

IFB NumberScope NumberClosing DateClosing TimeReturn IFB SubmittalGC2018092565-497749779/27/20192:00pm CSTbids@synergynds.com

IFB Reference Information: Warehouse Build

Insured Property Owner: Town of Greenwood

Property Location Name: Warehouse
Address Line 1: 5167 Fort Rd

Address Line 2: Enter Text Here

City: **Greenwood** State: Florida Zip Code: **32443**

<u>**DESCRIPTION**</u>: Furnish all required labor, materials and equipment necessary to provide Scope-of-Work at the above described location. Work is being authorized under the elected FMIT TurnKey Recovery Program^{sм} administered by SynergyNDS on behalf of the Insured Property Owner, a Member of the Florida Municipal Insurance Trust (FMIT).

SUBMITTAL INSTRUCTIONS: In support of Procurement Guidelines, the IFB Packet includes specifications and terms & conditions associated with the above referenced project information.

- 1. Bids shall be received no later than the Closing Date & Time indicated above. Bids received after above deadline or that are not submitted in accordance to Submittal Instructions may be rejected without further explanation or contractor notification.
- 2. Bid shall be completed and submitted using **ONLY** the **Contractor Submittal Form** (provided at the end of the IFB Packet).
- 3. Contractor is responsible to validate all Quantities and Units of Measurements specific to the following scope items &/or products. The information and descriptions provided in the IFB are intended for general guidance purposes only. Contractor may not change or alter any material &/or specifications identified in the IFB for submission purposes without prior written/email notification to: bids@synergynds.com.
- 4. Contractor has the sole responsibility to ensure that all services and material for BID Submittal (whether stated correctly in the IFB or not) satisfactorily meet all required Codes & Standards, OSHA Guidelines and The Americans with Disabilities Act (ADA).
- 5. Contractor should also consider the approach (if necessary) in which to stock/store material at the jobsite in a safe and secure manner. SynergyNDS will not be responsible for lost or stolen material, supplies or equipment stocked at the jobsite.
- 6. Bid award will be made based on best overall LUMP SUM project value as determined by SynergyNDS in accordance to market valuation, project demands, critical path scheduling as well as overall Insured Member's WorkForce Participation Goals. Contributing factors, in addition to price, may be considered as necessary to help determine bid award based on any additional criteria set forth by the specific FMIT Insured Member.

- 7. SynergyNDS reserves the right to modify the IFB Specifications and Terms & Conditions at any time during the bid solicitation process. Timely notice to all bidders will be given via an electronically distributed Addendum.
- 8. All registered HUB & HUB Zone Contractors, as well as DBEs are encouraged to participate. Additional Contractor Financial Assistance is available to help support daily HUB/DBE Contractor's operations under the terms and condition of a successful contract award.
- 9. SynergyNDS is an equal opportunity employer and administers all Contracts & Contractor Agreements in accordance to the requirements of 41 CFR §§ 60-1.4(a), 60-300.5(a) and 60-741.5(a).
- 10. Contractor is strongly encouraged to schedule a Site Visit of the property as necessary to support the IFB Submittal. All scheduled site visits can be requested at bids@synergynds.com.
- 11. When a mandatory Pre-BID Meeting is identified and scheduled in a specific IFB, Contractor Attendance is a requirement as part of the Solicitation. Contractors who fail to attend the Pre-BID Meeting will not be eligible to participate in the IFB and subsequent submittal process.
- 12. Contractor can submit all questions &/or concerns specific to the IFB by email to: bids@synergynds.com.

SCOPE-OF-WORK SUMMARY

Refer to **EXHIBIT A** and any subsequent **ATTACHMENTS** for scope-of-work description that will be included after the IFB Contractor Submittal Form on Page #9.

- *This IFB is part of a potential Federally Funded Project.
- *This IFB does not require a Contractor Payment or Performance Bond.
- *This Project is Sales Tax Exempt through the specific Florida Public Entity.
- *This IFB does not require a Pre-BID Meeting
- *This IFB supports workforce participation goals.

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GENERAL TERMS & CONDITIONS

- 1. Contractor shall be responsible for field verifying all conditions, dimensions & quantities prior to IFB Submittal and the implementation of this scope of work. Any Exhibits, Plans, Drawing &/or Other Supporting Documents have been included for general reference purposes only.
- Contractor is responsible to identify and satisfactorily address all applicable regulatory requirements, including but not limited to Codes & Standards, HUD/DBE Participation Goals & Guidelines and ADA/FHA Specifications.
- 3. Contractor shall indicate in writing and be responsible to submit to SynergyNDS via email distribution to projects@synergynds.com any request or need for additional 3rd Party Assignment as necessary to further identify required codes & standards, scope specifications or public health safety concerns outside of Contractor's professional competence &/or licenses.
- 4. Contractor is to obtain their own permits and schedule all applicable inspections. Permits can be obtained by contacting the Building Department or other administering entity. Permit Fees are reimbursable direct from SynergyNDS (in addition to contractor's Lump Sum Proposal) if incurred and submitted with proper documentation.
- 5. Contractor shall prohibit discrimination against staff &/or available workforce based on their status as protected veterans or individuals with disabilities and prohibit discrimination against all individuals based on their race, color, religion, sex, sexual orientation, gender identity or national origin. Moreover, these regulations require that Contractor and its subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, protected veteran status or disability.
- 6. Contractor is to abide by all applicable OSHA and project safety requirements and standards. Contractor shall require all employees to utilize proper PPE when applicable, including but not limited to: fall protection harnesses, hard hats, safety glasses, safety foot wear, gloves and etc.
- 7. Contractor is responsible for submitting applicable project and associated contract documents as defined by Architectural Drawings Specifications, Engineering Requirements, Certificates of Insurance, Change Order Requests and any written or documented deviations from approved scopes-of-work or Contract.
- 8. Contractor may be asked to provide Material Safety Data Sheets (MSDS) to the Industrial Hygienist of record (for the project) for chemical-based products that will be used including, but not limited to, glues, cleaners, solvents, anti-microbial products, sanitizing agents, etc. The Industrial Hygienist of record retains the right to not allow the use of any of the products selected.
- 9. Contractor shall be responsible under terms of the Agreement for supplying any and all necessary labor, equipment, tools, materials and travel expense to complete the scope of work unless directed otherwise in the IFB. This includes but is not limited to: Rental Equipment, Dumpsters, Storage Containers, Jobsite Trailer, General Conditions, Associated Expenses, Travel Cost and Overhead & Profit which are to be included in the IFB Contractor Lump Sum Proposal.
- 10. Contractor shall protect all property from new and supplemental damage during the performance of work. This includes, but necessarily limited to: wall finishes, floor finishes, windows, electrical systems, mechanical systems, communication systems, life safety systems, security systems, HVAC control

- systems, plumbing systems, lighting systems, structurally related components, exterior elements, vegetation, property-of-others, and etc.
- 11. Contractor shall be responsible for any breakage &/or cleaning of unintended damage, debris, coatings, coverings, overspray and residual caulking from the aforementioned property described above. If affected property can't be successfully cleaned &/or restored to pre-existing condition, SynergyNDS will seek reimbursement from Contractor &/or deduct the appropriate replacement cost from outstanding Invoice Payment (Contract Value).
- 12. Contractor is EXPECTED to maintain a Clean & Safe Work Environment throughout the lifecycle of the awarded scope-of-work. This includes daily clean-up and organization of the Contractor's work area specific to all material waste, debris, tools &/or equipment. Failure to do so (after 3 documented warnings) can result in back charges to Contractor in the amount of \$25.50 hourly rate with a minimum \$150.00 per day clean-up rate (as determined by the SynergyNDS or the Insured Property Owner).
- 13. Contractor shall be responsible for securing work area(s) from access by non-authorized building occupants, including all persons not directly part of the restoration, repair and/or rebuild efforts. This includes securing work area(s) as identified in the IFB Scope-of-Work &/or under Contractors control.
- 14. Contractor shall provide and implement a site-specific health and safety plan to include hazard communication and related OSHA to protect workers as well as the general public with access to the work area.
- 15. If the Contractor determines that deviations, modifications (change order or supplemental costs) from the initial scope-or-work are required, the Contractor shall submit a written request to SynergyNDS for review and approval prior to start of any additional work not otherwise included in initial BID. The written request will contain, at a minimum:
 - a. Reason for deviation or modification
 - b. Description of deviation or modification
 - c. Project cost addition or subtraction for deviation or modification
 - d. Estimated time required for deviation or modification.
- 16. Contractor is NOT responsible for any conditions or activities the building owner or employees implemented prior to their arrival to the job site. This includes removal of contents, equipment or personnel from the affected areas to the non-affected areas of the building.
- 17. During the performance of Contractor's scope-of-work, pre-existing damage to the building, structure, system failures or other anomalies may be found. If this occurs, the Contractor has the responsibility to identify, document and report these deficiencies immediately to SynergyNDS by email notification to projects@synergynds.com. Verbal notification &/or discussion only with the Onsite Project Manager is encouraged but not binding. Written documentation must be provided in efforts to comply with the required transparent approach.
- 18. Contractor is responsible to ensure that their employees &/or its sub-contractors comply with the provisions and terms of the IFB and Contract Agreement.

<u>PAYMENT</u>: Project is managed by SynergyNDS, Inc., under the TML Turnkey Recovery Program. Payments will be made directly to the contractor(s) in accordance with described terms & conditions. Qualified contractors may be eligible for an upfront material deposit or progress payments as determined prior to BID AWARD. Contractor must be registered in the MVP (Managed Vendor Program) whereby required contractor documents must be uploaded to the database. There is annual \$49.95 processing fee as part of the initial contractor vetting and background check.

<u>PAYMENT TERMS</u>: Payments will be made after inspection and approval of work by SynergyNDS, City Building Official &/or Insurance Adjuster. Accurate invoices and required project documentation must be submitted to SynergyNDS for project audit prior to payment. *Material Deposits &/or Advanced Payments require Contractor to complete online registration in the Managed Vendor Program (MVP). MVP has an annual \$49.99 Registration Fee to be part of the Contractor Direct Repair Program. Material Deposits &/or Advanced Payments will require a 2% Invoice Payment Discount.

HOLD HARMLESS: To the fullest extent permitted by law, the Contractor/Vendor shall indemnify, defend, and hold harmless SynergyNDS, Inc & TML, their officers, agents, employees, elected, and appointed officials, Insurance Representatives and volunteers from and against any and all claims, losses or liability, including attorney's fees, arising from injury or death to persons or damage to property occasioned by any act, omission, or failure of the Contractor/Vendor and any of its officers, agents, employees, and volunteers in satisfying the terms required by this contract.

RIGHT TO ACCEPT, REJECT AND WAIVE DEFECTS: SynergyNDS &/or Contracting Agent reserves the right to: reject all quotations; waive formalities, technical defects, and minor irregularities; accept the quotation (if any) deemed most advantageous to and in the best interests of Insured Members of FMIT. Award will be based on price, contractor's daily performance capabilities, availability to provide the specified services when required &/or in accordance to critical path scheduling.

DAMAGES: Contractor will be held liable for any damage caused to the building and ancillary structure, and/or injury to the occupants resulting from the execution of the work or from not exercising proper precautionary protective measures. Any cost of repair/replacement resulting from damages shall be at the Contractor's expense.

WORK-SITE PRACTICES: Contractor's workers, as well as the various trade contractors entering or leaving the work area, will all attend a site-specific safety meeting as well as daily safety meetings prior the scheduled workday. Contractor's workers entering or leaving the work area will don or remove personal protective equipment and clothing in the staging area outside of each work area. All debris & trash in the work area will be removed and disposed.

WORKER PERSONAL PROTECTION EQUIPMENT: The National Institute for Occupational Safety and Health (NIOSH) provides the following interim guidelines and warnings to restoration workers.

- a) Steel toed leather boots should be worn. Tennis shoes or sneakers should *not* be worn because they will transfer contamination and will not prevent punctures, bites, or crush injuries.
- b) Goggles, safety glasses with side shields or full-face shields shall be used when performing restoration related activities that involve demolition, cutting or the use of ANY power tools. Sun/glare-protective

lenses may be needed in some work settings. The use of goggles or protective eyewear should also be worn during the application of any cleaners, sanitizers or disinfectants.

- c) Soft hat or another protective head cover. Wear an American National Standards Institute (ANSI) rated hardhat if there is any danger of falling debris or electrical hazards.
- d) Hearing protection (when working in an environment with any noise that you must shout over to be heard).
- e) Comfortable, form fitting, light weight clothing including long pants and a long-sleeved shirt or coveralls. Additional PPE, respiratory protection, or clothing may be required when specific exposure hazards are identified or expected at the work site. In some instances, the protective ensemble components (garment, boots and gloves) may need to be impervious to contaminated flood or other site-specific chemical, physical, or biological hazards. In all instances, workers are advised to wash their hands with soap and clean water, especially before eating or drinking. Protect any cuts or abrasions with waterproof gloves and dressings. The use of insect repellant, sun block and lip balm may also be required for some work environments. Drink plenty of bottled water and take frequent rest breaks to avoid overexertion.

THERMAL STRESSES: HEAT: Workers are at serious risk for developing heat stress. Excessive exposure to hot environments can cause a variety of heat-related problems, including heat stroke, heat exhaustion, heat cramps, and fainting. To reduce the potential for heat stress, drink a glass of fluid every 15 to 20 minutes and wear loose- fitting clothing. Additionally, incorporate work-rest cycles into work routines and when possible distribute the workload evenly throughout the day.

****Temporary cooling to the work areas shall only be authorized by the owner's representative based on the actual need for the work being performed. Where the conditions allow for the operation of part or all of the ventilation systems serving the work area then the need for temporary cooling is NOT necessary. The work area should be maintained at conditions that meet OSHA requirements for health and safety.***

WORKING IN CONFINED SPACES: If you are required to work in a boiler, furnace, pipeline, pit, pumping station, septic tank, sewage digester, storage tank, utility vault, well, or similar enclosure, you should be aware of the hazards of working in confined spaces. A confined space has one or more of the following characteristics:

- a) limited openings for entry or exit;
- b) unfavorable natural ventilation; or
- c) Is not designed for continuous worker occupancy.

Toxic gases, a lack of oxygen, or explosive conditions may exist in the confined area, resulting in a potentially deadly atmosphere. Because many toxic gases and vapors cannot be seen or smelled, never trust your senses to determine if safe entry is possible. **Never** enter a confined space unless you have been properly trained, even to rescue a fellow worker! If you need to enter a confined space and do not have the proper training and equipment, contact your local fire department for assistance.

<u>CONTRACT IMPLEMENTATION:</u> Contract will be awarded upon review of all bids and proposals received by SynergyNDS. Initiation of intent-to-contract with Contractor will be engaged upon email notification and signed/returned Contractor Agreement Form. Contract-in-full will occur upon SynergyNDS receipt of all required documentation including but not limited to:

- a) Performance Bond &/or Payment Bond (If Required)
- b) Certificate of General Liability Insurance
- c) Certificate of Auto Insurance
- d) Certificate of Worker's Compensation or Letter of Exemption
- e) Contractor's W-9
- f) State Licenses

Further description of insurance requirements is listed in "Insurance & Licensing Requirements." No material deposits &/or payments will be made to Contractor until all required documentation has been received.

ASSIGNMENT OF CONTRACT: Contractor shall not assign the contract or any part thereof to any person, firm, corporation or company unless such assignment is approved in writing by SynergyNDS. Such acceptance shall be at the sole discretion of the SynergyNDS upon request of the Contractor. Upon approved and executed Transfer-of-Contract-Agreement, Contractor will be responsible for the coordination and hand-off of work/trades with the newly Assigned Contractor. Failure to coordinate this work will not relieve original Contractor of their obligations and shall not constitute additional cost as governed by the Lump Sum Contract Award.

ASSIGNMENT OF CONTRACTOR: Contractor is responsible for supplying all required Personal Protective Equipment (PPE), including but not limited to the furnishing and appropriate use of: hard hat(s), safety glasses, face shields, ear plugs, gloves, boots, fall protection (where required), breathing protection (where required), tie off ropes/apparatuses/points (where required), fire extinguishers, first aid kits, etc. Contractor is required to be familiar with and follow all OSHA and State of Florida's safety requirements.

- a) Contractor is to hold daily jobsite safety meetings that review the work to be performed, the hazards involved and the methods for reducing and eliminating such hazards, as well as maintain meeting records, - including attendance lists, which shall be kept onsite and available for SynergyNDS review at all times. Contractor shall be solely liable for any and all OSHA violations associated with his/her employees.
- b) SynergyNDS reserves the right to hold weekly progress meetings for which the Subcontractor shall attend. Contractor shall be responsible for daily cleanup of the work performed herein. Failure to cleanup daily after trade will result in cleanup supplementation at Contractor's cost. Twenty-Four (24) hour notice will be given prior to supplementation. Contractor shall be responsible for delivery, loading, unloading, storage, protection, etc. of all work provided herein.

ENERGY EFFICIENCY: The Contractor shall comply with all mandatory standards and policies relating to energy efficiency which are contained in the energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub.L. 94-163) for the State in which the work under this contract is performed.

PROCUREMENT OF RECOVERED MATERIALS: In accordance with Section 6002 of the Solid Waste

Disposal Act, as amended by the Resource Conservation and Recovery Act, the Contractor shall procure items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition. The Contractor should procure items designated in the EPA Guidelines that contain the highest percentage of recovered materials practical unless the Contractor determines that such items:

- a) are not reasonably available in a reasonable period of time;
- b) fail to meet reasonable performance standards, which shall be determined on the basis of the guidelines of the National Institute of Standards and Technology;

FAILURE TO COMPLY: For failure to deliver in accordance with specifications, SynergyNDS may cancel the contract or any part thereof and purchase services on the open market, charging any additional cost to the Contractor. Contractor shall comply with all applicable state, federal and local codes, and pay all permits, licenses and certificates, and other fees as required by the work.

INSURANCE & LICENSING REQUIREMENTS: Before starting work, the Contractor will provide SynergyNDS proof of Worker's Compensation and Commercial and Public Liability Insurance. The Contractor must be licensed to do business in the State of Texas and SynergyNDS must be named as an additional insured on general liability insurance certificate. Contractor will need to go to www.syngerynds.com and complete the initial registration for the Managed Vendor Program (MVP). Contractor will be required to upload the following information (when applicable) prior to contract award and eligible material deposits.

- a) The Contractor will carry Worker's Compensation Insurance for all employees engaged in work at the site, in accordance with State or Territorial Worker's Compensation Laws.
- b) Commercial and Public Liability with bodily injury and property damage limits will be at a combined single limit of at least \$500,000 to protect the contractor and each subcontractor against claims for injury to or death of one or more persons.
- c) Automobile Liability on owned and non-owned motor vehicles used on the site(s), or in connection with the sites, for a combined single limit for bodily injury and property damages of not less than \$500,000.00 per occurrence.
- d) Builder's Work Insurance limit of at least \$5,000.00 per occurrence and \$10,000.00 aggregate.
- e) Professional Liability \$1,000,000 per occurrence (if applicable).

Contractor will not allow insurance coverage to lapse and will provide SynergyNDS with updated Certificates of Insurance as necessary. All policies must provide that at least thirty (30) days' notice of cancellation will be given to SynergyNDS. All Contractor employees &/or subcontractors are bound by the Insurance Requirement. Contractor is the sole responsible party for all its Employee &/or SubContractor infractions, accidents, damages and all general liability concerns that occur, whether directly or indirectly, as related to Contracted Scope-of-Work.

The certificate holder(s) must be noted as:

Synergy NDS, Inc. 1400 Sarno Rd Melbourne, FL 3293

FEDERAL CONTRACT REQUIREMENTS ONLY (In a Declared Event)

If stated in the IFB, the Contractor and its subcontractors must follow the provisions, as applicable, as set forth in 2 C.F.R. §200.326 Contract provisions and Appendix II to 2 C.F.R. Part 200, as amended, including but not limited to:

9.29.1 Davis-Bacon Act, as amended (40 U.S.C. §§3141-3148). When required by Federal program legislation, which includes emergency Management Preparedness Grant Program, Homeland Security Grant Program, Nonprofit Security Grant Program, Tribal Homeland Security Grant Program, Port Security Grant Program and Transit Security Grant Program, all prime construction contracts in excess of \$2,000 awarded by non-Federal entities must comply with the Davis-Bacon Act (40 U.S.C. §§3141-3144, and §§3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. If applicable, SynergyNDS must place a current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. SynergyNDS must report all suspected or reported violations to the Federal awarding agency. When required by Federal program legislation, which includes emergency Management Preparedness Grant Program, Homeland Security Grant Program, Nonprofit Security Grant Program, Tribal Homeland Security Grant Program, Port Security Grant Program and Transit Security Grant Program (it does not apply to other FEMA grant and cooperative agreement programs, including the Public Assistance Program), the contractors must also comply with the Copeland "Anti-Kickback" Act (40 U.S.C. § 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). As required by the Act, each contractor or subrecipient is prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. SynergyNDS must report all suspected or reported violations to the Federal awarding agency.

- 1. Contractor. The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.
- Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clause above and such
 other clauses as the FEMA may by appropriate instructions require, and also a clause requiring the
 subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be
 responsible for the compliance by any subcontractor or lower tier subcontractor with all of these
 contract clauses.
- 3. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12.

9.29.2 Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708). Where applicable, which includes all FEMA grant and cooperative agreement programs, all contracts awarded by SynergyNDS in excess of

\$100,000 that involve the employment of mechanics or laborers must comply with 40 U.S.C.§§ 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. §3702 of the Act, each contractor must compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

- 9.29.3 Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under 37 CFR §401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.
- 9.29.4 Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387). Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. §§7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. §§1251-1387) and will report violations to FEMA and the Regional Office of the Environmental Protection Agency (EPA). The Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water PollutionControl Act (33 U.S.C. 1251-1387), as amended—applies to Contracts and subgrants of amounts in excess of \$150,000.
- 9.29.5 Debarment and Suspension (Executive Orders 12549 and 12689)—A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689(3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.
- 9.29.6 Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)—Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non- Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.
- 9.29.7 Compliance with Procurement of recovered materials as set forth in 2 CFR § 200.322. CONTRACTOR must comply with section 6002 of the Solid Waste disposal Act, as amended, by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered

materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

OTHER FEDERAL REQUIREMENTS (In a Declared Event)

9.29.9 Americans with Disabilities Act of 1990, as amended (ADA) – The CONTRACTOR will comply with all the requirements as imposed by the ADA, the regulations of the Federal government issued thereunder, and the assurance by the CONTRACTOR pursuant thereto.

9.29.10 Disadvantaged Business Enterprise (DBE) Policy and Obligation - It is the policy of SynergyNDS that DBE's, as defined in 49 C.F.R. Part 26, as amended, shall have the opportunity to participate in the performance of contracts financed in whole or in part with SYNERGYNDS funds under this Agreement. The DBE requirements of applicable federal and state laws and regulations apply to this Agreement. SynergyNDS and its CONTRACTOR agree to ensure that DBE's have the opportunity to participate in the performance of this Agreement. In this regard, all recipients and contractors shall take all necessary and reasonable steps in accordance with 2 C.F.R. § 200.321(as set forth in detail below), applicable federal and state laws and regulations to ensure that the DBE's have the opportunity to compete for and perform contracts. SynergyNDS and the CONTRACTOR and subcontractors shall not discriminate on the basis of race, color, national origin or sex in the award and performance of contracts, entered pursuant to this Agreement. 2 C.F.R. § 200.321 CONTRACTING WITH SMALL AND MINORITY BUSINESSES, WOMEN'S BUSINESS ENTERPRISES, AND LABOR SURPLUS AREA FIRMS

- a) If the CONTRACTOR, with the funds authorized by this Agreement, seeks to subcontract goods or services, then, in accordance with 2 C.F.R. §200.321, the CONTRACTOR shall take the following affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used whenever possible.
- b) Affirmative steps must include:
 - I. Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
 - II. Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
 - III. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
 - IV. Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;
 - V. Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

- VI. Requiring the Prime contractor, if subcontractor are to be let, to take the affirmative steps listed in paragraph (1) through (5) of this section.
- 9.30 The Contractor shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Contractor during the term of the Contract and shall expressly require any subcontractors performing work or providing services pursuant to the Contract to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the Contract term.
- 9.31 If attached, the CONTRACTOR is bound by the terms and conditions of the Federally-Funded Subaward and Grant Agreement between SYNERGYNDS and the Texas Division of Emergency Management (Division).
- 9.32 The CONTRACTOR shall hold the Division and SYNERGYNDS harmless against all claims of whatever nature arising out of the CONTRACTOR's performance of work under this Agreement, to the extent allowed and required by law.

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IFB – CONTRACTOR SUBMITTAL FORM

<u> </u>	<u>B Number</u>	Scope Number	<u>Closing Date</u>	<u>Closing Time</u>	<u>Return IFB Submittal</u>
GC202	18092565-4977	4977	9/27/2019	2:00pm CST	bids@synergynds.com
Coı	mpany Name:				
А	ddress Line 1:				
А	ddress Line 2:				
	City:				
	State:			Zip Code	e:
		ification: DBE SUM PROPOSAL:	☐ WBE/WOS	В ПНОВ [SDVOSB/VOSB
IFB TITLE	Lump Sum Tota	l Phase 1 (Exterior)		PROPOSAL:	\$
IFB TITLE	Optional - Phase	e 2 Interior framing/o	drywall/painting	PROPOSAL:	\$
IFB TITLE	Optional - Phase	2 Electrical		PROPOSAL:	\$
IFB TITLE	Optional - Phase	e 3 Plumbing		PROPOSAL:	\$
Material Deposit Required Requested in the amount of \$					
	Company Co	ntact Name (Please Pr	rint)	Company ⁻	Title (Please Print)
		Signature			Date

^{*}Material Deposits &/or Advanced Payments require Contractor to complete online registration in the Managed Vendor Program (MVP). MVP has an annual \$49.99 Registration Fee to be part of the Contractor Direct Repair Program. Material Deposits &/or Advanced Payments will require a 2% Invoice Payment Discount.

INVITATION FOR BID (IFB) GC2018092565-007001-Exhibit A

<u>Project Summary:</u> The location the remnants of a warehouse building which was a complete loss as a result of Hurricane Michael. Warehouse is an 80' x 40' structure with garage doors and personnel entry/exit doors. Debris from original warehouse have been removed from the location along with the damaged concrete slab and footers.

Work Scope:

This is a summary of the required work scope. This work scope is only for the concrete slab and prefabricated metal building. This shall be noted on the bid form as Lump Sum Total Phase 1 (Exterior). See included specification binder for more in depth information.

- Perform necessary work to ensure that the slab can be poured level and true to surrounding area. Site visit is highly recommended.
- Form and pour concrete slab and footers in accordance with the specification documentation and included engineering plans.
- o Provide premanufacture metal building which meets the requirements of the specification's binder and engineering plans.
- Contractor shall acknowledge that s/he has reviewed and understand all information within the specification binder.
- All required documentation is attached below. Separate PDF file of architectural drawings are attached to email with IFB packet.

Optional Phase 2 bid lines:

- Interior framing/drywall/painting:
 - All information is provided in the attached specifications package. This shall include all identified framing, insulation of framed walls, hanging & finishing all drywall, application of texture (if required), and painting of all finished walls. This will also include any doors, millwork, and final trim out. All hardware as identified in the specification binder shall be included in the total bid price.
- Interior Electrical:
 - Total bid cost shall include all identified electrical work in the specification's binder.
 - This shall also include running power to adjacent pole barn to a sub-panel to be provided by the contractor. Lighting and out circuits shall be provided to the adjacent pole barn. All circuits shall be ran in accordance for exterior locations.
- Interior Plumbing:
 - Total bid cost shall include all identified plumbing work in the specification's binder.

Reminder Notes:

- 1. Contractor is responsible to validate all quantities and units of measurements specific to the scope items above. Information above is intended as a general guidance purpose only.
- 2. Contractor has the sole responsibility to ensure that all services and materials for bid submittal meet all codes and standards. This include that all work must be completed in order to meet all codes and standards.
- 3. Contractor should also consider method to stock/store materials at the jobsite in a safe and secure manner. SynergyNDS will not be responsible for lost or stolen materials, supplies, or equipment from the location.
- 4. Contractor is strongly encouraged to schedule a site visit of the property as necessary to support the IFB submittal.
- 5. Contractor can submit request for site visit, all questions &/or concerns to the specific IFB by emailing: bids@synergynds.com

DONOFRO ARCHITECTS Marianna, Florida Phone (850) 482-5261

NEW MUNICIPAL WAREHOUSE Greenwood, Florida

For the TOWN OF GREENWOOD Greenwood, Florida



Phyliss Bowman, Mayor

Town Council

Thomas Andreasen
Mamie Vann

Bryan Johnson



Job # M -2019-03

August 3, 2019

PROJECT DIRECTORY

OWNER: Town of Greenwood

4207 Bryan Street, Greenwood, Florida

Phyliss Bowman, Mayor Phone: (850) 594-1216

ARCHITECT: Donofro Architects

2910 Caledonia St. P.O. Box 861 Marianna, Florida 32446/32447

Phone: (850) 482-5261 Fax: (850) 482-8609

Paul A. Donofro, Jr., Project Architect Sean Donofro, Contract Administration

PROJECT MANAGEMENT: SynergyNDS

1400 Sarno Road Melbourne, GL 32935 Phone: (888) 580-7080

Keith Bassett, Sr Project Manager

kbassett@synergynds.com or (706) 551-4946

CIVIL ENGINERING: N.I.C. / BY OWNER

STRUCTURAL ENGINEER: Johnson and Associates Engineering

200 Grove Park Lane, #820

Dothan, Al. 36305 Phone: (334) 671-4783 Brad Johnson, PE

MECHANICAL ENGINEER: Watford Engineering, Inc.

2872 Madison Street Marianna, Florida 32448 Phone: (850) 526-3447 David N. Watford, PE

ELECTRICAL ENGINEER: Humber Garrick Engineering

142 Elgin Parkway, SE

Fort Walton Beach, Florida 32548

Phone (850) 243-6723

Dan White, PE

M-2019-03 August 3, 2019

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DIVISION I BIDDING CONDITIONS

M-2019-03 August 3, 2019

INVITATION TO BID

Bids will be received by the Town of Greenwood, Greenwood, Florida, until 2:00 p.m. CT on , 2019 at the Town of Greenwood City Hall located at 4207 Bryan Street, Greenwood, Florida, at which time and place all bids received will be publicly opened and read aloud for furnishing all labor and materials for the construction of:

NEW MUNICIPAL WAREHOUSE TOWN OF GREENWOOD 5167 FORT ROAD, HIGHWAY 60 GREENWOOD, FLORIDA

All work shall be done according to plans and specifications prepared by Donofro Architects, 2910 Caledonia Street, Marianna, Florida 32446. Plans are on file and open to inspection in the office of the Architect, 2910 Caledonia Street, Marianna, Florida.

Drawings and specifications may be viewed at the office of the Architect at 2910 Caledonia Street, Marianna, Florida 32446. Drawings, specifications and addendums may also be viewed thru drop box link upon request to karen@donofroarchitects.com

Each bid must be accompanied by a bid bond or a cashier's check, made payable to the Town of Greenwood, Greenwood, Florida in the sum of 5% of the base bid as a guarantee and with an agreement that the bidder will not revoke or cancel his bid or withdraw from the competition for a period of thirty (30) days after the opening of bids, and that in the event the contract is awarded to the bidder, he will within ten (10) consecutive days after it is submitted, enter into written contract with the Town of Greenwood in accordance with the accepted bid. The cost of the bond will be included as part of the bidder's base-bid proposal.

The Owner reserves the right to waive informalities in any bid, and to reject any or all bids, or to accept any bid and any combination of alternates or separate bid prices that, in their judgement, will be to the best interest of Town of Greenwood.

NOTE: There will be a Mandatory Pre-Bid Conference held at 9:00 a.m. on , , 2019 at the Town of Greenwood Town Hall located at 4207 Bryan Street, Greenwood, Florida.

TOWN OF GREENWOOD

BY: /s/ Phyliss Bowman, Mayor Town of Greenwood Greenwood, Florida

SECTION B

INSTRUCTIONS TO BIDDERS

B-1 INTENT OF INSTRUCTIONS:

Instructions of bidders are included in the contract documents to amplify the Advertisement and the Proposal Form and to give other details which interested parties must or should know to prepare their bid properly.

B-2 PROJECT DESCRIPTION:

Generally, this project can be described as a 3,200 sf. General purpose warehouse to serve the Town of Greenwood. In addition to the warehouse space the building will include space for an office, a breakroom, a toilet room with shower, and a second-floor mezzanine accessible from the warehouse via stairs. The building is designed as a pre-engineered metal building (PEMB) system and utilizes a CIP concrete floor slab at grade, prefinished metal wall panels, and prefinished metal roof panels.

B-3 EXAMINATION OF CONTRACT DOCUMENTS AND SITE PRIOR TO THE WORK:

Before submitting a proposal for the work, the bidders shall carefully examine the contract documents, visit the sites, and satisfy themselves as to the nature and location of the work, and the general and local conditions, including weather, the general character of the site, any other work being performed thereon at the time of the submission of their bids. They shall obtain full knowledge of transportation, disposal, handling and storage of materials, availability of water, electric power and all other facilities in the area which will have a bearing on the performance of the work for which they submit their proposals. The submission of a proposal shall be prima facie evidence that the bidder has made such an examination and visit and has judged for and satisfied himself as to the conditions to be encountered and the materials and equipment to be furnished and as to the contract requirements and contingencies involved.

B-4 EXPLANATIONS AND INTERPRETATIONS:

Should any bidder observe any ambiguity, discrepancy, omission or errors in the drawings and specifications, or any of the contract documents, or be in doubt as to the intention and meaning thereof, he should at once report such to the Architect and request clarification, preferably in writing, from the Architect.

Clarification will be made by Addenda and sent to all prospective bidders, as time permits. No addendum will be mailed out after a date three (3) days before bids are received nor faxed to those that have received bid documents from this office, prior to 24 hours before time of receipt of bids. Each bidder is requested to report such questions before that time.

Neither the Owner nor the Architect will be responsible in any manner for verbal answers regarding intent or meaning of the contract documents, or for any verbal instructions, by whomsoever made, prior to the award of the contract. Bidders for their own protection should demand answers or instructions concerning any matter affecting their bids in writing. Should conflict occur in or between drawings and specifications, the bidder will be deemed to have estimated on the more expensive way of doing the work involved unless they have asked for and obtained the written decision of the Architect before submission of their proposal, as to method, or equipment, which will be required.

B-5 SUBSTITUTIONS:

No substitution will be considered unless written request has been submitted to the Project Management Company (bids@synergynds.com) approval at least five (5) days prior to the date for receipt of bids. Each such request shall include a complete description of the proposed substitute, the name of the material or equipment for which it is to be substituted, drawings, cuts, performance and test data and any other information necessary for a complete evaluation.

B-6 DRAWINGS AND SPECIFICATIONS:

Consider as complementary each to the other. What is called for by one shall be as binding as if called for by both. Where conflicts occur, secure clarification from the Project Management Company (bids@synergynds.com) in advance of bidding, otherwise provide the more expensive quality and quantity. Follow figures in preference to scale dimensions, verify all dimensions and existing conditions.

B-7 FAMILIARITY WITH LAWS:

The bidder is assumed to be familiar with all federal, state and local laws, ordinances, rules and regulations, that may in any manner affect the work. Ignorance on the part of the bidder will in no way relieve him from responsibility.

B-8 PREPARATION AND SUBMISSION OF BIDS:

A. <u>Procedure</u>: Proposals shall be submitted on the Proposal Form as bound with these specifications or a reproduced form. Any erasures or other corrections in the proposal must be explained or noted over the signature of the bidder. Proposals containing any conditions, omissions, unexplained erasures, alterations, items not called for, or irregularities of any kind may be rejected by the Owner.

Proposals must be submitted in duplicate.

Each bid must give full business name and address of the bidder, state whether he is an individual, corporation or partnership. Proposals by a corporation must be signed with the legal name and proposals by partnerships shall show the names of all partners and must be signed in the partnership name by one of the partners. Bidders shall be licensed as Contractors by the Florida Construction Industry Licensing Board.

Proposals with the bid guarantee shall be enclosed in a sealed envelope which shall be marked:

"SEALED BID FOR THE NEW MUNICIPAL WAREHOUSE 5167 FORT ROAD, HIGHWAY 69, GREENWOOD, FLORIDA"

- B. <u>Irregular Proposals</u>: Proposals may be rejected if they contain any omissions, alterations of forms, additions not called for, incomplete bids, or erasures, or irregularities of any kind.
- C. <u>Errors in Bid</u>: In case of discrepancies between the prices shown in the figures and in words, the words govern.

B-9 WITHDRAWAL OF BIDS:

Bids may be withdrawn by written or telegraphic request from the bidders prior to the time fixed for opening. Negligence on the part of the bidder in preparing their bid confers no right for the withdrawal of the bid after it has been opened.

B-10 RECEIPT AND OPENING OF BIDS:

Bids will be opened publicly at the time and place stated in the Advertisement for Bids. The officer whose duty it is to open them will decide when the specified time has arrived and no bids received thereafter will be considered. No responsibility will be attached to any officer for the premature opening of a bid not properly addressed and identified. At the time fixed for the opening of bids, their contents will be made public for the information of bidders and others interested who may be present.

B-11 BID MODIFICATIONS:

Bid modifications will be accepted from bidders if addressed as indicated in Advertisement for Bids, and if received prior to the opening of bids. No bid modification will be accepted after the close for receiving bids have been announced. Modifications may be in telegraphic or in other written or printed form. Modifications shall be submitted in separate sealed envelope or the modifications may be written or printed on the outside of the sealed bid envelope. All bid modifications must be signed by an authorized representative of the bidder. Modifications will be read by the officer in charge prior to the opening of bids.

B-12 BID CUT OFF TIME:

Bidders will abide by a two-hour cut off in receiving bids from subcontractors and suppliers. Prices from subcontractors and suppliers will not be received by contractors after two hours before the time for opening of bids.

B-13 REJECTION OF BIDS:

The Owner reserves the right to reject any and / or all bids when such rejection is in the interest of the Owner, and to reject the bid of a bidder who is not in a position to perform the contract. The Owner reserves the right to waive informalities in any bid, and to reject any or all bids, or to accept any bid and any combination of alternates or separate bid prices that, in their judgement, will be to the best interest of the Town of Greenwood.

B-14 QUALIFICATION OF BIDDERS:

In order to be qualified, a bidder must be able to present evidence that he/she is registered or licensed to perform the work as shown on the drawings and specifications in the State and / or County where the work will be carried on.

Furthermore, the agreement will only be entered into with responsible contractors, found to be satisfactory by the Owner, qualified by experience and in a financial position to do the work specified.

To facilitate the execution of the agreement, the bidder shall submit with their proposal a list and brief

description of similar work satisfactorily completed, with location, date of contracts, together with names and address of owners.

B-15 <u>DISQUALIFICATION OF BIDDERS:</u>

Any bidder using the same or different names for submitting more than one proposal upon any unit, portion, part, or section of work will be disqualified from further consideration on that part of the work. Evidence that any bidder is interested as a principal in more than one proposal for the work (example: bidding in partnership, association or individual) will cause the rejection of any such proposal. A bidder may, however, submit a proposal as a principal and as a subcontractor to some other principals, as he desires and by so doing will not be liable for disqualification. If there is any reason for believing there is collusion among the bidders, any or all proposals may be rejected and participants in such collusion may not be considered in future proposals for the same work. Proposals in which prices are obviously unbalanced or unresponsive to the Advertisement may be rejected.

The right is reserved to reject a proposal from a bidder who has not paid for or satisfactorily settled all bills due for labor and materials on former contracts in force at the time of letting.

B-16 MANDATORY PRE-BID CONFERENCE: N.A.

B-17 BID GUARANTEE:

Bids shall be accompanied by a bid guarantee of not less than five percent (5%) of the amount of the bid, which may be a cashier's check or bid bond made payable to the Owner. Such check or bid bond shall be submitted with the understanding that it shall guarantee that bidder will not withdraw their bid for a period of thirty (30) days after the scheduled closing time for receipt of bids; that if their bid is accepted. he will enter into a written contract with the Owner in accordance with the form of agreement included as a part of the contract documents, and that the required performance and payment bonds will be given and that in the event of the withdrawal of said bid within said period, or failure to enter into said agreement and give said bonds within ten (10) days after he has received notice of acceptance of their bid, the bidder shall be liable to the Owner for the full amount of the bid guarantee in any particular thereof. The bid bond or check shall be returned to all except the lowest two bidders after the formal opening of bids. The remaining bid bonds or checks will be returned to the two lowest bidders after the Owner and the accepted bidder have executed the agreement and performance bond has been approved by the Owner. If the required agreement and bond have not been executed within thirty (30) days after the date of opening of bids, then the bid bond or check of any bidder will be returned upon their request, provided he has not been notified of the acceptance of their bid prior to the date of such request.

B-18 AWARD OF CONTRACT:

The contract will be awarded as soon as possible to the lowest responsible bidder, provided their bid is reasonable and it is in the interest of the Owner to accept it.

The Owner reserves the right to waive any informality in bids received when such waiver is in the interest of the Owner.

Each bidder shall, if requested by the Owner, present evidence of their experience, qualifications, and ability to carry out the terms of the contract, including a financial statement.

B-19 TIME OF COMPLETION, NOTICE TO PROCEED, AND LIQUIDATED DAMAGES:

The work to be performed under the contract shall be commenced within ten (10) calendar days after date of Notice to Proceed and work for the total project shall be substantially completed within one hundred eighty (180) calendar days from date of Notice to Proceed.

The "Notice to Proceed Date" is established as the date the building permit is issued. A copy of the building permit showing date issued shall be submitted to the Project Management Company (bids@synergynds.com) for their records.

In as much as failure to complete the work within the time fixed in the agreement will result in substantial injury to the Owner, and damages arising from such failure cannot be calculated with any degree of certainty, it is hereby agreed that if the work is not substantially completed in accordance with the provisions of the contract documents the contractor shall pay the Owner as liquidated damages for such delay, and not as a penalty, five hundred dollars (\$500.00) for each and every calendar day lapsing between the date fixed for substantial completion, and the date such substantial completion shall have been fully accomplished. This amount shall be deducted by the Owner from the final estimate and shall be retained by the Owner out of monies otherwise due the contractor in the final payment under the Provisions of Article 8, of the General Conditions, and shall not exclude the recovery of damages by the Owner under other provisions of the contract documents, except for contractor's delays.

This provision for liquidated damages for delay shall in no manner affect the Owners right to terminate the contract as provided in Article 14 of the General Conditions, or elsewhere in the contract documents. The Owners exercise of the right to terminate shall not release the contractor from his obligation to pay said liquidated damages in the amounts set out in the agreement.

It is further agreed that the Owner may deduct from the balance retained by the Owner the liquidated damages stipulated therein, or such portion thereof as the said retained balance will cover.

B-20 DIRECT PURCHASE OF MATERIALS BY OWNER:

As a service to the Contractor and as a cost savings measure for the Town, the Town of Greenwood, Florida may purchase major materials for the construction project.

The Town of Greenwood may issue purchase orders and process payment for invoices approved by the General Contractor. The General Contractor and their Sub-Contractor hereafter referred to as the Contractor, is responsible for assisting the Owner in ordering and receiving materials for use in the work. Installation or assembly of these materials is the sole responsibility of the Contractor. This Direct Purchase of Materials by the Owner does not alter, modify, or relieve the Contractor of any obligations specified in the Contract Documents.

The contractor has included the cost of construction materials and equipment in the Contract Amount as shown in Article 4 of the Standard Form of Agreement Between Owner and Contractor. The Contract Amount stated in Article 4 of the agreement includes all Florida State sales and other taxes normally applicable to such material and equipment. The Owner may, at its own discretion, purchase such materials and equipment directly from the supplier. The Owner may consider purchasing any item but does not expect to issue Direct Purchase Orders for less than \$500.00. This amount may vary during the course of this project as determined by the Owner.

In the event the Owner elects to make direct purchases, the Contractor will not be responsible for paying

sales tax on such items. The responsibilities of the Owner, Architect / Engineer (A/E) and the Contractor relative to the Direct Material Purchase shall be governed by the terms and conditions of this agreement.

Cost of the bonds has been included in the Contract Amount and is not affected by this agreement.

The Contractor may select the supplier from whom it wishes the Owner to purchase materials or equipment as long as the material or equipment meets the specifications, which relates to that material or equipment.

The Contractor shall assist the Owner in completing the Direct Material Purchase Order Form identifying each item or materials or equipment to be purchased by the Contractor for the Project. The Direct Material Purchase Form should include:

- 1. The name, address, telephone number, and contact person for the supplier and the name and address of the project.
- 2. Manufacturer or brand, model or specification number of the item.
- 3. Quantity needed as estimated by the Contractor.
- 4. The price quoted by the supplier for the material or equipment in question.
- 5. Shipping, handling and insurance costs.
- 6. Delivery dates as established by Contractor if applicable.
- 7. Any special terms and conditions which have been negotiated with the supplier relative to payment terms, discounts, rebates, warranty, credits, or other terms and conditions.

Promptly upon completion of a Direct Material Purchase Order Form the Owner will authorize the Direct Purchase Order for the material / equipment that the Owner chooses to purchase. The purchase order shall require that the supplier provide required shipping and handling insurance. The purchase order shall also require the delivery of the Direct Material Purchase items on the delivery dates established by the Contractor. A copy of each purchase order will be furnished for the Vendor, the General Contractor, the Sub-Contractor, the Town of Greenwood Facilities Office and the Town of Greenwood Finance Department along with a "RECEIVING COPY". Upon receipt of the purchased materials and upon confirmation that the order is complete as evidenced by the required signatures on the Receiving Copy and upon receipt of all invoices, delivery tickets by the Director of Facilities payment for the purchase will be made.

Change Orders to Purchase Orders will be executed when minor additions or changes are made for a Purchase Order or when Purchase Order is cancelled.

The Project Management Company shall prepare the Owner and General Contractor shall execute, on a monthly basis, Deductive Change Orders to the Contract which will reflect Direct Purchase Orders issued for that period by the Owner. The amount of the deduction from the Contract Sum shall be based on the sum of Direct Purchase Orders issued for the period plus the applicable sales taxes and / or other discounts as may result from prompt payment. These Direct Purchase Orders to the Contract must be properly executed before the related purchase order will be paid.

Contractor's overhead and profit shall not be deducted on Contract Change Orders for Direct Material Purchase items.

When the Direct Material Purchase items are delivered to the project site by common carrier or manufacturer's / supplier's vehicle, the title to these items shall pass to the Owner. The Owner's representative and the Contractor shall jointly inspect each delivery for manufacturer / brand, quantity and condition. The contractor and Owner's representative shall both sign the invoice(s) and receiving copy of the purchase order after inspection of the order, by this process the ownership will transfer from the Owner to the Contractor for their immediate use in the execution of the contract. The Owner agrees to ensure all materials that are delivered to the site prior to its incorporation into the realty. At the time when ownership is transferred from the Owner to the Contractor, the contractor shall be fully responsible for all matters relating to the protection and risk of loss of materials provided by the Owner until such time as the items are incorporated in the work and accepted by the Owner as a finished project. At a minimum, the contractor shall assist the Owner inspect each item at the time of delivery, verify correct quantities, verify documentation, coordinate and expedite delivery, obtain and verify warranties required by contract documents.

The contractor shall assist the Owner in the inspection to determine that Direct Material Purchase items conform to the purchase requirements and determine prior to the incorporation into the project that such materials are not defective. If the contractor discovers defective or non-conforming items, the contractor shall not utilize such items in the project and shall promptly notify Owner of the defect or non-conformity and assist the Owner in the repair or replacement of the item. The contractor shall be fully responsible and liable to the Owner for failure to perform such inspections or otherwise permit defective or non-conforming material or equipment to be incorporated into the project.

Direct purchase of materials by the Owner in no way relieves the contractor of the responsibility for compliance with specification requirements, coordination, scheduling or warranty of work. The contractor is not relieved of the responsibility or obligation to ensure that materials requested for purchase have been reviewed and approved by the A/E through shop drawings and submittal procedures when required by the contract documents.

The contractor warrants Direct Material Purchase items the same as all other materials and equipment furnished by the contractor and nothing in this section shall alter or modify contractor's obligations under the contract relative to warranties.

The Owner shall not be liable for any interruption or delay damages in connection with Direct Material Purchase items except where Owner fails, within (7) days of a request to purchase by the contractor, to award a purchase order or to notify the contractor that the Owner elects not to purchase the item(s).

The contractor shall, on a monthly basis, provide Owner with documentation establishing the amount and nature of the material and equipment for which Direct Purchase Orders have been issued during the reporting period.

The contractor shall assist the Owner in obtaining lien waivers and other release from suppliers. Upon receipt of appropriate documentation from the contractor, Owner will make payment directly to the appropriate supplier.

B-21 PUBLIC ENTITY CRIMES:

Any person submitting a bid or proposal in response to this Invitation must execute the Form PUR 7068, as included in these Specifications, SWORN STATEMENT UNDER SECTION 287.133(A), FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES, including proper check(s), in the space(s) provided, and enclose it with the Bid/Proposal.

B-22 <u>JESSICA LUNSFORD ACT: N.A.</u>

B-23 <u>TEMPORARY CONSTRUCTION FENCING:</u>

The contractor shall be required to segregate construction areas from non-construction areas with a 6'0" high temporary chain link fence. The fencing shall be populated with signs that read "CONSTRUCTION SITE – AUTHOIRZED PERSONEL ONLY" at 20'0" o.c. Exact route and configuration of fence and entry points shall be determined by contractor. At project completion temporary fencing shall be removed from site by contractor

B-24 BUILDING PERMIT COSTS:

Contractor is responsible for obtaining all applicable permits and all permit costs shall be included as part of the bid cost.

B-25 OWNER CONTINGENCY:

Each bidder shall include in their base bid price a lump sum amount of **\$10,000.00** to be used by the Owner as a contingency fund to compensate the contractor for execution of any unforeseen work, not included as part of the work scope designated in these bid documents.

The expenditure of these contingency dollars can only occur after a written scope of work by the Architect and a written price proposal by the Contractor has been reviewed and approved by the Owner in the form of an approved contingency change notification (CCN) form.

At the close out of the project, any unexpended contingency funds shall be deducted from the contract amount via a deductive change order.

B-26. UNIT COSTS: N.A.

B-27. CIVIL ENGINEERING / SITE DEVELOPMENT PACKAGE:

The Civil Engineering and a portion of the Site Development components for this project including site demolition, site utilities, utility connections to municipal utilities, driveway connections, asphalt paving, pavement markings, site signage, erosion control, storm water management, landscaping, and landscape irrigation are not included as part of this project and are being handled independent of this contract by the Town of Greenwood's storm Damage representative, Synergy NDS. Any questions pertaining to civil engineering or the above described site development shall be directed in writing to Mr. Keith Bassett at kbassett@synergynds.com.

All clearing and grubbing, construction of the building pad, building pad density testing, concrete walks, pads, stoops and aprons shown on Architectural Floor Plan shall be included as part of this contract and shall be accounted for in this Bid. Top of the building pad shall be constructed so that top of the building pad is 1'0" above the highest point of the existing grade elevation within the building pad footprint and the building pad shall be extended out 10'-0" beyond perimeter of building and shall be compacted and densified as specified in the structural drawings. Areas around the building shall be graded to provide positive surface water drainage away from building and graded to divert water around building to preclude ponding of service water.

M-2019-03 B-8 August 3, 2019

END OF SECTION.

PROPOSAL FORM (May be reproduced by the Bidder)

DATE: _ TIME: _	
THE TOWN OF GREEN GREENWOOD, FLORII	

ATTENTION: Ms. Phyliss Bowman. Mayor

Sir:

TO:

The undersigned, hereinafter called "Bidder", having visited the site of the proposed project, familiarized himself with the local conditions, nature and extent of the work, the drawings, specifications and contract and bond requirements, proposes to furnish all labor, materials and equipment necessary and to complete all work required for:

NEW MUNICIPAL WAREHOUSE TOWN OF GREENWOOD 5167 FORT ROAD, HIGHWAY 60 GREENWOOD, FLORIDA

in full accordance with the Advertisement for Bids, Instructions to Bidders, contract and contract documents relating thereto, on file thru bids@synergynds.com, for the following bid prices:

1.	BASE BID including \$10,000.00 contingency:	
	Dollars (\$)
There	e is enclosed a cashier's check or bid bond, in the amount of	
		ch is not
	than 5% of the base bid, payable to the Town of Greenwood, Florida as the required bid arantee and for the purposes set out in your Advertisement for Bids and Instructions to B	•

The bidder hereby agrees that:

- A. The above proposal shall remain in full force and effect for a period of thirty (30) calendar days after the time of the opening of this proposal and that bidder will not revoke or cancel his proposal or withdraw from the competition within the said thirty (30) calendar days.
- B. In the event the contract is awarded to this bidder, he will enter into a formal written contract with the Owner in accordance with the accepted bid within ten (10) calendar days after said contract is submitted to you, and will furnish to the Owner a Contract Performance and Material Payment bond with good and sufficient sureties, satisfactory to the Owner, in the amount of 100% of the accepted bid. The bidder further agrees that in the event of the bidder's default or breach of any of the agreements of this Proposal, the said bid deposit shall be forfeited as liquidated damages.

The bidder agrees to substantially complete all work from date of "Notice to Proceed" within one hundred eighty (180) calendar days.

M-2019-03 C-1 August 3, 2019

Acknowledgment is hereby ma	de of receipt of the following a	addenda issued during the bidding period.
Addendum No Addendum No (Add further addenda as neces	Dated Dated sary)	
IN WITNESS WHEREOF, the	oidder has hereunto set his si	gnature and affixed this seal this
day o	f	<u>,</u> AD, 20 <u>.</u>
	BY:	
	TITLE:	

M-2019-03 C-2 August 3, 2019

SECTION D

LIST OF SUBCONTRACTORS

NOTICE:

Each bidder shall submit with his Proposal, a list of his subcontractors as shown below in duplicate. The list of subcontractors submitted by the apparent low General Contractor bidder will be read aloud at the bid opening. No change may be made in the subcontractor list submitted except upon written approval of the Owner / Architect. This form must be submitted in duplicate.

All subcontractors <u>must</u> be listed and noted on this form and attached to and with the bid form. Failure to complete this form will be cause for rejection of bid.

This	list is atta	ached to, and is an integra	al part of the proposal submitted by:
NAM	1E:		
ADD	RESS:		
FOR	₹ :	NEW MUNICIPAL WAR TOWN OF GREENWOO 5167 FORT ROAD, HIG GREENWOOD, FLORIE	DD SHWAY 60
		ned hereinafter called the ne phase of the work indic	bidder, lists below the names of the subcontractors who cated.
1	Site Su	ubcontractor	N.I.C.
2	Termit	e Subcontractor	Name:
			Address:
			Contact No
			Email:
3	Concre	ete Supplier	Name:
			Address:
			Contact No.
			Email:

M-2019-03 D-1 August 3, 2019

4	Pre-Engineered Metal Building System	Name:	
	Manufacturer	Address:	
		Contact No.	
		Email:	
5	Glass & Glazing	Name:	
		Address:	
		Contact No.	
		Email:	
6	Hardware	Name:	
		Address:	
		Contact No.	
		Email:	
7	Plumbing Contractor	Name:	
		Address:	
		Contact No.	
8	Electrical Contractor	Name:	
		Address:	
		Contact No.	
		Email:	
recei in the work work,	undersigned declares that he has fully inversed, and has in his files, evidence that the place where required by local or state law and his organization is capable, technical and that he has made similar installations	subcontractor is properly ws, has been engaged suc ly and financially, of perfor s in a satisfactory manner.	and currently licensed cessfully in his line of ming the pertinent
	day of		AD, 20
	Ву:		(SEAL)

THIS FORM MUST BE SUBMITTED IN DUPLICATE

M-2019-03 D-2 August 3, 2019

SWORN STATEMENT PURSUANT TO SECTION 287.133(3)(a), **FLORIDA STATUES**, ON PUBLIC ENTITY CRIMES

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

Т	his sworn statements is submitted to
	(print name of the public entity)
b	у
	(print individual's name and title)
fo	or
W	hose business address is
а	nd (if applicable) its Federal Employer Identification Number (FEIN) is
•	f the entity has no FEIN, include the Social Security Number of the individual signing this sworn tatement:

- 2. I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g). Florida Statues means a violation of any state or federal law a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
- 3. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b) **Florida Statues,** means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.
- 4. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a). Florida Statutes means:
 - 1. A predecessor or successor of a person convicted of a public entity crime or
 - 2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors' executives, partners, shareholders, employees, members and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with another person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.
- 5. I understand that a "person" as defined in Paragraph 287.133(1)(e). **Florida Statues** means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to

management of an entity. 6. Based on information and belief, the statement which I have marked below is in true relation to the entity submitting this sworn statement. [Indicate which statement applies] Neither the entity submitting this sworn statement, nor any of its officers' directors, executives, partners, shareholders, employees, members or agents who are active in the management of the entity, nor any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. [Attach a copy of the Final Order]. I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1(ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017 FLORIDA STATUES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM. (Signature) Sworn to and subscribed before me this _____day of ______, 20____. Personally known Notary Public - State of -OR Produced identification My commission expires _____ (Type of identification) (Printed, typed or stamped commissioned name of notary public)

transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in

Form PUR 7068 (Rev 06/11/92)

DIVISION II CONTRACTUAL CONDITIONS

M-2019-03 August 3, 2019

SECTION E

SUPPLEMENTARY AND SPECIAL CONDITIONS

E-01 GENERAL:

The General Conditions, Section D, AIA Document A-201, dated 1997, or latest edition, shall apply to and form a part of this Section as if written in full herein.

