RFQ 2018-011

DESIGN/BUILD CRITERIA PACKAGE

for

PARKS PRE-FABRICATED BUILDINGS PROJECT

CITY OF MARGATE
Purchasing Division
Spencer L. Shambray, CPPB
Purchasing Manager
5790 Margate Boulevard
Margate, FL 33063
(954) 935-5346
purchase@margatefl.com

TECHNICAL CONTACT:
CHEN MOORE AND ASSOCIATES
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Vice President – Operations
500 West Cypress Creek Road - Suite 630
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SUBMISSION DATE: TUESDAY, APRIL 10, 2018

SUMBISSION TIME: 11:00 A.M.

ALL RFQ SUBMISSIONS MUST BE RECEIVED BY THE PURCHASING DIVISION PRIOR TO THE DATE AND TIME SPECIFIED ABOVE

Proposals received prior to the date and time above will be considered. Proposals received *after* the date and time above will not be considered and will be returned to the firm(s) unopened.

REQUEST FOR QUALIFICATIONS (RFQ) 2018-011
PARKS PRE-FABRICATED BUILDINGS

I. STATEMENT OF WORK: The City of Margate intends to retain a qualified, competent, and licensed firm to provide the design/build services required for the installation of two pre-fabricated building structures within existing public parks in the City of Margate. A pre-fabricated building structure with space for restrooms and storage will be installed within the Margate Marina Park (also known as Veteran's Memorial Park), which is located at 7044 NW 1st Street. A pre-fabricated building structure with space for restrooms, concessions, and storage will be installed within the Southeast Park, which is located at 655 SW 50th Avenue. (See "Attachment A" – Design/Build Criteria Package for full details)

II. SCOPE OF WORK:

Successful Offeror, hereinafter referred to as the Offeror, shall enter into an Agreement with the City of Margate, Florida, hereinafter referred to as the City, for the purpose of the Design/Build of the Parks Pre-Fabricated Building Project. The City of Margate has purchased two pre-fabricated building structures that need to be installed within two existing public parks. One pre-fabricated building structure with space for restrooms and storage will be installed within the Margate Marina Park at 7044 NW 1st Street as displayed within Exhibit 1 – Marina Park Location Map. One pre-fabricated building structure with space for restrooms, concessions, and storage will be installed within the Southeast Park at 655 SW 50th Avenue as displayed within Exhibit 2 – Southeast Park Location Map. This project includes any site investigation, design document development (design plans, design details, product specifications, and cost estimating), regulatory permitting, and construction within these City parks in accordance with the terms, conditions, and specifications contained in this Request for Qualification (RFQ).

Offerors are requested to provide all necessary professional services, documentation, labor, equipment, materials, insurance, and incidentals required for the design/build of the Parks Pre-Fabricated Building Project within the City of Margate. The information contained in the Design Criteria Package is the minimum that potential proposers must address in their responses to the Request for Proposals. Potential proposers shall consider all applicable regulatory requirements, industry standards, best practices regarding design and construction standards, and past professional experience in their responses to the Request for Qualifications. (See "Attachment A" – Design/Build Criteria Package for full details)

III. SUBMISSION CONTENT:

The CITY has prepared the following instructions for the compilation of the RFQ in order to minimize costs and response times and to ensure review and evaluation of all applicants in a consistent manner. For that reason, each section of the RFQ response is subject to specific page limitations, as stated in these instructions. In addition the paper size limit is 8 ½" x 11", the minimum font size is ten point (10-pt) and lines of text may not be less than single spaced.

Each RFQ response shall include the following:

Transmittal Letter – This is to be a two page document to transmit the R.F.Q. package. The letter shall provide the name, title, address and telephone number of the official corporate contact, and an alternate. These individuals shall have the authority to bind the consulting firm and shall be available to attend appropriate meetings. (two page, single sided maximum).

Corporate History – Briefly describe the corporate history of the company. Also, describe the corporate history of any joint ventures or key subconsultants proposed for any of this type of project. Firms that are short-listed may be required to submit audited financial statements to demonstrate current financial condition and stability that will become public information as provided in Chapter 119, Florida Statutes (four pages, single sided maximum).

Corporate Qualifications – Summarize relevant corporate experiences that demonstrate specific knowledge of similar projects and services completed within the last five years in Florida. Provide a short description of the qualifications of specific people assigned to this project as they relate to the type of work to be performed. This narrative is in addition to Standard Form 330, Architect-Engineer Qualifications.

Overall Design Aspects – Provide a summary of technical and design aspects of the proposed design/build project.

Project Team – Identify key personnel and their qualifications for these Services. Also describe qualifications of assigned support personnel (four pages, single sided maximum). In addition, attach one page current organization chart (not counted as part of the page limit).

Personnel Assigned and Availability – Personnel proposed for the project, including all subconsultants, must be identified and their qualifications provided. Availability of the assigned personnel must also be described, including an estimate of current workload and future commitments for each person. Such descriptions must be made both in terms of man-hours per year and as a percentage of total workload (no page limit).

Price Proposal – Shall be provided in accordance with the Submission Requirements in section IV paragraph 3.

Professional Registration – All submittals must include copies of Certificate of Registration with the Florida State Board of Professional Engineers (no page limit).

Proof of Insurance – Proof of professional liability insurance and error omission insurance, auto, workers compensation or proof that the required insurance will be provided at the time of selection. (Refer to Section V – Insurance)

Attach sample certificates of insurance or equivalent (no page limit).

IV. SUBMISSION REQUIREMENTS

1. Any firm desiring to provide professional design/build services as described above shall submit expression of interest including qualifications and experience as outlined previously.

2. The City of Margate Purchasing Division will accept sealed Qualification Proposals, until 11:00 AM, Tuesday, April 10, 2018. R.F.Q. packets will be received in the Office of the Purchasing Division, City of Margate City Hall, Second Floor, 5790 Margate Blvd., Margate, FL 33063. Proposals received prior to the date and time above will be considered. Proposals received ***after*** the date and time above will not be considered and will be returned to the firm(s) unopened.

3. One original and seven (7) copies **(NO THREE RING BINDERS PLEASE)**, as well as an electronic copy (flash drive or disc – do not sent via email) in one (1) sealed envelope or other container marked "A", and one original and seven (7) copies in one (1) sealed envelope marked "B" (no electronic copy is required for envelope "B"), shall be submitted by each proposer to the City of Margate, Purchasing Division, not later than the date and time as stated above. The first sealed envelope or container marked (A) shall contain the Qualifications, References and Technical Proposals. The second envelope marked (B) shall contain Respondent's signed, firm, fixed-fee performance based price proposal and rate schedules for providing all design services and supplies necessary and incidental to the delivery of a complete project whether mentioned or not mentioned in the scope of work. ***The fixed fee proposal shall include a separate price for (a) All work at Margate Marina Park; (b) All work at Southeast Park; and (c) Total project cost for both parks.***

4. Respondents desiring to submit a proposal should carefully review the instructions and other related sections of the Request for Qualifications. Compliance with all requirements shall be solely the responsibility of the Respondent. By submitting a proposal, the Proposer certifies that they have fully read and understood the proposal method and have full knowledge of the scope, nature, and quality of work to be performed.

5. **NO FAXED OR ELECTRONICALLY SUBMITTED PROPOSALS WILL BE ACCEPTED.** It shall be the sole responsibility of the Proposer to have their proposal delivered to the Office of the Purchasing Division, City of Margate City Hall, Second Floor, 5790 Margate Blvd., Margate, FL 33063 prior to the date and time specified.

6. Proposers may withdraw their proposals by notifying the Purchasing Division in writing at any time prior to the scheduled opening. Proposers may withdraw their proposals in person or through an authorized representative. Proposers and authorized representative must disclose their identity and provide a receipt for the proposal. Proposals, once opened, become the property of the CITY and will not be returned to the Proposers.

   The CITY reserves the right to accept any or all proposals, to waive irregularities and technicalities, and/or to request resubmission. The CITY shall

be the sole judge in the selection of a firm and the resulting agreement that best serves the interest of the CITY.

7. **ADDENDA, ADDITIONAL INFORMATION**

Any addenda or answers to written questions supplied to participating proposers shall become part of the Request for Qualifications packet and the resultant contract. No negotiations, decisions or actions shall be initiated by the Proposer as a result of any discussions with a CITY employee. Only those communications which are in writing from the Purchasing Division may be considered as a duly authorized expression. Also only communications from Proposers, which are signed and submitted in writing, will be recognized by the CITY as duly authorized expressions on behalf of the Proposer. **Questions received less than 7 days prior to the date for submission of proposals may not be answered** It is the Proposer's responsibility to contact the Purchasing Division at (954) 935-5346 (prior to the date and time for submission) to determine if any addenda have been issued

The Offeror's Certification form shall be signed by an authorized company representative, dated and returned with the RFQ submission.

V. INSURANCE

The awarded Proposer shall procure and maintain at its own expense and keep in effect during the full term of the Contract a policy or policies of insurance which shall be determined by the CITY prior to contract. Additionally, any subcontractor hired by the awarded Proposer for this contract shall provide insurance coverage as well. The CITY shall be named "additional insured" under the appropriate policies and a policy endorsement shall be provided. Awarded Proposer agrees to provide CITY a Certificate(s) of Insurance evidencing that all coverages, limits and endorsements required are maintained and in full force and effect. Said Certificate(s) of Insurance shall include a minimum of thirty (30) day requirement to notify due to cancellation or non-renewal of coverage.

The Certificate Holder address shall read:

For CITY:

City of Margate
Purchasing Division
5790 Margate Boulevard
Margate, FL 33063
Re: RFQ 2018-011

2. The required insurance coverage shall be issued by an insurance company duly authorized and licensed to do business in the State of Florida with the following minimum qualifications in accordance with the latest edition of A.M. Best's Insurance Guide:

Financial Stability B + to A+

3. Insurance Companies selected must be acceptable to CITY. All of the policies of insurance so required to be purchased and maintained shall contain a provision or

endorsement that the coverage afforded shall not be canceled, materially changed or renewal refused until at least thirty (30) calendar days written notice has been given to CITY by certified mail.

VI. WORKING PAPER RETENTION AND ACCESS TO WORKING PAPERS

All working papers and reports must be retained in accordance with requirements and procedures set forth by the General Records Schedule for Local Government Agencies as promulgated by the Division of Archives, History and Records Management (a division of the Florida Department of State) at the firm's expense, unless the firm is notified in writing by the City of Margate of the need to extend the retention period. The firm will be required to make working papers available, upon request, to the following parties or their designees:

- City of Margate,
- U.S. General Accounting Office (GAO),
- Parties designated by federal or state governments or by the CITY as part of an audit quality review process.

In addition, the firm shall respond to the reasonable inquiries of auditors and allow successor auditors to review working papers relating to matters of continuing accounting significance.

VII. TIME REQUIREMENTS

A. PROPOSAL CALENDAR, NOTIFICATION AND CONTRACT DATES

The schedule of events, relative to the procurement shall be as follows:

	Event	Date (on or by)
1.	Issuance of R.F.Q.	March 8, 2018
2.	Receipt of R.F.Q. (Proposals received prior to the date and time above will be considered. Proposals received ***after*** the date and time above will not be considered and will be returned to the firm(s) unopened.)	April 10, 2018 (11:00 A.M.)*
3.	Initial Proposal Evaluations and Short-listing	April 12, 2018
4.	Oral Presentations with Short-listed Firms and Evaluations for Final Ranking	April 17, 2018
5.	Request Authorization from Commission to Negotiate with Top-ranked Firm	May 2, 2018
6.	Recommendation to Commission for Award	May 16, 2018

Be advised that the CITY is prepared to award a single contract or multiple contracts as is deemed to be in the best interest of the CITY. The CITY reserves the right to change and/or delay scheduled dates.

As the best interest of the CITY may require, the right is reserved to reject any and all proposals or waive any minor irregularity or technicality in proposals received.

The successful proposer shall be required to execute a contact with the CITY covering the scope of services to be provided and setting fourth the duties, rights and responsibilities of the parties.

A. Oral Presentations

During the evaluation process, the Selection Committee may, at its discretion, request firms to make oral presentations either in person, by phone, or by webinar. Such presentations will provide firms with an opportunity to answer any questions the Selection Committee may have regarding a firm's proposal. Not all firms will be short-listed and proceed to oral presentations.

B. Final Selection

In compliance with Florida Statute 287.055 (CCNA), the CITY will select/award the firm(s) that best meets the interests of the CITY. The CITY shall be the sole judge of its own best interests, the proposals, and the resulting negotiated agreement. The CITY's decision will be final.

VIII. SUMMARY OF PROVIDED DOCUMENTS TO BE SUBMITTED WITH PROPOSALS

Samples of the following documents, (except certificate of insurance) are attached and shall be executed as a condition to this offer:

(a) Proposal and Offeror's Certification
(b) Qualifications Statement
(c) Proof of Insurance (Refer to Section III, Submission Content)
(d) Drug Free Workplace Form
(e) Compliance with OSHA Form
(f) Non-Collusive Affidavit Form

IX. EVALUATIONS AND SELECTION OF PROPOSALS

Step one of the evaluations and selection process shall include:

Qualifications Based evaluation – There shall be the qualification and selection of no fewer than three (provided a sufficient number of submissions) design/build firms who are deemed to be the most qualified and available based upon the past work of the firms including the partners or members thereof and taking into consideration their availability. After the short-listing process, the short-listed firms shall be scored as follows:

CRITERIA	POINTS
Firm's Technical Approach to the project (Firm's site-specific action plan, building manufacturer coordination, approach to safety, public access to parks, etc.)	50
Firm's Qualifications and Past Work Experience (Firm's location, similar projects completed, key personnel, etc.)	30
Firm's Availability and MBE Status (Firm's assigned staff's current and projected workload, firm's minority business enterprise status, etc.)	20

The final ranking of the firms shall be determined by an average of the overall point total for each with the highest possible point total awarded being 100 points.

The highest ranked firm (or firms should the two sites be awarded individually) shall be recommended to the City Commission for authorization to negotiate a contract for award of the design-build project.

Step two of the evaluations and selection process shall include:

In compliance with Florida Statute 287.055, consideration of the highest ranked firm's price proposal will be made. Negotiations with that firm for a contract will ensue. Failing successful negotiations with the highest ranked firm(s) the City shall terminate the unsuccessful negotiation process and then undertake negotiations with the second most qualified firm and so on until a satisfactory negotiated contract can be awarded.

X. AWARD OF CONTRACT

The City intends to award a negotiate a contract or contracts with the most qualified, highest ranked firm(s) whose proposal(s) is/are determined to be the most advantageous to the CITY and who agree to provide the required services at compensation which the CITY determines is fair, reasonable and competitive.

XI. GENERAL CONDITIONS

A. PUBLIC ENTITY CRIMES INFORMATION STATEMENT: "A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in s. 287.017 for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list."

B. DISCRIMINATORY VENDOR LIST: An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid on a contract to provide goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not award or perform work as a contractor, supplier, subcontractor, or consultant under contract with any public entity, and may not transact business with any public entity.

C. EXPENSES: All expenses for making the proposal to the CITY are borne by the Proposer.

D. WITHDRAWAL OF PROPOSAL: Any proposal may be withdrawn up until the date and time set forth for the opening proposals. Any proposal not withdrawn shall constitute an irrevocable offer for a period of 90 days or until one or more of the proposals have been duly accepted and a contract is awarded. No guarantee or representation is made herein as to the time between the proposal opening and subsequent award.

E. LAWS AND REGULATIONS: All applicable laws and regulations of the U.S. Government, State of Florida, Broward County and ordinances and regulations of the City of Margate will apply to any resulting agreement.

F. RESULTANT AGREEMENT: Any agreement or contract resulting from the acceptance of a proposal shall be on forms either supplied by or approved by the CITY and shall contain, as a minimum, applicable provisions of the Request for Qualifications. The CITY reserves the right to reject any agreement that does not conform to the Request for Qualifications and any CITY requirements for agreements and contracts.

G. CONFLICT OF INTEREST: For purposes of determining any possible conflict of interest, all Proposers must indicate if any CITY employee is an owner, corporate officer, or employee of their business. If such relationship(s) exist, the Proposer must file a statement with the Supervisor of Elections, pursuant to Florida Statutes 112.13.

H. COPYRIGHTS AND PATENT RIGHT: Proposer warrants that there has been no violation of copyrights or patent rights in manufacturing, producing and/or selling the item(s) ordered or shipped as a result of this proposal, and successful proposer agrees to hold the city harmless from any and all liability, loss or expense by any such violation.

I. TAXES: – The CITY is exempt from any taxes imposed by the State and Federal Governments. Exemption certificates will be provided upon request.

J. RETENTION OF RECORDS AND RIGHT TO ACCESS CLAUSE: The successful proposer shall preserve and make available all financial records, supporting documents, statistical records and any other documents pertinent to this contract for a period of five (5) years after termination of this contract; or if an audit has been initiated and audit findings have not been resolved at the end of these (5) years, the records shall be retained until resolution of audit finding.

K. ASSIGNMENT: Successful Proposer may not assign or transfer this contract in whole or part without prior written approval of the CITY.

L. TERMINATION FOR CONVENIENCE OF CITY: Upon thirty (30) calendar days written notice delivered by certified mail, return receipt requested, to the successful Proposer, the CITY may without cause and without prejudice to any other right or remedy, terminate the agreement for the CITY's convenience whenever the CITY determines that such termination is in the best interests of the CITY. Where the agreement is terminated for the convenience of the CITY the notice of termination to the successful proposer must state that the contract is being terminated for the convenience of the CITY under the termination clause and the extent of the termination. Upon receipt of such notice, the contractor shall promptly discontinue all work at the time and to the extent indicated on the notice of termination, terminate all outstanding sub-contractors and purchase orders to the extent that they relate to the terminated portion of the contract and refrain from placing further orders and subcontracts except as they may be necessary, and complete any continued portions of the work.

M. CANCELLATION FOR UNAPPROPRIATED FUNDS: The obligation of the CITY for payment to a Contractor is limited to the availability of funds appropriated in current fiscal period, and continuation of the contract into a subsequent fiscal period is subject to appropriation of funds, unless otherwise authorized by law.

N. GOVERNMENT RESTRICTIONS: In the event any governmental restrictions may be imposed which would necessitate alteration of the material quality, workmanship, or performance of the items/services offered on the proposal prior to delivery/performance, it shall be the responsibility of the Contractor to notify the CITY at once, indicating in their letter

the specific regulation which required an alteration. The CITY reserves the right to accept any such alteration, including any price adjustments occasioned hereby, or to cancel the contract at no further expense to the CITY.

O. NOTICES AND COMPLIANCE BY CONTRACTOR: The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and orders of public authorities bearing on the safety of persons and property and their protection from damage, injury or loss.

P. LIABILITY FOR DAMAGE: The Contractor shall be liable for damage or loss (other than damage or loss to property insured under the property insurance provided or required by the Contract Documents to be provided by the Owner) to property at the site caused in whole or in part by the Contractor, a contractor of the Contractor or anyone directly or indirectly employed by either of them, or by anyone for whose acts they may be liable.

Q. NON-COLLUSIVE STATEMENT: By submitting this proposal, the Proposer affirms that this proposal is without previous understanding, agreement, or connection with any person, business, or corporation submitting a proposal for the same materials, supplies, service, or equipment, and that this proposal is in all respects fair, and without collusion or fraud. (Refer to "Non-Collusive Affidavit" form attached.)

R. INDEMNIFICATION: For the total amount of one (1) million dollars, Contractor agrees to indemnify, and hold harmless the CITY, its officers and employees, from liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the indemnifying party and persons employed or utilized, including sub-contractors, by the indemnifying party in the performance of this construction contract. Nothing contained in the foregoing indemnification shall be construed to be a waiver of any immunity or limitation of liability the CITY may have under the doctrine of sovereign immunity or Section 768.28, Florida Statutes.

S. WAIVER OF JURY TRIAL: The parties to this agreement hereby knowingly, irrevocably, voluntarily and intentionally waive any right either may have to a trial by jury in respect to any action, proceeding, lawsuit or counterclaim based upon the contract, arising out of, under, or in connection with the matters to be accomplished in this Agreement, or any course of conduct, course of dealing, statements (whether verbal or written) or the actions or inactions of any party.

T. CITY PERMITS: The Contractor shall be required to obtain all necessary permits from the CITY Engineering and/or Building Departments. City of Margate Building and Engineering permit fees are waived. Contractor shall be responsible for Broward County or any other regulatory agency permit and license fees for the project, as applicable.

U. DISPUTES: NOTWITHSTANDING ANY OTHER PROVISIONS PROVIDED IN THIS AGREEMENT, ANY DISPUTE ARISING UNDER THIS AGREEMENT WHICH IS NOT DISPOSED OF BY AGREEMENT, SHALL BE DECIDED BY THE CITY MANAGER, WHO SHALL REDUCE HIS DECISION IN WRITING AND FURNISH A COPY THEREOF TO THE CONTRACTOR. THE DECISION OF THE CITY MANAGER AND THOSE PERSONS TO WHOM HE DELEGATES AUTHORITY TO DECIDE DISPUTES, SHALL BE FINAL AND CONCLUSIVE UNLESS DETERMINED BY A COURT OF COMPETENT JURISDICTION TO BE FRAUDULENT, CAPRICIOUS, ARBITRARILY, OR GROSSLY ERRONEOUS AS TO NECESSARILY IMPLY BAD FAITH, OR NOT SUPPORTED BY SUBSTANTIAL EVIDENCE.

V. LITIGATION VENUE: This agreement shall have been deemed to have been executed within the State of Florida. The validity, construction, and effect of this Agreement shall be governed by the laws of the State of Florida. Any claim, objection or dispute arising out of this Agreement shall be litigated only in the courts of the Seventeenth Judicial Circuit in and for Broward County, Florida.

OFFEROR'S CERTIFICATION

WHEN OFFEROR IS AN INDIVIDUAL

IN WITNESS WHEREOF, the Offeror hereto has executed this Proposal Form this _____ day of _____, 2018.

By: _____
Signature of Individual

_____ _____
Witness Printed Name of Individual

_____ _____

_____ _____
Witness Business Address

_____
City/State/Zip

_____
Business Phone Number

State of _____

County of _____

The foregoing instrument was acknowledged before me this _____ day of _____, 2018, by _____(Name), who is personally known to me or who has produced _____ as identification and who did (did not) take an oath.

WITNESS my hand and official seal.

_____
NOTARY PUBLIC

_____
(Name of Notary Public: Print, Stamp,
or type as Commissioned)

OFFEROR'S CERTIFICATION

WHEN OFFEROR IS A SOLE PROPRIETORSHIP OR OPERATES UNDER A FICTITIOUS OR TRADE NAME

IN WITNESS WHEREOF, the Offeror hereto has executed this Proposal Form this _____ day of _____, 2018.

_____
Printed Name of Firm

By:_____
Signature of Owner

_____ _____
Witness Printed Name of Individual

_____ _____
Witness Business Address

_____
City/State/Zip

_____
Business Phone Number

State of _____

County of _____

The foregoing instrument was acknowledged before me this _____ day of _____, 2018 by _____(Name), who is personally known to me or who has produced _____ as identification and who did (did not) take an oath.

WITNESS my hand and official seal.

_____
NOTARY PUBLIC

_____
(Name of Notary Public: Print, Stamp, or type as Commissioned)

OFFEROR'S CERTIFICATION

WHEN OFFEROR IS A PARTNERSHIP

IN WITNESS WHEREOF, the Offeror hereto has executed this Proposal Form this day of _____, 2018.

_____
Printed Name of Partnership

By: _____
Signature of General or Managing Partner

_____ _____
Witness Printed Name of partner

_____ _____
Witness Business Address

_____
City/State/Zip

_____
Business Phone Number

_____
State of Registration

State of _____

County of _____

The foregoing instrument was acknowledged before me this _____ day of _____, 2018, by _____(Name), _____(Title) of _____(Name of Company) who is personally known to me or who has produced _____ as identification and who did (did not) take an oath.

WITNESS my hand and official seal.

_____
NOTARY PUBLIC

_____
(Name of Notary Public: Print, Stamp, or type as Commissioned)

OFFEROR'S CERTIFICATION

WHEN OFFEROR IS A CORPORATION

IN WITNESS WHEREOF, the Offeror hereto has executed this Proposal Form this _____ day of _____, 2018.

_____
Printed Name of Corporation

_____
Printed State of Incorporation

By:_____
Signature of President or other authorized officer

(CORPORATE SEAL)

_____
Printed Name of President or other authorized officer

ATTEST:

_____
Address of Corporation

By_____
Secretary

_____
City/State/Zip

_____
Business Phone Number

State of _____

County of _____

The foregoing instrument was acknowledged before me this _____ day of _____, 2018, by _____(Name), _____(Title) of _____(Company Name) on behalf of the corporation, who is personally known to me or who has produced _____ _____ as identification and who did (did not) take an oath.
WITNESS my hand and official seal.

_____
NOTARY PUBLIC

_____
(Name of Notary Public: Print, Stamp, or type as Commissioned)

OFFEROR'S
QUALIFICATION STATEMENT

The undersigned certifies under oath the truth and correctness of all statements and of all answers to questions made hereinafter:

SUBMITTED TO: City of Margate (Purchasing Division)

ADDRESS: 5790 Margate Boulevard
Margate, Florida 33063

	CIRCLE ONE
SUBMITTED BY:	Corporation
NAME:	Partnership
ADDRESS:	Individual
PRINCIPAL OFFICE:	Other

1. State the true, exact, correct and complete name of the partnership, corporation, trade or fictitious name under which you do business and the address of the place of business.

   The correct name of the Offeror is:

   The address of the principal place of business is:

2. If Offeror is a corporation, answer the following:

   a. Date of Incorporation:

   b. State of Incorporation:

   c. President's name:

   d. Vice President's name:

   e. Secretary's name:

   f. Treasurer's name:

   g. Name and address of Resident Agent:

   If Offeror is an individual or a partnership, answer the following:

   a. Date of organization:

   b. Name, address and ownership units of all partners:

c. State whether general or limited partnership:

4. If Offeror is other than an individual, corporation or partnership, describe the organization and give the name and address of principals:

5. If Offeror is operating under a fictitious name, submit evidence of compliance with the Florida Fictitious Name Statute.

6. How many years has your organization been in business under its present business name?

   a. Under what other former names has your organization operated?

7. Indicate registration, license numbers or certificate numbers for the businesses or professions which are the subject of this RFQ. Please attach certificate of competency and/or state registration.

8. Have you ever failed to complete any work awarded to you? If so, state when, where and why?

THE OFFEROR ACKNOWLEDGES AND UNDERSTANDS THAT THE INFORMATION CONTAINED IN RESPONSE TO THIS QUALIFICATIONS STATEMENT SHALL BE RELIED UPON BY OWNER IN AWARDING THE CONTRACT AND SUCH INFORMATION IS WARRANTED BY OFFEROR TO BE TRUE. THE DISCOVERY OF ANY OMISSION OR MISSTATEMENT THAT MATERIALLY AFFECTS THE OFFEROR'S QUALIFICATIONS TO PERFORM UNDER THE CONTRACT SHALL CAUSE THE OWNER TO REJECT THE PROPOSAL, AND IF AFTER THE AWARD TO CANCEL AND TERMINATE THE AWARD AND/OR CONTRACT.

(Signature)

State of
County of _____

The foregoing instrument was acknowledged before me this _____ day of _____, 2018, by _____, who is personally known to me or who has produced _____ as identification and who did (did not) take an oath.

WITNESS my hand and official seal.

_____
NOTARY PUBLIC

(Name of Notary Public: Print, Stamp,
or Type as Commissioned)

DRUG-FREE WORKPLACE PROGRAM FORM RFQ NO . 2018-011

In accordance with Section 287.087, State of Florida Statutes, preference shall be given to businesses with Drug-free Workplace Programs. Whenever two or more bids which are equal with respect to price, quality and service are received for the procurement of commodities or contractual service, a bid received from a business that certifies that it has implemented a Drug-free Workplace Program shall be given preference in the award process. In the event that none of the tied vendors have a Drug-free Workplace program in effect the City reserves the right to make final Decisions in the City's best interest. In order to have a Drug-free Workplace Program, a business shall:

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the Workplace, the business's policy of maintaining a drug-free Workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).

4. In the statement specified in subsection (1), notify employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contenders to, any violation of Chapter 893 or of any controlled substance law of the United States of any State, for a violation occurring in the Workplace no later than five (5) days after such conviction.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community by any employee who is convicted.

6. Make a good faith effort to continue to maintain a drug-free Workplace through implementation. If bidder's company has a Drug-free Workplace Program, so certify below:

AS THE PERSON AUTHORIZED TO SIGN THE STATEMENT, I CERTIFY THAT THIS FIRM COMPLIES FULLY WITH THE ABOVE REQUIREMENTS.

SIGNATURE OF BIDDER:_____DATE:_____

COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT

Bidder certifies that all material, equipment, etc. contained in this bid meets all O.S.H.A. requirements. Bidder further certifies that if he/she is the successful bidder, and the material, equipment, etc., delivered is subsequently found to be deficient in any O.S.H.A. requirement in effect on date of delivery, all costs necessary to bring the material, equipment, etc. into compliance with the aforementioned requirements shall be borne by the bidder.

OCCUPATIONAL HEALTH AND SAFETY - SAFETY DATA SHEET REQUIRED:

In compliance with Chapter 442, Florida Statutes, any item delivered from a contract resulting from this bid must be accompanied by a SAFETY DATA SHEET (SDS). The SDS must include the following information:

A. The chemical name and the common name of the toxic substance.

B. The hazards or other risks in the use of the toxic substances, including:

   1. The potential for fire, explosion, corrosivity and reactivity;

   2. the known acute and chronic health effects of risks from exposure, including the medical conditions which are generally recognized as being aggravated by exposure to the toxic substance; and

   3. the primary routes of entry and symptoms of overexposure.

C. The proper precautions, handling practices, necessary personal protective equipment, and other safety precautions in the use of or exposure to the toxic substances, including appropriate emergency treatment in case of overexposure.

D. The emergency procedure for spills, fire, disposal and first aid.

E. A description in lay terms of the known specific potential health risks posed by the toxic substances intended to alert any person reading this information.

F. The year and month, if available, that the information was compiled and the name, address and emergency telephone number of the manufacturer responsible for preparing the information.

SIGNATURE:_____ DATE:_____

NON-COLLUSIVE AFFIDAVIT FOR RFQ NO. 2018-011

State of_____)

County of_____)

_____being first duly sworn, deposes and says that:

He/she is the_____, (Owner, Partner, Officer, Representative or Agent) of_____, the Offeror that has submitted the attached Proposal;

He/she is fully informed regarding the preparation and contents of the attached Proposal and of all pertinent circumstances regarding such Proposal;

Such Proposal is genuine and is not a collusive or sham Proposal;

Neither the said Offeror nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, have in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Offeror, firm, or person to submit a collusive or sham Proposal in connection with the Work for which the attached Proposal has been submitted; or to refrain from bidding in connection with such Work; or have in any manner, directly or indirectly, sought by agreement or collusion, or communication, or conference with any Offeror, firm, or person to fix the price or prices in the attached Proposal or of any other Offeror, or to fix any overhead, profit, or cost elements of the Proposal price or the Proposal price of any other Offeror, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against (Recipient), or any person interested in the proposed Work;

The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Offeror or any other of its agents, representatives, owners, employees or parties in interest, including this affiant.

Signed, sealed and delivered in the presence of:

_____ By _____
Witness

_____ _____
Witness Printed Name

_____
Title

ACKNOWLEDGMENT
NON-COLLUSIVE AFFIDAVIT FOR RFQ NO. 2018-011

State of Florida
County of _____

On this the____day of_____, 20____, before me, the undersigned Notary Public of the State of Florida, personally appeared

_____and
(Name(s) of individual(s) who appeared before notary)

whose name(s) is/are Subscribed to within the instrument, and he/she/they acknowledge that he/she/they executed it.

WITNESS my hand
and official seal.

_____
NOTARY PUBLIC, STATE OF FLORIDA

NOTARY PUBLIC
SEAL OF OFFICE:

_____
(Name of Notary Public: Print, Stamp, or Type as Commissioned)

☐Personally known to me, or
☐Produced identification:

_____
(Type of Identification Produced)

☐ DID take an oath, or ☐ DID NOT take an oath

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:
	PHONE (A/C, No, Ext): / FAX (A/C, No):
	E-MAIL ADDRESS:
	PRODUCER CUSTOMER ID #:

INSURED	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A :	
	INSURER B :	
	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	GENERAL LIABILITY						EACH OCCURRENCE	$ 1M
	[X] COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	$
	[ ] CLAIMS-MADE [ ] OCCUR						MED EXP (Any one person)	$ 5K
							PERSONAL & ADV INJURY	$ 1M
							GENERAL AGGREGATE	$ 1M
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG	$ 1M
	[ ] POLICY [ ] PRO-JECT [ ] LOC							$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$ 500K
	[X] ANY AUTO						BODILY INJURY (Per person)	$
	[ ] ALL OWNED AUTOS						BODILY INJURY (Per accident)	$
	[ ] SCHEDULED AUTOS						PROPERTY DAMAGE (Per accident)	$
	[ ] HIRED AUTOS							$
	[ ] NON-OWNED AUTOS							$
	[ ] UMBRELLA LIAB [ ] OCCUR						EACH OCCURRENCE	$
	[ ] EXCESS LIAB [ ] CLAIMS-MADE						AGGREGATE	$
	[ ] DEDUCTIBLE							$
	[ ] RETENTION $			Note:				$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N			When applicable, the Insured			[X] WC STATU-TORY LIMITS [ ] OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [ ] N/A			shall provide a copy of			E.L. EACH ACCIDENT	$ 100,000
	(Mandatory in NH) If yes, describe under SPECIAL PROVISIONS below			authorized certificate or			E.L. DISEASE - EA EMPLOYEE	$ 100,000
							E.L. DISEASE - POLICY LIMIT	$ 300,000
				Workers Compensation Exemption				

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

The City of Margate additional Insured for General Liability Only

CERTIFICATE HOLDER

The City of Margate
(Department Name)
5790 Margate Blvd
Margate, Florida 33063

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

ACORD 25 (2009/09) The ACORD name and logo are registered marks of ACORD

ATTACHMENT A

DESIGN-BUILD CRITERIA PACKAGE

RFQ 2018-011
PARKS PRE-FABRICATED BUILDING PROJECT

ATTACHMENT A
DESIGN / BUILD CRITERIA PACKAGE

STATEMENT OF WORK

The City of Margate intends to retain a qualified, competent, and licensed firm to provide the design/build services required for the installation of two pre-fabricated building structures within existing public parks in the City of Margate. A pre-fabricated building structure with space for restrooms and storage will be installed within the Margate Marina Park (also known as Veteran's Memorial Park), which is located at 7044 NW 1st Street. A pre-fabricated building structure with space for restrooms, concessions, and storage will be installed within the Southeast Park, which is located at 655 SW 50th Avenue.

SCOPE OF SERVICES

Successful Offeror, hereinafter referred to as the Offeror, shall enter into an Agreement with the City of Margate, Florida, hereinafter referred to as the City, for the purpose of the Design/Build of the Parks Pre-Fabricated Building Project. The City of Margate has purchased two pre-fabricated building structures that need to be installed within two existing public parks. One pre-fabricated building structure with space for restrooms and storage will be installed within the Margate Marina Park at 7044 NW 1st Street as displayed within Exhibit 1 – Marina Park Location Map. One pre-fabricated building structure with space for restrooms, concessions, and storage will be installed within the Southeast Park at 655 SW 50th Avenue as displayed within Exhibit 2 – Southeast Park Location Map. This project includes any site investigation, design document development (design plans, design details, product specifications, and cost estimating), regulatory permitting, and construction within these City parks in accordance with the terms, conditions, and specifications contained in this Request for Qualification (RFQ).

Offerors are requested to provide all necessary professional services, documentation, labor, equipment, materials, insurance, and incidentals required for the design/build of the Parks Pre-Fabricated Building Project within the City of Margate. The information contained in the Design Criteria Package is the minimum that potential proposers must address in their responses to the Request for Proposals. Potential proposers shall consider all applicable regulatory requirements, industry standards, best practices regarding design and construction standards, and past professional experience in their responses to the Request for Qualifications.

The general scope of the project includes, but is not limited to, the following components:

General Requirements:

- The City of Margate has purchased two pre-fabricated building structures manufactured by Restroom Facilities Limited (RFL) that need to be installed within two existing public parks. The manufacturer shall be responsible for the delivery and placement of the pre-fabricated building structures to each location. The Offeror shall be responsible for all work required prior to and after the placement of the pre-fabricated building structures, such as permitting approvals, utility connections, site preparations, and site restoration.
- The pre-fabricated building structure for Marina Park includes approximately 509 square feet of floor space for a male restroom, a female restroom, a utility area, and a storage area. Specific information on this pre-fabricated building structure can be found on Exhibit 3 – Marina Park Floor Plan for RFL

Model #S312ST. Restroom Facilities Limited (RFL) can be reached at (512) 222-5454 if any more detailed information is needed on these pre-fabricated building structures.

- The pre-fabricated building structure for Southeast Park includes approximately 816 square feet of floor space for a male restroom, a female restroom, a utility area, a concession area, and a storage area. Specific information on this pre-fabricated building structure can be found on Exhibit 4 – Southeast Park Floor Plan for RFL Model #S312STCN2. Restroom Facilities Limited (RFL) can be reached at (512) 222-5454 if any more detailed information is needed on these pre-fabricated building structures.
- Offeror shall be responsible for all planning, design, permitting, and construction related to any structural, electrical, mechanical, plumbing, utilities, ADA pathways, and all appurtenances necessary to complete the installation of the two pre-fabricated building structures at these City Parks.
- Offeror shall be responsible for all coordination with all applicable regulatory agencies along with all permit submittals, permit fees, and associated costs. Offeror shall obtain a Building Permit approval from the City of Margate Building Department for the proposed construction prior to any site work. The City of Margate Building and Engineering fees are waived. Offeror shall be responsible for any permit or license fees from Broward County or other governmental agencies. The City of Margate shall be responsible for any impact fees for water and sewer.
- The City of Margate will be responsible for filing the application(s) and processing for all site plan submissions to the City's Development Review Process, which may include the Development Review Committee, the Planning Board, and the City Commission. The Offeror shall cooperate with the City during this process and shall complete the survey, design plans, and other documentation required for the site plan approval process.
- Offeror is responsible for inspecting, examining, and verifying the existing conditions at each location to make adequate provisions and preparation for the installation of each pre-fabricated building structure for the purpose of avoiding any potential horizontal, vertical, underground, or overhead obstructions.
- Offeror is responsible for the completion of any boundary surveys, site surveys, and as-built drawings necessary for project layout, construction, and final certification. Offeror shall provide 10 feet offset stakes and locate front corners of building, existing utilities, and inverts within the area of construction and locate and mark final slab elevation prior to the placement of the pre-fabricated building structures. Offeror shall verify finish floor elevation upon installation of the pre-fabricated building structures.
- Offeror shall be responsible for all soil borings, soil bearing analysis, material testing, and engineering reports required for all design, permitting, construction, and certifications related to the proposed construction. Soil borings have been completed within each park at the general location of the proposed pre-fabricated building structures. For relevant information on these soil borings, please refer to Exhibit 5 – Marina Park Geotechnical Report and Exhibit 6 – Southeast Park Geotechnical Report.
- Offeror is responsible for obtaining available utility atlases, as-built drawings, and/or GIS information from the City. Offeror is responsible for ensuring continued operations of the existing sanitary sewer system, existing potable water system, and any other utility service within each project site for entire duration of the project. Offeror shall prepare and provide all documentation related to the plumbing connections are each location as required by the City of Margate Building Department.
- Offeror is responsible for all clearing, grubbing, compaction, and site preparations at each site location necessary to install each pre-fabricated building structure. Offeror shall be responsible for removal and disposal of any unsuitable materials generated by the clearing and grubbing operations. If any existing trees must be removed for the installation, Offeror shall be responsible for obtaining tree removal permit (if necessary). Offeror shall be responsible for the complete removal and demolition of the existing structure in Southeast Park, which is approximately located within the footprint of the proposed structure.
- Offeror shall be responsible for the preparation of the compacted building pads for the pre-fabricated building structures per the recommendations of the building manufacturer and per City Code requirements. The Offeror shall excavate and backfill trenches up to and within building pad for the

connection with underground utility service kits supplied by the manufacturer. The preparation of the proposed building pads shall include excavation down ten inches below the finish floor elevation, import six inches of limerock base, and compact building pad to 95% of maximum density per AASHTO T180 modified proctor test or to minimum requirement per City Code (whichever is greater). The compaction of building pad should extend 12-inches beyond the building footprint in all directions. The Offeror shall verify that the completed building pad is level and flat and at correct elevation. The Offeror shall supply approximately five cubic yards of clean sand at each location for fine grading purposes.

- Offeror shall coordinate suitable, safe, and clear access to allow for a crane (minimum 110 tons) and the prefabricated building structure on a semi-trailer (up to 40 tons) to reach the proposed building locations. The crane access needs to be within 25 feet of the proposed building location. If path to the proposed locations is over existing utilities, sidewalks, or other damageable areas, the Offeror shall be responsible for providing proper markings, plating, or other appropriate protections to prevent any damage. If there are any overhead obstructions, such as overhead utility lines or existing canopy trees, the Offeror shall be responsible for coordinating and scheduling the de-energizing of any overhead utility lines or trimming of any existing canopy trees.
- Offeror is responsible for completing the necessary water and sewer connections to each pre-fabricated building structure. Existing sanitary sewer and potable water infrastructure is currently available adjacent to each project site. The Offeror is responsible for any additional water and sewer infrastructure that must be extended, rerouted, and/or relocated to provide necessary utility service to each pre-fabricated building structure. Offeror is responsible for installation of any new utility piping and fittings that must be installed from the connection point at each pre-fabricated building structure to the nearest connection point to the existing sanitary sewer system and the existing water distribution system. If there is not adequate available depth for the connection of the pre-fabricated building structure to the existing gravity sewer system with sanitary lateral, the Offeror is responsible for installing a package pumping system to connect to the nearest sanitary sewer system. At the request of the Offeror, the City will make available for information purposes only a set of design plans previously prepared (but not constructed) for the City of Margate of a sewage lift station and force main within the Margate Marina Park. The City makes no representation as to the suitability of these plans for the current conditions, which should be independently verified and designed by Offeror as needed.
- The Offeror shall install underground utility service kits supplied by the manufacturer from the building pads to the utility connection points within 6 feet of the building line at the location shown within the provided plans. The point of connection to building's water system will be an isolation valve from mechanical chase to a Christy box located 6 feet from the building line. The point of connection for building's sewer system shall be from mechanical chase to a Christy box located 6 feet from the building line. The depth of sewer line will be approximately 30-inches below finished floor elevation to bottom of sewer pipe at a distance of 6 feet from building line. The Offeror will be responsible for hiring of licensed plumber to acquire appropriate plumbing permits, to install prefabricated underground plumbing kits into pre-dug trench, and to make connections between underground stubups and internal building plumbing located in plumbing chase within the building.
- Offeror is responsible for completing the necessary electrical service connections to each pre-fabricated building structure. Offeror is responsible for any new electrical conduit, wiring, handholes, and panels that must be installed from each pre-fabricated building structure to the nearest electrical service point. The point of connection for the building's electrical system shall be 6 feet from the building line via PVC conduit and a Christy box. Offeror shall pull the electrical service line through the conduit and connect to the main panel lugs inside the building. All electrical components inside the building will be furnished and installed by the manufacturer. Offeror shall be responsible for all coordination with FPL to ensure the electrical service connection to each pre-fabricated building structure. Offeror shall prepare and provide all documentation related to the electrical connections as required by the City of Margate Building Department.

- Offeror shall be responsible for coordinating with the manufacturer to assist with delivery and placement of each pre-fabricated building structure. The manufacturer shall be responsible for the delivery and placement of the pre-fabricated building structures at each location. The Offeror shall be responsible for all permitting approvals, utility connections, and site preparations required prior to the placement of the pre-fabricated building structures.
- Offeror is responsible for the installation of concrete sidewalk to provide pedestrian connections between each pre-fabricated building structure and the nearest existing sidewalks as displayed on Exhibit 1 – Marina Park Location Map and Exhibit 2 – Southeast Park Location Map. The proposed concrete sidewalk must be ADA compliant. Offeror shall prepare and provide all documentation related to the proposed sidewalk as required by the City of Margate Building Department.
- Offeror is responsible for installing any landscaping around the perimeter of each pre-fabricated building structure as required by City Code. Offeror shall prepare and provide all documentation related to the proposed landscaping as required by the City of Margate Code.
- Offeror shall be responsible for coordinating and scheduling all site inspections required by the City Building Department related to water connections, sanitary sewer connections, electrical connections, plumbing components, structural components, and landscaping installation.
- Offeror shall be responsible for all site cleanup, debris removal, and trash removal required during the work duration.
- Offeror shall be responsible for all site restoration at each location. All items impacted by the construction work, such as existing sidewalks, curbing, driveways, fencing, landscaping, sodding, irrigation, utilities, etc., shall be restored to match the existing conditions or better.
- Offeror is responsible for maintaining continuous safe and adequate pedestrian and vehicular access throughout each City park for duration of the project. Offeror shall prepare and provide a Maintenance of Traffic (MOT) plan in accordance with FDOT, Broward County Engineering Division, and MUTCD standards to City for approval prior to construction activities.
- All work shall be completed in accordance with the latest editions of all applicable Federal, State, County, and City codes/regulations, including but not limited to, Sixth Edition (2017) Florida Building Code, Sixth Edition (2017) Florida Building Code Accessibility, Americans with Disabilities Act (ADA), National Fire Protection Association (NFPA), City of Margate Code of Ordinances, Broward County Code of Ordinances, and industry standards if greater than code requirements. If a conflict between any Codes, Regulations, Standards and Criteria is detected, the most stringent shall apply.
- The City's schedule for this project is 45 days from notice to proceed to substantial completion for Margate Marina Park (Phase 1) and 135 days from notice to proceed to substantial completion for Southeast Park (Phase 2), which includes design, permitting, and construction in accordance with the aforementioned components. For the purposes of this Agreement, final completion for each phase shall mean the issuance of final payment for that phase and shall occur within 45 days of substantial completion. The City will have the right to include a provision for liquidated damages in the Agreement.
- The City's budget for Parks Pre-Fabricated Building Project is $120,000.

Jason McClair,
Florida PE #56962

EXHIBIT 1

MARINA PARK LOCATION MAP

NW 1ST ST

ROCK ISLAND RD

STOP BAR

MANHOLE

N

EXISTING FORCE MAIN

STOP BAR

STOP SIGN

EXISTING TRAILER TYPICAL

EXISTING LANDSCAPE

EXISTING LANDSCAPE

EXISTING LANDSCAPE

EXISTING PARKING TYPICAL

IMPROVE LIGHTING THROUGHOUT THE ENTIRE SITE AS PER CODE

NEW ASPHALT MILL OVERLAY, PAVEMENT MARKING & SIGNAGE

NEW LIFT PUMP STATION (VERIFY LOCATION)

NEW WASTE LINE

NEW SIDEWALK

10'+/-

43'+/-

"A"

NEW SIDEWALK

EXISTING ELECTRICAL BOX/PAD

C.O.

CANAL R/W

DN

PROPOSED RESTROOM

23'-8"

EXISTING OPEN PAVILION

DN

EXISTING BOAT LAUNCH RAMP

MEMORIAL

NEW CONCRETE WALKWAY TO BE FLUSH WITH SURROUNDING GRADE

EXISTING BOAT LAUNCH RAMP

63'

EXISTING LANDSCAPE

EXISTING LANDSCAPE

EXISTING LANDSCAPE

37'

EXISTING DECK WALKWAY

"A"

CANAL

DATE

DESCRIPTION

REV.

Reddy Chitepu, P.E.
FL. Registration No. 53835

SEAL

CITY OF MARGATE
BROWARD COUNTY, FLORIDA
MARINA PARK
PROPOSED RESTROOM

APPROVED BY
R.C.

