

PROJECT MANUAL

I PROJECT DIRECTORY

PROJECT: Sun 'N Lake Golf Club
5223 Sun N Lake Blvd
Sebring, Florida
CS17028

ARCHITECT: Clifford M. Scholz Architects, Inc.
300 S. Orange Ave
Sarasota, FL 34236
T: 941-364-4600 F: 941-364-4606

ENGINEERS: Structural
Wilson Structural Consultants Inc
6731 Professional Parkway West
Sarasota, FL 34240
T: 941-907-4789

Mechanical/Electrical/Plumbing/Fire Protection:
Genesis Engineering Group
2601 Cattlemen Road, Suite 501
Sarasota, FL 34232
T: 941-444-2189

II. INSTRUCTIONS TO BIDDERS

- A. The American Institute of Architects, AIA Document A701 Instructions to Bidders, 1997 Edition, is the Instructions to Bidders between the Owner and Bidder and forms part of the Contract Documents.
B. AIA Document A701 is adopted in this document by reference to the same extent as if bound herein.
C. SUMMARY OF WORK. This contract provides for the selective demolition of the existing kitchen, equipment & storage area. Addition to and renovation of the existing kitchen, add/move equipment & utility connections (utility connections including: water, sewer, natural gas, and electric as required), and site work completed and ready for use in strict accordance with Contract Documents entitled ADDITIONS & ALTERATIONS TO SUN N LAKE GOLF CLUB dated 08/10/2018.
D. The following supplements modify the Instructions to Bidders, AIA Document A701, 1997 Edition. Where a portion of the Instructions to Bidders is modified or deleted by these supplements, the unaltered portions of the Instructions to Bidders shall remain in effect. The terms used in these supplements which are defined in the Instructions to Bidders, AIA Document A701, 1997 Edition, have the meanings assigned to them in the Instructions to Bidders.
E. Bidding process shall be per the Sun 'N Lake of Sebring Improvement District Policy Manual, Adopted 9/26/1997, use the latest revised version.

ARTICLE 2, BIDDERS REPRESENTATIONS, SUBPARAGRAPH 2.1.3, shall be amended to include the following: Bidder shall acquaint themselves with governing laws, codes, ordinances, regulations and subdivision covenants.

ARTICLE 2, BIDDERS REPRESENTATIONS, SUBPARAGRAPH 2.1.4, shall be amended to include the following: All materials, installation and systems shall be provided with necessary current and new parts, components, and connections to be complete and functional at time of contract closeout whether expressly stated in documents or not. Failure to become familiar with Contract Documents and existing site conditions will not relieve successful Bidder from necessity of furnishing materials or performing work to complete the Work in accordance with Contract Documents without additional cost to Owner.

ARTICLE 2, BIDDERS REPRESENTATIONS, shall be amended to add the following subparagraph 2.1.5: The Bidder and all workmen, including temporary contracted laborers, employees and subcontractors are skilled and experienced in the type of construction represented by the construction contract documents bid upon.

ARTICLE 2, BIDDERS REPRESENTATIONS, shall be amended to add the following subparagraph 2.1.6: Bidder shall verify locations of ALL overhead and underground utilities including, but not limited to, telephone, gas, electrical, CATV, sewer, water, underground drainage systems, et cetera. It shall be the contractor's responsibility to procure and provide adequate location firms to locate and stake all utilities and include the cost of all required work on and fees for said utilities in his Base Bid.

ARTICLE 3, BIDDING DOCUMENTS, SUBPARAGRAPH 3.1.3, shall be amended to include the following: Trade Contractors and Subcontractors shall be required to examine and review a full set of Bidding Documents to ensure that any items that are necessary or are a part of this work that are included in a separate section of the construction documents are also included in his Bid.

ARTICLE 3, BIDDING DOCUMENTS, PARAGRAPH 3.1.5 COPIES, shall be amended to include the following subparagraph 3.1.5: Bidding Documents may be obtained from the office of the Architect. General Contractors may request a PDF version of the contract documents from the architect. Once the project has been awarded, three sets shall be provided for permit application.

ARTICLE 3, BIDDING DOCUMENTS, PARAGRAPH 3.3 SUBSTITUTIONS, shall be amended to add the following subparagraph 3.3.5: Re-engineering of systems or assemblies including fees for re-engineering, if required, shall be identified and included in substitution. Revisions to drawings, coordination time required by Architect/Engineer to review proposed substitution will be billed to bidder/contractor at Architect's/Engineer's current hourly rates.

ARTICLE 4, BIDDING PROCEDURES, PARAGRAPH 4.2 BID SECURITY, shall be deleted in its entirety.

ARTICLE 4, BIDDING PROCEDURES, PARAGRAPH 4.3 SUBMISSION OF BIDS, shall be amended to add the following subparagraph 4.3.5: Sealed Bids from invited Bidders only will be received and reviewed by Owner for furnishing labor, materials, equipment and services necessary for construction of the new ADDITIONS & ALTERATIONS TO SUN N LAKE GOLF CLUB dated 08/10/2018. Bids shall be delivered to architect's office at time and date to be determined, in triplicate. Address proposals to the owner. Basis of Bid shall be a Stipulated Sum Contract. Contract format will be AIA type, to be determined.

ARTICLE 5, CONSIDERATION OF BIDS, PARAGRAPH 5.1, OPENING OF BIDS, shall be modified to: "Bids will be opened in accordance with the Sun 'N Lake of Sebring Improvement District Policy Manual, adopted 9/26/1997, most current version".

ARTICLE 5, CONSIDERATION OF BIDS, PARAGRAPH 5.3, ACCEPTANCE OF BID (AWARD), SUBPARAGRAPH 5.3.1, shall be modified to read: It is the intent of the Owner to award a Contract to the most qualified Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner shall have the right to waive informalities and irregularities in a Bid received and to accept a Bid and/or reject a Bid, which, in the Owner's judgment, is in the Owner's own best interest.

ARTICLE 5, CONSIDERATION OF BIDS, PARAGRAPH 5.3, ACCEPTANCE OF BID (AWARD), SUBPARAGRAPH 5.3.2, shall be modified to read: The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the successful Bidder on basis of the sum of the Base Bid and Alternates accepted.

III. DOCUMENT 00310: BID FORM:

Bid Form provided, under separate cover, shall be completed and submitted with/As Sealed Bid. See form on SP-1.3 for reference.

IV. DOCUMENT 00400: SUPPLEMENTS TO BID FORM:

Supplements to Bid Forms provided, under separate cover, shall be completed and submitted as an attachment to the Bid Form and submitted with Sealed Bid.

V. SPECIAL CONDITIONS

Furnishings shall be provided by Owner/Interior Designer under separate contract.

VI. GENERAL CONDITIONS

- A. The American Institute of Architects, AIA Document A201 General Conditions of the Contract for Construction, 1997 Edition, is the General Conditions between the Owner and Contractor and forms part of the Contract Documents.
B. AIA Document A201 is adopted in this document by reference to the same extent as if bound herein.
C. Refer to Supplementary Conditions for amendments to these General Conditions.

VII. SUPPLEMENTARY CONDITIONS

The following supplements modify the "General Conditions of the Contract for Construction," AIA Document A201, 2007 Edition. Where a portion of the General Conditions is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect. The terms used in these Supplementary Conditions, which are defined in the General Conditions of the Contract for Construction, AIA A201 - 2007 Edition have the meanings assigned to them in the General Conditions.

ARTICLE 1, GENERAL PROVISIONS, SUBPARAGRAPH 1.1.1, THE CONTRACT DOCUMENTS, shall be modified to include the following: The Contract Documents shall include the signed Bid Form as submitted.

ARTICLE 1, GENERAL PROVISIONS, SUBPARAGRAPH 1.2.1, CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS, shall be amended to add the following: Architect shall be notified in writing prior to receipt of bids of conflicts, occurring in or between Drawings and Project Manual. In a case of inconsistency between Drawings and Project Manual, the Architect will make a written interpretation. Failure to give notice and to have received clarification shall not relieve Contractor from responsibility of accomplishing work in accordance with directions of, and interpretations by, Architect subsequent to receipt of bids at no additional cost to Owner.

ARTICLE 1, GENERAL PROVISIONS, shall be amended to add the following subparagraph 1.2.4: Drawings and general provisions of the Contract including General Conditions, Supplementary Conditions, and Sections of Division 1 - General Requirements govern the execution of all Divisions and Sections of the Project Manual as well as the Bidding and Contract Documents.

ARTICLE 3, CONTRACTOR, PARAGRAPH 3.1, GENERAL, shall be amended to add the following subparagraph 3.1.4: Contractor and all subcontractors shall be currently licensed to perform their work within the jurisdiction of the project.

ARTICLE 3, CONTRACTOR, PARAGRAPH 3.3, SUPERVISION AND CONSTRUCTION PROCEDURES, shall be amended to add the following subparagraph 3.3.4: The Contractor shall, immediately upon entering project site for purpose of beginning work, locate bench marks and general reference points and lay out his own work and be responsible for lines, elevations, zoning setbacks, and measurements of building and work executed by him under the Contract. He shall exercise proper precaution to verify figures shown on Drawings before laying out his work and will be responsible for any error resulting from his failure to exercise such precaution. No physical work shall be performed on site until Contractor has filed NOTICE OF COMMENCEMENT with Clerk of the Circuit Court and a recorded copy of NOTICE OF COMMENCEMENT has been prominently posted at the site and a copy delivered to the Owner and Architect. Unless otherwise agreed to between Owner and Contractor, contractor shall provide full-time, on site supervisory personnel to administer the project from inception to completion.

ARTICLE 3, CONTRACTOR, SUBPARAGRAPH 3.7.1, PERMITS, FEES, AND NOTICES, shall be amended to read: Contractor will secure and pay for plan review and the building, site, work, landscape work, mechanical, electrical, and plumbing permits. The Owner shall pay for the health and environmental impact fees due to water and sewer connections, and also zoning regulation fees and permits. The Contractor shall also secure and pay for all other permits and governmental fees, licenses, and inspections necessary for proper execution of and completion of the Contract, which are legally required when bids are received, or negotiations concluded.

ARTICLE 3, CONTRACTOR, PARAGRAPH 3.8, ALLOWANCES, shall be amended to add the following subparagraph 3.8.2.4: Contractor shall solicit and receive three written proposals for allowance items, except as otherwise directed by Owner, and shall forward original signed copies in duplicate to

Owner for instruction. Contractor shall conclude purchase orders or subcontracts in accordance with instructions and shall furnish copies of purchase orders and receipted bills to Owner. Proposals shall be accompanied by manufacturer's literature or other information as necessary to fully define work. Owner, at his option, may solicit and receive direct proposals for any allowance item, in lieu of those taken by the Contractor or in addition to those taken by Contractor. Unless otherwise specified, allowance shall provide for purchase of materials or equipment plus taxes, handling, and delivery to site. Installation shall be included as part of the allowance in Division 1 - Cash Allowances. Installation included as part of the contract sum shall include all accessories, setting beds, sealers, et cetera in order for a complete installation.

ARTICLE 3, CONTRACTOR, PARAGRAPH 3.10, CONTRACTOR'S CONSTRUCTION SCHEDULES, shall be amended to add the following sub-paragraph 3.10.4: Contractor's Construction Schedule shall be coordinated and approved with Owner to avoid excessive and untimely interruptions and inconveniences to Owner's operations and provide an efficient and orderly construction schedule. Contractor shall provide Gantt schedule for construction prior to the start of construction.

ARTICLE 3, CONTRACTOR, PARAGRAPH 3.13, USE OF SITE, shall be amended to add the following subparagraph 3.13.2: Areas of site, which may be used by Contractor, are limited and shall be approved by Owner before starting work. Contractor shall maintain construction area and clean site and construction area upon completion of each day's work.

ARTICLE 3, CONTRACTOR, PARAGRAPH 3.15, CLEANING UP, shall be amended to add the following subparagraph 3.15.3: Contractor shall replace broken and scratched glass, remove stains, marks, and dirt from decorated work, clean hardware and glass, remove paint spots and smears from all surfaces, clean fixtures, and wash or clean all floors in construction areas. Remove debris from CMU and wall cavities prior to concealing cavities. All materials shall be inspected at delivery for defects and replace as necessary.

ARTICLE 9, PAYMENTS AND COMPLETION, SUBPARAGRAPH 9.3.1, APPLICATIONS FOR PAYMENT, shall be amended to add the following: Application for Payment shall be submitted in quadruplicate on AIA Form G-702 (1992) accompanied by Form G-703 (1992) Continuation Sheet. Form G-703 shall be prepared in same form and sequence of items as appear on Schedule of Values. Contractor shall include AIA forms G706-1994, Contractor's Affidavit of Payment of Debts and Claims, and G706A-1994, Contractor's Affidavit of Release of Liens, for Contractor covered by the current pay period and for each Subcontractor that has filed Notice to Owner covered by the previous pay period. Requests for payment shall be submitted no more than once monthly. Release of liens shall be job/payment specific. If not job/payment specific, application will be withheld or adjusted accordingly.

ARTICLE 9, PAYMENTS AND COMPLETION, SUBPARAGRAPH 9.3.2, APPLICATIONS FOR PAYMENT, shall be amended to add the following: If stored materials are included in Application and Certificate for Payment, they shall be listed separately and attached to payment request, indicating item, quantity, costs, and location if different from construction site. Materials shall not be stored off construction site unless specifically approved by Owner in writing. Contractor shall provide satisfactory evidence that materials stored away from construction site are adequately insured and that Owner has clear title to such materials and equipment after payment is made to Contractor.

ARTICLE 11, INSURANCE AND BONDS, shall be amended to include insurance as stipulated below or as mutually agreed upon between Owner and Contractor. Contractor shall provide insurance coverage with bid to Owner. Prior to commencement of work, Contractor shall submit to Owner Certificate of Insurance indicating coverage types and amounts.

TYPE OF INSURANCE & LIMITS:

Table with 2 columns: Insurance Type, Amount. Includes General Aggregate (1,000,000.00), Products-Comp/Ops Aggregate (1,000,000.00), Personal & Advertising Injury (1,000,000.00), Each Occurrence (1,000,000.00).

Table with 2 columns: Insurance Type, Amount. Includes Business Automobile Liability (per occurrence) (1,000,000.00), Combined Single Limit (1,000,000.00), Any Auto/All Owned Autos, Scheduled Autos, Hired Autos, Non-Owned Autos.

Table with 2 columns: Insurance Type, Amount. Includes Worker's Compensation & Employers Liability (Per accident 100,000.00, Disease Policy Limit 500,000.00, Aggregate by disease 1,000,000.00).

Property Insurance/Builders Risk Insurance will be Purchased by Owner

ARTICLE 11, INSURANCE AND BONDS, SUBPARAGRAPH 11.1.1, shall be amended to add the following: Contractor's liability policy shall name Owner and Architect as additional insured. Prior to commencement of work, Contractor shall submit to Owner and Architect copy of liability policy, with additional names listed.

ARTICLE 11, INSURANCE AND BONDS, PARAGRAPH 11.3, PROPERTY INSURANCE, shall be amended to include the following clause 11.3.1.1: The form of policy for this coverage shall be completed value.

VIII. SPECIFICATIONS

SPECIFICATIONS

DIVISION 1 - GENERAL REQUIREMENTS

0100 - SUMMARY

- GENERAL:
1. Summary of Work: (refer to project manual for summary of work)
2. Limit use of site and premises to Owner, Owner's Representative, Contractor and other performing Work under this Contract. Pets shall be prohibited. Limit construction operations to areas approved by Owner and as depicted in Contract Documents. Smoking in building shall be prohibited. Time restrictions for work shall comply with local ordinances and any applicable owners association by laws, covenants and restrictions. Contractor shall be responsible for maintaining and repairing (if damaged as result of construction) all existing roads, utilities and services. If damage exists, photo document as soon as discovered.

and report to Owner/Architect. This shall include verifying, locating and marking all existing utility and service lines.

01300 - ADMINISTRATIVE REQUIREMENTS

GENERAL:

- 1. Project Management and Coordination
2. Verify layout information shown on Drawings, in relation to property survey and existing benchmarks, before laying out the Work.
3. Coordinate construction to ensure efficient and orderly execution of each part of the work.
4. Construction Schedule: Prepare a Gantt chart construction schedule. Use same breakdown of work indicated in the Schedule of Values. As work progresses, provide updated schedule to indicate actual completion. Submit to Owner and Architect prior to commencement of the work. Submit date established as Notice of Commencement, which contract time is based on.

PRODUCTS:

- Submittals:
1. Coordinate submittal preparation with construction schedule, fabrication lead times, other submittals, and activities that require sequential operations.
2. Submit samples finished as specified and identical with materials proposed. Where variations are inherent in the material, submit sufficient units to show limits of the variations. Include product name or name of the manufacturer.
3. Architect will not accept submittals from sources other than Contractor.
4. Product Data: Mark each copy to show applicable choices and options. Include the following:
a. Data indicating compliance with specified standards and requirements.
b. Notation of coordination requirements.
c. For equipment data, include rated capacities, dimensions, weights, required clearances, and furnished specialties and accessories.
5. Shop Drawings: Submit newly prepared information drawn to scale. Do not reproduce Contract Documents or copy standard information. Submit 1 reproducible print and 1 blue-line or black-line print, or 5 copies for mark-up on sheets at least 8 1/2 x 11" but no larger than 24 x 36". Include the following:
a. Dimensions, profiles, methods of attachment, coordination with adjoining work, large scale details, and other information, as appropriate for the work.
b. Identification of products and materials.
c. Notation of coordination requirements.
d. Identification of deviations from Contract Documents.
6. Architect will review each submittal, mark as appropriate to indicate action taken, and return copies less those retained. Compliance with specified requirements remains Contractor's responsibility.
7. Upon request, Architect may elect to provide CAD file for submittal preparation. Contractor/sub-contractor shall use file information at their own risk and indemnify and hold harmless CMSA from any/all liability.

01400 - QUALITY REQUIREMENTS

GENERAL:

- 1. Quality-control services include inspections, tests, and related actions including reports. Quality-control services are further specified in other Sections of these Specifications and shall be performed by independent testing agencies provided by Contractor or Owner, as specified.
2. Unless otherwise indicated, quality-control services required by authorities having jurisdiction will be provided by Owner. Contractor is responsible for scheduling inspections and tests.
3. Retesting: Contractor shall pay for retesting where results of inspections and tests prove unsatisfactory and indicate noncompliance with requirements.
4. Auxiliary Services: Cooperate with agencies performing inspections and tests. Provide auxiliary services as requested. Notify agency in advance of operations requiring tests or inspections, to permit assignment of personnel. Auxiliary services include the following:
a. Access to the Work.
b. Incidental labor and facilities to assist inspections and tests.
c. Adequate quantities of materials that require testing, and assisting in taking samples.
d. Facilities for storage and curing of test samples.
e. Security and protection of samples and test equipment.
6. Duties of Testing Agency: Testing agency shall cooperate with Owner and Contractor in performing its duties. Agency shall provide qualified personnel to perform inspections and tests.
a. Agency shall promptly notify Owner and Contractor of irregularities or deficiencies observed in the Work during performance of its services.
b. Agency shall not release, revoke, alter, or enlarge requirements of the Contract Documents or approve or accept any portion of the Work.
c. Agency shall not perform duties of Contractor.
7. Submittals: Testing agency shall submit a certified written report of each inspection and test to the following:
a. Owner.
b. Contractor.
c. Authorities having jurisdiction, when authorities so direct.
8. Report Data: Reports of each inspection, test, or similar service shall include at least the following:
a. Name, address, and telephone number of testing agency.
b. Project title and testing agency's project number.
c. Designation (number) and date of report.
d. Dates and locations where samples were taken or inspections and field tests made.
e. Names of individuals taking the sample or making the inspection or test.
f. Designation of the product and test method.
g. Complete startup testing of systems and instruction of operation and maintenance personnel.
h. Remove temporary facilities and controls.
i. Complete final cleanup.
j. Touch up, repair, and restore marred, exposed finishes.
k. Obtain final inspections from authorities having jurisdiction.
l. Obtain certificate of occupancy.

- k. Name and signature of laboratory inspector.
9. Testing Agency Qualifications: Engage inspection and testing agencies that are pre-qualified as complying with the American Council of Independent Laboratories' "Quality Assurance Manual" and that specialize in the types of inspections and tests to be performed.
10. Each testing agency shall be authorized by authorities having jurisdiction to operate in the state where Project is located.

01500 - TEMPORARY FACILITIES AND CONTROLS

GENERAL:

- 1. Provide temporary sanitary facilities.
2. Collect construction waste daily and, when containers are full, legally dispose of waste off-site. Separate recyclables or contract with refuse company for separating recyclables. Provide documentation of recycling with monthly application for payment. Provide temporary barricades, warning signs, and lights to protect construction personnel, and others on site, from construction hazards.
3. Provide temporary environmental controls during construction. Remove temporary facilities and controls no later than Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

01600 - PRODUCT REQUIREMENTS

GENERAL:

- 1. Provide products of same kind from a single source. The term "product" includes the terms "material", "equipment", "system", and similar terms.
2. Provide products complete with accessories, trim, finish, and other devices and components needed for a complete installation and the intended use and effect.
3. Unless otherwise indicated, Owner will select color, pattern, and texture of each product from manufacturer's full range of options. Deliver, store, and handle products according to manufacturer's written instructions, using means and methods that will prevent damage, deterioration, and loss, including theft.

01701 - EXECUTION REQUIREMENTS

GENERAL:

- CLOSEOUT:
1. Maintain two sets of Contract Drawings and Project Manual as Record Drawings. Mark to show installation that varies from the Work originally shown.
2. Organize operation and maintenance data into three-ring binders, with pocket folders. Include emergency instructions, copies of warranties, wiring diagrams, shop drawings, and product data.
3. Provide CD/DVD and USB of final Record Documents, Operation and Maintenance data to Owner and Architect in PDF format. Confirm if this is acceptable to Owner in lieu of paper documents.

EXECUTION:

- EXAMINATION AND PREPARATION:
1. Examine substrates and conditions for compliance with manufacturer's written requirements including, but not limited to, surfaces that are sound, level, and plumb; substrates within installation tolerances, surfaces that are smooth, clean, and free of deleterious substances; and application conditions within environmental limits. Proceed with installation only after unsatisfactory conditions have been corrected.
2. Prepare substrates and adjoining surfaces according to manufacturer's written instructions, including, but not limited to, filler and primer application.
3. Where Drawings indicate dimensions of existing construction verify by field measurement. Where fabricated products are to be fitted to other construction, verify dimensions by field measurement before fabricating and, when possible, allow for fitting and trimming during installation.

CUTTING AND PATCHING:

- 1. Do not cut structural members without prior written approval of Architect/Engineer.
2. For patching, provide materials whose installed performance will equal or surpass that of existing materials. For exposed surfaces, provide or finish materials that visually match existing adjacent surfaces to the fullest extent possible.

INSTALLATION:

- 1. Anchor each product securely in place, accurately located and aligned. Clean exposed surfaces and protect from damage. If applicable, prepare surfaces for field finishing.
2. Comply with NFPA 70 for installation of electrically operated equipment and electrical components and materials.

FINAL CLEANING:

- 1. Clean each surface or item as follows before requesting inspection for certification of Substantial Completion:
2. Remove labels that are not permanent.
3. Clean transparent materials, including mirrors. Remove excess glazing compounds. Replace chipped or broken glass.
4. Clean exposed finishes to a dust-free condition, free of stains, films, or foreign substances. Leave concrete floors broom clean.
5. Vacuum carpeted surfaces and wax resilient flooring.
6. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication. Clean plumbing fixtures. Clean light fixtures and lamps.
7. Clean the site. Sweep paved areas, remove stains, spills, and foreign deposits. Rake grounds to a smooth, even-textured surface.

CLOSEOUT PROCEDURES:

- 1. Request Substantial Completion inspection once the following are complete.
2. Advise Owner of pending insurance changeover requirements.
3. Submit Record Drawings and Specifications, maintenance manuals, warranties, and similar record information.
4. Deliver spare parts, extra materials, and similar items.
5. Change over locks and transmit keys to Owner.
6. Complete startup testing of systems and instruction of operation and maintenance personnel.
7. Remove temporary facilities and controls.
8. Complete final cleanup.
9. Touch up, repair, and restore marred, exposed finishes.
10. Obtain final inspections from authorities having jurisdiction.
11. Obtain certificate of occupancy.

- 12. Arrange for each installer of equipment that requires operation and maintenance to provide instruction to Owner's personnel. Include a detailed review of the following:
a. Startup and shutdown.
b. Emergency operations and safety procedures.
c. Noise and vibration adjustments.
d. Maintenance manuals.
e. Spare parts, tools, and materials.
f. Lubricants and fuels.
g. Identification systems.
h. Control sequences.
i. Hazards.
j. Warranties and bonds.
13. Request inspection for certification of final acceptance, once the following are complete:
a. Submit a copy of the Substantial Completion inspection list stating that each item has been completed or otherwise resolved for acceptance.
b. Submit final meter readings for utilities, a record of stored fuel, and similar data as of the date of Substantial Completion.

01732 - SELECTIVE DEMOLITION

GENERAL:

- 1. Unless otherwise indicated, demolished materials become Contractor's property. Promptly remove from Project site. Do not burn demolished materials.
2. Comply with EPA regulations and disposal regulations of authorities having jurisdiction.

EXECUTION:

- 1. Provide temporary closures to maintain weather tightness and security of building.
2. Maintain and protect existing utilities to remain before proceeding with demolition.
3. Locate, identify, shut off, disconnect, and cap off utility services to be demolished.
4. Conduct demolition operations and remove debris to prevent injury to people and damage to adjacent buildings and site improvements.

DIVISION 2 - SITE WORK

DIVISION 3 - CONCRETE (Refer to structural drawings)

DIVISION 4 - MASONRY (Refer to structural drawings)

DIVISION 5 - METALS (Refer to structural & food service drawings)

DIVISION 6 - WOOD AND PLASTIC (Refer to structural drawings)

DIVISION 7 - THERMAL AND MOISTURE PROTECTION:

07210 - BUILDING INSULATION

GENERAL:

Surface-Burning Characteristics: ASTM E 84, flame-spread ratings of 25 or less and smoke-developed ratings of 450 or less.

PRODUCTS:

- 1. Exterior Walls (at areas of alterations only): Polyisocyanurate Board Insulation: ASTM C 1289, Type I, Class 2, faced on both sides with aluminum foil, tape joints and penetrations R-value: R-11.1 (complete wall system value). Repair damage to foil facing. Basis of requirements: Celotex Corporation/ThermaX Sheathing Insulation Board.
2. Sound Walls: Mineral-Fiber-Blanket Insulation: ASTM C 665, Type I, un-faced with fibers manufactured from glass, see wall types for locations - formaldehyde free. Fill cavity, friction fit. Attics: open cell spray foam insulation as manufactured by Icymene or approved equal to obtain R-19.

EXECUTION:

- 1. Install insulation in areas and in thicknesses indicated or required to produce R-values indicated. Cut and fit tightly around obstructions and fill voids with insulation.
2. Insulation shall be installed to be without voids, and shall only be used above grade (not in contact with soil). Install as shown on Drawings.
3. Rigid insulation shall be installed directly to CMU/concrete with resilient battens over or between insulation to match existing condition.

07610 - SHEET METAL ROOFING

GENERAL:

- 1. Providing all labor, materials, tools, equipment and services to furnish and install metal roofing, wall panels/siding, flashing, trim and such other accessories to make the system complete and weathertight, as indicated on the drawings and specified herein. Before Fabrication: The contractor shall take field measurements of the structure and substrates indicated and specified to ensure that panel lengths and braekformed flashings are dimensioned accurately to facilitate easy installation. Fabrication shall not begin until all field conditions have been verified. Allow for sufficient trimming of panel units at eaves, valleys, and gables prior to fabrication.
2. Reference:
A. SMACNA (Sheet Metal and Air Conditioning Contractors National Association, Inc.) Architectural Sheet Metal Manual.
B. NRCA (The National Roofing Contractors Association) Roofing and Waterproofing Manual (including Construction Details), and Handbook of Accepted Roofing Knowledge.
C. Manufacturer's Construction Details Handbook.
D. AISI Steel Construction Manual.
E. AISI Cold Formed Steel Design Manual.
3. Submittals:
A. Submit product literature, shop drawings, and samples.

CLIFFORD M. SCHOLZ ARCHITECTS, INC.
300 South Orange Ave.
Sarasota, Florida 34236
941 364-4600 tel | 941 364-4606 fax | AAC02212

CMSA ARCHITECTURE
CLIFFORD M. SCHOLZ ARCHITECTS, INC.
300 South Orange Ave.
Sarasota, Florida 34236
941 364-4600 tel | 941 364-4606 fax | AAC02212

CONSULTANT

REVISIONS
ADDITIONS & ALTERATIONS TO
SUN 'N LAKE GOLF CLUB
FLORIDA
SEBRING,
REVIEWED & ACCEPTED BY: (DATE)

ADDITIONS & ALTERATIONS TO
SUN 'N LAKE GOLF CLUB
FLORIDA
SEBRING,

DATE 08/27/2018

Clifford M. Scholz | AIA

CS18068

SHEET NO.

SP-1.1

PRODUCTS:

- 1. ENGLERT, INC - SERIES 2000
1200 Amboy Avenue
Perth Amboy, New Jersey 08861
Tel: (732) 826-8614
Fax: (732) 826-8865
2. Panel System shall be the Englert Series 2000, 1-3/4" high, 18" wide, Structural Standing Seam Snap-Lock System, with sealant applied at the panel interlock.
3. Panels shall be .032" Aluminum.
4. Or architect approved equal.

EXECUTION:

- 1. Verify substrate is uniform, even and symmetrical by running a string test. Inspect to assure that all purlins or substructure/framing members are flat and insulation is embedded symmetrically so when the metal panels are applied, they will not appear wavy or distorted.
2. Provide a written report of discrepancies or variations in the substrate to the Architect.
3. Do not begin installation until unsatisfactory conditions are corrected.
4. Do not proceed with installation until adjoining areas scheduled for stucco treatment have been stuccoed and washed down.
A. Do not wash down acid residues from stucco directly over the metal panels.
5. Installation
A. The metal panel system shall be installed plumb, level, and straight over a layer of 30 lb. felt, (dry) with a minimum 6" for horizontal lap and 12" for end lap.
B. The (standing, batten) seam shall be equidistant and shall align for corners, hips, valleys, mullions, and columns in accordance with architectural design parameters as shown on the drawings.
C. No face penetrations or perforation shall be made in metal panels by fasteners without architect's specific approval. All panels shall be continuous from ridge to eaves with no horizontal end laps.
D. End lap all flashing and trim at least 3". All gutters must be mitered, soldered and caulked with a lining of Ice and Watershield applied at the laps to make it watertight. All butt joints must be caulked. Soldered areas shall be counterflashed or painted to match. all valleys shall be treated with a layer of Ice and Watershield spread out at least 24" each side from the center of the valley, on both sides, before applying valley flashing. End lap at least 6" at joints.

07620 - SHEET METAL FLASHING AND TRIM

PRODUCTS:

- 1. Aluminum Sheet: ASTM B 209 (AS/MB 209M) Alloy 3003, 3004, 3150 or 5005, temper suitable for forming and structural performance required, but not less than H12; not less than 0.032 in. (0.8 mm) thick, and finished as follows:
a. Fluoropolymer Two-Coat System: Manufacturer's standard system with topcoat containing less than 70 percent polyvinylidene fluoride resin by weight, complying with AAMA 2604.
2. Flashing and Trim:
a. Fabricate sheet metal flashing and trim to comply with recommendations of SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of the item indicated.
3. Accessories:
a. Asphalt Mastic: SSPC-Paint 12, asbestos free, solvent type.
b. Roofing Cement: ASTM D 4586, Type I, asbestos free, asphalt based.

EXECUTION:

- 1. Comply with SMACNA's "Architectural Sheet Metal Manual" Allow for thermal expansion, set true to line and level. Install Work with laps, joints, and seams permanently watertight and weatherproof, conceal fasteners where possible.
2. Sealed Joints: Form non-expansion, but movable, joints in metal to accommodate elastomeric sealant to comply with SMACNA standards.
3. Separations: Separate non-compatible metals or corrosive substrates with a coating of asphalt mastic or other permanent separation.
4. Fabricate nonmoving seams in sheet metal with flat-lock seams. Rivet joints for additional strength.
5. Separations: Separate non-compatible metals or corrosive substrates with a coating of asphalt mastic or other permanent separation.

07710 - MANUFACTURED ROOF SPECIALTIES

GENERAL:

- 1. Submittals: Shop drawings and samples.
2. Provide products that comply with applicable requirements of SMACNA's "Architectural Sheet Metal Manual," unless otherwise indicated.

PRODUCTS:

- 1. Gutters and Downspouts:
a. Aluminum Finish: High performance coating, AAC12C42R1X, composed of inhibitive primer and color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight, with a total minimum dry film thickness of 0.9 mil (0.023 mm), complying with AAMA 1402, Test Method No. 7.
b. Gutters: 5" ogee ("K"), 0.032 thickness.
c. Downspouts: 2" x 3", 0.027 thickness.
d. Anchors: Concealed "K" style screw in, install at 30" on center. Screws and anchors shall be alum. or stainless steel.

EXECUTION:

- 1. Coordinate with installation of roof decks and other substrates to produce a watertight assembly capable of withstanding inward and outward loading pressures, and thermal and lateral loads.
2. Expansion Provisions: Install running lengths to allow controlled expansion for movement of metal components, to prevent water leakage, deformation, or damage.
3. Coat back side of aluminum roof specialties with bituminous coating where they will contact wood, ferrous metal, or cementitious construction.

07920 - JOINT SEALANTS

GENERAL:

- 1. Submittals: Color Samples for exposed sealant locations.

PRODUCTS:

- 1. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under service and application conditions.
2. Elastomeric Sealants: Comply with ASTM C 920.
3. Single-component, neutral-curing silicone sealant, Type S, Grade NS, Class 25; Uses T, NT, M, G, A, and O. For general exterior use.
4. Single-component, non-sag urethane sealant, Type S, Grade NS, Class 25, and Uses NT, M, A, and O. For general exterior use.
5. Single-component, mildew-resistant silicone sealant, Type S, Grade NS, Class 25; Uses NT, G, A and O, formulated with fungicide. Use for interior sealant joints in ceramic tile, stone and other hard surfaces in kitchens and toilet rooms and around plumbing fixtures.
6. Latex Sealant: Single-component, non-sag, mildew-resistant, paintable, acrylic-emulsion sealant complying with ASTM C 834. For interior use only at perimeters of door and window frames.
7. Acoustical Sealant for Exposed Joints: Non-sag, paintable, non-staining, latex sealant complying with ASTM C 834. For interior use only at acoustical assemblies.
8. Acoustical Sealant for Concealed Joints: Non-drying, non-hardening, non-skinning, non-staining, gunnable, synthetic-rubber sealant recommended for sealing interior concealed joints to reduce transmission of airborne sound. For interior use only at acoustical assemblies.

EXECUTION:

- 1. Comply with ASTM C 1193.
2. Comply with ASTM C 919 for use of joint sealants in acoustical applications.

07500 - MEMBRANE ROOFING

GENERAL:

- 1. Furnish and install a FiberTite Roofing System as manufactured and supplied by: Seaman Corporation, 1000 Venture Blvd, Wooster, Ohio 44691, Tel: 1-800-927-8578, Fax: 1-800-649-2737.
2. Prior to installation of materials, a pre-roofing conference should be held with the roofing contractor, and owner/owner's representative(s) to discuss the specified roofing system, coordinate its proper application and the expectations of all parties involved. The authorized roofing contractor and the owner/owner's representative shall notify all parties a minimum of fourteen days prior to the meeting.
3. Plan and coordinate the installation of the roofing system with other trades in such a manner to avoid membrane damage, keeping the complete installation weather tight and in accordance with all approved details and warranty requirements.

PRODUCTS:

- 1. All products and components for the FiberTite Roofing System shall be supplied by Seaman Corporation.
2. FiberTite membranes may be installed over or adhered directly to pre-approved insulation, cover board, decking or composites there of.
3. FiberTite Membrane: FiberTite is a nominal 36-mil ketone ethylene ester (KEE) membrane, reinforced with a 5.0-oz/yd² knitted polyester fabric as manufactured by Seaman Corporation, under the trade name FiberTite, conforming to the physical properties as outlined in the associated data sheet. FiberTite exceeds all requirements outlined in ASTM D 6754 - 02 Standard Specification for Ketone Ethylene Ester (KEE) Sheet Roofing.
4. Flashing Membrane:
a. Nominal 36-mil FiberTite, 45-mil FiberTite-SM or 50-mil FiberTite-XT membrane shall be used for all flashing.
5. Insulation:
a. Insulation shall be installed, where specified and/or required to provide a suitable surface for the FiberTite Roofing System and/or meet desired thermal values.

EXECUTION:

- 1. The "Authorized" roofing contractor is responsible for ensuring appropriate system specific addendums included by reference are strictly applied to FTR-GS04/08, General Guide Specifications for Installation of FiberTite Roofing Systems.
2. The roofing contractor is responsible for providing a suitable substrate surface for the proper installation of the FiberTite Roofing System, roof insulation and specified components. Application of Seaman Corporation/FiberTite materials constitutes an agreement that the roofing contractor has inspected and found the substrate suitable for the installation of the FiberTite Roofing System.
3. The roofing contractor is responsible for coordinating the installation to ensure that the system remains watertight at the end of each working day.
4. FLASHING:
a. Clean all vents, pipes, conduits, tubes, walls, and stacks to bare metal. All protrusions must be properly secured to the roof deck with approved fasteners. Remove and discard all lead, pipes and drain flashing. Flash all penetrations according to approved details.
b. Remove all loose and/or deteriorated cant strips and flashing.
c. Flash all curbs, parapets and interior walls in strict accordance with approved FiberTite details.
d. All flashing shall be adhered to properly prepared, approved substrate(s) with either FTR-190e Adhesive or FTR-201 mastic applied in sufficient quantity to ensure total adhesion. Specific projects may require the use of FTR-490 as a bonding adhesive for FiberTite-SM membrane. Contact FTCS prior to this application.
e. The base flange of all membrane flashing shall extend out on to the plane of the deck, beyond the wood nailers to a maximum width of 8 inches.

- f. Complete all inside and outside corner flashing details with FiberTite pre-formed corners or an approved field fabrication detail.
6. Inspect all field welds, detailing and terminations to ensure a 100% the watertight installation.

DIVISION 8 - OPENINGS:

081116 - ALUMINUM FLUSH DOORS AND FRAMES

GENERAL:

- 1. Submit for review under provisions of Section 01 30 00 [01300].
a. Product Data: Manufacturer's descriptive literature for each type door and frame: include the following information: Fabrication methods, Finishing, Hardware preparation & Accessories.
b. Shop Drawings: Indicate the following:
A. Elevations and details of each door and frame type.
B. Schedule of doors and frames.
C. Conditions at openings with various wall thicknesses and materials.
D. Location and installation requirements for hardware.
E. Thicknesses of materials, joints.
F. Connections and trim.
2. Hardware Templates: Provide finish hardware mounting details.
3. Manufacturer's Installation Instructions printed installation instructions for each product, including product storage requirements & operations and Maintenance Data: Printed instructions for each product.

PRODUCTS:

- 1. Acceptable Manufacturer: Model: Series 100BE Cline Aluminum Doors, Inc. 112 - 32nd Avenue West, Bradenton, Florida 34205-8907. Telephone: (800) 648-6736, (941) 746-4104, Fax: (941) 746-5153. Website: www.clinedoors.com. Email: inquire@clinedoors.com.
2. Requests for substitution will be considered in accordance with provisions of Section 01 60 00 [01600].
3. Door construction:
a. Aluminum Members: Alloy and temper recommended by manufacturer for strength, corrosion resistance, and application of required finish.
b. Aluminum Door Components: Minimum 5-ply composite laminated construction to include:
A. Facing: One-piece 0.040-inch (1.02 mm) smooth 5005-H14 stretcher-leveled aluminum alloy.
B. Substrate: One-piece oil-tempered hardboard backer.
C. Core: Organic materials shall be used to form a marine-grade honeycomb core with high compression strength of 94.8 psi (ASTM C365), and internal aluminum hardware backup tube.
D. Hardware Backup: The hardware backup tube shall be a minimum of 4.25-inches (107.95 mm) in width, 1.375-inches (34.93 mm) in depth with a wall thickness of 0.0125-inches (3.18 mm). Contiguous for the full perimeter of the door to allow for all specified and non-specified hardware reinforcement.
E. Hardware Prep: Basic to include mortise lock edge prep or cylindrical lock prep, and pairs prepped for flush bolts, if required.
F. Bonding Agent: Environmentally friendly adhesive with strength buildup of 350 pounds per square inch (24.6 kg/cm2).
G. Perimeter Door Trim: Wall thickness of 0.050-inch (1.25 mm) minimum in 6063-T5 extruded aluminum alloy with special beveled edge cap design and integral weather stripping on lock stile.
H. Replaceable Door Trim: Mechanically fastened to the hardware backup tube, allowing for replacement in the field, if damaged.
I. Trim Finish: To have minimum of a Class I anodized finish.
J. Weather Stripping: Replaceable wool pile with nylon fabric, polypropylene backing meeting AAMA 701 standards. Applied weather stripping is not acceptable.
K. Materials: Only nonferrous, non-rusting members shall be acceptable, including tie rods, screws and reinforcement plates.
L. Regulations: All components and agents to meet EPA standards.
c. Aluminum Frames:
1. Frame Components: Extruded channel 6063-T5 aluminum alloy, minimum wall thickness 0.125-inch (3.18 mm), cut corners square and joinery shall be mechanical with no exposed fasteners.
2. Profile: Open Back with Applied Stop (OBS), 1.75-inch by 5-inch (44 x127 mm).
3. Hinge and Strike Mounting Plates: Extruded aluminum alloy bar stock, 0.1875-inch (4.75 mm) thick mounted in a concealed integral channel with no exposed fasteners.
4. Replaceable Weather Stripping: AAMA 701, wool pile with nylon fabric, polypropylene backing, at head and jamb.
5. Door Stop: No screw-on stops acceptable.
6. Finish: Clear anodic coating, AA-M12022A31 Class II mechanical finish, non-specular, with chemical medium-matte etch, minimum thickness 0.4-mil (0.01 mm).

Fabrication

- 1. General: Receive hardware if required by manufacturer.
2. Aluminum Flush Door Construction: Of type, size and design indicated:
a. Minimum Thickness: 1.75-inches (44 mm), 5-ply composite laminate system.
b. Door Size: Sizes shown are nominal; provide standard clearances as follows:
c. Hinge and Lock Stiles: 0.125-inch (3.18 mm).
d. Between Meeting Stiles: 0.25-inch (6.35 mm).
e. At Top Rails: 0.125-inch (3.18 mm).

- f. Between Door Bottom and Threshold: 0.125-inch (3.18 mm).
3. Accessories:
a. Fasteners: Aluminum, nonmagnetic stainless steel or other material warranted by manufacturer as non-corrosive and compatible with aluminum components. Do not use exposed fasteners.
b. Brackets and Reinforcements: Manufacturer's high-strength aluminum units where feasible, otherwise, nonferrous stainless steel.
c. Bituminous Coating: Cold-applied asphaltic mastic compounded for 30-mil (0.76 mm) thickness per coat.

EXECUTION:

- 1. General: Install doors and frames in accordance with manufacturer's instructions and approved shop drawings; set frames plumb, square, level, and aligned to receive doors.
A. Anchor frames to adjacent construction in strict accordance with recommendations and approved shop drawings and within tolerances specified in manufacturer's instructions.
B. Seal metal-to-metal joints between framing members using good quality elastomeric sealant.
C. Where aluminum surfaces contact with metals other than stainless steel, zinc or small areas of white bronze, protect from direct contact by one or more of the following methods.
D. Paint dissimilar metal with one coat of heavy-bodied bituminous paint. Apply good quality elastomeric sealant between aluminum and dissimilar metal. Paint dissimilar metal with one coat of primer and one coat of paint recommended for aluminum surface applications.
E. Use non-absorptive tape or gasket in permanently dry locations.
F. Hang doors with required clearances as follows:
G. Hinge and Lock Stiles: 0.125-inch (3.18 mm).
H. Between Meeting Stiles: 0.250-inch (6.35 mm).
I. At Top Rails: 0.125-inch (3.18 mm).
J. Between Door Bottom and Threshold: 0.125-inch (3.18 mm).
2. Adjust doors and hardware to operate properly.
3. Install glazing in glazing frames.
4. Install hardware for doors of this section.
5. Installation of door hardware is specified in Section 08 71 00 [08710].
6. Installation of glass is specified in Section 08 80 00 [08800].
7. Upon completion of installation, thoroughly clean door and frame surfaces in accordance with AAMA 609. Do not use abrasive, caustic or acid cleaning agents.
8. Protect products of this section from damage caused by subsequent construction until substantial completion. Repair damaged or defective products to original specified condition in accordance with manufacturer's recommendations. Replace damaged or defective products that cannot be repaired to architect's acceptance.

081433 - WOOD DOORS

GENERAL:

- 1. Submit for review shop Drawings in accordance with Section 01300. Indicate:
a. Door number
b. Door Type
c. Door Sizes
d. Handing
e. Door elevations
f. Hardware Set Numbers
g. Details of construction.
2. Templates: Hardware templates for hardware mounted on doors will be submitted under Section 08710 directly to door manufacturer immediately after acceptance of hardware schedule. Report failure to receive templates with reasonable promptness to General Contractor.
3. Product Data: Submit door manufacturer's product construction data including, core construction, stile and rail details, panel and staining details and any trim or glazing details as appropriate for doors specified. Product data should indicate compliance with specifications.
4. Quality Assurance:
a. Storage and Handling: Doors shall be stored and handled in accordance with the manufacturer's recommendations and the WDMA - Appendix Section - "Care and Installation at Job Site".
A. Doors shall be stored on a flat and level surface in a well ventilated dry building. Doors shall not be stored on edge and shall be protected from dirt, water and abuse.
B. Protect doors from exposure to light for veneers which are light sensitive.
C. Doors shall not be subjected to extreme heat or humidity. HVAC systems should be set to provide a temperature range of 60 -90 degrees F and 25-55% relative humidity.
D. Handle doors with clean hands or gloves. Do not drag doors across floors or other surfaces.
E. Each Door shall be marked with the opening number.
Preinstallation Meeting: Prior to the doors being unwrapped from the factory packaging a meeting shall take place with the factory representative or the door manufacturer and the general contractor, door distributor, installers, finishers and any other trades responsible for the handling of the doors, to review the factory Care and Handling and Finishing Instructions.
c. STC ratings shall be operable and shall have been tested and not estimated. Manufacturers shall have testing lab documentation of STC ratings.
d. Warranty: Submit in accordance with Section 01700. For factory finished or prime doors, warranty shall be in effect of the Life of the Installation for interior and interior fire.

PRODUCTS:

- 1. Acceptable Manufacturers, subject to compliance with specifications:
a. TruStile Doors, LLC.
b. Approved equal products, subject to compliance with the design and performance of this specification and as approved by owner and architect in accordance with Section 01600.

2. DOOR CONSTRUCTION

- a. Description:
A. Type: TruStile WTS Series Wood veneered doors.
B. Veneer: 1/8" in thickness, finish to match existing doors.
C. Stile Thickness: 1-3/4".
D. Profiles and dimensions shall be TruStile standards unless otherwise noted in the drawings and elevations.
E. Stile and Rail (Sticking) Type: Square Sticking (SS).
F. Panel Type: Flat Panel (Panel C).
G. Panels shall be constructed of MDF core with solid wood panels laminated both sides or solid wood to match profile specified. Panels shall float inside the sticking in true stile and rail construction. Panels shall be held in place by the sticking and flexible bumper shall be installed inside sticking to keep panel centered.
H. Panel Thickness: As indicated in TruStile specifications for panel selected.
b. Lower Type: False, to be plantation type 3/8" x 1/4" with 2-1/8" visible with Square Top.
c. Stile Construction:
A. Core material to be constructed of engineered wood to resist moisture, warping, checking and improved screw pull.
B. Stiles are to be constructed for improved screw holding by use of solid wood edges. Hardwood stiles to match face veneers.
EXECUTION:
1. General: Install doors in accordance with manufacturer's recommendations and to comply with WDMA IS 1A and NFPA 80. Installation by skilled finish carpenters or factory authorized installers. Installer shall be thoroughly familiar with the requirements of the manufacturer's door warranty as currently in effect and assure compliance with all provisions.
2. After sizing doors, fit for hardware as scheduled. Hang doors to be free of binding with hardware functioning properly.
3. Adjustment: At completion of job, adjust doors and hardware as required and leave in proper operating condition.
4. Protection: Advise General Contractor of proper procedures required to protect installed wood doors from damages or deterioration until acceptance of entire project.
5. Replacement: Refinish or replace doors damaged during installation. Causes for Rejection: Include chips, scratches or gouges.

08710 - DOOR HARDWARE

GENERAL:

- 1. RELATED WORK SPECIFIED ELSEWHERE: Hollow Metal Doors and Frames, Aluminum Doors and Frames, Wood Doors and Frames.
A. DESCRIPTION OF WORK: Furnish labor and material to complete hardware as indicated, as specified herein, or as may be required by actual conditions at building. Include all necessary screws, bolts, expansion shields, other devices, if necessary, as required for proper hardware application. The hardware supplier shall assume all responsibility for correct quantities. All hardware shall meet the requirements of Federal, State and Local codes having jurisdiction over this project, notwithstanding any real or apparent conflict therewith in these specifications. Fire-Rated Openings: Provide hardware for fire-rated openings in compliance with A.I.A. (NBFU) Pamphlet No. 80, NFPA Standards NO. 101, UBC 702 and UL10C. This requirement takes precedence over other requirements for such hardware. Provide only hardware that has been tested and listed by UL for the types and sizes of doors required, and complies with the requirements of the door and door frame labels. Where panic exit devices are required on fire-rated doors, provide supplementary marking on door UL label indicating Fire Door to be equipped with fire exit hardware and provide UL label on exit device indicating "Fire Exit Hardware". Fasteners:
A. Hardware as furnished shall conform to published templates generally prepared for machine screw installation.
B. Furnish each item complete with all screws required for installation. Typically, all exposed screws installation. Insofar as practical, furnish concealed type fasteners for hardware units which have exposed screws shall be furnished with Phillips flat heads screws, finished to match adjacent hardware.
C. Door closers and exit devices to be installed on wood or composite fire doors shall be attached with closed head through bolts (six bolts).
D. Florida Building Code (Latest edition) Engineering Reports that opening meet requirement for wind load, water infiltration and impact as required in FBC.
2. The supplier to be a directly franchised distributor of the products to be furnished and have in their employ an AHC (Architectural Hardware Consultant). This person is to be available for consultation to the architect, owner and the general contractor at reasonable times during the course of work.
A. The finish hardware supplier shall prepare and submit to the architect six (6) copies of a complete schedule identifying each door and each set number, following the numbering system and not creating any separate system himself. He shall submit the schedule for review, make corrections as directed and resubmit the corrected schedule for final approval. Approval of schedule will not relieve Contractor of the responsibility for furnishing all necessary hardware, including the responsibility for furnishing correct quantities.
B. No manufacturing orders shall be placed until detailed schedule has been submitted to the architect and written approval received.
C. After hardware schedule has been approved, furnish templates required by manufacturing contractors for making proper provisions in their work for accurate fitting, finishing hardware setting. Furnish templates in ample time to facilitate progress of work.
D. Hardware supplier shall have an office and warehouse facilities to accommodate the materials used on this project. The supplier must be an authorized distributor of the products specified.
E. The hardware manufacturers are to supply both a pre-installation class as well as a post-installation walk-thru. This is to insure proper installation and provide for any adjustments or replacements of hardware as required.
3. DELIVERY, STORAGE, AND HANDLING:
A. Wrap, protect finishing hardware items for shipment. Deliver to manufacturing contractors hardware items required by them for their application, deliver balance of hardware to job; store in designated location. Each item shall be clearly marked with its intended location.
4. WARRANTY
A. The material furnished shall be warranted for one year after installation or longer as the individual manufacturer's warranty permits.

PRODUCTS:

- 1. ACCEPTABLE MANUFACTURERS:
a. To the greatest extent possible, obtain each kind of hardware from one manufacturer only.
PRODUCT ACCEPTABLE Ives Schlage Lock Falcon Lock Schlage Lock Falcon Lock Von Duprin LCN Glyn Rixson Ives Zero Ives Lund
HINGES AND PIVOTS:
a. Exterior Hinges to be Stainless Steel (32D) and Interior hinges to be Satin Chrome (26D). Door Closers to be Aluminum, Locks to be Satin Chrome (26D). Exit Devices to be Satin Chrome (26D). Overhead Holders to be Satin Chrome (26D), Stainless Steel (32D) and the Thresholds to be Mill Finish Aluminum.
HINGES AND PIVOTS:
a. Exterior butts shall be Stainless Steel. Butts on all out swinging doors shall be furnished with non-removable pins (NRP).
b. Interior butts shall be as listed.
c. Doors 5' or less in height shall have two (2) butts. Furnish one (1) additional butt for each 2' 0" in height or fraction thereof. Dutch door shall have two (2) butts per leaf.
KEYING:
a. Locks and cylinders shall be Schlage Lock Company. All bittings shall be issued by lock manufacturer in order to create a grand master key system.
b. Locks and cylinders to be construction master keyed in a manner that does not require the cylinders to be removed.
c. Provide Two (2) each change keys per lock and Six (6) each construction master keys.
5. LOCKSETS:
a. Locksets shall be Heavy Duty Cylindrical type, unless specified otherwise, in "ND" and "AL" series, lever design as manufactured by Schlage Lock.
b. Acceptable substitutions: Falcon Lock Company T and B series.
6. EXIT DEVICES:
a. All devices shall be Von Duprin 98 Series in types and functions specified. All devices must be listed under "Panic Hardware" in accident equipment list of Underwriters Laboratories. All labeled doors with "Fire Exit Hardware" must have labels attached and be in strict accordance with Underwriters Laboratories.
b. All exit devices shall be tested to ANSI/BHMA A156.3 test requirements by a BHMA certified testing laboratory.
c. All surface strikes shall be roller type and come complete with a plate underneath to prevent movement. And shall be provided with a dead-latching feature to prevent latchback tampering.
d. Acceptable Substitutions: Falcon 25 Series.
7. DOOR CLOSERS:
a. All closers shall be LCN 4000 series with slim cover having non-ferrous covers, steel arms separate valves for adjusting backcheck, closing and latching cycles and adjustable spring to provide up to 50% increase in spring power. Closers shall be furnished with parallel arm mounted on all doors opening into corridors or other public spaces and shall be mounted to permit 180 degrees door swing wherever wall conditions permit. Furnish with non-hold open arms unless otherwise indicated.
b. Door closer cylinders shall be of high strength cast construction to provide low wear operating capabilities of internal parts throughout the life of the installation. All door closers shall be tested to ANSI/BHMA A156.4 test requirements by a BHMA certified testing laboratory.
c. Door closers shall utilize temperature stable fluid capable of withstanding temperature ranges of 120 degrees Fahrenheit to -30 degrees Fahrenheit, without requiring seasonal adjustment of closer speed to properly close the door. Closers for fire-rated doors shall be provided with temperature stabilizing fluid that complies with the standards UBC 7-2 (1997) and UL 10C.
d. Door closers shall incorporate tamper-resistant non-critical screw valves of V-slot design to reduce possible logging from particles within the closer. Closers shall have separate and independent screw valve adjustments for latch speed, general speed, and hydraulic backcheck. Backcheck shall be properly located so as to effectively slow the swing of the door at a minimum of 10 degrees in advance of the dead stop location to protect the door frame and hardware from damage. Pressure relief valves (PRV) are not acceptable.
e. Acceptable Substitutions: Falcon SC70

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CMSA ARCHITECTURE CLIFFORD M. SCHOLZ ARCHITECTS, INC. Florida 34236 300 South Orange Ave., Sarasota, Florida 34236 941 964-4600 tel | 941 364-4606 fax | AAC02212

CONSULTANT REVISIONS & ALTERATIONS TO SUN 'N LAKE GOLF CLUB FLORIDA REVIEWED & ACCEPTED BY: (DATE) SEIBING,

DATE 08/27/2018

Clifford M. Scholz | AIA CS18068 SHEET NO. SP-1.2

Fishman & Associates, Inc. 2018

- (A) Form drainboards and drainables integrally with the sinks in the same unit, be of the length and width specified or indicated on the drawings and be sloped to the sink 1/8" (3mm) per foot (25mm).
- (B) Unless otherwise indicated, the rims of the drainboards shall be 1-1/2" (38mm) x 205 degree rolled rims depressed 1/2" (13mm) with exterior corners bullnosed.
- (C) Crossbrace legs with stainless steel undershelf hereinafter specified.

2.06 ENCLOSED CABINET BODIES

- (A) Construct the enclosed cabinet body formed with a minimum of 18 gauge steel sheets reinforced with steel sections to create a rigid structure.
- (B) The body shall be of welded construction throughout with front rails, mullions, etc., welded to appear as one-piece construction.
- (C) Close vertical channel sections.
- (D) Fabricate exposed interior and exterior sections of stainless steel unless specified otherwise.
- (E) Fabricate unexposed sections of galvanized steel unless specified to the contrary.

2.07 DRAWERS

- (A) Drawers shall be of 20 gauge stainless steel removable pan type, supported on a 14 gauge stainless steel all welded drawer cradle with a stainless steel front. All vertical and horizontal corners shall have a 3/4" minimum covered radius.
- (B) Provide the drawer front with a continue stainless steel pull.
- (C) Support the drawer cradle with stainless steel roller bearing slides with stops mounted to make the drawers self-closing.
- (D) Enclose drawers under open tables with stainless steel housing secured to the underside of the table.
- (E) Construct slides to permit each drawer to be pulled out at least 2/3's of its length and support heavy loads without deflection.
- (F) The drawer cradle shall be removable without tools.
- (G) Drawers shall be positioned so they are a minimum of 2" recessed from front of table edge.

2.08 DOORS

FOODSERVICE EQUIPMENT 114000 - 9

Fishman & Associates, Inc. 2018

- (A) All prep and pot sinks shall be fitted with twist lever waste valves and stainless steel strainers. Overflows shall be included for pot sinks.

2.12 TRIMMING AND SEALING

- (A) All equipment that rests on concrete masonry bases shall be set, leveled, and sealed as required by Health Department Codes.
- (B) All equipment butting walls shall be scribed and sealed to the walls with a silicone rubber sealant (Dow Corning 780, General Electric Series SE12 or approved equal). Where there is any vertical or horizontal gap larger than 1/8" it shall be trimmed with finished stainless steel closures at no extra cost.
- (C) Where two or more pieces of equipment join, the seam shall be sealed with a silicone rubber sealant (Dow Corning 780, General Electric Series SE1200 or approved equal).
- (D) Hi-Temp silicone sealant, or equal to be used at joints between pieces of heat producing equipment.
- (E) Ends of all back splashes and hollow sections shall be closed during fabrication.
- (F) Trim is acceptable-applied required to cover applicable joints.
- (G) Trade Marks: Trade Marks and the name of the fabricator shall not be fastened to any items of fabricated equipment.

3.01 CONSTRUCTION AND WORKMANSHIP

- (A) Construct each piece in a workmanlike manner to include all necessary reinforcing, bracing, and welding; and the proper number and spacing of uprights and crossmembers for strength as set forth in the standard drawings and specifications and for the heavy duty commercial use intended. Wherever size permits, equipment shall be fabricated of a single sheet of metal. Equipment not braced in a rigid manner which is subject to rattle, wobble, or tin-canning will not be acceptable.
- (B) Exposed surfaces shall be free from bolt, screw and rivet heads, when bolts are required they shall be of concealed type and be of similar composition as the metal to which they are applied. Where bolt or screw heads on the interior of fixtures are visible or may come in contact with hands or wiping of cloths, they must be capped with an acorn nut with lock-washer.
- (C) Welding shall be done by the Heliarc method unless the Contractor has received written permission to use another but similar method. Where filler rods are

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- (D) Butt joints and contact joints, wherever they occur, shall be close fitting and shall not require solder as a filler. Wherever break bends occur they shall be free of undue extrudence and shall not be flaky, scaly, or cracked in appearance and where such breaks do mar the uniform surface appearance of the material, all such marks shall be removed by suitable grinding, polishing, and finishing. Wherever sheared edges occur, they shall be finished to alleviate all danger of cutting or laceration when the hand is drawn over such sheared edges. In no case are over-lapping materials to be acceptable where miters or bullnosed corners occur.

- (E) The grain of polishing shall run in the same direction on all horizontal and all vertical surfaces of each individual item of fabricated equipment, except in the case where table or sink tops join at right angles where finish of the horizontal sections of each terminating in mitered edges shall be acceptable. Where sinks and adjacent drainboards are equipped with splashbacks, the grain of polishing shall be consistent in direction throughout the length of the splashback and sink compartment.
- (F) Where stainless steel surfaces are disturbed by the fabricating process, such surfaces shall be finished to a fine satin finish.

3.04 FASTENING

- (A) Bolts, screws, nuts and washers shall be of stainless steel, except where brass or stainless steel is fastened in which case they shall be brass or stainless steel respectively. Where dissimilar metals are fastened, bolts, screws, nuts, and washers shall be of the highest grade metal. The spacing and extent of bolts, and screws shall be such as to insure suitable fastening and prevent buckling of the materials fastened.

3.05 INSULATION

- (A) For low temperature applications, such as ice bins, cold pans, or fabricated undercounter freezers use urethane rigid board, foam, or foamed-in-place, not less than 2" thick, except that vertical surfaces of cold pans and ice bins may be 1" thick. Bond insulation at joints to prevent condensation on exterior.
- (B) For normal temperature applications such as fabricated undercounter refrigerators, use styrofoam material 2" thick bonded at joints.
- (C) For heated applications such as plate warmers, use block-type rock wool, minimum 1" thick.
- (D) For countertops subject to heat from cooking equipment and/or refrigeration

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- (C) Food Service Equipment contractor shall coordinate his work with the Electrical Contractor so that the receptacles provided will match the specific plugs installed as part of the plug-in equipment. Any changes in cords and plugs required in the field due to lack of coordination between the Electrical and Food Service Equipment Contractors will be the latter's responsibility. Food Service Equipment length of cords furnished with the specified equipment to be a suitable or appropriate length, so they do not interfere with other equipment.

- (D) The Food Service Equipment Contractor shall supply each motor driven appliance or electrical heating unit suitable control switch or starter of proper type and in accordance with the Underwriters Code wherever such equipment is not built-in. Other line switches, safety cut-outs, control panels, fuse boxes, other controls, fittings and connections, when not an integral part of this unit, will be furnished and installed by the Electrical Contractor, unless otherwise specified.

- (E) It shall be the responsibility of the Food Service Equipment Contractor as part of the work included under this division of the specifications to insure that equipment furnished under this contract shall be so wired, wound or constructed as to conform with the characteristics of electrical and other services at the premises.

- (F) Appliances shall be new of manufacturer's current production and furnished complete with motors, driving mechanisms, starter and controllers, timers cut-outs, reversing mechanism and other electrical equipment, if and as applicable. Wiring and connection diagrams shall be furnished with electrically operated machines and for electrically wired fabricated equipment.

- (G) Appliances shall be of rigid construction, free from objectionable vibrations. Quietness of operation of food service equipment is a requirement and Food Service Equipment Contractor will be required to remove or repair any equipment producing objectionable noise and/or vibration.

- (H) Motors shall be of the drip-proof, splash proof, or totally enclosed type, having a continuous duty cycle and ball bearings except small timing motors which may have sleeve bearings. Motors located where subject to deposit of dust, lint, or other similar matter from the machine on which installed shall be of the totally enclosed type. Motors shall have windings impregnated to resist moisture. Motors shall have ample power to operate the machine for which designated under full load operating conditions without exceeding their name plate ratings. Horsepower requirements on driven equipment shall be determined by the manufacturer, based on normal operation at maximum capacities. The normal rated motor horsepower shall not be less than the horsepower required for normal operation of the equipment at maximum capacity.

- (I) Electrical components are to be U.L. approved and wiring is to be in accordance with the National Electrical Code or in effect at the job site, whichever is the greater. Furnish and install cover plates on electrical outlets, receptacles,

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- (A) Construct doors with double pan construction of 18 gauge stainless steel, having corners welded, ground and polished. Insulate between pans with Celotex board. Tack weld the pans together.
- (B) Polish the exterior and interior of the doors.
- (C) The doors shall be 7/8" (22mm) thick, and fitted with continuous stainless steel pull, matching those specified for drawers and have rubber bumpers.
- (D) Fit sliding doors on top with ball-bearing, quiet sheaves in 14 gauge stainless steel overhead tracks and be removable without the use of tools.
- (E) Hinged doors shall be the flush type mounted on heavy duty concealed hinges of approved design and fitted with magnetic catches.
- (F) Install strike plate on the fixture body so as not to interfere with the use of the shelf area.

2.09 SHELVING

- (A) Construct shelving in the counters or cabinets of 18 gauge stainless steel unless otherwise specified.
- (B) Turn down the front edge of the intermediate shelves 1 1/2" (38mm) and then back.
- (C) Turn backsides up and feather slightly to form a tight fit to the enclosure panels.
- (D) Construct shelves of open base tables with 18 gauge stainless steel, the front end sides being flanged down 1 1/2" (38mm) with rear up 4" (51mm).

2.10 HARDWARE AND LOCKS

- (A) The hardware shall be of chromium-plated cast brass, except when specified to the contrary. Stampings shall not be used.
- (B) Identify the hardware with the respective manufacturer's name and number.
- (C) Fit doors for reach-in refrigerated compartments with magnetic type latches and cylinder locks, keyed alike or separately as specified.
- (D) Fit the drawers and doors with cylinder-type locks, keyed alike and in separate groups as directed. Locks should be left off unless needed.
- (E) Provide master keys to open all locks in every department.

2.11 FAUCETS AND WASTES

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- used, they should be of the same or higher grade composition as the materials to be joined and contain a flux to minimize carbide precipitation. Welds shall be complete, strong, and ductile, sound, non-porous, free of pits, cracks, and other mechanical imperfections. Excess metal shall be ground off, finished smooth and polished creating one homogenous fixture of like color and finish, to prevent possible corrosion. Welded stainless steel joints shall be ground smooth and polished. In no case shall soldering be considered as a replacement for welding, nor shall any soldering operation be done where dependence is placed on strength and stability of joint or fixture proper.

- (D) In general, shop fabricated fixtures of one piece construction, shall be shipped to the job completely assembled. Equipment too large to transport or enter the building as one piece shall be constructed so that welded field joints can be made at the job site.

- (E) Suitable pipe slots shall be provided throughout all undershelves to accommodate necessary service lines. These slots shall be of proper size and shall be neatly made with turned up edges on all four sides to eliminate cutting or defacing of equipment on job. Cabinet bodies shall be provided with an inner panel duct at ends or rear of cabinet to allow vertical pipe space to conceal the vertical piping.

3.02 FINISHES

- (A) Stainless steel where exposed shall be ground polished to a #4 commercial finish. Where unexposed, finish may be #2B. The grain of polishing shall run the same direction on all horizontal and vertical surfaces of each item of equipment where possible.
- (B) Exterior galvanized parts, exposed members of framework and wrought steel pipe where specified, to be cleaned, properly primed with rust inhibiting primer, degreased, and finished with two (2) coats epoxy based Hammertone paint.

3.03 GRINDING, POLISHING, AND FINISHING

- (A) Exposed welded joints shall be suitable ground flush with the adjoining materials and neatly finished to harmonize there in with. Wherever material has been sunken depressed by a welding operation such depressions shall be suitable hammered and panned flush with adjoining surfaces consistent with good workmanship. In all cases the grain of rough grinding shall be removed by a successive fine polishing operations.
- (B) Nonexposed welded joints on undersides of tables or counters of stainless steel construction shall be suitably coated at the factory with a metallic based paint to prevent possible corrosion at such locations.
- (C) After galvanized iron members have been welded, welds and areas where galvanizing has been damaged shall be coated by the Amco galvanizing stick

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- compressors, use 1" thick Johns Manville Marinite 36, or equal to insulate underside of top.

- (E) Add marinite material between freezer or refrigerator and 14 gauge stainless steel top.

3.06 MISCELLANEOUS

- (A) Food Service Equipment Contractor is directed to refer to Kitchen Facilities Drawings and is specifically directed to the Kitchen Facilities Spot Connection Plans for additional information regarding necessary appurtenances to accommodate plumbing, electrical, and refrigeration, etc., rough-in.

3.07 MILLWORK FABRICATION

- (A) The construction and installation of millwork shall be as indicated on the drawings and shall conform to the requirements of the Architectural Woodwork Institute (AWI) Standards for "Custom Grade Work".
- (B) Moisture content of lumber, plywood and millwork shall not exceed 10%.
- (C) Millwork and materials shall conform in all respects to local codes for fire retardant treatments.
- (D) Plywood shall be Douglas Fir or Birch of the thickness indicated on the drawings or required, good one or both sides as conditions require.
- (E) Wherever laminated plastic materials are specified for cabinet work, they shall be Formica, Textolite, Wilsonart, Laminart, Nevamar, or as approved by the by the Architect. Laminate materials to close-grained plywood or selected smooth sanded stock to insure a ripple free surface. Place top sheet on and over finished edge. Cover corresponding backs with approved backing and balancing sheet materials.
- (F) Apply plastic laminate with the grain running vertically unless otherwise specified or approved.

3.08 UTILITY SERVICE REQUIREMENTS

- (A) Electrical: The Food Service Equipment Contractor shall furnish equipment complete with internal wiring chases where electrical services are required.
- (B) Food Service Equipment Contractor shall provide adequate raceways and accesses in fixtures for this work. Where the Food Service Equipment Contractor fails to provide for such space, he shall correct his work without expense to the Owner. Cutting and patching required by such work shall be reworked to its original finish.

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- switches, etc., furnished by Food Service Equipment Contractor and shall match the material and finish of the equipment to which they will be fastened.

- (J) Food Service Equipment Contractor to furnish interior light fixtures for walk-in coolers and freezers.

- (K) Electrical Contractor to wire circuits from exhaust ventilator control panels, fire protection systems, and to exhaust fan controls.

3.09 PLUMBING

- (A) Locate water inlets above the positive water level to prevent siphoning of liquids into the water system. Wherever conditions shall require submerged inlet, suitable type check valve and vacuum breaker shall be placed on the fixture to form part of same to prevent siphoning. Chrome plate exposed piping and fittings.

- (B) Necessary faucets shall be furnished by the Food Service Equipment contractor with his equipment and shall be supplied with replaceable monel seals, non-splash aerator, and unless otherwise specified will be as manufactured by T&S Brass and Bronze Works, Inc. and Fisher Manufacturing Company.

- (C) The Food Service Equipment Contractor shall provide suitable pipe slots and/or do all drillings, punching, and cutting of his equipment required to provide access for mechanical connections and/or runs. Such work when performed at the job site shall be of the same quality as similar work performed in the shop.

- (D) So as to insure proper clearance for cleaning, horizontal piping lines shall run at the highest possible elevation and not less than six (6) inches above the floor, through equipment wherever possible.
- (E) No exposed piping about fixtures or in other conspicuous places shall show tool marks or more than one thread at the fitting.

3.10 STEAM

- (A) Furnish and install special pressure regulators, steam trap assemblies, control valves, pressure gauges, strainers and other devices required for the proper operations of steam operated equipment. Interconnect devices and make ready for final connection.

- (B) Furnish and install steam thermostats, where required, on steam-heated or steam-operated equipment.

- (C) Furnish and install pressure regulators for all items of steam-operated equipment, where required.

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CMSA
ARCHITECTURE
CLIFFORD M. SCHOLZ ARCHITECTS, INC.
300 South Orange Ave., Sarasota, Florida 34236
941-364-4600 tel | 941-364-4606 fax | AAC02212

CONSULTANT

REVISIONS
DATE
REVIEWED & ACCEPTED BY: (DATE)

ADDITIONS & ALTERATIONS TO
SUN 'N LAKE GOLF CLUB
FLORIDA
SEBRING,

DATE
08/27/2018

Clifford M. Scholz | AIA

CS18068

SHEET NO.
SP-1.5

3.11 REFRIGERATION

- (A) Refrigeration systems shall include start-up and one (1) year service plus additional four (4) year manufacturer's warranty on all compressors.
- (B) Cold pans, refrigerated pans and cabinets shall be provided with breaker strips where adjoining top or cabinet face materials to prevent transfer of cold.
- (C) Adequate air supply and exhaust shall be provided for self-contained refrigeration condensing units, both fabricated and standard, as required for proper operation. If in the opinion of the Food Service Equipment Contractor, additional ventilation is required to insure correct operation temperatures, he shall so state to the Architect in writing of his evaluation and decision before installation.
- (D) Refrigerators and freezers having remote refrigeration system shall be complete with thermostatic expansion valves at the evaporator. Expansion valves shall match the refrigeration and electrical requirements of the remote condensing units.
- (E) Refrigerated compartments, fabricated and standard, shall be fitted with flush digital thermometers. Thermometers shall be adjustable and calibrated after installation.
- (F) Where remote refrigeration systems are indicated, such as for walk-in coolers, freezers, and reach-in refrigerators and freezers as well as fabricated requirements, it is the intent of these specifications that complete and operating system be supplied and installed to the highest standards for this type of work. Required racks are to be provided for mounting of condensers and controls. Where needed, provide removable weather-proof covers.
- (G) Refrigerator hardware shall be heavy duty. Hinges shall be self-closing and latches shall be magnetic edge mount-type unless specified or detailed otherwise.

3.12 REFRIGERATION REQUIREMENTS (REMOTE)

- (A) Provide and install the following:
 - (1) Vibration absorbing mountings for condensing units and suction lines.
 - (2) Disconnect switches, automatic starting switches, motor protectors and pressure limit switches all enclosed and with interconnection wiring, factory installed, ready for line connections.
 - (3) Thermostats, solenoids, pressure control, liquid line sight glass, and dryer

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of ample capacity.

- (4) For Government projects, Refrigerant lines shall be type "L" hard (required for government jobs only) copper with "Silfos" brazed joints. Installation locations of lines shall be coordinated with jobsite superintendent. All refrigeration piping shall be properly supported by adjustable hangers spaced and adjusted to the drop required.
- (5) A heat exchanger for each evaporator.
- (6) A thermostatic expansion valve for each evaporator.
- (7) A full charge of appropriate refrigerant and oil for each system per the manufacturer specifications.
- (8) Start-up adjustment and one (1) year free warranty service. Five (5) year warranty on motor compressor units.
- (9) Where refrigerant suction lines are trapped, use next size smaller pipe in vertical portion of the trap than that indicated so as to acquire sufficient gas velocity for proper air return.
- (10) All refrigerant lines shall be insulated their full length with anti-sweat pipe covering of 3/4" Armaflex or equal. If refrigerant lines are in air return plenum areas, insulation as required by local code shall be used. Metal pipe sleeves shall be provided by the General Contractor where piping passes through a wall, ceiling or floor.
- (11) Provide 1/2" copper drain tubing from drain pans below coils to drains, furnished and installed by system installer. Exterior exposed lines to be chromed Drain line from freezer coil shall be wrapped with heat cable as required.
- (12) Electrical Contractor shall provide and install the main power to each disconnect, and shall also interwire power from the defrost time clock to the freezer blower coil. Control and thermostat wiring shall be included as part on electrical contract.
- (13) The Supplier will be required to supervise and instruct the Plumber and Electrician in their work of connection. Units shall comply in all respects to design drawings and any discrepancies noted during the bidding process shall be immediately noted to the Consultant for interpretation and action. No extras will be considered after the bidding process for not following the above procedures.
- (B) Walk-ins are to be running and adjusted a minimum of 24 hours prior to the loading of product. Freezers are to be cooled down in stages over a 12 hour period to -10° F.

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3.13 HOOD INSTALLATION

Hood permit, hanging hood, hood installation, all ductwork, setting fans and curbs, patching, all electrical field wiring, start-up & balance, gas or electric shutdown for fire hook-up shall be the responsibility of the General Contractor's Mechanical Contractor.

PART 4 EXECUTION

4.1 OPENING ACCESS

- (A) Coordinate with other contractors for provision and scheduling of temporary openings in walls or floors which may be required for passing large sections of equipment into the building that cannot be accommodated through permanent openings.

4.2 INSTALLATION

- (A) General: Make arrangements for receiving food service equipment and make delivery into the building as requisitioned by installation superintendent. Equipment shall be delivered only after the building is weather and vandal safe.
- (B) Deliver all equipment into the building, uncrate, assemble, level and repair any damaged or abraded surfaces. Set equipment temporarily in its final location to permit mechanical trades to take necessary measurements for the connection of the service lines. Move the equipment sufficiently to permit the installation of such service lines and anchoring devices and then realign equipment level and plumb. Install all equipment so as to eliminate objectionable vibration.

4.3 CLEANING

- (A) At all times, keep the premises free from accumulations of waste materials and rubbish caused by the work.
- (B) Wrapping and protective coverings shall remain on all items until installation is complete and job is ready for cleaning.
- (C) Clean all equipment items provided under this contract prior to inspection and acceptance of the work.

PART 5 BIDDING

- (A) Bids shall consist of itemized prices, including costs for freight, installation and taxes.

PART 6 WARRANTY SERVICE

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The Food Service Equipment Contractor shall, for a period of one year, provide the owner with warranty service during business hours (8:30-5:00) for all food service equipment installed. He shall dispatch service calls to the appropriate manufacturer's authorized service agents and ensure service is performed and completed within 24 hours. He shall maintain logs and records of all service calls, completion dates, serial numbers, parts replacement and any other service related information.

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Bid Form

07/23/2018

Project:
Sun N Lake - Equipment Specs
5223 Sun N Lake Boulevard
PH: 239-707-2445
Sebring, Florida 33872

From:
Fishman & Assoc. Inc.
C.J. Fishman
143 E. Miami Ave.
Venice, FL 34285-2430
(941)484-8800

Item	Qty	Description
K01	1 ea	48" RECEIVING DOOR General Contractor Model No. 48" RECEIVING DOOR By G.C.
K02	1 ea	AIR CURTAIN Mars Air Systems Model No. STD248-1UA-0B Standard Series 2 Air Curtain, for 48" wide door, Unheated, 115v/60/1-ph, Obsidian Black powder coated cabinet (Standard Production Color)
	1 ea	5 year warranty, standard
	1 ea	99-014 Steel Mechanical Universal Surface-mounted Plunger/Roller Switch
K03	1 ea	MOP SINK CABINET Advance Tabco Model No. 9-OPC-84DR Cabinet with Mop Sink, 50-3/8"W x 22-5/8"D x 84"H, double hinged doors, 12" deep mop sink in base on right, storage for mop bucket to roll in on left, (2) mop holders, (4) fixed intermediate shelves (3 on left, 1 on right above sink), slotted side panels for ventilation, stainless steel construction (cabinet type 400, mop sink type 300)
	1 ea	K-240 Service Sink Faucet, wall mount, 8" OC, 6-1/2" spout, with hose thread & pail hook, vacuum breaker spout, wall braced, chrome-plated brass
	1 ea	Note: This faucet is not intended for potable water use
K04	1 lt	DRY STORAGE SHELVING Metro Model No. DRY STORAGE SHELVING Packed It One lot of dry storage shelving consisting of the following: 24 ea 2460NC Super Erecta® Shelf, wire, 60"W x 24"D, chrome plated finish, plastic split sleeves are included in each carton, NSF 4 ea 2436NC Super Erecta® Shelf, wire, 36"W x 24"D, chrome plated finish, plastic split sleeves are included in each carton, NSF 28 ea 74P Super Erecta® SiteSelect™ Post, 74-1/2"H, adjustable leveling bolt, posts are grooved at 1" increments & numbered at 2" increments, double grooved every 8", chrome finish
K05	4 ea	RACK DOLLY Metro Model No. D2020N Dish Rack Dolly, platform design, single stack, designed for 20" x 20" racks, 5" heavy duty, non-marking, resilient tread swivel casters, corner bumpers, all aluminum construction, without handle
K06	1 ea	BANQUET WALK-IN COOLER

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Item	Qty	Description
		American Panel Corporation Model No. WALK IN COOLER Banquet Walk In Cooler - 8'11" Width 9'5" Depth 8'6 1/2" High, INT/EXT finish: 26 GAUGE MILL EMBOSSSED ACRYLUME (walls and ceiling), INT finish: 080 SMOOTH ALUMINUM - NSF APPROVED EXT FINISH: STANDARD (floor), 34 X 78 UL COOLER DOOR (IN-FITTING, SELF CLOSING, FLUSH MOUNTED & MAGNETIC) INT:26 GAUGE ACRYLUME, EXT:26 GAUGE ACRYLUME with 36" high diamond tread kickplate INT/EXT, LED Vapor Light, 6' probe for 24DT-L4F1-B.
		REMOTE PREASSEMBLED, 208-230/1/60, R404A Refrigerant.
		With the following accessories: 1 - Air Curtain, Plastic Strip (up to 41" x 80" door) 1 - 34" Interior Ramp
K07		EVAPORATOR COIL Walk-in cooler evaporator coil
K08		REMOTE CONDENSING UNIT Preassembled remote medium temperature condensing unit with winter controls, UL listed covers and stand. NOTE: Architect to locate.
K09		BANQUET WALK-IN FREEZER Banquet Walk-in Freezer - 8'11" Width 5'9" Depth 8'6 1/2" High, INT/EXT finish: 26 GAUGE MILL EMBOSSSED ACRYLUME (walls and ceiling), INT finish: 080 SMOOTH ALUMINUM - NSF APPROVED EXT FINISH: STANDARD (floor), 34 X 78 UL FREEZER DOOR W/PRV (IN-FITTING, SELF CLOSING, FLUSH MOUNTED & MAGNETIC) INT:26 GAUGE ACRYLUME, EXT:26 GAUGE ACRYLUME with 36" high diamond tread kickplate INT/EXT, LED Vapor Light, 6' probe for 24DT-L4F1-B.
		REMOTE PREASSEMBLED, 208-230/1/60, R404A Refrigerant. NOTE: Priced with Item K06.
K10		EVAPORATOR COIL Walk-in freezer evaporator coil
K11		REMOTE CONDENSING UNIT Preassembled remote low temperature condensing unit with winter controls, UL listed cover and stand. NOTE: Architect to locate.
K12	7 ea	BUN / SHEET PAN RACK Advance Tabco Model No. PR18-3W-1X Pan Rack, mobile, full height, end loading, 20-1/4"W x 26"D x 63-1/4"H, (18) 18" x 26" sheet pan capacity, slides on 3" centers, open sides, all-welded aluminum construction, 5" swivel casters, NSF
K13	1 lt	WALK IN FREEZER SHELVING Metro Model No. WALK IN FREEZER SHELVING Packed It One lot of walk in freezer shelving consisting of the following: 16 ea 1830NK3 Super Erecta® Shelf, wire, 30"W x 18"D, plastic split sleeves are included in each carton, Metroseal 3™ epoxy-coated corrosion-

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Item	Qty	Description
16 ea		resistant finish with Microban® antimicrobial protection, NSF 74PK3 Super Erecta® SiteSelect™ Post, 74-1/2"H, adjustable leveling bolt, posts are grooved at 1" increments & numbered at 2" increments, double grooved every 8", Metroseal 3 epoxy coated corrosion-resistant finish with Microban® antimicrobial protection
4 ea		1848NK3 Super Erecta® Shelf, wire, 48"W x 18"D, plastic split sleeves are included in each carton, Metroseal 3™ epoxy-coated corrosion-resistant finish with Microban® antimicrobial protection, NSF
4 ea		63PK3 Super Erecta® SiteSelect™ Post, 62-7/16"H, adjustable leveling bolt, posts are grooved at 1" increments & numbered at 2" increments, double grooved every 8", Metroseal 3 epoxy coated corrosion-resistant finish with Microban® antimicrobial protection
K14		SPARE NO.
K15	1 ea	MEAT AND DAIRY WALK IN COOLER EXISTING Model No. MEAT AND DAIRY WALK IN COOLER Existing; Relocated
K16		EVAPORATOR COIL Existing; Relocated
K17		REMOTE CONDENSING UNIT Existing; Relocated
K18		MEAT AND DAIRY WALK-IN FREEZER Existing; Relocated
K19		EVAPORATOR COIL Existing; Relocated
K20		REMOTE CONDENSING UNIT Existing; Relocated
K21	1 lt	COOLER AND FREEZER SHELVING EXISTING Model No. COOLER AND FREEZER SHELVING Packed It Existing; Relocated
K22		SPARE NO.
K23	1 ea	DISH CART / DOLLY Metro Model No. PCD11A Poker Chip Dish Dolly, 26-5/8"W x 26-5/8"D x 31-15/16"H, adjustable, dish size 4-1/4" to 11-3/4", removable dividers & towers, two-handed access, recessed handles, 5" dia. swivel casters with neoprene wheels (2 with brakes), chip-resistant polymer shell with Microban® antimicrobial protection, aesthetic blue, vinyl dust/water splash cover, NSF
K24	1 ea	PRODUCE WALK IN COOLER EXISTING Model No. PRODUCE WALK IN COOLER Existing; Relocated
K25		EVAPORATOR COIL Existing; Relocated
K26		REMOTE CONDENSING UNIT Existing; Relocated
K27		PRODUCE WALK-IN FREEZER

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Item	Qty	Description
		Existing; Relocated
K28		EVAPORATOR COIL Existing; Relocated
K29		REMOTE CONDENSING UNIT Existing; Relocated
K30	1 lt	COOLER AND FREEZER SHELVING EXISTING Model No. COOLER AND FREEZER SHELVING Packed It Existing; Relocated
K31		SPARE NO.
K32		SPARE NO.
K33	1 ea	PIZZA PREPARATION REFRIGERATOR Continental Refrigerator Model No. CPA93 Pizza Prep Table, 93" wide, three-section, 32.0 cu ft capacity, forced air, #300 stainless steel work top with 19" poly cutting board, (3) full & (1) half height field rehingable doors, stainless steel front and end panels, aluminum interior, electronic controller with digital display, 5" swivel casters, side-mounted refrigeration, 1/2 hp, cETLus, NSF, Made in USA 1 ea Standard warranty (for the United States & Canada Only): 3 year parts and labor; 5 year compressor 1 ea 115v/60/1-ph, 14.4 amps, cord, NEMA 5-15P, standard 1 ea Condensing unit on the right, standard 1 ea 4-916 Electric Condensate Evaporator, automatic, 115v/60/1 with cord & plug 1 ea Stainless steel finished back 1 ea 5" Swivel Casters standard 1 ea DOS93 Double overselves for 92-1/4" models
K34	1 ea	LETTUCE CRISPER Glastender Model No. LC Refrigerated Lettuce Crisper, wall mount, 24"W x 24"D, self-contained refrigeration, holds (50) heads of shredded lettuce, digital thermostat control with automatic defrost, hinged front door, lettuce chute with lift-up stainless steel, removable plastic bin with stainless steel divider, automatic condensate evaporator, includes wall bracket, stainless steel front, sides, & interior, R134a, 1/8 HP, cETLus, ETL-Sanitation 1 ea 1 year parts & labor warranty, 5 year compressor warranty 1 ea 120v/60/1-ph 3.0 amps, cord with NEMA 5-15P, standard 1 ea (R) Door hinged right, standard
K35	1 ea	S/S PREP COUNTER Custom Model No. S/S PREP COUNTER S/S Prep Counter with Prep Sink, with built-in hand sink (Item K36) and undershelf, all welded construction, size per plan. 1 ea Fisher 3313 Faucet, 8" c/c deck mount, mixing valve, 12" swing spout, with 1/2" inlets
K36	1 ea	S/S BUILT-IN HAND SINK

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WE HEREBY CERTIFY THAT THE INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS A CONDITION OF THE BIDDING PROCESS AND IS SUBJECT TO THE TERMS AND CONDITIONS OF THE BIDDING DOCUMENTS. ANY FALSIFICATION OF THIS INFORMATION WILL BE CONSIDERED A VIOLATION OF THE BIDDING DOCUMENTS AND WILL BE SUBJECT TO THE PENALTIES THEREIN. THE BIDDING DOCUMENTS SHALL BE THE FINAL AUTHORITY IN THE EVENT OF A DISCREPANCY BETWEEN THIS CERTIFICATION AND THE BIDDING DOCUMENTS. THE BIDDING DOCUMENTS SHALL BE THE FINAL AUTHORITY IN THE EVENT OF A DISCREPANCY BETWEEN THIS CERTIFICATION AND THE BIDDING DOCUMENTS. THE BIDDING DOCUMENTS SHALL BE THE FINAL AUTHORITY IN THE EVENT OF A DISCREPANCY BETWEEN THIS CERTIFICATION AND THE BIDDING DOCUMENTS.