E-02 SCOPE:

This Section sets forth all modifications and additions to the General Conditions, Section D.

E-03 ARTICLE 1 GENERAL PROVISIONS:

Add the following to Paragraph 1.1.5:

Should the drawings disagree in themselves or with the specifications, the contractor shall estimate and furnish the more expensive, better quality, greater amount of work, and/or materials unless otherwise instructed in writing by the Project Management Company. Should minor omissions occur between or within the drawings or the specifications, the Contractor will furnish the item to meet the general intent and/or scope of the project documents.

Add the following to Paragraph 1.1.5:

<u>Drawings and Specifications:</u> Consider each as complementary to the other. What is called for by one shall be as binding as if called for by both. Where conflicts occur, secure clarification from the Architect in advance of bidding, otherwise provide the more expensive quality and quantity. Follow figures in preference to scale dimensions, verify all dimensions and existing conditions.

E-04 ARTICLE 2 OWNER:

Add the following to Paragraph 2.1.1 Definition:

Where the term "Owner" is used on the drawings or in the specifications, it shall refer to the Town of Greenwood. Florida.

E-05 ARTICLE 3 CONTRACTOR:

Add the following to Paragraph 3.1, Definition:

Where the words "The Contractor" are used, they shall be understood to refer to the contractor operating under the specifications of which these General Conditions are a part, unless particularly noted otherwise. In using the pronoun designation, the contractor, the third person singular is adopted herein, whether the contract is in the hands of an individual, a firm, a corporation, or their successors.

Paragraph 3.9.1, add the following:

Should the Architect find any person employed on the project incompetent or unfit for his duties, and so certified the facts to the contractor, the contractor shall immediately dismiss the employee and said employee shall not be re-employed on this project without written consent of the Architect.

Add the following to Paragraph 3.18, Indemnification:

Indemnification by the Contractor shall be in the full dollar amount of the Contract.

E-06 ARTICLE 4 ADMINISTRATION OF THE CONTRACT:

Add the following to Paragraph 4.1 Architect:

Where the words "The Architect" are used, they shall be understood to refer to Donofro Architects, Marianna, Florida or an authorized representative of that firm.

E-07 ARTICLE 7 CHANGES IN THE WORK:

Add the following to Paragraph 7.3.3:

Change orders under this contract whether adding to or deducting from the contract sum will be based as follows for overhead and profit:

- For all work done by his own organization, or subsidiaries of his own organization, the contractor may add 10% of his actual costs for combined overhead and profit.
- For all work done by his subcontractors, the respective subcontractors may add 10% of their actual costs for combined overhead and profit, and the Contractor may add 5% of the above subcontractor's cost for his overhead and profit.
- The above percentages shall be considered a reasonable allowance for overhead and profit due the contractors.
- Labor costs for the subcontractors and / or the Contractor may include supervision, estimation, layout, mechanics and labor wages, including payroll taxes, assessments, and insurance provisions. Costs may also include material and equipment rental cost which shall be the trade discount plus sales tax where applicable. Other items of cost may include freight or other transportation, special permits or fees, and unusual or excessively high expenses for communication, special testing or other transportation of personnel. Any of the above costs shall be itemized and shall be reasonable.
- A bond cost of 2% of the total amount of added costs will be allowed the contractor as a legitimate item of cost. No bond costs will be allowed for subcontractor bond cost.

 All proposals for change orders, shall be in written form itemizing all costs included in the change order, and submitted to the Architect. If required by the Architect, the contractor shall submit receipts, invoices for materials and other evidence showing his costs and his right to the payment claims.

E-08 ARTICLE 9 PAYMENTS AND COMPLETION:

Add the following to Paragraph 9.2.1:

The contractor shall within ten (10) days from date of contract deliver to the Architect three (3) copies of Schedule of Contract Values according to Sections of specifications and addition of item, profit and overhead showing values for all items listed, the total of which shall equal the contract price.

This schedule shall be for use of the Owner, at his discretion, in checking requisitions for payments, but it shall not be binding against the judgement of the Owner. The Unit Schedule shall also contain a chart giving the estimated time schedule for each portion of the contract.

The following form is given as a guide for the contractor's use in preparing the Unit Schedule Cost Breakdown and Payment Requests required under these Supplementary General Conditions. Monthly Pay Requests shall be submitted in triplicate.

SCHEDULE OF COSTS

Project Name and Location

Contra	actors Name: Date:				
ITEM_	UNIT	_QUANTITY	MATERIAL	LABOR	TOTAL
1.	General Conditions Bond Office and Sheds Taxes & Insurance Utilities Etc.		L.S. L.S. L.S.		
2.	Excavation & Grading Clear Area Machine Excav. Footing Excav. Etc.	J	L.S. L.S. C.Y. C.Y.		
3.	Concrete Work Footings Walls Cols. Forms-Ftgs. Walls		C.Y. C.Y. C.Y. S.F. S.F.		
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	Etc. Reinf. Steel	Tons	
	Reinf. Mesh	S.F.	
4.	Masonry Work	M	
	Slumped Brick Conc. Block-6"	M M	
	Conc. Block-8"	M	
	Etc.	IVI	
5.	Dampproofing & Waterproofing Etc.		
NOTE	: With each division broken down in	to appropriate items.	
TOTAI	L CONTRACT AMOUNT		
			Oollars
\$).		

E-09 ARTICLE 9 PAYMENTS AND COMPLETION:

Add the following to Paragraph 9.3.1:

The Contractor shall submit with his second monthly request for payment, and with every request for monthly payments thereafter, a Certificate of Partial Payment as included in these specifications. AIA document G702 & G703 (1992 Edition) will be acceptable. Certificates shall be notarized affirming that all subcontractors, suppliers, labor, etc., that have earned payment shown on the immediately previous monthly estimate have been paid in full accordance with the contract that exists between the Contractor and that or those agencies. Pay requests will not be approved by Architect without submission of this certificate.

Each payment request shall be for the cost of work done and the value of materials suitably stored at the site since the time of the last previous request for payment. The Architect shall certify a payment of 90% of the value of the work and materials as above noted according to his best judgement of the correct amount.

Requests for payment shall be itemized in the same subdivisions as "Unit Schedule," and all pay requests shall be submitted in triplicate.

Add the following to Paragraph 9.3.1.2.:

Ten (10%) percent of the total contract amount shall be retained until the project is complete and has been accepted by the Owner.

Add the following to Paragraph 9.3.2.:

The Owner's approval regarding payment for materials stored off site will not be unreasonably withheld. For payment of materials delivered and stored offsite the contract shall furnish with his monthly pay request documentation showing that the materials have been

delivered and received and location noted where stored.

E-10 ARTICLE 11 INSURANCE AND BONDS:

Article 11 shall be amended as follows:

- A. Contractor's Liability Insurance: The contractor shall not commence work under this contract until he has obtained all insurance required under this paragraph and such insurance has been approved by the Owner, nor shall the contractor allow any subcontractor to commence work on his subcontract until all similar insurance required of the subcontractor has been so obtained and approved. All insurance policies shall be with insurers qualified and doing business in Florida.
 - 1. Workmen's Compensation Insurance: The contractor shall take out and maintain during the life of this contract, workmen's compensation, and in case any work is sublet, the contractor shall require the subcontractor to similarly provide workmen's compensation insurance for all the latter's employees unless such employees are covered by the protection afforded by the contractor. Such insurance shall comply with the Florida Workmen's Compensation Law. In case any class of employees engaged in hazardous work under the contract at the site of the project is not protected under the Workmen's Compensation Statute, the contractor shall provide and cause each subcontractor to provide adequate insurance, satisfactory to the Owner, for the protection of his employees not otherwise protected. Workmen's compensation policy shall include employer's liability in an amount of not less than:

Body Injury by Accident; Each Accident	\$ 500,000
Bodily Injury by Disaster; Each Employee	\$ 500,000
Bodily Injury by Disease; Policy Limit	\$ 500,000

2. Public Liability and Property Damage Insurance: The contractor shall take out and maintain for the life of the contract, such public liability and property damage insurance as shall protect him and any subcontractor performing work covered by this contract from claims for damages, for personal injury, including accidental death, as well as from claims for property damages, which may arise from operations under this contract, whether such operations be by himself or either of them. The policy shall include comprehensive general liability, contractual liability, employer's liability, and products and completed operations liability. Automobile property damage liability shall include coverage for Owners, nonowners, and hired vehicles under the Contractor's Business Auto Policy.

The Town of Greenwood, Greenwood, FL shall be named as the insured and the Architect and the Project Management Company shall be named as additional insured. Units shall be set as follows:

Combined single limit per occurrence	\$1,000,000
Products and completed operations	\$1,000,000
Personal Injury Liability	\$ 500,000
Fire Legal Liability	\$ 50,000
Medical Payments	\$ 5,000
Automobile Liability Combined Single Limit	\$1,000,000

Insuring clause for both bodily injury and property damage shall be

amended to provide coverage on an occurrence basis.

The contractor shall also carry an Owners and Contractors protective liability insurance policy for the **Town of Greenwood**, **Greenwood**, **Florida** and shall be in the same amounts as stipulated above for the contractor's liability insurance policy.

- 3. <u>Fire and Extended Coverage Insurance:</u> The contractor shall take out and maintain during the life of this contract a "Builders Risk Policy," completed value form. The policy shall include malicious mischief and vandalism. This policy shall be obtained from an insurance company approved by the Owner. The coverage shall be in the amount of 100 percent of the values at risk.
- 4. <u>Proof of Carriage of Insurance:</u> The contractor shall furnish the Owner with satisfactory proof of carriage of the insurance required. **The Owner shall be notified of cancellation at least thirty (30) days prior to cancellation of policy by return-receipt, certified mail.** No other form of notification will relieve the Insurance Company, its agents, or its representatives of responsibility.
- B. Paragraph 11.2.1 **DELETE.**

E-11 ARTICLE 11 INSURANCE AND BONDS:

Add the following to Paragraph 11.4, Performance and Payment Bonds:

The contractor shall furnish the Owner with a 100% Performance and a Labor and Material Payment Bond written by a surety company acceptable to the Owner and authorized to do business in the State of Florida.

The cost of the Performance Bond shall be borne by the Contractor. The bond shall be accompanied by a duly authenticated or certified document, in duplicate, evidencing that the person executing the bond in behalf of the surety had the authority to do so on the date of the bond. In the usual case the conferring of that authority has occurred prior to the date of the bond, and the document showing the date of appointment and enumeration of powers have not been revoked and remain in effect. The date of that certification cannot be earlier than the date of the bond. The bond shall be dated not earlier than the agreement. The life of the Performance Bond shall extend one year from the date of final acceptance as a maintenance guarantee. The Labor and Material Payment Bond shall extend until all labor and materials have been paid for in full.

Add the following to Paragraph 11.5:

The successful contractor shall, before commencing with any work, record in the Public Records of the County, where the work is taking place, the Payment and Performance Bond with a Surety Insurer authorized to do business in the State of Florida and in compliance with the Florida Statues Section 255.05(1)(a).

E-12 ARTICLE 12 UNCOVERING AND CORRECTION OF WORK:

Article 12 shall be amended as follows:

- A. Guarantee of Work: Except as otherwise specified, all work shall be guaranteed by the contractor against defects resulting from the use of inferior materials, equipment or workmanship for one year from the date of final completion of the contract, or from full occupancy, or use of the project (for which it was designed) by the Owner, whichever is earlier.
- B. If, within any guarantee period, repairs or changes are required in connection with the guaranteed work, which in the opinion of the Architect or engineer is rendered necessary as the result of the use of materials, equipment or workmanship, which are defective, inferior, or not in accordance with the terms of the contract, the contractor shall, promptly upon receipt of notice from the Owner, and without expense to the Owner:
 - 1. Place in a satisfactory condition in every particular all of such guaranteed work, correct all defects therein; and
 - 2. Make good all damage to the structure of site, or equipment or contents thereof, which in the opinion of the Architect or engineer is the result of the use of equipment, materials, or workmanship which are inferior, defective, or not in accordance with the terms of the contract; and
 - 3. Make good any work or materials, or the equipment and contents of structures or site disturbed in fulfilling any such guarantee.
- C. In any case where in fulfilling the requirements of the contract or any guarantee, embrace in or required thereby, the contractor disturbs any work guaranteed under the contract, he shall restore such disturbed work in a condition satisfactory to the Architect or the engineer and guarantee such restored work to the same extent as it was guaranteed under other such contract.
- D. If the contractor, after notice, fails to proceed promptly with the terms of the guarantee, the Owner may have the defects corrected and the contractor and his surety shall be liable for all expenses incurred.
- E. All special guarantees applicable to definite parts of the work that may be stipulated in the specifications or other papers forming a part of the contract shall be subject to the terms of this paragraph during the first year of the life of such special guarantee.
- F. Deliver to the Owner as part of the closeout documents, three loose leaf binders, each containing all guarantees, warranties, waivers of liens, contractors final certificate of completion, list of subcontractors and supplies, with addresses, phone and fax numbers, maintenance and service representatives for all items of equipment, maintenance manuals and test and balance report. Maintenance and service representatives for all items of equipment shall be authorized by the manufacturer, serviced the respective type of equipment for at least five (5) years and maintain an office within 200 miles of the project.

E-13 <u>ADDITIONAL ARTICLES, ARTICLE 15:</u>

15-1 <u>Manufacturers Specifications</u>: Where the name of a concern or manufacturer is mentioned in reference to his required service or product, and no qualifications or

specification or such is included on drawings or in specifications, then the material gauges, details or manufacturer finish, etc., shall be in accordance to his standard practice or directions or specifications. The contractor shall be responsible for any infringement of patents, royalties, or copyrights, which may be incurred thereby.

- 15-2 Reference to ASTM and Federal Specifications: Where reference is made to the Standard Specifications of the American Society of Testing Materials (ASTM); the United States Government Federal Specifications, or to other standard specifications of associated manufacturers organizations, or trades in connection with the required quality of materials, methods, etc., then the applicable specifications shall be of the latest revised edition.
- Approval of Materials: A list of all materials, equipment, etc., together with manufacturer's drawings and catalog information shall be submitted to the Architect for approval prior to ordering material or equipment. Information submitted shall show capacity, operating conditions and all engineering data and descriptive information necessary for comparison and to enable the Architect to determine whether same meets specifications. The Architects approval will not relieve the contractor of the responsibility for performance of any terms of the contract.

Approval in writing of all materials, equipment, etc., must be obtained from the Architect before any material or equipment is delivered or installed on the job. The Architect will determine the quality of any material or item.

Where one manufacturer's name is listed in the Specifications with "an equal" clause, it is used to establish a standard of quality and design, and to give a general description of the type of item or material desired. Equal items, materials, or equipment will be acceptable, provided approval is received in accordance to the Instruction to Bidders (Substitutions).

Where three (3) or more manufacturer's names are listed, for a item or material, substitutions will not be acceptable.

15-4 <u>Asbestos Containing Materials:</u> No asbestos containing materials shall be used in the construction of this project.

The contractor shall provide as part of his close out documents and incorporated with his guarantee an affidavit stating, that no asbestos containing materials have been used in the construction of this project.

Shop Drawings: Shop drawings shall be submitted for all manufactured or fabricated materials and/or as called for in the separate specification sections. Drawings shall be fully identified by project name, location, suppliers name, date, drawing number, specification section reference, etc. The contractor shall submit, with such promptness as to cause no delay in his work, or in that of any other contractor, four (4) copies (in addition to those copies necessary for his own requirements) of all shop drawings and schedules, required for the work of the various trades, to the Architect for approval. The contractor shall make no deviation from the approved drawings, and the changes made thereto by the Architect, Engineer, if any.

It shall be the responsibility of the contractor to properly schedule the submission of shop drawings for approval to allow adequate time for checking of drawings.

manufacture and shipment of items to the job site in enough time to prevent delay in progress schedule.

It shall also be the responsibility of the contractor to coordinate the preparation of shop drawings of items which will be furnished by more than one manufacturer but are designed to interface when installed.

Shop drawings submitted to the Architect-Engineer for his approval shall first be checked and approved by the Contractor, the prima facie evidence of which shall be a "checked" stamp marked "Approved" or "Approved as Noted" on each copy of each shop drawing, placed thereon by the contractor. Shop drawings received without the contractors "checked" stamp shall be cause for immediate return without further action.

The subcontractors for all phases of the contract shall submit through the contractor complete brochures covering all materials and/or equipment proposed for use in the execution of the work as required by their respective divisions of the specifications. These brochures shall be indexed and properly cross referenced to the plans and specifications for easy identification.

All shop drawings, setting drawings, material brochures, samples and/or color selection of materials which are required are not included in the foregoing shall be submitted via the Contractor. Insofar as is possible or <u>practical</u>, all shop drawings or descriptive literature of equipment for the mechanical or electrical trades shall be submitted in a complete brochure for each trade as soon as possible after notice to proceed is executed.

The Owner will not grant time extension based on delays due to improper scheduling of work; and the Owner, at his discretion may withhold progress payments until such time as these requirements are fully satisfied.

- 15-6 <u>Product Approval:</u> Submittals for the following products (materials) shall have included with the submittal, the product approval numbers and other supporting documentation showing compliance to Chapter 17 of the Florida Building Code.
- 15-7 Pre-Construction Conference: Before beginning work at the site the Contractor shall attend a preconstruction conference and bring with him the superintendent employed for this project and any other subcontractor or supplier as may be requested by the Architect or Owner. In the event the contractor is unable to attend he shall send a letter of introduction by the superintendent in which he advises the superintendent's full name and states that he is assigned to the project and will be in full responsible charge. At this time all parties concerned will discuss the project under contract and prepare a program of procedure in keeping with requirements of the drawings and specifications. The superintendent shall henceforth make every effort to expeditiously coordinate all phases of the work, including the required reporting procedure, to obtain the result within the full purpose and intent of the plans and specifications for the project.
- 15-8 <u>Job Superintendent</u>: This project will require a full-time job superintendent. The superintendent shall always be on the job site during normal working hours. He shall be responsible for this project only and no change of superintendent may be made during the construction of this project without approval of the Architect.
- 15-9 <u>Storage and Work Areas</u>: The Owner will make available work and storage areas within the building site. At the start of the operation the contractor shall make arrangements

with the Architect's field representative and Owners representatives for the assignment of the area. During construction the contractor shall maintain the building and storage areas in a neat condition.

- 15-10 <u>Permits, Licenses, Etc.</u>: The Owner will pay for County Roofing permits. Mechanical or electrical permits that may be required shall be paid for by the respective subcontractor.
- 15-11 <u>Codes</u>: Construction of facilities shall conform to and comply with the Florida Building Code 2017. All or portions of the following codes and requirements are incorporated.
 - a. Florida Building Code, 2017,
 - b. Florida Plumbing Code, 2017,
 - c. National Electrical Code, 2017,
 - d. Florida Mechanical Code, 2017,
 - e. Florida Gas Code, 2017.
 - f. NFPA 101 Life Safety Code 2017,
 - g. Florida Fire Prevention Code 2017,

NOTE: Where compliance with the Florida Building Code 2017 is indicted elsewhere in these specifications, **all** supplements are to be included.

In case of conflicting requirements, the more or most stringent shall apply. Where conflicts occur between a code and contract drawings or specifications, most stringent requirement shall apply.

- 15-12 <u>Temporary Utilities</u>: The contractor shall be responsible for providing and coordinating temporary site utilities required at the site during construction including water, sewer (if required), and electrical power. At the conclusion of the project, the contractor shall be responsible for terminating and removing any temporary utilities utilized during construction and not requires as part of the new construction.
- 15-13 Safety and Protection: Safety Procedures shall be the sole responsibility of the contractor. The contractor shall provide for the safety and protection of his workers, the students, the school staff, and the public, and shall be held liable for any injury to any of the above by lack of, or inadequate, protection. Workers, tenants, and visitors to the job site shall be protected from any damage from falling material, tools or equipment, or any other damage that might be caused from this operation, by means of adequate covering, barricades, fencing, scaffolds, etc., as may be required. The contractor's attention is called to Article 10 of the AIA General Conditions referenced in this specification. The Contractor shall inform the Owner and the Architect at the pre-construction conference either verbally or by drawings his plans for safety and protection around the site of new construction.
- 15-14 Indemnification: It is understood and agreed by the Contractor, that the Architect has no constructive use of Owner's site; has no control or authority over the means, methods and sequences of construction; and therefore has no ongoing responsibility whatsoever for construction site safety, a responsibility that is wholly vested in the Contractor or others engaged in the construction of this project. Notwithstanding the above, the Architect has a duty to preserve and protect public health, safety and welfare. Accordingly, it is his professional responsibility to take what he believes are prudent measures, should he encounter situations that he believes create a danger to public health, safety, or welfare. Contractor understands this situation and agrees to defend the Architect and hold him harmless from claims arising from claims arising from

- his exercise of professional responsibility in this regard.
- It is further understood that the Architect's observation of safety violations is casual and not of primary consideration during site visits.
- 15-15 <u>Coordination:</u> The contractor will coordinate all his work with the various trades. All work to be done will be accomplished from areas approved at the Pre-Construction Conference and the Contractor will coordinate access and <u>restrict traffic</u> in and/or through the property.
- 15-16 Phone Requirement: The job superintendent shall be required to have a hand held cellular phone and it shall always be kept on his person during working hours, from the starting date of construction thru completion of the project. A truck installed cellular phone is not acceptable as an equivalent.
- 15-17 <u>Toilet Accommodations</u>: Toilet accommodations will be provided for by the contractor for the use of workmen at the construction site and shall be kept in a clean and sanitary condition. Provide sewer and water connections if required. Remove on completion of project and leave the premises clean.
- 15-18 <u>Dress and Restrictions:</u> Workers will always be fully clothed and with hard hats on during working hours. No cut-offs, bare tops, or profanity will be allowed within the construction areas. Eating, except in a designated area outside the building, will not be allowed. **The work area will be policed daily, with all trash removed and area left broom clean.**
- 15-19 <u>Project Drawings</u>: Prior to beginning any work, the contractor shall indicate conspicuously and plainly in the field set of drawings and at appropriate paragraphs in the specifications, all changes or corrections made by addenda and change orders as they are required.
- 15-20 Record Drawings: One set of drawings shall be kept clean and in good condition to serve as a "Record Set" of drawings. Any changes in conduit runs, piping, sewer work, drainage, locations of clean-outs, and existing underground lines not indicated on contract drawings shall be plainly marked on this set which shall not be used for other purposes. At completion of the work and with request for final payment, this set of drawings shall be turned over to the Owner for file reference. Final pay request will not be processed prior to delivery of the "Record Set" of drawings.
- 15-21 <u>Progress Reports</u>: Written reports of all site visits by the Architect or his representative will be sent to the contractor after each site visit. The Contractor will be responsible for the distribution of these reports to his subs and job superintendent. Items listed for correction will be corrected as quickly as possible and within a reasonable time. Uncorrected work, under the provisions of the contract (paragraph 9.5.1), will be the basis for withholding approval of monthly estimates.
 - 15-22 <u>Final Payment and Retainage</u>: Final payment (retainage) will be approved for payment only after all of the following has been completed:
 - a. All warranties and guarantees received. Each to contain waiver of lien. AlA document G706-A (1994)
 - b. Record set of drawings received.
 - c. Final inspection made and all items noted on final inspection report completed

- and/or corrected and letter received from Contractor stating completion and verification of completion by Architect.
- d. Certificate of Final Inspection received from a U.B.C. inspector, and completion and/or correction of all items listed on Certificate.
- e. Receipt of completed Statement of Contract Completion as included in these specifications.
 - Substantial completion and occupancy of any of the spaces will not warrant reduction in amount of, or payment of, the retain monies.
- 15-23 Existing Work: The Contractor shall be responsible for checking all existing conditions in relation to the work, whether shown or not, and shall remove, relocate or modify any existing work as may be required to complete the new work as shown and/or specified. Any mechanical or electrical items, equipment, fixtures, etc., or structural items that may interfere with the new work shall be relocated, modified, etc., as may be required to complete the work as implied or shown on the drawings.

The Contractor shall be responsible for the protection of any existing areas due to construction of this project. This shall include protection against damage from weather, water and damage incurred from work being carried on in the area.

If damage occurs due to negligence or failure to provide proper protection by the contractor, the contractor shall correct the damage and restore or refinish the area to its prior state and to the satisfaction of the Owner and/or Architect.

- 15-24 Existing Utilities: Where required for this project, existing on site utilities are shown on the drawings, however, all below grade water, gas, sewage and electrical (bell, sound, fire alarm, data communication) have been determined by field inspection and drawings from previous building projects and may not be neither entirely accurate or comprehensive. Other buried utility lines may be encountered that are not shown or known and the Contractor is cautioned to be extremely careful during any excavating so as not to damage any buried utility lines. Any buried utility lines damaged during construction shall be repaired and/or replaced by the Contractor responsible.
- 15-25 <u>Cutting and Patching:</u> All penetrations through fire rated construction shall be fire stopped as per N.E.C. 300-21, using a through penetration fire stop system (XHE2) as listed in the Underwriters Lab Fire Resistant Directory.
- 15-26 <u>Protection of Existing Areas:</u> During demolition and construction, the contractor shall make all arrangements for the protection of existing areas, outside the areas of construction, from dust and debris to the satisfaction of the Owner and those working in the unaffected areas.
- 15-27 Penetrations Through Existing Construction: Where new work necessitates the cutting through or modifying of existing construction, the contractor shall do all patch work as required to match existing materials, details, etc. and to make for a first-class job. This includes penetrations through existing roofs, exterior and interior walls, ceilings and floors.
- 15-28 <u>Salvageable and Obsolete Items:</u> The contractor, in connection with this work, shall

remove all items, materials, equipment, etc. necessary to complete the work described on the drawings and it these specifications. All items deemed obsolete shall be removed. All salvageable items are to remain the property of the Owner. All else is to be removed from the site. Salvageable items shall be stockpiled in one area, designated by the Owner, within the construction area. The Architect or the Owner will determine what items are salvageable.

- 15-29 Scheduling of Work: The contractor will keep the designated parties advised always of the type and areas where work will be carried on, and shall be responsible for scheduling all aspects of the work so that the project is completed within the specified time for completion.
- 15-30 <u>Direct Purchase of Materials by Owner:</u> See Paragraph B-20, Instructions to Bidders, for direct purchasing of materials by the Owner.
- 15-31 <u>Cleaning</u>: All debris, unused material, etc., as a result of this work, shall be removed from the site. The Contractor shall make every effort to keep the work areas clean at each day's end as a condition of safety and for neatness.
- 15-32 <u>Workmanship</u>: The workmanship of all trades shall be first class, regardless of the quality of material used. All materials called for and/or shown shall be new.

END OF SECTION.

CONTRACTOR'S REQUEST FOR PARTIAL PAYMENT

AIA Document G702" - 1992

Application and Certificate for Payment

TO OWNER:	PROJECT:	ON NO:
FROM CONTRACTOR:	VIA ARCHITECT:	PERIOD TO: CONTRACT FOR: CONTRACT DATE: CONTRACT DATE: PROJECT NOS: / / SISTON
		Отнек:
CONTRACTOR'S APPLICATION FOR PAYMENT	AYMENT	The understand Contractor certifies that to the best of the Contractor's knowledge, inflormation and
Application is usede for payment, as shown below, in connection with the Connect. Continuation Steet, AIA Decument G701, is attached.	ion with the Contract.	Select the York covered by this Application for Layment has been completed in neconomic with the Contract Deciments that all announces have been paid by the Commerce for Work for which previous Confidence for Patricial and Contract and and receive a consistent from the Commerce and the surrors.
1. ORIGINAL CONTRACT SUM	14	payment shown herein is now due.
2. Net change by Change Orders		COMTRACTOR
3. CONTRACT SUM TO DATE (Line 1 ± 2)	٠	By
4 TOTAL COMPLETED & STORED TO DATE (Culumn G on G703)	Chan \$	¥
& RETAINAGE		County of:
a. 0 % of Completed World		Subscribed and sower, to before
(Cohmin D + Blon G703)	5	and this upsy of
b. 0 % of Storred Material		
(Column F on GP03)	2 1	Notary Public:
Total Retainage (Linex 5s + 5b or Local in Column 1 of G793)	30)	My Commission expires:
8. TOTAL EARNED LESS RETAINAGE	121	ARCHITECT'S CERTIFICATE FOR PAYMENT
(Line 4 Loss Line 5 Total)		In accordance with the Contract Documents, pased on on-side observations and the data comprising
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT Giore & from prior Chafficate)	8	this application, the Architect certifies to the Omner that to the best of the Auchitect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is accordance.
8. CURRENT PAYMENT DUE	60	with the Contract Documents, and the Contractor is cutiled to payment of the AMCHINT CERTIFIED.
9. BALANCE TO FINISH, INCLUDING RETAINAGE	,	AMOUNT CERTIFIED
(Time 5 less Line 6)		Amoch exploration if menuet certified differs from the amount applied. Initial of figures on this Amoistanian and the footbast has constant and the continuents overflow?
CHANGE ORDER SUMMARY	ADDITIONS DEDUCTIONS	ARCHITECT
Total changes approved in previous months by Owner \$	S.	Ply:
Total approved this Mooth \$	8	The state of the s
S TOTALS \$	so.	This Contracte is not depotable, the Annual CERTIFIED is payable only to the Contractor named between Issuance named and accordance of assumed and accordance have a contract and accordance of assumed and accordance on the contract and accordance of assumed and accordance on the contract and accordance of assumed and accordance on the contract and accordance of assumed accordance of assumed accordance on the contract and accordance of assumed and accordance on the contract and accordance of the contract and accordance on t
NET CHANGES by Change Order 5		the Owner or Contractor trader this Contract

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STATEMENT OF CONTRACT COMPLETION



Certificate of Substantial Completion

Name and address):	PROJECT NUMBER: / CONTRACT FOR: General Construction	OWNER: ☐ ARCHITECT: ☐
SAMPLES	CONTRACT DATE:	CONTRACTOR: □
TO OWNER: Name and address):	TO CONTRACTOR: (Name and address):	FIELD:
		OHEN.
PROJECT OR PORTION OF THE PR	ROJECT DESIGNATED FOR PARTIAL OCCUPANCY (OR USE SHALL INCLUDE:
to be substantially complete. Substantially complete in accordance intended use. The date of Substantial	tract has been reviewed and found, to the Architect's betal Completion is the stage in the progress of the Wor e with the Contract Documents so that the Owner can Completion of the Project or portion designated above of commencement of applicable warranties required	rk when the Work or designated portion occupy or utilize the Work for its re is the date of issuance established by
Warranty	Date of Commencement	nt
ARCHITECT	BY D	ATE OF ISSUANCE
responsibility of the Contractor to co	rrected is attached hereto. The failure to include any it implete all Work in accordance with the Contract Doct of warranties for items on the attached list will be the data.	uments. Unless otherwise agreed to in
Cost estimate of Work that is inco	mplete or defective: \$ 0.00	
The Contractor will complete or corr Substantial Completion.	ect the Work on the list of items attached hereto within	n Zero (0) days from the above date of
CONTRACTOR	BY	ATE
	BY Dignated portion as substantially complete and will assur	
The Owner accepts the Work or design	gnated portion as substantially complete and will assu	

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M-2019-03 G-1 August 3, 2019

STATEMENT OF CONTRACT COMPLETION

STATEMENT OF THE PROJECT MANAGEMENT COMPANY

PROJECT:

To the best of my knowledge, information, and belief, the work under the above-named contract has been satisfactorily completed under the terms of the contract; that the project is recommended for occupancy by the owning agency; that the contractor has submitted satisfactory evidence that he has paid all labor, materials, and other charges against the project in accordance with the terms of the contract.

	DATE	DAYS
Contract Date:		
Contractor Notified to Proceed:		
Days Allowed by Contract:		
Extensions Granted by Change Order:		
Total Days Allowable:		
Work Began:		
Project Substantially Completed:		
Days to Complete:		
Under Run / Over Run		
Project Management Company:	<u>SynergyNDS</u>	
DATE:	BY:	<u>.</u>
STATEM	IENT OF ACCEPTANCE BY OWN	<u>JER</u>
To the best of my knowledge and belief, satisfactorily completed under the term operation and maintenance.		
OWNER:		<u>.</u>
BY:		<u>.</u>
DATE:	TITLE:	<u>.</u>

STATEMENT OF CONTRACT COMPLETION

STATEMENT OF THE CONTRACTOR

PROJECT:		
CONTRACTOR:		
CONTRACT FOR:		
CONTRACT DATE:	CONTRACT	AMOUNT \$
I solemnly affirm that the work under the abordance been satisfactorily completed; that all a charges against the project have been paid; project; that no suits are pending for any real all Workmen's Compensation claims are conrequired by law; that all public liability claims	amounts payable for that no liens have b ason of work on the p vered by Workmen's	materials, labor and other been attached against the project under the contract; that Compensation Insurance as
CONTI		
	SEA	L
TITLE:		
DATE:		
STATE OF	COUNTY OF .	
Personally appeared before me thisknown) to me to be the	day of	, 20 <u>,</u> known (or made of (Owner/Partner/Corp Off.)
Contractor(s), who being by me duly sworn, presence.	subscribed to the fo	
•		(SEAL)
	Notary Public	
	Type Name:	
	My Commission Ex	pires:

DIVISION III TECHNICAL AND MATERIAL SPECIFICATION

M-2019-03 August 3, 2019

SECTION 1A

TERMITE CONTROL TREATMENT

1A-01. GENERAL CONDITIONS:

The General and Special Conditions, Division II, Sections E and F of these specifications shall apply to and form a part of this Section as if written in full herein.

1A-02. SCOPE:

The compacted soil under all new interior concrete floor slabs and around all foundation walls shall be chemically treated prior to vapor barrier being placed. Materials, applications and standards shall comply with the Florida Building Code 2007, Section 1816.

1A-03. MATERIALS:

Shall be Termidor or a chemical that is approved by the State of Florida for pretreatment. Proof shall be provided that no toxic effects to humans or beneficial plant or animal life will result from its use.

1A-04. RATES OF APPLICATION:

- A. Rate of application shall be as per manufacturer's label for chemical use at full label rate.
- B. Treatment shall be full coverage below the concrete slabs and along the inside of all foundation walls or interior partitions, and around any openings in the interior of the slab cut or left for pipes, conduits, etc.

1A-05. MATERIAL SAMPLE:

Prior to application of the chemical, if required by Architect, this contractor shall, in the presence of the Architect, fill a sealable sample bottle of at least 8 fluid oz. of the mixture to be applied. Testing of the mixture shall be by the Entomology Department, State of Florida Department of Agriculture. Label of the mixture used shall be provided with the sample of mixture.

1A-06. APPLICATION TECHNIQUE:

Treatment shall not be made when the soil is excessively wet or immediately after heavy rains to avoid surface flow of the toxicant from the application site. Unless the treated soil is to be promptly covered with drainage fill and vapor barrier, adequate precautions must be taken to prevent disturbances of the treatment and human or animal contact with the treated soil.

1A-07. <u>POST TREATMENT:</u>

Upon completion of construction and completion of all grading around the building and in

accordance to material label a final application shall be made entirely around the perimeter of the building and at the rate as directed on the materials label. Post treatment shall be done at the time of the substantial completion inspection and the Architect shall be present.

1A-08. SUBMITTAL:

Prior to application, submit all information showing type of chemical and rate of application for approval.

1A-09. WARRANTY:

After all of the above has been done, the termite control subcontractor shall provide the Owner a written five (5) year warranty fully guaranteeing his work and providing any treatment and repairs necessary during that period. Five year warranty shall include any and all inspections that may be required under the warranty.

END OF SECTION

SECTION 1B

RODENT PROOFING

1B-01. GENERAL CONDITIONS:

The General and Special Conditions, Division II, Sections E and F of these specifications shall apply to and form a part of this Section as if written in full herein.

1B-02. <u>SCOPE:</u>

Buildings or structures and the walls enclosing habitable or occupied rooms and spaces in which persons live, sleep or work or in which feed, food or foodstuffs are stored, prepared, processed, served, or sold, shall be constructed in accordance with the provisions of this section.

1B-03. FOUNDATION WALL VENTILATION OPENINGS: N.A.

1B-04. FOUNDATION AND EXTERIOR WALL SEALING:

Annular spaces around pipes, electric cables, conduits, or other openings in the walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry, or non-corrosive metal.

1B-05. DOORS:

Hollow metal doors and doors on which metal protection has been applied shall be hinged to be free swinging. When closed, the maximum clearance between any door, door jambs and sills shall not be greater than _ inch (9.5mm).

1B-06. WINDOWS AND OTHER OPENINGS:

Windows and other openings for light or ventilation located in exterior walls within 2 feet (610mm) above the existing ground level immediately below such openings shall be covered for their entire height and width, including frame, with hardware cloth of at least 0.035-inch (0.89mm) wire or heavier.

A. Rodent - accessible openings: Windows and other openings for the purpose of light and ventilation in the exterior walls not covered in this chapter, accessible to rodents by way of exposed pipes, wires, conduits and other appurtenances, shall be covered with wire cloth of at least 0.035 inch (0.89mm) wire. In lieu of wire cloth covering, said pipes, wired, conduits and other appurtenances shall be blocked from rodent usage by installing solid sheet metal guards 0.024 inch (0.61mm) thick or heavier. Guards shall be fitted around pipes, wires, conduits, or other appurtenances. In addition, they shall be fastened securely to and shall extend perpendicularly from the exterior wall for a minimum distance of 12 inches (305mm) beyond and on either side of pipes, wires, conduits or appurtenances.

1B-07. PIER AND WOOD CONSTRUCTION:

- A. <u>Sill less than 12 inches above ground</u>: Buildings not provided with a continuous foundation shall be provided with protection against rodents at grade by providing either an apron in accordance with Section F101.6.1.1 or a floor slab in accordance with Section F101.6.1.2
 - 1. **F101.6.1.1 Apron**. Where an apron is provided, the apron shall not be less than 8 inches (203mm) above, nor less than 24 inches (610mm) below grade. The apron shall not terminate below the lower edge of the siding material. The apron shall be constructed of an approved non-decayable, water-resistant rodent-proofing material of required strength and shall be installed around the entire perimeter of the building. Where constructed of masonry or concrete materials, the apron shall not be less than 4 inches (102mm) in thickness.
 - 2. **F101.6.1.2. Grade Floors**. Where continuous concrete grade floor slabs are provided, open spaces shall not be left between the slab and walls, and openings in the slab shall be protected.
- B. <u>Sill at or above 12 inches above ground:</u> Buildings not provided with a continuous foundation and which have sills12 or more inches (305mm) above the ground level shall be provided with protection against rodents at grade in accordance with any of the following:
 - 1. Section F101.6.1.1 or F101.6.1.2:
 - 2. By installing solid sheet metal collars at least 0.024 inch (0.6mm) thick at the top of each pier or pile and around each pipe, cable, conduit, wire or other item which provides a continuous pathway from the ground to the floor; or
 - 3. By encasing the pipes, cables, conduits, or wires in an enclosure constructed in accordance with Section F101.6.1.1

END OF SECTION

SECTION 2

SITE DEVELOPMENT

2-01. <u>CIVIL ENGINEERING / SITE DEVELOPMENT PACKAGE:</u>

The Civil Engineering and the Site Development components for this project including site demolition, clearing and grubbing, construction of the building pad, building pad density testing, site utilities, utility connections to municipal utilities, driveway connections, asphalt paving, pavement markings, site signage, erosion control, storm water management, landscaping, and landscape irrigation are not included as part of this project and are being handled independent of this contract by the Town of Greenwood's storm Damage representative, Synergy NDS. Any questions pertaining to civil engineering or site development shall be directed in writing to Mr. Keith Bassett at kbassett@synergynds.com.

All concrete walks, pads, stoops and aprons shown on Architectural Floor Plan shall be included as part of this contract and shall be accounted for in this Bid. Top of the Building pad provided outside of this contract by independent owner provided site contractor shall be constructed up to 4" below bottom of floor slab and shall be extended out 10'-0" beyond perimeter of building and shall be compacted and densified as specified in the structural drawings.

END OF SECTION

SECTION 3A

CONCRETE AND CEMENT FINISH WORK

3A-01. GENERAL CONDITIONS:

The General and Special Conditions, Division II, Sections E and F of these specifications shall apply to and form a part of this Section as if written in full herein.

3A-02. <u>SCOPE:</u>

Work includes entire concrete operation consisting generally of footings, walls, grade beams, floor slabs, tie beams as shown on drawings, together with metal reinforcement rods and wire fabric, wood form, expansion joints and other required items to completely furnish all materials and labor for all concrete work. All reinforced concrete shall comply with the latest editions of ACI 301, Specifications for Structural Concrete for Buildings, and ACI 318-14, Requirements for Reinforced Concrete.

3A-03. MATERIALS:

- A. <u>All materials</u> specified in this Section shall conform to ASTM Designation specified, latest revision.
- B. <u>Cement</u> shall be an approved branch of Portland, meeting requirements of ASTM Standard Specification C-150. Type 1 cement shall be used.
- C. <u>Fine Aggregate</u> shall consist of natural sand; sand shall be clean, hard, strong, durable, uncoated, and free from loam, clay, organic matter, or other deleterious substances in excess quantities, shall meet the requirements of ASTM Designation C-33.
- D. <u>Coarse Aggregate</u> shall consist of crushed stone or gravel, conforming to ASTM Specification C-33, having hard, strong, durable and uncoated particles, well graded from fine to a maximum size not larger than 3/4".
- E. <u>Water</u> used in mixing concrete shall be clean and free from any deleterious substances. Water used in mixing concrete shall be potable.
- F. <u>Anchorage Items:</u> Slots, inserts, clips and other devices for anchoring masonry, wood, steel, and mechanical items to concrete of standard manufacture of approved types as required to engage and anchor work specified under other Sections.
 - Embedded items of structural steel as specified under Section of Structural Steel.
- G. <u>Forms:</u> All contact forms for concrete exposed to view shall be new 5/8" thick, oil impregnated plywood, attached to the supports.
- H. Form Oil: Approved colorless non-staining mineral oil, free of kerosene.
- I. <u>Form Ties:</u> Approved design, fixed or adjustable length, free of devices that leave holes or depressions larger than 7/8" diameter in concrete surface or metal with 1" of finished surface.

- J. Reinforcing Bars: Shall be new billet steel conforming to ASTM A-615, Grade 60, deformed and shall be free of kinks and non-shop bends in accordance with Section 26.6.3.1.b ACI 318-14 and should also be free of mud, oil, corrosion or anything that will impair proper bonding with concrete in accordance to 26.6.1.2.d ACI 318-14.
- K. Reinforcing Mesh: Welded wire fabric shall conform to ASTM A-1064 and unless otherwise noted shall be sized as follows:

```
For 4" Slabs 6 x 6 - W 1.4 x W 1.4
For 5" Slabs 6 x 6 - W 2.9 x W 2.9 (U.N.O.)
For 6" Slabs 6 x 6 - W 4.0 x W 4.0
```

- L. <u>Metal Accessories:</u> Metal accessories to support and space reinforcing bars shall be furnished in wire sizes and quantities in accordance with CRSI Code of Standard Practice.
- M. <u>Expansion Joint Material:</u> Shall be 1/2" thick, premolded expansion filler strips conforming to Federal Specification No. HHF 334, Type 1, Class "B".
- N. <u>Sheet Vapor Retarder:</u> ASTM E 1745, Class B (10 mils thick). Include manufacturer's recommended adhesive or pressure-sensitive tape.

3A-04. STORAGE OF MATERIALS:

- A. <u>Cement and Aggregate:</u> Shall be stored to prevent deterioration or intrusion of foreign matter. Material deteriorated or damaged shall not be used for concrete.
- B. Reinforcing Bars: Must be kept in racks off ground until used.

3A-05. DESIGN OF CONCRETE MIX AND PROPORTIONS:

- A. The concrete shall be composed of Portland Cement, fine aggregate, coarse aggregate, water and at the contractor's option, water-reducing admixture. Proportion concrete in accordance with ACI 211-91 of the ACI to be homogeneous, readily placeable and uniformly workable.
- B. Except for sidewalks, all concrete shall be of such quality as to develop a minimum compressive strength of 3000 psi at 28 days for building slab-on-grade, foundations, and footings and 4000 psi for all beams, columns, and elevated slabs. The maximum permissible slump shall be 4" plus or minus 1" at the time of placing concrete. Concrete for sidewalks may have minimum compressive strength of 2500 psi at 28 days.
- C. All concrete shall be a controlled mix concrete, and tests made to determine the exact amount of cement and proper proportion and grading of aggregate together with quantity of water required for strength of concrete shown above.
- D. The concrete mix for 3000 psi and 4000 psi concrete shall be designed by an independent testing laboratory. The mixture design shall be submitted to the Architect for approval prior to any concrete work being done.

After approval, the mixture design shall be furnished to the mixing plant and shall be adhered to strictly. Cost for design mix shall be paid for by the General Contractor.

E. The exact proportions of all materials entering the concrete shall be as determined by the design mixture. The proportions will be changed whenever, in the opinion of the Architect, such change becomes necessary to obtain the specified strength, and the desired density, uniformity, and workability. The contractor shall not be compensated because of such change.

A minimum mix of 5.3 bags of cement per yard shall be used. The use of fly ash is allowable up to 20% of the design mix.

Unless approved otherwise by the Architect, aggregate used in <u>all</u> concrete mixes shall be no larger than No. 89 aggregate for concrete placed via a mechanical pump. All other concrete mix shall use No. 57 aggregate.

Concrete used for exterior concrete walks may contain fly ash as part of the mixture but not more than 10% of the total cement weight.

3A-06. SAMPLING AND TESTING:

- A. <u>Cement:</u> Will be accepted based on manufacturer's mill certificate of compliance to ASTM Designation C-150.
- B. <u>Reinforcement:</u> Mill tests reports for the material used shall be furnished to Architect and shall be furnished either before or at the time of submittal of reinforcing shop drawings.

C. Tests on Concrete:

- 1. (a) Four (4) 4" x 8" long test cylinders shall be made during each day's pour, or approximately each 50 yards or 1 per every 5 trucks by an independent testing laboratory. Selection of testing laboratory will require approval of the Architect.
 - (b) The cylinders shall be given identification marks and recorded for reference. Specimens shall be made and cured in accordance with current compression and flexural test specimens in the field.
 - (c) Cylinders shall be shipped to an approved testing laboratory for testing. During the first 24-hour after molding the cylinders, the contractor shall provide suitable means for maintaining the temperature immediately adjacent to the specimens within the range of 60 °F to 80 °F and prevent loss of moisture from the specimens. After the initial curing period the test specimens shall be transported in a damp condition to the testing laboratory in a manner to prevent damage to the specimens. Strict adherence to this requirement is necessary in achieving accurate cylinder test results. Acceptance of concrete cylinder tests shall be as per ACI 318 Chapter 26, Section 12 (ACI 318 26.12).
 - (d) One cylinder shall be broken at seven days, and three cylinders shall be broken at 28 days. The results of the cylinders broken at 28 days shall be the average results and the results of the test sent to the Architect in triplicate and shall equal or exceed the ultimate concrete strength f'c and no individual strength test or average of any two strength tests shall be less than f'c by more than 500 psi. Laboratory testing of cured specimens (concrete cylinders) shall be in accordance with ACI 318 26.12.3,

- 26.12.4 and 26.12.5 laboratory testing of cured specimens (concrete cylinders).
- (e) Payment for cylinder tests shall be by the General Contractor.

 Invoices for concrete testing shall be sent directly to the General Contractor.
- 2. Slump tests shall be made on each batch (truck load) and tests shall be in accordance with current ASTM Designation C-143. Slump shall not exceed 4" plus or minus 1". Each slump test shall be made by an independent testing laboratory approved by the Architect. Making of slump tests by other than a designated technician from an approved testing lab will not be allowed. Payment for slump tests shall be by the General Contractor.
- 3. In addition, where there are questions as to the quality of the concrete in the structure, the Architect may require tests in accordance with the "Standard Methods of Securing, Preparing and Testing Specimens of Hardened Concrete for Compressive and Flexural Strengths; (ASTM Designation C-42)" or on order load test for that portion of structure where the questionable concrete has been placed.
- 4. Both cylinder and slump test reports shall be sent to the Architect. 7 and 28 day test reports shall be sealed and signed by a Florida Registered Professional Engineer as soon as the tests have been performed. Test results shall be sent as soon as the lab results are recorded.

3A-07. READY-MIXED CONCRETE:

- A. All ready-mixed concrete shall conform to ASTM C-94.
- B. Certificate shall be furnished by the mixing plant certifying that methods, materials and proportions used by the plant for concrete to be used on this project meet the requirements of the specification, if requested by the Architect.

3A-08. CONVEYING, PLACING AND VIBRATION:

A. <u>Conveying:</u> Concrete shall be transported from the mixer to forms as rapidly as practicable by methods which shall prevent separation, loss of ingredients, or the displacement of reinforcement and forms. Concrete shall be placed in the forms immediately after mixing, and under no circumstances shall concrete that has partially hardened be deposited in the work. Deposit as nearly as practical in its final position to avoid re-handling.

Ready mix or transit-mix equipment may be used provided that each batch of concrete shall be mixed, when using a truck mixer load to its maximum capacity, not less than 70 or more than 100 revolutions at stated mixing speed and remainder of mixing shall be at stated agitating speed. When a truck mixer or truck agitator is used to transport concrete that has been completely mixed in a stationary mixer, mixing shall be at the speed designated by the manufacturer of the equipment as agitating speed. Mixing and/or agitation of the concrete shall not continue for more than 16 minutes after the cement has been intermingled with the aggregate.

When air temperature is between 85 and 90 degrees F mixing and delivery time shall be no more than 75 minutes. When air temperature is above 90 degrees

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F, mixing and delivery time shall be no more than 60 minutes.

B. <u>Placing:</u> Concrete shall have a temperature of not more than 90 degrees F, nor less than 50 degrees F, when placed in the forms. Concrete placement shall not be permitted when in the opinion of the Architect conditions prevent proper placement and consolidation.

Upon commencement of placement operation, operation shall be continuous until the placing of a panel or section as determined by its boundaries has been completed in accordance to Section 26.5.2.1.j ACI 318-14.

Concrete shall not be placed when the atmospheric temperature is below 40 degrees F, or it is likely to fall below 40 degrees F, during the 24-hour period after placing, except when approved in writing by the Architect. Salt or other chemicals for the prevention of freezing shall not be used, and when necessary, the concrete materials shall be heated before mixing. No frozen materials shall be used in the concrete. The contractor shall assume all risk for unsatisfactory concrete and such concrete shall be rejected when and as directed by the Architect. Permission to place concrete will in no way relieve the contractor of the responsibility for satisfactory results; the contractor shall break out, remove, and replace rejected concrete at no cost to Owner.

Concrete shall be deposited over firm, clean, damp surfaces free from frost, ice, standing or running water, and never upon soft mud, dry porous earth, or upon fills that have not been subjected to approved rolling and tamping so that the ultimate settlement has been obtained.

Concrete shall be deposited in layers not to exceed 18" in thickness, unless directed otherwise by the Architect. The placing of concrete shall generally be done by such means that the concrete deposited in one spot may be efficiently vibrated into a layer not exceeding 18" in thickness with the minimum amount of lateral movement. Concrete shall be deposited in forms as near its final location as practicable. Pre-handling and flowing of the concrete shall be as directed by the Architect only. As far as practicable, the contractor shall avoid splashing concrete on the form face and shall remove such coatings as have set before the concrete is placed there.

Concrete that has been splashed and dried on reinforcing prior to embedment shall be cleaned off by rubbing and brushing.

Concrete shall be placed to avoid segregation of materials in accordance to Section 26.5.2.1.f.3 ACI 318-14.

The use of contaminated or retempered concrete is prohibited in accordance to Sections 26.5.2.1.g and 26.5.2.1.h ACI 318-14.

Concrete placement operation shall ensure that concrete is always plastic in accordance to Section 5.10.2 ACI 318-14.

No concrete shall be placed until the Architect has inspected the area of placement and approved the reinforcement.

C. <u>Vibration:</u> Concrete shall be compacted with the aid of mechanical vibrating equipment. Internal vibrators shall be used in all sections sufficiently large to accommodate them. The vibration shall be of such intensity to cause the concrete to settle readily into place.

A sufficient number of vibrators shall be used so that efficient vibration throughout the entire volume of each layer of concrete is obtained. Extra vibrators shall be kept

available in the placement area so that there will be no interruptions in the consolidation of the concrete.

The vibration shall be of sufficient duration to accomplish thorough compaction of the concrete, and when necessary, shall be supplemented by forking and spading by hand adjacent to the forms in areas that cannot be effectively vibrated. The concrete shall be compacted and worked in an approved manner into all corners and angles of the forms and around reinforcement and embedded fixtures. No vibrator shall be immersed in one location long enough to draw a pool of grout from the surrounding concrete. Systematic spacing of points of vibration should be established to ensure that no portions of the concrete are missed. Care must be exercised that concrete is not over-vibrated and that vibrators are not used as a transportation facility. Care shall be taken to avoid hitting the forms of any embedded objects with sufficient force to cause damage.

3A-09. FINISHES OF CONCRETE OTHER THAN FLOORS & SLABS:

- A. <u>General:</u> Directly after removal of forms, remove the wires in surface to be left exposed and cut ties flush with all finished surfaces. Patch slight honeycomb and minor imperfect areas in exposed areas with 1:2 mortar that will cure out same color as concrete and give one of the finishes indicated or specified. Remove fins and rough edges.
- B. <u>Rubbed Finish:</u> Carefully remove fins, other projections, level offsets, repair damaged places, then rub with Carborundum stones and water, leaving surface uniformly smooth and clean. Use no mortar or grout in rubbing. This finish is to be applied to all exposed stair surfaces.
- C. <u>Smooth Finish:</u> Immediately after removing forms, smooth off joint marks, remove blemishes, thoroughly dampen surface, brush coat with fine sand grout, filling all air bubbles and holes, rub with wood or corn float. Permit grout to partially set then remove excess with sponge rubber float without pulling grout from holes. Rub floated finish with burlap and keep damp by fog spraying. This finish is to be applied to all concrete surfaces to be left exposed.
- D. <u>Rough Finish:</u> Remove fins and rough edges. Patch honeycombs. This finish is required of surfaces to be concealed by earth, etc.

3A-10. FLOOR FINISH:

Concrete floor slabs shall have a monolithic finish.

Monolithic Finish: Tamp with suitable tools to force coarse aggregate below surface, screed with straight edge, float to required finish level or grade showing no variations greater than 1/8" in ten (10) feet. While surface is still green, but will bear man's weight without appreciable imprint, trowel surface smooth and leave free from tool marks. Troweling shall be minimum amount to gain a smooth dense surface and shall not be done until the concrete has gained a smooth dense surface and shall not be done until the concrete has hardened sufficiently to prevent excess fine material from being worked to the surface. Dusting with sand cement or cement to facilitate troweling is prohibited.

