INITIATING DEVICES 16AWG TWISTED/SHIELDED PAIR TEFLON CABLE MINIMUM 150 DEG C
- 3. POSITIVE WIRES SHALL BE COLOR CODED: RED NEGATIVE WIRES SHALL BE COLOR CODED: BLACK

# SSP AMERICA

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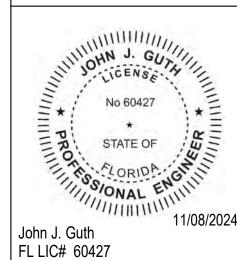
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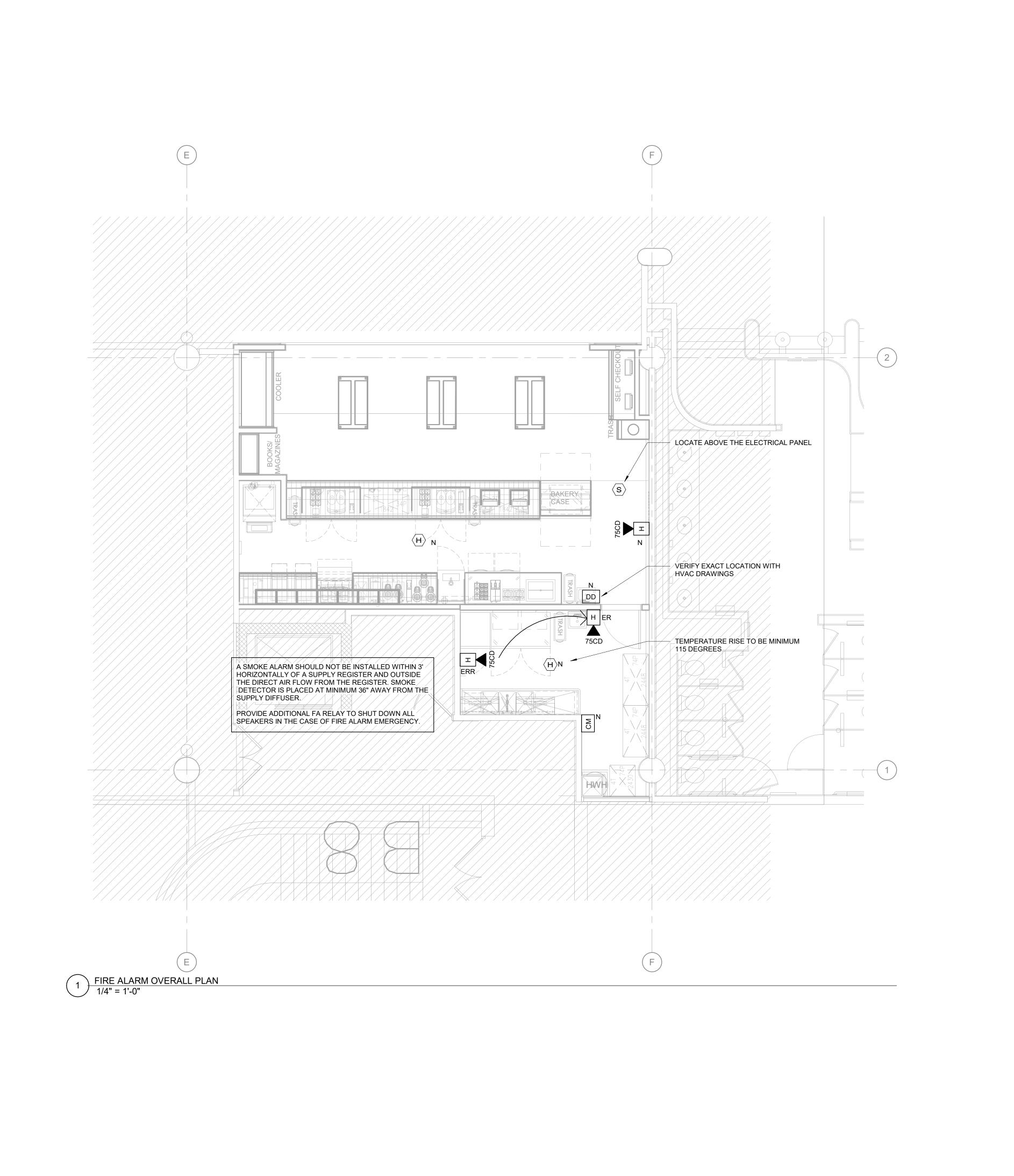
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FIRE ALARM NOTES,
SYMBOLS AND
DRAWING LIST





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FIRE ALARM OVERALL PLAN

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