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CONSULTANT

REVISIONS

ADDITIONS & ALTERATIONS TO
SUN 'N LAKE GOLF CLUB
FLORIDA
SEBRING,

DATE
08/27/2018

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CS18068

SHEET NO.

SP-1.6

Item	Qty	Description
		Custom Model No. S/S HAND SINK
		S/S Hand Sink, built into S/S Prep Table (Item K35), with side splashes, all welded construction, size per plan.
1 ea		Fisher 3515 Faucet, 4" c/c deck mount, mixing valve, 12" swing gooseneck spout, with 1/2" inlets NOTE: Soap and towel dispensers provided by others.
K37	2 ea	S/S OVERSHELF Custom Model No. S/S OVERSHELF S/S Overshelf, wall mounted, size per plan.
K38	1 ea	S/S SLICER TABLE Custom Model No. S/S SLICER TABLE S/S Slicer Table, mobile, with undershelf, all welded construction, size per plan.
K39	1 ea	SLICER EXISTING Model No. SLICER Existing; Relocated
K40		SPARE NO.
K41	2 ea	S/S BANQUET PREP TABLE Custom Model No. S/S BANQUET PREP TABLE S/S Banquet Prep Table, mobile, with undershelf, all welded construction, size per plan.
K42	10 ea	DECORATIVE LAMP Hato Model No. DLH-725 Decorative Heat Lamp, High Wattage, (1) bulb type (not included), 8-1/2" H x 9-1/2" Dia. shade, 375 watt max, CE, cULus, UL EPH Classified, ANSI/NSF 4, Made in USA
	10 ea	120v/60/1-ph, 375 watt, standard
	10 ea	WHITE-CTD-120H Lamp Bulb, 375 Watt clear, coated
	10 ea	SPECIFY MUST SPECIFY designer color selected from list of standard colors and indicated on order (Available at time of purchase only)
	10 ea	Color to match unit finish
	10 ea	RT Mounting Style - Retractable mount to track adapter (specify cord and track color) - retractable cord mount to track adapter, adjusts from 33-3/8" to 71-7/8" (Available at time of purchase only)
	10 ea	R Switch Location - Remote (Available at time of purchase only)
	10 ea	DL-CORD-WHITE White Cord, (CL, CU, CT, RL, mounts only), (black is standard) (Available at time of purchase only)
	2 ea	DL-TRACK-8W Track Mount Bar, 8", white
	10 ea	DL-ADAPT-WHITE White Track Adapter, (CT, RT, ST mounts only), standard NOTE: Additional costs apply for plated finishes. Color and finish to be determined.
K43	1 ea	BAG-N-BOX Vendor Model No. BAG-N-BOX SODA SYSTEM Provided by Owner's Vendor.
K44	4 ea	MOBILE HEATED CABINET Alto-Shaam Model No. 1000-UP

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Item	Qty	Description
		Halo Heat® Heated Holding Cabinet, mobile, double-compartment, on/off simple control with adjustable thermostats, insulated, capacity for (8) 18" x 26" x 1" sheet pans in each compartment, heavy-duty stainless steel exterior and interior, 5" heavy-duty casters; 2 rigid, 2 swivel with brake, EcoSmart®, cULus, UL EPH ANSI/NSF 4, CE, IP X4, TUV NORD
4 ea		120v/60/1-ph, 16.0 amps, 1.9kW, 9' cord, NEMA 5-20P
8 ea		Solid door, hinged on right, standard
K45	4 ea	WIRE SHELVING Metro Model No. 2442NK3 Super Erecta® Shelf, wire, 42"W x 24"D, plastic split sleeves are included in each carton, Metroseal 3™ epoxy-coated corrosion-resistant finish with Microban® antimicrobial protection, NSF
4 ea		74UPK3 Super Erecta® SiteSelect™ Post, 73-7/8"H, for use with stem casters, Metroseal 3 epoxy coated corrosion-resistant finish with Microban® antimicrobial protection
2 ea		5M Super Erecta® Stem Caster, swivel, 5" diameter, 1-1/4" face, resilient wheel tread, with donut bumpers, 200 lb. capacity
2 ea		5MB Super Erecta® Stem Caster, brake (foot operated), 5" diameter, 1-1/4" face, flat resilient wheel tread, with donut bumpers, 200 lb. capacity, brakes are foot operated
K46	1 ea	CO2 Vendor Model No. CO2 Provided by Owner's Vendor.
K47		SPARE NO.
K48	2 ea	GAS FLOOR FRYER Vulcan Model No. 1GB35M Fryer, gas, 15-1/2" W, free-standing, 35-40 lb. capacity, millivolt thermostat controls, twin baskets, stainless steel cabinet and fry tank, adjustable casters (2 swivel locking & 2 non-locking), 90,000 BTU, CSA, NSF
2 ea		1 year limited parts & labor warranty, standard
2 ea		10 year limited tank warranty, standard
2 ea		Natural Gas
2 ea		Dormont 1675KIT2S48PS Dormont Blue Hose™ Moveable Gas Connector Kit, 3/4" inside dia., 48" long, covered with stainless steel braid, coated with blue antimicrobial PVC, 1 SnapFast® QD, 2 Swivel MAX®, 1 full port valve, 1 pair Safety Set® with adhesive foam tape and hardware mounting options, limited lifetime warranty
K49	1 ea	S/S FLOOR TROUGH Custom Model No. S/S FLOOR TROUGH S/S Floor Trough, with subway grating on top, all welded construction, size per plan.
K50	1 ea	TILTING SKILLET BRAISING PAN, GAS Vulcan Model No. VG40 Braising Pan, Gas, 40-gallon capacity, 46" wide open base, manual tilt, 9" deep stainless steel pan with gallon markings, pouring lip & removable strainer, spring assist cover with drip edge, pan holder,

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Item	Qty	Description
		thermostatic control, includes 1 faucet bracket, electric ignition, 12" stainless steel legs with adjustable flanged feet, 120,000 BTU
1 ea		1 year limited parts & labor warranty, standard
1 ea		Natural Gas
1 ea		120v/60/1-ph, 9.0 amps, standard
1 ea		SGLTS 12NZL SINGLE Pantry Deck-Mount Faucet, 12" swivel spout, includes 4" and 12" riser, NSF and Lead Reduction Compliant
1 ea		Dormont 1675BP48 Dormont Blue Hose™ Moveable Gas Connector Hose, 3/4" inside dia., 48" long, covered with stainless steel braid, coated with blue antimicrobial PVC, 225,000 BTU/hr minimum flow capacity, limited lifetime warranty
K51	1 ea	HD RANGE, 36", 6 OPEN BURNERS Vulcan Model No. V6B36S V Series Heavy Duty Range, gas, 36", (6) 35,000 BTU open burners, cast iron grates, standard oven, stainless steel front, front top ledge, sides, base, burner box & stub back, 6" adjustable legs, 260,000 BTU, CSA, NSF
1 ea		1 year limited parts & labor warranty, standard
1 ea		Natural Gas
1 ea		1-1/4" rear gas connection, standard
1 ea		Rear gas connection: cap and cover, both ends
1 st		CASTERS RR4 Casters (set of 4)
1 ea		Dormont 16125KIT2S48PS Dormont Blue Hose™ Moveable Gas Connector Kit, 1-1/4" inside dia., 48" long, covered with stainless steel braid, coated with blue antimicrobial PVC, 1 SnapFast® QD, 2 Swivel MAX®, 1 full port valve, 1 pair Safety Set® with adhesive foam tape and hardware mounting options, limited lifetime warranty
K52	1 ea	COMBI OVEN, GAS RATIONAL Model No. B628206.19E (QUICK SHIP) (SCC 62NG) SelfCooking Center® Combi Oven/Steamer, natural gas, iCookingControl with 7 modes, HiDensityControl®, iLevelControl, Efficient CareControl, Combi-Steamer with 3 modes, (6) 18"x26" or (12) 12"x20" pan capacity, core temp probe with 6 point measurement, hand shower with automatic retracting system, ships with (3) grid shelves, ethernet interface, 208v/60/1-ph, 8'cord, NEMA 6-15P, 106,000 BTU (dual voltage: retrofitable to 240v/60/1-ph, 106,000 BTU) ENERGY STAR®
1 ea		2 years parts and labor warranty
1 ea		CAP Chef Assistance Program, a RATIONAL certified Chef conducts 4 hours/location specialized application training with personnel, no charge
1 ea		9999.9951 RCI Rational Certified Installation, new certified installation cost for a countertop model is \$1000 for the first unit (61/62/101/102) (Pricing based on a 50 mile radius, Additional charges may apply, See attached installation flyer for details) THIS ITEM IS NON-DISCOUNTABLE, USA ONLY (NET)
1 ea		9999.9812 Pre-Installation Site Survey, ensures that the site has proper space and connections for gas, electric, drain & water, includes 50 miles (100 miles round trip) from the installer, can only be purchased

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Item	Qty	Description
		with a Certified Installation, THIS ITEM IS NON-DISCOUNTABLE, USA ONLY (NET)
1 ea		8720.15600S Installation Kit, for gas SCC WE/CMP 101G (120/60/1ph); gas SCC WE/CMP 62G (208-240/60/1ph); gas SCC WE/CMP 61G (120/60/1ph) THIS ITEM IS NON-DISCOUNTABLE, USA ONLY (NET)
1 ea		Door hinged on right std.
1 ea		60.70.392 Heat Shield, for left side panel, for SCC 62/CMP 62 series
1 ea		60.30.324 UG I Stationary Oven Stand, all sides open, height 26-3/8", stainless steel construction, for SCC 62/CMP 102 series
K53	1 ea	CONVECTION OVEN, GAS Vulcan Model No. VC44GD Convection Oven, gas, double-deck, standard depth, solid state controls, electronic spark igniters, 60 minute timer, 8" high legs, stainless steel front, top and sides, stainless steel doors with windows, 50,000 BTU each section, NSF, CSA Star, CSA Flame, ENERGY STAR®
1 ea		1 year limited parts & labor warranty, standard
1 ea		Natural gas
1 ea		(2) 120v/60/1-ph, (2) 1/2 HP, 16.0 amps total, (2) 6' cords with plugs, NEMA 5-15P, standard
1 ea		Gas manifold piping included with stacking kit to provide single point gas connection NOTE: Units are not to be manifolded
1 st		Castors, set of (4) in lieu of standard legs
1 ea		Dormont 1675KITS48PS Dormont Blue Hose™ Moveable Gas Connector Kit, 3/4" inside dia., 48" long, covered with stainless steel braid, coated with blue antimicrobial PVC, 1 SnapFast® QD, 1 Swivel MAX®, 1 full port valve, 1 elbow, 1 pair Safety Set® with adhesive foam tape and hardware mounting options, limited lifetime warranty
1 ea		Dormont 1675KITS48 Dormont Blue Hose™ Moveable Gas Connector Kit, 3/4" inside dia., 48" long, covered with stainless steel braid, coated with blue antimicrobial PVC, 1 SnapFast® QD, 1 Swivel MAX®, 1 full port valve, 1 elbow, coiled restraining cable with hardware, 167,000 BTU/hr minimum flow capacity, limited lifetime warranty
K54	1 ea	COOK HOLD OVEN CABINET SMOKER, ELECTRIC Alto-Shaam Model No. 1200-SK/III Halo Heat® Slo Cook and Smoker Oven, electric, low-temperature, double-deck, standard depth, 120 lb. capacity each - (1) rib rack shelf per compartment, (3) full-size pans, deluxe controller, (2) stainless steel wire shelves, (1) exterior drip tray, includes (1) sample bag each of cherry, hickory, apple & maple wood chips, heavy-duty stainless steel, 5" casters; 2 rigid, 2 swivel with brakes, EcoSmart®, cULus, UL EPH ANSI/NSF 4, CE, IP X4, TUV NORD
1 ea		208-240v/60/1-ph, 32.0-36.3 amps, 7.7-8.7 kW (NO cord or plug)
1 ea		Solid Door, hinged on right, standard
1 ea		Stainless steel exterior, standard
K55	1 ea	EXHAUST HOOD Captive-Aire Model No. 3240528

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Item	Qty	Description
		S/S Exhaust Hood with Make-Up Air, 10' 0" long O.A., consisting of the following components to be provided by the F.S.E.C. and installed by the Mechanical Contractor:
		-One hood sections
		-Stainless Steel Captrate Solo Filter(s)
		-Compact Fluorescent lights
		-Grease cup
		-Exhaust Riser(s)
		-Field wrapper (left, front and right sides, as necessary)
		-Fire suppression system cabinet located on LEFT side of hood section as shown on plans.
		-Prewired electrical package factory installed in utility cabinet for Exhaust fan(s), Supply Fan(s), Audible alarm, Exhaust on in Fire Condition and Lights out in Fire Condition (INCLUDES SPARE WIRING TERMINAL(S) FOR FIELD WIRING TO BUILDING FIRE PANEL AND ELECTRIC EQUIPMENT OFF IN FIRE CONDITION)
		-Pre-piped Wet Chemical Fire Suppression System with detection, control head, microswitches and remote pull station.
		-Gas Valve: Up to 2" mechanical shut-off valve.
		-Exhaust Fan(s)
		-Exhaust Fan Curb(s)
		-Supply Fan(s)
		-Supply Fan Curb(s)
		-PSP supply plenum
		NOTE: Hood permit, hanging hood, hood installation, all ductwork, setting fans and curbs, patching, all electrical field wiring, start-up & balance, gas or electric shutdown for fire hook-up shall be the responsibility of the Mechanical Contractor.
		NOTE: Please refer to the Captive-Aire hood detail drawing(s) (Sheet FS-H1 through FS-H6) in the Food Service Equipment set of plans for further details.
		NOTE: Priced with Item K78.
K56	1 ea	FIRE SUPPRESSION SYSTEM Captive-Aire Model No. ANSUL Wet chemical fire suppression system, pre-piped into hood(s) with chrome nozzles, pull station, detection, up to 2" mechanical gas valve, permit, certification and ONE test. NOTE: Priced with Item K78.
K57	1 ea	WALL FLASHING Captive-Aire Model No. WALL FLASHING Provided by F.S.E.C and installed by G.C.
K58		SPARE NO.
K59		SPARE NO.
K60	1 ea	S/S CLEAN DISHTABLE WITH 3-COMPARTMENT SINK BUILT IN Custom Model No. S/S CLEAN DISHTABLE WITH 3-COMPARTMENT SINK

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Item	Qty	Description
		BUILT IN
		S/S Clean Dishtable with 3-Compartment Sink Built In, with S/S bowl covers and rack slides, lever wastes, 10" rear backsplash and front and side rolled edge, all welded construction, size and shape per plan.
1 ea		Fisher 3253 Faucet, wall mount, 8" adjustable centers, 12" swing spout, 1/2" inlets
1 ea		Fisher 2210-WB Pre-Rinse Assembly, 8" adjustable centers, wall-mounted mixing valve, with spring action flexible gooseneck, with Ultra-Spray™/PLUS spray valve (1.15 gallons per minute @ 60 PSI), with wall bracket
K61	1 ea	CONDENSATE HOOD Captive-Aire Model No. CONDENSATE HOOD 4824VHB-G - 7ft 0" Long Condensate Hood, w/ Full Perimeter Gutter, 304 SS - 100% Application, EXHAUST RISER - Factory installed 10" X 10" X 4", FIELD WRAPPER 18.00" High Front, Left, Right. NOTE: Priced with Item K78.
K62	1 ea	DISHWASHER, CONVEYOR TYPE Hobart Model No. CL44EN-BAS+BUILDUP Conveyor Dishwasher, single tank, (202) racks/hour, insulated hinged doors, .62 gallon/rack, stainless steel enclosure panels, microprocessor controls with low temperature & dirty water indicators, ENERGY STAR®
1 ea		Standard warranty - 1-Year parts, labor & travel time during normal working hours within the USA
1 ea		CL44EN-BASELE0AX 208v/60/3-ph, electric heat only
1 ea		CL44EN-BASHE15K Electric tank heat 15KW
1 ea		CL44EN-BASERH30K 30KW electric booster
1 ea		CL44EN-BASDIR0RL Right to left operation
1 ea		CL44EN-BASHGHTS Higher than standard
1 ea		CL44EN-BASFETSTD Standard feet
1 ea		NOTE: For water over 3-grains of hardness, Hobart suggests adding a water softener.
1 ea		DWTCLE Drain water tempering kit for CLE models
1 ea		Installation of DWT kit only (NET)
K63	1 ea	S/S SOILED DISHTABLE WITH DOUBLE SIDED GLASS RACK SHELF Custom Model No. S/S SOILED DISHTABLE S/S "L-shaped" Soiled Dishtable, with 10" rear backsplash and front and side rolled edge, rack slide and scrap basket, all welded construction, size and shape per plan.
1 ea		Fisher 2210-WB Pre-Rinse Assembly, 8" adjustable centers, wall-mounted mixing valve, with spring action flexible gooseneck, with Ultra-Spray™/PLUS spray valve (1.15 gallons per minute @ 60 PSI), with wall bracket
K64	1 ea	S/S DOUBLE GLASS RACK OVERSHELVES Custom Model No. S/S DOUBLE GLASS RACK OVERSHELVES S/S Double Glass Rack Overshelves, mounted to Soiled Dishtable (Item K63), all welded construction, size per plan.
K65	1 ea	GARBAGE CAN ON CASTERS

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CONSULTANT

REVISIONS
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ADDITIONS & ALTERATIONS TO
SUN 'N LAKE GOLF CLUB
FLORIDA
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DATE
08/27/2018

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CS18068

SHEET NO.

SP-1.7

Item	Qty	Description
		Owner Model No. GARBAGE CAN ON CASTERS By Owner
K66		SPARE NO.
K67		SPARE NO.
K68	4 ea	WIRE SHELVING Metro Model No. 2442NK3 Super Erecta® Shelf, wire, 42"W x 24"D, plastic split sleeves are included in each carton, Metroseal 3™ epoxy-coated corrosion-resistant finish with Microban® antimicrobial protection, NSF
	4 ea	74UPK3 Super Erecta® SiteSelect™ Post, 73-7/8"H, for use with stem casters, Metroseal 3 epoxy coated corrosion-resistant finish with Microban® antimicrobial protection
	2 ea	5M Super Erecta® Stem Caster, swivel, 5" diameter, 1-1/4" face, resilient wheel tread, with donut bumpers, 200 lb. capacity
	2 ea	5MB Super Erecta® Stem Caster, brake (foot operated), 5" diameter, 1-1/4" face, flat resilient wheel tread, with donut bumpers, 200 lb. capacity, brakes are foot operated
K69	1 ea	S/S BEVERAGE COUNTER Custom Model No. S/S BEVERAGE COUNTER S/S Beverage Counter, with 4" backsplash, accommodation for Glass Rack Dollies (Item K05) and existing Soda Unit (Item K71), 12" side splash next to soda and ice dispenser, all welded construction, size per plan.
K70	2 ea	POS Owner Model No. POS By Owner
K71	1 ea	SODA UNIT EXISTING Model No. SODA UNIT Existing; Relocated
K72	1 ea	COFFEE BREWER EXISTING Model No. COFFEE BREWER Existing; Relocated
K73	1 ea	ICED TEA BREWER EXISTING Model No. ICED TEA BREWER Existing; Relocated
K74	1 ea	REACH-IN REFRIGERATOR Continental Refrigerator Model No. 1R Refrigerator, reach-in, one-section, 20 cu. ft., self-contained refrigeration, stainless steel front, aluminum interior & ends, standard depth, full-height solid door, electronic controller w/ digital display, electric condensate evaporator, 5" casters, 1/4 hp, cETLus, NSF, Made in USA
	1 ea	Standard warranty (for the United States & Canada Only): 3 year parts and labor; 5 year compressor
	1 ea	115v/60/1-ph, 5.5 amps, cord, NEMA 5-15P, standard
	1 ea	Door hinged on right, standard
	1 ea	5" Casters, standard

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Item	Qty	Description
K75		SPARE NO.
K76		SPARE NO.
K77	2 ea	HAND SINK Advance Tabco Model No. 7-PS-50 Hand Sink, wall mounted, 14" wide x 10" front-to-back x 5" deep bowl, 20 gauge 304 stainless steel, with splash mounted faucet, lever drain with overflow, P-trap, wall bracket, NSF, cCSAus NOTE: Soap and towel dispenser by others
K78	1 ea	EXHAUST HOOD Captive-Aire Model No. 3240528 S/S Exhaust Hood with Make-Up Air, 20' 11" long O.A., consisting of the following components to be provided by the F.S.E.C. and installed by the Mechanical Contractor: -Two hood sections -Stainless Steel Captrate Solo Filter(s) -Compact Fluorescent lights -Grease cup -Exhaust Riser(s) -Field wrapper (left, front and right sides, as necessary) -Fire suppression system cabinet located on LEFT side of hood section as shown on plans. -Prewired electrical package factory installed in utility cabinet for Exhaust fan(s), Supply Fan(s), Audible alarm, Exhaust on in Fire Condition and Lights out in Fire Condition (INCLUDES SPARE WIRING TERMINAL(S) FOR FIELD WIRING TO BUILDING FIRE PANEL AND ELECTRIC EQUIPMENT OFF IN FIRE CONDITION) -Pre-piped Wet Chemical Fire Suppression System with detection, control head, microswitches and remote pull station. -Gas Valve: Up to 2" mechanical shut-off valve. -Exhaust Fan(s) -Exhaust Fan Curb(s) -Supply Fan(s) -Supply Fan Curb(s) -PSP supply plenum NOTE: Hood permit, hanging hood, hood installation, all ductwork, setting fans and curbs, patching, all electrical field wiring, start-up & balance, gas or electric shutdown for fire hook-up shall be the responsibility of the Mechanical Contractor. NOTE: Please refer to the Captive-Aire hood detail drawing(s) (Sheet FS-HJ through FS-H6) in the Food Service Equipment set of plans for further details.
K79	1 ea	FIRE SUPPRESSION SYSTEM Captive-Aire Model No. ANSUL Wet chemical fire suppression system, pre-piped into hood(s) with chrome nozzles, pull station, detection, up to 2" mechanical gas valve, permit, certification and ONE test.

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Item	Qty	Description
		NOTE: Priced with Item K78.
K80	1 ea	WALL FLASHING Captive-Aire Model No. WALL FLASHING Provided by F.S.E.C and installed by G.C.
K81	2 ea	GAS FLOOR FRYER Vulcan Model No. 1GR35M Fryer, gas, 15-1/2" W, free-standing, 35-40 lb. capacity, millivolt thermostat controls, twin baskets, stainless steel cabinet and fry tank, adjustable casters (2 swivel locking & 2 non-locking), 90,000 BTU, CSA, NSF
	2 ea	1 year limited parts & labor warranty, standard
	2 ea	10 year limited tank warranty, standard
	2 ea	Natural Gas
	2 ea	VSPGARD-G/E Removable Splash Guard, 10", stainless steel, for 35, 45, 50 & 65 lb. fryers
	2 ea	Dormont 1675KIT2548PS Dormont Blue Hose™ Moveable Gas Connector Kit, 3/4" inside dia., 48" long, covered with stainless steel braid, coated with blue antimicrobial PVC, 1 SnapFast® QD, 2 Swivel MAX®, 1 full port valve, 1 pair Safety Set® with adhesive foam tape and hardware mounting options, limited lifetime warranty
K82	1 ea	EQUIPMENT STAND, REFRIGERATED BASE True Manufacturing Co., Inc. Model No. TRCB-82-84 Refrigerated Chef Base, 82-3/8"L base, 84"L one-piece 300 series 18 gauge stainless steel top with V edge, stainless steel front/sides, aluminum back, aluminum interior with stainless steel floor, (4) drawers [left drawer accommodates (3) and right drawer accommodates (2) 12"x20"x4" pans, NOT included], 4" castors, 1/3 HP, 115v/60/1, 10.3 amps, NEMA 5-15P, cULus, UL EPH Classified, CE, MADE IN USA
	1 ea	Self-contained refrigeration standard
	1 ea	Warranty - 5 year compressor (self-contained only), please visit www.Truemfg.com for specifics
	1 ea	Warranty - 3 year parts and labor, please visit www.Truemfg.com for specifics
	1 ea	Flat top option (no marine edge)
	1 ea	4" Castors, standard
K83	1 ea	CHARBROILER, GAS, COUNTERTOP Vulcan Model No. VACB36 Achiever Charbroiler, countertop, 36", (6) 17,000 BTU cast iron burners, infinite heat control valves, fully welded chassis, (1) drip tray, stainless steel front, sides & top trim, backsplash & grease trough, 4" adjustable legs, 102,000 BTU, CSA, NSF
	1 ea	1 year limited parts & labor warranty, standard
	1 ea	Natural Gas
	1 ea	Dormont 1675KITS48PS Dormont Blue Hose™ Moveable Gas Connector Kit, 3/4" inside dia., 48" long, covered with stainless steel braid, coated with blue antimicrobial PVC, 1 SnapFast® QD, 1 Swivel MAX®, 1 full port valve, 1 elbow, 1 pair Safety Set® with adhesive foam tape

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Item	Qty	Description
		and hardware mounting options, limited lifetime warranty
K84	1 ea	GAS COUNTERTOP GRIDDLE Vulcan Model No. VCCG48-AS Heavy Duty Griddle, countertop, gas, 48" W x 24" D cooking surface, 1" thick steel plate, (4) burners, solid state thermostat every 12", atmospheric type "U" shaped aluminized steel burners, electronic spark ignition & pilot protection, wire knob guards, (1) drawer, stainless steel front, sides, front top ledge, front grease trough, 4" back & tapered side splashes, 4" adjustable legs, 120,000 BTU, NSF, CSA
	1 ea	1 year limited parts & labor warranty, standard
	1 ea	Natural Gas
	1 ea	120v/50/60/1-ph, 2 amp, NEMA 5-15P
	1 ea	Dormont 1675KIT2548 Dormont Blue Hose™ Moveable Gas Connector Kit, 3/4" inside dia., 48" long, covered with stainless steel braid, coated with blue antimicrobial PVC, 1 SnapFast® QD, 2 Swivel MAX®, 1 full port valve, coiled restraining cable with hardware, 160,000 BTU/hr minimum flow capacity, limited lifetime warranty
K85-86	1 ea	RANGE, 48", 8 OPEN BURNERS Vulcan Model No. 48C-8B Endurance™ Restaurant Range, gas, 48", (8) 30,000 BTU burners with lift-off burner heads, convection oven, stainless steel front, sides, backriser & high shelf, fully MIG welded frame, 6" adjustable legs, 275,000 BTU, CSA, NSF
	1 ea	1 year limited parts & labor warranty, standard
	1 ea	Natural Gas
	1 ea	115v/60/1-ph, 4.0 amps, 6' cord and plug, standard
	1 ea	36RB Salamander Broiler, gas, 36" wide, 50,000 BTU heavy duty burner, dual control, (6) grid positions, removable pan, stainless steel front, top and sides, 3/4" gas rear connection & pressure regulator
	1 ea	Natural Gas
	1 ea	CONNECT-CHALL Inter-plumbing gas connection kit (requires rear gas connection on range), for connecting 36RB/36IRB to Endurance or Challenger Series ranges
	1 ea	RSHELF-XL48 Reinforced highshelf, for 48" ranges (shipped in separate carton)
	1 ea	Stainless steel backriser and lift-off high shelf, standard
	1 st	CASTERS R88 Casters (set of 8)
	1 ea	Dormont 16100BPCF2548 Dormont Blue Hose™ Moveable Gas Connector Hose Assembly, 1" inside dia., 48" long, covered with stainless steel braid, coated with blue antimicrobial PVC, 1 Safety Quik® QDV, 2 Swivel MAX®, 295,000 BTU/hr minimum flow capacity, limited lifetime warranty
K87	1 ea	DOUBLE DECK CONVECTION OVEN EXISTING Model No. DOUBLE DECK CONVECTION OVEN Existing; Relocated
K88		SPARE NO.
K89	1 ea	S/S CHEF'S COUNTER

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Item	Qty	Description
		Custom Model No. S/S CHEF'S COUNTER S/S Chef's Counter, UL listed, with electrical sub panel, with accommodations for Bread Warmer (Item K90), Soup Wells (Item K91), Refrigerated Units (Item K93) and Drop In Hot Wells (Item K95), with heated plate cabinet storage, all welded construction, size and shape per plan. NOTE: The following units also connect to Chef's Counter electrical subpanel - french fry warmer (Item K92), printer (Item K94), heat lamps (Item K97 and K98).
K90	1 ea	WARMING DRAWER, FREE STANDING APW Wyott Model No. HDDIS-2 X*PERT™ Series Warming Drawer, Slimline, Free Standing, (2) drawer, holds (1) 12" x 20" x 6.5" pan per drawer, individual thermostatic controls, rolling readout thermometer, stainless steel construction, CE, cULus, UL EPH
	1 ea	1 year parts & labor warranty, standard
	1 ea	120v/60/1-ph, 900 watts, 7.5 amps, NEMA 5-15P, standard
	1 ea	0-999-002 Casters Kit, 5" swivel
K91	2 ea	HOT FOOD WELL UNIT, DROP-IN, ELECTRIC APW Wyott Model No. CH-11D Hot Food Well Unit, drop-in, electric, 11 quart round pan capacity, wet operation, thermostatic control, immersible element, with drain, stainless steel construction, 120v/60/1-ph, 1650 watts, 13.75 amps, NSF
	2 ea	1 year limited parts & labor warranty, standard
	2 ea	120v/60/1-ph, 1650 watts, standard
K92	1 ea	FRENCH FRY WARMER Vollrath Model No. 71500 Cayenne® Heat Lamp - Model OHC-500, WHITE BULBS, Stainless U-Shaped base accepts full size pans, 19"W x 14"D x 28 3/4"H, one-piece cantilever hood, bulb height adjusts from 12" to 20", 120v/60/1-ph, 500 watts, 4.2 amp, NEMA 5-15P, ETL, UL, NSF, CSA, Made in USA
K93	2 ea	SANDWICH / SALAD PREPARATION REFRIGERATOR Continental Refrigerator Model No. SW48-12 Sandwich Unit, 48" wide, 13.4 cu ft capacity, two-section, (12) 1/6 size x 4" deep pans with 12" cutting board, (2) field rehingable doors, stainless steel top, front and end panels, aluminum interior, electronic controller w/digital display, 5" casters, rear mounted self-contained refrigeration, 1/5 hp, cETLus, NSF, Made in USA
	2 ea	Standard warranty (for the United States & Canada Only): 3 year parts and labor; 5 year compressor
	2 ea	115v/60/1-ph, 7.3 amps, cord, NEMA 5-15P, standard
	2 ea	4-916 Electric Condensate Evaporator, automatic, 115v/60/1 with cord & plug
	2 ea	CASTERS, 5" standard
K94	1 ea	PRINTER Owner Model No. PRINTER By Owner
K95	1 ea	HOT FOOD WELL UNIT, DROP-IN, ELECTRIC

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Item	Qty	Description
		Wells Model No. MOD-200TD Food Warmer, top-mount, built-in, electric, (2) 12" x 20" openings with drains, wet/dry operation, thermostatic controls, stainless steel interior, insulated aluminized steel housing, cULus
	1 ea	Limited 2 year parts & 1 year labor warranty, standard
	1 ea	21233 208/240v/60/1-ph or 3-ph, 1.24/1.65 kW per well, field wired (field convertible)
K96	1 ea	S/S DOUBLE OVERSHELF Custom Model No. S/S DOUBLE OVERSHELF S/S Double Overshelf, mounted on Chef's Counter (Item K89), all welded construction, size per plan. NOTE: Priced with Item K89.
K97	3 ea	HEAT LAMP Hatco Model No. GRA-54 Glo-Ray® Infrared Foodwarmer, standard wattage, tubular metal heater rod, single heater rod housing, aluminum construction, 925 watts, NSF, cUL, UL
	3 ea	One year on-site parts and labor warranty, plus one additional year parts only warranty on all Glo-Ray metal sheathed elements
	3 ea	120v/60/1-ph
	3 ea	RMB-3D Remote Control Enclosure, (1) toggle switch, (for 120, 208 or 240 volt)
	3 ea	STANDARD Clear Anodized Aluminum (housing), standard (Available at time of purchase only)
	3 ea	No Tandem selection
	3 ea	STANDARD Clear Anodized Aluminum, standard (Available at time of purchase only)
K98	1 ea	HEAT LAMP Hatco Model No. GRA-48 Glo-Ray® Infrared Foodwarmer, standard wattage, tubular metal heater rod, single heater rod housing, aluminum construction, 800 watts, 48", NSF, cUL, UL
	1 ea	One year on-site parts and labor warranty, plus one additional year parts only warranty on all Glo-Ray metal sheathed elements
	1 ea	120v/60/1-ph
	1 ea	RMB-3D Remote Control Enclosure, (1) toggle switch, (for 120, 208 or 240 volt)
	1 ea	STANDARD Clear Anodized Aluminum (housing), standard (Available at time of purchase only)
	1 ea	No Tandem selection
	1 ea	STANDARD Clear Anodized Aluminum, standard (Available at time of purchase only)
K99		SPARE NO.
K100		SPARE NO.
K101	1 ea	S/S TABLE Custom Model No. S/S TABLE S/S Table, with built-in hand sink (Item K102) and undershelf, all

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REVISIONS
DATE
08/27/2018

ADDITIONS & ALTERATIONS TO
SUN 'N LAKE GOLF CLUB
FLORIDA
SEBRING,

REVIEWED & ACCEPTED BY: (DATE)

CONSULTANT

CMSA ARCHITECTURE
CLIFFORD M. SCHOLZ ARCHITECTS, INC.
Sarasota, Florida 34236
300 South Orange Ave. | 941 364-4606 fax | AAC02212
941 364-4600 tel |

DATE
08/27/2018

Clifford M. Scholz | ALA

CS18068

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SP-1.8

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STRUCTURAL NOTES

GENERAL NOTES:

STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR SLEEVES, DEPRESSIONS, AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.

ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.

THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO INSURE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIEDOWNS.

DESIGN LOADS:

THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, 2014 6TH EDITION EDITION (2017). THE FOLLOWING SUPERIMPOSED LOADINGS HAVE BEEN UTILIZED.

ROOF:
LIVE LOAD - 20 psf.
DEAD LOAD - 25 psf.

WIND:
ASCE 7-10
DESIGN WIND SPEED $V_{ult}=140$ MPH
EXPOSURE B
ENCLOSED STRUCTURE
CATEGORY II
INTERNAL PRESSURE COEFF. $Gc_{pi} = +/- 0.18$

SHOP DRAWING REVIEW:

SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE WITH THE CONTRACT DOCUMENTS AS TO QUANTITY, LENGTH, ELEVATIONS, DIMENSIONS, ETC.

ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER. DRAWINGS SUBMITTED WITHOUT REVIEW NOTATION WILL BE RETURNED UNCHECKED.

ONE SET OF PRINTS WILL BE RETAINED BY THE ENGINEER AND ONE BY THE ARCHITECT. THE CONTRACTOR SHALL RECEIVE THE REMAINING PRINTS FOR SUBMITTAL TO THE BUILDING DEPARTMENT AND AS REQUIRED FOR DISTRIBUTION.

IN ALL INSTANCES THE CONTRACT DOCUMENTS WILL GOVERN OVER THE SHOP DRAWINGS UNLESS OTHERWISE SPECIFIED IN A REQUEST FOR INFORMATION (RFI) OR SIMILAR DOCUMENTATION BY THE ENGINEER.

SHOP DRAWINGS SHOULD BE SUBMITTED FOR ALL COMPONENTS OF THE STRUCTURAL FRAMING SYSTEM, AS REQUIRED BY THE ARCHITECT, AND AS NOTED ELSEWHERE IN THESE NOTES, INCLUDING, BUT NOT LIMITED TO:
CONCRETE MIX DESIGNS
MASONRY BLOCK
MASONRY BLOCK ACCESSORIES
MASONRY REINFORCING

STRUCTURAL STEEL (INCLUDING ANCHOR BOLTS)
PRECAST CONCRETE COMPONENTS
ANY ALTERNATE MATERIAL/PRODUCT SUBSTITUTIONS

FOUNDATIONS:

ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 1.5 ksf ON COMPACTED FILL OR NATIVE SOIL. BEFORE CONSTRUCTION COMMENCES, SOIL BEARING CAPACITY SHALL BE VERIFIED BY A SUBSURFACE INVESTIGATION, AS WELL AS FIELD AND LABORATORY TESTS PERFORMED BY A CERTIFIED TESTING LABORATORY, WHOSE REPORT SHALL INCLUDE ANALYSIS AND RECOMMENDATIONS FOR SITE PREPARATION IN ORDER TO BEAR THE FOUNDATION LOADS. ABOVE REPORT SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW BEFORE FOUNDATION CONSTRUCTION BEGINS.

FORMWORK AND SHORING:

NO STRUCTURAL CONCRETE SHALL BE STRIPPED UNTIL IT HAS REACHED AT LEAST TWO-THIRDS OF THE 28 DAY DESIGN STRENGTH. DESIGN, ERECTION AND REMOVAL OF ALL FORMWORK, SHORES AND RESHORES SHALL MEET THE REQUIREMENTS SET FORTH IN ACI STANDARDS 347 AND 301.

PLUMBING SLEEVES:

MINIMUM SLEEVE SPACING SHALL BE THREE DIAMETERS CENTER TO CENTER OF THE LARGER SLEEVE OR 6" CLEAR BETWEEN SLEEVES, WHICHEVER IS GREATER. PRIOR TO CONSTRUCTION SLEEVE LOCATIONS AND SIZES SHALL BE APPROVED BY THE ENGINEER.

REINFORCING STEEL:

SHALL BE ASTM A615 GRADE 60 DEFORMED BARS, FREE FROM OIL, SCALE AND RUST AND PLACED IN ACCORDANCE WITH THE TYPICAL BENDING DIAGRAM AND PLACING DETAILS OF ACI STANDARDS AND SPECIFICATIONS. SECURE APPROVAL OF SHOP DRAWINGS PRIOR TO COMMENCING FABRICATION.

EPOXY COATED REINFORCING STEEL:

TOP BARS AT EXPOSED AREAS SUCH AS BALCONIES AND AS SHOWN ON STRUCTURAL PLANS SHALL BE EPOXY COATED ACCORDING TO ASTM A775.

WELDED WIRE FABRIC:

TO CONFORM TO ASTM A-185, FREE FROM OIL, SCALE AND RUST AND PLACED IN ACCORDANCE WITH THE TYPICAL PLACING DETAILS OF ACI STANDARDS AND SPECIFICATIONS. MINIMUM LAP SHALL BE ONE SPACE PLUS TWO INCHES.

CONCRETE:

SHALL BE PER AN APPROVED MIX DESIGN PROPORTIONED TO ACHIEVE A STRENGTH AT 28 DAYS AS LISTED BELOW WITH A PLASTIC AND WORKABLE MIX:

3000 psi FOR FOUNDATIONS AND SLABS ON GRADE.
4000 psi FOR ALL OTHER STRUCTURAL CONCRETE.

CONCRETE SHALL BE PLACED AND CURED ACCORDING TO ALL STANDARDS AND SPECIFICATIONS.

SUBMIT PROPOSED MIX DESIGN WITH RECENT FIELD CYLINDER OR LAB TESTS FOR REVIEW PRIOR TO USE. MIX SHALL BE UNIQUELY IDENTIFIED BY MIX NUMBER OR OTHER POSITIVE IDENTIFICATION. MIX SHALL MEET THE REQUIREMENTS OF ASTM C39 FOR COARSE AGGREGATE. **FOR ALL FLATWORK, AT LEAST 75% OF LARGE AGGREGATE SHALL CONSIST OF #57 STONE.** CONCRETE SHALL COMPLY WITH ALL THE REQUIREMENTS OF ASTM STANDARD C94 FOR MEASURING, MIXING, TRANSPORTING, ETC. CONCRETE TICKETS SHALL BE TIME STAMPED WHEN CONCRETE IS BATCHED.

THE MAXIMUM TIME ALLOWED FROM THE TIME THE MIXING WATER IS ADDED UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED ONE AND ONE HALF (1-1/2) HOURS. IF FOR ANY REASON THERE IS A LONGER DELAY THAN THAT STATED ABOVE, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LAB TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THE ABOVE. ALL SLABS SHALL BE CURED USING A DISSIPATING CURING COMPOUND MEETING ASTM STANDARD C309 TYPE 1-D AND SHALL HAVE A FUGITIVE DYE. THE COMPOUND SHALL BE PLACED AS SOON AS THE FINISHING IS COMPLETED OR AS SOON AS THE WATER HAS LEFT THE UNFINISHED CONCRETE. ALL SCUFFED OR BROKEN AREAS IN THE CURING MEMBRANE SHALL BE RECOATED DAILY. CALCIUM CHLORIDES SHALL NOT BE UTILIZED; OTHER ADMIXTURES MAY BE USED ONLY WITH THE APPROVAL OF THE ENGINEER.

ALL CONCRETE MIX DESIGNS SHALL INCLUDE A WRITTEN DESCRIPTION INDICATING WHERE EACH PARTICULAR MIX IS TO BE PLACED WITHIN THE STRUCTURE.

ALL CONCRETE DESIGN MIX SUBMITTALS SHALL INCLUDE TESTED, STATISTICAL BACK-UP DATA AS PER CHAPTER 5 OF ACI 318-05.

WATER/CEMENT RATIO FOR CONCRETE AT EXTERIOR BALCONIES SHALL NOT EXCEED 0.40 BY WEIGHT AND HAVE 5,000psi MINIMUM COMPRESSIVE CAPACITY.

CONCRETE TESTING: AN INDEPENDENT TESTING LABORATORY SHALL PERFORM THE FOLLOWING TESTS ON CAST IN PLACE CONCRETE:

- A) ASTM C143 - "STANDARD TEST METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE." MAXIMUM SLUMP SHALL BE 4-6 INCHES, PRIOR TO ADDING A SUPER PLASTICIZER.
- B) ASTM C39 - "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS." A SEPARATE TEST SHALL BE CONDUCTED FOR EACH CLASS, FOR EVERY 50 CUBIC YARDS (OR FRACTION THEREOF), PLACED PER DAY. REQUIRED CYLINDERS' QUANTITIES AND TEST AGE AS FOLLOWS:
2 AT 28 DAYS

ONE ADDITIONAL RESERVE CYLINDER TO BE TESTED UNDER THE DIRECTION OF THE ENGINEER IF REQUIRED. IF 28 DAY STRENGTH

NON-SHRINK GROUT:

NON-SHRINK GROUT SHALL BE A HIGH-STRENGTH MORTAR OR GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 5000 psi AT 28 DAYS. THE GROUT IS TO BE NON-METALLIC, NON-CORROSIVE, CEMENT-BASED AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM C1107. IT SHALL BOND PERMANENTLY TO A CLEAN METAL BASEPLATE AND CONCRETE SUBSTRATE AND WILL NOT SHRINK IN ITS PLASTIC STATE, AS TESTED IN ACCORDANCE WITH ASTM C827.

CHEMICAL ANCHORS:

SHALL BE AN EQUAL TWO PART EPOXY POLYMER INJECTION SYSTEM, SUCH AS SIMPSON SET-XP "STRUCTURAL ANCHORING ADHESIVE", HILTI HIT-HY 150 MAX-SD OR ENGINEER APPROVED SUBSTITUTION, INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. INSTALLERS SHALL BE TRAINED BY THE MANUFACTURER'S REPRESENTATIVE. BRUSH AND BLOW OUT ALL HOLES.

MASONRY WALLS:

MASONRY UNITS SHALL MEET ASTM C-90 FOR HOLLOW LOAD BEARING TYPE MASONRY WITH UNIT STRENGTH OF 1900 psi ON THE NET AREA ($f_m = 1500$ psi). MORTAR SHALL BE TYPE "M" OR "S" AND MEET ASTM C-270. GROUT SHALL BE 2000 psi MINIMUM COMPRESSIVE STRENGTH AND MEET ASTM C-476. PROVIDE HOOKED DOWELS IN FOOTINGS FOR ALL VERTICAL REINFORCING ABOVE. LAP SPLICES 48 BAR DIAMETERS.

BLOCK CELLS AS SHOWN ON PLANS SHALL BE GROUT FILLED WITH VERTICAL REINFORCING BARS. SEE PLAN NOTES FOR BAR SIZE AND SPACING. DOWELS SHALL BE USED TO PROVIDE CONTINUITY INTO THE STRUCTURE ABOVE AND/OR BELOW, UNLESS NOTED OTHERWISE. USE METAL LATH, MORTAR, OR SPECIAL UNITS TO CONFINE CONCRETE AND GROUT TO AREA REQUIRED.

PROVIDE 9 GAGE GALVANIZED HORIZONTAL JOINT REINFORCING (DUR-O-WALL OR ENGINEER APPROVED SUBSTITUTION) AT ALTERNATE BLOCK COURSES, **BEGINNING 8" ABOVE FOOTINGS AND FLOOR LEVELS.**

GROUT LIFT: AN INCREMENT OF GROUT HEIGHT WITHIN A TOTAL GROUT POUR.
GROUT POUR: THE TOTAL HEIGHT OF MASONRY TO BE GROUTED PRIOR TO ERECTION OF ADDITIONAL MASONRY. A GROUT POUR CONSISTS OF ONE OR MORE GROUT LIFTS. GROUT POURS SHALL SET FOR A MINIMUM OF 4 HOURS BEFORE ANY ADDITIONAL GROUT PLACEMENT.

GROUT SHALL HAVE A SLUMP BETWEEN 8 AND 11 INCHES, EXCEPT SELF-CONSOLIDATING GROUT. JOB-SITE PROPORTIONING OF SELF-CONSOLIDATING GROUT IS NOT PERMITTED.

MASONRY GROUTING REQUIREMENTS:

1. FIELD-MIXED GROUT SHALL BE PLACED WITHIN 1-1/2 HOURS FROM INTRODUCING WATER INTO THE MIXTURE AND BEFORE INITIAL SET.
2. GROUT SLUMP REQUIREMENTS:
 - a. FOR GROUT SLUMP BETWEEN 8 AND 10 INCHES, THE MAXIMUM GROUT LIFT HEIGHT IS 5 FEET.
 - b. FOR GROUT SLUMP BETWEEN 10 AND 11 INCHES, THE MAXIMUM GROUT LIFT HEIGHT IS 12.67 FEET.
 - c. FOR SELF-CONSOLIDATING GROUT, THE GROUT LIFT HEIGHT SHALL NOT EXCEED THE GROUT POUR HEIGHT (24 FEET MAX.).
3. GROUT LIFT HEIGHTS EXCEEDING 5 FEET SHALL MEET THE FOLLOWING REQUIREMENTS:
 - a. MASONRY MORTAR HAS CURED FOR AT LEAST 4 HOURS.
 - b. GROUT SLUMP IS BETWEEN 10 AND 11 INCHES.
 - c. NO INTERMEDIATE BOND BEAMS ARE PLACED BETWEEN THE TOP AND BOTTOM OF THE GROUT LIFT HEIGHT.
4. EACH GROUT LIFT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION AT THE TIME OF PLACEMENT. CONSOLIDATION IS NOT REQUIRED FOR SELF-CONSOLIDATING GROUT.
5. EACH GROUT LIFT SHALL BE RECONSOLIDATED BY MECHANICAL VIBRATION AFTER INITIAL WATER LOSS AND SETTLEMENT HAS OCCURRED, AND BEFORE ADDING THE SUBSEQUENT GROUT LIFT. RECONSOLIDATION IS NOT REQUIRED FOR SELF-CONSOLIDATING GROUT.
6. THE TIME BETWEEN PLACING GROUT LIFTS SHALL NOT EXCEED 1 HOUR.
7. THE MAXIMUM POUR HEIGHT IS 24 FEET.
8. A GROUT KEY SHALL BE PROVIDED AT THE TOP OF EACH GROUT LIFT AND GROUT POUR. GROUT KEYS SHOULD BE FORMED BY TERMINATING THE GROUT 1-1/2 INCHES BELOW A MORTAR JOINT.

INTELS:

MASONRY OPENINGS LESS THAN 6 FEET SHALL BE SPANNED WITH AN 8" SPAN RATED PRECAST/PRESTRESSED CONCRETE LINTEL. ALL PRECAST INTELS SHALL BEAR A MINIMUM OF 8" AT EACH END ON A GROUT FILLED CELL.

MASONRY OPENINGS 6 FEET OR GREATER SHALL BE SPANNED WITH AN 8" SPAN RATED PRECAST/PRESTRESSED CONCRETE LINTEL WITH 1#5 BAR CONTINUOUS. PRECAST LINTEL AND ALL CELLS ABOVE, TO THE BOTTOM OF THE TIE BEAM OR BOND BEAM, SHALL BE GROUTED SOLID. ALL PRECAST INTELS SHALL BEAR A MINIMUM OF 8" AT EACH END ON A GROUT FILLED CELL.

WHERE A CONCRETE COLUMN OR CONCRETE TIE COLUMN IS WITHIN 8" OF A MASONRY OPENING, THE LINTEL SHALL BE AN 8"x16" CONCRETE CAST-IN-PLACE BEAM WITH (2) #5 BARS TOP AND BOTTOM, AND #3 STIRRUPS AT 18" ON CENTER.

STRUCTURAL STEEL:

WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A-992 WITH A MINIMUM YIELD STRENGTH OF 50 KSI. STEEL SECTIONS EXCEPT WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A-36 WITH A 36 KSI YIELD STRENGTH. ALL STEEL SHALL CONFORM TO THE "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC. ALL SHOP CONNECTIONS TO BE WELDED (UTILIZING E70XX ELECTRODES) AND FIELD CONNECTIONS TO BE BOLTED, UNLESS OTHERWISE NOTED ON STRUCTURAL DRAWINGS. STEEL TO RECEIVE ONE SHOP COAT AND ONE FIELD TOUCH UP COAT OF APPROVED PAINT, EXCEPT WHERE GALVANIZING IS INDICATED ON THE DRAWINGS.

STRUCTURAL TUBING SHALL CONFORM TO ASTM A-500, GRADE B, $F_y = 46$ ksi. STRUCTURAL PIPE SHALL CONFORM TO ASTM A-53 GRADE B, TYPE E OR S, $F_y = 35$ ksi. WHERE CONCRETE-FILLED COLUMNS ARE SPECIFIED, TUBE & PIPE COLUMNS SHALL BE CONCRETE FILLED IN THE SHOP OR, WHEN THEY SUPPORT CONCRETE BEAMS OR FORMED CONCRETE SLABS, A HOLE PROVIDED IN THE CAP PLATE FOR FIELD FILLING.

ALL BOLTED CONNECTIONS SHALL CONSIST OF MINIMUM 3/4 INCH DIAMETER ASTM A-325 HIGH STRENGTH BOLTS. BEAM CONNECTIONS SHALL BE DESIGNED BY THE FABRICATOR FOR THE REACTIONS SHOWN ON THE PLANS. IF NOT SHOWN, THE FABRICATOR SHALL DESIGN THE BEAM CONNECTIONS TO SUPPORT AN END REACTION OF W/2 KIPS FROM TABLE 3-6 "MAXIMUM TOTAL UNIFORM LOAD" OF STEEL CONSTRUCTION MANUAL (13th EDITION), BUT CONNECTIONS SHALL NOT HAVE LESS THAN 2 ROWS OF BOLTS.

MINIMUM CONNECTIONS: AT A MINIMUM THE BOLT ROWS (AT 3" CENTERS) SHALL EXTEND FOR 2/3 OF THE BEAM DEPTH AND AS REQUIRED ABOVE.

SLOTTED HOLES: WHEREVER LONG SLOTTED HOLES ARE USED 5/16" THICK WASHERS SHALL BE PROVIDED PER AISC REQUIREMENTS.

ANCHOR BOLTS:

SHALL CONFORM TO ASTM A-307 OR A-36 (THREADED ROD).

MACHINE AND LAG BOLTS:

SHALL BE A-307 HOT DIPPED GALVANIZED WITH GALVANIZED WASHERS.

WOOD:

STRUCTURAL WOOD COMPONENTS (BEAMS, JOISTS, RAFTERS, ETC.) SHALL HAVE THE FOLLOWING MINIMUM ALLOWABLE FIBER STRESSES FOR NO. 2 SOUTHERN PINE CONFORMING TO NDS, WITH 2015 SUPPLEMENT, AS FOLLOWS:

SHEAR	$F_v = 175$ psi
BENDING	$F_b = 1,000$ psi
BENDING	$F_b = 925$ psi
BENDING	$F_b = 800$ psi
BENDING	$F_b = 750$ psi

WOOD IN CONTACT WITH CONCRETE OR MASONRY, AND AT OTHER LOCATIONS AS SHOWN ON STRUCTURAL DRAWINGS, SHALL BE PROTECTED OR PRESSURE TREATED IN ACCORDANCE WITH ATC, 109. MEMBER SIZES SHOWN ARE NOMINAL, UNLESS NOTED OTHERWISE.

ALL NAILS SHOWN ON PLANS ASSUME COMMON WIRE NAILS UNLESS SPECIFICALLY NOTED ON DRAWINGS.

ENGINEERED WOOD TRUSS SYSTEMS SHALL BE DESIGNED BY SUPPLIER'S SPECIALTY ENGINEER TO CONFIGURATION AND LOAD, CARRYING CAPACITY SHOWN ON DRAWINGS AND SPECIFICATIONS. ALL INDIVIDUAL TRUSS MEMBERS, TRUSS PLATE CONNECTIONS, TRUSS-TO-TRUSS CONNECTIONS, COMMON TRUSSES AND GREYER TRUSSES SHALL BE DESIGNED FOR COMPONENT AND GLADING WIND LOADING, EXCEPT THOSE TRUSSES EXCEEDING 700 SQUARE FEET IN TRIBUTARY AREA. ALTERNATE TRUSS LAYOUTS ARE ACCEPTABLE ONLY AS A CHANGE ORDER WHICH WILL INCLUDE ENGINEERING CHARGES FOR REDESIGN OF THE STRUCTURE BY THE ENGINEER OF RECORD. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS SHALL SHOW AND SPECIFY ALL CONNECTOR TYPES UTILIZED WITHIN TRUSSES, AS WELL AS CONNECTORS UTILIZED IN ALL OTHER CONNECTIONS AND ATTACHMENTS BETWEEN TRUSSES OR COMPONENTS SUPPLIED AS PART OF THE ENGINEERED TRUSS SYSTEM. AN ERECTION DRAWING SHALL BE INCLUDED, IDENTIFYING ALL TRUSS SYSTEM COMPONENTS, AS WELL AS ALL PERMANENT BRACING REQUIRED FOR TRUSS DESIGN.

ENGINEERED SHOP DRAWINGS SHALL BEAR THE SIGNATURE AND IMPRESSED SEAL OF A FLORIDA REGISTERED PROFESSIONAL ENGINEER AS THE SPECIALTY ENGINEER. THE FOLLOWING LOAD DURATION FACTORS SHALL BE USED:

DEAD LOAD	0.90
DEAD LOAD + FLOOR LIVE LOAD	1.00
DEAD LOAD + ROOF LIVE LOAD	1.25
DEAD LOAD + WIND LOAD	1.80

THE SUPERIMPOSED DEAD LOAD, AS SPECIFIED IN THE DESIGN LOADS SECTION ABOVE, INCLUDES THE OVERALL WEIGHT OF THE FIRE SPRINKLER SYSTEM PIPES. THE GENERAL CONTRACTOR SHALL PROVIDE THE TRUSS MANUFACTURER WITH THE LOCATIONS OF THE PIPE SUPPORTS AND THE LOADS FROM ALL SPRINKLER LINES GREATER THAN 2" DIAMETER.

PLYWOOD ROOF, FLOOR, AND WALL SHEATHING ARE DESIGNED AS DIAPHRAGMS AND SHALL COMPLY WITH APPLICABLE PROVISIONS OF CHAPTER 23 OF THE FLORIDA BUILDING CODE AND SHALL BE FASTENED IN ACCORDANCE WITH STRUCTURAL DRAWINGS, PLAN NOTES AND

MINIMUM FASTENING REQUIREMENTS FOR BUILT UP WOOD FRAMING, BLOCKING, MEMBER CONNECTIONS AND PLYWOOD SHEATHING SHALL NOT BE LESS THAN THAT SET FORTH IN FBC TABLE 2304.10.1. ATTACHMENT OF PLYWOOD SHEATHING TO RESIST WIND PRESSURES SHALL ALSO NOT BE LESS THAN WHAT IS SHOWN IN FBC TABLE 2304.6.1.

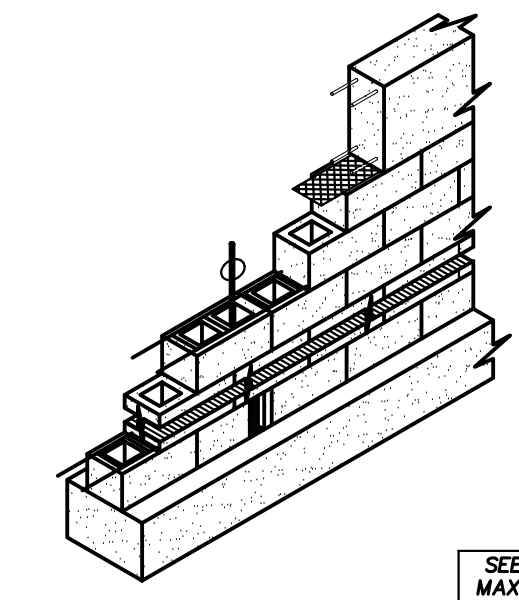
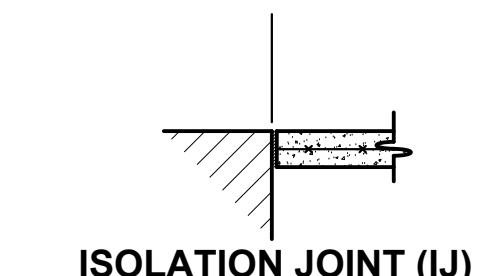
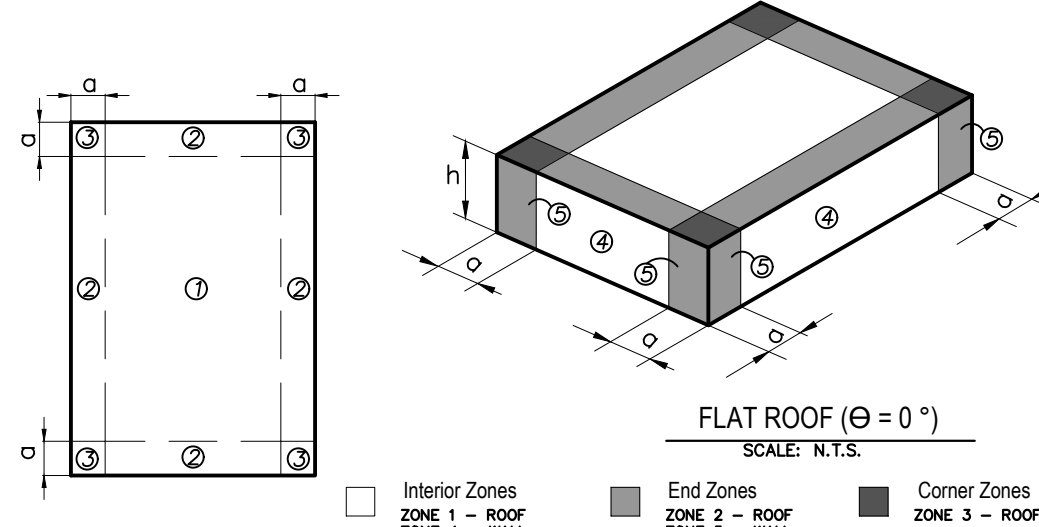
WOOD FRAMING CONNECTORS:

ALL CONNECTORS SHALL BE GALVANIZED. CONNECTOR MODEL NUMBERS SHOWN ARE STRONG-TIE CONNECTORS AS MANUFACTURED BY SIMPSON STRONG-TIE CO., 5556 W. LAS POSITAS BLVD., P.O. BOX 10789, PLEASANTON, CA 94588, 800-999-5099, WWW.STRONGTIE.COM. SUBSTITUTIONS ARE ACCEPTABLE WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. UNLESS SHOWN OTHERWISE, INSTALL SIZE AND "MAXIMUM" NUMBER OF FASTENERS SHOWN IN LATEST SIMPSON CATALOG.

WIND LOAD SCHEDULE				
SCHEDULE OF COMPONENTS AND CLADDING LOADS				
ZONE	ZONE DESCRIPTION	TRIBUTARY AREA (SF)	IN (PRESSURE) (+ PSF)	OUT (PRESSURE) (- PSF)
1	ROOF	LESS THAN 20	10.6	26.0
		20 = 100	9.9	23.6
		MORE THAN 100	8.4	23.8
2	ROOF	LESS THAN 20	10.6	43.7
		20 = 100	9.9	39.3
		MORE THAN 100	8.4	28.2
	ROOF, OVERHANG	LESS THAN 20		41.5
		20 = 100		40.8
		MORE THAN 100		39.3
3	ROOF, CORNER ZONE	LESS THAN 20	10.6	65.8
		20 = 100	9.9	52.5
		MORE THAN 100	8.4	21.6
	ROOF, OVERHANG	LESS THAN 20		28.2
		20 = 100		27.1
		MORE THAN 100		24.7
4	WALL	LESS THAN 20	26.0	26.2
		20 = 100	24.9	27.1
		MORE THAN 100	22.1	24.7
5	WALL	LESS THAN 20	26.0	34.9
		20 = 100	24.9	32.7
		MORE THAN 100	22.1	27.1

NOTE: WIND PRESSURES SHOWN ARE BASED ON Voad

ULTIMATE WIND SPEED V_{ult}	130 MPH
ALLOWABLE WIND SPEED V_{oad}	170 MPH
Kz	1.000 EXPOSURE C
Kzt	1.00 ENCLOSED
Kd	0.85 RISK CAT. II
INTERNAL PRESSURE COEFFICIENT (Gc_{pi})	0.18 FLAT ROOF



SEE STRUCTURAL NOTES FOR MAXIMUM GROUT POUR HEIGHT AND ADDITIONAL REQUIREMENTS.

TYPICAL MASONRY WALL CONSTRUCTION

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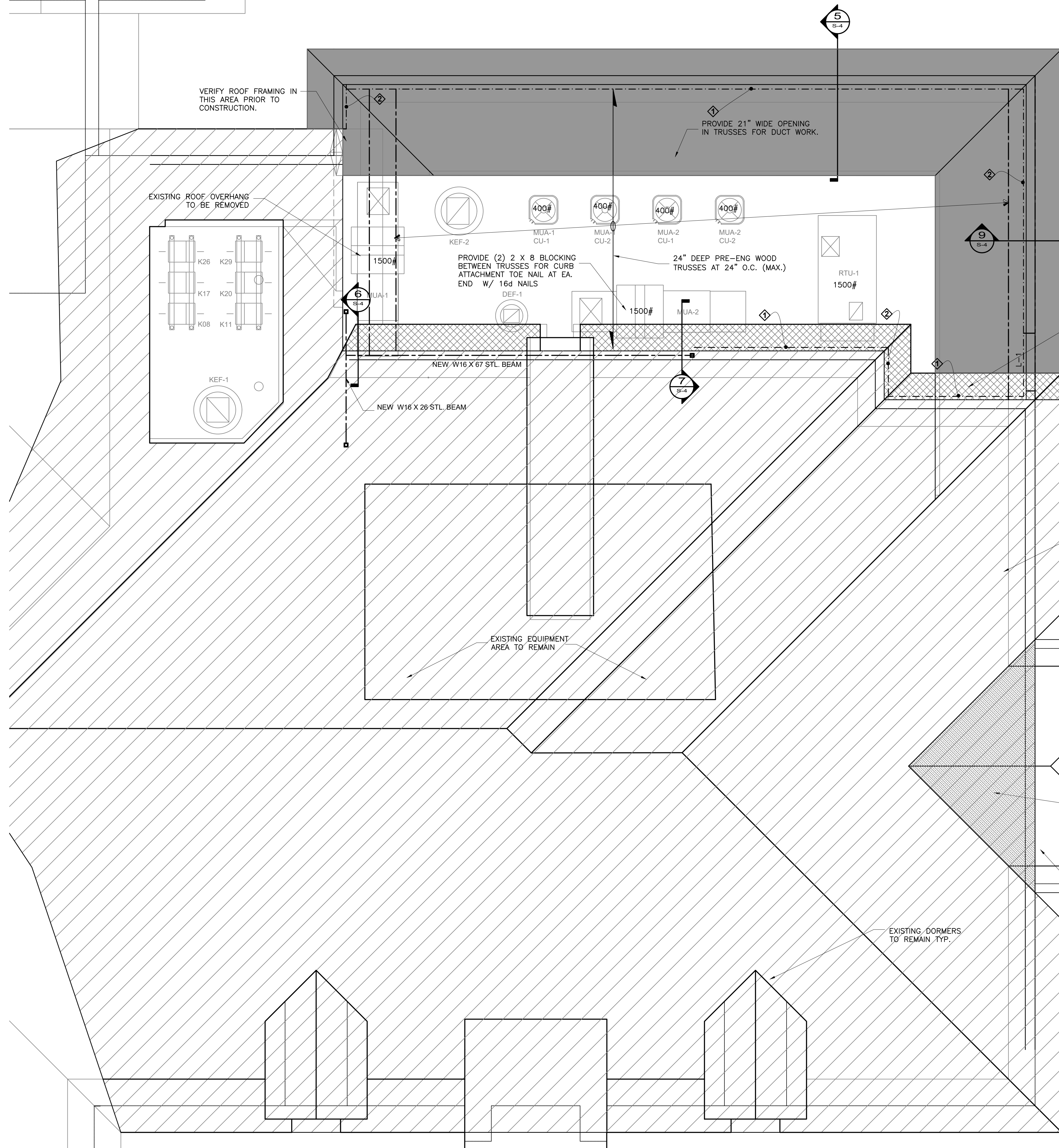
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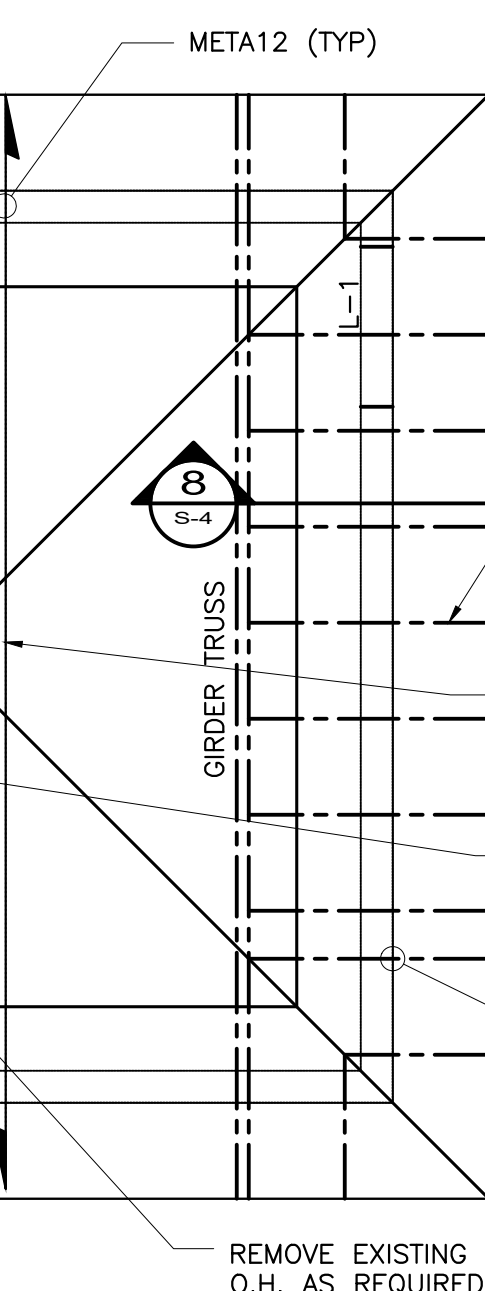
SHEET NO.
S-1

Wilson Structural Consultants, Inc.
 8731 PROFESSIONAL PROFESSIONAL WEST (941) 907-4789
 SUITE 100 SARASOTA, FL 34240 FAX (941) 907-0576
 TO THE BEST OF MY KNOWLEDGE AND ABILITY, THE COMPLETED STRUCTURAL DRAWINGS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES.
 FILE: 18-080
Cert. of Authorization #9099

8/16/2018
 ENGINEER OF RECORD
Kevin P. Kemp
 FL P.E. # 74800



- ROOF PLAN NOTES:**
1. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS AND THE MEP PLANS. SEE MEP PLANS FOR ANY CONDENSING UNITS TO BE PLACED IN ATTIC LOCATIONS AND RELATED WEIGHTS.
 2. ELEVATIONS SHOWN ARE RELATIVE TO THE GROUND FLOOR SLAB SURFACE SET AT 0'-0" (REF.).
 3. THE ROOF FRAMING SYSTEM SHALL CONSIST OF A PRE-ENGINEERED WOOD ROOF TRUSS SYSTEM AT 24" O.C. VERIFY CEILING HEIGHTS AND CONFIGURATIONS WITH THE ARCHITECTURAL PLANS. SEE ARCHITECTURAL PLANS FOR ROOF SLOPE AND EAVE DETAILS.
 4. ROOF SHEATHING SHALL BE 3/4" APA RATED ADVANTECH EXTERIOR ROOF SHEATHING. FASTEN SHEATHING TO ROOF TRUSSES W/ 10d NAILS @ 6" O.C. AT SUPPORTED PANEL EDGES AND 6" O.C. IN THE FIELD. PROVIDE PLYWOOD "H" CLIPS @ UNSUPPORTED PLYWOOD PANEL EDGES.
 5. ALL WOOD TRUSSES SHALL BE ATTACHED TO THE STRUCTURE WITH THE SPECIFIED SIMPSON CONNECTOR.
 6. THE TRUSS ENGINEER SHALL SPECIFY THE TRUSS-TO-TRUSS CONNECTIONS.
 7. PLYWOOD SHEATHING SHALL BE CONTINUOUS ON THE TOP CHORD OF THE TRUSSES. ALL OVER-FRAMING OR VALLEY SETS SHALL BE PLACED ABOVE THE CONTINUOUS PLYWOOD.
 8. ALL WOOD IN CONTACT WITH MASONRY, CONCRETE OR USED IN EXTERIOR APPLICATIONS SHALL BE PRESERVED TREATED WITH PRESERVATIVE. (P.T.) EXTERIOR CONNECTORS SHALL BE HOT DIPPED GALVANIZED.
 9. PROVIDE 2x P.T. CONT FASCIA AT EDGE OF ROOF.
 10. ALL TRUSSES ATTACHED WITH META12 SHALL USE A TSS PLATE. META12 W/ TSS IS THE TYPICAL TRUSS CONNECTOR, UNLESS NOTED OTHERWISE.
 11. VERTICAL REINFORCING IN MASONRY WALLS SHALL BE HOOKED AT TOP OF WALL INTO BOND BEAM.
 12. PRE-ENGINEERED WOOD OVERFRAMING BY TRUSS MANUFACTURER. OVERFRAMING ATTACHMENT TO PRE-ENGINEERED WOOD TRUSSES BELOW SHALL BE BY TRUSS MANUFACTURER. OVERFRAMING SHALL DISTRIBUTE ROOF LOADS UNIFORMLY TO TRUSSES BELOW. SEE SECTIONS.
 13. L-1 INDICATES 8F16-1T/1B 8" MIN. BRG. REQUIRED TYP.
 14. \diamond INDICATES 2x10 PT LEDGER. ATTACH TO CONCRETE W/ TWO ROW 3/4" SIMPSON TITEN HD BOLTS @ 12" O.C. (5" EMBED). STAGGER SPACING.
 15. \diamond INDICATES 2x8 PT NAILER. ATTACH TO CONCRETE W/ TWO ROWS 1/2" TAPCONS @ 12" O.C. (2" EMBED). STAGGER SPACING.



ROOF FRAMING PLAN
SCALE 1/4" = 1'-0"

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SUITE 100 SARASOTA, FL 34240 FAX (941) 907-0576
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ENGINEER OF RECORD
Kevin P. Kemp
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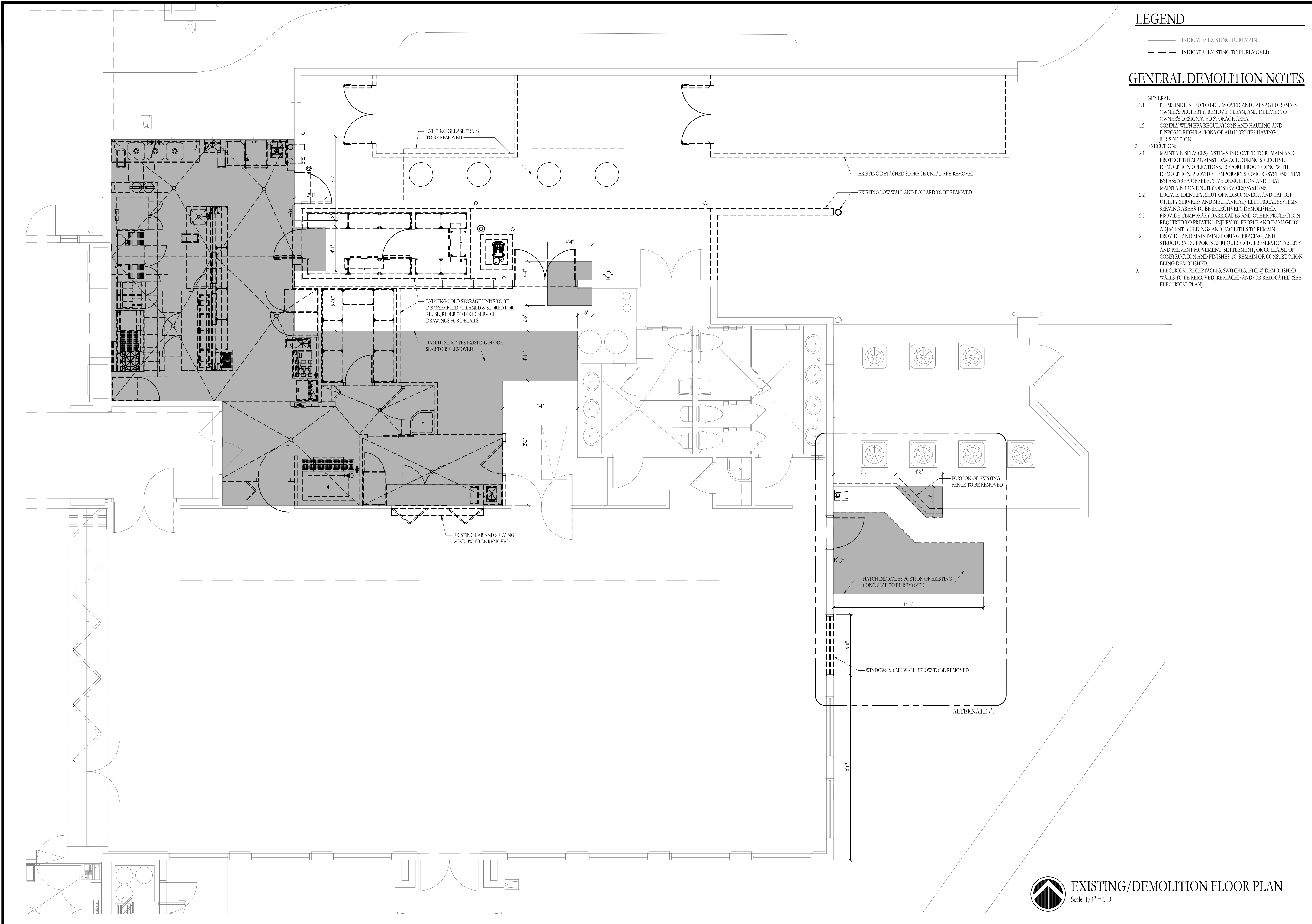
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SHEET NO.
S-3



LEGEND

- INDICATES EXISTING TO REMAIN
- - - INDICATES EXISTING TO BE REMOVED

GENERAL DEMOLITION NOTES

1. GENERAL:
 - 1.1. ITEMS INDICATED TO BE REMOVED AND SALVAGED REMAIN OWNER'S PROPERTY. REMOVE, CLEAN, AND DELIVER TO OWNER'S DESIGNATED STORAGE AREA.
 - 1.2. COMPLY WITH EPA REGULATIONS AND HAULING AND DISPOSAL REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
2. EXECUTION:
 - 2.1. MAINTAIN SERVICES/SYSTEMS INDICATED TO REMAIN AND PROTECT THEM AGAINST DAMAGE DURING SELECTIVE DEMOLITION OPERATIONS. BEFORE PROCEEDING WITH DEMOLITION, PROVIDE TEMPORARY SERVICES/SYSTEMS THAT BYPASS AREA OF SELECTIVE DEMOLITION AND THAT MAINTAIN CONTINUITY OF SERVICES/SYSTEMS.
 - 2.2. LOCATE, IDENTIFY, SHUT OFF, DISCONNECT, AND CAP OFF UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS SERVING AREAS TO BE SELECTIVELY DEMOLISHED.
 - 2.3. PROVIDE TEMPORARY BARRICADES AND OTHER PROTECTION REQUIRED TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS AND FACILITIES TO REMAIN.
 - 2.4. PROVIDE AND MAINTAIN SHORING, BRACING, AND STRUCTURAL SUPPORTS AS REQUIRED TO PRESERVE STABILITY AND PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF CONSTRUCTION AND FINISHES TO REMAIN OR CONSTRUCTION BEING DEMOLISHED.
3. ELECTRICAL RECEPTACLES, SWITCHES, ETC. @ DEMOLISHED WALLS TO BE REMOVED, REPLACED AND/OR RELOCATED (SEE ELECTRICAL PLAN)

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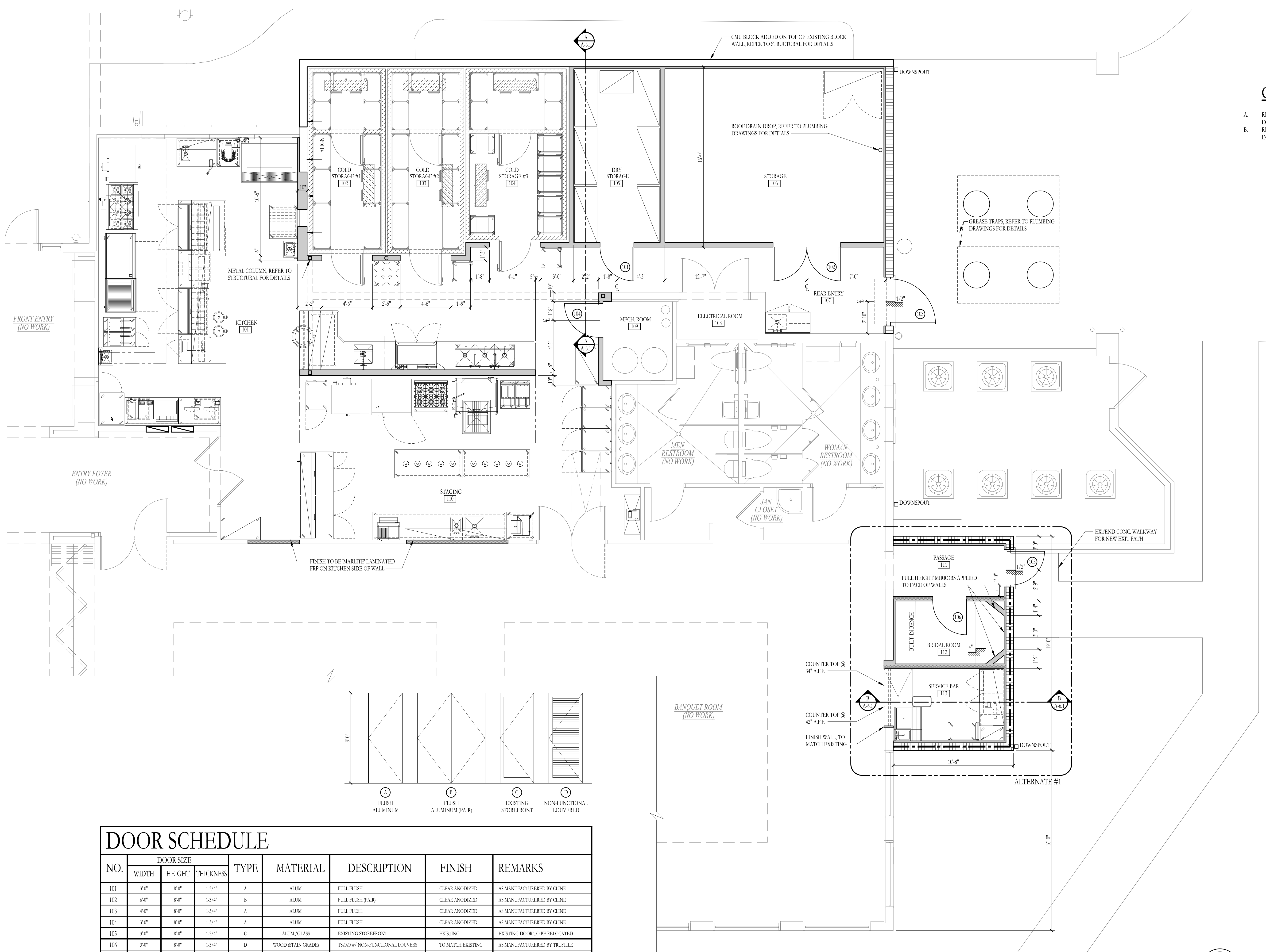
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SHEET NO.
A-1.1

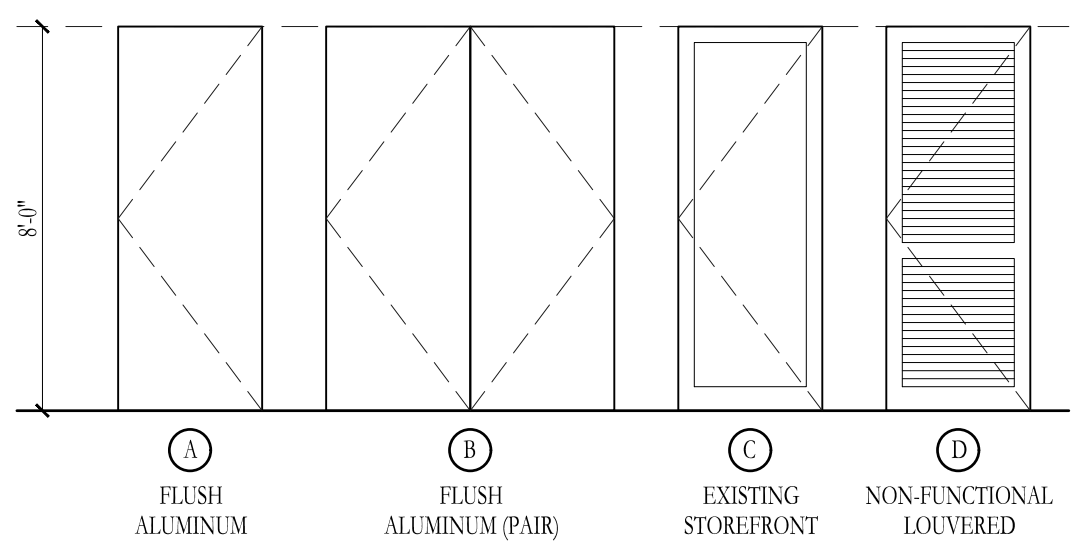


GENERAL NOTES:

- A. REFER TO FOOD SERVICE DRAWINGS FOR ALL KITCHEN EQUIPMENT DETAILS. (SHOWN JUST FOR REFERENCE)
- B. REFER TO SHEET A-8.1 FOR ROOM FINISH SCHEDULE INFORMATION.