3A-11. <u>SIDEWALKS:</u>

A. Construction: Sidewalks unless otherwise shown shall be 4" thick, reinforced with 6 x 6

- W 1.4 x W 1.4 reinforcing mesh and the edges shall be turned down an additional 4" x 4". Construction joints shall be placed no more than 30 ft. on center and shall be tooled. Control joints shall be placed no more than 5 ft. on center and shall be tooled.
- B. <u>Finish:</u> Concrete finish on sidewalks shall be a <u>light</u> broom finish. Concrete for sidewalks shall be tamped with proper tools to force coarse aggregate below the surface, then screeded with a straight edge, and while surface is still green the surface shall be steel troweled. After steel troweling, the surface shall be broomed lightly perpendicular to the edge of the walk. Sample section shall of at least 5'-0" x 5'-0" be finished for approval by the Architect prior to any sidewalk concrete being poured. Concrete walks shall be poured and finished by bonafide and experienced concrete subcontractors
- C. <u>Construction Joints:</u> Construction Joints shall be placed no more than 30FT on center and shall be tooled. Control joints shall be placed no more than 5FT on center and <u>shall</u> be tooled.
- D. <u>Expansion Joints:</u> Sidewalk expansion joints shall not exceed 120' in accordance to FDOT specifications.

3A-12. PATCHING:

Surface defects that require repair and holes from form ties shall be promptly attended to by the contractor. Repairs of defective concrete shall be completed before the adjacent concrete is four (4) days old where possible. Ridges and bulges shall be removed by careful chipping or tooling followed by rubbing with a grinding stone. Honeycomb and other defective concrete shall be chipped out in such a manner as to key the filling in place. All holes shall be moist prior to filling. The smaller holes shall be patched with 1.2 volume sand-cement dry mortar. The mortar shall be well compacted into the hole, and the surface shall be given a texture to match that of adjoining concrete. For major repairs, the filling shall be not less than 3" thick and shall also be doweled to the old concrete. As far as practicable, all patches shall be kept wet during the curing period of the surrounding concrete, and in no case less than seven days. Patching shall be done at the contractor's expense. A non-shrinking grout admixture shall be used for patching at such locations as shown by the Architect.

3A-13. CURING:

- A. All concrete shall be protected from loss of moisture due to the sun or artificial heat. Fresh concrete shall be protected from rains, running water and mechanical injury. Tarpaulin sufficiently to cover fresh concrete sections shall always be available for prompt use. Wood forms left in place to assist curing shall be kept wet.
- B. All concrete floor slabs shall be sealed as soon as possible with concrete curing and sealing compound equal to Sure Seal 25 for exterior use and VOCOMP-25 for interior use as manufactured by W.R. Meadows which is clear UV resistant solvent based (exterior use) and water-based (interior use), respectively, ready to use formula which seals and hardens freshly placed concrete. Curing compound shall be applied in strict accordance to manufacturer's recommendations.
- C. Whenever the temperature of the surrounding air is below 40 degrees F, all freshly poured concrete shall be maintained at a temperature of not less than 50 degrees F, for at least 72 hours for normal concrete. No dependence shall be placed on salt or other chemicals for the prevention of freezing.

D. Floor slabs shall be protected throughout the entire construction period from damages.

3A-14. FORMS:

- A. Construct forms to shape, form line and grade required and maintain sufficiently rigid to prevent deformation under load. Unless otherwise specified, construct forms and casework in conformity with A.C.I. 318-14, with leak-proof joints, arranged vertically and horizontally to design pattern. Make removable without injury to concrete.
- B. <u>Coating:</u> Coat forms for exposed concrete surfaces with oil before placing reinforcement, remove surplus oil on form surfaces and any oil on reinforcing steel.
 - Forms for unexposed surfaces only may be thoroughly wetted immediately before placing concrete in lieu of oiling, except that in freezing weather oiling is mandatory.
- C. <u>Removal:</u> When permission of the Architect has been obtained remove forms without damage to concrete. Leave load-supporting forms and shoring in place at least until seven-day tests indicate strength adequate to safely support superimposed load.
- D. If any forms bulge or show deflection, which in the opinion of the Architect is excessive, concrete shall be removed, and work rebuilt.
- E. <u>Footing Forms:</u> If local conditions are favorable, the Architect will permit use of earth forms for grade beams. These shall be inspected and approved by the Architect before pouring.

3A-15. REINFORCING STEEL:

- A. <u>Shop Drawings:</u> To include placing drawings as well as detail of all bars as to size, shape and/or dimensions, and shall be submitted to Architect for approval. All detailing and fabrication shall be in accordance with ACI 318-14. Fabrication shall not begin until drawings are approved.
- B. Reinforcing shall be placed accurately and secured in position in accordance with CRSI 59 of the C.R.S.I. by use of chairs, bolsters, spacers and/or tie wires.
- C. Footing reinforcing shall be supported by plastic chairs equal to Grade Chair with Base manufactured by Rebar Support Products. Pieces of wood block or other material subject to decay shall not be used for support of bars. Brick bats or concrete brick or block will not be acceptable as support for reinforcing bars.
- D. Reinforcing in all concrete tie beams and footings shall be continuous around corners with additional bars (size and number to match reinforcing), bend 2'-0" each way around corners. Where wall footings step, reinforcing shall be continuous in step. Reinforcing steel shall be free of kinks and non-shop bends. Field bend only as permitted by Architect. Do not field bend any bars set in hardened concrete. Reinforced concrete masonry units shall be reinforced at each side of all openings with one No. 5 bar from bottom steel of footing to top steel of tie beam as per Paragraph 4A-14 of these specifications.
- E. In no case shall the clear distance between bars be less than one bar diameter, 1" nor less than 1-1/3 times the maximum size of the coarse aggregate. Where reinforcement in beams or girders is placed in two or more layers, the clear distance between layers shall be not less than 2", and the bars in the upper layers shall be placed directly above

those in the bottom layer.

- F. Unless otherwise noted on the drawings, do all splicing in accordance with the recommendations of the C.R.S.I. Splices shall not be made at points of maximum stress unless specifically shown on the drawings. All reinforcing bar lap splices at footings shall be lapped a minimum of 36 bar diameters, except laps in reinforced masonry units shall be a minimum of 48 bar diameters. All other lap splices shall be spliced per drawing schedule. The Architect shall approve character and location of all splices.
- G. Protective concrete cover for reinforcing shall be as noted on the drawings. ACI 318-14 shall govern where not specifically shown or noted on the drawings.
- H. Adjacent sheets of welded wire mesh shall be lapped at least 6" and securely tied together. Mesh shall be placed at 1/3 times depth of the slab from the top of slab by placing the mesh on chairs prior to concrete pouring. All slabs on grade not otherwise noted on the drawings are to be reinforced with welded wire mesh of the size stated previously.
- I. Reinforcing shall <u>not</u> under any circumstances be covered with concrete until placement has been inspected and approved by the Architect's representative. The Architect shall be notified a minimum of 24 hours in advance and sufficient time allowed for inspection before pouring of concrete. Reinforcing steel shall be free of mud, oil, corrosion, or other coatings that would impair proper bond with concrete.

3A-16. EMBEDDED ITEMS:

- A. All embedded items shall be firmly and securely fastened in place as indicated. They shall be thoroughly clean and free from coatings or foreign matter. The embedment of wood shall be avoided.
- B. Anchor bolts, pipe sleeves, and other embedded items shall be accurately set and rigidly held to prevent displacement. Threads and sleeves of anchor bolts shall be oiled or greased. All embedded items shall be checked by the Architect for location and security prior to pouring concrete.
- C. Upon removal of forms, care shall be taken not to harm projecting items, such steps as required to assure continued protection during remaining construction operations shall also be taken.

3A-17. VAPOR-RETARDER INSTALLATION:

- A. Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder according to ASTM E 1643 and manufacturer's written instructions.
 - 1. Lap joints 6 inches and seal with manufacturer's recommended tape.

3A-18. EXPANSION JOINTS:

Expansion joints shall be equal to Fiber expansion joint material as manufactured by W.R. Meadows, composed of cellular fibers bonded together and uniformly distributed with asphalt to ensure longevity.

3A-19. CONSTRUCTION JOINTS:

- A. The use and location of monolithic construction joints shall be subject to prior approval of the Architect. Where construction joints are necessary in self-supporting slabs and beams they shall be placed at the center of the clear span of the member with key-ways provided at the bulkhead. Construction joints shall not be placed in beams supporting concentrated loads.
- B. The surface of the concrete shall be roughened, except where key-ways are required, thoroughly cleaned, and all latence removed. Joints shall be thoroughly wetted and slushed with a coat of neat cement grout immediately before placing of new concrete.
- C. At least two (2) hours must elapse after depositing concrete in columns or walks before depositing in beams, girders or slabs supported thereon. Beams, girders, brackets, column capitals, and haunches shall be considered as part of the floor system and shall be placed monolithically unless otherwise specifically indicated on drawings.

3A-20. SAW CUT JOINTS:

Saw cut joints (contraction joints) if indicated on the drawings shall be made between 4 and 12 hours after the concrete hardens or final finish. Saw cuts shall not be made after 12 hours from concrete finishing. Depth of the joint shall be 1/3 the depth of the slab, the depth shall be consistent, and the joint shall be straight.

3A-21. CONCRETE FLOOR SEALER:

- A. Where noted on the Finish Schedule for concrete floors to be sealed, the floors shall be chemically treated for sealing, hardening, and dustproofing. Material shall be REZ-SEAL, Acrylic Copolymer as manufactured by the Euclid Chemical Co., Cleveland, Ohio
- B. <u>Application:</u> Application shall be immediately after finishing operation has been completed. Application shall be by short nap roller and coverage shall be no more than 300 SF per gallon.

Do not apply when temperature is below 50°F.

Follow all manufacturer's directions in applying product.

3A-22. PAINTED CONCRETE FLOORS:

See Room Finish Schedule on drawing for concrete floors to be painted. Painting of these floor areas will be as specified in the painting section of these specifications.

END OF SECTION.

SECTION 5

PRE-ENGINEERED METAL BUILDING SYSTEM

5-01. GENERAL:

The General and Special Conditions, Division II, Sections E and F of these specifications shall apply to and form a part of this Section as if written in full herein.

5-02. SCOPE:

Work described in this Section and as shown on the Drawings shall consist of furnishing all labor, materials and equipment for the complete fabrication and erection of all components for the preengineered steel building which shall be constructed to be weather-tight, water tight and in compliance with the following specifications.

5-03. MANUFACTURER:

The pre-engineered metal building specifications are based on Butler Building Systems (Butler Building Corporation) rigid frame clear span gable (LFR).

Other pre-engineered metal building manufacturers will be acceptable providing compliance is met in all respects to the following specifications.

5-04. SHOP DRAWINGS:

- A. Detail drawings shall be submitted in quadruplicate for approval after award of contract and before fabrication has begun.
- B. Shop drawings shall include anchor bolt setting plan, framing plans, framing elevations, rigid frame, purlin girt and bracing details as well as drawings and details necessary to clearly indicate the scope of the work and proper assembly of the building.
- C. Shop drawings shall be signed and sealed by a Florida Registered Engineer, and it shall be stated by the Engineer that the system will comply with the uplift requirements as stated herein.
- D. A product approval number and product approval notice of acceptance will be required to comply with the 2017 Florida Building Code with most current supplement and be included with the shop submittal drawings. See Supplementary and Special Conditions, Paragraph 15-6.

5-05. STRUCTURAL DESIGN:

The manufacturer shall furnish engineering calculations as part of the shop drawings submittal of the building, for the prefabricated structure, prepared by an engineer licensed in the State of Florida. The design shall be based on accepted engineering principles using accepted values of safety factors. Values of connections and any details not subjected to rational analysis shall be substantiated by reference to a nationally accepted standard or test. The building shall be

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designed to follow the Florida Building Code 2017. Certification will be required to this effect by the manufacturer and this certification shall be included as part of the bidding documents.

The bidding documents components will be designed to meet the most severe conditions produced by the following load combinations:

- A. Building dead load, plus roof live load.
- B. Building dead load, plus wind load.

Design wind speed shall be 145 mph as per ASCE 7-10 with Exposure Category C and Building Risk Category of 11.

PEMB Supplemental Design Criteria

Roof Live Load – 120 psf (reduceable at R.F. rafters and columns only)
Dead Load – Weight of structure
Collateral Load- 5 psf
Concentrated Loads – Mechanical Equipment
Lateral Frame Drift – H/100
Wall Girt Deflection – L/240 or 1 ½" maximum
Column Shaft Deflection – L/240

Building manufacturer shall submit all design criteria for approval by the Architect prior to prefabrication of the building.

5-06. BASIC MATERIAL SPECIFICATIONS:

A. <u>Primary Framing Steel:</u>

- 1. Steel for hot rolled structural sections conform to requirements of ASTM Specification A-36.
- 2. Steel for all built-up sections shall conform to modified ASTM Specifications A-36, the modification being a minimum yield point of 42,000 PSI.
- B. <u>Secondary Framing Steel:</u> Steel used to form purlins, girts, eave struts and " C " sections shall be flat steel stock having a minimum yield point of 55,000PSI. Galvanized members shall conform to the requirements of Federal Specifications ZZ-775 C Type 1 Class D having zinc coating of 1.25 ounce per square foot.
- C. <u>Roofing Covering:</u> Shall be exposed metal panel type with a factory applied protective coating. The interlocking standing seam steel roof panels shall be noncombustible, Class One panels, color to be selected.
- D. <u>Wall Covering:</u> Shall be of metal curtain -wall type with a factory applied protective coating. The interlocking ribbed steel wall panels shall be noncombustible Class One panels, color wall panels to be selected from metal color samples.

5-07. STRUCTURAL FRAMING:

A. General:

- 1. All framing members shall be shop fabricated for bolted field assembly. The surfaces of the bolted connections shall be smooth and free from burrs or distortions.
- 2. All shop connections shall be in accordance with the American Welding Society Code for Building Construction. Certification of welder qualifications will be furnished when required and specified.
- 3. All framing members, where necessary, shall carry an easily visible identifying mark.

B. <u>Primary Framing:</u>

- 1. <u>Rigid Framing:</u> All rigid frames shall be welded, built-up "T" sections. The columns and the rafters may be either uniform depth or tapered.
- 2. <u>Plates, Stiffeners, Etc.:</u> All base plates, splice plates, cap plates, and stiffeners shall be factory welded into place on the structural members.
- 3. <u>Bolt Holes, Etc.:</u> All base plates, splice plates, and flanges shall be shop fabricated to include brace rod holes and flange brace holes.

C. Secondary Framing:

- Purlins and Girts: Purlins and girts shall be cold roll-formed "Z" sections with stiffened edges. They shall be pre-punched at the factory to provide for field bolting to the rigid frames. They shall be simple or continuous span as required by design.
- 2. Eave Struts: Eave struts shall be unequal flange cold formed "C" sections.
- 3. <u>Base Angle:</u> A continuous member will be supplied to which the base of the wall covering may be attracted to the perimeter of the slab. This member shall be secured to the concrete slab with ram-sets, expansion bolts, or anchor bolts as shown on the drawings.

D. Bracing:

- 1. <u>Rod Bracing:</u> Diagonal rod bracing in the roof and side walls shall be used to remove longitudinal loads (wind, crane, etc.) from the structure. These rods will be furnished to length, threaded and equipped with level washers and nuts at each end.
- 2. <u>Flange Braces:</u> The compression flange of all primary framing shall be braced laterally with angles connecting to the webs of purlins or girts so that the compressive stress is within allowable limits for any combination of loadings.
- 3. <u>Special Bracing:</u> When diagonal rod bracing is not permitted in the sidewalls, a rigid frame type portal must be placed between the frames. Wind bracing in the

roof and / or walls need not be furnished when it can be shown that the diaphragm strength of the roof and / or wall covering is adequate to resist the applied wind forces.

5-08. ROOF PANELS:

See Section 7A of these specifications for Metal Roofing specifications.

5-09. WALL PANELS:

Wall panels where shown shall be 36" wide non-embossed flat panels of not less than 24 US Gauge coated steel with interlocking ribs. The wall panels shall be applied to the structural framing with the interlocking ribs toward the interior of the structure. The interlocking ribs (16" o.c.) Shall be fastened at the base, at eave and / or rake and to each intermediate girt by means of a positive bolt and nut, thus eliminating any thru-wall fastening.

Wall panels shall be supplied in continuous lengths from the building base to either the eave or rake height with no horizontal joints except over and/ or under door and window openings and where a wall splice is required for necessary weather tight flashing of attached structures.

All panels shall be of coated steel tested in accordance with ASTM Designation A-446 Grade B to meet or exceed a minimum yield point of 37,000 psi. protective coating shall be as hereinafter specified.

Color of wall panels to be selected from metal samples.

All walls shall be properly flashed and /or caulked at the base, eave and rake.

5-10. FINISHES:

- A. <u>Wall Panels and Fascia Panels:</u> Finish with corrosion resistant metallic coating, Kynar 500, 1 mil (.001") thick, factory applied prior to fabrication. Color to match existing roof panels on adjacent Main Building.
- B. Roof Panels: See Section 7A.
- C. Samples of roof and wall panel colors to be submitted for color selection.

5-11. FASTENINGS:

All fastenings shall be of the type, length and spacing that will secure the framing and support members directly into the existing and / or new structural system and as recommended by the metal building panel manufacturer. Fastenings shall be of stainless steel.

The contractor shall submit, to the Architect prior to starting any work, a complete list of the fastenings he proposes to use for each framing system, showing by size, type, and spacing, etc.

5-12. ROOF AND WALL INSULATION:

Where shown on the drawings, insulation installed over framing supports, and underside of metal roof and inside of wall panels, insulation shall be white vinyl faced, metal building insulation .6 pcf density, 4' wide blanket, below roof panels providing 6" thick insulation with R=19 and at wall panels provide 3" insulation R=10. Installation shall be so that complete underside of roof and wall panels are completely covered and a complete vapor barrier is formed. The combined assembly of insulation and roof panels must carry a flame spread rating of no greater than 25.

5-13. MISCELLANEOUS:

- A. <u>Ridge Vent:</u> Where shown, furnish and install continuous gravity type ridge vent as detailed. Sheet metal parts shall be of 22 gauge. Finish and color to be same as roof panels.
- B. <u>Drip and Trim Pieces:</u> To be in shapes, sizes and gauges as shown on the drawings. All metal for trim pieces to be minimum 24 gauge, in same finish and color as fascia panels and wall panels. Where galvalume finish is called for, drip and trim gutter and downspout to be painted color as selected by Architect. Drip shall be installed as detailed with continuous cleat and joints shall be butted and 4" wide joint covers installed over using same material, gauge, finish, etc.
- C. <u>Curbs:</u> This contractor is to furnish and install all roof curbs that are required for Mechanical roof mounted exhaust fans air intake hoods, and gravity vents that penetrate this metal roof. Fan and air intake hood dimensions will be provided by the mechanical contractor. Gravity vents will be furnished by the General Contractor.

5-14. GUTTERS AND DOWNSPOUTS:

- A. Where shown on the drawings, furnish and install gutters and downspouts. Gutters and downspouts will be constructed in shapes and sizes as detailed and to match existing, of 24-gauge galvanized iron. Finish shall be Kynar 500 finish in the same color as the fascia and wall panels.
- B. Downspout Adapters: Where downspouts shown tied directly into drainage system, site contractor shall furnish and install PVC adapters for transition directly into drainage system.
- C. All workmanship shall be first class. Gutters and downspouts shall be straight and true and all components shall be properly anchored.

5-15. DESIGN REQUIREMENTS:

Design for the pre-engineered building, metal roofing and fascia system shall be designed to resist a wind speed of 145 mph as per ASCE 7-10 with an Exposure Category of C and Building Risk Category of II.

Panel assembly to bear Underwriters Laboratory Label UL90.

As noted above, Shop drawings for metal roofing and sidewall system shall be signed and sealed by a professional engineer licensed in the State of Florida.

5-16. GUARANTEES:

The following guarantees shall be furnished to the Owner at completion of project, dated the Date of Acceptance, for each Metal Roof System.

- A. <u>Manufacturer's Warranty:</u> Warranting the finish of the panels against blistering, peeling, cracking, or chipping and against significant color change, for a period of Twenty (20 yrs.) Years.
- B. <u>Manufacturer's Twenty (20 yr.) Year Warranty:</u> For weather tightness of the total metal roofing system.

If not implied or stated on this Warranty, the Roofing Contractor shall furnish separate Guarantee in writing, to the Owner, his Workmanship and Materials Guarantee, guaranteeing the weather tightness of his work for a period of two (2) years, from Date of Acceptance.

5-17. PAINTING:

As per painting specifications, all structural steel including rigid frames, columns, purlins, and wall girts where exposed will receive paint.

5-18. EXTERIOR COMPONENTS OF BUILDING ENVELOPE:

See related sections in these specifications for exterior, roll up doors, personnel doors, hollow metal frames, window glass and frames, store front and other finishes as noted and / or shown.

END OF SECTION

SECTION 6A

CARPENTRY, MILLWORK, AND INSULATION

6A-01. GENERAL CONDITIONS:

The General and Special Conditions, Division II, Sections E and F of these specifications shall apply to and form a part of this Section as if written in full herein.

6A-02. SCOPE:

The contractor shall furnish all labor and materials for carpentry, millwork and case work as indicated on drawings or specified, or reasonably required to finish the work. Work under this heading shall be properly coordinated with all other trades. The carpenter shall do all cutting and fitting for carpentry and millwork, and render all such other assistance required for other branches of the work, making good after other mechanics.

6A-03. LUMBER. IN GENERAL:

All lumber shall be thoroughly seasoned and dried to a moisture content of not over 10% for framing lumber and not over 12% for millwork, and when delivered shall be stored and protected to keep same dry.

All lumber for any purpose shall be dressed four (4) sides, unless otherwise noted and be free from holes, large loose knots, bark and large pitch streaks, regardless of grade.

Grading shall be according to grading rules of the Southern Pine Inspection Bureau under which it is manufactured and each piece of bundle, if bundled stock, shall bear an Inspection Bureau's mark, indicating the grade.

Doors, trim, and millwork in general shall not be stored in the building while the building is damp or in any damp storage location.

6A-04. <u>LUMBER GRADES:</u>

All trim shall be No. 1 Fir. All blocking "cant" strips, grounds or nailers shall be pressure treated No. 2 grade, Yellow Pine; wood studs and wood joists shall be Fir or Yellow Pine structural grade.

6A-05. TREATED LUMBER:

A. <u>Structural Lumber:</u> Give all nailers, blocking and wood grounds in contact with exterior masonry, concrete, roof slabs or steel, pressure preventative treatment in closed retort as per FS TT-W-571; minimum net preservatives as specified herein. Any of the following preservatives will be acceptable:

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<u>Preservative</u>	Lbs. Per Cu. Ft.
Pentachlorophenol (5% solution in oil)	Solution 6.0
Zinc Chloride	Dry Salt 1.0
Zinc Metal Arsenite (ZMA)	Dry Salt .03
Wolman Salts (Tanalith)	Dry Salt 0.3
Chromated Zinc Chloride	Dry Salt 0.75

After using the salt treatment, reduce lumber moisture content to not over 10%. Brush coat surfaces of lumber sawed, bored or cut, after treatment with same preservative used at plant. Accompany lumber with certificates from lumber treatment company, certifying treatment amount, moisture percentage after kiln drying. Architect reserves the right to apply method for determining penetrating as per manual issued by the American Wood Preserver's Association. Treatment shall be arsenic free.

6A-06. METAL GLASS STOPS:

All wood doors shown or noted with glass lights shall have metal stops. Stops shall be Type FGS75 for single glazing and shall be as manufactured by Anemostat Door Products. **Install stops with stainless steel through bolts.**

6A-07. MILLWORK:

Millwork shall be of material and manufacturer hereinafter specified and as indicated on the drawings and shown on details. In all cases millwork shall be of good standard construction. All joints shall be made in approved manner perfectly fitted. Secure with finishing nails with heads set for putty, and with screws and glue where required. All surfaces sanded smooth.

All trim and moldings shall be mitered at joints and corners and in full lengths within the limits of the material.

No sheet plywood shall be less than $\frac{1}{4}$ " thick, exposed surfaces, Grade A. Frames shall be primed on all sides at the mill with clear primer.

6A-08. TRIM:

Trim shall be as indicated on drawings or if not noted shall match specie of doors, siding, and paneling used. All other trim shall be as specified above, No. 1 Fir. All cuts in trim shall be painted with clear Rez during erection. All trim work including bonding on cabinets and cabinet work shall have mitered corners.

6A-09. PLASTIC LAMINATE:

Surfaces where detailed shall be standard grade plastic laminate, 1/16" thickness, furniture finish, color as selected. Edges are to be covered with laminate. Counter top sheet shall overlap counter edge and corners ground to a 45-degree angle. Laminate shall be Formica, Micarta, Wilson Art, or equal. Colors shall be of solid colors as selected. **Other than manufactured**

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casework items, all millwork, window sills, and other surfaces shown with plastic laminate, plastic laminate shall be field applied.

6A-10. ROUGH HARDWARE:

The contractor shall furnish all nails, screws, bolts and fittings required to fabricate and install his work in place of the character required and best suited to the conditions of the work.

6A-11. APPLICATION OF FINISH HARDWARE:

Finish hardware is specified under another Section. Fit and apply all finish hardware to wood doors and leave same in operating order. All mortises, sinkages and cuts shall be accurately made to fit or be covered by hardware. Screws shall be counter sunk or counter bored and plugged as specified. All screws shall be screwed in place and not hammered. (After the finish hardware has been fitted, remove same until the painter has applied the last coat of paint on every surface, then reset in place.) See Carpet Section and Finish Hardware Section for aluminum saddles at doors between corridors and rooms.

6A-12. <u>DOOR LOUVERS:</u>

All door louvers to be furnished by others and installed by this Contractor.

6A-13. CAULKING:

Where backsplashes and/or counter tops finish against plastic walls, the joint shall be caulked with a Thiokol caulking compound before painting.

6A-14. PLYWOOD:

All plywood shall have markings stamped on sheets for grades and thicknesses called for. Where used for exterior applications plywood to be exterior grade with exterior glue.

6A-15. ROOF INSULATION: See Section 5

6A-16 EXTERIOR WALL INSULATION: See Section 5

6A-17. INTERIOR WALL SOUND BATTS:

Install interior wall sound batts at interior metal stud framed wall construction as shown in drawings equal to un-faced sound attenuation batts fiber glass as manufactured by Owens Corning with the following characteristics:

Thickness: 3 ½" Width: 16" Length: 96"

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<u>Surface Burning Characteristics / Rating</u>: Flame Spread Rating 10 Smoke Developed Rating 10

Acoustical Performances: N.R.C. (Noise Reduction Coefficient)

Thermal Performance: R-Value 11

6A-18. INTERIOR CEILING SOUND BATTS: N.A.

6A-19. CLEAN-UP:

The Contractor shall remove all debris, scrap, etc., from the site upon completion of his work. Tile shall be free of finger prints, smudges, and present a uniform color, clean and level. Any tile found to contain smudges, chips, etc., shall be removed and replaced with new tile.

6A-20. GUARANTEE:

This contractor shall guarantee in writing the materials and workmanship for a period of two (2) years after final acceptance of the building.

END OF SECTION.

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SECTION 7A

METAL ROOFING

7A-01. GENERAL CONDITIONS:

The General and Special Conditions, Division II, Sections E and F of these specifications, shall apply to the form part of this Section as if written in full herein.

7A-02. SCOPE OF WORK

A. Furnish all labor, material, equipment and incidentals necessary for installing all new roofing and fascia panels, including required trim, flashing, framing and supports for new metal roofing and fascia panels, and other related items as indicated on the drawings and as specified, and/or as required to complete the work.

Generally, the roofing system will consist of installing a standing seam 24-gauge metal panel roofing over a loadmaster or light gauge framing system as shown on the drawings.

7A-03. INCIDENTAL WORK:

All work which is incidental to the installation of the roof and fascia shall be done by this Contractor. This includes flashing, trim, gutter and downspouts and any other items related to the above roofing areas, fastening and any support work required to complete the installation.

7A-04. METAL ROOF PANELS:

A. General Conditions:

The General and Special Conditions, Division II, Sections D and E of these specifications shall apply to and form part of this Section as if written in full herein.

B. Scope of Work:

The General Contractor shall furnish all labor, materials, equipment, and incidentals necessary for the installation of the new roofing system over existing fiberglass shingle roofs. The new metal roof panels shall be as per these specifications and shall include all flashing, trim, framing, and supports as required to complete the work and as required to provide a weather tight roof system protecting the entire building shown to be reroofed.

C. <u>Incidental Work:</u>

All work which is incidental to the installation of the new roof system and shown to be executed in these drawings shall be done by this contractor and includes flashing trim, gutter,

downspouts, fascia, soffit and any other support work required to complete the roof system installation.

D. Metal Roof Panels:

- 1. Product: Shall be equal to PBR Metal Roof Panels as manufactured by MBCI.
 - a. Coverage width 36"
 - b. Minimum slope $-\frac{1}{2}$:12
 - c. Panel attachment exposed fastening system
 - d. Gauge 24
 - e. Finishes Smooth
 - f. Coating Galvalume Plus
 - g. Rib space 12" o.c.
 - h. Rib Height 1` 1/4"
 - i. Length 5'0" to 50'0"
- 2. <u>Installation</u>: Installation of new metal roof system shall be in strict accordance to roof panel manufacturer's requirements, guidelines and recommendations.

Panels shall be attached to each PEMB purlin with self-tapping stainless-steel screws of length and size necessary to fully penetrate purlin. Fastener shall include self-sealing neoprene washier as required to seal fastener penetration and as required to prevent water intrusion thru roof panel around the fastener. Fastening apparatus used to drill screw fasteners thru roof panel and into purlins and existing roof deck shall be adjusted to provide appropriate torque level to preclude over torqueing or under torqueing screw fasteners.

All panels shall be installed parallel and perpendicular to the roof perimeter. End of roof panels at low eave shall align with ends of adjacent panels to an acceptable tolerance of not more than ½".

3. Roof Panels Penetrations:

- a. Existing plumbing vent and stacks shall be flashed with new EPDM boot of appropriate size to provide watertight installation / condition.
- b. Flashing for exhaust fan curbs and for any other curb mounted penetrations as per manufacturer's typical installation details and as required to provide water tight conditions.
- 4. <u>Design Requirements</u>: Design for the metal roofing system, shall be designed to resist basic windspeed of 145 mph with a building risk category 2 and an exposure category of C as per ASCI-7-10 and as required to comply with FBC 2017.
- 5. <u>Guarantee</u>: The General Contractor / Roofing Contractor shall furnish the Owner a weathertightness and workmanship guarantee in writing, guaranteeing the weathertightness of his / her work for a period of 3-years from the date of acceptance.

7A-05. FINISHES:

- A. Roof Panels: Finish shall be manufacturer's standard galvalume finish.
- B. Samples of roof and wall panel colors to be submitted for color selection.

7A-06. FASTENINGS:

All fastenings shall be of the type, length and spacing that will secure the framing and support members directly into the existing and/or new structural system and as recommended by the metal building panel manufacturer. **Fastenings shall be of stainless steel.**

The contractor shall submit, to the Architect prior to starting any work, a complete list of the fastenings he proposes to use for each framing system, showing by size, type, and spacing, etc. joist structural system. Metal roof panels applied over this system shall have fasteners penetrating either the steel joist or through the heavy- duty steel decking. See roof deck systems section, these specifications, for deck system.

7A-07. MISCELLANEOUS:

- A. <u>Ridge Vent</u>: Where shown, furnish and install continuous gravity type ridge vent as detailed. Sheet metal parts shall be of 22 gauge. Finish and color to be same as roof panels.
- B. <u>Drip and Trim Pieces</u>: To be in shapes, sizes and gauges as shown on the drawings. All metal for trim pieces to be minimum 24 gauge, in same finish and color as roof panels where panels are called for with color finish. Where galvalume finish is called for, drip and trim gutter and downspout to be painted color as selected by Architect. Drip shall be installed as detailed with continuous cleat and joints shall be butted and 4" wide joint covers installed over using same material, gauge, finish, etc.
- C. <u>Curbs:</u> This contractor is to furnish and install all roof curbs that are required for Mechanical roof mounted exhaust fans air intake hoods, and gravity vents that penetrate this metal roof. Fan and air intake hood dimensions will be provided by the mechanical contractor. Gravity vents will be furnished by the general contractor.

7A-08. <u>GUTTERS AND DOWNSPOUTS:</u>

- A. Where shown on the drawings, furnish and install gutters and downspouts. Gutters and downspouts will be constructed in shapes and sizes as detailed and of 24-gauge steel. Finish shall be Kynar 500 finish in color selection from PEMB System manufacturer's standard colors.
- B. Downspouts terminate will terminate into a downspout elbow diverter as required to divert roof water away from building.
- C. All workmanship shall be first class. Gutters and downspouts shall be straight and true and all components shall be properly anchored.

- D. Anchorage for downspouts to building wall shall be as shown and detailed on the drawings.
- 7A-09. <u>METAL SOFFIT PANELS:</u> N.A.
- 7A-10. <u>METAL CORRUGATED SIDING PANELS:</u> N.A.

7A-11. DESIGN REQUIREMENTS:

Design for the metal roofing system shall be for an ultimate wind speed of 145 mph as per ASCE 7-10 and the State of Florida Building Code 2017.

Shop drawings shall be signed, dated and sealed by a Florida Registered Engineer, and it shall be stated by the Engineer that the system will comply with the uplift requirements as state herein.

Metal roofing and fascia system shall contain product approval numbers and information showing product complies with the Florida Building Code 2017, Section 17. See Supplementary and Special Conditions, Paragraph 15-6

7A-12. GUARANTEES AND ONE YEAR INSPECTION:

- A. The following guarantees shall be furnished to the Owner at completion of project, dated the Date of Acceptance, for each Metal Roof System.
 - 1. <u>Manufacturer's Warranty:</u> Warranting the finish of the panels against blistering, peeling, cracking, or chipping and also against significant color change, for a period of Twenty (20-Yrs.) Years.
 - 2. <u>Manufacturer's Twenty (20 Yr.) Year Warranty:</u> For weather tightness of the total metal roofing system, both classroom building and pavilion.

If not implied or stated on this Warranty, the Roofing Contractor shall furnish separate Guarantee in writing, to the Owner, his Workmanship and Materials Guarantee, guaranteeing the weather tightness of his work for a period of three (3) years, from Date of Acceptance.

B. <u>Manufacturer's One Year Inspection</u>: The roof shall be inspected by the manufacturer's representative within one year of the project's completion and acceptance of the Board.

END OF SECTION

SECTION 7C

WATERPROOFING, DAMPPROOFING, AND CAULKING

7C-01. GENERAL CONDITIONS:

The General and Special Conditions, Division II, Sections E and F of these specifications shall apply to and form a part of this section as if written in full herein.

7C-02. SCOPE:

The contractor shall furnish all labor and materials for waterproofing, dampproofing and caulking indicated on the drawings, as specified, and here reasonably required to make work watertight.

7C-03. WORK BY OTHERS:

All admix or liquid waterproofing of masonry and all sheet metal, water or dampproofing will be done by the respective sub-contractors.

7C-04. WALL FLASHING: N.A.

7C-05. EXTERIOR WALL WATERPROOFING: N.A.

7C-06. FLOOR SLAB WATERPROOFING: (vapor barrier)

Under all interior floor slabs, install one layer of .006 "Natural Visqueen" or equal over carefully prepared porous fill, by a suitable method to prevent damage or rupturing of film. Lap all joints 8" with the top lap in the direction of the spreading of the concrete. Cut carefully around all pipe, conduit, etc., and apply pressure sensitive tape to all joints to insure maximum barrier effectiveness as recommended by the manufacturer. Turn up at exterior walls to insure enveloping and trim after concrete pour. Inspect all surfaces after mesh is laid and repair all damage.

7C-07. <u>METAL ROOF UNDERLAYMENT:</u> N.A.

7C-08. CAULKING:

- A. <u>Scope:</u> Caulk all joints between masonry and the perimeter of exterior door and window frames and similar locations in exterior walls of building wherever **indicated or specified or necessary to make weather tight.**
- B. <u>Materials:</u> Caulking compound shall be Dow Corning 785 Silicone Building Sealant, or G.E. Construction 1200 Sealant. Substitutes other than these are acceptable with approval by the Architect prior to being shipped to the work.

C. Caulking: Joints and spaces shall be thoroughly clean and dry.

Caulking around frames of exterior openings and as may be required in masonry shall be not less than ½" deep and joints shall be raked clean and prepared to receive the compound, and shall be completely filled. Finish joints smoothly and slightly concave.

Caulking around windows in areas where special concrete coating is to be applied shall be done prior to concrete coating. Caulking shall be left slightly recessed.

Joints having depth in excess of $\frac{3}{4}$ " shall be packed with oakum to within $\frac{1}{2}$ " of the surface and carefully and completely filled with compound and thoroughly worked in. Material shall finish neatly against adjoining surfaces, smooth and of uniform width.

The method of application will be by means of a pressure caulking gun; in locations where a caulking gun cannot be used, the compound shall be applied with hand caulking tools.

The color of caulking shall be as selected by Architect.

<u>Metal Thresholds:</u> Unless otherwise specifically indicated on drawings, shall be set in full beds of caulking compound.

7C-09. THRESHOLDS AND WEATHER STRIPPING:

Covered in Finish Hardware Section, these specifications.

END OF SECTION.

SECTION 8A

GLASS, GLAZING, ALUMINUM WINDOWS, STOREFRONT, CURTAIN WALL

8A-01. GENERAL CONDITIONS:

The General and Special Conditions, Division II, Sections E and F of these specifications shall apply to and form a part of this Section as if written in full herein.

8A-02. SCOPE:

Furnish all labor, materials, and equipment and perform all operations necessary for the complete installation of all glass, glazing, windows, and store front as noted in these specifications and as shown on the drawings.

8A-03. GLAZING:

All glazing shall be done by experienced glaziers. Only high grade glazing compound shall be used. G.E. Silglaze 2400 Silicone Sealant. All surfaces to be glazed shall be clean and dry and no glazing shall be done in freezing weather. Face putty shall be smooth and of uniform width, without ripples and all corners shall be cut clean and sharp.

Rebates of glazed panels and doors shall be primed before installing glass and all glass shall be back puttied and bedded on all sides except as noted for plate glass. Heat absorbing glass shall be set as to allow free expansion and contraction of the material.

Each piece of glass shall bear the manufacturer's label of quality and the labels shall remain in place until after inspection and approval of Architect. After inspection and approval, the labels shall be removed and glass cleaned and polished, both sides.

8A-04. SAFETY STANDARDS:

All glazing shall comply with Safety Standards for Architectural Glazing 16CFR as issued by the Consumer Safety Commission. All windows shall meet requirements for 130 mph ultimate wind speed as per the 2014 Florida Building Code and ASCE 7-10.

8A-05. NON-SECURITY LEVEL GLASS:

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Glass and glazing units for the following products and applications, and glazing requirements referenced by other sections:
 - 1. Windows.
 - 2. Doors.
 - 3. Interior borrowed lites.
 - Glazed entrances.
 - Storefront framing.

- 6. Glazed curtain walls.
- 7. Skylights.
- B. Glazing accessories.

1.2 RELATED SECTIONS

- A. Division 08 Section 'Decorative Glass Glazing.'
- B. Division 08 Section 'Mirrors.'
- C. Division 08 Section 'Plastic Glazing.'
- D. Division 08 Section 'Security Glazing.'

1.3 REFERENCES

- A. American Architectural Manufacturers Association:
 - 1. AAMA 800 Voluntary Specifications and Test Methods for Sealants.
- B. ASTM International (ASTM):
 - 1. **ASTM C 509 -** Specification for Elastomeric Cellular Preformed Gasket and Sealing Material.
 - 2. **ASTM C 864** Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers.
 - 3. **ASTM C 920** Specification for Elastomeric Joint Sealants.
 - 4. **ASTM C 1036 -** Specification for Flat Glass.
 - 5. **ASTM C 1048 -** Specification for Heat-Treated Flat Glass Kind HS, Kind FT Coated and Uncoated Glass.
 - 6. **ASTM C 1087 -** Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems.
 - 7. **ASTM C 1115 -** Specification for Dense Elastomeric Silicone Rubber Gaskets and Accessories.
 - 8. **ASTM C 1172 Specification for Laminated Architectural Flat Glass.**
 - ASTM C 1281 Specification for Preformed Tape Sealants for Glazing Applications.
 - 10. **ASTM C 1330 -** Specification for Cylindrical Sealant Backing for Use with Cold Liquid Applied Sealants.
 - 11. **ASTM C 1376 -** Specification for Pyrolytic and Vacuum Deposition Coatings on Glass.
 - 12. **ASTM E 774 -** Specification for the Classification of the Durability of Sealed Insulating Glass Units.
 - 13. **ASTM E 1300 -** Practice for Determining Load Resistance of Glass in Buildings.
 - 14. **ASTM E** 2190 Standard Specification for Insulating Glass Unit Performance and Evaluation.
- C. Code of Federal Regulations:
 - 16 CFR 1201 Safety Standard for Architectural Glazing Materials.
- D. Glass Association of North America (GANA):
 - 1. Glazing Manual.
 - 2. Laminated Glass Design Guide.
 - Engineering Standards Manual.
- E. The Insulating Glass Manufacturers Alliance (IGMA):
 - 1. IGMA TB-3001 Sloped Glazing Guidelines.
 - 2. IGMA TM-3000 Glazing Guidelines for Sealed Insulating Glass Units.

- F. Lawrence Berkeley National Laboratory; Environmental Energy Technologies Division; Building Technologies Department; Windows & Daylighting Group, windows.lbl.gov/software:
 - 1. "LBNL Window 5.0 (or higher) A PC Program for Analyzing Window Thermal and Optical Performance.
- G. National Fenestration Rating Council (NFRC):
 - NFRC 100 Procedure for Determining Fenestration Product Thermal Properties.
 - 2. NFRC 200 Procedure for Determining Fenestration Product Solar Heat Gain Coefficients at Normal Incidence.
 - 3. NFRC 300 Procedures for Determining Solar Optical Properties of Simple Fenestration Products.
- H. National Fire Protection Association (NFPA):
 - 1. NFPA 80 Fire Doors and Windows.
 - 2. NFPA 252 Fire Tests of Door Assemblies.
 - 3. NFPA 257 Fire Test for Window and Glass Block Assemblies.

1.4 DEFINITIONS

- A. Manufacturers of Primary Glass: Firms that produce primary glass, as defined in referenced industry publications.
- B. Manufacturers/Fabricators of Glass Products: Firms that utilize primary glass in the production of glass products that may include coated glass, laminated glass, and insulating glass.
- C. Sealed Insulating Glass Unit Surfaces:
 - 1. Surface 1: Exterior surface of outer lite.
 - 2. Surface 2: Interspace-facing surface of outer lite.
 - 3. Surface 3: Interspace-facing surface of inner lite.
 - 4. Surface 4: Interior surface of inner lite.

1.5 PERFORMANCE REQUIREMENTS

- A. General: Provide glazing systems that will withstand indicated loads and normal thermal movement without failure, including loss or glass breakage resulting from defective manufacture, fabrication, or installation; failure of glazing systems to remain watertight and airtight; or deterioration of glazing materials.
- B. Glass Design: Glass thicknesses indicated are minimums. Select actual glass lite thicknesses by analyzing loads and conditions. Provide glass lites in the thicknesses and in strengths required to meet or exceed the following criteria:
 - 1. Glass Thicknesses: Comply with ASTM E 1300, as follows:
 - a. Specified Design Wind Loads: As indicated.
 - b. Probability of Breakage for Vertical Glazing: 8 lites per 1000 for lites set within 15 degrees of vertical and under wind load for a load duration of [3] seconds.
 - c. Probability of Breakage for Sloped Glazing: 1 lite per 1000 for lites set more than 15 degrees off vertical and under wind and snow loads for a duration of [30] days.
 - d. Thickness of Tinted Glass: Provide the same thickness for each tint color for all applications.

- C. Thermal Movements: Allow for thermal movements of glazing components and glass framing members resulting from a temperature change range of 120 deg F ambient and 180 deg F material surfaces.
- D. Thermal and Optical Performance Properties: Provide glass meeting specified performance properties, based on manufacturer's published test data for units of thickness indicated, and the following:
 - 1. Center-of-Glass Values: Per LBNL Window 5.0 (or higher) analysis, as follows:
 - a. U-Factors: NFRC 100 expressed as Btu/sq. ft. x h x deg F.
 - b. Solar Heat Gain Coefficient: NFRC 200.
 - c. Solar Optical Properties: NFRC 300.

1.6 SUBMITTALS

- A. Product Data: Manufacturer's data sheets for each glass product and glazing material.
- B. Samples: 12-inch-square, for each type of glass product, other than monolithic clear float glass [or clear float glass only set in insulated glass units].
- C. Glazing Schedule: Prepare schedule using designations used on Drawings.
- D. Product Certificates: Signed by manufacturers/fabricators of glass products certifying that products furnished comply with project requirements.
- E. Preconstruction Adhesion and Compatibility Test Report: From glazing sealant manufacturer, based on submitted samples or acceptable data from previous testing of current formulations with similar products.
- F. Qualification Information: For Installer firm and Installer's manufacturer/fabricator-trained field supervisor.
- G. Warranties: Submit sample meeting warranties requirements of this Section.

1.7 QUALITY ASSURANCE

- A. Manufacturer/Source: Obtain each type of glass product from a single primary glass manufacturer and a single manufacturer/fabricator for each glass product type.
 - 1. For glass sputter-coated with solar-control low-e coatings, obtain glass products in fabricated units from a manufacturer/fabricator certified by the primary glass manufacturer.
- B. Installer Qualifications: Experienced Installer with minimum of 5 successful completed projects of similar materials and scope, approved by glass product manufacturer/fabricator.
- C. Preconstruction Adhesion and Compatibility Testing: Submit glass units, glazing materials, and glass-framing members with applicable finish to elastomeric glazing sealant manufacturer for determination of sealant compatibility, priming, and preparation requirements for optimum adhesion and performance.
- D. Glazing for Fire-Rated Door and Window Assemblies: Glazing tested per NFPA 252 and NFPA 257, as applicable, for assemblies complying with NFPA 80 and listed and labeled per requirements of authorities having jurisdiction.
- E. Safety Glazing Products: Comply with size, glazing type, location, and testing requirements of 16 CFR 1201 for Category I and II glazing products, and requirements of authorities having jurisdiction.
- F. Glazing Industry Publications: Comply with glass product manufacturers' recommendations and the following:

- 1. GANA Publications: GANA Laminated Division's 'Laminated Glass Design Guide' and GANA's 'Glazing Manual.'
- 2. IGMA Publication for Insulating Glass: IGMA TM-3000, 'Glazing Guidelines for Sealed Insulating Glass Units.'
- G. Insulating-Glass Certification Program: Indicate compliance with requirements of Insulating Glass Certification Council on applicable glazing products.
- H. Mockups: Prior to installing glazing, build mockups to demonstrate materials and workmanship. Coordinate with mockup requirements of related sections.
- I. Preinstallation Conference: Conduct conference at Project site in compliance with Division 01 requirements.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Protect glazing materials during shipping, handling, and storage to prevent breakage, scratching, damage to seals, or other visible damage. Deliver, unload, store, and erect glazing materials without exposing panels to damage from construction operations.
 - 1. Comply with manufacturer's venting and sealing recommendations for shipping and handling of insulating glass units exposed to substantial altitude change.

1.9 WARRANTY

- A. Warranty for Coated-Glass Products: Manufacturer's standard form, signed by coated-glass product primary manufacturer or manufacturer/fabricator, as applicable, agreeing to replace coated-glass units that display peeling, cracking, and other deterioration in metallic coating under normal use, within [10] years of date of Substantial Completion.
- B. Warranty for Laminated Glass: Manufacturer's standard form, signed by laminated-glass product manufacturer/fabricator, agreeing to replace laminated-glass units that display edge separation, delamination, and blemishes exceeding those allowed by ASTM C 1172, within [five] years of date of Substantial Completion.
- C. Warranty for Insulating Glass: Manufacturer's standard form, signed by insulating-glass product manufacturer/fabricator, agreeing to replace insulating-glass units that exhibit failure of hermetic seal under normal use evidenced by the obstruction of vision by dust, moisture, or film on interior surfaces of glass, within [10] years of date of Substantial Completion.
- D. Installer's Warranty: Form acceptable to Owner, signed by glass product Installer, agreeing to replace glass products that deteriorate, or that exhibit damage or deterioration of glass or glazing products due to faulty installation, within [2] years of date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design: Glass product selections are based upon the primary glass manufacturer below. Provide basis of design product [, or comparable product of a listed manufacturer approved by the Architect prior to bid]:
 - 1. Vitro Architectural Glass, Cheswick, PA, (888) 774-4332, Email: ideascapes@ppg.com, http://www.vitroglazings.com.

2.2 GLASS PRODUCTS

- B. Annealed Ultra-Clear (Low Iron) Float Glass: Class I (clear).
 - 1. Basis of Design Product: Vitro Architectural Glass, Starphire.
 - 2. [Specifier: insert manufacturer of comparable product if required]
- C. Heat-Treated Float Glass, Heat-Strengthened: ASTM C 1048; Type I (transparent flat glass); Quality-Q3; Kind HS, of class and condition indicated: where indicated, where needed to resist thermal stresses and where required to comply with performance requirements.
- D. Heat-Treated Float Glass, Fully Tempered: ASTM C 1048; Type I (transparent flat glass); Quality-Q3; Kind FT, of class and condition indicated: where safety glass is indicated. Safety glazing must comply with ANSI Z97.1 and CPSC 16CFR-1201
- E. Pyrolytic-Coated Float Glass: ASTM C 1376, float glass with metallic-oxide coating applied by pyrolytic deposition process during primary glass product manufacture.
- F. Sputter-Coated Float Glass: ASTM C 1376, float glass with metallic-oxide or -nitride coating deposited by vacuum deposition process following primary glass product manufacture.
- G. Ceramic-Coated Vision Glass: Float glass with silk-screened ceramic enamel application, per ASTM C 1048, Condition B, Type I, Quality-Q3, and Specification No. 95-1-31 in GANA 'Engineering Standards Manual.'
- H. Ceramic-Coated Spandrel Glass: ASTM C 1048, Condition B, Type I, Quality-Q3 and GANA 'Engineering Standards Manual' 66-9-20 Specification for Heat-Strengthened or Fully Tempered Ceramic Enameled Spandrel Glass for Use in Building Window/Curtain Walls and Other Architectural Applications.
- I. Coated Spandrel Float Glass: Float glass complying with ASTM C 1048, GANA 'Engineering Standards Manual' 89-1-6 Specification for Environmental Durability of Fully Tempered or Heat-Strengthened Spandrel Glass with Applied Opacifier and other requirements specified, with manufacturer's standard opacifier material on coated second surface of lites.
- J. Laminated Glass: ASTM C 1172, with manufacturer's standard polyvinyl butyral or cured resin interlayer.
- K. Insulating-Glass Units: Factory-assembled units consisting of dual-sealed lites of glass separated by a dehydrated interspace, with manufacturer's standard spacer material and construction, per ASTM E 2190.

2.3 GLAZING ACCESSORIES

- A. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.
- B. Glazing Tape: Butyl-based elastomeric tape with integral resilient tube spacer, 10 to 15 Shore A durometer hardness, black color, coiled on release paper; widths required for specified installation, complying with ASTM C 1281 and AAMA 800 for application.
- C. Glazing Tape: Closed cell polyvinyl chloride foam, maximum water absorption by volume 2 percent, designed for 25 percent compression percent for air barrier and vapor retarder seal, black color, coiled on release paper over adhesive on two sides; widths required for specified installation, and complying with AAMA 800.
- D. Glazing Gaskets:
 - Dense Compression Gaskets: ASTM C 864, neoprene or EPDM, or ASTM C 1115, silicone, or thermoplastic polyolefin rubber, as recommended by

- glazing product manufacturer for application, molded or extruded shape to fit glazing channel retaining slot; black color.
- 2. Soft Compression Gaskets: ASTM C 509, Type II, black, molded, or extruded, neoprene, EPDM, silicone, or thermoplastic polyolefin rubber, of profile and hardness required to maintain watertight seal.
- E. Setting Blocks: ASTM C 864, neoprene, 80 to 90 Shore A durometer hardness; length 4 inches, width of glazing rabbet space less 1/16-inch, height required for glazing method, pane weight, and pane area.
- F. Spacer Shims: ASTM C 864, neoprene, 50 to 60 Shore A durometer hardness; length 3 inches, one half height of glazing stop, thickness required for application, one face self-adhesive.
- G. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking).
- H. Glazing Sealants: ASTM C 920, type recommended by glazing product manufacturer for application indicated, complying with requirements of Division 07 Section 'Joint Sealants,' color as selected by Architect.
- I. Cylindrical Glazing Sealant Backing: ASTM C 1330, Type O (open-cell material), of size and density to control glazing sealant depth and otherwise produce optimum glazing sealant performance.
- J. Smoke Removal Unit Targets: Adhesive targets for application to glass, identifying glass units designed for removal for smoke control.

2.4 FABRICATION OF GLAZING UNITS, GENERAL

A. Fabricate glazing units in dimensions required, with edge and face clearances, edge and surface conditions, and bite in accordance with glazing product manufacturer/fabricator's instructions and referenced glazing publications.

2.5 INSULATING-GLASS UNIT(S)

- A. Double Glazed Tinted Solar Control Insulating Glass Unit [Solarban® 60 on Solargray® 6mm (2) | Air 1/2" (12.7mm) | Clear 6mm]
 - 1. Conformance: ASTM E 2190
 - 2. Outdoor Lite: Solargray® Tinted Float Glass as manufactured by Vitro Architectural Glass
 - a. Conformance: ASTM C 1036, Type 1, Class 2, Quality q3.
 - b. Glass Thickness: 6mm (1/4")
 - c. Magnetic Sputter Vacuum Deposition Coating (MSVD): ASTM C 1376.
 - d. Coating: Solarban® 60 on Surface # 2
 - e. Heat-Treatment: [None] [Heat-strengthened, ASTM C 1048, Kind HS]
 [Tempered; ASTM C 1048, Kind FT; Safety Glazing meets ANSI Z97.1 and CPSC 16CFR-1201] Specifier Notes: Specify the method of heat treatment. Vitro recommends that heat strengthened glass be specified and used, except where tempered glass is mandated for safety or other purposes by code.
 - 3. Interspace Content: Air 1/2" (12.7mm)
 - 4. Indoor Lite: Clear float glass as manufactured by Vitro Architectural Glass
 - a. Conformance: ASTM C 1036, Type 1, Class 1, Quality q3.
 - b. Heat-Treatment: [None] [Heat-strengthened, ASTM C 1048, Kind HS] [Tempered; ASTM C 1048, Kind FT; Safety Glazing meets ANSI Z97.1 and CPSC 16CFR-1201] Specifier Notes: Specify the method of heat

treatment. Vitro recommends that heat strengthened glass be specified and used, except where tempered glass is mandated for safety or other purposes by code.

- c. Glass Thickness: 6mm (1/4")
- 5. Performance Requirements:
 - a. Visible Light Transmittance: 35 percent minimum.
 - b. Winter Nighttime U-Factor: 1.55 (W/m²*°C) maximum.
 - c. Summer daytime U-Factor: 1.55 (W/m²*°C) maximum.
 - d. Shading Coefficient: 0.29 maximum.
 - e. Solar Heat Gain Coefficient: 0.25 maximum.
 - f. Outdoor Visible Light Reflectance: 6 percent maximum.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that glazing channels are clean and ready to accept glazing installation, and that weeps are unobstructed. Confirm that minimum required face and edge clearances will be maintained. Do not proceed with glazing until unsatisfactory conditions have been corrected.
- B. Examine glazing units prior to setting. Reject units that display edge or face damage that may impede performance of unit or that will be visible when installed.

3.2 PREPARATION

A. Clean glazing channels with recommended solvent and wipe dry. Apply primers to joint surfaces to ensure adhesion of sealants, unless preconstruction sealant-substrate testing indicates no primer is required.