DRAWN BY
J. WEAVER

DATE
1/8/18

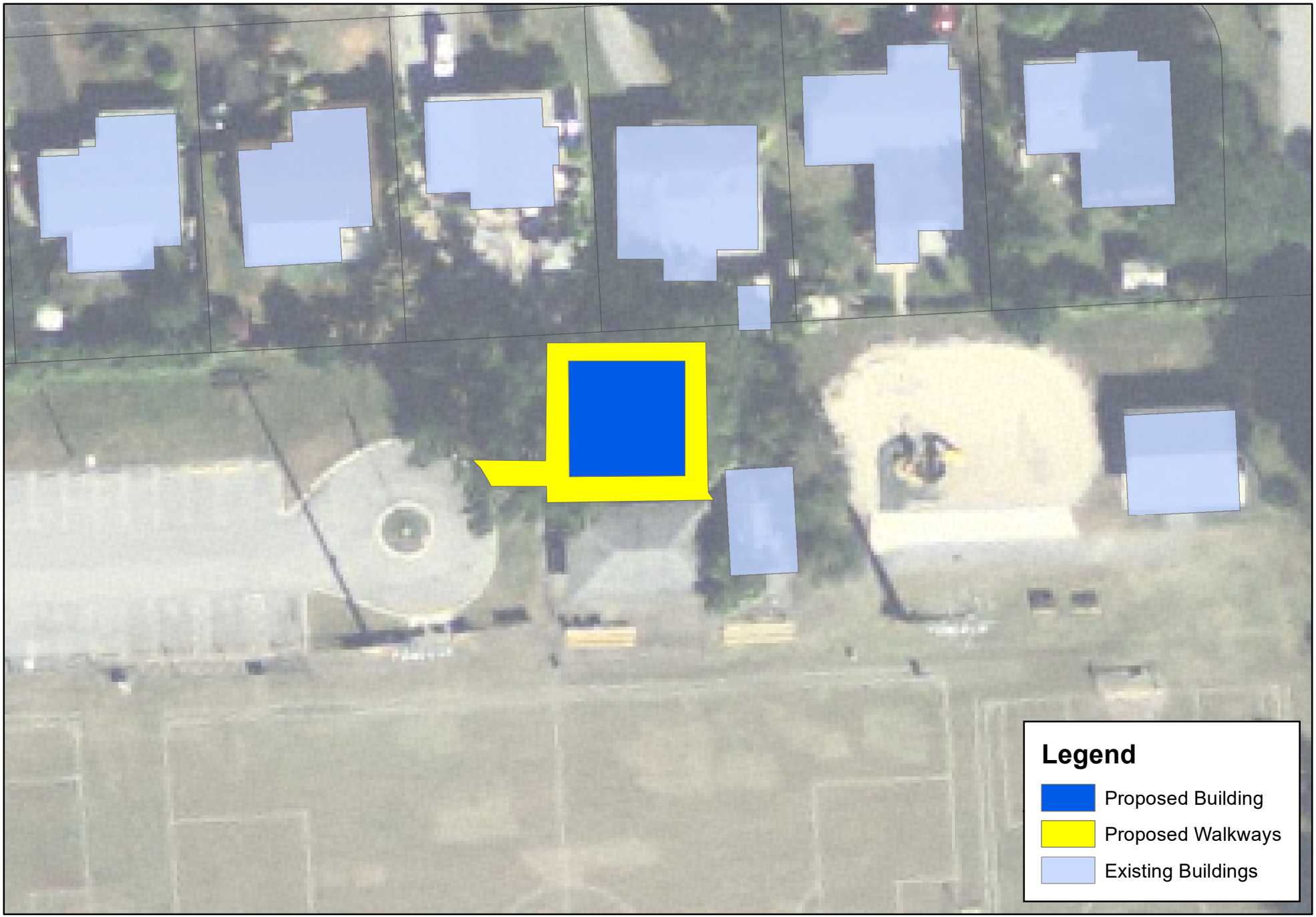
SCALE
1" = 20'

PLAN

SHEET NUMBER
1
SHT 1 of 2

EXHIBIT 2

SOUTHEAST PARK LOCATION MAP



N
W E
S

CHEN·MOORE
&ASSOCIATES

Exhibit 2
Southeast Park Location Map
655 SW 50th Avenue

CITY OF
MARGATE
Together We Make It Great

0 25 50
Feet

EXHIBIT 3

MARINA PARK BUILDING FLOOR PLAN

LIST OF ABBREVIATIONS

A.F.F.	ABOVE FINISH FLOOR
B.W.	BOTH WAY
C.L.	CENTER LINE
E.O.S.	EDGE OF SLAB
F.O.S.	FACE OF STUD
F.R.C.	FIBER REINFORCED CONCRETE
F.R.P.	FIBER REINFORCED PLASTIC
F.W.	FIELD WORK
H.S.S.	HOLLOW STRUCTURAL SECTION
I.D.	INSIDE DIAMETER
K.D.	KILN DRIED
MAX.	MAXIMUM
MIN.	MINIMUM
NOM.	NOMINAL
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.S.B.	ORIENTED STRANDED BOARD
R.S.	ROUGH SAWN
S.S.	STAINLESS STEEL
U.N.O.	UNLESS NOTED OTHERWISE
W.W.F.	WELDED WIRE FABRIC

MISCELLANEOUS NOTES

IN THE EVENT OF UNFORSEEN CIRCUMSTANCES THAT CAUSE MATERIALS TO BECOME UNAVAILABLE, RESTROOM FACILITIES LTD. RESERVES THE RIGHT TO SUBSTITUE REASONABLY SIMILAR OR EQUAL TO ITEMS TO ORIGINAL SPECIFICATIONS. ANY ITEM SUBSTITUTED WILL MEET APPLICABLE CODE REQUIREMENTS.

DISCLOSURE

STATE STAMP

ENGINEER STAMP

NICHOLAS MARK BINGHAM
LICENSE
No. 77529
STATE OF FLORIDA
PROFESSIONAL ENGINEER
2/12/18 EXP 2/13/19

MARGATE MARINA
7044 NW 1st STREET
MARGATE, FLORIDA 33063
JOB NUMBER: 17293
MODEL: S312ST

DESIGN CRITERIA

CODE REFERENCE:

NATIONAL ELECTRICAL CODE (NEC), 2014 EDITION
FLORIDA BUILDING CODE – BUILDING (FBCB), 2017 EDITION
FLORIDA BUILDING CODE – MECHANICAL (FBCM), 2017 EDITION
FLORIDA BUILDING CODE – PLUMBING (FVCP), 2017 EDITION
FLORIDA BUILDING CODE – FUEL GAS (FBCFG), 2017 EDITION
FLORIDA BUILDING CODE – ENERGY CONSERVATION (FBCEC), 2017 EDITION
FLORIDA FIRE PREVENTION CODE – (FFPC), 2017 EDITION
FLORIDA BUILDING CODE ACCESSIBILITY – (FBCA), 2017 EDITION
61G20–3 FAC FOR PRODUCT APPROVAL

CONSTRUCTION TYPE:	" VB "
RESTROOM OCCUPANCY GROUP:	"U"
ROOF LIVE LOAD:	20 P.S.F.
ROOF SNOW LOAD:	20 P.S.F. MAX.
RISK CATEGORY	" II "
BASIC WIND SPEED:	(3 SEC. GUST) VULT = 175 MPH, VASD = 136 MPH (ASCE 7–10) 37 PSF, ULTIMATE M.W.F.R.S.
WIND EXPOSURE:	CATEGORY "C"
FLOOR LIVE LOAD:	50 P.S.F.
SEISMIC CRITERIA:	Sds= .051 Sd1 = .036
(EQUIVALENT LATERAL FORCE PROCEDURE)	R = 2.0 1=1.0 SOIL CLASS "D". SEISMIC DESIGN CATEGORY A
ALLOWABLE SOIL BEARING PER GEOTECHNICAL REPORT BY NUTTING ENGINEERS OF FLORIDA DATED 1/5/18	2,500 PSF.
BUILDING AREA:	509 SQ/FT
DATA PLATE & DECAL LOCATION:	SHEET A1

SHEET INDEX

SPECIAL CONDITIONS/LIMITATIONS

–BUILDING NOT TO BE INSTALLED NEXT TO AN EXISITING BUILDING CLOSER THAN 5'.

–BUILDING CONFIGURATION SHOWN IS CONSTRUCTED IN FACTORY. THE UNDERGROUND PLUMBING PIPING IS PARTIALLY CONSTRUCTED AND SHIPPED TO THE SITE WITH THE BUILDING FOR INSTALLATION UNDERGROUND PRIOR TO THE BUILDING BEING SET.

PROJECT REVISION

REVISED BY:	DATE
1	
2	
3	
4	
5	

RFL Restroom Facilities Limited
1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

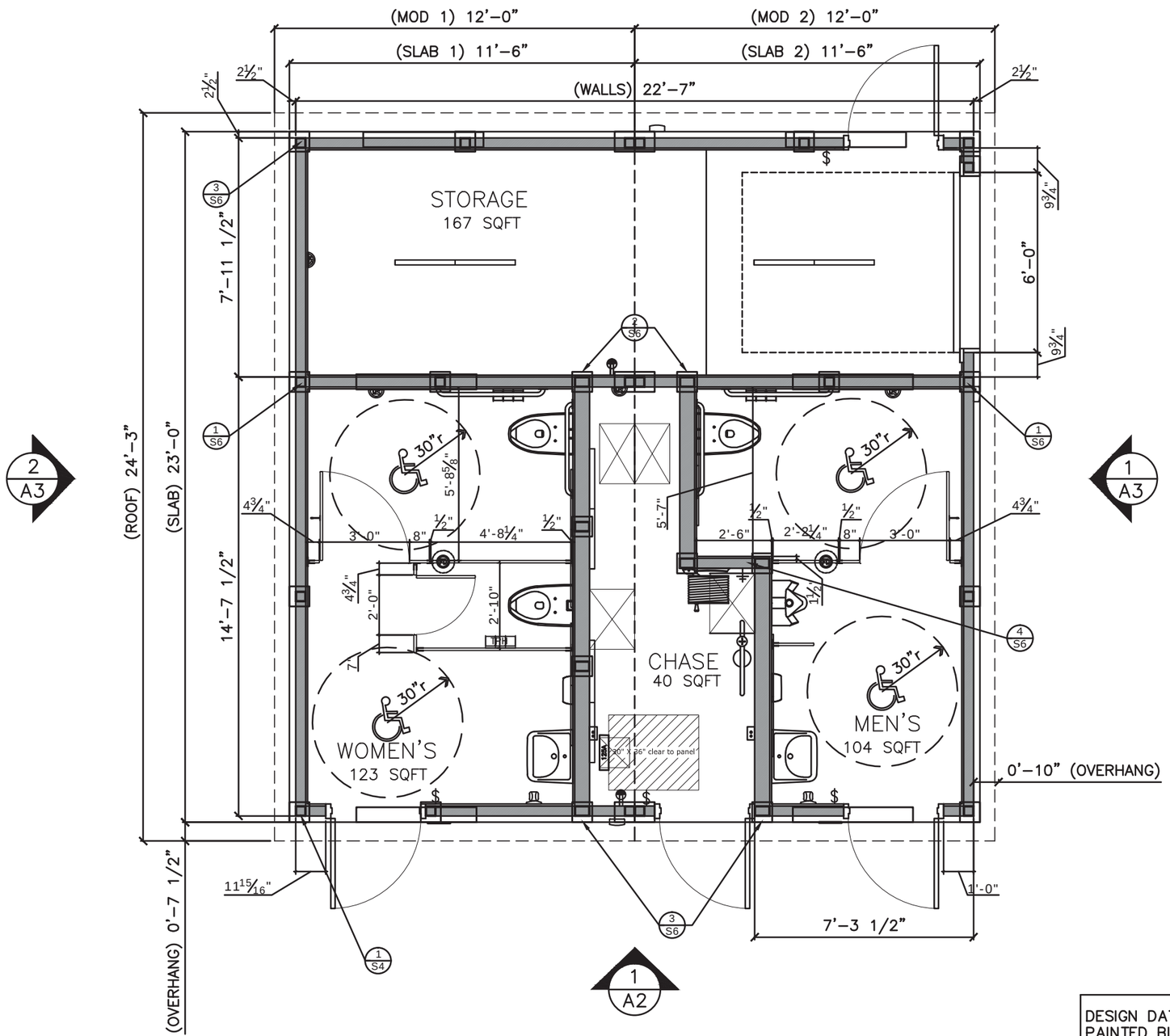
RFL MODEL #: S312ST
PROJECT: MARGATE MARINA
MARGATE, FLORIDA, 33063

DRAWN BY: RS
DATE: 02/12/18
REVISION: DATE:
REVISION: DATE:
REVISION: DATE:
REVISION: DATE:

SHEET DESCRIPTION: COVER SHEET

SHEET
CS

NOTE:
SEE S/8 FOR ALL WALL AND CAP SIZES.



FLOOR PLAN 509 SQ.FT.

DESIGN DATA PLATE TO BE OF PLAQUE GRADE METAL, PAINTED BLACK. CRITERIA TO BE ENGRAVED TO METAL. TO BE SCREWED TO WALL AT HINGE SIDE OF CHASE DOOR AT 60" AFF.

NICK MARK BINGHAM LICENSE No. 77529 STATE OF FLORIDA PROFESSIONAL ENGINEER 2/12/18 2/13/19

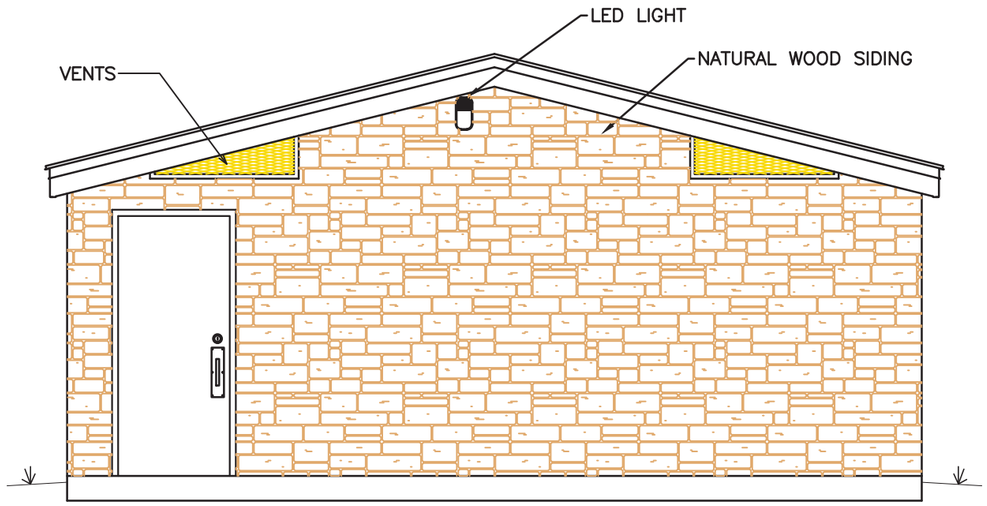
RFL Restroom Facilities Limited
1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

RFL MODEL #: S312ST
PROJECT: MARGATE MARINA
MARGATE, FLORIDA, 33063

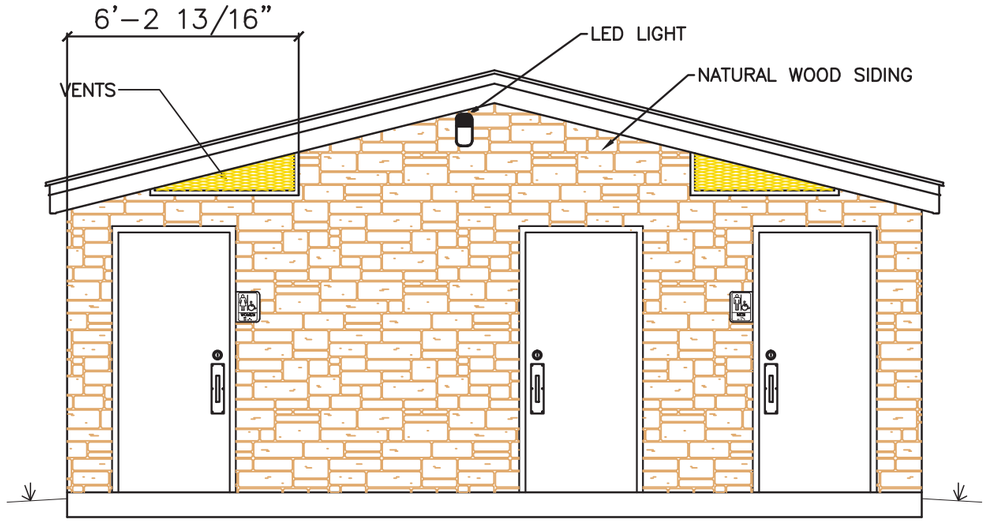
DRAWN BY:	RS
DATE:	02/12/18
REVISION: DATE:	
REVISION: DATE:	
REVISION: DATE:	
REVISION: DATE:	

SHEET DESCRIPTION: FLOOR PLAN

SHEET A1



2 REAR ELEVATION



1 FRONT ELEVATION

NICK MARK BINGHAM
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No. 77529
2/12/18 2/28/19
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

RFL Restroom Facilities Limited

1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

RFL MODEL #: S312ST

PROJECT:
MARGATE MARINA
MARGATE, FLORIDA, 33063

DRAWN BY: RS
DATE: 02/12/18
REVISION:
DATE:
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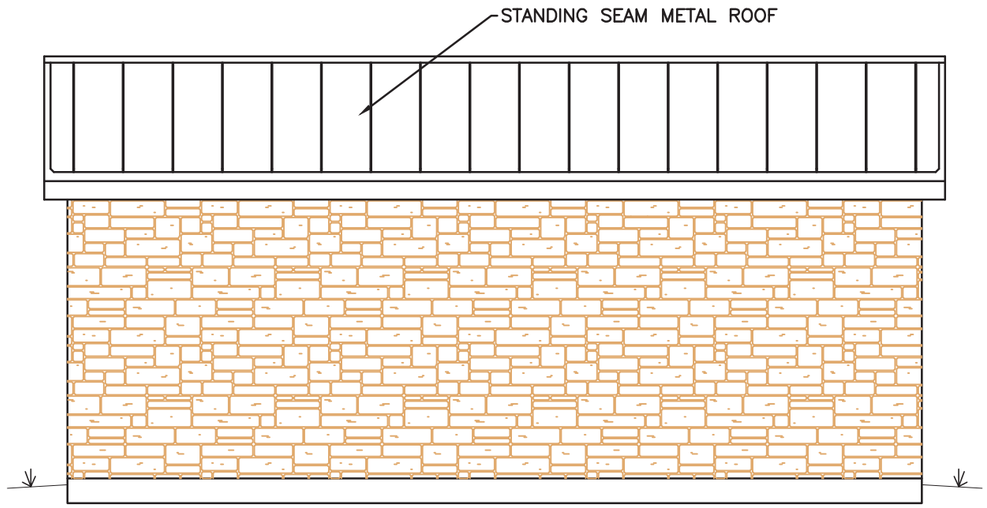
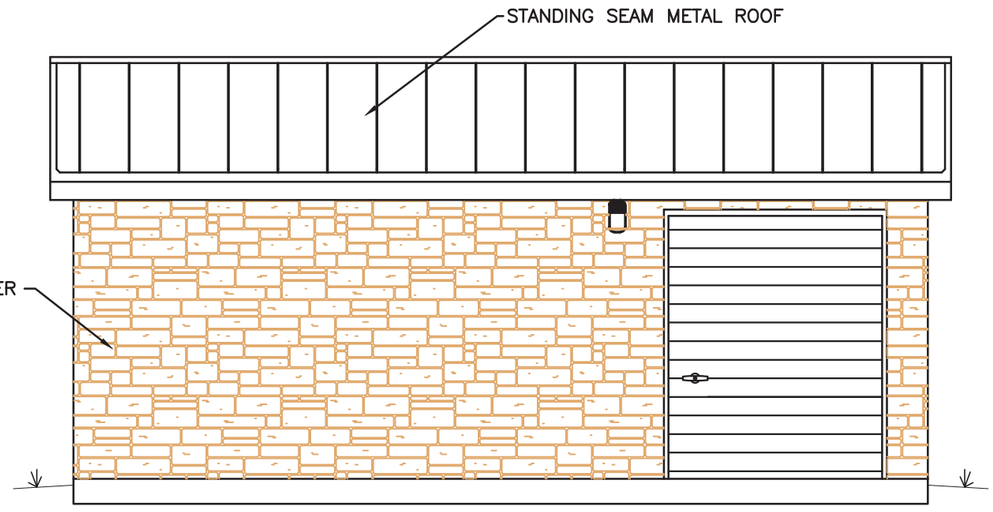
DATE:
REVISION:
DATE:
REVISION:
DATE:

SHEET DESCRIPTION: ELEVATIONS

SHEET
A2



2 LEFT SIDE ELEVATION



1 RIGHT SIDE ELEVATION

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2/12/18
2/13/19

RFL Restroom Facilities Limited
1707 COLT CIRCLE
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512-222-5454

RFL MODEL #: S312ST
PROJECT: MARGATE MARINA
MARGATE, FLORIDA, 33063

DRAWN BY: RS
DATE: 02/12/18
REVISION:
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REVISION:
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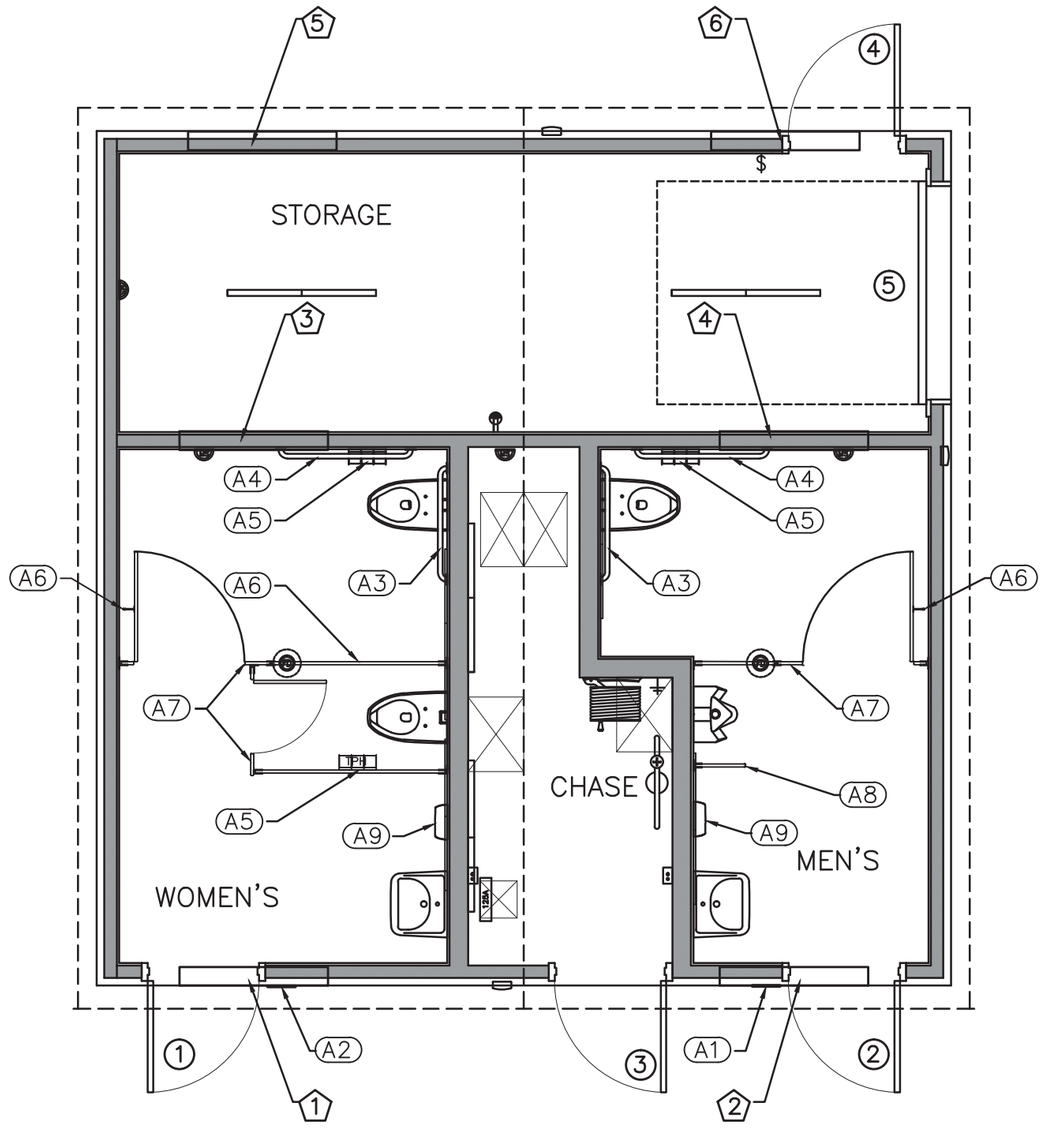
REVISION:
DATE:
REVISION:
DATE:

SHEET DESCRIPTION: ELEVATIONS

SHEET
A3



DOOR & WINDOW ACCESSORY PLAN

NICK MARK BINGHAM
LICENSE
No. 77529
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
2/12/19
2/13/19

RFL Restroom Facilities Limited

1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

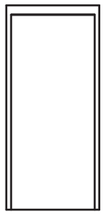
RFL MODEL #: S312ST

PROJECT: MARGATE MARINA
MARGATE, FLORIDA, 33063

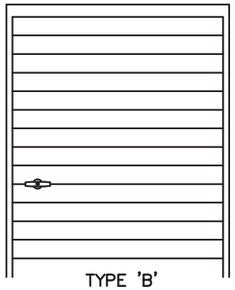
DRAWN BY:	RS
DATE:	02/12/18
REVISION: DATE:	
REVISION: DATE:	
REVISION: DATE:	
REVISION: DATE:	

SHEET DESCRIPTION: DOOR/WINDOW & ACCESSORY PLAN

SHEET
A4



TYPE 'A'



TYPE 'B'

DOOR SCHEDULE

	NO.	DOOR SIZE	R.O. SIZE	THICKNESS	TYPE	MANUFACTURER MODEL	DOOR MATERIAL	FRAME MATERIAL	LOCK	LOCK FINISH	PUSH/PULL PLATE & HANDLES	HINGE	CLOSER	KICK PLATE	PERIMETER SEALS
①	1	3'-0" x 7'-0"	3'-4 1/4" x 7'-4"	1-3/4"	A	STEELCRAFT H SERIES SINGLE FLUSH, (MIAMI-DADE NOA # 17-0320.06)	HOLLOW METAL 14 GA.	5¾" WIDE HOLLOW METAL 14 GA.	SCHLAGE B660P DEADBOLT KEY/THUMB TURN (SMALL CORE)	626	IVES 8311, 8300 PLATE WITH 8111 PULL	HAGER 780/224HD CONTINUOUS HINGE	DORMA 8616 DST W/5 SEC CLOSE TIME	IVES 8400, 10X32 US32D (INSIDE ONLY)	SEE ITEMS 1-8 BELOW
②	2	3'-0" x 7'-0"	3'-4 1/4" x 7'-4"	1-3/4"	A	STEELCRAFT H SERIES SINGLE FLUSH, (MIAMI-DADE NOA # 17-0320.06)	HOLLOW METAL 14 GA.	5¾" WIDE HOLLOW METAL 14 GA.	SCHLAGE B660P DEADBOLT KEY/THUMB TURN (SMALL CORE)	626	IVES 8311, 8300 PLATE WITH 8111 PULL	HAGER 780/224HD CONTINUOUS HINGE	DORMA 8616 DST W/5 SEC CLOSE TIME	IVES 8400, 10X32 US32D (INSIDE ONLY)	SEE ITEMS 1-8 BELOW
③	3	3'-0" x 7'-0"	3'-4 1/4" x 7'-4"	1-3/4"	A	STEELCRAFT H SERIES SINGLE FLUSH, (MIAMI-DADE NOA # 17-0320.06)	HOLLOW METAL 14 GA.	5¾" WIDE HOLLOW METAL 14 GA.	SCHLAGE B660P DEADBOLT KEY/THUMB TURN (SMALL CORE)	626	IVES 8311, 8300 PLATE WITH 8111 PULL	HAGER 780/224HD CONTINUOUS HINGE	WRIGHT V11	N/A	SEE ITEMS 1-8 BELOW
④	4	3'-0" x 7'-0"	3'-4 1/4" x 7'-4"	1-3/4"	A	STEELCRAFT H SERIES SINGLE FLUSH, (MIAMI-DADE NOA # 17-0320.06)	HOLLOW METAL 14 GA.	5¾" WIDE HOLLOW METAL 14 GA.	SCHLAGE B660P DEADBOLT KEY/THUMB TURN (SMALL CORE)	626	IVES 8311, 8300 PLATE WITH 8111 PULL	HAGER 780/224HD CONTINUOUS HINGE	DORMA 8616 DST W/5 SEC CLOSE TIME	IVES 8400, 10X32 US32D (INSIDE ONLY)	SEE ITEMS 1-8 BELOW
⑤	5	6'-0" x 7'-3"	TBD		B	AMARR MODEL 2400 STEEL SECTIONAL GARAGE DOOR (MIAMI-DADE NOA #15-0505.14)	24 GA. STEEL	N/A	CLOPAY GARAGE DOOR KEYED LOCK SET MODEL: 4125480	CHROME	N/A	N/A	N/A	N/A	N/A

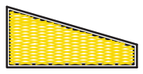
PERIMITER SEALS:

1. THRESHOLD: NGP 950,W/SILICON, VINYL, OR NEOPRENE BUMBER
2. SHOE: STEELCRAFT FAS-SEAL SWEEP
3. SELF ADHESIVE DOOR SEAL: STEELCRAFT PS04
4. DOOR EDGE SWEEP: ZERO INT'L 539
5. DOOR BOTTOM SWEEP: ZERO INT'L 139
6. ADJUSTABLE STOP: NGP 170N
7. RAIN DRIP CAP: ZERO INT'L 11
8. DOOR TOP CAP: STEELCRAFT DOOR TOP CAP

NICK MARK BINGHAM LICENSE No. 77529 STATE OF FLORIDA PROFESSIONAL ENGINEER 2/12/18 2/13/19

VENT SCHEDULE

	NO.	FRAME SIZE	R.O. SIZE	THICKNESS	TYPE	FRAME MATERIAL	VENT MATERIAL	MOUNTING HEIGHT	MANUFACTURER MODEL #
①	1	4' LENGTH	4'-0 1/4"	1/8""	A	WINDSOR ONE PROTECTED	TYPE 304 STAINLESS STEEL	IN GABLE	CUSTOM: IN FLATTENED DE-BURRED PATTERN
②	2	4' LENGTH	4'-0 1/4"	1/8""	A	WINDSOR ONE PROTECTED	TYPE 304 STAINLESS STEEL	IN GABLE	CUSTOM: IN FLATTENED DE-BURRED PATTERN
③	3	4' LENGTH	4'-0 1/4"	1/8""	A	WINDSOR ONE PROTECTED	TYPE 304 STAINLESS STEEL	IN GABLE	CUSTOM: IN FLATTENED DE-BURRED PATTERN
④	4	4' LENGTH	4'-0 1/4"	1/8""	A	WINDSOR ONE PROTECTED	TYPE 304 STAINLESS STEEL	IN GABLE	CUSTOM: IN FLATTENED DE-BURRED PATTERN
⑤	5	4' LENGTH	4'-0 1/4"	1/8""	A	WINDSOR ONE PROTECTED	TYPE 304 STAINLESS STEEL	IN GABLE	CUSTOM: IN FLATTENED DE-BURRED PATTERN
⑥	6	4' LENGTH	4'-0 1/4"	1/8""	A	WINDSOR ONE PROTECTED	TYPE 304 STAINLESS STEEL	IN GABLE	CUSTOM: IN FLATTENED DE-BURRED PATTERN



TYPE 'A'

ACCESSORY SCHEDULE

	MEN	WOMENS	FAMILY	SHOWER	ADA SHOWER	CONCESSION	STORAGE	CHASE	EXTERIOR	TOTAL	ACCESSORY NAME	ACCESSORY DESCRIPTION	MOUNTING HEIGHT	MANUFACTURER	COLOR	MODEL # NOTES
A1	1									1	(MENS) ADAAG PICTOGRAM RESTROOM SIGN	INTERNATIONAL ACCESSIBILTY SCHEDULE	60" A.F.F. @ TO C.L.	MYDOORSIGN.COM	8"X8" WHITE CHARACTERS OVER BLUE BACKGROUND	MDDS-128572 CUSTOM KIT MEN'S & WOMEN'S ADA SIGN
A2		1								1	(WOMEN'S) ADAAG PICTOGRAM RESTROOM SIGN	INTERNATIONAL ACCESSIBILTY SCHEDULE	60" A.F.F. @ TO C.L.	MYDOORSIGN.COM	8"X8" WHITE CHARACTERS OVER BLUE BACKGROUND	
A3	1	1								2	HANDICAP GRAB BARS	36" X 1-1/2" DIAMETER HORIZONTAL OR VERTICAL STAINLESS STEEL GRAB BARS WITH CONCEALED FLANGES	33" TO 36" A.F.F. TO TOP	BOBRICK	STAINLESS STEEL	B-6806 X 36
A4	1	1								2	HANDICAP GRAB BARS	42" X 1-1/2" DIAMETER HORIZONTAL OR VERTICAL STAINLESS STEEL GRAB BARS WITH CONCEALED FLANGES	33" TO 36" A.F.F. TO TOP	BOBRICK	STAINLESS STEEL	B-6806 X 42
A5	1	2								3	TOILET PAPER RECEPTACLE	3 ROLL SPINDLE W/ COVER	19" MIN A.F.F TO C.L.	ROYCE ROLLS	STAINLESS STEEL	TP-3
A6	1	2								3	COAT HOOK	COAT HOOK WITH HOOK AND BUMPER	50" A.F.F. TO C.L.	BOBRICK	ALLUMINUM CAST	B-212
A7	1	2								3	TOILET PARTIONS	1" HIGH-DENSITY POLYETHYLENE PLASTIC (HDPE) STAINLESS STEEL VANDAL RESISTANT HARDWARE	9" MIN A.F.F. TO BOTTOM	GEM PLASTICS	CARAMEL	
A8	1									1	URINAL SCREENS	1" HIGH-DENSITY POLYETHYLENE PLASTIC (HDPE) STAINLESS STEEL VANDAL RESISTANT HARDWARE	9" MIN A.F.F. TO BOTTOM	GEM PLASTICS	CARAMEL	
A9	1	1								2	HAND DRYER	SURFACE MOUNT HAND DRYER	40" AFF TO BUTTON	WORLD DRYER	WHITE ON ALUMINUM	L-974

RFL Restroom Facilities Limited

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DRAWN BY: RS
DATE: 02/12/18
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DATE:
REVISION:
DATE:

SHEET DESCRIPTION: DOOR/WINDOW & ACCESSORY SCHEDULE

SHEET
A5

EXTERIOR FINISH SCHEDULE

DESCRIPTION	MATERIAL	FINISH	COLOR	BRAND	REMARKS
WALLS TO 7'-4"	EL DORADO STONE VENEER, MOUNTAIN LEDGE	NATURAL	YUKON	EL DORADO	
WALLS ABOVE 7'_4"	EL DORADO STONE VENEER, MOUNTAIN LEDGE	NATURAL	YUKON	EL DORADO	
EXTERIOR SOFFITS	2x6 T&G SELECT DECK w/ V JOINTS	STAINED	REDWOOD	SUPERDECK	N/A
FASCIA	STEEL (SEE ROOF FRAMING SCHEDULE FOR SIZE)	PAINTED	SWISS COFFEE	KELLY MOORE OR EQUAL	F03
RAKE	STEEL (SEE ROOF FRAMING SCHEDULE FOR SIZE)	PAINTED	SWISS COFFEE	KELLY MOORE OR EQUAL	F03
ROOFING	STANDING SEAM 26 GA IMAGE II	MANUFACTURER	COPPER PENNY	METAL SALES	N/A (MIAMI-DADE NOA# 14-0107.04)
VENTS	STAINLESS STEEL EXPANDED METAL MESH	PAINTED	SWISS COFFEE	KELLY MOORE OR EQUAL	F01 (PAINT FRAME ONLY)
DOOR	1 3/4" THICK FULL-FLUSH, 14 GAUGE STEEL	PAINTED	SWISS COFFEE	KELLY MOORE OR EQUAL	F03
DOOR JAMB	14 GAUGE STEEL	PAINTED	SWISS COFFEE	KELLY MOORE OR EQUAL	F03

F01 EXPOSED WOOD, TRIM, BEAMS RAFTERS, FRC

(1) PRIMER COAT — 2521 ACRY. SHIELD (100%) ACRYLIC PRIMER
(2) FINISH COAT — 1685 DURA-POXY+ (100 % ACRYLIC SEMI GLOSS ENAMEL)

F02 BLOCK (PUBLIC USE AREAS)

(1) COAT BLOCK FILL — 521 COLOR SHIELD (PRIME & FILL ACRYLIC BLOCK FILLER)
(1) COAT PRIMER — 255 ACRYLIC -SHIELD (100% ACRYLIC PRIMER)
(2) COATS FINISH — 1685 DURA-POXY+ (100% ACRYLIC SEMI GLOSS ENAMEL)

F03 STEEL METAL DOORS AND FRAMES

(1) COAT PRIMER — METALMAX DTM ACRYLIC URETHANE GREY PRIMER
(2) COATS FINISH — METALMAX URETHANE TINT BASE

F04 BLOCK AND OSB IN CHASE AND STORAGE

(1) COAT PRIMER — 255 ACRY-SHEILD (100) ACRYLIC PRIMER) GREY

F05 STUCCO

(1) COAT PRIMER — 98 STUCCO SEAL (ACRYLIC STUCCO & MASONRY SEALER)
(2) COATS FINISH — 1685 DURA-POXY+ (100% ACRYLIC SEMI GLOSS ENAMEL)

F06 ANTI GRAFFITI COATING

(2) COATS PRIMER — VANDLGUARD TEN NON-SACRIFICIAL GRAFFITI COATING
(1) FINISH COAT — VANDLGUARD FINISH COAT

NICK MARK BINGHAM LICENSE No. 77529 STATE OF FLORIDA PROFESSIONAL ENGINEER 2/12/18 2/13/19

INTERIOR FINISH SCHEDULE

MEN	WOMEN	CONCESSION	CHASE	STORAGE	OUTSIDE	DESCRIPTION	MATERIAL	FINISH	COLOR	BRAND	REMARKS
			●	●		CONCRETE FLOOR	FASTKOTE UV POLYUREA FLOOR COATING	SMOOTH	GRAY	RUSTOLEUM	
●	●					CONCRETE FLOOR	EPOXY FLOOR COATING, 100% SOLIDS MODIFIED, 30-50 MILS THICKNESS	SAND	ADOBE	APF	
				●		WALLS FLOOR TO CEILING	OPEN FRAMED	PRECISION	SWISS COFFEE	KELLY MOORE	F03
●	●					WALLS FLOOR TO CEILING	3/32" CLASS 'A' FIBER REINFORCED PLASTIC (FRP) OVER 5/8" OSB	PEBBLE GRAIN	WHITE	KEMLITE	
				●		WALLS FLOOR TO CEILING	5/8" OSB	PAINTED	SWISS COFFEE	KELLY MOORE	F01
			●			CHASE WALLS	OPEN FRAME	PAINTED	GRAY	KELLY MOORE	F04
●	●		●	●		ROOF FRAMING	RIDGE BEAM & RAFTERS	PAINTED	SWISS COFFEE	KELLY MOORE	N/A
●	●		●	●		CEILING	2x6 T&G SELECT DECK w/ V JOINTS	OILED/STAINED	REDWOOD	SUPERDECK	N/A

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DRAWN BY: RS
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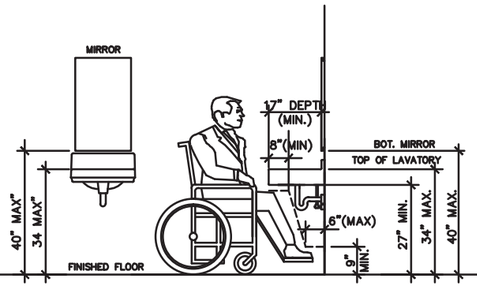
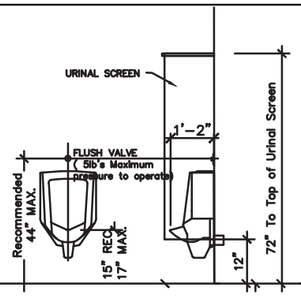
SHEET DESCRIPTION: EXTERIOR & INTERIOR FINISH SCHEDULE

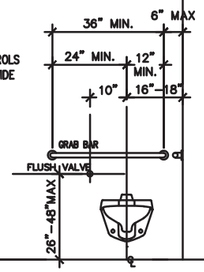
SHEET A6

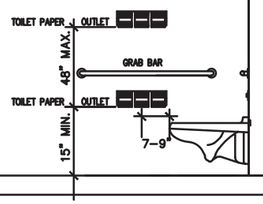
PLUMBING FIXTURE & ACCESSORY HEIGHT'S SCHEDULE

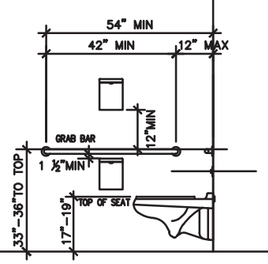




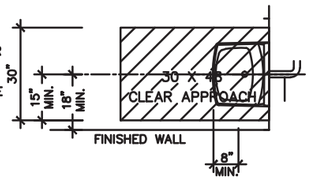
NOTE:
TOILET FLUSH CONTROLS SHALL BE TO THE WIDE SIDE OF THE STALL



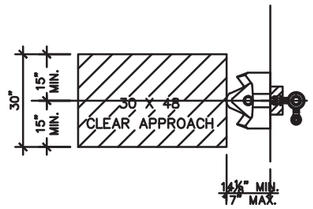




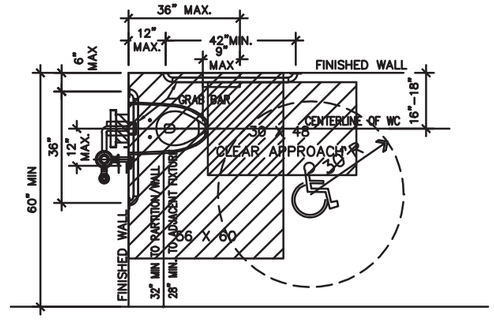
NOTE:
IF HOT WATER IS SUPPLIED. HOT WATER LINE & WASTE MUST BE FOAM WRAPPED IF PIPES ARE EXPOSED.

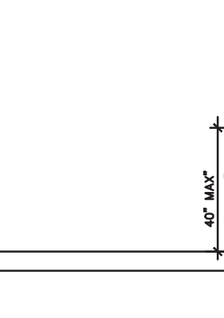


CODE SUMMARY HEIGHT A.F.F.		LOCATION
RIM HEIGHT	34" MAX	17" MIN. TO WALL
HEIGHT OF APRON	29" MIN	17" MIN. TO WALL
FRONT LAV. TO TRAP	8" MIN	N/S
TOE SPACE UNDER TRAP	9" MIN	N/S
CONTROLS	DECK MT.	N/S
ACCESS KNEE	N/A 27" MIN	30" x 48"

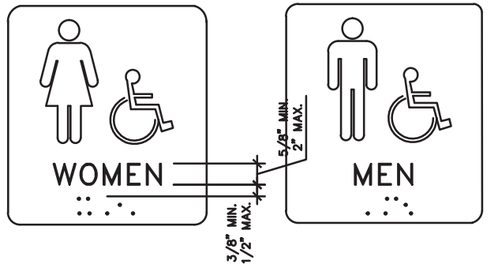


CODE SUMMARY HEIGHT A.F.F.		LOCATION
URINAL RIM	17" MAX / 14" MIN	15" ' TO WALL
CONTROLS	44" MAX	N/S
URINAL SCREENS	12"-14"	SCREENS MUST BE AT LEAST 30" APART





SIGNS TO BE A CONTRASTING COLOR TO THE DOORS.



DOOR SIGNAGE DESIGN CRITERIA

CODE SUMMARY HEIGHT A.F.F./ LOC.	
GRAB BARS	33" X 1-1/4" – 1-1/2" DIA. (1-1/2" DIST. FROM BAR TO WALL)
TOILET/ SEAT	19" MAX / 17" MIN
TOILET FLUSH VALVE	48" MAX., 12" TO WIDE SIDE
T.P. DISPENSER	15" MIN.

NOTES: 1. ALL DIMENSIONS SHOWN ON PLAN OR ELEVATION ARE OUR STANDARDS AND WITHIN CODE.

2. FLUSH VALVE IN HANDICAP STALL OFFSET TO WIDE SIDE.

-MEN'S ROOM SIGN ARE:
AN 8" X 8" WALL SIGN.

-WOMEN'S ROOM SIGNS ARE:
AN 8" X 8" WALL SIGN.

-THE SIGNS ARE ¼" THICK, WITH CHARACTERS BEING 5/8" MIN & 2" MAX. IN HEIGHT, RAISED 1/32". USED.

-DOTS SHALL BE CENTERS IN EACH CELL WITH 2/10" (5.08MM) SPACE BETWEEN CELLS. DOTS SHALL BE MEASURED FROM THE SECOND COLUMN OF DOTS IN THE FIRST CELL TO THE FIRST COLUMN OF DOTS IN THE SECOND CELL. DOTS SHALL BE RAISED A MINIMUM OF 1/10 BACKGROUND." (0.635MM) ABOVE THE 1/10" (2.54MM) ON-BRAILLE DOTS SHALL BE DOMED OR ROUNDED.

FLORIDA BUILDING CODE ACCESSIBILITY

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RFL MODEL #: S312ST
PROJECT: MARGATE MARINA
MARGATE, FLORIDA, 33063

NICK MARK BINGHAM LICENSE No. 77529 STATE OF FLORIDA PROFESSIONAL ENGINEER

DRAWN BY:	RS
DATE:	02/12/18
REVISION:	
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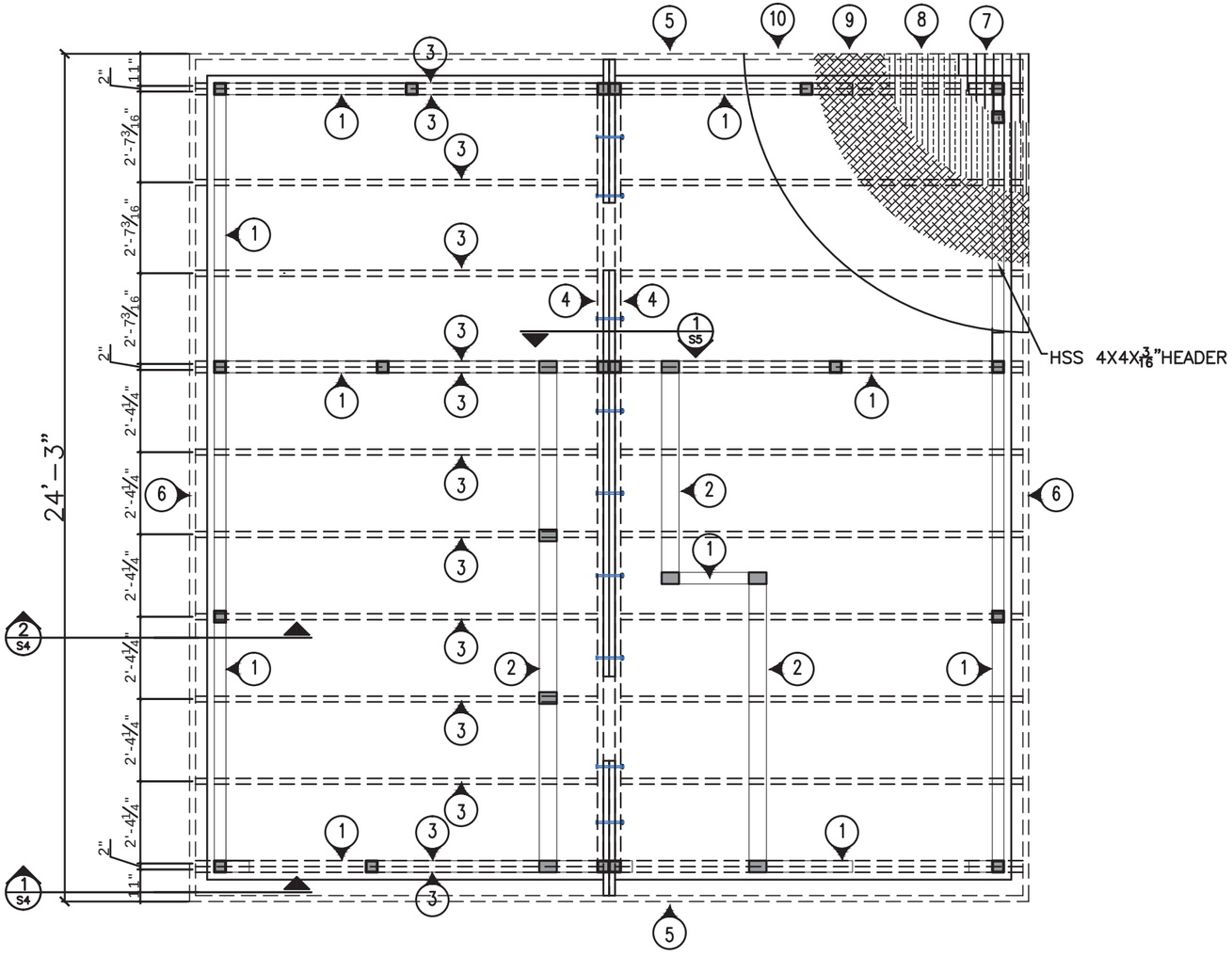
REVISION:	
DATE:	

SHEET DESCRIPTION: ADA REQUIREMENTS

SHEET
A7



FRAMING PLAN

FRAME SCHEDULE & ROOF FRAME SCHEDULE

1. WALL BELOW: 1 5/8" X 4" 16ga. STRUCTURAL STEEL STUDS @ 16" O.C.
2. WALL BELOW: 1 5/8" X 6" 18ga. STRUCTURAL STEEL STUDS @ 16" O.C.
3. RAFTERS: HSS 5X2X1/4" @ 32" O.C. MAX. WELDED TO RIDGE BEAM. SEE DETAIL 1/S5 AND 2/S5
4. RIDGE BEAM: (1) HSS 8X2X1/4" AT EACH MOD
5. RAKE: HSS 8X2X3/16" WELDED TO RIDGE AND FASCIA.
6. FASCIA: HSS 8X2X3/16" WELDED TO RAFTERS AND RAKE.
7. ROOF DECKING: 2X6 T&G FASTENED TO RAFTERS WITH (2) #12 X 2-3/4 SELF DRILLING SCREWS @ EACH RAFTER.
8. 30LB FELT PAPER STAPLED AS PER CODE.
9. 3/8" OSB OR BETTER FASTENED TO DECKING WITH #6X1 3/4" SCREWS @ 4" O.C. ON EDGES AND 4" O.C. IN FIELD. (INSERT SCREWS AT SLIGHT ANGLE)
10. ROOFING: SEE EXTERIOR SCHEDULE

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NOTES:
A. ALL STRUCTURAL WOOD MEMBERS TO BE #2 OR BETTER KD SPF OR #2 SOUTHERN PINE.