DOOR SCHEDULE

NO.	DOOR SIZE			TYPE	MATERIAL	DESCRIPTION	FINISH	REMARKS
	WIDTH	HEIGHT	THICKNESS					
101	3'-0"	8'-0"	1-3/4"	A	ALUM.	FULL FLUSH	CLEAR ANODIZED	AS MANUFACTURED BY CLINE
102	6'-0"	8'-0"	1-3/4"	B	ALUM.	FULL FLUSH (PAIR)	CLEAR ANODIZED	AS MANUFACTURED BY CLINE
103	4'-0"	8'-0"	1-3/4"	A	ALUM.	FULL FLUSH	CLEAR ANODIZED	AS MANUFACTURED BY CLINE
104	3'-0"	8'-0"	1-3/4"	A	ALUM.	FULL FLUSH	CLEAR ANODIZED	AS MANUFACTURED BY CLINE
105	3'-0"	8'-0"	1-3/4"	C	ALUM./GLASS	EXISTING STOREFRONT	EXISTING	EXISTING DOOR TO BE RELOCATED
106	3'-0"	8'-0"	1-3/4"	D	WOOD (STAIN GRADE)	TS200 w/ NON-FUNCTIONAL LOUVERS	TO MATCH EXISTING	AS MANUFACTURED BY TRUSTILE



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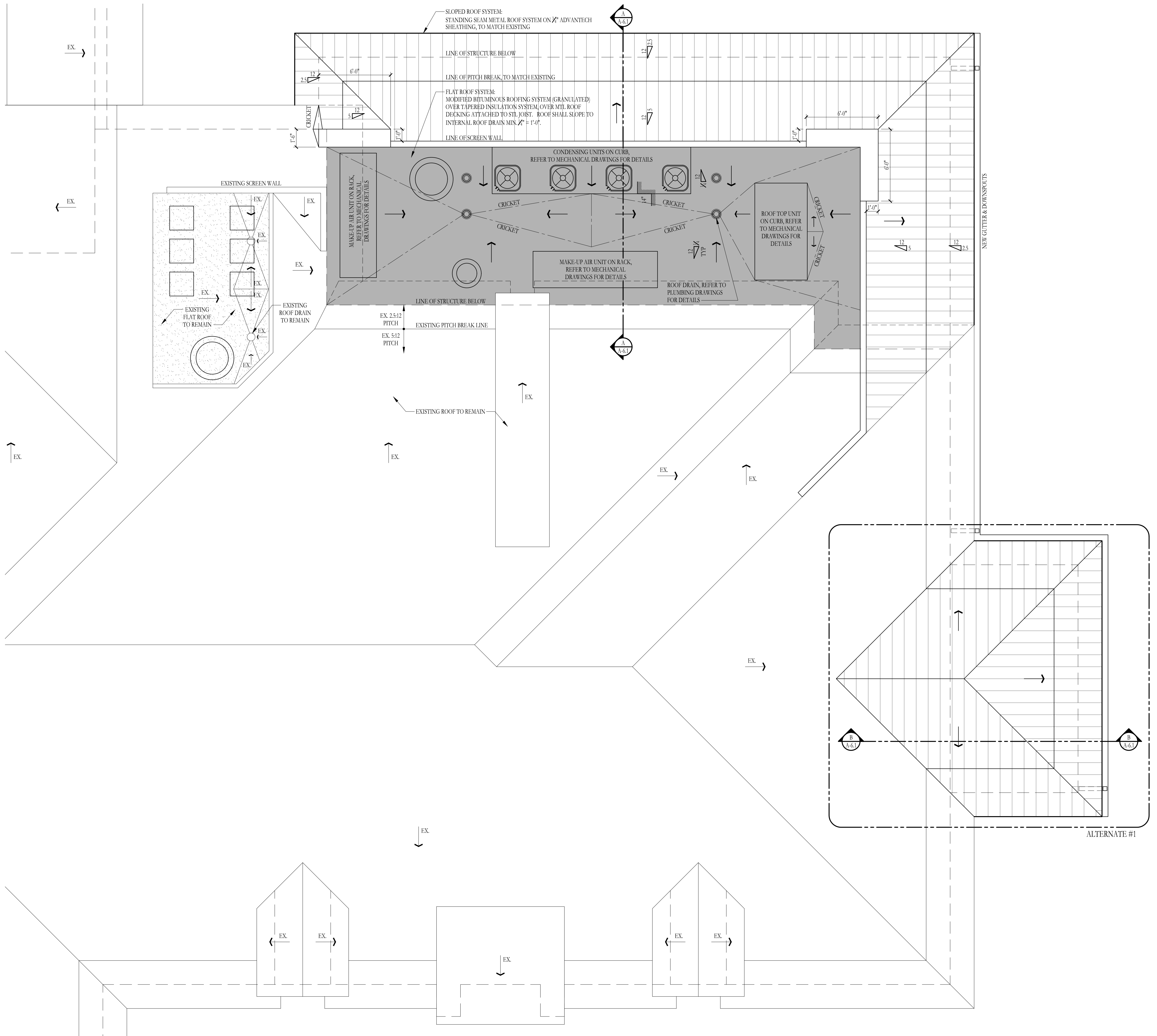
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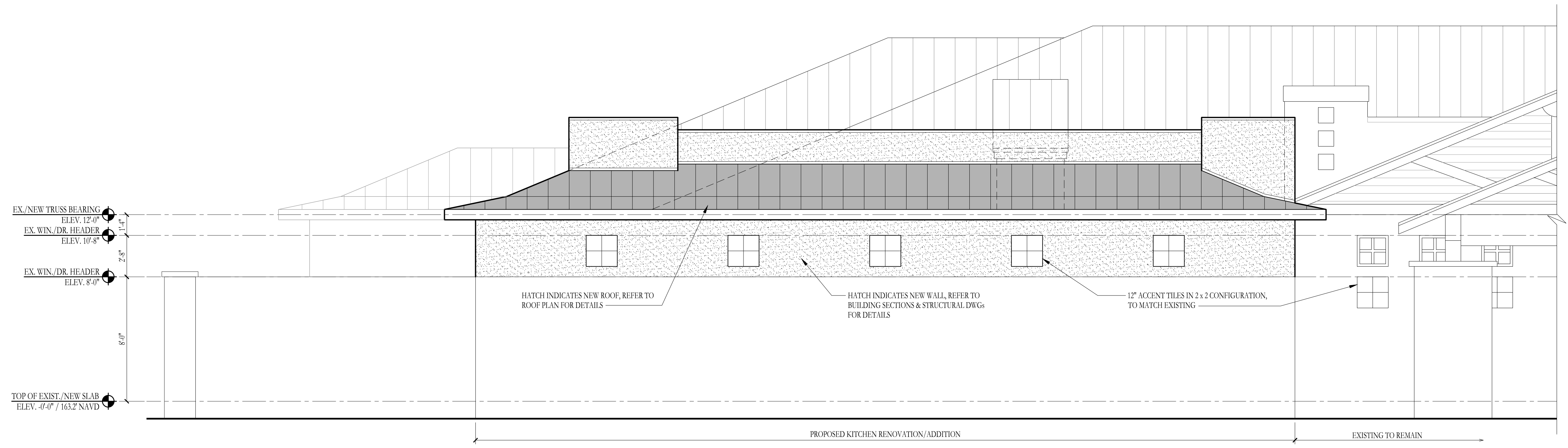
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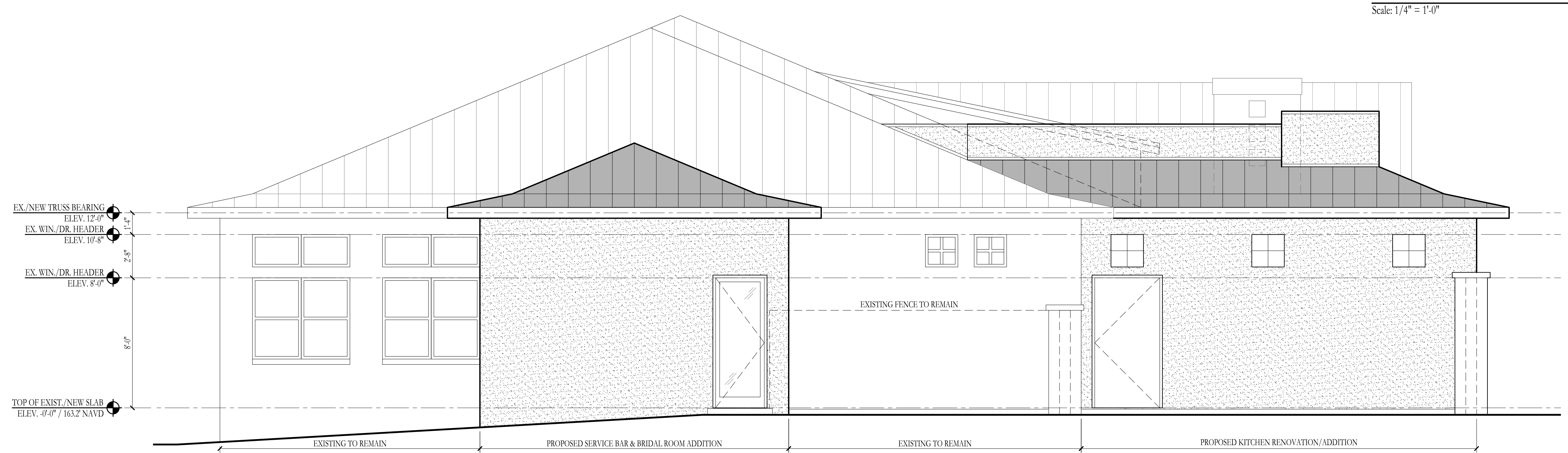
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A-4.1



PARTIAL FRONT ELEVATION
Scale: 1/4" = 1'-0"



SIDE ELEVATION
Scale: 1/4" = 1'-0"



PARTIAL REAR ELEVATION
Scale: 1/4" = 1'-0"

EXTERIOR ELEVATIONS

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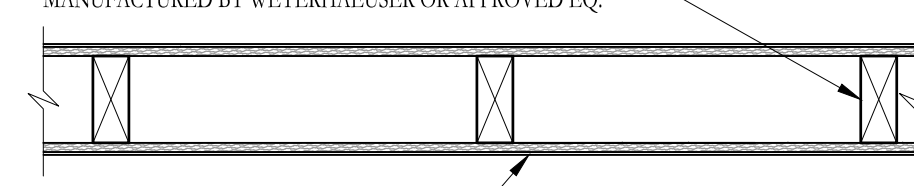
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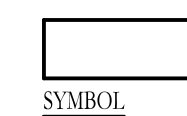
TYPICAL INTERIOR WOOD STUD WALL

EXTEND PARTITION FROM CONC. FLOOR SLAB TO WD. ROOF TRUSSES ABOVE.

2" x 4" "TIMBERSTRAND" FRAMING @ 16" O.C.
"TIMBERSTRAND LSL" STUD FRAMING AS
MANUFACTURED BY WEYERHAEUSER OR APPROVED EQ.



'MARLITE' LAMINATED FRP @ EA
SIDE OF 2" X 4" FRAMING @ 16" O.C.



SYMBOL

WALL LEGEND:

NTS.

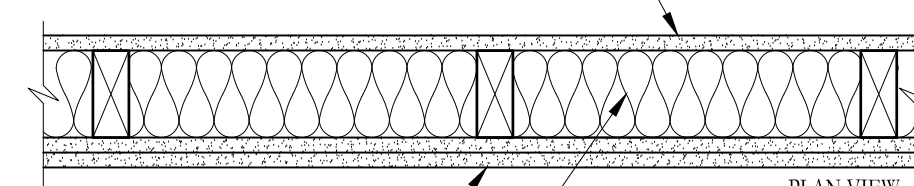
NOTES:

- DIMENSIONS TO INTERIOR WOOD WALLS SHALL BE TO FACE OF WOOD STUDS, REFER TO DIMENSIONS ON PLAN.
- DIMENSIONS TO EXTERIOR MASONRY WALLS SHALL BE TO FACE OF MASONRY, REFER TO DIMENSIONS ON PLAN.
- WALL THICKNESS OTHER THAN DESCRIBED IN WALL TYPES WILL BE DIMENSIONED ON PLAN.
- ALL 'MARLITE' FRP SYSTEMS TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.

INSULATED INTERIOR WOOD STUD WALL

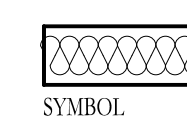
EXTEND PARTITION FROM CONC FLOOR SLAB TO WD. ROOF TRUSSES ABOVE.

(1) LAYER 5/8" GWB, PAINTED, ON 2" x 4" "TIMBERSTRAND" FRAMING @ 16" O.C., "TIMBERSTRAND LSL" STUD FRAMING AS MANUFACTURED BY WEYERHAEUSER OR APPROVED EQ.

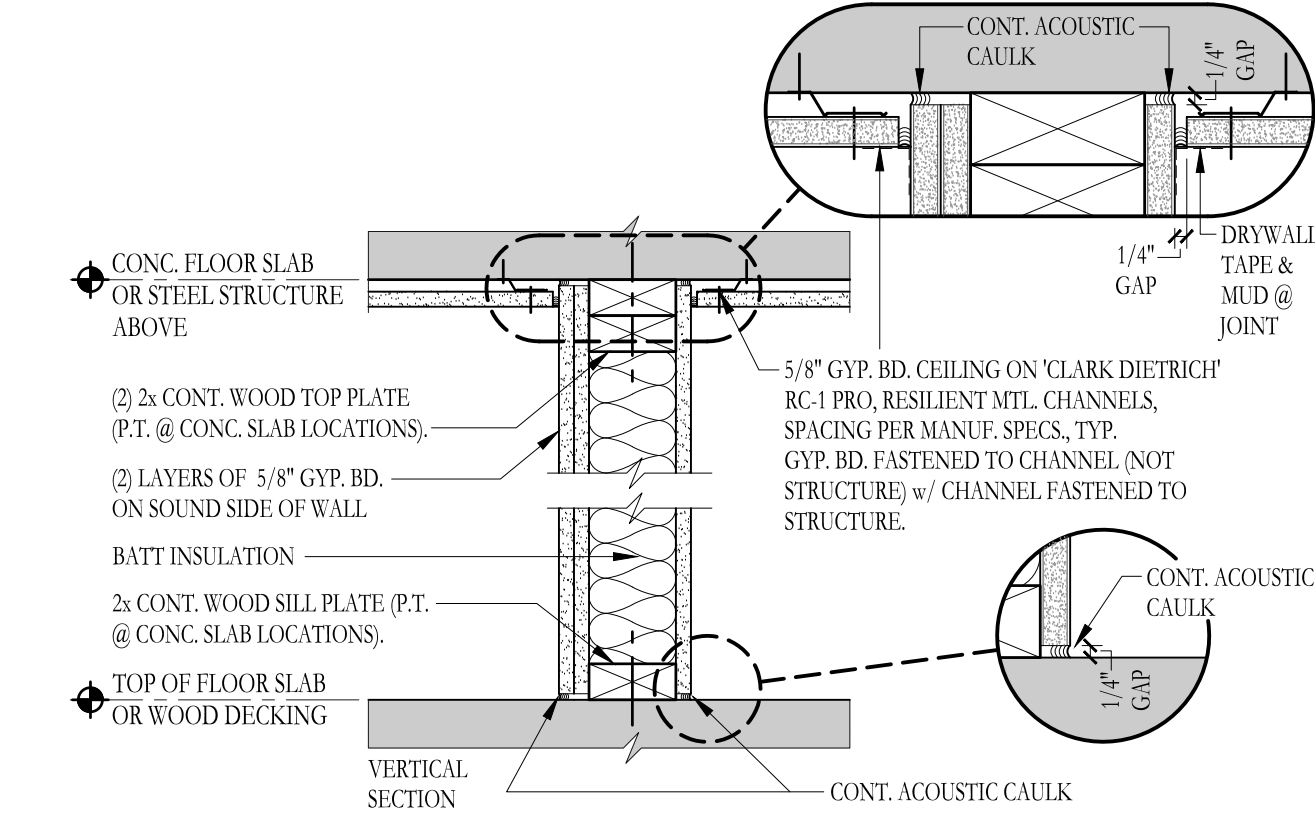


(2) LAYERS 5/8" GWB, PAINTED, @
SOUND SIDE OF FRAMING @ 16" O.C.

BATT INSULATION BETWEEN STUDS
TO ACHIEVE STC RATING OF 50, MIN.

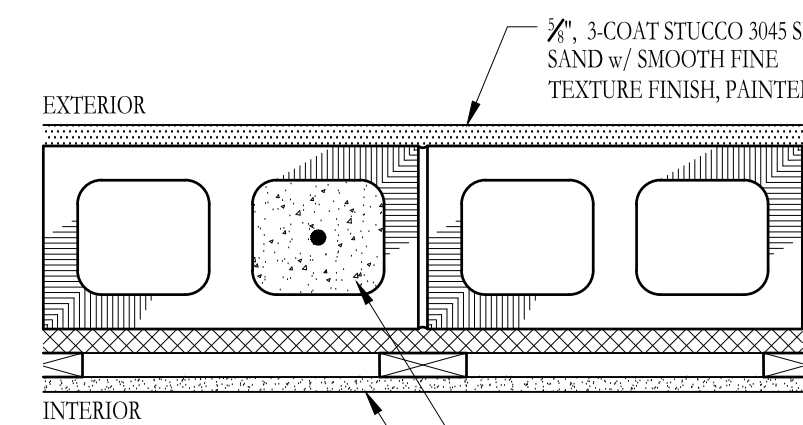


SYMBOL



TYPICAL EXTERIOR MASONRY WALL

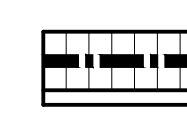
STUCCO ON EXTERIOR, 8" CMU WITH PAINTED 3/4" GWB ON 1st P.T. WD FURRING ON R-5 RIGID INSULATION AT INTERIOR SIDE.



3/4" 3-COAT STUCCO 3045 SILICA SAND w/ SMOOTH FINE TEXTURE FINISH, PAINTED

CMU WALL, SEE STRUCTURAL DWGS. FOR REINF. DETAILS

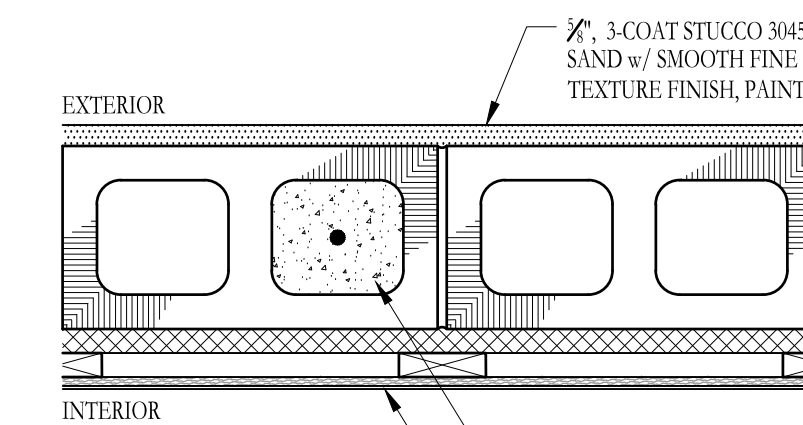
PAINTED 3/4" GWB ON 1st P.T. WD FURRING @ 16" O.C. ON R-5 RIGID INSULATION



SYMBOL

TYPICAL EXTERIOR MASONRY WALL

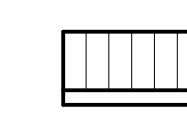
STUCCO ON EXTERIOR, 8" CMU WITH 'MARLITE' LAMINATED FRP ON 1st P.T. WD FURRING ON R-5 RIGID INSULATION AT INTERIOR SIDE.



3/4" 3-COAT STUCCO 3045 SILICA SAND w/ SMOOTH FINE TEXTURE FINISH, PAINTED

CMU WALL, SEE STRUCTURAL DWGS. FOR REINF. DETAILS

'MARLITE' LAMINATED FRP ON 1st P.T. WD FURRING ON R-5 RIGID INSULATION



SYMBOL

ROOM FINISH SCHEDULE

ROOM/AREA NUMBER	ROOM/AREA NAME	FLOOR		BASE	WALLS	WALL FINISH	CEILING	CLG. FINISH	CLG. HGT.	TRIM FINISH	REMARKS
		1. CONCRETE	2. POLARON'S POLYSPARTIC	3. CERAMIC TILE	4. GYPSUM BOARD	5. GYPSUM BOARD w/ 'MARLITE' LAMINATED FRP	6. PAINT	7. ACoustiC FINISHES	8. GYPSUM BOARD	9. PAINT	
101	KITCHEN	1	2		10		17		9'-0"		
102	COLD STORAGE #1	1							9'-0"		REFER TO FOOD SERVICE DWGS FOR FINISH & TRIM DETAILS
103	COLD STORAGE #2	1							9'-0"		REFER TO FOOD SERVICE DWGS FOR FINISH & TRIM DETAILS
104	COLD STORAGE #3	1							9'-0"		REFER TO FOOD SERVICE DWGS FOR FINISH & TRIM DETAILS
105	DRY STORAGE	1	2		10		17		9'-0"		
106	STORAGE	1	2		10		17		9'-0"		
107	REAR ENTRY	1	2		10		17		9'-0"		
108	ELECTRICAL ROOM	1	2							EXIST.	
109	MECHANICAL ROOM	1	2		10					EXIST.	
110	STAGING	1	2		10		17		9'-0"		
111	PASSAGE	1	3	6	9	13	17		10'-6"	24	
112	BRIDAL ROOM	1	3	6	9	13 14	18		10'-6"	24	
113	SERVICE BAR	1	2		9	13	18		9'-0"		

NOTES:
1. ALL GYP. BOARD FINISHES ARE TO MATCH EXISTING.

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REVISIONS	REVIEWED & ACCEPTED BY: (DATE)

ADDITIONS & ALTERATIONS TO:
SUN 'N LAKE GOLF CLUB
 SEBRING, FLORIDA

DATE
 08/27/2018
 Clifford M. Scholz | AIA

CS18068

SHEET NO.
A-8.1

ELECTRICAL SYMBOL LEGEND

LINE WEIGHT & LINE TYPE DESIGNATIONS			LIGHTING (LETTER INDICATES TYPE, REFER TO LIGHT FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION)		
SYMBOL	DESCRIPTION	REMARKS	SYMBOL	DESCRIPTION	REMARKS
	EXISTING (UNLESS OTHERWISE INDICATED)			LIGHT FIXTURE	WALL MOUNTED
	PROVIDE AS NEW (UNLESS OTHERWISE INDICATED)			EMERGENCY LIGHT FIXTURE	WALL MOUNTED
BASIC DRAWING				LIGHT FIXTURE	CEILING MOUNTED
	KEYED DRAWING NOTE			EMERGENCY LIGHT FIXTURE	CEILING MOUNTED
	REMOVALS			LIGHT FIXTURE	CEILING MOUNTED
	CIRCUIT			EMERGENCY LIGHT FIXTURE	CEILING MOUNTED
ONE-LINE/RISER				LIGHT FIXTURE	WALL MOUNTED
	CIRCUIT BREAKER			EMERGENCY LIGHT FIXTURE	WALL MOUNTED
	FUSE			STRIP LIGHT FIXTURE	CEILING MOUNTED
	DISCONNECT SWITCH (NON-FUSED)			EXIT LIGHT (HATCHING/ARROW INDICATES FACE/DIRECTION)	CEILING MOUNTED
	DISCONNECT SWITCH (FUSED)			EXIT LIGHT (HATCHING/ARROW INDICATES FACE/DIRECTION)	WALL MOUNTED
	TRANSFER SWITCH			EMERGENCY BATTERY PACK LIGHT FIXTURE	WALL MOUNTED
	TRANSFORMER			SINGLE POLE SWITCH	MOUNT AT 48" AFF, UNO
	PANELBOARD			S 3 SINGLE POLE SWITCH (3-WAY)	MOUNT AT 48" AFF, UNO
	PANELBOARD			S 4 SINGLE POLE SWITCH (4-WAY)	MOUNT AT 48" AFF, UNO
	PANELBOARD			S 0 SINGLE POLE SWITCH (DIMMER)	MOUNT AT 48" AFF, UNO
	METER (SELF CONTAINED)			OCCUPANCY SENSOR/WALL SWITCH (SUBSCRIPT INDICATES TYPE)	MOUNT AT 48" AFF, UNO
	METER (WITH CURRENT TRANSFORMERS)			OCCUPANCY SENSOR (SUBSCRIPT INDICATES TYPE)	CEILING MOUNTED
	MOTOR (NUMBER INDICATES HORSEPOWER)			PHOTOCELL	
	GENERATOR			TIME CLOCK	
	GROUND CONNECTION			SITE LIGHT FIXTURE	POLE MOUNTED
	CONTINUATION				
POWER - DISTRIBUTION			FIRE ALARM		
	PANELBOARD (FLUSH-MOUNTED)			FIRE ALARM CONTROL PANEL	
	PANELBOARD (SURFACE-MOUNTED)			FIRE ALARM REMOTE ANNUNCIATOR	
	TRANSFORMER			SMOKE DETECTOR	
	AUTOMATIC TRANSFER SWITCH			S S SMOKE DETECTOR WITH SOUNDER BASE	
	MANUAL TRANSFER SWITCH			S V SMOKE DETECTOR WITH VISUAL BASE	
	DISCONNECT SWITCH (NON-FUSED)			HEAT DETECTOR	
	DISCONNECT SWITCH (FUSED)			DUCT SMOKE DETECTOR	
	MANUAL MOTOR STARTER			MANUAL PULL STATION	
	MAGNETIC MOTOR STARTER			STROBE NOTIFICATION DEVICE	
	COMBINATION MAGNETIC MOTOR STARTER/DISCONNECT			COMBINATION V.E. SPEAKER/STROBE NOTIFICATION DEVICE	
	VARIABLE FREQUENCY DRIVE (VFD)			V.E. SPEAKER NOTIFICATION DEVICE	
	MOTOR			DOOR HOLD-OPEN DEVICE	
	HARD-WIRED EQUIPMENT CONNECTION			WATER FLOW DETECTION SWITCH	
	GENERATOR			TAMPER SWITCH	
	GROUND ROD			CONTROL MODULE	
POWER - BRANCH DEVICES				MONITOR MODULE	
	SIMPLEX RECEPTACLE	MOUNT AT 18" AFF, UNO		SMOKE DAMPER	
	DUPLEX RECEPTACLE	MOUNT AT 18" AFF, UNO		PRESSURE SWITCH	
	DUPLEX RECEPTACLE	MOUNT ABOVE COUNTER, UNO MOUNT HORIZONTAL FOR ADA		CARBON MONOXIDE DETECTOR	
	DUPLEX RECEPTACLE	MOUNT AT 18" AFF, UNO		NOTIFICATION APPLIANCE CIRCUIT EXTENDER PANEL	
	SPECIAL PURPOSE RECEPTACLE, SUBSCRIPT INDICATES TYPE	MOUNT AT 18" AFF, UNO		KNOX BOX	
	JUNCTION BOX OR OUTLET BOX		SECURITY/ACCESS CONTROL		
	RECEPTACLE(S) IN RECESSED FLOOR BOX		SCOPE OF WORK SHALL BE RACEWAY ONLY. FOR EACH WALL DEVICE LOCATION, PROVIDE RECESSED WALL-BOX AND 1" CONDUIT STUB WITH PULL STRING TO ACCESSIBLE ABOVE CEILING SPACE. FOR EACH CEILING DEVICE LOCATION, PROVIDE RECESSED CEILING BOX AND 3/4" CONDUIT TO NEAREST ACCESSIBLE ABOVE-CEILING SPACE. DEVICES, CABLING, EQUIPMENT, ETC. PROVIDED BY OTHERS.		
	CEILING MOUNTED RECEPTACLE(S)			DOOR CONTACT	
TELEPHONE/DATA/COMMUNICATION				MOTION DETECTOR	
SCOPE OF WORK SHALL BE RACEWAY ONLY. FOR EACH WALL DEVICE LOCATION, PROVIDE RECESSED WALL-BOX AND 1" CONDUIT STUB WITH PULL STRING TO ACCESSIBLE ABOVE CEILING SPACE. FOR EACH CEILING DEVICE LOCATION, PROVIDE RECESSED CEILING BOX AND 1" CONDUIT TO NEAREST ACCESSIBLE ABOVE-CEILING SPACE. DEVICES, CABLING, EQUIPMENT, ETC. PROVIDED BY OTHERS.				CARD READER	
	DATA OUTLET, #D SUBSCRIPT INDICATE NUMBER OF DATA AND TELEPHONE JACKS. IF NO SUBSCRIPTS ARE GIVEN, PROVIDE BLANK COVERPLATE.	MOUNT AT 18" AFF, UNO		KEY PAD	
	TELEPHONE OUTLET, #V SUBSCRIPT INDICATE NUMBER OF DATA AND TELEPHONE JACKS. IF NO SUBSCRIPTS ARE GIVEN, PROVIDE BLANK COVERPLATE.	MOUNT AT 18" AFF, UNO		DOOR STRIKE	
	TELEPHONE/DATA OUTLET, #D/#V SUBSCRIPT INDICATE NUMBER OF DATA AND TELEPHONE JACKS. IF NO SUBSCRIPTS ARE GIVEN, PROVIDE BLANK COVERPLATE.	MOUNT AT 18" AFF, UNO		MAGNETIC LOCK	
	WIRELESS ACCESS POINT			COMBINATION HORN/STROBE NOTIFICATION DEVICE	
	DATA RACK (REFER TO RISER, AND/OR SPECIFICATIONS FOR TYPE)			CCTV CAMERA (SUBSCRIPT INDICATES TYPE)	
	CABLE TELEVISION OUTLET	MOUNT AT 18" AFF, UNO	LIGHTING SYSTEM FUNCTIONAL TESTING		
	PUSHBUTTON (SUBSCRIPT INDICATES TYPE) EPD - EMERGENCY POWER OFF DB - DOOR BELL HC - DOOR OPENER	MOUNT AT 48" AFF, UNO	BEFORE FINAL INSPECTION A FACTORY CONTROL CONSULTANT SHALL PROVIDE EVIDENCE THAT LIGHTING CONTROLS HAVE BEEN TESTED, CALIBRATED, ADJUSTED, PROGRAMMED AND ARE IN WORKING CONDITION.		
	AUDIBLE/VISUAL DOORBELL CHIME	MOUNTING HEIGHT PER ADA	<ul style="list-style-type: none"> TEST OCCUPANCY SENSORS. TEST AUTO TIME SWITCH. TEST DAYLIGHT RESPONSIVENESS. 		
	INTERCOM STATION		PROVIDE OWNER DOCUMENTS CERTIFYING LIGHTING CONTROLS MEET PERFORMANCE CRITERIA WITHIN 90 DAYS AFTER CERTIFICATE OF OCCUPANCY.		
	SPEAKER		CODES REFERENCED		
			<ul style="list-style-type: none"> FLORIDA FIRE PREVENTION CODE, 6TH EDITION. FLORIDA BUILDING CODE 6TH EDITION (2017) BUILDING NATIONAL ELECTRICAL CODE - NEC (2014) NATIONAL FIRE ALARM AND SIGNALING CODE - NFPA 72 (2013) NFPA 101 (2015) LIFE SAFETY CODE FLORIDA BUILDING CODE 6TH EDITION (2017) - ENERGY CONSERVATION 		

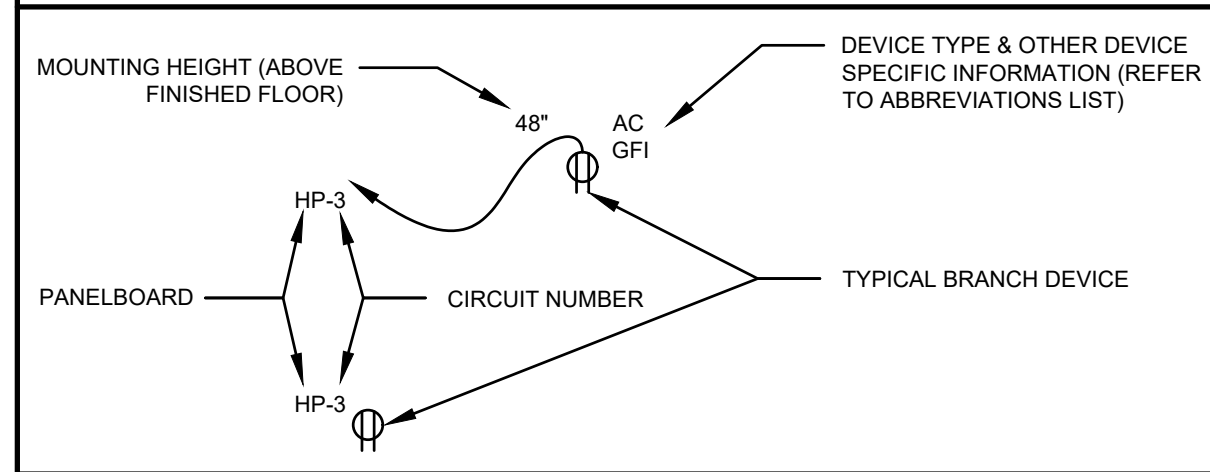
GENERAL NOTES

- THE GENERAL NOTES APPLY TO ALL DRAWINGS UNDER THIS CONTRACT. REFER TO INDIVIDUAL DRAWINGS FOR ADDITIONAL NOTES.
- ALL ELECTRICAL WORK SHOWN SHALL BE PROVIDED AS NEW UNLESS OTHERWISE NOTED.
- DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS. MAINTAIN HEADROOM AND SPACE CONDITIONS. BRANCH CIRCUIT NUMBERS ARE FOR REFERENCE ONLY. CONTRACTOR SHALL DETERMINE THE CIRCUIT NUMBERS AND PROVIDE A SCHEDULE IN PANEL IDENTIFYING BRANCH CIRCUITS.
- JUNCTION AND PULL BOXES SHALL GENERALLY BE LOCATED FOR FLUSH MOUNTING IN FINISHED SPACES. WHERE NECESSARY, CONDUITS SHALL BE REROUTED OR OTHER ARRANGEMENTS MADE FOR CONCEALMENT. PULL BOXES SHALL BE PROVIDED AS INDICATED AND WHERE NECESSARY TO FACILITATE PULLING OF WIRE AND COORDINATE LOCATIONS WITH OTHER TRADES. COVERS OF JUNCTION AND PULL BOXES SHALL BE ACCESSIBLE. FOR EMPTY RACEWAY RUNS, PULL BOXES SHALL BE PROVIDED EVERY 100 FEET AND AS INDICATED OR NECESSARY.
- BOXES SHALL BE SET SQUARE AND TRUE WITH BUILDING FINISH. WALL AND SWITCH OUTLETS SHALL BE ERECTED IN ADVANCE OF FURRING AND FIREPROOFING. BOXES SHALL BE SECURED TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRONS.
- IN EXISTING BUILDINGS, ALL REQUIRED ACCESS DOORS SHALL BE FURNISHED AND INSTALLED UNDER THE ELECTRICAL SECTION. ALL ACCESS DOOR LOCATIONS SHALL BE FIELD COORDINATED WITH THE OWNER.
- NO ELECTRICAL RACEWAYS OR CONDUCTORS SHALL BE INSTALLED WITHIN 3 INCHES OF STEAM OR HOT WATER PIPES, OR APPLIANCES, EXCEPT FOR CROSSING WHERE RACEWAYS SHALL BE AT LEAST 1 INCH FROM PIPE COVER.
- SUFFICIENTLY LONG WIRE SLACK SHALL BE LEFT IN RUNS TO ALLOW FOR MAKING PROPER FINAL CONNECTIONS. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH #12 AWG STEEL DRAG WIRES.
- REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF ALL HVAC EQUIPMENT, (AC UNITS, FANS, VAV BOXES, ETC).
- REFER TO PLUMBING DRAWINGS FOR EXACT LOCATION OF ALL PLUMBING EQUIPMENT.
- ALL WIRING SHALL BE ROUTED IN AN ORGANIZED AND NEAT MANNER.
- SUBMIT DIMENSIONED LAYOUTS OF ALL ELECTRIC EQUIPMENT WITH EQUIPMENT SUBMITTALS.
- ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL RACEWAYS RUNS WITH EXISTING CONDITIONS AND INCLUDE ALL PULLBOXES, OFFSETS, CUTTING, PATCHING, PAINTING TO MATCH EXISTING, SUPPORTS, ETC. AS REQUIRED.
- THE ROUTING AND LOCATION OF CONDUIT RUNS ARE GENERALLY NOT DIMENSIONAL ON THE DRAWINGS BUT SHALL BE DETERMINED IN THE FIELD TO SUIT THE LOCATIONS OF EQUIPMENT, TO CONFORM TO STRUCTURAL AND ARCHITECTURAL FEATURES AND TO AVOID INTERFERENCES.
- ALL CUTTING AND RESTORATION OF SLAB AND FLOOR SHALL BE IN ACCORDANCE WITH STRUCTURAL ENGINEER'S REQUIREMENTS AND AS APPROVED BY ENGINEER.
- ELECTRICAL CONTRACTOR SHALL VERIFY ALL PENETRATIONS, POKE THRU'S, AND EXISTING CONDUIT LOCATIONS PRIOR TO MODIFICATION.
- ALL SIGHT EXPOSED ELECTRICAL DEVICES SHALL BE LOCATED AS PER ARCHITECT'S DRAWINGS AND/OR DIRECTION.
- WHERE CONDUIT OR JUNCTION BOXES ARE RUN IN SLAB, THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING, PATCHING, AND RESTORATION OF SLAB AND FLOOR.
- ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LIGHT FIXTURES, REMOTE BALLASTS AND ASSOCIATED WIRING, SUPPORTS, HARDWARE, AND ACCESSORIES AS REQUIRED.
- SYMBOLS AND LEGENDS SHOWN ON THIS DRAWING ARE FOR ELECTRICAL DRAWINGS ONLY. SEE ARCHITECTURAL DRAWINGS AND TRADE DRAWINGS FOR RESPECTIVE SYMBOLS AND LEGENDS.
- THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL SLAB CUTS, FOUNDATION WALL PENETRATIONS, WALL OPENINGS, CORE DRILLING, ROOF PENETRATIONS, ETC. AND PATCHING AS REQUIRED TO PROVIDE ALL ELECTRICAL WORK. FOR FOUNDATION WALL PENETRATIONS PROVIDE 4"x4"x3/8" WELDED STEEL ANGLE BY THE CONTRACTOR AND APPROVED BY THE STRUCTURAL ENGINEER AND PROVIDE WATER PROOFING. ALL ROOF, TUNNEL AND FOUNDATION PENETRATIONS SHALL BE WATER PROOFED. COORDINATE WORK SO AS TO MAINTAIN ANY AND ALL WARRANTIES FOR ROOF SYSTEMS, FOUNDATIONS, ETC.
- ALL TELEPHONE/DATA RACEWAYS SHALL BE PROVIDED WITH INSULATED END BUSHINGS.
- SEPARATE RACEWAYS SHALL BE PROVIDED FOR CONDUCTORS OF NORMAL AND EMERGENCY CIRCUITS.
- HORIZONTAL OR CROSS RUNS IN PARTITIONS OR WALLS ARE NOT PERMITTED.
- THE ELECTRICAL CONTRACTOR SHALL NOT INSTALL MORE THAN THE NUMBER OF CIRCUITS SHOWN IN ANY HOMERUN CIRCUIT.
- CONTRACTOR TO PROVIDE FIRE PROOFING AT ALL PENETRATIONS OF RATED PARTITIONS, FLOORS, AND WHERE THE EXISTING FIRE PROOFING WAS REMOVED TO EXPOSE EXISTING STEEL FOR NEW HANGER INSTALLATION. REFER TO SPECIFICATION SECTION FIRE PROOFING.
- LOCATIONS INDICATED FOR LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS. AT OR NEAR DOORS, INSTALL SWITCH ON SIDE OPPOSITE HINGE. VERIFY FINAL DOOR HINGE LOCATION IN FIELD PRIOR TO SWITCH OUTLET INSTALLATION.
- EXACT LOCATION OF LIGHTING FIXTURES SHALL BE IN ACCORDANCE WITH ARCHITECTURAL REFLECTED CEILING PLAN OR AS DIRECTED BY THE ARCHITECT.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CEILING WORK WITH CEILING CONTRACTOR AND DETERMINE CEILING TYPE PRIOR TO THE PURCHASING AND INSTALLATION OF LIGHTING FIXTURES, SPEAKERS, SMOKE DETECTORS, EXIT LIGHTS, OR ANY OTHER CEILING MOUNTED ELECTRICAL ELEMENTS. THE ELECTRICAL CONTRACTOR SHALL ALSO COORDINATE ALL ELECTRICAL WORK WITH LOCATION OF DIFFUSERS AND SPRINKLERS AND OTHER MECHANICAL WORK.
- EXACT LOCATION AND MOUNTING OF LIGHTING FIXTURES IN MECHANICAL AREAS SHALL BE COORDINATED WITH THE MECHANICAL TRADES TO AVOID CONFLICT WITH PIPING, DUCTS AND EQUIPMENT. IN GENERAL, THE FINAL LOCATION OF LIGHTING FIXTURES SHALL BE GOVERNED BY THE NEED OF TASK LIGHTING IN THE VICINITY OF PANEL BOARDS, MOTOR CONTROLS, CONTROL AND INSTRUMENT PANELS AND GAUGES.
- LOCATIONS OF OUTLETS AND SWITCHES IN FINISHED ROOMS SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISHES. IN CENTERING OUTLETS AND LOCATING BOXES AND OUTLETS, ALLOW FOR OVERHEAD PIPES, DUCTS AND MECHANICAL EQUIPMENT, VARIATIONS IN FIREPROOFING AND PLASTERING, WINDOW AND DOOR TRIMS, PANELING, SUSPENDED CEILINGS AND THE LIKE. CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT ANY ADDITIONAL EXPENSE TO THE OWNER.
- ALL RACEWAYS, WIRING, AND ASSOCIATED ELECTRICAL EQUIPMENT SHALL BE ROUTED CONCEALED EXCEPT IN UNFINISHED AREAS.
- ALL EQUIPMENT, MATERIALS, ETC. SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL. REFER TO SPECIFICATIONS FOR ADDITIONAL ACTION SUBMITTAL AND SHOP DRAWING REQUIREMENTS.
- PRIOR TO CONSTRUCTION, COORDINATE WITH LOCAL AHJ THE UL CONDITIONAL LISTING REQUIREMENTS FOR ALL JUNCTIONS BOXES UTILIZED IN RATED WALLS AND CEILINGS.
- WHERE CONFLICTS EXIST BETWEEN THE INFORMATION INCLUDED IN THESE DRAWINGS OR BETWEEN INFORMATION PROVIDED IN THESE DRAWINGS AND THE PROJECT SPECIFICATIONS OR WITHIN THE PROJECT SPECIFICATIONS, THE MORE STRINGENT AND/OR HIGHEST COST REQUIREMENTS SHALL APPLY. SHOULD THE CONTRACTOR REQUIRE FURTHER CLARIFICATION, AN RFI SHALL BE SUBMITTED FOR CLARIFICATION. WHERE CONFLICTS DO EXIST, THE PROJECT ENGINEER OF RECORD SHALL HAVE THE SOLE DISCRETION AND RIGHT TO PROVIDE INTERPRETATION OF INTENT OF THE CONTRACT DOCUMENTS AS REQUIRED AND THIS INTERPRETATION SHALL SERVE TO DIRECT THE CONTRACTOR IN ACCORDANCE WITH THE IMPLIED INTENT OF THE CONSTRUCTION DOCUMENTS WITHOUT ADDITIONAL COST TO THE PROJECT.
- CONTRACTOR SHALL INCLUDE CONTINGENCY IN BID PRICE TO ALLOW FOR MODIFICATION OR ADDITION OF ELECTRICAL DEVICES (LIGHTING, FIRE ALARM, POWER, SWITCHING, OCCUPANCY SENSORS, ETC.) BASED UPON THE REQUIREMENTS OF THE LOCAL INSPECTOR (AHJ). THE LOCAL INSPECTOR (AHJ) HAS THE AUTHORITY TO REQUIRE DEVICES TO BE ADDED, MODIFIED, OR RELOCATED BASED UPON HIS OPINION OF THE SPECIFIC INSTALLATION, EVEN IF THE BUILDING DEPARTMENT APPROVED THE PLANS WITHOUT COMMENTS. CONTRACTOR SHALL PROVIDE FOR ADDITIONAL, MODIFICATION, AND/OR RELOCATION OF ALL DEVICES REQUIRED BY THE INSPECTOR WITHOUT ADDITIONAL COST TO THE OWNER.

ABBREVIATIONS

SYMBOL	DESCRIPTION	REMARKS	SYMBOL	DESCRIPTION	REMARKS
A	AMPERE(S)		KAIC	1000 AMPERE INTERRUPTING CAPACITY	
AC	ALTERNATING CURRENT		KMIL	1000 CIRCULAR MIL(S)	
ADA	AMERICANS WITH DISABILITIES ACT		KVA	KILOVOLT AMPERE(S)	
AF-CI	ARC-FAULT CIRCUIT INTERRUPTER		KW	KILOWATT(S)	
AFF	ABOVE FINISHED FLOOR		LTG	LIGHTING	
AFG	ABOVE FINISHED GRADE		MC	MECHANICAL CONTRACTOR	
AHJ	AUTHORITY HAVING JURISDICTION		MCA	MINIMUM CIRCUIT AMPACITY	
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE		MCB	MAIN CIRCUIT BREAKER	
ATS	AUTOMATIC TRANSFER SWITCH		MIC	MICROWAVE	
AWG	AMERICAN WIRE GAUGE		MISC	MISCELLANEOUS	
BLDG	BUILDING		MIN	MINIMUM	
C	CONDUIT		MFR	MANUFACTURER	
CB/CKT BKR	CIRCUIT BREAKER		MH	MOUNTING HEIGHT	
CL	CLOSET		MTD	MOUNTED	
CLG	CEILING		N	NEUTRAL	
CKT	CIRCUIT		NC	NORMALLY CLOSED	
CO	CONDUIT ONLY		NEC	NATIONAL ELECTRIC CODE	
CONC	CONCRETE		NFPA	NATIONAL FIRE PROTECTION ASSOCIATION	
COND	CONDUCTOR		NL	NIGHT LIGHT	
CONST	CONSTRUCTION		NO	NORMALLY OPEN	
CONT	CONTRACT		NTS	NOT TO SCALE	
CP	CONTROL PANEL		P	POLE	
CT	CURRENT TRANSFORMER		PB	PULL BOX	
CU	COPPER		PC	PLUMBING CONTRACTOR	
DED	DEDICATED		PH0	PHASE	
DISC	DISCONNECT		PNL	PANEL	
DISH	DISHWASHER		PRI	PRIMARY	
DISP	DISPOSAL		PWR	POWER	
DIV	DIVISION		QTY	QUANTITY	
DT	DUAL TECHNOLOGY (IRUS)		REC/RECEPT	RECEPTACLE	
DWG	DRAWING		REF	REFRIGERATOR	
EA	EACH		SEC	SECONDARY	
EC	ELECTRICAL CONTRACTOR		SPEC	SPECIFICATION	
ELEC	ELECTRIC		SW	SWITCH	
EMEMER	EMERGENCY		TEL	TELEPHONE	
EXEXIST	EXISTING		TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION	
F	FUSE		TYP	TYPICAL	
FA	FIRE ALARM		UG	UNDERGROUND	
FBO	FURNISHED BY OTHERS		UL	UNDERWRITER'S LABORATORIES	
FDR	FEEDER		UNO	UNLESS NOTED OTHERWISE	
FL	FLOOR		USED	UNLESS OTHERWISE NOTED	
FLA	FULL LOAD AMPS		UPS	UNINTERRUPTIBLE POWER SUPPLY	
FLUOR	FLUORESCENT		US	ULTRASONIC	
FT	FEET		UV	ULTRAVIOLET	
G/GND	GROUND		V	VOLT(S)	
GC	GENERAL CONTRACTOR		VA	VOLTPERE(S)	
GFI	GROUND FAULT INTERRUPTER		VFD	VARIABLE FREQUENCY DRIVE	
HC	HUNG CEILING		W	WATT(S)	
HOA	HAND-OFF-AUTO SELECTOR SWITCH		WP	WEATHERPROOF	
HP	HORSEPOWER				
IR	INFRARED				
JB	JUNCTION BOX				

TYPICAL BRANCH DEVICE INFORMATION



BRANCH CIRCUIT NOTES

- CIRCUIT NUMBERS ARE FOR REFERENCE ONLY AND INDICATE THE DEVICES REQUIRED TO BE CONNECTED TO DESIGNATED CIRCUITS.
- THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING AND PROVIDING THE ACTUAL NUMBER OF CONDUCTORS REQUIRED FOR ALL BRANCH CIRCUIT WIRING TO SERVE THE INTENDED FUNCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY BALANCING LOADS ON ALL THREE PHASES.
- ALL BRANCH CIRCUITS SHALL HAVE SEPARATE GROUND WIRE.
- ALL BRANCH CIRCUITS SHALL HAVE SEPARATE NEUTRAL WIRE.
- ALL BRANCH CIRCUITS SHALL BE SIZED PER OVERCURRENT PROTECTION RATING AND NEC REQUIREMENTS (INCLUDING NEC CONDUCTOR AMPACITY TABLES, ARTICLE 334.80, AND 338.10(B)(4)).
- PROVIDE ARC-FAULT CIRCUIT PROTECTION PER NEC ARTICLE 210.12.

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REVISIONS
 REVIEWED & ACCEPTED BY: (DATE)

ADDITIONS & ALTERATIONS
 TO:
SUN 'N LAKE GOLF CLUB
 FLORIDA
 SEBRING,

DATE
 08/10/2018

CS17028

SHEET NO.

E-0

GENERAL NOTES

- DO NOT SCALE FROM THESE DRAWINGS. EXACT DIMENSIONS SHALL BE TAKEN FROM ARCHITECTURAL DRAWINGS.
- ALL INDICATED WORK SHALL BE PERFORMED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.
- ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ALL APPLICABLE CODES AND REGULATIONS INCLUDING BUT NOT LIMITED TO NATIONAL, CITY, STATE AND LOCAL ORDINANCES WHICH MAY BE IN EFFECT. ALL MECHANICAL MATERIALS, INSTALLATION PROCEDURES AND SYSTEM LAYOUTS SHALL BE APPROVED BY ALL APPLICABLE CODE ENFORCEMENT AUTHORITIES HAVING JURISDICTION, AND IT SHALL BE THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO PAY FOR ALL NECESSARY PERMITS AND APPROVALS FOR THIS INSTALLATION.
- IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO REVIEW THESE PLANS AND SPECIFICATIONS, AS WELL AS THE RELATED PLUMBING, FIRE PROTECTION, ELECTRICAL, STRUCTURAL, ARCHITECTURAL, INTERIOR DECOR AND SITE ENGINEERING DRAWINGS TO BECOME FAMILIAR WITH THE FULL PROJECT SCOPE. IN ADDITION, THIS CONTRACTOR MUST COORDINATE WITH AN OWNER REPRESENTATIVE TO FULLY UNDERSTAND ALL REQUIREMENTS WHICH MAY NOT BE SPECIFIED HEREIN AND WHICH THE OWNER MAY CONSIDER PART OF THIS CONTRACT. DURING THE COURSE OF CONSTRUCTION COORDINATION AND ACTUAL CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO WORK CLOSELY WITH ALL ACCOMPANYING CONTRACTORS AND TRADESMEN IN ORDER TO ENSURE A SMOOTH RUNNING AND CAREFULLY COORDINATED INSTALLATION.
- ANY DISCREPANCIES OR INADEQUACIES WITHIN THESE BID DOCUMENTS OR BETWEEN THESE BID DOCUMENTS AND THE RELATED PLUMBING, FIRE PROTECTION, ELECTRICAL, STRUCTURAL, ARCHITECTURAL, INTERIOR DECOR AND SITE ENGINEERING DRAWINGS, OR BETWEEN THESE BID DOCUMENTS AND FIELD CONDITIONS MUST BE BROUGHT TO THE ATTENTION OF THE OWNER, ARCHITECT AND ENGINEER PRIOR TO BID SUBMISSION.
- WHERE CONFLICTS EXIST BETWEEN THE INFORMATION INCLUDED IN THESE DRAWINGS OR BETWEEN INFORMATION PROVIDED IN THESE DRAWINGS AND THE PROJECT SPECIFICATIONS OR WITHIN THE PROJECT SPECIFICATIONS, THE MORE STRINGENT AND/OR HIGHEST COST REQUIREMENTS SHALL APPLY. SHOULD THE CONTRACTOR REQUIRE FURTHER CLARIFICATION, AN RFI SHALL BE SUBMITTED FOR CLARIFICATION. WHERE CONFLICTS DO EXIST, THE PROJECT ENGINEER OF RECORD SHALL HAVE THE SOLE DISCRETION AND RIGHT TO PROVIDE INTERPRETATION OF INTENT OF THE CONTRACT DOCUMENTS AS REQUIRED AND THIS INTERPRETATION SHALL SERVE TO DIRECT THE CONTRACTOR IN ACCORDANCE WITH THE IMPLIED INTENT OF THE CONSTRUCTION DOCUMENTS WITHOUT ADDITIONAL COST TO THE PROJECT.
- THE MECHANICAL CONTRACTOR SHALL PROVIDE A COMPLETE SET OF RECORD "AS-BUILT" DRAWINGS INDICATING THE PRECISE LOCATION OF ALL SYSTEMS, EQUIPMENT CONCEALED OR EMBEDDED PIPING, PIPING CONNECTIONS AND ACCESS DOORS. THESE DRAWINGS SHALL ALSO INCLUDE ALL CHANGES AND DEVIATIONS FROM THE BID DOCUMENTS.
- CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF NEW MECHANICAL EQUIPMENT WITH NEW LIGHT LOCATIONS AND TILE LOCATIONS. REFER TO ARCHITECT'S REFLECTED CEILING PLAN LAYOUT.
- ALL DUCT DIMENSIONS SHOWN ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS. AIR VELOCITY SHALL NOT EXCEED 650 FEET PER MINUTE IN DWELLING UNITS.
- RUN ALL DUCTWORK AND PIPING WITH AS FEW OFFSETS AS POSSIBLE THROUGHOUT THE ENTIRE BUILDING. COORDINATE AND VERIFY WITH OTHER CONTRACTORS AS NOT TO INTERFERE WITH PLUMBING, FIRE PROTECTION PIPING, LIGHTING SYSTEMS, ETC..
- ALL REQUIRED OFFSETS, RISES AND DROPS DUE TO POSSIBLE OBSTRUCTIONS OF PIPE RUNS ARE NOT NECESSARILY SHOWN. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRANSITIONS, FITTINGS, ELBOWS, DUCTWORK, PIPING, SUPPORTS, ETC. NECESSARY FOR A PROPER INSTALLATION AND OPERATION OF NEW HVAC SYSTEM. MECHANICAL CONTRACTOR SHALL INCLUDE A CONTINGENCY IN HIS BID TO OFFSET ANY COST REQUIRED FOR ADDITIONAL FITTINGS AND LABOR THAT MAY BE REQUIRED.
- ALL EXPOSED HORIZONTAL AND VERTICAL DUCTWORK AND PIPING SHALL BE INSTALLED IN A NEAT ARRANGEMENT IN LOCATIONS WHICH ARE THE MOST INCONSPICUOUS. VERTICAL DROPS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND THEIR FINAL LOCATIONS SHALL BE COORDINATED AND RUN WITHIN CHASES, WALLS, SOFFITS WITH OTHER MECHANICAL/ELECTRICAL FEEDS. ALL SUCH LOCATIONS ARE TO BE REVIEWED WITH AN OWNER REPRESENTATIVE AND ARCHITECT PRIOR TO INSTALLATION.
- ALL BRANCH DUCTS TO AIR DEVICES SHALL BE PROVIDED WITH VOLUME DAMPER IN THE BRANCH CONNECTION UNLESS NOTED OTHERWISE. ALL ROUND BRANCH DUCT CONNECTIONS SHALL BE PROVIDED WITH CONICAL SPIN-IN FITTING WITH INTEGRAL VOLUME DAMPER.
- ALL DUCT PENETRATIONS THROUGH A RATED FLOOR/CEILING ASSEMBLY SHALL BE PROVIDED WITH A FIRE DAMPER. FOR AIR DEVICES INSTALLED IN A RATED FLOOR/CEILING ASSEMBLY, INSTALL A CEILING RADIATION DAMPER.
- THROUGH PENETRATIONS OF FIRE RESISTANCE RATED HORIZONTAL ASSEMBLIES SHALL BE PROTECTED BY AN APPROVED THROUGH-PENETRATION FIRESTOP SYSTEM INSTALLED AND TESTED IN ACCORDANCE WITH ASTM E 814 OR UL 1479. WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER (2.49PA). THE SYSTEM SHALL HAVE AN F RATING OF NOT LESS THAN 1 HOUR BUT NOT LESS THAN THE REQUIRED RATING OF THE FLOOR PENETRATED. SEE ARCHITECTURAL DRAWINGS FOR RATED ASSEMBLY LOCATIONS, RATINGS AND DETAILS. EXCEPTIONS: FLOOR PENETRATIONS CONTAINED AND LOCATED WITHIN THE CAVITY OF A WALL ABOVE THE FLOOR OR BELOW THE FLOOR DO NOT REQUIRE A T RATING.
- DUCT SMOKE DETECTORS SHOWN ON PLANS ARE DIAGRAMMATIC. REFER TO MANUFACTURER'S INSTRUCTIONS FOR EXACT OPTIMUM LOCATION IN DUCTWORK. DUCT SMOKE DETECTORS SHALL BE PURCHASED BY THE ELECTRICAL CONTRACTOR, AND INSTALLED BY THE MECHANICAL CONTRACTOR. WIRING INSTALLATION SHALL BE BY THE FIRE ALARM CONTRACTOR.
- MOUNT ALL THERMOSTATS ABOVE FINISHED FLOOR AT HEIGHT APPROVED BY ARCHITECT. COORDINATE LOCATION WITH ARCHITECTURAL INTERIOR ELEVATIONS.
- INSTALL SLEEVES FOR PIPING PENETRATIONS OF WALLS, CEILINGS, AND FLOORS. INSTALL CHROME PLATED ESCUTCHEONS FOR PIPING PENETRATIONS OF WALLS, CEILINGS, AND FLOORS. REFER TO DETAIL SHEET FOR ROOF PENETRATIONS.
- ALL PLUMBING VENTS AND BUILDING EXHAUST SHALL BE LOCATED A MINIMUM OF 10 FEET FROM BUILDING INTAKES (INCLUDING OPERABLE WINDOWS).
- MAINTAIN MANUFACTURER'S RECOMMENDED SERVICE CLEARANCES AROUND EQUIPMENT AT A MINIMUM. DO NOT ROUTE PIPING, DUCTWORK, CONTROL WIRE, ETC. THROUGH THE SERVICE CLEARANCE AREAS.
- REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- ALL MECHANICAL EQUIPMENT SHALL BE PROVIDED WITH A FACTORY DISCONNECT SWITCH, STARTER, VFD OR MOTOR RATED SWITCH AS REQUIRED FOR CODE COMPLIANT OPERATION OF ALL MOTORIZED EQUIPMENT IN ACCORDANCE WITH CODE AND THE DESIGN INTENT ASSOCIATED WITH THESE DRAWINGS. COORDINATE ALL DISCONNECTS AND STARTER REQUIREMENTS WITH THE PROJECT ELECTRICAL CONTRACTOR PRIOR TO BID TO ENSURE A COORDINATED INSTALLATION.

DEMOLITION NOTES

- COORDINATE HVAC DEMOLITION WITH OTHER TRADES AND GENERAL CONTRACTOR. DO NOT DEMOLISH EQUIPMENT OR COMPONENTS WITHOUT APPROVAL.
- UNDER NO CIRCUMSTANCE SHALL DEMOLITION CAUSE DAMAGE OR REMOVAL IN WHOLE OR IN PART OF ANY STRUCTURAL MEMBER WITHOUT EXPRESS APPROVAL OF THE GENERAL CONTRACTOR.
- CAP AND PROTECT ANY EXPOSED EQUIPMENT, DUCT, PIPE OR ELECTRICAL CABLE / CONDUIT THAT RESULTS FROM DEMOLITION. UNDER NO CIRCUMSTANCE WILL DEMOLITION RESULT IN THE PERMANENT EXPOSURE OF ANY CHARGED OR LIVE COMPONENT OR ANY EQUIPMENT TO BE RE-USED.
- PROTECT ANY EQUIPMENT, SYSTEM, OR COMPONENT THEREOF THAT SHALL BE RE-USED.
- COORDINATE DISPOSAL OF ALL REMOVED ITEMS WITH THE GENERAL CONTRACTOR. TURN OVER ANY COMPONENTS TO THE OWNER AS DESIGNATED IN CLEAN CONDITION, WITHOUT DAMAGE, AND WITH OPENING SEALED. FURNISH RECEIPTS OF PROPER DISPOSAL OF ALL ITEMS REMOVED TO THE GENERAL CONTRACTOR UPON REQUEST. RECEIPTS SHALL INDICATE DISPOSAL IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

MECHANICAL SPECIFICATIONS

1. GENERAL

PROVIDE MATERIALS, EQUIPMENT, ACCESSORIES, INCIDENTALS, ARTICLES, ITEMS, OPERATIONS, INCLUDING LABOR, NECESSARY FOR COMPLETION OF WORK INDICATED AND/OR CALLED FOR ON THESE DRAWINGS. SUBMIT SHOP DRAWINGS AND PRODUCT DATA ON ALL EQUIPMENT, PIPE, DUCTWORK, AND INSULATION.

PROVIDE A COPY OF BOUND CLOSE-OUT DOCUMENTS TO THE ARCHITECT FOR APPROVAL. PROVIDE TWO BOUND COPIES OF CLOSE OUT DOCUMENTS TO THE OWNER'S REPRESENTATIVE AFTER APPROVAL. CLOSE OUT DOCUMENTS SHALL INCLUDE COMPLETE I.O.M.'S FOR EACH PIECE OF EQUIPMENT, A COPY OF THE SEQUENCE OF OPERATIONS AS PROGRAMMED, A FULL-SIZE SET OF AS-BUILT PLANS AND FACTORY AUTHORIZED SERVICE START-UP FORMS FOR EACH PIECE OF EQUIPMENT INDICATING PROPER OPERATION ACROSS THE SEQUENCE.

2. REGULATORY REQUIREMENTS

ALL WORK SHALL BE PER THE PREVAILING BUILDING CODES, NEC, NFPA, UL, STATE, LOCAL INSPECTORS AND OTHER APPLICABLE CODES.

3. COORDINATION

INSTALLATION OF ALL WORK SHALL BE COORDINATED WITH OTHER TRADES AND WITH EXISTING CONDITIONS. CONTRACTOR SHALL VISIT THE SITE AND VERIFY SIZES, CAPACITY, PERFORMANCE, AND LOCATION OF ALL EXISTING WORK.

4. GUARANTEES

THE CONTRACTOR SHALL PROVIDE A ONE YEAR WRITTEN GUARANTEE FOR ALL MATERIALS AND LABOR FROM THE DATE OF SUBSTANTIAL COMPLETION. GUARANTEE SHALL COVER ALL LABOR AND MATERIALS TO REPLACE DEFECTIVE MATERIALS AND TO ENSURE PROPER OPERATION OF ALL SYSTEMS.

5. INSTALLATION

A. ALL EQUIPMENT AND MATERIAL SHALL BE INSTALLED PER THEIR RESPECTIVE MANUFACTURER'S WRITTEN INSTRUCTION MANUAL FOR ADEQUATE CLEARANCE FOR ALL EQUIPMENT AND MATERIAL FOR REGULAR MAINTENANCE, REMOVAL AND AIR FLOW. CONTRACTOR SHALL PROVIDE CONTROLS, INCLUDING THERMOSTATS, CONTROL POWER TRANSFORMERS, WIRING, PROGRAMMING, ETC., TO OPERATE ALL EQUIPMENT UTILIZED FOR THIS PROJECT. ADJUST AIR HANDLING UNITS, EXHAUST FANS, AND AIR DEVICES TO PROVIDE CFM'S AS SHOWN.

B. STRAPS MAY BE USED ON DUCTS 24" WIDE AND SMALLER, ALL OTHERS SHALL BE SUPPORTED ON TRAPEZE WITH HANGER RODS.

6. DUCTWORK

A. ALL DUCTWORK, NEW AND EXISTING, AS ADDRESSED IN THE CONSTRUCTION DOCUMENTS, SHALL BE FREE OF LEAKAGE. ALL WORK SHALL BE PER LATEST EDITION OF SMACNA. REFER TO SMACNA, ASHRAE, MECHANICAL AND ENERGY CODES FOR SEAL AND LEAKAGE CLASS RATINGS FOR ALL DUCT SYSTEMS. ALL DUCT SYSTEMS SHALL BE SEALED TO CLASS A.

B. SINGLE WALL GALVANIZED STEEL DUCTS: ASTM A525 OR ASTM A527 GALVANIZED STEEL SHEET, LOCK-FORMING QUALITY, HAVING ZINC COATING OF .90 OZ. PER SQ.FT. FOR EACH SIDE IN CONFORMANCE WITH ASTM A90.

C. FLEXIBLE FIBERGLASS DUCT: FLEXIBLE FIBERGLASS DUCT WITH A MAXIMUM THERMAL CONDUCTIVITY OF 0.23 BTU/HR-DEGREES F- SQ.FT. AT 75 DEGREES F MEAN TEMPERATURE WITH A MAXIMUM FLAME SPREAD RATING OF 25 AND SMOKE DEVELOPED RATING OF 50. FLEXIBLE FIBERGLASS DUCT SHALL BE OWENS-CORNING VALUFLEX OR APPROVED EQUAL.

1. FLEXIBLE FIBERGLASS DUCT SHALL BE PROVIDED WITH SPIN-IN BELLMOUTH FITTING, VOLUME DAMPER AND STAINLESS STEEL CLAMP.

2. FLEXIBLE FIBERGLASS DUCT SIZE SHALL BE SAME AS AIR DEVICE NECK SIZE UNLESS OTHERWISE NOTED.

3. FLEXIBLE FIBERGLASS DUCT LENGTH SHALL BE A MAXIMUM OF 5 FEET IN LENGTH.

4. FLEXIBLE DUCT SHALL BE USED FOR CONNECTION OF SUPPLY AIR DEVICES ONLY. ALL EXHAUST AND RETURN DUCTWORK SHALL BE RIGID DUCTWORK.

5. PROVIDE MANUAL VOLUME DAMPERS IN BRANCH DUCTS TO ALL AIR DEVICES.

7. DUCTWORK INSULATION

ASTM C553, TYPE I, CLASS B-5, 0.75 PCF NOMINAL CONDUCTIVITY (K) EQUALS APPROXIMATELY 0.17 (BTU-IN/HR-SQ-F) AT 75 DEGREES F. .002 FOIL SCRIM FACING FOR DUCT SYSTEMS WITH INTEGRAL VAPOR BARRIER. INSTALL PER MANUFACTURER'S INSTRUCTIONS WITH PINS. PRESSURE SENSITIVE TAPE AND MASTIC. APPLY TO ALL SUPPLY, RETURN AND OUTSIDE AIR DUCTWORK - 2" THICK MINIMUM FOR AN INSTALLED R VALUE OF 6.0.

8. PACKAGED DX UNIT

A. MANUFACTURED UNITS

1. PROVIDE ROOF-MOUNTED UNITS HAVING ELECTRIC REFRIGERATION.

2. UNIT SHALL BE SELF-CONTAINED, PACKAGED, FACTORY ASSEMBLED AND PREWIRED, CONSISTING OF CABINET AND FRAME, FACTORY PREFABRICATED EQUIPMENT SUPPORT CURB, SUPPLY FAN, CONTROLS, AIR FILTERS, REFRIGERANT, COOLING COIL, COMPRESSOR, HEATER, CONDENSER COIL AND CONDENSER FAN. PROVIDE WITH CONDENSER COIL GUARD AND FACTORY ROOF CURB.

3. THE UNITS SHALL BE DEDICATED DOWN AIRFLOW. THE OPERATING RANGE SHALL BE BETWEEN 115°F AND 0°F IN COOLING AS STANDARD FROM THE FACTORY FOR ALL UNITS. COOLING PERFORMANCE SHALL BE RATED IN ACCORDANCE WITH ARI TESTING PROCEDURES. ALL UNITS SHALL BE FACTORY ASSEMBLED, INTERNALLY WIRED, FULLY CHARGED

WITH R-410a AND 100% RUN TESTED TO CHECK COOLING AND HEATING OPERATION. FAN AND BLOWER ROTATION AND CONTROL SEQUENCE BEFORE LEAVING THE FACTORY. WIRING INTERNAL TO THE UNIT SHALL BE COLORED AND NUMBERED FOR IDENTIFICATION. UNITS SHALL BE UL LISTED AND LABELED.

B. UNIT CASING SHALL BE CONSTRUCTED OF ZINC COATED, HEAVY GAUGE, GALVANIZED STEEL. ALL COMPONENTS SHALL BE MOUNTED IN A WEATHER RESISTANT STEEL CABINETS WITH A PAINTED EXTERIOR. CABINET CONSTRUCTION SHALL ALLOW FOR ALL MAINTENANCE ON ONE SIDE OF THE UNIT. SERVICE PANELS SHALL HAVE LIFTING HANDLES AND SHALL BE REMOVED AND REINSTALLED BY REMOVING NOT MORE THAN THREE SCREWS WHILE PROVIDING A WATER AND AIR TIGHT SEAL. THE INDOOR AIR SECTION SHALL BE COMPLETELY INSULATED WITH FIRE RESISTANT, PERMANENT, CLEARLESS GLASS FIBER MATERIAL. THE BASE OF THE UNIT SHALL HAVE PROVISIONS FOR FORKLIFT AND CRANE LIFTING.

C. EACH REFRIGERANT CIRCUIT SHALL HAVE THERMAL EXPANSION VALVE, SERVICE PRESSURE PORTS AND REFRIGERANT LINE FILTER DRYERS. FACTORY-INSTALLED AS STANDARD.

D. UNIT SHALL BE COMPLETELY FACTORY WIRED WITH NECESSARY CONTROLS AND CONTROL PRESSURE LUGS OR TERMINAL BLOCK FOR POWER WIRING. UNITS SHALL PROVIDED WITH A FACTORY MOUNTED DISCONNECT AND A GFCI CONVENIENCE OUTLET WITH STEP-DOWN TRANSFORMER MOUNTED IN WEATHERPROOF ENCLOSURE. OUTLET SHALL REMAIN POWERED WHEN MAIN UNIT DISCONNECT IS OFF. MICROPROCESSOR CONTROLS SHALL BE PROVIDED FOR ALL CONTROL FUNCTIONS. THE RESIDENT CONTROL ALGORITHMS SHALL MAKE ALL HEATING, COOLING AND/OR VENTILATION DECISIONS IN RESPONSE TO ELECTRONIC SIGNALS FROM SENSORS MEASURING INDOOR AND OUTDOOR TEMPERATURES. THE CONTROL ALGORITHM SHALL MAINTAIN ACCURATE TEMPERATURE CONTROL, MINIMIZE DRIFT FROM SET POINT AND PROVIDE BUILDING COMFORT. A CENTRALIZED MICROPROCESSOR SHALL PROVIDE ANTI-SHORT CYCLE TIMING AND TIME DELAY BETWEEN COMPRESSORS TO PROVIDE A HIGHER LEVEL OF MACHINE PROTECTION.

E. ELECTRIC HEATER ELEMENTS SHALL BE CONSTRUCTED OF HEAVY-DUTY NICKEL CHROMIUM ELEMENTS INTERNALLY DELTA CONNECTED FOR 240 VOLT, WYE CONNECTED FOR 480 VOLT. CAPACITY MODULATION SHALL BE ACHIEVED THROUGH THE USE OF PULSE WIDTH MODULATION OR SCR CONTROL. EACH HEATER PACKAGE SHALL HAVE AUTOMATICALLY RESET HIGH LIMIT CONTROL OPERATING THROUGH HEATING ELEMENT CONTACTORS. ALL HEATERS SHALL BE INDIVIDUALLY FUSED FROM FACTORY AND SHALL MEET ALL NEC AND LOCAL CODE REQUIREMENTS. POWER ASSEMBLIES SHALL PROVIDE SINGLE-POINT CONNECTION. ELECTRIC HEAT MODULES SHALL BE UL LISTED.

F. COORDINATE AND VERIFY THAT ROOF IS READY TO RECEIVE WORK AND ALL DIMENSIONS ARE AS INDICATED ON SHOP DRAWINGS.

G. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND ALL APPLICABLE CODES AND STANDARDS AS REQUIRED AT THE PROJECT LOCATION.

H. MOUNT UNIT ON FACTORY PRE MANUFACTURED EQUIPMENT CURB. INSTALL UNIT LEVEL.

I. MANUFACTURER SHALL FURNISH A FACTORY-TRAINED SERVICE ENGINEER WITHOUT ADDITIONAL CHARGE TO PREPARE THE MACHINE FOR OPERATION. START THE UNIT AND CERTIFY INITIAL FIELD STARTUP. THE MANUFACTURER SHALL PROVIDE A WRITTEN CERTIFICATION TO THE ARCHITECT/ENGINEER THAT THE UNIT HAS BEEN PREPARED AND READY FOR OPERATION.

J. INSTALL UNIT WITH PROGRAMMABLE 7-DAY THERMOSTAT CAPABLE OF AUTOMATIC HEAT/COOL CHANGEOVER. ADJUSTABLE DEAD-BAND, INSULATED MOUNTING BASE, LOCKABLE PROTECTIVE COVER, 24V POWER WITH BATTERY BACKUP TO PRESERVE PROGRAM. MOUNT THERMOSTAT LEVEL AND PER THE ARCHITECT'S INTERIOR FINISH ELEVATIONS.

9. TEST AND BALANCE CONTRACTOR SHALL BE CERTIFIED BY AABC OR NEBB. SUBMIT TAB QUALIFICATIONS AND SAMPLE REPORT FORMS FOR APPROVAL BY THE ENGINEER. SUBMIT TAB REPORT TO ENGINEER FOR REVIEW. UPON REQUEST, TAB CONTRACTOR SHALL DEMONSTRATE ON-SITE CONFIRMATION OF THE TAB REPORT MEASUREMENTS WITNESSED BY THE ENGINEER. DISCREPANCIES WILL REQUIRE ADDITIONAL TAB SAMPLING AND RE-BALANCE OF THE SYSTEMS.

ADJUST ALL SYSTEM COMPONENTS, EQUIPMENT, FLOW DEVICES AND SENSORS PER "AABC NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCE, V 2002".

PROVIDE BELT AND SHEAVE CHANGES AS REQUIRED FOR BALANCING OF ALL FANS INDICATED ON THESE DRAWINGS. BELT AND SHEAVE CHANGES SHALL BE PROVIDED AT THE CONTRACTOR'S EXPENSE.

10. AIR DEVICES

FURNISH AS SCHEDULED OR OBTAIN PRIOR APPROVAL TO SUBMIT AN ALTERNATE MANUFACTURER / MODEL.

DEVICE SHALL BE OF ALUMINUM CONSTRUCTION, WITH BAKED WHITE ENAMEL FINISH UNLESS OTHERWISE STATED. FURNISH DEVICE WITH ACCESSORIES SCHEDULED, INCLUDING PLASTER TRIM RING FOR HARD CEILING INSTALLATION, UL LISTED FIRE RADIATOR DAMPER FOR RATED PARTITION INSTALLATIONS, OPPOSED-BLADE OR BUTTERFLY (ROUND-ONLY) DAMPERS MAY BE INSTALLED ONLY WHEN BRANCH TAKE-OFF VOLUME DAMPERS CANNOT BE INSTALLED AND ONLY WITH PRIOR APPROVAL BY THE ENGINEER. INSTALL INSULATION ON BACK PANELS FOR ALL CEILING SUPPLY GRILLES. PLENUMS SHALL BE CONSTRUCTED TO SMACNA STANDARDS FOR DUCT RIGIDITY AND SEAL, LINED WITH 1" CERTAINTED TOUGHGUARD LINER BOARD INSTALLED PER MANUFACTURER'S DIRECTIONS AND FINISHED BLACK.

MECHANICAL SYMBOL LEGEND

GENERAL SYMBOLS		DUCT SYMBOLS	
	EQUIPMENT IDENTITY (SEE EQUIPMENT ABBREVIATION LIST AND SCHEDULES)		DOUBLE LINE
	EQUIPMENT NUMBER		SINGLE LINE
	SYSTEM NUMBER (IF APPLICABLE)		EXISTING EQUIPMENT OR DUCTWORK TO BE REMOVED.
	INDICATES DETAIL, PLAN, SECTION, AND/OR DIAGRAM/APPLIES ONLY WHERE INDICATED ON DRAWINGS		EXISTING DUCTWORK TO REMAIN
	INDICATES DRAWING ON WHICH DETAIL APPEARS		NEW DUCTWORK
	INDICATES TYPICAL DETAIL (APPLIES TO ALL CONTRACT DRAWINGS)		MANUAL VOLUME DAMPER (MVD) MOTOR OPERATED DAMPER (MOD)
	INDICATES DRAWING ON WHICH DETAIL APPEARS		ACCESS DOOR
	INDICATES SECTION NUMBER		RADIUS ELBOW (R=1.5)
	INDICATES ON WHICH DRAWING SECTION APPEARS		ELBOW W/ TURNING VANES
	INDICATES REVISION & NUMBER		REC. BRANCH DUCT TAKE-OFF W/ VD
	CONNECT NEW TO EXISTING		ROUND BRANCH DUCT TAKE-OFF W/ VD
	DEMOLISH TO THIS POINT		RISE OR DROP DIRECTION OF AIR FLOW
	KEYED NOTE NUMBER		FLEXIBLE CONNECTION (FXC)
	CONTROL DAMPER- OPPOSED BLADE WITH ACTUATOR		DIFFUSER
	UNDERCUT DOOR		SUPPLY AIR GRILLE (G) OR SUPPLY AIR REGISTER (R)
	DOOR LOUVER (FREE AREA REQUIRED INDICATED IN SQUARE FEET)	PIPING SYMBOLS	
	SUPPLY AIR		
	RETURN OR EXHAUST AIR		PIPE RISING UP
	FIRE DAMPER W/ ACCESS DOOR		PIPE DROPPING DOWN
	SMOKE DAMPER W/ ACCESS DOOR		DIRECTION OF FLOW
	SMOKE DETECTOR		GATE VALVE
	THERMOSTAT		BUTTERFLY VALVE
			BALL VALVE
			CHECK VALVE
			AUTOMATIC CONTROL VALVE
			AUTOMATIC CONTROL VALVE (3-WAY)
			PRESSURE REDUCING VALVE (PSI)
			STRAINER
			FLOW SWITCH
			THERMOMETER
			PRESSURE GAUGE
			PIPE WELL

MECHANICAL ABBREVIATIONS LEGEND

AFF	ABOVE FINISHED FLOOR	DN	DOWN	HPS	HIGH PRESSURE STEAM	RA	RETURN AIR
AFG	ABOVE FINISHED GRADE	DO	DIGITAL OUTPUT	HWS	HOT WATER RETURN	RH	RELATIVE HUMIDITY
AFR	ABOVE FINISHED GRADE	DWG	DRAWING	IAQ	INDOOR AIR QUALITY	RM	REVOLUTIONS PER MINUTE
AHU	AIR HANDLING UNIT	DP	DIFFERENTIAL PRESSURE	IN	INCH	RS/L	REFRIGERANT SUCTION/LIQUID
AI	ANALOG INPUT	EA	EXHAUST AIR	KW	KILOWATT	RTU	ROOFTOP PACKAGED UNIT
AO	ANALOG OUTPUT	EER	ENERGY EFFICIENCY RATION	LAT	LEAVING AIR TEMPERATURE	SA	SUPPLY AIR
AUTO	AUTOMATIC	EF	EXHAUST FAN	LBS	POUNDS	SF	SQUARE FEET
BOD	BOTTOM OF DUCT	EAT	ENTERING AIR TEMPERATURE	LPS	LOW PRESSURE STEAM	SS	START/STOP SIGNAL
BOP	BOTTOM OF PIPE	ESP	EXTERNAL STATIC PRESSURE	LPR	LOW PRESSURE RETURN	S.S.	STAINLESS STEEL
BHP	BRAKE HORSE POWER	EWT	ENTERING WATER TEMPERATURE	LWT	LEAVING WATER TEMPERATURE	SP	STATIC PRESSURE
BTU	BRITISH THERMAL UNIT	ERV	ENERGY RECOVERY	M	MOTORIZED	T	TEMPERATURE
BTUH	BRITISH THERMAL UNIT PER HOUR	FC	FAIL CLOSED	MBH	THOUSAND BTUH	V-PH	VOLTAGE-PHASE
C	COMMON	FC	FAN COIL (EXISTING)	MCA	MINIMUM CIRCUIT AMPACITY	TD	TIME DELAY
CD	CONDENSATE	FCU	FAN COIL UNIT	MOCF	MAXIMUM OVER CURRENT PROTECTIONS	TS	TEMPERATURE SENSOR
CFM	CUBIC FEET PER MINUTE	FD	FIRE DAMPER	NC	NORMALLY CLOSED	TSP	TOTAL STATIC PRESSURE
CH	CHILLER	FF	FULL FEEDBACK/STATUS SIGNAL	NO	NORMALLY OPEN	UH	UNIT HEATER
CHWS	CHILLED WATER SUPPLY	FLA	FULL LOAD AMPS	NTS	NOT TO SCALE	UNO	UNLESS OTHERWISE NOTED
CHWR	CHILLED WATER RETURN	FO	FALL OPEN	OB	OPPOSED BLADE DAMPER	VD	VOLUME DAMPER
CO2	CARBON DIOXIDE	FPM	FEET PER MINUTE	OCA	OUTDOOR AIR	VFD	VARIABLE FREQUENCY DRIVE
COEF	COEFFICIENT OF PERFORMANCE	FT	FEET	P	PRESSURE	VPH	VOLTS/PHASE
CU	CONDENSING UNIT	GPM	GALLONS PER MINUTE	PF	PROPORTIONAL, LINEARIZE FEEDBACK, 4-20mA SIGNAL	WB	WET BULB
DAC	DEHUMIDIFICATION AHU	HP	HUMIDITY	PRV	PRESSURE REDUCING VALVE	WG	WATER GAUGE
DB	DRY BULB	HS	HUMIDISTAT	PRS	PRESSURE REDUCING	WR	CHILLED WATER RESET 4-20 mA SIGNAL
DCU	DEHUMIDIFICATION CU	HT	HEAT PUMP	STATION	STATION	W	WITH
DDC	DIRECT DIGITAL CONTROL	HP	HORSEPOWER	PSI	POUNDS PER SQUARE INCH	W/O	WITHOUT
DEGF	DEGREE FARENHEIT	HWS	HOT WATER SUPPLY	PVI	POLYVINYL CHLORIDE		

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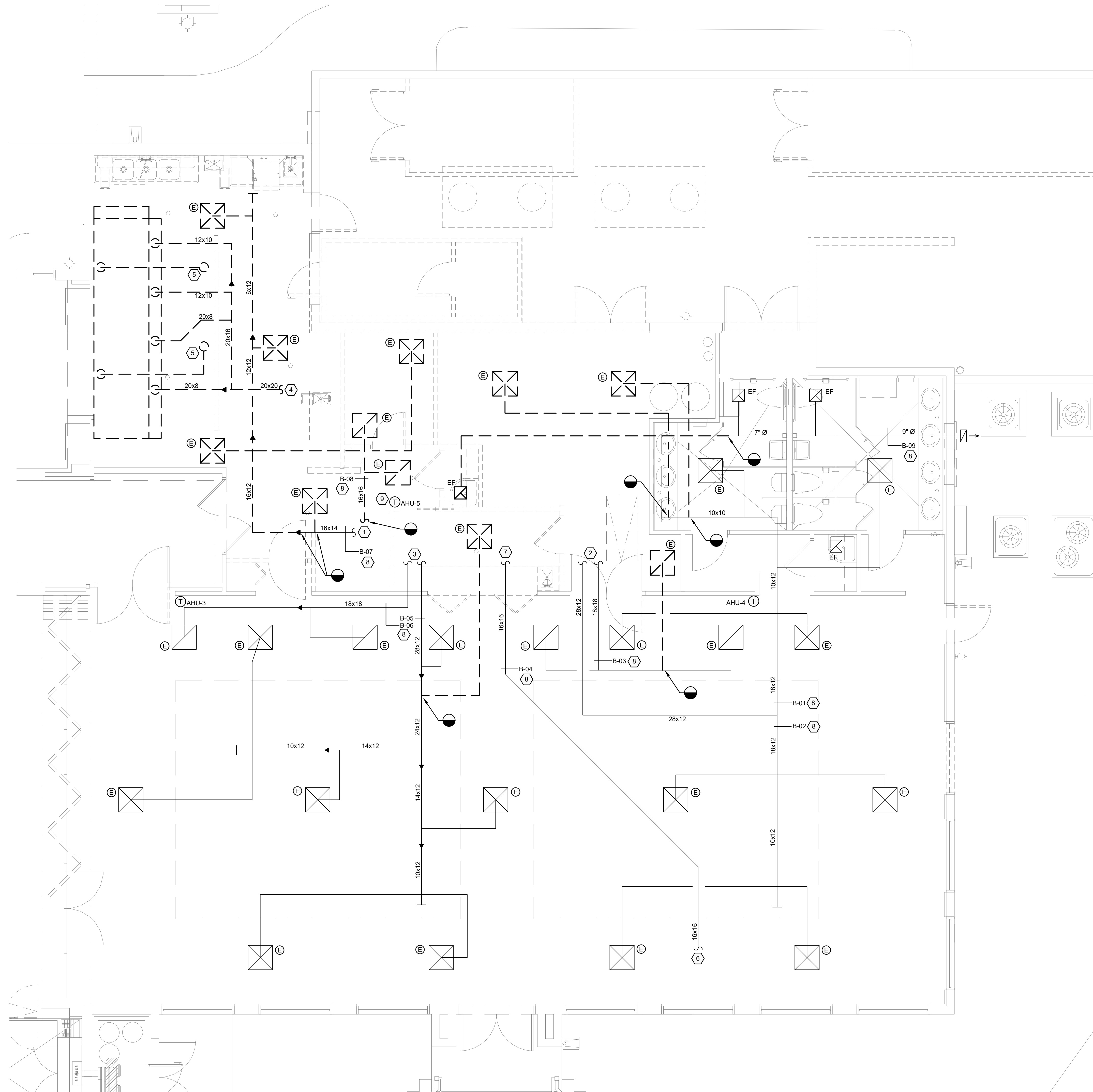
ADDITIONS & ALTERATIONS TO:
SUN 'N LAKE GOLF CLUB
FLORIDA
SEBRING.