3.3 GLAZING INSTALLATION

- A. General: Install glass and glazing materials in accordance with instructions of manufacturers and requirements of GANA Glazing Manual.
 - 1. Install setting blocks of size and in location required by glass manufacturer. Set blocks in bed of approved sealant.
 - 2. Provide spacers for glass lites as recommended, based upon size of glass unit.
 - 3. Comply with glass manufacturer's limits on edge pressures.
 - 4. Ensure that glazing units are set with proper and consistent orientation of glass units toward interior and exterior.
 - 5. Provide edge blocking where recommended.
 - 6. Install sealants in accordance with requirements of Division 07 Section 'Joint Sealants.'
- B. Tape Glazing: Place tapes on fixed stops positioned to be flush or protrude slightly when compressed by glass. Install tapes continuously. Form butt joints at corners and where required, and seal tape joints with approved sealant.
 - 1. Apply heel bead of glazing sealant along intersection of permanent stop and frame for continuity of air and vapor seal.
 - 2. Set glass lites centered in openings on setting blocks.
 - 3. Install removable stops, and insert dense compression gaskets at corners, working toward centers of lites, compressing glass against tape on fixed stops.
 - 4. Apply cap bead of elastomeric sealant over exposed edge of tape or gasket on exterior of glass unit.
- C. Sealant Glazing: Install continuous spacers between glass lites and glazing stops. Install cylindrical sealant backing where recommended, in width and depth

recommended to provide proper depth and width of sealant bead. Ensure sealant cannot block weep system.

- 1. Install sealant under pressure to completely fill glazing channel without voids, with full bond to glass and channel surfaces.
- 2. Tool sealant bead to proper profile providing wash away from glass.
- D. Sealant Glazing for Butt Glazing:
 - 1. Brace glass in position for duration of glazing process
 - 2. Mask edges of glass at adjoining glass edges and between glass edges and framing members.
 - 3. Secure small diameter non-adhering foamed rod on back side of joint.
 - 4. Apply sealant to open side of joint in continuous operation; completely fill joint without displacing foam rod; tool sealant surface smooth to concave profile.
 - 5. Allow sealant to cure, then remove foam backer rod.
 - 6. Apply sealant to opposite side; tool sealant smooth to concave profile.
 - 7. Remove masking tape.
- E. Gasket Glazing: Fabricate gaskets to fit openings exactly. Allow for stretching of gaskets during installation.
 - 1. Set soft compression gasket against fixed stop or frame, secure, with bonded miter cut joints at corners.
 - 2. Set glass lites centered in openings on setting blocks.
 - 3. Install removable stops, and insert dense compression gaskets at corners, working toward centers of lites, compressing glass against soft compression gaskets and to produce a weathertight seal. Seal joints in gaskets. Allow gaskets to protrude past face of glazing stops.

3.4 CLEANING AND PROTECTION

- A Protect installed glass from damage. Attach streamers or warning tape to framing members, away from contact with glass. Remove nonpermanent labels.
- B Protect glass from contact with contaminating substances during construction. Immediately clean glass exposed to contamination using methods recommended by glass manufacturer.
- C Within 5 working days prior to inspection for Substantial Completion, clean all exposed glass surfaces using methods recommended by manufacturer. Remove glazing compounds from framing surfaces.
- D Remove and replace broken or damaged glass.

8A-06. SECURITY LEVEL GLAZING: N.A.

8A-07. <u>ALUMINUM STOREFRONT AND SASH:</u>

- A General: All aluminum tubing shown for fixed glass windows and windows shall be equal to Kawneer TriFab II 451 Series, 2" x 4 ½" or Vista Wall Series 3000 2" x 4 ½". Finish shall be Class 1 clear anodized. Aluminum storefront shall be for Thermopane glazing.
- B <u>Materials:</u> All framing members shall be extruded aluminum of 6063-T6 alloy and temper. Exterior glazing gasket shall be E.P.D.M. and interior glazing seal shall be closed cell PVC. foam sealant tape. All mullions and horizontals for 1" glazing (except butt glazed) shall be thermally isolated from the pressure plate by a rigid vinyl separator.

- C <u>Installation:</u> All openings shall be prepared plumb and square by others and shall be of sufficient size to provide clearance at jambs, head and sill as shown on the Architectural drawings. Experienced technicians shall perform installation, glass and glazing according to the manufacturer's recommended procedures. All units shall be securely anchored with all joints fully caulked to issue a water tight seal. Sills shall be laid in full bed of caulking and jambs and heads shall be caulked as shown on the drawings and specified elsewhere in these specifications. Installation shall be by skilled, well trained mechanics. Fastenings shall be Phillips Head Machine Screws counter sunk and of stainless steel.
- D <u>Finish:</u> All exposed surfaces shall be free of unsightly scratches and blemishes. The exposed surfaces shall receive a caustic etch followed by an architectural class I clear anodized coating conforming to AA-M12C22A44 Vistawall 740-EC.
- E <u>Cleaning:</u> Upon completion of construction, the General Contractor shall be responsible for cleaning all aluminum, employing methods recommended by the manufacturer as follows Anodized aluminum shall be cleaned with plain water containing a mild detergent, or a petroleum product such as white gasoline, kerosene, or distillate. No abrasive agent shall be used.
- F <u>Warranty</u>: Provide standard limited two-year warranty from the date of substantial completion.
- G See drawings for locations for store front and fixed glass windows.

8A-08. <u>ALUMINUM FRAME ENTRANCE DOORS:</u> N.A.

8A-09. <u>ALUMINUM WINDOWS:</u> N.A.

8A-10. SKYLIGHTS: N.A,

8A-11. SHOP DRAWINGS:

Glass and glazing contractor shall furnish complete shop drawings for all items this Section for approval prior to fabrication showing all details, sizes, shapes, dimensions, etc.

Shop Drawings shall show calculations, signed and sealed by an engineer registered in the State of Florida, that all exterior glazing, windows and store front comply with 130 mph ultimate wind speed as per the 2014 Florida Building Code and ASCE 7-10.

Shop Drawings shall also include product approval number and additional test data that is required to comply with the 2014 Florida Building Code. See Supplementary and Special Conditions, Paragraph 15-6.

8A-12. CLEANING:

After Final Inspection, all remaining glazing compound and smears shall be cleaned from the glass, the sash and frames, and the glass washed clean. Broken glass shall be removed and replaced at no expense to the Owner.

END OF SECTION.

SECTION 8B

EXTERIOR AND INTERIOR DOORS

8B-01. GENERAL CONDITIONS:

The General and Special Conditions, Division II, Sections E and F of these specifications shall apply to and form a part of this Section as if written in full herein.

8B-02. SCOPE:

Furnish all labor, materials, and equipment and perform all operations necessary for the complete installation of all glass, glazing, windows, and store front as noted in these specifications and as shown on the drawings.

8B-03. CHAIN OPERATED SERVICE DOOR:

A. Furnish and install chain operated service doors as shown on drawings. Mounting shall be face of wall mounting. Door shall be as manufactured by the C.H.I. Overhead Doors. Furnished materials shall include curtain, bottom bars, brackets, guides, hood operating mechanism and all incidentals to make for a complete installation.

B. Materials:

- 1. The door curtain shall be constructed with 20-gauge No. 5 flat slats as designated by the C.H.I. Overhead Doors.
- 2. Door shall be shipped with one coat of corrosion inhibiting primer, 2 mils per side, for finish painting at the job site.
- 3. The bottom bar shall consist of two _" steel angles mechanically joined together. The finish on the bottom bar shall be one (1) coat of bronze rust -inhibiting prime paint.
- 4. The guides shall consist of 3 steel angles bolted together with 3/8" fasteners to form a channel for the curtain to travel. The wall angle portion shall be continuous and fastened to the surrounding structure with either minimum ½" fasteners or welds both on 36" centers. The finish on the guide angles shall be one (1) coat of bronze rust-inhibiting paint.
- 5. The brackets shall be constructed of steel not less than ¼" thick and shall be bolted to the wall angle with minimum ½" fasteners. The finish on the brackets shall be one (1) coat of bronze rust-inhibiting prime paint.
- 6. All gears shall be cast iron with teeth cast from machine cut patterns. The pinion gear shall not be less than a 3" pitch diameter. The gear ratio shall be designed for a maximum effort of not more than 30 pounds.
- 7. The barrel shall be steel tubing of not less than 4" in diameter. Oil tempered torsion springs shall be capable of correctly counter balancing the weight of the curtain. The barrel shall be designed to limit the maximum deflection to .03" per foot of opening width.

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The springs shall be adjusted by means of an exterior wheel. The finish on the barrel shall be one (1) coat of bronze rust-inhibiting prime paint.

8. The hood shall be fabricated from 24-gauge galvanized steel and shall be formed to fit the curvature of the brackets. The hood shall be corrugated every 1" along the curvature for the entire length of the hood. The hood shall be finish in color as selected.

C. Operation:

- 1. Chain operated doors shall open and close with a maximum of 30 pounds of effort utilizing an endless chain and cast-iron reduction gears.
- 2. The chain door shall be secured by means of a chain lock.
- D. <u>Shop Drawings:</u> Shop drawings shall be submitted for approval showing all details and shall also show that the door complies with the 145-mph wind speed as per the 2017 Florida Building Code.

8B-04. HOLLOW METAL DOORS:

Furnish and install at exterior and interior openings and as called for in door schedule, "Regent" Honeycomb Core Beveled Lockedge, 1 ¾ "thick full flush heavy duty 18-gauge galvanized steel doors as manufactured by Ceco Door product. Doors hall be seamless model. Doors shall be reinforced, stiffened, sound deadened, and insulated with impregnated Kraft Honeycomb core completely filling inside of doors and laminated to both inside faces of the panels. Doors shall have continuous vertical mechanical interlocking joints at lock and hinge edges and lock edges, 14 gauge reinforcing steel channels spot welded within the door. Hinge reinforcing shall be 3/16" lock reinforcing 16-gauge, closer reinforcing 12 gauge and adequately reinforced for other hardware if required.

All doors shall be bonderized and finished with one coat of baked on gray prime coat. Provide astragali at pairs of doors, and rain drips where scheduled. Glass lights to be as detailed on the drawings. Furnish UL Label doors in openings called for on the door schedule. Doors to carry appropriate Underwriter's Label.

Shop drawings shall also include the product approval number and any additional test data that is required to comply with the 2010 Florida Building Code. See Supplementary and Special Conditions, Paragraph 15-6.

E. <u>Execution:</u>

- 1. An authorized Cookson Distributor shall install all Cookson Rolling Service Doors.
- 2. All Cookson Rolling Service Doors shall be warranted for a period of twelve (12) months against defects in workmanship and materials from the time the building has been accepted.

8B-05 WOOD DOORS: (WOOD DOORS WILL NOT BE BID IN THIS PHASE OF WORK)

All wood doors shall be sized as scheduled on the drawings and shall be equal to the following specifications for door types.

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- A. <u>Hollow Core Doors:</u> Shall be Graham seven-ply hollow core doors, 1-3/4" thick conforming to US Commercial Standard CS 171-58, including all amendments. Type I waterproof glue for exterior doors and Type II water resistant for interior doors. Hollow core doors shall be flush panel, Birch Veneer. Furnish one-year industry guarantee.
- B. <u>Solid Core Doors:</u> Shall be Graham exterior or interior solid lumber staved core doors, 1- ³/₄ " thick, of sizes as noted on drawings. Doors noted for 20-minute rating shall be DGS-20 staved core. Doors shall conform to U.S.
 - Commercial Standard CS 171-58 including all amendments. Face veneer shall be Birch premium grade. Exterior doors shall be guaranteed for two (2) years after installation, interior doors for life of installation. Top and bottom edges to be at least 2 _" minimum hardwood, side edges to be 1¾" minimum Beech.
- C. <u>Fire Doors:</u> Where noted on the drawings, rated or label wood doors shall be equal to Weyerhaeuser staved core DFM-60 fire door for a one-hour fire rating, conforming to industry standards I.S. 1-73. Door shall carry appropriate UL Label. Finish shall be Birch premium grade.
- D. Acceptable manufacturers are US Plywood, Roddis, or Eggers Hardwood Company; supplier to furnish submittal data showing all specifications of doors to be furnished for approval by Architect.

8B-06. <u>METAL GLASS STOPS:</u>

All wood doors shown or noted with glass lights shall have metal stops. Stops shall be Type FGS75 for single glazing and shall be as manufactured by Anemostat Door Products. **Install stops with stainless steel through bolts.**

- 8B- 07. ALUMINUM FRAME ENTRANCE DOORS: N.A.
- 8B-08. <u>BULLET RESISTANT WOOD DOORS:</u> N.A.
- 8B-09. PUSH UP COUNTER DOOR: N.A.

8B-10. PRODUCT APPROVAL NUMBERS: (METAL DOORS AND FRAMES)

Submittals for exterior hollow metal doors, metal door frames, exterior roll up doors, and exterior hollow metal window frames to have Florida Product Approval Numbers and information showing product complies with the Florida Building Code 2014. See Supplementary and Special Conditions, Paragraph 15-6 for this requirement.

Approval numbers shall be for the entire assembly (frames, doors. and hardware) including gauges of materials, set backs of hardware anchorage and installation of all components.

END OF SECTION

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SECTION 8C

HOLLOW METAL DOOR AND WINDOW FRAMES

8C-01. GENERAL CONDITIONS:

The General and Special Conditions, Division II, Sections E and F, of these specifications shall apply to and form a part of this Section as if written in full herein.

8C-02. SCOPE:

Provide all labor, materials, and equipment necessary to install new floor covering and base where shown and scheduled on the drawings and as specified.

8C-03. HOLLOW METAL DOOR AND WINDOW FRAMES:

Furnish and install in required sizes and shapes 16-gauge frames at exterior doors and 16-gauge for interior openings. All frames shall be reinforced at points of junction and where all hardware will occur with minimum of 3 - 16-gauge anchors per jamb. **Frames shall be furnished with fully mitered welded corners and shipped assembled to the job.** The frames shall be bonderized and delivered to job with one coat of zinc chromate paint. **All hollow metal frames shall be hot dipped galvanized.**

Store frames in upright position, cover with visqueen until ready for use, and on arrival give each frame one coat of approved rust inhibitive primer. Before priming, inspect all frames for rust, take down to base metal, touch up, then prime entire frame. All corners shall be mitered. Shop drawings shall be submitted for approval. Template butts will be required and information on hardware including butts, closers, etc., will be secured from hardware supplier. See Hardware Section.

See drawings and schedule for wood doors installed in metal bucks. Hardware location tolerance shall conform to ASA tolerance as noted in A-115. Furnish UL Label frames at all locations where wood or metal label doors are called for. Label frames to carry appropriate Underwriter's Label. Furnish proper anchors and throat fillers for hollow metal door frames used in dry wall system walls.

Note drawings for exterior windows set in hollow metal frames. Stops to be set to receive insulated glass as specified.

8C-04. <u>BULLET RESISTANT HOLLOW METAL DOOR AND WINDOW FRAMES:</u> N.A.

8C-05. PRODUCT APPROVAL NUMBERS: (METAL DOORS AND FRAMES)

Submittals for exterior hollow metal doors, metal door frames, exterior roll up doors, and exterior hollow metal window frames to have Florida Product Approval Numbers and information showing product complies with the Florida Building Code 2014. See Supplementary and Special Conditions, Paragraph 15-6 for this requirement.

Approval numbers shall be for the entire assembly (frames, doors, and hardware) including gauges of materials, set backs of hardware anchorage and installation of all components.

END OF SECTION

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SECTION 08D

DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes commercial door hardware for the following:
 - Swinging doors.
- B. Door hardware includes, but is not necessarily limited to, the following:
 - 1. Mechanical door hardware.
- C. Related Sections:
 - 1. Division 08 Section "Hollow Metal Doors and Frames".
 - 2. Division 08 Section "Flush Wood Doors".
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
 - 1. ANSI A117.1 Accessible and Usable Buildings and Facilities.
 - 2. ANSI/SDI A250.13 Testing and Rating of Severe Windstorm Resistant Components for Swing Door Assemblies.
 - 3. ASTM E1886 Test Method for Performance of Exterior Windows, Curtain Walls, Doors and Shutters Impacted by Missiles and Exposed to Cyclic Pressure Differentials.
 - 4. ASTM E330 Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure difference.
 - 5. ASTM E1996 Standard specification for performance of exterior windows, curtain walls, doors and storm shutters impacted by Windborne Debris in Hurricanes.
 - 6. ICC/IBC International Building Code.
 - 7. NFPA 70 National Electrical Code.
 - 8. NFPA 80 Fire Doors and Windows.
 - 9. NFPA 101 Life Safety Code.
 - 10. NFPA 105 Installation of Smoke Door Assemblies.
 - 11. TAS-201-94 Impact Test Procedures.
 - 12. TAS-202-94 Criteria for Testing Impact and Non-Impact Resistant Building Envelope Components using Uniform Static Air Pressure.
 - 13. TAS-203-94 Criteria for Testing Products Subject to Cyclic Wind Pressure Loading.
 - 14. State Building Codes, Local Amendments.
- E. Standards: All hardware specified herein shall comply with the following industry standards:
 - 1. ANSI/BHMA Certified Product Standards A156 Series
 - 2. UL10C Positive Pressure Fire Tests of Door Assemblies

1.3 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
 - 1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
 - 2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
 - 3. Content: Include the following information:
 - a. Type, style, function, size, label, hand, and finish of each door hardware item.
 - b. Manufacturer of each item.
 - c. Fastenings and other pertinent information.
 - d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
 - e. Explanation of abbreviations, symbols, and codes contained in schedule.
 - f. Mounting locations for door hardware.
 - g. Door and frame sizes and materials.
 - h. Warranty information for each product.
 - 4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
- C. Proof of Qualification: Provide copy of manufacturer(s) Factory Trained Installer documentation indicating proof of status as a qualified installer of Windstorm assemblies.
- D. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.

E. Informational Submittals:

Hurricane Resistant Openings (State of Florida): Within the State of Florida, provide copy
of current State of Florida Product Approval or Metro-Dade County Notice of Acceptance
(NOA) as proof of compliance that doors, frames and hardware for exterior opening
assemblies have been tested and approved for use at the wind load and design pressure
level requirements specified for the Project.

- a. Hurricane Resistant Components (State of Florida): Within the State of Florida, provide copy of independent, third party certified listing to ANSI A250.13.
- 2. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.
- F. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Submittals.

1.4 QUALITY ASSURANCE

- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.
- B. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- C. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.
- D. Windstorm Assembly Installer Qualifications: Installers are to be factory trained for shop and field installation prior to project bid, and are responsible for commissioning, servicing, and warranting the installed equipment specified for the project. A pre-installation site inspection of the frame and floor conditions shall be conducted by the factory trained installer prior to any Windstorm assembly hardware applied to the opening.
- E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
 - 1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
- F. Hurricane Resistant Exterior Openings (State of Florida including the High Velocity Hurricane Zone (HVHZ)): Provide exterior door hardware as complete and tested assemblies, or component assemblies, including approved doors and frames specified under Section 081113 "Hollow Metal Doors and Frames", to meet the wind loads, design pressures, debris impact resistance, and glass and glazing requirements as detailed in the current State of Florida building code sections applicable to the Project.
 - 1. Each unit to bear third party permanent label in accordance with the Florida Building Code requirements.
- G. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.

- H. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
 - 1. Function of building, purpose of each area and degree of security required.
 - 2. Plans for existing and future key system expansion.
 - 3. Requirements for key control storage and software.
 - 4. Installation of permanent keys, cylinder cores and software.
 - 5. Address and requirements for delivery of keys.
- I. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
 - 1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
 - 2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
 - 3. Review sequence of operation narratives for each unique access controlled opening.
 - 4. Review and finalize construction schedule and verify availability of materials.
 - 5. Review the required inspecting, testing, commissioning, and demonstration procedures
- J. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.
- 1.5 DELIVERY, STORAGE, AND HANDLING
- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.6 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.
- B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.7 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
 - 1. Structural failures including excessive deflection, cracking, or breakage.
 - 2. Faulty operation of the hardware.
 - 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - 4. Electrical component defects and failures within the systems operation.
- C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.
- D. Special Warranty Periods:
 - 1. Ten years for mortise locks and latches.
 - 2. Seven years for heavy duty cylindrical (bored) locks and latches.
 - 3. Twenty five years for manual surface door closer bodies.

1.8 MAINTENANCE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.
- B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
 - 1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
- C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.2 HANGING DEVICES

- A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.
 - 1. Quantity: Provide the following hinge quantity:
 - a. Two Hinges: For doors with heights up to 60 inches.
 - b. Three Hinges: For doors with heights 61 to 90 inches.
 - c. Four Hinges: For doors with heights 91 to 120 inches.
 - d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
 - 2. Hinge Size and Weight: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
 - a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
 - b. Sizes from 3'1" to 4'0": 5" heavy weight.
 - 3. Hinge Base Material: Unless otherwise indicated, provide the following:
 - a. Exterior Doors: Non-ferrous, ball bearing or oil impregnated bearing hinges.
 - b. Interior Doors: Steel, ball bearing or oil impregnated bearing hinges.
 - 4. Hinge Options: Comply with the following:
 - a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all outswinging lockable doors.
 - Manufacturers:
 - a. Bommer Industries (BO) LB Series.
 - b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) TA Series.
 - c. Stanley Hardware (ST) CB Series.

2.3 DOOR OPERATING TRIM

- A. Door Push Plates and Pulls: ANSI/BHMA A156.6 certified door pushes and pulls of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.
 - 1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
 - 2. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.
 - Manufacturers:
 - a. Burns Manufacturing (BU).
 - b. Hiawatha, Inc. (HI).
 - c. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
 - d. Trimco (TC).

2.4 CYLINDERS AND KEYING

- A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.
- B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.
- C. Cylinders: Original manufacturer cylinders complying with the following:
 - 1. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
 - 2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
 - 3. Bored-Lock Type: Cylinders with tailpieces to suit locks.
 - 4. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
 - 5. Keyway: Manufacturer's Standard.
- D. Patented Cylinders: ANSI/BHMA A156.5, Grade 1, certified cylinders employing a utility patented and restricted keyway requiring the use of patented controlled keys. Provide bump resistant, fixed core cylinders as standard with solid recessed cylinder collars. Cylinders are to be factory keyed where permanent keying records will be established and maintained.
 - 1. Provide a 6 pin multi-level master key system comprised of patented controlled keys and security and high security cylinders operated by one (1) key of the highest level. Geographical exclusivity to be provided for all security and high security cylinders and UL437 certification where specified.
 - a. Level 1 Cylinders: Provide utility patented controlled keyway cylinders that are furnished with patented keys available only from authorized distribution.
 - b. Level 2 Cylinders: Provide utility patented controlled keyway and side bar locking incorporating unique angled bottom pins for geographical exclusivity. Cylinders constructed to provide protection against bumping and picking.
 - c. Level 3 Cylinders: Provide utility patented controlled keyway and side bar locking incorporating unique angled bottom pins for geographical exclusivity. Cylinders to be UL437 certified and constructed to provide protection against bumping, picking, and drilling.
 - d. Refer to hardware sets for specified levels.

2. Manufacturers:

- a. Sargent Manufacturing (SA) Degree Series.
- b. Corbin Russwin (RU) Access 3 Series.
- E. Keying System: Each type of lock and cylinders to be factory keyed.
 - 1. Conduct specified "Keying Conference" to define and document keying system instructions and requirements.
 - 2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
 - 3. New System: All locksets shall be keyed alike and construction master keyed.
- F. Key Quantity: Provide the following minimum number of keys:

- 1. Change Keys per Cylinder: Two (2)
- 2. Construction Keys (where required): Ten (10).
- G. Construction Keying: Provide construction master keyed cylinders.
- H. Key Registration List (Bitting List):
 - 1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
 - 2. Provide transcript list in writing or electronic file as directed by the Owner.

2.5 MECHANICAL LOCKS AND LATCHING DEVICES

- A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 certified. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.
 - 1. Extended cycle test: Locks to have been cycle tested in ordinance with ANSI/BHMA 156.13 requirements to 10 million cycles.
 - 2. Manufacturers:
 - a. Corbin Russwin Hardware (RU) ML2000 Series.
 - b. Sargent Manufacturing (SA) 8200 Series.
 - c. Yale Locks and Hardware (YA) 8800FL Series.
- B. Cylindrical Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.2, Series 4000, Grade 1 certified.
 - 1. Furnish with solid cast levers, standard 2 3/4" backset, and 1/2" (3/4" at rated paired openings) throw brass or stainless steel latchbolt.
 - 2. Locks are to be non-handed and fully field reversible.
 - 3. Extended cycle test: Locks to have been cycle tested in ordinance with ANSI/BHMA 156.2 requirements to 2 million cycles.
 - 4. Manufacturers:
 - a. Corbin Russwin Hardware (RU) CL3300 Series.
 - b. Sargent Manufacturing (SA) 10 Line.
 - c. Yale Locks and Hardware (YA) 5400LN Series.

2.6 LOCK AND LATCH STRIKES

- A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
 - 1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
 - 2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
 - 3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
 - 4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.
- B. Standards: Comply with the following:

- 1. Strikes for Mortise Locks and Latches: BHMA A156.13.
- 2. Strikes for Bored Locks and Latches: BHMA A156.2.
- 3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
- 4. Dustproof Strikes: BHMA A156.16.

2.7 DOOR CLOSERS

- A. All door closers specified herein shall meet or exceed the following criteria:
 - 1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers including installation and adjusting information on inside of cover.
 - 2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
 - 3. Cycle Testing: Provide closers which have surpassed 15 million cycles in a test witnessed and verified by UL.
 - 4. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the physically handicapped, provide units complying with ANSI ICC/A117.1.
 - 5. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
 - 6. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
 - 7. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.
- B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.
 - 1. Manufacturers:
 - a. Sargent Manufacturing (SA) 351 Series.
 - b. Norton Door Controls (NO) 7500 Series.
 - c. Yale Locks and Hardware (YA) 4400 Series.

2.8 ARCHITECTURAL TRIM

A. Door Protective Trim

- 1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
- Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.

- 3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.
- 4. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:
 - a. Stainless Steel: 300 grade, 050-inch thick.
- 5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
- Manufacturers:
 - a. Burns Manufacturing (BU).
 - b. Hiawatha, Inc. (HI).
 - c. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
 - d. Trimco (TC).

2.9 DOOR STOPS AND HOLDERS

- A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.
- B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
 - 1. Manufacturers:
 - a. Burns Manufacturing (BU).
 - b. Hiawatha, Inc. (HI).
 - c. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
 - d. Trimco (TC).

2.10 ARCHITECTURAL SEALS

- A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.
- B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
 - 1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.
- C. Fire Labeled Gasketing: Furnished by door manufacturer (UL10C, Category A).
- D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.

E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

F. Manufacturers:

- 1. National Guard Products (NG).
- 2. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).
- 3. Reese Enterprises, Inc. (RE).

2.11 FABRICATION

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.12 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
- B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.

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- 1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - 2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
 - 3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
 - 4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
- C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
- D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
- E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 FIELD QUALITY CONTROL

A. Field Inspection: Supplier will perform a final inspection of installed door hardware and state in report whether work complies with or deviates from requirements, including whether door hardware is properly installed, operating and adjusted.

3.5 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.6 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
- B. Clean adjacent surfaces soiled by door hardware installation.
- C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

- A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.
- B. The supplier is responsible for handing and sizing all products and providing the correct option for the appropriate door type and material where more than one is presented in the hardware sets. Quantities listed are for each pair of doors, or for each single door.
- C. Manufacturer's Abbreviations:
 - 1. MK McKinney
 - 2. SA SARGENT
 - 3. RO Rockwood
 - 4. PE Pemko

Hardware Sets

Set: 1.0

Doors: 101A, 101E, 103A

Description: Basis of Design CURRIES FL#16353

3 Hinge	TA2314 NRP 4-1/2" x 4-1/2"	US32D	MK
1 Dormitory Lock	DG1 8225 LNL	US26D	SA
1 Door Closer	351 CPS	EN	SA
1 Kick Plate	K1050 12" x 2" LDW	US32D	RO
1 Threshold	2005AV x LAR (door width)		PΕ
1 Gasketing	S88D x LAR (head/jambs)		PΕ
1 Sweep	345AV x LAR (door width)		PΕ
1 Rain Guard	347A x Door Width Plus 4 Inches		PΕ
1 Rain Guard	68AR x LAR (door width)		PΕ

Notes: Exterior opening to comply with FBC windstorm requirements.

HARDWARE SETS 2.0 THRU 6.0 WILL NOT BE BID IN THIS PHASE OF WORK

Set: 2.0

Doors: 105A

3 Hinge	TA2714 4-1/2" x 4-1/2"	US26D	MK
1 Storeroom Lock	DG1 10G04 LL	US26D	SA
1 Wall Stop	409	US32D	RO
3 Silencer	608-RKW		RO

T .	Cat. 2.0		
Doors: 102	<u>Set: 3.0</u>		
3 Hinge 1 Office Lock 1 Wall Stop 3 Silencer	TA2714 4-1/2" x 4-1/2" DG1 10G05 LL 409 608-RKW	US26D US26D US32D	MK SA RO RO
Doors: 103B	<u>Set: 4.0</u>		
 3 Hinge 1 Classroom Lock 1 Door Closer 1 Kick Plate 1 Wall Stop 1 Threshold 1 Gasketing 	TA2314 NRP 4-1/2" x 4-1/2" DG1 10G37 LL 351 P10 K1050 12" x 2" LDW 409 2005AV x LAR (door width) S88D x LAR (head/jambs)	US32D US26D EN US32D US32D	MK SA SA RO RO PE PE
Doors: 105	<u>Set: 5.0</u>		
 3 Hinge 1 Privacy Lock 1 Door Closer 1 Kick Plate 1 Mop Plate 1 Wall Stop 3 Silencer 	TA2714 4-1/2" x 4-1/2" 10U65 LL 351 O K1050 12" x 2" LDW K1050 6" x 2" LDW 409 608-RKW	US26D US26D EN US32D US32D US32D	MK SA SA RO RO RO RO
Doors: 104	Set: 6.0		
3 Hinge 1 Pull Plate 1 Push Plate 1 Door Closer 1 Kick Plate 1 Mop Plate 1 Wall Stop 3 Silencer	TA2714 4-1/2" x 4-1/2" 110x70C 70E 351 O K1050 12" x 2" LDW K1050 6" x 2" LDW 409 608-RKW	US26D US32D US32D EN US32D US32D US32D US32D	MK RO RO SA RO RO RO RO

END OF SECTION

SECTION 8E

ALUMINUM LOUVERS AND BRICK VENTS

8E-01. ALUMINUM LOUVERS AND BRICK VENTS:

A. <u>Manually operated louvers</u>: Shall be in sizes and shapes as shown on the drawings equal to Construction Specialties, Inc., Aluminum Model 4830 M for manual operation. Louver blades to be storm proof type center pivoted with two reinforcing bosses. Furnish with aluminum insect screen on exterior side and an aluminum expanded metal screen on the interior side. Expanded metal shall be equal to ½", 081 standard expanded aluminum and set in a screened or heavy duty extruded aluminum frame.

Finish to be C/S Kynar 500 coating in color as selected by Architect.

B. <u>Louvers (Fixed):</u> Furnish and install at locations shown and in sizes and shapes shown, aluminum fixed louvers equal to Construction Specialties Model 4110 storm proof for louver widths or diameters up to 24" and Model 4130 storm proof for louver widths or diameters over 24".

All louvers to be furnished complete with C/S insect screen and an aluminum expanded metal screen on the interior side set in a screwed on heavy duty extruded frame. The expanded metal shall be equal to .081 standard expanded aluminum.

Frames and blades to be 6063-T52 alloy minimum .081" for 4110 louvers and .125" for 4130 louvers, with reinforcing bosses. Heads, jambs, and sills to be one piece structural members and to have integral caulking slot and retaining bead. All fastenings to be stainless steel.

Structural supports to be designed by C/S to carry a wind load of not less than 20 pounds p.s.f.

Finish to be C/S Kynar 500 coating in color as selected by Architect.

C. <u>Brick Vents:</u> Shall be in sizes as shown on the mechanical drawings and equal to Construction Specialties, Inc., Aluminum Brick Vent.

Model 22EX for 16 x 4-7/8 vents Model 23EX for 16 x 7-3/4 vents

Vents shall include 7 x 7 mesh aluminum screen, continuous drip top and bottom, weep holes and minimum wall thickness of .125".

Coordinate with mechanical contractor for exact location and installation for proper connection to FIA duct.

Finish shall be Kynar 500 finish in color selected by Architect.

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D. Motorized Louvers:

Shall be in sizes as indicated on the drawings and equal to Construction Specialties, Inc., aluminum electric operating louver model 6870E.

Frame and blades to be 6063-T52 alloy .081" thick. All louver blades to be storm proof type, center pivoted with two reinforcing bosses and have $\frac{1}{2}$ " diameter zamac alloy pinion operating in self-lubricating nylon bearings. All blades shall be operated by concealed drive arms at each jamb. Drive arms shall be connected by a $\frac{5}{8}$ " diameter torsion bar operating in nylon bearings. All louver blades and sills shall be equipped with jamb gaskets riveted to blade ends. When closed, air leakage through the louvers shall not exceed 1.72 CFM per square foot of face area at a wind velocity of 30 m.p.h.

Structural supports to be designed to carry a wind load of not less than 20 lbs. per square foot.

Furnish with heavy duty aluminum bird screen, ½" mesh, .063 wire intercrimped and secured with a 12 B and S gauge extruded aluminum frame.

Furnish with EX110 motor unit for single phase and provide push button control with pilot lamps indicating open & closed position for each louver and to be interlocked with exhaust fans so when fan is switched on louvers operate to open position.

Furnish shop drawings for approval.

E. Shop drawings for louvers used in exterior walls shall also include the product approval number and any test data that is required to comply with 2014 Florida Building Code, Section 17. See "Supplementary and Special Conditions", Paragraph 15-6.

END OF SECTION

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SECTION 9E

PAINTING

9E-01. GENERAL CONDITIONS:

The General and Special Conditions, Division II, Sections E and F of these specifications shall apply to and form a part of this Section as if written in full herein.

9E-02. SCOPE:

Furnish all labor, materials, equipment and services necessary and/or incidental to do all painting and decorating under this Contract.

In general, but not limited to, this contractor will include:

- A. Three (3) coats of paint on all new work exterior and interior, including plaster, stucco, sheetrock, block masonry walls, trim, and metal.
- B. Finishing of all cabinet work and paneling except that which is covered by plastic laminate, or that which is finished at the mill.
- C. Epoxy coating of all walls and ceilings where called for on the schedule.
- D. Painting of concrete floors where called for on the drawings.

9E-03. GENERAL REQUIREMENTS:

Mix all paints at least seventy-two (72) hours before using, keeping the containers covered during this period. Mix well before using. All paint to come to the job in their original containers, and to be Sherwin- Williams, ICI Coatings, Pittsburgh, or Pratt and Lambert.

Painter to mix samples of stains and colors and have Architect's approval before applying. All surfaces to receive paint, varnish, etc., shall be clean, smooth, free from dust, scratches, and to be thoroughly dry before applying paint.

The edges including the top and bottom edges of all doors which paint at the job site shall be finished as called for, and shall be touched up after the carpenter has made the final adjustments.

No paint shall be applied to wet or damp surfaces, nor shall any paint be applied to any surface when the temperature is below 50 degrees F.

All painting and decorating to be done by experienced workmen, and the finished work shall be free from runs, sags, scratches, and brush marks, and shall be uniform in color.

Application of a paint by spray not allowed other than glaze or multicolor coats as called for. All wood and trim to be painted by brush only.

9E-04. APPLICATION:

- A. No coat shall be applied until the preceding one is thoroughly dry, and no paint shall be applied when temperature is 50 degrees F., or below, or when surfaces are damp. All paint shall be evenly spread and well brushed or sprayed as noted, or so as to accomplish best results. All paints, stains, etc., shall be mixed and applied according to manufacturer's directions, and each coat shall be sanded as required before the succeeding coat is applied.
- B. <u>All raw spots of wood frames, interior millwork,</u> to be primed at mill shall be touched up with similar material immediately after being placed. All knots, sap, and pitch streaks shall be brush coated with shellac before priming coat is applied. Prime all wood which is to be covered with metal unless same has been treated with wood preserver.
- C. <u>Concrete masonry</u> walls where called for to be painted shall be first examined for excess mortar, pointing up of joints, etc.
- D. All rust spots, scratches, blemishes, etc., on metal door frames and exposed metal work through the building, shall be worked to the base metal with steel wool, the spots primed, and when dry.
- E. Natural finish wood doors surfaces to be sanded with #320 wet or dry paper and rubbed with 4/0 steel wool between each coat.
- F. Epoxy Coating Finish: Where called for on the finish schedule, epoxy coating shall be as per Paragraph 16-11, this section.

9E-05. <u>PUTTYING:</u>

After the priming coat has been applied, all nail holes and voids of any kind are to be puttied flush with the surfaces. Excess putty shall be removed from the surfaces before succeeding coats of paint are applied.

9E-06. EXTERIOR PAINTING:

- A. All exposed metal, trim, frames, doors, miscellaneous steel and iron, galvanized iron:
 - 1. One Coat Primer: ICI Devoe Coatings DevGuard 4160 Multi-Purpose Tank and Structural Primer or one coat of Sherwin Williams Kerm Kromik Metal Primer and one coat of Sherwin Williams Galvite for Galvanized Irons.
 - 2. <u>Two Coats Finish:</u> ICI Devoe Coatings DevGuard 4308 Alkyd Gloss Enamel. Or two coats of Sherwin Williams Industrial Enamel B-54.
- B. All exposed wood and wood trim:
 - 1. <u>One Coat Primer:</u> ICI Ultra-Hide Durus 2110 Exterior Alkyd Primecoat or one coat of Sherwin Williams A-100 Primer.
 - 2. <u>Two Coats Finish:</u> ICI Dulux Professional 2402 Exterior 100% Acrylic Satin Finish or Sherwin Williams K33W100 Satin Latex House.

- C. Exposed concrete block, concrete, and cement stucco:
 - One Coat Primer: (for concrete block only) ICI Ultra-Hide 3010-1200, Interior Exterior Vinyl Acrylic Block Filler or Sherwin Williams Heavy Duty Acrylic Block Filler B42W46.
 - 2. <u>Two Coats Finish:</u> ICI Dulux Professional 2402 Exterior 100% Acrylic Satin Finish or Sherwin Williams A24W351 Satin Latex House Paint.

9E-07. INTERIOR PAINTING:

- A. Exposed Iron and Steel Metals:
 - One Coat Primer: ICI Ultra-Hide 1120-1200 Oil / Alkyd Interior Enamel Undercoater or Sherwin Williams Kem Kromik Metal Primer.
 - 2. <u>Two Coats Finish:</u> ICI Ultra-Hide 1416 Latex Semi-Gloss Interior Wall and Trim Enamel or two coats Sherwin Williams Promar 200 Latex Semi-Gloss Enamel.
- B. Wood Trim (other than natural finish):
 - One Coat Primer: ICI Ultra-Hide 1120-1200 Oil / Alkyd Interior Enamel Undercoater or Sherwin Williams Classic Wall and Wood Primer B28-W101.
 - 2. <u>Two Coats Finish:</u> ICI Ultra-Hide 1416 Latex Semi-Gloss Interior Wall and Trim Enamel or Sherwin Williams Promar B-31 200 Semi-Gloss.
- C. Sheetrock Walls:
 - 1. <u>One Coat Primer:</u> ICI Ultra-Hide 1030-1200 PVA Interior Primer Sealer or Sherwin Williams Promar 200 Series B-28.
 - 2. <u>Two Coats Finish:</u> ICI Ultra-Hide 1412 Latex Eggshell Interior Wall and Trim or Sherwin Williams Promar 200 Latex Semi-Gloss Enamel B-31.
- D. Exposed Masonry Block:
 - One Coat Primer: ICI Ultra-Hide 3010-1200 Interior / Exterior Vinyl Acrylic Blockfiller or Sherwin Williams Heavy Duty Acrylic Block Filler B42W46.
 - 2. <u>Two Coats Finish:</u> ICI Ultra-Hide 1412 Latex Eggshell Interior Wall and Trim Enamel or Sherwin Williams Promar 200 Latex Semi-Gloss Enamel B-31.
- E. <u>Epoxy Coating Finish:</u> Where called for on the finish schedule, epoxy coating shall be as per Paragraph 16-11, this section.

9E-08. NATURAL FINISH:

A. Where selected or called for on wood trim or doors or millwork items:

1. One coat of Lacquer Sealer and two coats of Gloss Lacquer or two coats of ICI Woodpride 1902 Interior Polyurethane High Gloss Varnish.

9E-09. STAINED FINISH:

- A. Where selected or called for on wood trim or wood doors or millwork items:
 - 1. <u>One Coat:</u> ICI Woodpride 1900 Interior Oil Wood Finishing Stain or one coat of Olympic Clear Interior Stain.
 - 2. <u>One Coat:</u> Lacquer Sealer or Sanding Sealer Well Sanded.
 - 3. <u>Two Coats:</u> ICI Woodpride 1902 Interior Polyurethane High Gloss Varnish or two coats of Gloss Lacquer.

9E-10. PAINTED CONCRETE FLOORS:

- A. Where called for on the drawings and finish schedule concrete floors shall be painted with H&C shield plus paint as manufactured by the Sherwin-Williams Company Cleveland, Ohio. (Technical Service Phone 1-800/867-8246) or two coats of Anvil Concrete 1900 Siliconized Acrylic Concrete Stain.
- B. Concrete floor areas to receive paint shall be at least 45 days old, shall be clean and completely free of all grease, oil, loose or chalking paint, chalking concrete, dirt, etc.
 - Floor areas to be first cleaned with detergent and degreaser and thoroughly rinsed.
- C. Apply first coat of paint, let dry two (2) hours and apply 2nd coat. Paint maybe applied by brush, roller, or airless sprayer.
 - Do not apply in temperature below 50 degrees F or above 90 degrees F.
- D. Color to be selected by Architect.

9E-11. EPOXY COATING FINISH:

A. Where called for on the drawings, finish shall be equal to DeVoe and Reynolds Co. True Glaze or Tile-Clad II Epoxy coating as manufactured by Sherwin Williams Company. Colors shall be as selected by Architect from manufacturers standard color key chart.

All materials shall be first quality, freshly compounded and formulated in such a manner as to form a chemical bond with the surface applied to, forming an integral part of same.

Application shall be by factory trained technicians, using approved mechanical equipment, and adhering to manufacturer's instructions and literature.

B. <u>Surface Preparation:</u> Mortar joints and major voids must be corrected and filled. Surfaces to receive epoxy coating shall be free from oil, grease, dirt, mortar splashing, etc.

C. Materials:

- 1. <u>One Coat:</u> ICI Ultra-Hide 3010-1200 Interior / Exterior Vinyl Acrylic Blockfiller or Sherwin Williams, Heavy Duty Block Filler B42W46.
- 2. One Coat Primer: ICI Ultra-Hide 3010-1200 Aguarcrylic Gripper Primer Sealer.
- 3. <u>Two Coats Finish:</u> ICI DeVoe Tur-Glaze 4419 Waterborne Acrylic Epoxy Coating or Sherwin William Tile-Clad II Epoxy.

D. Application:

- 1. Blockfiller by brush or roller only. DeVoe 75 sq. Ft. per gallon. Sherwin Williams 87 To 108 sq. ft./gallon.
- 2. Primer (DeVoe) by brush, roller or spray at the rate of 379 sq. ft. Per gallon to achieve 3.0 mills thickness dry. Sherwin Williams Two Coats Tile-Clad II Epoxyby brush, roller, or spray at rate of 195 sq. ft./gallon to achieve 4 mills thickness dry, each coat.
- 3. DeVoe Epoxy Coating by brush, roller or spray at the rate of 154-240 sq. ft. / gallon to achieve 3 mills thickness dry.
- 4. DeVoe and Sherwin Williams one splatter coat of a different color. DeVoe Epoxy Primer 12735, Sherwin Williams Tile Clad II Epoxy.

9E-12. SANDING AND FINISHING:

It will be the responsibility of the painting contractor to hand sand all surfaces to be painted and otherwise prepare them to provide a smooth finish paint job. All corners to be "eased", nail holes filled and painted surfaces prepared and approved after prime coat is applied. The second coat of paint must be completed and approved before final coat is started in any area. Repainting of any area required because of poor coverage, sags, voids, poorly prepared surfaces, etc., will require the repainting of the entire wall area. No patch painting will be accepted.

9E-13. <u>APPLICATION OF COATS:</u>

Work shall be limited to specific areas of construction to facilitate inspection and progress, and no succeeding coat will be applied in any area until the prime coat or first coat has been inspected and approved for the entire area.

Prime coat will be white. Second coat tinted toward color, and final coat from can in color selected.

9E-14. SUBMITTAL:

Painting contractor to submit technical information for the various types of paint used along with color sample box for color selection.

9E-15. GUARANTEE:

Painting contractor shall guarantee in writing his material and application for a period of one year from date of acceptance of building.

END OF SECTION.

SECTION 9F

METAL STUD, DRYWALL SYSTEM

9F-01. GENERAL CONDITIONS:

The General and Special Conditions, Division II, Sections E and F of these specifications shall apply to and form a part of this Section as if written in full herein.

9F-02. SCOPE:

Furnish all labor, materials and equipment and perform all operations necessary for the complete installation of all metal studs and drywall applications as noted in these Specifications and as shown on the Drawings.

9F-03. GENERAL:

Screw stud system shall be generally for single layer of %" fireguard sheetrock, or %" sheetrock in interior walls, ½" exterior plywood or exterior gypsum board for backing for E.I.F. system, or for thermoply and backing for face brick. Steel stud system shall be equal to 3 %" and 6" screw stud system as manufactured by U.S. Gypsum Company. Note drawings for other special wall thicknesses. All studs shall be galvanized steel and spaced 16" o.c.

9F-04. MATERIALS:

- 1. Studs -3 5%", 6" or 8" where shown. 16 gauge at door jambs and head. 20 gauge where used for framing for interior walls or where drawings indicate. 18 gauge where framing at exterior walls. Walls above or below window and door openings and for any framing where connections are welded if not indicated heavier shall be 18 gauge.
- 2. Runners Sized for studs 22 gauge.
- 3. Face Boards 5/8" " fire guard where noted (see drawings for double layers), and 5/8" "regular for other partition walls. Where ceramic tile is called for on metal stud construction wall boards shall be 1/2" Durock Board as manufactured by U.S. Gypsum.
- 4. Fasteners USG screws of required length.
- 5. Joint Treatment tape regular and flex tape.
- 6. Z galvanized metal furring strips ³/₄" and 1".
- 7. ³/₄" E.P.S. insulation board.
- 8. Galvanized hat channels (see drawings for sizes).

- 9. Galvanized corner beads. Galvanized "J" molding at all face ends
- 10. Sheetrock equal to National Gypsum Co. Wallboards 5/8" " thick fire guard for all rated walls, 5/8" " thick for interior walls and for ceilings where called for.
- 11. See EIFS section for exterior EIFS sheathing.

9F-05. INSTALLATION:

A. <u>Exterior Framing:</u>

- 1. Studs and Runners:
 - a. Align runners accurately according to exterior wall layout and secure to base and head with power-driven fastener spaced 16" o.c.
 - b. Position studs vertically in runners at floor and ceiling to structural elements with suitable fasteners located 2" from each end and spaced 24" o.c., or to suspended ceilings with toggle bolts or hollow wall anchors spaced 16" o.c.
 - c. Exterior block wall furring strips to be installed 2'0" o.c. with 3/4" E.P.S. Board positioned tightly between the furring strips. Furring strips to be secured to block walls with power driven fasteners spaced no further than 16" o.c.

B. Interior Walls:

1. <u>Stud System Erection:</u> Attached steel runners at floor and ceiling to structural elements with suitable fasteners located 2" from each end and spaced 24" o.c., or to suspended ceilings with toggle bolts or hollow wall anchors spaced 16" o.c.

Position study vertically, with open side facing in same direction, engaging floor and ceiling runners, and spaced 16" o.c. When necessary, splice study with 8" nested lap and two positive attachments per stud flange. Place study in direct contact with all door frame jambs, abutting partitions, partitions corners and existing construction elements. here study are installed directly against exterior walls, and a possibility of water penetration through walls exists, install asphalt felt strips between study and wall surface.

Anchor all studs for shelf-walls and those adjacent to door and window frames, partition intersections, corners and free-standing furring to ceiling and floor runner flanges with USG Metal Lock Fastener tool or screws. Securely anchor studs to jamb and head anchor clips of door or borrowed-light frames by bold or screw attachment. Over metal door and borrowed-light frames, placed horizontally a cut-to length section of runner, with a web-flange bend at each end, and secure to strut-studs with two screws in each bent web. Position a cut-to-length stud (extending to ceiling runner) at vertical panel joints over door frame header.

2. <u>Gypsum Panel Erection:</u> Apply gypsum panels perpendicular to studs. Position

all edges over studs for parallel application; all ends over studs for perpendicular application. Use maximum practical lengths to minimize end joints. Fit ends and edges closely, but not forced together. Stagger joints on opposite sides of partition.

For one hour rated walls between units, screw size and spacing shall be in accordance to requirement for a one-hour rating.

For single-layer parallel application of gypsum panels, space screws 16" o.c. in field of panels and along vertical abutting edges. For perpendicular panel application, space screws 16" o.c. in field and along abutting end joints. For double-layer screw attachment, space screws 24" o.c. in base layer and 16" o.c. in face layer. Apply both layers of gypsum panels vertically with joints in face layer offset from base layer joints. For ½" and ½" " panels, use 1" screws for base layer and 1- ½" " screws for face layer.

For stud walls where ceramic tile is called for ½" Durock Board shall be installed in accordance with ATC. All joints shall be properly taped and the contractor shall inspect application of wall board for proper secureness to see that all joints of the wall board occur at wall anchored studs. All joints to be taped full length of cement board.

3. <u>Chase Wall Erection:</u> Align two parallel rows of floor and ceiling runners spaced apart as detailed. Attach to concrete slabs with concrete stud nails or power-driven anchors 24" o.c. to suspended ceilings with toggle bolts 16" o.c., or to wood framing with suitable fasteners 24" o.c.

Position steel studs vertically in runners, 16" o.c. with flanges in the same direction, and with studs on opposite sides of chase directly across from each other. Anchor all studs to floor and ceiling runner flanges with USG Metal Lock Fastener tool or screws.

Cut cross bracing to be placed between rows of studs from gypsum panels, 12" high by chase wall width. Space braces 48" o.c. vertically and attach to stud webs with six (6) 1" Type S Screws per brace. If larger braces are used, space screws 8" o.c. max. On each side.

Bracing of 2- $\frac{1}{2}$ " steel studs may be used in place of gypsum panels. Anchor web at each end of steel brace to stud web with two (2) $\frac{5}{6}$ " pan head screws. When chase wall studs are not opposite, install steel stud cross braces 24" o.c. horizontally and securely anchor each end to a continuous horizontal 2- $\frac{1}{2}$ " runner screw-attached to chase wall studs within the cavity.

<u>Finishing:</u> Gypsum board shall be finished according to manufacturer's recommendations with a complete system of taping, joint compound, sanding, etc. Use pre-fabricated outside and inside corner metal reinforcement. Joints, nails or other imperfections that are visible will be cause for rejection. Use "J" molding at all sheetrock panel ends.

END OF SECTION.

THIS SECTION WILL. NOT BE BID IN THIS SECTION WILL. NOT BE BID IN THIS SECTION WILL.

SECTION 10A

MISCELLANEOUS SPECIALTIES

10A-01. GENERAL CONDITIONS:

The General Conditions, Division II, Sections E and F of these specifications shall apply to and form a part of this Section as if written in full herein.

10A-02. SCOPE:

Work under this heading includes necessary labor and materials required to install items listed in this Section or shown on the contract drawings.

10A-03. ACCESS PANELS AND DOORS:

Access panels for access to mechanical or electrical items shall be furnished to the general contractor by the respective subcontractor and installation shall be by the General Contractor.

All other areas which require access, access panels shall be furnished and installed by the General Contractor. Doors shall be suitable for wall or ceiling finish involved. Opening size shall be as required or as indicated and fire rated where rated walls or ceilings are penetrated. Units shall be equal to those manufactured by Milcor, Philip Carey, Zurn, or other approved equal.

10A-04. PAIRED OPERABLE PARTITION: N.A.

10A-05. ALUMINUM LETTERS: N.A.

10A-06. <u>ALUMINÚM PLAQUE:</u> N.A.

10A-07. ALUMINUM SHIPS LADDER: N.A.

10A-07 ALUMINUM THRESHOLDS:

See Finish Hardware Section, these specifications. All thresholds to be set in full bed of mastic.

10A-08. ALUMINUM & STEEL MISCELLANEOUS SHAPES:

Furnish and install all aluminum or steel angles, channels, break metal shapes, in sizes and shapes and at locations as shown on drawings, or as required for support, bracing, anchoring, etc. of incidental items whether shown or not.

10A-09. BATHROOM ACCESSORIES:

Furnish and install the following accessories in locations as stated. Exact locations will be as directed by Architect.

A. Accessories:

- Surface Mounted Paper Towel Dispenser: To be Bradley Model 2441-110000 Stainless Steel.
 - a. One (1) at Breakroom #103
 - b. One (1) at Unisex H/C Restroom #105
 - c. One (1) at Warehouse #101
- 2. <u>Mirrors:</u> Bradley Model 780 ¾" x ¾" satin finish stainless steel frame. All welded construction. 18 gauge wall hanger and theft resistant mounting bracket. 18" x 24" or sizes as shown on the interior elevations and drawings.
 - a. One (1) at Unisex H/C Restroom #105
- 3. <u>Toilet Tissue Holder:</u> Bradley Model 5106 surface mounted toilet tissue holder fabricated from 304 stainless steel.
 - a. One (1) at Unisex H/C Restroom #105
- 4. <u>Grab Bars:</u> Bradley 1 ½" O.D., S.S. Series 812, sanitary safe grey finish 059 configuration and 001 configuration grab bar installation for concealed mounting.
 - a. One (1) set at Unisex H/C Restroom #105

10A-10. CHAIN LINK FENCE: N.A.

10A-11. FIRE EXTINGUISHERS:

Furnish and install at locations shown, or noted on the drawings, 10 lb. capacity fire extinguishers equal to L Industries Cosmic 10E A B C with U.L. rating 4A-60BC.

Provide complete with metal hanger. Exact location will be as directed by Architect. Mounting height to be so top of extinguisher not more than 5'-0" A.F.F. Prior to final inspection each extinguisher shall be inspected by the local fire inspector and tagged with inspection sticker showing unit fully charged, date and signature of inspector.

10A-12. HANDRAILS/ GUARDRAILS:

See Drawings for Construction.

10A-13. <u>HAT CHANNELS:</u>

Furnish and install 1 ½" and ¾" galvanized hat channels for framing and installation of metal fascia and medal siding panels as shown and noted on the drawings. Light gauge framing for

installation of fascia system shall be as shown on the drawings and specified in Section 11 of these specifications.

10A-14. CORRIDOR LOCKERS: N.A.

10A-15. MOP HOLDERS: N.A.

10A-16. PRECAST CONCRETE SILLS / WALL CAPS: N.A.

10A-17. SIGNAGE:

A. Furnish and install plastic room signs for all rooms or areas numbered whether noted or not. Signs shall be equal to Best Manufacturing Sign Systems, Montrose, Colorado; (303) 249-0223.

NOTE: Rooms or areas with two or more means of egress are to have a room sign at each entrance to that room or space.

B. Signs for classrooms shall be 6 x 6 x ¼ MP and shall contain room name, and raised braille copy. Numbers and names shall be engraved. All signs to be ADA compliant.

Type style shall be Helvetica Medium, finish of background shall be non-glare. Colors of letters and background will be as selected by Architect.

Signs for restrooms shall have separate integral handicapped pictorial insignia.

Room numbers and names will be furnished by Architect.

- C. Install door signs 60" A.F.F., to the centerline of the sign, on wall adjacent to latch side of door. Signs to be installed with stainless steel screws.
- D. See mechanical and electrical drawings and specifications for engraved signs located at exhaust fan switches and emergency cut offs. Signs to be red background, white letters. Signs to be installed for gas, water, electrical emergency cut off and for exhaust fans.
- E. Furnish shop drawings for approval, and color samples for color selection.

10A-21. <u>SOLID PLASTIC TOILET PARTITIONS:</u> N.A.