B. DETAILS CUT ONCE ARE INTENDED TO BE APPLIED TYPICALLY IN ALL SUCH SIMILAR CONDITIONS, WHETHER REFERENCED OR NOT.

C. ALL WOOD MATERIAL TO BE COATED WITH ECO CLEAR SHIELD.

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1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

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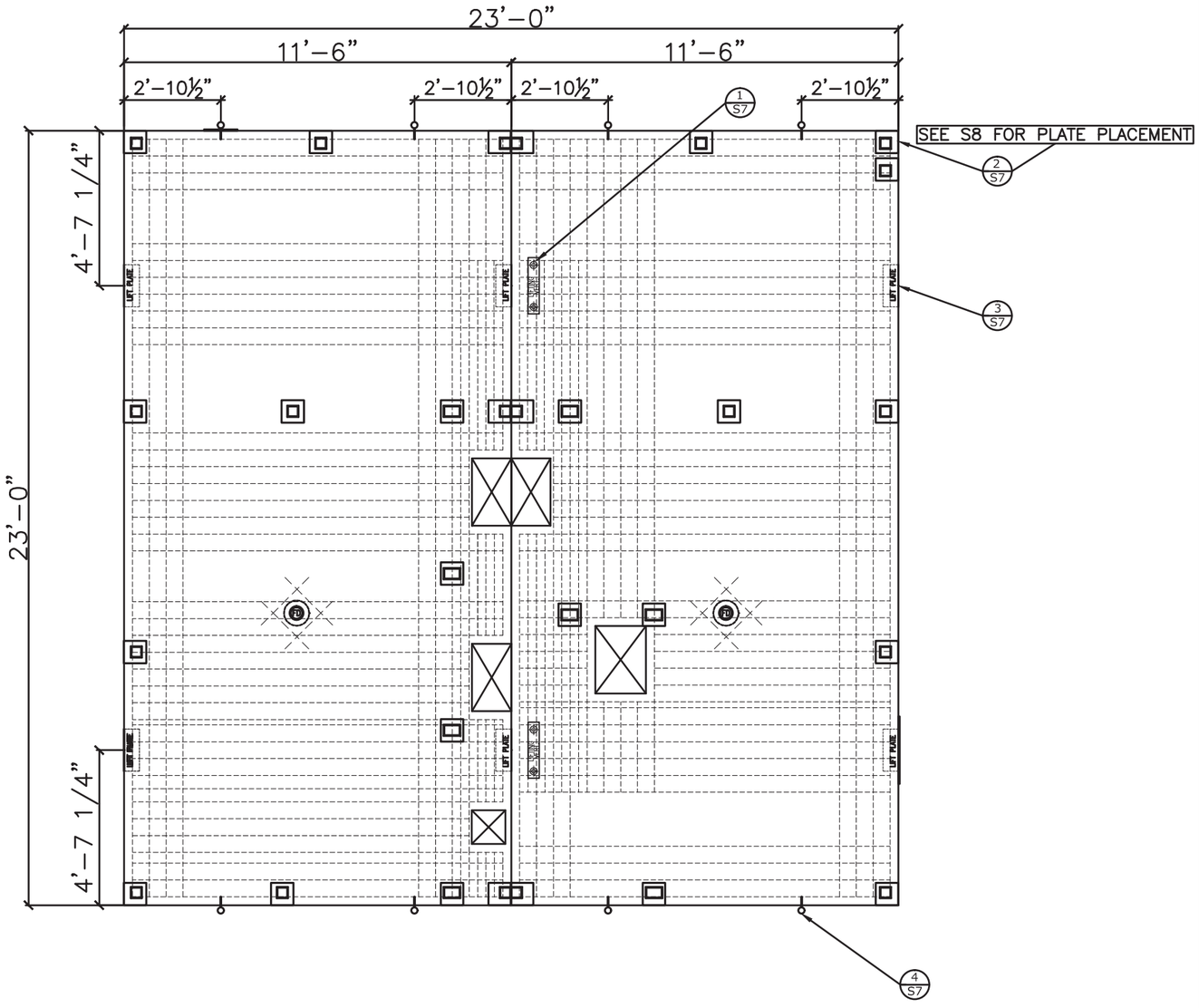
SHEET DESCRIPTION: ROOF FRAMING PLAN

SHEET
S1



SLAB REBAR PLAN

NOTE:

1. INSTALL #3 @ 12 O.C. EACH WAY PLUS ADDITIONAL # 5 REBAR TOP & BOTTOM AS SHOWN.

2. 6X6X½" ANGLE AROUND PERIMETER OF EACH MOD

SLAB LEGEND

LIFT PLATE — #5 REBAR TOP & BOTTOM

VERTICAL LIFTING PLATE

TRANSPORT TIE LOCATIONS

– FLOOR DRAIN

A = SLAB KNOCKOUT (18"x 24")

B = SLAB KNOCKOUT (14"x 24")

C = SLAB KNOCKOUT (12" X 12")

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BUILDING SLAB CONCRETE

1. THE MANUFACTURING PLANT POURED SLAB CONCRETE SHALL MEET THE DESIGN PROVISIONS OF ACI–317–14.

2. THE SLAB CONCRETE SHALL BE CONSTRUCTED USING A CONCRETE MIX WHICH HAS BEEN DESIGNED TO REACH 5,000 PSI.

3. THE CONCRETE SLAB SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 7 DAYS OF 3,000 PSI (60% OF 28 DAY STRENGTH).

4. THE CEMENT USED IN THE CONCRETE SLAB SHALL BE TYPE II MEETING ASTM C150–05, UNLESS NOTED OTHERWISE IN A SITE SPECIFIC SOILS REPORT.

5. THE AGGREGATE SIZE SHALL BE 3/4" MAXIMUM MEETING GRADATION REQUIREMENTS OF ASTM C33–03.

6. #3 AND #5 REBAR TO MEET ASTM 615 GRADE 60.

7. MAXIMUM BEND OF REBAR IS TO BE MINIMUM 6db PER ACI 318 7.2.1.

8. SLAB ANGLES TO BE ASTM A36

1 DETAILS & NOTES

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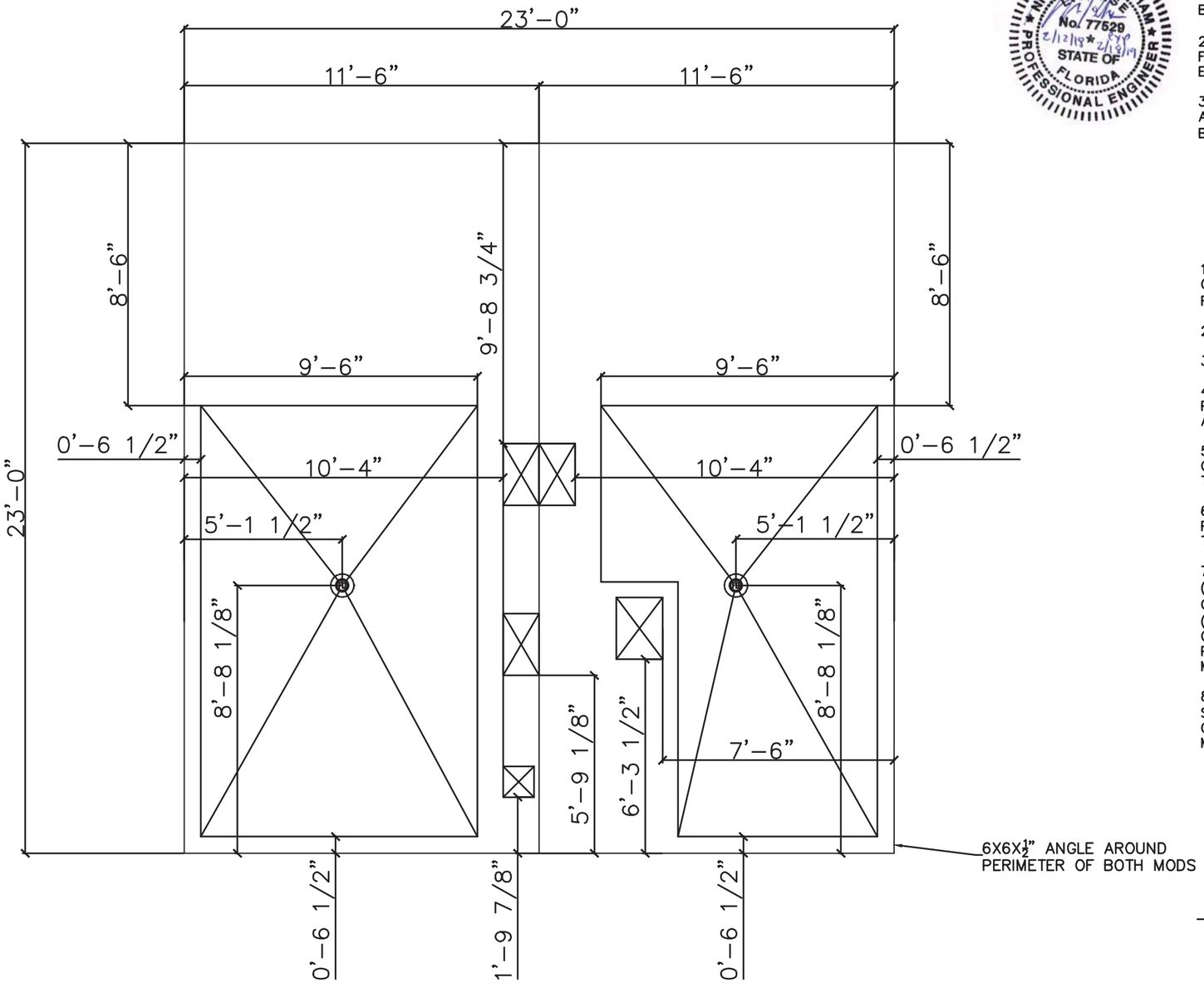
SHEET DESCRIPTION: SLAB REBAR PLAN

SHEET S2



SLAB SLOPE & KNOCKOUT PLAN

2% SLOPE MAX. (TYPICAL)

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NOTES:

1. SLAB OPENING SHALL BE FILLED IN WITH COARSE MASONS SAND AFTER BUILDING & UTILITIES ARE INSTALLED, CONNECTED & INSPECTED.

2. FINISH GRADE AROUND BUILDING SHALL BE MINUS (–2") INCHES BELOW FINISH FLOOR ELEVATION, EXCEPT FOR PAVING TO MATCH FINISH FLOOR ELEVATION.

3. ALL FLAT WORK AT DOORS SHALL BE LEVEL WITH FINISH FLOOR ADDITIONAL F.W. AND OR BACKFILL TO SIDES & REAR OF BUILDING SHALL BE 1/2" LOWER THAN BUILDING FINISH FLOOR LEVEL.

GENERAL CONTRACTORS SCOPE OF WORK

1. ALL EARTH WORK SHALL CONFORM TO THE SITE SPECIFIC GEOTECHNICAL REPORT PREPARED BY NUTTING ENGINEERS OF FLORIDA, DATED 01/05/2018.

2. PROVIDE STRUCTURAL FILL AS REQUIRED TO RAISE EXISTING GRADE.

3. BUILDING PAD MUST BE LEVEL.

4. EXCAVATE AND BACKFILL ALL TRENCHES FOR UNDERGROUND PLUMBING
AND UTILITY KIT WHEN RFL SITE CREW IS ON SITE.

5. SUPPLY APPROXIMATELY SIX YARDS OF CLEAN SAND FOR FINE GRADING.
THE SAND IS UNINSTALLED AFTER THE PLUMBING INSPECTION.

6. DEPENDING UPON WEATHER ALL IRRIGATION SHOULD BE TURNED OFF PRIOR TO DELIVERY TO ALLOW SURROUNDING SOILS TO DRY AND BEAR THE WEIGHT OF THE TRUCK AND CRANE.

7. PROVIDE SUITABLE SAFE AND CLEAR ACCESS TO ALLOW THE CRANE (UP TO 110 TONS), WITHIN 25' OF THE BUILDING PAD AND THE BUILDING ON A SEMI TRAILER (UP TO 40 TONS), TO REACH THE SITE (14' WIDTH, 70' LENGTH, AND 14' IN HEIGHT). IF PATH TO SITE IS OVER EXISTING UTILITIES, SIDEWALKS OR OTHER DAMAGEABLE AREAS PROPER MARKING, PLATTING OR OTHER APPROPRIATE PROTECTION MUST BE PROVIDED.

8. RESTROOM FACILITIES TO PROVIDE PLUMBING KIT AND UTILITY KIT SET BACK. RESTROOM FACILITIES STUB OUT TO 6'. RFL WILL PROVIDE CHRISTY BOXES FOR CONNECTION. RESTROOM FACILITIES WILL NOT MAKE THE FINAL CONNECTION.

SLAB LEGEND

- SLAB KNOCKOUT (18"x 24")
- SLAB KNOCKOUT (14"x 24")
- SLAB KNOCKOUT (12" X 12")
- FLOOR DRAIN

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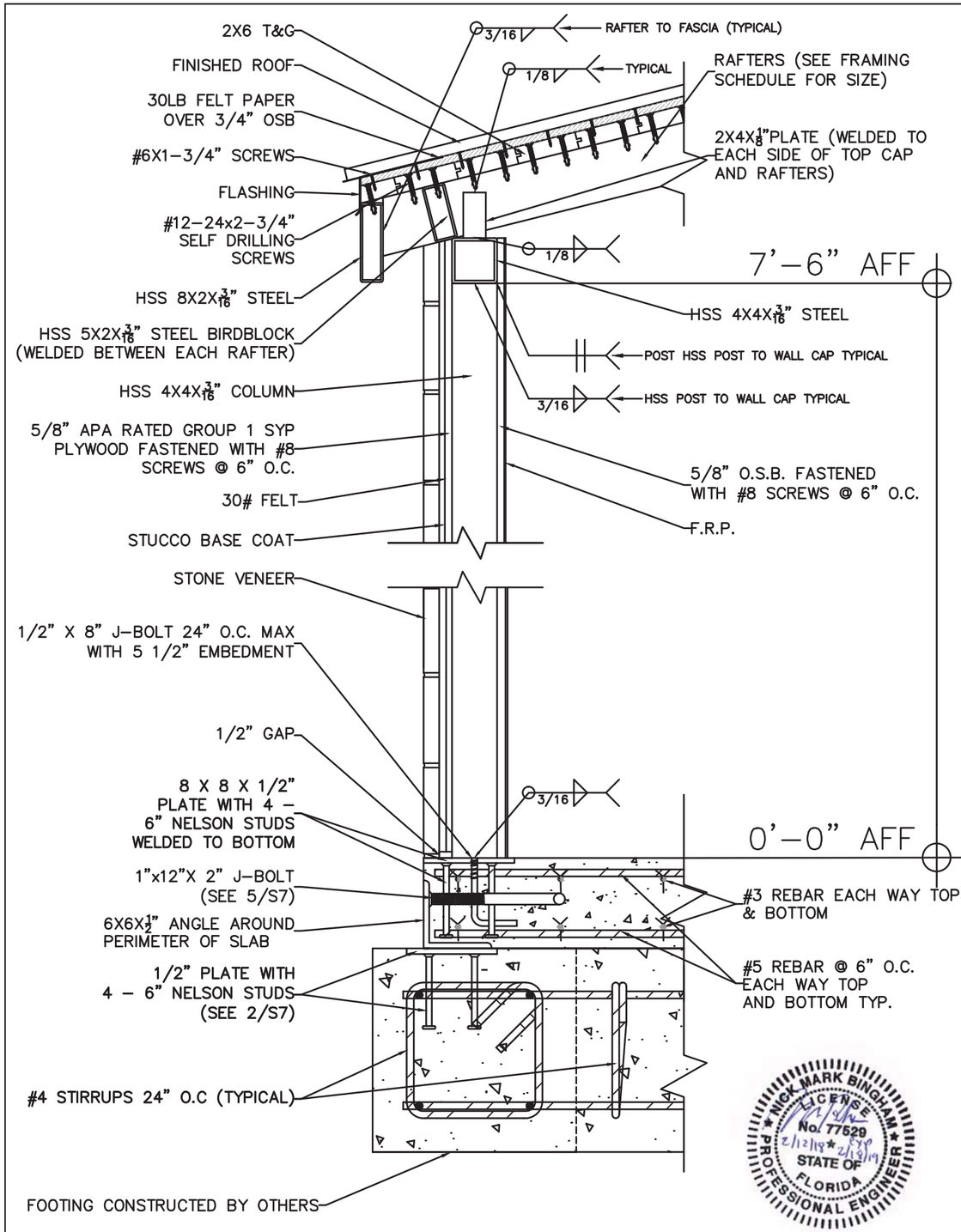
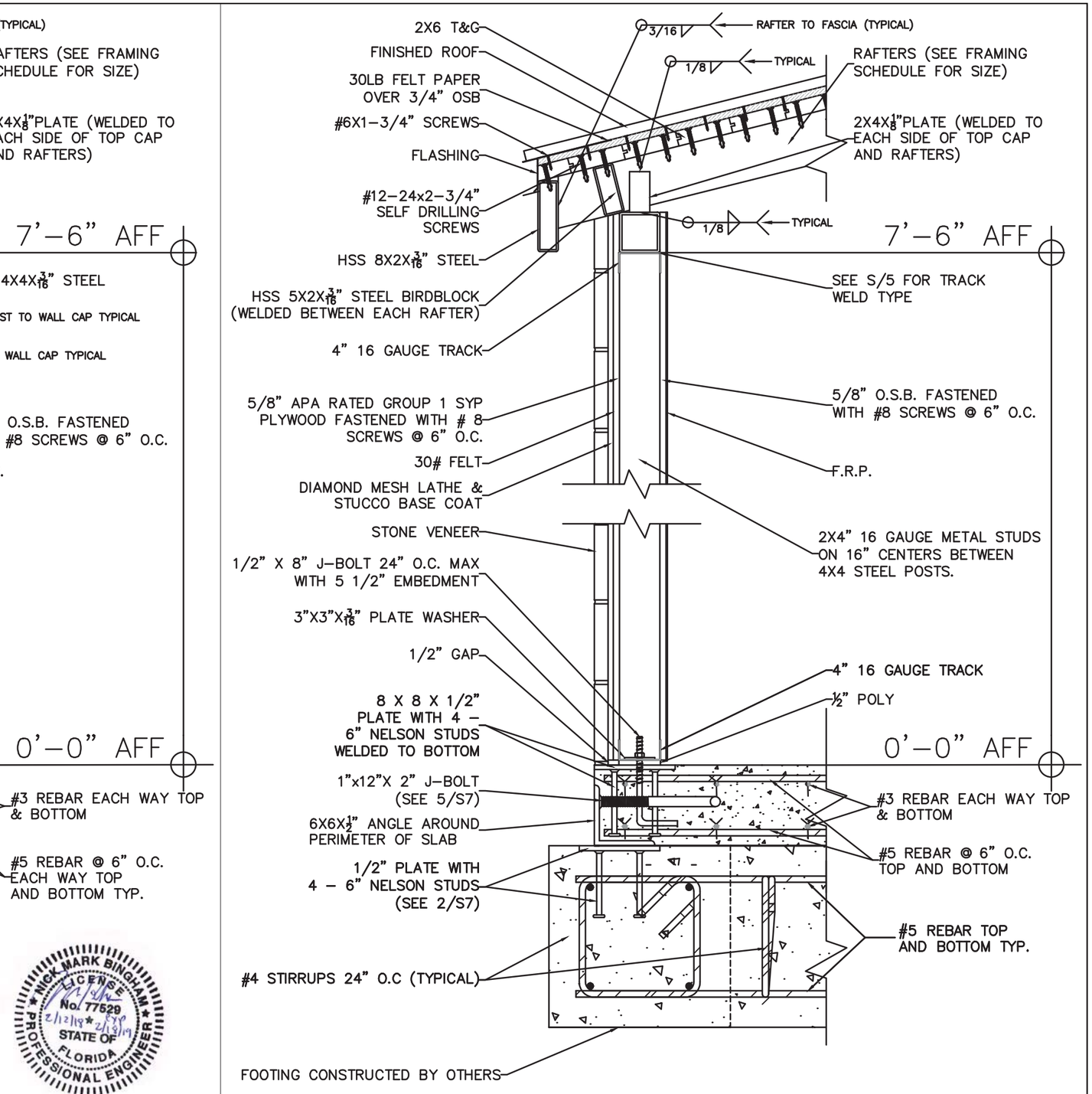
REVISION: DATE:	
REVISION: DATE:	

SHEET DESCRIPTION: SLAB SLOPE PLAN

SHEET S3





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2/12/18 - 2/13/19

1 WALL TO SLAB DETAIL @ CORNER

2 WALL TO SLAB DETAIL

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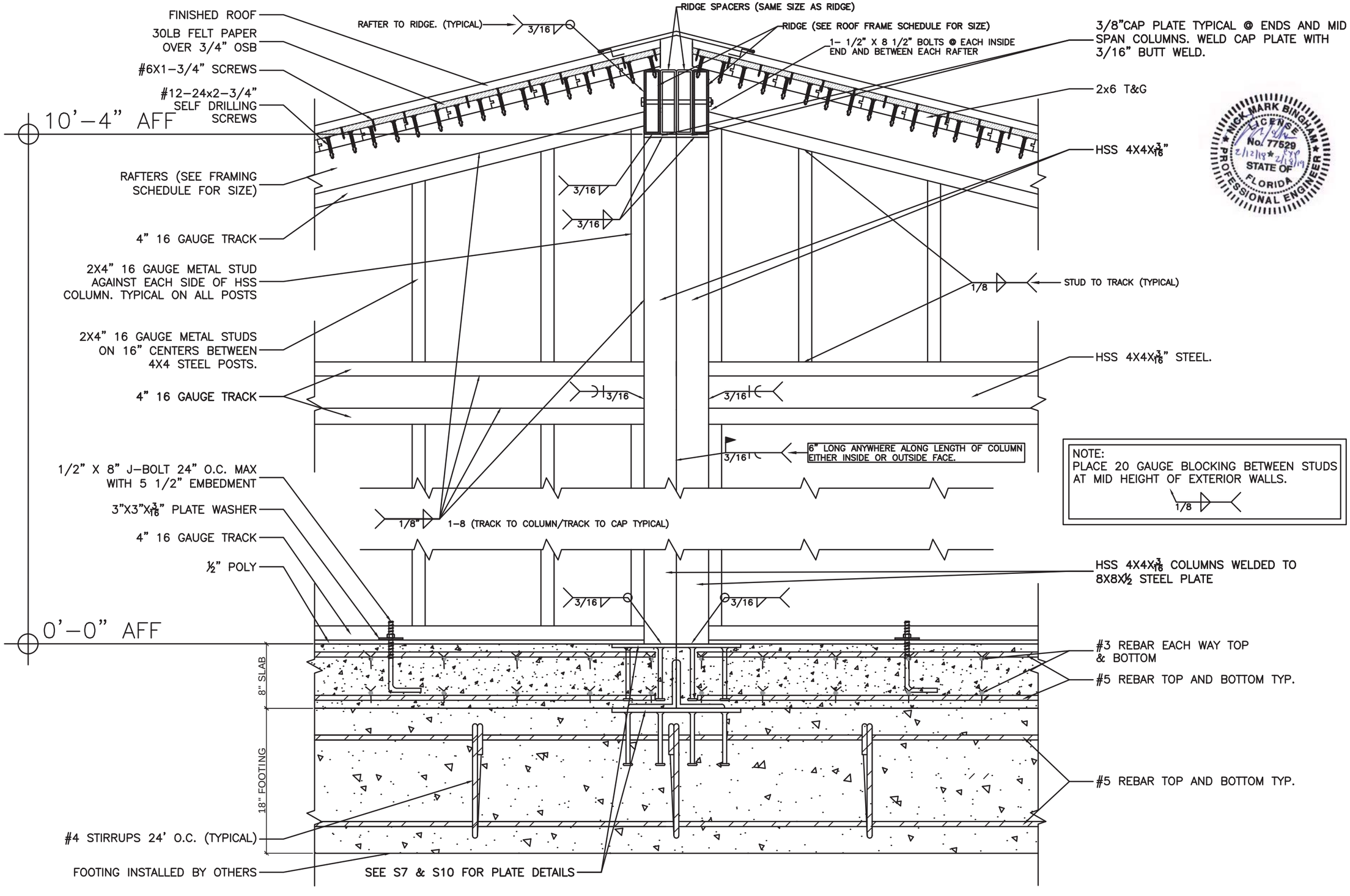
SHEET DESCRIPTION: DETAILS

SHEET S4



NOTE:
PLACE 20 GAUGE BLOCKING BETWEEN STUDS AT MID HEIGHT OF EXTERIOR WALLS.

1/8

INTERIOR & EXTERIOR PONY WALL SECTIONS & RIDGE BEAM

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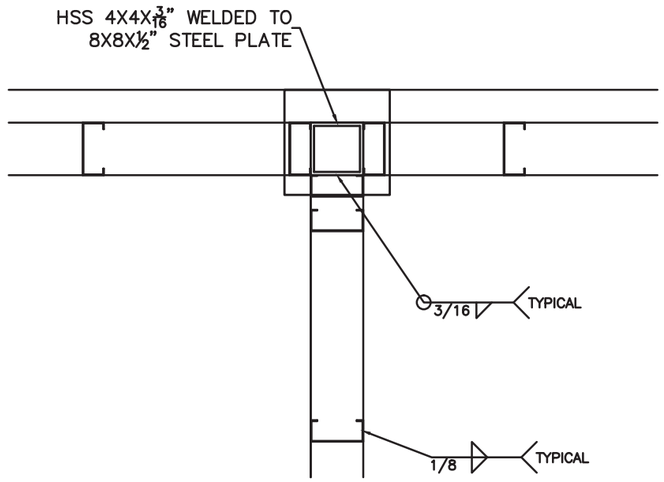
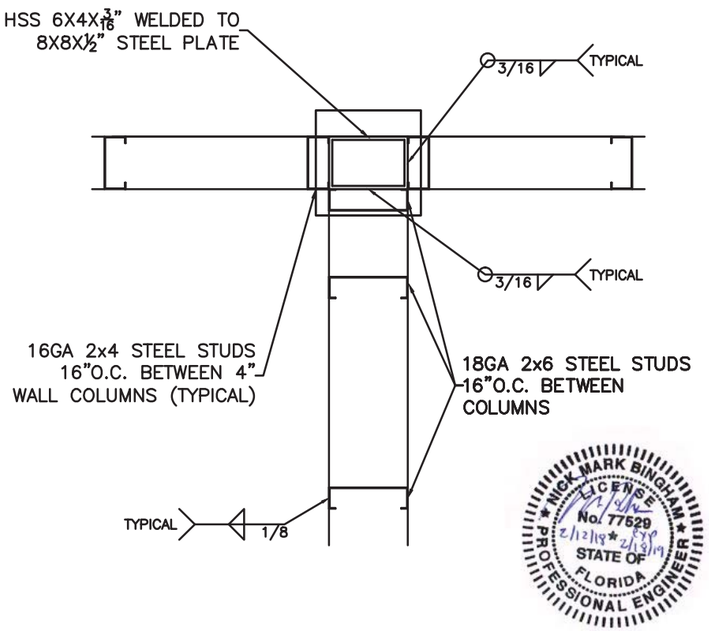
SHEET DESCRIPTION: DETAILS

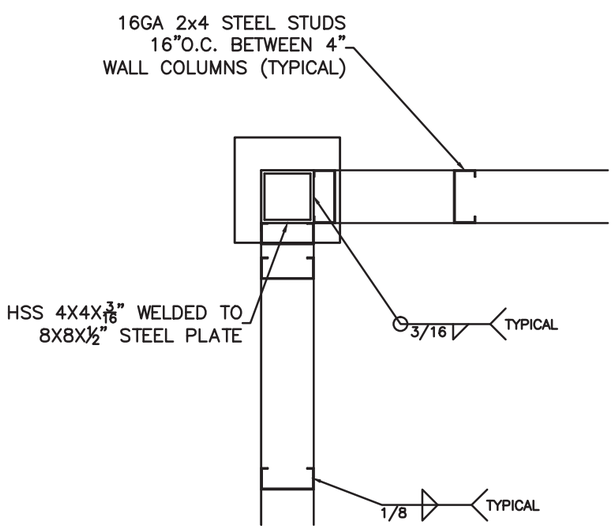
SHEET
S5



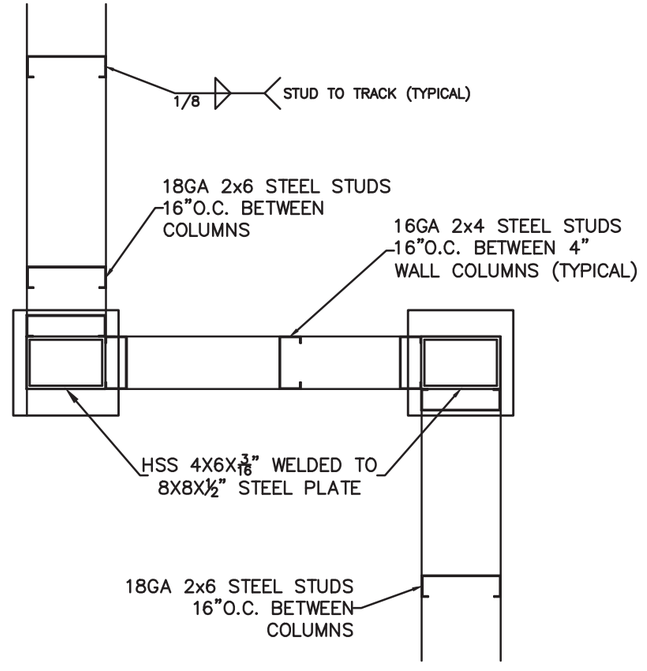
1 4" WALL INTERSECTIONS



2 WALL @ CHASE INTERSECTION



3 4" WALL CORNERS



4 CHASE & MEN'S R.R. CORNER

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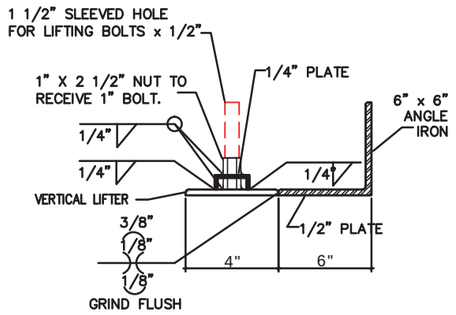
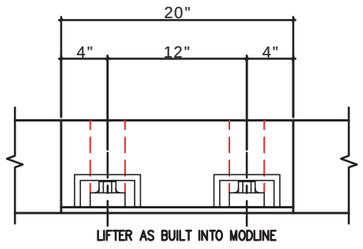
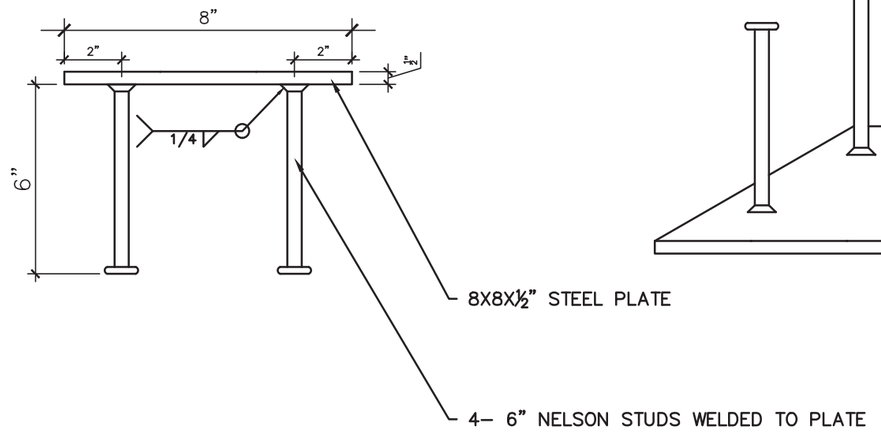
SHEET DESCRIPTION: DETAILS

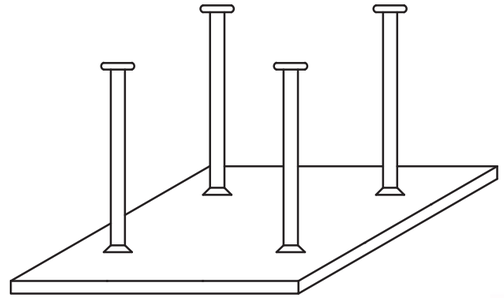
SHEET
S6



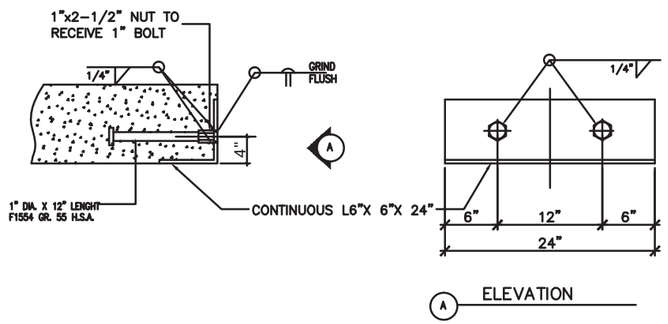


1 VERTICAL LIFTER DETAIL

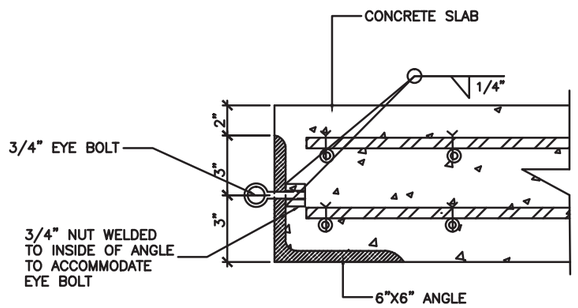




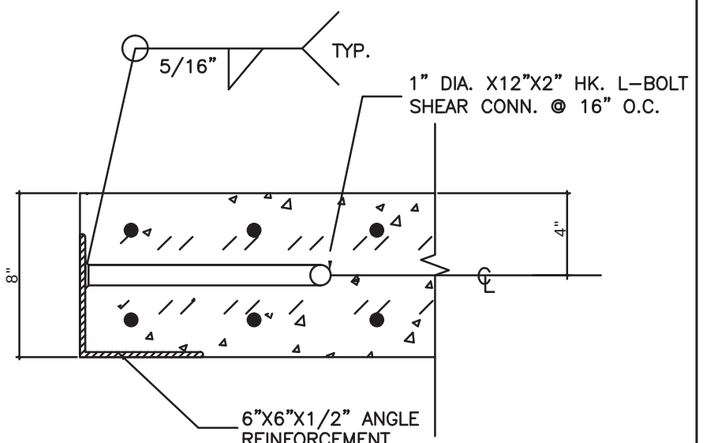
2 PLATES FOR WELDING COLUMNS



3 LIFTING PLATE DETAIL



4 SECTION @ TIE DOWN



5 ANGLE REINFORCEMENT DETAIL

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DATE:	

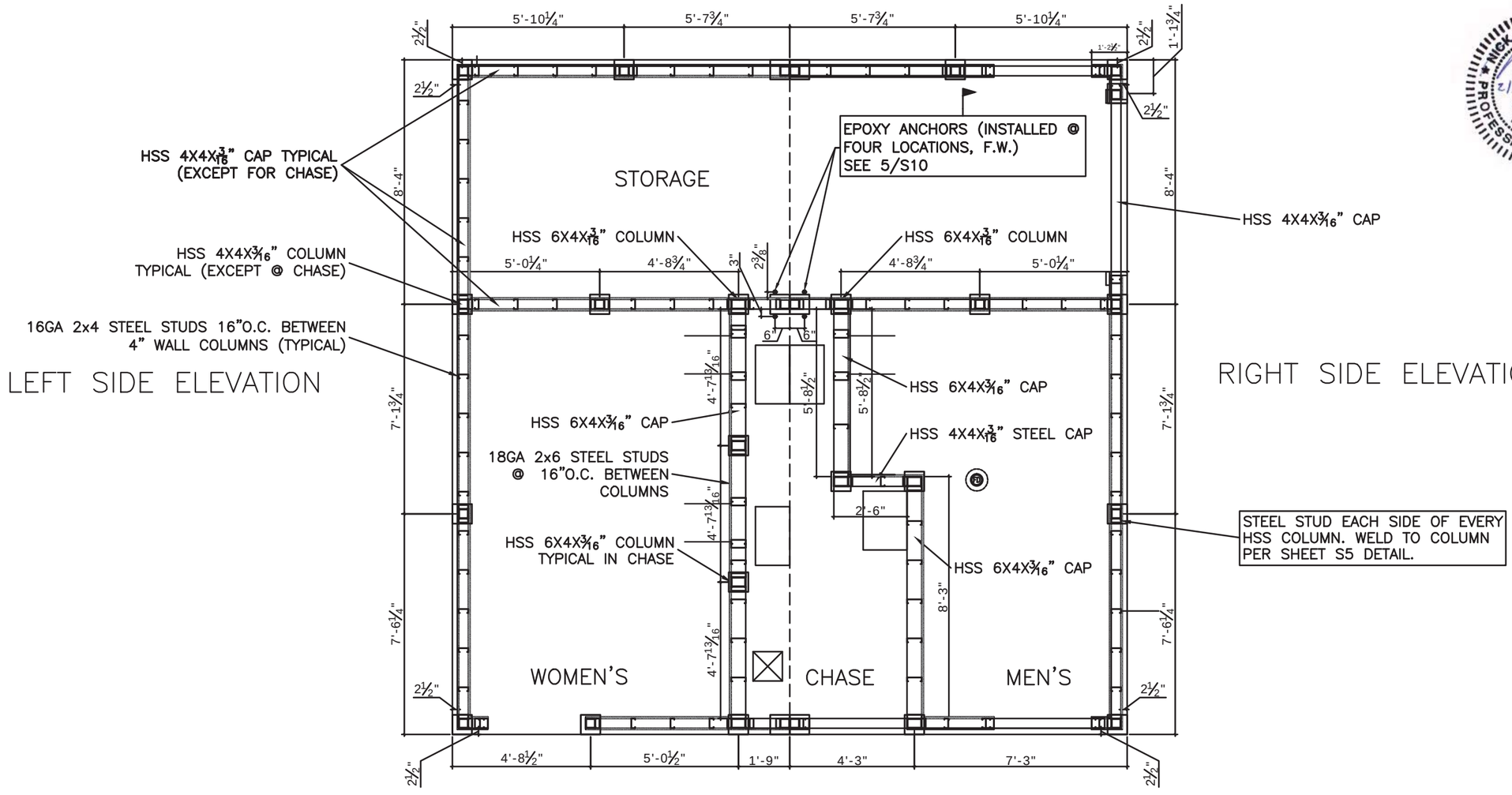
SHEET DESCRIPTION: DETAILS

SHEET
S7

NOTE:

ALL EXTERIOR SHEATHING TO BE 5/8" APA RATED GROUP 1
SYP PLYWOOD ATTACHED WITH SCREWS PER DETAILS 1 AND 2 ON S4.

REAR ELEVATION



LEFT SIDE ELEVATION

RIGHT SIDE ELEVATION

FRONT ELEVATION

1 STRUCTURAL STEEL & LIGHT GAUGE STEEL SIZES

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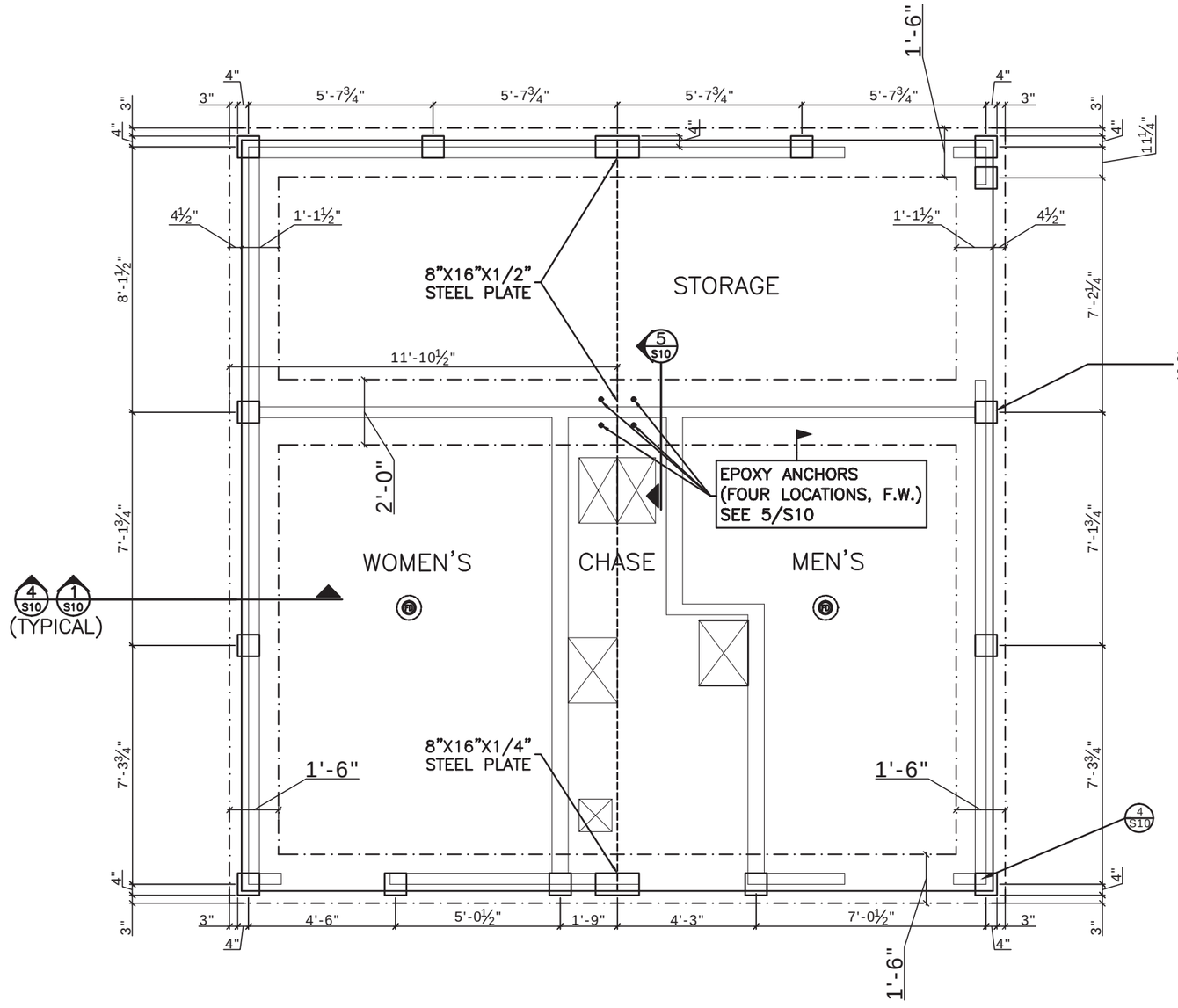
SHEET DESCRIPTION: DETAILS

SHEET S8

NOTE:
FOUNDATION CONSTRUCTION AND SETTING OF EMBEDDED PLATES WILL NOT BE PERFORMED BY RFL AND SHALL BE CONSTRUCTED BY OTHERS.



FOUNDATION FOOTING PLAN

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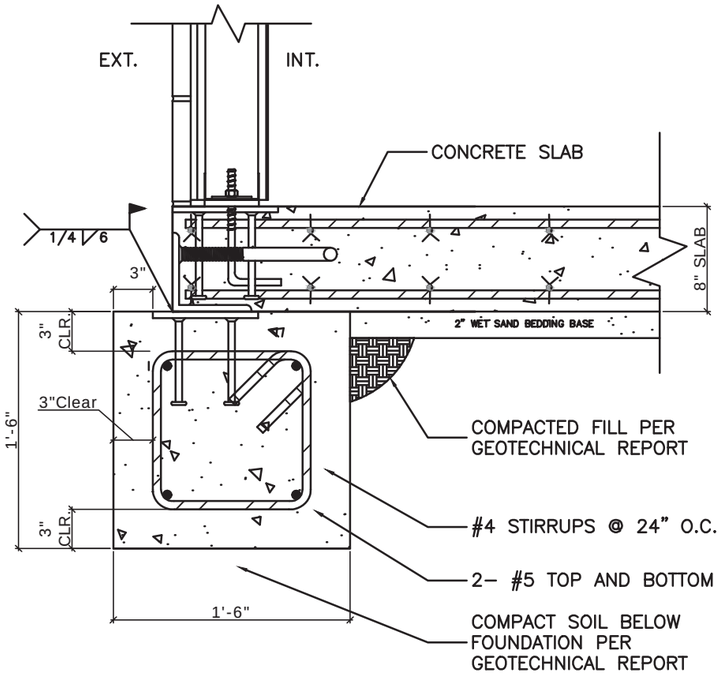
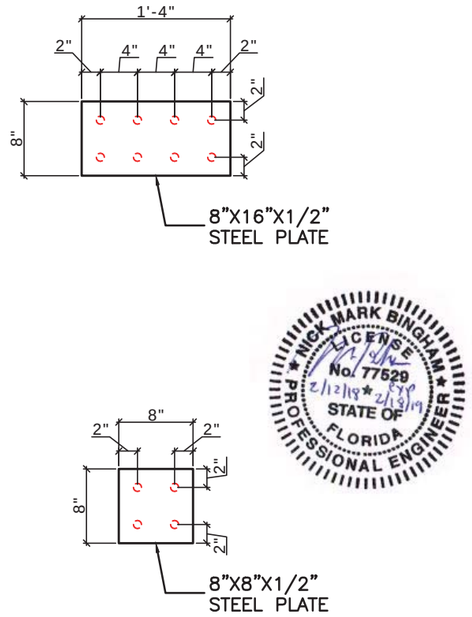
SHEET DESCRIPTION: DETAILS

SHEET
S9



1 SLAB/FOOTING CORNER SECTION



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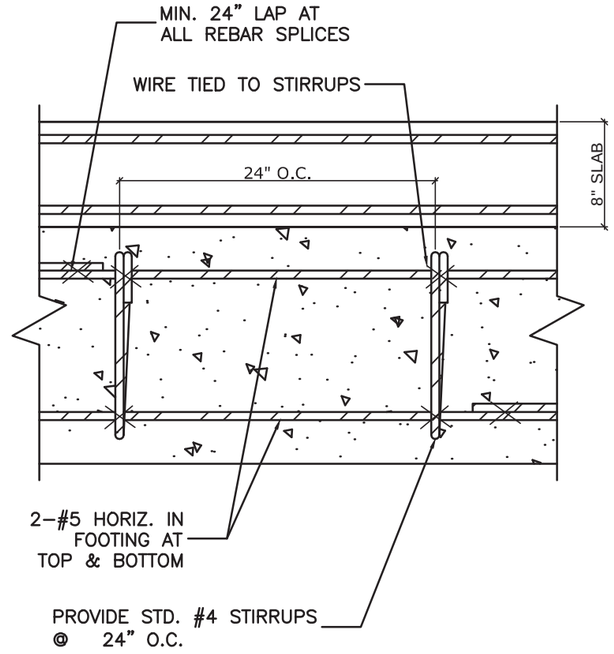
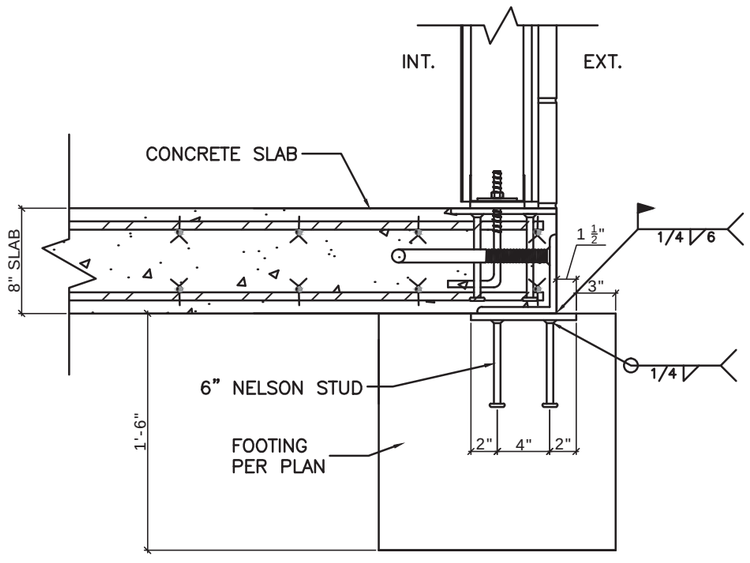
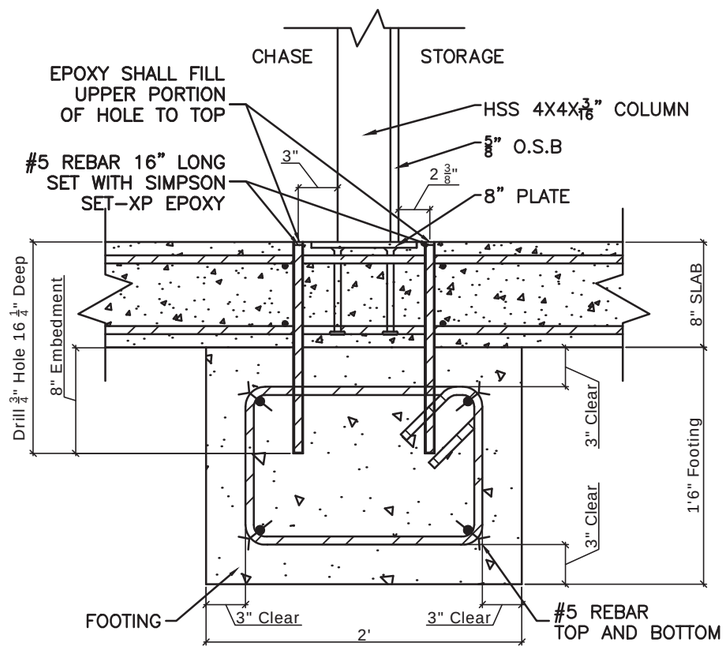
2 PLATE PLAN VIEW



3 FOUNDATION REINFORCING



4 SLAB TO FOOTING CONNECTION



5 SLAB/FOOTING @ CHASE CONNECTION

NOTES:

8X8X1/4" PLATE WELDED TO BOTTOM OF SLAB 6X6X1/4" ANGLE PRIOR TO INSTALLATION. (8X16X1/4" PLATE USED AT MOD LINE)

FOOTING MIX 2500 PSI CONCRETE.

