PURCHASING OFFICE
P.O. BOX 3371
PHONE 813-247-8034
FAX 813-247-8015

David Gee, Sheriff

HILLSBOROUGH COUNTY
TAMPA, FLORIDA 33601

October 1, 2008

Office of the Comptroller
2008 E 8th Avenue
Tampa, FL 33605

Janice Wilder, Buyer
(813) 247-0026

PROPOSAL TITLE: WCHPTS ROADWAY AND OBSERVATION TOWER CONSTRUCTION PROJECT

PROPOSAL NUMBER: RFP 20-08

INSTRUCTIONS TO PROPOSERS

Included herein are General Terms and Provisions (Part A); the Special Provisions (Part B); the Technical Specifications (Part C), and the Proposal Response (Part D), which together with all attachments, constitute the entire "Proposal Package". Said package must be the basis upon which all proposals are offered and the same (the entire package) must be kept together and returned, intact, by the time and at the place herein specified. The proposer must manually sign the General Terms and Provisions (Part A) and Bid Proposal (Part D). Any questions concerning this proposal package should be directed to the Buyer whose name appears above.

When awarded, the proposal package becomes the "**Contract Document**". The Proposer's signature on the proposal constitutes Proposer's agreement to the terms therein. READ THE ENTIRE PROPOSAL CAREFULLY BEFORE SIGNING.

NOTICE TO PROPOSERS

WHEN SUBMITTING A SEALED BID, ALL PACKAGES SHOULD BE CLEARLY MARKED AS A PROPOSAL DOCUMENT. THIS IDENTIFICATION SHOULD INCLUDE THE PROPOSAL NUMBER, PROPOSAL TITLE AND DATE & TIME DUE ON THE OUTSIDE OF THE ENVELOPE. For your convenience a self-addressed mailing label is provided with this package.

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Refer to Civil Engineering Drawings C1.0 thru C7.0 for specifications for Site Development work.

Refer to Drawing Sheet S1.1 for specifications for the following:

Foundation	
Structural	
Steel Deck	
Grating	
042000 - Unit Masonry	7 Pages
055100 - Metal Stairs	5 Pages
055213 - Pipe Railings	4 Pages
074113 - Metal Roof Panels	6 Pages
079200 - Joint Sealants	4 Pages
081113 - Hollow Metal Doors and Frames	5 Pages
087100 - Door Hardware	7 Pages
088000 – Glazing	2 Pages
092400 - Portland Cement Plastering	5 Pages
099113 - Exterior Painting	5 Pages
099123 - Interior Painting	5 Pages

260500 - General Provisions for Electrical Work	4 Pages
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ADDENDUM# 1 Geotechnical Engineering Services Report (Includes Cover Letter, 12 page report plus Appendix with boring Location Plan and Soil Profiles)

ADDENDUM #2 Construction Documents / Drawings

LETTER OF INTENT

REQUEST FOR PROPOSAL NO. 20-08

The undersigned acknowledges the General Terms and Provisions of the Proposal and intends to respond to the Proposal for the Hillsborough County Sheriff's Office. We understand that any changes, clarification and addenda to the Proposal will be promptly communicated to the individual authorized below to receive this information.

_____
NAME

_____
COMPANY NAME

_____
ADDRESS

_____

_____

_____
TELEPHONE NUMBER

_____
FAX NUMBER

_____ WILL BE ATTENDING THE MANDATORY PRE-PROPOSAL CONFERENCE **OCTOBER 31, 2008 @ 10:00 A.M.** REPRESENTING OUR COMPANY**

_____

_____

_____

**NOTE: THIS FORM SHOULD BE SENT IMMEDIATELY TO THE BUYER LISTED ON THE FRONT OF THIS DOCUMENT AT FAX NUMBER (813) 247-0049.