DATE
08/10/2018

CS17028

SHEET NO.

M-0



- ### KEYED NOTES
- 1 EXISTING SUPPLY & RETURN DUCTS CONTINUE TO AHU-5 LOCATED IN MECHANICAL MEZZANINE ABOVE.
 - 2 EXISTING SUPPLY & RETURN DUCTS CONTINUE TO AHU-4 LOCATED IN MECHANICAL MEZZANINE ABOVE.
 - 3 EXISTING SUPPLY & RETURN DUCTS CONTINUE TO AHU-3 LOCATED IN MECHANICAL MEZZANINE ABOVE. DEMOLISH RETURN DUCT BACK TO DUCT PENETRATION THROUGH MEZZANINE WALL.
 - 4 DEMOLISH EXISTING DUCT TO KITCHEN MAKE-UP AIR SUPPLY FAN LOCATED IN MECHANICAL MEZZANINE ABOVE. DEMOLISH MAKE-UP AIR SUPPLY FAN.
 - 5 DEMOLISH EXISTING GREASE DUCT UP TO KITCHEN EXHAUST FAN ON ROOF. DEMOLISH EXISTING KITCHEN EXHAUST FAN.
 - 6 EXISTING OUTSIDE AIR DUCT CONTINUES TO LOUVER LOCATED IN DORMER ON ROOF.
 - 7 EXISTING OUTSIDE AIR DUCT CONTINUES TO AHU-3, AHU-4, & AHU-5 LOCATED IN MECHANICAL MEZZANINE ABOVE.
 - 8 PRIOR TO THE START OF DEMOLITION WORK, CONTRACTOR SHALL PRE-TEST AND RECORD CFM VALUES FOR ALL POINTS INDICATED ON PLAN AS B-01 THROUGH B-09.
 - 9 CONTRACTOR SHALL REMOVE THERMOSTAT FROM WALL AND PRESERVE FOR RELOCATION DURING NEW CONSTRUCTION PHASE.

- ### GENERAL NOTES
1. PRIOR TO START OF DEMOLITION WORK, CONTRACTOR SHALL CLEAN COILS AND MAINTENANCE SERVICE ON AHU-3, AHU-4, AHU-5, CU-3, CU-4, AND CU-5. PROVIDE AIR HANDLERS WITH 3 SETS OF NEW FILTERS, ONE AT START OF DEMOLITION, ONE AT START OF NEW CONSTRUCTION, AND ONE AT COMPLETION OF CONSTRUCTION. CLEAN ANY CONSTRUCTION DUST FROM CEILING AIR DEVICES AT COMPLETION OF CONSTRUCTION. NOTIFY ARCHITECT, OWNER, AND ENGINEER OF ANY DEFICIENCIES FOUND DURING PRE-CONSTRUCTION MAINTENANCE SERVICE.

MECHANICAL DEMOLITION PLAN
Scale: 1/4" = 1'-0"

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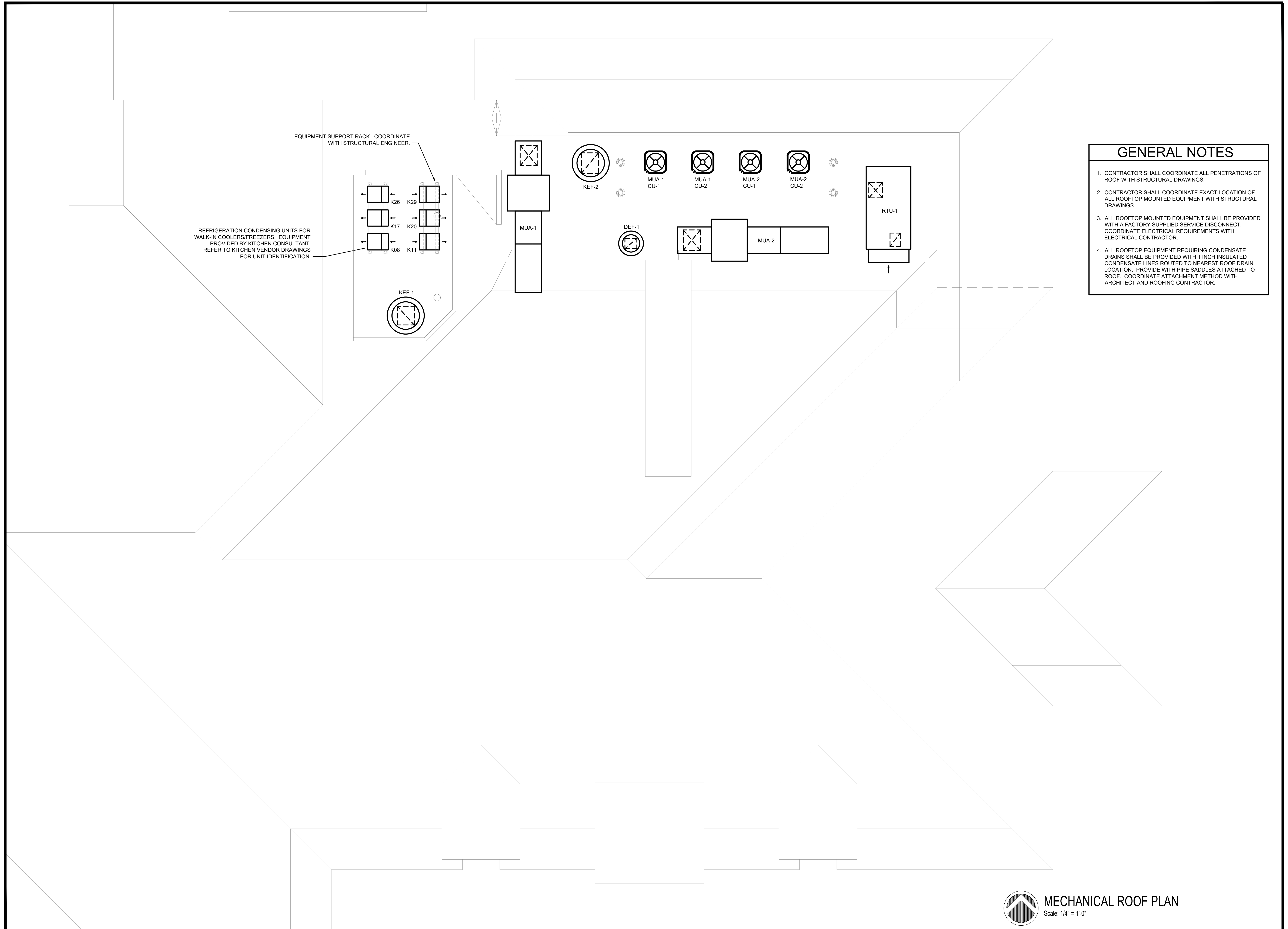
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- ### GENERAL NOTES
1. CONTRACTOR SHALL COORDINATE ALL PENETRATIONS OF ROOF WITH STRUCTURAL DRAWINGS.
 2. CONTRACTOR SHALL COORDINATE EXACT LOCATION OF ALL ROOFTOP MOUNTED EQUIPMENT WITH STRUCTURAL DRAWINGS.
 3. ALL ROOFTOP MOUNTED EQUIPMENT SHALL BE PROVIDED WITH A FACTORY SUPPLIED SERVICE DISCONNECT. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
 4. ALL ROOFTOP EQUIPMENT REQUIRING CONDENSATE DRAINS SHALL BE PROVIDED WITH 1 INCH INSULATED CONDENSATE LINES ROUTED TO NEAREST ROOF DRAIN LOCATION. PROVIDE WITH PIPE SADDLES ATTACHED TO ROOF. COORDINATE ATTACHMENT METHOD WITH ARCHITECT AND ROOFING CONTRACTOR.

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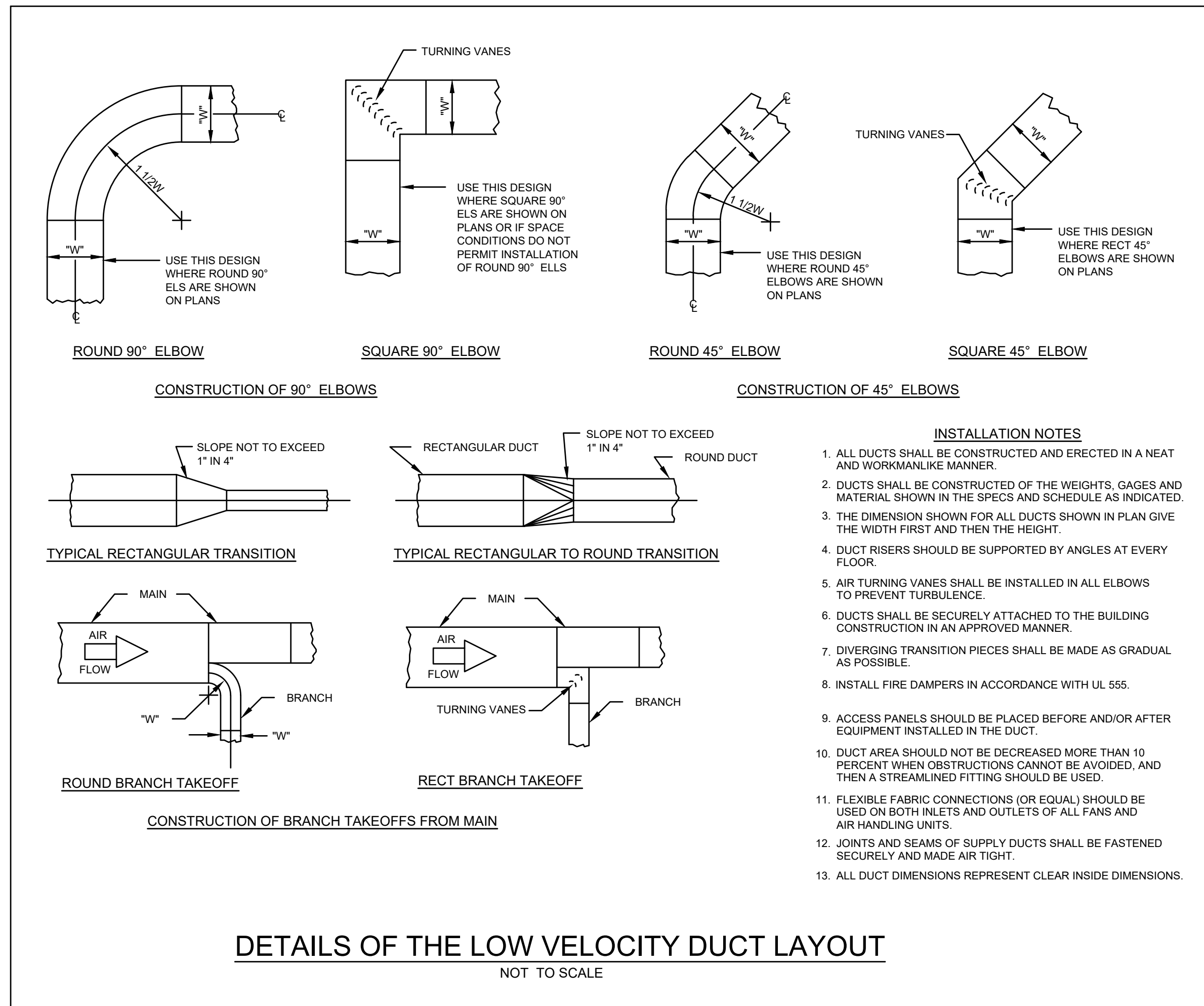
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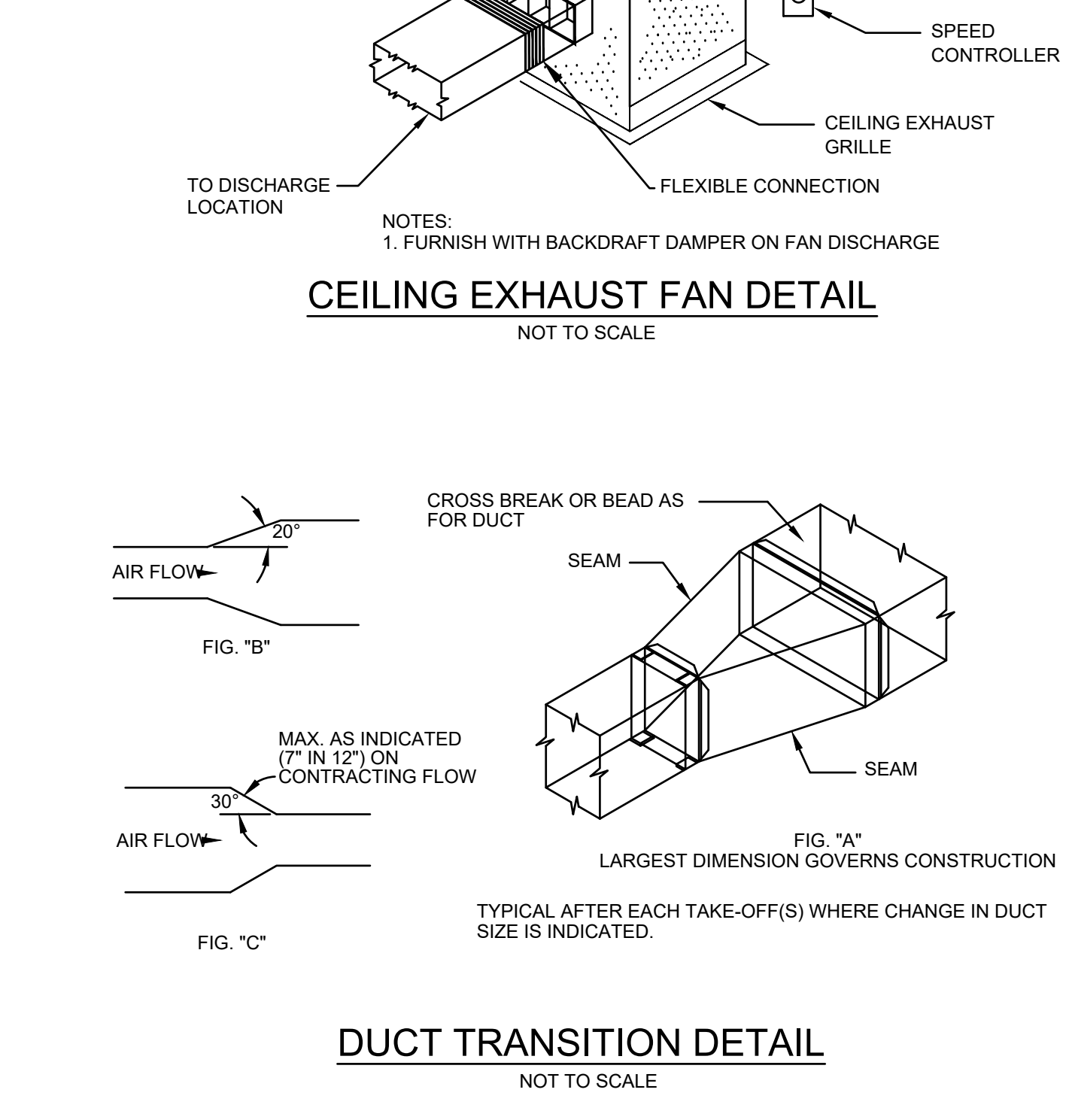
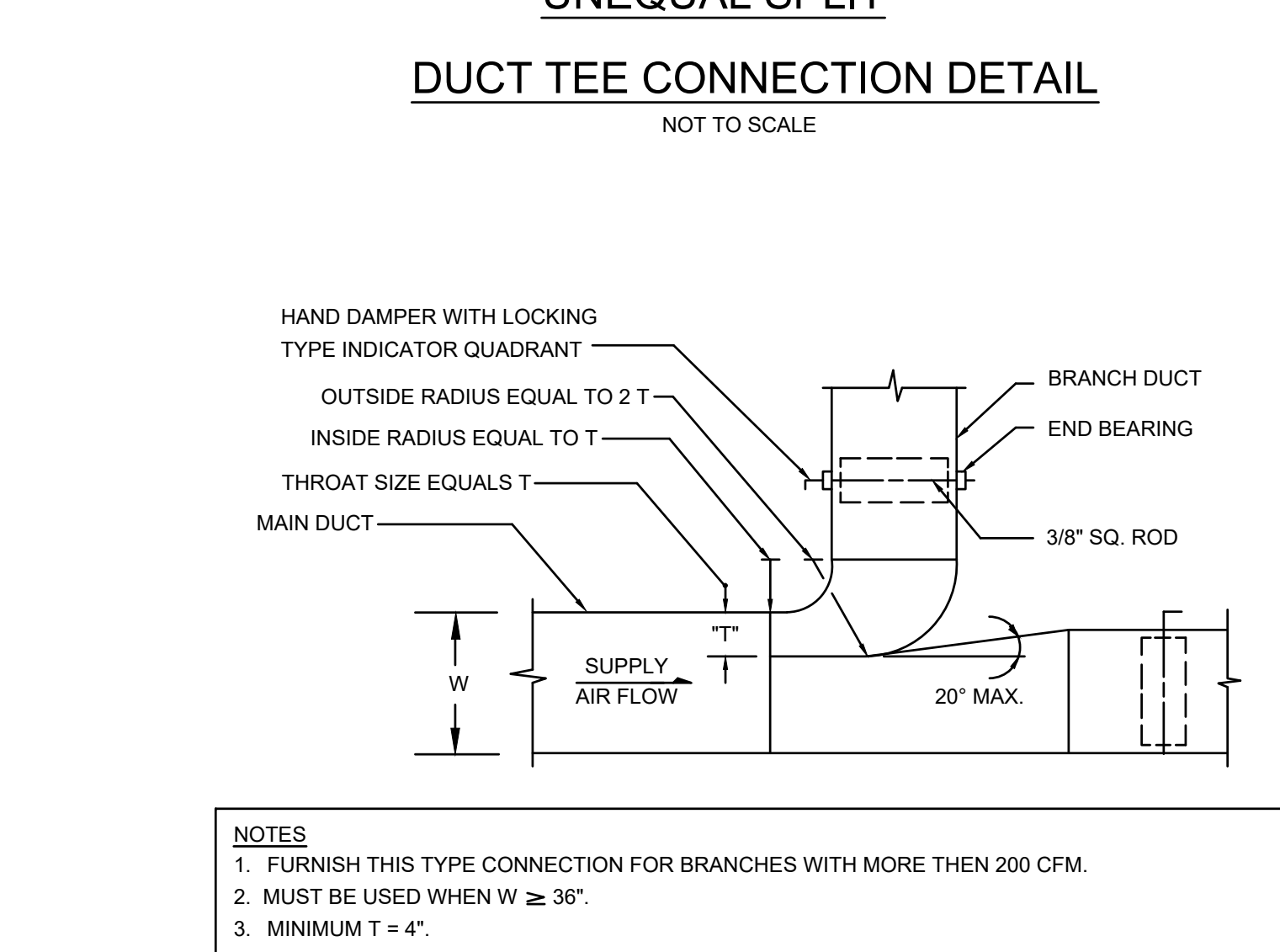
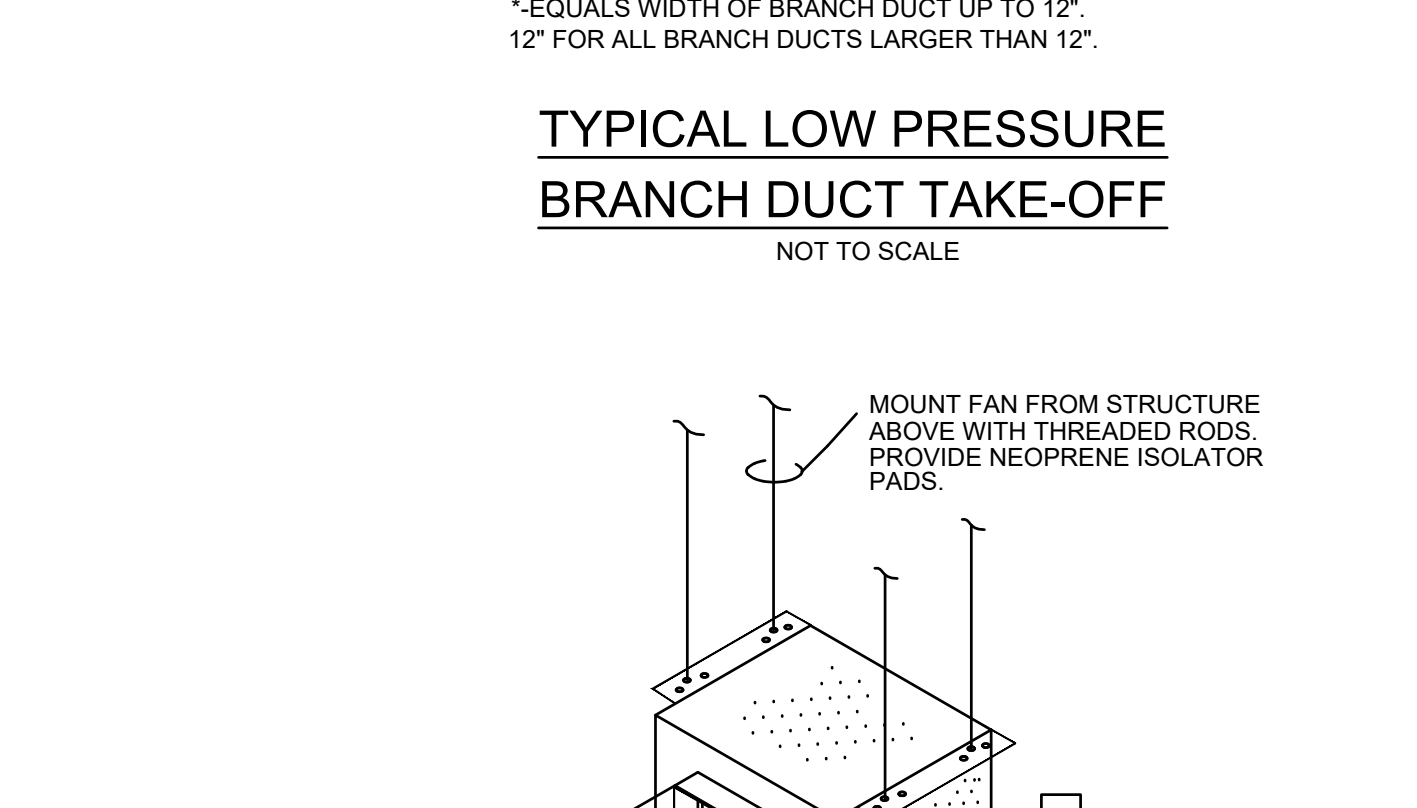
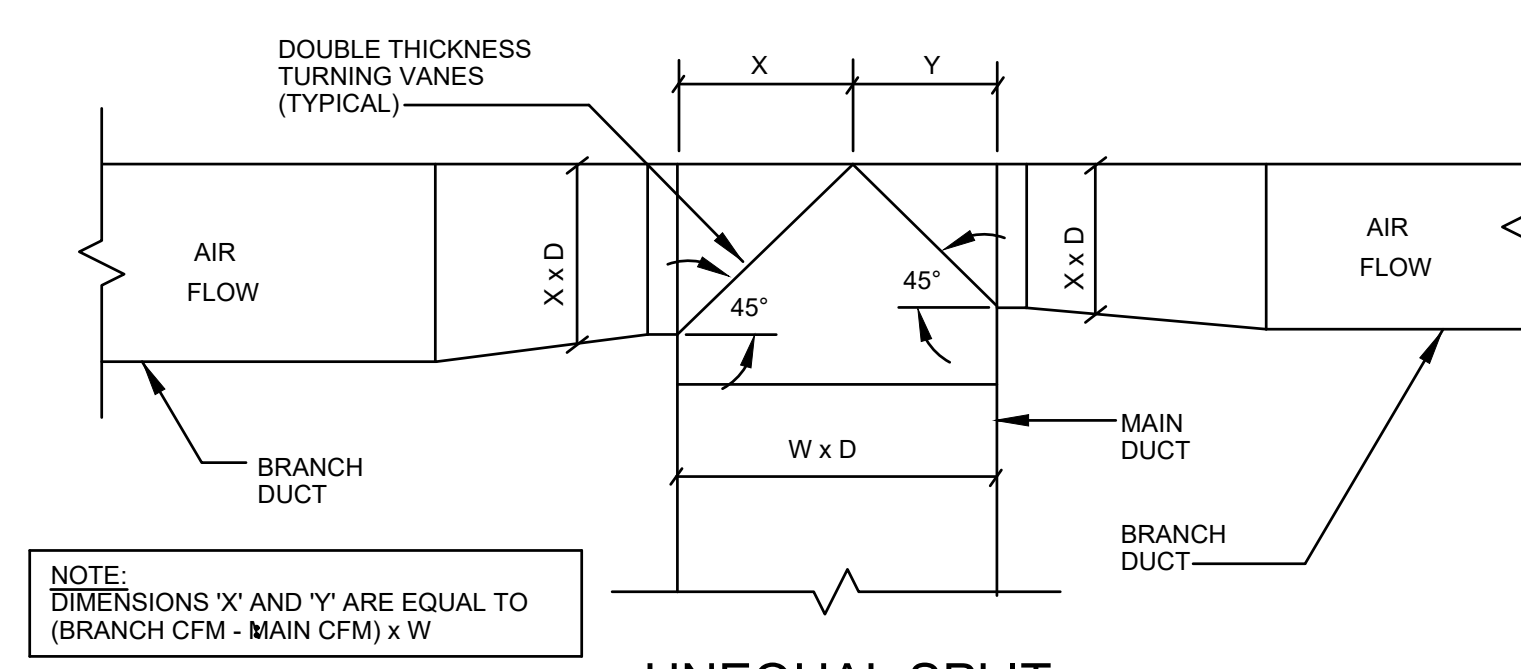
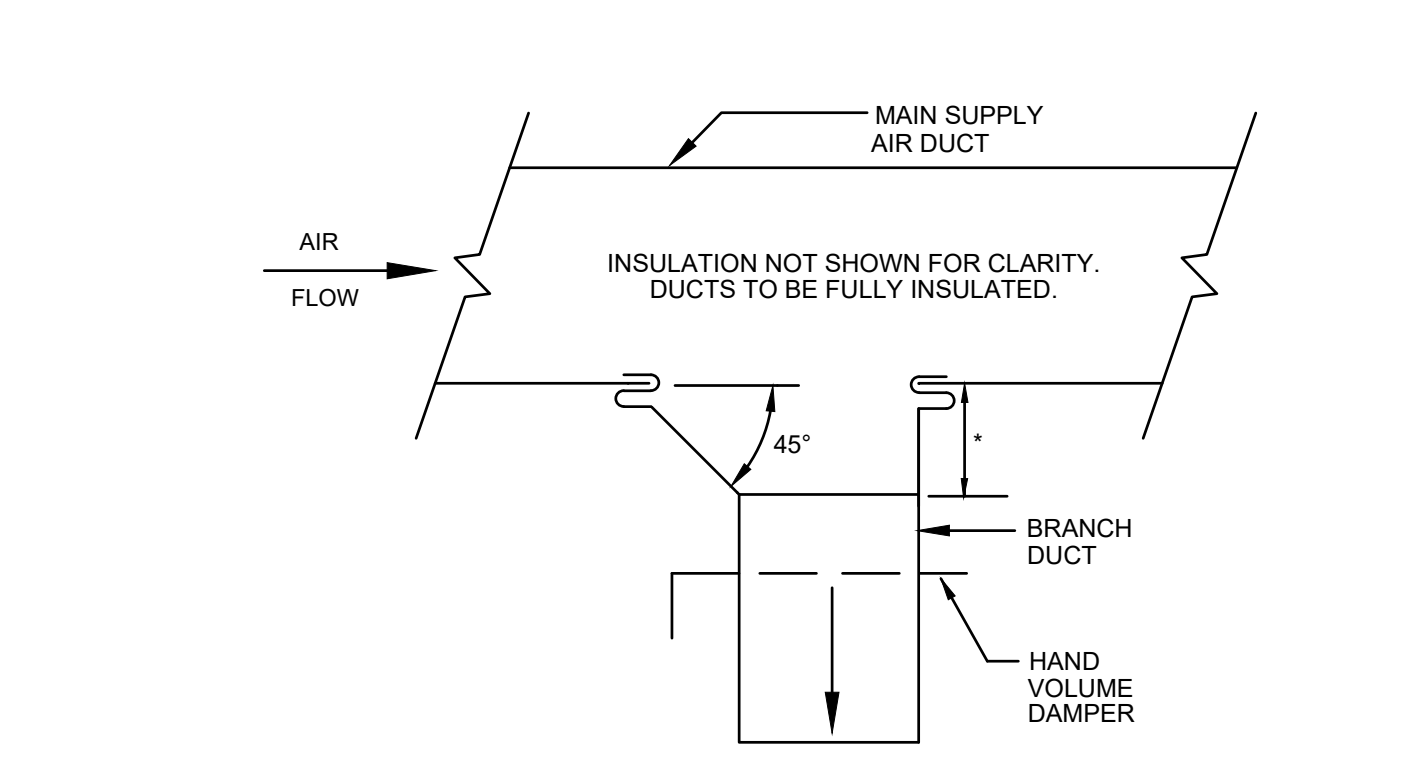
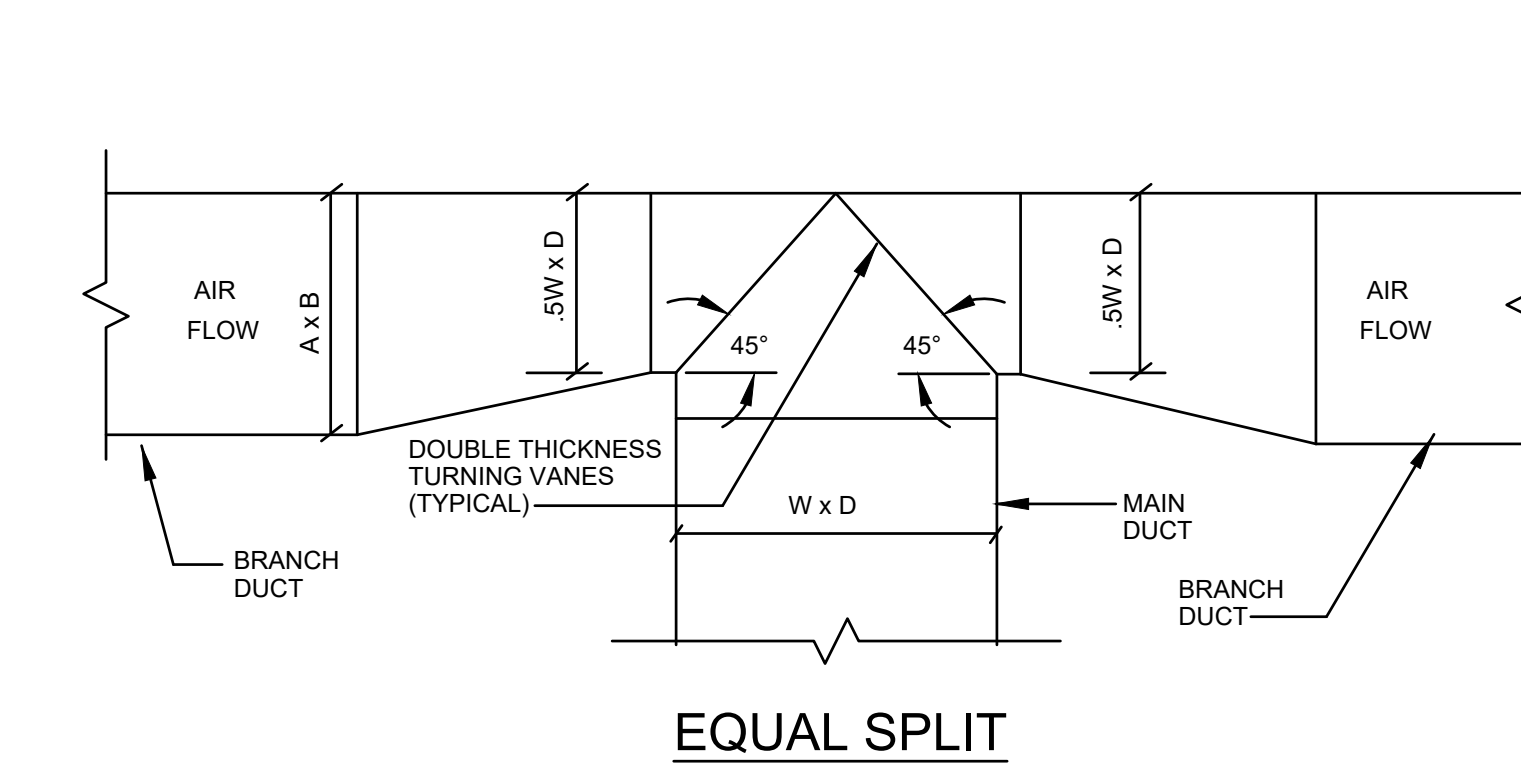
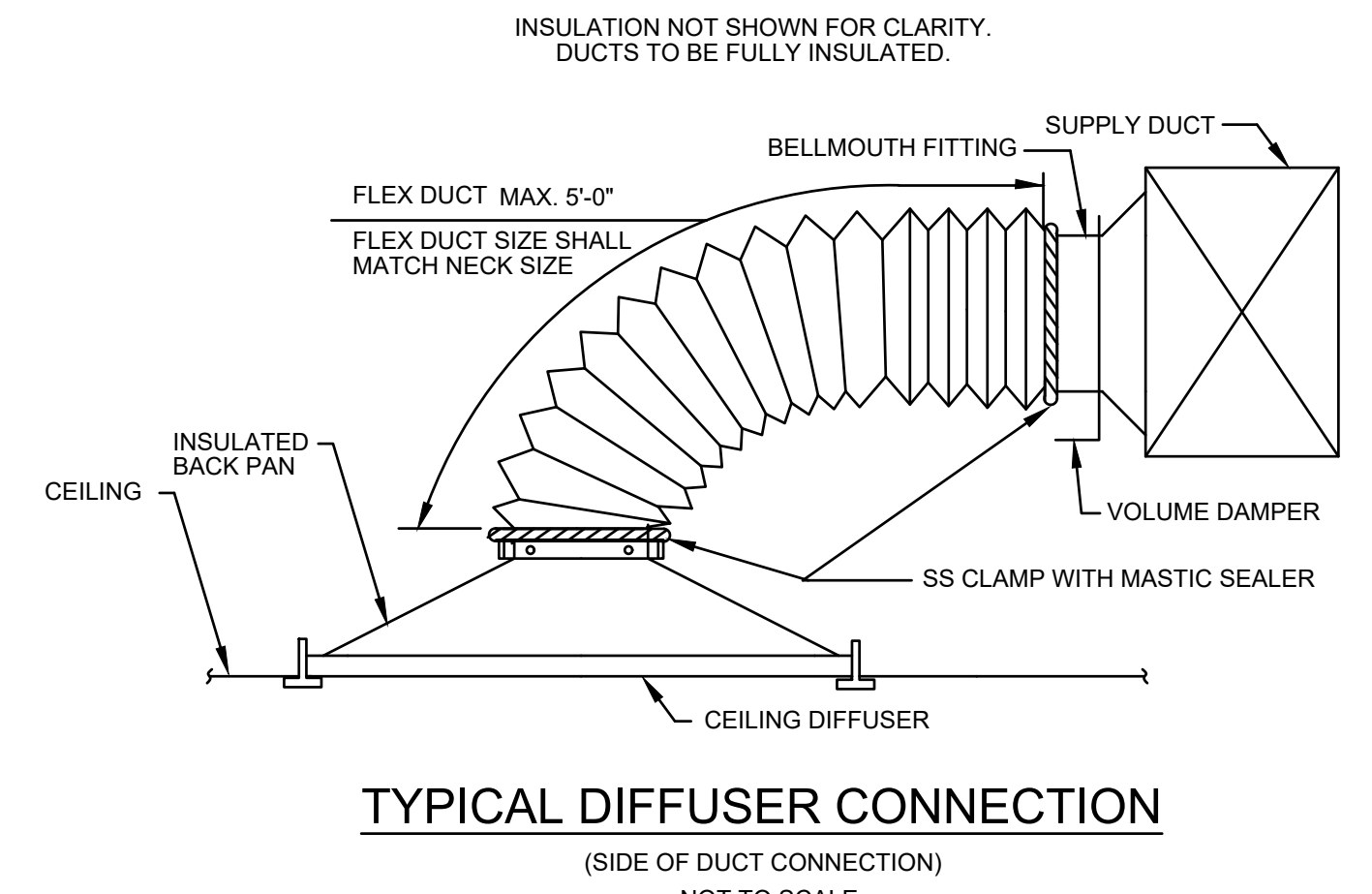
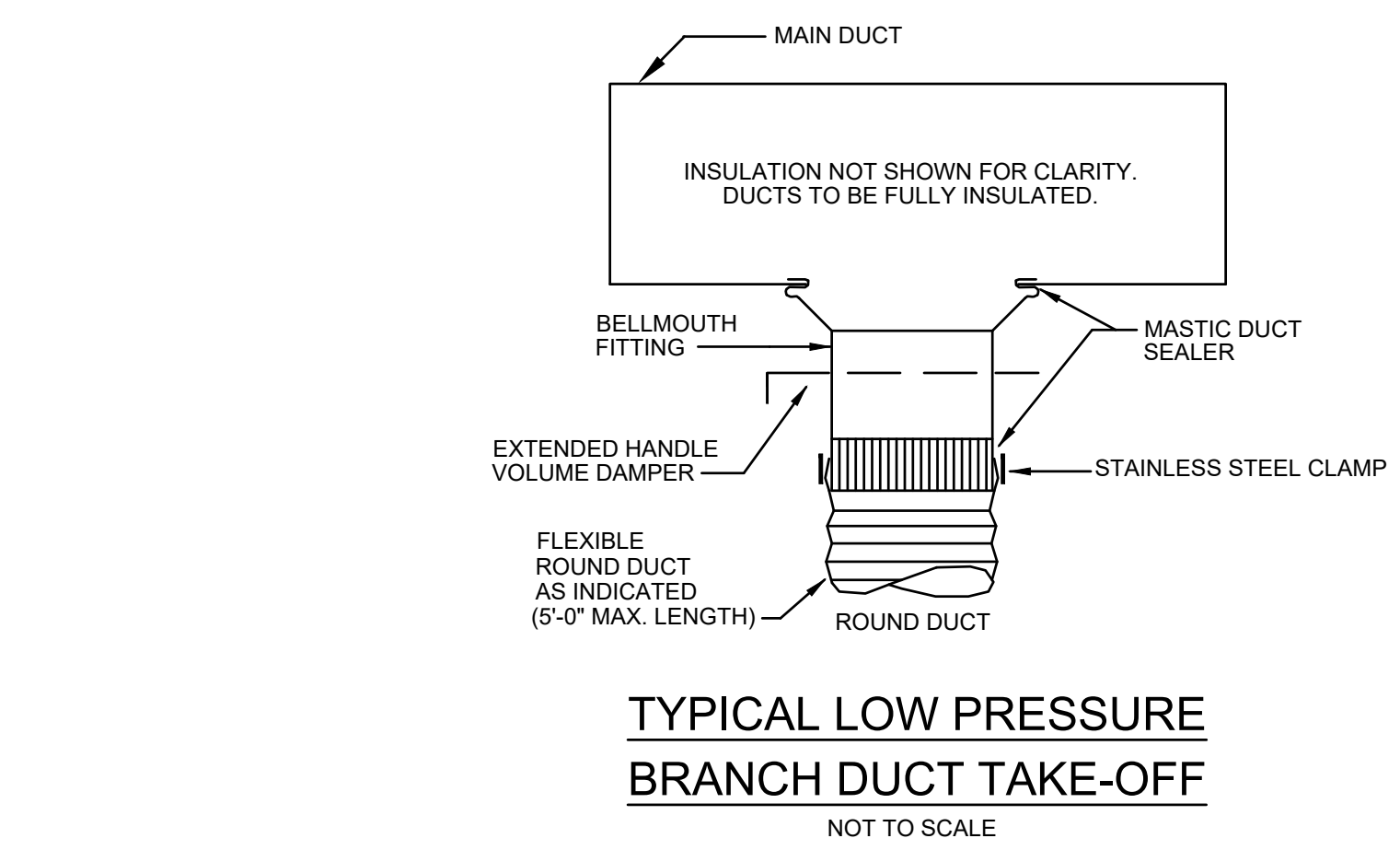
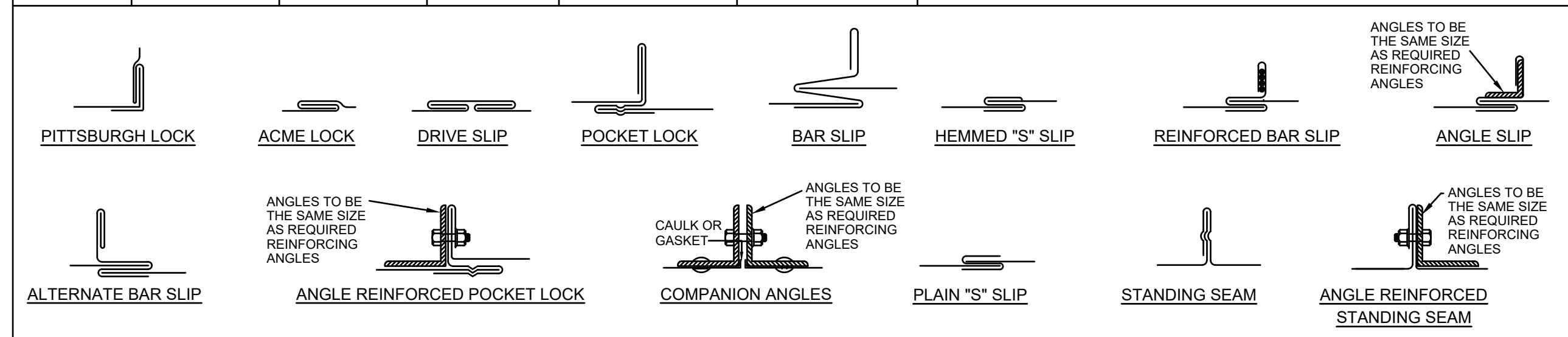
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THICKNESS & REINFORCING SCHEDULE - * LOW PRESSURE DUCTWORK

NOTE: LOW PRESSURE DUCTWORK SHALL BE DUCTWORK IN WHICH THE PRESSURE DOES NOT EXCEED 2" WATER GAUGE.

GREATEST DUCT DIMENSION	STEEL DUCTS U.S. STANDARD GAUGE	ALUMINUM DUCTS B & S GAUGE	LONGITUDINAL SEAM	TRANSVERSE JOINT SMALLEST DIMENSION	TRANSVERSE JOINT GREATEST DIMENSION	REINFORCING (ALL DUCTS 18" THRU 54" SHALL BE CROSSBRACKEN)
12" OR LESS	26	24(0.020")	PITTSBURGH OR ACME LOCK	DRIVE SLIP OR POCKET LOCK OR BAR SLIP	PLAIN "S" SLIP OR POCKET LOCK OR BAR SLIP	NONE REQUIRED
13" THRU 18"	24	22(0.025")	PITTSBURGH OR ACME LOCK	DRIVE SLIP OR POCKET LOCK OR BAR SLIP	PLAIN "S" SLIP OR POCKET LOCK OR BAR SLIP	NONE REQUIRED
19" THRU 30"	24	22(0.025")	PITTSBURGH OR ACME LOCK	HEMMED "S" SLIP OR BAR SLIP OR DRIVE SLIP OR 1" POCKET LOCK	HEMMED "S" SLIP OR BAR SLIP OR 1" POCKET LOCK	IF TRANSVERSE JOINTS ARE LOCATED 4'-0" OR LESS ON CENTER NO REINFORCING IF ON 8'-0" CENTERS REINFORCE WITH 1"x1"x1/8" ANGLES AT 4 FT. O.C.
31" THRU 42"	22	20(0.032")	PITTSBURGH OR ACME LOCK	DRIVE SLIP 18" OR LESS BAR SLIP REINFORCED BAR SLIP OR POCKET LOCK	HEMMED "S" SLIP OR REINFORCED BAR SLIP OR POCKET LOCK	IF TRANSVERSE JOINTS ARE LOCATED 4'-0" OR LESS ON CENTER NO REINFORCING IF ON 8'-0" CENTERS REINFORCE WITH 1"x1"x1/8" ANGLES AT 4 FT. O.C.
43" THRU 54"	22	20(0.032")	PITTSBURGH LOCK	1 1/4" BAR SLIP, OR REINFORCED BAR SLIP, OR 1 1/2" POCKET LOCK	1 1/4" BAR SLIP, OR REINFORCED BAR SLIP, OR 1 1/2" POCKET LOCK	IF TRANSVERSE JOINTS ARE LOCATED 4'-0" OR LESS ON CENTER NO REINFORCING IF ON 8'-0" CENTERS REINFORCE WITH 1"x1"x1/8" ANGLES AT 4 FT. O.C.
55" THRU 60"	20	18(0.040")	PITTSBURGH LOCK	1 1/4" BAR SLIP, OR REINFORCED BAR SLIP, OR 1 1/2" POCKET LOCK	1 1/4" BAR SLIP, OR REINFORCED BAR SLIP, OR 1 1/2" POCKET LOCK	IF TRANSVERSE JOINTS ARE LOCATED 4'-0" OR LESS ON CENTER NO REINFORCING IF ON 8'-0" CENTERS REINFORCE WITH 1"x1"x1/8" ANGLES AT 4 FT. O.C.
61" THRU 84"	20	18(0.040")	PITTSBURGH LOCK	REINFORCED BAR SLIP, OR ANGLE SLIP, ALTERNATE BAR SLIP, OR ANGLE REINFORCED POCKET LOCK	REINFORCED BAR SLIP, OR ANGLE SLIP, ALTERNATE BAR SLIP, OR ANGLE REINFORCED POCKET LOCK	REINFORCE ALL SIDES OVER 60" WITH 1 1/2"x1 1/2"x1/8" ANGLES ON 2'-0" CENTERS. SIDES 61" THRU 84" REINFORCE WITH 1 1/2"x1 1/2"x1/8" ANGLES ON 4'-0" CENTERS. IF JOINTS ARE ON 8'-0" CENTERS REINFORCE WITH 1 1/2"x1 1/2"x1/8" ANGLES ON 4'-0" CENTERS.
85" THRU 96"	18	16(0.051") (LONGITUDINAL SEAM MAY BE STANDING SEAM)	PITTSBURGH LOCK	1 1/2" COMPANION ANGLE, OR ANGLE REINFORCED POCKET LOCK, OR 2"x2"x1/4" ANGLE REINFORCED POCKET LOCK OR REINFORCED BAR SLIP	1 1/2" COMPANION ANGLE, OR ANGLE REINFORCED POCKET LOCK, OR 2"x2"x1/4" ANGLE REINFORCED POCKET LOCK OR REINFORCED BAR SLIP	REINFORCE ALL SIDES OVER 84" WITH 1 1/2"x1 1/2"x3/16" ANGLES ON 2'-0" CENTERS. SIDES 85" THRU 96" WITH 1 1/2"x1 1/2"x3/16" ANGLES ON 2'-0" CENTERS. SIDES 60" OR LESS NEED NO REINFORCING IF JOINTS ARE ON 4'-0" CENTERS. IF JOINTS ARE ON 8'-0" CENTERS REINFORCE WITH 1 1/2"x1 1/2"x1/8" ANGLES ON 4'-0" CENTERS.
OVER 96"	18	16(0.051") (LONGITUDINAL SEAM MAY BE STANDING SEAM)	PITTSBURGH LOCK	2" COMPANION ANGLE, OR 2"x2"x1/4" ANGLE SLIP, OR 2"x2"x1/4" ANGLE REINFORCED POCKET LOCK OR REINFORCED BAR SLIP	2" COMPANION ANGLE, OR 2"x2"x1/4" ANGLE SLIP, OR 2"x2"x1/4" ANGLE REINFORCED POCKET LOCK OR REINFORCED BAR SLIP	REINFORCE ALL SIDES OVER 96" WITH 2"x2"x1/4" ANGLES ON 2'-0" CENTERS. REINFORCE ALL SIDES UNDER 96" WITH 1 1/2"x1 1/2"x1/8" ANGLES ON 2'-0" CENTERS. REINFORCE ALL SIDES UNDER 60" WITH 1 1/2"x1 1/2"x1/8" ANGLES. IF JOINTS ARE 8'-0" ON CENTER, NO REINFORCING IF JOINTS ARE 4'-0" ON CENTER.



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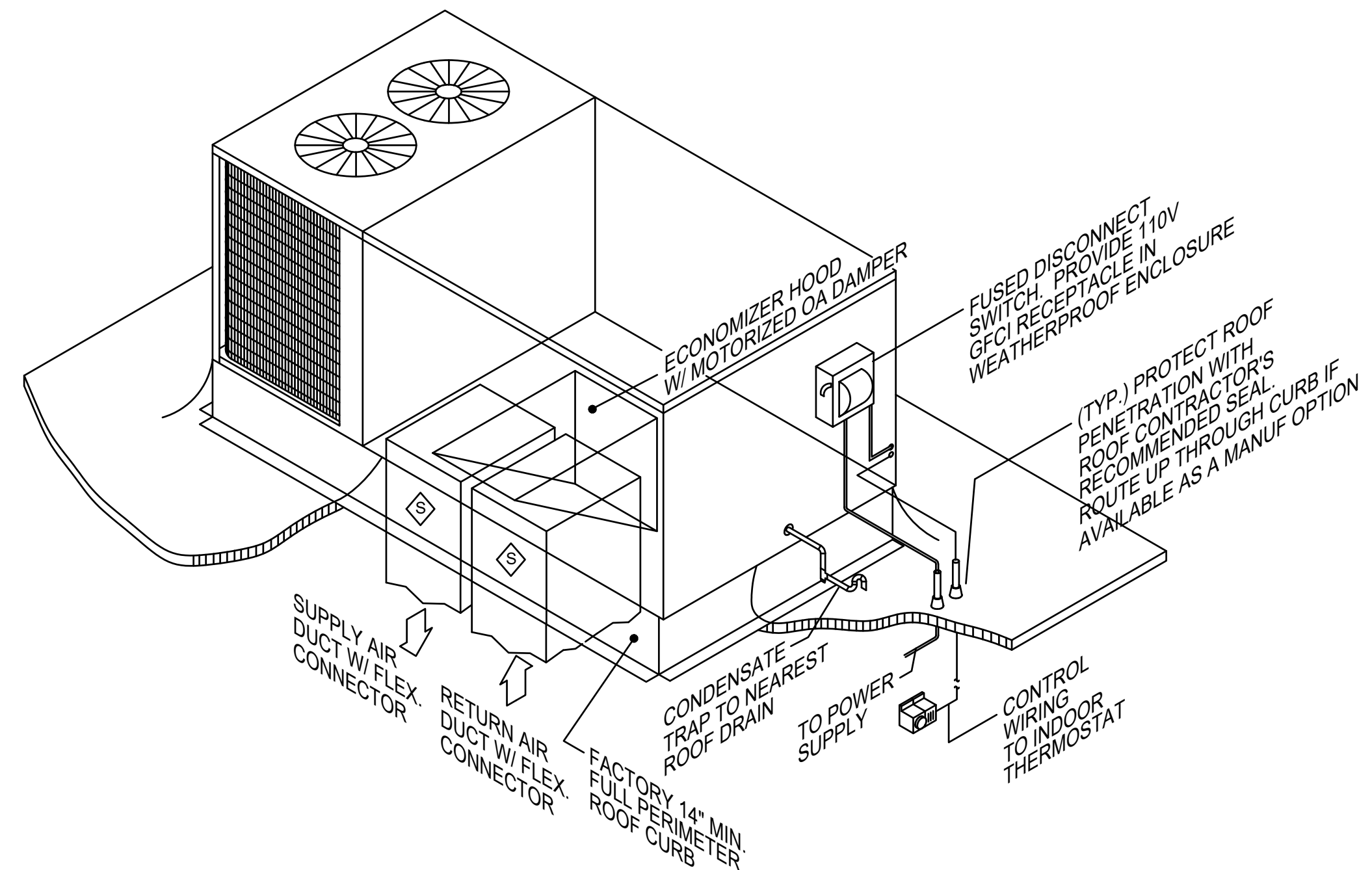
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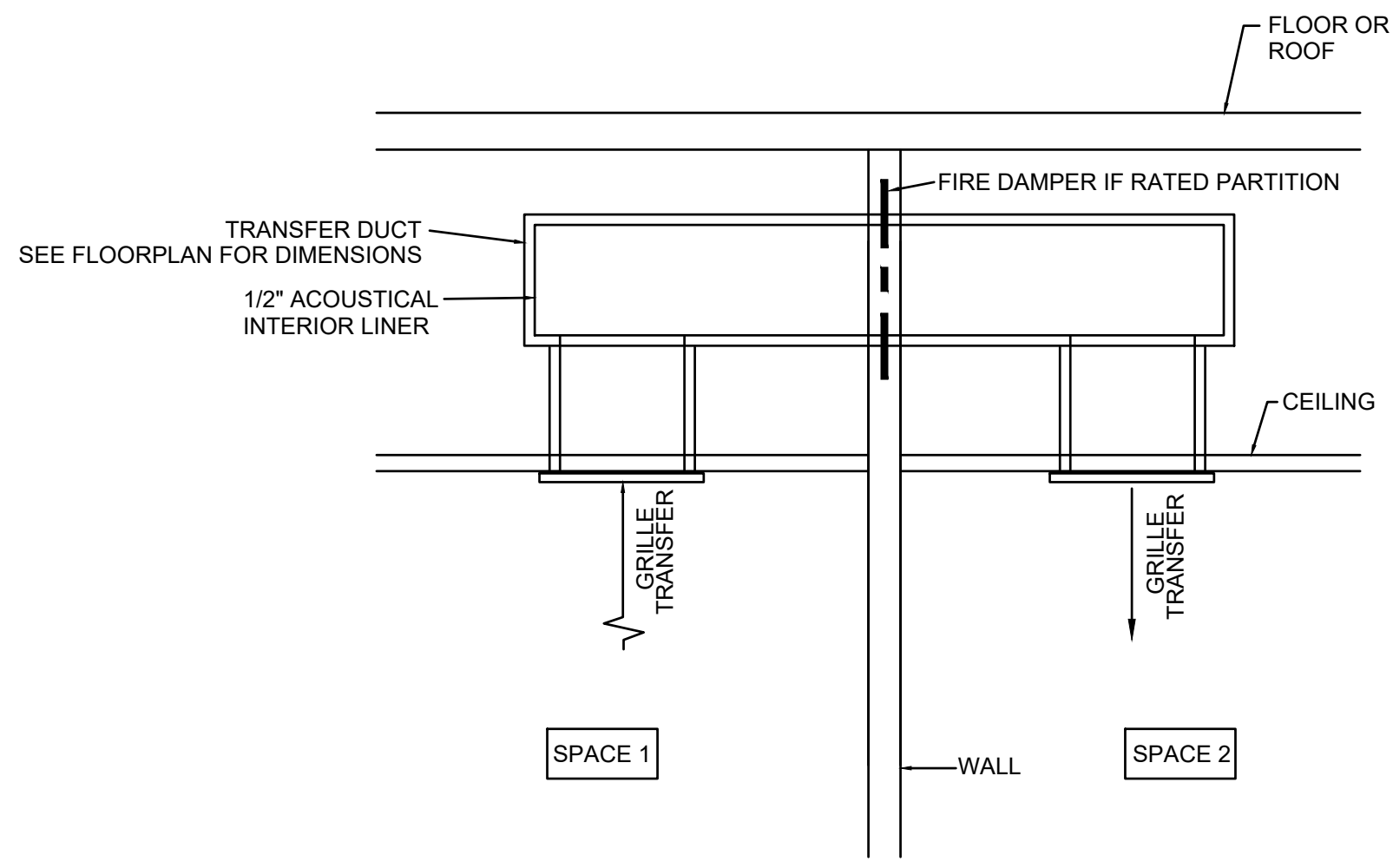
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M-5



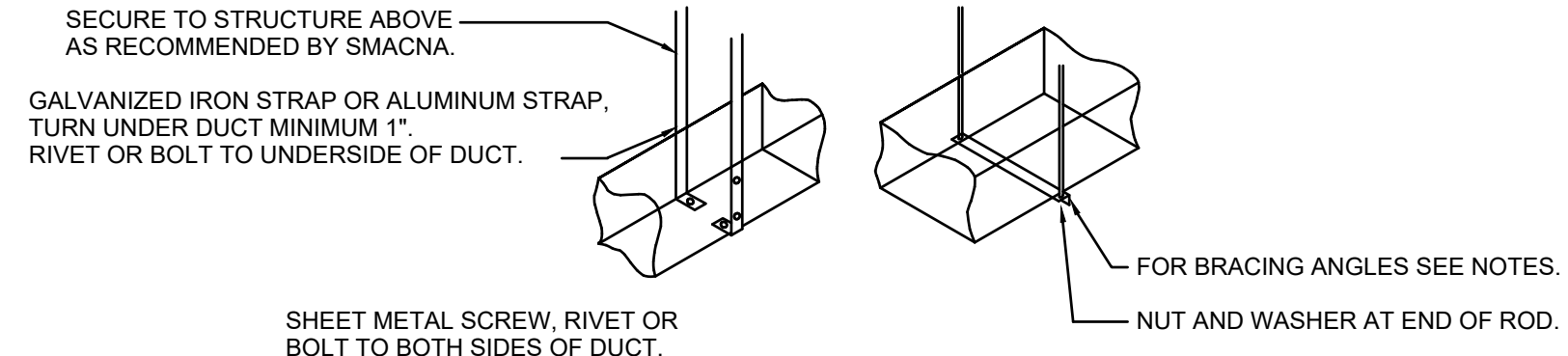
TYPICAL ROOFTOP PACKAGED HVAC UNIT DETAIL
NOT TO SCALE



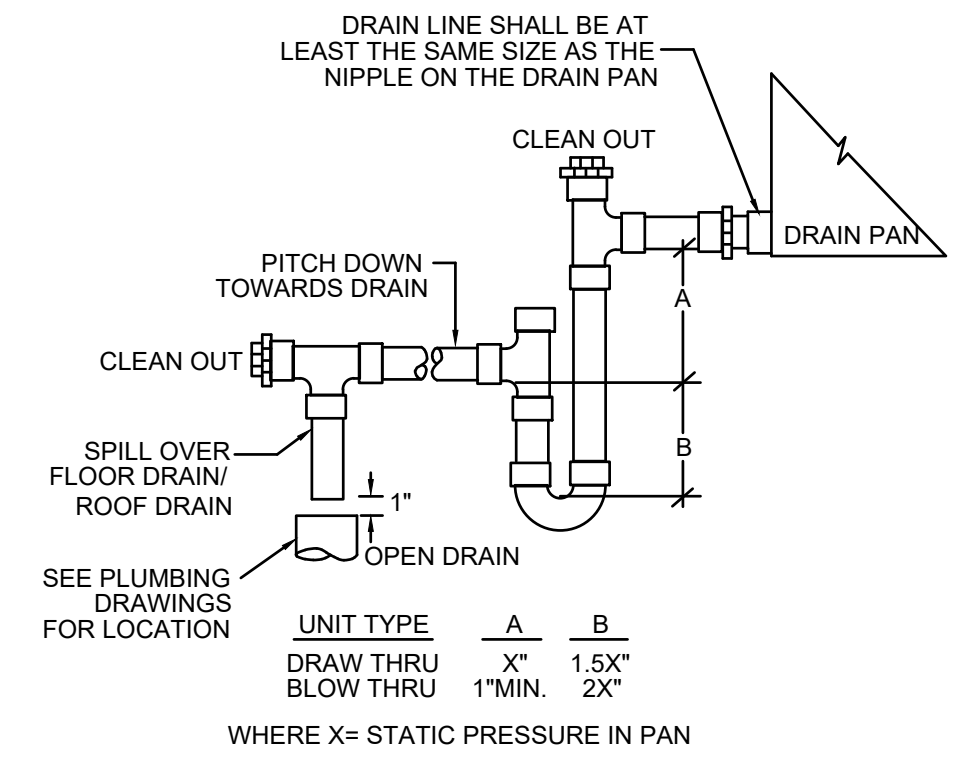
TRANSFER DUCT DETAIL
NOT TO SCALE

RECTANGULAR DUCT HANGER SCHEDULE (MINIMUM SIZES)

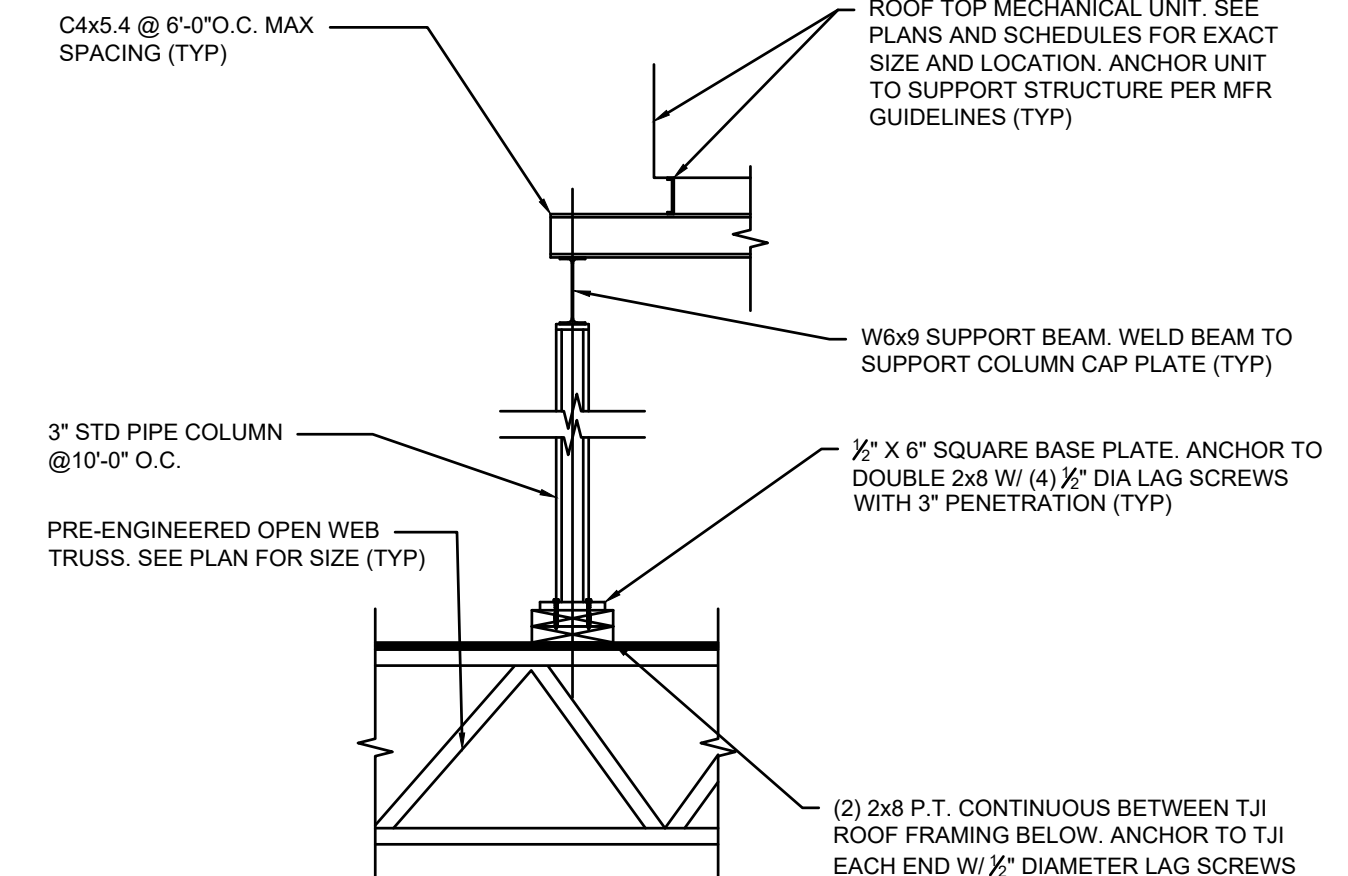
HALF DUCT PERIMETER RANGE	PAIR AT 10' SPACING		PAIR AT 8' SPACING		PAIR AT 5' SPACING		PAIR AT 4' SPACING	
	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD
P/2 < 30"	1"x 22 GA.	0 GA. (0.135")	1"x 22 GA.	0 GA. (0.135")	1"x 22 GA.	1/2 GA. (0.106")	1"x 22 GA.	1/2 GA. (0.106")
P/2 < 72"	1"x 18 GA.	3/8"	1"x 20 GA.	1/4"	1"x 22 GA.	1/4"	1"x 22 GA.	1/4"
P/2 < 96"	1"x 16 GA.	3/8"	1"x 18 GA.	3/8"	1"x 20 GA.	3/8"	1"x 22 GA.	1/4"
P/2 < 120"	1-1/2"x 16 GA.	1/2"	1"x 16 GA.	3/8"	1"x 18 GA.	3/8"	1"x 20 GA.	1/4"
P/2 < 168"	1-1/2"x 16 GA.	1/2"	1"x 16 GA.	1/2"	1"x 16 GA.	3/8"	1"x 18 GA.	3/8"
P/2 < 192"	-	1/2"	1-1/2"x 16 GA.	1/2"	1"x 16 GA.	3/8"	1"x 16 GA.	3/8"



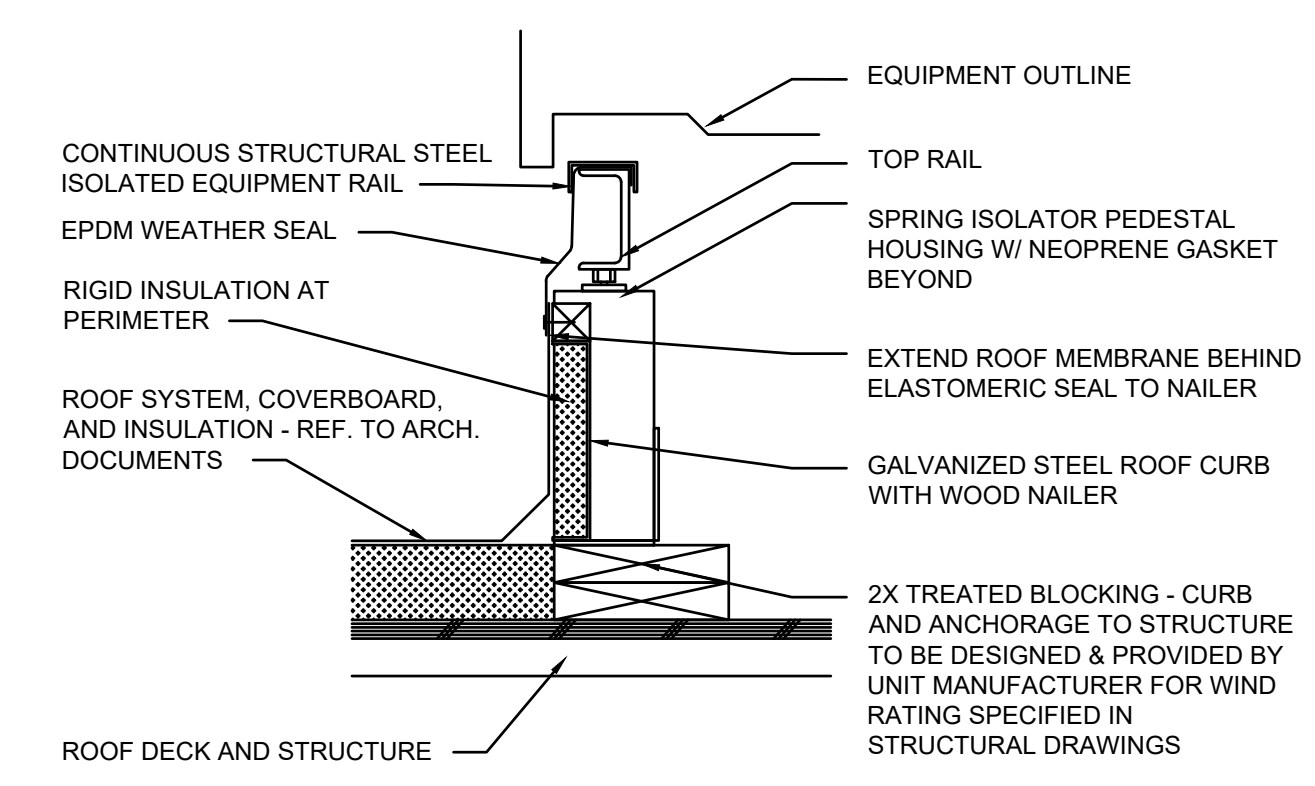
DUCT HANGER DETAIL
NOT TO SCALE



AIR CONDITIONING UNIT DRAIN TRAP DETAIL
NOT TO SCALE

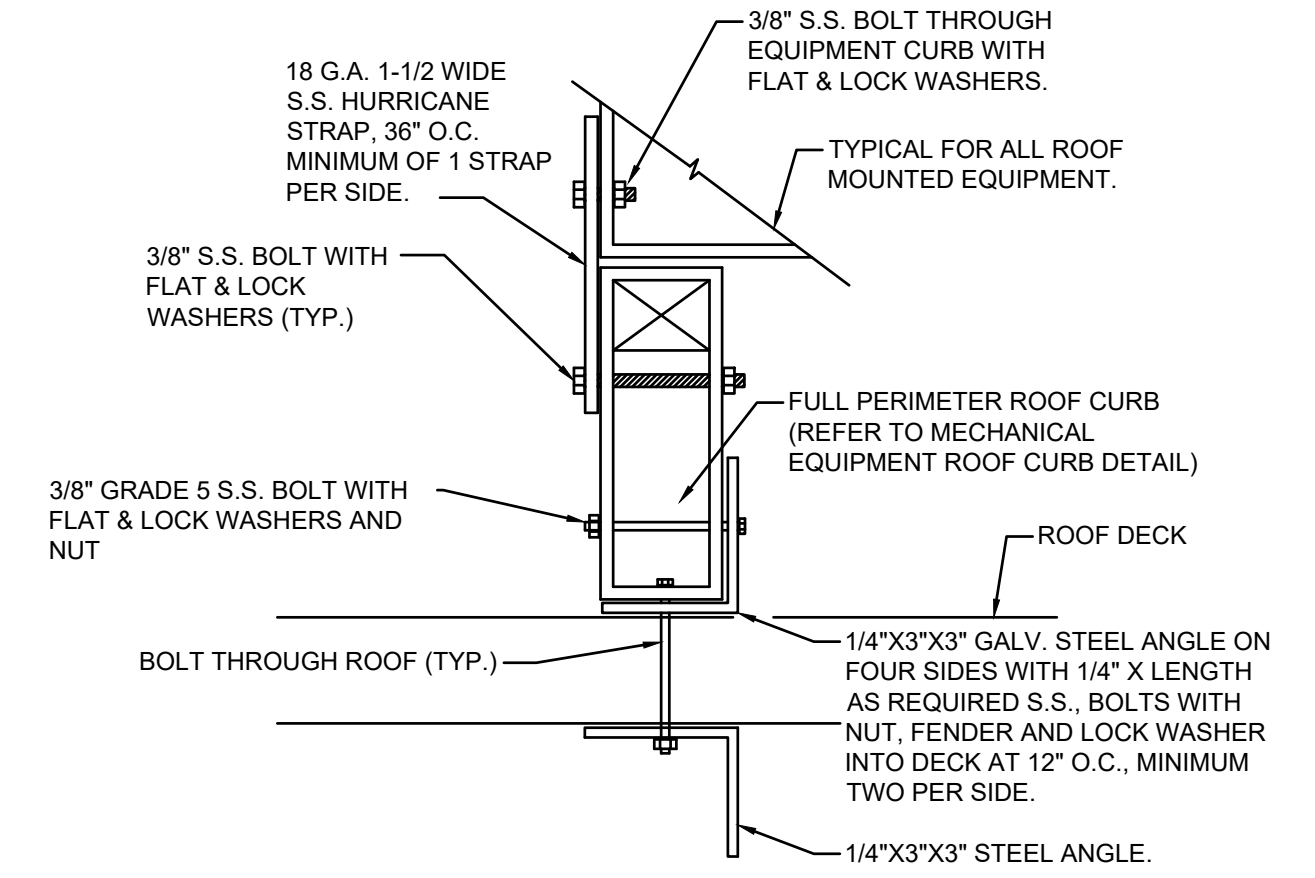


ROOFTOP MECHANICAL RACK DETAIL
NOT TO SCALE



NOTE: ROOFING, FLASHING AND COUNTER FLASHING SHALL BE INSTALLED BY LICENSED AND INSURED ROOFING CONTRACTOR. COORDINATE EXACT MATERIALS WITH ROOF CONSTRUCTION.

RTU ROOF CURB W/ ISOLATION SYSTEM DETAIL
NOT TO SCALE



TYPICAL HURRICANE STRAP DETAIL
NOT TO SCALE

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M-6

BASIC REQUIREMENTS

1. GENERAL

- 1.A. GENERAL CONTRACT PROVISIONS APPLY TO THE WORK OF THIS SECTION.
1.B. CODE: COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE (NEC), ALL GOVERNING BUILDING CODES AND ENERGY CODES, NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), UNDERWRITERS LABORATORIES (UL), AUTHORITIES HAVING JURISDICTION (AHJ), AND ALL APPLICABLE RULES AND REGULATIONS OF LOCAL AND STATE LAWS AND ORDINANCES.
1.C. PROVIDE ALL NECESSARY PERMITS, LICENSES, INSPECTIONS AND APPROVALS AS REQUIRED BY THE UTILITY COMPANY AND LOCAL AHJ. CONTRACTOR IS RESPONSIBLE FOR PAYING ALL ASSOCIATED AND REQUIRED FEES IN CONNECTION WITH THE WORK OF THIS CONTRACT.
1.D. ALL ELECTRICAL MATERIALS, EQUIPMENT, APPLIANCES, ETC. SHALL HAVE THE LISTING OF THE UNDERWRITER'S LABORATORIES, INC., AND SHALL BE TYPES APPROVED BY LOCAL AUTHORITIES HAVING JURISDICTION.

2. UTILITY COORDINATION

- 2.A. [UTILITY COMPANY WHICH SERVICES THE PROJECT SITE IS DUKE ENERGY.
2.B. COMPLY WITH THE REQUIREMENTS OF THE LOCAL UTILITY COMPANY AND PERFORM ALL REQUIRED COORDINATION WITH UTILITY PRIOR TO PERFORMING WORK.
2.C. PROVIDE ALL EQUIPMENT AS REQUIRED BY UTILITY COMPANY AND IN COMPLIANCE WITH ALL UTILITY COMPANY REQUIREMENTS AND REGULATIONS.
2.D. COORDINATE WITH ALL OTHER TRADES AND CONTRACTORS IN RELATION TO UTILITY COMPANY REQUIREMENTS AND INSTALLATIONS.
2.E. CONTRACTOR SHALL COORDINATE NEW SERVICE WITH THE UTILITY CO., AS FOLLOWS:
2.E.A. SERVICE WIRING
2.E.B. SUPPLY AND INSTALL WATT HOUR METERS.
2.E.C. FINAL CONNECTIONS TO METERING EQUIPMENT.
2.E.D. ARRANGE WITH THE UTILITY CO FOR SERVICE FACILITIES AND PAY ALL CHARGES.
2.E.E. EXTEND SERVICE FROM UTILITY CO TERMINATIONS.
2.E.F. INSTALLATION OF UTILITY CO. CURRENT TRANSFORMERS.
2.E.G. PROVIDE METERING ENCLOSURES AND METER PANS.
2.E.H. METER WIRING EXCEPT FINAL CONNECTIONS.
2.E.I. OBTAIN UTILITY CO APPROVAL FOR ALL ELECTRIC SERVICE WORK AND SERVICE EQUIPMENT SHOP DRAWINGS.
2.E.J. PROVIDE ALL ASSOCIATED INSTALLATION COMPONENTS AND ACCESSORIES.
2.F. CONTRACTOR SHALL EXAMINE THE LOCATION WHERE SERVICE EQUIPMENT AND RACEWAYS ARE TO BE INSTALLED, DETERMINE SPACE REQUIREMENTS AND NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF THE CONDITIONS DETRIMENTAL TO PROPER AND TIMELY COMPLETION OF THE WORK.

3. WORK INCLUDED

- 3.A. UNLESS NOTED AS EXISTING OR PROVIDED BY OTHERS, CONTRACTOR SHALL PROVIDE ALL WORK AND MATERIALS SHOWN ON DRAWINGS AND INDICATED WITHIN THESE SPECIFICATIONS.
3.B. ALL MATERIALS PROVIDED SHALL BE NEW AND UNUSED.
3.C. THESE SPECIFICATIONS AND ACCOMPANYING DRAWINGS ARE INTENDED TO SECURE THE PROVISIONS OF ALL MATERIAL AND LABOR NECESSARY FOR THE COMPLETE INSTALLATIONS, TESTED AND READY FOR SERVICE, TOGETHER WITH COMPLETE ELECTRICAL WORK AS CALLED FOR HEREIN AND AS INDICATED ON THE DRAWINGS. WHEN CONFLICTS OCCUR IN THE SPECIFICATIONS OR ON THE DRAWINGS, OR BETWEEN EITHER, THE ITEMS OF GREATER QUANTITY OR HIGHER COST SHALL BE PROVIDED.
3.D. PROVIDE A COMPLETE WIRING SYSTEMS FOR LIGHTING AND POWER INSTALLATION, HVAC, PLUMBING AND SPRINKLER SYSTEMS AND MISCELLANEOUS DEVICES.
3.E. A GENERAL DESCRIPTION OF THE ELECTRICAL WORK INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:
3.E.A. RELOCATION AND/OR REMOVAL OF EXISTING ELECTRICAL WORK IN ACCORDANCE WITH DEMOLITION SCHEME, OR AS DIRECTED AND REQUIRED. RESTORATION OF ELECTRICAL SERVICE IN AFFECTED ADJOINING AREAS WHICH ARE TO CONTINUE TO FUNCTION.
3.E.B. REMOVAL AND/OR REINSTALLATION OF EXISTING CONSTRUCTION (CEILING, LIGHTING, ELECTRICAL EQUIPMENT, FIRE ALARM DEVICES, FURNISHINGS, ETC.) AS NECESSARY TO COMPLETE THE REMOVALS AND RENOVATION WORK REQUIRED BY THE DRAWINGS AND SPECIFICATIONS. REPLACE ANY ITEMS DAMAGED BY OR DUE TO THIS REMOVAL AND REINSTALLATION WITH NEW ITEMS TO MATCH EXISTING.
3.E.C. TEMPORARY LIGHT AND POWER FOR CONSTRUCTION PURPOSES.
3.E.D. ELECTRICAL SERVICE INSTALLATION.
3.E.E. BRANCH CIRCUIT WIRING, SWITCHES, RECEPTACLES, TELEPHONE AND SIGNAL OUTLETS, AND ALL ASSOCIATED RACEWAYS. UNLESS NOTED OTHERWISE, WIRING, CONDUIT ROUTING, RACEWAYS, ETC. SHALL BE CONCEALED ABOVE ACCESSIBLE CEILINGS, IN WALLS, OR BENEATH FINISHED FLOORS IN ALL FINISHED SPACES. UNLESS NOTED OTHERWISE, DEVICES SHALL BE FLUSH MOUNTED IN ALL FINISHED SPACES.
3.E.F. LIGHTING FIXTURES AND LAMPS.
3.E.G. POWER WIRING TO MECHANICAL EQUIPMENT.
3.E.H. CUTTING AND ROUGH PATCHING REQUIRED TO PERFORM ELECTRICAL WORK, UNLESS NOTED OTHERWISE ON THE DRAWINGS. IN ADDITION, PATCH ALL OPENINGS CREATED BY ELECTRICAL DEMOLITION ACTIVITIES WHICH ARE NOT BEING UTILIZED FOR CONSTRUCTION. PATCH TO MATCH EXISTING ADJACENT SURFACES IN MATERIAL FINISH, TEXTURE, AND COLOR.
3.E.I. FURNISHING AND SETTING OF ALL SLEEVES THROUGH FLOORS, WALLS, WHERE REQUIRED, INCLUDING WATERPROOF AND FIREPROOF SEALING.
3.E.J. FIRE SEALING AROUND ALL BOXES, RACEWAYS, SLEEVES, ETC. WHERE PASSING THROUGH OR PENETRATING CONCRETE SLABS/WALLS AND ALL OTHER FIRE PARTITIONS. FIRE SEAL SHALL BE APPROVED AND INSTALLED IN ACCORDANCE WITH ASTM E814 AND AHJ REQUIREMENTS.
3.E.K. CORE DRILLING ASSOCIATED WITH THE ELECTRICAL WORK.
3.E.L. POWER AND LIGHT DISTRIBUTION SYSTEM
3.E.M. PANELBOARDS.
3.E.N. SAFETY DISCONNECT SWITCHES WHERE REQUIRED, UNLESS FURNISHED WITH STARTERS OR ON EQUIPMENT.
3.E.O. GROUNDING AS REQUIRED BY CODE.
3.E.P. IDENTIFICATION OF EQUIPMENT.
3.E.Q. PRIME PAINTING ELECTRICAL EQUIPMENT AND INSTALLATION COMPONENTS.
3.E.R. FIRE ALARM, SMOKE DETECTION AND SPRINKLER ALARM SYSTEMS.
3.E.S. CABLE SUPPORT AND PULLBOXES.
3.E.T. TELEPHONE AND LOW-VOLTAGE SYSTEM EMPTY CONDUIT SYSTEMS.
3.E.U. WHERE INDICATED, INSTALLATION OF EQUIPMENT FURNISHED BY OTHERS.
3.E.V. HANGERS, ANCHORS, INSERTS, SUPPORTS, SLEEVES, CHASES, ETC. AS REQUIRED TO SECURELY FASTEN ELECTRICAL WORK TO BUILDING STRUCTURE.
3.E.W. STORAGE, RIGGING, SCAFFOLDING AND HANDLING OF ALL MATERIALS AND EQUIPMENT.
3.E.X. TESTS AND INSPECTIONS OF ALL SYSTEMS UNDER THIS SECTION.
3.E.Y. PAYING ALL FEES AND PERFORMING ALL TESTING AND ADJUSTING, AND FURNISHING ALL CERTIFICATES OF APPROVAL.
3.E.Z. [AS-BUILT DRAWINGS.]