BUILDING SLAB WITH REBAR EDGE BEAMS AROUND FULL PERIMETER OF SLAB.

FOOTING, REBAR AND WIRE TIES BY OTHERS.

FOOTINGS TO BE POURED PRIOR TO BUILDING INSTALLATION.

CONCRETE FOOTING & REINFORCEMENT BY OTHERS.

4" CONCRETE SIDEWALK BY OTHERS.

6 NOTES

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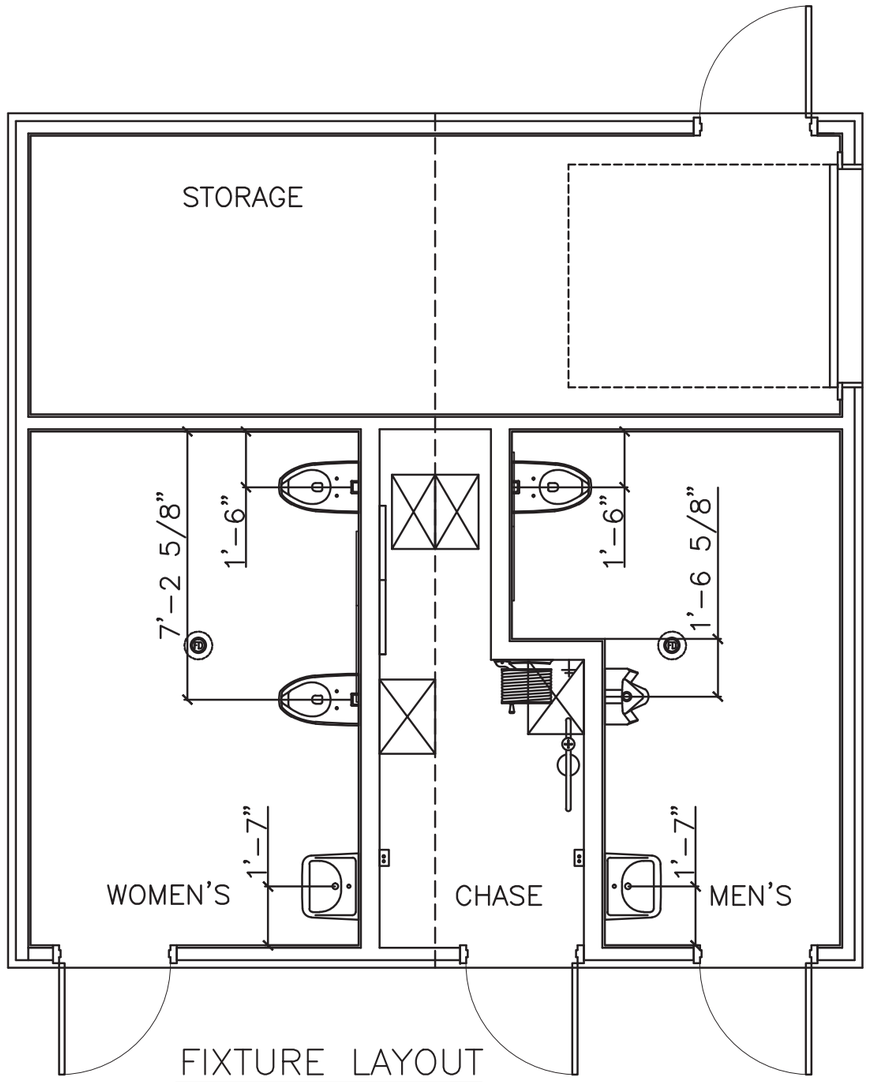
SHEET DESCRIPTION: DETAILS

SHEET S10



FIXTURE LAYOUT

NOTES:

1. ALL FIELD INSTALLED PLUMBING SHALL BE SUBJECT TO LOCAL JURISDICTION APPROVAL.
2. WATER PRESSURE IS 60 LBS. SET FROM PRESSURE REDUCING VALVE AND MAX. DEVELOPED LENGTH IS 20 FEET.
3. ALL WATER PIPE DRAINS TO BE AT THE LOWEST POINT AND FITTED WITH A HIGH POINT PET COCK FOR SYSTEM DRAINAGE.
4. INSTALL PROTECTIVE SHEATHING OR WRAPPING OVER ALL PIPES, FLOOR DRAINS, ETC. TO PROTECT FROM COMING IN CONTACT W/BLOCK GROUT OR CONCRETE.
5. ONLY TEMPERED WATER IS TO BE SUPPLIED TO LAVS (NO HOT AND COLD)
6. SUPPLY SHUT OFF VALVES TO ALL PLUMBING FIXTURES
7. INCLUDE T/P VALVE WITH WATER HEATER.
8. ALL WATER PIPING SHALL BE INSULATED USING A CONDUCTIVITY VALUE 0.21–0.28.

PLUMBING FIXTURE SCHEDULE

MENS	WOMENS	CHASE	OUTSIDE	STORAGE	QUANTITY TOTAL	FIXTURE	CALLOUT	SERVICE ROUGH-IN: COLD WATER	HOT WATER	WASTE	VENT	DESCRIPTION
1	1				2	WATER CLOSET	WC-1	1"		4"	2"	AMERICAN STANDARD: A2634101020, CCY1.1/1.6 EB BSPUD AFWALL WHITE FLUSH VALVE: ZURN MODEL Z6144-WS1-9L-L3 AQUAFLUSH W/ BUTTON CARRIER: ZURN: Z1204N
1					1	URINAL	U-1	3/4"				KOHLER K-4991-ET-0 FLUSH VALVE: ZURN Z-6195-WS1-9L-L3
1	1				2	LAVATORY	L-1	1/2"		2"	2"	AMERICAN STANDARD: #A0356421020 VC 20x18 1H WM LUVERN WHITE ; FAUCET: CHICAGO # 333665PSHABCP DECK MOUNT
		2			2	WATER HEATER	WH-1 WH-2	1/2"				CHRONOMITE LABORATORIES INC: M-20L/208-MM, 208V, 4160W, 20A W/ MIXING VALVE (COMPLIES WITH ASSE 1070-2004)

PLUMBING ROUGH-IN & ACCESSORIES

MENS	WOMENS	CHASE	OUTSIDE	STORAGE	QUANTITY TOTAL	FIXTURE	CALLOUT	SERVICE ROUGH-IN: COLD WATER	HOT WATER	WASTE	VENT	DESCRIPTION
		1			*1	INT. HOSE BIB	HB-1	3/4"				WOODFORD #24P-3/4" WITH INTEGRAL VACUUM BREAKER W/ W/ COMMERCIAL HOSE REEL AND 50 FT HOSE
		2			*2	PRESSURE GAUGE		1/4"				PASCO 1/4" X160 LB GAUGE
		1			*1	BYPASS VALVE COMBO		1 ½"				PRESSURE REDUCING VALVE: WATTS REGULATOR #25AUB FILTER: AMERICAN PLUMBER # W15-PR,PRESSURE RANGE: 30-90 PSI. FILTER: (RFL-41415) HOUSING: AW15-PR (RFL-41420)
1	1				2	FLOOR DRAIN	FD-1			2"	2"	MIFAB F1120 INTEGRAL FLOOR DRAIN
1	1				2	TRAP PRIMER	FD-1	1/2"				TRAP PRIMERS SLOAN SP-50306545
		2			2	CHRISTY BOX						8" ROUND CHRISTY BOX ONE MARKED "WATER" ONE MARKED "SEWER"
		1			1	STOP AND DRAIN VALVE				1 ½"		AT SERVICE HOOK-UP
		1			1	CLEANOUT	CO			4"		AT SERVICE HOOK-UP

* – INSTALLED IN ALL CHASES

PIPE SCHEDULE

TYPE OF SERVICE		PIPE MATERIAL: TYPE 'L' COPPER	TYPE 'K' COPPER	SCHEDULE 40 CPVC	SCHEDULE 40 PVC	CAST IRON 'NO HUB'	DWV COPPER	VITRIFIED CLAY	SCHEDULE 40 BLACK STEEL	CLASS 200-DR 14	REMARKS
WATER	ABOVE GROUND	●									
	BELOW GROUND		●								
SANITARY DRAINAGE	ABOVE GROUND				●						
	BELOW GROUND				●						
SANITARY VENT	ABOVE GROUND				●						
	ABOVE ROOF					●					CAPPED, PAINT TO MATCH ROOF
	BELOW GROUND				●						

RFL Restroom Facilities Limited
1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

RFL MODEL #: S312ST
PROJECT: MARGATE MARINA
MARGATE, FLORIDA, 33063

DRAWN BY: RS
DATE: 02/12/18
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:

SHEET DESCRIPTION: PLUMBING FIXTURE SCHEDULE & PLAN

SHEET
P1

GENERAL NOTES:

1. THIS CONTRACTOR SHALL EXECUTE ALL WORK SO THAT IT PROCEEDS WITH A MINIMUM OF INTERFERENCE WITH OTHER TRADES AND NORMAL FUNCTIONING OF EXISTING FACILITIES AND SERVICES.

2. VERIFY EXACT ROUGH–IN AND FINAL EQUIPMENT REQUIREMENTS IN FIELD.

3. THE CONTRACTOR SHALL VERIFY THAT ALL PIPING, AS SHOWN ON THESE DRAWINGS WILL NOT CONFLICT WITH ANY DRAINS, SCUTTLES, JOINTS, VENTS, EQUIPMENT, ETC.

4. THE PLUMBING CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND OTHER TRADES, ALL REQUIRED OPENINGS AND EXCAVATIONS. ALL REQUIRED OPENINGS IN FOUNDATIONS, FLOORS, WALLS, AND ROOFS SHALL BE DESIGNED INTO THE STRUCTURE INITIALLY BY THE USE OF SLEEVES, CURBS, ETC. CUTTING AND PATCHING SHALL BE HELD TO A MINIMUM.

5. ALL ITEMS PROJECTING THROUGH THE ROOF SHALL BE FLASHED A MINIMUM OF 12" ABOVE THE ROOF. ALL VENTS SHALL BE A MINIMUM OF 10' FROM ANY OUTSIDE AIR INTAKE DEVICE.

6. PROVIDE STOPS AND SHOCK ABSORBERS AT EACH FIXTURE OR GROUP OF FIXTURES. CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDENSATE DRAIN PIPING AND FITTINGS. INSULATE ALL CONDENSATE DRAIN PIPING AND FITTINGS WITH 1/2" "ARMAFLEX" PIPE INSULATION.

7. PROVIDE VACUUM BREAKERS AT FIXTURES WITH HOSE THREAD CONNECTIONS AND APPLIANCES WITH DIRECT CONNECTIONS TO DOMESTIC WATER.

8. PROVIDE DI–ELECTRIC UNIONS AT ALL DISSIMILAR METAL PIPE CONNECTIONS.

9. ALL WATER LINES INSTALLED IN EXTERIOR WALLS SHALL BE INSTALLED INSIDE OF WALL INSULATION AND INSULATED INDIVIDUALLY TO PROTECT FROM FREEZING, PIPING AND FITTINGS. INSULATE ALL CONDENSATE DRAIN PIPING AND FITTINGS WITH 1/2" "ARMAFLEX" PIPE INSULA TION.ALL PLUMBING FIXTURES SHALL BE WHITE.

10. PROVIDE APPROVED BACKFLOW PREVENTION AT ALL EQUIPMENT DIRECTLY CONNECTED TO WATER SYSTEM.

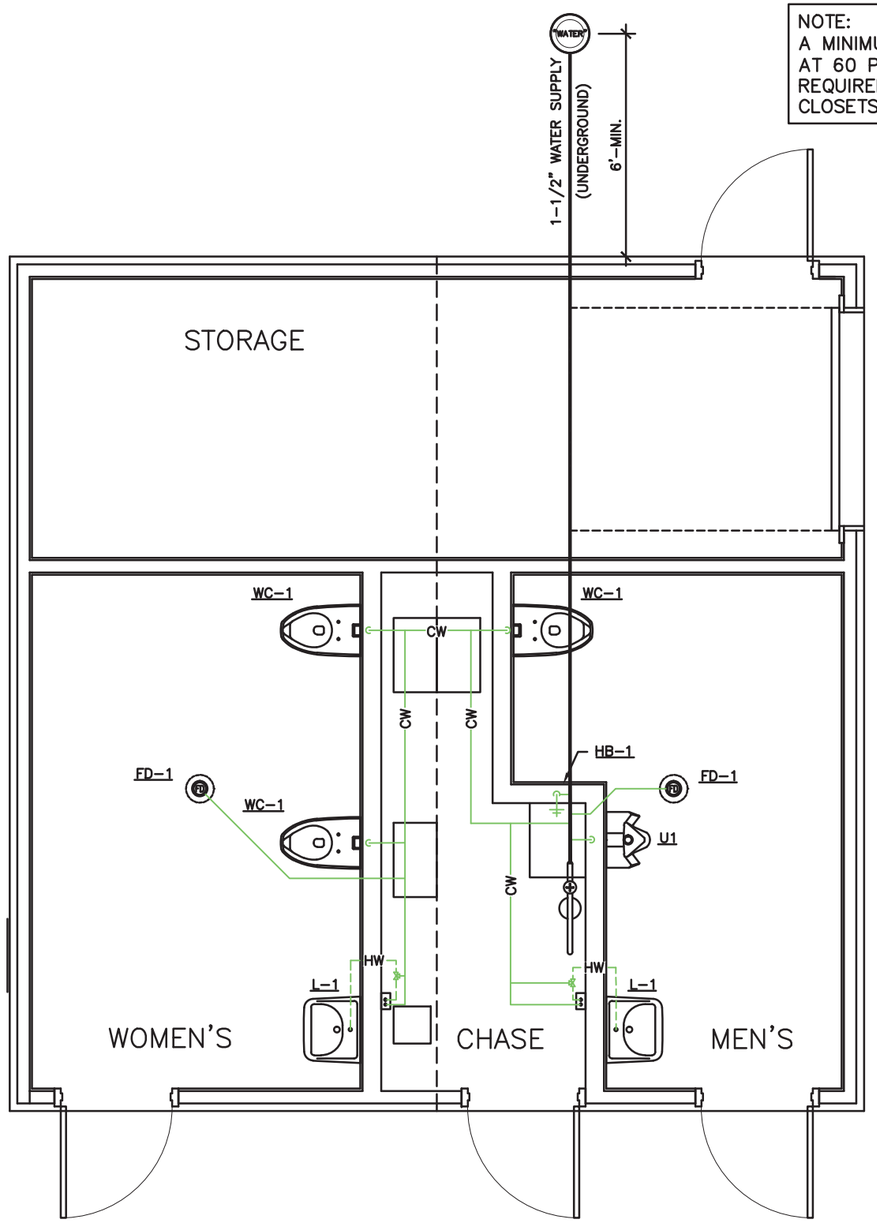
11. PROVIDE A PRESSURE REDUCING VALVE IF THE INCOMING PRESSURE EXCEEDS 80 PSI. IF A PRV IS UTILIZED THEN IT SHALL BE SET TO 80 PSI. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO DETERMINE IF REQUIRED.

12. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL CONNECTIONS TO GAS FIRED EQUIPMENT AND SPECIFIED FIXTURES. ALL GAS FIRED EQUIPMENT AND FIXTURES SHALL BE OPERABLE.

13. PROVIDE ASSE 1070 COMPLIANT TEMPERING VALVE SET AT 110°F TO ALL LAVATORIES.

OWNER TO VERIFY UTILITY LOCATION.

NOTE:
A MINIMUM 1 1/2" LINE WITH 25 GPM AT 60 PSI PRESSURE MINIMUM IS REQUIRED TO ENSURE THAT WATER CLOSETS WILL OPERATE AS DESIGNED.



WATER PLUMBING PLAN

RFL Restroom Facilities Limited

1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

RFL MODEL #: S312ST

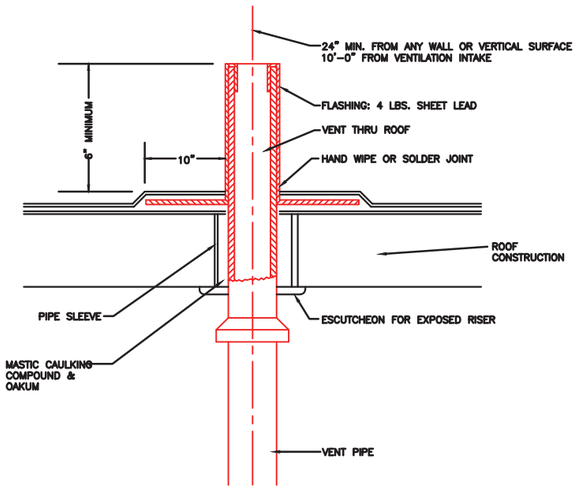
PROJECT: MARGATE MARINA
MARGATE, FLORIDA, 33063

DRAWN BY:	RS
DATE:	02/12/18
REVISION:	
DATE:	
REVISION:	
DATE:	
REVISION:	
DATE:	
REVISION:	
DATE:	

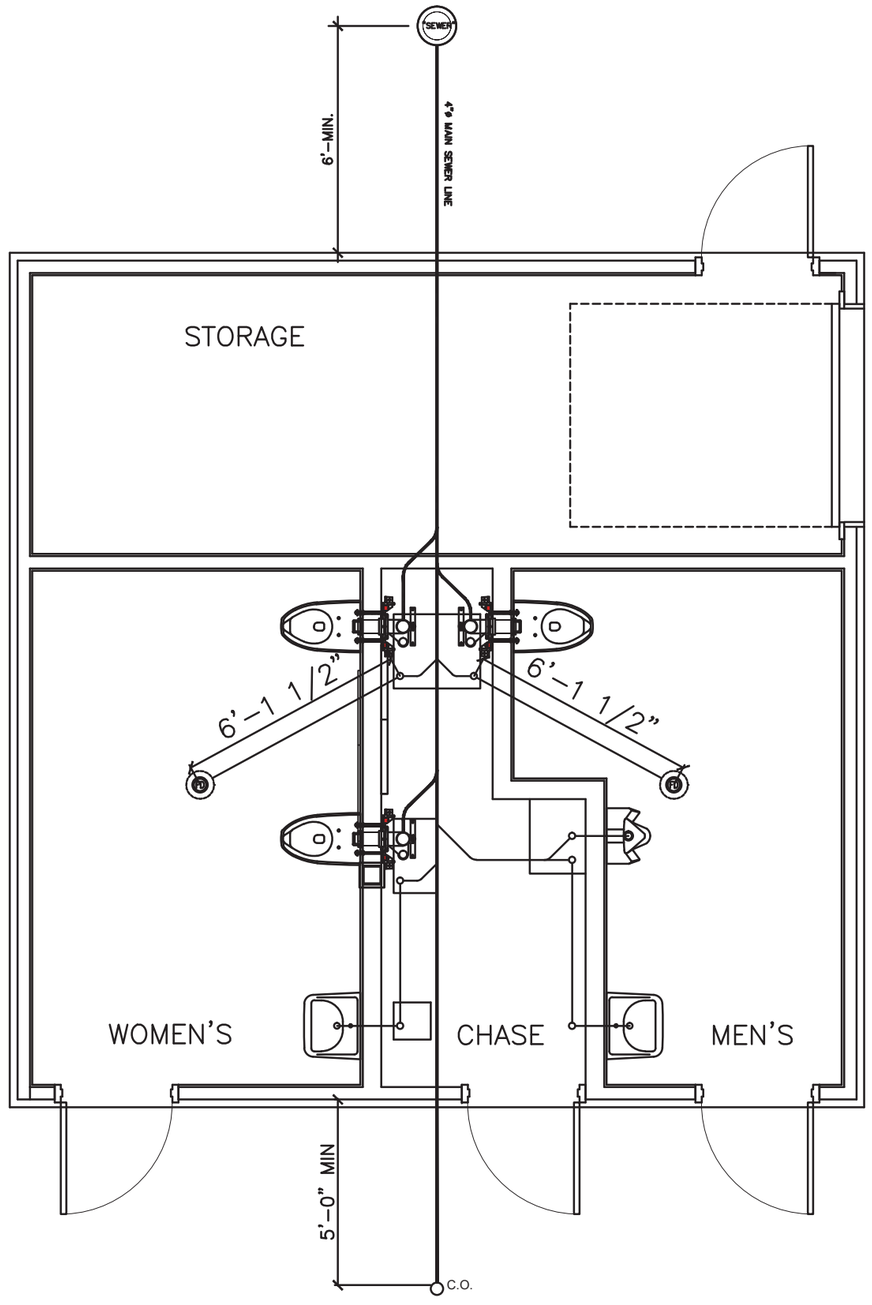
SHEET DESCRIPTION: PLUMBING WATER PLAN

SHEET
P2

OWNER TO VERIFY UTILITY LOCATION.



VENT THRU ROOF DETAIL



SANITARY PLAN

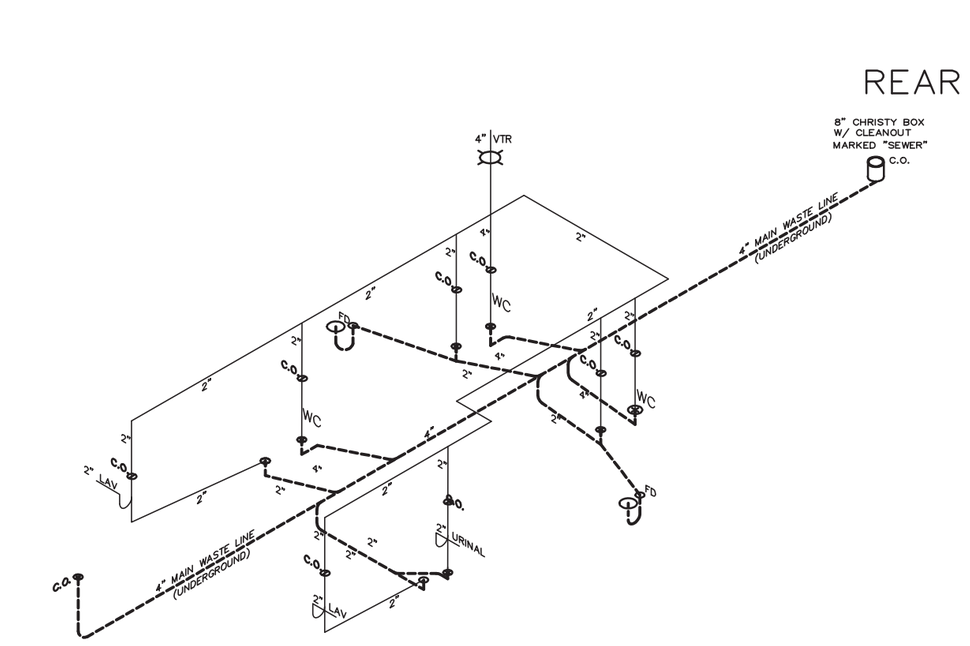
RFL Restroom Facilities Limited
1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

RFL MODEL #: S312ST
PROJECT: MARGATE MARINA
MARGATE, FLORIDA, 33063

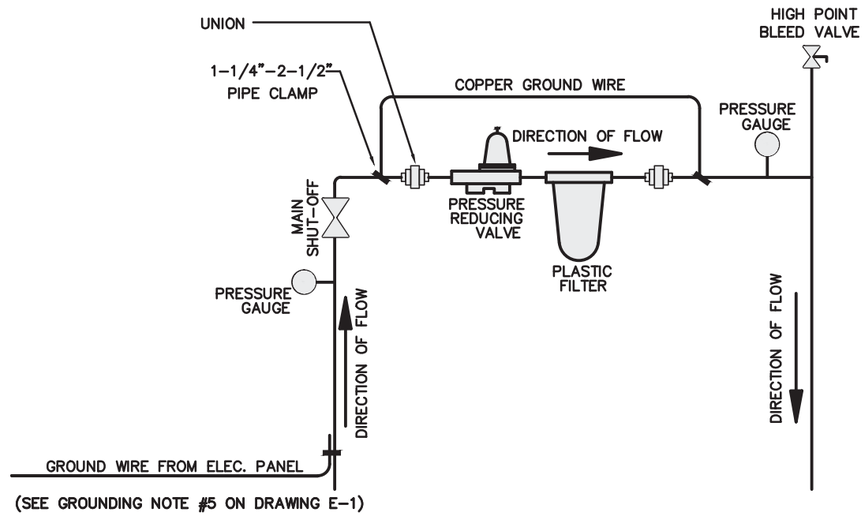
DRAWN BY:	RS
DATE:	02/12/18
REVISION:	
DATE:	
REVISION:	
DATE:	
REVISION:	
DATE:	
REVISION:	
DATE:	

SHEET DESCRIPTION: PLUMBING WASTE PLAN

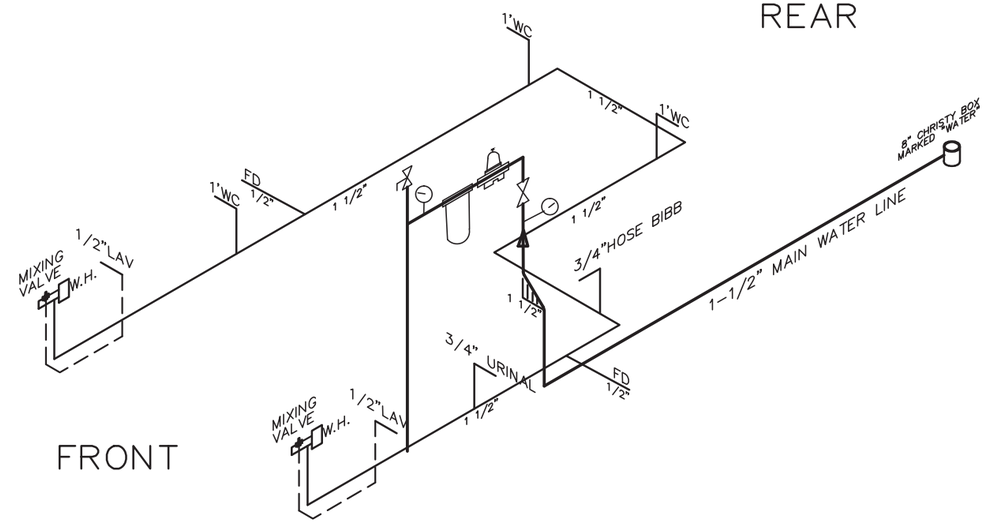
SHEET
P3



SEWER ISOMETRIC LAYOUT



VALVE TREE



WATER SUPPLY ISOMETRIC LAYOUT

RFL Restroom Facilities Limited
1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

RFL MODEL #: S312ST
PROJECT: MARGATE MARINA
MARGATE, FLORIDA, 33063

DRAWN BY: RS
DATE: 02/12/18
REVISION: DATE:
REVISION: DATE:
REVISION: DATE:
REVISION: DATE:

SHEET DESCRIPTION: ISOMETRIC PLUMBING PLAN

SHEET P4

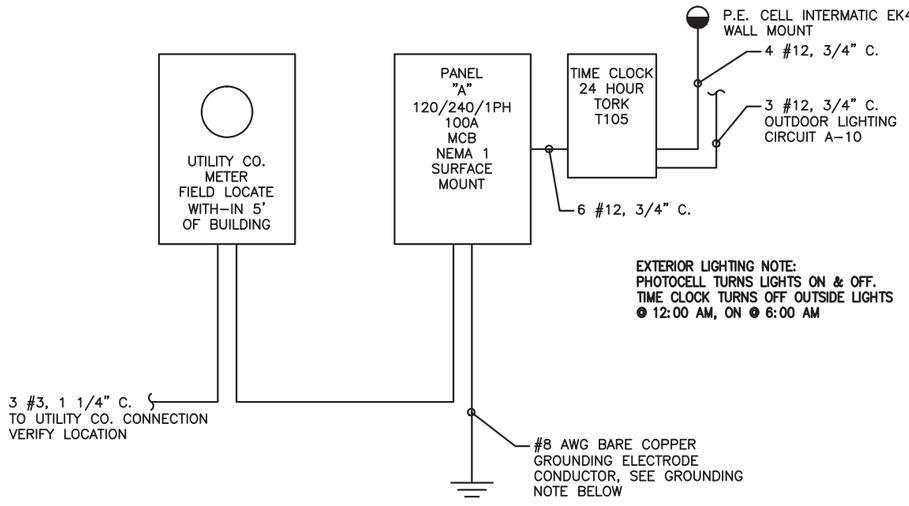
120/240 PANEL A

120/240 VOLT, 1 PHASE, 3 WIRE, 60HZ, 42K AIC — NEMA 1 SURFACE MOUNT

LOCATION	LOAD (VA)	CIRCUIT NUMBER		CIRCUIT NUMBER	LOAD (VA)	LOCATION
			L1 L2 N G 125 AMP MAIN CB N GND			
JUNCTION BOX: HAND DRYER, MEN	950	1	20A 20A	2	950	JUNCTION BOX: HAND DRYER, WOMEN
LIGHTING: MEN	60	3	20A 20A	4	60	LIGHTING: WOMEN
JUNCTION BOX: WATER HEATER, MEN	2080	5	30A 30A	6	2080	JUNCTION BOX: WATER HEATER, WOMEN
↓	2080	7		8	2080	↓
RECEPTACLE: CHASE	180	9	20A 20A	10	36	LIGHTING: OUTDOOR
LIGHTING: CHASE	60	11	20A 20A	12	30	LIGHTING: STORAGE
RECEPTACLE: STORAGE	180	13	20A 20A	14	·	SPARE
SPARE	·	15	20A 20A	16	·	SPARE
SPARE	·	17		18	·	SPACE
SPACE	·	19		20	·	SPACE
SPACE	·	21		22	·	SPACE
SPACE	·	23		24	·	SPACE

TOTAL CONNECTED LOAD: 11.9KW — ALL BRANCH BREAKERS SIZED AS SHOWN

PANEL LOCATION: CHASE



RISER DIAGRAM

GROUNDING NOTE:
PER NEC ARTICLE 250 SECTION III 250.50 ALL GROUNDING ELECTRODES AS DESCRIBED IN 250.52(A)(1) THROUGH (A)(6) THAT ARE AT EACH BUILDING OR STRUCTURE SERVED SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM. WHERE NONE OF THESE GROUNDING ELECTRODES EXIST, ONE OR MORE OF THE GROUNDING ELECTRODES SPECIFIED IN 250.52(A)(4) THROUGH (A)(7) SHALL BE INSTALLED AND USED.

APPLICABLE CODES

1. NATIONAL ELECTRICAL CODE (NEC) NFPA 70, 2014.
2. INTERNATIONAL BUILDING CODE, 2012 EDITION.
3. INTERNATIONAL FIRE CODE, 2012 EDITION.

NOTES

1. INSTALLATION SHALL COMPLY WITH NATIONAL ELECTRICAL CODE, STATE BUILDING CODE AND ALL REQUIREMENTS OF THE LOCAL INSPECTOR (FURNISH INSPECTION CERTIFICATE). ALL WORK SHALL BE BY LICENSED ELECTRICAL CONTRACTOR.
2. ALL BRANCH CIRCUITS SHALL BE IN ZINC-COATED EMT OR RIGID CONDUIT AS PERMITTED BY THE NATIONAL ELECTRICAL CODE. SCHEDULE 40 PVC CONDUIT MAY BE USED ONLY FOR THE SECONDARY UNDERGROUND SERVICE, AND CONDUITS LOCATED BELOW THE FLOOR SLAB OR BURIED ON THE EXTERIOR OF THE BUILDING. ALL CONDUIT SHALL BE 3/4" MIN. SIZE. EMT FITTINGS SHALL BE STEEL COMPRESSION TYPE.
3. ALL CONDUCTORS SHALL BE COPPER TYPE THHN OR THWN SOLID FOR #10 AWG OR #12 AWG AND STRANDED FOR ALL LARGER SIZES. #12 AWG MINIMUM FOR 20A CIRCUITS, LARGER CIRCUIT WIRE SIZE AS NOTED ON DRAWING.
4. ALL WIRING SHALL BE CONCEALED IN WALLS, UNDER SLAB OR IN CEILING SPACE.
5. CONDUITS MAY BE RUN EXPOSED IN MECHANICAL AREAS. CONDUITS SHALL BE RUN PARALLEL OR PERPENDICULAR TO STRUCTURAL ELEMENTS AND SHALL BE RUN IN GROUPS. SEAL ALL PENETRATIONS AIR TIGHT AROUND ALL CONDUITS WHEN PASSING INTO MECHANICAL ROOMS.
6. ALL LIGHT FIXTURES SHALL BE SUPPORTED INDEPENDENTLY OF THE CEILING SYSTEM.
7. ALL MOUNTING HEIGHTS ARE GIVEN TO THE BOTTOM OF THE DEVICE UNLESS NOTED OTHERWISE.
8. THE LOCATION OF ALL WALL MOUNTED DEVICES, INCLUDING MOUNTING HEIGHTS, SHALL BE FIELD VERIFIED WITH THE ARCHITECTURAL PRIOR TO INSTALLATION.
9. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY DISCONNECTS, SWITCHES AND RECEPTACLES UNDER THE ELECTRICAL BID AND SHALL INCLUDE ALL NECESSARY CIRCUITS.
10. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED SO THAT ALL CODE REQUIRED AND MANUFACTURER RECOMMENDED SERVICING CLEARANCES ARE MAINTAINED.
11. BIDDING CONTRACTORS MUST VISIT THE SITE, REVIEW ALL CONSTRUCTION DOCUMENTS, AND OBTAIN WRITTEN COPIES OF ALL REFERENCED CODES AND ORDINANCES PRIOR TO SUBMITTING BIDS. NO ALLOWANCE WILL BE MADE FOR ADVERSE CONDITIONS WHICH WERE ASCERTAINABLE PRIOR TO BID TIME.
12. ALL CIRCUIT BREAKERS IN PANEL SHALL BE FULLY RATED FOR THE SYSTEM.
13. THE ELECTRICAL CONTRACTOR SHALL COORDINATE AND VERIFY THE ELECTRICAL SERVICE ARRANGEMENTS WITH THE LOCAL POWER COMPANY AND WITH OWNER SUPPLIED SITE PLAN. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT FOR A COMPLETE INSTALLATION.
14. CIRCUIT BREAKERS SHALL BE RATED TO WITHSTAND THE MAXIMUM AVAILABLE FAULT CURRENT AT THE SITE AS DETERMINED BY THE LOCAL UTILITY. E.C. SHALL COORDINATE WITH LOCAL UTILITY BEFORE STARTING WORK.
15. 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.
16. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL FITTINGS AND NECESSARY EQUIPMENT FOR LIGHT FIXTURE MOUNTING, AND INSTALLATION.
17. ALL FIRE BARRIER PENETRATIONS SHALL BE SEALED WITH APPROVED FIRE SEALANT. COORDINATE WITH ARCHITECTURAL PLANS FOR ALL RATED WALLS AND CEILINGS PRIOR TO BID SO AN UNDERSTANDING OF NUMBER OF SEALS REQUIRED, AND DETERMINE METHOD FOR MINIMIZING THE SEAL REQUIREMENTS.
18. ALL MATERIALS SHALL BE NEW AND UL LISTED FOR THE INTENDED APPLICATION.

LEGEND

- DUPLEX RECEPTACLE – TAMPER RESISTANT, 20 AMP, 125V. HEAVY DUTY. HUBBELL MODEL HBL5362W, MTD. @ 16" A.F.F. UNLESS NOTED, WITH MATCHING FACEPLATE.
- G — DUPLEX RECEPTACLE – TAMPER RESISTANT, HUBBELL MODEL GF5362W, WITH GROUND FAULT INTERRUPT, MTD. @ 16" A.F.F. UNLESS NOTED, WITH MATCHING FACEPLATE.
- WP G — DUPLEX RECEPTACLE – TAMPER RESISTANT, HUBBELL MODEL GF5362W, WITH GROUND FAULT INTERRUPT, MTD. @ 16" A.F.F. UNLESS NOTED, WITH WEATHER-PROOF CAST ALUMINUM COVER.
- $ — 20A-1P TOGGLE SWITCH, HEAVY DUTY, HUBBELL MODEL HBL1221W. WHITE COLOR, MOUNTED @ 48" A.F.F. W/ MATCHING FACEPLATE.
- OS — LINE VOLTAGE, 120VAC CEILING MOUNTED OCCUPANCY SENSOR, HUBBELL LVDT2000R120
- LIGHTING FIXTURE, SEE FIXTURE SCHEDULE
- J — JUNCTION BOX LOCATION MOUNTED AS NOTED ON DRAWING, SIZED AS REQUIRED BY EQUIPMENT BEING SERVED.
- DISCONNECT SWITCH, SIZE AND TYPE AS NOTED.
- HOME RUN CONDUIT, CIRCUIT NUMBER AS INDICATED ON DRAWINGS, HASHMARKS INDICATE HOT NEUTRAL AND GROUND.
- CONDUIT RUN IN WALLS OR CEILING.

RFL Restroom Facilities Limited
1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

RFL MODEL #: S312ST
PROJECT: MARGATE MARINA
MARGATE, FLORIDA, 33063

DRAWN BY:	RS
DATE:	02/12/18
REVISION:	
DATE:	
REVISION:	
DATE:	
REVISION:	
DATE:	
REVISION:	
DATE:	

SHEET DESCRIPTION: ELECTRICAL PANEL

SHEET
E1

LIGHTING FIXTURE SCHEDULE

MARK	TYPE	VOLT	WATTS	LAMP	BRAND & CATALOG NO.
A	LED LIGHT BAR 36" LONG . .	120	18	LED . .	CUSTOM . .
B	LED TUBE LIGHT 48" LONG . .	120	15	LED . .	CUSTOM . .
C	WALL MOUNTED EXTERIOR . .	120	12	LED . .	RAB: WPLED26/E, 26W . .
EM	WALL MOUNTED EMERGENCY LIGHT (ONE 6 VOLT BATTERY CASE TO BE MOUNTED IN CHASE TO POWER BOTH RESTROOMS FOR EMERGENCY BACKUP.) CONNECT TO LIGHTING CIRCUIT IN CHASE A-11	120	5	LED . .	TAMILITE LSRHS1-6V, 5.3W LED

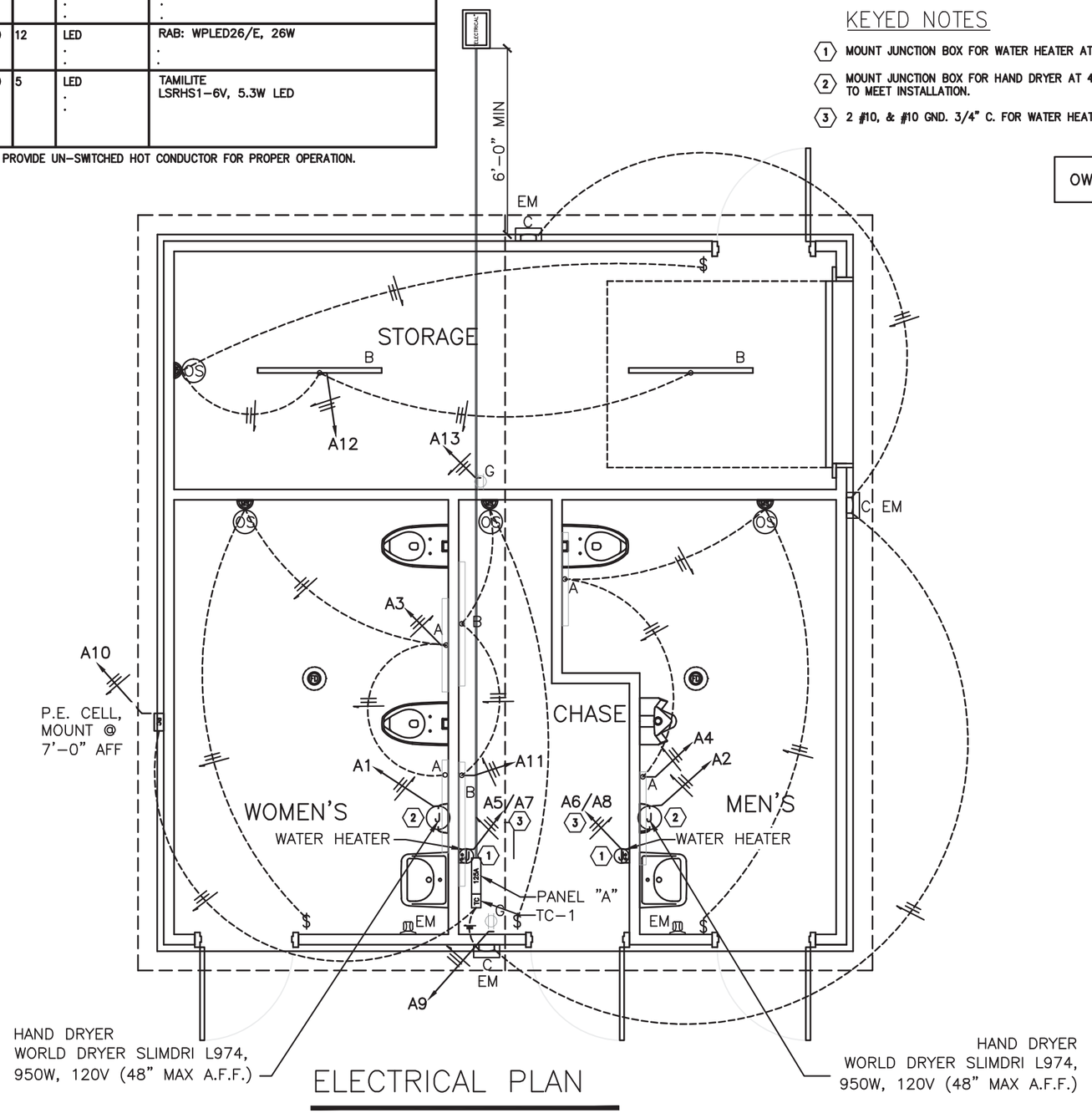
"EM" INDICATES EMERGENCY BATTERY BACK UP FOR LIGHTING FIXTURE. PROVIDE UN-SWITCHED HOT CONDUCTOR FOR PROPER OPERATION.

EXTERIOR LIGHTING NOTE:
PHOTOCELL TURNS ALL 4 LIGHTS ON & OFF. TIME CLOCK TURNS OFF OUTSIDE LIGHTS @ 12:00 AM, ON @ 6:00 AM

KEYED NOTES

1. MOUNT JUNCTION BOX FOR WATER HEATER AT HEIGHT AS REQUIRED TO MEET INSTALLATION.
2. MOUNT JUNCTION BOX FOR HAND DRYER AT 46" AFF, VERIFY HEIGHT AS REQUIRED TO MEET INSTALLATION.
3. 2 #10, & #10 GND. 3/4" C. FOR WATER HEATER

OWNER TO VERIFY UTILITY LOCATION.



ELECTRICAL PLAN

RFL Restroom Facilities Limited
1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

RFL MODEL #: S312ST
PROJECT: MARGATE MARINA
MARGATE, FLORIDA, 33063

DRAWN BY:	RS
DATE:	02/12/18
REVISION: DATE:	
REVISION: DATE:	
REVISION: DATE:	
REVISION: DATE:	

SHEET DESCRIPTION: ELECTRICAL PLAN/ FIXTURE LAYOUT

SHEET E2

EXHIBIT 4

SOUTHEAST PARK BUILDING FLOOR PLAN

LIST OF ABBREVIATIONS

A.F.F.	ABOVE FINISH FLOOR
B.W.	BOTH WAY
C.L.	CENTER LINE
E.O.S.	EDGE OF SLAB
F.O.S.	FACE OF STUD
F.R.C.	FIBER REINFORCED CONCRETE
F.R.P.	FIBER REINFORCED PLASTIC
F.W.	FIELD WORK
H.S.S.	HOLLOW STRUCTURAL SECTION
I.D.	INSIDE DIAMETER
K.D.	KILN DRIED
MAX.	MAXIMUM
MIN.	MINIMUM
NOM.	NOMINAL
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.S.B.	ORIENTED STRANDED BOARD
R.S.	ROUGH SAWN
S.S.	STAINLESS STEEL
U.N.O.	UNLESS NOTED OTHERWISE
W.W.F.	WELDED WIRE FABRIC

MISCELLANEOUS NOTES

IN THE EVENT OF UNFORSEEN CIRCUMSTANCES THAT CAUSE MATERIALS TO BECOME UNAVAILABLE, RESTROOM FACILITIES LTD. RESERVES THE RIGHT TO SUBSTITUE REASONABLY SIMILAR OR EQUAL TO ITEMS TO ORIGINAL SPECIFICATIONS. ANY ITEM SUBSTITUTED WILL MEET APPLICABLE CODE REQUIREMENTS.

DISCLOSURE

STATE STAMP

ENGINEER STAMP

NICK MARK BINGHAM * LICENSE * No. 77529 * STATE OF FLORIDA * PROFESSIONAL ENGINEER *
2/12/18 2/13/19

MARGATE SOUTHEAST PARK
655 SW 50TH AVE.
MARGATE, FLORIDA, 33063
JOB NUMBER: 17216
MODEL NUMBER: S312STCN2

DESIGN CRITERIA

CODE REFERENCE:

NATIONAL ELECTRICAL CODE (NEC), 2014 EDITION
FLORIDA BUILDING CODE – BUILDING (FBCB), 2017 EDITION
FLORIDA BUILDING CODE – MECHANICAL (FBCM), 2017 EDITION
FLORIDA BUILDING CODE – PLUMBING (FVCP), 2017 EDITION
FLORIDA BUILDING CODE – FUEL GAS (FBCFG), 2017 EDITION
FLORIDA BUILDING CODE – ENERGY CONSERVATION (FBCEC), 2017 EDITION
FLORIDA FIRE PREVENTION CODE – (FFPC), 2017 EDITION
FLORIDA BUILDING CODE ACCESSIBILITY – (FBCA), 2017 EDITION
61G20–3 FAC FOR PRODUCT APPROVAL

CONSTRUCTION TYPE:	" VB "
RESTROOM OCCUPANCY GROUP:	"U"
ROOF LIVE LOAD:	20 P.S.F.
RISK CATEGORY	" II "
BASIC WIND SPEED:	(3 SEC. GUST) VULT = 175 MPH, VASD = 136 MPH (ASCE 7–10) 37 PSF, ULTIMATE M.W.F.R.S.
WIND EXPOSURE:	CATEGORY "C"
FLOOR LIVE LOAD:	50 P.S.F.
SEISMIC CRITERIA:	Sds= .050 Sd1 = .036
(EQUIVALENT LATERAL FORCE PROCEDURE)	R = 3.0 1=1.0 SOIL CLASS "D". SEISMIC DESIGN CATEGORY A
ALLOWABLE SOIL BEARING PER GEOTECHNICAL REPORT BY NUTTING ENGINEERS OF FLORIDA DATED 1/12/18	2,500 PSF.
BUILDING AREA:	816 SQ/FT
DATA PLATE & DECAL LOCATION:	SHEET A1

SHEET INDEX

SPECIAL CONDITIONS/LIMITATIONS

–BUILDING NOT TO BE INSTALLED NEXT TO AN EXISITING BUILDING CLOSER THAN 5'.