HILLSBOROUGH COUNTY SHERIFF'S OFFICE
2008 E 8th Avenue
Tampa, FL 33605

VENDOR: Name & Address: October 1, 2008

SUBJECT: Request for Proposal Number 20-08

PROPOSAL TITLE: WCHPTS ROADWAY AND OBSERVATION TOWER Construction Project

OPENING DATE & TIME: November 21, 3:00 PM

Place: Sheriff's Operation Center
2008 E. 8th Avenue #125
Tampa, FL 33605

MANDATORY PRE-PROPOSAL CONFERENCE: October 31, 2008 @ 10:00 AM

Place: Walter C. Heinrich Practical Training Site
14063 State Road 39
Lithia, FL 33547

PART A - GENERAL TERMS AND PROVISIONS:

1. Proposals: Must be contained in a SEALED envelope addressed to: David Gee, Sheriff, 2008 E 8th Avenue #125, Tampa, Florida 33605. To prevent inadvertent opening, the proposal must be marked as a PROPOSAL DOCUMENT (including the proposal number, proposal date and time of opening) on the outside of the envelope. A label is provided at the end of this document.

   If our specifications, when included in our Request for Proposal, are not returned with your proposal, and no specific reference is made to them in your proposal, it will be assumed that all specifications will be met. When material, sketches, cuts, descriptive literature, vendor's or manufacturer's specifications which accompany the proposal contain information that can be construed or is intended to be a deviation from our specifications, such deviation must be specifically referenced in your proposal response.

2. The responsibility for getting the proposal to the Sheriff's Office on or before the stated time and date will be solely and strictly the responsibility of the proposer. The Sheriff will in no way be responsible for delays caused by the United States Postal Service or a delay caused by any other occurrence, or any other method of delivery. The proposer shall be responsible for reading very carefully and understanding completely the requirements in the specifications. Proposals will not be accepted after the time specified for receipt. Such proposals shall be returned to the vendor unopened with the notation "This Proposal Was Received After theTime Designated For the Receipt and Opening of Proposals".

3. Time for Consideration: Proposer warrants by virtue of proposing the prices quoted in his proposal will be good for an evaluation period of forty-five (45) calendar days from the date of proposal opening unless otherwise stated. Proposers will not be allowed to withdraw or modify their proposals after the opening time and date.

4. Prices: All proposals submitted must show the net proposal price after any and all discounts allowable have been deducted. **Price(s) offered are to be F.O.B. Destination (DELIVERED).** State sales tax and federal excise taxes shall not be included as the Sheriff's Office is tax-exempt for materials sold directly to them. The Sheriff will issue exemption certificates to the successful vendor when requested.

   The Vendor's attention is directed to the fact that the tax laws of the State of Florida, including but not limited to Chapter 212, Florida Statutes, apply to this proposal matter and that all applicable taxes and fees shall be deemed to have been included in the Vendor's proposal as part of his materials cost, when applicable.

5. Proposal Errors: When errors are found in the extension of proposal prices, the unit price will govern. Proposals having erasures or corrections must be initialed in ink by the proposer.

6. Claims: The successful proposer will immediately replace missing or damaged items and will be responsible for making any and all claims against carriers.

7. Proposal Submittal Costs: Submittal of a proposal is solely at the cost of the proposer and the Sheriff's Office in no way is liable or obligates itself for any cost accrued to the proposer in coming up with the Proposal Submittal.

8. No Proposal: If the receipt of this request for quotation is not acknowledged, Proposer's name may be removed from the proposers' mailing list.

9. Compliance with Occupational Safety and Health Act: Proposer certifies that all material, equipment, etc., contained in his proposal meets all O.S.H.A. requirements.

10. Public Entity Crimes: Pursuant to Florida Statute 287-132-133, effective July 1, 1989, the Hillsborough County Sheriff, as a public entity, may not accept any proposal from, award any contract to, or transact any business in excess of the threshold amount provided in Section 287.017, F.S., for Category Two (currently $10,000) with any person or affiliate on the convicted vendor list for a period of 36 months from the date that person or affiliate was placed on the convicted vendor list unless that person of affiliate has been removed from the list pursuant to Section 287.133 (3)(f), F.S.

    As of April 10, 1991 you are only required to complete one (1) form each calendar year, per agency. If you have already submitted a Form PUR 7068 to the Hillsborough County Sheriff's Office this year, note same as an exception referencing the bid or proposal with which the form was submitted.

11. Acceptance and Rejection: The Sheriff, Hillsborough County, Florida, reserves the right to reject any or all proposals, for cause, to waive irregularities, if any, in any proposal, and to accept the proposal or proposals which in the judgment of the Sheriff is in the best interest of Hillsborough County.