4. RELATED WORK SPECIFIED IN OTHER SECTIONS

- 4.A. UNLESS NOTED OTHERWISE IN CONTRACT DOCUMENTS, THE FOLLOWING WORK, RELATED TO THIS SECTION, WILL BE FURNISHED AND/OR PERFORMED UNDER OTHER SECTIONS OF THE SPECIFICATIONS, OR BY OTHERS, AND SHALL NOT BE CONSIDERED AS PART OF THE WORK OF THIS SECTION:
4.A.L. [FURNISHING MOTOR STARTERS AND ALL CONTROL DEVICES FOR MOTORS AND EQUIPMENT SPECIFIED UNDER OTHER CONTRACTS.]
4.A.M. [OPENINGS FOR SLEEVES IN WALLS AND FLOOR SLABS.]
4.A.N. [FINISH PAINTING.]
4.A.O. [FINISH PAINTING OF EXPOSED CONDUITS, BOXES, HANGERS, APPARATUS, ETC.
4.A.P. TEMPERATURE AND MOTOR CONTROL WIRING, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.]
4.A.Q. [DATA/TELEPHONE SYSTEM CABLES, WIRES, CONNECTIONS, AND INSTRUMENTS.]

5. SUBMITTALS/SHIPPING & HANDLING

- 5.A. SUBMITTAL SHALL INCLUDE MANUFACTURER'S STANDARD DATA, INSTALLATION INSTRUCTIONS AND SPECIFICATIONS.
5.B. SUBMIT SAMPLES FOR EACH ITEM AS REQUIRED.
5.C. SUBMIT SHOP DRAWINGS FOR ALL ITEMS DESCRIBED IN THE CONTRACT DOCUMENTS OR AS MAY BE REQUIRED BY THE ARCHITECT AND/OR ENGINEER INCLUDING (BUT NOT LIMITED TO):
5.C.A. LIGHT FIXTURES
5.C.B. POWER DISTRIBUTION EQUIPMENT (PANELBOARDS, TRANSFORMERS, SWITCHES, ETC.)
5.C.C. WIRING DEVICES
5.C.D. RACEWAY AND BOXES
5.C.E. WIRING
5.C.F. FIRE ALARM SYSTEM

- 5.D. CONTRACTOR IS RESPONSIBLE FOR SHIPPING AND STORING OF ALL MATERIALS. HANDLE PRODUCTS CAREFULLY DURING SHIPPING, STORING, AND INSTALLING. DO NOT INSTALL DAMAGED EQUIPMENT OR COMPONENTS. IN SUCH INSTANCES REPLACE WITH NEW.
6. EXAMINATION OF EXISTING CONDITIONS OF PREMISES
6.A. BEFORE SUBMITTING THE BID, THIS CONTRACTOR SHALL VISIT THE SITE OF THE WORK AND SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AFFECTING THE WORK. NO EXTRA PAYMENTS WILL BE ALLOWED ON ACCOUNT OF EXTRA WORK MADE NECESSARY BY FAILURE TO DO SO.
6.B. EXAMINE ALL WORK PREPARED BY OTHERS TO RECEIVE THE WORK OF THIS SECTION AND REPORT ANY DEFECTS AFFECTING INSTALLATION TO THE GENERAL CONTRACTOR FOR CORRECTION. COMMENCEMENT OF WORK WILL BE CONSTRUED AS COMPLETE ACCEPTANCE OF PREPARATORY WORK BY OTHERS.
6.C. CONTRACTOR SHALL TEST ALL EXISTING BRANCH CIRCUITS IN EXISTING PANELBOARDS PRIOR TO RE-USING SAID BRANCH CIRCUITS FOR THIS PROJECT. TESTING SHALL BE DONE DURING PREMIUM TIME, UNLESS APPROVED BY BUILDING OWNER AND EXISTING TENANTS.

- 7. REMOVAL OF EXISTING WORK
7.A. REMOVE AND/OR RELOCATE ALL ELECTRICAL EQUIPMENT, WIRING AND OTHER ELECTRICAL WORK SO INDICATED OR REQUIRED BY REMOVAL OF OR CHANGES IN EXISTING CONSTRUCTION. DISCONNECT LOAD AND LINE ENDS OF CONDUCTORS FEEDING PANELBOARDS, CONTROLLERS, MOTORS, APPLIANCES, AND DEVICES WHICH ARE TO BE REMOVED OR ABANDONED. REMOVE CONDUCTORS FROM EXISTING CONDUITS THROUGH WHICH NEW CONDUCTORS ARE TO BE PULLED. CUT AND CAP FLUSH WITH FLOOR ALL ABANDONED CONDUITS. REMOVE ABANDONED SURFACE MOUNTED CONDUITS. REMOVE MATERIAL AND EQUIPMENT AND DISPOSE OF SAME AS DIRECTED. WHERE ANY FIXTURE OR WIRING DEVICE IS REMOVED, PROVIDE ADEQUATE SIZE AND TYPE OF BLANK COVER PLATE OVER EACH OUTLET.
8. COORDINATION OF WORK WITH OTHERS
8.A. THE WORK OF THIS SECTION SHALL BE COORDINATED WITH THE WORK OF ALL OTHER CONTRACTS, THE UTILITY COMPANY, AND OF THE TELECOMMUNICATIONS COMPANY, AND SHALL BE SO ARRANGED THAT THERE WILL BE NO DELAY IN THE PROPER INSTALLATION AND COMPLETION OF ANY PART OR PARTS OF EACH RESPECTIVE WORK WHEREIN IT MAY BE INTERRELATED WITH THAT OF THIS CONTRACT SO THAT GENERALLY ALL CONSTRUCTION WORK CAN PROCEED IN ITS NATURAL SEQUENCE WITHOUT UNNECESSARY DELAY.
8.B. COORDINATE WORK WITH OTHER TRADES AND ADJUST EQUIPMENT LOCATIONS ACCORDINGLY TO FIT SPACES ALLOTTED.
8.C. ELECTRICAL EQUIPMENT AND DEVICE LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE EXACT MOUNTING LOCATIONS AND HEIGHTS WITH OTHER TRADES AND ARCHITECTURAL ELEVATIONS, PLANS, AND FURNITURE LAYOUTS. VERIFY EXACT EQUIPMENT LOCATIONS PRIOR TO FEEDER ROUGH IN.
8.D. PRIOR TO ROUGH-IN FOR ANY CEILING MOUNTED ELECTRICAL DEVICE OR LIGHT FIXTURE, COORDINATE THE LOCATIONS OF SPRINKLER HEADS WITH PLUMBING CONTRACTOR. ALL CEILING-MOUNTED EQUIPMENT SHALL BE MOUNTED AT A DISTANCE FROM SPRINKLER HEADS THAT MEET NFPA MINIMUM REQUIREMENTS.

- 8.A. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. TO INSURE CONTINUOUS OPERATION, MAKE NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING WORK WHEN SO REQUIRED.
8.B. WHEN INSTALLATION OF A NEW SYSTEM REQUIRES THE TEMPORARY SHUTDOWN OF AN EXISTING OPERATING SYSTEM, THE CONNECTION OF THE NEW SYSTEM SHALL BE PERFORMED AT SUCH TIME AS DESIGNATED BY THE OWNER.
8.C. NOTIFY AND OBTAIN PERMISSION FROM OWNER A MINIMUM OF 48 HOURS IN ADVANCE OF ANY UTILITY INTERRUPTION. COORDINATE ANY UTILITY INTERRUPTIONS WITH ALL OTHER CONTRACTORS.
8.D. WORK SHALL BE ARRANGED FOR CONTINUOUS PERFORMANCE, INCLUDING OVERTIME, AT NO EXTRA COST TO THE OWNER TO ASSURE THAT EXISTING OPERATION SERVICES WILL BE SHUT DOWN ONLY DURING THE TIME ACTUALLY REQUIRED TO MAKE NECESSARY CONNECTIONS.

- 9. MATERIAL AND WORKMANSHIP
9.C. ALL MATERIAL AND EQUIPMENT SHALL COMPLY WITH ALL ASSOCIATED CODES AND STANDARDS FOR THE INTENDED MATERIAL AND EQUIPMENT. CODES AND STANDARDS INCLUDE, BUT ARE NOT LIMITED TO, NATIONAL ELECTRIC CODE (NEC), UL, NEMA/ICEA, IEEE, AND NFPA.
9.D. ALL MATERIAL SHALL BE NEW AND OF THE BEST QUALITY AND SHALL HAVE THE APPROVED UNDERWRITER'S LABEL ATTACHED. THE LABEL OF APPROVAL SHALL BE OF THE TYPE FOR THE INTENDED APPLICATION. THE WORK THROUGHOUT SHALL BE EXECUTED IN THE BEST AND MOST THOROUGH MANNER UNDER THE DIRECTION OF, AND TO THE SATISFACTION OF, THE OWNER WHO WILL INTERPRET THE MEANINGS OF THE DRAWINGS AND SPECIFICATIONS, AND THE OWNER SHALL HAVE THE POWER TO REJECT ANY WORK AND MATERIALS WHICH, IN THEIR OPINION, IS NOT IN FULL CONFORMANCE THEREWITH.
9.E. IF, AFTER INSTALLATION, OPERATION OF THE EQUIPMENT PROVES TO BE UNSATISFACTORY TO THE OWNER BY REASONS OF DEFECTS, ERRORS OR OMISSIONS, THE OWNER RESERVES THE RIGHT TO OPERATE THE EQUIPMENT UNTIL IT CAN BE REMOVED FROM SERVICE FOR CORRECTION BY THE CONTRACTOR. THE CONTRACTOR SHALL PAY FOR ALL DAMAGES TO WORK OF OTHER TRADES CAUSED BY THIS DEFECTIVE EQUIPMENT AND ITS REPLACEMENT.
9.F. FURNISH WRITTEN GUARANTEE COVERING MATERIAL, OPERATION, AND WORKMANSHIP FOR A PERIOD OF ONE YEAR.
9.G. INSTALL ALL CIRCUITRY PARALLEL OR PERPENDICULAR TO WALLS, FLOOR, AND CEILING.
9.H. REMOVE MATERIALS AS WORK PROGRESSES, UPON COMPLETION OF WORK. LEAVE AREAS IN A CLEAN CONDITION.
9.I. PROVIDE A COMPETENT SUPERINTENDENT WHO SHALL BE IN CHARGE OF THE WORK TO BE INSTALLED UNDER THIS SECTION OF THE SPECIFICATIONS.

- 10. LABELING
10.A. ALL DEVICE AND EQUIPMENT LABELING SHALL BE TYPEWRITTEN. HANDWRITTEN LABELS WILL NOT BE ACCEPTED.
10.B. ALL DEVICE LABELING SHALL BE TYPEWRITTEN USING A LABEL MAKER AND SHALL BE PERMANENTLY AFFIXED TO EACH FACEPLATE.
10.C. FOR ALL EQUIPMENT PROVIDED UNDER PROJECT, PROVIDE STANDARD PHENOLIC NAMEPLATE WITH 1" MINIMUM SIZE ENGRAVED LETTERING INDICATING LOAD SERVED, POWER SOURCE, VOLTAGE, PHASE, AND CIRCUIT NUMBER. NAMEPLATES SHALL BE WHITE LETTERING ON BLACK BACKGROUND OR AS DIRECTED BY OWNER TO MATCH EXISTING LABELING.
10.D. UPON COMPLETION OF PROJECT, THE CONTRACTOR SHALL PROVIDE TYPEWRITTEN, UP-TO-DATE CIRCUIT BREAKER DIRECTORIES FOR ALL EXISTING PANELBOARDS IMPACTED BY PROJECT TO DESCRIBE NEW EQUIPMENT AND DEFINE THEIR CORRESPONDING CIRCUIT BREAKER.
10.E. UPON COMPLETION OF PROJECT, THE CONTRACTOR SHALL PROVIDE TYPEWRITTEN, UP-TO-DATE CIRCUIT BREAKER DIRECTORIES FOR ALL NEW PANELBOARDS PROVIDED UNDER PROJECT.
10.F. EACH RECEPTACLE AND SWITCH PROVIDED OR ALTERED UNDER THIS CONTRACT SHALL BE LABELED WITH THE CORRESPONDING POWER PANEL NAME AND CIRCUIT BREAKER NUMBER.
10.G. ALL JUNCTION BOXES, OUTLET BOXES, PULL BOXES, ETC. SHALL BE CLEARLY LABELED WITH BLACK PERMANENT MAKER IDENTIFYING THE ASSOCIATED PANELBOARD AND CIRCUIT NUMBER.
10.H. PROVIDE A COMPETENT SUPERINTENDENT WHO SHALL BE IN CHARGE OF THE WORK TO BE INSTALLED UNDER THIS SECTION OF THE SPECIFICATIONS.

- 11. FINAL INSPECTIONS, TESTS, AND CLOSE-OUTS
11.A. UPON COMPLETION OF THE ELECTRICAL INSTALLATION, CONDUCT A LOAD TEST BY TURNING ON ALL ELECTRICAL EQUIPMENT THROUGHOUT THE ENTIRE PROJECT FOR A CONTINUOUS PERIOD. ALTER FUSES, CIRCUIT BREAKERS, CIRCUIT CONNECTION ARRANGEMENTS, ETC. AS REQUIRED TO

- PERMIT SATISFACTORY PERFORMANCE. LOAD SHALL BE BALANCED WITHIN 5%.
11.B. AT THE TIME OF THE FINAL INSPECTION AND TESTS, ALL CONNECTIONS AT PANELS AND ALL SPLICES, ETC. MUST BE MADE. ALL FUSES MUST BE IN PLACE AND THE CIRCUITS CONTINUOUS FROM SERVICE SWITCHES TO ALL PANELS, RECEPTACLES, OUTLETS, MOTORS, ETC. EACH ENTIRE WIRING SYSTEM MUST TEST FREE FROM ALL SHORT CIRCUITS AND FROM GROUNDS AS REQUIRED BY THE N.E.C.
11.C. AFTER SUBSTANTIAL COMPLETION, PROVIDE OWNER DESIGNATED PERSONNEL WITH INSTRUCTIONS ON INSTALLED SYSTEMS.
11.D. PROVIDE OWNER WITH AN OPERATION AND MAINTENANCE MANUAL FOR EACH INSTALLED SYSTEM.

RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

- 1. UNLESS NOTED OTHERWISE AND AS APPROVED BY THE AHJ, CONDUIT TYPES SHALL BE USED AS FOLLOWS:
1.A. ELECTRICAL METALLIC TUBING (EMT): PROVIDE FOR ALL INTERIOR BRANCH CIRCUITS, UNLESS OTHERWISE INDICATED.
1.B. FLEXIBLE METAL CONDUIT (FMC): PROVIDE FOR FINAL BRANCH CIRCUIT CONDUIT CONNECTION TO RECESSED CEILING LIGHT FIXTURES, 6' MAXIMUM LENGTH.
1.C. LIQUID-TIGHT FLEXIBLE METAL CONDUIT (LFMC): PROVIDE FOR FINAL CIRCUIT CONNECTIONS TO MOTORS AND EQUIPMENT, 6' MAXIMUM LENGTH.
1.D. INTERMEDIATE METAL CONDUIT (IMC): PROVIDE FOR ALL FEEDERS.
1.E. RIGID METAL CONDUIT (RMC): PROVIDE FOR ALL EXTERIOR EXPOSED, RISERS FROM GRADE, INTERIOR/EXTERIOR WET LOCATIONS, AND IN ALL INTERIOR/EXTERIOR AREAS WHERE PHYSICAL DAMAGE MAY OCCUR.
1.F. RIGID POLYVINYL CHLORIDE CONDUIT (PVC): PROVIDE FOR ALL UNDERGROUND EXTERIOR, UNDER-SLAB, AND CONCRETE ENCASED CIRCUITS/FEEDERS. SCHEDULE 80 PVC SHALL BE USED FOR ALL DIRECT-BURY APPLICATIONS. SCHEDULE 40 PVC SHALL BE USED UNDER-SLAB AND CONCRETE ENCASEMENT APPLICATIONS.
2. FITTINGS, SUPPORTS, ACCESSORIES, ETC. SHALL BE SPECIFICALLY DESIGNED FOR ASSOCIATED CONDUIT TYPES AND SHALL BE OF SAME MANUFACTURER OF CONDUIT PROVIDED.
3. MINIMUM RACEWAY SIZE SHALL BE 3/4".
4. PROVIDE PULL CORDS IN ALL CONDUITS/RACEWAYS FOR PULLING OF CABLING/WIRING.
5. RACEWAYS SHALL NOT CROSS PIPE SHAFTS OR VENTILATION DUCT OPENINGS AND SHALL NOT BE ROUTED THROUGH ELEVATOR SHAFTS OR ELEVATOR MACHINE ROOMS UNLESS SPECIFICALLY SERVING ELEVATOR OR ELEVATOR RELATED SYSTEMS.
6. PROVIDE BOXES AND FITTINGS OF TYPES AND SIZES WHICH ARE SUITABLE FOR INSTALLATION. COMPLY WITH PROVISIONS OF NEC FOR BOXES AND FITTINGS.
7. IN ADDITION TO BOXES SHOWN, PROVIDE ADDITIONAL BOXES WHERE REQUIRED TO PREVENT DAMAGE TO CABLES AND WIRES DURING PULLING OPERATIONS.
8. PROVIDE PULL BOXES AFTER EVERY TWO 90 DEGREE BENDS FOR ALL 4" CONDUITS. FOR ALL OTHER CONDUIT SIZES/RUNS PROVIDE PULL BOXES AS REQUIRED BY NEC. SIZE ALL PULL BOXES PER NEC REQUIREMENTS.
9. PROVIDE ACCESSORIES AS REQUIRED FOR EACH INSTALLATION.
10. COUPLINGS AND CONNECTORS SHALL BE SET-SCREW TYPE.
11. SUPPORT ALL RACEWAYS AND BOXES SECURELY TO BUILDING STRUCTURE.
11.A. FASTEN ELECTRICAL BOXES SECURELY AND RIGIDLY TO STRUCTURAL SURFACES TO WHICH THEY ARE ATTACHED.
11.B. RACEWAYS SHALL BE SUPPORTED WITHIN 3' OF CONNECTION TO EQUIPMENT, BOXES, CABINETS, ETC.
11.C. PROVIDE RACEWAY SUPPORTS PER NEC SUPPORT SPACING REQUIREMENTS.
12. MECHANICALLY JOIN ALL METAL RACEWAYS, ENCLOSURES, AND RACEWAYS FOR CONDUCTORS TO FORM A CONTINUOUS ELECTRICAL CONDUCTOR. CONNECT ALL ELECTRICAL BOXES, FITTINGS AND CABINETS SO AS TO PROVIDE AN EFFECTIVE ELECTRICAL CONTINUITY AND A FIRM MECHANICAL ASSEMBLY.
13. INSTALL RACEWAYS SO THAT REQUIRED CONDUCTORS MAY BE DRAWN IN WITHOUT INJURY OR EXCESSIVE STRAIN TO THE RACEWAY OR CABLE.
14. INSTALL RACEWAYS TO AVOID PROXIMITY TO STEAM AND HOT WATER PIPES. KEEP RACEWAYS A MINIMUM OF 3" FROM SUCH PIPES.
15. KEEP ENDS OF RACEWAYS PLUGGED OR CAPPED DURING CONSTRUCTION. PROVIDE INSULATED BUSHINGS FOR ALL EMPTY CONDUITS AND CONDUIT ENDS.
16. PROVIDE EXPANSION - DEFLECTION FITTINGS IN ALL RACEWAYS PASSING THROUGH STRUCTURAL EXPANSION JOINTS.
17. FEEDERS TO PANELS SHALL BE IN CONDUIT.
18. COMBINING OF CIRCUITS IN SAME RACEWAY, OTHER THAN THOSE INDICATED ON DRAWING SHALL NOT BE PERMITTED.
19. ALL CONDUITS RUN UNDERGROUND OR BENEATH CONCRETE SLAB SHALL COMPLY WITH SET LOCATION REQUIREMENTS OF THE NEC.
20. RACEWAY PENETRATIONS OF FIRE-RATED WALLS AND/OR FLOORS SHALL BE SEALED TO MAINTAIN THE INTEGRITY OF CONSTRUCTION/RATING. ALL PRODUCTS, MATERIALS, AND METHODS OF INSTALLATION SHALL BE UL APPROVED AND MEET NFPA REQUIREMENTS.

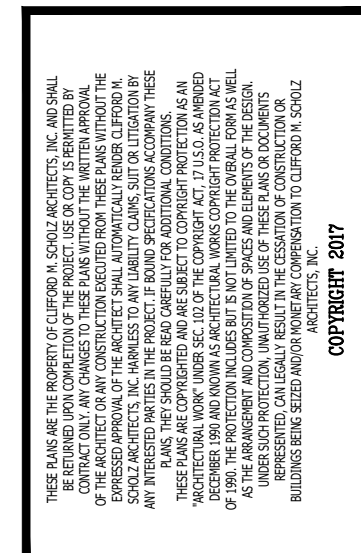
CONDUCTORS AND CABLES

- 1. ALL CONDUCTORS SHALL BE COPPER, UNLESS OTHERWISE INDICATED.
2. ALL BRANCH CIRCUIT WIRING SHALL BE INSULATED COPPER CONDUCTORS (MINIMUM #12 AWG), #12 AWG AND #10 AWG SHALL BE SOLID, #8 AWG AND LARGER SHALL BE STRANDED. BRANCH CIRCUITS LONGER THAN 100' FROM PANEL TO LOAD SHALL BE #10 AWG MINIMUM FOR THE ENTIRE CIRCUIT.
3. UNLESS NOTED OTHERWISE AND AS APPROVED BY AHJ, CONDUCTOR (WIRE) TYPES SHALL BE AS FOLLOWS:
3.A. DRY, DAMP, AND WET LOCATIONS: TYPE THHN-THWN OR XHHW-2 WITH INSULATION RATING OF 75° PROVIDED AS CONDUCTORS IN CONDUIT. 90° INSULATION RATING MAY BE USED FOR DRY LOCATIONS ONLY.
3.B. DIRECT BURIAL: TYPE UF OR USE
3.C. THE USE OF AC CABLE, MC CABLE, OR FLEXIBLE METAL CONDUIT IS PERMITTED IN LIEU OF WIRE IN CONDUIT FOR BRANCH CIRCUITS 20A OR LESS IN INTERIOR SPACES. FOR ALL OTHER AREAS AND APPLICATIONS, THE USE OF TYPE AC CABLE, MC CABLE OR FLEXIBLE METAL CONDUIT WITH CONDUCTORS IS NOT PERMITTED, EXCEPT FOR FINAL CONNECTIONS TO LIGHT FIXTURES, HVAC EQUIPMENT, AND OTHER EQUIPMENT/TRANSFORMERS (FINAL FLEXIBLE CONNECTION LENGTH IS LIMITED TO MAXIMUM OF 6'). AC CABLE AND MC CABLE SHALL BE PROVIDED WITH AN INSULATED GREEN EQUIPMENT GROUND CONDUCTOR.
3.D. [TYPE NM-B (ROMEX) MULTI-WIRE SHEATHED CABLE IS PERMITTED FOR ALL INTERIOR, CONCEALED BRANCH CIRCUITS IN ALL TYPE III, IV, AND V BUILDING CONSTRUCTION APPLICATIONS.]
4. ALL CONDUCTORS SHALL BE COLOR CODED AS REQUIRED BY NEC. COLOR CODING SHALL BE BY MEANS OF COLORED INSULATING MATERIAL, COLORED BRAID OR JACKET OVER THE INSULATION, OR BY MEANS OF SUITABLE COLORED, PERMANENT, NON-AGING, INSULATING TAPE APPLIED TO CONDUCTORS AT EACH CABINET OR JUNCTION POINT. THE COLOR CODING SHALL BE ACCOMPLISHED AS THE CONDUCTORS ARE BEING INSTALLED.
5. DRAWING FEEDER CONDUCTOR SIZES INDICATED ARE COPPER. WHERE APPROVED BY OWNER AND AHJ, ALUMINUM EQUIVALENT FEEDERS MAY BE USED FOR FEEDER SIZES OVER #8 AWG. CONTRACTOR IS RESPONSIBLE FOR PROVIDING EQUIVALENT CONDUCTOR SIZES/TYPES AND ANY ASSOCIATED INCREASE IN CONDUIT SIZE AS REQUIRED BY NEC.
6. CONNECTORS SHALL BE UL LISTED AND PROVIDED WITH APPROPRIATE TEMPERATURE RATINGS.
7. PROVIDE CONNECTORS AND FILLER WHICH ARE COMPATIBLE WITH THE CONDUCTOR MATERIAL. CONNECTORS AND FILLER INCLUDES, BUT ARE NOT LIMITED TO, INDENT-TYPE CONNECTORS, INDENT-TYPE PRESSURE CONNECTORS, SPRING-TYPE CONNECTORS, BOLT-ON PRESSURE CONNECTORS, TWO AND THREE-WAY CONNECTORS, AND FILLER FOR INDENTIONS IN CONNECTOR BODIES.
8. PROVIDE SPLICE KITS AND INSULATION TAPES WITH MECHANICAL STRENGTH AND INSULATION RATING EQUIVALENT OR BETTER THAN CONDUCTORS BEING SPLICED.
9. PRIOR TO ENERGIZING CIRCUITRY, CHECK INSTALLED WIRES AND CABLES WITH MEGOHM METER TO DETERMINE INSULATION RESISTANCE LEVELS AND ENSURE REQUIREMENTS ARE FULFILLED.
10. PRIOR TO ENERGIZING, TEST WIRES AND CABLES FOR ELECTRICAL CONTINUITY AND FOR SHORT CIRCUITS.

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

- 1. THE ENTIRE ELECTRICAL SYSTEM SHALL BE COMPLETELY AND EFFECTIVELY GROUNDED AS REQUIRED BY UL 467 AND NATIONAL ELECTRICAL CODE (NEC).

- 2. ALL METALLIC RACEWAYS SHALL BE MECHANICALLY AND ELECTRICALLY SECURE AT ALL JOINTS AND AT ALL BOXES, CABINETS, FITTINGS, AND EQUIPMENT. METALLIC RACEWAYS SHALL NOT BE CONSIDERED SOLE MEANS OF GROUNDING.
3. A SEPARATE COPPER CONDUCTOR SHALL BE INSTALLED IN ALL RACEWAYS AS THE EQUIPMENT GROUNDING MEANS. UNLESS NOTED OTHERWISE, GROUNDING CONDUCTOR SHALL BE SIZED PER NEC BASED ON THE SIZE OF THE RESPECTIVE FEEDER OVERCURRENT PROTECTIVE DEVICE. TERMINATE GROUNDING CONDUCTORS ON THE DEVICE/EQUIPMENT GROUND TERMINAL AND ON THE GROUND BUS INSTALLED IN PANELBOARDS, MOTOR CENTERS, ETC.
4. PROVIDE A DEDICATED NEUTRAL CONDUCTOR THE ENTIRE LENGTH OF ALL CIRCUITS. TERMINATE NEUTRAL CONDUCTORS ON THE DEVICE/EQUIPMENT NEUTRAL TERMINAL AND ON THE NEUTRAL BUS INSTALLED IN PANELBOARDS, MOTOR CENTERS, ETC. SHARED NEUTRAL CONDUCTORS ARE NOT PERMITTED.
5. GROUNDING CONNECTIONS:
5.A. EXOTHERMIC WELDING PROCESS: CADWELD OR APPROVED EQUAL
5.B. MECHANICAL COMPRESSION:
5.B.A. TIN-PLATED, HIGH-CONDUCTIVITY PURE ELECTROLYTIC COPPER EXTRUSION FITTINGS.
5.B.B. HYDRAULIC COMPRESSION EQUIPMENT AND DIES AS RECOMMENDED BY MANUFACTURER.
5.B.C. BOLTED CONNECTIONS: HIGH CONDUCTIVITY COPPER FITTINGS WITH CORROSION RESISTANT NUTS AND BOLTS.
6. PROVIDE BONDING FITTINGS AND BONDING JUMPERS TO ASSURE ELECTRICAL CONTINUITY OF THE GROUNDING CIRCUIT OF SERVICE EQUIPMENT AND ENCLOSURES THAT CONTAIN SERVICE CONDUCTORS. SIZE THE BONDING JUMPERS PER NEC BASED UPON THE SIZE OF THE SYSTEM PHASE CONDUCTORS.
7. PROVIDE GROUNDING BUSHINGS ON ALL CONDUIT TERMINATIONS AT PANELBOARDS AND JUNCTION BOXES. GROUND BUSHINGS TO EQUIPMENT GROUNDING BUSES USING AN INSULATED, CONTINUOUS, STRANDED, COPPER CONDUCTOR (#12 AWG MINIMUM).
8. PROVIDE GROUNDING FOR TVSS SERIES FILTER PER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND NEC.
9. TIGHTEN GROUNDING AND BONDING CONNECTORS AND TERMINALS, INCLUDING SCREWS AND BOLTS, IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED TIGHTENING VALUES FOR CONNECTORS AND BOLTS.
10. CONTRACTOR SHALL TEST GROUNDING SYSTEM. THE RESISTANCE TO GROUND SHALL NOT BE MORE THAN FIVE (5) OHMS. SUBMIT TEST RESULTS TO ENGINEER. CONTRACTOR SHALL MAKE ALL UPGRADES AND ADDITIONS AS REQUIRED TO ACHIEVE THE FIVE (5) OHM REQUIREMENT.
11. [PROVIDE COMPLETE LOW-VOLTAGE/TELECOMMUNICATIONS GROUNDING SYSTEM AS DETAILED ON DRAWINGS AND PER NEC AND ANSI/TIA/EIA REQUIREMENTS. SYSTEM SHALL INCLUDE, BUT IS NOT LIMITED TO, TELECOMMUNICATIONS MAIN GROUNDING BUSBAR, TELECOM GROUND BACKBONE, TELECOM GROUNDING BUSBAR, AND TELECOM BONDING BACKBONE INTERCONNECTING BONDING CONDUCTOR, BOND TO SERVICE ENTRANCE GROUNDING SYSTEM AND STRUCTURAL STEEL.]



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REVISIONS
ADDITIONS & ALTERATIONS TO:
SUN 'N LAKE GOLF CLUB
SEBRING, FLORIDA
REVIEWED & ACCEPTED BY: (DATE)

ADDITIONS & ALTERATIONS TO:
SUN 'N LAKE GOLF CLUB
SEBRING, FLORIDA

DATE
08/10/2018

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SHEET NO.

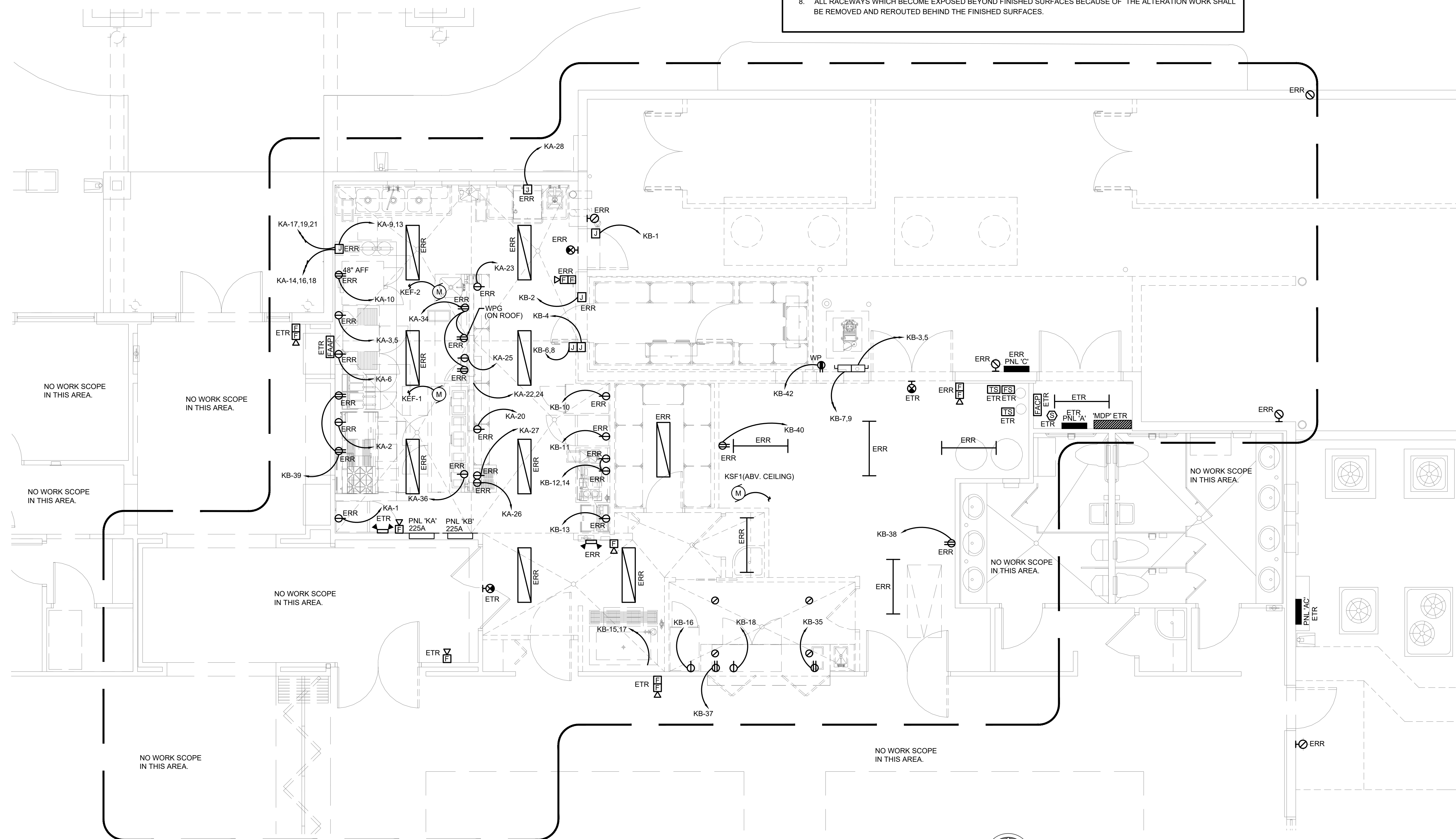
E-1

GENERAL NOTES

1. REFER TO DWG. E-0 FOR SYMBOL LIST, NOTES AND ABBREVIATIONS.
2. REFER TO DWG. E-1 & E-2 FOR ELECTRICAL SPECIFICATIONS.
3. VERIFY ALL MOUNTING HEIGHTS WITH ARCHITECTURAL ELEVATION PLANS BEFORE ROUGH IN.
4. COORDINATE WITH MECHANICAL PLANS AND CONTRACTOR FOR ALL FINAL MECHANICAL EQUIPMENT REQUIREMENTS/LOCATIONS.
5. COORDINATE WITH PLUMBING PLANS AND CONTRACTOR FOR ALL FINAL PLUMBING EQUIPMENT REQUIREMENTS/LOCATIONS.

EXISTING CONDITIONS, REMOVALS AND RELOCATIONS

1. THE CONTRACTOR SHALL INCLUDE ALL COSTS FOR REMOVALS AND RELOCATIONS IN THE CONTRACT. THESE COSTS SHALL INCLUDE WORK DESCRIBED IN THE SPECIFICATIONS AND SHOWN ON THE DRAWINGS WITH ALLOWANCES FOR NORMAL UNFORESEEN DIFFICULTIES WHEN CONCEALED WORK HAS BEEN OPENED.
2. THE CONTRACTOR SHALL REMOVE AND/OR RELOCATE ALL EXISTING ELECTRICAL WORK WHICH INTERFERES WITH THE NEW ARCHITECTURAL AND ELECTRICAL LAYOUTS AND SCHEMES IN FULL COORDINATION WITH THE ARCHITECT'S DEMOLITION PLAN. ALL WORK WHICH IS NO LONGER REQUIRED TO FUNCTION SHALL BE DE-ENERGIZED AND DISCONNECTED AT THE SOURCE OF POWER SUPPLY.
3. ALL ELECTRICAL WORK IN ADJOINING ROOMS OR AREAS WHICH IS REQUIRED TO FUNCTION BUT IS AFFECTED BY DEMOLITION WORK SHALL BE RECONNECTED AND RESTORED TO ITS PRESENT FUNCTION AS PART OF THE ELECTRICAL SYSTEM OF THE BUILDING(S).
4. ALL PRESENT MATERIAL AND EQUIPMENT IN USABLE CONDITION, WHICH IS TO BE REMOVED UNDER THIS CONTRACT, SHALL REMAIN THE PROPERTY OF THE OWNER AND/OR SHALL BE DISPOSED OF BY THE ELECTRICAL CONTRACTOR AS DIRECTED.
5. PORTIONS OF FEEDER LINES THAT HAVE TO BE REMOVED OR ABANDONED AS A RESULT OF DEMOLITION WORK, BUT ARE REQUIRED TO CONTINUE TO FUNCTION, SHALL BE CUT AT CONVENIENT LOCATIONS, REROUTED AND RECONNECTED FOR CONTINUATION OF THEIR PRESENT FUNCTION. NEW FEEDER EXTENSIONS SHALL MATCH EXISTING ONES IN ALL RESPECTS; CONDUCTOR CAPACITY, CONDUIT SIZE, ETC.
6. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES AT THE APPROPRIATE TIME OF THE PROJECTED DEMOLITION AND PHASING SCHEDULE SO THAT REMOVAL OR RELOCATION OF AFFECTED UTILITIES MAY BE CARRIED OUT IN COORDINATION WITH THE OWNER'S REQUIREMENTS. THE CONTRACTOR SHALL FOLLOW THE ARCHITECT'S DEMOLITION AND PHASING SCHEDULE AND PROCEED IN THE SPECIFIED SEQUENCE.
7. THE ELECTRICAL CONTRACTOR SHALL REMOVE ALL ELECTRICAL OUTLETS, SWITCHES AND OTHER DEVICES, COMPLETE WITH ASSOCIATED WIRING, CONDUITS, ETC., FROM PARTITIONS THAT ARE TO BE REMOVED. WHERE THE REMOVAL OF THESE ITEMS MAKES DEAD ELECTRICAL WIRING THAT IS TO REMAIN, THE CONTRACTOR SHALL INSTALL JUNCTION BOXES AND OTHER DEVICES AND PROVIDE BYPASS CONNECTIONS NECESSARY TO MAKE THE CIRCUITS AFFECTED CONTINUOUS AND READY FOR OPERATION. OTHERWISE, WIRING SHALL BE REMOVED BACK TO THE NEAREST ELECTRICAL OUTLET BOX THAT IS TO REMAIN OR TO THE PANEL BOARD.
8. ALL RACEWAYS WHICH BECOME EXPOSED BEYOND FINISHED SURFACES BECAUSE OF THE ALTERATION WORK SHALL BE REMOVED AND REROUTED BEHIND THE FINISHED SURFACES.



EXISTING ELECTRICAL DEMOLITION FLOOR PLAN ENLARGED
Scale: 1/4" = 1'-0"

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TO:
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SEBRING, FLORIDA

DATE
08/10/2018

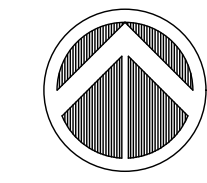
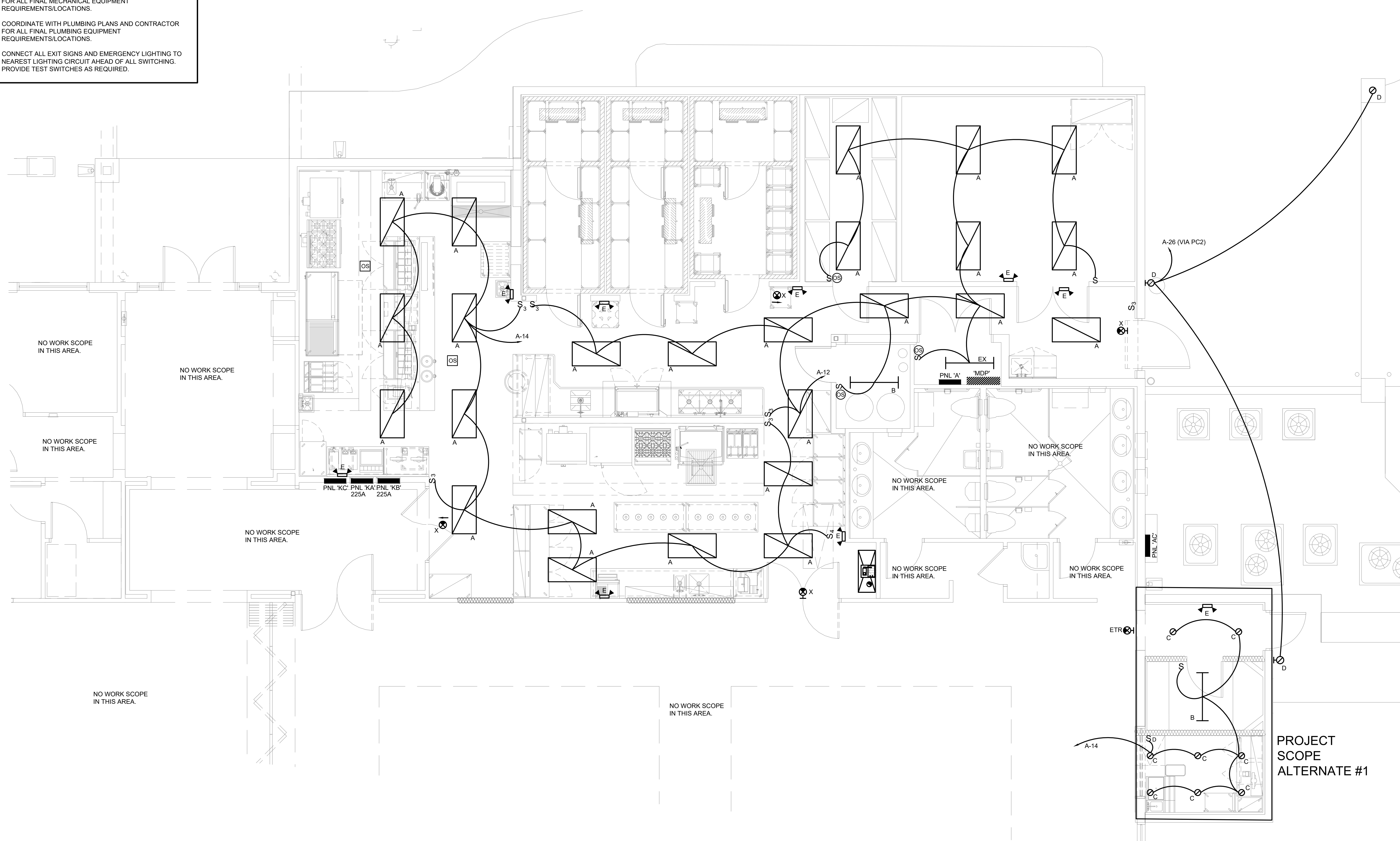
CSI7028

SHEET NO.

E-4

GENERAL NOTES

1. REFER TO DWG. E-0 FOR SYMBOL LIST, NOTES AND ABBREVIATIONS.
2. REFER TO DWG. E-1 & E-2 FOR ELECTRICAL SPECIFICATIONS.
3. VERIFY ALL MOUNTING HEIGHTS WITH ARCHITECTURAL ELEVATION PLANS BEFORE ROUGH IN.
4. COORDINATE WITH MECHANICAL PLANS AND CONTRACTOR FOR ALL FINAL MECHANICAL EQUIPMENT REQUIREMENTS/LOCATIONS.
5. COORDINATE WITH PLUMBING PLANS AND CONTRACTOR FOR ALL FINAL PLUMBING EQUIPMENT REQUIREMENTS/LOCATIONS.
6. CONNECT ALL EXIT SIGNS AND EMERGENCY LIGHTING TO NEAREST LIGHTING CIRCUIT AHEAD OF ALL SWITCHING. PROVIDE TEST SWITCHES AS REQUIRED.



PROPOSED ELECTRICAL FLOOR PLAN - LIGHTING
Scale: 1/4" = 1'-0"

PROJECT SCOPE ALTERNATE #1

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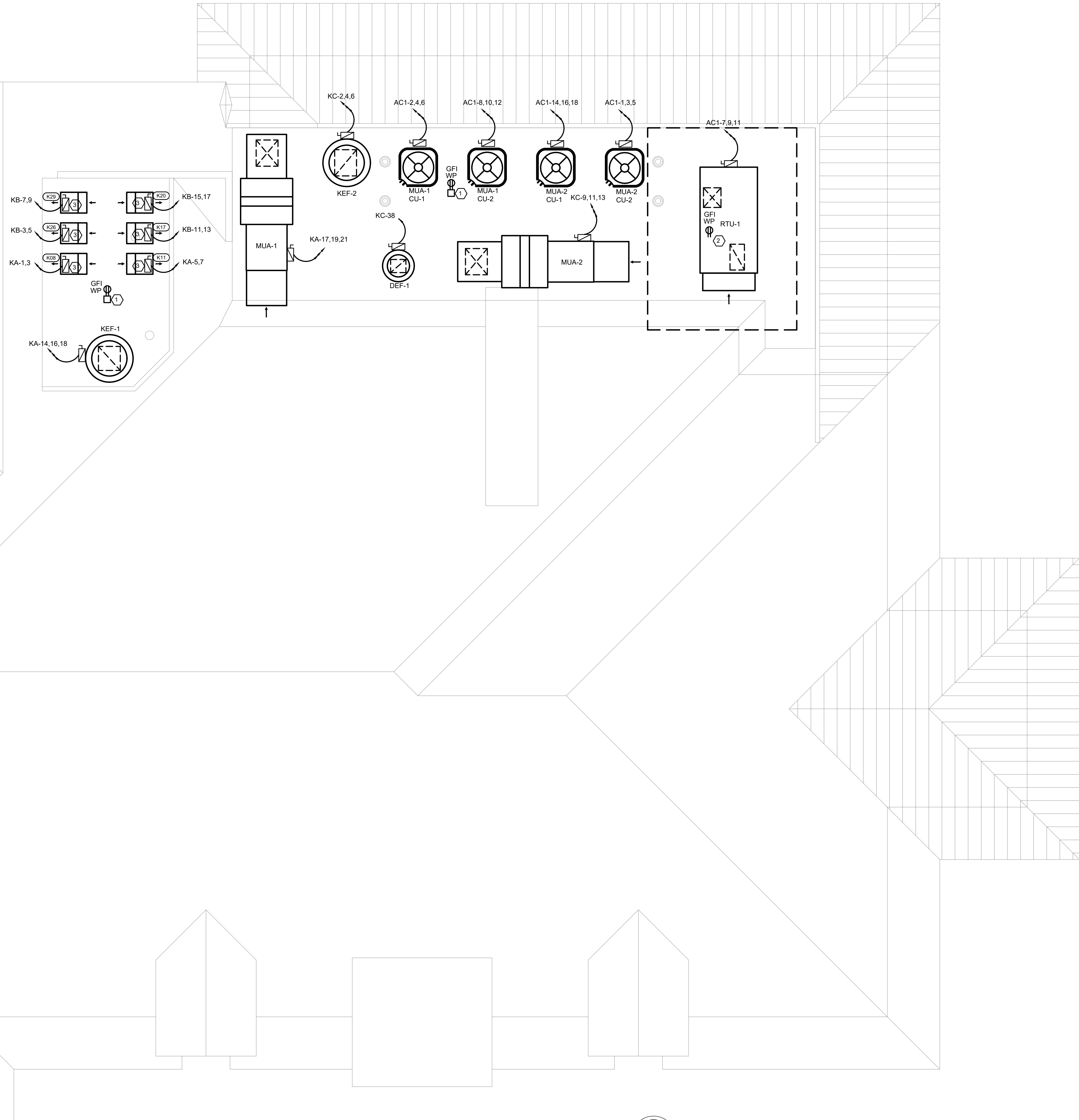
SHEET NO.
E-5

GENERAL NOTES

1. REFER TO DWG. E-0 FOR SYMBOL LIST, NOTES AND ABBREVIATIONS.
2. REFER TO DWG. E-1 & E-2 FOR ELECTRICAL SPECIFICATIONS.
3. VERIFY ALL MOUNTING HEIGHTS WITH ARCHITECTURAL ELEVATION PLANS BEFORE ROUGH IN.
4. COORDINATE WITH MECHANICAL PLANS AND CONTRACTOR FOR ALL FINAL MECHANICAL EQUIPMENT REQUIREMENTS/LOCATIONS.
5. COORDINATE WITH PLUMBING PLANS AND CONTRACTOR FOR ALL FINAL PLUMBING EQUIPMENT REQUIREMENTS/LOCATIONS.
6. REFER TO EQUIPMENT CONNECTION SCHEDULE FOR ALL INFORMATION AND CIRCUITS.

KEYED NOTES

1. 120V DUPLEX UTILITY RECEPTACLE IN NEMA3R ENCLOSURE ON 12" H. PEDESTAL.
2. 120V DUPLEX UTILITY RECEPTACLE ON RTU-1 IS PART OF RTU WIRING AND PROVIDED BY RTU MANUFACTURER.
3. ELECTRICIAN TO LOCATE J.B.'S ABOVE WALK-INS AND RUN TO CONNECTIONS ON EQUIPMENT



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E-7

PANELBOARD MDP SCHEDULE													
VOLTAGE: 208Y/120V			BUS RATING: 800A			LOCATION: WEST BUILDING EXTERIOR (1)							
PHASE: 3Ø WIRE: 4W			MAIN BREAKER: MCB			MOUNTING: FLUSH							
AIC RATING: 42,000			NEUTRAL SIZE: 100%			ISO. GROUND: N			TVSS: Y				
NOTE	TYPE	LOAD	DESCRIPTION	BRANCH C/B	P	CIRCUIT #	Φ	BRANCH C/B	P	DESCRIPTION	LOAD	TYPE	NOTE
	M	4400	EXIST M-AHU-1	50	3	1	A 2	50	3	EXIST M-AHU-2	4400	M	
	M	4400	M-			3	B 4			M-	4400	M	
	M	4400	M-			5	C 6			M-	4400	M	
	M	4400	EXIST M-AHU-3	50	3	7	A 8	50	3	EXIST M-AHU-4	4400	M	
	M	4400	M-			9	B 10			M-	4400	M	
	M	4400	M-			11	C 12			M-	4400	M	
	M	4000	EXIST M-AHU-5	50	2	13	A 14	150	3	EXIST O-PANEL A	13733	E	
	M	4000	M-			15	B 16			O-	13733	E	
	M	4000	EXIST M-AHU-6	50	2	17	C 18			O-	13733	E	
	M	4100	M-			19	A 20	150	3	EXIST O-PANEL B	11625	E	
	M	4100	EXIST M-AHU-7	50	2	21	B 22			O-	11625	E	
	M	4100	M-			23	C 24			O-	11625	E	
1	E	16787	NEW PANEL KC	225	3	25	A 26	3	3	SPACE			
1	E	16787	O-			27	B 28			O-			
1	E	16787	O-			29	C 30			O-			
	E	16925	EXIST O-PANEL AC, NEW AC-1	225	3	31	A 32	30	3	EXIST O-SURGE PROTECTION		E	
	E	16925	O-			33	B 34			O-		E	
	E	16925	O-			35	C 36			O-		E	
	E	22436	EXIST/NEW O-PANEL KA, KB	225	3	37	A 38						
	E	22436	O-			39	B 40						
	E	22436	O-			41	C 42						

TYPE	CONNECTED LOAD (VA)	NEC DEMAND FACTOR	NEC DEMAND LOAD (VA)
R	RECEPTACLES ≤ 10KVA	1.00	-
R	RECEPTACLES > 10KVA	-	0.50
L	LIGHTING	-	1.25
M	LARGEST MOTOR	13200	1.25
M	REMAINING MOTORS	63900	1.00
H	HEATING (RESISTIVE)	-	1.25
E	EQUIPMENT	244518	1.00
K	KITCHEN EQUIPMENT	-	1.00
TOTAL	321618		324918

TYPE	CONNECTED LOAD (VA)	NEC DEMAND FACTOR	NEC DEMAND LOAD (VA)
R	RECEPTACLES ≤ 10KVA	10000	1.00
R	RECEPTACLES > 10KVA	5800	0.50
L	LIGHTING	15900	1.25
M	LARGEST MOTOR	-	1.25
M	REMAINING MOTORS	-	1.00
H	HEATING (RESISTIVE)	-	1.25
E	EQUIPMENT	2100	1.00
K	KITCHEN EQUIPMENT	-	1.00
TOTAL	33800		34875

PHASE A LOAD = 107206 VA
PHASE B LOAD = 107206 VA
PHASE C LOAD = 107206 VA

NEC DEMAND LOAD = 902 A
SPARE CAPACITY = -102 A
TOTAL AVAILABLE = 800 A

NOTES: 1 CONTRACTOR SHALL INSTALL NEW 225A 3 POLE BREAKER IN SPACE. MATCH EXISTING MANUFACTURER TYPE AND AIC RATING. VERIFY BUS IS AVAILABLE IN THIS LOCATION AND NOTIFY ENGINEER IF BREAKER CANNOT FIT IN THIS LOCATION

DEMAND LOAD SUMMARY		
DESCRIPTION	KW	AMPS
EXISTING BUILDING PEAK LOAD	84	233
BUILDING LOAD REMOVED	43	119
BUILDING LOAD ADDED	144	400
NEW BUILDING PEAK LOAD	185	514
EXISTING SERVICE SIZE	288	800
SPARE CAPACITY	103	286

PEAK DEMAND FROM DUKE ENERGY FOR THE PAST YEAR IS 84KW (233.33 AMPS AT 208V 3Ø)

PANELBOARD B SCHEDULE													
VOLTAGE: 208Y/120V			BUS RATING: 225A			LOCATION: VESTIBULE 130							
PHASE: 3Ø WIRE: 4W			MAIN BREAKER: MLO			MOUNTING: FLUSH							
AIC RATING: 42,000			NEUTRAL SIZE: 100%			ISO. GROUND: N			TVSS: N				
NOTE	TYPE	LOAD	DESCRIPTION	BRANCH C/B	P	CIRCUIT #	Φ	BRANCH C/B	P	DESCRIPTION	LOAD	TYPE	NOTE
	R	1000	EXIST R-PRO SHOP 138	20	1	1	A 2	20	1	EXIST R-PRO'S OFFICE 132/VESTIB	1000	R	
	R	1000	EXIST R-PRO SHOP 138	20	1	3	B 4	20	1	EXIST E-TTB	500	E	
	R	1200	EXIST R-EWC	20	1	5	C 6	20	1	EXIST R-RESTROOMS 126, 128 131	600	R	
	R	1000	EXIST R-OFFICE 120	20	1	7	A 8	20	1	EXIST R-MANAGER 117	800	R	
	R	1000	EXIST R-GOLFERS ASSN. RM 132	20	1	9	B 10	20	1	EXIST R-LOBBY 101/EXTERIOR	800	R	
	R	800	EXIST R-19TH HOLE 103	20	1	11	C 12	20	1	EXIST R-REC & LTS MECH RM	600	R	
	R	800	EXIST R-19TH HOLE 103	20	1	13	A 14	20	1	EXIST R-EXTERIOR	800	R	
	L	1200	EXIST L-LTS VEST, OFFIC, JANITOR	20	1	15	B 16	20	1	EXISTS-SPARE		L	
	L	1200	EXIST L-LTS R.R., PRO OFF, EF	20	1	17	C 18	20	1	EXIST L-LTS LOBBY, VEST.	800	L	
	L	900	EXIST L-LTS PRO SHOP	20	1	19	A 20	20	1	EXIST-LTS 19TH HOLE	1100	L	
	L	1800	EXIST L-LTS PRO SHOP	20	1	21	B 22	20	1	EXIST L-LTS 19TH HOLE	1100	L	
	L	1800	EXIST L-LTS PRO SHOP	20	1	23	C 24	20	1	EXIST L-LTS 19TH HOLE	1100	L	
	L	1800	EXIST L-LTS PRO SHOP	20	1	25	A 26	20	1	EXIST L-LTS 19TH HOLE	1100	L	
	L	1400	EXIST L-LTS OUTDOOR DINING	20	1	27	B 28	20	1	EXIST L-LTS 19TH HOLE	800	L	
	L	1600	EXIST L-FANS OUTDOOR DINING	20	1	29	C 30	20	1	EXIST S-SPARE		L	
	E	1000	EXIST E-MUSIC/PA PANEL	20	1	31	A 32	20	1	EXIST S-SPARE		E	
	E	600	EXIST E-SECURITY PANEL	20	1	33	B 34	20	1	EXIST R-REC BAND EQUIP.	1800	R	
	R	800	EXIST R-PRO SHOP	20	1	35	C 36	20	1	EXIST R-REC BAND EQUIP.	1800	R	
	R	800	EXIST R-PRO SHOP	20	1	37	A 38	20	1	SPACE		R	
	R	800	EXIST R-PRO SHOP	20	1	39	B 40	20	1	SPACE		R	
			SPACE	20	1	41	C 42	20	1	SPACE			

TYPE	CONNECTED LOAD (VA)	NEC DEMAND FACTOR	NEC DEMAND LOAD (VA)
R	RECEPTACLES ≤ 10KVA	10000	1.00
R	RECEPTACLES > 10KVA	5800	0.50
L	LIGHTING	15900	1.25
M	LARGEST MOTOR	-	1.25
M	REMAINING MOTORS	-	1.00
H	HEATING (RESISTIVE)	-	1.25
E	EQUIPMENT	2100	1.00
K	KITCHEN EQUIPMENT	-	1.00
TOTAL	33800		34875

PHASE A LOAD = 13000 VA
PHASE B LOAD = 9700 VA
PHASE C LOAD = 11900 VA

NEC DEMAND LOAD = 97 A
SPARE CAPACITY = 53 A
TOTAL AVAILABLE = 150 A

NOTES: 1 PROVIDE PANELBOARD IN NEMA 3R RATED ENCLOSURE
2 FIRE ALARM SYSTEM SHALL BE DESIGN-BUILD, COORDINATE LOCATION WITH FIRE ALARM SUPPLIER
3 CIRCUIT SHALL BE CONTROLLED BY PHOTOCELL VIA CONTACTOR, REFER TO CIRCUITING ON PLANS
4 CIRCUIT SHALL BE CONTROLLED BY PHOTOCELL/TIMELOCK VIA CONTACTOR, REFER TO CIRCUITING ON PLANS

PANELBOARD A SCHEDULE													
VOLTAGE: 208Y/120V			BUS RATING: 225A			LOCATION: ELECT RM 110							
PHASE: 3Ø WIRE: 4W			MAIN BREAKER: MLO			MOUNTING: FLUSH							
AIC RATING: 42,000			NEUTRAL SIZE: 100%			ISO. GROUND: N			TVSS: N				
NOTE	TYPE	LOAD	DESCRIPTION	BRANCH C/B	P	CIRCUIT #	Φ	BRANCH C/B	P	DESCRIPTION	LOAD	TYPE	NOTE
	R	800	EXIST R-KEG STORAGE 105	20	1	1	A 2	20	1	EXIST R-RESTROOM/STORAGE 111	1200	R	
	R	1000	EXIST R-BANQUET 106	20	1	3	B 4	20	1	EXIST E-WATER HEATERS	400	E	
	R	500	EXIST R-REC & LTS-MECH RM	20	1	5	C 6	20	1	EXIST E-H.W. CIRC. PUMP	400	E	
			EXIST S-SPARE	20	1	7	A 8	20	1	EXISTS-SPARE			
			EXIST S-SPARE	20	1	9	B 10	20	1	EXISTS-SPARE			
	L	1200	EXIST L-ROOF EAVE	20	1	11	C 12	20	1	EXIST L-LTS STORAGE, RR., EL	1300	L	
	L	600	EXIST L-ROOF EAVE	20	1	13	A 14	20	1	EXIST L-LTS KITCHEN, CATERING	1100	L	
	E	400	EXIST E-FACP	20	1	15	B 16	20	1	EXIST L-LTS BANQUET	1200	L	
	R	1000	EXIST R-RECEPTACLES-SITE	20	1	17	C 18	20	1	EXIST L-LTS BANQUET	1200	L	
	R	1000	EXIST R-RECEPTACLES-SITE	20	1	19	A 20	20	1	EXIST L-LTS BANQUET	1200	L	
	R	1200	EXIST R-RECEPTACLES-SITE	20	2	21	B 22	20	1	EXIST L-LTS BANQUET	1200	L	
	R	1200	EXIST R-	20	2	23	C 24	20	1	EXIST L-LTS BANQUET	1800	L	
	R	1200	EXIST R-RECEPTACLES-SITE	20	2	25	A 26	20	1	EXIST L-LTS BLDG EXTERIOR	1800	L	
	R	1200	EXIST R-	20	2	27	B 28	20	1	EXIST L-LTS BLDG EXTERIOR	1600	L	
	R	1000	EXIST R-RECEPTACLES-SITE	20	1	29	C 30	20	1	EXIST L-BUILDING EXTERIOR	1000	L	
	R	1000	EXIST R-RECEPTACLES-SITE	20	1	31	A 32	20	1	EXIST R-SIGN LIGHT	1000	L	
	R	1200	EXIST R-RECEPTACLES-SITE	20	2	33	B 34	20	1	EXIST R-RECEPTACLES-SITE	1600	R	
	R	1200	EXIST R-	20	2	35	C 36	20	1	EXIST R-REC BAND EQUIP	1800	R	
	R	1200	EXIST R-RECEPTACLES-SITE	20	2	37	A 38	20	1	EXIST R-REC BAND EQUIP	1800	R	
	R	1200	EXIST R-	20	2	39	B 40	20	1	EXIST E-BLOCK HEATER	1800	E	
			SPACE	20	1	41	C 42	20	1	EXIST E-BATTERY CHARGER	1800	E	

TYPE	CONNECTED LOAD (VA)	NEC DEMAND FACTOR	NEC DEMAND LOAD (VA)
R	RECEPTACLES ≤ 10KVA	10000	1.00
R	RECEPTACLES > 10KVA	12300	0.50
L	LIGHTING	16200	1.25
M	LARGEST MOTOR	-	1.25
M	REMAINING MOTORS	-	1.00
H	HEATING (RESISTIVE)	-	1.25
E	EQUIPMENT	4800	1.00
K	KITCHEN EQUIPMENT	-	1.00
TOTAL	43300		41200

PHASE A LOAD = 13900 VA
PHASE B LOAD = 14000 VA
PHASE C LOAD = 15400 VA

NEC DEMAND LOAD = 114 A
SPARE CAPACITY = 36 A
TOTAL AVAILABLE = 150 A

NOTES: 1 PROVIDE PANELBOARD IN NEMA 3R RATED ENCLOSURE
2 FIRE ALARM SYSTEM SHALL BE DESIGN-BUILD, COORDINATE LOCATION WITH FIRE ALARM SUPPLIER
3 CIRCUIT SHALL BE CONTROLLED BY PHOTOCELL VIA CONTACTOR, REFER TO CIRCUITING ON PLANS
4 CIRCUIT SHALL BE CONTROLLED BY PHOTOCELL/TIMELOCK VIA CONTACTOR, REFER TO CIRCUITING ON PLANS

PANELBOARD KA SCHEDULE													
VOLTAGE: 208Y/120V			BUS RATING: 225A			LOCATION: KITCHEN							
PHASE: 3Ø WIRE: 4W			MAIN BREAKER: MLO			MOUNTING: FLUSH							
AIC RATING: 42,000			NEUTRAL SIZE: 100%			ISO. GROUND: N			TVSS: N				
NOTE	TYPE	LOAD	DESCRIPTION	BRANCH C/B	P	CIRCUIT #	Φ	BRANCH C/B	P	DESCRIPTION	LOAD	TYPE	NOTE
1			REMOVE A-REACH-IN REFRIGERATOR	20	1	1	A 2	20	1	REMOVE A-REFRIG. EQUIP. STAN			1
1			REMOVE A-PIZZA OVEN	20	1	3	B 4	20	1	REMOVE A-SHUNT TRIP COIL			1
1			REMOVE A-	20	1	5	C 6	20	1	REMOVE A-WORKTOP FREEZER			1
1			REMOVE E-SHUNT TRIP COIL	20	1	7	A 8	20	1	REMOVE A-SHUNT TRIP COIL			1
1			REMOVE L-HOOD LIGHTS	20	1	9	B 10	20	1	REMOVE A-CONVECTION OVEN			1
1			REMOVE L-SHUNT TRIP COIL	20	1	11	C 12	20	1	REMOVE A-SHUNT TRIP COIL			1
1			REMOVE E-HOOD CONTROLS	20	1	13	A 14</						

PANELBOARD AC SCHEDULE

VOLTAGE: 208Y/120V BUS RATING: 225A LOCATION: EXTERIOR OF BUILDING
 PHASE: 3Ø WIRE: 4W MAIN BREAKER: MLO MOUNTING: SURFACE
 AIC RATING: 42,000 NEUTRAL SIZE: 100% ISO. GROUND: N TVSS: N

NOTE	TYPE	LOAD	DESCRIPTION	BRANCH C/B P	CIRCUIT # Φ #	BRANCH C/B P	DESCRIPTION	LOAD	TYPE	NOTE
1	M		M-CU-1	50 3	1 A 2	50 3	CU-2		M	1
1	M		M-		3 B 4		M-		M	1
1	M		M-		5 C 6		M-		M	1
1	M		M-CU-3	50 3	7 A 8	50 3	M-CU-4		M	1
1	M		M-		9 B 10		M-		M	1
1	M		M-		11 C 12		M-		M	1
1	M		M-CU-5	20 2	13 A 14		SPACE			
1	M		M-		15 B 16		SPACE			
1	M		M-CU-6	40 2	17 C 18		SPACE			
1	M		M-		19 A 20		SPACE			
1	M		M-CU-7	20 2	21 B 22		SPACE			
1	M		M-		23 C 24		SPACE			
			SPACE	30 3	25 A 26		SPACE			
					27 B 28		SPACE			
					29 C 30		SPACE			
				70 3	31 A 32 20	1	SPARE			
					33 B 34 20	1	SPARE			
					35 C 36 20	1	SPARE			
					37 A 38		SPACE			
					39 B 40		SPACE			
					41 C 42		SPACE			

TYPE	CONNECTED LOAD (VA)	NEC DEMAND FACTOR	NEC DEMAND LOAD (VA)	
R	RECEPTACLES ≤ 10KVA	-	1.00	
R	RECEPTACLES > 10KVA	-	0.50	
L	LIGHTING	-	1.25	
M	LARGEST MOTOR	-	1.25	
M	REMAINING MOTORS	-	1.00	
H	HEATING (RESISTIVE)	-	1.25	
E	EQUIPMENT	-	1.00	
K	KITCHEN EQUIPMENT	-	1.00	
TOTAL				

PHASE A LOAD = VA
 PHASE B LOAD = VA
 PHASE C LOAD = VA
 NEC DEMAND LOAD = A
 SPARE CAPACITY = 225 A
 TOTAL AVAILABLE = 225 A

NOTES: 1 NON CONCURRENT LOAD

NEW PANELBOARD AC 1 SCHEDULE

VOLTAGE: 208Y/120V BUS RATING: 225A LOCATION: EXTERIOR OF BUILDING
 PHASE: 3Ø WIRE: 4W MAIN BREAKER: MLO MOUNTING: SURFACE
 AIC RATING: 42,000 NEUTRAL SIZE: 100% ISO. GROUND: N TVSS: N

NOTE	TYPE	LOAD	DESCRIPTION	BRANCH C/B P	CIRCUIT # Φ #	BRANCH C/B P	DESCRIPTION	LOAD	TYPE	NOTE
	M	2500	MUA2CU2	30 3	1 A 2	20 3	MUA1CU1	1400	M	
	M	2500	M-		3 B 4		M-	1400	M	
	M	2500	M-		5 C 6		M-	1400	M	
	M	7300	RTU-1	70 3	7 A 8	30 3	MUA1CU2	2500	M	
	M	7300	M-		9 B 10		M-	2500	M	
	M	7300	M-		11 C 12		M-	2500	M	
			SPACE		13 A 14	20 3	MUA2CU1	1400	M	
			SPACE		15 B 16		M-	1400	M	
			SPACE		17 C 18		M-	1400	M	
			SPACE		19 A 20		SPACE			
			SPACE		21 B 22		SPACE			
			SPACE		23 C 24		SPACE			
			SPACE		25 A 26		SPACE			
			SPACE		27 B 28		SPACE			
			SPACE		29 C 30		SPACE			
			SPACE		31 A 32 20	1	SPARE			
			SPACE		33 B 34 20	1	SPARE			
			SPACE		35 C 36 20	1	SPARE			
			SPACE		37 A 38 20	1	SPARE			
			SPACE		39 B 40 20	1	SPARE			
			SPACE		41 C 42 20	1	SPARE			

TYPE	CONNECTED LOAD (VA)	NEC DEMAND FACTOR	NEC DEMAND LOAD (VA)	
R	RECEPTACLES ≤ 10KVA	-	1.00	
R	RECEPTACLES > 10KVA	-	0.50	
L	LIGHTING	-	1.25	
M	LARGEST MOTOR	21900	1.25	27375
M	REMAINING MOTORS	23400	1.00	23400
H	HEATING (RESISTIVE)	-	1.25	
E	EQUIPMENT	-	1.00	
K	KITCHEN EQUIPMENT	-	1.00	
TOTAL	45300			50775

PHASE A LOAD = 15100 VA
 PHASE B LOAD = 15100 VA
 PHASE C LOAD = 15100 VA
 NEC DEMAND LOAD = 141 A
 SPARE CAPACITY = 84 A
 TOTAL AVAILABLE = 225 A

NOTES: 1 PROVIDE PANELBOARD IN NEMA 3R RATED ENCLOSURE
2
3
4

REUSED PANELBOARD KA SCHEDULE

VOLTAGE: 208Y/120V BUS RATING: 225A LOCATION: KITCHEN
 PHASE: 3Ø WIRE: 4W MAIN BREAKER: MLO MOUNTING: FLUSH
 AIC RATING: 42,000 NEUTRAL SIZE: 100% ISO. GROUND: N TVSS: N

NOTE	TYPE	LOAD	DESCRIPTION	BRANCH C/B P	CIRCUIT # Φ #	BRANCH C/B P	DESCRIPTION	LOAD	TYPE	NOTE
	K	1200	NEW A-MED. TEMP. COND. #3	20 2	1 A 2	20 1	NEW L-WALK-IN COOLER #3 LIGH	1200	L	
	K	3640	NEW A-		3 B 4	20 1	NEW E-MED. TEMP. BLOWER COIL	600	K	
	K	3640	NEW A-LOW TEMP. COND. #3	20 2	5 C 6	20 2	NEW A-LOW TEMP. BLOWER COIL	1440	K	
	K		NEW A-		7 A 8		NEW A-		K	
	L	500	NEW L-HOOD LIGHTS #1	20 1	9 B 10	20 2	NEW A-ICE MACHINE	1400	K	
	L		NEW L-SHUNT TRIP COIL	20 1	11 C 12		NEW A-		K	
	E	420	NEW E-HOOD #1 CONTROLS	20 1	13 A 14	20 1	NEW KIT EXHAUST FAN-KEF-1	550	K	
	E		NEW E-SHUNT TRIP COIL	20 1	15 B 16	20 1	NEW E-	550	K	
	K	620	NEW HOOD #1/M.U.A.1	20 3	17 C 18	20 1	NEW E-	550	K	
	K	620	NEW E-		19 A 20	20 3	NEW A-CHEF'S COUNTER SUB-PN	1200	K	
	K	620	NEW E-		21 B 22		NEW A-	800	K	
	R	1200	NEW R-MIXER	20 1	23 C 24		NEW A-	800	K	
	R	1800	NEW R-CONV. RECEPTACLE	20 1	25 A 26	20 1	NEW R-CONVECTION OVEN	1200	K	
	K	1200	NEW R-REF. EQUIP. STAND	15 1	27 B 28	20 1	NEW R-CONVECTION OVEN	1660	K	
1	K	600	EXIST A-M.T. BLOWER COIL	20 1	29 C 30	20 1	EXIST A-M.T. REMOTE CONDENS	830	K	1
1	K	600	EXIST A-BEER SYSTEM	20 1	31 A 32	20 1	EXIST A-	830	K	1
1	L	800	EXIST L-WALK-IN KEG COOLER LTS	20 1	33 B 34	20 1	NEW R-STOVE/OVEN	1200	K	
			NEW A-SODA BAG-IN BOX SYSTEM	20 1	35 C 36	20 1	NEW R-GRIDDLE	1200	K	
			S-SPARE	20 1	37 A 38	20 1	EXIST R-UTILITY RECEPTACLE	1200	R	1
			S-SPARE	20 1	39 B 40	20 1	EXIST R-UTILITY RECEPTACLE	600	R	1
			S-SPARE	20 1	41 C 42	20 1	SPACE			

TYPE	CONNECTED LOAD (VA)	NEC DEMAND FACTOR	NEC DEMAND LOAD (VA)	
R	RECEPTACLES ≤ 10KVA	4800	1.00	4800
R	RECEPTACLES > 10KVA	-	0.50	-
L	LIGHTING	2500	1.25	3125
M	LARGEST MOTOR	-	1.25	-
M	REMAINING MOTORS	-	1.00	-
H	HEATING (RESISTIVE)	-	1.25	-
E	EQUIPMENT	420	1.00	420
K	KITCHEN EQUIPMENT	28150	0.65	18298
TOTAL	35870			26643

PHASE A LOAD = 11420 VA
 PHASE B LOAD = 12970 VA
 PHASE C LOAD = 11480 VA
 NEC DEMAND LOAD = 74 A
 SPARE CAPACITY = 151 A
 TOTAL AVAILABLE = 225 A

NOTES: 1 EXISTING BREAKER, CIRCUIT AND LOAD TO REMAIN UNALTERED
2 FIRE ALARM SYSTEM SHALL BE DESIGN-BUILD, COORDINATE LOCATION WITH FIRE ALARM SUPPLIER
3
4

August 10, 2018

Location: 5223 SUN N LAKE BLVD, RESTAURANT & GOLF CL SEBRING FL 33872
Transformer ID: 1356580-0263120

Good Afternoon:

We are providing the following information based upon your request for the available short circuit current. Duke Energy provides the maximum short circuit current based on infinite buss on the source side of the supply transformer and minimum transformer impedance for the size and voltage installed. The short circuit current value provided would be the utility design maximum fault current available based upon a bolted fault at the point of delivery.

The calculated maximum available short circuit current requested at the point of delivery for the above referenced service location is as follows:
(Short Circuit current in RMS symmetrical Amperes)

Three-phase (line-line-line fault) 49,570 ABC

Transformer Information:

Transformer KVA 500 KVA

Transformer Voltage 120/208

Transformer percent impedance 2.80 %Z

Transformer X/R ratio 4.8 X/R

Kind Regards,

Lillian Marciano
Engineering Design Associate
1 Distribution Force (1DF) - Duke Energy Florida
Office: (727) 562 - 3903

Duke Energy Florida * 4121 Saint Lawrence Dr, New Port Richey, FL 34653

NEW PANELBOARD KC SCHEDULE

VOLTAGE: 208Y/120V BUS RATING: 225A LOCATION: KITCHEN
 PHASE: 3Ø WIRE: 4W MAIN BREAKER: 225A MCB MOUNTING: FLUSH
 AIC RATING: 42,000 NEUTRAL SIZE: 100% ISO. GROUND: N TVSS: N

NOTE	TYPE	LOAD	DESCRIPTION	BRANCH C/B P	CIRCUIT # Φ #	BRANCH C/B P	DESCRIPTION	LOAD	TYPE	NOTE
	E	200	L-HOOD #2 LIGHTS	20 2	1 A 2	20 3	KIT EXHAUST FAN KEF-2	1896	M	
			L-SHUNT TRIP COIL		3 B 4		E-	1896	M	
	E	200	E-HOOD #2 CONTROLS	20 2	5 C 6		E-	1896	M	
			E-SHUNT TRIP COIL		7 A 8	20 1	R-REFRIGERATOR	648	K	
	M	1140	HOOD #2/ M.U.A.2	20 3	9 B 10	20 1	R-ICE TEA BREWER	1680	K	
	M	1140	E-		11 C 12	20 2	A-COFFEE BREWER	1800	K	
	M	1140	E-		13 A 14		A-	1800	K	
	K	1728	R-PAN TOP REFRIGERATOR	20 1	15 B 16	20 1	R-SODA DISPENSER	1680	K	
	K	360	R-LETTUCE CRISPER	20 1	17 C 18	20 1	R-POS	1680	E	
	R	1680	R-PREP. TABLE W/ CONV. RCPT.	20 1	19 A 20	20 1	R-POS	1680	E	
	R	840	R-SLICER	20 1	21 B 22	40 2	A-COOK & HOLD SMOKER OVEN	2218	K	
	R	1680	R-BAG-IN-BOX SODA SYSTEM	20 1	23 C 24		A-	2218	K	
	L	314	L-HEAT LMPS OVER PREP TABLE	20 1	25 A 26	20 1	A-DBL. DECK CONVCNTN. OVEN	960	K	
	K	1920	A-HEATED CABINETS	20 1	27 B 28	20 1	A-	960	K	
	K	1920	A-HEATED CABINETS	20 1	29 C 30	20 2	A-COMBO. OVEN & STAND	769	K	
	K	1920	A-HEATED CABINETS	20 1	31 A 32		A-	769	K	
	K	1920	A-HEATED CABINETS	20 1	33 B 34	20 1	A-TILT SKILLET	1200	K	
	K	9624	E-HIGH TEMP. DISHWASHER	90 3	35 C 36	20 1	R-FRYERS	1680	K	
	K	9624	E-		37 A 38	20 1	DEF-1	672	M	
			E-		39 B 40	20 1				
			SPARE	20 1	41 C 42	20 1				

TYPE	CONNECTED LOAD (VA)	NEC DEMAND FACTOR	NEC DEMAND LOAD (VA)	
R	RECEPTACLES ≤ 10KVA	4200	1.00	4200
R	RECEPTACLES > 10KVA	-	0.50	-
L	LIGHTING	314	1.25	393
M	LARGEST MOTOR	5688	1.25	7110
M	REMAINING MOTORS	4092	1.00	4092
H	HEATING (RESISTIVE)	-	1.25	-
E	EQUIPMENT	3760	1.00	3760
K	KITCHEN EQUIPMENT	47398	0.65	30809
TOTAL	65452			50363

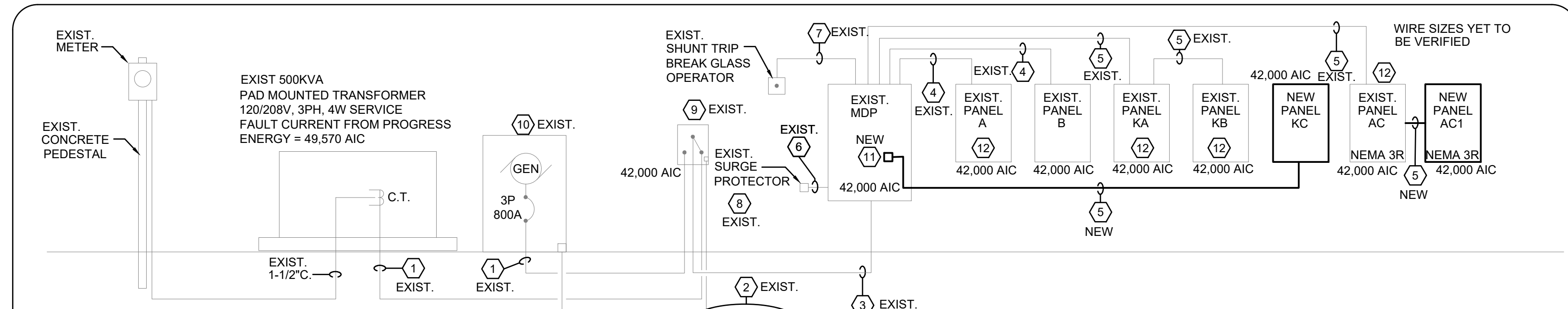
PHASE A LOAD = 23303 VA
 PHASE B LOAD = 27006 VA
 PHASE C LOAD = 24967 VA
 NEC DEMAND LOAD = 140 A
 SPARE CAPACITY = 85 A
 TOTAL AVAILABLE = 225 A

NOTES: 1
2
3
4 E

REUSED PANELBOARD KB SCHEDULE

VOLTAGE: 208Y/120V BUS RATING: 225A LOCATION: KITCHEN
 PHASE: 3Ø WIRE: 4W MAIN BREAKER: MLO MOUNTING: FLUSH
 AIC RATING: 42,000 NEUTRAL SIZE: 100% ISO. GROUND: N TVSS: N

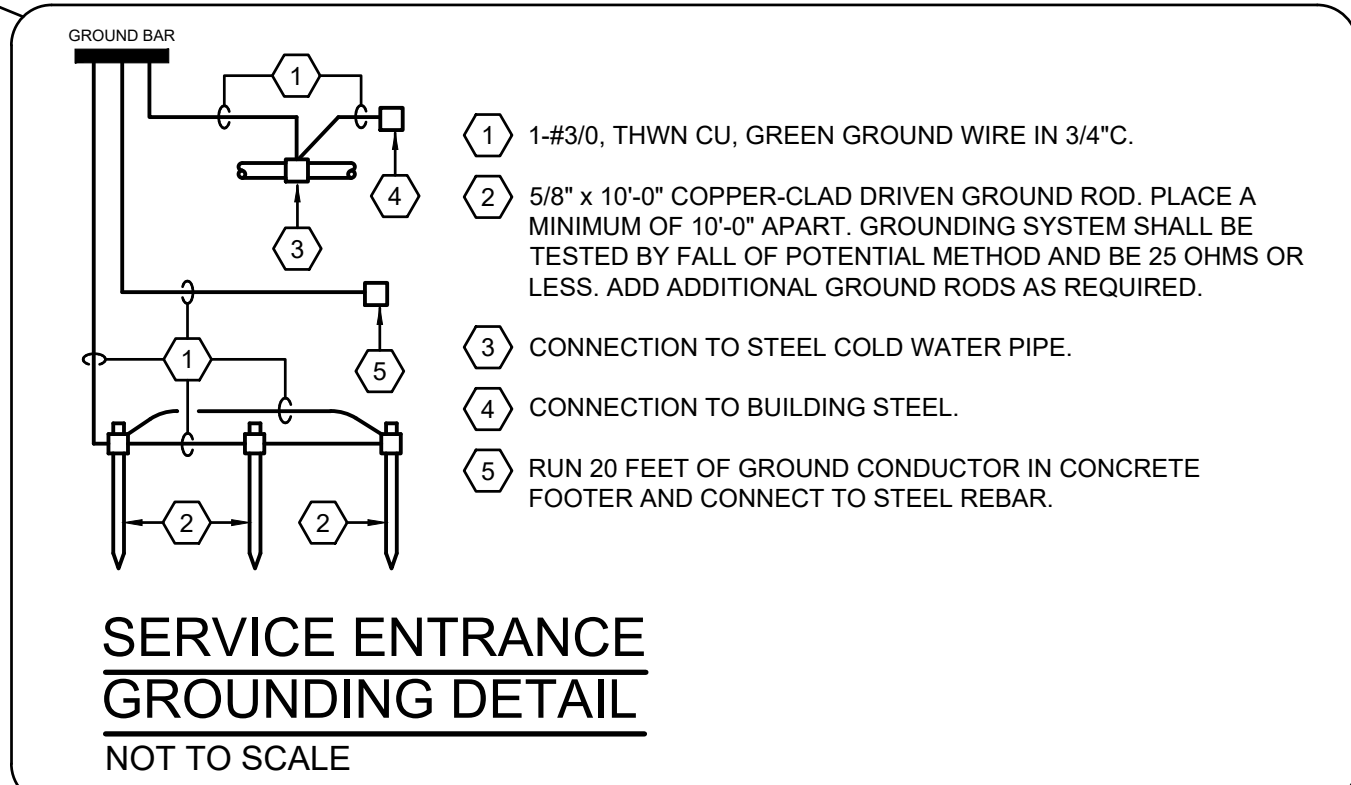
NOTE	TYPE	LOAD	DESCRIPTION	BRANCH C/B P	CIRCUIT # Φ #	BRANCH C/B P	DESCRIPTION	LOAD	TYPE	NOTE
2	E	1200	NEW E-AIR DOOR	20 1	1 A 2	20 1	NEW L-WALKIN COOLER #1 LIGHT	800	L	2
2	M	830	NEW A-MED. TEMP. COND. #1	20 2	3 B 4	20 1	NEW E-MED. TEMP. BLOWER COIL	600	K	2
2	M	830	NEW A-		5 C 6	20 2	NEW A-LOW TEMP. BLOWER COIL	1000	K	2
2	M	1000	NEW A-LOW TEMP. COND. #1	20 2	7 A 8		NEW A-	1000	K	2
2	M	1000	NEW A-		9 B 10	20 1	NEW L-WALKIN COOLER #2 LIGHT	1200	L	2
2	M	1200	NEW A-MED. TEMP. COND. #2	20 2	11 C 12	20 1	NEW E-MED. TEMP. BLOWER COIL	1500	K	2
2	M	1200	NEW A-		13 A 14	20 2	NEW A-LOW TEMP. BLOWER COIL	1500	K	2
2	M	1670	NEW A-LOW TEMP. COND. #2	20 2	15 B 16		NEW A-	1200	K	2
2	M	1670	NEW A-		17 C 18	20 1	NEW A-UNDERCOUNTER REFRIG	1200	K	2
1	K	1500	EXIST A-COFFEE BREWER	20 1	19 A 20	20 1	EXIST A-SODA DISPENSER	600	K	1
1	K	1500	EXIST A-ICED TEA BREWER	20 1	21 B 22	20 1	EXIST R-UTILITY OUTLET	900	R	1
1	K	600	EXIST A-UNDERCOUNTER REFRIG	20 1	23 C 24	20 1	EXIST A-POS SYSTEM	1200	K	1
1	K	1200	EXIST A-SODA GUN	20 1	25 A 26	20 1	EXIST A-BLENDER STATION	1600	K	1
1	K	1600	EXIST A-BLENDER STATION	20 1	27 B 28	20 1	EXIST A-BOTTLE COOLER	1200	K	1
1	K	1200	EXIST A-BOTTLE COOLER	20 1	29 C 30	20 1	EXIST A-POS SYSTEM	1200	K	1
1	R	900	EXIST R-UTILITY OUTLET	20 1	31 A 32	20 1	EXIST A-BACK BAR COOLER	1200	K	1
1	K	1200	EXIST A-SODA GUN	20 1	33 B 34	20 1	EXIST R-UTILITY OUTLET			



EXISTING BUILDING ELECTRICAL RISER DIAGRAM

NOT TO SCALE (NOTE: ALL ELEMENTS ARE EXISTING TO REMAIN, UNLESS NOTED OTHERWISE)

- 1 EXIST 2 SETS: 4-#500KCM THWN CU, 3-1/2" C EACH
- 2 EXIST REFER TO "SERVICE ENTRANCE GROUNDING DETAIL" ON THIS SHEET
- 3 EXIST 2 SETS: 4-#500KCM, 1-#3 GND, THWN CU, 3-1/2" C EACH.
- 4 EXIST 4-#1/0, 1-#6 GND, THWN CU, 2" C.
- 5 4-#4/0, 1-#4 GND, THWN CU, 2-1/2" C.
- 6 EXIST 4-#10, 1-#10 GND, THWN CU, 3/4" C.
- 7 EXIST 2-#12, THWN CU, 1/2" C.
- 8 EXIST SURGE PROTECTOR. "WIREMOLD" #PB120Y OR EQUAL.
- 9 EXIST SERVICE ENTRANCE RATED TRANSFER SWITCH SHALL BE NEMA 4X ENCLOSURE "ASCO" #3AUS3800CXP44G208V/60 OR EQUAL. ATS TO BE FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR. PROVIDE 6" DEEP CONC. PAD FOR ATS INSTALLATION.
- 10 EXIST 275KW, 350KV, 0.8 POWER FACTOR, 1800 RPM, 120/208V, 3-PHASE, 4 WIRE, 60 HERTZ GAS GENERATOR SET WITH WEATHER HOUSING. APPROXIMATE TOTAL WEIGHT IS 7,165 POUNDS. GENERATOR TO BE FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR.
- 11 INSTALL NEW 225A 3 POLE BREAKER IN PANEL AC FOR NEW PANEL KC. MATCH EXISTING AIC RATING AND MANUFACTURER TYPE.
- 12 INSTALL FEED THROUGH LUG KIT ON PANEL AC FOR NEW PANEL AC-1. CONTRACTOR TO VERIFY LUG KIT CAN BE INSTALLED.