–BUILDING CONFIGURATION SHOWN IS CONSTRUCTED IN FACTORY. THE UNDERGROUND PLUMBING PIPING IS PARTIALLY CONSTRUCTED AND SHIPPED TO THE SITE WITH THE BUILDING FOR INSTALLATION UNDERGROUND PRIOR TO THE BUILDING BEING SET.

PROJECT REVISION

REVISED BY:	DATE
1	
2	
3	
4	
5	

RFL Restroom Facilities Limited
1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

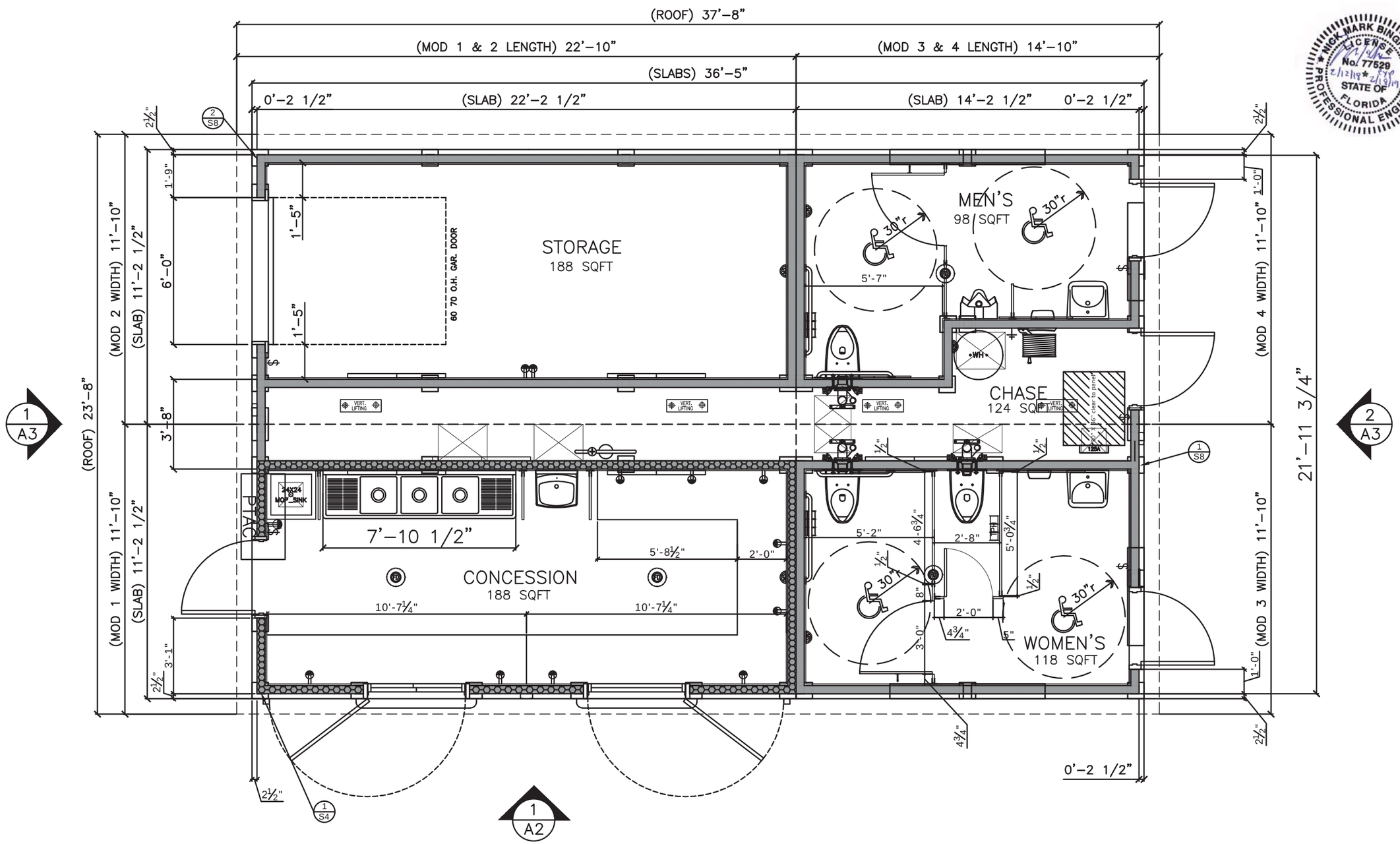
RFL MODEL #: S312STCN2
PROJECT: MARGATE SOUTHEAST PARK
MARGATE, FLORIDA, 33063

DRAWN BY: RS
DATE: 02/12/18
REVISION: DATE:
REVISION: DATE:
REVISION: DATE:
REVISION: DATE:

SHEET DESCRIPTION: COVER SHEET

SHEET
CS

NOTE:
SEE S/10 FOR ALL WALL AND CAP SIZES.



FLOOR PLAN 816 SQ.FT.

DESIGN DATA PLATE TO BE OF PLAQUE GRADE METAL, PAINTED BLACK. CRITERIA TO BE ENGRAVED TO METAL. TO BE SCREWED TO WALL AT HINGE SIDE OF CHASE DOOR AT 60" AFF.

NICK MARK BINGHAM LICENSE No. 77529 STATE OF FLORIDA PROFESSIONAL ENGINEER 2/12/19 2/13/19

RFL Restroom Facilities Limited
1707 COLT CIRCLE
MARBLE FALLS, TX 78654
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RFL MODEL #: S312STCN2
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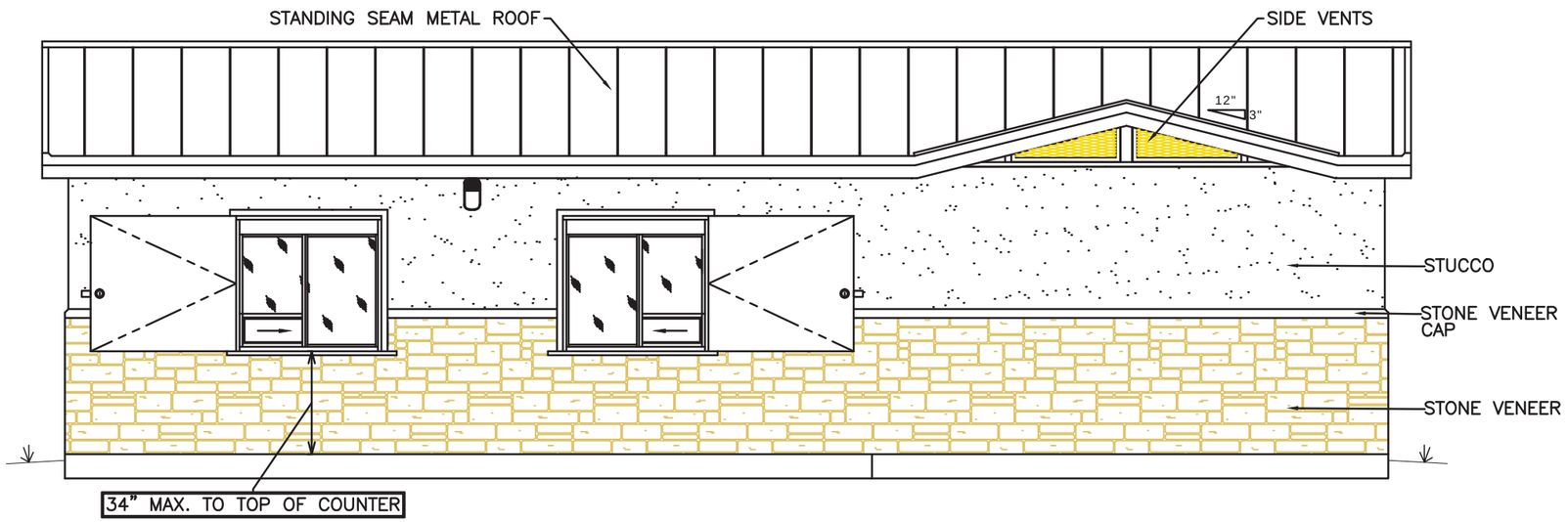
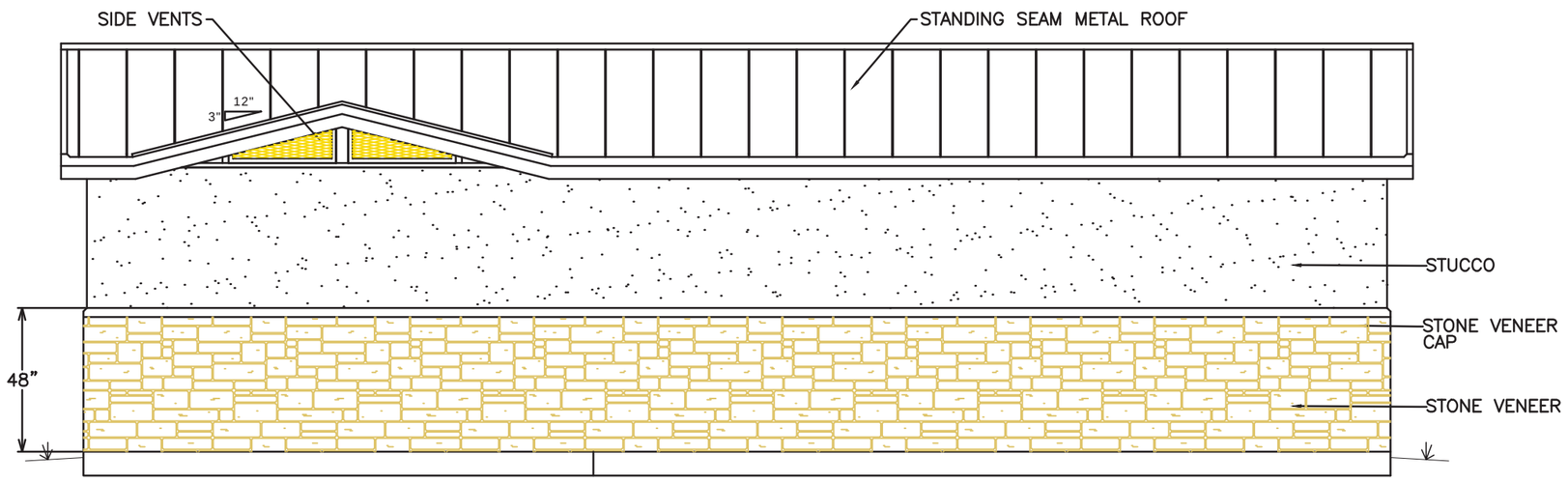
SHEET DESCRIPTION: FLOOR PLAN

SHEET A1



1 FRONT ELEVATION



2 REAR ELEVATION

NICK MARK BINGHAM
LICENSE
No. 77529
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
2/12/19
2/13/19

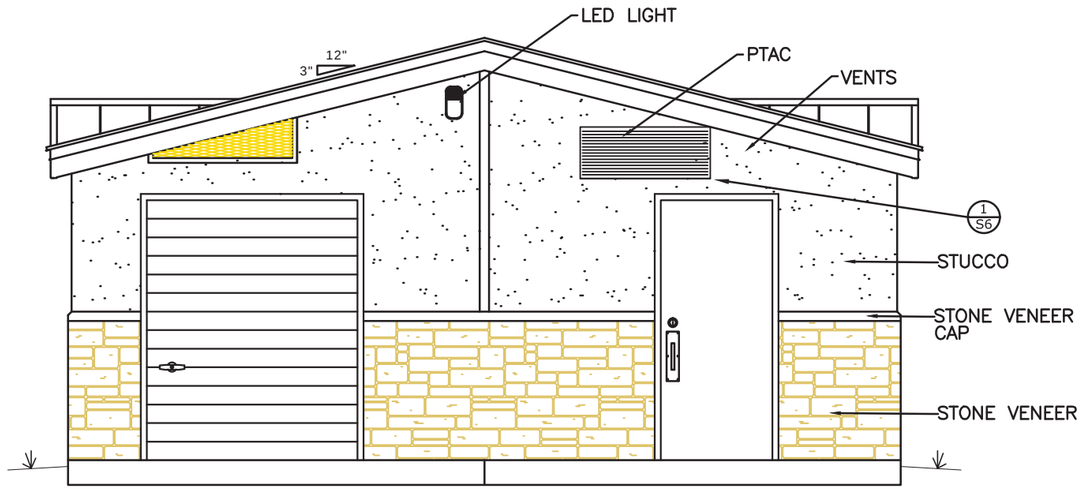
RFL Restroom Facilities Limited
1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

RFL MODEL #: S312STCN2
PROJECT: MARGATE SOUTHEAST PARK
MARGATE, FLORIDA, 33063

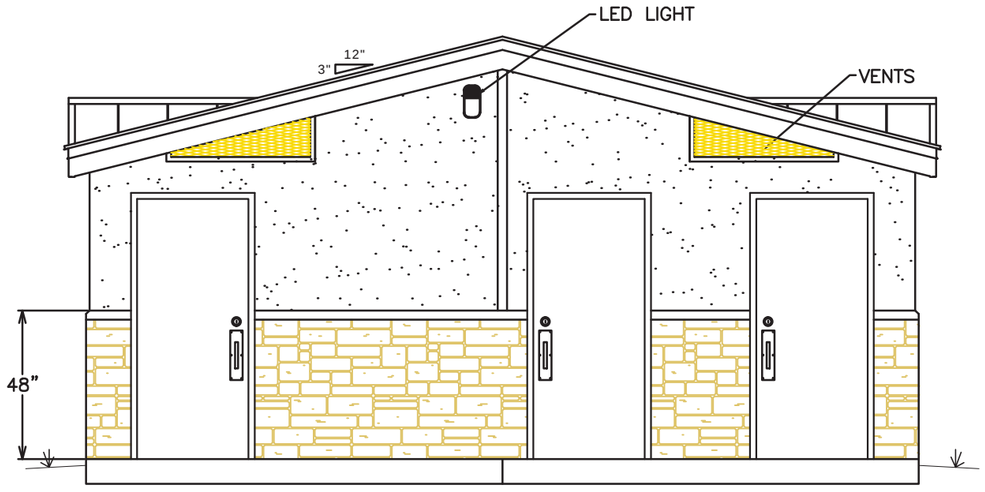
DRAWN BY:	RS
DATE:	02/12/18
REVISION:	
DATE:	
REVISION:	
DATE:	
REVISION:	
DATE:	
REVISION:	
DATE:	

SHEET DESCRIPTION: ELEVATIONS

SHEET
A2



1 LEFT SIDE ELEVATION



2 RIGHT SIDE ELEVATION

NICK MARK BINGHAM
LICENSE
No. 77529
STATE OF FLORIDA
PROFESSIONAL ENGINEER
2/12/18
2/13/19

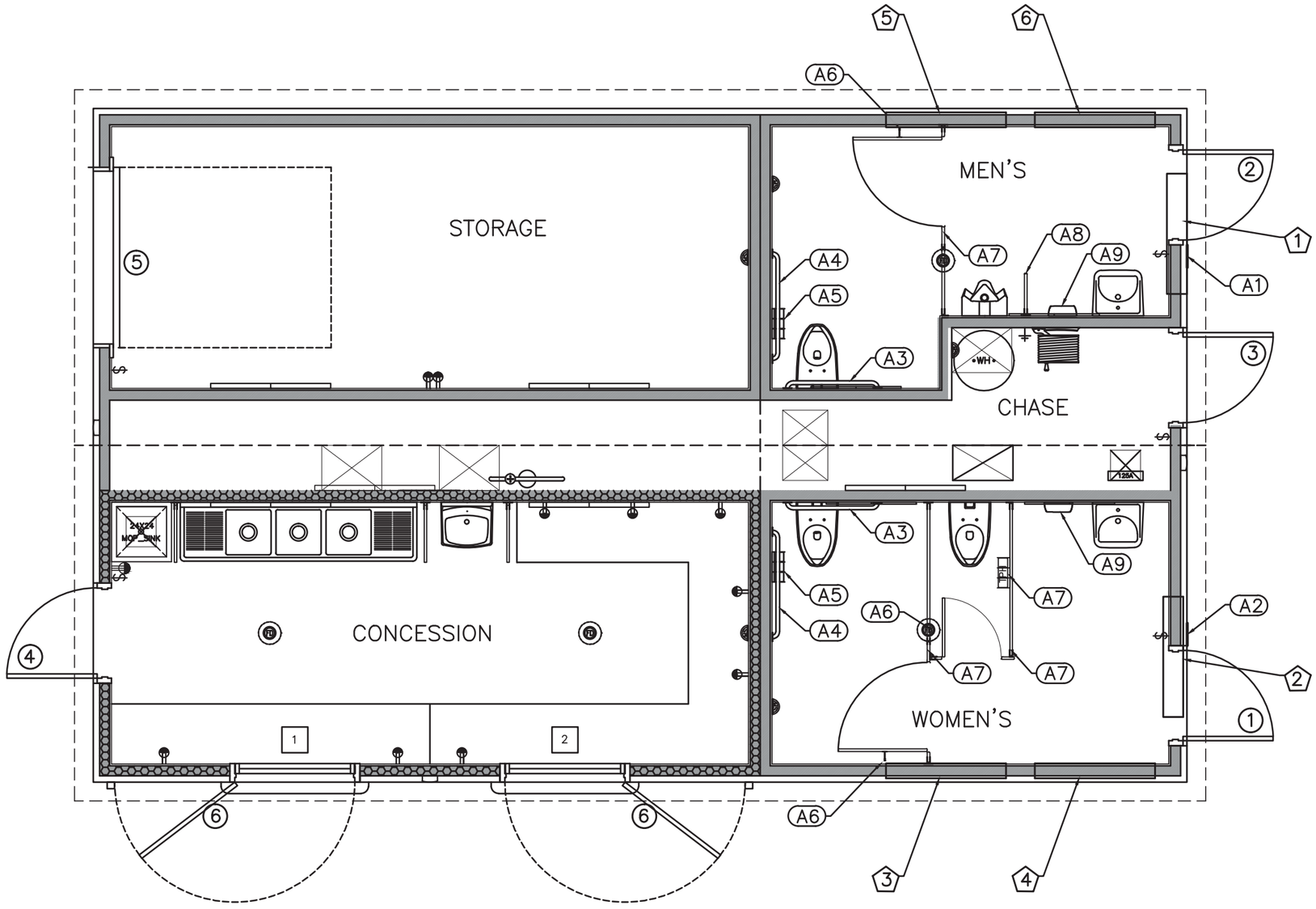
RFL Restroom Facilities Limited
1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

RFL MODEL #: S312STCN2
PROJECT: MARGATE SOUTHEAST PARK
MARGATE, FLORIDA, 33063

DRAWN BY:	RS
DATE:	02/12/18
REVISION:	
DATE:	
REVISION:	
DATE:	
REVISION:	
DATE:	
REVISION:	
DATE:	

SHEET DESCRIPTION: ELEVATIONS

SHEET
A3



DOOR & WINDOW ACCESSORY PLAN

RFL Restroom Facilities Limited

1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

NICK MARK BINGHAM
LICENSE
No. 77529
STATE OF FLORIDA
PROFESSIONAL ENGINEER
2/12/19 EXP 2/28/19

RFL MODEL #: S312STCN2

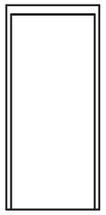
PROJECT:
MARGATE SOUTHEAST PARK
MARGATE, FLORIDA, 33063

DRAWN BY: RS
DATE: 02/12/18

REVISION:	DATE:

SHEET DESCRIPTION:
DOOR, WINDOW, VENT & ACCESSORY PLAN

SHEET
A4



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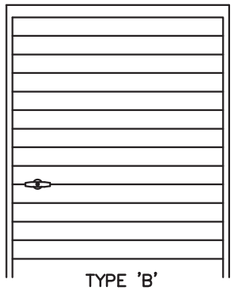

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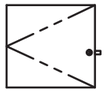


TYPE 'C'

DOOR SCHEDULE

	NO.	DOOR SIZE	R.O. SIZE	THICKNESS	TYPE	MANUFACTURER MODEL	DOOR MATERIAL	FRAME MATERIAL	LOCK	LOCK FINISH	PUSH/PULL PLATE & HANDLES	HINGE	CLOSER	KICK PLATE	PERIMETER SEALS
①	1	3'-0" x 7'-0"	3'-4 1/4" x 7'-4"	1-3/4"	A	STEELCRAFT H SERIES SINGLE FLUSH, (MIAMI-DADE NOA # 17-0320.06)	HOLLOW METAL 14 GA.	5¾" WIDE HOLLOW METAL 14 GA.	SCHLAGE B660P DEADBOLT KEY/THUMB TURN (SMALL CORE)	626	IVES 8311, 8300 PLATE WITH 8111 PULL	HAGER 780/224HD CONTINUOUS HINGE	DORMA 8616 DST W/5 SEC CLOSE TIME	IVES 8400, 10X32 US32D (INSIDE ONLY)	SEE ITEMS 1-8 BELOW
②	2	3'-0" x 7'-0"	3'-4 1/4" x 7'-4"	1-3/4"	A	STEELCRAFT H SERIES SINGLE FLUSH, (MIAMI-DADE NOA # 17-0320.06)	HOLLOW METAL 14 GA.	5¾" WIDE HOLLOW METAL 14 GA.	SCHLAGE B660P DEADBOLT KEY/THUMB TURN (SMALL CORE)	626	IVES 8311, 8300 PLATE WITH 8111 PULL	HAGER 780/224HD CONTINUOUS HINGE	DORMA 8616 DST W/5 SEC CLOSE TIME	IVES 8400, 10X32 US32D (INSIDE ONLY)	SEE ITEMS 1-8 BELOW
③	3	3'-0" x 7'-0"	3'-4 1/4" x 7'-4"	1-3/4"	A	STEELCRAFT H SERIES SINGLE FLUSH, (MIAMI-DADE NOA # 17-0320.06)	HOLLOW METAL 14 GA.	5¾" WIDE HOLLOW METAL 14 GA.	SCHLAGE B660P DEADBOLT KEY/THUMB TURN (SMALL CORE)	626	IVES 8311, 8300 PLATE WITH 8111 PULL	HAGER 780/224HD CONTINUOUS HINGE	WRIGHT V11	N/A	SEE ITEMS 1-8 BELOW
④	4	3'-0" x 7'-0"	3'-4 1/4" x 7'-4"	1-3/4"	A	STEELCRAFT H SERIES SINGLE FLUSH, (MIAMI-DADE NOA # 17-0320.06)	HOLLOW METAL 14 GA.	5¾" WIDE HOLLOW METAL 14 GA.	SCHLAGE B660P DEADBOLT KEY/THUMB TURN (SMALL CORE)	626	IVES 8311, 8300 PLATE WITH 8111 PULL	HAGER 780/224HD CONTINUOUS HINGE	DORMA 8616 DST W/5 SEC CLOSE TIME	IVES 8400, 10X32 US32D (INSIDE ONLY)	SEE ITEMS 1-8 BELOW
⑤	5	6'-0" x 7'-0"	5'-9" X 6'-10 ½"		B	AMARR MODEL 2400 STEEL SECTIONAL GARAGE DOOR (MIAMI-DADE NOA #15-0505.14)	24 GA. STEEL	N/A	CLOPAY GARAGE DOOR KEYED LOCK SET MODEL: 4125480	CHROME	N/A	N/A	N/A	N/A	N/A
⑥	6	4'-0" x 3'-0"	4'-4 1/4" x 3'-4"	1-3/4"	C	STEELCRAFT H SERIES SINGLE FLUSH, (MIAMI-DADE NOA # 17-0320.06)	HOLLOW METAL 14 GA.	5¾" WIDE HOLLOW METAL 14 GA.	SCHLAGE L9462 F16 DOUBLE CYLINDER LOCK KEY/KEY	626	N/A	HAGER 780/224HD CONTINUOUS HINGE	N/A	N/A	N/A
⑦	7	4'-0" x 3'-0"	4'-4 1/4" x 3'-4"	1-3/4"	C	STEELCRAFT H SERIES SINGLE FLUSH, (MIAMI-DADE NOA # 17-0320.06)	HOLLOW METAL 14 GA.	5¾" WIDE HOLLOW METAL 14 GA.	SCHLAGE L9462 F16 DOUBLE CYLINDER LOCK KEY/KEY	626	N/A	HAGER 780/224HD CONTINUOUS HINGE	N/A	N/A	N/A

PERIMITER SEALS:

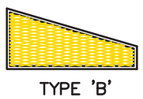
1. THRESHOLD: NGP 950,W/SILICON, VINYL, OR NEOPRENE BUMBER
2. SHOE: STEELCRAFT FAS-SEAL SWEEP
3. SELF ADHESIVE DOOR SEAL: STEELCRAFT PS04
4. DOOR EDGE SWEEP: ZERO INT'L 539
5. DOOR BOTTOM SWEEP: ZERO INT'L 139
6. ADJUSTABLE STOP: NGP 170N
7. RAIN DRIP CAP: ZERO INT'L 11
8. DOOR TOP CAP: STEELCRAFT DOOR TOP CAP

WINDOW SCHEDULE

TYPE 'A'

	NO.	WINDOW SIZE	R.O. SIZE	THICKNESS	TYPE	WINDOW MATERIAL	FRAME MATERIAL	MOUNTING HEIGHT	MANUFACTURER MODEL #
1	1	47-1/2" x 35-3/4"	47-3/4" x 36"	3"	A	INSULATED & TINTED GLASS	ALUMINUM	34" MAX A.F.F. TO TOP OF SILL	READY ACCESS 600 HURRICANE (MIAMI-DADE NOA # 16-0307.06)
2	2	47-1/2" x 35-3/4"	47-3/4" x 36"	3"	A	INSULATED & TINTED GLASS	ALUMINUM	34" MAX A.F.F. TO TOP OF SILL	READY ACCESS 600 HURRICANE (MIAMI-DADE NOA # 16-0307.06)

VENT SCHEDULE



TYPE 'B'

	NO.	FRAME SIZE	R.O. SIZE	THICKNESS	TYPE	FRAME MATERIAL	VENT MATERIAL	MOUNTING HEIGHT	MANUFACTURER MODEL #
①	1	4' LENGTH	4'-0 1/4"	1/8""	B	WINDSOR ONE PROTECTED	TYPE 304 STAINLESS STEEL	IN GABLE	CUSTOM: IN FLATTENED DE-BURRED PATTERN
②	2	4' LENGTH	4'-0 1/4"	1/8""	B	WINDSOR ONE PROTECTED	TYPE 304 STAINLESS STEEL	IN GABLE	CUSTOM: IN FLATTENED DE-BURRED PATTERN
③	3	3' LENGTH	3'-0 1/4"	1/8""	B	WINDSOR ONE PROTECTED	TYPE 304 STAINLESS STEEL	IN GABLE	CUSTOM: IN FLATTENED DE-BURRED PATTERN
④	4	3' LENGTH	3'-0 1/4"	1/8""	B	WINDSOR ONE PROTECTED	TYPE 304 STAINLESS STEEL	IN GABLE	CUSTOM: IN FLATTENED DE-BURRED PATTERN
⑤	5	3' LENGTH	3'-0 1/4"	1/8""	B	WINDSOR ONE PROTECTED	TYPE 304 STAINLESS STEEL	IN GABLE	CUSTOM: IN FLATTENED DE-BURRED PATTERN
⑥	6	3' LENGTH	3'-0 1/4"	1/8""	B	WINDSOR ONE PROTECTED	TYPE 304 STAINLESS STEEL	IN GABLE	CUSTOM: IN FLATTENED DE-BURRED PATTERN

RFL Restroom Facilities Limited
1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

RFL MODEL #: S312STCN2
PROJECT: MARGATE SOUTHEAST PARK
MARGATE, FLORIDA, 33063

DRAWN BY: RS
DATE: 02/12/18
REVISION: DATE:
REVISION: DATE:
REVISION: DATE:
REVISION: DATE:

SHEET DESCRIPTION: DOOR, WINDOW & VENT SCHEDULE

SHEET
A5

ACCESSORY SCHEDULE

	MEN	WOMENS	FAMILY	SHOWER	ADA SHOWER	CONCESSION	STORAGE	CHASE	EXTERIOR	TOTAL	ACCESSORY NAME	ACCESSORY DESCRIPTION	MOUNTING HEIGHT	MANUFACTURER	COLOR	MODEL # NOTES
A1	1									1	(MENS) ADAAG PICTOGRAM RESTROOM SIGN	INTERNATIONAL ACCESSIBILTY SCHEDULE	60" A.F.F. @ TO C.L.	MYDOORSIGN.COM	8"X8" WHITE CHARACTERS OVER BLUE BACKGROUND	MDDS-128572 CUSTOM KIT MEN'S & WOMEN'S ADA SIGN
A2		1								1	(WOMEN'S) ADAAG PICTOGRAM RESTROOM SIGN	INTERNATIONAL ACCESSIBILTY SCHEDULE	60" A.F.F. @ TO C.L.	MYDOORSIGN.COM	8"X8" WHITE CHARACTERS OVER BLUE BACKGROUND	
A3	1	1								2	HANDICAP GRAB BARS	36" X 1-1/2" DIAMETER HORIZONTAL OR VERTICAL STAINLESS STEEL GRAB BARS WITH CONCEALED FLANGES	33" TO 36" A.F.F. TO TOP	BOBRICK	STAINLESS STEEL	B-6806 X 36
A4	1	1								2	HANDICAP GRAB BARS	42" X 1-1/2" DIAMETER HORIZONTAL OR VERTICAL STAINLESS STEEL GRAB BARS WITH CONCEALED FLANGES	33" TO 36" A.F.F. TO TOP	BOBRICK	STAINLESS STEEL	B-6806 X 42
A5	1	2								3	TOILET PAPER RECEPTACLE	3 ROLL SPINDLE W/ COVER	19" MIN A.F.F TO C.L.	ROYCE ROLLS	STAINLESS STEEL	TP-3
A6	1	2								3	COAT HOOK	COAT HOOK WITH HOOK AND BUMPER	50" A.F.F. TO C.L.	BOBRICK	ALLUMINUM CAST	B-212
A7	1	2								3	TOILET PARTIONS	1" HIGH-DENSITY POLYETHYLENE PLASTIC (HDPE) STAINLESS STEEL VANDAL RESISTANT HARDWARE	9" MIN A.F.F. TO BOTTOM	GEM PLASTICS	CARAMEL	
A8	1									1	URINAL SCREENS	1" HIGH-DENSITY POLYETHYLENE PLASTIC (HDPE) STAINLESS STEEL VANDAL RESISTANT HARDWARE	9" MIN A.F.F. TO BOTTOM	GEM PLASTICS	CARAMEL	
A9	1	1								2	HAND DRYER	SURFACE MOUNT HAND DRYER	40" AFF TO BUTTON	WORLD DRYER	WHITE ON ALUMINUM	L-974
A10						4				4	CONCESSION COUNTERS	18 GA TYPE 304 STAINLESS STEEL	COUNTERTOP TO TOP OF INSIDE WINDOW SILL	RFL	STAINLESS STEEL	CUSTOM

RFL Restroom Facilities Limited
1707 COLT CIRCLE
MARBLE FALLS, TX 78654
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RFL MODEL #: S312STCN2
PROJECT: MARGATE SOUTHEAST PARK
MARGATE, FLORIDA, 33063

DRAWN BY: RS
DATE: 02/12/18
REVISION:
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DATE:
REVISION:
DATE:

SHEET DESCRIPTION: ACCESSORY SCHEDULE

SHEET
A6

EXTERIOR FINISH SCHEDULE

DESCRIPTION	MATERIAL	FINISH	COLOR	BRAND	REMARKS
WALLS TO 4'–0"	EL DORADO STONE VENEER, MOUNTAIN LEDGE	NATURAL	YUKON	EL DORADO	
WALLS ABOVE 4'–0"	STUCCO OVER ⅝" APA RATED GROUP 1 SYP PLYWOOD	PAINTED	NAVAJO WHITE	KELLY MOORE OR EQUAL	F05
EXTERIOR SOFFITS	2x6 T&G SELECT DECK w/ V JOINTS	STAINED	REDWOOD	SUPERDECK	N/A
FASCIA	STEEL (SEE ROOF FRAMING SCHEDULE FOR SIZE)	PAINTED	SWISS COFFEE	KELLY MOORE OR EQUAL	F03
RAKE	STEEL (SEE ROOF FRAMING SCHEDULE FOR SIZE)	PAINTED	SWISS COFFEE	KELLY MOORE OR EQUAL	F03
ROOFING	STANDING SEAM 26 GA IMAGE II	MANUFACTURER	FOREST GREEN	METAL SALES	N/A (MIAMI–DADE NOA# 14–0107.04)
VENTS	STAINLESS STEEL EXPANDED METAL MESH	PAINTED	SWISS COFFEE	KELLY MOORE OR EQUAL	F01 (PAINT FRAME ONLY)
DOOR	1 3/4" THICK FULL–FLUSH, 14 GAUGE STEEL	PAINTED	SWISS COFFEE	KELLY MOORE OR EQUAL	F03
DOOR JAMB	14 GAUGE STEEL	PAINTED	SWISS COFFEE	KELLY MOORE OR EQUAL	F03

F01 EXPOSED WOOD, TRIM, BEAMS RAFTERS, FRC

(1) PRIMER COAT — 2521 ACRY. SHIELD (100%) ACRYLIC PRIMER
(2) FINISH COAT — 1685 DURA–POXY+ (100 % ACRYLIC SEMI GLOSS ENAMEL)

F02 BLOCK (PUBLIC USE AREAS)

(1) COAT BLOCK FILL — 521 COLOR SHIELD (PRIME & FILL ACRYLIC BLOCK FILLER)
(1) COAT PRIMER — 255 ACRYLIC –SHIELD (100% ACRYLIC PRIMER)
(2) COATS FINISH — 1685 DURA–POXY+ (100% ACRYLIC SEMI GLOSS ENAMEL)

F03 STEEL METAL DOORS AND FRAMES

(1) COAT PRIMER — METALMAX DTM ACRYLIC URETHANE GREY PRIMER
(2) COATS FINISH — METALMAX URETHANE TINT BASE

F04 BLOCK AND OSB IN CHASE AND STORAGE

(1) COAT PRIMER — 255 ACRY–SHEILD (100) ACRYLIC PRIMER) GREY

F05 STUCCO

(1) COAT PRIMER — 98 STUCCO SEAL (ACRYLIC STUCCO & MASONRY SEALER)
(2) COATS FINISH — 1685 DURA–POXY+ (100% ACRYLIC SEMI GLOSS ENAMEL)

F06 ANTI GRAFFITI COATING

(2) COATS PRIMER — VANDLGUARD TEN NON–SACRIFICIAL GRAFFITI COATING
(1) FINISH COAT — VANDLGUARD FINISH COAT

NICK MARK BINGHAM ★ LICENSE No. 77529 STATE OF FLORIDA ★ PROFESSIONAL ENGINEER ★ 2/12/19

INTERIOR FINISH SCHEDULE

MEN	WOMEN	CONCESSION	CHASE	STORAGE	OUTSIDE	DESCRIPTION	MATERIAL	FINISH	COLOR	BRAND	REMARKS
			●			CONCRETE FLOOR	FASTKOTE UV POLYUREA FLOOR COATING	SMOOTH	GRAY	RUSTOLEUM	
●	●					CONCRETE FLOOR	EPOXY FLOOR COATING, 100% SOLIDS MODIFIED, 30–50 MILS THICKNESS	SAND	ADOBE	APF	
				●		WALLS FLOOR TO CEILING	OPEN FRAMED	PRECISION	SWISS COFFEE	KELLY MOORE	F03
●	●					WALLS FLOOR TO CEILING	3/32" CLASS 'A' FIBER REINFORCED PLASTIC (FRP) OVER ⅝" OSB	PEBBLE GRAIN	WHITE	KEMLITE	
				●		WALLS FLOOR TO CEILING	5/8" OSB	PAINTED	SWISS COFFEE	KELLY MOORE	F01
			●			CHASE WALLS	OPEN FRAME	PAINTED	GRAY	KELLY MOORE	F04
●	●		●	●		ROOF FRAMING	RIDGE BEAM & RAFTERS (STEEL: SEE S1 FRAMING SCHEDULE FOR SIZE)	PAINTED	SWISS COFFEE	KELLY MOORE	N/A
●	●		●	●		CEILING	2x6 T&G SELECT DECK w/ V JOINTS	OILED/STAINED	REDWOOD	SUPERDECK	N/A

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DATE: 02/12/18
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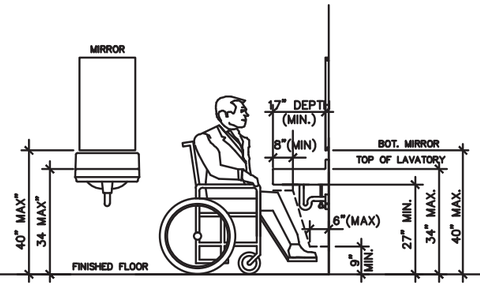
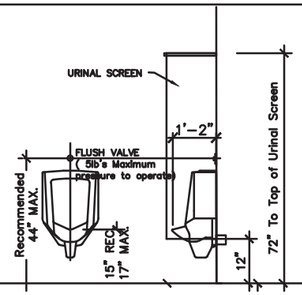
REVISION: DATE:

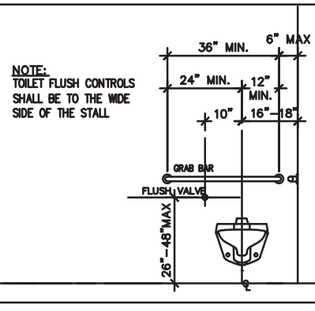
SHEET DESCRIPTION: EXTERIOR & INTERIOR FINISH SCHEDULE

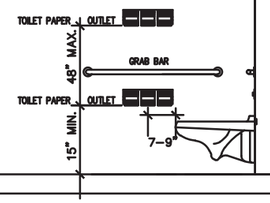
SHEET A7

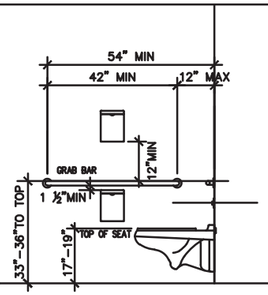
PLUMBING FIXTURE & ACCESSORY HEIGHT'S SCHEDULE

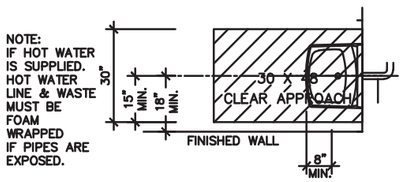




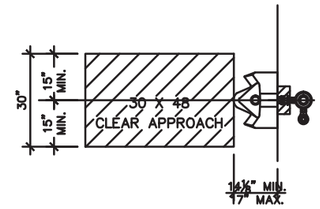




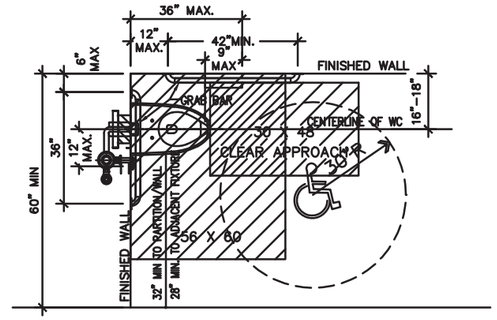


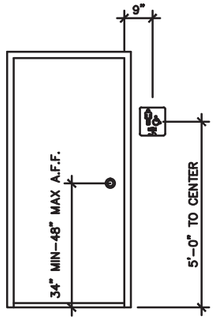


CODE SUMMARY HEIGHT A.F.F.		LOCATION
RIM HEIGHT	34" MAX	17" MIN. TO WALL
HEIGHT OF APRON	29" MIN	17" MIN. TO WALL
FRONT LAV. TO TRAP	8" MIN	N/S
TOE SPACE UNDER TRAP	9" MIN	N/S
CONTROLS	DECK MT.	N/S
ACCESS	N/A	30" x 48"
KNEE	27" MIN	

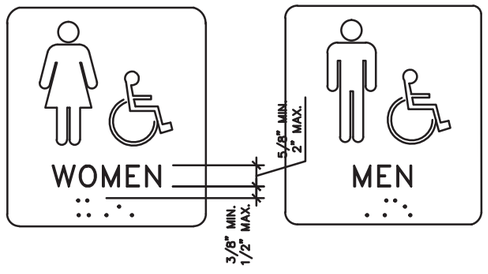


CODE SUMMARY HEIGHT A.F.F.		LOCATION
URINAL RIM	17" MAX / 14" MIN	15" ' TO WALL
CONTROLS	44" MAX	N/S
URINAL SCREENS	12"-14"	SCREENS MUST BE AT LEAST 30" APART





SIGNS TO BE A CONTRASTING COLOR TO THE DOORS.



DOOR SIGNAGE DESIGN CRITERIA

CODE SUMMARY HEIGHT A.F.F./ LOC.	
GRAB BARS	33" X 1-1/4" – 1-1/2" DIA. (1-1/2" DIST. FROM BAR TO WALL)
TOILET/ SEAT	19" MAX / 17" MIN
TOILET FLUSH VALVE	48" MAX., 12" TO WIDE SIDE
T.P. DISPENSER	15" MIN.

NOTES: 1. ALL DIMENSIONS SHOWN ON PLAN OR ELEVATION ARE OUR STANDARDS AND WITHIN CODE.

2. FLUSH VALVE IN HANDICAP STALL OFFSET TO WIDE SIDE.

–MEN'S ROOM SIGN ARE:
AN 8" X 8" WALL SIGN.

–WOMEN'S ROOM SIGNS ARE:
AN 8" X 8" WALL SIGN.

–THE SIGNS ARE ¼" THICK, WITH CHARACTERS BEING 5/8" MIN & 2" MAX. IN HEIGHT, RAISED 1/32". USED.

–DOTS SHALL BE CENTERS IN EACH CELL WITH 3/10" (5.08MM) SPACE BETWEEN CELLS. DOTS SHALL BE MEASURED FROM THE SECOND COLUMN OF DOTS IN THE FIRST CELL TO THE FIRST COLUMN OF DOTS IN THE SECOND CELL. DOTS SHALL BE RAISED A MINIMUM OF 1/40 BACKGROUND." (0.635MM) ABOVE THE 1/10" (2.54MM) ON-BRAILLE DOTS SHALL BE DOMED OR ROUNDED.

FLORIDA BUILDING CODE ACCESSIBILITY

RFL Restroom Facilities Limited

1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

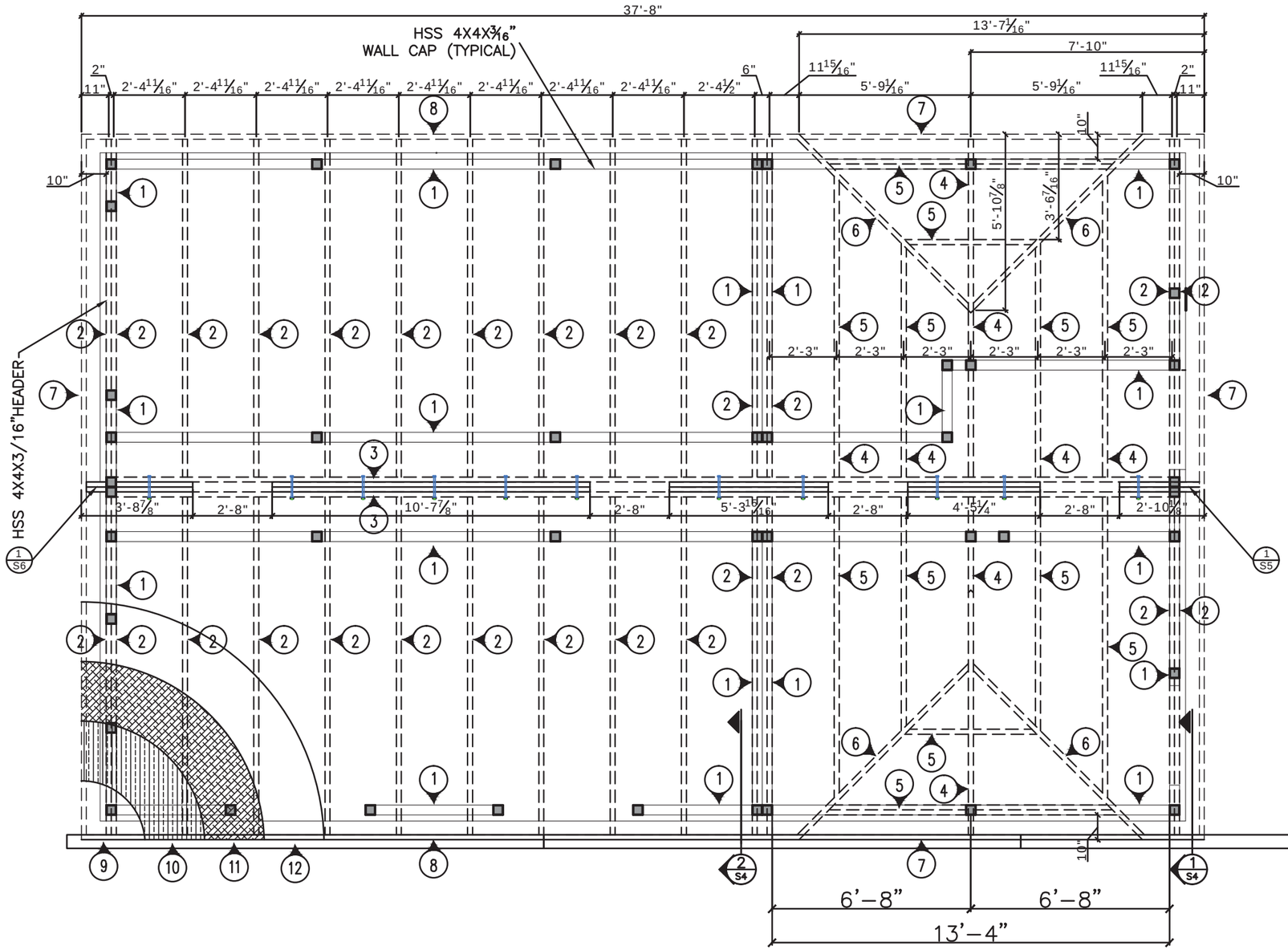
RFL MODEL #: S312STCN2

PROJECT:
MARGATE SOUTHEAST PARK
MARGATE, FLORIDA, 33063

DRAWN BY: RS
DATE: 02/12/18
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:

SHEET DESCRIPTION:
ADA REQUIREMENTS

SHEET
A8



FRAMING PLAN

FRAME SCHEDULE & ROOF FRAME SCHEDULE

1. WALL BELOW: 1 5/8" X 4" 16ga. STRUCTURAL STEEL STUDS @ 16" O.C.
2. RAFTERS: HSS 5X2X3/16" @ 32" O.C. MAX. WELDED TO RIDGE BEAM. SEE DETAIL 1/S5 AND 2/S5
3. RIDGE BEAM: (1) HSS 8X2X3/16" AT EACH MOD
4. RIDGE & RAFTER @ SIDE VENTS: HSS 6X2X3/16" (SEE S7)
5. VALLEY JACK RAFTERS: HSS 5X2X1/4" @ 32" O.C. MAX. WELDED TO RIDGE BEAM AND VALLEY.
6. VALLEY: HSS 6X2X3/16"
7. RAKE: HSS 8X2X3/16" WELDED TO RIDGE AND FASCIA.
8. FASCIA: HSS 8X2X3/16" WELDED TO RAFTERS AND RAKE.
9. ROOF DECKING: 2X6 SPF #2 T&G FASTENED TO RAFTERS WITH (2) #12 X 2-3/4 SELF DRILLING SCREWS @ EACH RAFTER.
10. 30LB FELT PAPER STAPLED AS PER CODE.
11. 3/8" OSB OR BETTER FASTENED TO DECKING WITH #6X1 3/4" SCREWS @ 4" O.C. ON EDGES AND 4" O.C. IN FIELD. (INSERT SCREWS AT SLIGHT ANGLE)
12. ROOFING: SEE EXTERIOR SCHEDULE

NOTES:

ALL WOOD MATERIAL TO BE COATED WITH ECO CLEAR SHIELD.