10A-21. SPLASH BLOCKS:

Furnish and install where noted at each downspout and/or roof drain wall Nozzle a preformed concrete splash, 1'-4" x 2'0".

THIS SECTION WILL NOT BE BID IN THIS PHASE OF MORE.

NEW MUNICIPAL WAREHOUSE FOR:

THE TOWN OF GREENWOOD

5167 FORT ROAD, HIGHWAY 69, GREENWOOD FLORIDA

CITY OFFICIALS

MAYOR

■ PHYLLIS BOWMAN

TOWN CLERK

■ ALICIA L. CORDER

CITY COUNCIL

■ BRYAN JOHNSON

■ MAMIE VANN

■ THOMAS ANDREASEN

PROJECT INFORMATION

OCCUPANCY CLASSIFICATION — MODERATE HAZZARD STORAGE * GROUP S-1

CONSTRUCTION TYPE — TYPE (V) FIVE B

BUILDING SQUARE FOOTAGE—— FIRST FLOOR: 3,200 S.F.

MEZZANINE: 800 S.F. TOTAL: 4,000 S.F.

OCCUPANT LOAD — OFFICE - 2 PERSONS

BREAK ROOM - 4 PERSONS WAREHOUSE - 5 PERSONS

TOTAL - 11 PERSONS

MIN. # OF EXITS (1) / 2 PROVIDED

<u>AUTOMATIC FIRE PROTECTION</u>——<u>NOT</u> REQUIRED / <u>NOT</u> PROVIDED

SPRINKLER SYSTEM

PORTABLE FIRE EXTINGUISHERS——REUIRED / PROVIDED

PROJECT DESIGN LOADS

ROOF LIVE LOAD — 20 P.S.F. MEZZANINE FLOOR LIVE LOAD — 100 P.S.F.

WIND LOAD CRITERIA — BUILDING RISK CATEGORY — II

BASIC WIND SPEED - 145 MPH (V) ULT. EXPOSURE CATEGORY - EXPOSURE (C) INTERNAL PRESSURE COEFFICIENT - 0.18 (GPCI)

P.E.M.B. SUPPLEMENTAL DESIGN CRITERIA

ROOF LIVE LOAD - 20 PSF (REDUCABLE @ R.F. RAFTERS & COLUMNS ONLY)

DEAD LOAD - WEIGHT OF STRUCTURE

COLLATERAL LOAD - 5 PSF

CONCENTRATED LOADS - MECHANICAL EQUIPMENT

LATERAL EDAME DRIET - H/100

LATERAL FRAME DRIFT - H/100

WALL GIRT DEFLECTION - L/240 OR 1-1/2" MAX

COLUMN SHAFT DEFLECTION - L/240

PROJECT DIRECTORY

OWNER

TOWN OF GREENWOOD
4207 BRYAN ST. GREENWOOD, FLORIDA
(850) 594-1216

OWNER'S REPRESENTATIVE

SYNERGY NDS

KEITH BASSETT

(407) 454-9195

DESIGN ARCHITECT

DONOFRO ARCHITECTS
2910 CALEDONIA ST. MARIANNA, FLORIDA
(850) 482-5261

ARCHITECT OF RECORD

DONOFRO ARCHITECTS
2910 CALEDONIA ST. MARIANNA, FLORIDA
(850) 482-5261

CIVIL ENGINEERING

■ PROVIDED UNDER SEPARATE CONTRACT BY OWNER

STRUCTURAL ENGINEER

■ JOHNSON ENGINEERING ASSOCIATES

DOTHAN, ALABAMA
(850) 671-7221

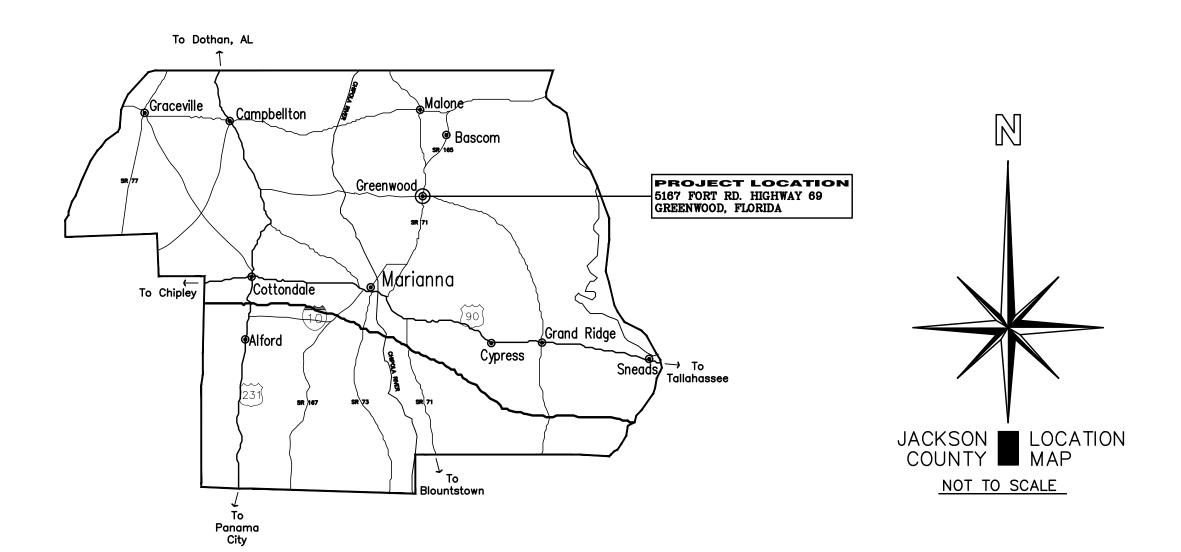
MECHANICAL ENGINEER

■ WATFORD ENGINEERING INC. 4471 CLINTON ST. MARIANNA, FLORIDA (850) 526-3447

ELECTRICAL ENGINEER

HUMBER-GARICK CONSULTING ENGINEERS

142 EGLIN PARKWAY SE, FORT WALTON BEACH, FLORIDA
(850) 526-3447



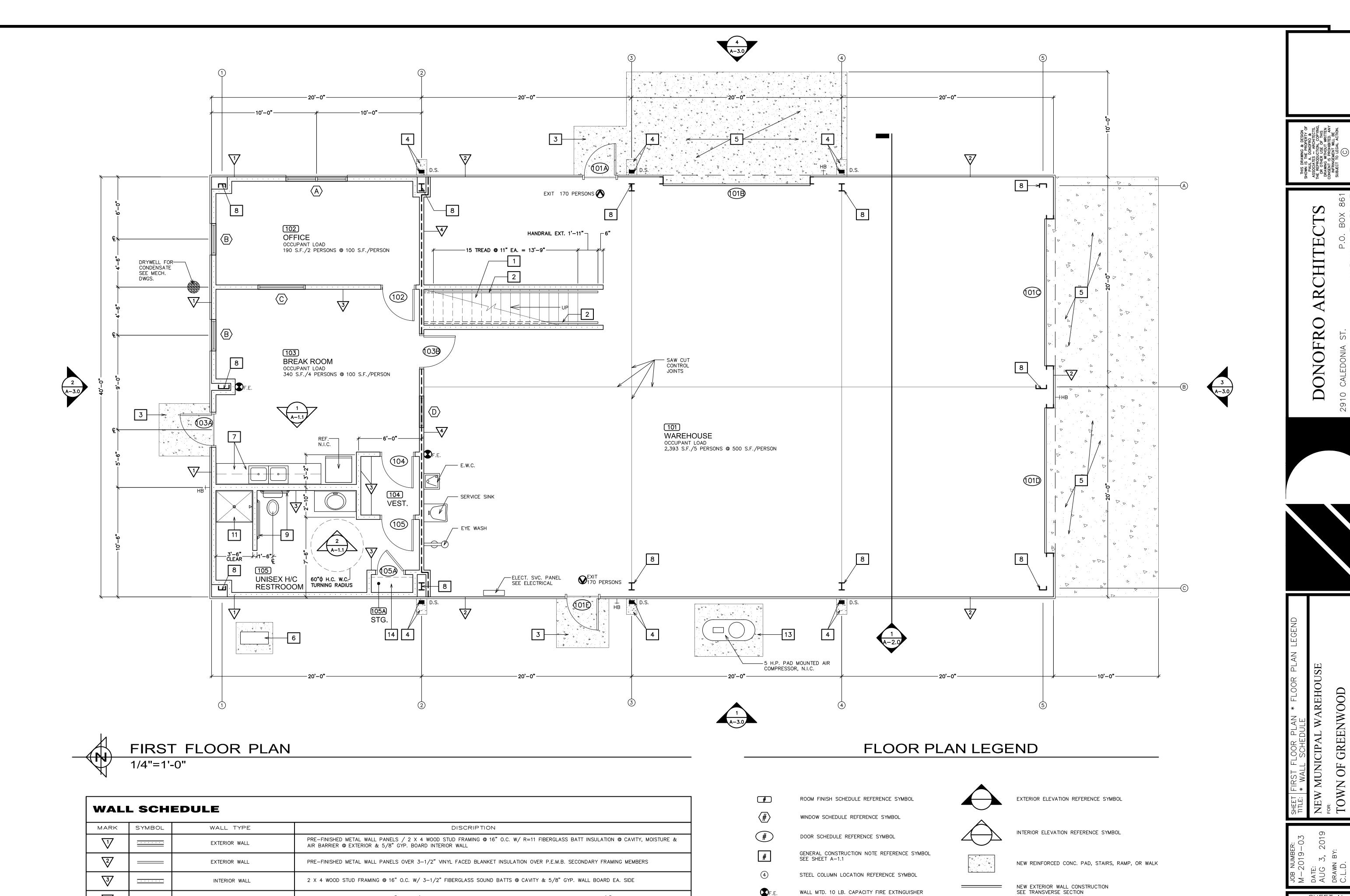
		INDEX TO DRAWINGS
SECTION NAME	SHT. No.	CONTENTS
COVER		PROJECT LOCATION MAP * PROJECT DIRECTORY * PROJECT INFORMATION
	A-1.0	FIRST FLOOR PLAN * LEGEND
	A-1.1	SECOND FLOOR PLAN * LEGEND * CONSTRUCTION NOTES * INT. ELEV. * DETAILS
ARCHITECTURAL	A-2.0	ROOM FINISH & DOOR SCHEDULES * WINDOW & DOOR TYPES * DOOR FRAME TYPES
ARCHITECTORAL	A-3.0	EXTERIOR ELEVATIONS
	A-4.0	ROOF PLAN
	A-5.0	TRANSVERSE SECTION * DETAILS
	S-0.1	GENERAL STRUCTURAL NOTES * DETAILS
	S-1.1	FOUNDATION PLAN * SECTIONS
STRUCTURAL	S-1.2	MEZZANINE FRAMING PLAN * SECTIONS
	S-1.3	SCHEMATIC ROOF FRAMING PLAN
	P-1.0	PLYUMBING LEGEND * SCHEDULES * DETAILS & NOTES
PLUMBING	P-1.1	PLUMBING SPECIFICATIONS
	P-2.0	PLUMBING PLAN * RISER DIAGRAMS
	M-1.0	HVAC LEGEND * SCHEDULES & NOTES
MECHANICAL	M-2.0	HVAC FLOOR PLANS
	M-3.0	HVAC DETAILING
	E-1.0	LEGEND * NOTES * DETAILS
	E-2.0	SCHEDULES * POWER RISER * PARTIAL SITE PLAN
	E-2.1	LIGHTING CONTROLS & SCHEDULES
ELECTRICAL	E-3.0	FIRST FLOOR POWER PLAN
	E-3.1	SECOND FLOOR POWER PLAN
	E-4.0	FIRST FLOOR LIGHTING PLAN
	E-4.1	SECOND FLOOR LIGHTING PLAN

PROJECT ABBREVIATIONS

A/C AIR CONDITIONING ELEC ELECTRICAL ABOVE FINISH FLOOR EOR EDGE OF ROOF GALV GALVANIZED HVAC HEATING, VENTILATION, & A/C COND CONDENSING MOUNTED CONN CONNECTION N.I.C. NOT IN CONTRACT CONTINUOUS ROOF DRAIN CORRIDOR SCHED SCHEDULE SHEET DWG DRAWING SIMILAR EXHAUST FAN TYP TYPICAL UNO UNLESS NOTED OTHERWISE

DONOFRO ARCHITECTS 1
2910 CALEDONIA MARIANNA, FLORIDA (850) 482-5261

JOB NUMBER: M-2019-03
DATE: AUGUST 3, 2019
CONSTRUCTION SET #



2 X 4 WOOD STUD FRAMING @ 16" O.C. W/ R=11 FIBERGLASS BATT INSULATION @ STUD CAVITY & 1 LAYER OF 5/8" TYPE X F.C. GYP WALL

INTERIOR 1HR RATED WALL

BOARD EACH SIDE

CONTRACTORS OPTION TO USE STEEL STUD FRAMING AS OPTION TO WOOD STUD FRAMING. NOMINAL SIZE & SPACING SHALL BE THE SAME FOR STEEL AS FOR WOOD & GA. SHALL BE 20 GA. FOR NOT LOAD BEARING INTERIOR WALLS & 18 GA. FOR LOAD BEARING & EXTERIOR WALL ASSEMBLY

NOTE!

WALL MTD. 10 LB. CAPACITY FIRE EXTINGUISHER

WALL TYPE SCHEDULE REFERENCE SYMBOL

NEW INTERIOR WALL CONSTRUCTION SEE INTERIOR WALL SECTIONS SHEET A-5.0

NEW 1HR. RATED WALL CONSTRUCTION

FLOOR PLAN LEGEND

- ROOM FINISH SCHEDULE REFERENCE SYMBOL
- WINDOW SCHEDULE REFERENCE SYMBOL
- DOOR SCHEDULE REFERENCE SYMBOL
- GENERAL CONSTRUCTION NOTE REFERENCE SYMBOL
- STEEL COLUMN LOCATION REFERENCE SYMBOL
 - WALL MTD. 10 LB. CAPACITY FIRE EXTINGUISHER
- EXTERIOR ELEVATION REFERENCE SYMBOL

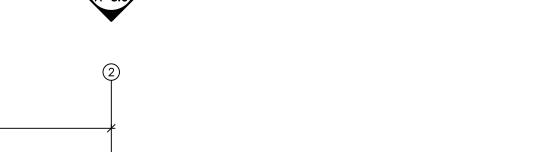


INTERIOR ELEVATION REFERENCE SYMBOL



- NEW EXTERIOR WALL CONSTRUCTION





HANDRAIL EXT. 1'-11"

PROVIDE & INSTALL 42" X 42" FIBERGLASS SHOWER ENCLOSURE. SEE PLUMBING DWGS. FOR WATER & WASTE CONNECTIONS.

CONSTRUCT 2ND FLOOR STORAGE GUARDRAIL. SEE INTERIOR ELEVATION & SECTION.

SEE STRUCTURAL DRAWINGS FOR FOUNDATION FOOTINGS.

AS REQ. FOR MOUNTING TO WALLS.

- PROVIDE & INSTALL NEW ELECTRIC WATER HEATER. SEE PLUMBING & ELECTRICAL DRAWINGS.
- CONSTRUCT C.I.P. 4" THICK CONC. PAD FOR FOR OWNER PROVIDED 5 H.P. AIR COMPRESSOR. REINF. CONC. PAD W/ 6 X 6 W4.0 X 4.0 W.W.M. & PROVIDE ; IGHT BROOM FINISH. COORDINATE EXACT EXACT SIZE & LOCATION OF PAD WITH OWNER.

CONSTRUCTION NOTES

& TURN DOWN EDGES 8" X 8" SLOPE TOP OF SLAB MIN. 1/4" / FOOT AWAY FROM BUILDING & PROVIDE LIGHT BROOM FINISH

CONSTRUCT 10'-0" X 40'-0" X 6" THICK CONC. APRON REINF. W/ 6X6 W4.0X4.0 W.W.M. TURN DOWN SLAB EDGES AS

CONSTRUCT STAINED WOOD BASE & WALL CABINETS. SEE INTERIOR ELEVATIONS & CONSTRUCTION SECTION FOR DETAILS.

DENOTES PRE-ENGINEERED METAL BUILDING SYSTEM RIGID FRAME & END WALL COLUMNS. EXACT SIZE AS PER P.E.M.B.

INDICATES ALUMINUM GRAB BARS. SEE GRAB BAR SCHEDULE THIS SHEET & SPECIFICATIONS. PROVIDE DEAD WOOD/BLOCKING

PER STRUCTURAL DRAWINGS. SLOPE TOP OF APRON MIN. OF $1/4^{''}$ / FOOT AWAY FROM BUILDING & PROVIDE LIGHT BROOM FINISH.

CONSTRUCT CONC. PAD FOR MINI-SPLIT CONDENSER UNIT. COORDINATE EXACT SIZE & LOCATION W/ MECH. SUB-CONTRACTOR.

CONSTRUCT WOOD 2ND FLOOR ACCESS STAIRS. SEE INTERIOR ELEVATION & CONSTRUCTION SECTION

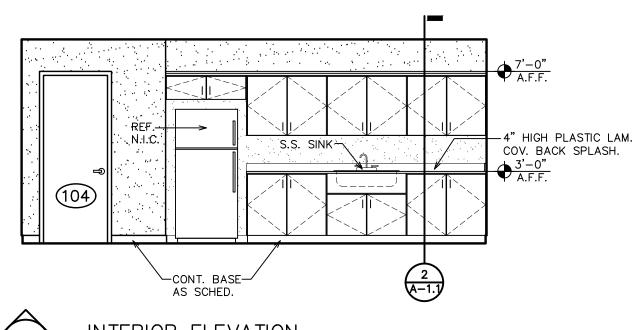
PROVIDE AND INSTALL 1/4" DIA. PAINTED STL. PIPE HANDRAILS @ EA. SIDE OF STAIRS. SEE INTERIOR

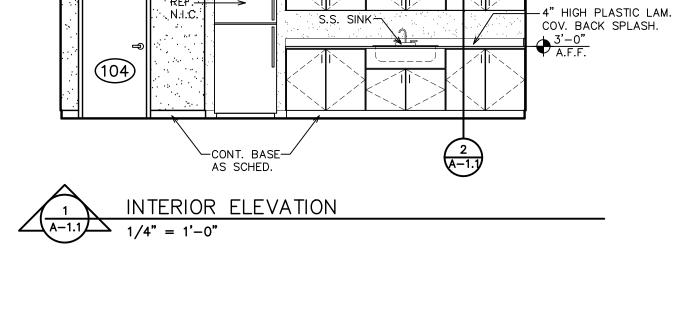
CONSTRUCT 6" THICK CONC. PAD @ ENTRANCE DOOR. REINFORCE W/ 6 X 6 10/10 W.1.4 X 1.4 W.W.M.

PROVIDE/CONSTRUCT 12" X 16" CONC. SPLASH PAD @ EA. MTL. DOWNSPOUT LEADER.

ELEVATION & CONSTRUCTION SECTION.

CONSTRUCT (3) 12" WIDE PAINTED WOOD FRAMED SHELVES @ 18" O.C. W/ SHELVES 4'-0", 5'-6", & 7'-0" A.F.F.





4" HIGH PLASTIC LAM COVERED BACK SPLASH

—PLASTIC LAM ON 1/2" P.W.

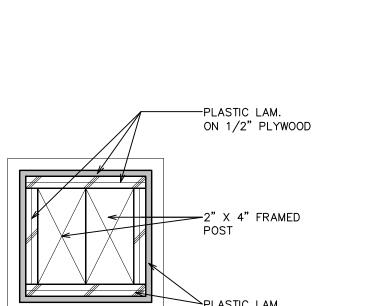
PLASTIC LAM ON 1/2" P.W.

-PLASTIC LAM ON 1/2" P.W. ON (2) 2" X 4" POSTS

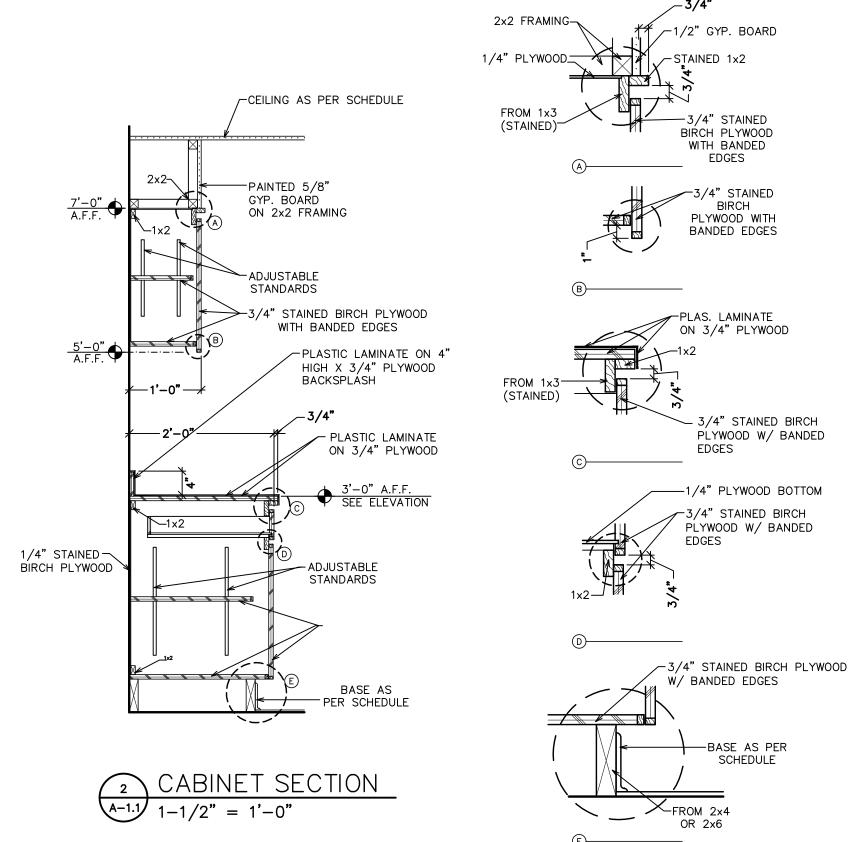
2"X4" FRAMING— @ 12" O.C.

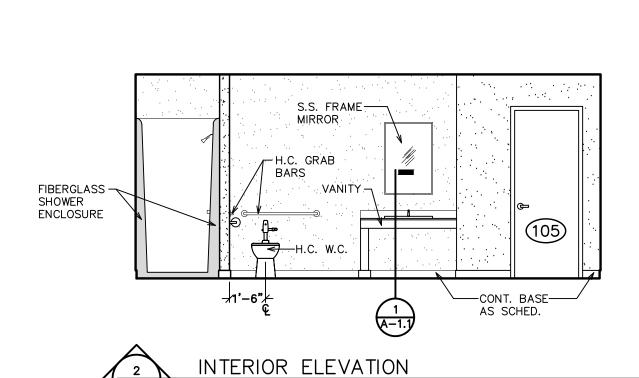
A-1.1

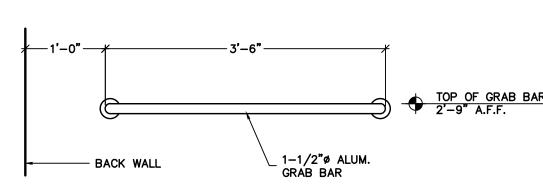
VANITY DETAIL





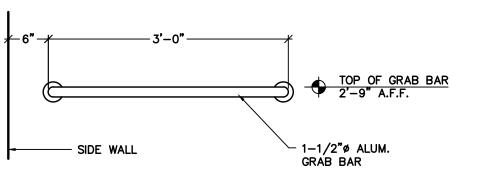






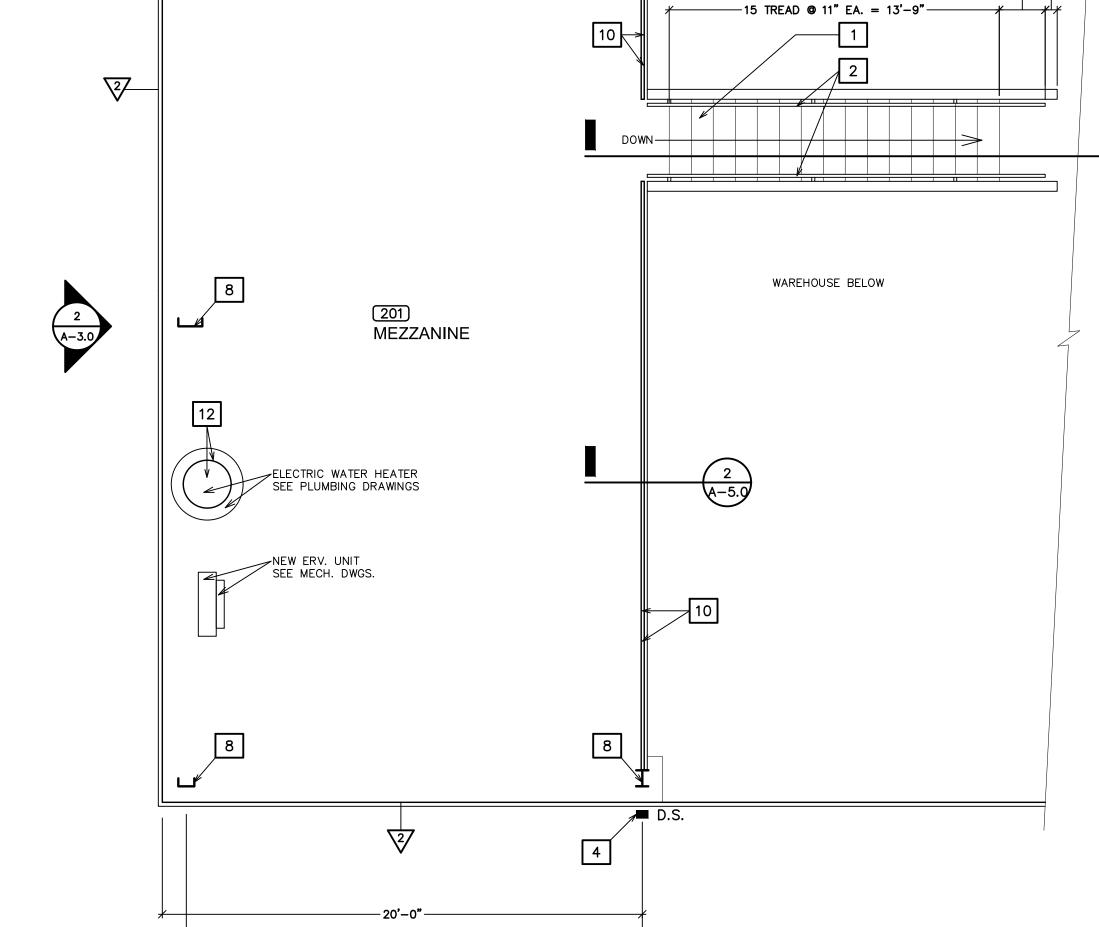
TYPE 'A' GRAB BAR

1/4" = 1'-0"



TYPE 'B' GRAB BAR

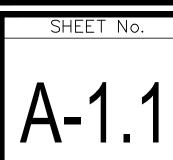
GRAB BAR SCHEDULE scale



MEZZANINE FLOOR PLAN 1/4"=1'-0"







X

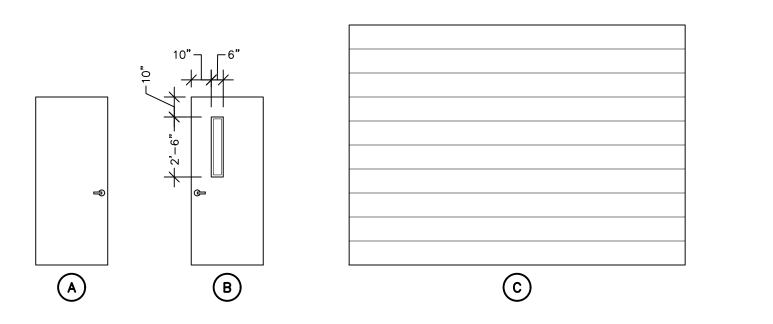
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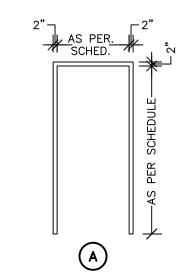
NEW MUNICIPAL WAREHOUSE
FOR:

TOWN OF GREENWOOD

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ROOM NUMBER	ROOM NAME	AIC TILE	YL PLANK	CARPET TILE NONE OR EXPOSED	ONC.	TILE	BAS	KUBBEK NONE	DAINTEN DIVWOON	PAINTED CONC. BLOCK	83 83		SUSPENDED ACOUSTICAL TILE SUSPENDED VINYL	GYP. BOARD TILE TO PAINTED GYP. BOARD		CHAIR RAIL CROWN MOLDING		CEILING HEIGHT	REMARKS	ROOM NUMBER
101	WAREHOUSE				•			•							•				PAINTED PLYWOOD WALL @ NORTHSIDE ONLY	101
102	OFFICE				•			•			•			•				8'-0"		102
103	BREAKROOM				•			•			•			•	1			8'-0"		103
104	VESTIBULE				•		(•			•			•				8'-0"		104
105	UNISEX H.C. RESTROOM				•			•			•			•				8'-0"		105
105A	STORAGE				•			•						•				8'-0"		105A
201	STORAGE							•				•			•					201

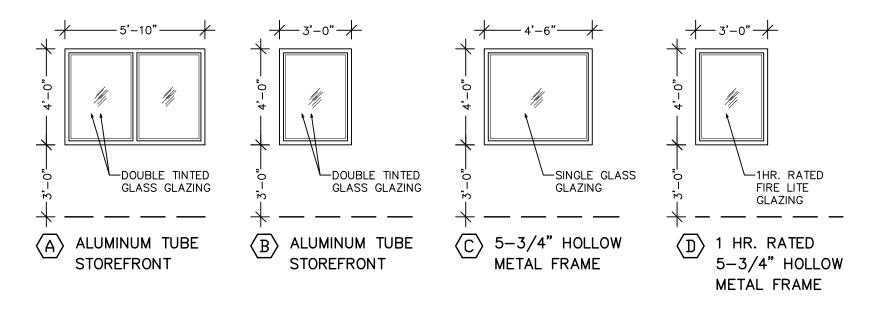
	DOOR SCHEDULE														
DOOR NUMBER	WIDTH	HEIGHT SIZ	THICKNESS	DOOR DESCRIPTION	DOOR TYPE	FRAME DESCRIPTION	FRAME TYPE	SET. NUMBER		WEATHERSTRIPPING E	REMARKS	SIGNAGE	DOOR NUMBER		
101A	3'-0"	7'-0"	$1-\frac{3}{4}$	HOLLOW METAL FLUSH PANEL	Α	5-3/4" HOLLOW METAL	Α	1		•			101A		
101B	14'-0"	10'-0"		STEEL ROLL UP DOOR	С		\angle		11				101B		
101C	14'-0"	10'-0"		STEEL ROLL UP DOOR	С				11				101C		
101D	14'-0"	10'-0"		STEEL ROLL UP DOOR	С				\Box				101D		
101E	3'-0"	7'-0"	$1-\frac{3}{4}$ "	HOLLOW METAL FLUSH PANEL	Α	5-3/4" HOLLOW METAL	Α	1					101E		
102	3'-0"	7'-0"	$1-\frac{3}{4}$ "	WOOD SOLID CORE FLUSH PANEL	Α	5-3/4" HOLLOW METAL	Α	3				OFFICE	102		
103A	3'-0"	7'-0"	1-3"	HOLLOW METAL FLUSH PANEL	Α	5-3/4" HOLLOW METAL	Α	1		•			103A		
103B	3'-0"	7'-0"	$1-\frac{3}{4}$ "	WOOD SOLID CORE FLUSH PANEL	В	5-3/4" HOLLOW METAL	Α	4	•		1HR. RATED DOOR & FRAME	BREAK-ROOM	103B		
104	3'-0"	7'-0"	1-3"	WOOD SOLID CORE FLUSH PANEL	Α	5-3/4" HOLLOW METAL	Α	5	•			H/C ACCESS SYS.	104		
105	3'-0"	7'-0"	1-3"	WOOD SOLID CORE FLUSH PANEL	Α	5-3/4" HOLLOW METAL	Α	6	•			H/C ACCESS SYS.	105		
105A	2'-6"	7'-0"	1-3"	WOOD SOLID CORE FLUSH PANEL	Α	5-3/4" HOLLOW METAL	Α	2				STORAGE	105A		





DOOR TYPES1/4" = 1'-0"

FOOR FRAME TYPES

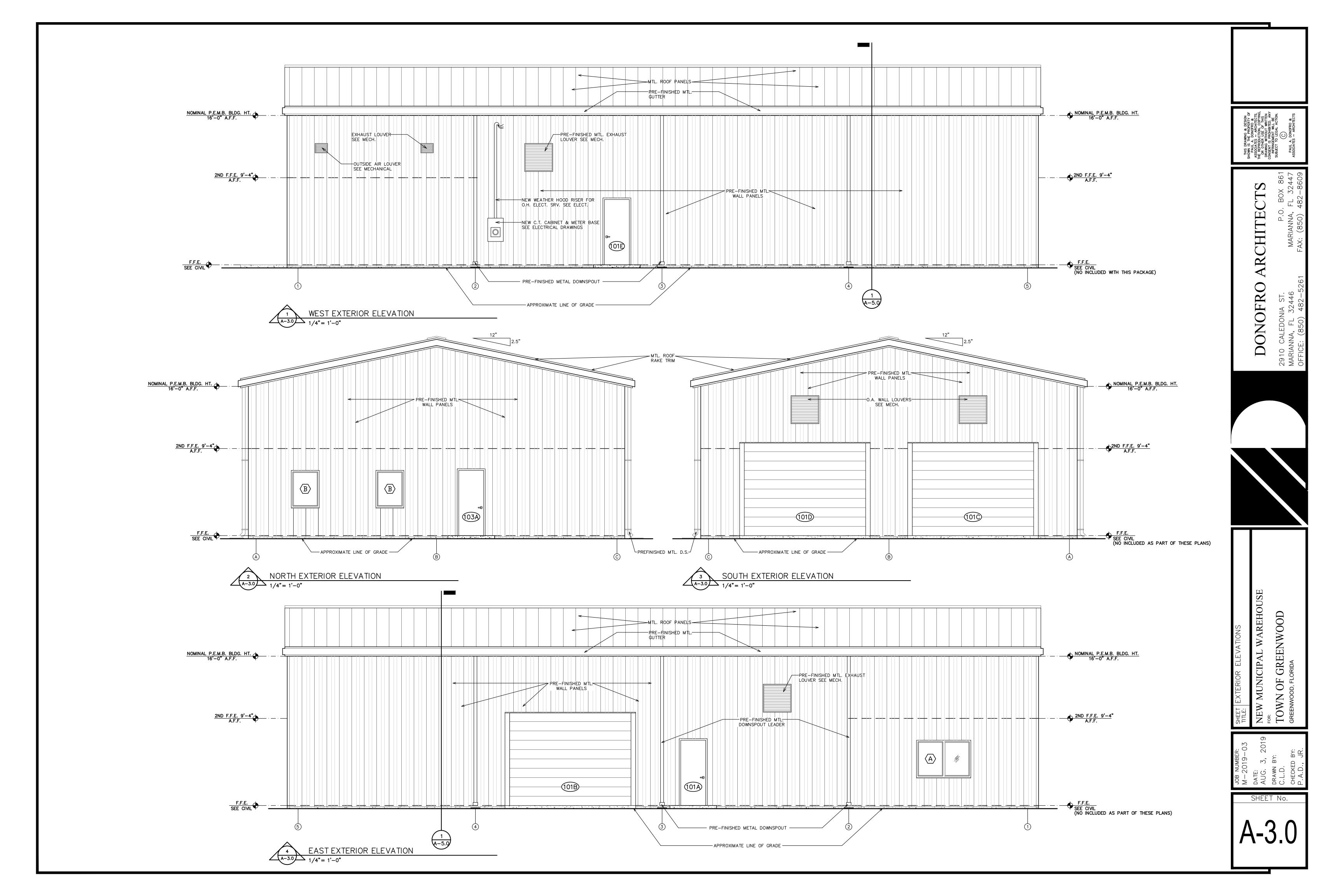


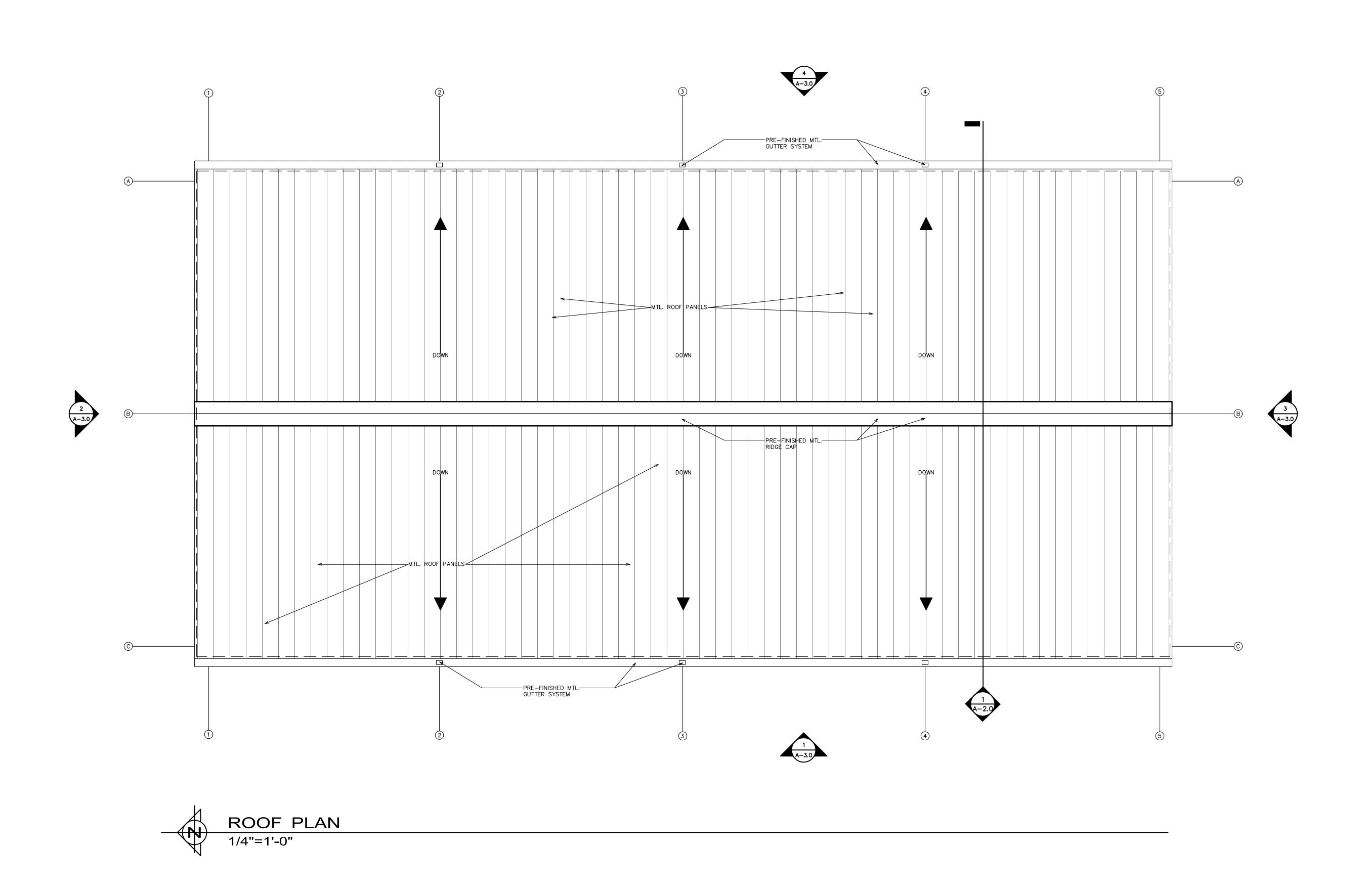
WINDOW TYPES1/4" = 1'-0"

SHEET ROOM FINISH & DOOR SCHEDULE TITLE: WINDOW & DOOR TYPES * DOOR FOR:

TOWN OF GREENWOOD

GREENWOOD, FLORIDA







POR OTHER DRAWING WITH CONSENT IS PRINGEN IS BOUNDED TO SUBJECT TO

ARCHITECTS
P.O. BOX 86
MARIANNA, FL 3244

DONOFRO AJ

OCALEDONIA ST.

SHEET KUUL LUN LUNICIPAL WAREHOUSE

FOR:

TOWN OF GREENWOOD

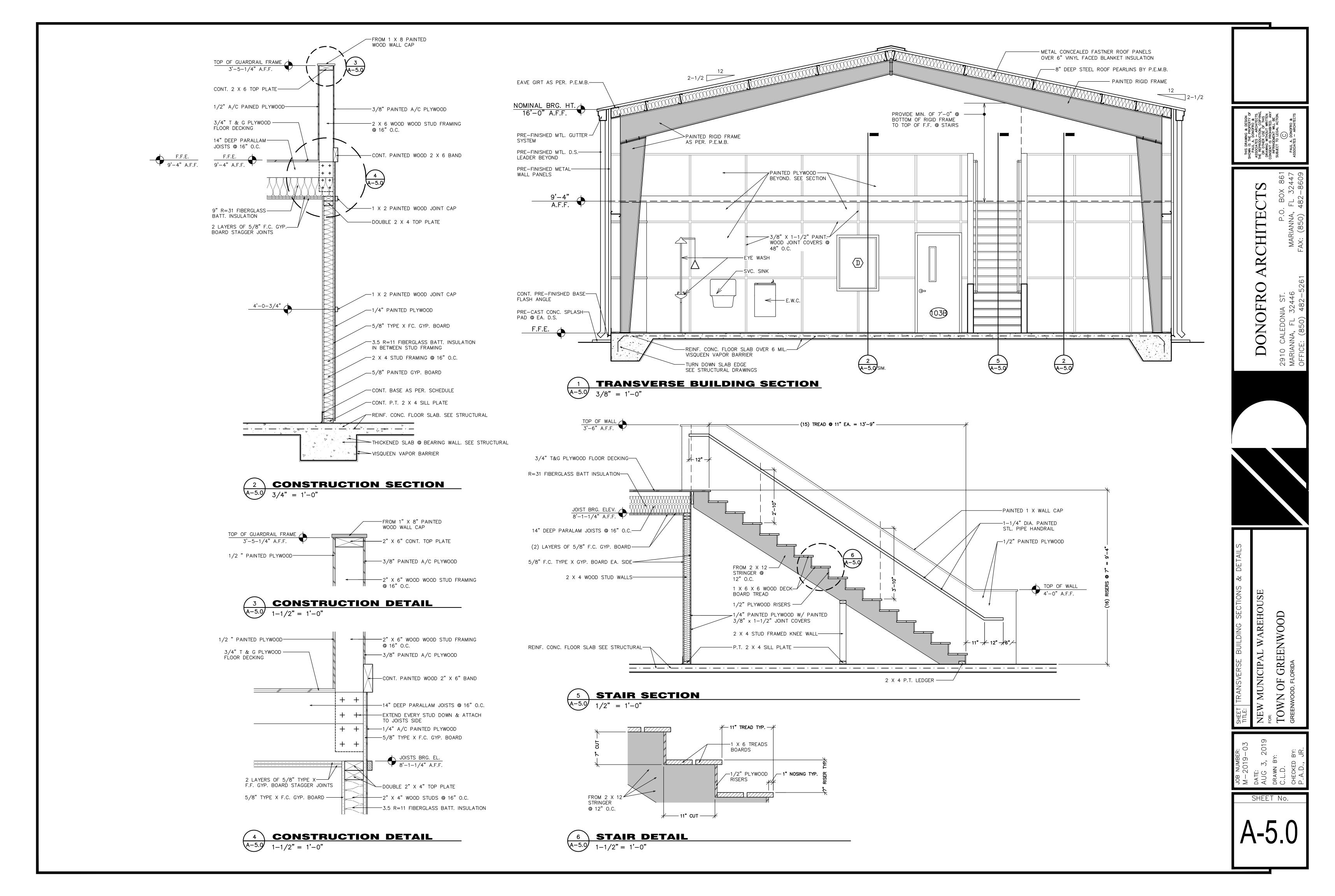
GREENWOOD, FLORIDA

JOB NUMBER:
M-2019-03

M-2019-03

DATE:
AUG. 3, 2019
DRAWN BY:
C.L.D.

A-4.0



GENERAL STRUCTURAL NOTES

GENERAL

- 1. NO PROVISION OF ANY REFERENCED STANDARD SPECIFICATION, MANUAL OR CODE (WHETHER OR NOT SPECIFICALLY INCORPORATED BY REFERENCE IN THE CONTRACT DOCUMENTS) SHALL BE EFFECTIVE TO CHANGE THE DUTIES AND RESPONSIBILITIES OF OWNER, CONTRACTOR, ENGINEER OR SUPPLIER OR ANY OF THEIR CONSULTANTS, AGENTS OR EMPLOYEES FROM THOSE SET FORTH IN THE CONTRACT DOCUMENTS, NOR SHALL IT BE EFFECTIVE TO ASSIGN TO THE STRUCTURAL ENGINEER OF RECORD OR ANY OF THE STRUCTURAL ENGINEER OF RECORD'S CONSULTANTS, AGENTS, OR EMPLOYEES ANY DUTY OR AUTHORITY TO SUPERVISE OR DIRECT THE FURNISHING OR PERFORMANCE OF THE WORK OR AUTHORITY TO UNDERTAKE RESPONSIBILITIES CONTRARY TO THE PROVISIONS OF THE CONTRACT DOCUMENTS.
- 2. THE GENERAL CONTRACTOR SHALL VERIFY THE DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE ARCHITECT/STRUCTURAL ENGINEER OF RECORD SHALL BE NOTIFIED OF ANY DISCREPANCY.
- 3. MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE SIXTH EDITION (2017) FLORIDA BUILDING CODE
- 4. THE CONTRACTOR SHALL COORDINATE THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL WORKS WITH THE STRUCTURAL CONTRACT DOCUMENTS.

 ARCHITECT/STRUCTURAL ENGINEER OF RECORD SHALL BE NOTIFIED OF ANY DISCREPANCIES OR OMISSIONS.
- 5. THE CONTRACTOR SHALL VERIFY THE FLOOR AND ROOF MOUNTED MECHANICAL EQUIPMENTS WEIGHTS, FLOOR AND/OR ROOF OPENING SIZES AND LOCATIONS WITH ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS.
- 6. THE CONTRACTOR SHALL NOTIFY IN WRITING THE STRUCTURAL ENGINEER OF RECORD OF CONDITIONS ENCOUNTERED IN THE FIELD CONTRADICTORY TO THOSE SHOWN ON THE STRUCTURAL CONTRACT DOCUMENTS.
- T. FOR DIMENSIONS NOT SHOWN ON THE STRUCTURAL CONTRACT DOCUMENTS SEE THE ARCHITECTURAL
- 8. STRUCTURAL CONTRACT DRAWINGS SHALL NOT INCLUDE SHOP DRAWINGS, VENDOR DRAWINGS, OR ANY MATERIAL PREPARED AND SUBMITTED BY THE CONTRACTOR OR SUBCONTRACTOR.
- 9. REFERENCE TO STANDARD SPECIFICATIONS OF ANY TECHNICAL SOCIETY, ORGANIZATION OR ASSOCIATION TO CODES OF LOCAL OR STATE AUTHORITIES, SHALL MEAN THE EDITION OF THE REFERENCED CODE INDICATED IN THE BUILDING CODE NOTED ABOVE.
- 10. ANY CONTRACTOR INTENDING TO SUPPORT EQUIPMENT, PIPING, DUCT WORK, CRANES OR OTHER ITEMS WHICH SUBJECT THE ROOF OR FLOOR SYSTEMS TO CONCENTRATED LOADINGS NOT SPECIFICALLY INDICATED ON THESE STRUCTURAL DRAWINGS, MUST SUBMIT SHOP DRAWINGS, WEIGHTS, AND PROPOSED SUPPORT LOCATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO ERECTION. ANY CONTRACTOR WHO ERECTS EQUIPMENT WITHOUT OBTAINING SUCH APPROVAL WILL BE REQUIRED EITHER TO REMOVE IT AND SUBMIT SHOP DRAWINGS OR STAND THE COST OF REQUIRED REINFORCEMENT OF MEMBERS.
- II. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE PERFORMANCE OF THE CONTRACT. THE CONTRACTOR SHALL GIVE NOTICES AND COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDER OF PUBLIC AUTHORITIES (ESPECIALLY OSHA) BEARING ON SAFETY OF PERSONS OR PROPERTY OR THEIR PROTECTION FROM DAMAGE, INJURY OR LOSS. THE CONTRACTOR SHALL NOT LOAD OR PERMIT ANY PART OF THE CONSTRUCTION SITE TO BE LOADED SO AS TO ENDANGER ITS SAFETY.
- 12. IN NO CASE SHALL STRUCTURAL ALTERATIONS OR WORK AFFECTING A STRUCTURAL MEMBER BE MADE, UNLESS APPROVED BY JOHNSON AND ASSOCIATES ENGINEERING IN
- 13. THIS BUILDING IS DESIGNED AS AN ENCLOSED STRUCTURE. ALL EXTERIOR COMPONENTS (DOORS, WINDOWS, ETC.) MUST BE DESIGNED TO WITHSTAND THE WIND LOADINGS SPECIFIED FOR THE DESIGN OF COMPONENTS AND CLADDING IN THE APPLICABLE BUILDING CODE.
- 14. THE CONTRACT DOCUMENT DRAWINGS, GENERAL NOTES, AND SPECIFICATIONS SHALL GOVERN IN THE EVENT OF A CONFLICT WITH THE SPECIFICATIONS AND/OR CODE OF PRACTICE FOR AISC, ACI, SJI, OR OTHER STANDARDS.
- 15. JOHNSON & ASSOCIATES ENGINEERING (JAE) HAS A LIMITED SCOPE OF SERVICES AND RESPONSIBILITY ON THIS PROJECT. JAE IS THE STRUCTURAL ENGINEER OF RECORD FOR THE DESIGN OF THE FOUNDATION SYSTEM AND THE MEZZANINE ONLY. THE DESIGN OF THE STEEL BUILDING SYSTEM, INCLUDING PRIMARY AND SECONDARY FRAMING, CONNECTIONS, ETC IS THE SOLE RESPONSIBILITY OF THE STEEL BUILDING MANUFACTURER AND HIS DULY LICENSED FLORIDA ENGINEER.

PRE-ENGINEERED METAL BUILDING DESIGN CRITERIA

- I. ALL COLUMNS SHALL BE ANALYZED AND DESIGNED AS HAVING PINNED BASES. NO MOMENT SHALL BE TRANSFERRED TO THE FOUNDATIONS.
- 2. DESIGN LOADS SHALL BE AS SPECIFIED IN THE DESIGN LOADS SECTION.
- 3. ROOF PURLING MUST BE CAPABLE OF RESISTING NET WIND PRESSURES (IN OR OUT)
 ASSUMING INTERIOR FLANGE UNBRACED EXCEPT WHERE FLANGE BRACING IS PROVIDED.
- 4. THE METAL BUILDING SYSTEM MANUFACTURER WILL BE RESPONSIBLE FOR COMPLETE DESIGN OF THE BUILDING STRUCTURAL FRAME (INCLUDING LATERAL LOADS) DOWN TO THE FOUNDATION. COMPLETE DESIGN REACTIONS SHALL BE FURNISHED TO THE FOUNDATION DESIGN ENGINEER
- 5. ALL METAL BUILDING SYSTEM SHOP DRAWINGS AND ERECTION DRAWINGS SHALL BE SIGNED AND SEALED BY THE MANUFACTURER'S ENGINEER DULY LICENSED IN THE PROJECT STATE.
- 6. METAL BUILDING CALCULATIONS COVER SHEET SHALL BE SIGNED AND SEALED BY THE MANUFACTURER'S ENGINEER, IN RESPONSIBLE CHARGE OF THEIR DEVELOPMENT, LICENSED IN THE PROJECT STATE.
- 1. DEFLECTION LIMITS FOR ROOF MEMBERS SHALL BE AS FOLLOWS:

MANUFACTURER'S STANDARD DEFLECTION LIMITS, UNLESS SPECIFICALLY NOTED OTHERWISE BY THE ARCHITECT.

- 8. EXCEPT AS OTHERWISE APPROVED BY ARCHITECT, STRUCTURAL CLEARANCES SHALL BE MAINTAINED AS CURRENTLY INDICATED IN THE CONTRACT DOCUMENTS.
- STANDING SEAM DECKING SHALL NOT BE CONSIDERED AS PROVIDING DIAPHRAGM RESISTANCE FOR LATERAL LOADS.
- 10. RIGID FRAME COLUMNS SHALL HAVE A MINIMUM BASE PLATE THICKNESS OF AT LEAST 1/2
- II. ALL DEVIATIONS FROM THE CONTRACT DOCUMENTS (REQUESTED FOR THE CONVENIENCE OF THE PRE-ENGINEERED BUILDING SYSTEM MANUFACTURER) ARE SUBJECT TO APPROVAL BY THE ARCHITECT/ENGINEER OF RECORD. ALL DEVIATIONS SHALL BE EXPRESSLY LISTED AND DEFINED IN THE SHOP DRAWING SUBMITTAL. ARCHITECT/ENGINEER IS NOT RESPONSIBLE FOR DISCOVERY OF DEVIATIONS NOT LISTED, AND APPROVAL OF UNLISTED DEVIATIONS SHALL NOT BE IMPLIED.
- 12. A QUALIFIED REPRESENTATIVE OF THE METAL BUILDING SYSTEM SUPPLIER'S CONSTRUCTION SERVICES DEPARTMENT SHALL MAKE AN ON-SITE REVIEW OF THE ERECTED BUILDING. REVIEWER SHALL NOTIFY THE GENERAL CONTRACTOR AND ARCHITECT OF ANY AND ALL NOTED DISCREPANCIES FROM THE ERECTION AND DESIGN DRAWINGS.

CONTRACTOR/ERECTOR SHALL CORRECT ALL DISCREPANCIES TO THE SATISFACTION OF THE REVIEWER AND THE ARCHITECT.

UPON COMPLETION OF SERVICES THE REVIEWER SHALL SIGN AND NOTARIZE THE FOLLOWING STATEMENT UNDER THE METAL BUILDING SYSTEM SUPPLIER'S LETTERHEAD:

TO THE BEST OF MY KNOWLEDGE AND BELIEF THE ABOVE DESCRIBED STRUCTURE HAS BEEN ERECTED IN SUBSTANTIAL CONFORMANCE WITH THE SUPPLIER'S ERECTION DRAWINGS AND DETAILS.

PRE-ENGINEERED METAL BUILDING DESIGN CRITERIA (CONT.)

- 13. CONCRETE PEDESTALS/FOOTINGS SHALL BE OF SUFFICIENT SIZE TO PROVIDE FULL CONTACT BEARING AREA FOR COLUMN BASE PLATES. IF PEMBM. SELECTS BASE PLATES/COLUMNS LARGER THAN INDICATED PEDESTAL/FOOTING SIZES, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL OF SAME FROM THE PROJECT ARCHITECT AND STRUCTURAL ENGINEER OF RECORD. UPON RECEIPT OF SUCH APPROVAL CONTRACTOR SHALL FURNISH PEDESTALS/FOOTINGS OF SUFFICIENT SIZE TO ALLOW FULL CONTACT BEARING AREA FOR BASE PLATES AND TO MAINTAIN A MINIMUM OF 4" FROM THE CENTERLINE OF THE EXTREME ANCHOR BOLTS, TO THE PEDESTAL EDGE. PEDESTALS OF SUFFICIENT SIZE SHALL BE FURNISHED WITHOUT ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL PAY STRUCTURAL ENGINEER OF RECORD FOR SERVICES IN RE-SIZING PEDESTALS FOR CONTRACTOR'S CONVENIENCE. IF ARCHITECT/ENGINEER CANNOT APPROVE LARGER COLUMNS AND BASE PLATES, CONTRACTOR SHALL INSTRUCT PEMB. MANUFACTURER TO FURNISH COLUMNS AND BASE PLATES THAT WILL HAVE FULL BEARING ON THE PEDESTALS/FOOTINGS INDICATED ON THE CONTRACT DRAWINGS.
- 14. CENTER ALL FOOTINGS ON METAL BUILDING SYSTEM COLUMN BASE PLATE, U.N.O. NOTE, CENTERLINE OF METAL BUILDING COLUMN AND FOOTING MAY NOT ALIGN WITH CENTERLINE OF COLUMN PEDESTAL.
- IS. SEE ANCHOR BOLT LAYOUT PLAN, PROVIDED BY THE METAL BUILDING SYSTEM MANUFACTURER, FOR EXACT ANCHOR BOLT SIZE AND LOCATION. DESIGN OF REQUIRED ANCHOR BOLT DIAMETER IS THE RESPONSIBILITY OF THE METAL BUILDING SYSTEM DESIGNER. SEE ANCHOR BOLT DETAILS FOR REQUIRED ANCHOR BOLT LENGTH AND CONFIGURATION.