SERVICE ENTRANCE GROUNDING DETAIL

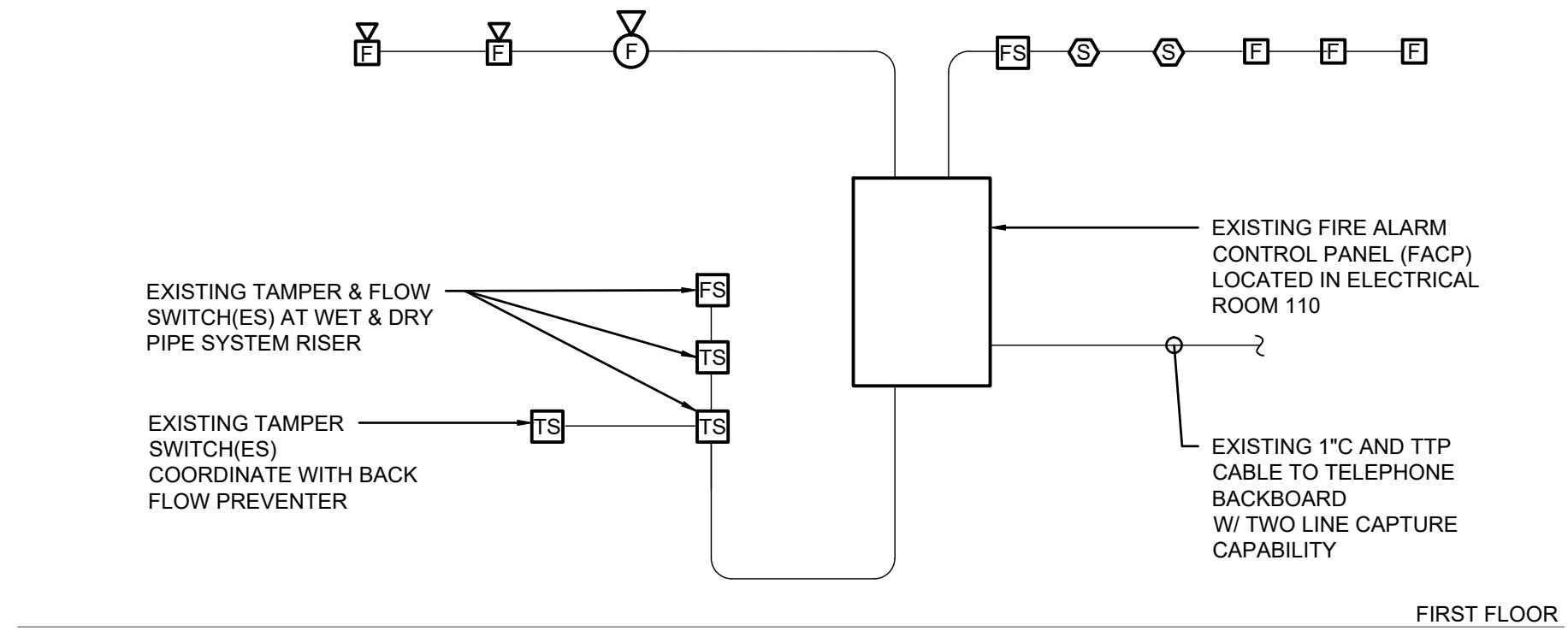
NOT TO SCALE

FIRE ALARM SYSTEM NOTES

1. NO CONDUITS ARE TO ENTER THE TOP OF A FIRE ALARM CONTROL PANEL REGARDLESS OF SYSTEM TYPE OR SIZE.
2. ALL FIRE ALARM PANELS, JUNCTION BOX COVERS, ETC. SHALL BE PAINTED RED.
3. DEVICE LOCATIONS MUST BE READILY ACCESSIBLE TO ALLOW FOR MAINTENANCE AND REPAIR.
4. DUCT MOUNTED SMOKE DETECTOR SHALL BE MOUNTED AND LOCATED ON THE DUCT WORK IN STRICT ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS. AND DUCT SMOKE DETECTORS MOUNTED ABOVE FINISH CEILING OR IN REMOTE LOCATIONS SHALL BE FURNISHED WITH A REMOTE LAMP.
5. MANUAL STATIONS SHALL BE MOUNTED 48 INCHES ABOVE THE FINISHED FLOOR TO THE CENTER OF THE HANDLE.
6. MANUAL PULL STATIONS SHALL BE PAINTED RED. ALL MANUAL PULL STATIONS SHALL BE INSTALLED SO THAT THEY KEPT UNOBSTRUCTED AT ALL TIMES.
7. THE FIRE MARSHALL SHALL APPROVE THE PLANS PRIOR TO START OF ANY WORK.
8. ALL WIRING, EXCEPT AS NOTED OTHERWISE, SHALL BE FPLP 150 DEGREE CELSIUS LABELED. ALL WIRING USED MUST BE OF THE PROPER INSULATION FOR THE TYPE OF SYSTEM BEING INSTALLED AND APPROVED FOR USE AS PER LOCAL CODES.
9. DO NOT RUN FIRE ALARM CABLE IN THE SAME RACEWAY WITH NON FIRE ALARM CABLE.
10. AVOID INSTALLING FIRE ALARM CABLES NEAR SOURCES OF ALTERNATING CURRENT (LIGHTING, POWER, ETC.)
11. ALL FIRE ALARM PANELS SHALL BE GROUNDED USING A MINIMUM # 10 AWG, GREEN THHN OR EQUIVALENT, CONNECTED TO STREET SIDE OF COLD WATER MAIN WITH AN APPROVED CLAMP.
12. OBSERVE ALL POLARITY ON ALL FIRE ALARM CIRCUITS. NO TEE TAPPING IS PERMITTED ON ALARM INDICATING CIRCUITS (HORNS, STROBES, SPEAKERS, ETC.)
13. ALL FIRE ALARM WIRE SHALL BE CLEARLY LABELED IN JUNCTION BOXES AND CABINETS. FURTHERMORE CONDUCTORS IN CABINETS SHALL BE FORMED SO THAT THEY DROP OFF DIRECTLY OPPOSITE TO ITS TERMINAL CONNECTION. ALL TERMINAL SHALL BE NUMBERED AND LABELED IN EVERY CABINET.
14. ANY REQUIREMENTS FOR SHIELDING CERTAIN CONDUCTORS OR RUNNING THEM IN SEPARATE RACEWAYS SHALL BE AS RECOMMENDED BY THE MANUFACTURERS DOCUMENTATION.
15. ALL WIRING TO BE CHECKED TO INSURE THAT THEY ARE FREE OF ANY OPENS, SHORTS, OR GROUNDS.
16. ALL FIRE ALARM PANELS, CABINETS AND DATA GATHERING PANELS SHALL BE CLEARLY LABELED USING A LAMINATE TYPE ENGRAVED LABEL.
17. LOCATIONS OF ALL FIRE ALARM EQUIPMENT SHALL BE SUBJECT TO THE FIRE MARSHAL APPROVAL.
18. FIRE ALARM CONTRACTOR SHALL DELIVER PROVIDE AND INSTALL FIRE ALARM SYSTEM IN ACCORDANCE TO MANUFACTURES INSTALLATION MANUAL.
19. FIRE ALARM CONTROL PANEL SHALL HAVE A BATTERY WITH CHARGER. REPLACE BATTERY AFTER WARRANTY HAS EXPIRED.
20. FIRE ALARM CONTRACTOR SHALL PAY FOR ALL FILING FEES TESTS AND PERMITS.
21. FIRE ALARM CONTRACTOR SHALL HAND OVER OPERATING INSTRUCTIONS AND MANUFACTURES WARRANTY TO OWNER.
22. FIRE ALARM CONTRACTOR SHALL BE RESPONSIBLE FOR A COMPLETE OPERATIONAL SYSTEM.
23. FIRE ALARM CONTRACTOR SHALL SIGN A WRITTEN 1 YEAR WARRANTY WITH SERVICE CONTRACT WITH OWNER.

FIRE ALARM SEQUENCE OF OPERATIONS

1. OPERATION OF ANY ALARM INITIATING DEVICE SHALL AUTOMATICALLY
 - a. SOUND ALL ALARM SIGNALS THROUGHOUT THE BUILDING.
 - b. TURN ON ALL STROBE LIGHTS THROUGHOUT THE BUILDING.
 - c. TURN OFF THE GREEN SYSTEM NORMAL LED.
 - d. SOUND THE CONTROL PANELS INTERNAL SIGNAL CONTINUOUSLY.
 - e. FLASH THE RED SYSTEM COMMON ALARM LED.
 - f. DISPLAY THE ZONE AND DEVICE NUMBER/S OF THE INITIATING ALARM DEVICE/S ON THE FIRE ALARM CONTROL PANEL.
 - g. TRANSMIT AN ALARM INDICATION TO A CENTRAL STATION AGENCY IN SECURITY INDUSTRY ASSOCIATION (SIA) REPORTING FORMAT BY WAY OF THE CONTROL PANEL'S ON-BOARD COMMUNICATOR.
 - h. OPERATE CONTROL RELAY CONTACTS ON SHUTDOWN ALL HVAC UNITS.
 - i. VISUALLY ANNUNCIATE, ON ANY REMOTE ANNUNCIATOR PANELS, THE ACTIVATED ALARM INITIATING DEVICE/S. THE VISUAL INDICATION SHALL REMAIN ON UNTIL THE ALARM CONDITION IS RESET TO NORMAL.
2. OPERATION OF A SPRINKLER VALVE TAMPER SWITCH SHALL AUTOMATICALLY.
 - a. SOUND AN AUDIBLE SIGNAL AT THE FIRE ALARM CONTROL PANEL. THE AUDIBLE SIGNAL SHALL BE CAPABLE OF BEING SILENCED DURING THE OFF NORMAL CONDITIONS.
 - b. TURN OFF THE GREEN SYSTEM NORMAL LED.
 - c. FLASH THE YELLOW COMMON SUPERVISORY LED. SILENCING THE PANEL'S AUDIBLE SIGNAL SHALL TURN ON THIS LED STEADY.
 - d. DISPLAY ZONE AND DEVICE INFORMATION FOR THE ACTIVATED DEVICE ON THE FIRE ALARM CONTROL PANEL.
 - e. TRANSMIT A SUPERVISORY INDICATION TO A CENTRAL STATION AGENCY IN SECURITY INDUSTRY ASSOCIATION (SIA) REPORTING FORMAT. BY THE WAY OF THE CONTROL PANEL'S ON-BOARD COMMUNICATOR.
 - f. SOUND AND AUDIBLE SIGNAL AT ANY REMOTE ANNUNCIATOR PANELS.
 - g. VISUALLY ANNUNCIATE, ON ANY REMOTE ANNUNCIATOR PANELS, A SUPERVISORY CONDITION. UNTIL THE OFF-NORMAL CONDITION IS RESTORED TO A NORMAL STATE.
3. THE ENTIRE FIRE ALARM SYSTEM WIRING SHALL BE ELECTRONICALLY SUPERVISED TO AUTOMATICALLY DETECT AND REPORT TROUBLE CONDITIONS TO THE FIRE ALARM CONTROL PANEL. ANY OPEN, GROUNDS OR DISARRANGEMENT OF SYSTEM WIRING AND SHORTS ACROSS ALARM NOTIFICATION DEVICE WIRING SHALL AUTOMATICALLY.
 - a. SOUND AN AUDIBLE SIGNAL AT THE FIRE CONTROL PANEL.
 - b. TURN OFF THE GREEN SYSTEM NORMAL LED.
 - c. FLASH THE YELLOW TROUBLE LED.
 - d. TRANSMIT A TROUBLE INDICATION TO A CENTRAL STATION AGENCY IN SECURITY INDUSTRY ASSOCIATION (SIA) REPORTING FORMAT. BY WAY OF THE CONTROL PANEL'S ON BOARD COMMUNICATOR.
 - e. VISUALLY ANNUNCIATE ON THE FIRE ALARM CONTROL PANEL AND ANY REMOTE ANNUNCIATOR A TROUBLE CONDITION, AND INDICATE THE CIRCUIT OR DEVICE IN TROUBLE. THE VISUAL INDICATION SHALL REMAIN ON UNTIL THE TROUBLE CONDITION HAS BEEN RETURNED TO NORMAL.
4. ACTIVATION OF A DUCT SMOKE DETECTOR SHALL AUTOMATICALLY.
 - a. SOUND AN AUDIBLE SIGNAL AT THE FIRE ALARM CONTROL PANEL. THE AUDIBLE SHALL BE CAPABLE OF BEING SILENCED DURING THE OFF NORMAL CONDITION.
 - b. TUN OFF THE GREEN SYSTEM NORMAL LED.
 - c. FLASH THE YELLOW SYSTEM TROUBLE LED.
 - d. INDICATE THE LOCATION OF THE DUCT SMOKE DETECTOR ON THE FIRE ALARM CONTROL PANEL AND ANY REMOTE ANNUNCIATOR.
 - e. TRANSMIT BY A SUPERVISORY INDICATION TO A CENTRAL STATION AGENCY IN SECURITY INDUSTRY ASSOCIATION (SIA) REPORTING FORMAT. BY THE WAY OF THE CONTROL PANEL'S ON-BOARD COMMUNICATOR.
 - f. THE SYSTEM WILL COMMUNICATE A SUPERVISORY CONDITION, BUT WILL NOT SOUND A GENERAL ALARM.
 - g. THE AIR HANDLER WILL BE SHUT DOWN.



- NOTE:
1. FIRE ALARM CONTRACTOR SHALL SUBMIT FIRE ALARM PLANS TO THE BUILDING DEPT., FOR APPROVAL WITH ORIGINAL PERMIT DOCUMENTS. PROVIDE CONDUCTOR TYPES AND SIZES, RACEWAY TYPES AND SIZES, WITH EQUIPMENT PRODUCT CUT SHEETS.
 2. ALL COMPONENTS SHALL REFLECT UL FOR FIRE SERVICE USE AND SHALL BE COMPATIBLE.
 3. FIRE ALARM SYSTEM SHALL BE IDENTIFIED AS TO WHETHER THEY ARE "POWER LIMITED".
 4. CABLE PENETRATION INTO OR THROUGH PLENUM AREAS USED FOR TRANSFER OF ENVIRONMENTAL AIR SHALL BE TEFLOX INSULATED TYPE OR OF AN APPROVED TYPE IN ACCORDANCE WITH SECTION 800-3 (D) OF THE NATIONAL ELECTRIC CODE.
 5. ALL COMMUNICATION AND POWER LINES TO AND FROM THE FIRE ALARM CONTROL PANEL TO BE SURGE AND LIGHTNING PROTECTED.
 6. MINIMUM WIRE SIZE SHALL BE #14 THWN COPPER, IN 1/2" (MIN). PROVIDE LARGER WIRE SIZE WHERE REQUIRED TO MAINTAIN VOLTAGE DROP OR SIGNAL STRENGTH WITHIN ACCEPTABLE LIMITS OF NFPA 72, CHAPTER 4.
 7. ALL FIRE ALARM NOTIFICATION APPLIANCES SHALL MEET REQUIREMENTS OF NFPA 72, CHAPTER 7.
 8. BACK-UP POWER FOR EACH FACP AND DACT IN THE CLUBHOUSE, SHALL BE PROVIDED BY STORAGE BATTERIES WITH CHARGING EQUIPMENT PER NFPA 72, PARAGRAPH 4.4.1.5. REQUIREMENTS. BATTERIES SHALL HAVE SUFFICIENT CAPACITY OPERATE THE FIRE ALARM SYSTEM UNDER QUIESCENT LOAD (SYSTEM OPERATING IN AN ON-ALARM CONDITION) FOR A MINIMUM OF 24 HOURS AND AT THE END OF THAT PERIOD SHALL BE CAPABLE OF OPERATING ALL ALARM NOTIFICATION APPLIANCES USED FOR EVACUATION OR TO DIRECT AID TO THE LOCATION OF AN EMERGENCY FOR 5 MINUTES.

FIRE ALARM RISER DIAGRAM

N.T.S

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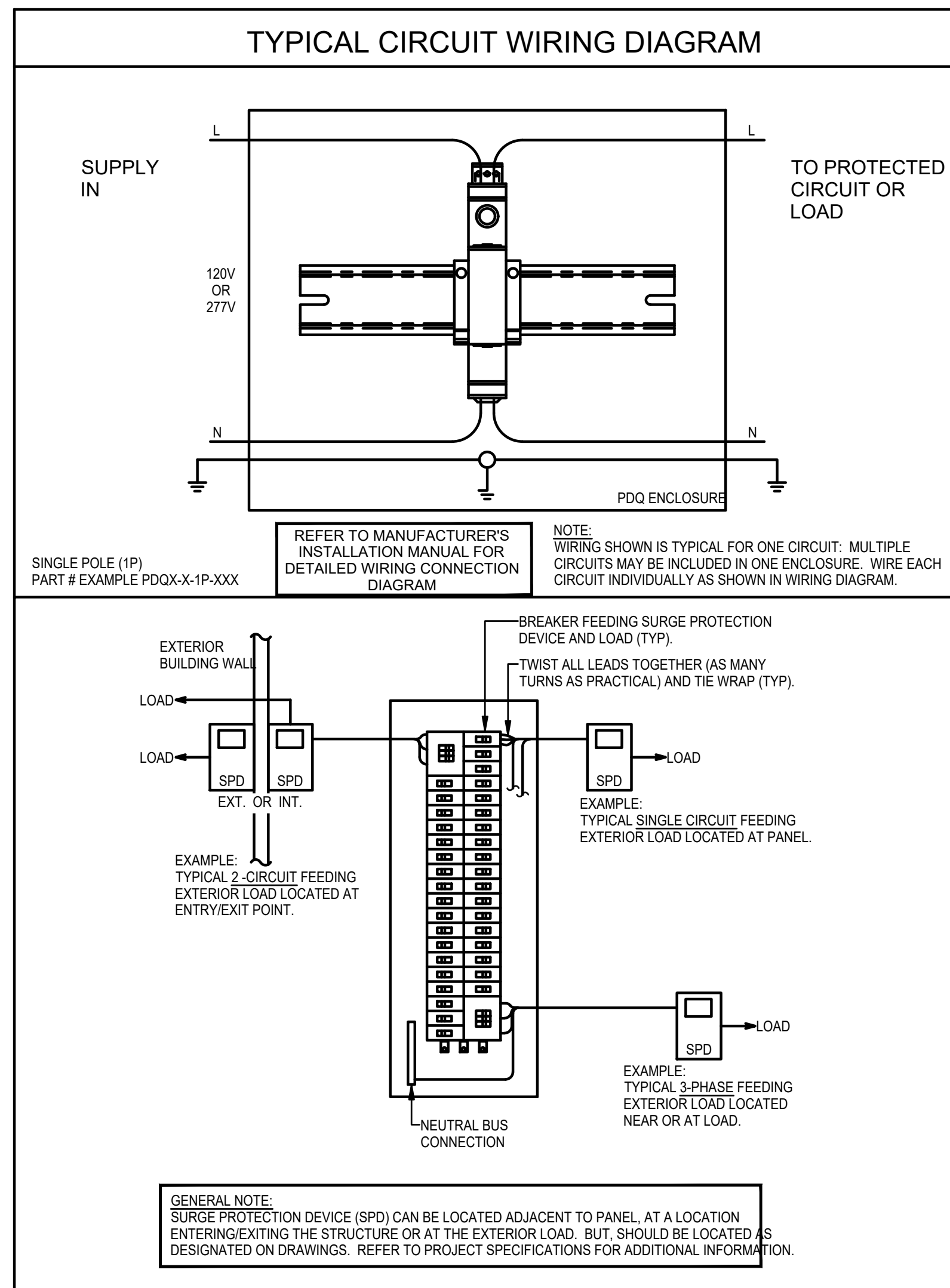
ADDITIONS & ALTERATIONS TO:
SUN 'N LAKE GOLF CLUB
FLORIDA
SERRING,

DATE
08/10/2018

CS17028

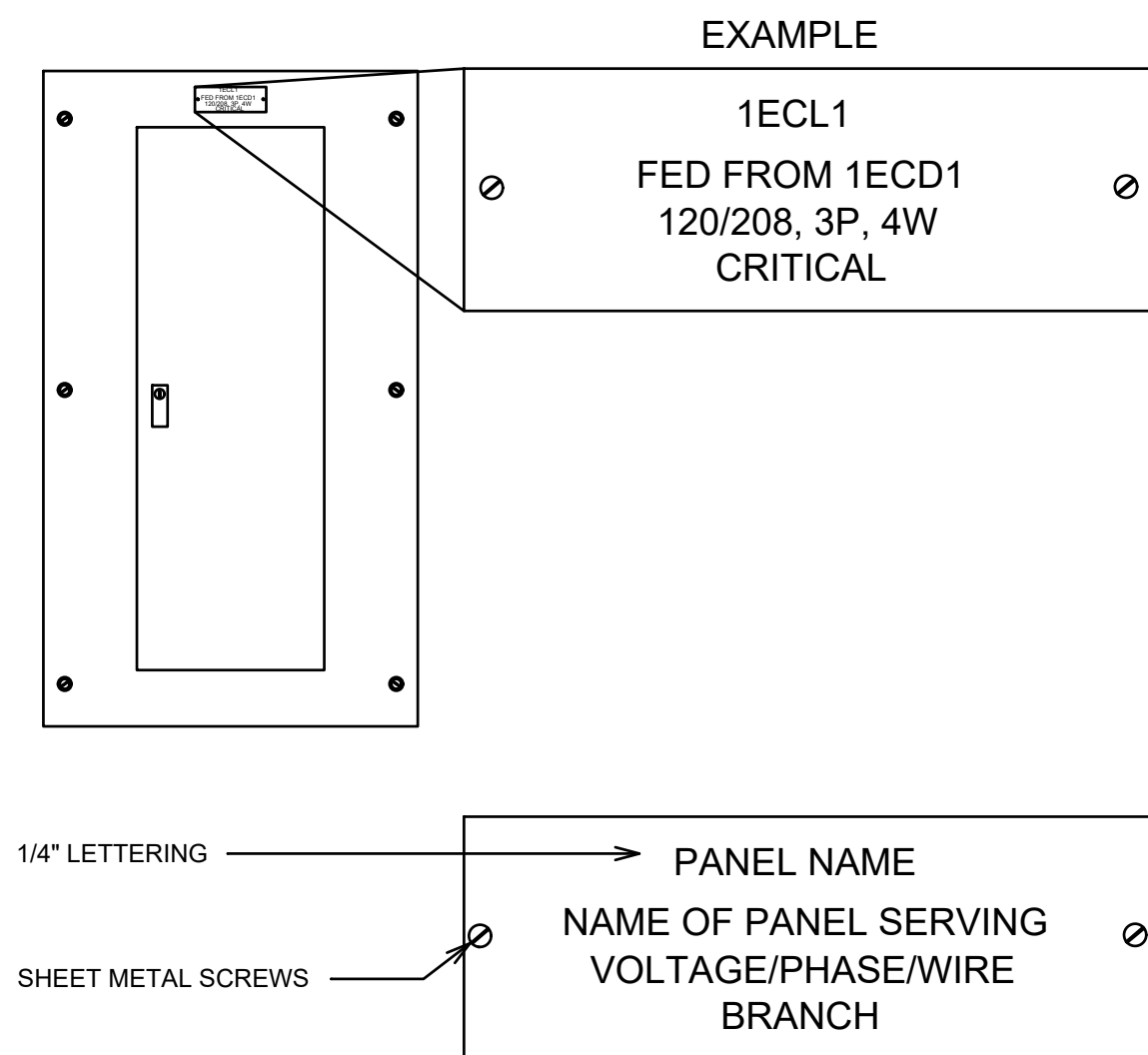
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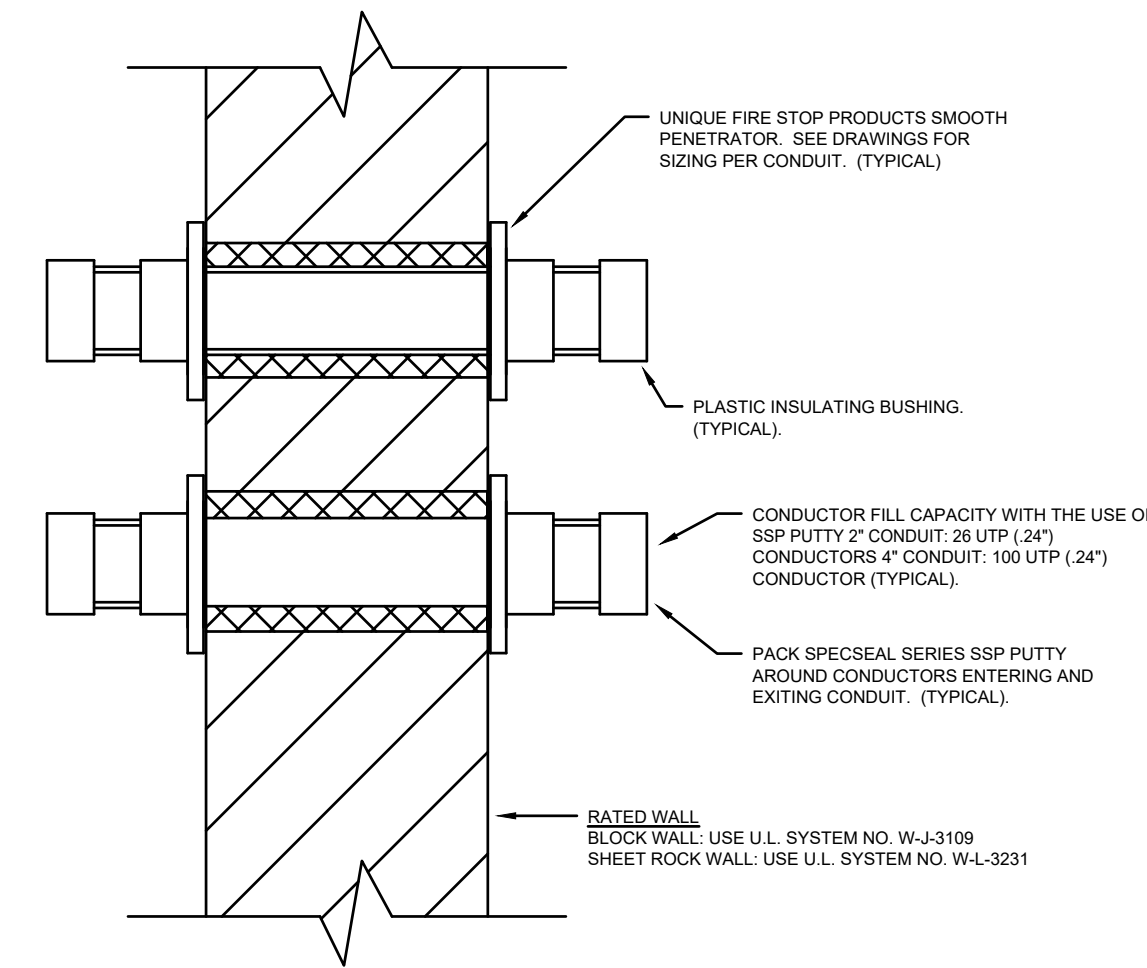


**SPD INSTALLATION DETAIL FOR CONDUCTORS
ENTERING OR EXITING STRUCTURE**
No Scale

NORMAL - BLACK WITH WHITE LETTERS
LIFE SAFETY BRANCH - YELLOW WITH BLACK LETTERS
CRITICAL BRANCH - ORANGE WITH BLACK LETTERS
EQUIPMENT BRANCH - GREEN WITH WHITE LETTERS
GENERATOR DISTRIBUTION - PURPLE WITH WHITE LETTERS

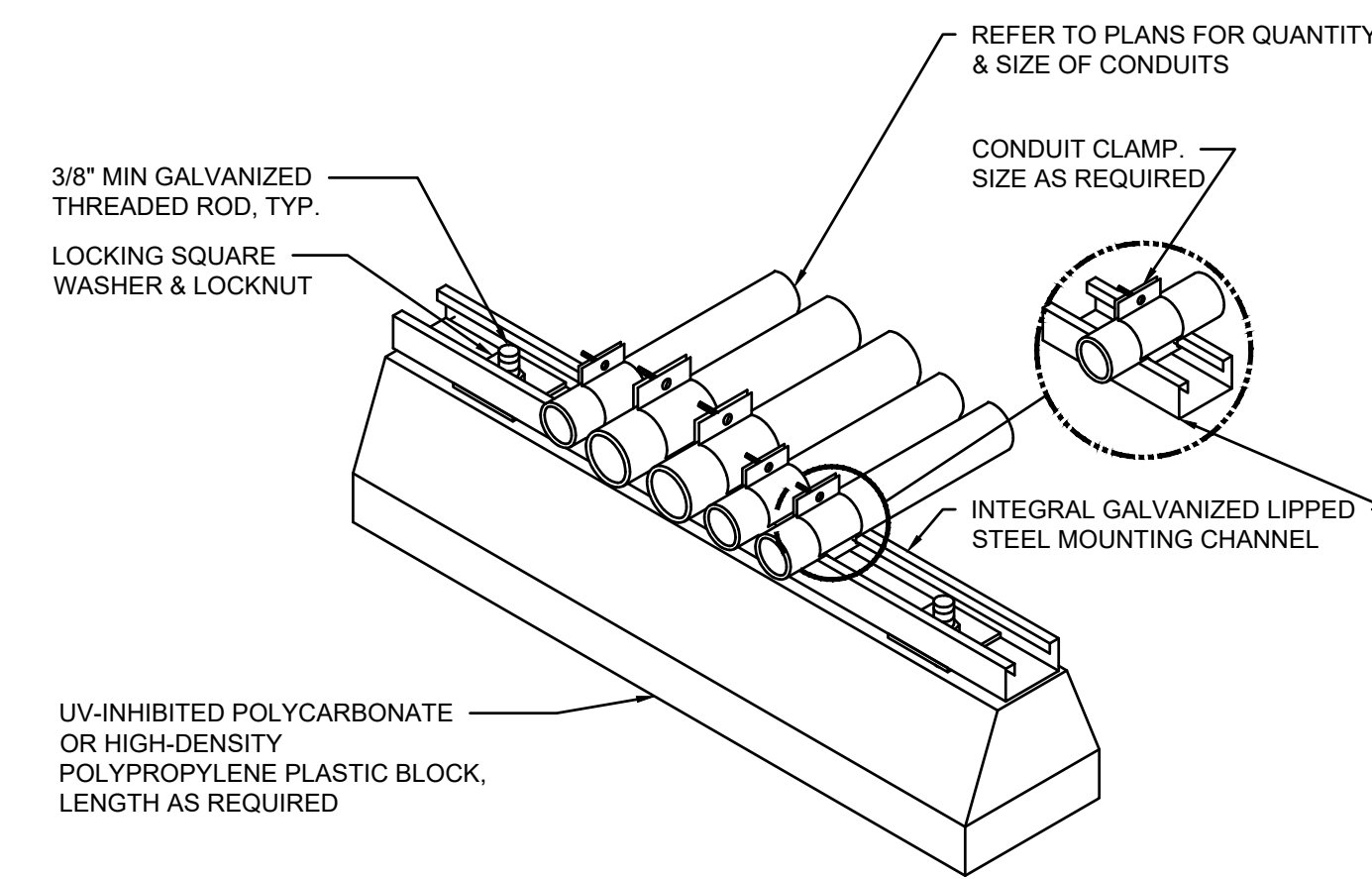


PANELBOARD IDENTIFICATION



CONDUIT PENETRATION OF RATED WALL
NO SCALE

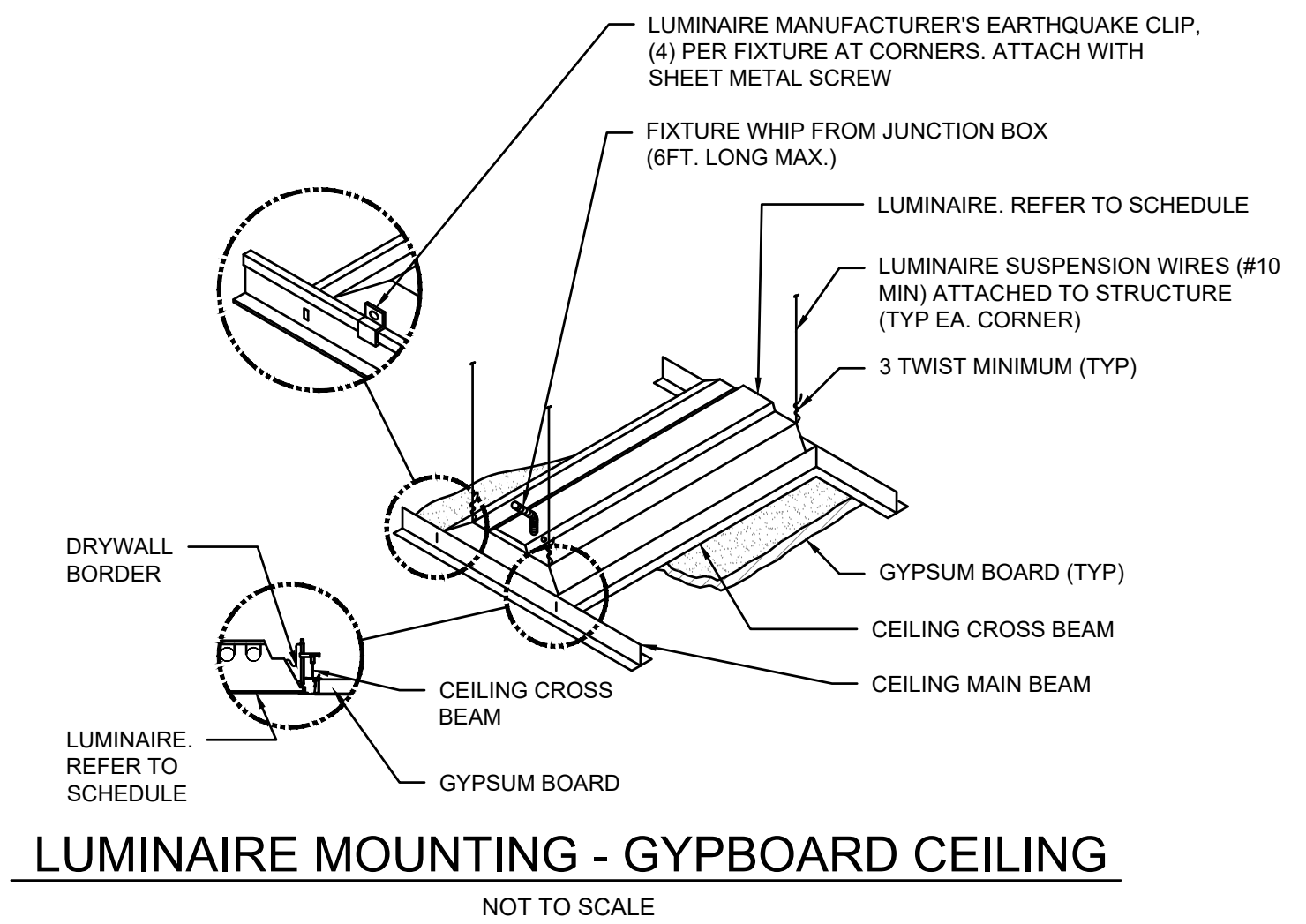
GENERAL NOTE:
1. PENETRATIONS SHALL BE NO MORE THAN 2'-0" ABOVE CEILING. TYPICAL
AT ALL PENETRATION LOCATIONS.



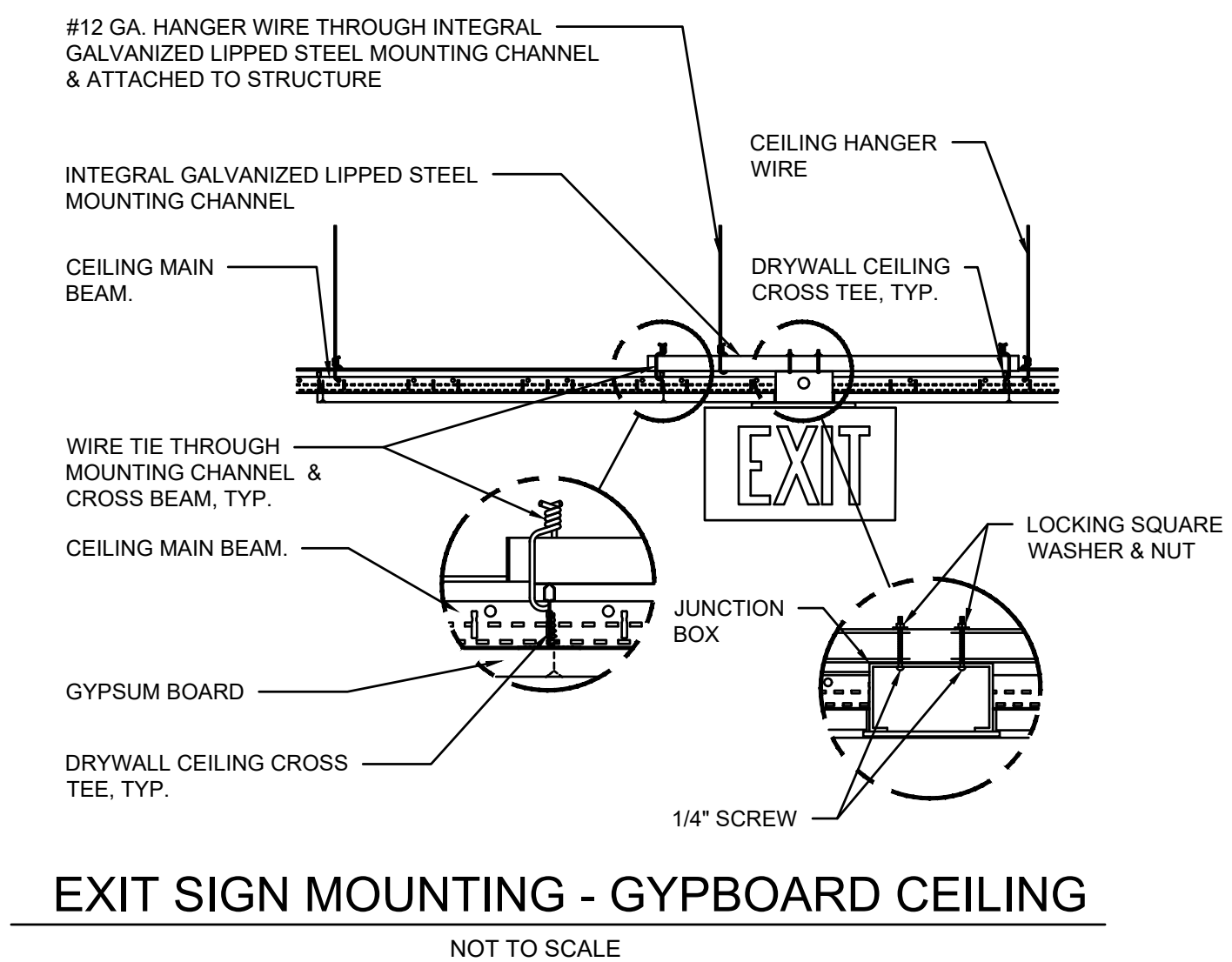
CONDUIT TRAPEZE MOUNTING DETAIL
NOT TO SCALE

NOTES
1. METAL CHANNEL STRUT SUPPORT LONGER THAN 36" SHALL BE INSTALLED
WITH A CENTER SUPPORT ROD.
2. FASTEN THREADED ROD TO STRUCTURE BY APPROVED METHOD. FIELD VERIFY
EXACT CONDITIONS.
3. FOR TRAPEZE INSTALLATIONS IN SEISMIC AREAS REFER TO APPROVED METHODS.

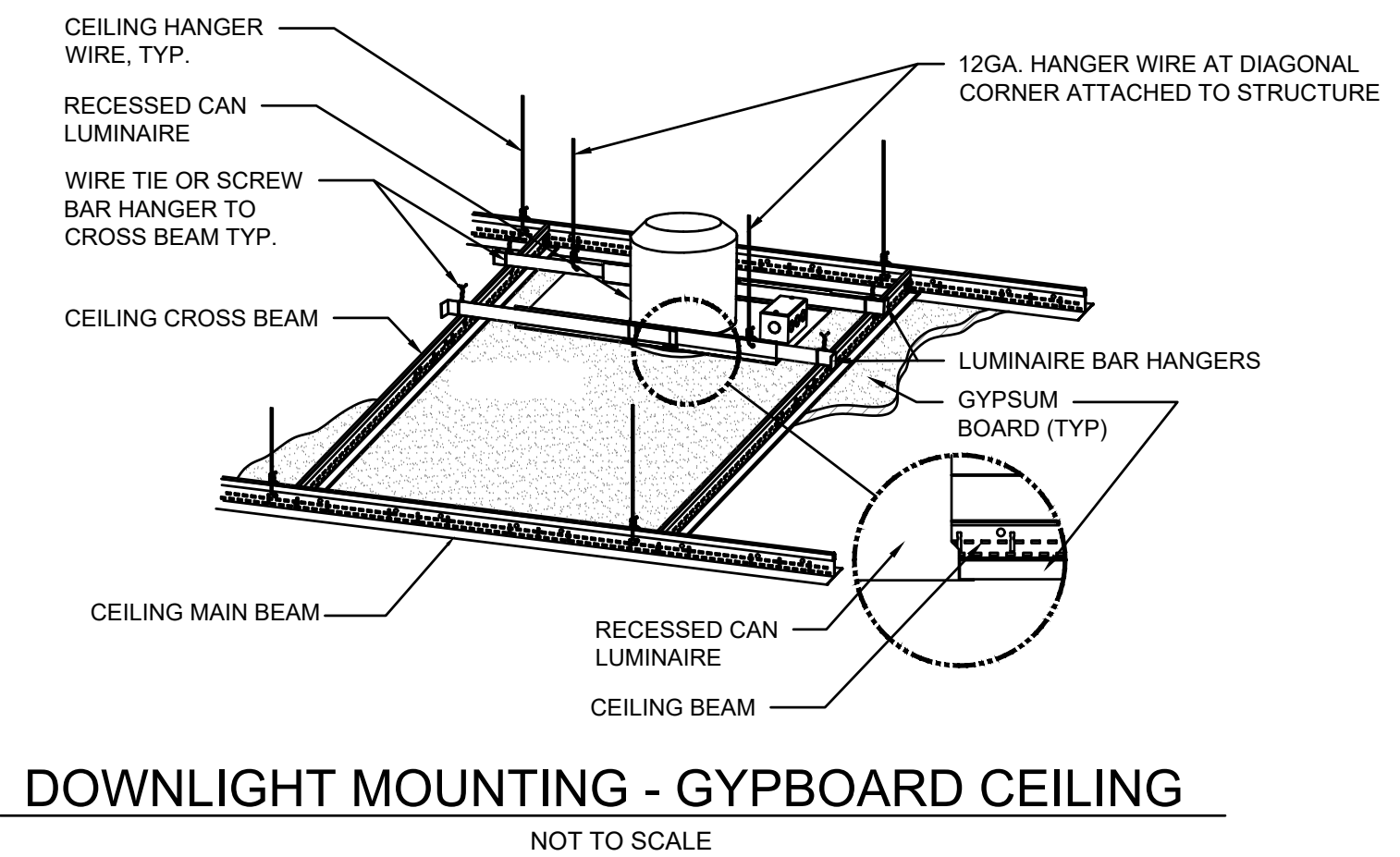
CONDUIT TRAPEZE MOUNTING DETAIL
NOT TO SCALE



LUMINAIRE MOUNTING - GYPBOARD CEILING
NOT TO SCALE



EXIT SIGN MOUNTING - GYPBOARD CEILING
NOT TO SCALE



DOWNLIGHT MOUNTING - GYPBOARD CEILING
NOT TO SCALE

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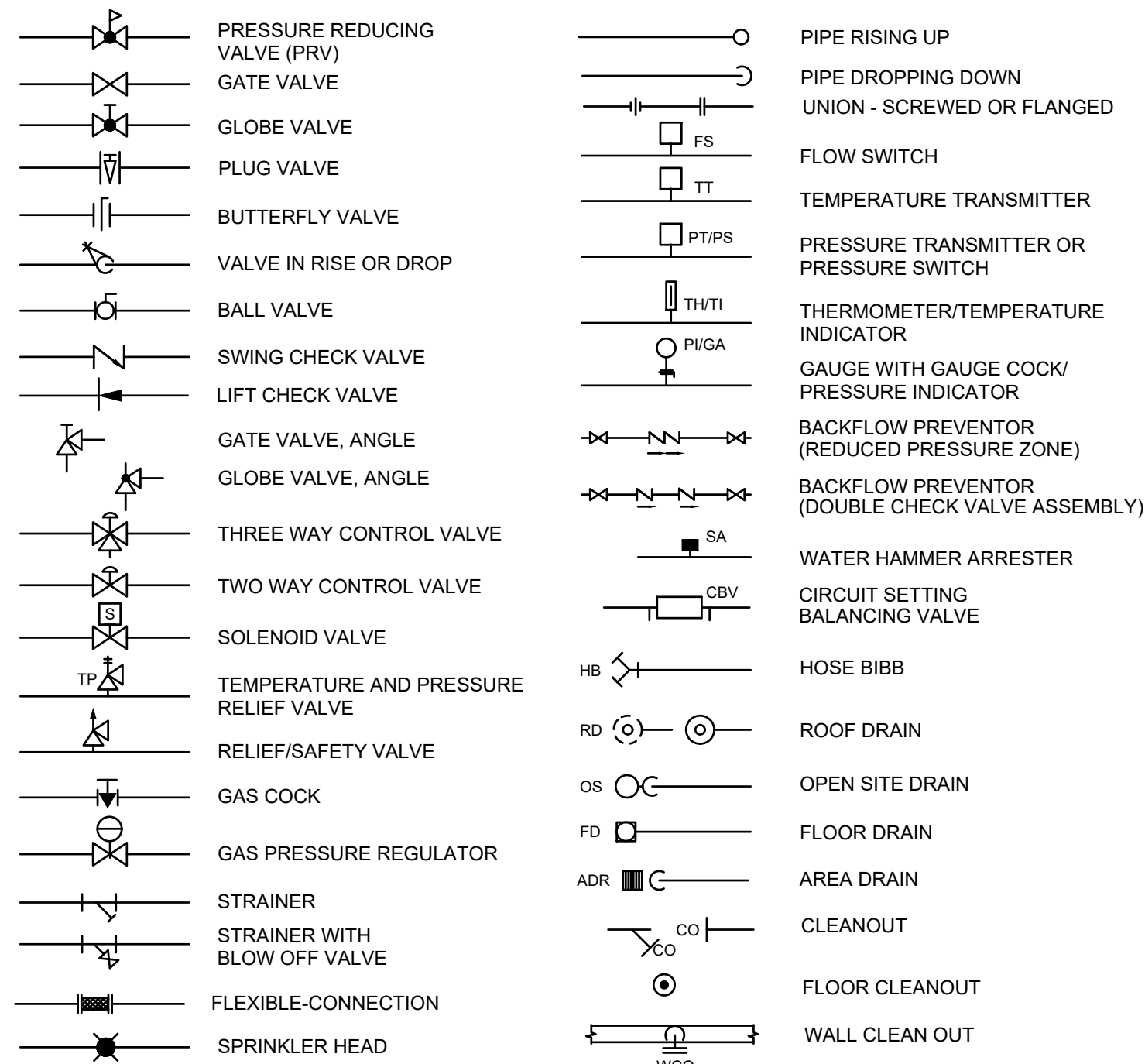
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PLUMBING DEMOLITION NOTES

- CONTRACTOR SHALL CAREFULLY REMOVE ALL EXISTING FIXTURES AND ASSOCIATED TRIM AND TURN OVER TO OWNER FOR FUTURE REUSE. ALL FIXTURES AND TRIM NOT DESIRED FOR FUTURE REUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. CONTRACTOR SHALL COORDINATE FINAL DISPOSITION OF FIXTURES AND TRIM WITH OWNER'S FIELD REPRESENTATIVE PRIOR TO START OF WORK.
- ALL EXISTING UTILITY SIZES AND LOCATIONS INDICATED ARE TAKEN FROM THE BASE BUILDING CONSTRUCTION DOCUMENTS. THE CONTRACTOR IS TO FIELD VERIFY ALL EXISTING UTILITIES NOTED FOR REUSE OR CONNECTION TO PRIOR TO FABRICATION OR START OF CONSTRUCTION.
- ALL EXISTING SANITARY, WASTE, AND VENT BRANCH PIPING NOT REQUIRED FOR REUSE IN THE RENOVATION IS TO BE REMOVED TO THE POINT OF CONNECTION TO EXISTING STACKS OR ACTIVE BRANCHES AND CAPPED OR PLUGGED ABOVE CEILING OR BELOW FLOOR.
- ALL EXISTING DOMESTIC WATER BRANCH PIPING NOT REQUIRED FOR RE-USE IN THE RENOVATION IS TO BE REMOVED FROM THE POINT OF CONNECTION TO EXISTING RISERS, MAINS OR ISOLATION VALVES AND CAPPED. DO NOT ABANDON DEAD END PIPE RUNS IN PLACE THAT ARE SUBJECT TO STAGNATION.
- ALL PIPE, FITTINGS, INSULATION, SUPPORTS, ETC. REMOVED IN THE RENOVATION AREA ARE TO BE REMOVED FROM THE SITE AND DISPOSED OF BY THIS CONTRACTOR. NO EXISTING PIPE OR MATERIALS ARE TO BE REMOVED AND REUSED ON THE RENOVATION.
- IF ANY OF THE EXISTING UTILITIES NOTED FOR REUSE IN THE RENOVATION AREA ARE FOUND TO BE INADEQUATE DUE TO DIFFERENCE IN LOCATION OR SIZES INDICATED, THE CONTRACTOR SHALL SUBMIT A BRIEF DESCRIPTION OR SKETCH OF THE EXISTING INSTALLATION TO THE ARCHITECT FOR REVIEW.
- COORDINATE THE LOCATION OF ALL EXISTING ACCESS PANELS WITH THE ARCHITECT FOR RELOCATION IN AREAS SCHEDULED FOR REPLACEMENT OF CEILING.
- ANY DEFECTIVE PIPING OR OTHER PLUMBING RELATED EQUIPMENT OR MATERIALS DISCOVERED OR OBSERVED DURING DEMOLITION AND INSTALLATION OF NEW WORK, WHETHER DIRECTLY RELATED TO THE SCOPE SHOWN IN THESE DOCUMENTS OR NOT, SHALL BE REPORTED TO THE OWNER'S FIELD REPRESENTATIVE.

PIPING ELEMENTS / VALVING



PLUMBING SYMBOL LEGEND

SYMBOL	DESCRIPTION
	- EXISTING PIPING TO BE REMOVED
	- DOMESTIC COLD WATER PIPING (CW)
	- DOMESTIC HOT WATER PIPING (HW)
	- DOMESTIC HOT WATER CIRCULATION PIPING (HWC)
	- CONDENSATE PIPING (CD) ABOVE FLOOR
	- CONDENSATE PIPING (CD) BELOW FLOOR
	- PUMP DISCHARGE PIPING (PD) ABOVE FLOOR
	- PUMP DISCHARGE PIPING (PD) BELOW FLOOR
	- SANITARY SEWER PIPING (SS) ABOVE FLOOR
	- SANITARY SEWER PIPING (SS) BELOW FLOOR
	- GREASE WASTE PIPING (GW) ABOVE FLOOR
	- GREASE WASTE PIPING (GW) BELOW FLOOR
	- SANITARY VENT PIPING (V)
	- LOW PRESSURE GAS PIPING (G)
	- MEDIUM PRESSURE GAS PIPING (MG)
	- STORM DRAIN
	- STORM DRAIN BELOW FLOOR
	- OVERFLOW STORM DRAIN
	- POINT OF DEMOLITION EXTENTS
	- POINT OF CONNECTION TO EXISTING
	- ENLARGED PLAN REFERENCE: TOP-PLAN#, BOTTOM-DRAWING# SHOWN ON

PLUMBING ABBREVIATIONS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
A/C	- ABOVE CEILING	IE	- INVERT ELEVATION
AFF	- ABOVE FINISH FLOOR	KW	- KILOWATT
AP	- ACCESS PANEL	LBS	- POUNDS
BFF	- BELOW FINISHED FLOOR	MG	- MEDIUM PRESSURE GAS
CD	- CONDENSATE DRAIN	NTS	- NOT TO SCALE
CFH	- CUBIC FEET PER HOUR	OSD	- OVERFLOW STORM DRAIN
CO	- CLEANOUT	PD	- PUMP DISCHARGE
CONT	- CONTINUATION	PSI	- POUNDS PER SQUARE INCH
CW	- DOMESTIC COLD WATER	PVC	- POLYVINYL CHLORIDE PIPE
DN	- DOWN	RPBP	- REDUCED PRESSURE BACKFLOW PREVENTER
DWG	- DRAWING	SD	- STORM DRAIN
(E)	- EXISTING	SS	- SANITARY SEWER
°F	- DEGREE FAHRENHEIT	SF	- SQUARE FEET
FCO	- FLOOR CLEANOUT	UNO	- UNLESS NOTED OTHERWISE
FD	- FLOOR DRAIN	V	- VENT
G	- GAS	VTR	- VENT THRU ROOF
GPM	- GALLONS PER MINUTE	WCO	- WALL CLEANOUT
HW	- DOMESTIC HOT WATER		
HWC	- DOMESTIC HOT WATER CIRCULATION		

PLUMBING GENERAL NOTES

- DO NOT SCALE FROM THESE DRAWINGS. EXACT DIMENSIONS SHALL BE TAKEN FROM ARCHITECTURAL DRAWINGS.
- ALL INDICATED WORK SHALL BE PERFORMED BY THE PLUMBING CONTRACTOR UNLESS OTHERWISE NOTED.
- ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ALL APPLICABLE CODES AND REGULATIONS INCLUDING BUT NOT LIMITED TO NATIONAL, CITY, STATE AND LOCAL ORDINANCES WHICH MAY BE IN EFFECT. ALL PLUMBING MATERIALS, INSTALLATION PROCEDURES AND SYSTEM LAYOUTS SHALL BE APPROVED BY ALL APPLICABLE CODE ENFORCEMENT AUTHORITIES HAVING JURISDICTION, AND IT SHALL BE THE PLUMBING CONTRACTOR'S RESPONSIBILITY TO PAY FOR ALL NECESSARY PERMITS AND APPROVALS FOR THIS INSTALLATION.
- IT IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO REVIEW THESE PLANS AND SPECIFICATIONS, AS WELL AS THE RELATED HVAC, FIRE PROTECTION, ELECTRICAL, STRUCTURAL, ARCHITECTURAL, INTERIOR DECOR AND SITE ENGINEERING DRAWINGS TO BECOME FAMILIAR WITH THE FULL PROJECT SCOPE. IN ADDITION, THIS CONTRACTOR MUST COORDINATE WITH AN OWNER REPRESENTATIVE TO FULLY UNDERSTAND ALL REQUIREMENTS WHICH MAY NOT BE SPECIFIED HEREIN AND WHICH THE OWNER MAY CONSIDER PART OF THIS CONTRACT. DURING THE COURSE OF CONSTRUCTION COORDINATION AND ACTUAL CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO WORK CLOSELY WITH ALL ACCOMPANYING CONTRACTORS AND TRADESMEN IN ORDER TO ENSURE A SMOOTH RUNNING AND CAREFULLY COORDINATED INSTALLATION.
- ANY DISCREPANCIES OR INADEQUACIES WITHIN THESE BID DOCUMENTS OR BETWEEN THESE BID DOCUMENTS AND THE RELATED HVAC, FIRE PROTECTION, ELECTRICAL, STRUCTURAL, ARCHITECTURAL, INTERIOR DECOR AND SITE ENGINEERING DRAWINGS, OR BETWEEN THESE BID DOCUMENTS AND FIELD CONDITIONS MUST BE BROUGHT TO THE ATTENTION OF THE OWNER, ARCHITECT AND ENGINEER PRIOR TO BID SUBMISSION.
- THE PLUMBING CONTRACTOR MUST VISIT THE SITE AND NOTE ALL EXISTING CONDITIONS AS WELL AS CONDITIONS TO BE MET PRIOR TO BID SUBMISSION. LACK OF A THOROUGH UNDERSTANDING OF THE PROJECT SCOPE AND CONDITIONS SHALL NOT CONSTITUTE AN EXCUSE FOR ERRORS OR OMISSIONS, NOR FOR A REQUEST FOR EXTRA COMPENSATION.
- IT IS CRITICAL THAT THE PLUMBING CONTRACTOR FIELD VERIFIES ALL EXISTING INVERT ELEVATIONS PRIOR TO BID SUBMISSION. IF ANY CONFLICTS EXIST BETWEEN THE NEW PLUMBING SYSTEMS AND THE EXISTING SITE LEVEL SYSTEMS, THEY SHOULD BE BROUGHT TO THE ATTENTION OF AN OWNER'S REPRESENTATIVE AND THE ENGINEER PRIOR TO BID SUBMISSION. EXTRA COMPENSATION WILL NOT BE GRANTED FOR ANY EXTRA WORK OR MATERIAL WHICH RESULTS FROM AN INABILITY TO MEET THE INVERTS OF THE EXISTING SITE LEVEL PIPING SYSTEMS.
- THE PLUMBING CONTRACTOR SHALL PROVIDE A COMPLETE SET OF RECORD "AS-BUILT" DRAWINGS INDICATING THE PRECISE LOCATION OF ALL SYSTEMS, EQUIPMENT CONCEALED OR EMBEDDED PIPING, PIPING CONNECTIONS AND ACCESS DOORS. THESE DRAWINGS SHALL ALSO INCLUDE ALL CHANGES AND DEVIATIONS FROM THE BID DOCUMENTS.
- RUN ALL DOMESTIC WATER, WASTE, VENT AND GAS PIPING AS HIGH AS POSSIBLE THROUGHOUT THE ENTIRE BUILDING. INSTALL LONG RUNS OF PIPING WITHIN STEEL JOIST SPACE AND OTHER PIPING TIGHT TO BOTTOM OF STEEL. COORDINATE AND VERIFY WITH OTHER CONTRACTORS AS NOT TO INTERFERE WITH DUCTWORK, FIRE PROTECTION PIPING, LIGHTING SYSTEMS, ETC.
- ALL EXPOSED HORIZONTAL AND VERTICAL PIPING SHALL BE INSTALLED IN A NEAT ARRANGEMENT IN LOCATIONS WHICH ARE THE MOST INCONSPICUOUS. VERTICAL DROPS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND THEIR FINAL LOCATIONS SHALL BE COORDINATED AND RUN WITHIN CHASES, WALLS, SOFFITS WITH OTHER MECHANICAL/ ELECTRICAL FEEDS. ALL SUCH LOCATIONS ARE TO BE REVIEWED WITH AN OWNER REPRESENTATIVE AND ARCHITECT PRIOR TO INSTALLATION.
- FINAL CONNECTIONS TO ALL GAS FIRED EQUIPMENT TO BE BY THE PLUMBING CONTRACTOR, REGARDLESS OF WHO PROVIDES EQUIPMENT. THIS SHALL INCLUDE BUT NOT BE LIMITED TO HVAC EQUIPMENT, WATER HEATERS, ETC.
- ALL DOMESTIC WATER BRANCH LINES SHALL HAVE THEIR OWN RESPECTIVE SHUT-OFF VALVES WHETHER OR NOT SHOWN ON THE DRAWINGS.
- DOMESTIC WATER HEATER TEMPERATURE / PRESSURE RELIEF VALVES SHALL BE PIPED FULL SIZE TO THE NEAREST APPROVED FLOOR DRAIN. THIS REQUIREMENT SHALL BE APPLICABLE TO ALL DOMESTIC WATER HEATING STORAGE VESSELS. INSTANTANEOUS WATER HEATERS NOT STORING WATER SHALL NOT REQUIRE TEMPERATURE OR PRESSURE RELIEF VALVES.
- THE PLUMBING CONTRACTOR SHALL RUN OUT ALL BUILDING DRAINAGE AND WASTE LINES WHERE SHOWN ON THE DRAWINGS AND MAKE ALL CONNECTIONS TO SITE LEVEL SYSTEMS.
- ALL EXPOSED PIPING BELOW LAVATORY'S DESIGNATED AS HANDICAPPED SHALL BE TOTALLY INSULATED.
- ALL ROOF DRAIN SUMPS AND HORIZONTAL STORM DRAINAGE PIPING LOCATED ABOVE CEILING SHALL BE FULLY INSULATED INCLUDING ALL FITTINGS.
- ALL NON-DRAINAGE PIPING SHALL BE RUN LEVEL AND GENERALLY FREE OF TRAPS AND UNNECESSARY BENDS, ARRANGED TO CONFORM TO THE BUILDING REQUIREMENTS AND TO SUIT THE NECESSITIES OF CLEARANCES FOR OTHER MECHANICAL WORK. PROVIDE VALVED DRAINAGE OUTLETS IN AREAS OF PIPING WHICH WOULD BE UNDRAINABLE DURING MAINTENANCE OR REPAIRS.
- ALL REQUIRED OFFSETS, RISES AND DROPS DUE TO POSSIBLE OBSTRUCTIONS OF PIPE RUNS ARE NOT NECESSARILY SHOWN. PLUMBING CONTRACTOR SHALL PROVIDE ALL REQUIRED OFFSETS NECESSARY FOR FINAL COORDINATION WITH OTHER TRADES AND STRUCTURE.
- THROUGH PENETRATIONS OF FIRE RESISTANCE RATED HORIZONTAL ASSEMBLIES SHALL BE PROTECTED BY AN APPROVED THROUGH-PENETRATION FIRESTOP SYSTEM INSTALLED AND TESTED IN ACCORDANCE WITH ASTM E 814 OR UL 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER (2.49 PA). THE SYSTEM SHALL HAVE AN F RATING/T RATING OF NOT LESS THAN 1 HOUR BUT NOT LESS THAN THE REQUIRED RATING OF THE FLOOR PENETRATED. SEE ARCHITECTURAL DRAWINGS FOR RATED ASSEMBLY LOCATIONS, RATINGS AND DETAILS.
EXCEPTIONS:
A. FLOOR PENETRATIONS CONTAINED AND LOCATED WITHIN THE CAVITY OF A WALL ABOVE THE FLOOR OR BELOW THE FLOOR DO NOT REQUIRE A T RATING.
B. FLOOR PENETRATIONS BY FLOOR DRAINS, TUB DRAINS OR SHOWER DRAINS CONTAINED AND LOCATED WITHIN THE CONCEALED SPACE OF A HORIZONTAL ASSEMBLY DO NOT REQUIRE A T RATING.
- FLUSH LEVERS FOR ACCESSIBLE WATER CLOSETS SHALL BE LOCATED ON THE APPROACH SIDE (WIDE SIDE OF ROOM) OF THE FIXTURE.
- CLEANOUTS SHALL BE PROVIDED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS, INCLUDING AT THE BASE OF ALL DRAINAGE STACKS.
- ALL PLUMBING EQUIPMENT, INSULATION, PIPING, ETC. INSTALLED IN HVAC RETURN AIR PLENUMS SHALL MEET CODE REQUIREMENTS FOR FLAME SPREAD AND SMOKE DEVELOPMENT RATINGS (FLAME 25 / SMOKE 50), WHEN TESTED IN ACCORDANCE WITH ASTM E84 OR UL 273.
- ALL PLUMBING EQUIPMENT REQUIRING ELECTRICAL POWER SHALL BE INSTALLED WITH DISCONNECT SWITCHES AT EACH PIECE OF EQUIPMENT. COORDINATE SWITCH TYPE (FUSED OR NON-FUSED) WITH ELECTRICAL DRAWINGS.
- ALL PLUMBING EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S REQUIREMENTS. MANUFACTURER RECOMMENDATIONS ARE DEEMED REQUIREMENTS.
- WATER PIPING ROUTED ABOVE CEILING AND IN EXTERIOR WALLS SHALL BE ROUTED ON HEATED SIDE (UNDERSIDE) OF CEILING INSULATION AND HEATED SIDE (INSIDE) OF WALL INSULATION. DO NOT INSTALL PIPING IN LOCATIONS SUBJECT TO FREEZING CONDITIONS.
- WATER HAMMER ARRESTORS, SIZED PER PDI, SHALL BE PROVIDED ON THE SUPPLY PIPING TO EACH QUICK CLOSING VALVE (E.G. WATER CLOSETS, URINALS, SENSOR SENSOR OPERATED FAUCETS, ICE MACHINE SUPPLY BOXES, WATER COOLERS, WASHING MACHINE SUPPLY BOXES, DISHWASHERS, ETC). ARRESTORS SHALL BE DOUBLE SEAL PISTON TYPE WITH THREADED CONNECTIONS, LISTED FOR CONCEALED INSTALLATIONS WITHOUT ACCESS PANELS.
- WHERE REQUIRED FOR ACCESS TO VALVES AND ACCESSORIES ABOVE HARD CEILING OR IN WALLS, ACCESS PANELS SHALL BE PROVIDED BY THIS CONTRACTOR. PANELS IN RATED ASSEMBLIES SHALL HAVE LISTED RATINGS EQUAL TO OR GREATER THAN THE ASSEMBLY THEY ARE INSTALLED IN.

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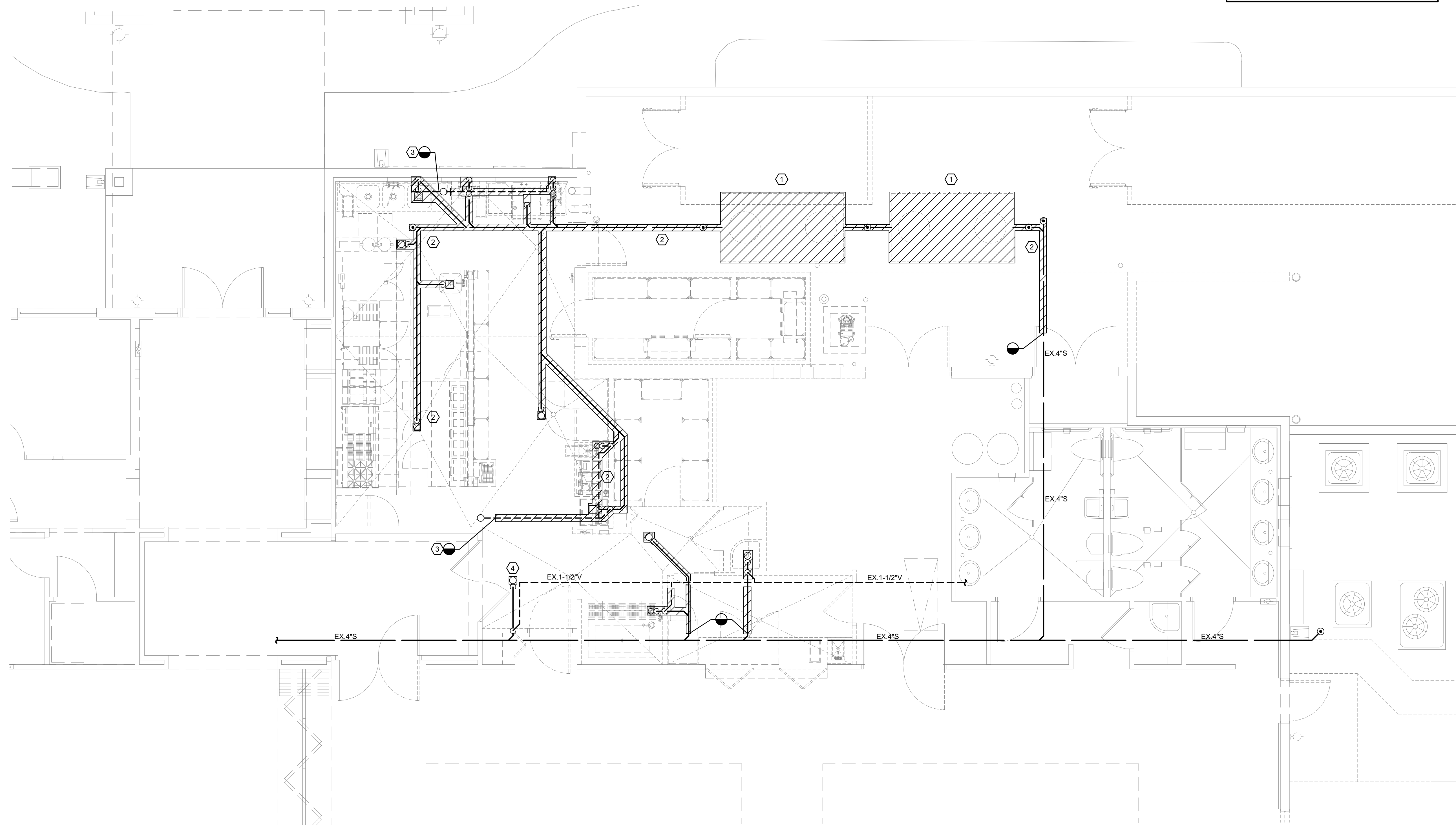
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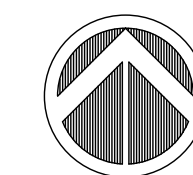
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- KEYED NOTES**
- ① CONTRACTOR SHALL DEMOLISH TWO EXISTING 1,250 GALLON GREASE INTERCEPTORS.
 - ② DEMOLISH ALL PIPING, DRAINS, FLOOR SINKS, ETC. AS SHOWN.
 - ③ DEMOLISH ALL DISTRIBUTION VENTING IN KITCHEN. EXISTING VENT THRU ROOF TO REMAIN AND PREPARE FOR NEW CONNECTION.
 - ④ EXISTING FLOOR DRAIN TOP REMAIN.



EXIST/DEMOLITION PLUMBING GRAVITY FLOOR PLAN ENLARGED
 Scale: 1/4" = 1'-0"

WE WARRANT THAT THE INFORMATION CONTAINED HEREIN WAS PREPARED BY US OR UNDER OUR CLOSE PERSONAL SUPERVISION AND TO THE BEST OF OUR KNOWLEDGE AND BELIEF IT COMPLIES WITH ALL APPLICABLE REGULATIONS AND STANDARDS. WE DO NOT WARRANT THAT THE INFORMATION IS COMPLETE, ACCURATE, OR THAT IT WILL BE USED FOR ANY OTHER PURPOSE THAN THAT FOR WHICH IT WAS PREPARED. WE SHALL NOT BE RESPONSIBLE FOR ANY CONSEQUENCES ARISING FROM THE USE OF THIS INFORMATION FOR ANY OTHER PURPOSE. THIS WARRANTY IS LIMITED TO THE INFORMATION CONTAINED HEREIN AND DOES NOT EXTEND TO ANY OTHER INFORMATION OR SERVICES PROVIDED BY US OR ANY OTHER PARTY. THIS WARRANTY IS VOID WHERE PROHIBITED BY LAW.

CONSISTENT 2017

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NO.	DESCRIPTION	DATE

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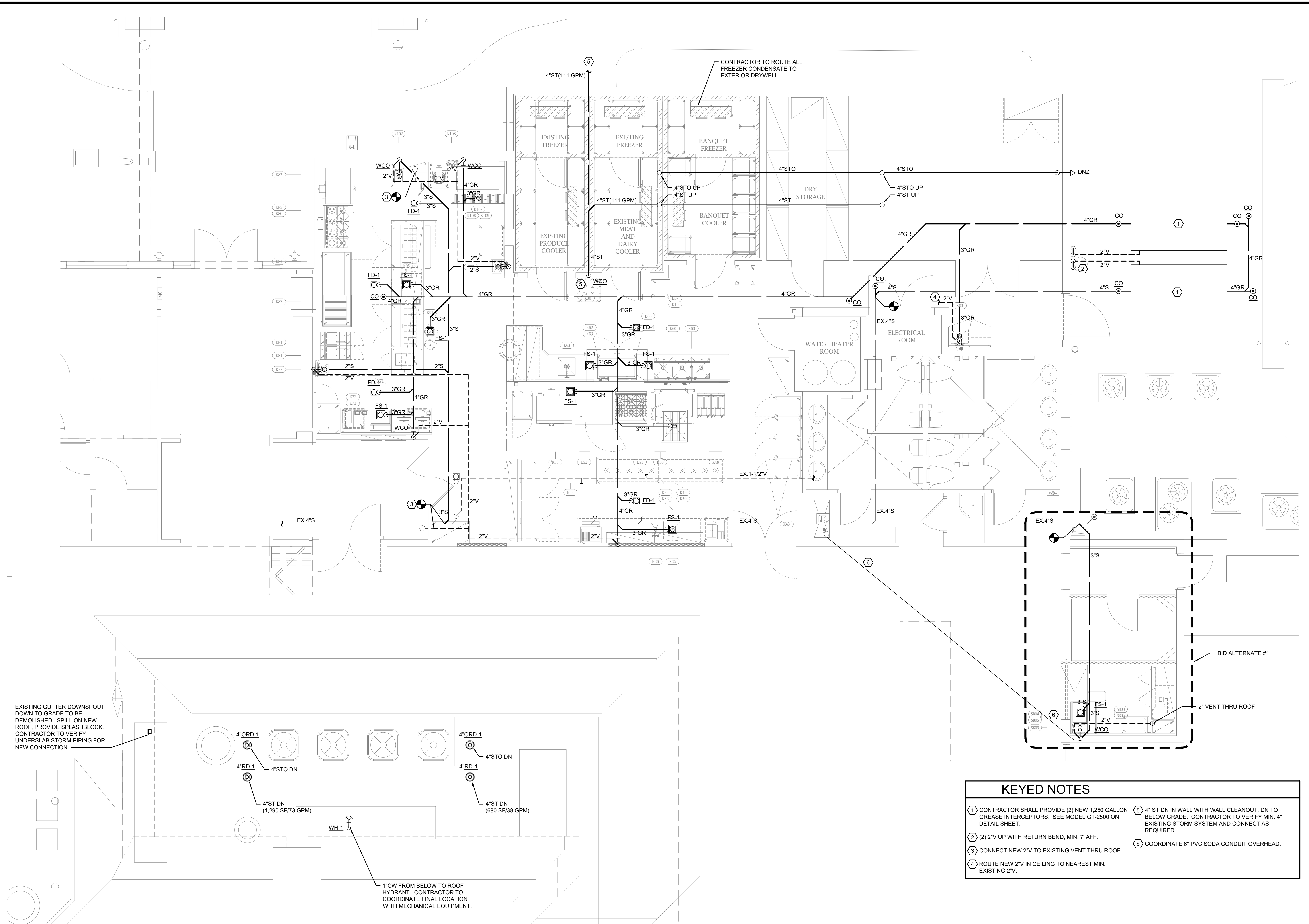
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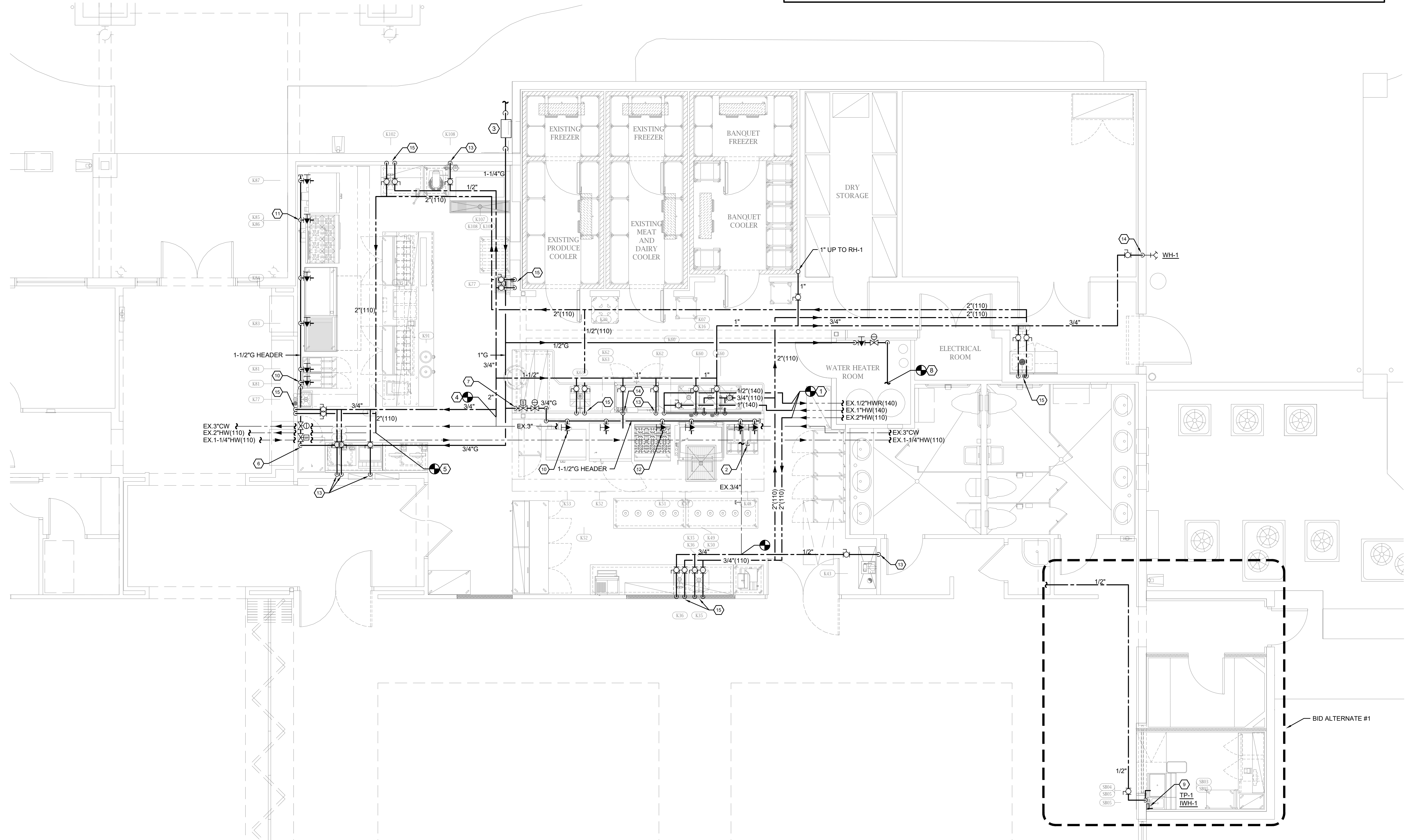
- KEYED NOTES**
- ① CONTRACTOR SHALL PROVIDE (2) NEW 1,250 GALLON GREASE INTERCEPTORS. SEE MODEL GT-2500 ON DETAIL SHEET.
 - ② (2) 2" V UP WITH RETURN BEND, MIN. 7' AFF.
 - ③ CONNECT NEW 2" V TO EXISTING VENT THRU ROOF.
 - ④ ROUTE NEW 2" V IN CEILING TO NEAREST MIN. EXISTING 2" V.
 - ⑤ 4" ST DN IN WALL WITH WALL CLEANOUT, DN TO BELOW GRADE. CONTRACTOR TO VERIFY MIN. 4" EXISTING STORM SYSTEM AND CONNECT AS REQUIRED.
 - ⑥ COORDINATE 6" PVC SODA CONDUIT OVERHEAD.