NICK MARK BINGHAM LICENSE No. 77529 STATE OF FLORIDA PROFESSIONAL ENGINEER 2/12/18 2/28/19

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512-222-5454

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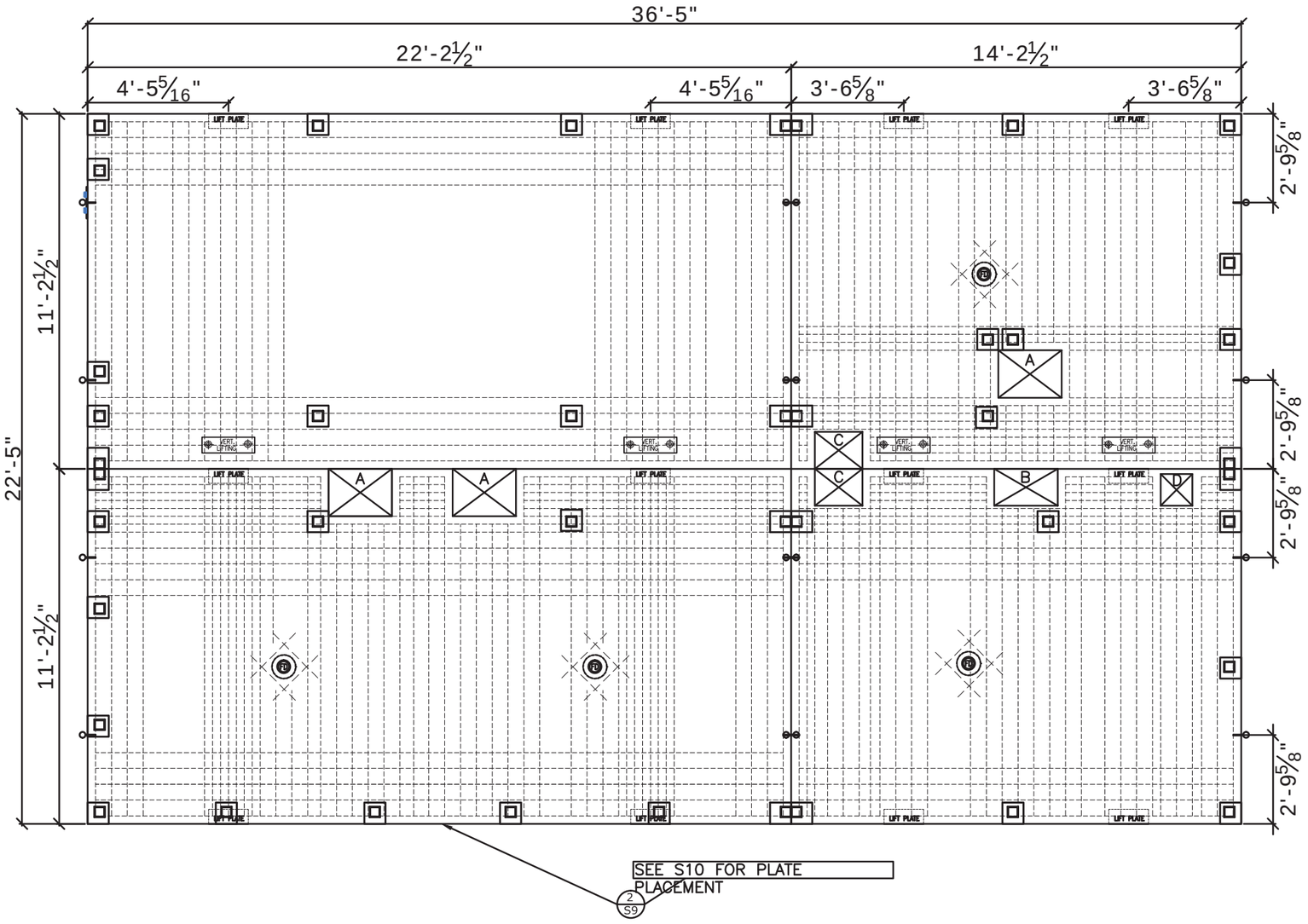
REVISION:	
DATE:	

SHEET DESCRIPTION: ROOF FRAMING PLAN

SHEET S1



SLAB REBAR PLAN

NOTE:

1. INSTALL #3 @ 12 O.C. EACH WAY PLUS ADDITIONAL # 5 REBAR TOP & BOTTOM AS SHOWN.

2. 6X6X½" ANGLE AROUND PERIMETER OF EACH MOD

SLAB LEGEND

- #5 REBAR TOP & BOTTOM
- LIFTING PLATE
- VERTICAL LIFTING PLATE
- TRANSPORT TIE LOCATIONS
- FLOOR DRAIN
- A = SLAB KNOCKOUT (18"x 24")
- B = SLAB KNOCKOUT (14"x 24")
- C = SLAB KNOCKOUT (14"x 18")
- D = SLAB KNOCKOUT (12" X 12")

BUILDING SLAB CONCRETE

1. THE MANUFACTURING PLANT POURED SLAB CONCRETE SHALL MEET THE DESIGN PROVISIONS OF ACI–318–14.

2. THE SLAB CONCRETE SHALL BE CONSTRUCTED USING A CONCRETE MIX WHICH HAS BEEN DESIGNED TO REACH 5,000 PSI.

3. THE CONCRETE SLAB SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 7 DAYS OF 3,000 PSI (60% OF 28 DAY STRENGTH).

4. THE CEMENT USED IN THE CONCRETE SLAB SHALL BE TYPE II MEETING ASTM C150–05, UNLESS NOTED OTHERWISE IN A SITE SPECIFIC SOILS REPORT.

5. THE AGGREGATE SIZE SHALL BE 3/4" MAXIMUM MEETING GRADATION REQUIREMENTS OF ASTM C33–03.

6. #3 AND #5 REBAR TO MEET ASTM 615 GRADE 60.

7. MAXIMUM BEND OF REBAR IS TO BE MINIMUM 6db PER ACI 318 7.2.1.

8. SLAB ANGLES TO BE ASTM A36.

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1 DETAILS/NOTES

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512-222-5454

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MARGATE, FLORIDA, 33063

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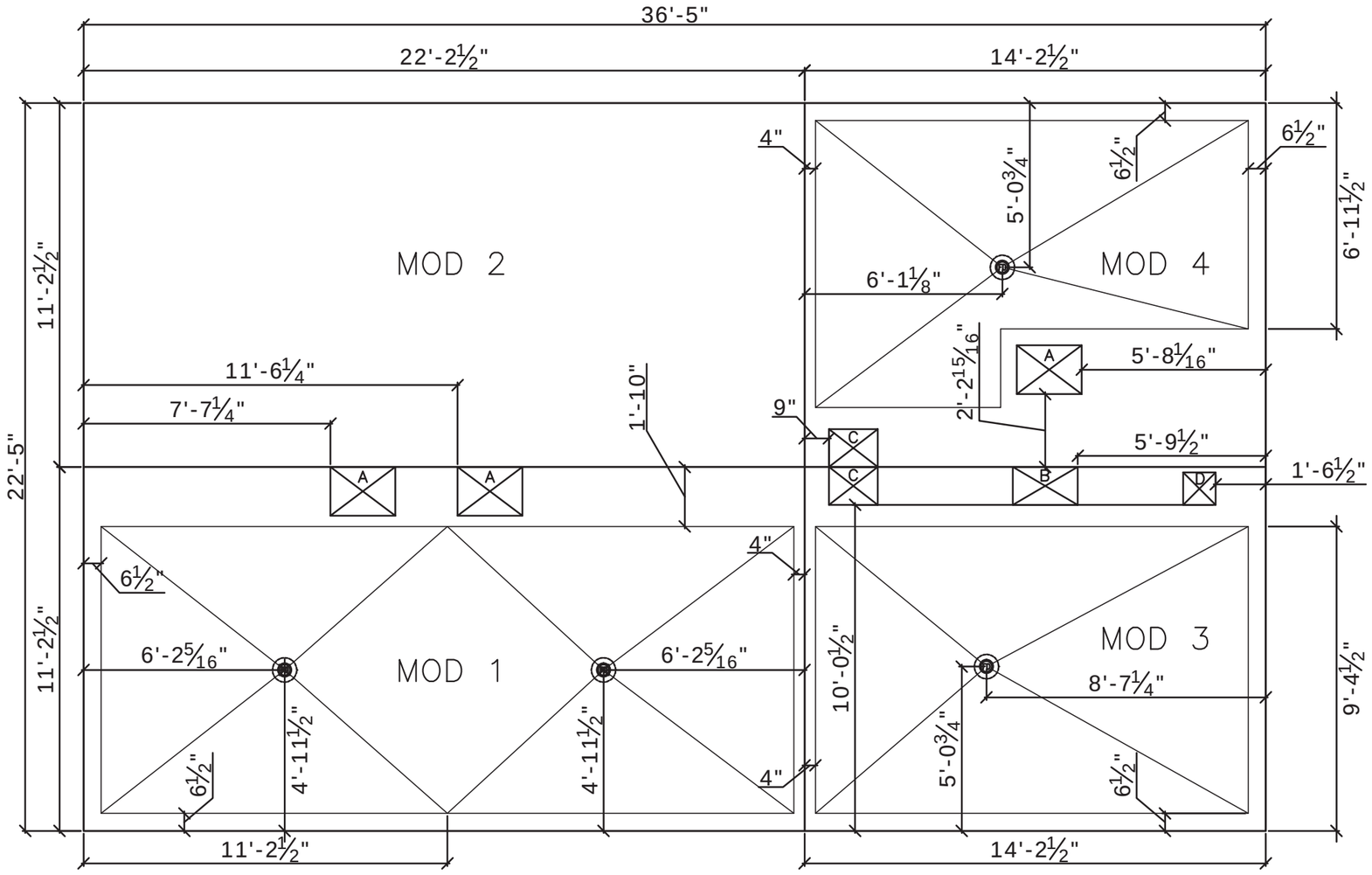
REVISION: DATE:

SHEET DESCRIPTION: SLAB REBAR PLAN

SHEET S2



NOTES:

1. SLAB OPENING SHALL BE FILLED IN WITH COARSE MASONS SAND AFTER BUILDING & UTILITIES ARE INSTALLED, CONNECTED & INSPECTED.

2. FINISH GRADE AROUND BUILDING SHALL BE MINUS (–2") INCHES BELOW FINISH FLOOR ELEVATION, EXCEPT FOR PAVING TO MATCH FINISH FLOOR ELEVATION.

3. ALL FLAT WORK AT DOORS SHALL BE LEVEL WITH FINISH FLOOR ADDITIONAL F.W. AND OR BACKFILL TO SIDES & REAR OF BUILDING SHALL BE 1/2" LOWER THAN BUILDING FINISH FLOOR LEVEL.

GENERAL CONTRACTORS SCOPE OF WORK

1. ALL EARTH WORK SHALL CONFORM TO THE SITE SPECIFIC GEOTECHNICAL REPORT PREPARED BY NUTTING ENGINEERS OF FLORIDA, DATED 01/12/2018.

2. PROVIDE STRUCTURAL FILL AS REQUIRED TO RAISE EXISTING GRADE.

3. BUILDING PAD MUST BE LEVEL.

4. EXCAVATE AND BACKFILL ALL TRENCHES FOR UNDERGROUND PLUMBING AND UTILITY KIT WHEN RFL SITE CREW IS ON SITE.

5. SUPPLY APPROXIMATELY SIX YARDS OF CLEAN SAND FOR FINE GRADING. THE SAND IS UNINSTALLED AFTER THE PLUMBING INSPECTION.

6. DEPENDING UPON WEATHER ALL IRRIGATION SHOULD BE TURNED OFF PRIOR TO DELIVERY TO ALLOW SURROUNDING SOILS TO DRY AND BEAR THE WEIGHT OF THE TRUCK AND CRANE.

7. PROVIDE SUITABLE SAFE AND CLEAR ACCESS TO ALLOW THE CRANE (UP TO 110 TONS), WITHIN 25' OF THE BUILDING PAD AND THE BUILDING ON A SEMI TRAILER (UP TO 40 TONS), TO REACH THE SITE (14' WIDTH, 70' LENGTH, AND 14' IN HEIGHT). IF PATH TO SITE IS OVER EXISTING UTILITIES, SIDEWALKS OR OTHER DAMAGEABLE AREAS PROPER MARKING, PLATTING OR OTHER APPROPRIATE PROTECTION MUST BE PROVIDED.

8. RESTROOM FACILITIES TO PROVIDE PLUMBING KIT AND UTILITY KIT SET BACK. RESTROOM FACILITIES STUB OUT TO 6'. RFL WILL PROVIDE CHRISTY BOXES FOR CONNECTION. RESTROOM FACILITIES WILL NOT MAKE THE FINAL CONNECTION.

SLAB LEGEND

- A = SLAB KNOCKOUT (18"x 24")
- B = SLAB KNOCKOUT (14"x 24")
- C = SLAB KNOCKOUT (14"x 18")
- D = SLAB KNOCKOUT (12" X 12")

SLAB SLOPE & KNOCKOUT PLAN

2% SLOPE MAX. (TYPICAL)

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512-222-5454

RFL MODEL #: S312STCN2

PROJECT: MARGATE SOUTHEAST PARK
MARGATE, FLORIDA, 33063

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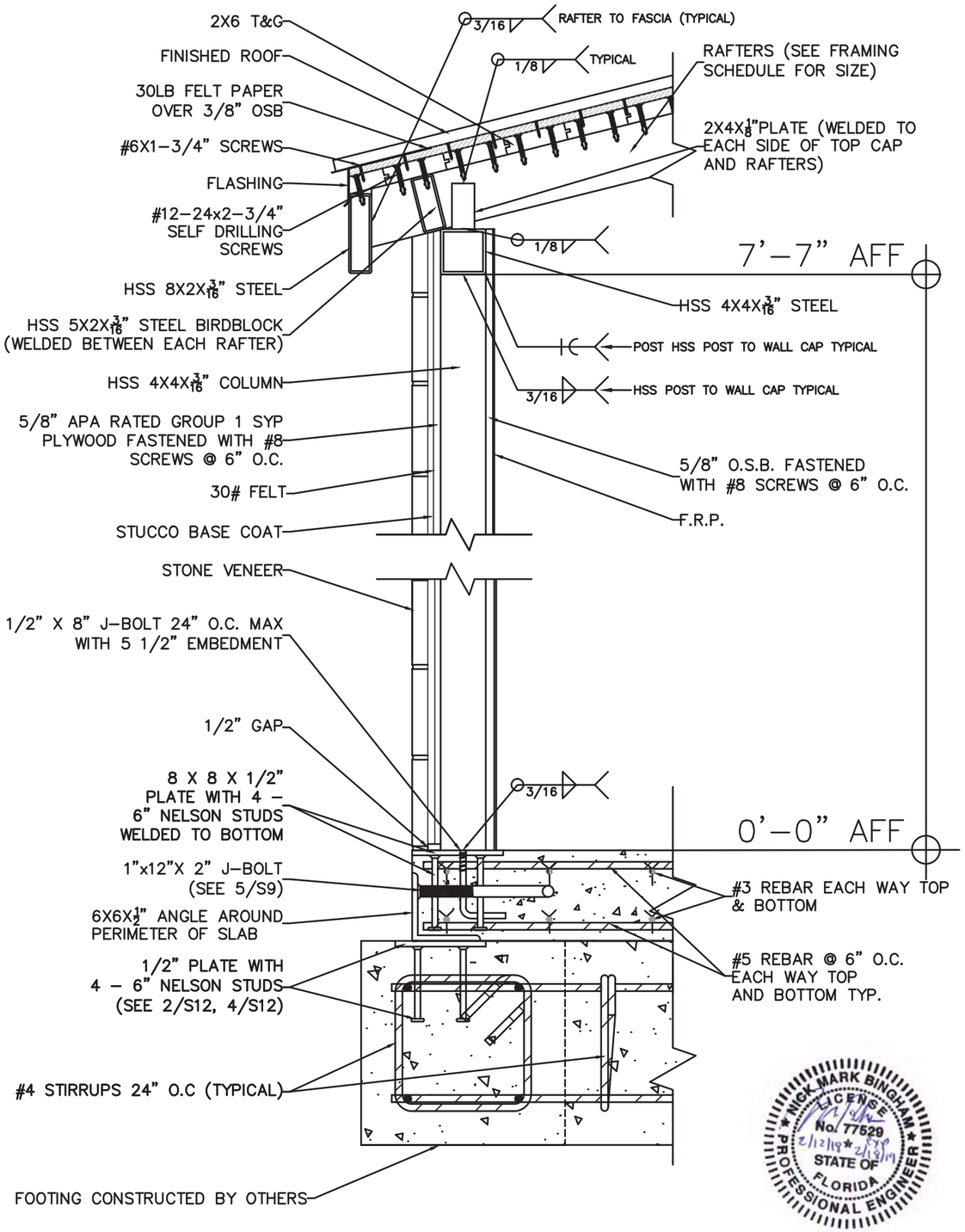
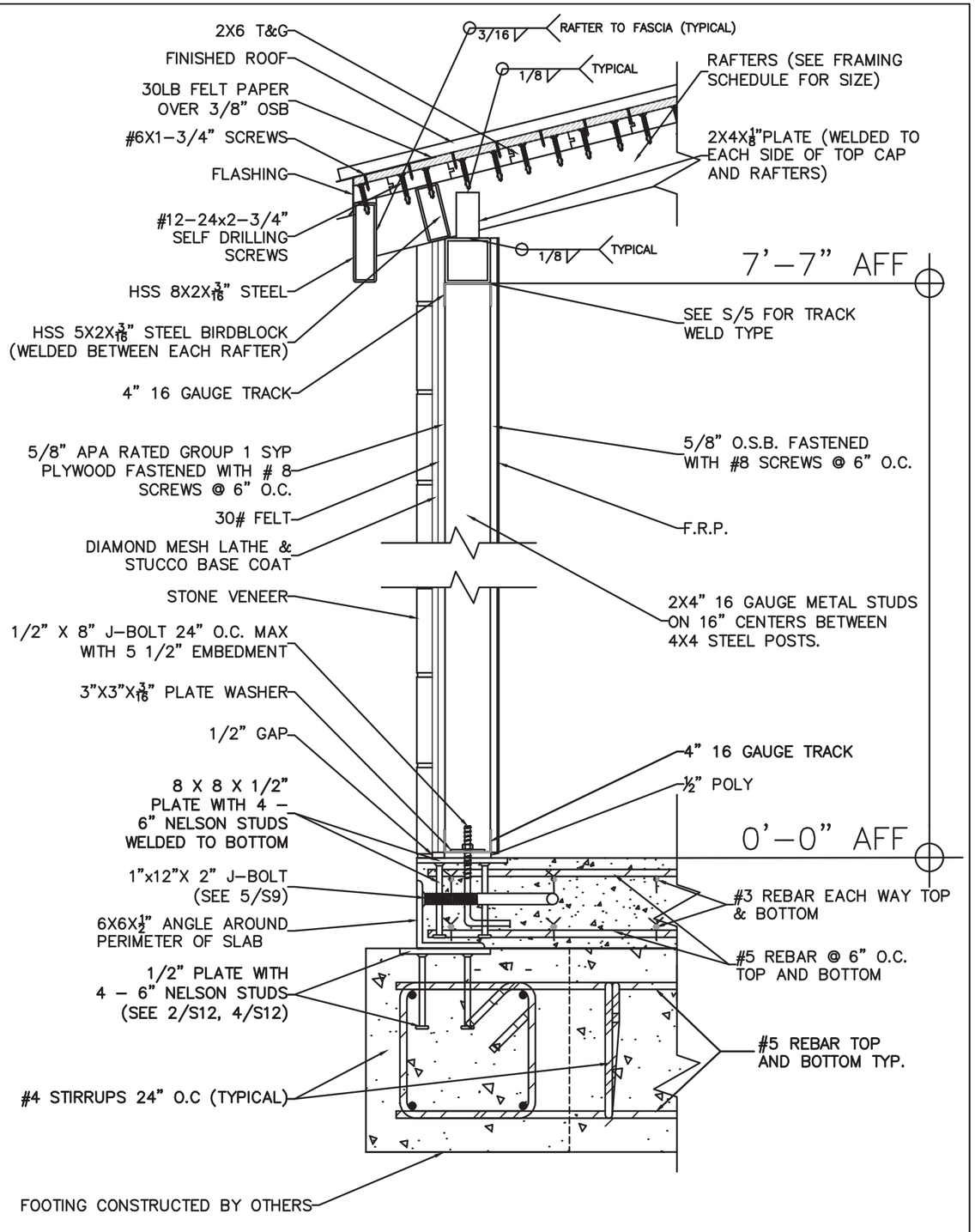
DATE:	02/12/18
REVISION: DATE:	
REVISION: DATE:	
REVISION: DATE:	
REVISION: DATE:	

SHEET DESCRIPTION: SLAB SLOPE PLAN

SHEET S3



1 WALL TO SLAB DETAIL @ CORNER



2 WALL TO SLAB DETAIL

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SHEET DESCRIPTION: DETAILS

SHEET
S4

FINISHED ROOF
30LB FELT PAPER OVER 3/8" OSB
#6X1-3/4" SCREWS
#12-24x2-3/4" SELF DRILLING SCREWS
10'-4 1/8" AFF
RAFTERS (SEE FRAMING SCHEDULE FOR SIZE)
4" 16 GAUGE TRACK
2X4" 16 GAUGE METAL STUD AGAINST EACH SIDE OF HSS COLUMN. TYPICAL ON ALL POSTS
2X4" 16 GAUGE METAL STUDS ON 16" CENTERS BETWEEN 4X4 STEEL POSTS.
7'-11" AFF
4" 16 GAUGE TRACK
1/2" X 8" J-BOLT 24" O.C. MAX WITH 5 1/2" EMBEDMENT
3"X3"X3/16" PLATE WASHER
4" 16 GAUGE TRACK
½" POLY
0'-0" AFF
8" SLAB
18" FOOTING
#4 STIRRUPS 24' O.C. (TYPICAL)
FOOTING INSTALLED BY OTHERS

RAFTER TO RIDGE. (TYPICAL) 3/16
RIDGE SPACERS (SAME SIZE AS RIDGE)
RIDGE (SEE ROOF FRAME SCHEDULE FOR SIZE)
1- 1/2" X 8 1/2" BOLTS @ EACH INSIDE END AND BETWEEN EACH RAFTER
3/8"CAP PLATE TYPICAL @ ENDS AND MID SPAN COLUMNS. WELD CAP PLATE WITH 3/16" BUTT WELD.
2x6 T&G
HSS 4X4X3/16"
3/16
3/16
1/8 STUD TO TRACK (TYPICAL)
HSS 4X4X3/16" STEEL.
3/16 TYPICAL
1/8" 1-8 (TRACK TO COLUMN/TRACK TO CAP TYPICAL)
3/16 6" LONG EITHER INSIDE OR OUTSIDE FACE.
HSS 4X4X3/16 COLUMNS WELDED TO 8X8X½ STEEL PLATE
3/16
3/16
#3 REBAR EACH WAY TOP & BOTTOM
#5 REBAR TOP AND BOTTOM TYP.
#5 REBAR TOP AND BOTTOM TYP.
SEE S11 & S12 FOR PLATE DETAILS

NOTE:
PLACE 20 GAUGE BLOCKING BETWEEN STUDS AT MID HEIGHT OF EXTERIOR WALLS.
1/8

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1 EXTERIOR PONY WALL SECTIONS & RIDGE BEAM @ 2/A3

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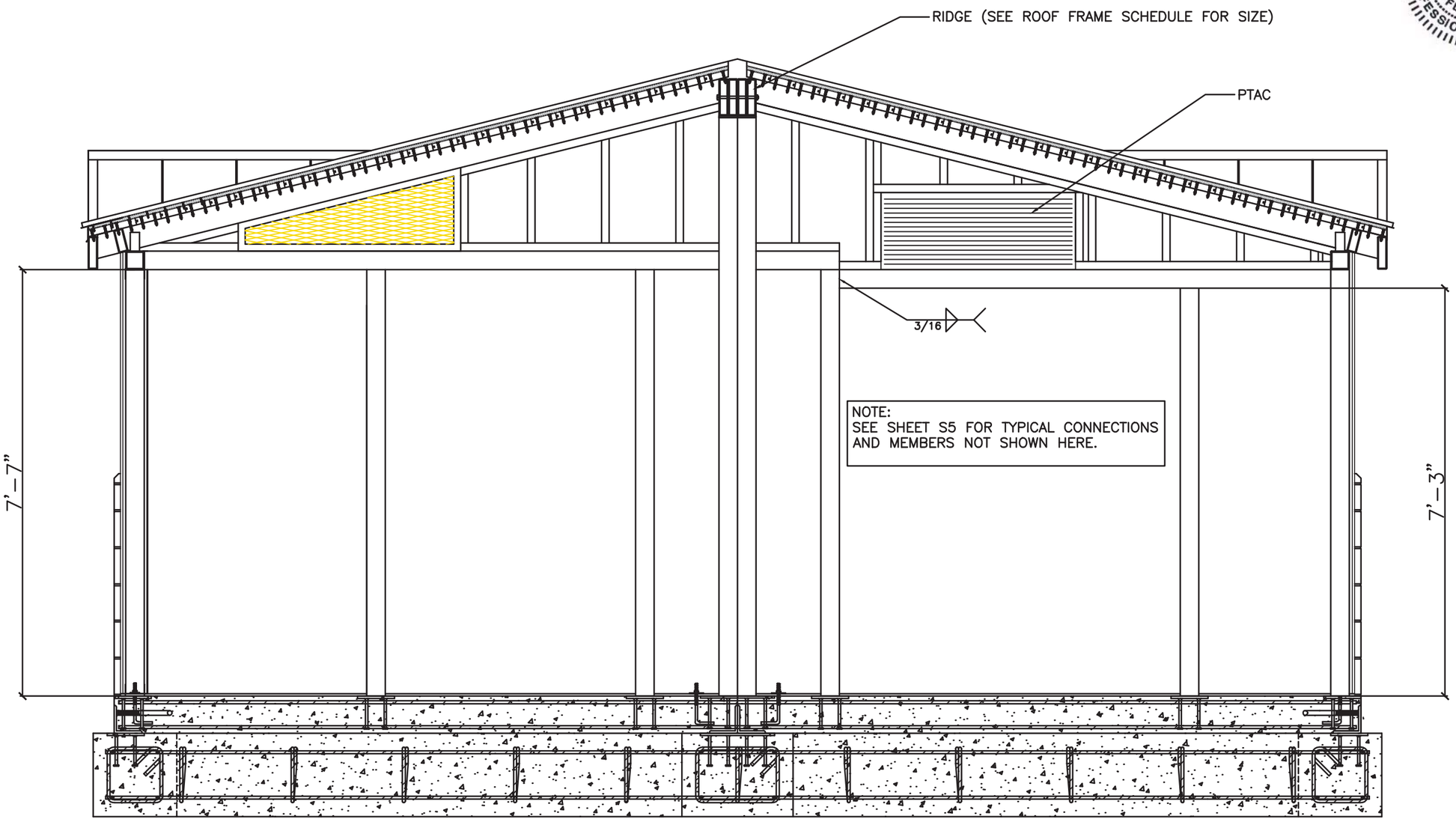
SHEET DESCRIPTION: DETAILS

SHEET
S5



1 EXTERIOR PONY WALL SECTIONS & RIDGE BEAM @ 1/A3

NICK MARK BINGHAM
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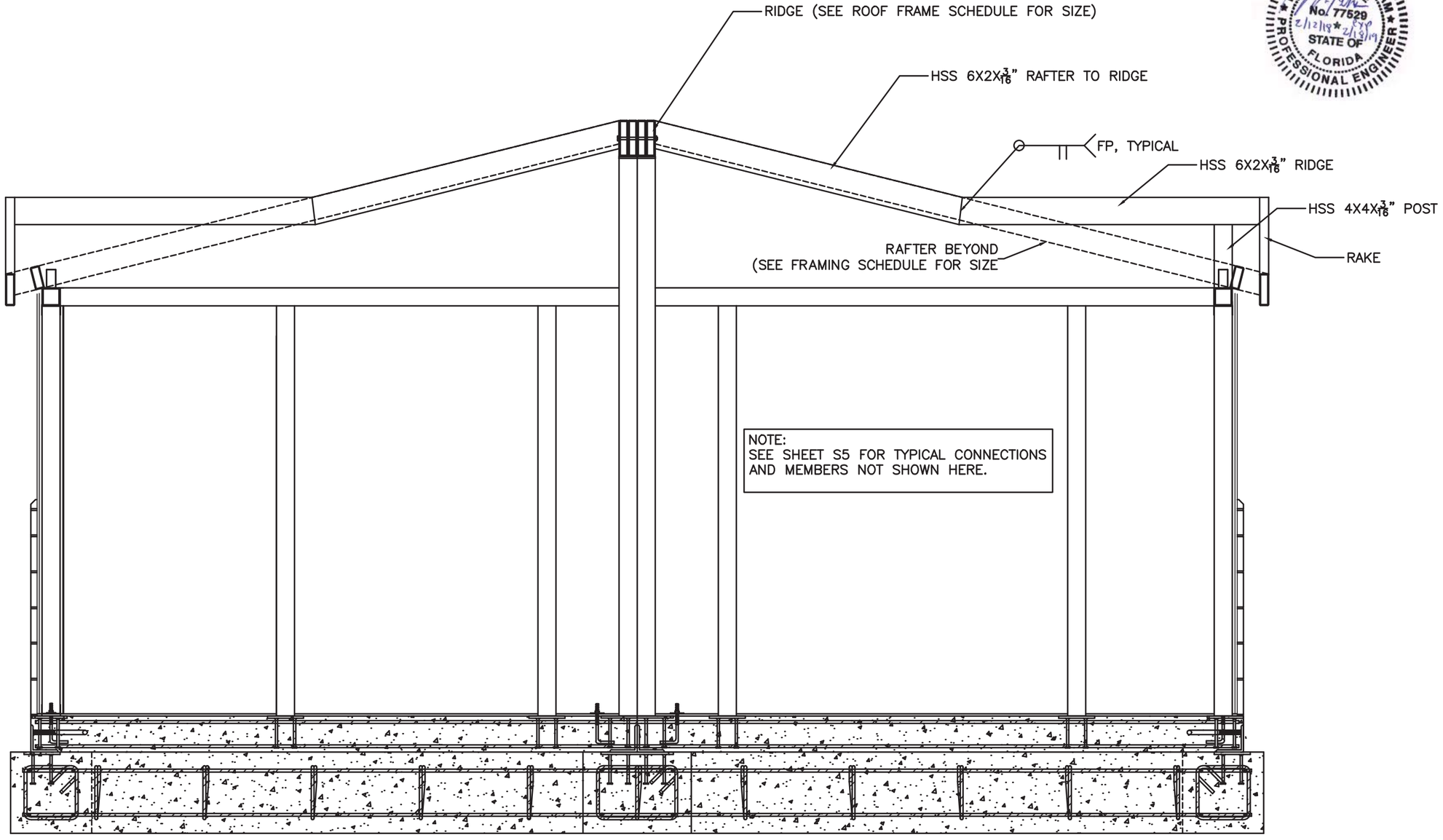
SHEET DESCRIPTION: DETAILS

SHEET
S6



1 RAFTER TO RIDGE CONNECTION @ SIDE VENTS

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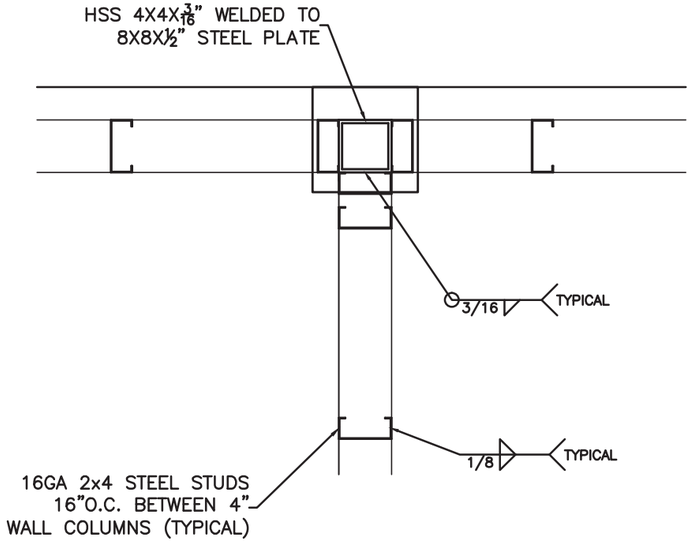
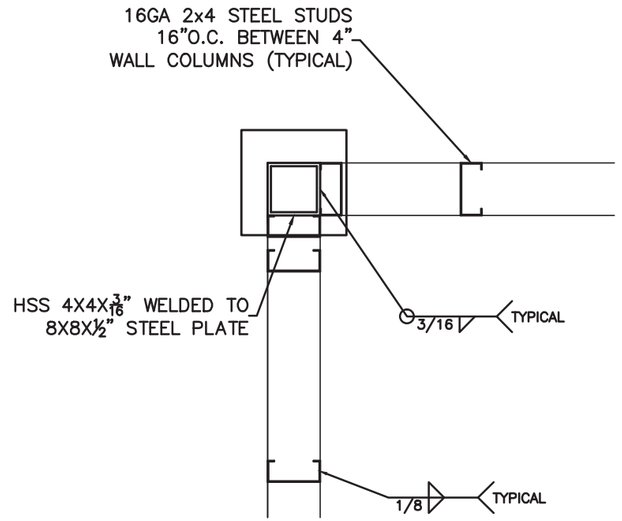
SHEET DESCRIPTION: DETAILS

SHEET S7



1 4" WALL INTERSECTIONS



2 4" WALL CORNERS

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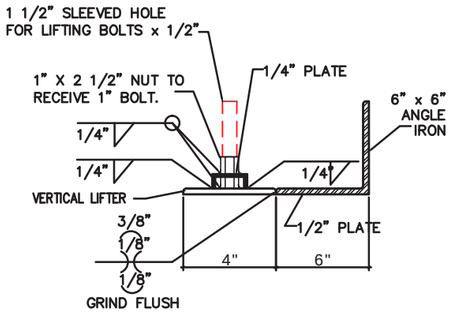
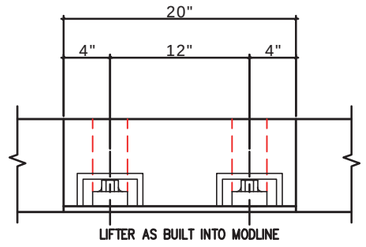
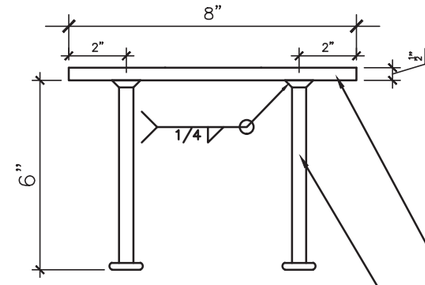
SHEET DESCRIPTION: DETAILS

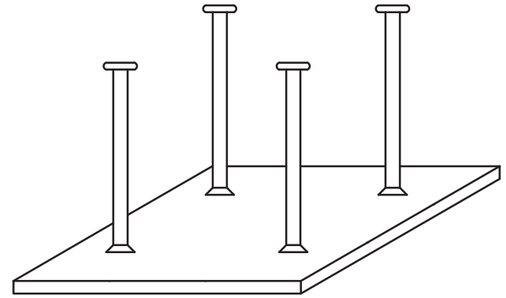
SHEET
S8





1 VERTICAL LIFTER DETAIL

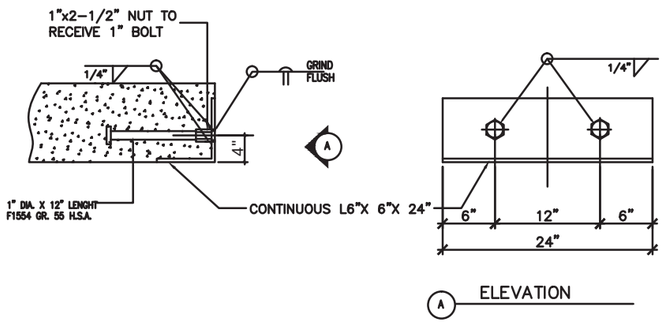




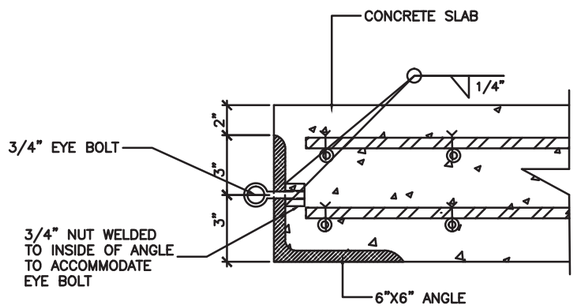
8X8X½" STEEL PLATE

4– 6" NELSON STUDS WELDED TO PLATE

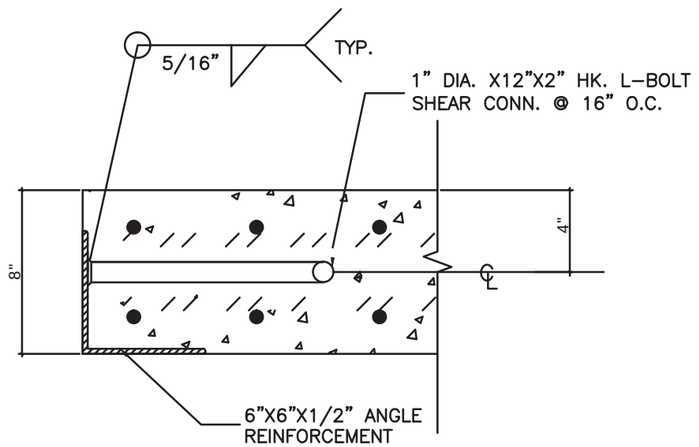
2 PLATES FOR WELDING COLUMNS



3 LIFTING PLATE DETAIL



4 SECTION @ TIE DOWN



5 ANGLE REINFORCEMENT DETAIL

NICK MARK BINGHAM
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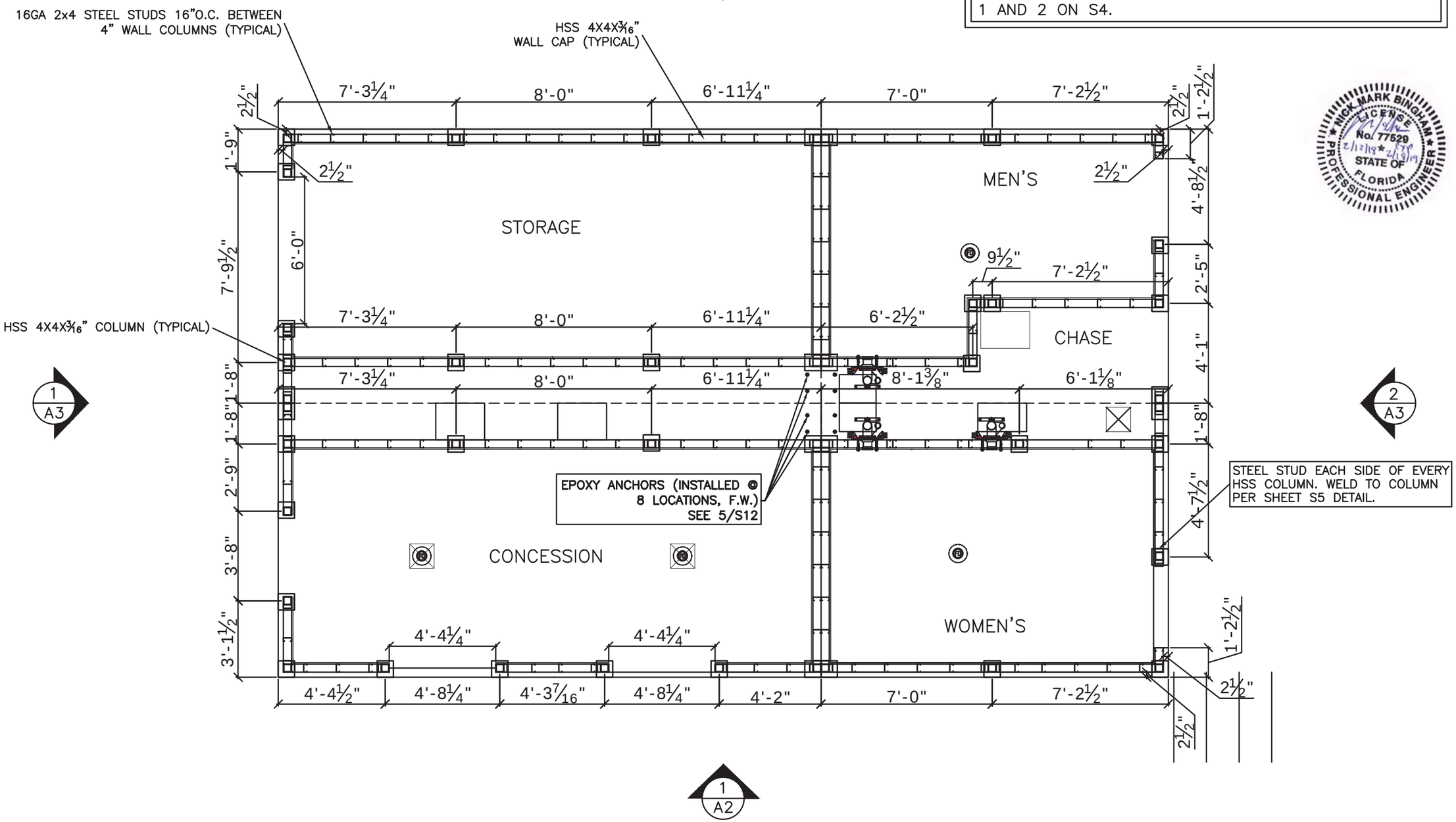
SHEET DESCRIPTION:
DETAILS

SHEET
S9

NOTE:

ALL EXTERIOR SHEATHING TO BE 5/8" APA RATED GROUP 1
SYP PLYWOOD ATTACHED WITH SCREWS PER DETAILS 1 AND 2 ON S4.



1 STRUCTURAL STEEL & LIGHT GAUGE STEEL SIZES

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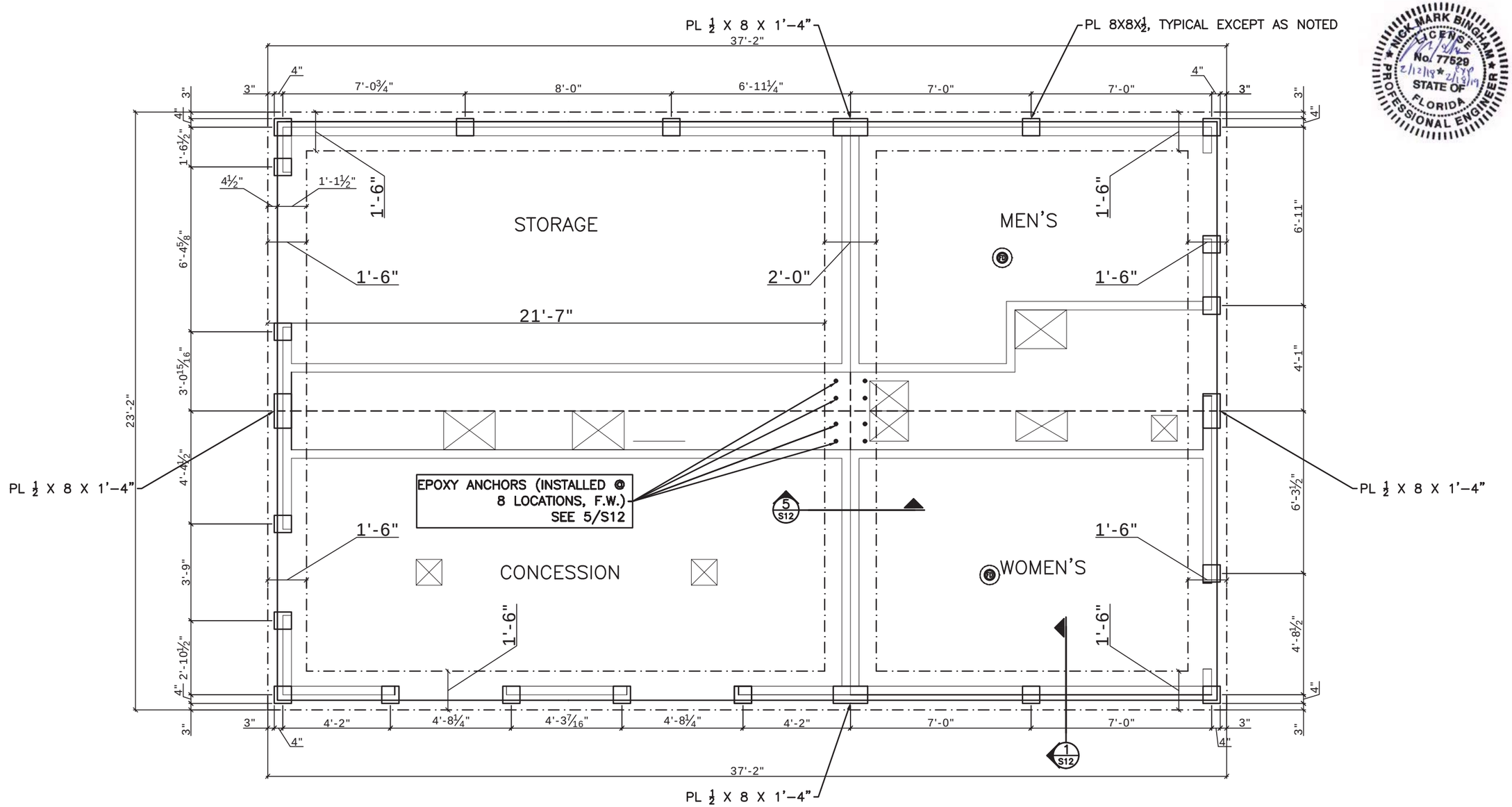
SHEET DESCRIPTION: DETAILS

SHEET S10

NOTE:
FOUNDATION CONSTRUCTION AND SETTING OF EMBEDDED PLATES WILL NOT BE PERFORMED BY RFL AND SHALL BE CONSTRUCTED BY OTHERS.