FOUNDATION

- 1. THE FOUNDATION IS DESIGNED AS A SHALLOW SPREAD FOUNDATION SYSTEM WITH AN ASSUMED ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF. THE STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR SUBSURFACE CONDITIONS ENCOUNTERED IN THE FIELD CONTRARY TO THOSE ASSUMED FOR DESIGN.
- 2. THE CONTRACTOR SHALL VERIFY THE AVAILABLE SOIL BEARING CAPACITY AT FOOTING SUBGRADE ELEVATION, PRIOR TO COMMENCEMENT OF FOOTING CONCRETE OPERATIONS, BY PERFORMING HAND PENETROMETER TESTS. THE HAND PENETROMETER TESTS SHALL BE PERFORMED BY A PRIOR APPROVED TESTING LABORATORY AT EACH ISOLATED COLUMN FOOTING AND ALONG ALL CONTINUOUS FOOTINGS AT THE RATE OF ONE TEST PER 25 LINEAR FEET. THE ENGINEER OF RECORD SHALL BE NOTIFIED IMMEDIATELY OF ALL SOIL BEARING TEST RESULTS. IF THE SUBGRADE SOIL IS DETERMINED TO BE INADEQUATE TO SUPPORT THE ASSUMED BEARING CAPACITY, THE CONTRACTOR SHALL IMMEDIATELY SUSPEND CONSTRUCTION OPERATIONS AND CONTACT THE STRUCTURAL ENGINEER OF RECORD SO THAT THE FOUNDATION SYSTEM CAN BE RE-DESIGNED TO SUIT FIELD CONDITIONS. THE STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR SUBSURFACE CONDITIONS ENCOUNTERED IN THE FIELD CONTRARY TO THOSE ASSUMED FOR DESIGN.
- 3. FOOTING SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 95% MODIFIED PROCTOR DENSITY (ASTM D-1551) TO A DEPTH OF 12" BELOW BOTTOM OF FOOTING.

NCRETE

- 1. CONCRETE WORK SHALL CONFORM TO THE ACI 318-11 AND CRSI STANDARDS.
- 2. PIPES OR DUCTS EXCEEDING ONE-THIRD THE SLAB OR WALL THICKNESS SHALL NOT BE PLACED WITHIN THE THICKNESS OF CONCRETE WALLS UNLESS SPECIFICALLY DETAILED. SEE MECHANICAL AND/OR ELECTRICAL DRAWINGS FOR LOCATION OF SLEEVES.
- 3. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, CLIPS, OR GROUNDS REQUIRED TO BE ENCASED IN CONCRETE AND FOR LOCATION AND DETAILS OF FLOOR FINISHES AND SLAB DEPRESSIONS.
- 4. CONSTRUCTION JOINTS IN CONCRETE BEAMS AND FRAMED SLABS SHALL BE PLACED AT MIDSPAN. ALL CONSTRUCTION JOINTS MUST BE KEYED WITH REINFORCING RUN CONTINUOUS THROUGH JOINTS.
- 5. AT COLUMN FOOTINGS, COLUMN ANCHOR RODS WITH TEMPLATE SHALL BE INSTALLED IN PROPER LOCATION PRIOR TO POURING. THE FOOTING.
- 6. CONCRETE SHALL HAVE THE FOLLOWING MINIMUM 28 DAY COMPRESSIVE STRENGTH UTILIZING TYPE I CEMENT:

FOUNDATIONS AND SLABS ON GRADE 3000 PSI

REINFORCING STEEL

- 1. REINFORCING STEEL SHALL CONFORM TO ASTM A615-GRADE 60.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 AND HAVE A MINIMUM SIDE LAP OF 8 INCHES.
- REINFORCEMENT SHALL BE SPLICED ONLY AS SHOWN OR NOTED IN THE STRUCTURAL CONTRACT DOCUMENTS.
- 4. ALL REINFORCING LAP SPLICES SHALL BE A MINIMUM OF 36 BAR DIAMETERS IN LENGTH FOR REINFORCED CONCRETE. LAP SPLICES FOR REINFORCED MASONRY SHALL BE A MINIMUM OF 48 BAR DIAMETERS.
- 5. ALL REINFORCING STEEL AND ACCESSORIES SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH THE LATEST EDITION OF THE ACI MANUAL AND MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES.
- 6. MINIMUM CONCRETE COVER FOR REINFORCING BARS SHALL BE IN CONFORMANCE WITH CHAPTER 1 OF ACI 318-11 EXCEPT AS OTHERWISE NOTED.
- 1. REINFORCING IN ALL CONCRETE FOOTINGS SHALL BE CONTINUOUS AT INTERSECTIONS AND CORNERS. WHERE WALL FOOTINGS STEP, REINFORCING SHALL BE CONTINUOUS IN STEP.
- 8. PROVIDE 2-*5 EXTRA DIAGONAL REINFORCING BARS AT CORNERS OF ALL OPENINGS IN FRAMED SLABS AND CONCRETE WALLS. EXTEND BARS 2'-Ø" BEYOND EACH EDGE OF OPENING.
- 9. AT POURED CONCRETE WALLS, PIERS AND COLUMNS, DOWELS FOR VERTICAL REINFORCING BARS SHALL BE INSTALLED IN THEIR PROPER LOCATION PRIOR TO CONCRETE POUR OF THE FOOTINGS.

WOOD FRAMING

ALL WOOD FRAMING INCLUDING TRUSSES SHALL BE DESIGNED, DETAILED AND FABRICATED IN ACCORDANCE WITH THE LATEST EDITION OF THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION".

2. FOR STRUCTURAL LUMBER, PROVIDE THE FOLLOWING GRADE AND SPECIES:

ALL STRUCTURAL LUMBER SHALL BE SOUTHERN YELLOW PINE NO. 2 GRADE OR BETTER (NO. 3 LUMBER WILL NOT BE ACCEPTED).

PARALLAM LUMBER FB = 2900 PSI FV = 290 PSI

E = 2,000,000 PSI

LAMINATED VENEER LUMBER (LVL)

FB = 2925 PSI FV = 285 PSI

- E = 2,000,000 PSI
- 3. PROVIDE GALVANIZED METAL HANGERS AND FRAMING ANCHORS OF THE SIZE AND TYPE RECOMMENDED BY THE MANUFACTURER FOR EACH USE INCLUDING RECOMMENDED NAILS AND/OR BOLTING.
- 4. ALL BOLTS USED FOR WOOD CONSTRUCTION SHALL BE A MINIMUM OF 5/8" DIAMETER (ASTM A3Ø1). PROVIDE FLAT WASHERS UNDER ALL HEADS AND NUTS WHICH ARE DRAWN UP AGAINST WOOD SURFACE.

STRUCTURAL SUBMITTALS

FURNISH FIVE COPIES OF SHOP DRAWINGS. FURNISH THREE COPIES OF OTHER STRUCTURAL SUBMITTALS.

STRUCTURAL SUBMITTALS (CONT.)

- SEE CONTRACT SPECIFICATIONS FOR ADDITIONAL SUBMITTAL REQUIREMENTS AND PROCEDURES.
- 3. REPRODUCTION OF CONTRACT DOCUMENTS FOR ERECTION AND/OR SHOP DRAWINGS WILL NOT BE REPORTED.
- 4. REVIEW OF SUBMITTALS AND/OR SHOP DRAWINGS BY THE STRUCTURAL ENGINEER OF RECORD DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW AND CHECK SHOP DRAWINGS PRIOR TO SUBMITTAL TO THE STRUCTURAL ENGINEER OF RECORD. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, AND DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS. CONTRACTOR ALSO SHALL BE RESPONSIBLE FOR MEANS, METHOD, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION. SEE SPECIFIC PROVISIONS IN THE CONTRACT DOCUMENTS DEALING WITH THE APPROPRIATE DESIGN RESPONSIBILITIES OF CONTRACTORS, SUBCONTRACTORS, AND SUPPLIERS.
- 5. IN THE EVENT THAT JOHNSON & ASSOCIATES ENGINEERING REVIEWS SUBMITTALS (AS A COURTESY TO THE CONTRACTOR TO REDUCE THE TIME PRIOR TO THE START OF FABRICATION) WHICH HAVE NOT FIRST BEEN REVIEWED AND APPROVED BY THE CONTRACTOR, SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM REVIEW AND APPROVE ALL SUCH SUBMITTALS, NOR WILL IT CREATE RESPONSIBILITY OR LIABILITY ON THE PART OF JOHNSON & ASSOCIATES ENGINEERING AS TO THE CONTENTS, ACCURACY OR COMPLETENESS OF SUCH SHOP DRAWINGS EXCEPT AS MAY BE SPECIFICALLY DESCRIBED IN THESE GENERAL NOTES. CONTRACTOR IS SOLELY RESPONSIBLE FOR REVIEW AND APPROVAL OF SHOP DRAWINGS AND OTHER SUBMITTALS, AND CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL REQUIREMENTS OF THE WORK OF THE CONTRACTOR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS
- 6. THE SER REVIEW OF SUBMITTALS WILL BE MADE FOR LIMITED PURPOSES AND IS SUBJECT TO THE LIMITATIONS AND DISCLAIMERS SET FORTH IN THESE GENERAL NOTES. THE JOHNSON AND ASSOCIATES ENGINEERING REVIEW DOES NOT INVOLVE OR INCLUDE:
 - A. REVIEW OF SUBMITTAL DIMENSIONS AND QUANTITIES.
 - B. ACCEPTANCE OR ASSUMPTION OF ANY RESPONSIBILITY TO REVIEW, ANALYZE OR EYALUATE ANY SUBMITTALS INCLUDING SHOP DRAWINGS PROVIDED TO JOHNSON AND ASSOCIATES ENGINEERING OR ACCEPTANCE OR ASSUMPTION OF ANY PART OF CONTRACTOR'S RESPONSIBILITIES (WHICH INCLUDE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW AND APPROVE SUBMITTAL), WHETHER OR NOT THE JOHNSON AND ASSOCIATES ENGINEERING REVIEW WAS MADE PRIOR TO THE REVIEW AND APPROVAL OF THE CONTRACTOR.
 - C. ANALYSIS, VERIFICATION OR SUBSTANTIATION OF EQUIPMENT OR SYSTEM INSTALLATION OR PERFORMANCE OF EQUIPMENT OR SYSTEMS.
 - D. REVIEW, EVALUATION OR APPROVAL OF PROJECT SAFETY PRECAUTIONS OR
 - E. REVIEW, EVALUATION OR APPROVAL OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES OR SEQUENCES.

JOHNSON AND ASSOCIATES ENGINEERING REVIEW OF A SPECIFIC ITEM DOES NOT INCLUDE OR INDICATE OR CONSTITUTE REVIEW OF A GROUP OR AN ASSEMBLY OF WHICH THE ITEM IS A COMPONENT.

THE CONTRACTOR MUST NOTIFY JOHNSON AND ASSOCIATES ENGINEERING, IN WRITING, RELATIVE TO ANY DEVIATION FROM THE CONTRACT DOCUMENTS, WHICH APPEARS IN THE SHOP DRAWINGS, SAMPLES, AND PRODUCT DATA. APPROVAL OF THE SUBMITTAL CONTAINING SUCH DEVIATION DOES NOT CONSTITUTE APPROVAL OF THE DEVIATION. APPROVAL OR REJECTION OF THE DEVIATION WILL ONLY BE PROVIDED BY JOHNSON AND ASSOCIATES ENGINEERING. IN A SEPARATE WRITTEN COMMUNICATION TO THE CONTRACTOR. JOHNSON AND ASSOCIATES ENGINEERING IS NOT RESPONSIBLE FOR DISCOVERY OF DEVIATIONS NOT COMMUNICATED BY THE CONTRACTOR.

STRUCTURAL SUBMITTALS: METAL BUILDING SYSTEM, CONCRETE REINFORCING BARS, ANCHOR RODS AND CONCRETE MIX DESIGNS

- 1. THE FOLLOWING SUBMITTALS MUST BE MADE TO THE STRUCTURAL ENGINEER OF RECORD:
 - A. ERECTION DRAWINGS, FABRICATION DRAWINGS, COMPONENT DETAILS, AND CONNECTION DETAILS.
- B. CALCULATIONS FOR ALL COMPONENTS SIZED BY THE FABRICATOR'S SPECIALTY DESIGN ENGINEER.
- 2. THE STRUCTURAL SUBMITTALS FOR THE METAL BUILDING SYSTEM SHALL BEAR THE IMPRESSED SEAL AND SIGNATURE OF THE SPECIALTY DESIGN ENGINEER LICENSED IN THE PROJECT STATE.
- 3. THE PROJECT STRUCTURAL ENGINEER OF RECORD WILL REVIEW THE SUBMITTALS FOR INDICATION THAT HIS INTENT HAS BEEN UNDERSTOOD AND THAT THE SPECIFIED CRITERIA HAVE BEEN USED.

= 100 PSF

DESIGN LOADS

- 1. ROOF LIVE LOAD = 20 PSF
- 3. WIND LOADING CRITERIA (PER ASCE 1-10)
- BUILDING RISK CATEGORY = 11

 BASIC WIND SPEED: Y(ULT) = 145 MPH

 EXPOSURE CATEGORY: = C

 INTERNAL PRESSURE COEFF: GCPI = ±0.18
- 4. METAL BUILDING SUPPLEMENTAL DESIGN CRITERIA

ROOF LIVE LOAD:	= 20 PSF (REDUCIBLE AT RIG FRAME RAFTERS AND COLUM
	ONLY)
DEAD LOAD:	= WEIGHT OF STRUCTURE
COLLATERAL LOAD:	= 5 PSF
CONCENTRATED LOADS	= (MECH EQUIP, ETC)
LATERAL FRAME DRIFT:	= H/IØØ
WALL GIRT DEFLECTION	= L/24Ø (OR 1-1/2" MAX)
COLUMN SHAFT DEFLECTION	= L/24Ø

PREENGINEERED SYSTEMS

2. MEZZANINE DESIGN LIVE LOAD

- I. THE DESIGN OF PREENGINEERED SYSTEMS SPECIFIED IN THE CONTRACT DOCUMENTS WHICH ARE DESIGNED/ENGINEERED BY OTHERS IS THE SOLE RESPONSIBILITY OF THE SUPPLIER AND ITS DESIGN ENGINEER, LICENSED IN THE PROJECT STATE. SUBMITTALS OF SUCH SYSTEMS TO THE STRUCTURAL ENGINEER OF RECORD SHALL BE REVIEWED FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS WITH REGARD TO THE ARRANGEMENT, AND/OR SIZES OF MEMBERS SHOWN ON THE CONTRACT DOCUMENTS AND TO INSURE CORRECT INTERPRETATION OF THE DESIGN INFORMATION INCLUDED IN THE CONTRACT DOCUMENTS. SUCH REVIEW BY THE STRUCTURAL ENGINEER OF RECORD SHALL NOT IMPLY ANY RESPONSIBILITY FOR THE ACTUAL DESIGN OF SUCH SYSTEMS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DIMENSIONAL ACCURACY AND CONFORMANCE WITH THE INFORMATION CONTAINED IN THE CONTRACT DOCUMENTS.
- 2. SEE SPECIFIC SECTIONS OF GENERAL NOTES ABOVE AND SPECIFICATIONS FOR THE APPROPRIATE DESIGN RESPONSIBILITIES OF THE SUPPLIER AND ITS LICENSED ENGINEER.
- THE CONTRACT DOCUMENT DRAWINGS, GENERAL NOTES, AND SPECIFICATIONS SHALL GOVERN IN THE EVENT OF A CONFLICT WITH THE SPECIFICATIONS AND/OR CODE OF PRACTICE FOR AISC, ACI, SJI OR OTHER STANDARDS.

ERECTION, BRACING AND FORMWORK

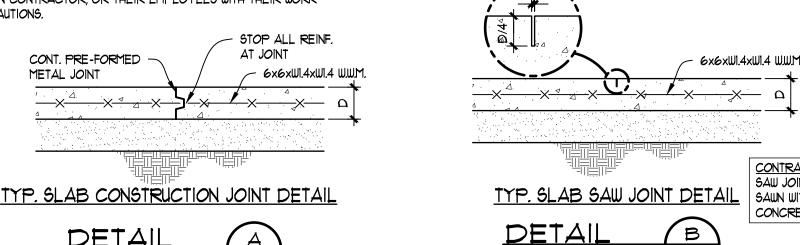
THE DESIGN, ADEQUACY AND SAFETY OF ERECTION BRACING, FORMWORK, SHORING, AND TEMPORARY SUPPORTS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

ERECTION, BRACING AND FORMWORK (CONT.)

- 2. ANCHOR BOLTS AND FOUNDATIONS HAVE NOT BEEN DESIGNED FOR ANY CONDITION OF LOADING OTHER THAN THAT OF THE COMPLETED STRUCTURE. VERIFICATION OF ADEQUACY OF ANCHOR BOLT AND FOUNDATIONS TO RESIST ERECTION INDUCED FORCES IS SOLELY THE RESPONSIBILITY OF THE STEEL ERECTOR AND CONTRACTOR.
- 3. UNLESS OTHERWISE NOTED STEEL FRAMEWORKS FOR THIS PROJECT ARE CLASSIFIED PER AISC CODE OF STANDARD PRACTICE AS A "NON-SELF-SUPPORTING STEEL FRAME". PROVIDE TEMPORARY SUPPORT SYSTEMS NECESSARY TO SECURE ANY ELEMENT OR ELEMENTS OF THE STEEL FRAMING UNTIL ALL PERMANENT STEEL BRACING, DECKING AND/OR MASONRY WALLS ARE IN-PLACE AND CONNECTED TO THE STEEL FRAMEWORKS.

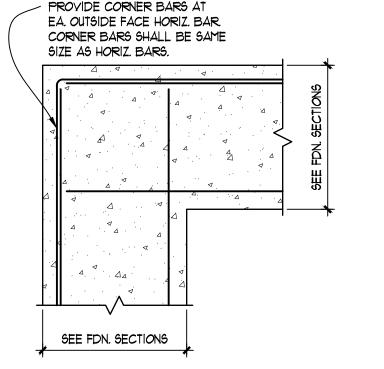
JOB SITE SAFETY

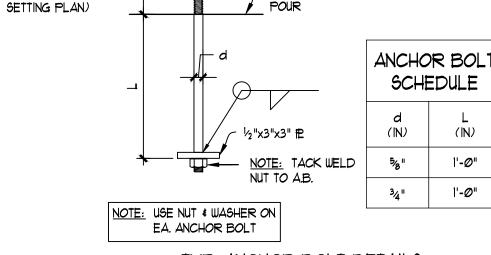
THE GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY AND FOR CONFORMANCE WITH THE HEALTH AND SAFETY PROVISIONS REQUIRED BY ANY REGULATORY AGENCIES. THE STRUCTURAL ENGINEER OF RECORD HAS NO AUTHORITY TO EXERCISE ANY CONTROL OVER ANY CONSTRUCTION CONTRACTOR, OR THEIR EMPLOYEES WITH THEIR WORK OR ANY HEALTH OR SAFETY PRECAUTIONS.

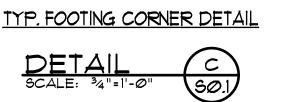


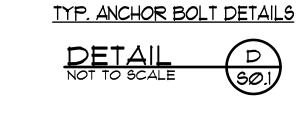
PROJECTION (SEE

ANCHOR BOLT









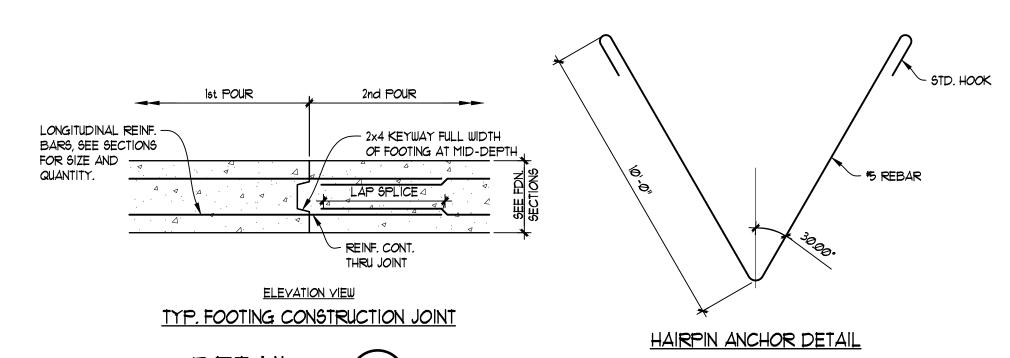
TOP OF CONC.

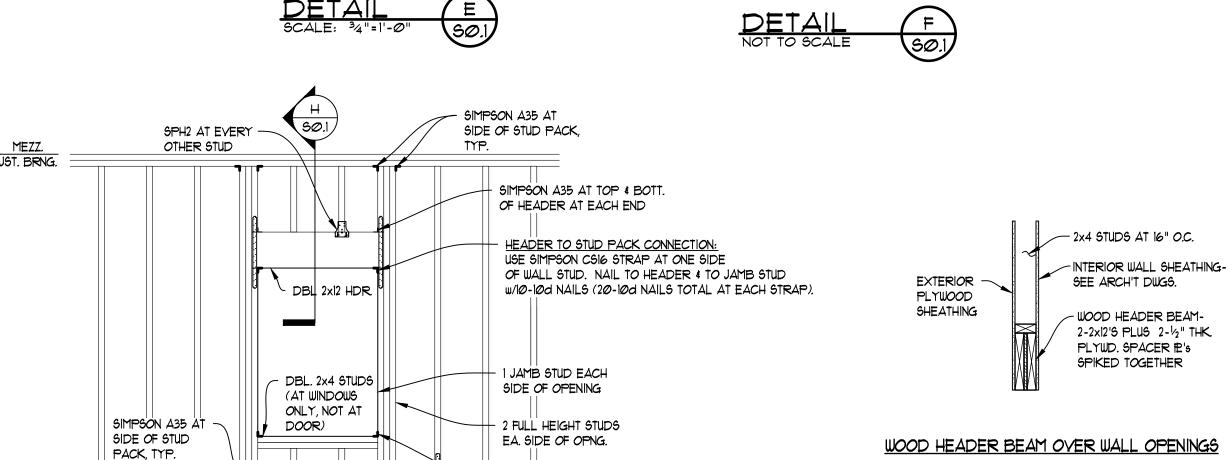
CONTRACTOR NOTE:

SAW JOINTS MUST BE

SAWN WITHIN I HOUR OF

CONCRETE INITIAL SET.





- SIMPSON A35 AT EACH END

OF SILL, CONNECT TO JAMB

STUD & SILL EACH END

TYPICAL OPENING IN EXTERIOR WALLS
(OPENINGS UP TO 3'-4" WIDE)

DETAIL

G

JOHNSON & ASSOCIATES ENGINEERING

200 GROVE PARK LANE, #820
DOTHAN, ALABAMA 36305
Jae@ja-eng.com
HORIDA CERTIFICATE OF AUTHORIZATION No. 25956

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RCHITECTS
P.O. BOX 861
MARIANNA, FL 32447

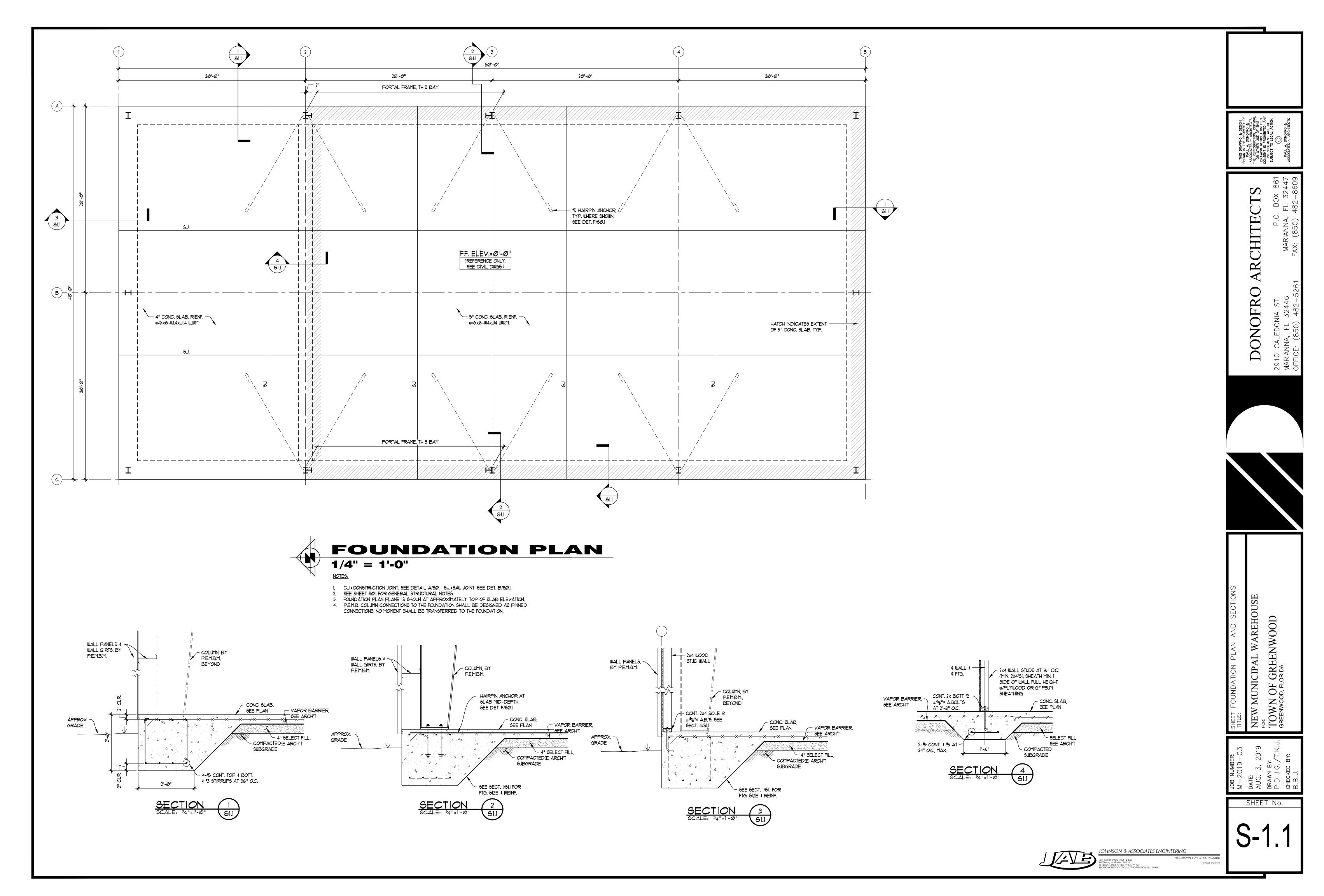
DONOFRO
2910 CALEDONIA ST.
MARIANNA, FL 32446

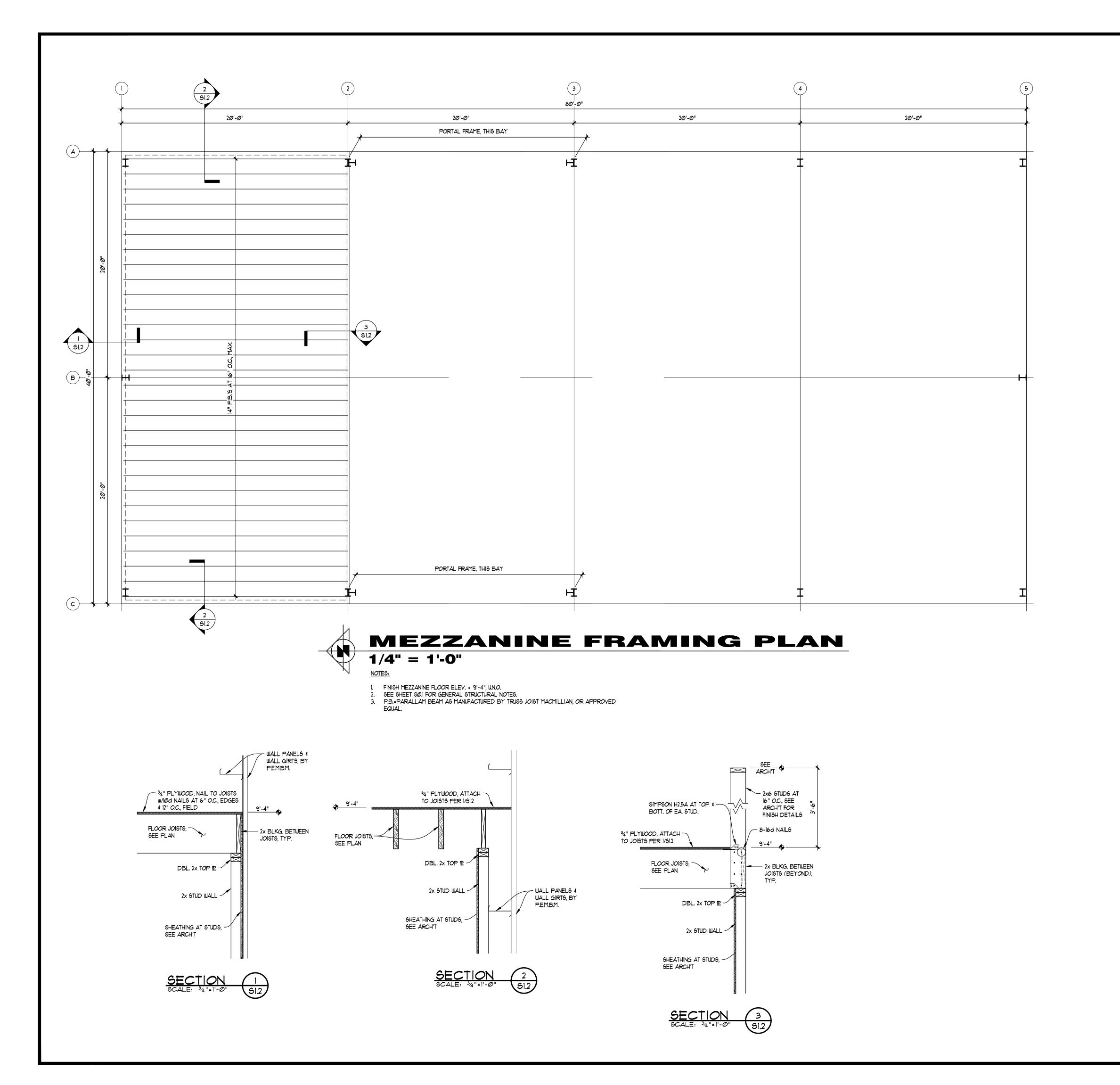


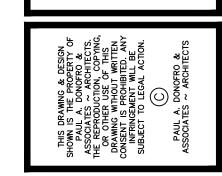
GENERAL STRUCTURAL NOTES AND DETAILS

MUNICIPAL WAREHOUSE

//N OF GREENWOOD







CHITECTS

P.O. BOX 861

MARIANNA, FL 32447

10 CALEDONIA ST. RIANNA, FL 32446



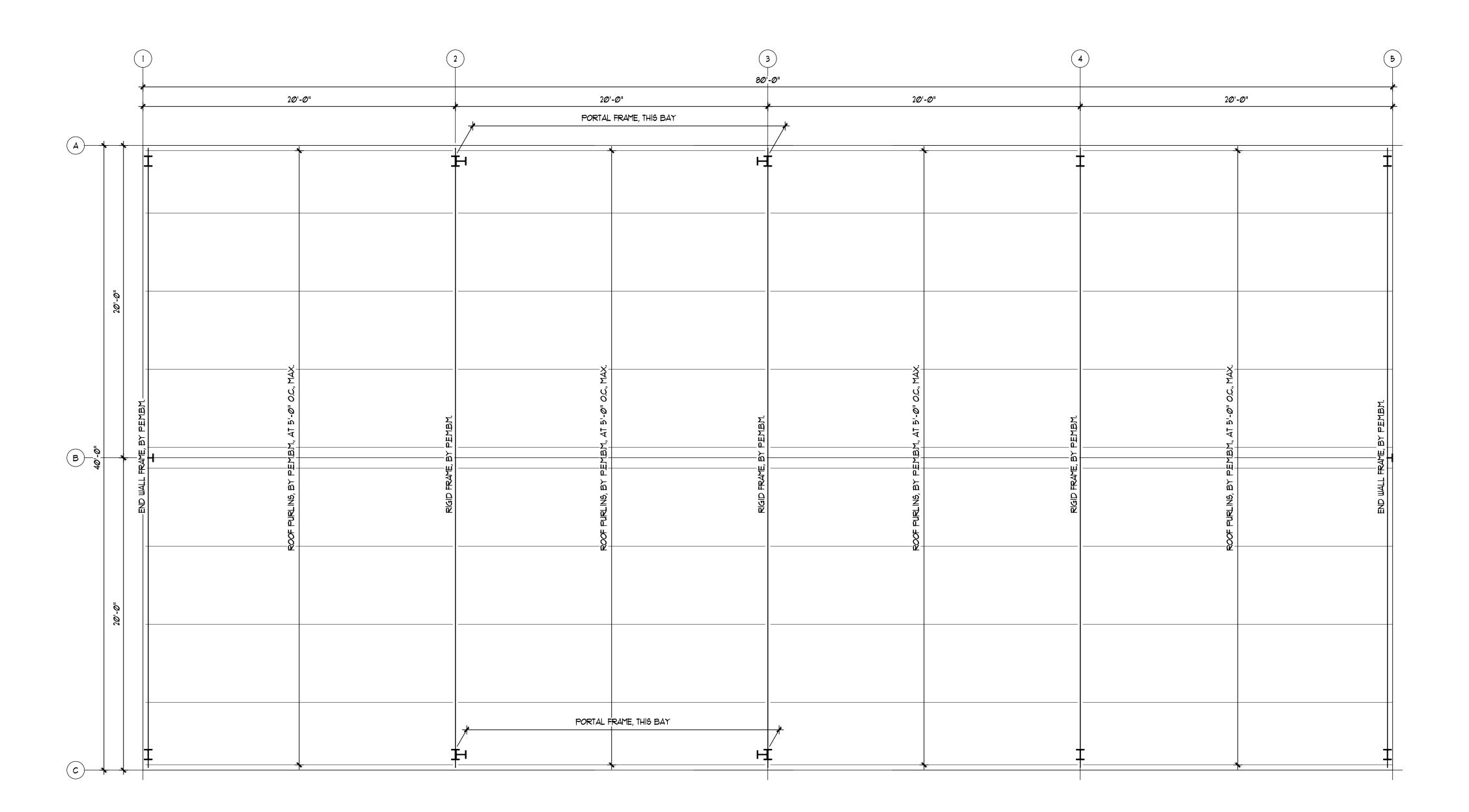
SHEET MEZZANINE FRAMING PLAN AND SECTION TITLE:

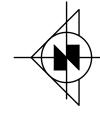
NEW MUNICIPAL WAREHOUSE
FOR:
TOWN OF GREENWOOD
GREENWOOD, FLORIDA

JOB NUMBER:
M-2019-03
DATE:
AUG. 3, 2019
DRAWN BY:
P.D.J.G./T.K.J.
CHECKED BY:

S-1.2







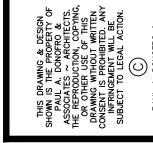
SCHEMATIC ROOF FRAMING PLAN

1/4" = 1'-0"

SEE SHEET 50.1 FOR GENERAL STRUCTURAL NOTES. SEE ARCHITECTURAL DWGS. FOR DIMENSIONS AND DETAILS NOT SHOWN.
 ROOF FRAMING PLAN SHOWN IS SCHEMATIC IN NATURE ONLY. MANUFACTURER/SUPPLIER IS SOLELY RESPONSIBLE FOR FINAL ROOF FRAMING LAYOUT AND DESIGN. CONTACT THE

STRUCTURAL ENGINEER OF RECORD PRIOR TO CHANGING ANY ASPECT OF THE ROOF FRAMING DEPICTED ON THIS PLAN.

3. PEMBM. = PRE-ENGINEERED METAL BUILDING MANUFACTURER.



LEGEND SOIL OR WASTE PIPING _____ VENT PIPING COLD WATER SUPPLY PIPING HOT WATER SUPPLY PIPING HOT WATER RETURN PIPING _____ GATE VALVE CHECK VALVE BALL VALVE WALL HYDRANT CLEANOUT TO FLOOR FD FLOOR DRAIN FLOOR DRAIN WITH TRAP PRIMER CONNECTION CLEANOUT TO GRADE UNION VENT THRU ROOF SHEET NOTE POINT OF CONNECTION TO EXISTING SOLENOID VALVE SERVICE SINK WATER CLOSET TRAP PRIMER EWH ELECTRIC WATER HEATER WATER HAMMER ARRESTOR TYPE A WATER HAMMER ARRESTOR TYPE B WATER HAMMER ARRESTOR TYPE C

LAVATORY

URINAL

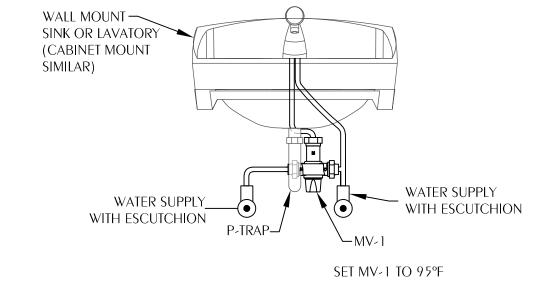
KILOWATT

GENERAL NOTES

- 1. COORDINATE ALL PIPING WITH DUCTWORK SHOP DRAWINGS AND EXISTING CONDITIONS. ROUTE PIPING AS REQUIRED TO
- 2. PRIOR TO START OF ANY WORK, COORDINATE SANITARY SEWER AND POTABLE WATER PIPING WITH CIVIL DRAWINGS.
- FIELD VERIFY PIPE INVERTS PRIOR TO LAYING OUT SANITARY SEWER PIPING.
- 4. ALL PIPING PASSING THROUGH ANY WALL SHALL HAVE A SLEEVE PER SPECIFICATIONS.
- ALL PIPING PASSING THROUGH FIRE-RATED WALLS SHALL HAVE A FIRE-RATED SLEEVE PER SPECIFICATIONS. ALL PIPING PENETRATIONS THROUGH WALLS OR FLOORS SHALL BE SEALED TO EQUAL THE RATING OF THE WALLS OR FLOORS.
- ALL PIPING INDICATED IS ABOVE THE CEILING EXCEPT THE OBVIOUS SANITARY SOIL, WASTE, VENT AND POTABLE WATER PIPING BELOW FLOOR OR GRADE.
- 7. SEE TOILET ROOM ELEVATIONS ON ARCHITECTURAL DRAWINGS FOR PLUMBING FIXTURE MOUNTING HEIGHT.
- COORDINATE EXACT LOCATION OF ALL EXTERIOR WALL HYDRANTS WITH ARCHITECTURAL DRAWINGS.
- UNDER SLAB SOIL, WASTE AND VENT PIPING PASSING TO UNDERSIDE OR THROUGH FOUNDATION FOOTING, WALL OR GRADE BEAM SHALL BE PROVIDED WITH A RELIEVING ARCH OR PIPE SLEEVE 2 (TWO) PIPE SIZES GREATER THAN PIPE SIZE INDICATED ON PLANS. COORDINATE FINAL PIPE ROUTING AND LAYOUT WITH STRUCTURAL DRAWINGS.
- 10. PRIOR TO SUBSTANTIAL COMPLETION OF NEW AND ALTERED WORK AREAS, CONTRACTOR SHALL HAVE SANITARY PLUMBING SYSTEM CLEARED OF DEBRIS OR ANY MATTER THAT WOULD INTERFERE OR PREVENT ADEQUATE CONVEYANCE OF MATERIALS FROM MOVING THROUGH AND TERMINATING INTO BUILDING OR PUBLIC DISPOSAL FACILITIES.
- 11. ALL (VTR'S) VENT THRU ROOF PENETRATIONS INDICATED ON PLANS ARE PRELIMINARY. FINAL LOCATIONS SHALL BE COORDINATED WITH ALL TRADES. ALL VTR'S SHALL BE A MINIMUM OF 10'-0" FROM ALL FRESH AIR INTAKE OPENINGS.
- 12. ALL TRAP PRIMERS AND DOMESTIC WATER ISOLATION VALVES SHALL BE ACCESSIBLE. TRAP PRIMERS LOCATED IN THE VICINITY OF WATER CLOSETS SHALL BE ACTIVATED BY WATER CLOSET USAGE. ISOLATION VALVES SHALL BE OF THE QUARTER TURN BALL OR GATE TYPE.
- 13. CONTRACTOR SHALL DEVELOP AND SUBMIT COORDINATION SHOP DRAWINGS WHICH IDENTIFY ROUTING OF PLUMBING PIPE AND LOCATION OF EQUIPMENT. SHOP DRAWINGS SHALL INDICATE COORDINATION WITH THE WORK OF OTHER TRADES.
- 14. ALL WORK SHALL COMPLY WITH THE FLORIDA BUILDING CODE 6TH EDITION (2017) PLUMBING.

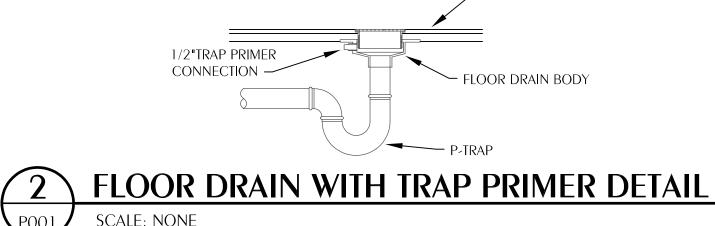
	PLUMBING FIXTURE SCHEDULE													
MARK	FIXTURE	PIPE SIZ	ES-INCHE	6	REMARKS									
		CW HW	TW	W										
WC-1	WATER CLOSET (ADULT HANDICAP, TANK)	3/8	,	3	HANDICAP HEIGHT @ 17", FLOOR MOUNT, ELONGATED BOWL, TANK TYPE, 1.28 GPF									
L-l	LAVATORY (STAFF, HANDICAP, 20X18)	3/8	3/8	1-1/4	COUNTERTOP MOUNT, OVAL, VITREOUS CHINA, SINGLE HOLE, METERING FAUCET, ANGLE STOPS & RISERS, MIXING VALVE, OFFSET TAIL-PIECE, P-TRAP W PRIMER CONNECTION									
SK-1	SINK (DOUBLE, 33"x22"x10")	3/8	3/8	1-1/2	COUNTERTOP, DOUBLE COMPARTMENT, STAINLESS STEEL, 8" CENTERS, SWING FAUCET, SINGLE LEVER HANDLE WITH SPRAY, MIXING VALVE, VACUUM BREAKER, AERATOR, P-TRAP W/ PRIMER CONNECTION									
SS-1	SERVICE SINK (24"x18"x12")	3/8 3/8	,	3	WALL MOUNT, SERVICE TYPE, CAST IRON, 8" CENTERS, TOP BRACE FAUCET, STRAIGHT LEVER HANDLES, VACUUM BREAKER, RIM GUARD									
SH-1	SHOWER (HANDICAP)	1/2 1/2	,	2	WALL MOUNT, STAINLESS STEEL,SINGLE HANDLE PRESSURE BALANCING & THERMOSTATIC VALVE MEETING ASSE 1016 - TYPE T/P,MIXING VALVE FACTORY SET AT 110, 2.5 GPM SHOWERHEAD,HAND SHOWER W/ HOSE,VACUUM BREAKER,GLIDE RAIL									
UB-1	RECESSED UTILITY WALL BOX (ICE MACHINE HOOK-UP)	1/2	,	,	FACTORY FABRICATED, 16 GAUGE STEEL EPOXY FINISH. PROVIDE FINAL CONNECTIONS TO ICE MACHINE.									
EWC-1	ELECTRIC WATER COOLER (SINGLE LEVEL)	3/8	,	1-1/2	WALL MOUNT, CHAIR CARRIER, DUAL LEVEL, SELF-CONTAINED, STAINLESS STEEL, PUSH BAR,									
EWH-1	ELECTRIC WATER HEATER	3/4 3/4 INLET OUTLET	-	-	4 KW TOTAL, 40 GALLON STORAGE, FLOOR MOUNT, STEEL SHELL DIAPHRAGM EXPANSION TANK, DRAIN PAN, 240 VOLT, SINGLE PHASE									
FD	FLOOR DRAIN	1/2		3	DEEP SEAL, TRAP PRIMER CONNECTION									
EW-1	EMERGENCY SHOWER/EYE WASH	1-1/4	,	1-1/4	FLOOR MOUNT WITH CAST FLANGE, PULL BAR HANDLE, OPEN TEE WASTE DRAIN									
WH	RECESSED WALL HYDRANT/HOSE BIBB	3/4	,	,	FLUSH MOUNTING WALL BOX, BRASS, CHROME FINISH, ANTI-SIPHON VACUUM BREAKER, WHEEL HANDLE, INTEGRAL SERVICE STOPS									
MV-1	WATER MIXING VALVE	1/2 1/2		,	BRONZE, EXPOSED WALL MNT, FAC. PRE-PIPED, THERMOSTATIC, VAC. BRKER, FLOW RATE @ 0.5-3.5 GPM									

- 1. WATER SUPPLY TAPPING TO EACH PLUMBING FIXTURE SHALL BE FULL SIZE (MINIMUM).
- 2. SEE ELECTRICAL DWGS FOR FINAL POWER REQUIREMENTS.
- PROVIDE WATER HAMMER ARRESTERS ON HOT & COLD WATER SUPPLY BRANCHES SERVING SINGULAR, MULTIPLE OR GROUPS OF PLUMBING FIXTURES. ADHERENCE TO THE PLUMBING AND DRAINAGE INSTITUTE STANDARD P.D.I.-WH201 (PER SPECIFICATIONS) SHALL BE EMPLOYED IN DETERMINING PROPER SIZE, SELECTION, PLACEMENT, LOCATION AND INSTALLATION OF ARRESTERS.

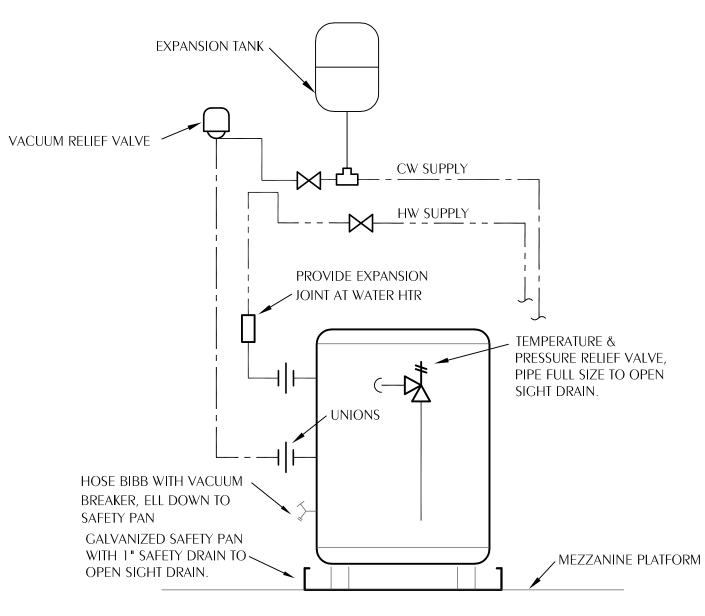


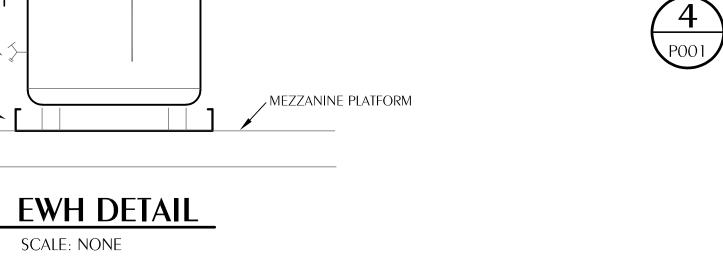


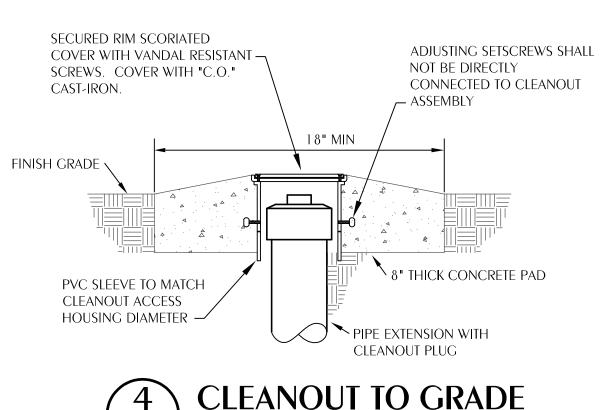
NOTE: MIXING VALVE WILL BE TYPICAL FOR L-1, SK-1



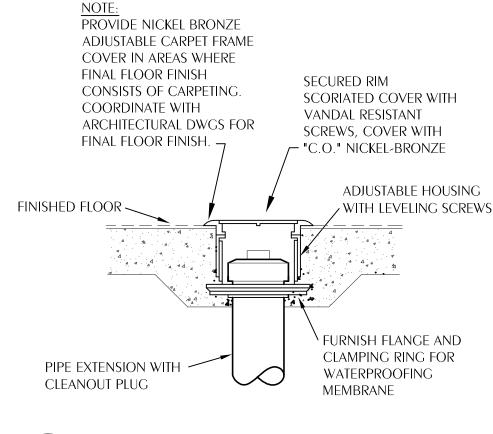
FINISH FLOOR











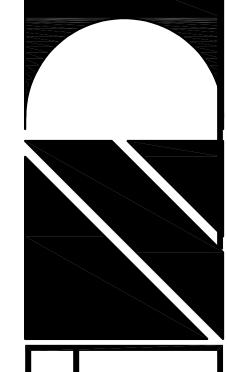






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NEW MUNICIPAL WAREHOUSE
FOR:
TOWN OF GREENIWA

PLUMBING SPECIFICATIONS

GENERAL

- THE CONTRACTOR SHALL FURNISH AL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND PERFORM ALL WORK AND SERVICES FOR ALL PLUMBING AS SHOWN ON DRAWINGS AND AS SPECIFIED, IN ACCORDANCE WITH PROVISIONS OF THE CONTRACT DOCUMENTS, AND COMPLETELY COORDINATED WITH WORK OF ALL OTHER TRADES.
- ALTHOUGH SUCH WORK IS NOT SPECIFICALLY INDICATED, FURNISH AND INSTALL ALL SUPPLEMENTARY OR MISCELLANEOUS ITEMS, APPURTENANCES AND DEVICES INCIDENTAL TO OR NECESSARY FOR A SOUND, SECURE AND COMPLETE INSTALLATION.
- C. ALL WORK SHALL COMPLY WITH THE 2017 FLORIDA BUILDING CODE.

SCOPE OF WORK

- THE WORK INCLUDES THE FOLLOWING ITEMS BUT IS NOT NECESSARILY LIMITED TO
- 1. ALL POTABLE WATER, DRAIN, WASTE AND VENT PIPING FOR COMPLETE PLUMBING SYSTEM.
- ALL WASTE AND DRAIN PIPING INCLUDING CONNECTING INTO EXISTING SERVICES.
- ALL MATERIALS, EQUIPMENT, FIXTURES, ACCESSORIES AND TRIM, TO MAKE A COMPLETE FINISHED INSTALLATION.
- NECESSARY TRENCHING AND BACKFILLING TO INSTALL THE PLUMBING SYSTEM.
- ALL INSULATION AS SPECIFIED HEREIN.

SITE INSPECTION:

BEFORE SUBMITTING PROPOSALS. EACH BIDDER SHALL VISIT THE SITE AND FULLY FAMILIARIZE HIMSELF WITH ALL JOB CONDITIONS AND SHALL BE FULLY INFORMED AS TO THE EXTENT OF WORK.

QUALITY OF MATERIALS AND APPROVALS:

THE FIXTURES AND EQUIPMENT ARE SPECIFIED BY MANUFACTURER AND MODEL NUMBER FOR THE PURPOSE OF ESTABLISHING TYPE AND QUALITY REQUIRED. OTHER MANUFACTURER'S PRODUCTS OF EQUAL QUALITY AND TYPE, AS DETERMINED BY THE ARCHITECT, MAY BE USED WHEN APPROVED.

5. <u>TESTS</u>

- CONCEALED WORK SHALL REMAIN UNCOVERED UNTIL REQUIRED TESTS HAVE BEEN
- COMPLETED. TESTS SHALL BE REPEATED AFTER DEFECTS HAVE BEEN ELIMINATED. DRAIN SYSTEMS: A WATER TEST SHALL BE APPLIED TO ALL PARTS OF THE DRAINAGE
- SYSTEM BEFORE THE PIPES ARE CONCEALED OR FIXTURES SET IN PLACE.
- STERILIZATION: THE ENTIRE WATER DISTRIBUTION SYSTEM SHALL BE THOROUGHLY STERILIZED WITH SOLUTION CONTAINING NOT LESS THAN 50 PARTS PER MILLION OF AVAILABLE CHLORINE. THE COMPLETE STERILIZATION OPERATION SHALL BE APPROVED BY THE STATE BOARD OF HEALTH REPRESENTATIVE.

PIPE AND FITTINGS

- A. WASTE, VENT AND DRAIN PIPING:
 - 1. PIPING BELOW SLAB SHALL BE SERVICE WEIGHT CAST IRON WITH BELL AND SPIGOT - LEAD CAULKED, BELL AND SPIGOT NEOPRENE PUSH TYPE CASKET, OR "NO - HUB" JOINTS. PIPE AND FITTINGS SHALL BE COATED INSIDE AND OUTSIDE WITH COAL - TAR VARNISH. "NO - HUB" JOINTS BELOW SLAB SHALL BE MADE USING TYPE MG CAST IRON COUPLINGS ONLY. CONTRACTOR'S OPTION: MAY UTILIZE PVC PIPE AND FITTINGS.
 - 2. PIPING ABOVE THE SLAB SHALL BE SERVICE WEIGHT CAST IRON WITH BELL AND SPICOT LEAD CALLKED OR "NO , HUR" JOINTS OR PVC.DMV PIPE AND FITTINGS. VENT PIPING MAY BE SCHEDULE 40 GALVANIZED STEEL WITH MALLEABLE FITTINGS. CONTRACTOR'S OPTION: MAY UTILIZE PVC PIPE AND FITTINGS.
- WATER PIPING:
- 1. WATER PIPING SHALL BE COPPER TUBING, TYPE "K" (SOFT UP TO 1-INCH, OVER I / INCH TO BE HARD) BELOW SLAB AND TYPE "L" ABOVE SLAB, WITH SWEAT
- WATER PIPING MORE THAN FIVE FEET OUTSIDE BUILDING SHALL BE TYPE "K" COPPER.

PLASTIC PIPE

CONTRACTOR MAY, AS INDICATED IN THESE SPECIFICATIONS, USE SCHEDULE 40 PVC. MATERIALS: PVC PIPE SHALL BE SCHEDULE 40 PIPE AND FITTINGS PRODUCED FROM MATERIAL CONFORMING TO ASTM D 1784, TYPE I, GRADE I, 200 PSI DESIGN STRESS (PVC 1120).