PROPOSED PLUMBING ROOF PLAN
Scale: 1/4" = 1'-0"

PROPOSED PLUMBING GRAVITY FLOOR PLAN
Scale: 1/4" = 1'-0"

KEYED NOTES

- 1 CONNECT NEW SYSTEM PIPING, SAME SIZE, TO EX. 1/2"HWR, EX. 1"HW(140) AND EX. 2"HW(110)
- 2 PROVIDE NEW CAP FOR DEMOLISHED EXISTING BRANCH PIPING AT LIVE MAINS (TYP)
- 3 CONTRACTOR SHALL PROVIDE NEW NATURAL GAS METER AND REGULATOR (BY UTILITY) FOR 1,991 CFH @ 2 PSIG. 1-1/4"G TO BUILDING.
- 4 CONNECT NEW 2"CW TO EXISTING.
- 5 CONNECT NEW 2"HW(110) LOOP TO EXISTING.
- 6 3/4"G@2PSIG DN BELOW CEILING TO AUTOMATIC SOLENOID SHUT-OFF VALVE INTERLACED WITH FIRE SUPPRESSION HOOD SYSTEM. PROVIDE REGULATOR FOR 827 CFH @ 7"W.C., 1-1/2" DN TO COOK LINE HEADER.
- 7 3/4"G@2PSIG DN BELOW CEILING TO AUTOMATIC SOLENOID SHUT-OFF VALVE INTERLACED WITH FIRE SUPPRESSION HOOD SYSTEM. PROVIDE REGULATOR FOR 827 CFH @ 7"W.C., 1-1/2" DN TO COOK LINE HEADER.
- 8 1/2"G DN BELOW CEILING TO SHUT-OFF VALVE AND REGULATOR FOR 398 CFH @ 7"W.C., 1"G, CONNECT TO EXISTING GAS PIPING TO WATER HEATERS AS REQUIRED.
- 9 ROUTE 1/2" CW DN TO SINK, TEE 1/2" TO IWH-1 AND 1/2" HW TO SINK, TEE 1/2" TO TP-1 AND CONTINUE TO MIN. 6" AFF & TRANSITION TO TYPE 'K' SOFT COPPER IN PE ENCASUREMENT WITH NO JOINTS TO FLOOR SINK.
- 10 COOK LINE 1-1/2"G HEADER WITH 3/4"G BRANCH WITH GAS COCK TO APPLIANCE. SEE KITCHEN SCHEDULE AND FOOD SERVICE DRAWINGS FOR DETAIL. (TYPICAL)
- 11 1"G BRANCH WITH GAS COCK TO APPLIANCE.
- 12 1-1/4"G BRANCH WITH GAS COCK TO APPLIANCE.
- 13 1/2"CW DN
- 14 3/4"CW DN
- 15 1/2"HW(110) & 1/2"CW DN.
- 16 PROVIDE THERMOSTATIC MIXING VALVE EQUAL TO LEONARD LF-170 FOR HAND SINK.



PROPOSED PLUMBING PRESSURE FLOOR PLAN
Scale: 1/4" = 1'-0"

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REVIEWED & ACCEPTED BY: (DATE)

ADDITIONS & ALTERATIONS
TO:
SUN 'N LAKE GOLF CLUB
SEBRING, FLORIDA

DATE
08/10/2018

CS17028

SHEET NO.
P-6

PLUMBING FIXTURE SCHEDULE								* REFER TO DRAWINGS FOR SPECIFIC VENTING METHOD AND SIZES			
MARK	FIXTURE	DESCRIPTION	MAKE AND MODEL	PIPE SIZE (INCH)				ACCESSORIES			
				WASTE	VENT	C.W.	H.W.				
WH-1	WALL HYDRANT (FREEZE PROOF)	AUTOMATIC DRAINING WITH ANTISIPHON VACUUM BREAKER, ASSE STANDARD 1019-B APPROVED, 3/4" INLET AND OUTLET, HARDENED STAINLESS STEEL OPERATING STEM AND ONE-PIECE VALVE PLUNGER TO CONTROL BOTH FLOW AND DRAIN FUNCTIONS. EXTERIOR FINISH TO BE CHROME PLATED ROUGH BRASS.	WOODFORD B65	-	-	3/4	-	LOOSE TEE KEY TO BE FURNISHED WITH EACH HYDRANT.			
RH-1	ROOF HYDRANT	AUTOMATIC DRAINING WITH DOUBLE CHECK BACKFLOW PREVENTER, ASSE STANDARD 1052 APPROVED, 1" INLET AND 3/4" OUTLET, GALVANIZED PIPE CASING, CAST IRON HYDRANT SUPPORT	WOODFORD RHY2-MS	-	-	1"	-				
FS-1	FLOOR SINK	12"x12"x8" DEEP, CAST IRON BODY, ACID RESISTANT PORCELAIN ENAMELED INTERIOR, SEEPAGE FLANGE WITH CLAMP COLLAR, INTERIOR DOME STRAINER, NICKEL BRONZE FRAME AND GRATE, HALF GRATE	ZURN ZN-1901-KC-2	SEE PLANS	*	-	-				
FD-1	FLOOR DRAIN-GENERAL PURPOSE AND SHOWERS	CAST IRON BODY, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAGE SLOTS, HEEL PROOF 5" DIAMETER STAINLESS STEEL STRAINER. PROVIDE WITH TRAP PRIMER CONNECTION AT REQUIRED LOCATIONS.	ZURN ZS415SS-5SS	SEE PLANS	*	-	-				
RD-1 ORD-1	ROOF DRAIN OVERFLOW ROOF DRAIN	CAST IRON BODY, FLASHING CLAMP AND GRAVEL STOP, CAST IRON DOME, UNDERDECK CLAMP, 2" HIGH DAM ON OVERFLOW DRAIN	RD-1: ZURN Z100 ORD-1: ZURN Z100-W2	SEE PLANS	*	-	-				
DNZ	DOWNSPOUT NOZZLE	DOWNSPOUT NOZZLE, ALL NICKEL BRONZE BODY AND DECORATIVE FACE OF WALL FLANGE AND OUTLET NOZZLE.	ZURN Z199	SEE PLANS	*	-	-				
CO	CLEANOUTS	GENERAL(ALL FLOOR CLEANOUTS); DURO-COATED CAST IRON CLEANOUT WITH MEMBRANE FLANGE WITH CADMIUM PLATED CAST IRON COUNTERSUNK PLUG. CLEANOUT CAN BE ADJUSTED TO FINISH FLOOR LEVEL AFTER CONCRETE HAS SET. FLOOR : HEAVY DUTY ROUND SCORIATED NICKEL BRONZE TOP CARPETED FLOOR: HEAVY DUTY ROUND NICKEL BRONZE TOP RECESSED FOR CARPET. TILE FLOOR: HEAVY DUTY ROUND NICKEL BRONZE TOP RECESSED FOR TILE. EXTERIOR: HEAVY DUTY ROUND SCORIATED NICKEL BRONZE TOP, PROVIDE WITH 18" X 4" THICK CONCRETE COLLAR, SEE DETAIL. WALL : CAST IRON CLEANOUT TEE, CADMIUM PLATED CAST IRON COUNTERSUNK PLUG, SMOOTH SQUARE NICKEL BRONZE WALL ACCESS COVER AND FRAME. PLUG : DURO-COATED CAST IRON FERRULE AND CADMIUM PLATED CAST IRON COUNTERSUNK PLUG.	FLOOR - ZURN - ZN-1405 CARPETED FLOOR - ZURN - ZN-1405-4 TILE FLOOR - ZURN - ZN-1405-4 EXTERIOR FLOOR - ZURN - ZN-1406 WALL - ZURN - 1445-4 PLUG - ZURN - Z-1440	SEE PLANS	-	-	-				
WHA	WATER HAMMER ARRESTOR	PISTON OPERATED, TYPE "L" COPPER BARREL WITH BRASS THREADED ADAPTOR. ALL JOINTS SHALL BE MADE WITH 95-5 LEAD FREE SOLDER. THE PISTON SHALL BE EQUIPPED WITH TWO (2) EPDM "O" RINGS TO PROVIDE A PERMANENT MECHANICAL BARRIER BETWEEN FLUID AND PRE-LOAD AIR CHARGE. ARRESTORS MAY BE INSTALLED AT ANY ANGLE.	SIoux CHIEF WHA-1: SIZE A WHA-2: SIZE B WHA-3: SIZE C	-	-	1	-				

ELECTRIC WATER HEATER SCHEDULE

MARK	TEMP RISE	ELEMENT CAPACITY	ELECTRICAL
IWH-1	°F	49 @ .5 GPM	V / PH
EEMAX		3.6	208/1
AM005240T			

KITCHEN PLUMBING AND GAS CONNECTION SCHEDULE

ITEM #	DESCRIPTION	QTY	UNIT	PRICE	REMARKS
K03	1 MOP CABINET WITH SINK AND CHEMICAL STORAGE	1	M/A	2	FLOOR WASTE
K07	1 BANQUET WALK-IN COOLER EVAPORATOR COIL	1	M/A		
K10	1 BANQUET WALK-IN FREEZER EVAPORATOR COIL	1	M/A		
K18	1 MEAT AND DAIRY WALK-IN COOLER EVAPORATOR COIL	1	M/A		VERIFY REQUIREMENTS WITH EXISTING UNIT
K19	1 MEAT AND DAIRY WALK-IN FREEZER EVAPORATOR COIL	1	M/A		VERIFY REQUIREMENTS WITH EXISTING UNIT
K25	1 PRODUCE WALK-IN COOLER EVAPORATOR COIL	1	M/A		VERIFY REQUIREMENTS WITH EXISTING UNIT
K28	1 PRODUCE WALK-IN FREEZER EVAPORATOR COIL	1	M/A		VERIFY REQUIREMENTS WITH EXISTING UNIT
K35	1 S/S PREP TABLE WITH SINK AND UNDERSHELF	1	M/A	-/A	
K36	1 BUILT-IN 5/8" HAND SINK	1	M/A	-/A	
K43	1 BAG-IN-BOX SODA SYSTEM	1	M/A		VERIFY REQUIREMENTS WITH VENDOR
K48	2 FRYERS	2	M/A	90,000	
K49	1 5/8" FLOOR TROUGH	1	M/A		FLOOR WASTE
K50	1 TILT SKILLET (40 GAL)	1	M/A	120,000	
K51	1 SIX BURNER RANGE WITH OVEN	1	M/A	280,000	
K52	1 COMBI OVEN ON STAND	1	M/A	106,000	TWO(2) CW CONNECTIONS REQUIRED
K53	1 DOUBLE DECK CONVECTION OVEN	1	M/A	100,000	
K60	1 5/8" CLEAN DISHABLE 7Y THREE COMPARTMENT SINK	2	M/A	-/A	PLUMBER TO MANIFOLD THREE(3) DRAINS WITH DRAIN WATER TEMPERING KIT
K62	1 HIGH TEMP DISHWASHER	1	M/A	2	
K63	1 5/8" SOLED DISHABLE WITH SINK	1	M/A	-/A	VERIFY REQUIREMENTS WITH EXISTING UNIT
K71	1 SODA DISPENSER WITH ICE BIN	1	M/A	-/A	VERIFY REQUIREMENTS WITH EXISTING UNIT
K72	1 COFFEE BREWER	1	M/A		VERIFY REQUIREMENTS WITH EXISTING UNIT
K73	1 ICE TEA BREWER	1	M/A		VERIFY REQUIREMENTS WITH EXISTING UNIT
K77	2 5/8" HAND SINKS	2	M/A	-/A	
K81	2 FRYERS	2	M/A	90,000	
K83	1 M" CHARBROILER	1	M/A	100,000	
K84	1 48" GRIDDL	1	M/A	120,000	
K85	1 EIGHT BURNER RANGE WITH OVEN	1	M/A	275,000	
K86	1 SALAMANDER BROILER	1	M/A	50,000	INTERPLUMBED WITH RANGE
K87	1 DOUBLE DECK CONVECTION OVEN	1	M/A	100,000	VERIFY REQUIREMENTS WITH EXISTING UNIT
K91	2 DROP-IN SOUP WARMERS	2	M/A		
K95	1 DROP-IN HOT FOOD WELLS	1	M/A		
K102	1 BUILT-IN 5/8" HAND SINK	1	M/A	-/A	
K107	1 5/8" FLOOR TROUGH	1	M/A		FLOOR WASTE
K108	1 ICE MACHINE	1	M/A		VERIFY REQUIREMENTS WITH EXISTING UNIT
K109	1 ICE BIN	1	M/A		VERIFY REQUIREMENTS WITH EXISTING UNIT
SB03	1 EXTRA DEEP ICE BIN WITH DOUBLE SPEED RAIL	1	M/A		
SB04	1 SODA GUN	1	M/A		VERIFY REQUIREMENTS WITH VENDOR
SB05	1 HAND SINK WITH DOUBLE SPEED RAIL	1	M/A	-/A	

* SEE FOOD SERVICE DRAWINGS FOR FULL SCHEDULE.

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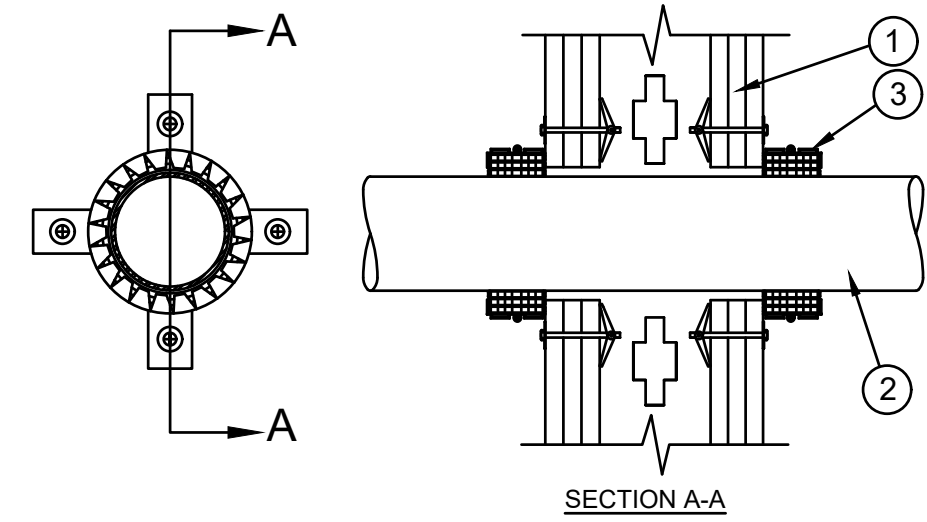
ADDITIONS & ALTERATIONS TO:
SUN 'N LAKE GOLF CLUB
SEBRING, FLORIDA

DATE
08/10/2018

CS17028

SHEET NO.

P-7



SYSTEM NO. W-L-2162
F RATINGS - 1, 2 AND 3 HR (SEE ITEM 1)
T RATINGS - 1, 2 AND 3 HR (SEE ITEM 1)

1. **WALL ASSEMBLY** — THE 1, 2 OR 3 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300, U400 OR V400 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. (51 BY 102 MM) LUMBER SPACED 16 IN. (406 MM) OC. STEEL STUDS TO BE MIN 3-1/2 IN. (89 MM) WIDE SPACED MAX 24 IN. (610 MM) OC. WHEN WOOD STUDS ARE USED, THE ASSEMBLY IS LIMITED TO 1 AND 2 HR. RATINGS.

B. **GYPSUM BOARD** — THICKNESS, TYPE, NUMBER OF LAYERS AND FASTENERS AS REQUIRED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX DIAM OF OPENING IS 6 IN. (127 MM).

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 NONMETALLIC PIPE OR CONDUIT TO BE CENTERED WITHIN OPENING WITH A NOM 1/4 IN. (6 MM) ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND PERIPHERY OF OPENING. PIPE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDERS OF THE WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF NONMETALLIC PIPES OR CONDUITS MAY BE USED:

A. **POLYVINYL CHLORIDE (PVC) PIPE** — NOM 4 IN. (102 MM) 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. **RIGID NONMETALLIC CONDUIT** — NOM 4 IN. (102 MM) DIAM (OR SMALLER) SCHEDULE 40 PVC CONDUIT INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NFPA NO. 70).

C. **CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE** — NOM 4 IN. (102 MM) DIAM (OR SMALLER) SDR13.5 CPVC PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) PIPING SYSTEMS.

D. **ACRYLONITRILE BUTADIENE STYRENE (ABS) PIPE** — NOM 4 IN. (102 MM) DIAM (OR SMALLER) SCHEDULE 40 ABS PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.

E. **FIRE RETARDANT POLYPROPYLENE (FRPP) PIPE** — NOM 4 IN. (102 MM) DIAM (OR SMALLER) SCHEDULE 40 FRPP PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEM.

F. **POLYVINYLIDENE FLUORIDE (PVDF) PIPE** — NOM 4 IN. (102 MM) DIAM (OR SMALLER) SCHEDULE 40 PVDF PIPE FOR USE IN CLOSED (PROCESS OR SUPPLY) OR VENTED (DRAIN, WASTE OR VENT) PIPING SYSTEMS.

THE T RATINGS ARE 1, 2 AND 3 HR FOR PIPES A, B AND C IN 1, 2 AND 3 HR RATED WALL ASSEMBLIES, RESPECTIVELY. THE T RATINGS FOR PIPE D, E AND F ARE 1 HR IN 1 AND 2 HR RATED WALL ASSEMBLIES AND 2 HR IN 3 HR RATED WALL ASSEMBLIES.

3. **FIRESTOP DEVICE — COLLAR** — COLLAR TO BE INSTALLED IN ACCORDANCE WITH THE ACCOMPANYING INSTALLATION INSTRUCTIONS. COLLAR TO BE INSTALLED AND LATCHED AROUND PIPE AND SECURED TO BOTH SIDERS OF WALL WITH 3M ULTRA FAST ANCHOR STRAPS OR WITH 1/4 IN. (6 MM) DIAM BY MIN 1-1/2 IN. (38 MM) LONG STEEL TOGGLE BOLTS IN CONJUNCTION WITH MIN 1-1/4 IN. (32 MM) DIAM STEEL FENDER WASHERS. MIN OF TWO, THREE OR FOUR ANCHOR STRAPS OR ANCHOR BOLTS, SYMMETRICALLY LOCATED. FOR NOM 2 IN. (51 MM) DIAM (AND SMALLER), NOM 3 IN. (76 MM) DIAM AND NOM 4 IN. (102 MM) DIAM PIPES, RESPECTIVELY.

3M COMPANY — ULTRA PPD 1.5, 2.0, 3.0 AND 4.0

4. **FILL, VOID OR CAVITY MATERIALS** — CAULK, SEALANT OR PUTTY

PUTTY — (OPTIONAL, NOT SHOWN) — GENEROUS BEAD OF CAULK OR PUTTY MAY BE APPLIED TO OUTER PERIMETER OF COLLAR AT ITS INTERFACE WITH WALL SURFACES.

3M COMPANY — CP 25WB+ CAULK, MP+ STIX PUTTY, IC 15WB+ CAULK, FIREDAM 150+ CAULK OR FB-3000 WT SEALANT. (NOTE: CP 25WB+ AND FIREDAM 150+ NOT SUITABLE FOR USE WITH CPVC PIPES.)

*BEARING THE UL CLASSIFICATION MARKING

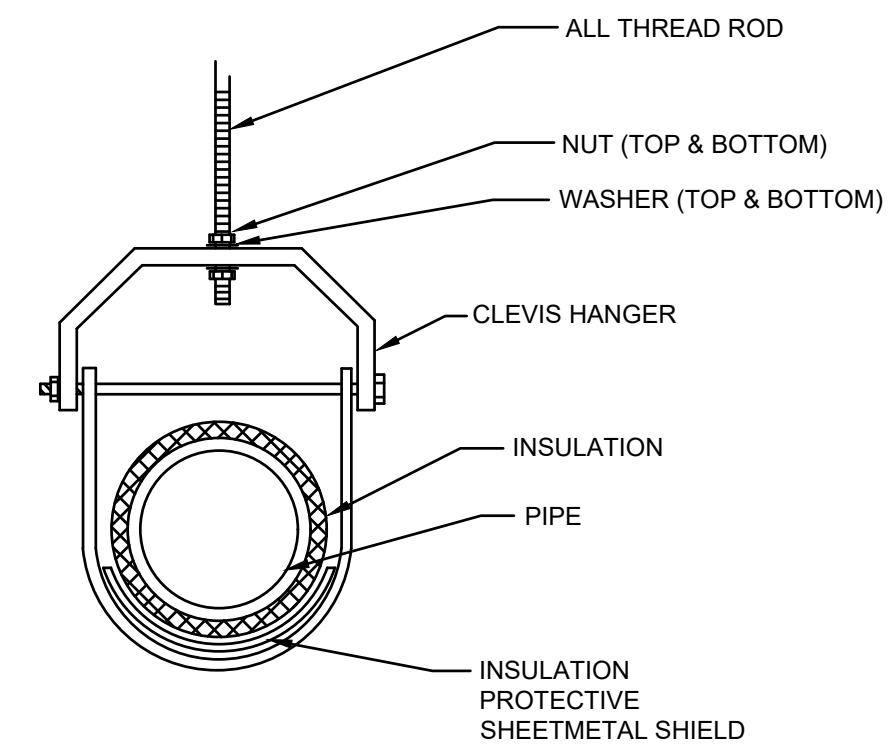
**BEARING THE UL LISTING MARK

NON-METALLIC PIPING THRU GYPSUM WALLBOARD
NOTE: DO NOT USE CP25WB OR FIREDAM 150 MATERIALS WITH CPVC PIPE.

NON-METALLIC PIPE PENETRATION DETAIL (4" AND SMALLER)

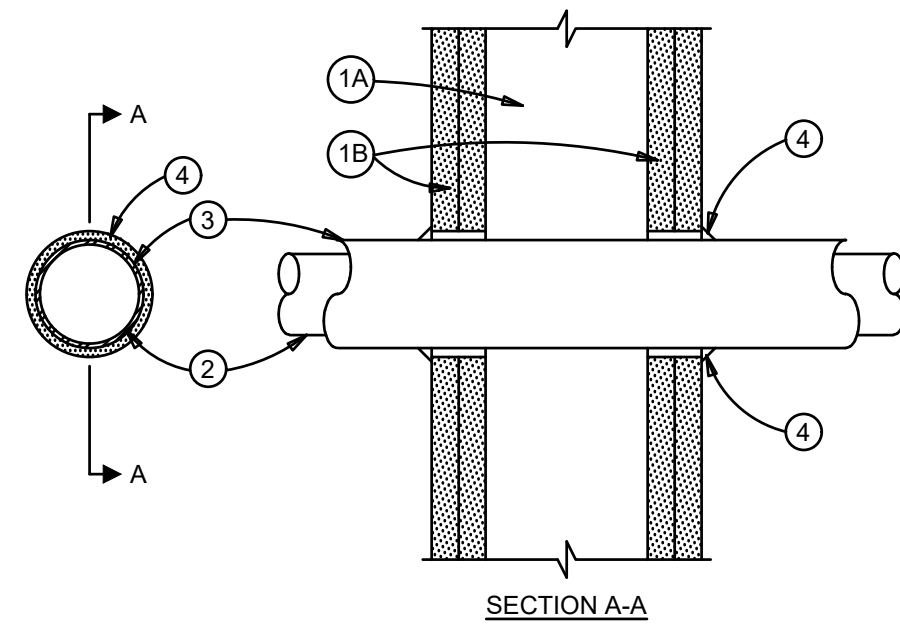
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PIPE HANGER SCHEDULE		
TYPE OF PIPE	SIZE OF PIPE	HANGER SPACING
STEEL THREADED PIPE	3/4" SIZE & SMALLER 1" SIZE & LARGER	10 FT. INTERVALS 12 FT. INTERVALS
COPPER TUBE	1-1/4" SIZE & SMALLER 1-1/2" SIZE & LARGER	6 FT. INTERVALS 10 FT. INTERVALS
PLASTIC PIPE	ALL SIZES	4 FT. INTERVALS PROVIDE SUPPORTS AT END OF ALL BRANCHES AND AT ALL CHANGES OF DIRECTION & ELEVATION
CAST IRON PIPE	ALL SIZES	MINIMUM OF 1 HANGER PER PIPE LENGTH LOCATED WITHIN 18" OF EACH JOINT (UP TO 10 FT. MAXIMUM), AT CHANGES IN DIRECTION AND AT BRANCH CONNECTIONS.



TYPICAL CLEVIS HANGER DETAIL

NO SCALE



SYSTEM NO. WL5039
F RATINGS - 1, AND 2 HR. (SEE ITEM 4) T RATINGS - 1, AND 1-1/2 HR. (SEE ITEM 4)

- 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 OR PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
 - STUDS — WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS (MAX 2 HR FIRE RATED ASSEMBLIES) OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. OC WITH NOM 2 BY 4 IN. LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE BY 1-3/8 IN. DEEP CHANNELS SPACED MAX 24 IN. OC.
 - WALLBOARD, GYPSUM* — NOM 1/2 OR 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 IN WALLBOARD LAYERS IS 8-1/2 IN.
- METAL PIPE — NOM. 4 IN. DIAMETER (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE OR TYPE L (OR HEAVIER) COPPER TUBE. ONE PIPE TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. PIPE TO BE RIGIDLY SUPPORTED ON THE BOTH SIDERS OF WALL ASSEMBLY.
- 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-SERVICE JACKET. LONGITUDINAL JOINTS SEALED WITH METAL FASTENERS OR FACTORY-APPLIED SELF-SEAMING LAP TAPE. TRANSVERSE JOINTS SECURED WITH METAL FASTENERS OR WITH BUTT STRIP TAPE SUPPLIED WITH PRODUCT. THE ANNULAR SPACE BETWEEN THE INSULATED PIPE AND THE EDGE OF THE THROUGH OPENING SHALL BE A MIN. 0 TO MAX. 1-1/4 IN.

SEE PIPE AND EQUIPMENT COVERING-MATERIALS*(BRGU) CATEGORY IN BUILDING MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS. ANY PIPE COVERING MATERIAL MEETING THE ABOVE SPECIFICATIONS AND BEARING THE UL CLASSIFICATION MARKING WITH FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS MAY BE USED.
- FILL, VOID OR CAVITY MATERIAL* — CAULK — INSTALLED TO FILL ANNULAR SPACE THROUGHOUT THICKNESS OF GYPSUM WALLBOARD LAYERS, FLUSH WITH EACH SURFACE OF WALL. A MIN. 1/2 IN. DIAM BEAD OF CAULK SHALL BE APPLIED TO THE PIPE INSULATION/WALLBOARD INTERFACE AT THE POINT CONTACT LOCATION ON BOTH SIDERS OF WALL. THE HOURLY F AND T RATINGS OF THE FIRESTOP SYSTEM ARE 1 HR WHEN INSTALLED IN A 1 HR FIRE RATED WALL. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS 2 HR WHEN INSTALLED IN A 2 HR FIRE RATED WALL. WHEN INSTALLED IN A 2 HR FIRE RATED WALL, T RATING IS 1 HR WHEN COPPER TUBE IS USED AND 1-1/2 HR WHEN STEEL PIPE IS USED.

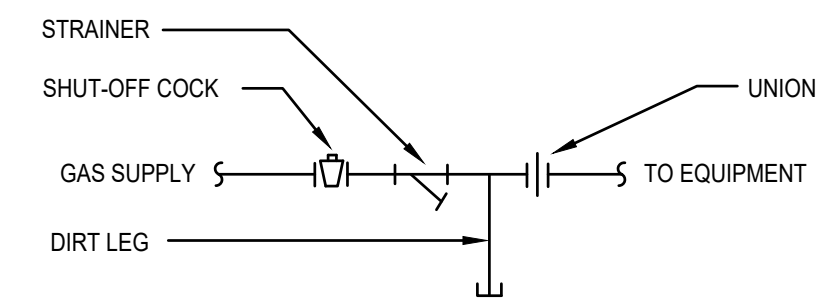
MINNESOTA MINING & MFG. CO. - TYPE MPS-2+

* BEARING THE UL CLASSIFICATION MARKING.

INSULATED COPPER PIPING THRU GYPSUM WALLBOARD

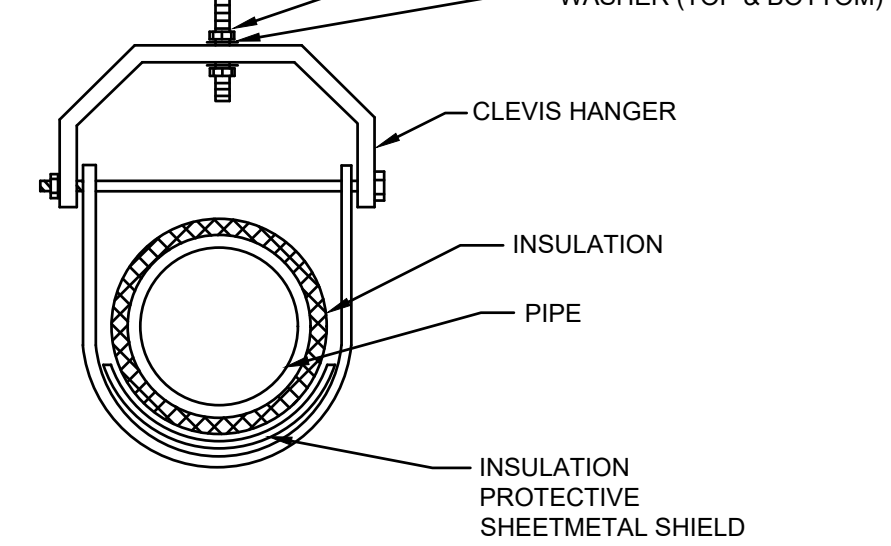
COPPER PIPING PENETRATION DETAIL

NO SCALE



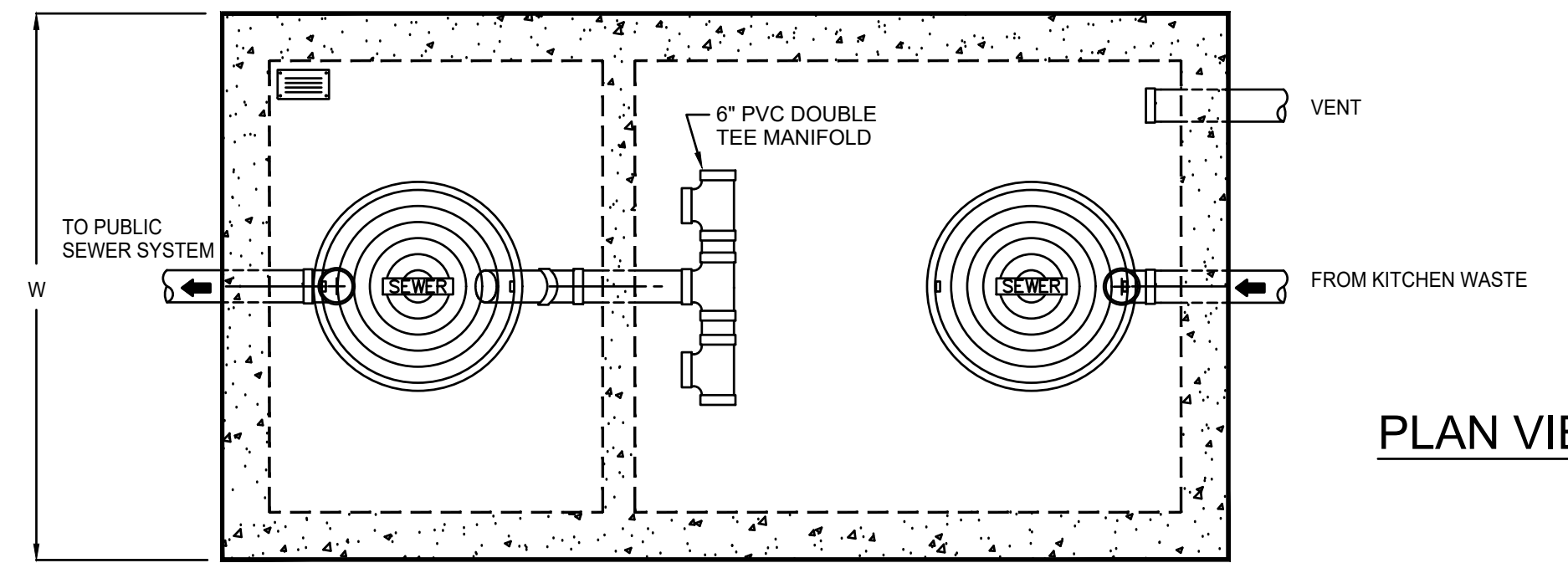
LOW PRESSURE GAS CONNECTION DETAIL

NOT TO SCALE

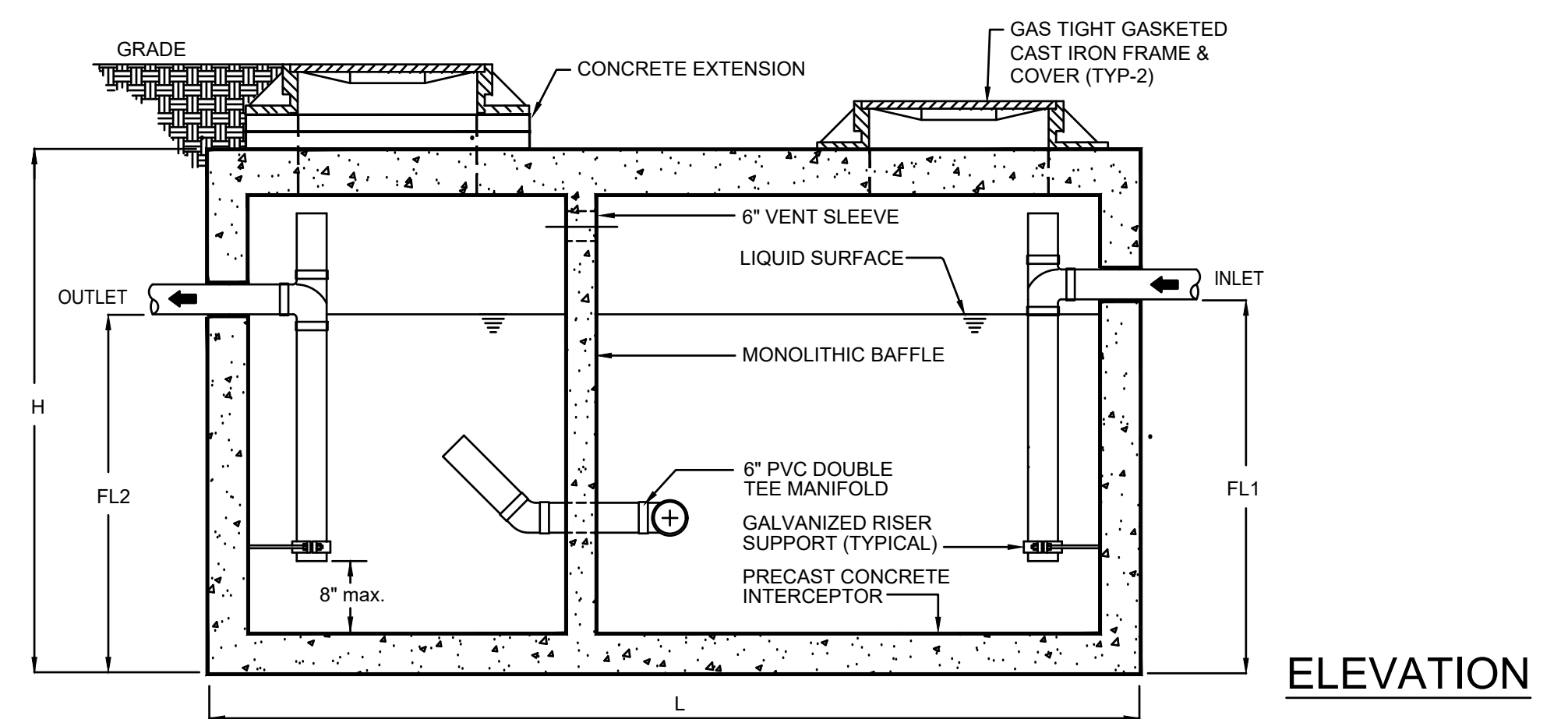


MEDIUM PRESSURE GAS CONNECTION DETAIL

NOT TO SCALE



PLAN VIEW



ELEVATION

Specifications

CONCRETE :

CLASS 1 CONCRETE WITH DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR. FIRST STAGE OF WALL AND BAFFLE WITH SECTIONAL RISER TO REQUIRED DEPTH. (MONOLITHIC BAFFLE REQUIRED, SLIDE-IN TYPE IS NOT ACCEPTABLE)

REINFORCEMENT:

GRADE 60 REINFORCED WITH STEEL REBAR CONFORMING TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.

C.I. CASTINGS:

MANHOLE FRAMES, COVERS OR GRATES ARE MANUFACTURED OF GREY CAST IRON CONFORMING TO ASTM A48-76 CLASS 30. COVERS SHALL BE GASKETED GAS TIGHT. MANHOLE SHALL BE NOMINAL 24 INCH DIAMETER AND BE TRAFFIC DUTY.

ENGINEERING DATA:

SHOP DRAWINGS SHALL INCLUDE COMPLETE STRUCTURAL & BOUANCY CALCULATIONS CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER.

GREASE INTERCEPTOR SCHEDULE									
MODEL NO.	CAPACITY USGal	GREASE CAP. (LBS)	EMPTY WT (LBS)	LENGTH L	WIDTH W	HEIGHT H	INLET FL1	OUTLET FL2	
GT-500	500	1,200	7,000	7'-10"	4'-4"	4'-6"	3'-3"	3'-0"	
GT-750	750	1,700	10,000	7'-10"	4'-4"	6'-0"	4'-5"	4'-2"	
GT-1000	1,000	2,300	13,200	8'-8"	5'-0"	6'-0"	4'-9"	4'-6"	
GT-1250	1,250	2,900	15,500	9'-2"	5'-8"	6'-0"	4'-9"	4'-6"	
GT-1500	1,500	3,500	20,000	9'-2"	5'-8"	7'-0"	5'-9"	5'-6"	
GT-2000	2,000	4,600	24,000	13'-0"	7'-0"	6'-0"	4'-7"	4'-4"	
GT-2500	2,500	5,700	27,000	13'-0"	7'-0"	7'-0"	5'-9"	5'-6"	
GT-3000	3,000	6,900	30,000	13'-0"	7'-0"	8'-0"	6'-9"	6'-6"	
GT-3500	3,500	8,000	33,000	13'-0"	7'-0"	8'-6"	7'-6"	7'-3"	
GT-4000	4,000	9,240	36,000	13'-0"	7'-0"	9'-6"	8'-6"	8'-3"	

NOTE: PROVIDE UPSTREAM AND DOWNSTREAM EXTERIOR GRADE CLEANOUTS FOR MAINTENANCE AND SAMPLING.

PRE-CAST CONCRETE GREASE INTERCEPTOR DETAIL

NOT TO SCALE

THIS DRAWING IS THE PROPERTY OF GENESIS ENGINEERING GROUP, INC. ANY REPRODUCTION OR TRANSMISSION OF THIS DRAWING WITHOUT THE WRITTEN PERMISSION OF GENESIS ENGINEERING GROUP, INC. IS STRICTLY PROHIBITED. GENESIS ENGINEERING GROUP, INC. IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS IN THIS DRAWING. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. GENESIS ENGINEERING GROUP, INC. IS NOT RESPONSIBLE FOR ANY DAMAGE TO PERSONS OR PROPERTY ARISING FROM THE USE OF THIS DRAWING. GENESIS ENGINEERING GROUP, INC. IS NOT RESPONSIBLE FOR ANY CONSTRUCTION COSTS OR DELAYS ARISING FROM THE USE OF THIS DRAWING. GENESIS ENGINEERING GROUP, INC. IS NOT RESPONSIBLE FOR ANY CONSTRUCTION DEFECTS ARISING FROM THE USE OF THIS DRAWING. GENESIS ENGINEERING GROUP, INC. IS NOT RESPONSIBLE FOR ANY CONSTRUCTION ACCIDENTS ARISING FROM THE USE OF THIS DRAWING. GENESIS ENGINEERING GROUP, INC. 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61G15 FAC COMPLIANCE NOTES

NOTE: THESE DOCUMENTS ARE PERFORMANCE CRITERIA DOCUMENTS INTENDED TO CONVEY DESIGN INTENT OF THE ENGINEER OF RECORD IN ACCORDANCE WITH FLORIDA ADMINISTRATIVE CODE 61G15-32. THE DESIGN OF THE FIRE SUPPRESSION SYSTEM SHALL BE BY THE SPRINKLER CONTRACTOR AS OUTLINED BY STATE ORDINANCES. SYSTEM DESIGN SHALL BE COORDINATED WITH OTHER TRADES, BUILDING STRUCTURE, ETC AND SHALL BE SUBMITTED FOR PERMIT AND FIRE MARSHAL APPROVAL. PREPARE AND SUBMIT FIRE SPRINKLER LAYOUT DRAWINGS AND CALCULATIONS IN ACCORDANCE WITH NFPA 13, PREVAILING CODES AND FAC 61G15-32.

61G15-32.003

(1) SCOPE OF WORK:

PROVIDE AUTOMATIC FIRE SUPPRESSION SYSTEMS FOR COMPLETE PROTECTION OF A RENOVATED KITCHEN IN A SINGLE STORY CLUBHOUSE BUILDING.

(2) ACCEPTANCE TEST CRITERIA:

SHALL BE PERFORMED IN ACCORDANCE WITH NFPA-13 (2013), CHAPTER 24 AND AS REQUIRED BY THE AHJ. CONTRACTOR SHALL:

ABOVEGROUND:

- NOTIFY AHJ AND OWNER OF THE TIME AND DATE THAT TESTING WILL BE PERFORMED.
- PERFORM HYDROSTATIC TEST AT 200 PSI FOR 2 HOURS MINIMUM WITHOUT PRESSURE LOSS. ANY TEST BLANKS REQUIRED FOR HYDROSTATIC TESTING OF PORTIONS OF THE SYSTEM SHALL BE REMOVED AFTER COMPLETION OF TESTING. BLANKS SHALL BE NUMBERED AND THE CONTRACTOR SHALL HAVE A RECORD KEEPING METHOD ENSURING THEIR REMOVAL AFTER WORK IS COMPLETED.
- PERFORM WATER FLOW TEST OF WATER FLOW DETECTING DEVICES, INCLUDING THE ASSOCIATED ALARM CIRCUIT, THROUGH THE INSPECTOR'S TEST CONNECTION.
- PERFORM OPERATIONAL TEST OF CONTROL VALVES, INCLUDING THE ASSOCIATED TAMPER SWITCH ALARM CIRCUIT.
- PERFORM MAIN DRAIN VALVE TEST. RECORD STATIC AND RESIDUAL PRESSURE ON CONTRACTOR'S MATERIAL AND TEST CERTIFICATE.
- PERFORM BACKFLOW PREVENTER FORWARD FLOW TEST. THE MINIMUM FLOW RATE SHALL BE THE SYSTEM DEMAND.
- COMPLETE AND SIGN CONTRACTOR'S MATERIAL AND TEST CERTIFICATE AND PROVIDE AHJ AND OWNER WITH COPIES.
- REMOVE ALL CAPS AND STRAPS PRIOR TO PLACING THE SPRINKLER SYSTEM IN SERVICE.

UNDERGROUND:

- NOTIFY AHJ AND OWNER OF THE TIME AND DATE THAT TESTING WILL BE PERFORMED.
- FLUSH WATER PIPING FROM THE WATER SUPPLY TO THE SYSTEM RISER IN ACCORDANCE WITH NFPA 24, 10.10.2.1. LEAD-IN CONNECTIONS TO THE SYSTEM RISER SHALL BE COMPLETELY FLUSHED BEFORE THE CONNECTION IS MADE TO DOWNSTREAM FIRE PROTECTION PIPINGS.
- ALL PIPING AND ATTACHED APPURTENANCES SUBJECT TO SYSTEM WORKING PRESSURE SHALL BE HYDROSTATICALLY TESTED AT 200 PSI OR 50 PSI IN EXCESS OF THE SYSTEM WORKING PRESSURE, WHICHEVER IS GREATER, AND SHALL MAINTAIN THAT PRESSURE AT -- SPRI FOR 2 HOURS. PRESSURE DROP SHALL BE DETERMINED BY A DROP-IN GAUGE PRESSURE OR VISUAL LEAKAGE. THE TEST PRESSURE SHALL BE READ FROM ONE OF THE FOLLOWING, LOCATED AT THE LOWEST ELEVATION OF THE SYSTEM OR THE PORTION OF THE SYSTEM BEING TESTED:
 - A GAUGE LOCATED AT ONE OF THE HYDRANT OUTLETS.
 - A GAUGE LOCATED AT THE LOWEST POINT WHERE NO HYDRANTS ARE PROVIDED.

THE TRENCH SHALL BE BACKFILLED BETWEEN JOINTS BEFORE TESTING TO PREVENT MOVEMENT OF PIPE.

WHERE ADDITIONAL WATER IS ADDED TO MAINTAIN THE REQUIRED TEST PRESSURE, THE AMOUNT OF WATER SHALL BE MEASURED AND SHALL NOT EXCEED THE LIMITS INDICATED IN NFPA 24, TABLE 10.10.2.2.6. IF QUANTITY OF WATER EXCEEDS INDICATED LIMITS, REPAIR LEAKING JOINTS AND RETEST AS NECESSARY UNTIL ALL SYSTEMS HAVE BEEN TESTED AND PASS ACCEPTANCE REQUIREMENTS.

- OPERATING TESTS SHALL BE PERFORMED IN ACCORDANCE WITH NFPA 24, 10.10.2.4. HYDRANTS SHALL BE FULLY OPENED AND CLOSED UNDER SYSTEM WORKING PRESSURE. ALL CONTROL VALVES SHALL BE FULLY CLOSED AND OPENED UNDER SYSTEM WORKING PRESSURE TO ENSURE PROPER OPERATION.
- COMPLETE AND SIGN CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING AND PROVIDE AHJ AND OWNER WITH COPIES.

(3) HAZARD CLASSIFICATION:

LIGHT HAZARD AT INDICATED LOCATIONS
ORDINARY HAZARD AT INDICATED LOCATIONS

(4) STANDARDS TO BE APPLIED:

6TH EDITION (2017) FLORIDA BUILDING CODE, 6TH EDITION (2017) FLORIDA FIRE PREVENTION CODE, NFPA-13 (2013 EDITION), NFPA-24 (2013 EDITION).

(5) STRUCTURAL SUPPORT AND STRUCTURAL OPENINGS:

THE FACILITY STRUCTURE HAS BEEN DESIGNED TO ACCOMMODATE THE SUPPORT OF THE FIRE SUPPRESSION SYSTEM. THE WORST CASE ANTICIPATED LOAD IS FOR SUSPENDED 4" WATER FILLED SCHEDULE 10 STEEL PIPE (11.79 LBS PER FOOT OF PIPE), PLUS 250 LBS WITH A MAXIMUM HANGER DISTANCE OF 15 FEET. CALCULATED WORST CASE LOAD AT HANGER CONNECTION IS 338.4 LBS.

(6) FIRE ALARM SYSTEM:

REFER TO ELECTRICAL DOCUMENTS FOR ALARMING REQUIREMENTS.

61G15-32.004 (2)

(A) POINT OF SERVICE:

THE FIRE PROTECTION SYSTEM IS SERVED BY AN EXISTING FIRE MAIN CONNECTED TO THE MUNICIPAL WATER SUPPLY. SEE CIVIL DRAWINGS.

(B) APPLICABLE NFPA STANDARDS TO BE APPLIED:

NFPA-13 (2013 EDITION), NFPA 24 (2013 EDITION), NFPA 101 LIFE SAFETY CODE - FLORIDA SPECIFIC EDITION (2015)

(C) CLASSIFICATION OF HAZARD OCCUPANCY FOR EACH ROOM OR AREA:

LIGHT HAZARD: SEE PLANS FOR LOCATIONS
ORDINARY HAZARD: SEE PLANS FOR LOCATIONS

(D) DESIGN APPROACH:

LIGHT HAZARD:

PROVIDE COMPLETE SPRINKLER COVERAGE IN INDICATED AREAS WITH QUICK RESPONSE STANDARD SPRAY SPRINKLERS. SPRINKLERS IN LIGHT HAZARD AREAS SHALL NOT EXCEED 225 SqFt SPACING. SYSTEM DESIGN SHALL UTILIZE DENSITY/AREA METHOD WITH MINIMUM .10 GPM/SQ. FT. OVER THE MOST HYDRAULICALLY REMOTE 1500 SQ. FT.

ORDINARY HAZARD:

PROVIDE COMPLETE SPRINKLER COVERAGE IN INDICATED AREAS WITH QUICK RESPONSE STANDARD SPRAY SPRINKLERS. SPRINKLERS IN ORDINARY HAZARD AREAS SHALL NOT EXCEED 130 SqFt SPACING. SYSTEM DESIGN SHALL UTILIZE DENSITY/AREA METHOD WITH MINIMUM .20 GPM/SQ. FT. OVER THE MOST HYDRAULICALLY REMOTE 1500 SQ. FT.

(E) QUALITY AND PERFORMANCE SPECIFICATIONS OF ALL YARD AND INTERIOR FIRE PROTECTION COMPONENTS:

ALL FIRE PROTECTION EQUIPMENT SHALL BE UL LISTED AND/OR FM APPROVED.

FIRE PROTECTION LEGEND

SYMBOL	DESCRIPTION
	- CONTROL VALVE W/TAMPER SWITCH
	- CHECK VALVE
	- FLOW SWITCH
	- FIRE DEPARTMENT CONNECTION
	- POST INDICATOR VALVE W/TAMPER SWITCH
	- STANDPIPE WITH FIRE DEPARTMENT VALVE
	- SPRINKLER AND DRAIN RISER
	- BACKFLOW PREVENTOR W/TAMPER SWITCHES
	- ROOF MANIFOLD
	- SPRINKLER SYSTEM PIPING
	- FIRE MAIN PIPING
	- FLUSHING CONNECTION
	- REVISION REFERENCE
	- POINT OF DEMOLITION EXTENTS
	- POINT OF CONNECTION TO EXISTING
	- ENLARGED PLAN REFERENCE: TOP-PLAN#, BOTTOM-DRAWING# SHOWN ON

FIRE PROTECTION DESIGN CRITERIA

THE FOLLOWING PUBLICATIONS SHALL BE USED AS A REFERENCE FOR DESIGN OF THE FIRE SUPPRESSION SYSTEM(S) ON THIS PROJECT.

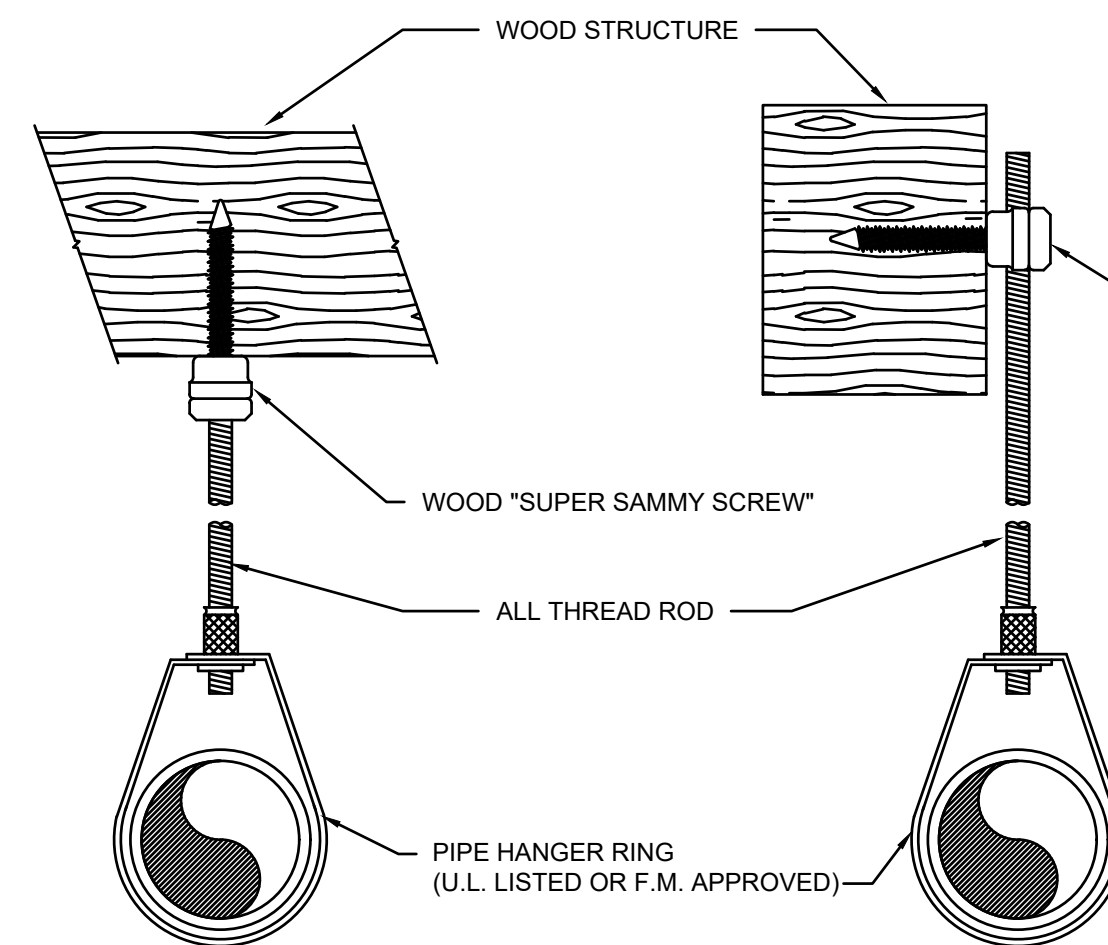
- FLORIDA FIRE PREVENTION CODE - 6TH EDITION (2017)
- FLORIDA ADMINISTRATIVE CODE 61G15-32
- FLORIDA BUILDING CODE - 6TH EDITION (2017)
- NFPA 13, INSTALLATION OF SPRINKLER SYSTEMS - 2013 EDITION
- NFPA 24, PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES - 2013 EDITION
- NFPA 101, LIFE SAFETY CODE - FLORIDA SPECIFIC - 2015 EDITION
- OWNER'S INSURANCE UNDERWRITER REQUIREMENTS

ENTIRE BUILDING (EXCEPT AS NOTED):

OCCUPANCY CLASSIFICATION: LIGHT HAZARD
SYSTEM TYPE: WET PIPE
DESIGN DENSITY: 0.10 GPM/SQ. FT.
HYDRAULIC REMOTE AREA: 1,500 SQ. FT.
SPRINKLER ORIFICE SIZE: 1/2"
DURATION OF SUPPLY: 30 MIN.
MAXIMUM COVERAGE/SPRINKLER HEAD: 225 SQ. FT.
HOSE STREAM ALLOWANCE: 100 GPM

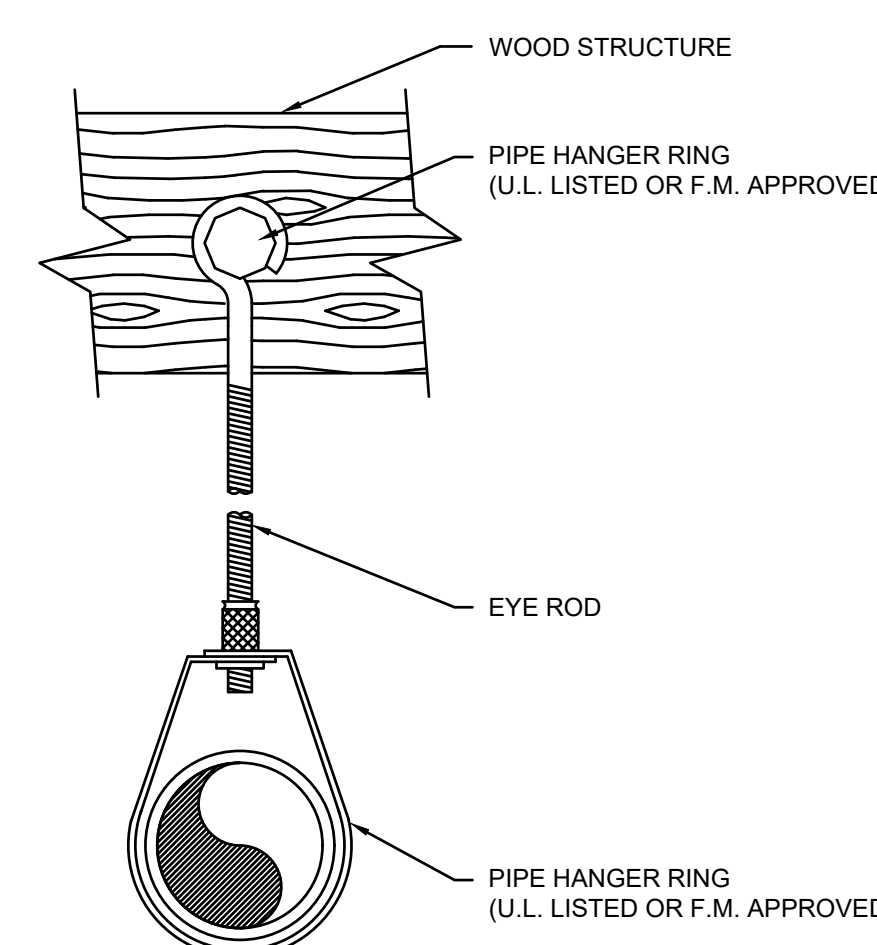
STORAGE, MECHANICAL, ELECTRICAL ROOMS AND SIMILAR AREAS:

OCCUPANCY CLASSIFICATION: ORDINARY HAZARD GROUP I
SYSTEM TYPE: WET PIPE
DESIGN DENSITY: 0.15 GPM/SQ. FT.
HYDRAULIC REMOTE AREA: 1,500 SQ. FT.
SPRINKLER ORIFICE SIZE: 1/2"
DURATION OF SUPPLY: 60 - 90 MIN.
MAXIMUM COVERAGE/SPRINKLER HEAD: 130 SQ. FT.
HOSE STREAM ALLOWANCE: 250 GPM



HANGER DETAIL - WOOD INSERT

NO SCALE



HANGER DETAIL - WOOD

NO SCALE

FIRE PROTECTION GENERAL NOTES

- THE FIRE PROTECTION SYSTEMS SHALL COMPLY WITH THE ABOVE REFERENCED NFPA STANDARDS AND THE STATE OF FLORIDA FIRE PREVENTION CODE.
 - FINAL SYSTEM ACCEPTANCE AND APPROVAL SHALL BE CONDUCTED BY LOCAL FIRE MARSHAL AND ARCHITECT/ENGINEER.
 - CONTRACTOR'S SPRINKLER SYSTEM LAYOUT (SHOP DRAWINGS), HYDRAULIC CALCULATIONS AND MATERIAL DATA SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER AND THE AUTHORITIES HAVING JURISDICTION FOR REVIEW AND APPROVAL PRIOR TO SYSTEM INSTALLATION.
 - THE FIRE PROTECTION SYSTEM DESIGN SHALL BE A DELEGATED DESIGN IN ACCORDANCE WITH FAC 61G15-32. SEE 61G15-32 COMPLIANCE NOTES.
 - SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR CEILING TYPES, HEIGHTS AND ALL ASSOCIATED DATA.
 - PROVIDE FIRE UL LISTED STOP ASSEMBLIES FOR ALL PENETRATIONS OF SMOKE/FIRE WALLS, CEILINGS AND FLOORS. FIRE STOP ASSEMBLIES SHALL MEET ASTM E-814. MATERIALS USED WITH CPVC PIPING SHALL BE SPECIFICALLY LISTED FOR USE WITH CPVC BY THE MANUFACTURER.
 - ALL DRAIN AND DRY PIPE SYSTEM PIPING AND FITTINGS SHALL BE GALVANIZED BOTH INSIDE AND OUTSIDE.
 - INSTALL ADDITIONAL SPRINKLERS UNDER ALL EXPOSED DUCTWORK OR OBSTRUCTIONS EXCEEDING 48" IN WIDTH. PROVIDE ADDITIONAL SPRINKLERS AS REQUIRED FOR PROPER COVERAGE OF OBSTRUCTIONS IN ACCORDANCE WITH APPLICABLE NFPA CRITERIA.
 - ALL SPRINKLER HEADS INSTALLED WITHIN MECHANICAL ROOMS, STORAGE ROOMS, JANITORS CLOSETS OR AREAS SUBJECT TO MECHANICAL INJURY SHALL BE PROTECTED WITH LISTED GUARDS.
 - COORDINATE PIPE ROUTING WITH DUCT ROUTING, EQUIPMENT LOCATIONS, ELECTRICAL INSTALLATIONS AND BUILDING STRUCTURAL MEMBERS. DO NOT ROUTE PIPING OVER ELECTRICAL PANELS. PIPING ROUTED OVER ELECTRICAL PANELS SHALL BE REROUTED AT NO ADDITIONAL COST.
 - PROVIDE TAMPER SWITCHES ON ALL CONTROL VALVES.
 - SLOPE ALL PIPING TO THE SYSTEM MAIN DRAIN AS REQUIRED TO INSURE PROPER DRAINAGE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT ALL PIPING IS DRAINABLE. ADDITIONAL DRAINS AND PIPING SHALL BE INSTALLED WHERE REQUIRED TO COMPLY WITH THE ABOVE REFERENCED CODES.
 - ALL ROLL GROOVED AND CUT GROOVED COUPLINGS AND FITTINGS SHALL BE PROVIDED BY A SINGLE MANUFACTURER.
 - SPRINKLERS SHALL BE CENTERED IN CEILING TILES IN AREAS WITH LAY-IN TILES AND VISUALLY ALIGNED IN AREAS WITH SMOOTH CEILINGS.
 - THIS BUILDINGS STRUCTURAL SYSTEM HAS BEEN DESIGNED TO SUPPORT THE ADDITIONAL WEIGHT ASSOCIATED WITH THE SPRINKLER SYSTEM.
 - PROVIDE A PERMANENTLY ATTACHED NAME TAG TO THE RISER OR FLOOR CONTROL VALVE STATING THE REQUIRED DESIGN CRITERIA FOR EACH HYDRAULICALLY DESIGNED SYSTEM AND AREA SERVED.
 - COORDINATE PIPING WITH ALL ELECTRICAL EQUIPMENT (PANELS, TRANSFORMERS, ETC.) PRIOR TO ANY INSTALLATION. DO NOT ROUTE ANY PIPING OVER ANY ELECTRICAL PANELS UNDER ANY CIRCUMSTANCES. ANY PIPING RUN OVER PANELS SHALL BE REROUTED AT NO ADDITIONAL COST.
 - CPVC (BLAZEMASTER) PIPING SYSTEMS SHALL BE ALLOWED IN LIGHT HAZARD AREAS AS ALLOWED BY CODE UNLESS OTHERWISE NOTED IN THESE DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL VERIFY PIPING SYSTEM PRESSURES ARE WITHIN THE ALLOWABLE TOLERANCES FOR CPVC PIPING.
 - THROUGH PENETRATIONS OF FIRE RESISTANCE RATED HORIZONTAL ASSEMBLIES SHALL BE PROTECTED BY AN APPROVED THROUGH-PENETRATION FIRESTOP SYSTEM INSTALLED AND TESTED IN ACCORDANCE WITH ASTM E 814 OR UL 1479. WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER (2.49 PA). THE SYSTEM SHALL HAVE AN F RATING/RATING OF NOT LESS THAN 1 HOUR BUT NOT LESS THAN THE REQUIRED RATING OF THE FLOOR PENETRATED. SEE ARCHITECTURAL DRAWINGS FOR RATED ASSEMBLY LOCATIONS, RATINGS AND DETAILS.
- EXCEPTIONS:
A. FLOOR PENETRATIONS CONTAINED AND LOCATED WITHIN THE CAVITY OF A WALL ABOVE THE FLOOR OR BELOW THE FLOOR DO NOT REQUIRE A T RATING.

FIRE SPRINKLER SCHEDULE

SYMBOL	ORF	TEMP	RESPONSE	K-FAC	FINISH	MODEL	STYLE	TRIM	MFG.
	1/2"	155°	QUICK	6.9	WHITE	V3426	RESIDENTIAL - PENDENT - SEMI-RECESSED	WHITE	VICTAULIC
	1/2"	155°	QUICK	5.6	WHITE	V2710	HORIZONTAL SIDEWALL - SEMI-RECESSED	WHITE	VICTAULIC
	1/2"	155°	QUICK	5.6	BRASS	V2704	UPRIGHT	N/A	VICTAULIC
	1/2"	155°	QUICK	5.6	WHITE	V3606	DRY PENDENT - SEMI-RECESSED	WHITE	VICTAULIC
	1/2"	155°	QUICK	5.6	WHITE	V2708	PENDENT - SEMI-RECESSED	WHITE	VICTAULIC
	1/2"	155°	QUICK	5.6	BRASS	V3802	PENDENT - CONCEALED	WHITE	VICTAULIC
	1/2"	155°	QUICK	5.6	WHITE	V3610	HORIZ. DRY SIDEWALL - SEMI-RECESSED	WHITE	VICTAULIC

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REVISIONS
REVIEWED & ACCEPTED BY: (DATE)

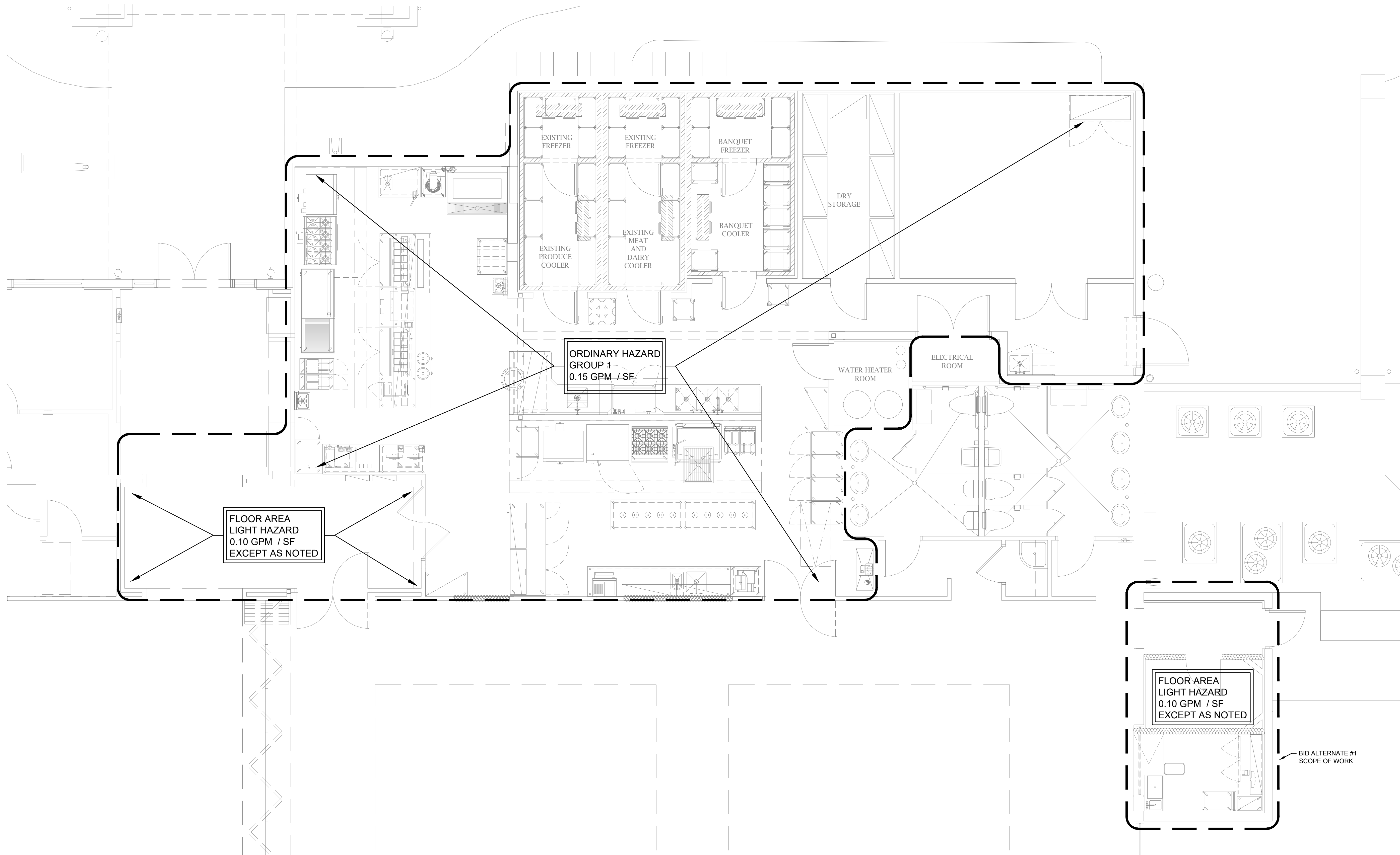
ADDITIONS & ALTERATIONS TO:
SUN 'N LAKE GOLF CLUB
SEBRING, FLORIDA

DATE
08/10/2018

CS17028

SHEET NO.

FP-0

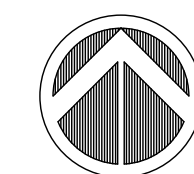


FLOOR AREA
LIGHT HAZARD
0.10 GPM / SF
EXCEPT AS NOTED

ORDINARY HAZARD
GROUP 1
0.15 GPM / SF

FLOOR AREA
LIGHT HAZARD
0.10 GPM / SF
EXCEPT AS NOTED

BID ALTERNATE #1
SCOPE OF WORK



PROPOSED FIRE PROTECTION FLOOR PLAN
Scale: 1/4" = 1'-0"

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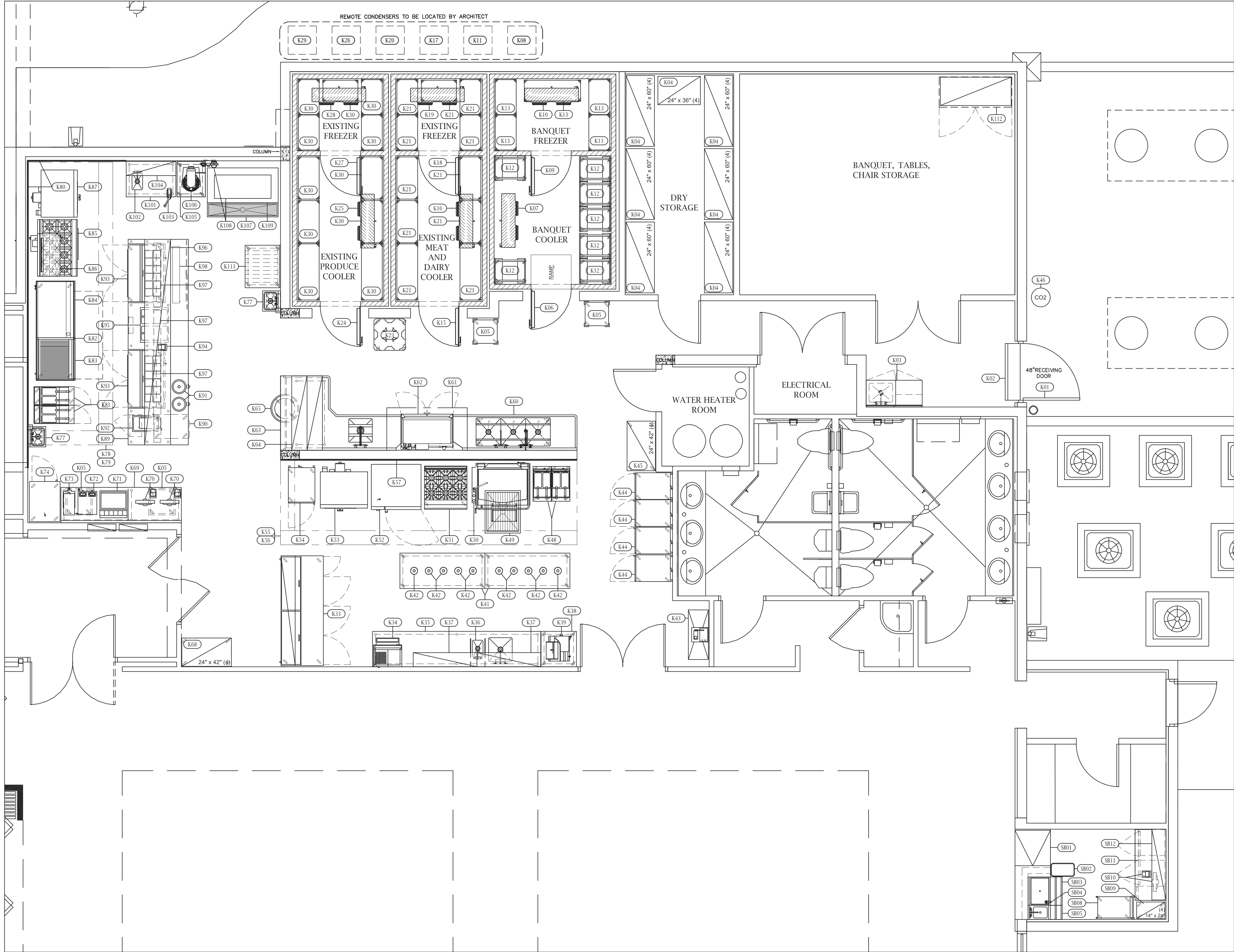
REVISIONS	REVIEWED & ACCEPTED BY: (DATE)

ADDITIONS & ALTERATIONS
TO:
SUN 'N LAKE GOLF CLUB
SEBRING, FLORIDA

DATE
08/10/2018

CS17028

SHEET NO.
FP-3



SERVICE BAR EQUIPMENT SCHEDULE

ITEM #	QTY	EQUIPMENT LIST
SB01	1	SERVICE BAR WITH FLIP DOWN TOP
SB02	1	SLIM JIM TRASH CAN
SB03	1	EXTRA DEEP ICE BIN WITH DOUBLE SPEED RAIL
SB04	1	SODA GUN
SB05	1	HAND SINK WITH DOUBLE SPEED RAIL
SB06		SPARE NUMBER
SB07		SPARE NUMBER
SB08	1	THREE SHELF UTILITY CART
SB09	1	STORAGE SHELVING FOR GLASSES
SB10	1	POINT OF SALE
SB11	1	TWO DOOR BACK BAR COOLER
SB12	1LT	OVERSHELVES
SB13		SPARE NUMBER
SB14		SPARE NUMBER
SB15		SPARE NUMBER

KITCHEN EQUIPMENT SCHEDULE

ITEM #	QTY	EQUIPMENT LIST
K01	1	48" RECEIVING DOOR
K02	1	48" AIR CURTAIN FAN
K03	1	MOP CABINET WITH SINK AND CHEMICAL STORAGE
K04	1LT	DRY STORAGE SHELVING
K05	4	GLASS RACK DOLLIES
K06	1	BANQUET WALK-IN COOLER
K07	1	BANQUET WALK-IN COOLER EVAPORATOR COIL
K08	1	BANQUET WALK-IN COOLER REMOTE CONDENSING UNIT
K09	1	BANQUET WALK-IN FREEZER
K10	1	BANQUET WALK-IN FREEZER EVAPORATOR COIL
K11	1	BANQUET WALK-IN FREEZER REMOTE CONDENSING UNIT
K12	7	PAN RACKS
K13	1LT	BANQUET WALK-IN STORAGE SHELVING
K14		SPARE NUMBER
K15	1	MEAT AND DAIRY WALK-IN COOLER
K16	1	MEAT AND DAIRY WALK-IN COOLER EVAPORATOR COIL
K17	1	MEAT AND DAIRY WALK-IN COOLER REMOTE CONDENSING UNIT
K18	1	MEAT AND DAIRY WALK-IN FREEZER
K19	1	MEAT AND DAIRY WALK-IN FREEZER EVAPORATOR COIL
K20	1	MEAT AND DAIRY WALK-IN FREEZER REMOTE CONDENSING UNIT
K21	1LT	MEAT AND DAIRY WALK-IN STORAGE SHELVING
K22		SPARE NUMBER
K23	1	DISH DOLLY
K24	1	PRODUCE WALK-IN COOLER
K25	1	PRODUCE WALK-IN COOLER EVAPORATOR COIL
K26	1	PRODUCE WALK-IN COOLER REMOTE CONDENSING UNIT
K27	1	PRODUCE WALK-IN FREEZER
K28	1	PRODUCE WALK-IN FREEZER EVAPORATOR COIL
K29	1	PRODUCE WALK-IN FREEZER REMOTE CONDENSING UNIT
K30	1LT	PRODUCE WALK-IN STORAGE SHELVING
K31		SPARE NUMBER
K32		SPARE NUMBER
K33	1	PAN-TOP REFRIGERATOR WITH DOUBLE OVERSHELVES
K34	1	LETTUCE CRISPER
K35	1	S/S PREP TABLE WITH SINK AND UNDERSHELF
K36	1	BUILT-IN S/S HAND SINK
K37	2	S/S OVERSHELVES
K38	1	S/S SLICER TABLE WITH UNDERSHELF
K39	1	SLICER
K40		SPARE NUMBER
K41	2	S/S BANQUET PREP TABLES WITH UNDERSHELVES
K42	10	HEAT LAMPS
K43	1	BAG-N-BOX SODA SYSTEM
K44	4	HEATED CABINETS
K45	1	CLEAN DISH AND PAN STORAGE SHELVING
K46	1	CO2
K47		SPARE NUMBER
K48	2	FRYERS
K49	1	S/S FLOOR TROUGH
K50	1	TILT SKILLET (40 GAL)
K51	1	SIX BURNER RANGE WITH OVEN
K52	1	COMBI OVEN ON STAND
K53	1	DOUBLE DECK CONVECTION OVEN
K54	1	COOK AND HOLD SMOKER OVEN
K55	1	S/S EXHAUST HOOD
K56	1	FIRE SUPPRESSION SYSTEM
K57	1	S/S WALL FLASHING
K58		SPARE NUMBER
K59		SPARE NUMBER
K60	1	S/S CLEAN DISHTABLE W/ THREE COMPARTMENT SINK
K61	1	S/S CONDENSATE HOOD
K62	1	HIGH TEMP DISHWASHER
K63	1	S/S SOILED DISHTABLE WITH SINK
K64	1	S/S DOUBLE SIDED GLASS RACK OVERSHELF
K65	1	TRASH CAN
K66		SPARE NUMBER
K67		SPARE NUMBER
K68	1	STORAGE SHELVING
K69	1	S/S BEVERAGE COUNTER
K70	2	POINTS OF SALE
K71	1	SODA DISPENSER WITH ICE BIN
K72	1	COFFEE BREWER
K73	1	ICE TEA BREWER
K74	1	SINGLE SECTION REFRIGERATOR
K75		SPARE NUMBER
K76		SPARE NUMBER
K77	2	S/S HAND SINKS
K78	1	S/S EXHAUST HOOD
K79	1	FIRE SUPPRESSION SYSTEM
K80	1	S/S WALL FLASHING
K81	2	FRYERS
K82	1	REFRIGERATED EQUIPMENT STAND WITH DRAWERS
K83	1	36" CHARBROILER
K84	1	48" GRIDDLE
K85	1	EIGHT BURNER RANGE WITH OVEN
K86	1	SALAMANDER BROILER
K87	1	DOUBLE DECK CONVECTION OVEN
K88		SPARE NUMBER
K89	1	S/S CHEF'S COUNTER WITH PLATE STORAGE CABINET
K90	1	TWO DRAWER BREAD WARMER
K91	2	DROP-IN SOUP WARMERS
K92	1	FRY DUMP STATION WITH HEAT LAMP
K93	2	PAN-TOP REFRIGERATORS
K94	1	PRINTER
K95	1	DROP-IN HOT FOOD WELLS
K96	1	S/S DOUBLE OVERSHELF
K97	3	54" HEAT LAMPS
K98	1	48" HEAT LAMP
K99		SPARE NUMBER
K100		SPARE NUMBER
K101		S/S WORKTABLE
K102	1	BUILT-IN S/S HAND SINK
K103	1	CAN OPENER
K104	1	S/S OVERSHELF
K105	1	S/S MIXER TABLE WITH UNDERSHELF
K106	1	MIXER
K107	1	S/S FLOOR TROUGH
K108	1	ICE MACHINE
K109	1	ICE BIN
K110		SPARE NUMBER
K111	1	S/S WORKTABLE WITH TRAY STORAGE
K112	1	LOCKED LIQUOR STORAGE SHELVING
K113		SPARE NUMBER
K114		SPARE NUMBER
K115		SPARE NUMBER

LEGEND

- CONSULTANT ADDED WALL
- INSULATED PANEL WALL
- FULL WALL
- KNEE WALL
- WINDOW
- UNDER SHELF
- EXHAUST HOOD
- ITEM NUMBER
- FIRE EXTINGUISHER

ABBREVIATION LEGEND

LT	LOT	HW	HOT WATER
WB	WALL BACKING	CW	COLD WATER
JB	JUNCTION BOX	DW	DIRECT WASTE
PH	PHASE	IDW	INDIRECT WASTE
HP	HORSE POWER	N	NATURAL GAS
V	VOLTS	LP	PROPANE GAS
AMPS	AMPERAGE	W/	WITH
KW	KILOWATTS	S/S	STAINLESS STEEL

FOOD SERVICE EQUIPMENT PLAN

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

GENERAL NOTES

- THESE PLANS ARE PROVIDED BY FISHMAN & ASSOCIATES, INCORPORATED, AND ARE INTENDED TO IDENTIFY TO THE EQUIPMENT LAYOUT AND THE ROUGH-INS FOR THE ELECTRICAL, PLUMBING AND GAS REQUIREMENT FOR THE FOOD SERVICE EQUIPMENT. ROUGH-IN HEIGHTS SHOWN ARE FROM FINISHED FLOOR TO CENTER OF ROUGH-IN WHERE ROUGH-INS ARE SHOWN STUBBED OUT OF FLOOR, THE TOP OF THE ROUGH-IN SHALL NOT EXCEED 5" (INCHES). WHERE POSSIBLE, UTILITIES SHOULD NOT BE STUBBED OUT OF FLOOR. THE SYMBOL SIZES SHOWN IS NOT INTENDED TO REPRESENT THE ACTUAL SIZE OF THE UTILITY.
- THESE DRAWINGS ARE AS ACCURATE AS CAN BE DETERMINED AT THE TIME OF ISSUE. IT IS THE RESPONSIBILITY OF THE G.C., ALL TRADES AND FOOD SERVICE EQUIPMENT CONTRACTOR (FSEC) TO FIELD DIMENSION AND VERIFY ALL EQUIPMENT LOCATIONS AND ROUGH-INS. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND IN COMPLIANCE WITH HEALTH DEPARTMENT CODES.
- THE SIZE AND LOCATION OF THE GREASE TRAP, HOT WATER HEATER, ELECTRICAL PANEL(S) AND ANY ADDITIONAL FLOOR DRAINS NOT SHOWN ON THESE PLANS ARE TO BE DESIGNED BY THE ARCHITECT / ENGINEER AND SHALL BE SUPPLIED AND INSTALLED BY THE G.C.
- UTILITIES SHOWN ARE FOR THE FOOD SERVICE EQUIPMENT ONLY. ANY ADDITIONAL UTILITIES FOR OFFICES OR OTHER ROOMS ARE TO BE DESIGNED BY THE ARCHITECT / ENGINEER.
- ALL PENETRATIONS, CHASES AND CURBS, INCLUDING THE REQUIRED SLEEVES AND FINISHES ARE TO BE PROVIDED BY THE G.C. IN COORDINATION WITH THE FSEC.
- PRIOR TO FOOD SERVICE EQUIPMENT BEING DELIVERED TO THE JOB SITE, IT IS THE RESPONSIBILITY OF THE G.C. TO PROVIDE THE FOLLOWING:
 - ADEQUATE AND UNOBSTRUCTED ACCESS TO DESIGNATED AREAS.
 - TEMPORARY UTILITIES AND ADEQUATE LIGHTING.
 - FLOORS BROOM SWEEP.
 - CEILINGS COMPLETED INCLUDING LIGHT FIXTURES AND LAMPS INSTALLED.
 - ALL FINISHES ON WALLS, FLOORS AND CEILINGS COMPLETED WITH FINAL FINISHES CURED.
- IT IS THE RESPONSIBILITY OF THE G.C. TO ADVISE ALL TRADES INCLUDING THE FSEC OF ANY CONFLICTS BETWEEN FIELD CONDITIONS AND THESE PLANS.
- FOOD PREPARATION, DISHWASHING, STORAGE, REST ROOMS, AND BAR AREA FLOORS ARE TO BE: DURABLE, EASILY CLEANABLE AND PROVIDED WITH ACCEPTABLE COVERED BASE.
- CEILINGS AND WALLS ARE TO BE SMOOTH, NON-ABSORBENT, EASILY CLEANABLE AND LIGHT COLORED.
- IT IS THE RESPONSIBILITY OF EACH TRADE TO WORK FROM THE MOST CURRENT PLANS.
- IT IS THE RESPONSIBILITY OF THE G.C. TO PULL THE REQUIRED PERMITS AND TO PERFORM ALL WORK IN COMPLIANCE WITH ALL CODES.
- ALL HAND SINKS TO HAVE SOAP AND TOWEL DISPENSERS PROVIDED AND INSTALLED BY G.C.
- IT IS THE RESPONSIBILITY OF THE TRADES TO COORDINATE THE MECHANICAL REQUIREMENTS LAYOUT AND SCHEDULE WITH THE EQUIPMENT SPECIFICATIONS BOOKLET.
- WALL BACKING WHERE SPECIFIED IS TO BE SUPPLIED AND INSTALLED BY THE G.C. WITH COORDINATION BY THE FOOD SERVICE EQUIPMENT CONTRACTOR AS TO HEIGHTS AND SIZES.
- EXHAUST & CONDENSATE HOODS- ALL DUCTWORK, DUCT COLLARS, HANGING RODS, FANS & HOOD INSTALLATION ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR, UNLESS OTHERWISE STATED.
- ALL ROOF STANDS / SUPPORTS / SLEEVES FOR REFRIGERATION EQUIPMENT ARE TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
- IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO ORDER A TEST & BALANCE OF THE ENTIRE BUILDING INCLUDING THE KITCHEN EXHAUST HOODS AND FANS TO ENSURE PROPER AIRFLOW IN ALL AREAS.
- ALL GFT'S MUST BE OF HIGH QUALITY TO PREVENT SHUT DOWN OF EQUIPMENT.