FOUNDATION FOOTING PLAN

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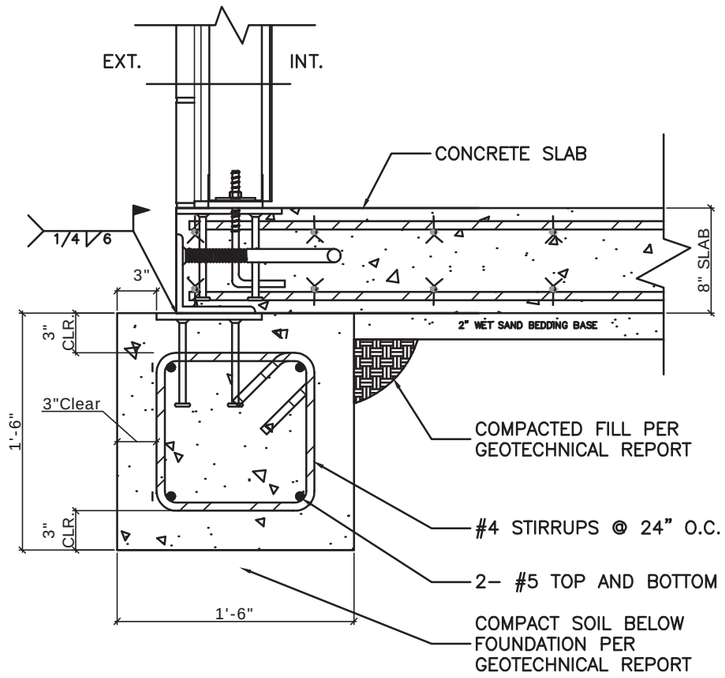
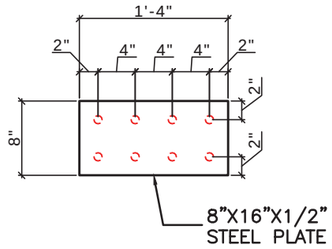
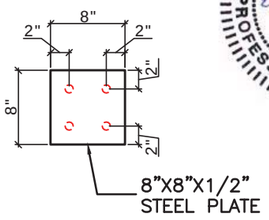
SHEET DESCRIPTION: DETAILS

SHEET
S11

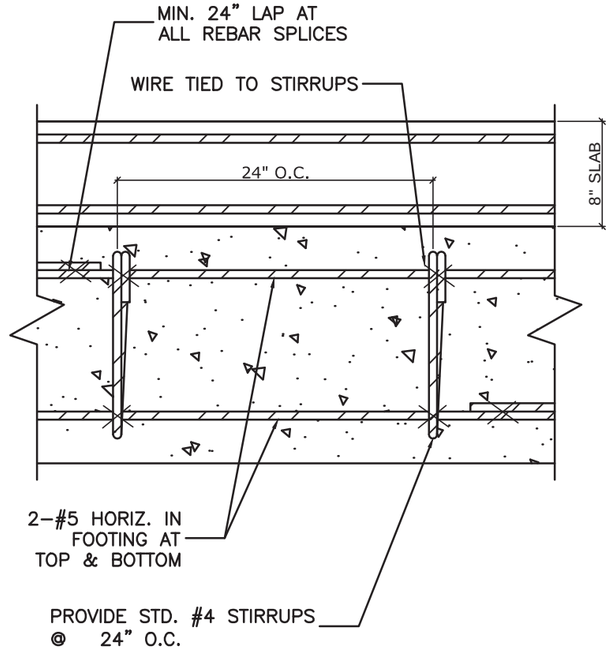


1 SLAB/FOOTING CORNER SECTION

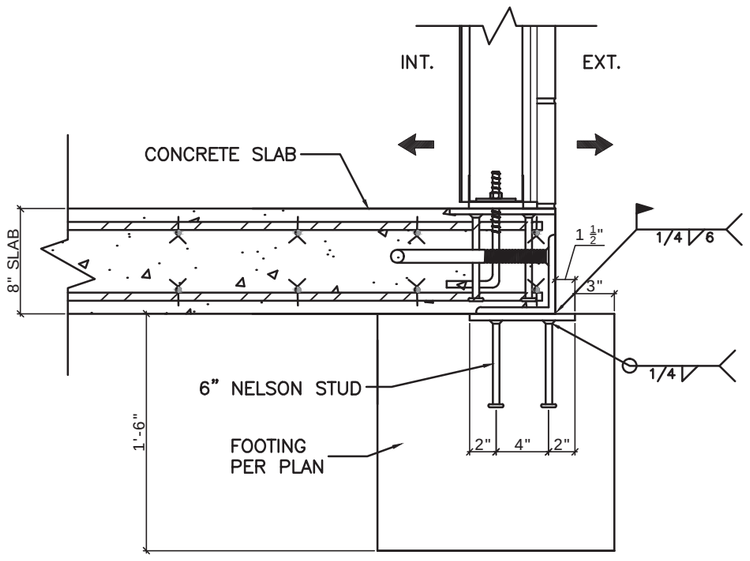




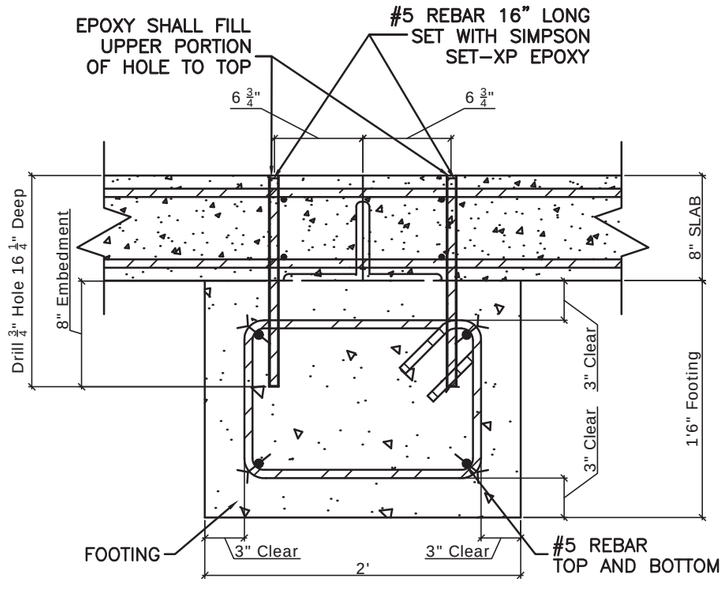
2 PLATE PLAN VIEW



3 FOUNDATION REINFORCING



4 SLAB TO FOOTING CONNECTION



5 SLAB/FOOTING @ CHASE CONNECTION

NOTES:

8X8X1/4" PLATE WELDED TO BOTTOM OF SLAB 6X6X1/4" ANGLE PRIOR TO INSTALLATION. (8X16X1/4" PLATE USED AT MOD LINE)

FOOTING MIX 2500 PSI CONCRETE.

BUILDING SLAB WITH REBAR EDGE BEAMS AROUND FULL PERIMETER OF SLAB.

FOOTING, REBAR AND WIRE TIES BY OTHERS.

FOOTINGS TO BE POURED PRIOR TO BUILDING INSTALLATION.

CONCRETE FOOTING & REINFORCEMENT BY OTHERS.

4" CONCRETE SIDEWALK BY OTHERS.

6 NOTES

RFL Restroom Facilities Limited
1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

RFL MODEL #: S312STCN2

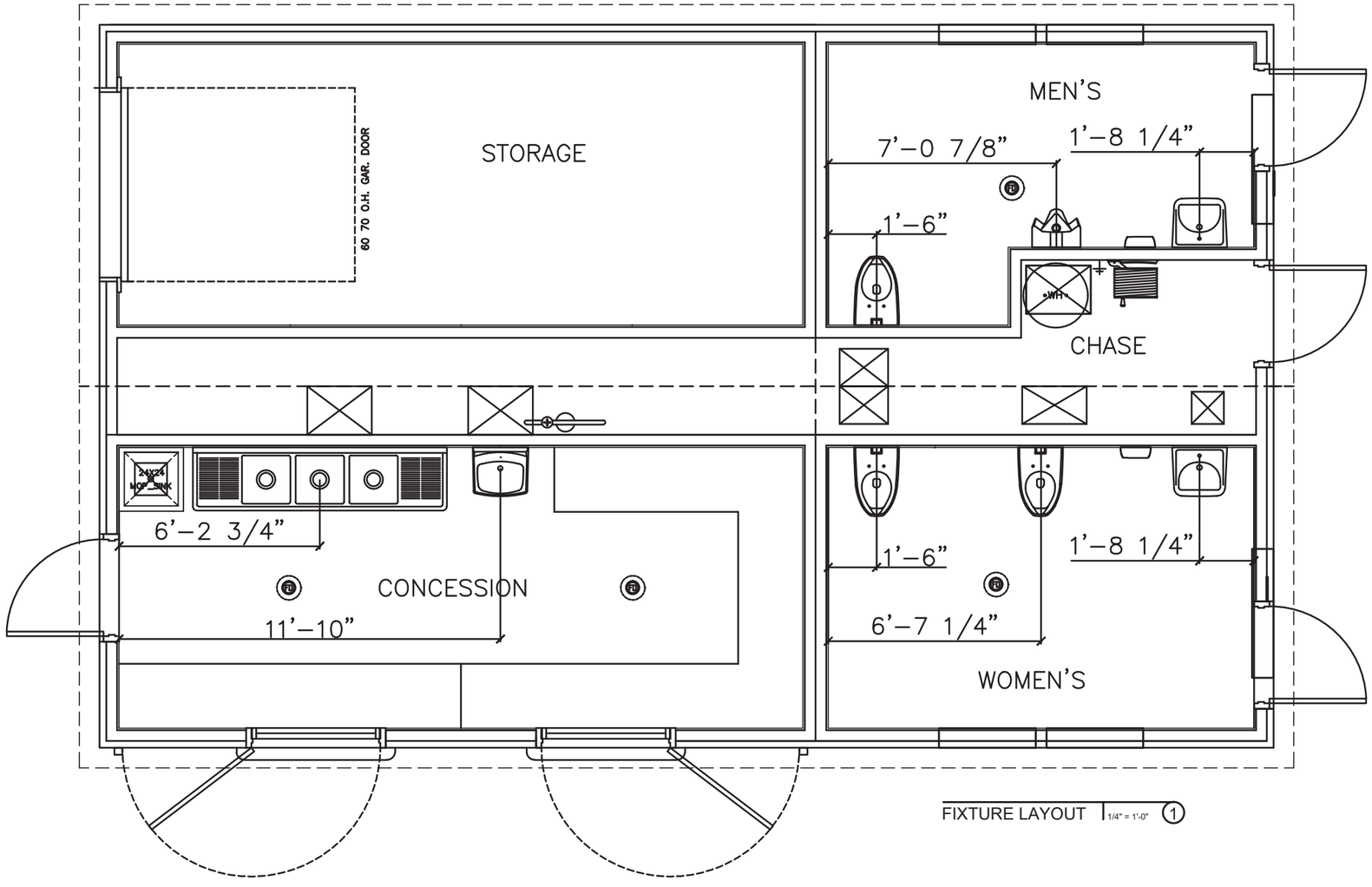
PROJECT: MARGATE SOUTHEAST PARK
MARGATE, FLORIDA, 33063

DRAWN BY:	RS
DATE:	02/12/18
REVISION:	
DATE:	
REVISION:	
DATE:	
REVISION:	
DATE:	
REVISION:	
DATE:	

SHEET DESCRIPTION: DETAILS

SHEET S12

OWNER TO VERIFY UTILITY LOCATION.



FIXTURE LAYOUT 1/4" = 1'-0" ①

PLUMBING PLAN

NOTES:

1. ALL FIELD INSTALLED PLUMBING SHALL BE SUBJECT TO LOCAL JURISDICTION APPROVAL.
2. WATER PRESSURE IS 60 LBS. SET FROM PRESSURE REDUCING VALVE AND MAX. DEVELOPED LENGTH IS 20 FEET.
3. ALL WATER PIPE DRAINS TO BE AT THE LOWEST POINT AND FITTED WITH A HIGH POINT PET COCK FOR SYSTEM DRAINAGE.
4. INSTALL PROTECTIVE SHEATHING OR WRAPPING OVER ALL PIPES, FLOOR DRAINS, ETC. TO PROTECT FROM COMING IN CONTACT W/BLOCK GROUT OR CONCRETE.
5. ONLY TEMPERED WATER IS TO BE SUPPLIED TO LAVS (NO HOT AND COLD)
6. SUPPLY SHUT OFF VALVES TO ALL PLUMBING FIXTURES
7. INCLUDE T/P VALVE WITH WATER HEATER.
8. ALL WATER PIPING SHALL BE INSULATED USING A CONDUCTIVITY VALUE 0.21–0.28.

RFL Restroom Facilities Limited
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512-222-5454

RFL MODEL #: S312STCN2
PROJECT: MARGATE SOUTHEAST PARK
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DRAWN BY: RS
DATE: 02/12/18
REVISION:
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REVISION:
DATE:
REVISION:
DATE:

SHEET DESCRIPTION: PLUMBING PLAN

SHEET
P1

PLUMBING FIXTURE SCHEDULE

MENS	WOMENS	CHASE	OUTSIDE	CONCESSION	QUANTITY TOTAL	FIXTURE	CALLOUT	SERVICE ROUGH-IN				DESCRIPTION
								COLD WATER	HOT WATER	WASTE	VENT	
1	2				3	WATER CLOSET	WC-1 WC-2 WC-3	1"		4"	2"	AMERICAN STANDARD: A2634101020, CCY1.1/1.6 EB BSPUD AFWALL WHITE FLUSH VALVE: ZURN MODEL Z6144-WS1-9L-L3 AQUAFLUSH W/ BUTTON CARRIER: ZURN: Z1204N
1					1	URINAL	U-1	3/4"				KOHLER K-4991-ET-0 FLUSH VALVE: ZURN Z-6195-WS1-9L-L3
1	1				2	LAVATORY	L-1 L-2	1/2"		2"	2"	AMERICAN STANDARD: #A0356421020 VC 20x18 1H WM LUCERN WHITE ; FAUCET: CHICAGO # 333665PSHABCP DECK MOUNT
			1		1	LAVATORY	L-3	1/2"		2"	2"	KOHLER K-2032 HAND WASH SINK FAUCET - CHICAGO 802-665CP
			1		1	MOP SINK	MS-1	1/2"		2"	2"	FLORESTONE MSR2424 MOP SINK FAUCET - KOHLER KINLOCK K-8907
			1		1	STAINLESS SINK	SS-1	1/2"		2"	2"	REGENCY 91" 16-GAUGE, 3 COMPARTMENT SINK WITH 2 DRAINBOARDS - 17"X17"X12" BOWLS FAUCET - ZURN AQUASPEC Z842K1-XL
		1			1	WATER HEATER	WH-1	1/2"				BRADFORD WHITE: RE240L6-1NCWW, 38 GAL., 4500W, 240V, MOUNTED 48" A.F.F. WITH ASSE 1070 APPROVED MIXING VALVE

PLUMBING ROUGH-IN & ACCESSORIES

MENS	WOMENS	CHASE	CONCESSION	STORAGE	QUANTITY TOTAL	FIXTURE	CALLOUT	SERVICE ROUGH-IN				DESCRIPTION
								COLD WATER	HOT WATER	WASTE	VENT	
		1			*1	INT. HOSE BIB	HB-1	3/4"				WOODFORD #24P-3/4" WITH INTEGRAL VACUUM BREAKER W/ W/ COMMERCIAL HOSE REEL AND 50 FT HOSE
		2			*2	PRESSURE GAUGE		1/4"				PASCO 1/4" X160 LB GAUGE
		1			*1	BYPASS VALVE COMBO		1 ½"				PRESSURE REDUCING VALVE: WATTS REGULATOR #25AUB FILTER: AMERICAN PLUMBER # W15-PR,PRESSURE RANGE: 30-90 PSI. FILTER: (RFL-41415) HOUSING: AW15-PR (RFL-41420)
1	1		2		4	FLOOR DRAIN	FD-1 FD-2 FD-3 FD-4			2"	2"	MIFAB F1120 INTEGRAL FLOOR DRAIN
1	1		2		*4	TRAP PRIMER	FD-1 FD-2 FD-3 FD-4	1/2"				TRAP PRIMERS SLOAN SP-50306545
			2		2	CHRISTY BOX						8" ROUND CHRISTY BOX ONE MARKED "WATER" ONE MARKED "SEWER"
			1		1	STOP AND DRAIN VALVE				1 ½"		AT SERVICE HOOK-UP
			1		1	CLEANOUT	CO			4"		AT SERVICE HOOK-UP

* - INSTALLED IN ALL CHASES

PIPE SCHEDULE

TYPE OF SERVICE		PIPE MATERIAL									REMARKS
		TYPE 'L' COPPER	TYPE 'K' COPPER	SCHEDULE 40 CPVC	SCHEDULE 40 PVC	CAST IRON 'NO HUB'	DWV COPPER	VITRIFIED CLAY	SCHEDULE 40 BLACK STEEL	CLASS 200-DR 14	
WATER	ABOVE GROUND	●									
	BELOW GROUND		●								
SANITARY DRAINAGE	ABOVE GROUND				●						
	BELOW GROUND				●						
SANITARY VENT	ABOVE GROUND				●						
	ABOVE ROOF					●					CAPPED, PAINT TO MATCH ROOF
	BELOW GROUND				●						

PLUMBING FIXTURE SCHEDULE

RFL Restroom Facilities Limited
1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

RFL MODEL #: S312STCN2
PROJECT: MARGATE SOUTHEAST PARK
MARGATE, FLORIDA, 33063

DRAWN BY: RS
DATE: 02/12/18
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:

SHEET DESCRIPTION: PLUMBING FIXTURE SCHEDUL

SHEET
P2

GENERAL NOTES:

1. THIS CONTRACTOR SHALL EXECUTE ALL WORK SO THAT IT PROCEEDS WITH A MINIMUM OF INTERFERENCE WITH OTHER TRADES AND NORMAL FUNCTIONING OF EXISTING FACILITIES AND SERVICES.

2. VERIFY EXACT ROUGH–IN AND FINAL EQUIPMENT REQUIREMENTS IN FIELD.

3. THE CONTRACTOR SHALL VERIFY THAT ALL PIPING, AS SHOWN ON THESE DRAWINGS WILL NOT CONFLICT WITH ANY DRAINS, SCUTTLES, JOINTS, VENTS, EQUIPMENT, ETC.

4. THE PLUMBING CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND OTHER TRADES, ALL REQUIRED OPENINGS AND EXCAVATIONS. ALL REQUIRED OPENINGS IN FOUNDATIONS, FLOORS, WALLS, AND ROOFS SHALL BE DESIGNED INTO THE STRUCTURE INITIALLY BY THE USE OF SLEEVES, CURBS, ETC. CUTTING AND PATCHING SHALL BE HELD TO A MINIMUM.

5. ALL ITEMS PROJECTING THROUGH THE ROOF SHALL BE FLASHED A MINIMUM OF 12" ABOVE THE ROOF. ALL VENTS SHALL BE A MINIMUM OF 10' FROM ANY OUTSIDE AIR INTAKE DEVICE.

6. PROVIDE STOPS AND SHOCK ABSORBERS AT EACH FIXTURE OR GROUP OF FIXTURES. CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDENSATE DRAIN PIPING AND FITTINGS. INSULATE ALL CONDENSATE DRAIN PIPING AND FITTINGS WITH 1/2" "ARMAFLEX" PIPE INSULATION.

7. PROVIDE VACUUM BREAKERS AT FIXTURES WITH HOSE THREAD CONNECTIONS AND APPLIANCES WITH DIRECT CONNECTIONS TO DOMESTIC WATER.

8. PROVIDE DI–ELECTRIC UNIONS AT ALL DISSIMILAR METAL PIPE CONNECTIONS.

9. ALL WATER LINES INSTALLED IN EXTERIOR WALLS SHALL BE INSTALLED INSIDE OF WALL INSULATION AND INSULATED INDIVIDUALLY TO PROTECT FROM FREEZING, PIPING AND FITTINGS. INSULATE ALL CONDENSATE DRAIN PIPING AND FITTINGS WITH 1/2" "ARMAFLEX" PIPE INSULA TION.ALL PLUMBING FIXTURES SHALL BE WHITE.

10. PROVIDE APPROVED BACKFLOW PREVENTION AT ALL EQUIPMENT DIRECTLY CONNECTED TO WATER SYSTEM.

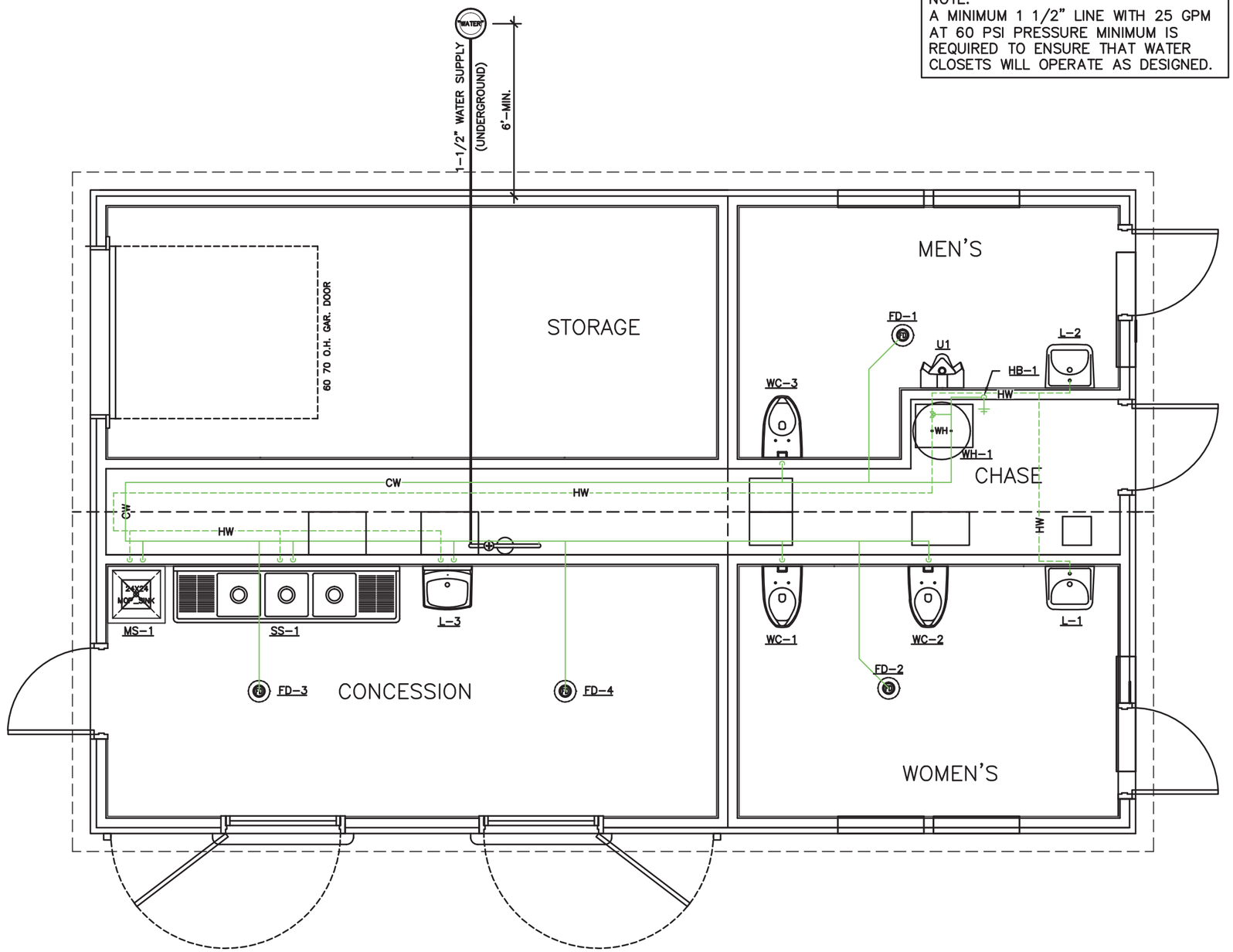
11. PROVIDE A PRESSURE REDUCING VALVE IF THE INCOMING PRESSURE EXCEEDS 80 PSI. IF A PRV IS UTILIZED THEN IT SHALL BE SET TO 80 PSI. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO DETERMINE IF REQUIRED.

12. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL CONNECTIONS TO GAS FIRED EQUIPMENT AND SPECIFIED FIXTURES. ALL GAS FIRED EQUIPMENT AND FIXTURES SHALL BE OPERABLE.

13. PROVIDE ASSE 1070 COMPLIANT TEMPERING VALVE SET AT 110°F TO ALL LAVATORIES.

OWNER TO VERIFY UTILITY LOCATION.

NOTE:
A MINIMUM 1 1/2" LINE WITH 25 GPM AT 60 PSI PRESSURE MINIMUM IS REQUIRED TO ENSURE THAT WATER CLOSETS WILL OPERATE AS DESIGNED.



WATER PLUMBING PLAN

Restroom Facilities Limited

1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

RFL MODEL #: S312STCN2

PROJECT: MARGATE SOUTHEAST PARK
MARGATE, FLORIDA, 33063

DRAWN BY: RS
DATE: 02/12/18
REVISION:
DATE:
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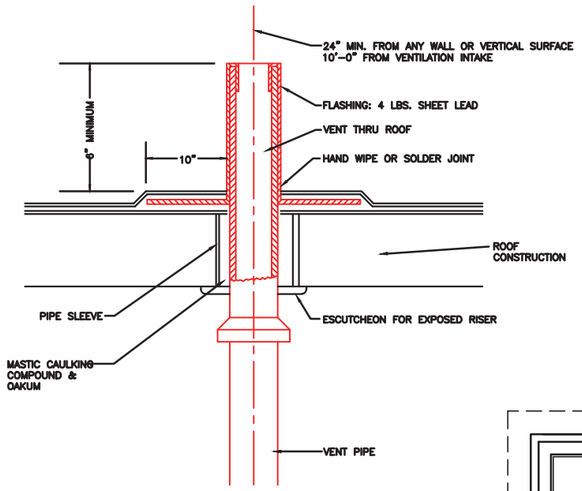
REVISION:
DATE:
REVISION:
DATE:

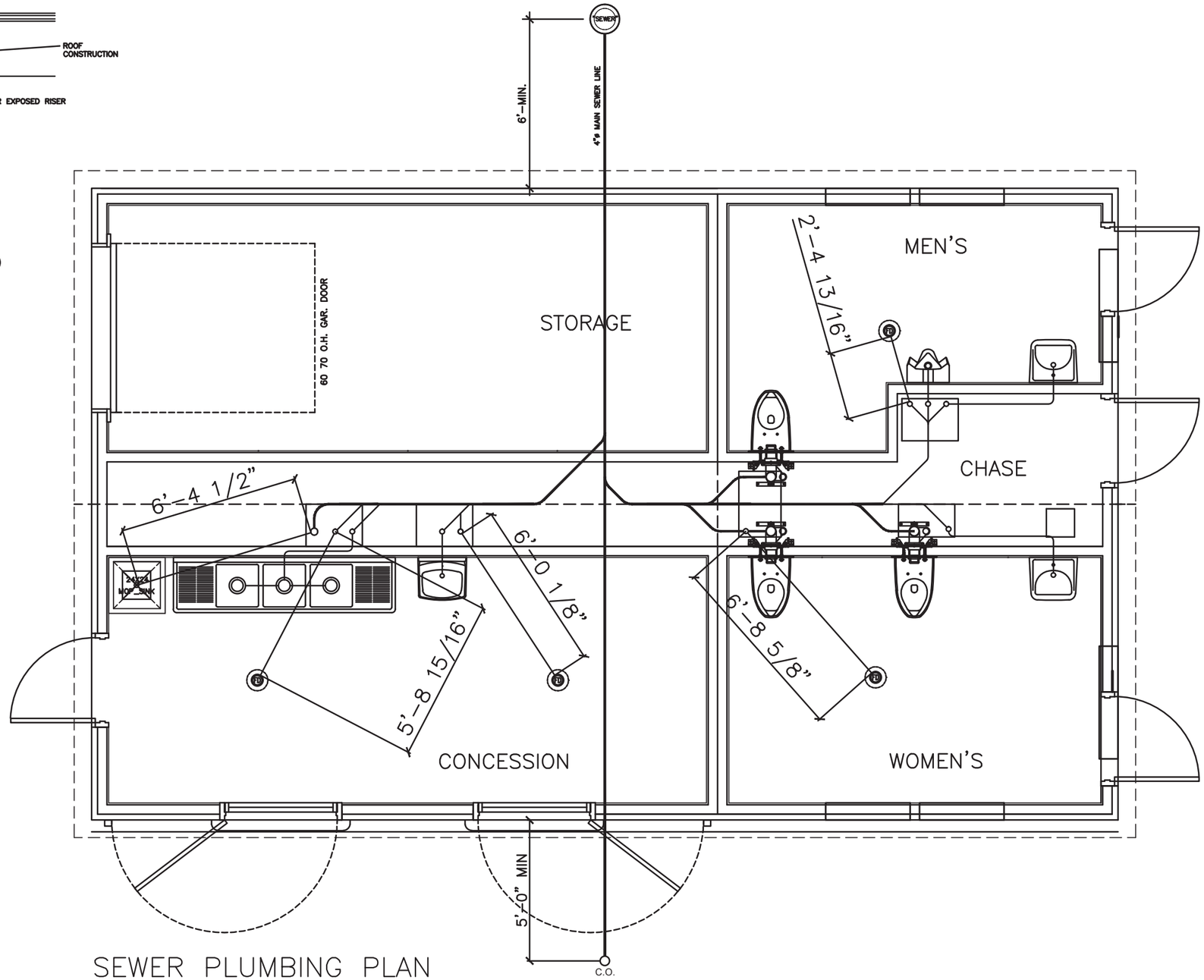
SHEET DESCRIPTION: PLUMBING WATER PLAN

SHEET
P3



VENT THRU ROOF DETAIL NTS ②

OWNER TO VERIFY UTILITY LOCATION.



SEWER PLUMBING PLAN

RFL Restroom Facilities Limited
1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

RFL MODEL #: S312STCN2

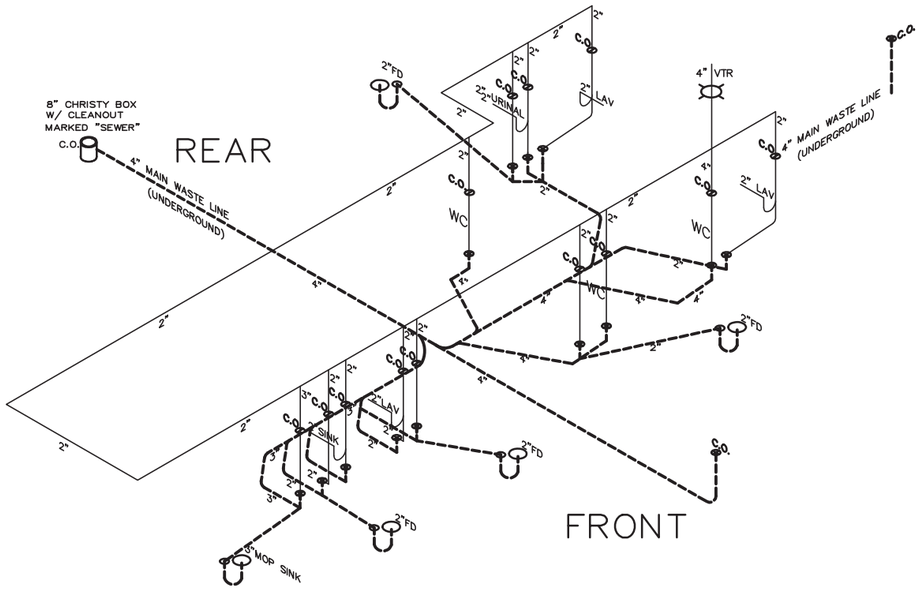
PROJECT: MARGATE SOUTHEAST PARK
MARGATE, FLORIDA, 33063

DRAWN BY:	RS
DATE:	02/12/18
REVISION: DATE:	
REVISION: DATE:	
REVISION: DATE:	
REVISION: DATE:	

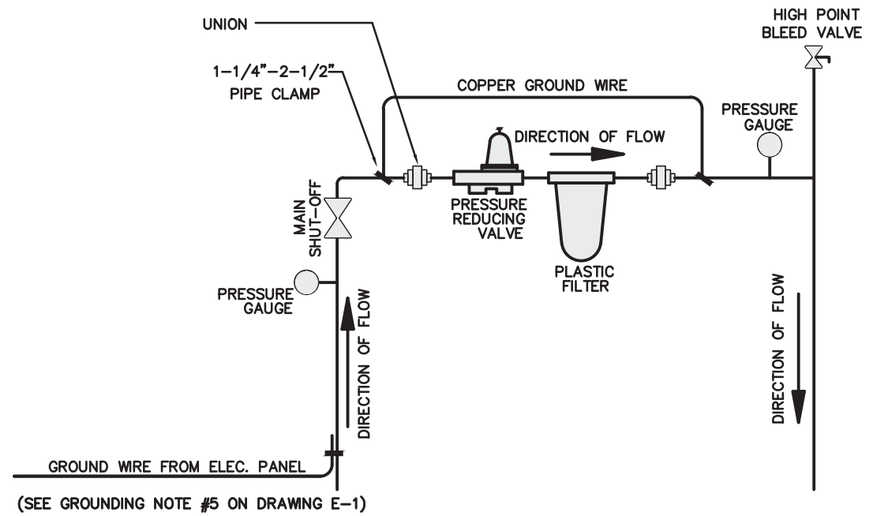
SHEET DESCRIPTION: PLUMBING WASTE PLAN

SHEET P4

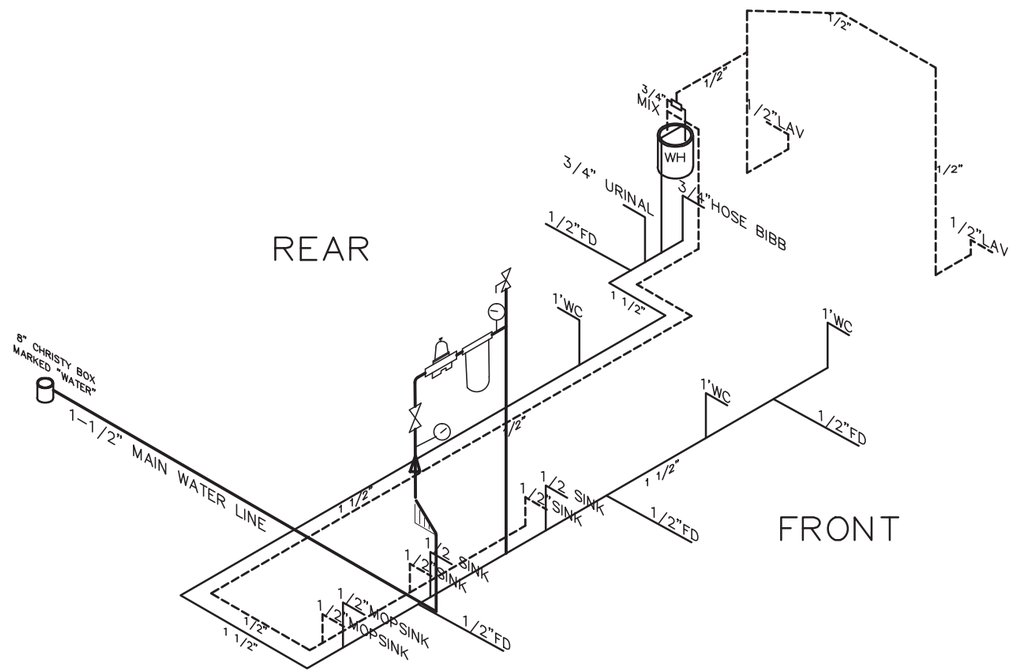
OWNER TO VERIFY UTILITY LOCATION.



1 SEWER ISOMETRIC LAYOUT



VALVE TREE



1 WATER SUPPLY ISOMETRIC LAYOUT

RFL Restroom Facilities Limited

1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

RFL MODEL #: S312STCN2

PROJECT:
MARGATE SOUTHEAST PARK
MARGATE, FLORIDA, 33063

DRAWN BY:	RS
DATE:	02/12/18
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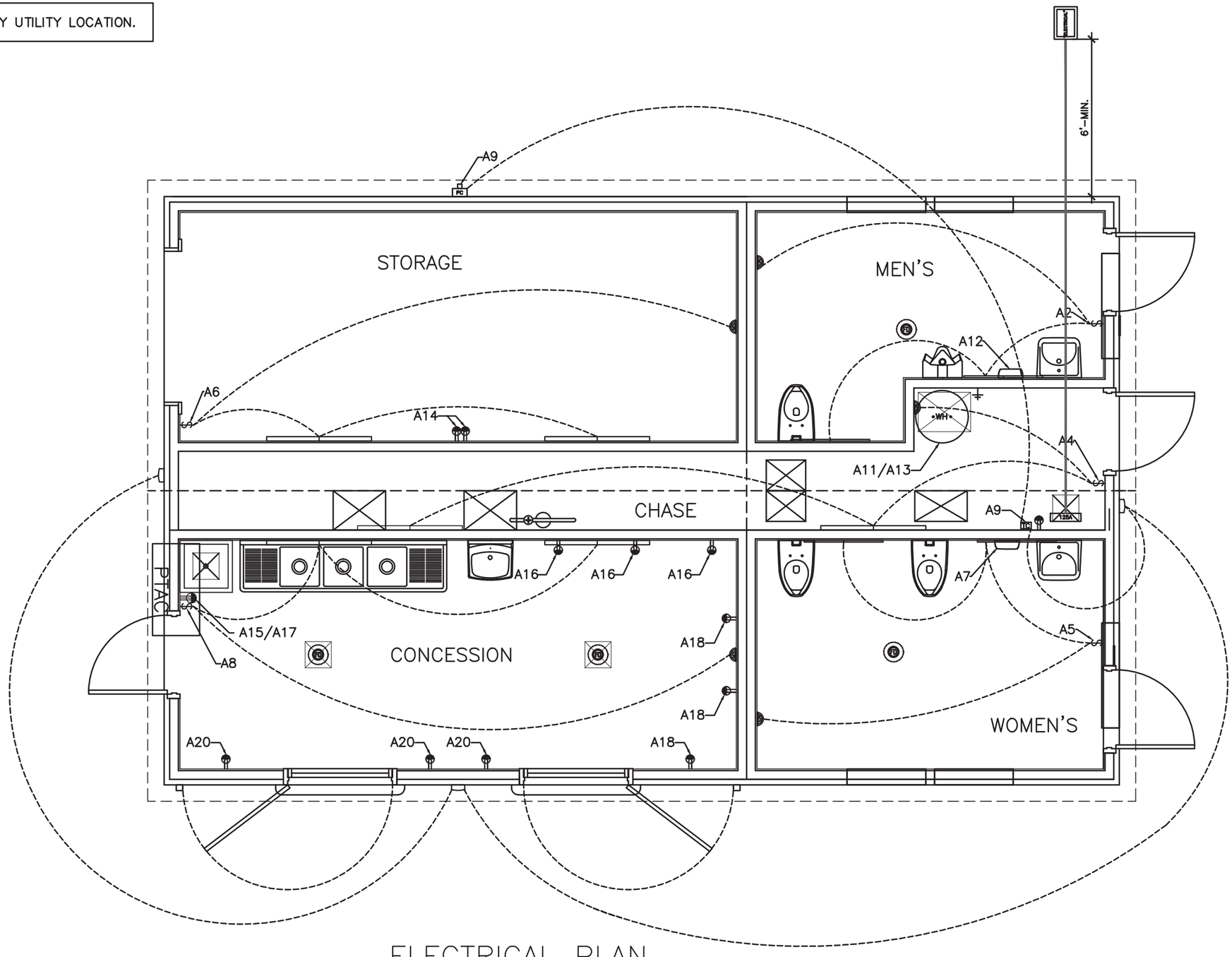
SHEET DESCRIPTION:
ISOMETRIC PLUMBING PLAN

SHEET
P5

OWNER TO VERIFY UTILITY LOCATION.



ELECTRICAL PLAN

RFL Restroom Facilities Limited

1707 COLT CIRCLE
MARBLE FALLS, TX 78654
512-222-5454

RFL MODEL #: S312STCN2

PROJECT: MARGATE SOUTHEAST PARK
MARGATE, FLORIDA, 33063

DRAWN BY:	RS
DATE:	02/12/18
REVISION:	
DATE:	
REVISION:	
DATE:	
REVISION:	
DATE:	
REVISION:	
DATE:	

SHEET DESCRIPTION: ELECTRICAL PLAN

SHEET E1

ELECTRICAL FIXTURE SCHEDULE

MEN	WOMEN	UNISEX	CHASE	CONCESSION	STORAGE	OUTSIDE	QTY	SYM PLAN	DESCRIPTION
			1				1	125A	CUTLER HAMMER CH22B125B 125A,120–240, 1 PHASE, 3–WIRE, 22 POLE, NEMA TYPE 1 LOAD CENTER W/ SNAP IN BREAKERS
			2	9			11		GROUND FAULT INTERRUPTION CIRCUIT RECEPTACLE (INTERIOR) COOPER MODEL # VGF20W
				1			1		COOPER 20A, 250V, 6–20R, SINGLE RECEPTACLE, COMMERCIAL GRADE, SIDE WIRED, WHITE
1	1		1	1	1		5	$	SINGLE POLE SWITCH – COOPER CS122W
			2	2	2		6		LED TUBE LIGHT, SINGLE TUBE 15W (48 IN LONG)
2	2						4		CUSTOM LED LIGHT BARS 17W (36 IN LONG)
							3		RAB BRISK 12, 12W BRONZE
1	1						2		WORLD DRYER SLIMDRI HAND DRYER
					1		1	WH	BRADFORD WHITE: RE240L6–1NCWW, 38 GAL., 4500W, 240V, MOUNTED 48" A.F.F. WITH ASSE 1070 APPROVED MIXING VALVE
1	1						2		SENSOR SWITCH CM–9 STANDARD RANGE 360 DEG. SENSOR
				1			1	PTAC	AMANA PTH123G25AXXX 12,000 BTU 10.7 EER, 3.1 COP 230/208V 1095W, WITH REMOTE THERMOSTAT

NOTES:

1. COMMERCIAL GRADE BREAKERS ARE USED IN THE RESTROOMS. AIC : MAIN BREAKER : 22,000 AMPS. ; AIR BRANCH CIRCUIT BREAKERS : 10,000 AMPS.
2. ALL WIRING SHALL BE STRANDED COPPER IN EMT OR METAL CLAD CABLE INCLUDING TYPE THHN/THWN/MTW.
3. ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL MEET REQUIREMENTS OF U.L. IF APPLICABLE.
4. DRAWING IS SCHEMATIC ONLY AND DOES NOT NECESSARILY SHOW FINAL PHYSICAL LOCATION OF EQUIPMENT.
5. ALL BOXES, SWITCHES, PLATES SHALL BE COMMERCIAL GRADE.
6. PANEL SHALL BE LABELED TO "PANEL DIAGRAM".
7. GENERAL CONTRACTOR TO VERIFY DIRECTION OF UTILITIES.

GROUNDING:

1. PANEL TO INCLUDE UFER GROUND (20' OF #4 BARE COPPER WIRE EMBEDDED IN CONCRETE SLAB) IN PLANT
2. BOND #4 GROUND WIRE TO WATER PIPE WITH APPROVED CLAMP GROUND WIRE TO BE CLAMPED AT THE LOWEST POINT OF PIPE PROTRUDING FROM THE SURFACE (SAND/DIRT).
3. ELECTRICAL GROUND ON WATER PIPING OVER PLASTIC IN–LINE FILTER IS ACHIEVED WITH TWO GROUND CLAMPS AND A #4 COPPER GROUND WIRE.
4. GROUND ROD TO BE NO MORE THEN 12'–0" FROM MAIN DISCONNECT LOCATED ON THE EXTERIOR OF THE BUILDING.

ELECTRICAL FIXTURE SCHEDULE

RFL Restroom Facilities Limited
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MARBLE FALLS, TX 78654
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RFL MODEL #: S312STCN2
PROJECT: MARGATE SOUTHEAST PARK
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DRAWN BY: RS
DATE: 02/12/18
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SHEET DESCRIPTION: ELECTRICAL FIXTURE SCHEDULE

SHEET E2

PANEL: 'A'

				LOAD, VA			CKT	PH	CKT	LOAD, VA						
SERVES		WIRE	AMPS / POLE	LTG	RECEPT.	OTHER				LTG	RECEPT.	OTHER	AMPS / POLE	WIRE		SERVES
MAIN BREAKER			125/2				1	A	2	34			20/1	#12-2 w/ #12G	L	LIGHTS MEN'S
MAIN BREAKER			125/2				3	B	4	30			20/1	#12-2 w/ #12G	L	LIGHTS CHASE
LIGHTS WOMEN'S	L	#12-2 w/ #12G	20/1	34			5	A	6	30			20/1	#12-2 w/ #12G	L	LIGHTS STORAGE
HAND DRYER WOMEN	EQ	#12-2 w/ #12G	20/1			950	7	B	8	30			20/1	#12-2 w/ #12G	L	LIGHTS CONCESSION
EXTERIOR LIGHTS	L	#12-2 w/ #12G	20/1	36			9	A	10		180		20/1	#12-2 w/ #12G	R	GFI RECEPTACLE CHASE
WATER HEATER CHASE	WH	#10-2 w/ #10G	30/2			4500	11	B	12			950	20/1	#12-2 w/ #12G	EQ	HAND DRYER MEN
WATER HEATER CHASE	WH						13	A	14		180		20/1	#12-2 w/ #12G	R	GFI RECEPTACLES STORAGE
PTAC	AC	#12-2 w/ #12G	20/2			1095	15	B	16		180		20/1	#12-2 w/ #12G	R	GFI RECEPTACLES CONCES.
PTAC	AC						17		18		180		20/1	#12-2 w/ #12G	R	GFI RECEPTACLES CONCES.
SPACE							19		20		180		20/1	#12-2 w/ #12G	R	GFI RECEPTACLES CONCES.
SPACE							21		22							SPACE

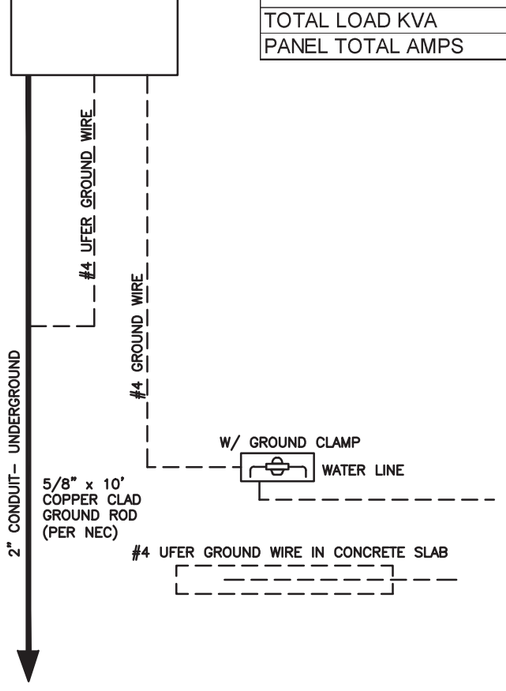
CATEGORY:		CONN. LOAD VA	FACTOR	DESIGN LOAD VA
LIGHTING	L	194	1.25	243
RECEPTICALES	R	0	1	0
MOTORS	MO	0	1	0
MISCELLANEOUS	M	0	1	0
SPARE	HT	0	0.5	0
WATER HEATERS	WH	4500	1	4500
HVAC	AC	1095	1	1095
KITCHEN EQUIPMENT	KT	0	0.65	0
EQUIPMENT	EQ	950	1	950

TOTAL LOAD KVA	6.788
PANEL TOTAL AMPS	29

		NOTES:	
MOUNTING:	SURFACE		
VOLTS:	120/240		2
PHASE / WIRE:	1 / 3		
MAIN SIZE:	125		
MAIN TYPE:	125A MCB		
BUSS TYPE:	COPPER		
A.I.C. (RMS):	10K		
BREAKER TYPE:	SNAP-IN		
NEMA RATING:	1		

FEEDER SIZE:	WIRE QTY	WIRE SIZE	GRD SIZE	CONDUIT SIZE
	3	#1 AWG	#4 AWG	1 1/4" C

REMARKS: PROVIDE COPPER GROUND BAR



ELECTRICAL PANEL

RFL Restroom Facilities Limited
1707 COLT CIRCLE
MARBLE FALLS, TX 78654
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RFL MODEL #: S312STCN2
PROJECT: MARGATE SOUTHEAST PARK
MARGATE, FLORIDA, 33063

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DATE:

SHEET DESCRIPTION: ELECTRICAL PANEL

SHEET
E3

EXHIBIT 5

MARINA PARK GEOTECHNICAL REPORT

REPORT OF
GEOTECHNICAL EXPLORATION

MARINA PARK RESTROOM PROJECT
7044 NW 1ST STREET
MARGATE, FLORIDA

FOR

CITY OF MARGATE PARKS AND RECREATION
COMMUNITY CENTER
6199 NW 10TH STREET
MARGATE, FLORIDA 33063

PREPARED BY

NUTTING ENGINEERS OF FLORIDA, INC.
1310 NEPTUNE DRIVE
BOYNTON BEACH, FLORIDA 33426

ORDER NO. 829.7

DECEMBER 2017

TABLE OF CONTENTS

ATTACHMENTS

- BORING LOCATION PLAN
- TEST BORING REPORTS
- LIMITATIONS OF LIABILITY
- SOIL CLASSIFICATION CRITERIA

Christopher E. Gworek, P.E. #69947
Senior Engineer

CHRISTOPHER E. GWOREK LICENSE 69947 STATE OF FLORIDA PROFESSIONAL ENGINEER

Christopher E. Gworek, P.E. 69947

Digitally signed by Christopher E. Gworek, P.E. 69947
DN: CN="Christopher E. Gworek, P.E. 69947", O="Nutting Engineers of Florida, Inc.", OU=Senior Engineer, E=chrisg@nutting.biz, C=US
Reason: I am the author of this document
Location:
Date: 2018-01-05 16:09:57

9b db d6 df 24 ac aa 5c 62 3a
Serial Number

Nutting Engineers of Florida Inc. | Established 1967

Nutting Engineers of Florida, Inc. 50th ANNIVERSARY 1967 – 2017

Nutting Engineers
of Florida Inc. | Established 1967
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1310 Neptune Drive
Boynton Beach, Florida 33426
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Toll Free: 877-NUTTING (688-8464)
Fax: 561-737-9975
Broward 954-941-8700
St. Lucie 772-408-1050
Miami-Dade 305-557-3083
www.nuttingengineers.com

December 29, 2017

Mr. Michael Jones, Director
City of Margate Parks and Recreation Community Center
6199 NW 10th Street
Margate, Florida 33063
Phone: 954-972-6458 Email: majones@margatefl.com

Subject: Report of Geotechnical Exploration
Marina Park Restroom Project
7044 NW 1st Street
Margate, Florida

Dear Mr. Jones:

Nutting Engineers of Florida, Inc. has performed a Geotechnical Exploration at the above referenced site in Margate, Florida. This work was performed in accordance with our proposal and your written authorization by the City of Margate (PO No. 180530) dated December 20, 2017. This evaluation was performed to develop information regarding subsurface soil conditions at specific test locations which along with proposed construction information provided was used to develop opinions regarding earthwork procedures and foundations for support of the proposed construction. This report presents our findings and recommendations based upon the information examined at the time of this evaluation.

PROJECT INFORMATION

We understand that plans include the construction of a new one-story restroom building east of the existing onsite structure. The building will be one-story and is anticipated to be a pre-fabricated structure with a concrete slab on grade. We were provided an aerial suggesting the location of the planned development. Along with the building new concrete sidewalks will also be constructed.

Based on current site elevations, we estimate that less than one foot of fill may be required to bring the site up to construction grade; however, the final building pad elevation shall be determined by a professional architect, civil engineer, or other qualified party.

NE should be notified in writing by the client of any changes in the proposed construction along with a request to amend our foundation analysis and/or recommendations within this report as appropriate.