8. <u>INSULATION:</u>

A. GENERAL: ALL INSULATION WORK SHALL BE DONE BY WORKMEN THOROUGHLY COMPETENT IN THIS TRADE. B. THE FOLLOWING SHALL BE INSULATED AS INDICATED: 1. DOMESTIC COLD WATER PIPING AND FITTINGS LOCATED ABOVE CEILING AND ALL HOT WATER PIPING AND FITTINGS: 1" IN. THICK PREFORMED FIBERGLASS WITH FACTORY JACKET THAT MEETS ASTM C547 WITH CONDUCTIVITY OF 0.21-0.28 BTU IN. @ 100°F, FIRE RESISTANT.

INSTALLATION OF PIPING SYSTEMS:

- GRADE: ALL BUILDING SEWERS SHALL HAVE A UNIFORM GRADE OF NOT LESS THAN 1/8 IN. TO THE FOOT, DOWNWARD IN DIRECTION OF FLOW FOR PIPE 3 IN. AND LARCER. PIPE SMALLER THAN 3 IN. SHALL HAVE GRADE OF 1/4 IN. TO THE FOOT.
- CLEANOUTS: ALL CLEANOUT PLUGS SHALL BE RECESSED BRASS TYPE. 1. CLEANOUTS TO FINISHED FLOORS SHALL BE EQUAL TO JOSAM SERIES 56000-18-41 (-12, -14), BRONZE PLUG, CLAMP RING AND FLANGE, LEVELEZE ADJUSTABLE HOUSING AND WITH SATIN FINISH BRONZE COVER AND FRAME. CLEANOUTS IN FINISHED WALLS SHALL BE EQUAL TO JOSAM SERIES 58890,

WITH POLISHED STAINLESS STEEL COVER AND SECURING SCREWS.

- CLEANOUTS TO GRADE SHALL BE WITH LEAD CAULKED CAST-IRON FITTINGS WITH BRASS COUNTERSUNK PLUC, JOSAM 58480 SET IN A 24 IN. SQUARE BLOCK OF POURED CONCRETE, 6 IN. THICK. ALL EXTERIOR CLEANOUTS SHALL BE BROUGHT TO GRADE. PVC SHALL NOT BE USED FOR CLEANOUTS TO GRADE.
- C. PIPE SUPPORT:
- ALL HORIZONTAL SUSPENDED PIPE SHALL BE SUPPORTED AS REQUIRED IN SECTION 308 OF THE 2017 FLORIDA BUILDING CODE-PLUMBING.
- PROTECTION OF PIPING SYSTEMS:
- ALL PIPING AND PLUMBING SYSTEM COMPONENTS SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 305 OF THE 2017 FLORIDA BUILDING CODE-PLUMBING.

10. INSTALLATION OF FIXTURES AND EQUIPMENT

- PREPARATIONS OF ROUGH-IN. SUPPORTS AND WALL FINISHES SHALL BE COMPLETED AND TESTED OR INSPECTED BEFORE FIXTURES OR EQUIPMENT ARE INSTALLED.
- INSTALLATION:
 - 1. MECHANICAL OR PLUMBING CONNECTIONS SHALL BE MADE WITH CORRECT FITTINGS, GASKETS OR SETTING COMPOUND FOR EACH FIXTURE. SEAL ALL BRASS AND TRIM TO WALLS AND FIXTURES WITH RESILIENT WATERPROOF COMPOUND.

11. START-UP SERVICE:

THE CONTRACTOR SHALL PUT ALL ITEMS INSTALLED UNDER THIS SECTION INTO OPERATION AND SHALL INSTRUCT THE OWNER'S MAINTENANCE PERSONNEL IN ALL

12. GUARANTEE:

THE CONTRACTOR SHALL GUARANTEE ALL WORK IN THIS SECTION FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE AGAINST DEFECTS DUE TO FAULTY WORKMANSHIP OR MATERIALS.

13. FIXTURES AND EQUIPMENT:

FURNISH AND INSTALL PLUMBING FIXTURES, EQUIPMENT, DRAINS, ETC., COMPLETE WITH ALL TRIM, FITTINGS, AND OTHER DEVICES WHICH ARE CONSIDERED NECESSARY BY THE TRADE, BY CRAFT STANDARDS AND/OR BY THE ARCHITECT.

WC-1 WATER CLOSET, FLOOR-MOUNT (STANDARD, TANK TYPE):

VITREOUS CHINA LOW CONSUMPTION 1.28 GPF, ELONGATED, SIPHON JET ACTION, CLOSED COUPLED TANK, COMPLETE WITH FLOAT VALVE, VALVE AND CHROME PLATED TRIP LEVER, BOLT CAPS, COLOR "WHITE", CHROME PLATED SOLID BRASS ANGLE STOP WITH FLEXIBLE CHROME PLATED COPPER RISER, LOOSE KEY HANDLE. HEAVY MOLDED PLASTIC, WHITE, ELONGATED, OPEN FRONT SEAT LESS COVER, WITH STAINLESS STEEL, SELF-SUSTAINING CHECK HINGES.

WATER CLOSET ZURN Z5555 SUPPLY W/STOP ZURN Z8802CRLK-PC SEAT Z5955SS-EL-STS CLOSET BOLT/WAX RING KIT Z5972-COMB

LAVATORY, COUNTERTOP (HANDICAP):

VITREOUS CHINA 20" x 17", OVAL, COLOR "WHITE", 4"CENTERS, FRONT OVERFLOW. PROVIDE CHROME PLATED 1/2" x 3/8" ANGLE STOP TO WALL WITH CHROME PLATED 3/8"FLEXIBLE SUPPLY AND LOOSE KEY OPERATOR, INTEGRAL PERFORATED CAST BRASS STRAINER WITH ELBOW AND 1-1/4" OFFSET TAILPIECE, CHROME PLATED 17 GAUGE CAST BRASS P-TRAP WITH CLEANOUT AND TUBE WASTE TO WALL. CHROME PLATED CAST BRASS FAUCET WITH AERATOR OUTLET AND ADA COMPLIANT LEVER HANDLE. UNDER SINK MIXING VALVE WITH SOLDERED CONNECTION, BRONZE BODY, LIMITS HOT WATER BETWEEN 80°F & 120°F, DOUBLE THROTTLING, INTEGRAL INLET FILTER WASHERS & CHECK VALVES, TAMPER RESISTANT LOCKING CAP. MEETS ASSE 1070 STANDARDS. LAVATORY P-TRAP AND SINGLE VALVE ASSEMBLIES SHALL BE INSULATED WITH FULLY MOLDED INSULATION KIT, LIGHT GRAY COLOR WITH 3-PIECE INTERLOCKING TRAP ASSEMBLY AND 2-PIECE INTERLOCKING ANGLE VALVE ASSEMBLY. FASTENERS SHALL BE NYLON-TYPE SUPPLIED WITH KIT. LAVATORY SHALL BE MOUNTED WITH A CLEARANCE OF AT LEAST 28" FROM FLOOR TO BOTTOM OF THE APRON. KNEE AND TOE CLEARANCES SHALL BE AS FOLLOWS: 27" CLEAR HEIGHT SHALL BE PROVIDED FROM FINISHED FLOOR TO A POINT ON UNDERSIDE OF BOWL 8" IN FROM FRONT APRON. TOE CLEARANCE SHALL BE A MINIMUM HEIGHT OF 9" UNDER P-TRAP AND SUPPLIES OR STOPS.

LAVATORY ZURN Z51114 FAUCET ZURN Z-81000 SUPPLY W/STOP ZURN 8802LRLK-PC P-TRAP ZURN Z1021-PC DRAIN 7HRN 78746 INSULATION KIT ZURN Z8946-3-NT AERATOR ZURN -5M MIXING VALVE WATTS LFUSG-B

DOUBLE COMPARTMENT STAINLESS STEEL SINK:

33" X 22" X 6-1/2" DEEP (BOWL IS 13-1/2X16X6-1/2), TYPE 304, 18 GAUGE, CENTER HOLE, 8"CENTERS, SELF RIMMING SINGLE COMPARTMENT, (18-8) NICKEL BEARING STAINLESS STEEL, BACK LEDGE SINK WITH SATIN FINISH AND SOUND DEADENING MATERIALS ON SIDE AND BOTTOM OF SINK. PROVIDE TOP MOUNT POLISHED CHROME PLATED METAL SWING SPOUT FAUCET WITH SINGLE LEVER HANDLE SPRAY, WITH WATER SAVING AERATOR, STRAINER WITH REMOVABLE CRUMB CUP AND STOPPER, 1-1/2" TAILPIECE, CHROME PLATED BRASS 1-1/2" CONTINUOUS WASTE WITH END OUTLET AND 1-1/2" TAILPIECE, CHROME PLATED 17 GAUGE CAST BRASS P-TRAP WITH CLEANOUT AND TUBE WASTE TO WALL. CHROME PLATED LOOSE KEY 1/2" x 3/8" ANGLE STOP TO WALL WITH 3/8" FLEXIBLE CHROME PLATED COPPER HOT AND COLD WATER SUPPLIES. COORDINATE WITH CABINET SHOP DRAWINGS, BASE CABINET MUST BE A TRUE MINIMUM 24" DEEP BACK TO FRONT IN ORDER FOR SINK TO DROP INTO COUNTERTOP OPENING. SINK DRILLINGS SHALL ACCOMMODATE FITTING INSTALLATION, ONLY, NO OTHER CAPPED OPENINGS WILL BE ALLOWED.

SINK ELKAY LRAD-332265PD **FAUCET** ZURN Z-871 BW-HS DRAIN ELKAY LK-35 WASTE ELKAY LK-53 SUPPLIES ZURN Z-8802-LR-LK P-TRAP ZURN Z-1021-PC

SERVICE SINK (WALL MOUNT):

22" X 18" X 12-3/4" ENAMELED CAST IRON SERVICE SINK WITH 8" ON CENTER, BACK, STAINLESS STEEL RIM GUARD AND WALL HANGER. ROUGH CHROME PLATED FAUCET WITH TOP BRACE, BUCKET HOOK, VACUUM BREAKER, STOPS AND HOSE END, 3" TRAP WITH CLEANOUT TO WALL INSIDE WITH FOOT SUPPORT. CHROME PLATED LOOSE KEY ANGLE STOP TO WALL WITH 3/8" CHROME PLATED FLEXIBLE COPPER SUPPLIES.

SINK ZURN Z5888 FAUCET ZURN Z843 M1 RC DRAIN ASSEMBLY ZURN TS 2900-IP3 HOSE & BRACKET/MOP HANGER -HH. -MH SUPPLY ZURN Z-8800-LR-LK

EWC-1 ELECTRIC WATER COOLER (HANDICAP):

WALL HUNG, SELF-CONTAINED ELECTRIC WATER COOLER. FURNISH FLOOR MOUNTED SINGLE CARRIER WITH BEARING PLATE, HANGER PLATE, ADJUSTABLE SUPPORTING RODS, STRUCTURAL UPRIGHTS AND BLOCK BASES, SECURE TO FLOOR WITH 1/2" BOLTS AND ANCHORS. UNIT TO BE COMPLETE WITH HERMETIC AIR COOLED REFRIGERATION SYSTEM, COOLER PRE-COOLER, THERMOSTAT, SAFETY CONTROLS, CONDENSER FAN MOTOR, VERMIN PROOF INSULATION, STAINLESS STEEL CABINET, QUIET OPERATION. TOP OF COOLER SHALL BE NO. 3 FINISH STAINLESS STEEL, TWO-STREAM ANTI-SQUIRT PROJECTOR WITH ONE-PIECE CHROME PLATED HOOD GUARD, AND FRONT AND SIDE PUSH BAR CONTROLS. COOLER CAPACITY SHALL BE 8.1 GPH, COOLING 80-DEGREE F WATER TO 50 DEGREE F. PROVIDE ONE-YEAR WARRANTY ON ENTIRE COOLER. PROVIDE 1/2" x 3/8" CHROME PLATED STOP TO WALL WITH CHROME PLATED 3/8" FLEXIBLE

COPPER SUPPLY. PROVIDE 1-1/4" CHROME PLATED 17 GAUGE CAST BRASS P-TRAP WITH CLEANOUT AND TUBE WASTE TO WALL, 120 VOLT, SINGLE PHASE, 3.3 FULL LOAD AMPS, 265 RATED WATTS, 1/6 COMPRESSOR HP. MOUNT TO SATISFY ADA REQUIREMENTS, VERIFY FINAL LOCATION. MOUNTING HEIGHT, AND FINISH WITH ARCHITECTURAL DRAWINGS.

ELKAY EZS8 EDC TRAP ZURN Z8700-PC CARRIER Z1225 BL SUPPLIES ZURN Z-8802-LK

EMERGENCY FACE AND EYE WASH:

SCHEDULE 40 GALVANIZED STEEL. FURNISHED WITH ORANGE POLYETHYLENE COVERS. PULL BAR HANDLE TO OPERATE EYEWASH. SHOWER AND EYEWASH SHALL HAVE 1-1/4" COLD WATER SUPPLY. FLOOR MOUNT WITH CAST FLANGE, OPEN WASTE TEE DRAIN, FOR INDIRECT CONNECTION.

EYE WASH GUARDIAN G-1902 HFC

SHOWER (HANDICAP)

SINGLE HANDLE PRESSURE-BALANCING MIXING VALVE. CERAMIC CONTROL CARTRIDGE WITH STAINLESS STEEL BALANCING PISTON. MUST HOLD SHOWER TEMPERATURE STEADY WITH PRESSURE FLUCTUATIONS UP TO 85%. PACKING WITH BRASS ADJUSTABLE LIMIT STOP SCREW TO PROHIBIT VALVE HANDLE FROM BEING TURNED TO EXCESSIVE HOT DISCHARGE TEMPERATURES. ALL TRIM TO BE COPPER NICKEL CHROME PLATED. SERVICE STOPS TO BE BRASS AND CAST INTEGRAL WITH VALVE BODY. TWO WAY CHROME DIVERTER VALVE. BRASS SHOWER HEAD WITH ARM AND FLANGE. WALL/HAND SHOWER WITH FLEXIBLE METAL HOSE, IN-LINE VACUUM BREAKER, WALL CONNECTION AND FLANGE, 30" SLIDE BAR FOR HAND SHOWER MOUNTING.

SHOWER ZURN Z-7301-SS-MT-DV-2P-HW DRAIN ZURN ZN-415 2" WITH 5"B

WATER MIXING VALVE (THERMOSTATIC MIXING):

UNDER SINK MIXING VALVE, BRONZE BODY, LIMITS HOT WATER BETWEEN 80°F & 120°F, DOUBLE THROTTLING, DUAL CHECK VALVES, INTEGRAL STRAINER WITH 40 MESH SCREEN, TAMPER RESISTANT LOCKING NUT. MEETS ASSE 1070 STANDARDS

EXPOSED MIXING VALVE WATTS LFUSG-B

UB-1 WALL BOX WITH SHUT-OFF VALVE (REFRIGERATOR):

RECESSED METAL WALL BOX CONSTRUCTED AND SUITABLE FOR FIRE RATED PARTITIONS COMPLETE WITH FACTORY INSTALLED SHANK VALVE WITH 1/4" O.D. COPPER OUTLET TESTED @ 100 P.S.I. PROVIDE APPROXIMATELY 5'-0" OF 1/4" O.D. SOFT COPPER TUBING WITH COMPRESSION FITTING IN TIGHT COIL. ANCHOR BOX TO WALL STRUCTURE. VERIFY LOCATION AND MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS OR MOUNT TO MANUFACTURERS RECOMMENDATIONS.

WALL BOX **GUY GRAY BIM 875**

EWH-1 ELECTRIC WATER HEATER:

ASHRAE STANDARD 90. CLASS LINED TANK SHITARLE FOR 150 PSLWORKING PRESSURE 300-PSI TEST. FINISH OF DURABLE HIGH GLOSS BAKED ENAMEL. BLANKET GLASS FIBER INSULATION OVER ENTIRE TANK. ASME PRESSURE AND TEMPERATURE RELIEF VALVE. WATER HEATER SHALL BE ACCEPTABLE FOR COMMERCIAL APPLICATION BY MANUFACTURER. PROVIDE 3 FULL YEAR WARRANTY. SNAP ACTION AUTOMATIC SURFACE MOUNTED THERMOSTATS. IMMERSION TYPE HEATING FLEMENTS AND MAGNESIUM ANODE ROD. PROVIDE UNIT MOUNTED DISCONNECT SWITCH. PROVIDE THERMAL EXPANSION RELIEF VALVE ON COLD WATER INLET SIDE OF HEATER FOR THERMAL EXPANSION CONTROL. PROVIDE GALVANIZED STEEL DRIP PAN. 40GAL., 4.0 KW, 240V/SINGLE PHASE.

WATER HEATER A. O. SMITH DEN 40 - 4 K.W. VACUUM RELIEF WATTS 36A AMTROL "THERM-X-TROL" **EXPANSION TANK**

WH-1 RECESSED HOSE BIB & WALL HYDRANT:

ANTI-SIPHON VACUUM BREAKER, FLUSH MOUNTING STAINLESS STEEL WALL BOX, NARROW INSTALLATION, 3/4 INCH HOSE THREAD, BRONZE BODY WITH CHROME FINISH POLYCARBONATE WHEEL HANDLE, STOP VALVES, LOOSE KEY FAUCET OPERATOR.

WALL FAUCET ZURN Z1350

PRESSURE REDUCING VALVE (IF REQUIRED):

A WATER PRESSURE REDUCING VALVE AND STRAINER SHALL BE INSTALLED ON THE WATER SERVICE PIPE NEAR ITS ENTRANCE TO THE BUILDING WHERE SUPPLY MAIN PRESSURE EXCEEDS 60PSI (413 KPA) TO REDUCE IT TO 50PSI (345 KPA) OR LOWER. THIS SERIES IS SUITABLE FOR WATER SUPPLY PRESSURES UP TO 300PSI. THE WATER PRESSURE REDUCING VALVE SHALL BE CONSTRUCTED USING LEAD FREE MATERIALS. LEAD FREE* REGULATORS SHALL COMPLY WITH STATE CODES AND STANDARDS, WHERE APPLICABLE REQUIRING REDUCED LEAD CONTENT. SILL COCKS AND OUTSIDE WALL HYDRANTS MAY BE LEFT ON FULL MAIN PRESSURE AT THE OPTION OF THE OWNER. PROVISION SHALL BE MADE TO PERMIT THE BYPASS FLOW OF WATER BACK THROUGH THE VALVE INTO THE MAIN WHEN PRESSURES. DUE TO THERMAL EXPANSION ON THE OUTLET SIDE OF THE VALVE, EXCEED THE PRESSURE IN THE MAIN SUPPLY. PRESSURE REDUCING VALVES WITH BUILT-IN BYPASS CHECK VALVES AND INTEGRAL STRAINER WILL BE ACCEPTABLE. APPROVED VALVES SHALL COMPLY WITH ASSE 1003.

WATTS LFN55B



M

OFR NO



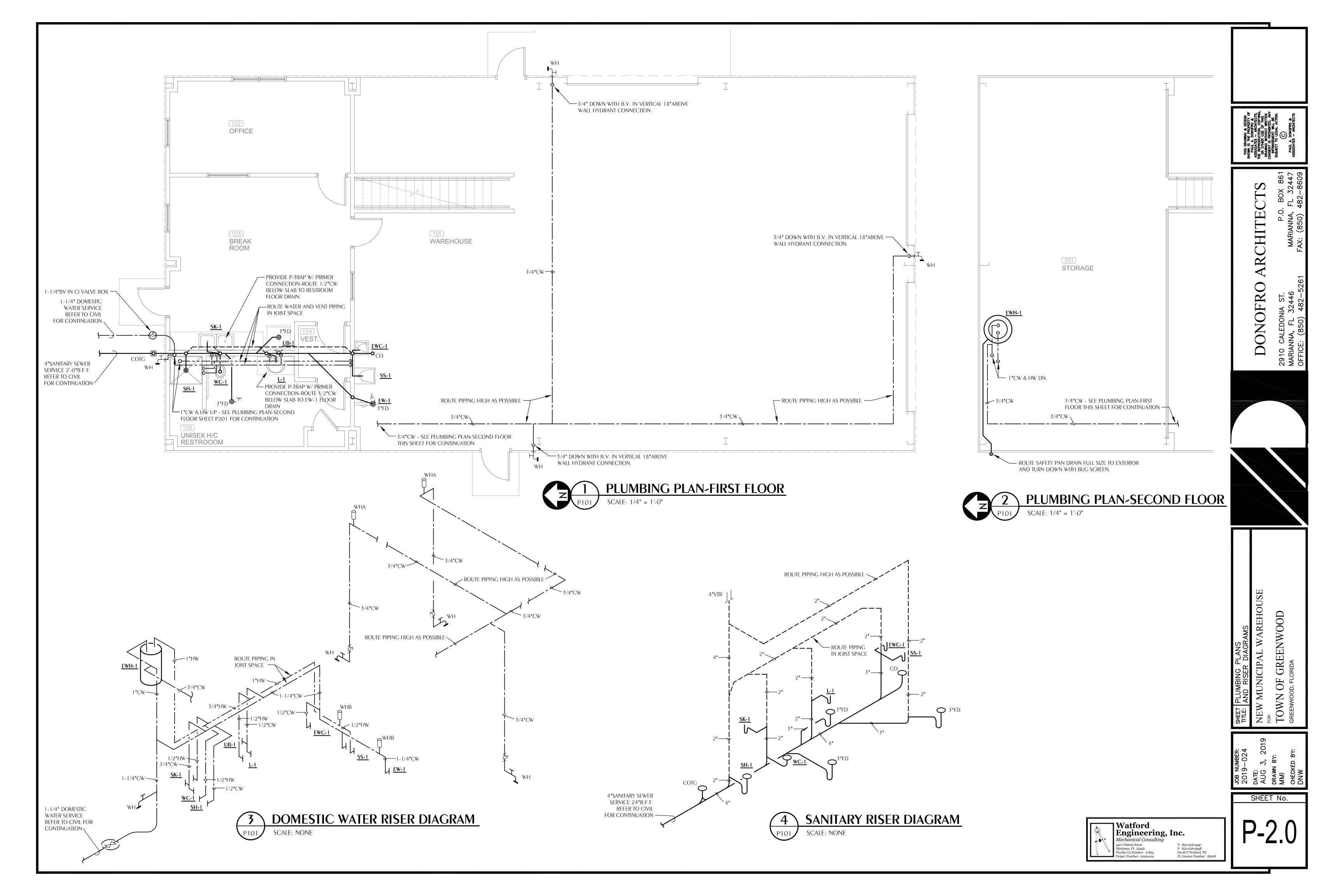
WAREHOU **GREE**] MUNICIPAL

SHEET No.

NEW FOR:
TOW

| Watford | Engineering, Inc. anna, FL 32446

FL License Number: 58208



LEGEND

EQUIPMENT TAG

SHEET NOTE

TYPICAL

TEMPERATURE

SUPPLY AIR

RETURN AIR

EXHAUST AIR

MIXED AIR

OUTDOOR AIR TRANSFER AIR

EXHAUST FAN CEILING DIFFUSER

RETURN GRILLE

EXHAUST GRILLE

HEAT PUMP

PUMP

EXHAUST REGISTER

THERMOSTAT, "1"

INDICATES UNIT

CONTROLLED

DETECTOR

FLOOR DRAIN

TRANSFER AIR

PRESSURE

EXTERNAL STATIC

ANALOG OUTPUT DIGITAL INPUT DIGITAL OUTPUT

BALANCING NOMINAL

DRIVE EXISTING

CEILING EXHAUST FAN

WALL MOUNTED UNIT

DUCTLESS SYSTEM HEAT

DUCT MOUNTED SMOKE

UNDERCUT DOOR 3/4"

DOOR GRILLE, REFER TO DOOR SCHEDULE

ABOVE FINISHED FLOOR

DIRECT DIGITAL CONTROL VENTURI FLOW METER

TESTING, ADJUSTING AND

VARIABLE FREQUENCY

ABOVE FINISHED FLOOR

TYP

CEF

DSHP

DETAIL TAG ("1" INDICATES IDENTIFICATION NUMBER;

"M3" INDICATES THE SHEET NUMBER DRAWN ON)

AIR DEVICE TAG. TOP LINE INDICATES TYPE OF

AIR DEVICE TAG. TOP LINE INDICATES TYPE OF

(2) INDICATES TYPICAL OF TWO DEVICES

DEVICE BOTTOM LINE INDICATES AIRFLOW IN CFM

DEVICE BOTTOM LINE INDICATES AIRFLOW IN CFM

SUPPLY DUCT SECTION POSITIVE PRESSURE RETURN OR EXHAUST DUCT NEGATIVE PRESSURE RECTANGULAR DUCT SIZE ("A" INDICATES SIDE SHOWN; "B" INDICATES SIDE NOT SHOWN) INDICATES RISE IN ELEVATION OF DUCT.

EXTERNALLY INSULATED ROUND FLEXIBLE DUCTWORK

EXTERNALLY INSULATED DUCTWORK INTERNALLY INSULATED DOUBLE WALL SPIRAL DUCTWORK

DUCT ELBOW WITH TURNING VANES

MANUAL VOLUME BALANCING DAMPER

MOTORIZED DAMPER

RADIUSED DUCT ELBOW

FLEXIBLE DUCT CONNECTION

SMOKE DAMPER WITH ACCESS DOORS

FIRE DAMPER WITH ACCESS DOORS

BACKDRAFT DAMPER

TEE WITH TURNING VANES

TRANSITION

FLEX DUCT TAKE OFF WITH MVD SIZE EQUALS DIFFUSER NECK SIZE UNLESS NOTED OTHERWISE

BRANCH DUCT TAKEOFF WITH MVD

AIRFLOW MEASURING STATION

HIGH PRESSURE DUCTWORK

PROVIDE ASYMMETRIC REFLECTOR.

2. PROVIDE COATED STEEL CONSTRUCTION.

DOUBLE WALL HIGH PRESSURE DUCTWORK

FLAT OVAL DUCTWORK, A REPRESENTS THE SIDE SHOWN AND B REPRESENTS THE SIDE NOT SHOWN

GENERAL NOTES

- 1. ALL DUCT DIMENSIONS ARE NET INSIDE.
- VERIFY COLLAR SIZES ON ALL AIR TERMINALS, EQUIPMENT OUTLETS AND INLETS, TRANSITION DUCTWORK AS NECESSARY. EXTERNALLY INSULATE TRANSITIONS AT EQUIPMENT CONNECTIONS.
- FIELD VERIFY CLEAR SPACE AVAILABLE, ROUTING PATH, AND CONFLICTS WITH STRUCTURE AND THE WORK OF OTHER TRADES PRIOR TO FABRICATING DUCTWORK. PROVIDE OFFSETS IN DUCTWORK AS REQUIRED, WHETHER SPECIFICALLY INDICATED ON DRAWINGS OR NOT. SUBMIT SHOP DRAWINGS ON DUCTWORK LAYOUT PRIOR TO COMMENCING WORK. MAINTAIN CLEARANCE AROUND ALL LIGHT FIXTURES AS REQUIRED TO REMOVE AND SERVICE FIXTURES. COORDINATE WITH ROOF TRUSSES/STRUCTURE. PRESSURE TEST ALL NEW DUCTWORK FOR LEAKS. SEE SPECIFICATIONS.
- 4. CONTRACTOR SHALL INSTALL ALL EQUIPMENT, PIPING, AND DUCTWORK SUCH THAT MANUFACTURERS' RECOMMENDED CLEARANCES ARE MET FOR ALL ACCESS PANELS, MOTORS, FANS, BELTS, FILTERS AND AIR INTAKES. CONDENSATE LINES SHALL BE CLEAR OF FILTER RACK ACCESS.
- 5. PROVIDE DUCT FLEX CONNECTIONS & VIBRATION ISOLATION FOR ALL UNITS NOT INTERNALLY ISOLATED.
- ALL SUPPLY, RETURN, EXHAUST AND OUTSIDE AIR INTAKE DUCTWORK SHALL BE GALVANIZED SHEET METAL.
- 7. ALL AHU AND OAU FILTERS SHALL BE OF A READILY AVAILABLE SIZE, OF DISPOSABLE TYPE, AND BE ACCESSIBLE WITHOUT THE USE OF SCREWS OR OTHER MECHANICAL DEVICES REQUIRING TOOLS.
- 8. PROVIDE ACCESS PANELS IN CEILINGS AS REQUIRED FOR MAINTENANCE AND ADJUSTMENT OF EQUIPMENT LOCATED ABOVE CEILING.
- 9. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING LOCATION OF ALL EQUIPMENT AND UTILITIES.

DUCTWORK NOTES

- ALL ROUND FLEXIBLE DUCT SHALL BE FLEXMASTER TYPE 8M ACOUSTICAL FLEX OR ENGINEER APPROVED EQUAL. MAXIMUM LENGTH OF ANY FLEXIBLE DUCT RUNOUT SHALL BE 5'-0". WHERE LENGTH REQUIRED EXCEEDS 5'-0", INSTALL EXTERNALLY INSULATED ROUND SNAPLOCK DUCT FOR BALANCE OF DISTANCE TO SPIN-IN TAP AT MAIN DUCT TRUNK.
- 2. SEAL ALL DUCT PENETRATIONS OF WALLS AIRTIGHT, REGARDLESS OF WHETHER WALLS ARE FIRE RATED OR NOT.
- 3. ALL SUPPLY AIR DUCTWORK FROM AHU'S (EXCEPT TAKEOFFS TO SUPPLY AIR DIFFUSERS) SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 2" W.G., SEAL CLASS A, EXTERNALLY INSULATED UNLESS OTHERWISE INDICATED. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.
- ALL RETURN AIR DUCTWORK SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 2" W.G., SEAL CLASS A, EXTERNALLY INSULATED UNLESS OTHERWISE INDICATED. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.
- 5. ALL OUTSIDE AIR INTAKE DUCTWORK SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 2" W.G., SEAL CLASS A, EXTERNALLY INSULATED. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.
- 6. STANDARD EXHAUST AIR DUCTWORK SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 1/2" W.G., SEAL CLASS A.
- 7. WHEN ROUTING DUCTWORK OVER LIGHTS, PROVIDE A MINIMUM 6" CLEARANCE BETWEEN DUCT AND LIGHTS.

VENTILATION	SCHED	ULE
SPACE TYPE	VENTILATION CFM/S.F.	VENTILATION CFM/PERSON
OFFICE	0.06	5
BREAK ROOM	0.06	5
VESTIBULE	0.06	О
RESTROOM	0.00	70/50*
WAREHOUSE	0.06	10

*70 CFM PER WATER CLOSET AND 50 CFM PER SHOWER HEAD

	LOUV	ER SCHE	DULE	
MARK	AIRFLOW CFM (MAX)	LOUVER SIZE (WxH) INCHES	FREE AREA FT ² (MIN)	PRESSURE DROP (IN. WG)
LVR-1 CFM	120	14x12	0.2	0.06
LVR-2 CFM	2,390	36x36	3.7	0.08

- 1. PROVIDE GREENHECK MODEL 'EVH-660D' (OR EQUAL) EXTRUDED ALUMINUM, WIND-DRIVEN RAIN RESISTANT, STATIONARY LOUVER
- WITH INSECT SCREEN. 2. FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS.

AIR DEVICE SCHEDULE												
MARK	MAX AIRFLOW CFM	AIR DEVICE SIZE	DUCT CONNECTION SIZE	TITUS MODEL								
CD-1 CFM	90	9x9	6Ø	TDC								
RG,EG,SG,TG,RR,ER												
xx-1 CFM	450	12x12	12x12	350FL								

NOTES:

- 1. MAX NC=20
- 2. PROVIDE BEVELED MOUNTING FRAME FOR CEILING DIFFUSERS IN HARD CEILINGS.
- 3. PROVIDE FLAT MOUNTING FRAME FOR GRILLES LOCATED IN HARD CEILINGS.

	ENERGY RECOVERY VENTILATOR SCHEDULE															
UNIT	BASIS OF		CONFIGURATION	DESIGN	AIR	CFM	ESP	FAN	ENTERING C	ONDITIONS	LEAVING C	ONDITIONS	ELECTRICAL	WEIGHT	NOTES	
ERV	DESIGN	MODEL		DAY	SIDE		(IN. H2O)	(HP)	SUMMER (DB/WB)	WINTER (DB/WB)	SUMMER (DB/WB)	WINTER (DB/WB)	VOLTS/PHASE	WEIGHT		
		LATENIT			LATENIT	SUPPLY	90	0.15	0.1	82.8/78.7	25.0/22.6	73.7/70.6	63.1/54.2			
EDV/ 1	DENIEWAIDE	F1/170	INDOOR	LATENT	EXHAUST	120	0.15	0.1	72.0/62.7	70.0/61.0	,		240/1	40 LDC	1,2,3,4,5,6,7,8	
EKV-I	RV-1 RENEWAIRE EV130	EVIZU	PACKAGED	CENICIDIE	SUPPLY	90	0.15	0.1	92.2/76.5	25.0/22.6	75.1/68.2	63.1/54.2	240/1	48 LBS.	1,2,7,4,7,0,7,0	
			SENSIBLE	EXHAUST	120	0.15	0.1	72.0/62.7	70.0/61.0	,	,					

- BELT DRIVE FAN
- PROVIDE 2", MERV 8 FILTERS ON ENTERING SIDE OF EACH AIRSTREAM.
- ESP DOES NOT INCLUDE FILTERS, CASING, ETC.
- 4. PROVIDE DEDICATED ENERGY RECOVERY UNIT WITH 1" FOIL FACED FIBERGLASS BOARD INSULATION, 20 CAGE G90 GALVANIZED STEEL CASE, AND FIXED PLATE CROSS FLOW CONSTRUCTION HEAT EXCHANGER WITH 10 YEAR CORE PERFORMANCE WARRANTY.
- DESICCANT WHEELS ARE NOT ACCEPTABLE
- PROVIDE MOTORIZED OA AND EA DAMPER MOUNTED IN DUCT AND INTERLOCKED WITH UNIT. PROVIDE SINGLE POINT POWER CONNECTION.
- PROVIDE BASIS OF DESIGN UNIT OR PRIOR APPROVED EQUAL.
- 8. INTERLOCK UNIT WITH 105 RESTROOM LIGHTS

						MIN	II SPLIT IN	NDOOR	AIR HAND	LING UNIT	SCHEDULI	Ē						
UNIT	JNIT BASIS OF DESIGN CAPACITY (NOMINAL)						CAPACITY (DERATED)		Co	OOLING DESIGN CONDITION	HEATING DE	SIGN CONDITIONS	AIRFLOW	/ ELECTRICAL			NOTES	
TAG	MANUFACTURER	MODEL	MOUNTING TYPE	COOLING (BTUH)	HEATING (BTUH)	TOTAL COOLING (BTUH)	SENSIBLE COOLING (BTUH)	HEATING (BTUH)	TOTAL COOLING (BTUH)	SENSIBLE COOLING (BTUH)	ENTERING AIR TEMP (DB °F/WB °F))	HEATING (BTUH)	ENTERING AIR TEMP (°F)	SUPPLY (CFM)	VOLTS/PH	MCA (AMPS)	MOCP (AMPS)	
WM-1	MITSUBISHI	PKFY-PO8NHMU-E2	WALL MOUNTED	8,000	9,000	7,300	6,200	9,000	5,700	4,300	72.2/64.2	4,200	70.4	295	240/1	0.38	15	1,2,3,4,5,6,7,8,9
WM-2	MITSUBISHI	PKFY-PO8NHMU-E2	WALL MOUNTED	8,000	9,000	7,100	6,200	9,000	5,900	5,200	72.3/61.2	1,700	71.0	275	240/1	0.38	15	1,2,3,4,5,6,7,8,9
WM-3	MITSUBISHI	PKFY-P06NBMU-E2R1	WALL MOUNTED	6,000	6,700	5,900	3,000	6,700	2,100	2,000	72.3/61.8	1,700	70.5	120	240/1	0.19	15	1,2,3,4,5,6,7,8,9

- NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB) NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°(WB)
- 4. CORRECTED CAPACITY IS NET CAPACITY FOR INSTALLATION ACCOUNTING FOR PIPE RUN LENGTHS, ETC. 5. PROVIDE UNIT MOUNTED CONDENSATE PUMP
- 7. EXPOSED (INDOOR OR OUTDOOR) REF PIPING SHALL BE HARD DRAWN COPPER.

- 3. HEATING AND COOLING SHALL INCLUDE NO DIVERSITY.
- 6. PROVIDE FACTORY ENGINEERED SHOP DRAWINGS WITH REFRIGERANT PIPE SIZES.

PROVIDE DISCONNECT

8. PROVIDE HARD WIRED THERMOSTAT AND FILTER HOUSING FOR UNIT MOUNTED FILTERS.

						MINI S	SPLIT OUT	DOOR UNIT	SCHEDU	LE							
UNIT	BASIS OF	DSHP	NOMINAL COOLING	CORRECTED COOLING	DESIGN COOLING	DESIGN COOLING	NOMINAL HEATING	CORRECTED HEATING	DESIGN HEATING	DESIGN HEATING	ELECT		EFFICIENCY		NOTES		
DSHP	DESIGN	MODEL	TOTAL CAPACITY (BTUH)	TOTAL CAPACITY (BTUH)	TOTAL LOAD (BTUH)	OUTDOOR TEMP (°F)	CAPACITY (BTUH)	CAPACITY (BTUH)	CAPACITY (BTUH)	OUTDOOR TEMP (°F)	VOLTS/PHASE	MCA	MOCP	EER	SEER	HSPF	
1	MITSUBISHI	PUMY-P36NKMU2	36,000	36,000	24,000	95.0	42,000	32,000	7,600	25.0	240/1	29	44	15.0	22.3	12.0	1,2,3,4

- 1. NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB)
- 2. NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°(WB)
- 3. EFFICIENCY VALUES FOR EER, SEER, AND HSPF ARE BASED ON NON-DUCTED INDOOR UNITS. 4. PROVIDE OUTDOOR UNIT FOR THREE INDOOR UNITS.

		ELECTRIC	CIN	FRA	RED I	HEATI	R SCH	EDU	LE
UNIT	BASIS OF	MODEL	BTUH	MOUNT	REFLECTOR	CONTROL	ELECTRICAL		NOTES
ERH	DESIGN	MODLL	БЮП	HEIGHT	PATTERN		VOLTS/PHASE	KW	
1-12	FOSTORIA	OCH-57-240V	10,200	16 FT	30°	PROGRAM. T-STAT	240/1	3.0	1,2
13,14	FOSTORIA	OCH-57-240V	10,200	7 FT	30°	PROGRAM. T-STAT	240/1	3.0	1,2
15	FOSTORIA	OCH-57-240V	10,200	8 FT	30°	PROGRAM. T-STAT	240/1	3.0	1,2

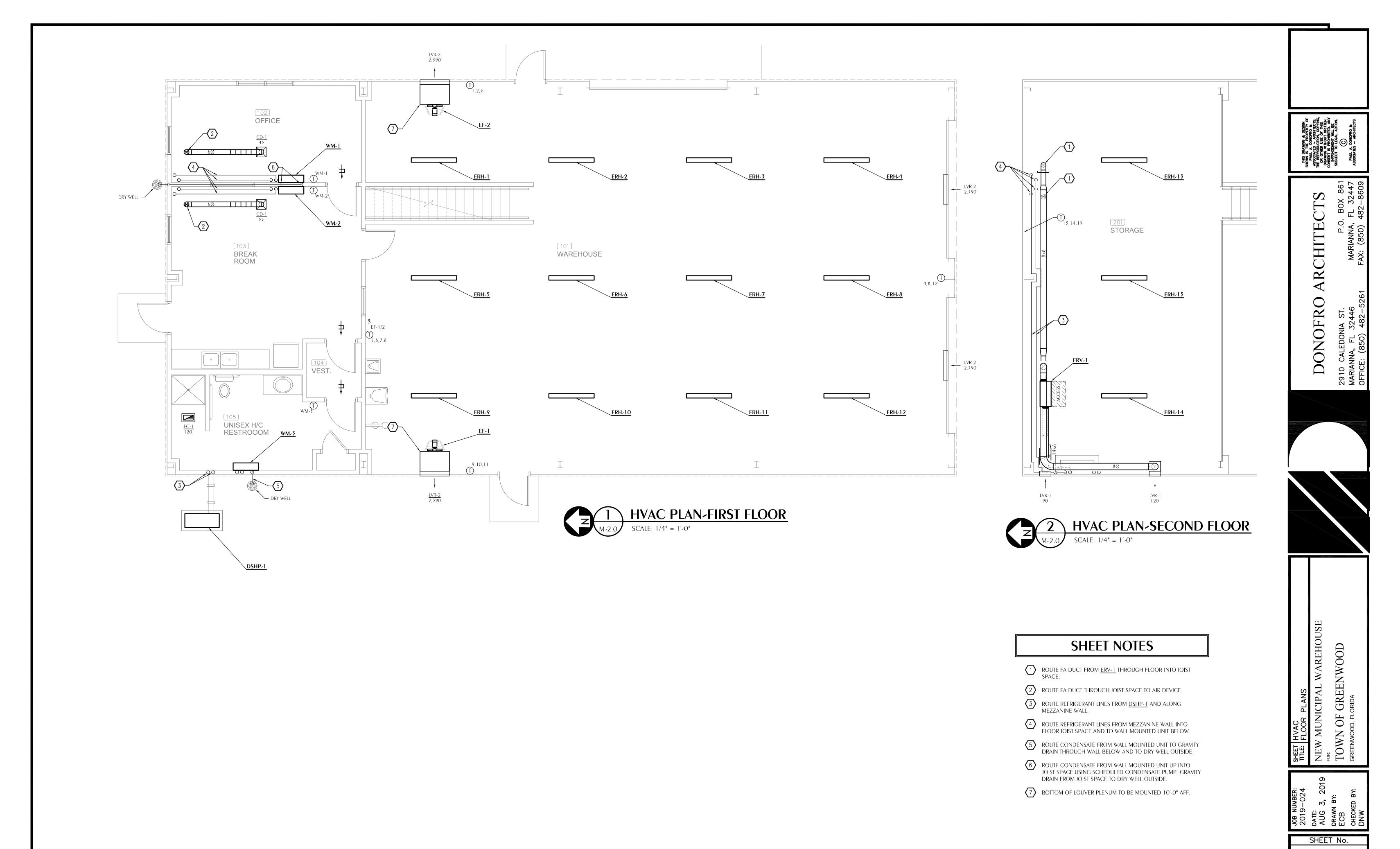
- PROVIDE BACK DRAFT DAMPER 3. PROVIDE THERMAL OVERLOAD
- FAN SCHEDULE ELECTRICAL SONES/db BASIS OF MODEL CONTROL NOTES MOTOR POWER (IN. H20) (MAX.) DESIGN VOLTS/PHASE EF-1 | SIDEWALL | 2,390 | 1,028 | 0.15 | 3/4 HP 7.3 | GREENHECK | SE1-18-429-VG SWITCH 115/1 1,2,3,4,5,6 EF-2 | SIDEWALL | 2,390 | 1,028 | 0.15 | 3/4 HP 7.3 | GREENHECK | SE1-18-429-VG 115/1 1,2,3,4,5,6
 - 4. PROVIDE DIRECT DRIVE FAN PROVIDE VIBRATION ISOLATION



RCHITE

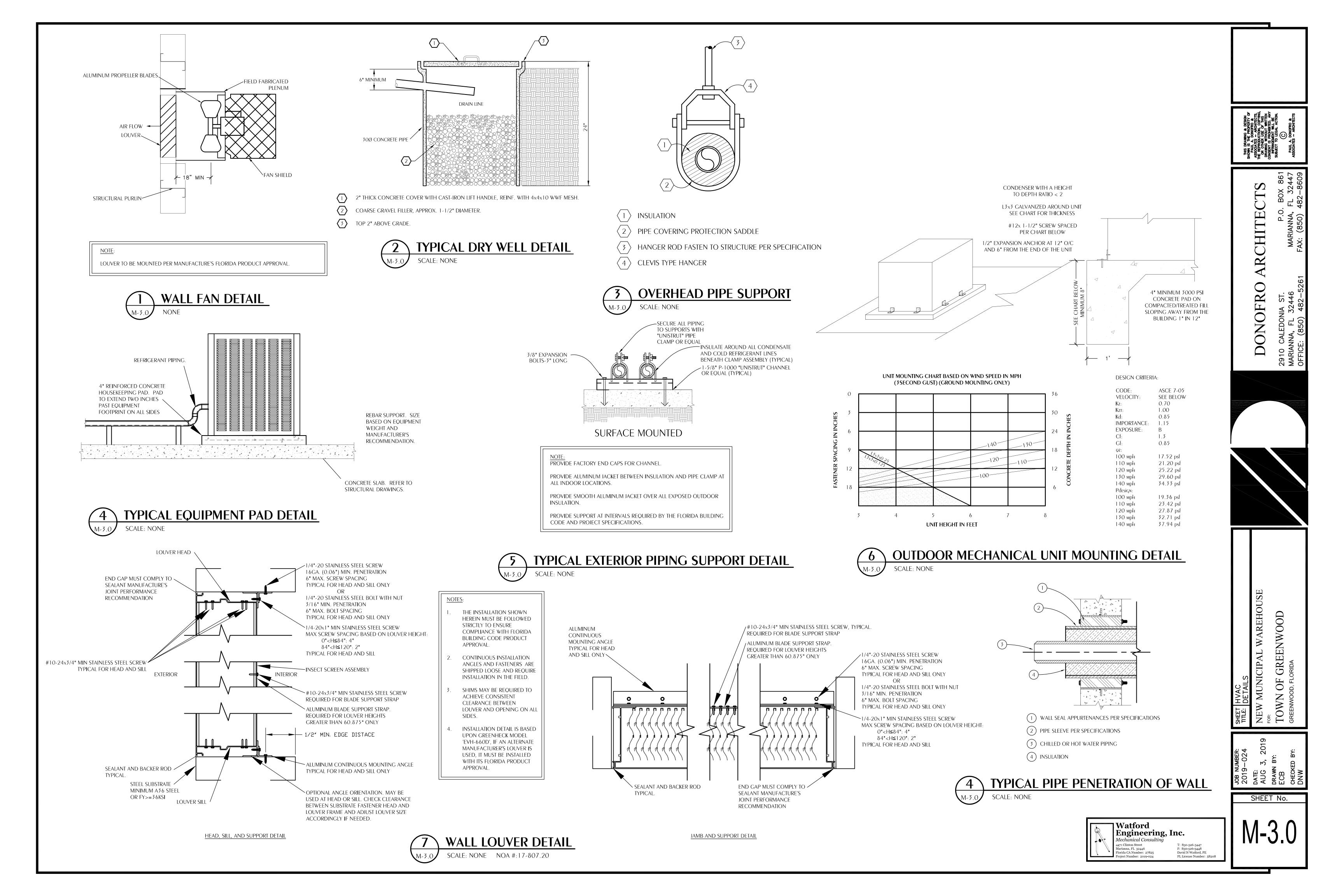
ONOFR

ND NOTES, WAREHOUSE GREENWOOD

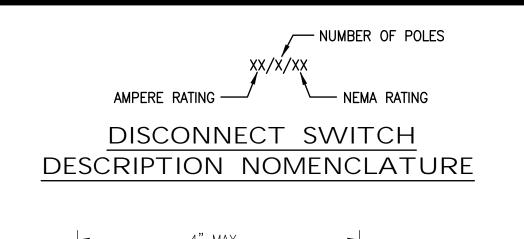


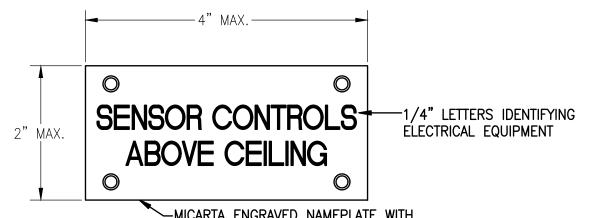
Watford
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4471 Clinton Street
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Project Number: 2019-024

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PL License Number: 58208



- A. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT SIZE AND LOCATION OF EQUIPMENT WHICH IS FURNISHED BY OTHERS AND CONNECTED BY ELECTRICAL.
- B. RECEPTACLES, SWITCHES AND COVERPLATES COLOR SHALL BE SELECTED BY THE ARCHITECT FROM STANDARD COLORS.
- C. VERIFY ALL DOOR SWINGS WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGHING-IN WALL FOR SWITCHES.
- D. LOCATION OF LIGHTING FIXTURES, DISCONNECT SWITCHES, ETC. FOR MECHANICAL EQUIPMENT/ROOM SHALL BE COORDINATED WITH FINAL MECHANICAL EQUIPMENT LOCATION TO PROVIDE NATIONAL ELECTRIC CODE REQUIRED ACCESS SPACE.
- E. FINAL CONNECTION TO ALL MOTORS SHALL BE WITH FLEXIBLE CONDUIT CONNECTION.
- F. ALL EXIT AND EMERGENCY FIXTURES SHALL BE CONNECTED TO LIGHT CIRCUIT AHEAD OF LOCAL SWITCH.
- G. ALL PANELBOARDS. BACKBOARDS. TERMINAL CABINETS. ETC SHALL HAVE CUSTOM ENGRAVED MICARTA NAMEPLATE MECHANICALLY AFFIXED IDENTIFYING SYSTEM.
- H. PROVIDE GREEN GROUND CONDUCTOR IN ALL CIRCUITS SIZE PER N.E.C.
- I. ALL EXPOSED CONDUITS, BOXES, STRAPS AND HANGERS IN THE BUILDING SHALL BE PAINTED TO MATCH ADJACENT FINISH.
- J. GENERAL CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING ANY WORK, AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES. FAILURE TO DO SO INDICATES THAT THE CONTRACTOR ACCEPTS THE CONDITIONS AS THEY EXIST, AND SHALL PERFORM THE WORK REQUIRED AS SHOWN AND SPECIFIED.
- K. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND REVIEW THE MECHANICAL AND SPECIAL EQUIPMENT SUBMITTALS PRIOR TO SUBMITTING THE ELECTRICAL SUBMITTALS. ANY ELECTRICAL EQUIPMENT, CONDUIT, AND WIRE SIZE CHANGES RESULTING FROM THIS REVIEW SHALL ALSO BE SUBMITTED FOR APPROVAL
- L. COMPLY WITH ALL LOCAL CODE, LAWS, AND ORDINANCES APPLICABLE TO ELECTRICAL WORK, THE STATE BUILDING CODE AND THE NATIONAL ELECTRIC CODE. OBTAIN ALL PERMITS REQUIRED BY LOCAL ORDINANCES.
- M. OBTAIN ARCHITECTS APPROVAL OF ALL LIGHT FIXTURES, SWITCHES, RECEPTACLES, PANELBOARDS, ETC. PRIOR TO PURCHASING.
- N. THE ELECTRICAL WORK SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. ALL NOT SO INSTALLED SHALL BE REMOVED AND REPLACED AT NO COST TO THE OWNER.
- O. ALL WORK SHALL BE INSTALLED IN CONCEALED TYPE CONSTRUCTION. UNDERGROUND CONDUITS UP TO FIRST BOX IN CONCEALED CONSTRUCTION MAY BE SCH.40 PVC. EXTERIOR EXPOSED WORK SHALL BE I.M.C. BRANCH CIRCUIT CONDUIT RUN IN OPEN SPACES ABOVE CEILING OR IN WALLS MAY BE THINWALL (E.M.T.) CONDUIT 1/2" MIN. SIZE.
- P. ALL CONDUCTORS LESS THAN 100A. SHALL BE COPPER #12 & #10 SOLID, #8 AND LARGER STRANDED, #6 AND SMALLER TO BE TYPE THW, 600 VOLT INSULATION AND TYPE THW OR THHN FOR #4 AND LARGER. COMPACT SECTOR STRANDED ALUM. CONDUCTORS MAY BE USED FOR 100A. AND LARGER TERMINATIONS.
- Q. PROVIDE GROUNDING PER NATIONAL ELECTRIC CODE.
- R. THE CONTRACTOR SHALL LEAVE THE ENTIRE ELECTRICAL SYSTEM INSTALLED IN PROPER WORKING ORDER, AND SHALL REPLACE WITHOUT ADDITIONAL COST, ALL WORK OR MATERIAL WHICH MAY DEVELOP DEFECTS, (ORDINARY WEAR AND TEAR OR DAMAGE RESULTING FROM IMPROPER HANDLING EXCEPTED) WITHIN A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER.





NOT TO SCALE



-MICARTA ENGRAVED NAMEPLATE WITH BLACK LETTERS ON WHITE BACKGROUND, MECHANICALLY AFFIXED TO CEILING TILE OR WALL WITH BOLTS, NUTS AND WASHERS

ABOVE CEILING NAMEPLATE

NOT TO SCALE

PANEL -1/2" LETTERS 120/240 VOLTS--1/4" LETTERS 1 PHASE 3 WIRE

2-GANG JUNCTION BOX

-BOX MOUNTING

BRACKET EQUAL

TO STEEL CITY

EQUAL TO STEEL CITY

2G−3/4. —

18" AFF C/L

TYPICAL POWER ONLY

NOT TO SCALE

MICARTA ENGRAVED NAMEPLATE WITH WHITE LETTERS ON BLACK BACKGROUND, MECHANICALLY AFFIXED

TYPICAL ELECTRICAL EQUIPMENT NAMEPLATE

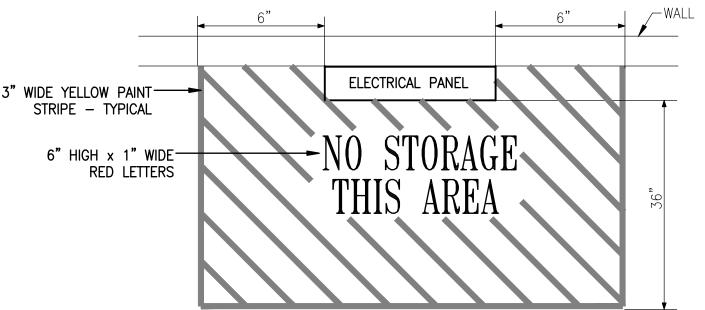
NOT TO SCALE

TYPICAL STUD

ATTACH TO

2-GANG BOX COVER WALL STUD

WITH 1-GANG RING EQUAL TO STEEL CITY



3" WIDE YELLOW PAINT-

TYPICAL STUD

EACH END WALL STUD

ATTACH TO

2-GANG BOX COVER

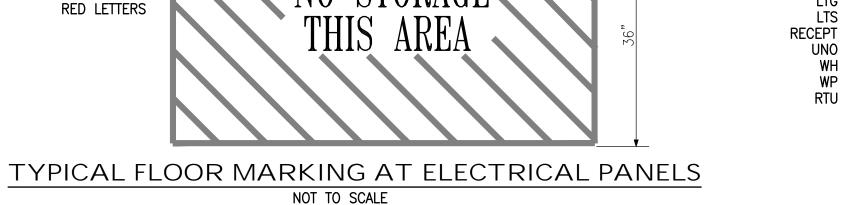
EQUAL TO STEEL CITY

WITH 1-GANG RING

#1-GC. (TYPICAL)—

WORKSTATION CABLE-

AND PLUG. (TYPICAL)



2-GANG JUNCTION BOX

TYPICAL STUD

EQUAL TO STEEL CITY

-2G-3/4.

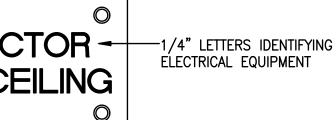
18" AFF C/L

TYPICAL POWER & COMMUNICATIONS

NOT TO SCALE

∽MICARTA ENGRAVED NAMEPLATE WITH BLACK LETTERS ON WHITE BACKGROUND, MECHANICALLY AFFIXED TO CEILING TILE OR WALL WITH BOLTS, NUTS AND WASHERS TYPICAL ELECTRICAL EQUIPMENT

ABOVE CEILING NAMEPLATE



ELECTRICAL EQUIPMENT

TYPICAL ELECTRICAL EQUIPMENT

ABBREVIATIONS

- AFF ABOVE FINISHED FLOOR EF — EXHAUST FAN
- GND GROUND CONDUCTOR GFI - GROUND FAULT PROTECTION
- LTG LIGHTING LTS - LIGHTS

—2-GANG JUNCTION BOX

EQUAL TO STEEL CITY

2G-3/4.