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FOOD SERVICE EQUIPMENT PLAN
SUN 'N LAKE GOLF CLUB
5223 SUN 'N LAKE BOULEVARD
SEBRING, FL 33872

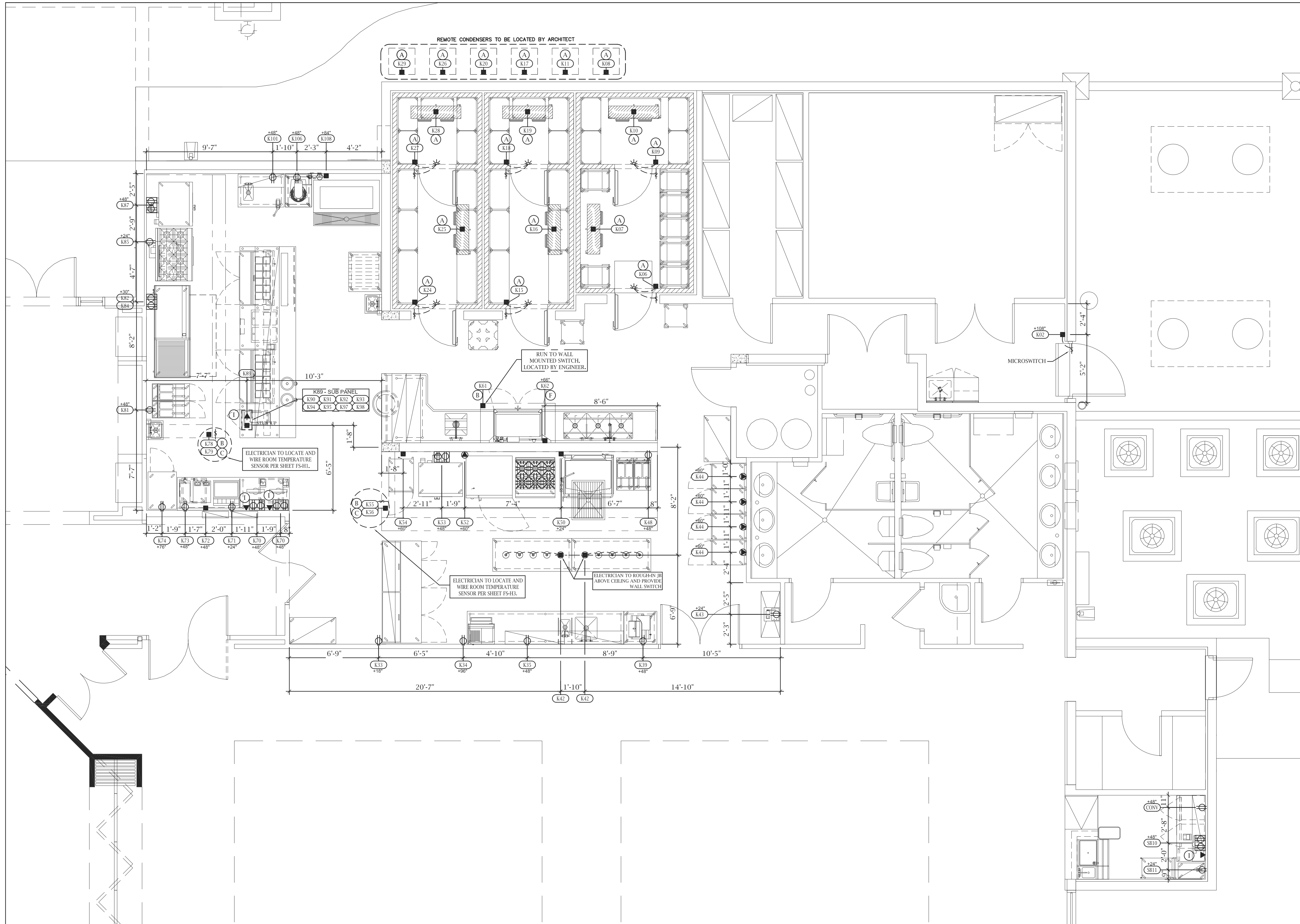
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JOB NUMBER 9849	DATE 07/23/18
FILE NAME Sun N Lake.dwg	

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ELECTRICAL GENERAL NOTES

- IT IS THE INTENT OF THIS PLAN TO INDICATE THE ROUGH-IN LOCATION FOR THE FOOD SERVICE EQUIPMENT ONLY. REFER TO THE A/E CONSTRUCTION DOCUMENTS FOR ADDITIONAL ELECTRICAL REQUIREMENTS.
- IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO CORRECTLY LOCATE THE ROUGH-INS AS INDICATED ON THIS PLAN AND TO ENSURE THAT THEY ARE IN COMPLIANCE WITH ALL CODES.
- ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL ROUGH-INS, INTER-CONNECTIONS AND FINAL CONNECTIONS TO THE FOOD SERVICE EQUIPMENT.
- ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING ALL ELECTRICAL ROUGH-INS, OUTLETS, SWITCHES, DISCONNECTS, CORDS AND PLUGS, AND OTHER SIMILAR ITEMS NECESSARY TO MAKE FOOD SERVICE EQUIPMENT OPERATIONAL.
- ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL ROOF AND REMOTE MOUNTED ELECTRICAL DEVICES REQUIRED TO COMPLY WITH ALL CODES AND TO MAKE FOOD SERVICE EQUIPMENT OPERATIONAL.
- ELECTRICAL CONTRACTOR IS TO PROVIDE ALL ROUGH-IN, INTER-CONTROL WIRING AND FINAL CONNECTIONS AS THEY RELATE TO WALK-IN AND REMOTE REFRIGERATION SYSTEM INCLUDING: LIGHTS, BLOWER COIL, DEFROST COIL, DRAIN LINE HEATER, DOOR HEATER AND COMPRESSORS.
- ELECTRICAL CONTRACTOR IS TO PROVIDE ALL ROUGH-IN, INTER-CONNECTIONS AND FINAL CONNECTIONS AND REQUIRED SWITCHES TO THE EXHAUST AND MAKE-UP FANS.
- ALL OUTLETS AND JUNCTION BOXES THAT ARE STUBBED OUT OF THE FLOOR ARE TO BE 5" TO THE TOP OF THE BOX. ALL OUTLETS ARE TO BE RUN HORIZONTAL, UNLESS CODE DICTATES OTHERWISE.
- ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE NEMA OUTLET CONFIGURATION TO MATCH APPLIANCE CORD AND PLUG. CORD AND PLUG TO BE PROVIDED BY ELECTRICAL CONTRACTOR, WHEN NOT PROVIDED BY FOOD SERVICE EQUIPMENT MANUFACTURER AND REQUIRED TO COMPLETE FINAL CONNECTION.
- ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR VERIFYING ROUGH-IN HEIGHTS AND LOCATION.
- ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL SHUNT TRIP BREAKERS FOR EXHAUST HOOD FIRE SUPPRESSION SYSTEMS. ALL ELECTRICAL APPLIANCES & OUTLETS UNDER HOOD MUST SHUT DOWN UPON ACTIVATION OF SUPPRESSION SYSTEM.
- ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL NECESSARY POWER TO MICRO SWITCH FOR EXHAUST HOOD FIRE SUPPRESSION SYSTEM.
- ALL GFT'S MUST BE OF HIGH QUALITY TO PREVENT SHUT DOWN OF EQUIPMENT.

ELECTRICAL LEGEND

- ⊕ 120 V. DUPLEX OUTLET
- ⊕ 120 V. SINGLE OUTLET
- ▲ PHONE/DATA OUTLET
- SPECIALTY OUTLET
- ⚡ SWITCH
- JUNCTION BOX
- Ⓛ ITEM NUMBER
- +0" MOUNT FLUSH TO FLOOR W/ WATER TIGHT COVER
- Ⓛ 120 V. 2-GANG OUTLET BOX
- DC DROP CORD
- Ⓛ CONVENIENCE DUPLEX OUTLET 120/60/1/20 AMP CIRCUIT

ROUGH-IN INSTALLATION NOTES

- (A) ELECTRICIAN TO LOCATE J.B.'S ABOVE WALK-INS AND RUN TO CONNECTIONS ON EQUIPMENT.
- (B) ELECTRICIAN TO LOCATE J.B.'S AND RUN TO CONNECTIONS FOR FANS, LIGHTS, AND SWITCHES.
- (C) ELECTRICIAN TO PROVIDE J.B. FOR CONTROL WIRING FOR FIRE SUPPRESSION SYSTEM AND COORDINATE W/ SYSTEM INSTALLER.
- (D) ELECTRICIAN TO LOCATE & PROVIDE J.B.'S & ELECTRICAL OUTLETS AS SPECIFIED ON THE ELECTRICAL FOOD SERVICE PLAN. J.B.'S ARE TO RUN TO ELECTRICAL OUTLETS LOCATED EITHER IN CABINET, ON TABLE LEG, UNDERSHELF AND/OR TABLE TOP.
- (E) ELECTRICIAN TO LOCATE AND INSTALL ELECTRICAL FOR HEAT LAMPS ON OVERSHELVES TO CODE.
- (F) ELECTRICIAN TO LOCATE DISCONNECT SWITCH IN DRY LOCATION.
- (G) ELECTRICIAN TO PROVIDE J.B. IN CEILING AND DROP OUTLET TO UNIT.
- (H) ELECTRICIAN TO MOUNT RECEPTACLE HORIZONTALLY.
- (I) GENERAL CONTRACTOR TO COORDINATE WITH OWNER THE NECESSITY AND REQUIREMENTS OF P.O.S. SYSTEM AND PRINTER WIRING.

FOOD SERVICE EQUIPMENT ELECTRICAL PLAN

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

FOOD SERVICE EQUIPMENT ELECTRICAL PLAN
SUN 'N LAKE GOLF CLUB
5223 SUN 'N LAKE BOULEVARD
SEBRING, FL 33872

DRAWN MGM	SCALE 1/4"=1'-0"
JOB NUMBER 9849	DATE 07/23/18
FILE NAME Sun N Lake.dwg	

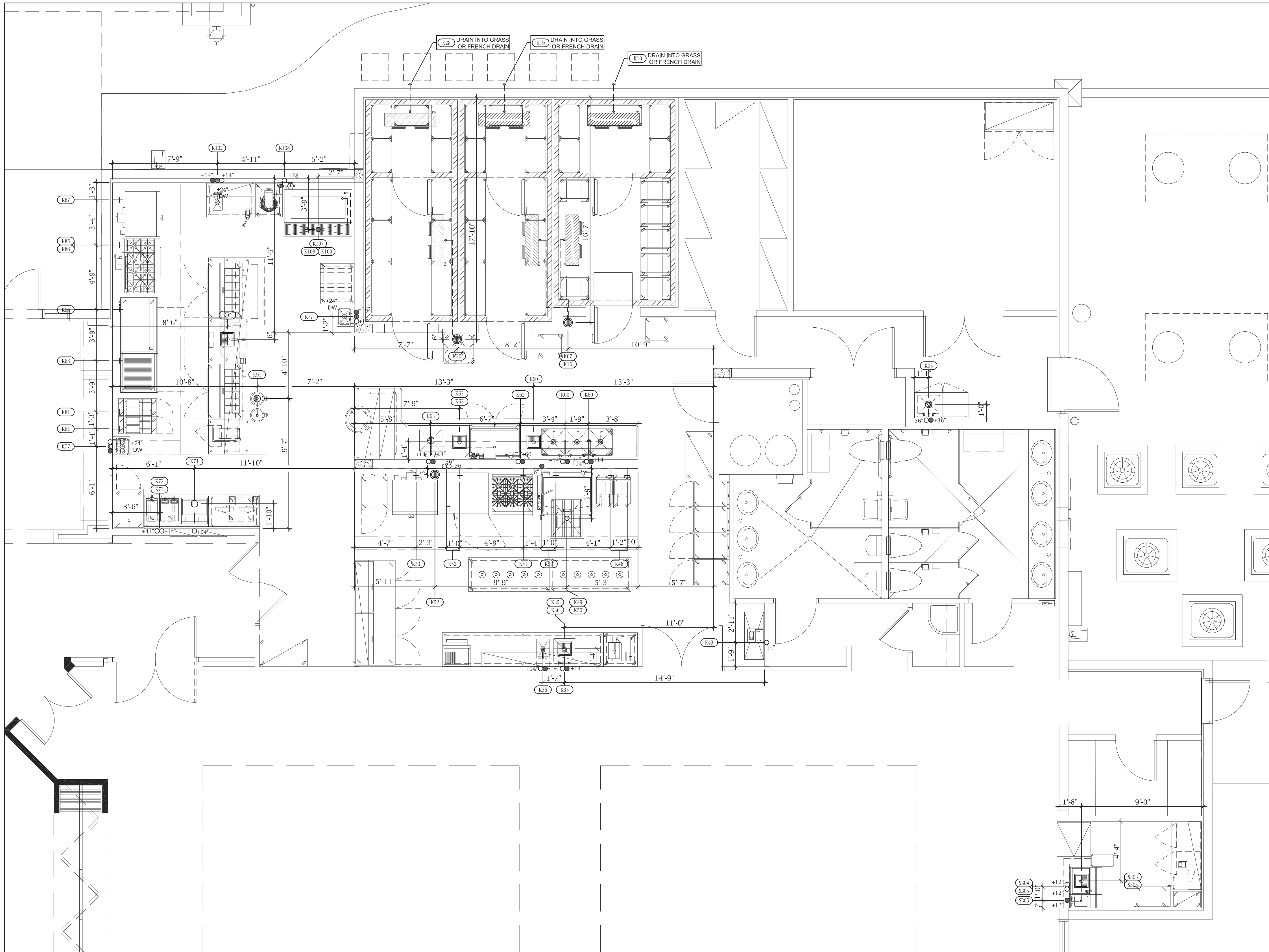
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- PLUMBING GENERAL NOTES**
- IT IS THE INTENT OF THIS PLAN TO INDICATE THE ROUGH-IN LOCATION FOR THE FOOD SERVICE EQUIPMENT ONLY. REFER TO THE A/E CONSTRUCTION DOCUMENTS FOR ADDITIONAL PLUMBING REQUIREMENTS.
 - IT IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO CORRECTLY LOCATE THE ROUGH-INS AS INDICATED ON THIS PLAN AND TO ENSURE THAT THEY ARE IN COMPLIANCE WITH ALL CODES.
 - PLUMBING CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL ROUGH-INS, INDIRECT CONNECTIONS, INTER-CONNECTIONS, AND FINAL CONNECTIONS TO MAKE THE FOOD SERVICE EQUIPMENT OPERATIONAL.
 - PLUMBING CONTRACTOR IS RESPONSIBLE FOR INSTALLING FAUCETS, TRAPS, LEVER WASTES AND SIMILAR ITEMS REQUIRED TO MAKE THE FOOD SERVICE EQUIPMENT OPERATIONAL.
 - PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL ALL TRAPS, SHOCK ABSORBERS, ANTI-BACK FLOW DEVICES, FLOOR SINKS, HUB DRAINS, PRESSURE REDUCING VALVES, TRIM PIECES AND OTHER SIMILAR ITEMS WHICH MAY BE REQUIRED TO MAKE THE FOOD SERVICE EQUIPMENT OPERATIONAL.
 - THE PITCH OF THE FLOOR FOR ADDITIONAL FLOOR DRAINS NOT RELATED TO THE FOOD SERVICE EQUIPMENT, SHALL BE DESIGNED BY THE A/E AND PROVIDED AND INSTALLED BY THE PLUMBING CONTRACTOR.
 - ALL HAND SINKS TO HAVE SOAP AND TOWEL DISPENSERS, WHICH ARE TO BE PROVIDED AND INSTALLED BY OTHERS.
 - ALL WALL STUB OUTS ARE TO BE A MINIMUM OF 12" ABOVE FINISHED FLOOR.
 - ALL GRATETOPS FOR FLOOR SINK GRATES ARE TO BE MADE WITH HALF OF THE TOP OPEN.

PLUMBING LEGEND

⊕	HOSE BIB
●	HOT WATER
○	COLD WATER
○	FLOOR DRAIN
⊕	FLOOR SINK
⊕	HUB DRAIN
⊕	DRAIN TROUGH
⊕	DIRECT WASTE
+	GAS CONNECTION
⊕	ITEM NUMBER

FOOD SERVICE EQUIPMENT PLUMBING PLAN

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

FOOD SERVICE EQUIPMENT PLUMBING PLAN
 SUN 'N LAKE GOLF CLUB
 5223 SUN 'N LAKE BOULEVARD
 SEBRING, FL 33872

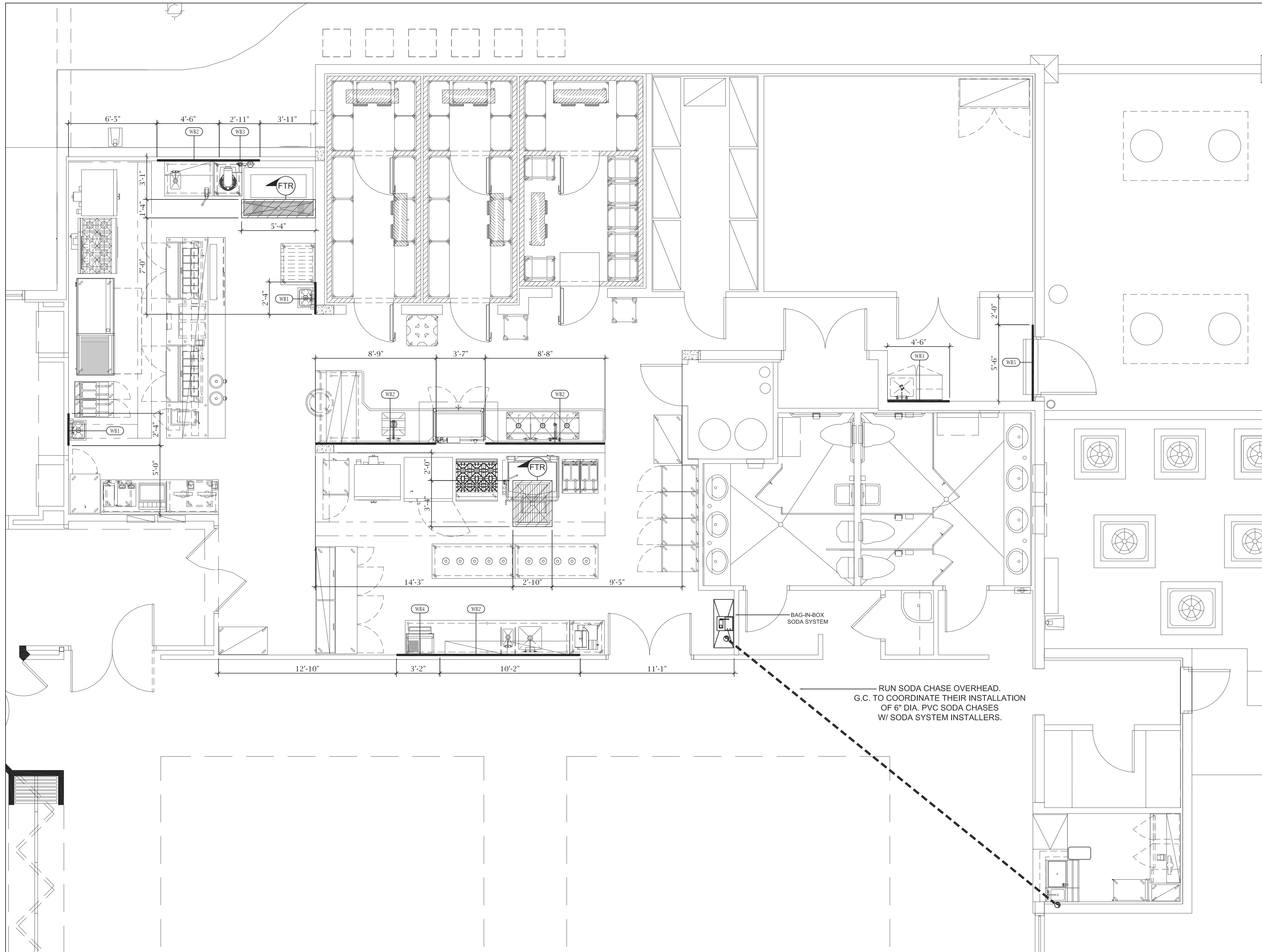
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JOB NUMBER 9849	DATE 07/23/18
FILE NAME Sun N Lake.dwg	

SHEET
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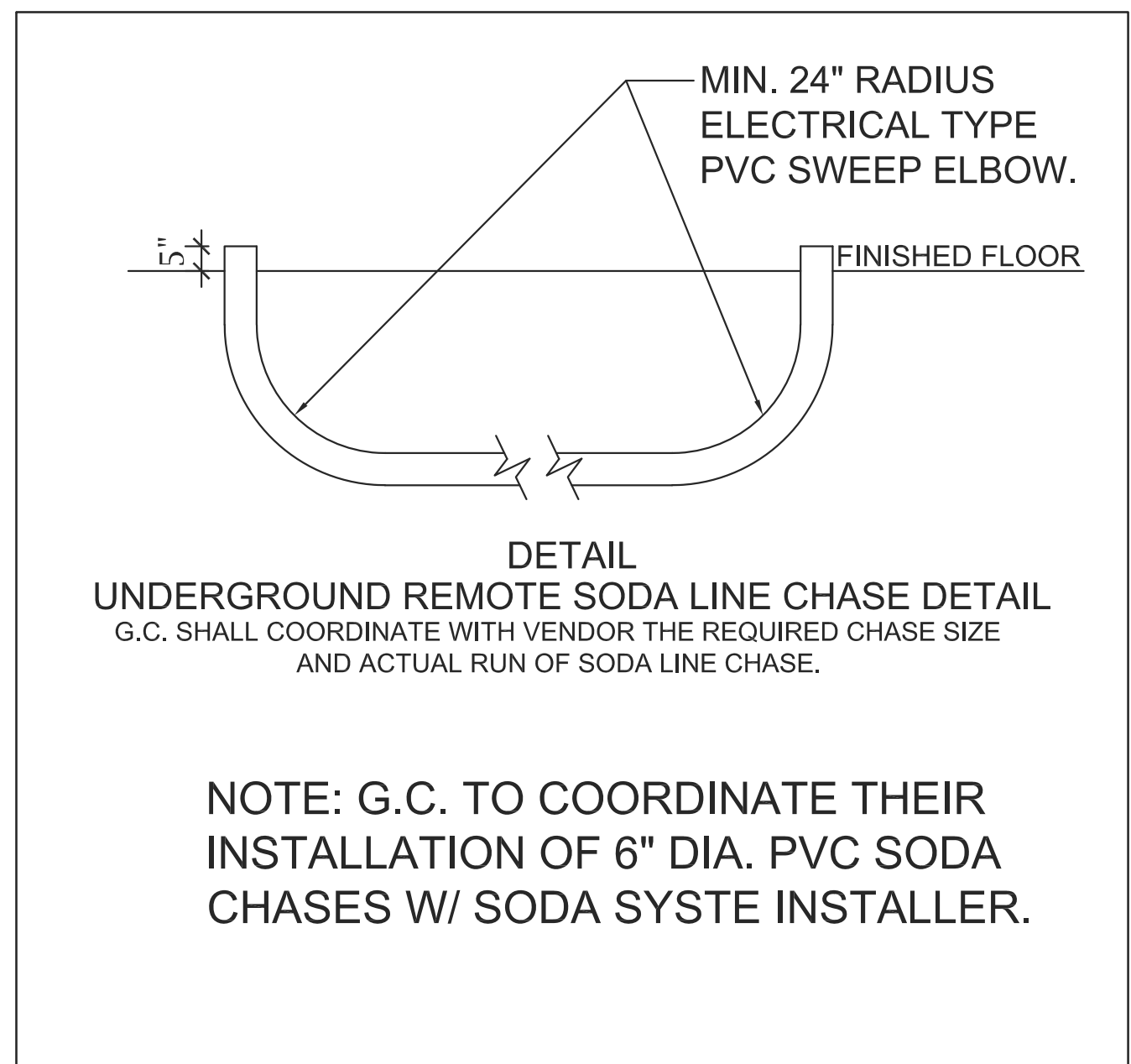
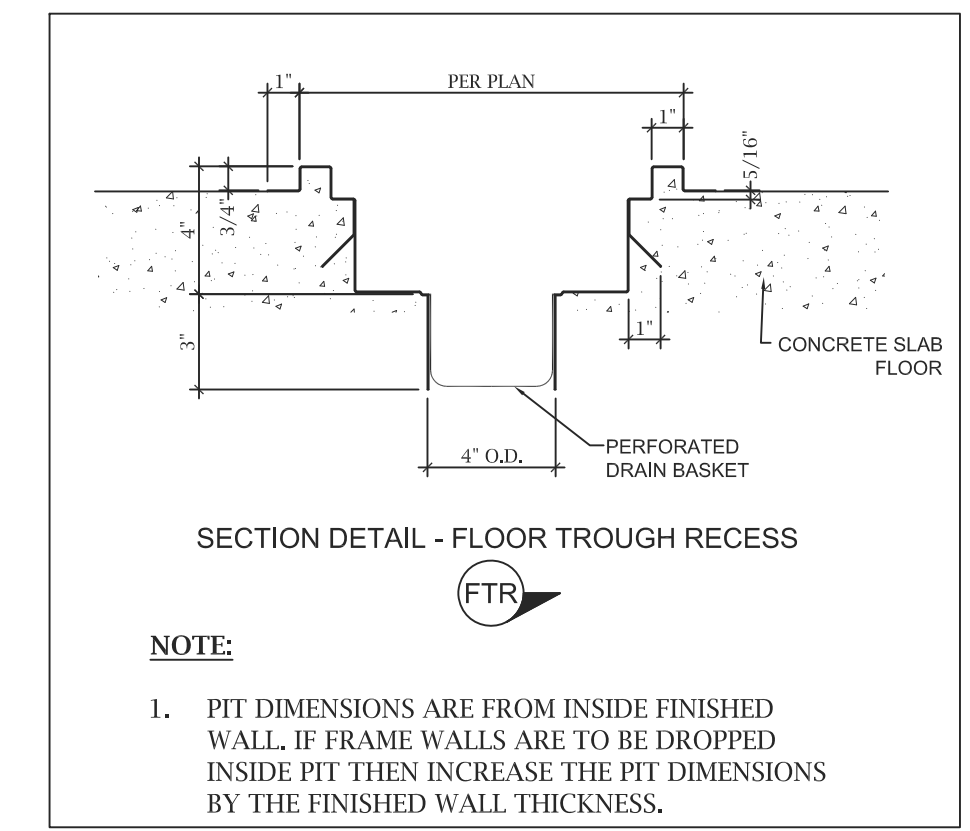


WALL BACKING LEGEND

- WB1 WALL BACKING FROM 30" A.F.F. UP TO 60" A.F.F.
- WB2 WALL BACKING FROM 40" A.F.F. UP TO 78" A.F.F.
- WB3 WALL BACKING FROM 40" A.F.F. UP TO 84" A.F.F.
- WB4 WALL BACKING FROM 40" A.F.F. UP TO 96" A.F.F.
- WB5 WALL BACKING FROM ABOVE RECEIVING DOOR UP 12"

NOTES:

1. TYPICAL BACKING = 3/4" SOLID PLYWOOD.
2. WALL BACKING IN HOOD WALL = 14 GA GALVANIZED STEEL. WOOD IS NOT TO BE USED WITHIN 18" OF THE HOOD OR PER LOCAL CODE.



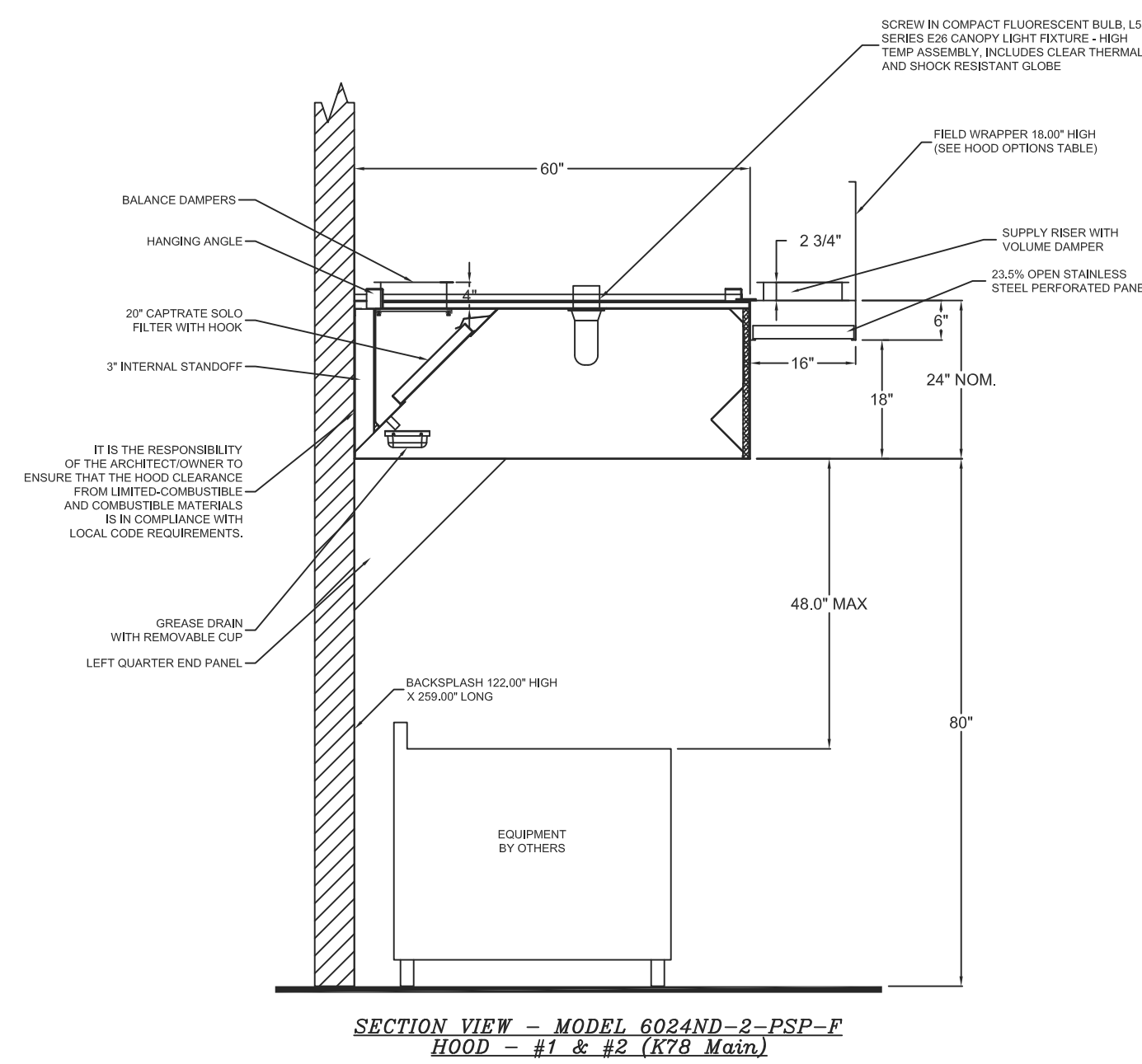
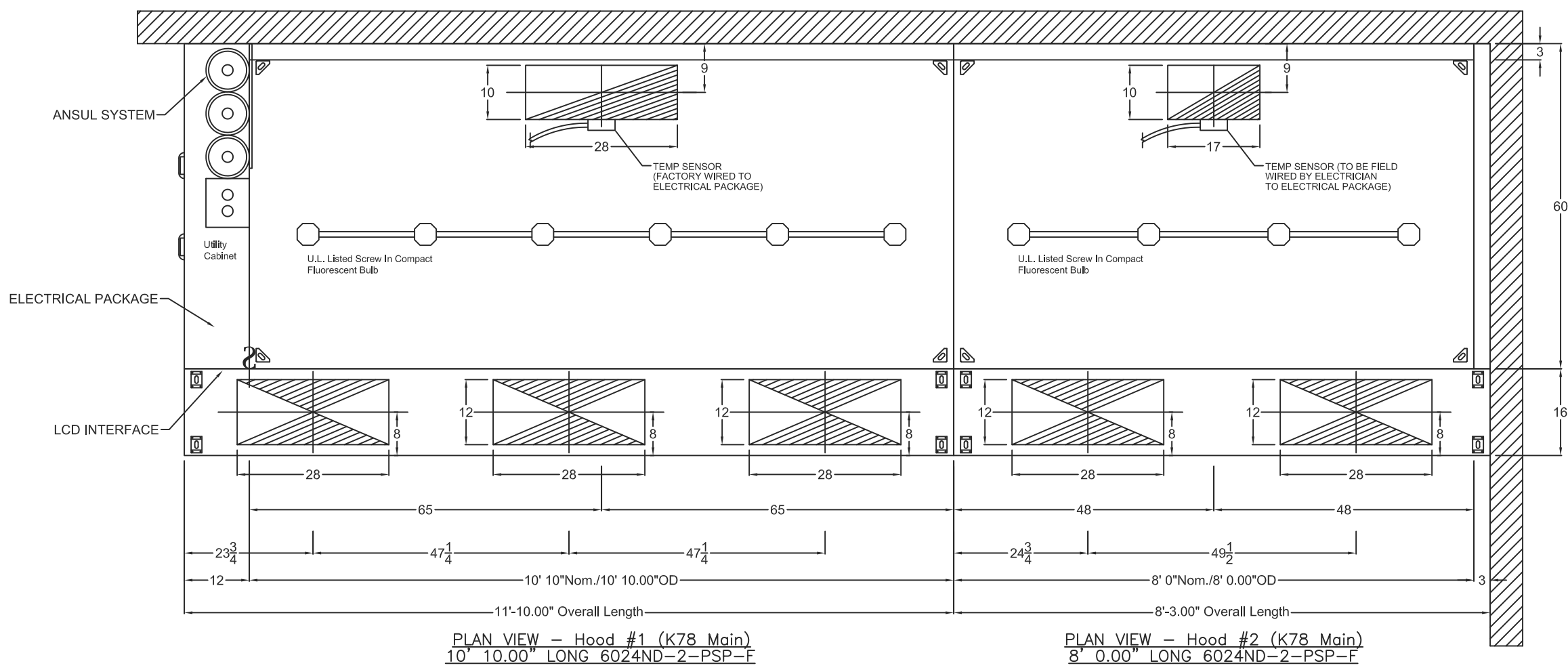
FOOD SERVICE EQUIPMENT WALL BACKING, FLOOR RECESS, AND SODA CHASE PLAN

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

FOOD SERVICE WALL BACKING, FLOOR RECESS, AND SODA CHASE PLAN
 SUN 'N LAKE GOLF CLUB
 5223 SUN 'N LAKE BOULEVARD
 SEBRING, FL 33872

DRAWN MGM	SCALE 1/4"=1'-0"
JOB NUMBER 9849	DATE 07/23/18
FILE NAME Sun N Lake.dwg	

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HOOD INFORMATION - Job#3240528

HOOD NO.	TAG	MODEL	LENGTH	MAX. COOKING TEMP.	TOTAL EXH. CFM	WIDTH	LENG.	HEIGHT	DIA.	CFM	VEL.	S.P.	TOTAL SUPPLY CFM	HOOD CONSTRUCTION	END TO END	HOOD CONTROLS
1	K78 Mah	6024 ND-2-PSP-F	10' 10"	600 Deg.	3000	10"	28"	4"	3000	1543	-0.968"	2200	430 SS	Where Exposed	LEFT	ALONE
2	K78 Mah	6024 ND-2-PSP-F	8' 0"	450 Deg.	1800	10"	17"	4"	1800	1525	-0.872"	1500	430 SS	Where Exposed	RIGHT	ALONE

HOOD INFORMATION

HOOD NO.	TAG	TYPE	FILTER(S)		EFFICIENCY @ 7 MICRONS	QTY.	LIGHT(S)		WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM		ELECTRICAL	SWITCHES	FIRE SYSTEM STRING	HOOD HANGING WEIGHT
			HEIGHT	LENGTH			TYPE	SIZE				MODEL #	QUANTITY				
1	K78 Mah	Captrate Solo Filter	8"	20"	16"	85% See Filter Spec.	6	Screw In Compact	NO	Left	12"x60"x24"	Anual R102	3.03,0.30	DCV-1111	1 Light 1 Fan	YES	865 LBS
2	K78 Mah	Captrate Solo Filter	5"	16"	16"	85% See Filter Spec.	4	Screw In Compact	NO							YES	494 LBS

HOOD OPTIONS

HOOD NO.	TAG	OPTION
1	K78 Mah	FIELD WRAPPER 18.00" High Front Left BACKSLASH 122.00" High X 259.00" Long 430 SS Vertical LEFT QUARTER END PANEL 23" Top Width, 0" Bottom Width, 23" High 430 SS BALANCE DAMPERS
2	K78 Mah	FIELD WRAPPER 18.00" High Front RIGHT END STANDOFF 3" Width 60" Long RIGHT SIDESPLASH 122.00" High X 78.00" Long 430 SS Vertical BALANCE DAMPERS

AIR BALANCE NOTE:
TOTAL EXHAUST = HOOD EXHAUST - HOOD SUPPLY
TOTAL EXHAUST = 4,800 CFM - 3,700 CFM
TOTAL EXHAUST = 1,100 CFM NEEDED FROM HVAC

NOTE:
THIS HOOD SYSTEM HAS A HEAT SENSOR THAT COMPLIES WITH IMC 507.2.1.1 FOR AUTOMATIC FAN ACTIVATION WHENEVER COOKING OPERATIONS OCCUR.

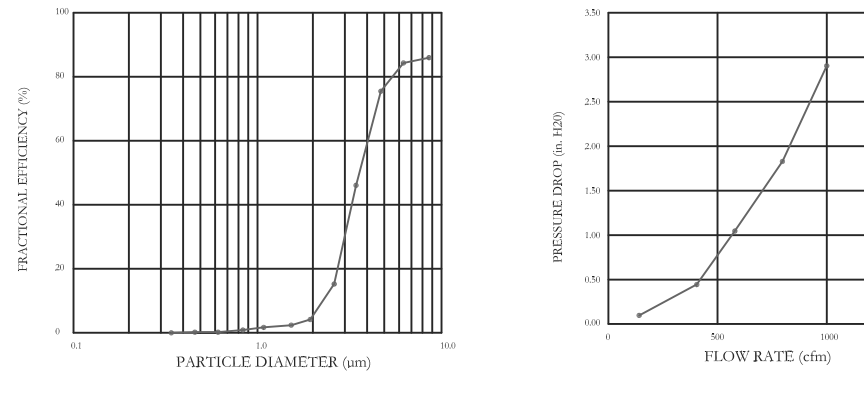
PERFORATED SUPPLY PLENUM(S)

HOOD NO.	TAG	POS.	LENGTH	WIDTH	HEIGHT	RESER(S)				
						TYPE	WIDTH	LENG.	DIA.	CFM
1	K78 Mah	Front	142"	16"	6"	MUA	12"	28"	734	0.202"
						MUA	12"	28"	733	0.202"
						MUA	12"	28"	733	0.202"
2	K78 Mah	Front	90"	16"	6"	MUA	12"	28"	750	0.211"
						MUA	12"	28"	750	0.211"
						MUA	12"	28"	750	0.211"

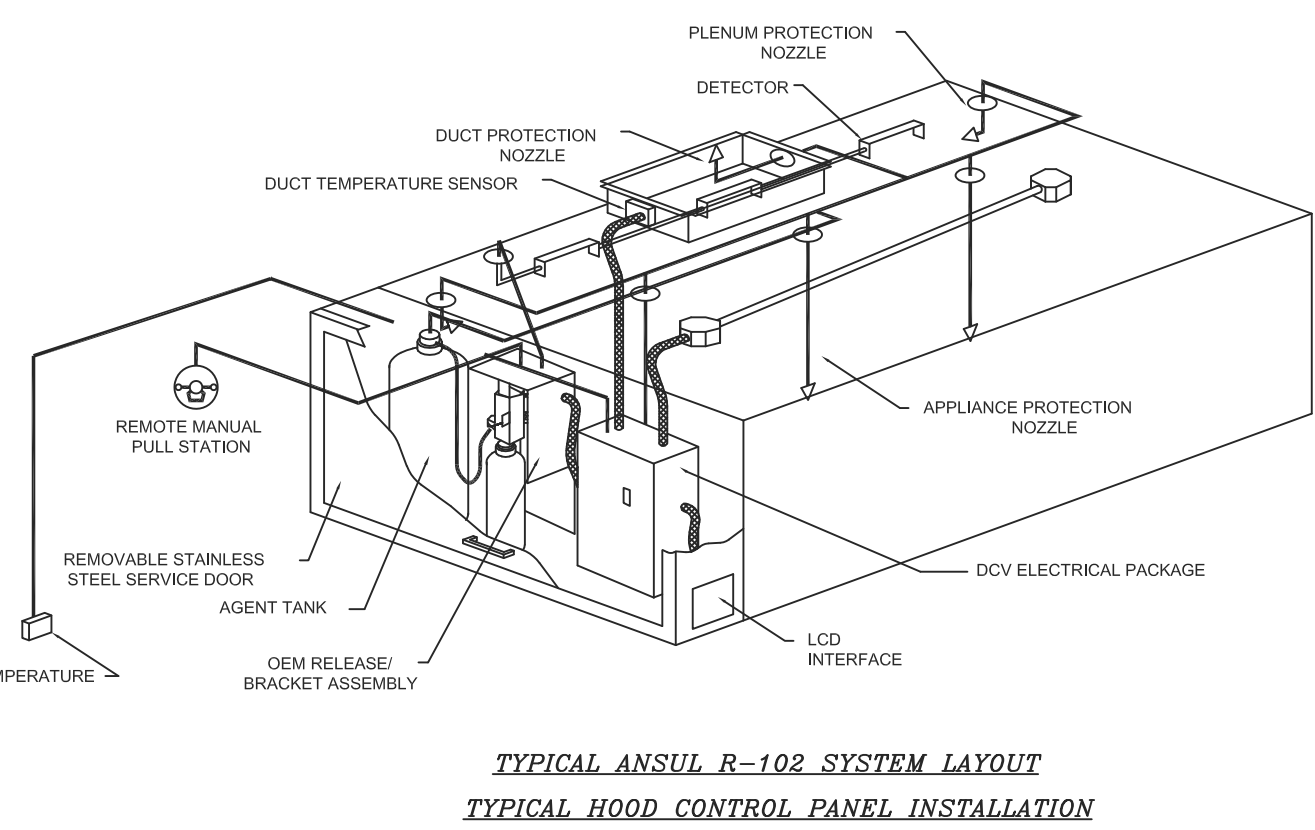
SPECIFICATION: CAPTRATE GREASE-STOP SOLO FILTER

THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-Baffle DESIGN IN CONJUNCTION WITH A SLOTTED REAR Baffle DESIGN TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 3-INCH DEEP HOOD CHANNEL(S).
UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE, AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05.



CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:
NFPA #96
NSF STANDARD #2
UL STANDARD #646
INT. MECH. CODE (IMC)
ULC6646



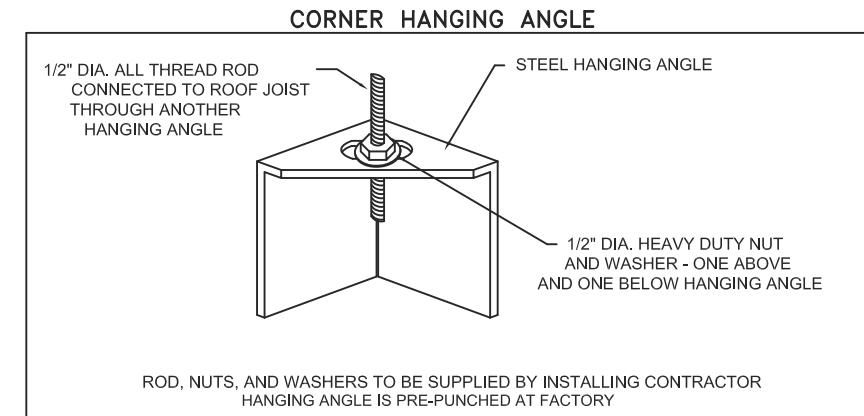
ALL EQUIPMENT SHOWN HERE IS TO BE PROVIDED AS PART OF THE KITCHEN EQUIPMENT CONTRACTOR'S PACKAGE. DUCTWORK AND INSTALLATION BY MECHANICAL.

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH

NFPA #96
UL 710 & ULC710 STANDARDS
E.T.L. LISTED 3054804-001

ELECTRICIAN NOTES:
All Hood/Fan/DCV electrical connections and interconnections to be provided and installed by Electrician. Electrician to provide, install, and land wiring between hood lights, hood temp sensors, remote Ansul system microswitches, and any other component requiring an electrical connection to the Captive-Aire electrical package.
Failure by the Electrician to make ALL required electrical connections and interconnections will result in the electrical controls not working properly. Any loss or failed test as a result of electrical controls not working properly is the responsibility of the Electrician.
Light bulbs for kitchen hoods to be provided and installed by electrician.

- GENERAL NOTES:**
- ELECTRICAL HOOD-UP TO GAS MOTOR CONTROLS (MOTOR STARTERS, FAN SWITCHES, FAN DISCONNECTS, RELAYS, ETC.) BY OTHERS.
 - FIRE CHARGE BY OTHERS, IF REQUIRED.
 - ALL PHASES OF INSTALLATION SHALL COMPLY WITH NFPA #96.
 - WRITTEN MEASUREMENTS HAVE PRECEDENCE OVER SCALE.
 - PROVIDE CLEARDUTS IN EXHAUST AIR DUCTS AS INDICATED TO ALLOW CLEANING AT ALL BENDS AND HORIZONTAL RUNS.
 - EXHAUST DUCT TO BE 16 GA. GAY STEEL.
 - ALL SEAMS AND JOINTS TO HAVE A LIQUID TIGHT CONTINUOUS EXTERNAL WELD.
 - FAN TO HAVE A MINIMUM OF 10 FT. OF CLEARANCE FROM THE OUTLET TO ADJACENT BUILDINGS, PROPERTY LINES, AIR INTAKES OR 3 FT. VERTICAL CLEARANCE FROM NEARBY.
 - HORIZONTAL EXHAUST DUCT TO SLUPE, NOT LESS THAN 1/4" PER FOOT TOWARD HOOD FOR DUCT LESS THAN 75' LONG.
 - HOOD TO OVERHANG COOKING EQUIPMENT 6" ON ALL OPEN SIDES.
 - EXHAUST DUCT TO BE PROTECTED FROM COMBUSTIBLES PER NFPA#96 AND LOCAL CODE.
 - BUILDING PRESSURE SHALL NOT EXCEED 0.04" WATER COLUMN AT EXTERIOR DOORS.
 - KITCHEN SHALL BE BALANCED TO BE NEGATIVE WITH RESPECT TO THE DINING ROOM.



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4519 GEORGE ROAD, SUITE 150, TAMPA, FL 33634
PHONE: (800)378-2471 FAX: (813)354-4825

CUSTOMER APPROVAL TO MANUFACTURE:

Approved as Noted
Approved with NO Exception Taken
Revised and Resubmit
SIGNATURE _____
Your Title _____ Date _____

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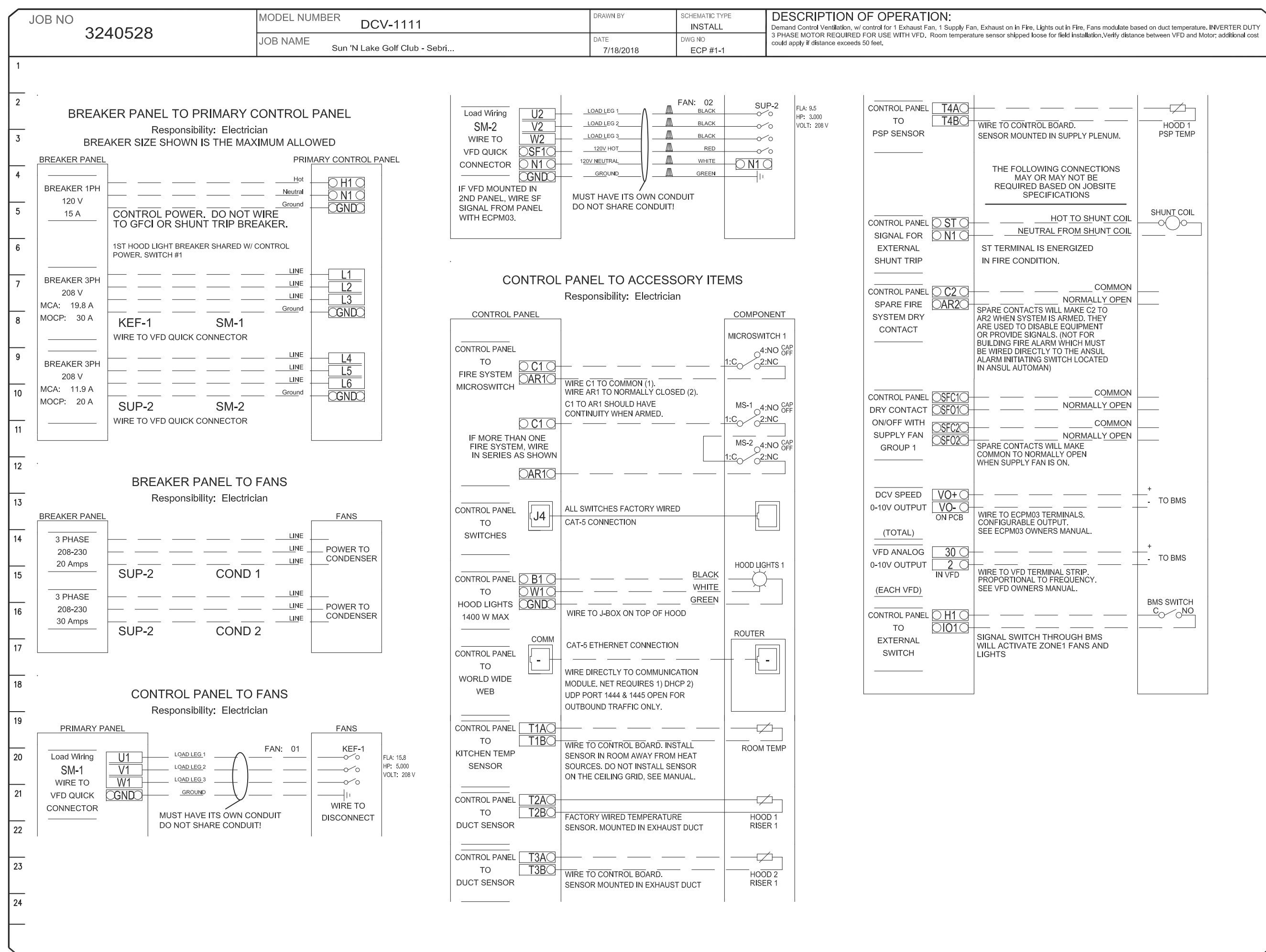
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NO.	DESCRIPTION	DATE

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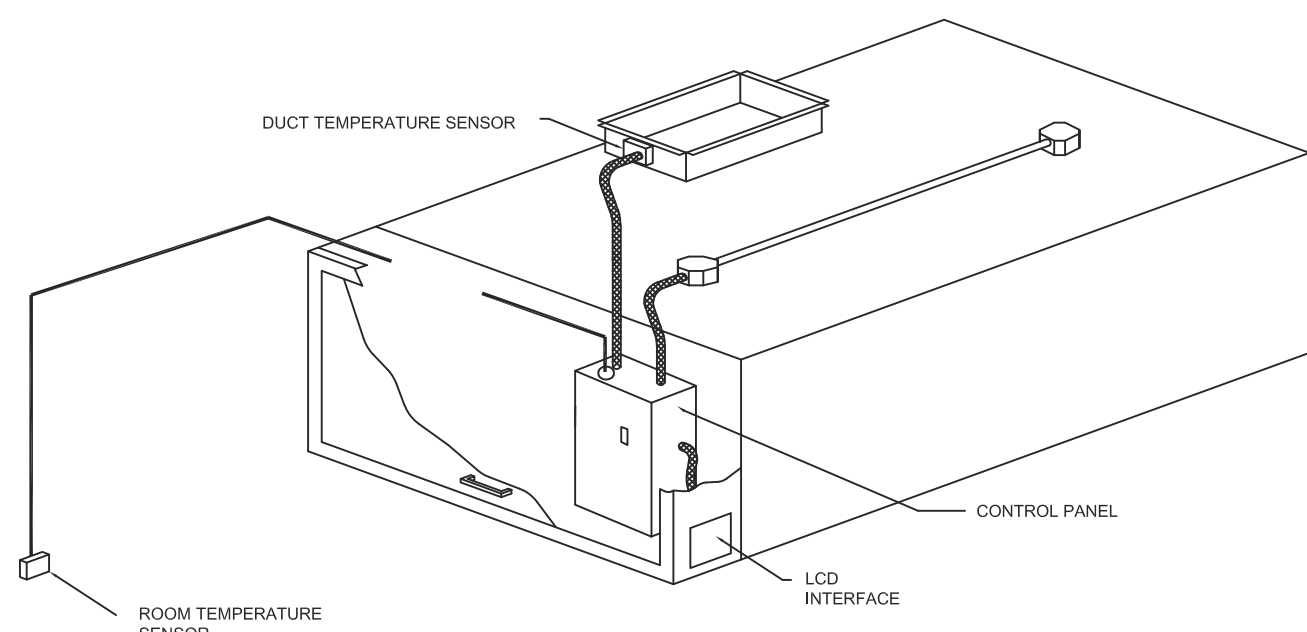
NO.	DESCRIPTION	DATE

ELECTRICAL PACKAGE -- Job#3240528				SWITCHES		OPTION		FANS CONTROLLED					
NO.	TAG	PACKAGE #	LOCATION	LOCATION	QUANTITY			FAN TAG	TYPE	#	H.P.	VOLT	FLA
1	K78 Mdr	DCV-1111	Utility Cabinet Left	03 - Utility Cabinet Left	1 Light		Smart Controls DCV	KEF-1	Exhaust	3	5,000	208	15.8
				Hood # 1	1 Fan			MUA-1	Supply	3	3,000	208	9.5



Demand Control Ventilation Hood Control Panel Specifications:

- Controls shall be listed by ETL (UL 508A) and shall comply with demand ventilation system shutdown requirements outlined in IECC 403.2.8 (2015).
- The control enclosure shall be NEMA 1 rated and listed for installation inside of the exhaust hood utility cabinet. The control enclosure may be constructed of stainless steel or painted steel.
- Temperature probe(s) located in the exhaust duct riser(s) shall be constructed of stainless steel.
- A digital controller shall be provided to activate the hood exhaust fans dynamically based on a fixed differential between the ambient and duct temperatures sensors. This function shall meet the requirements of IMC 5.7.1.1.
- A digital controller shall provide adjustable hysteresis settings to prevent cycling of the fans after the cooking appliances have been turned off and/or the heat in the exhaust system is reduced.
- A digital controller shall provide an adjustable minimum fan run-time setting to prevent fan cycling.
- Variable Frequency Drives (VFDs) shall be provided for fans as required. The digital controller shall modulate the VFDs between a minimum setpoint and a maximum setpoint on demand. The duct temperature sensor input(s) to the digital controller shall be used to calculate the speed reference signal.
- The VFD speed range of operation shall be from 0% to 100% for the system, with the actual minimum speed set as required to meet minimum ventilation requirements.
- An internal algorithm to the digital controller shall modulate supply fan VFD speed proportional to all exhaust fans that are located in the same fan group as the supply fan.
- The system shall operate in PREP MODE during light cooking load or COOL DOWN MODE when sufficient heat remains underneath the hood system after cooking operations have completed. Operation during either of these periods will disable the supply fans and provide an exhaust fan speed that is equal to the minimum ventilation requirement.
- A digital controller shall disable the supply fan(s), activate the exhaust fan(s), activate the appliance shunt trip, and disable an electric gas valve automatically when fire condition is detected on a covered hood.
- A digital controller shall allow for external BMS fan control via Dry Contact (external control shall not override fan operation logic as required by code).
- An LCD Interface shall be provided with the following features:
 - On/Off push button fan & light switch activation
 - Integrated gas valve reset for electronic gas valves (no reset relay required)
 - VFD Fault display with audible & visual alarm notification
 - Duct temperature sensor failure detection with audible & visual alarm notification
 - Mils-wired duct temperature sensor detection with audible & visual alarm notification
 - A single low voltage Cat-5 RJ45 wiring connection
 - An energy savings indicator that utilizes measured kWh from the VFDs



TYPICAL HOOD CONTROL PANEL INSTALLATION

Sequence of Operations:
The hood control panel is capable of operating in one or more of the following states at any given time:

- **Automatic:** The system operates based on the differential between room temperature and the temperature at the hood cavity or exhaust duct collar. Fans activate at a configurable temperature differential threshold. Depending on the job configuration each fan zone can be configured as static or dynamic. These terms refer to whether a variable motor (such as EC Motors or VFD driven motors) modulate with temperature. If the panel is equipped with variable speed fans and the zone is defined as "dynamic", these will modulate within a user-defined range based on the temperature differential. Panels equipped with variable speed fans and a fan zone defined as "static", fans will run at a set speed calculated for the drive. Demand control ventilation systems are capable of modulating exhaust and make up air fan speeds per the requirements outlined in IECC 403.2.8.
- **Manual:** The system operates based on human input from an HMI.
- **Schedule:** A weekly schedule can be set to run fans for a specified period throughout the day. There are three occupied times per day to allow for the user to set up a time that is suitable to their needs. Any time that is within the defined occupied time, the system will run at modulation mode and follow the fan procedure algorithm based on temperature during this time. During unoccupied time, the system will have an extra offset to prevent unintended activation of the system during a time where the system is not being occupied.
- **Other:** The system operates based on the input from an external source (DDC, BMS or hard-wired interlock)

System Design Verification (SDV)

If ordered, CAS Service will perform a System Design Verification (SDV) once all equipment has had a complete start up per the Operation and Installation Manual. Typically, the SDV will be performed after all inspections are complete.

Any field related discrepancies that are discovered during the SDV will be brought to the attention of the general contractor and corresponding trades on site. These issues will be documented and forwarded to the appropriate sales office. If CAS Service has to resolve a discrepancy that is a field issue, the general contractor will be notified and billed for the work. Should a return trip be required due to any field related discrepancy that cannot be resolved during the SDV, there will be additional trip charges.

During the SDV, CAS Service will address any discrepancy that is the fault of the manufacturer. Should a return trip be required, the general contractor and appropriate sales office will be notified. There will be no additional charges for manufacturer discrepancies.

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ELECTRICIAN NOTES:
All Hood/Fan/DCV electrical connections and interconnections to be provided and installed by Electrician. Electrician to provide, install, and land wiring between hood lights, hood temp sensors, remote Ansul system microswitches, and any other component requiring an electrical connection to the Captive-Aire electrical package.
Failure by the Electrician to make ALL required electrical connections and interconnections will result in the electrical controls not working properly. Any loss or failed test as a result of electrical controls not working properly is the responsibility of the Electrician. Light bulbs for kitchen hoods to be provided and installed by electrician.

FOR QUESTIONS, CALL THE SOUTHWEST FLORIDA REGIONAL OFFICE
4515 GEORGE ROAD, SUITE 100, TAMPA, FL 33634
PHONE: (800)279-2471 FAX: (813)354-4825

CUSTOMER APPROVAL TO MANUFACTURE:

Approved as Noted

Approved with NO Exception Taken

Resize and Reinstall

SIGNATURE _____

Your Title _____ Date _____

Sun 'N Lake Golf Club
5223 Sun 'N Lake Blvd,
SEBRING, FL, 33872

DATE: 7/18/2018

DWG.#: 3240528

DRAWN BY: DC

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

MASTER DRAWING

SHEET NO. 2

NO.	REVISIONS	DATE	BY

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4519 George Road, Suite 150, Tampa, FL 33634. PHONE: (813) 435-3388 FAX: (813) 354-4825 EMAIL: rsg@captivate.com

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"Food Service Consultants for the Food Service Industry"
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FOOD SERVICE EQUIPMENT HOOD DETAILS
SUN 'N LAKE GOLF CLUB
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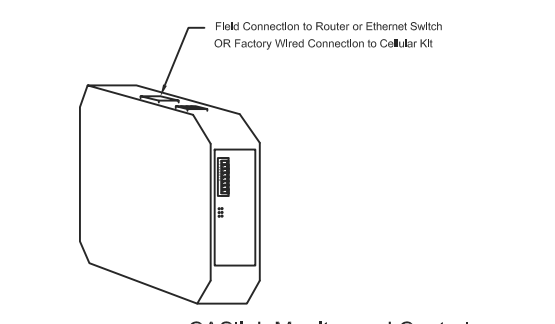
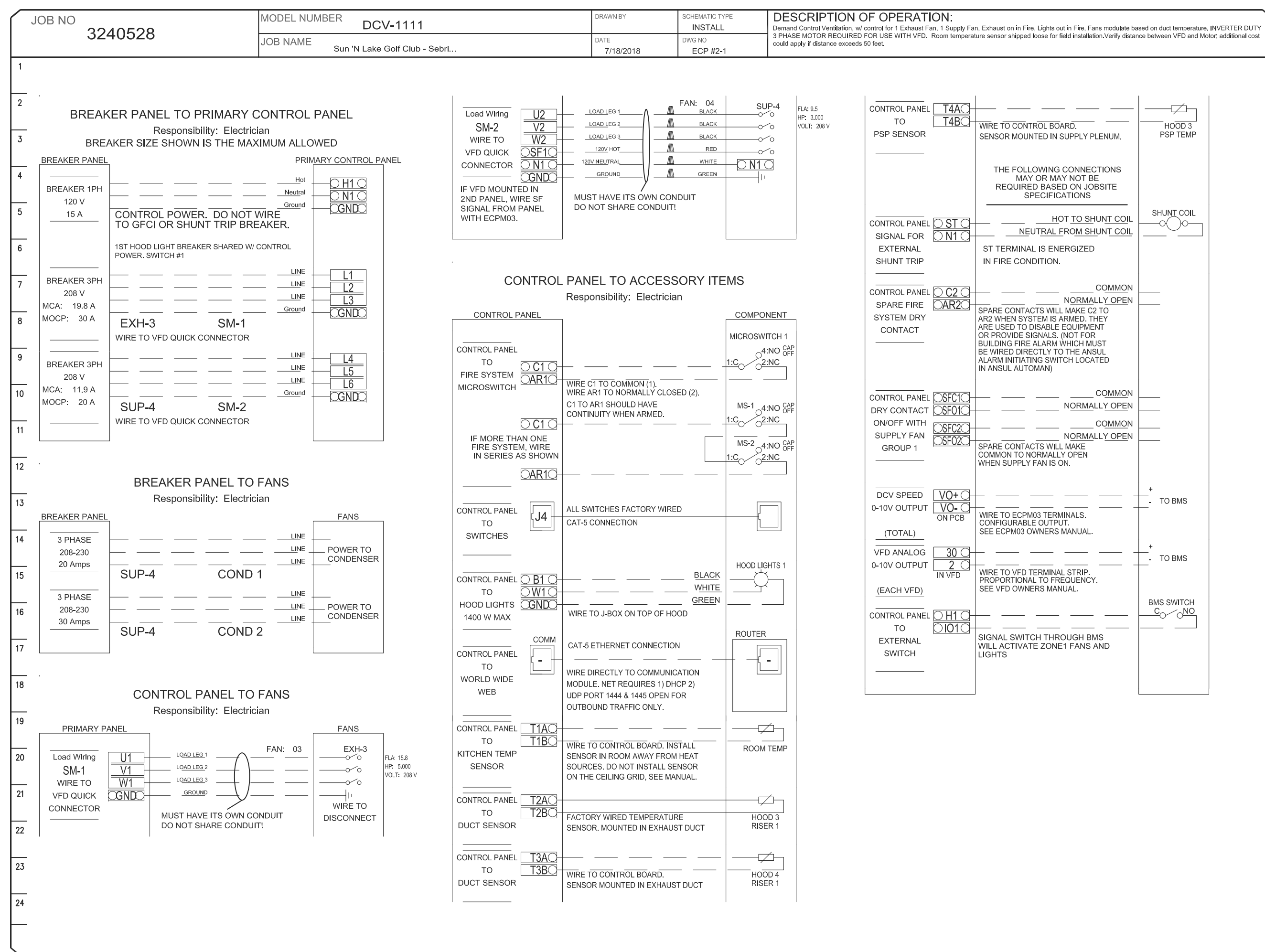
DRAWN	SCALE
MGM	NONE
JOB NUMBER	DATE
9849	07/23/18

FILE NAME: Sun 'N Lake.dwg

SHEET FS-H2
2 OF 6 SHEETS

FAN SIZES ARE BASED ON A STRAIGHT UP DUCT RUN TO ROOF. IF ROOF DESIGN MANDATES OTHERWISE, PLEASE CONTACT CONSULTANT FOR NEW FAN SPECIFICATIONS.

ELECTRICAL PACKAGE - Job#3240528												
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				LOCATION	QUANTITY		FAN TAG	TYPE	#	H.P.	VOLT	FLA
2	Prep	DCV-1111	Utility Cabinet Left	03 - Utility Cabinet Left Hood # 3	1 Light	Smart Controls DCV	KEF-2	Exhaust	3	5.000	208	15.8
							MJA-2	Supply	3	3.000	208	9.5



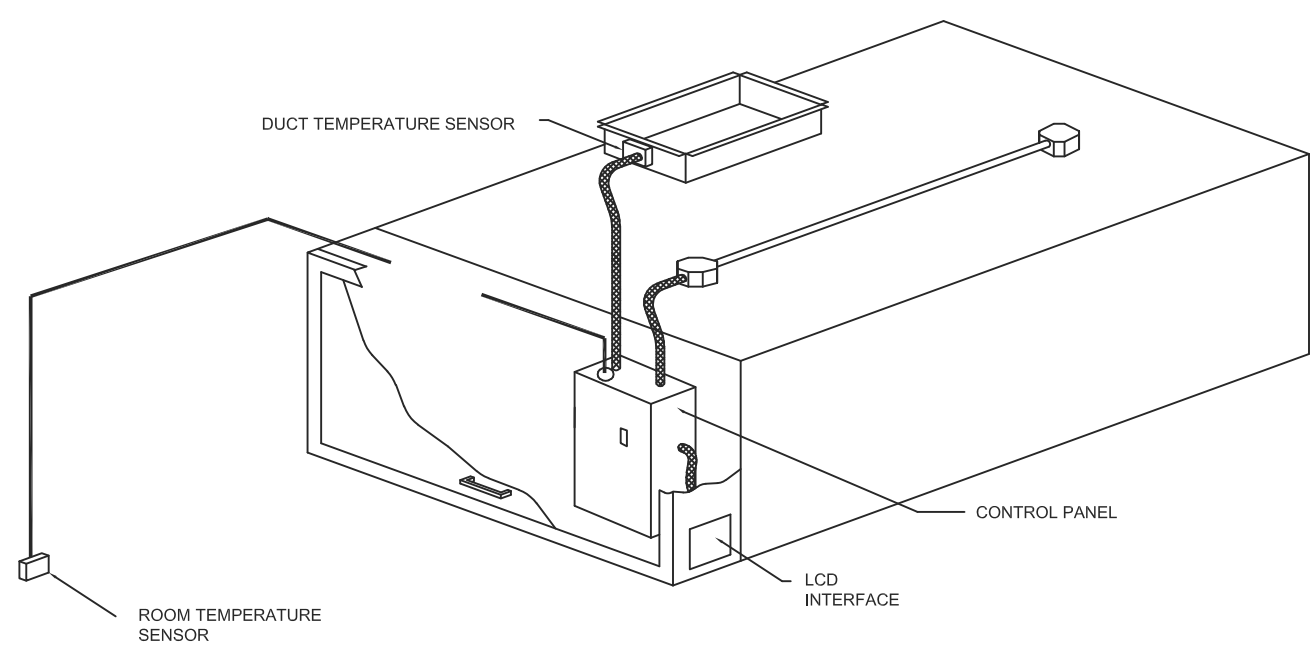
CASink Monitor and Control
 Hood control panel to support communications to cloud-based Building Management System.
 Hood Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITORS in the control kit.
 Hood Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL in the control kit.
 Hood control panel to allow remote changes in system settings such as: VFD frequencies, ECM speeds, temperature set points, fan and wash schedules, etc.

MONITORS AND CONTROL POINTS LIST

DCV Package	Function
Bus Temperature	MONITOR
Duct Temperature	MONITOR
Fan Speed	MONITOR
Fan Amps	MONITOR
Fan Power	MONITOR
ECM Speed	MONITOR
Control Panel	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
Fan Location	MONITOR & CONTROL
Fan Time Status	MONITOR & CONTROL
Fan Filter	MONITOR & CONTROL
Light Status	MONITOR & CONTROL

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 PHONE: (800)778-2471 FAX: (813)354-4825

CUSTOMER APPROVAL TO MANUFACTURE:

Approved as Noted
 Approved with NO Exception Taken
 Resizes and Resubmit
 SIGNATURE _____
 Your Title _____ Date _____

Sun 'N Lake Golf Club
 5223 Sun 'N Lake Blvd,
 SEBRING, FL, 33872

DATE: 7/18/2018
DWG.#: 3240528
DRAWN BY: DC
SCALE: 1/2" = 1'-0"
MASTER DRAWING

SHEET NO.
 4

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FOOD SERVICE EQUIPMENT HOOD DETAILS
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 SEBRING, FL 33872

DRAWN MGM	SCALE NONE
JOB NUMBER 9849	DATE 07/23/18
FILE NAME Sun N Lake.dwg	

SHEET
FS-H4
 4 OF 6 SHEETS

FAN SIZES ARE BASED ON A STRAIGHT UP DUCT RUN TO ROOF. IF ROOF DESIGN MANDATES OTHERWISE, PLEASE CONTACT CONSULTANT FOR NEW FAN SPECIFICATIONS.

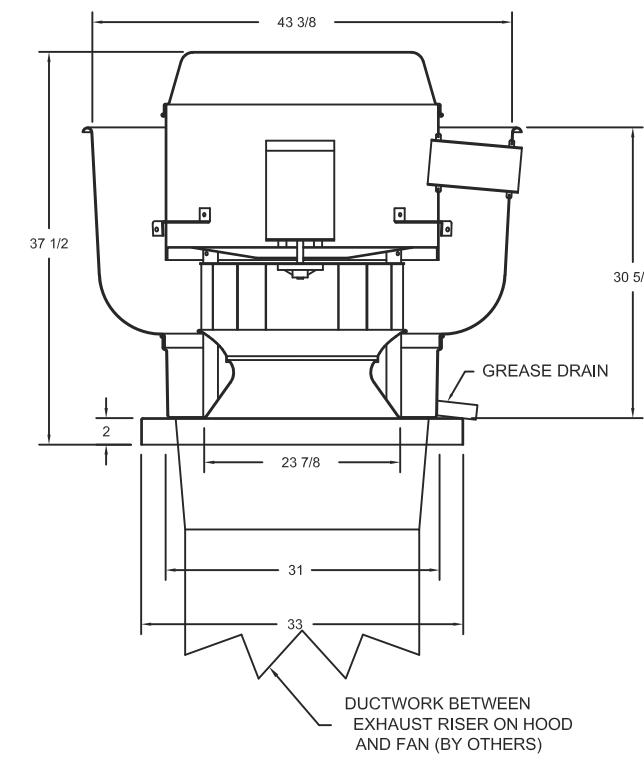
EXHAUST FAN INFORMATION - Job#3240528

FAN UNIT NO.	TAG	FAN UNIT MODEL #	CFM	ESP.	RPM	H.P.	B.H.P.	Ø	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS.)	SONES
1	KEF-1	DU240HFA	4800	2.000	1000	5.000	3.1580	3	208	15.8	1091 FPM	307	.21
3	KEF-2	DU240HFA	4700	2.000	993	5.000	3.0920	3	208	15.8	1068 FPM	307	.20
5	DinFan	DU50HFA	900	1.130	1495	0.500	0.3760	1	115	5.6	342 FPM	70	15.8

CURB ASSEMBLIES

NO.	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KEF-1	95 LBS	Curb	31.500"W x 31.500"L x 26.000"H 4,000:12,000 Pitch Vented Hinged 16 Gauge
3	# 3	KEF-2	95 LBS	Curb	31.500"W x 31.500"L x 26.000"H 4,000:12,000 Pitch Vented Hinged 16 Gauge
5	# 5	DinFan	27 LBS	Curb	19.500"W x 19.500"L x 20.000"H 4,000:12,000 Pitch

FAN #1 (KEF-1), #3 (KEF-2), DU240HFA EXHAUST FAN



FEATURES:

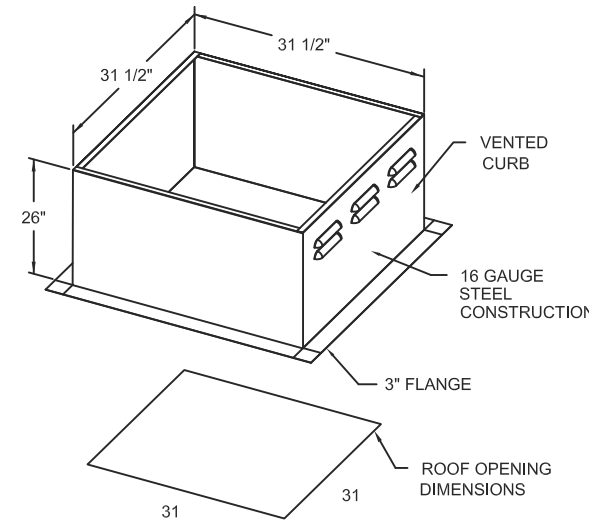
- DIRECT DRIVE CONSTRUCTION (NO BELT/PULLEYS)
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL705 AND UL716 AND UL-C-SHA
- VARIABLE SPEED CONTROL
- INTERNAL WIRING
- WEATHERPROOF DISCONNECT
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE)
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

ABNORMAL FLAME-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 300°F (149°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO AN EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

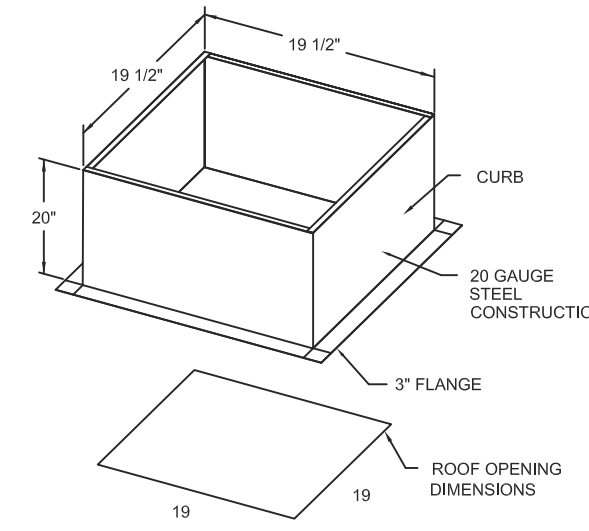
OPTIONS:

- GREASE BOX
- FAN BASE CERAMIC SEAL - INSTALLED AT PLANT FOR GREASE DUCTS
- MANUAL ON/OFF CONTROL
- UPRAISE FAN WHEEL ACCESS PORT



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

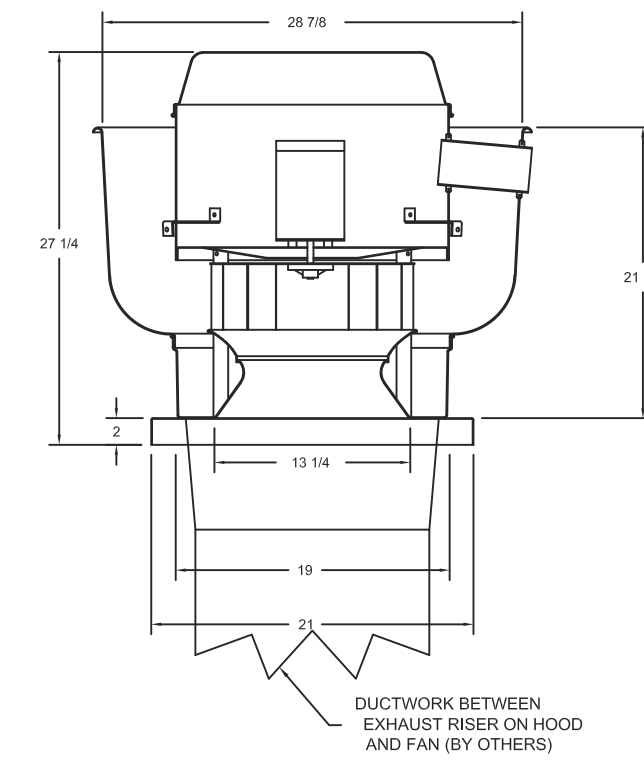
SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE

FAN #5 (DU50HFA) - EXHAUST FAN (DINFAN)



FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELT/PULLEYS)
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL705
- VARIABLE SPEED CONTROL
- INTERNAL WIRING
- WEATHERPROOF DISCONNECT
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE)
- HIGH HEAT OPERATION 300°F (149°C)

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

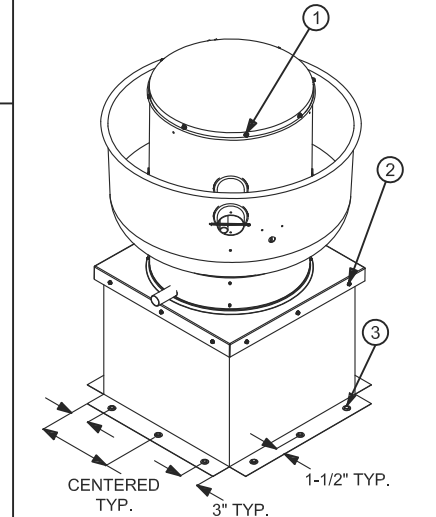
OPTIONS:

- ECM WIRING PACKAGE-EXHAUST - MANUAL ON/OFF CONTROL
- MANUAL ON/OFF CONTROL
- INBUILT MOTOR
- MANUAL ON/OFF CONTROL
- SCR-13 BRD SCREEN

Miami-Dade - Upblast Aluminum - NOA1

Installation Instructions:

1. Secure the lid to the fan using (8) 1/4" - 14 x 1" zinc plated steel self drilling screws with rubber washers, spaced evenly around the lid.
2. Secure the fan base to the curb using a minimum of (12) 1/4" - 14 x 2" zinc plated steel self drilling screws, through pre-punched holes in the fan base with a max spacing of 16 inches.
3. Secure the curb to the roof framing members by drilling 1/4" pilot holes in the curb flanges at locations shown in the diagram and using a minimum of (12) 3/8" x 2" (minimum embedment), zinc plated steel lag bolts and zinc plated washers, screw through curb flanges and into roof framing members with a maximum spacing 21 1/4".



Miami-Dade NOA1

General Notes:

1. This approval is for the structural capacity and impact rating of the exterior housing only; it does not include any interior mechanism or electrical part.
2. These fans have not been wind tested for Wind Driven Rain Test per Florida Building Code, TAS100 (A-95).
3. Tested in accordance to Florida Building Code test protocol TAS201, TAS202, TAS203.
4. Tested for areas including high velocity hurricane zones.
5. Tested under Miami-Dade County Notification number AT1-08033.

**DESIGN PRESSURE: +30.0 / -66.0 PSF
LARGE MISSILE IMPACT RESISTANT**

ALL EQUIPMENT SHOWN HERE IS TO BE PROVIDED AS PART OF THE KITCHEN EQUIPMENT CONTRACTOR'S PACKAGE. DUCTWORK AND INSTALLATION BY MECHANICAL.

GENERAL NOTES:

1. ELECTRICAL: HOOK-UP TO GAS MOTOR CONTROLS (MOTOR STARTERS, FAN SWITCHES, FAN DISCONNECTS, RELAYS, ETC.) BY OTHERS.
2. FIRE CHASE BY OTHERS, IF REQUIRED.
3. ALL PHASES OF INSTALLATION SHALL COMPLY WITH NFPA 96.
4. WRITTEN MEASUREMENTS HAVE PRECEDENCE OVER SCALE.
5. PROVIDE CLEANOUTS IN EXHAUST AIR DUCTS AS INDICATED TO ALLOW CLEANING AT ALL JOINTS AND HORIZONTAL RUNS.
6. EXHAUST DUCT TO BE 16 GA. GAV STEEL. ALL SEAMS AND JOINTS TO HAVE A LIQUID TIGHT CONTINUOUS EXTERNAL WELD.
7. FAN TO HAVE A MINIMUM OF 10 FT. OF CLEARANCE FROM THE OUTLET TO ADJACENT BUILDINGS, PROPERTY LINES, AIR INTAKES OR 3 FT. VERTICAL CLEARANCE PER NFPA96.
8. HORIZONTAL EXHAUST DUCT TO SLOPE NOT LESS THAN 1/4" PER FOOT TOWARD HOOD FOR DUCT LESS THAN 75' LONG.
1" PER FOOT SLOPE FOR DUCT LONGER THAN 75'.
9. HOOD TO OVERHANG COOKING EQUIPMENT 6" ON ALL OPEN SIDES.
10. COMBUST DUCT TO BE PROTECTED FROM COMBUSTIBLES PER NFPA96 AND LOCAL CODE.
11. BUILDING PRESSURE SHALL NOT EXCEED 0.02" WATER COLUMN AT EXTERIOR DOORS.
12. KITCHEN SHALL BE BALANCED TO BE NEGATIVE WITH RESPECT TO THE DINING ROOM.

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CUSTOMER APPROVAL TO MANUFACTURE:
Approved as Noted
Approved with NO Exception Taken
Revise and Resubmit
SIGNATURE _____
Your Title _____ Date _____

REVISIONS

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CAPTIVE-AIRE
www.captiveaire.com
Florida Gulf Coast Office
4519 George Road, Suite 150, Tampa, FL 33634 PHONE: (813) 435-3388 FAX: (813) 354-4825 EMAIL: reg@captivair.com

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SHEET
FS-H5
5 OF 6 SHEETS

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