GENERAL SUBSURFACE CONDITIONS

Soil Survey Maps

As part of the geotechnical exploration, we have reviewed available Soil Conservation Service (SCS) survey maps for Broward County. These SCS maps provide qualitative information about potential general shallow soil conditions in the project vicinity. This information was derived from approximately 6 ft. deep manual auger borings, aerial photo and surface feature interpretation at some point in the past (mid 1980's to early 1970's). The SCS data may or may not reflect actual current site conditions. As indicated in the Broward County Soil Survey Map the series under exploration is Immokalee fine sand. This series consists of nearly level, poorly drained soil that has a layer of well-coated organic matter at a depth of approximately 30 inches or more. These soils are on broad, low ridges in the eastern part of the survey. Included in this soil mapping are small areas of Basinger, Pompano, and Margate fine sands. We note that the soil survey extends to a depth of six feet.

Subsurface Exploration

NUTTING ENGINEERS OF FLORIDA, INC. performed two Standard Penetration Test (SPT) borings (ASTM D-1586) to depths of fifteen feet below land surface. The locations of the test borings are indicated on the boring location plan presented in the Appendix of this report. The boring locations were identified in the field using approximate methods; namely, a measuring wheel and available surface controls. As such the soil boring locations should be considered to be approximate.

We note that due to the potential for underground utilities at the test boring locations, the upper four feet of the soil profile at the test boring locations were manually cleared. Because of this, the relative density of the upper four feet was not obtained.

Test Boring Results

In general, the test borings recorded a surface layer of grass and topsoil in the upper two to four inches underlain by loose to medium dense brown to light brown sand to a depth of ten feet. Below ten feet, medium hard light tan limestone with some silty sand and limestone fragments were encountered to a depth of fifteen feet, the maximum depth explored. Please see the enclosed soil classification sheet in the Appendix of this report for additional important information regarding these descriptions, the field evaluation and other related information.

Rock Formation Note

Although not necessarily identified in the boring, it is possible that the weathered rock encountered may extend to greater depths and be present in areas other than recorded in the test boring. Generally, rock in the South Florida area may include limestone or sandstone which have irregularities and discontinuities including vertical and horizontal solution features, varying surface and bottom elevations, and varying degrees of hardness. The rock features may also contain intervening sand and other material filled lenses. The standard penetration test boring executed in this evaluation was performed in accordance with the normal standard of care in this area. Despite this, this process may sometimes fail to detect the presence of rock strata by passing through solution features. Solution features can be very common in rock strata in Southeast Florida. Also given the brittle nature of some rock strata, rocks may readily shatter when hit by the split spoon. Despite this, these strata which may not be depicted in the soil boring logs may present significant resistance to excavation.

Groundwater Information

The immediate groundwater level was measured at the test boring locations at the time of the field work. The groundwater level was encountered at an approximate depth of four feet below the existing ground surface at the time of drilling.

The immediate depth to groundwater measurements presented in this report may not provide a reliable indication of stabilized or a more long term depth to groundwater at this site. Water table elevations can vary dramatically with time through rainfall, droughts, storm events, flood control activities, nearby surface water bodies, tidal activity, pumping and many other factors. For these reasons, this immediate depth to water data **should not** be relied upon alone for project design considerations.

ANALYSIS AND RECOMMENDATIONS

The borings performed for this project suggest that the site may be prepared using conventional site preparation and compaction techniques as described herein. Once the site is successfully prepared in accordance with the recommendations presented in this report, the site may be developed with the proposed restroom using a shallow foundation system designed for an allowable soil bearing pressure of 2,500 pounds per square foot. Once plans are finalized for the proposed construction, a copy should be provided to Nutting Engineers for review to determine whether additional details or changes to our recommendations are warranted. All work should be completed in accordance with applicable building codes, other regulations as appropriate, and good standard local practice.

We recommend a minimum width of 16 inches for continuous footings and 30 inches for individual footings, even though the soil bearing pressure may not be fully developed in all cases.

We recommend that the bottom of footings be at least 12 inches below the lowest adjacent finished grade.

Ground Floor Slab Conditions

The proposed ground floor slab may be constructed as a slab on grade following that any deleterious surficial soils are fully removed and replaced with clean backfill. Based on the soil boring information and the project information provided we have calculated that a modulus of subgrade reaction (k-value) of 160 pounds per cubic inch (pci) may be used for the design of the shallow foundation.

Settlement Analysis

We performed a settlement evaluation based upon a hypothetical improved soil profile following completion of the compaction operations using a moderately sized vibratory compactor for the construction. This method should improve the soils to provide an allowable bearing capacity of 2,500 pounds per square foot. It was estimated that upon proper completion, long-term total settlements should be on the order of less than approximately one inch. Differential settlements should be approximately one-half of the total settlement. Distortions that occur along wall footings should not be more than 1 in 500. Most of this settlement should occur upon the application of the dead load during construction.

In order to maintain the calculated settlement throughout the life of the structure it would be necessary to grade the site such that stormwater is directed away from the foundations. Any ponding nearby/adjacent to walls and foundations should be avoided.

Site Preparation

The surficial organic soils, debris from the clearing operations, and any unsuitable soils as determined by the Geotechnical Engineer will need to be completely removed within the construction area and to a lateral distance of at least one to two feet beyond the footprint limits, where practical. A Nutting Engineer's representative should be present to observe that the stripping operations are performed as we have discussed herein.

The stripped surface should then be wetted and compacted with a self propelled vibratory compactor until a density equivalent to at least 98 percent of the modified Proctor maximum dry density (ASTM D-1557) is achieved to a depth of at least 12 inches below the compacted surface.

Structural fill needed to bring the site to construction grade may then be placed in lifts not exceeding 12 inches in loose thickness. Each lift should be thoroughly compacted until densities equivalent to at least 98 percent of the modified Proctor maximum dry density are uniformly

obtained. Fill should consist of granular soil, with less than 10% passing the No. 200 sieve, free of rubble, organics (5% or less) clay, debris and other unsuitable material.

The fill should have ASTM designation (D-2487) of GP, GW, SP, or SW, with a maximum particle size of no more than 3 inches or as otherwise approved by Nutting Engineers.

Following site and building pad construction as discussed above, the foundation area should be excavated and the footings formed.

The bottom of foundation excavations should be compacted after excavation to develop a minimum density requirement of 98 percent of the maximum modified Proctor dry density, for a minimum depth of two (2) feet below the bottom of the footing depth, as determined by field density compaction tests. The floor slab area should also be compacted in the same manner.

GENERAL INFORMATION

Our client for this geotechnical evaluation was:

Mr. Michael Jones, Director
City of Margate Parks and Recreation Community Center
6199 NW 10th Street
Margate, Florida 33063

The contents of this report are for the exclusive use of the client, the client's design & construction team and governmental authorities for this specific project exclusively. Information conveyed in this report shall not be used or relied upon by other parties or for other projects without the expressed written consent of Nutting Engineers of Florida, Inc.

This report discusses geotechnical considerations for this site based upon observed conditions and our understanding of proposed construction for foundation support. Environmental issues including (but not limited to), soil and/or groundwater contamination, and other environmental considerations are beyond our scope of service for this project. As such, this report should not be used or relied upon for evaluation of environmental issues.

If conditions are encountered which are not consistent with the findings presented in this report, or if proposed construction is moved from the location studied, this office shall be notified immediately so that the condition or change can be evaluated and appropriate action taken.

Prior to initiating compaction operations, we recommend that representative samples of the structural fill material to be used and acceptable in-place soils be collected and tested to determine their compaction and classification characteristics. The maximum dry density, optimum moisture content, gradation and plasticity characteristics should be determined. These

tests are needed for compaction quality control of the structural fill and existing soils, and to determine if the fill material is acceptable.

The vibratory compaction equipment may cause vibrations that could be felt by persons within nearby buildings and could potentially induce structural settlements. Additionally, preexisting settlements may exist within these structures that could be construed to have been caused or worsened by the proposed vibratory compaction after the fact. Pre- and post conditions surveys of these structures along with the vibration monitoring during vibratory compaction could be performed to better evaluate this concern. The contractor should exercise due care during the performance of the vibratory compaction work with due consideration of potential impacts on existing structures. If potential vibrations and impacts are not considered tolerable, then alternate foundation modification techniques should be considered.

Nutting Engineers of Florida, Inc. shall bear no liability for the implementation of recommended inspection and testing services as described in this report if implemented by others. Nutting has no ability to verify the completeness, accuracy or proper technique of such procedures if performed by others.

Excavations of five feet or more in depth should be sloped or shored in accordance with OSHA and State of Florida requirements.

The Geotechnical Engineer warrants that the findings, recommendations, specifications, or professional advice contained herein, have been presented after being prepared in accordance with general accepted professional practice in the field of foundation engineering, soil mechanics and engineering geology. No other warranties are implied or expressed.

We appreciate the opportunity to be of service on this project. If we can be of any further assistance, or if you need additional information, please contact us at your convenience.

Sincerely,
NUTTING ENGINEERS OF FLORIDA, INC.

Richard C. Wohlfarth, P.E.
Director of Engineering

1/5/18

Christopher E. Gworek, P.E. #69947
Senior Engineer

Appendix: Boring Location Plan
Test Boring Results
Limitations of Liability
Soil Classification Criteria

NW 1ST ST

ROCK ISLAND RD

STOP BAR

MANHOLE

N

EXISTING FORCE MAIN

STOP BAR

STOP SIGN

EXISTING TRAILER TYPICAL

EXISTING LANDSCAPE

EXISTING LANDSCAPE

EXISTING LANDSCAPE

EXISTING PARKING TYPICAL

IMPROVE LIGHTING THROUGHOUT THE ENTIRE SITE AS PER CODE

NEW ASPHALT MILL OVERLAY, PAVEMENT MARKING & SIGNAGE

NEW LIFT PUMP STATION (VERIFY LOCATION)

NEW WASTE LINE

NEW SIDEWALK

10'+/-

43'+/-

"A"

NEW SIDEWALK

EXISTING ELECTRICAL BOX/PAD

C.O.

CANAL R/W

DN

PROPOSED RESTROOM

23'-8"

EXISTING OPEN PAVILION

DN

EXISTING BOAT LAUNCH RAMP

MEMORIAL

NEW CONCRETE WALKWAY TO BE FLUSH WITH SURROUNDING GRADE

EXISTING BOAT LAUNCH RAMP

63'

EXISTING LANDSCAPE

EXISTING LANDSCAPE

EXISTING LANDSCAPE

37'

EXISTING DECK WALKWAY

"A"

CANAL

DATE

DESCRIPTION

REV.

Reddy Chitepu, P.E.
FL. Registration No. 53835

SEAL

CITY OF MARGATE
BROWARD COUNTY, FLORIDA
MARINA PARK
PROPOSED RESTROOM

APPROVED BY
R.C.

DRAWN BY
J. WEAVER

DATE
1/8/18

SCALE
1" = 20'

PLAN

SHEET NUMBER
1
SHT 1 of 2

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1310 Neptune Drive
Boynton Beach, Fl., 33426
Telephone: 561-736-4900
Fax: 561-737-9975

BORING NUMBER B-1

CLIENT City of Margate Parks & Recreation Comm. Cntr.
PROJECT NUMBER 829.7
PROJECT NAME Marina Park
PROJECT LOCATION 7044 NW 1st Street, Margate, Florida

DATE STARTED 12/29/18 COMPLETED 12/29/18
SURFACE ELEVATION REFERENCE Approx. @ Road Crown
DRILLING METHOD Standard Penetration Boring
GROUND WATER LEVELS:
LOGGED BY T. Lovett CHECKED BY C. Gworek
▽ AT TIME OF DRILLING 4.2 ft
APPROXIMATE LOCATION OF BORING As located on site plan

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	Blows	N-Value	▲ SPT N VALUE ▲ 10 20 30 40 / PL MC LL 20 40 60 80 / □ FINES CONTENT (%) □ 20 40 60 80
0		Gray fine SAND				
		Brown fine SAND	AU 1			
		Lt. brown fine SAND	AU 2			
		▽				
5			SS 3	3-3-4-5	7	▲
			SS 4	1-1-W.O.R.-1	1	▲
			SS 5	1-2-5-10	7	▲
10		Lt. gray fine SAND and SHELL, some limestone	SS 6	10-12-8-17	20	▲
		Lt. gray fine SAND and LIMESTONE	SS 7	10-10-12-16	22	▲
15		Bottom of hole at 15.0 feet.				

TEST NUTTING BOREHOLE 1-829.7 CITY OF MARGATE PARKS & RECREATION COMMUNITY CENTER - MARINA PARK 7044 NW 1ST STREET MARGATE FLORIDA.GPJ GINT US.GDT 1/3/18

Nutting Engineers of Florida Inc. | Established 1967
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1310 Neptune Drive
Boynton Beach, Fl., 33426
Telephone: 561-736-4900
Fax: 561-737-9975

BORING NUMBER B-2

PROJECT NUMBER 829.7

CLIENT City of Margate Parks & Recreation Comm. Cntr.

PROJECT NAME Marina Park

PROJECT LOCATION 7044 NW 1st Street, Margate, Florida

DATE STARTED 12/29/18 COMPLETED 12/29/18

SURFACE ELEVATION REFERENCE Approx. @ Road Crown

DRILLING METHOD Standard Penetration Boring

GROUND WATER LEVELS:

LOGGED BY T. Lovett CHECKED BY C. Gworek

▽ AT TIME OF DRILLING 4.2 ft

APPROXIMATE LOCATION OF BORING As located on site plan

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	Blows	N-Value	▲ SPT N VALUE ▲ 10 20 30 40 / PL MC LL 20 40 60 80 / □ FINES CONTENT (%) □ 20 40 60 80
0		Gray fine SAND				
		Brown fine SAND	AU 1			
			AU 2			
		Lt. brown fine SAND				
		▽				
5			SS 3	5-6-6-5	12	▲
			SS 4	1-1-1-1	2	▲
			SS 5	1-4-8-8	12	▲
10		Lt. gray fine SAND and SHELL, some limestone	SS 6	7-12-12-17	24	▲
		Lt. brown fine SAND and LIMESTONE	SS 7	12-11-14-19	25	▲
15		Bottom of hole at 15.0 feet.				

TEST NUTTING BOREHOLE 1-829.7 CITY OF MARGATE PARKS & RECREATION COMMUNITY CENTER - MARINA PARK 7044 NW 1ST STREET MARGATE FLORIDA.GPJ GINT US.GDT 1/3/18

LIMITATIONS OF LIABLILITY

WARRANTY

We warranty that the services performed by Nutting Engineers of Florida, Inc. are conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession in our area currently practicing under similar conditions at the time our services were performed. ***No other warranties, expressed or implied, are made***. While the services of Nutting Engineers of Florida, Inc. are a valuable and integral part of the design and construction teams, we do not warrant, guarantee or insure the quality, completeness, or satisfactory performance of designs, construction plans, specifications we have not prepared, nor the ultimate performance of building site materials or assembly/construction.

SUBSURFACE EXPLORATION

Subsurface exploration is normally accomplished by test borings; test pits are sometimes employed. The method of determining the boring location and the surface elevation at the boring is noted in the report. This information is represented in the soil boring logs and/or a drawing. The location and elevation of the borings should be considered accurate only to the degree inherent with the method used and may be approximate.

The soil boring log includes sampling information, description of the materials recovered, approximate depths of boundaries between soil and rock strata as encountered and immediate depth to water data. The log represents conditions recorded specifically at the location where and when the boring was made. Site conditions may vary through time as will subsurface conditions. The boundaries between different soil strata as encountered are indicated at specific depths; however, these depths are in fact approximate and dependent upon the frequency of sampling, nature and consistency of the respective strata. Substantial variation between soil borings may commonly exist in subsurface conditions. Water level readings are made at the time and under conditions stated on the boring logs. Water levels change with time, precipitation, canal level, local well drawdown and other factors. Water level data provided on soil boring logs shall not be relied upon for groundwater based design or construction considerations.

LABORATORY AND FIELD TESTS

Tests are performed in *general* accordance with specific ASTM Standards unless otherwise indicated. All criteria included in a given ASTM Standard are not always required and performed. Each test boring report indicates the measurements and data developed at each specific test location.

ANALYSIS AND RECOMMENDATIONS

The geotechnical report is prepared primarily to aid in the design of site work and structural foundations. Although the information in the report is expected to be sufficient for these purposes, it shall not be utilized to determine the cost of construction nor to stand alone as a construction specification. Contractors shall verify subsurface conditions as may be appropriate prior to undertaking subsurface work.

Report recommendations are based primarily on data from test borings made at the locations shown on the test boring reports. Soil variations commonly exist between boring locations. Such variations may not become evident until construction. Test pits sometimes provide valuable supplemental information that derived from soil borings. If variations are then noted, the geotechnical engineer shall be contacted in writing immediately so that field conditions can be examined and recommendations revised if necessary.

The geotechnical report states our understanding as to the location, dimensions and structural features proposed for the site. ***Any significant changes of the site improvements or site conditions must be communicated in writing to the geotechnical engineer immediately*** so that the geotechnical analysis, conclusions, and recommendations can be reviewed and appropriately adjusted as necessary.

CONSTRUCTION OBSERVATION

Construction observation and testing is an important element of geotechnical services. The geotechnical engineer's field representative (G.E.F.R.) is the "owner's representative" observing the work of the contractor, performing tests and reporting data from such tests and observations. ***The geotechnical engineer's field representative does not direct the contractor's construction means, methods, operations or personnel.*** The G.E.F.R. does not interfere with the relationship between the owner and the contractor and, except as an observer, does not become a substitute owner on site. The G.E.F.R. is responsible for his/her safety, but has no responsibility for the safety of other personnel at the site. The G.E.F.R. is an important member of a team whose responsibility is to observe and test the work being done and report to the owner whether that work is being carried out in general conformance with the plans and specifications. The enclosed report may be relied upon solely by the named client.

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SOIL AND ROCK CLASSIFICATION CRITERIA

SAND/SILT

N-VALUE (bpf)	RELATIVE DENSITY
0 – 4	Very Loose
5 – 10	Loose
11 – 29	Medium
30 – 49	Dense
>50	Very dense
100	Refusal

CLAY/SILTY CLAY

N-VALUE (bpf)	UNCONFINED COMP. STRENGTH (tsf)	CONSISTENCY
<2	<0.25	v. Soft
2 – 4	0.25 – 0.50	Soft
5 – 8	0.50 – 1.00	Medium
9 – 15	1.00 – 2.00	Soft
16 – 30	2.00 – 4.00	v. Stiff
>30	>4.00	Hard

ROCK

N-VALUE (bpf)	RELATIVE HARDNESS	ROCK CHARACTERISTICS
N≥100	Hard to v. hard	Local rock formations vary in hardness from soft to very hard within short vertical and horizontal distances and often contain vertical solution holes of 3 to 36 inch diameter to varying depths and horizontal solution features. Rock may be brittle to split spoon impact, but more resistant to excavation.
25≤N≤100	Medium hard to hard	
5≤N≤25	Soft to medium hard	

PARTICLE SIZE

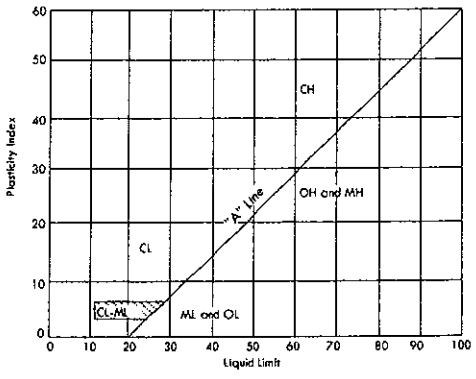
Boulder	>12 in.
Cobble	3 to 12 in.
Gravel	4.76 mm to 3 in.
Sand	0.074 mm to 4.76 mm
Silt	0.005 mm to 0.074 mm
Clay	<0.005 mm

DESCRIPTION MODIFIERS

0 – 5%	Slight trace
6 – 10%	Trace
11 – 20%	Little
21 – 35%	Some
>35%	And

Major Divisions			Group Symbols	Typical names	Laboratory classification criteria
Coarse-grained soils (More than half of material is larger than No. 200 sieve size)	Gravels (More than half of coarse fraction is larger than No. 4 sieve size)	Clean gravels (Little or no fines)	GW	Well-graded gavels, gravel-sand mixtures, little or no fines	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_z = \frac{(D_{30})^2}{D_{10} x D_{60}}$ between 1 and 3
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines	Not meeting all gradation requirements for GW
		Gravels with fines (Appreciable amount of fines)	GW* d / u	Silty gravels, gravel-sand-silt mixtures	Atterberg limits below "A" line or P.I. less than 4 / Atterberg limits above "A" line with P.I. greater than 7 — Above "A" line with P.I. between 4 and 7 are *borderline* cases requiring use of dual symbols.
			GC	Clayey gravels, gravel-sand-clay mixtures	
	Sands (More than half of coarse fraction is smaller than No. 4 sieve size)	Clean sands (Little or no fines)	SW	Well-graded sands, gravelly sands, little or no fines	$C_u = \frac{D_{60}}{D_{10}}$ greater than 6; $C_z = \frac{(D_{30})^2}{D_{10} x D_{60}}$ between 1 and 3
			SP	Poorly graded sands, gravelly sands, little or no fines	Not meeting all gradation requirements for SW
		Sands with fines (Appreciable amount of fines)	SM* d / u	Silty sands, sand-silt mixtures	Atterberg limits below "A" line or P.I. less than 4 / Atterberg limits above "A" line with P.I. more than 7 — Limits plotting in hatched zone with P.I. between 4 and 7 are *borderline* cases requiring use of dual system.
			SC	Clayey sands, sand-clay mixtures	
Fine-grained soils (More than half of material is smaller than No. 200 sieve size)	Silts and clays (Liquid limit less than 50)		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity	
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy, clays, silty clays, lean clays	
			OL	Organic silts and organic silty clays of low plasticity	
	Silts and clays (Liquid limit greater than 50)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	
			CH	Inorganic clays or high plasticity, fat clays	
			OH	Organic clays of medium to high plasticity, organic silts	
	Highly organic soils		PT	Peat and other highly organic soils	

Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:
Less than five percent.....GW, GP, SW, SP
More than 12 percent.....GM, GC, SM, SC
5 to 12 percent.....*Borderline* cases requiring dual systems**



Plasticity Chart

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EXHIBIT 6

SOUTHEAST PARK GEOTECHNICAL REPORT

REPORT OF
GEOTECHNICAL EXPLORATION

SOUTHEAST PARK RESTROOM PROJECT
655 SW 50TH AVENUE
MARGATE, FLORIDA

FOR

CITY OF MARGATE PARKS AND RECREATION
COMMUNITY CENTER
6199 NW 10TH STREET
MARGATE, FLORIDA 33063

PREPARED BY

NUTTING ENGINEERS OF FLORIDA, INC.
1310 NEPTUNE DRIVE
BOYNTON BEACH, FLORIDA 33426

ORDER NO. 829.9

JANUARY 2018

TABLE OF CONTENTS

ATTACHMENTS

- BORING LOCATION PLAN
- TEST BORING REPORTS
- LIMITATIONS OF LIABILITY
- SOIL CLASSIFICATION CRITERIA

1/12/18

Christopher E. Gworek, P.E. #69947
Senior Engineer

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January 12, 2018

Mr. Michael Jones, Director
City of Margate Parks and Recreation Community Center
6199 NW 10th Street
Margate, Florida 33063
Phone: 954-972-6458 Email: majones@margatefl.com

Subject: Report of Geotechnical Exploration
Southeast Park Restroom Project
655 SW 50th Avenue
Margate, Florida

Dear Mr. Jones:

Nutting Engineers of Florida, Inc. has performed a Geotechnical Exploration at the above referenced site in Margate, Florida. This work was performed in accordance with our proposal and your written authorization by the City of Margate (PO No. 180529) dated December 20, 2017. This evaluation was performed to develop information regarding subsurface soil conditions at specific test locations which along with proposed construction information provided was used to develop opinions regarding earthwork procedures and foundations for support of the proposed construction. This report presents our findings and recommendations based upon the information examined at the time of this evaluation.

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We understand that plans include the demolition of the existing building for the construction of a new one-story restroom building east of the existing onsite structure. The building will be one-story and is anticipated to be a pre-fabricated structure with a concrete slab on grade. We were provided an aerial suggesting the location of the planned development. Along with the building new concrete sidewalks will also be constructed.

Based on current site elevations, we estimate that less than one foot of fill may be required to bring the site up to construction grade; however, the final building pad elevation shall be determined by a professional architect, civil engineer, or other qualified party.

NE should be notified in writing by the client of any changes in the proposed construction along with a request to amend our foundation analysis and/or recommendations within this report as appropriate.

GENERAL SUBSURFACE CONDITIONS

Soil Survey Maps

As part of the geotechnical exploration, we have reviewed available Soil Conservation Service (SCS) survey maps for Broward County. These SCS maps provide qualitative information about potential general shallow soil conditions in the project vicinity. This information was derived from approximately 6 ft. deep manual auger borings, aerial photo and surface feature interpretation at some point in the past (mid 1980's to early 1970's). The SCS data may or may not reflect actual current site conditions. A review of the Soil Survey for Broward County revealed that at the time the survey was conducted, the soils at the site were described as Hallandale-Urban land complex. This complex consists of nearly level, poorly drained, Hallandale sand that has been graded and leveled in many places for urban development. Approximately 40 percent of the complex are open land, such as lawns, vacant lots, and undeveloped areas. Sidewalks, streets, parking lots, and buildings cover the remaining 60 percent of the complex. The Hallandale series is underlain by limestone at depths ranging from 7 to 20 inches, but has solution holes as deep as 50 inches or more. We note that the soil surveys were typically penetrated to a depth of approximately six feet.

Subsurface Exploration

NUTTING ENGINEERS OF FLORIDA, INC. performed two Standard Penetration Test (SPT) borings (ASTM D-1586) to depths of fifteen feet below land surface. The locations of the test borings are indicated on the boring location plan presented in the Appendix of this report. The boring locations were identified in the field using approximate methods; namely, a measuring wheel and available surface controls. As such the soil boring locations should be considered to be approximate.

We note that due to the potential for underground utilities at the test boring locations, the upper four feet of the soil profile at the test boring locations were manually cleared. Because of this, the relative density of the upper four feet was not obtained.

Test Boring Results

In general, the test borings recorded a surface layer of gray sand and limestone fragments in the upper one foot underlain by loose to medium dense gray to brown sand to a depth of five feet. From five to eight feet medium hard to soft tan limestone with some sand was encountered. Below eight feet, medium dense to dense brown sand was encountered to a depth of fifteen feet, the maximum depth explored.

Please see the enclosed soil classification sheet in the Appendix of this report for additional important information regarding these descriptions, the field evaluation and other related information.

Rock Formation Note

Although not necessarily identified in the boring, it is possible that the weathered rock encountered may extend to greater depths and be present in areas other than recorded in the test boring. Generally, rock in the South Florida area may include limestone or sandstone which have irregularities and discontinuities including vertical and horizontal solution features, varying surface and bottom elevations, and varying degrees of hardness. The rock features may also contain intervening sand and other material filled lenses. The standard penetration test boring executed in this evaluation was performed in accordance with the normal standard of care in this area. Despite this, this process may sometimes fail to detect the presence of rock strata by passing through solution features. Solution features can be very common in rock strata in Southeast Florida. Also given the brittle nature of some rock strata, rocks may readily shatter when hit by the split spoon. Despite this, these strata which may not be depicted in the soil boring logs may present significant resistance to excavation.

Groundwater Information

The immediate groundwater level was measured at the test boring locations at the time of the field work. The groundwater level was encountered at an approximate depth of six feet below the existing ground surface at the time of drilling.

The immediate depth to groundwater measurements presented in this report may not provide a reliable indication of stabilized or a more long term depth to groundwater at this site. Water table elevations can vary dramatically with time through rainfall, droughts, storm events, flood control activities, nearby surface water bodies, tidal activity, pumping and many other factors. For these reasons, this immediate depth to water data **should not** be relied upon alone for project design considerations.

ANALYSIS AND RECOMMENDATIONS

The borings performed for this project suggest that the site may be prepared using conventional site preparation and compaction techniques as described herein. Once the site is successfully prepared in accordance with the recommendations presented in this report, the site may be developed with the proposed restroom using a shallow foundation system designed for an allowable soil bearing pressure of 2,500 pounds per square foot. Once plans are finalized for the proposed construction, a copy should be provided to Nutting Engineers for review to determine whether additional details or changes to our recommendations are warranted. All work should be completed in accordance with applicable building codes, other regulations as appropriate, and good standard local practice.

We recommend a minimum width of 16 inches for continuous footings and 30 inches for individual footings, even though the soil bearing pressure may not be fully developed in all cases. We recommend that the bottom of footings be at least 12 inches below the lowest adjacent finished grade.

Ground Floor Slab Conditions

The proposed ground floor slab may be constructed as a slab on grade following that any deleterious surficial soils are fully removed and replaced with clean backfill. Based on the soil boring information and the project information provided we have calculated that a modulus of subgrade reaction (k-value) of 180 pounds per cubic inch (pci) may be used for the design of the shallow foundation.

Settlement Analysis

We performed a settlement evaluation based upon a hypothetical improved soil profile following completion of the compaction operations using a moderately sized vibratory compactor for the construction. This method should improve the soils to provide an allowable bearing capacity of 2,500 pounds per square foot. It was estimated that upon proper completion, long-term total settlements should be on the order of less than approximately one inch. Differential settlements should be approximately one-half of the total settlement. Distortions that occur along wall footings should not be more than 1 in 500. Most of this settlement should occur upon the application of the dead load during construction.

In order to maintain the calculated settlement throughout the life of the structure it would be necessary to grade the site such that stormwater is directed away from the foundations. Any ponding nearby/adjacent to walls and foundations should be avoided.

Site Preparation

The surficial organic soils, debris from the clearing operations, and any unsuitable soils as determined by the Geotechnical Engineer will need to be completely removed within the construction area and to a lateral distance of at least one to two feet beyond the footprint limits, where practical. A Nutting Engineer's representative should be present to observe that the stripping operations are performed as we have discussed herein.

The stripped surface should then be wetted and compacted with a self propelled vibratory compactor until a density equivalent to at least 98 percent of the modified Proctor maximum dry density (ASTM D-1557) is achieved to a depth of at least 12 inches below the compacted surface.

Structural fill needed to bring the site to construction grade may then be placed in lifts not exceeding 12 inches in loose thickness. Each lift should be thoroughly compacted until densities equivalent to at least 98 percent of the modified Proctor maximum dry density are uniformly obtained. Fill should consist of granular soil, with less than 10% passing the No. 200 sieve, free of rubble, organics (5% or less) clay, debris and other unsuitable material.

The fill should have ASTM designation (D-2487) of GP, GW, SP, or SW, with a maximum particle size of no more than 3 inches or as otherwise approved by Nutting Engineers.

Following site and building pad construction as discussed above, the foundation area should be excavated and the footings formed.

The bottom of foundation excavations should be compacted after excavation to develop a minimum density requirement of 98 percent of the maximum modified Proctor dry density, for a minimum depth of one foot below the bottom of the footing depth, as determined by field density compaction tests. The floor slab area should also be compacted in the same manner.

GENERAL INFORMATION

Our client for this geotechnical evaluation was:

Mr. Michael Jones, Director
City of Margate Parks and Recreation Community Center
6199 NW 10th Street
Margate, Florida 33063

The contents of this report are for the exclusive use of the client, the client's design & construction team and governmental authorities for this specific project exclusively. Information conveyed in this report shall not be used or relied upon by other parties or for other projects without the expressed written consent of Nutting Engineers of Florida, Inc. This report discusses geotechnical considerations for this site based upon observed conditions and our understanding of proposed construction for foundation support. Environmental issues including (but not limited to), soil and/or groundwater contamination, and other environmental considerations are beyond our scope of service for this project. As such, this report should not be used or relied upon for evaluation of environmental issues.

If conditions are encountered which are not consistent with the findings presented in this report, or if proposed construction is moved from the location studied, this office shall be notified immediately so that the condition or change can be evaluated and appropriate action taken.

Prior to initiating compaction operations, we recommend that representative samples of the structural fill material to be used and acceptable in-place soils be collected and tested to determine their compaction and classification characteristics.

The maximum dry density, optimum moisture content, gradation and plasticity characteristics should be determined. These tests are needed for compaction quality control of the structural fill and existing soils, and to determine if the fill material is acceptable.

The vibratory compaction equipment may cause vibrations that could be felt by persons within nearby buildings and could potentially induce structural settlements. Additionally, preexisting settlements may exist within these structures that could be construed to have been caused or worsened by the proposed vibratory compaction after the fact. Pre- and post conditions surveys of these structures along with the vibration monitoring during vibratory compaction could be performed to better evaluate this concern. The contractor should exercise due care during the performance of the vibratory compaction work with due consideration of potential impacts on existing structures. If potential vibrations and impacts are not considered tolerable, then alternate foundation modification techniques should be considered.

Nutting Engineers of Florida, Inc. shall bear no liability for the implementation of recommended inspection and testing services as described in this report if implemented by others. Nutting has no ability to verify the completeness, accuracy or proper technique of such procedures if performed by others.

Excavations of five feet or more in depth should be sloped or shored in accordance with OSHA and State of Florida requirements.

The Geotechnical Engineer warrants that the findings, recommendations, specifications, or professional advice contained herein, have been presented after being prepared in accordance with general accepted professional practice in the field of foundation engineering, soil mechanics and engineering geology. No other warranties are implied or expressed.

We appreciate the opportunity to be of service on this project. If we can be of any further assistance, or if you need additional information, please contact us at your convenience.

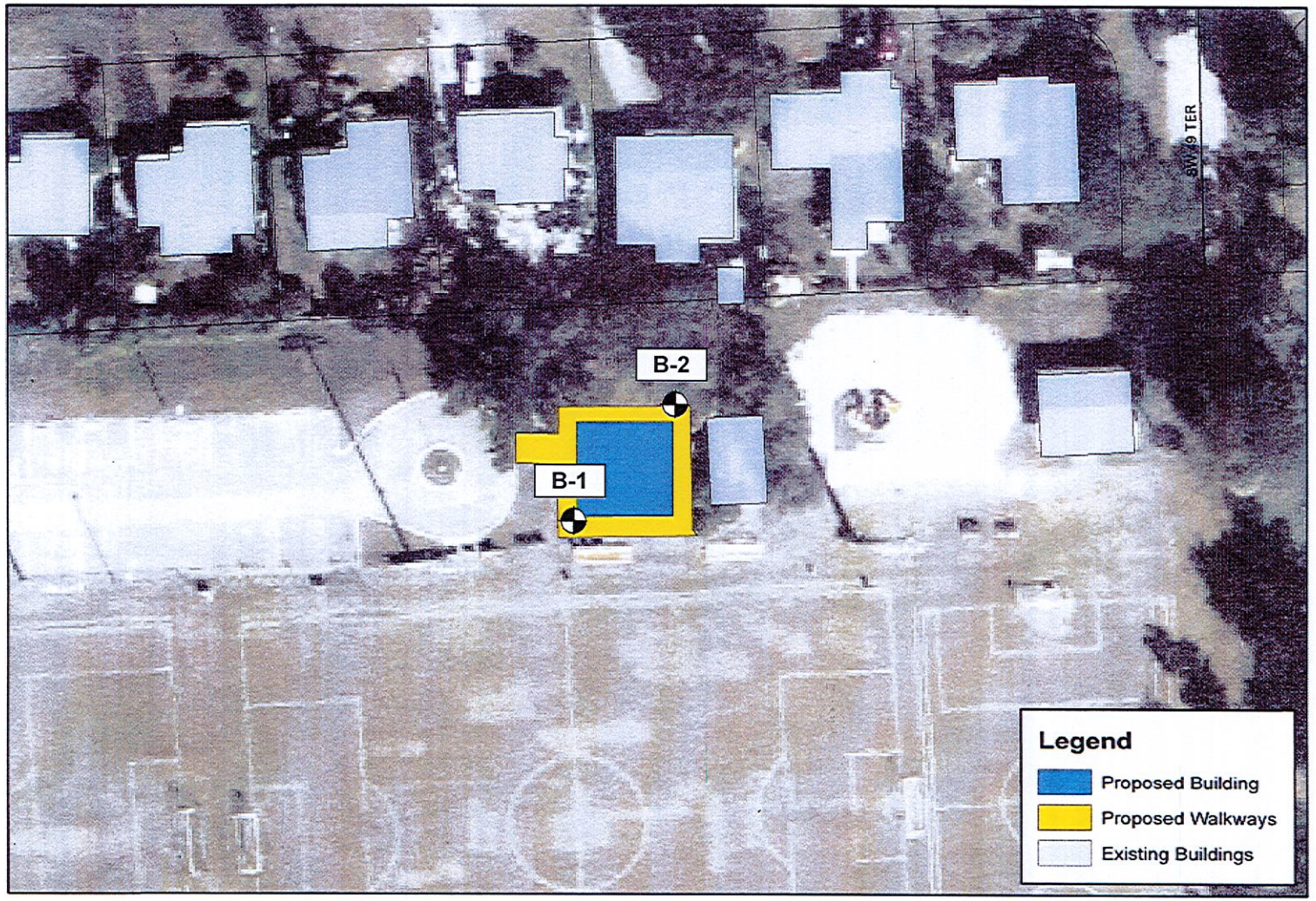
Sincerely,
NUTTING ENGINEERS OF FLORIDA, INC.

Richard C. Wohlfarth, P.E.
Director of Engineering

11/12/18

Christopher E. Gworek, P.E. #69947
Senior Engineer

Appendix: Boring Location Plan
Test Boring Results
Limitations of Liability
Soil Classification Criteria



- LEGEND -

APPROX. TEST LOCATION

NUTTING ENGINEERS
OF FLORIDA, INC.
ESTABLISHED 1967

City of Margate Parks & Recreation
Southeast Park—Proposed Restroom Building
655 SW 50th Avenue
Margate, Florida
PROJECT NO. 829.9

APPROXIMATE TEST LOCATION PLAN

GEOTECHNICAL EXPLORATION
— Not to Scale —

FIG. 1

Nutting Engineers
of Florida Inc. | Established 1967
Your Project Is Our Commitment

1310 Neptune Drive
Boynton Beach, Fl., 33426
Telephone: 561-736-4900
Fax: 561-737-9975

BORING NUMBER B-1

PROJECT NUMBER 829.9

CLIENT City of Margate Parks and Recreation Community Center PROJECT NAME Southeast Park - Proposed Bathroom Building

PROJECT LOCATION 655 SW 50th Avenue, Margate, Florida

DATE STARTED 1/5/18 COMPLETED 1/5/18 SURFACE ELEVATION REFERENCE Approx. @ Road Crown

DRILLING METHOD Standard Penetration Boring GROUND WATER LEVELS:

LOGGED BY T. Lovett CHECKED BY C. Gworek ▽ AT TIME OF DRILLING 6.3 ft

APPROXIMATE LOCATION OF BORING As located on site plan

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	Blows	N-Value
0		Gray fine SAND, some limestone fragments	AU 1		
		Gray fine SAND	AU 2		
5		Lt. brown LIMESTONE, some sand ▽	SS 3	6-9-9-6	18
			SS 4	3-3-6-7	9
		Lt. brown fine SAND	SS 5	6-9-10-15	19
10			SS 6	11-14-16-18	30
			SS 7	11-13-14-19	27
15		Bottom of hole at 15.0 feet.			

▲ SPT N VALUE ▲
10 20 30 40
PL MC LL
20 40 60 80
□ FINES CONTENT (%) □
20 40 60 80

TEST NUTTING BOREHOLE 1-829.9 CITY OF MARGATE PARKS & RECREATION - SOUTHEAST PARK NEW BATHROOM BUILDING.GPJ GINT US.GDT 1/11/18

Disclaimer Nutting Engineers of Florida, Inc. accepts no liability for the consequences of the independent interpretation of drilling logs by others.

Nutting Engineers
of Florida Inc. | Established 1967
Your Project Is Our Commitment

1310 Neptune Drive
Boynton Beach, Fl., 33426
Telephone: 561-736-4900
Fax: 561-737-9975

BORING NUMBER B-2

PROJECT NUMBER 829.9

CLIENT City of Margate Parks and Recreation Community Center PROJECT NAME Southeast Park - Proposed Bathroom Building

PROJECT LOCATION 655 SW 50th Avenue, Margate, Florida

DATE STARTED 1/5/18 COMPLETED 1/5/18 SURFACE ELEVATION REFERENCE Approx. @ Road Crown

DRILLING METHOD Standard Penetration Boring GROUND WATER LEVELS:

LOGGED BY T. Lovett CHECKED BY C. Gworek ▽ AT TIME OF DRILLING 6.3 ft

APPROXIMATE LOCATION OF BORING As located on site plan

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	Blows	N-Value
0		Gray fine SAND and LIMESTONE fragments	AU 1		
		Brown fine SAND	AU 2		
5		Tan LIMESTONE, some sand	SS 3	7-10-8-6	18
	▽		SS 4	4-3-5-6	8
		Lt. brown fine SAND	SS 5	6-10-10-13	20
10			SS 6	12-15-15-16	30
15			SS 7	10-14-15-17	29
		Bottom of hole at 15.0 feet.			

▲ SPT N VALUE ▲
10 20 30 40
PL MC LL
20 40 60 80
□ FINES CONTENT (%) □
20 40 60 80

TEST NUTTING BOREHOLE 1-829.9 CITY OF MARGATE PARKS & RECREATION - SOUTHEAST PARK NEW BATHROOM BUILDING.GPJ GINT US.GDT 1/11/18

LIMITATIONS OF LIABLILITY

WARRANTY

We warranty that the services performed by Nutting Engineers of Florida, Inc. are conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession in our area currently practicing under similar conditions at the time our services were performed. ***No other warranties, expressed or implied, are made.*** While the services of Nutting Engineers of Florida, Inc. are a valuable and integral part of the design and construction teams, we do not warrant, guarantee or insure the quality, completeness, or satisfactory performance of designs, construction plans, specifications we have not prepared, nor the ultimate performance of building site materials or assembly/construction.

SUBSURFACE EXPLORATION

Subsurface exploration is normally accomplished by test borings; test pits are sometimes employed. The method of determining the boring location and the surface elevation at the boring is noted in the report. This information is represented in the soil boring logs and/or a drawing. The location and elevation of the borings should be considered accurate only to the degree inherent with the method used and may be approximate.

The soil boring log includes sampling information, description of the materials recovered, approximate depths of boundaries between soil and rock strata as encountered and immediate depth to water data. The log represents conditions recorded specifically at the location where and when the boring was made. Site conditions may vary through time as will subsurface conditions. The boundaries between different soil strata as encountered are indicated at specific depths; however, these depths are in fact approximate and dependent upon the frequency of sampling, nature and consistency of the respective strata. Substantial variation between soil borings may commonly exist in subsurface conditions. Water level readings are made at the time and under conditions stated on the boring logs. Water levels change with time, precipitation, canal level, local well drawdown and other factors. Water level data provided on soil boring logs shall not be relied upon for groundwater based design or construction considerations.

LABORATORY AND FIELD TESTS

Tests are performed in *general* accordance with specific ASTM Standards unless otherwise indicated. All criteria included in a given ASTM Standard are not always required and performed. Each test boring report indicates the measurements and data developed at each specific test location.

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ANALYSIS AND RECOMMENDATIONS

The geotechnical report is prepared primarily to aid in the design of site work and structural foundations. Although the information in the report is expected to be sufficient for these purposes, it shall not be utilized to determine the cost of construction nor to stand alone as a construction specification. Contractors shall verify subsurface conditions as may be appropriate prior to undertaking subsurface work.

Report recommendations are based primarily on data from test borings made at the locations shown on the test boring reports. Soil variations commonly exist between boring locations. Such variations may not become evident until construction. Test pits sometimes provide valuable supplemental information that derived from soil borings. If variations are then noted, the geotechnical engineer shall be contacted in writing immediately so that field conditions can be examined and recommendations revised if necessary.

The geotechnical report states our understanding as to the location, dimensions and structural features proposed for the site. ***Any significant changes of the site improvements or site conditions must be communicated in writing to the geotechnical engineer immediately*** so that the geotechnical analysis, conclusions, and recommendations can be reviewed and appropriately adjusted as necessary.

CONSTRUCTION OBSERVATION

Construction observation and testing is an important element of geotechnical services. The geotechnical engineer's field representative (G.E.F.R.) is the "owner's representative" observing the work of the contractor, performing tests and reporting data from such tests and observations. ***The geotechnical engineer's field representative does not direct the contractor's construction means, methods, operations or personnel.*** The G.E.F.R. does not interfere with the relationship between the owner and the contractor and, except as an observer, does not become a substitute owner on site. The G.E.F.R. is responsible for his/her safety, but has no responsibility for the safety of other personnel at the site. The G.E.F.R. is an important member of a team whose responsibility is to observe and test the work being done and report to the owner whether that work is being carried out in general conformance with the plans and specifications. The enclosed report may be relied upon solely by the named client.

SAND/SILT

N-VALUE (bpf)	RELATIVE DENSITY
0 – 4	Very Loose
5 – 10	Loose
11 – 29	Medium
30 – 49	Dense
>50	Very dense
100	Refusal

CLAY/SILTY CLAY

N-VALUE (bpf)	UNCONFINED COMP. STRENGTH (tsf)	CONSISTENCY
<2	<0.25	v. Soft
2 – 4	0.25 – 0.50	Soft
5 – 8	0.50 – 1.00	Medium
9 – 15	1.00 – 2.00	Soft
16 – 30	2.00 – 4.00	v. Stiff
>30	>4.00	Hard

ROCK

N-VALUE (bpf)	RELATIVE HARDNESS	ROCK CHARACTERISTICS
N≥ 100	Hard to v. hard	Local rock formations vary in hardness from soft to very hard within short vertical and horizontal distances and often contain vertical solution holes of 3 to 36 inch diameter to varying depths and horizontal solution features. Rock may be brittle to split spoon impact, but more resistant to excavation.
25≤ N ≤ 100	Medium hard to hard	
5≤ N ≤ 25	Soft to medium hard	

PARTICLE SIZE

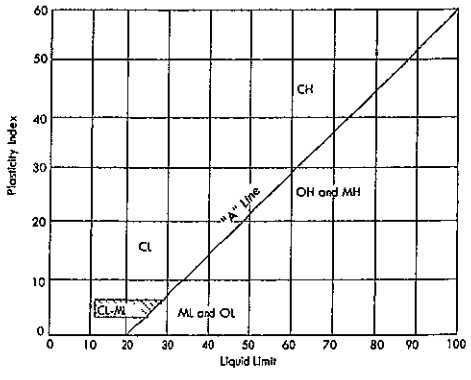
Boulder	>12 in.
Cobble	3 to 12 in.
Gravel	4.76 mm to 3 in.
Sand	0.074 mm to 4.76 mm
Silt	0.005 mm to 0.074 mm
Clay	<0.005 mm

DESCRIPTION MODIFIERS

0 – 5%	Slight trace
6 – 10%	Trace
11 – 20%	Little
21 – 35%	Some
>35%	And

Major Divisions			Group Symbols	Typical names	Laboratory classification criteria
Coarse-grained soils (More than half of material is larger than No. 200 sieve size)	Gravels (More than half of coarse fraction is larger than No. 4 sieve size)	Clean gravels (Little or no fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_z = \frac{(D_{30})^2}{D_{10} x D_{60}}$ between 1 and 3
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines	Not meeting all gradation requirements for GW
		Gravels with fines (Appreciable amount of fines)	GW* d / u	Silty gravels, gravel-sand-silt mixtures	Atterberg limits below "A" line or P.I. less than 4 / Above "A" line with P.I. between 4 and 7 are *borderline* cases requiring use of dual symbols.
			GC	Clayey gravels, gravel-sand-clay mixtures	Atterberg limits above "A" line with P.I. greater than 7
	Sands (More than half of coarse fraction is smaller than No. 4 sieve size)	Clean sands (Little or no fines)	SW	Well-graded sands, gravelly sands, little or no fines	$C_u = \frac{D_{60}}{D_{10}}$ greater than 6; $C_z = \frac{(D_{30})^2}{D_{10} x D_{60}}$ between 1 and 3
			SP	Poorly graded sands, gravelly sands, little or no fines	Not meeting all gradation requirements for SW
		Sands with fines (Appreciable amount of fines)	SM* d / u	Silty sands, sand-silt mixtures	Atterberg limits below "A" line or P.I. less than 4 / Limits plotting in hatched zone with P.I. between 4 and 7 are *borderline* cases requiring use of dual system.
			SC	Clayey sands, sand-clay mixtures	Atterberg limits above "A" line with P.I. more than 7
Fine-grained soils (More than half of material is smaller than No. 200 sieve size)	Silts and clays (Liquid limit less than 50)		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity	
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	
			OL	Organic silts and organic silty clays of low plasticity	
	Silts and clays (Liquid limit greater than 50)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	
			CH	Inorganic clays or high plasticity, fat clays	
			OH	Organic clays of medium to high plasticity, organic silts	
	Highly organic soils		PT	Peat and other highly organic soils	

Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:
Less than five percent.....GW, GP, SW, SP
More than 12 percent.....GM, GC, SM, SC
5 to 12 percent.....*Borderline* cases requiring dual systems**



Plasticity Chart