-BOX MOUNTING

BRACKET EQUAL

TO STEEL CITY

SSF-SB16

- RECEPT RECEPTACLE UNO - UNLESS NOTED OTHERWISE
- WH WATER HEATER
- WP WEATHERPROOF

RTU - ROOF TOP AIR CONDITIONER PHOTOCELL; TORK MODEL 2101

ELECTRICAL LEGEND

A-1 ADJACENT TO ARROW INDICATES HOMERUN OF CIRCUIT NUMBER 1 TO PANEL A: "B" INDICATES FIXTURE TYPE: MARKS ACROSS RACEWAY A-1 ADJACENT TO ARROW INDICATES HOMERON OF CIRCUIT NOMINER OF THE NUMBER OF #12 CONDUCTORS; UNLESS NOTED OTHERWISE NO MARKS INDICATES TWO #12 CONDUCTORS AND ONE #12 GREEN GROUND CONDUCTOR IN 1/2" CONDUIT (2 #12 & 1 #12 GND-1/2"C)

- CEILING FIXTURE
- WALL BRACKET FIXTURE
- 2' X 2' FIXTURE; CEILING MOUNTED; ARROW INDICATES LENS DIRECTION
- TWIN HEAD EMERGENCY BATTERY UNIT
- EXIT SIGN: CEILING MOUNTED: SHADED SECTION INDICATES LIGHTED FACE OF EXIT SIGN
- EXIT SIGN: BACK WALL MOUNTED: SHADED SECTION INDICATES LIGHTED FACE OF EXIT SIGN
- JUNCTION BOX; MOUNTED ABOVE CEILING
- JUNCTION BOX; MOUNTED FLUSH IN WALL WITH BLANK COVER
- DUPLEX RECEPTACLE; 125V; 20A; 3 POLE GND; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA 5-20R; HUBBELL SERIES HBL5352
- QUAD RECEPTACLE; 125V; 20A; 3 POLE GND; MT 18" AFF TO C/L; NEMA 5-20R; HUBBELL SERIES HBL5352
- DUPLEX RECEPTACLE: 125V; 20A; 3 POLE GND; HALF-CONTROLLED RECEPTACLE; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA 5-20R: HUBBELL SERIES BR20C1
- DUPLEX RECEPTACLE; 125V; 20A; 3 POLE GND; MT ABOVE COUNTER 46" MAX. TO TOP OF DEVICE; NEMA 5-20R; HUBBELL SERIES HBL5352
- DUPLEX RECEPTACLE: 125V: 20A: 3 POLE GND: GFI: MT ABOVE COUNTER 46" MAX. TO TOP OF DEVICE: NEMA GF-5-20R: HUBBELL SERIES GF5362
- LETTERS "WP" ADJACENT TO SYMBOL INDICATES GFI WEATHER RESISTANT RECEPTACLE WITH WEATHERPROOF COVER; PASS AND SEYMOUR WIUFC10S COVER/BOX.
- WALL SWITCH; 120V; 20A; 1 POLE; A.C. ONLY; MT 48" AFF TO C/L; HUBBELL SERIES HBL1221
- LOW VOLTAGE WALL SWITCH; MT 48" AFF TO C/L; REFER TO SPECS; SEE LIGHTING CONTROL DETAILS
- MOTOR CONTROL SWITCH; 600V; 30A; 2 POLE; A.C. ONLY; NEAR OR ON EQUIPMENT BEING SERVED; HUBBELL SERIES HBL7832D.
- VACANCY SENSOR POWER PACK; MOUNT ABOVE CEILING. SEE LIGHTING CONTROL DETAILS.
- LOW VOLTAGE VACANCY SENSOR; 360° DUAL-TECHNOLOGY TYPE; CEILING MOUNTED. SEE LIGHTING CONTROL DETAILS.
- PANEL; 120/240V; MT 72" AFF TO TOP
- MOTOR; FURNISHED BY OTHERS

RACEWAY INSTALLED EXPOSED

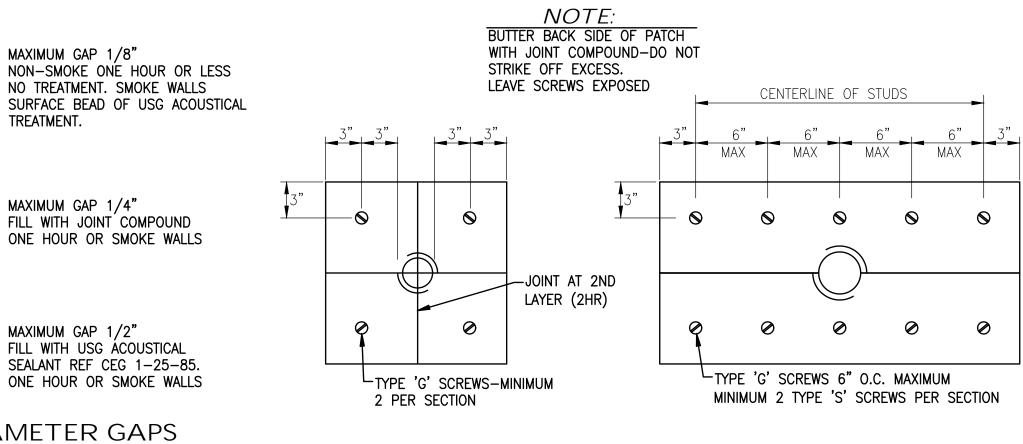
MAXIMUM GAP 1/8"

MAXIMUM GAP 1/4"

MAXIMUM GAP 1/2"

TREATMENT.

- EXHAUST FAN; FURNISHED BY OTHERS
- FUSED DISCONNECT SWITCH; AMP SIZE AS NOTED; FUSE SIZE PER EQUIPMENT NAMEPLATE DATA
- MAGNETIC STARTER; FURNISHED BY OTHERS
- RACEWAY INSTALLED CONCEALED IN WALLS AND/OR ABOVE CEILING
- "--- RACEWAY INSTALLED CONCEALED IN FLOOR SLAB AND/OR BELOW GRADE
- ► CAT 5e DATA CONDUCTOR; COORDINATE WITH DEVICE CONNECTION REQUIREMENTS.
- CONDUIT STUB UP WITH FLEXIBLE CONDUIT CONNECTION TO EQUIPMENT
- DATA SYSTEM WALL OUTLET WITH ONE(1) RJ-45 JACK AND COVERPLATE; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE;
- INSTALL 3/4"C WITH PULL-RIBBON UP INTO CEILING SPACE.
- DIGITAL TIMESWITCH WITH RESERVE POWER



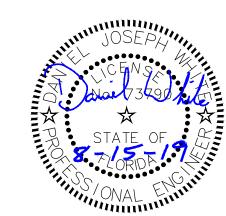


OPENINGS UP TO 3" DIA.

OPENINGS OVER 3" DIA.

WALL PENETRATIONS -APPLIES TO ALL CORRIDOR, SMOKE AND FIRE RATED WALLS NOT TO SCALE

Sheet List Table									
Sheet Number	Sheet Title								
E-1.0	LEGEND, NOTES and DETAILS								
E-2.0	SCHEDULES and POWER RISER								
E-2.1	LIGHTING CONTROLS AND SCHEDULES								
E-3.0	FIRST FLOOR POWER PLAN								
E-3.1	SECOND FLOOR POWER PLAN								
E-4.0	FIRST FLOOR LIGHTING PLAN								
E-4.1	SECOND FLOOR LIGHTING PLAN								







CHITE

X

OFR

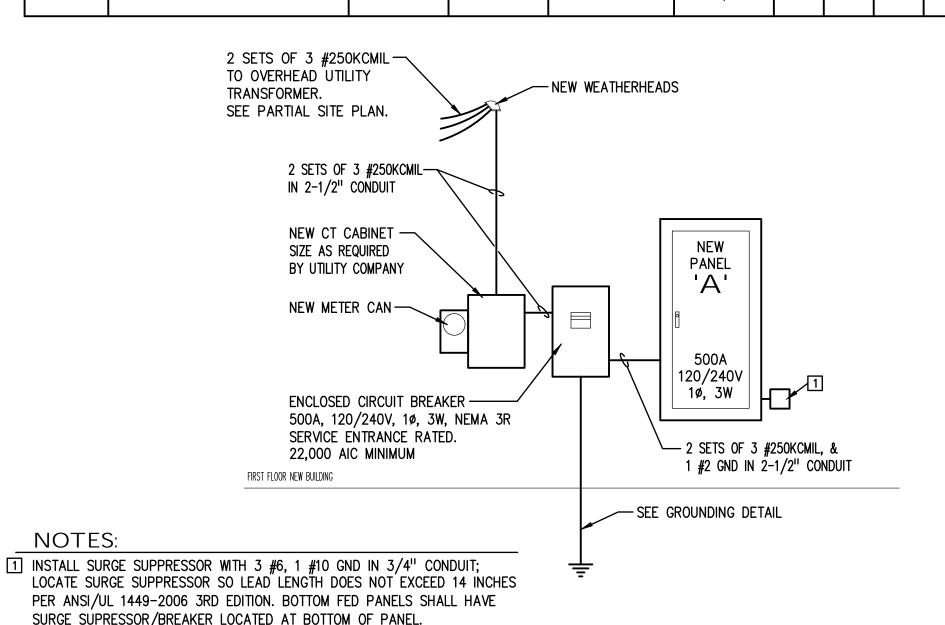
NO

WAREHOU GREENWOOD MUNICIPAL

NEW J FOR: TOWJ

	NEW PANEL	Voltage:	120/2	40V			Phase:	1¢ Wire: 3 Mounting: SURFACE	
		Mains:	500A	MLO				AIC Rating: 22,000	
	'A'				Ol	ptions:	BOLT-ON	N BREAKERS	
CKT NO.	SERVING	CONN LOAD			CKT POLE		CONN LOAD	SERVING	CK ⁷
1	MINI-SPLIT CONDENSER - DSHP-1	7188	40	2	2	15	300	MINI-SPLIT UNITS - CS-1, CS-2 & WM-1	2
3				_	_				4
5	AIR COMPRESSOR	4800	60	2	2	25	5010	WATER HEATER - EWH-1	6
7				_	-				8
	INFRARED HEATER — ERH—1	3750	20	2	2	20	3750	INFRARED HEATER — ERH—1	10
11				_	_				12
	INFRARED HEATER — ERH—1	3750	20	2	2	20	3750	INFRARED HEATER — ERH—1	14
15				_	_				16
	INFRARED HEATER — ERH—1	3750	20	2	2	20		INFRARED HEATER — ERH—1	18
19	NEDADED HEATED EDIT 4	7750		-	-		7750	INFRADED HEATED FOUL 4	20
	INFRARED HEATER — ERH—1	3750	20	2	2	20		INFRARED HEATER — ERH—1	2:
23				_	-				24
	INFRARED HEATER — ERH—1	3750	20	2	2	20		INFRARED HEATER — ERH—1	20
27				_					28
	INFRARED HEATER — ERH—1	3750	20	2	2	20		INFRARED HEATER — ERH—1	3(
31				_					3:
33	INFRARED HEATER — ERH—1	3750	20	2	2	20		INFRARED HEATER — ERH—1	34
35		7750		<u> </u>	<u> </u>				30
37 39	INFRARED HEATER — ERH—1	3750	20	2	2	20		SPARE	38
	LIGHTS – WAREHOUSE (NORTH)	860	20	1	1	20	 868	LIGHTS - WAREHOUSE (SOUTH)	4:
	LIGHTS - WAREHOUSE (NORTH)	64	20	1	1	20		LIGHTS - WAKEHOUSE (SOUTH)	4.
		157	20	1	_	20			4
	LIGHTS — RESTROOM EXHAUST FAN — EF-1	1294	20		1 1			LIGHTS — EXTERIOR EXHAUST FAN — EF—1	4
	RECEPT - EWC-1	720	20	1	1	20		RECEPT — REFRIGERATOR	5
	RECEPT - WAREHOUSE (EAST SIDE)	1080	20	1	1	20		RECEPT - WAREHOUSE (WEST SIDE)	5
	RECEPT - BREAK ROOM - KITCHEN	1200	20	1	1	20		RECEPT — OFFICE — EQUIPMENT	5.
	LIGHTS - 2ND FLOOR STORAGE	272	20	1	1	15		ENERGY RECOVERY VENTILATOR - ERV-1	5
	RECEPT — 2ND FLOOR STORAGE	1080	20	1	1	20		MICROWAVE — BREAK ROOM	5
	RECEPT - OFFICE	1080	20	1	1	20	900	RECEPT - BREAK ROOM	6
	RECEPT - RESTROOM	1200	20	1	1	20	300	RECEPT — TELECOM BACKBOARD	6
	SPARE		20	1	1	20		SPARE	6
	SPARE		20	1	1	20		SPARE	6
57	SPACE ONLY			1	1			SPACE ONLY	6
59	SPACE ONLY			1	1			SPACE ONLY	7
71 73	SPACE ONLY							SPACE ONLY	7
75 75	SPACE ONLY SPACE ONLY			1	1 1			SPACE ONLY SPACE ONLY	7
77	SPACE ONLY			1	1			SPACE ONLY	7
, , 79	SPACE ONLY			1	1			SPACE ONLY	8
B1	SPACE ONLY			1	2	60		SURGE SUPPRESSOR	8
83	SPACE ONLY			1	-				8
		20.50	2 1/4	,			7.4.4	TOTAL 11 100	•
	TOTAL CONNECTED	DLOAD: 90,506	O VA	/	240	37	7.1 A	TOTAL AMPS	

M	ECHANICAL E (VERIFY ALL EQUIPMEN								
EQUIPMENT DESIGNATION	DESCRIPTION	VOLTAGE	RATED LOAD AMPS	MAXIMUM CIRCUIT OVERCURRENT PROTECTION	PROTECTION SPECIFIED	HEATER KW	FAN HP	CFM	REMARKS
00.4	MINIT ODLIT LINIT	070\/ 44	0.44	4.5	45 /0	0.07	EDAGE	450	
CS-1	MINI-SPLIT UNIT	230V 1ø	0.44	15	15/2	0.03	FRACT	459	
CS-2	MINI-SPLIT UNIT	230V 1ø	0.44	15	15/2	0.03	FRACT	459	
WM-1	WALL MOUNT MINI-SPLIT UNIT	230V 1ø	0.15	15	15/2	0.03	FRACT	210	
DSHP-1	CONDENSING UNIT	230V 1ø	29	44	40/2	_	FRACT		
FF 4	EVILLED FAN	4451/44	•	00	00 /4		7/4	0700	LAANUAL OWITCHED
EF-1	EXHAUST FAN	115V 1ø	9	20	20/1		3/4	2390	MANUAL SWITCHED
EF-2	EXHAUST FAN	115V 1ø	9	20	20/1	_	3/4	2390	MANUAL SWITCHED
					/-				
ERH-1	INFRARED HEATER	240V 1ø	12.5	20	20/2				
ERV-1	ENERGY RECOVERY VENTILATOR	120V 1ø	1.3	15	15/1	_	0.1	130	
EWC	WATER COOLER	115V 1ø	5	20	20/1	_	FRACT	_	
EWH-1	WATER HEATER	240V 1ø	16.7	25	25/2	4000	_	_	NON-SIMULTANEOUS
					,				
	AIR COMPRESSOR	230V 1ø	28	60	60/2		5		

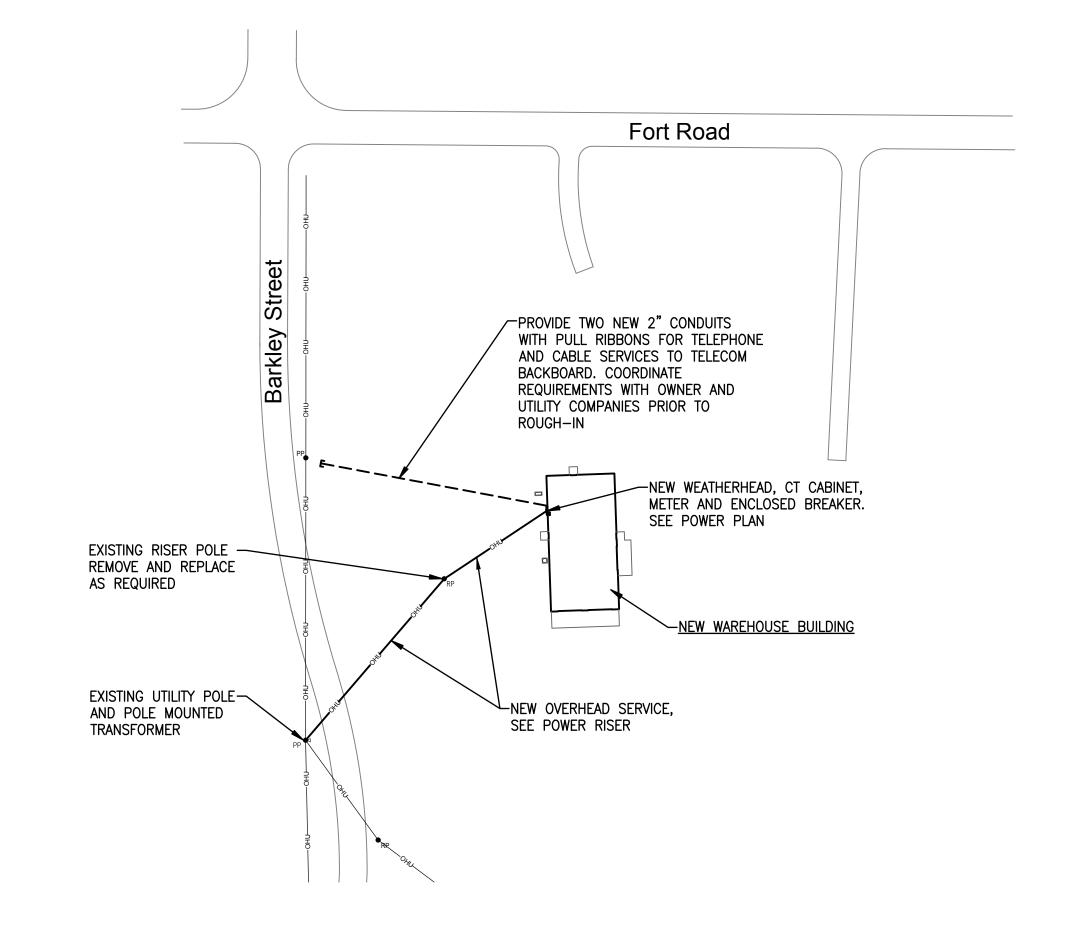


SINGLE LINE POWER RISER NOT TO SCALE

NOTES:

5 FT OF ENTRANCE SEPARATELY DERIVED SYSTEM OVERCURRENT DEVICE SIZE. BUILDING -GAS PIPE AND OTHER STRUCTURAL METAL PIPING SYSTEMS STEEL-IN AND ON THE STRUCTURE | 120/240 VOLT | SERVICE ENTRANCE -MAIN GROUNDING NEUTRAL GROUND ELECTRODE EQUIPMENT GROUND BAR - #4 W/600V INSULATION | 120/240 VOLT | POWER PANELBOARD GROUND NEUTRAL TELECOMMUNICATIONS BACKBOARD 7'-6'' 7'-6'' MIN. MIN. 120/240V GROUNDING SYSTEM DIAGRAM

METAL WATER PIPE WITHIN-



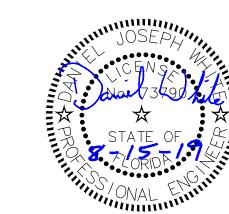
PARTIAL SITE PLAN

GENERAL NOTES

- 1 BOND HOT AND COLD WATER PIPING SYSTEMS.
- 2 CONDUCTOR SIZES SHOWN ARE MINIMUM AND MAY BE LARGER THAN THE MINIMUM SIZES REQUIRED BY NEC.
- 3 INSTALL GROUNDING CONNECTIONS TO BUILDING STRUCTURE AND WATER PIPES AT LOCATIONS THAT ARE VISIBLE AND ACCESSIBLE FOR INSPECTION, MAINTENANCE, AND TESTING.
- 4 INSTALL AN INSULATED THROAT GROUNDING BUSHING ON EACH METALLIC SERVICE ENTRANCE CONDUIT. BOND TO GROUND BUS USING CONDUCTOR THAT IS SIZED BASED ON NEC TABLE 250-66 USING THE SERVICE PHASE CONDUCTOR SIZE.
- 5 INSTALL AN INSULATED THROAT GROUNDING BUSHING ON EACH METALLIC FEEDER CONDUIT. BOND TO GROUND BUS USING CONDUCTOR THAT IS SIZED BASED ON NEC TABLE 250-122 USING THE FEEDER CIRCUIT OVERCURRENT DEVICE SIZE OR THE

KEYNOTES

- ① INSTALL GROUNDED (NEUTRAL) CONDUCTOR SAME SIZE AS THE LARGEST PHASE CONDUCTOR IF THE LINE-TO-NEUTRAL LOAD EXCEEDS 5% OF THE CONNECTED LOAD. IF NEUTRAL LOAD IS SMALLER, INSTALL THE NEC MINIMUM GROUNDED CONDUCTOR.
- ② INSTALL GROUNDING ELECTRODE CONDUCTOR, SIZED BASED ON NEC TABLE 250-66 USING THE SERVICE PHASE CONDUCTOR SIZE, BUT NOT SMALLER THAN NO 4.
- ③ INSTALL EQUIPMENT GROUNDING CONDUCTOR SIZED BASED ON NEC TABLE 250-122 USING THE FEEDER OVERCURRENT DEVICE SIZE.
- 4 16 FOOT MINIMUM X 3/4" DIAMETER COPPER CLAD STEEL SECTIONAL DRIVEN GROUND ROD.
- ⑤ INSTALL BONDING JUMPER WIRE THAT IS SIZED BASED ON NEC TABLE 250-66 OR 250.28(D)(1) USING THE SERVICE OR SEPARATELY-DERIVED SYSTEM PHASE PHASE CONDUCTOR SIZE.
- (6) INSTALL A CONCRETE-ENCASED MAIN GROUNDING ELECTRODE IN THE BUILDING FOUNDATION PER NEC ARTICLE 250.52 (A) (3).
- ① BOND EACH PERIMETER STRUCTURAL STEEL COLUMN TO THE CONCRETE-ENCASED MAIN GROUNDING ELECTRODE. USE COMPRESSION CONNECTORS THAT MEET IEEE 837 REQUIREMENTS OR USE EXOTHERMIC WELDS.
- (8) INSTALL A "MAIN GROUND ELECTRODE GROUND BAR" FOR SINGLE POINT GROUNDING. LOCATE AT AN ACCESSIBLE POINT NEAR THE SERVICE ENTRANCE EQUIPMENT. MAKE CONNECTIONS TO THE GROUND ELECTRODE CONDUCTOR USING IRREVERSIBLE CONNECTORS OR EXOTHERMIC WELDS. MAKE OTHER CONNECTIONS TO THE GROUND BAR USING TWO-HOLE COMPRESSION SPADE LUGS THAT MEET IEEE 837 REQUIREMENTS. LABEL EACH CONNECTION TO THE GROUND BAR





ARCHITE

DONOFRO

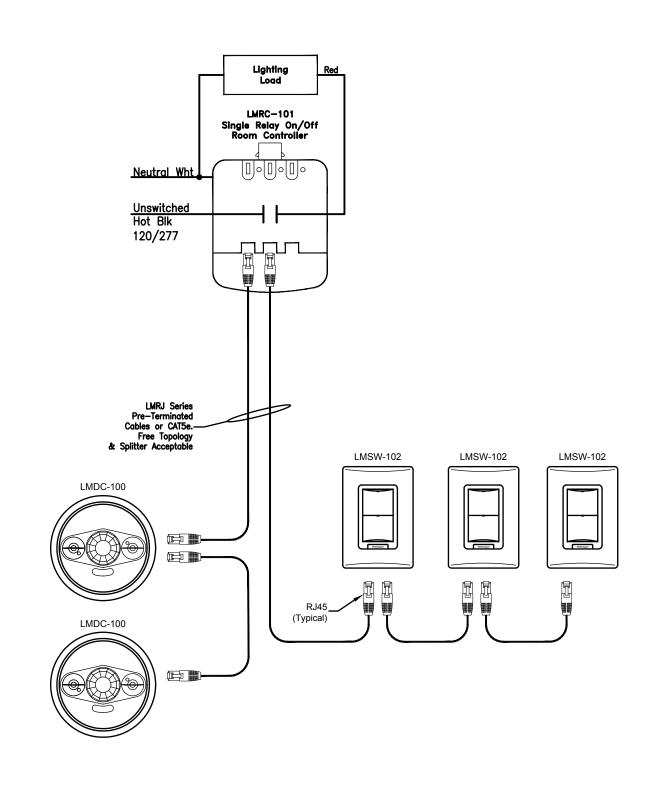
S AND POWER RIS L WAREHOUSE

GREENWOOD MUNICIPAL OF NEW MI FOR: TOWN

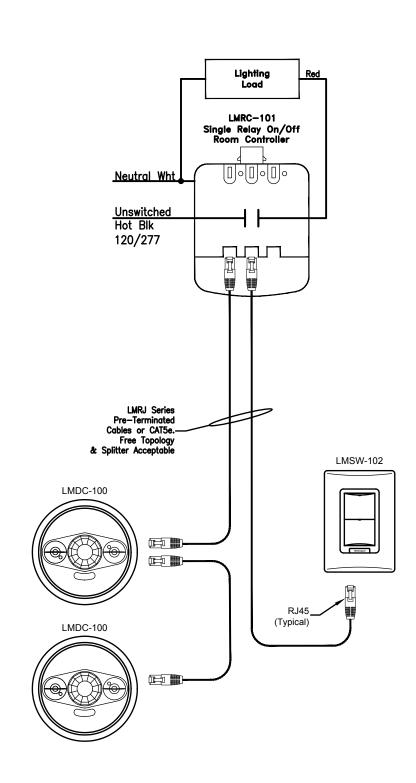
M – 20B N M – 20 DATE: AUG DRAWN BS

SHEET No.

NOT TO SCALE



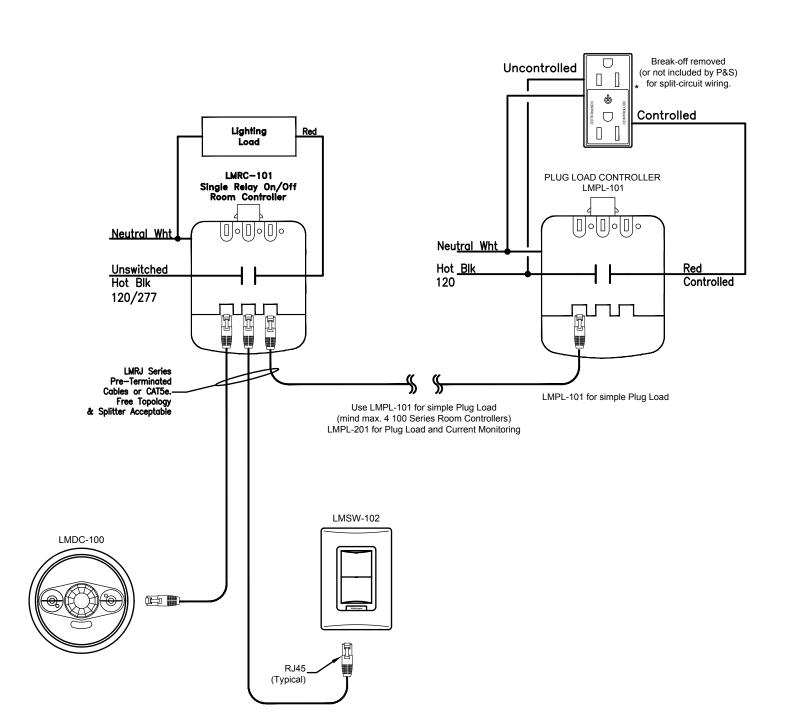
WAREHOUSE AREA
LIGHTING (SWITCHING) CONTROL
WITH OCC SENSOR
(NON-DIMMING)
NOT TO SCALE



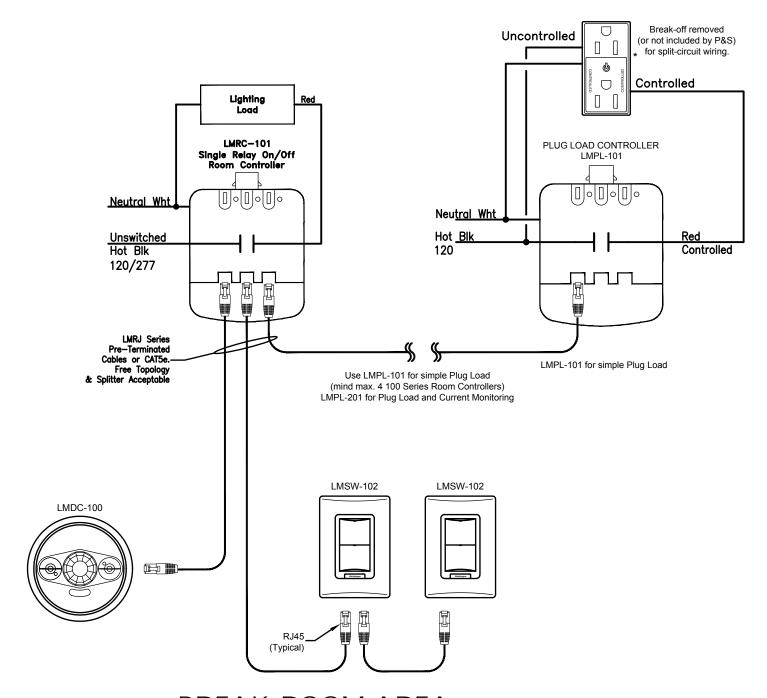
WAREHOUSE STORAGE AREA
LIGHTING (SWITCHING) CONTROL
WITH OCC SENSOR
(NON-DIMMING)
NOT TO SCALE

			L	I G H T	$\frac{1}{N}$	GFLX	K T U R	ESCHE	DULE	
Project: 1962	Job Name: NEW MUNICIP	AL WAREHOUSE for the TOWN of GR	REENWOOD							
Luminaire Designation	Manufacturer	Catalog Number	Connected Voltage	Luminaire Load (va)	Lamping Source	Color Rendering Index (CRI)	Kelvin Temperature	Mounting	Comments	Luminaire Equals
"BP"	BEGHELLI	PACO-T20-AT	120V	3.2W	LED	n/a	n/a	BACK WALL	ADJUSTABLE TWIN HEAD EMERGENCY BATTERY LIGHT, SELF DIAGNOSTIC / SELF TESTING, 5 YEAR FULL WARRANTY	BASED ON ENGINEER'S APPROVAL IS REQUIRED
"DL"	GOTHAM	EVO 40/20 4WR MD LSS 120 TRW (NON-DIMMING)	120V	23.5W	LED	80-CRI	4000	CEILING RECESSED	4" RECESSED LED DOWNLIGHT, WITH HOUSING AND TRIM, 2000 LUMENS, 120V	BASED ON ENGINEER'S APPROVAL IS REQUIRED
"DS"	GOTHAM	EVO4SH 40/20 4DFRAMF SMO 120 (NON-DIMMING)	120V	29.8W	LED	80-CRI	4000	CEILING RECESSED	4" RECESSED LED DOWNLIGHT, WITH HOUSING AND TRIM, 2000 LUMENS, SHOWER LOCATION,	BASED ON ENGINEER'S APPROVAL IS REQUIRED
"L22"	H. E. WILLIAMS	PTS-2 2-L38/840-RA-DRV-120	120V	32W	LED	80-CRI	4000	CEILING SURFACE	2' x 2' SHALLOW SURFACE LED FIXTURE, 3800 LUMENS, 120V	BASED ON ENGINEER'S APPROVAL IS REQUIRED
"L6"	MARK ARCHITECTURAL	SL6L LOP 6FT RLP FL 80CRI 40K 900LMF NODIM 120	120V	48W	LED	80-CRI	4000	CEILING RECESSED	6" x 6' RECESSED LINEAR LED DOWNLIGHT, WITH HOUSING AND TRIM, 5400 LUMENS, 120V	BASED ON ENGINEER'S APPROVAL IS REQUIRED
"LS"	H. E. WILLIAMS	96-4-L81/840-DCL-SSCMB- SS LATCH-DRV-120	120V	65W	LED	80-CRI	4000	CEILING CHAIN HUNG	4' LED ENCLOSED INDUSTRIAL FIXTURE, VAPOR TIGHT, GASKETED, CEILING SUSPENDED, STAINLESS STEEL LATCHES, 8100 LUMENS, 120V	BASED ON ENGINEER'S APPROVAL IS REQUIRED
"LV"	H. E. WILLIAMS	EGL2-4-L145/840-HIA- SSMRB-SS LATCH-DRV-120	120V	142W	LED	80-CRI	4000	CEILING CHAIN HUNG	4' LED ENCLOSED INDUSTRIAL FIXTURE, VAPOR TIGHT, GASKETED, CEILING SUSPENDED, STAINLESS STEEL LATCHES, 14,600 LUMENS, 120V	BASED ON ENGINEER'S APPROVAL IS REQUIRED
"WB"	H. E. WILLIAMS	WPM-L8/750-120	120V	11W	LED	70-CRI	5000	BACK WALL 7'-8" AFF	MINI WALL PACK FIXTURE, EXTERIOR, WET LOCATION, 120V	BASED ON ENGINEER'S APPROVAL IS REQUIRED
"X"	BEGHELLI	ATX-SA-LR1-W-AT	120V	2W	LED	n/a	n/a	BACK WALL ABOVE DOOR	LED EXIT SIGN, SINGLE SIDED WHITE FACE, EMERGENCY BATTERY BACK-UP, SELF TESTING, WALL MOUNTED, 5 YEAR WARRANTY, 120V	BASED ON ENGINEER'S APPROVAL IS REQUIRED
"XC"	BEGHELLI	ATX-SA-LR1-U-AT	120V	2W	LED	n/a	n/a	CEILING MOUNTED	LED EXIT SIGN, SINGLE SIDED WHITE FACE, EMERGENCY BATTERY BACK-UP, SELF TESTING, CEILING MOUNTED, 5 YEAR WARRANTY, 120V	BASED ON ENGINEER'S APPROVAL IS REQUIRED

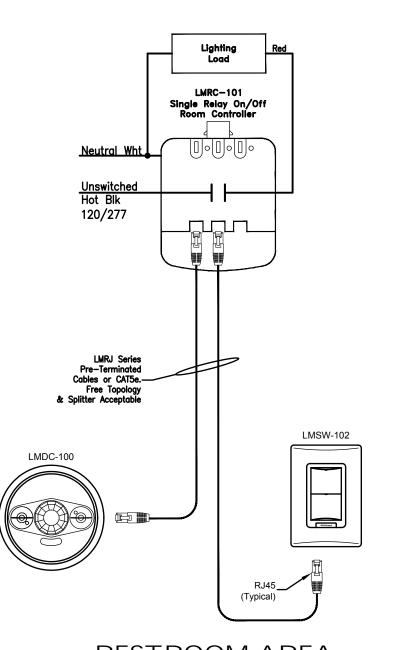
Light	ting Spa	ce an	d Zones		Lighting Control Matrix								Low Voltage Switch Matrix (Button Labels to be designated by owner during installation)													
		고 강 ZONE OF CO			CONTROL SCENARIOS								CONNECT TO LIGHTING CONTROL PANEL ROOM CONTROL													
Space Type	Room Number	1 ~	Description	Designator	Manual On	Manual Off	Dimming	Multi-Level Control	Timeclock On	Timeclock Off	Occupancy Sensor On	Vacancy Sensor Off	Daylight Harvesting	Photo Sensor On	Fire Alarm System Override to On	% ₽	SL1 (1-Button)	SL2 (2-Button)	SL3 (3-Button)	SL4 (4-Button)	SL5 (5-Button)	SL6 (6-Button)	SLa (2-Button)	SLb (4-Button)	SLc (6-Button)	Remarks
WAREHOUSE - SOUTH END	101				Х	Х					Х	Х											Х			
WAREHOUSE- NORTH END	101				Х	Х					Х	Х											Х			
OFFICE	102	Х			Х	Х					Х	Х											Х			
BREAK-ROOM	103	Х			Х	Х					Х	Х											Х			
VESTIBULE	104										Х	Х														
RESTROOM	105				Х	Х					Х	Х											Х			
STORAGE	201				Х	Х					Х	Х											Х			
Exterior Security Lighting	n/a								Х	Х				X												



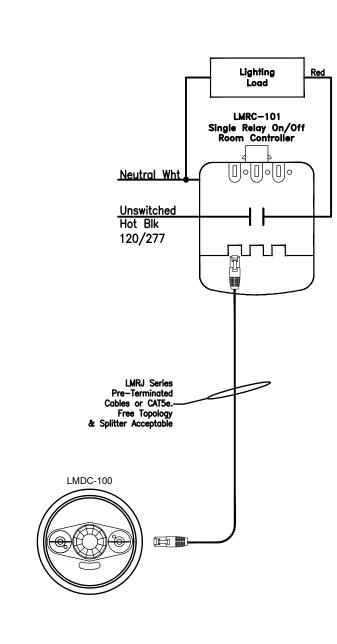
OFFICE AREA
LIGHTING (SWITCHING) CONTROL
WITH OCC SENSOR
AND SWITCHED RECEPTACLES
(NON-DIMMING)
NOT TO SCALE



BREAK-ROOM AREA
LIGHTING (SWITCHING) CONTROL
WITH OCC SENSOR
AND SWITCHED RECEPTACLES
(NON-DIMMING)
NOT TO SCALE



RESTROOM AREA
LIGHTING (SWITCHING) CONTROL
WITH OCC SENSOR
(NON-DIMMING)
NOT TO SCALE



VESTIBULE AREA
LIGHTING CONTROL
WITH OCC SENSOR
(NON-DIMMING)
(NON-SWITCHING)
NOT TO SCALE

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Valton Beach, Florida, 32548
il: office@hgengineers.com
50.243.6723 Fax: 850.664.5420
ithorization No.00006680
topher A. Garick; FL. PE No.53924
M. Humber; FL. PE No.13870



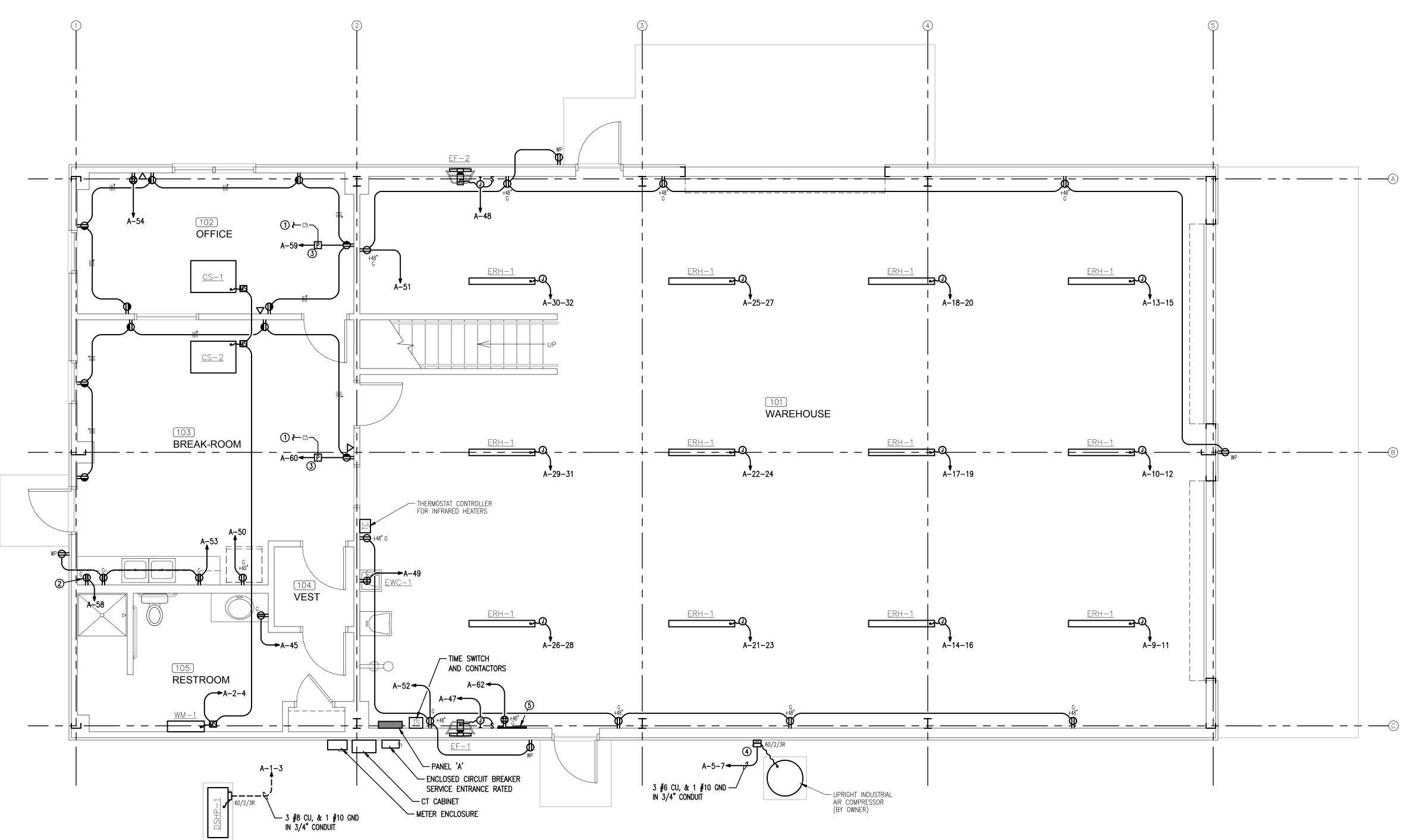
SHEET No.

SHEET | LIGHTING CONTROLS AND S | NEW MUNICIPAL WAREHOUSE

TOWN OF GREENWOOD

ARCHITE

DONOFRO



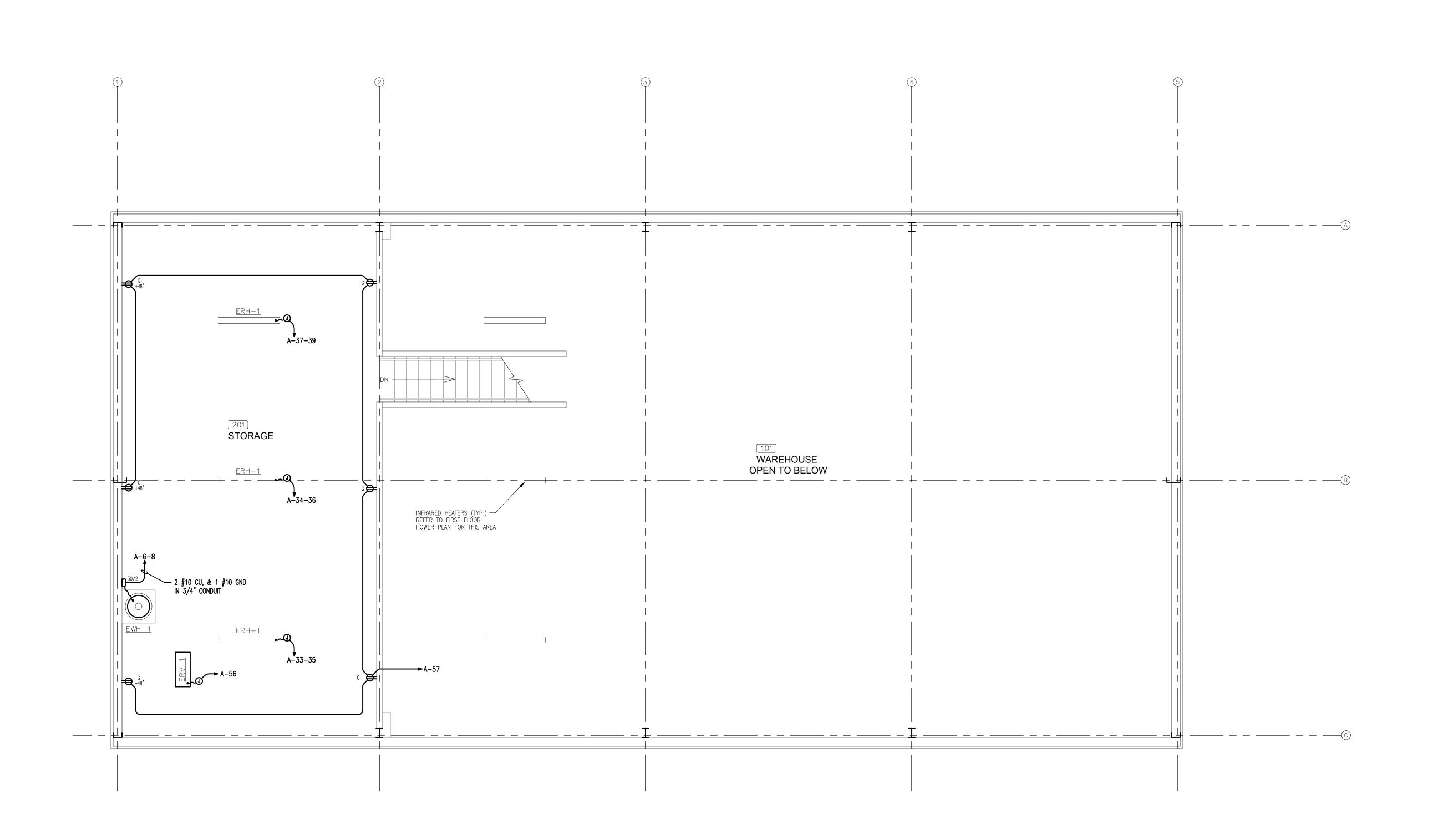
SHEET FIRST FLOOR POWER PLAN
NEW MUNICIPAL WAREHOUSE
FOR:
TOWN OF GREENWOOD
GREENWOOD, FLORIDA

SHEET No.

HG Engineers
142 Eglin Parkway SE
Fort Walton Beach, Florida, 32548
E-mail: office@hgengineers.com
Ph: 850.243.6723 Fax: 850.664.5420
Fl. Authorization No.00006680 Christopher A. Garick; FL. PE No.53924
Philip M. Humber; FL. PE No.13870
Thomas A. Alexander; FL. PE No.73172
Daniel J. White; FL. PE No.73790

NOTES:

- ① CONNECT TO RELAY POWER PACK INDICATED ON LIGHTING PLAN. REFER TO LIGHTING PLAN FOR LOCATION ABOVE CEILING.
- ② COORDINATE RECEPTACLE LOCATION FOR MICROWAVE WITH OWNER.
- (3) LOCATE POWER PACK IN CEILING, TO BE ACCESSED FROM LOCKABLE METAL ACCESS HATCH. REFER TO LIGHTING PLANS.
- (4) COORDINATE POWER REQUIREMENTS WITH ACTUAL AIR COMPRESSOR SYSTEM PROVIDE BY OWNER.
- (5) TELECOM BACKBOARD, 2 FT \times 2 FT \times 3/4" THICK, EXTERIOR PLYWOOD. PAINT WITH TWO COATS OF FIRE RETARDANT PAINT. INSTALL ONE #6 COPPER GROUND CONDUCTOR IN 3/4" CONDUIT TO BUILDING GROUND, LEAVE 4 FT OF SLACK CONDUCTOR AT BACKBOARD. STUB-OUT TWO 2" CONDUITS WITH PULL-RIBBONS TO LOCATION INDICATED ON SITE PLAN.





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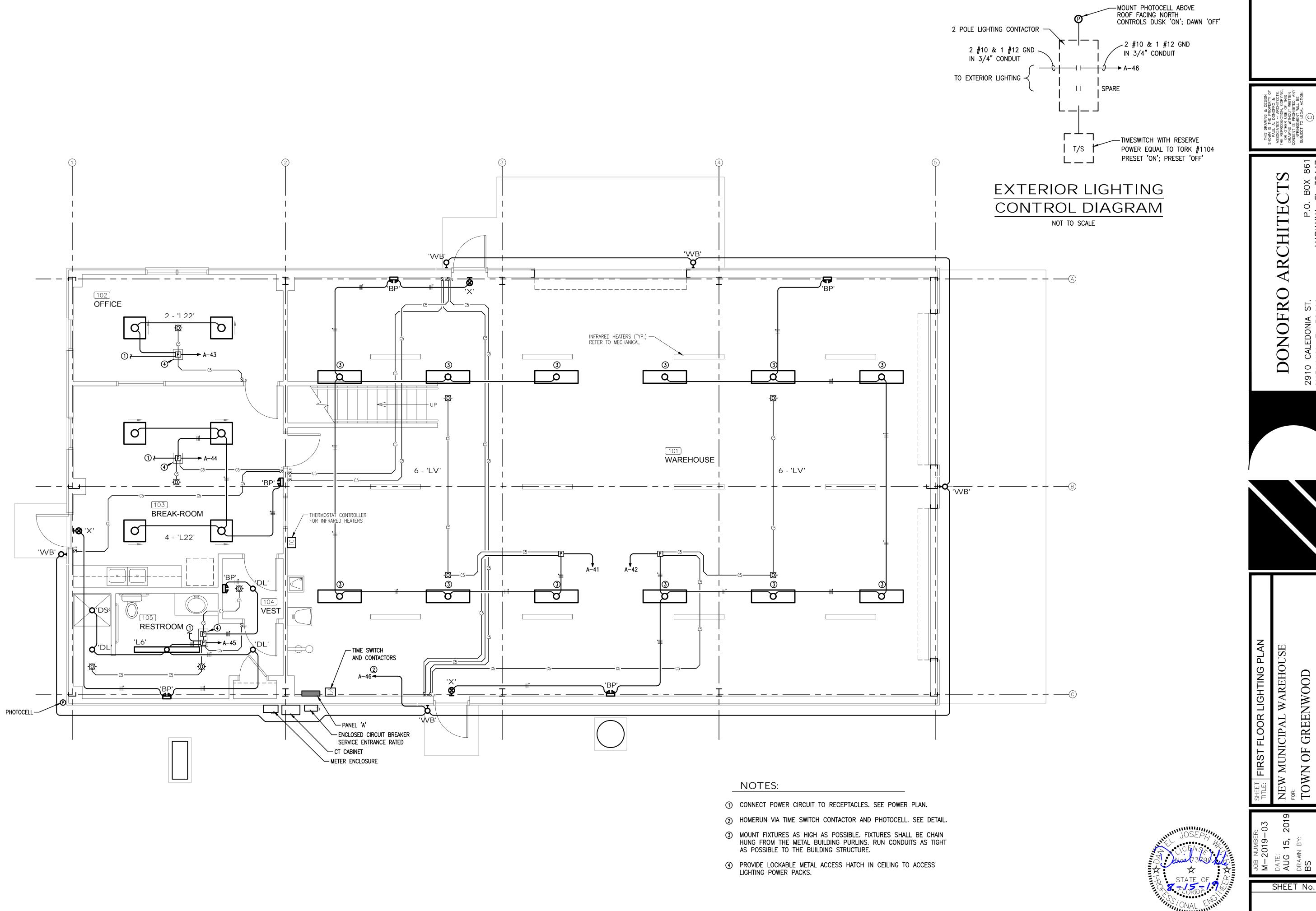
SHEET SECOND FLOOR POWER PLAN NEW MUNICIPAL WAREHOUSE FOR:

TOWN OF GREENWOOD GREENWOOD

SHEET No. HG Engineers
142 Eglin Parkway SE
Fort Walton Beach, Florida, 32548
E-mail: office@hgengineers.com
Ph: 850.243.6723 Fax: 850.664.5420
Fl. Authorization No.00006680

Christopher A. Garick; FL. PE No.53924
Philip M. Humber; FL. PE No.13870
Thomas A. Alexander; FL. PE No.73172
Daniel J. White; FL. PE No.73790





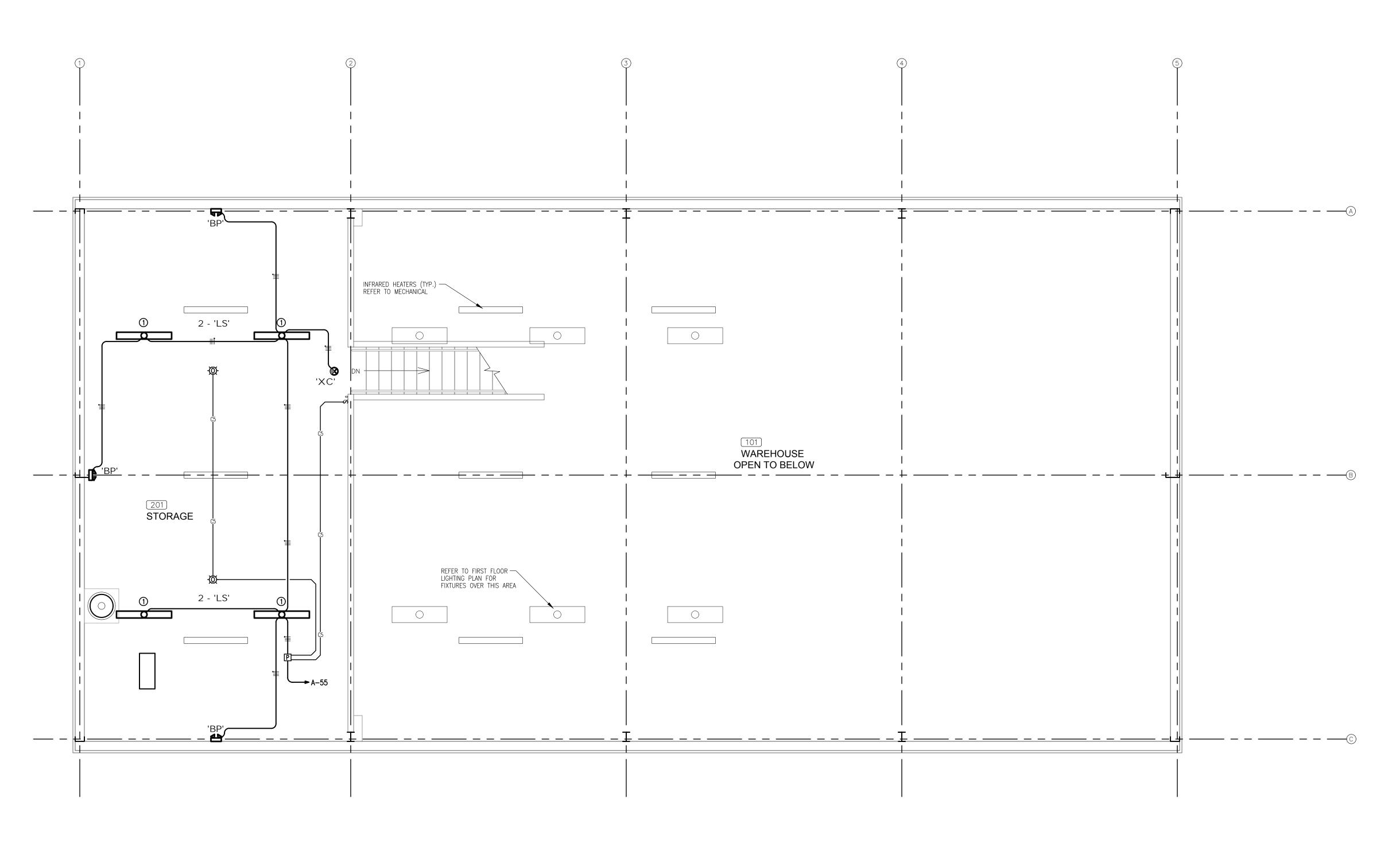
FIRST FLOOR LIGHTING PLAN

1/4" = 1'-0"

0
2'
4'
8'

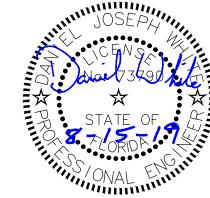
HG Engineers
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Fort Walton Beach, Florida, 32548
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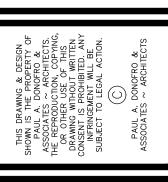
NOTES:

① MOUNT FIXTURES AS HIGH AS POSSIBLE. FIXTURES SHALL BE CHAIN HUNG FROM THE METAL BUILDING PURLINS. RUN CONDUITS AS TIGHT AS POSSIBLE TO THE BUILDING STRUCTURE.









P.O. BOX 861
MARIANNA, FL 32447

SDONIA ST.

EL 3246

MARIA

SHEET SECOND FLOOR LIGHTING PLAN

NEW MUNICIPAL WAREHOUSE
FOR:

TOWN OF GREENWOOD
GREENWOOD, FLORIDA

JOB NUMBER:
M-2019-03

DATE:
AUG 15, 2019

DRAWN BY:
BS