12. It is important that vendor visit sites where services are to be provided in order to familiarize himself with the scope of the effort required.

13. Specifications are attached.

DAVID GEE, SHERIFF
HILLSBOROUGH COUNTY, FLORIDA

By_____
Stephen G Crane,
Office of the Comptroller

14. General Terms and Provisions outlined above are acknowledged. Our proposal is attached.

Date_____ Signed_____
Company Officer

_____
Company Name

NOTE: COMPLETE PARAGRAPH 14 ABOVE AND RETURN WITH COMPLETED PART D, PROPOSAL RESPONSE. EXCEPTIONS TO THE SPECIFICATIONS, IF ANY, MUST BE NOTED IN YOUR PROPOSAL RESPONSE ON THE EXCEPTIONS PAGE (PART D PG 1) BY A REFERENCE TO THE SECTION & PARAGRAPH WITHIN PART C SPECIFICATIONS.

1. IN GENERAL

The purpose of these specifications is to describe the requirements of the Hillsborough County Sheriff's Office to provide labor, materials and equipment necessary for the construction of a Roadway and Observation Tower. All work will be accomplished in accordance with the specifications and requirements furnished within the bid document to include drawings and any addendums issued.
The contractor is to provide **all incidentals** required for the construction to meet all local, state, and federal codes.

2. SCOPE

The requirements of this proposal include furnishing the commodity/services as specified herein to our locations as noted below.

Hillsborough County Sheriff's Office
Walter C. Heinrich Practical Training Site
14063 County Road 39
Lithia, FL 33547

3. EVALUATION OF PROPOSALS

An Awards Committee will evaluate all proposals and make a recommendation to the Hillsborough County Sheriff based on the following criteria, listed in order of importance:

A. Cost of services

B. References (i.e., satisfaction of former clients), names and addresses of parties for whom comparable work has been performed

C. Proposed time for completion

D. Years of experience: Experience relating to the amount of time in providing the RFP service.

Once each member of the Proposal Analysis Group has independently read and rated each proposal and completed a proposal evaluation matrix, a composite evaluation will be developed which indicates the group's collective ranking of the highest rated proposal in a descending order. At this point, the Proposal Analysis Group may conduct interviews with the top ranked firms if it is deemed necessary for clarification of information received in the proposal documents.

4. MANDATORY PRE-PROPOSAL CONFERENCE

All interested parties are invited to attend the mandatory pre-proposal conference (see date on Page 1 of Part A). At this time the Sheriff's representative(s) will be available to answer questions relative to this Proposal. Any suggested modifications may be presented in writing or discussed with the Sheriff's representative(s) at this meeting and may be considered by said representative(s) as possible amendments to the Proposal.

5. EXAMINATION OF SITE

Bidders shall visit the site and familiarize themselves with existing conditions and satisfy themselves as to the nature and scope of the work required. The submission of a bid will be construed as evidence that such an examination has been made. Any materials and/or labor not reflected in the drawings or specifications, required for completion of the work, shall be submitted with the bid. Later claims for labor, equipment or materials required, will not be allowed. The mandatory pre-proposal conference will be held on site affording the opportunity for site survey at that time.

6. MEASUREMENTS AND DIMENSIONS

Before ordering materials or doing work which is dependent for proper size, or installation upon coordination with site conditions, the Bidder shall verify all dimensions at the site and shall be responsible for the correctness of same. No consideration will be given any claim based on the difference between the actual dimensions and those indicated on the drawings. Any discrepancies between the drawings and/or specifications and the existing conditions shall be referred to the owner for adjustments before any work is commenced.

7. VENDOR QUALIFICATIONS

Vendors may be required to furnish evidence in writing that they maintain permanent places of business and have adequate equipment, finances and personnel to furnish the item or service offered satisfactorily and expeditiously.

The Hillsborough County Sheriff's Office reserves the right to inspect the vendor's place of business and equipment prior to award of any contract, for determining ability to meet terms and conditions as set forth herein.

Vendors shall have engaged in business in the Hillsborough County area for a period of not less than two (2) years, and shall provide references in the proposal response.

We may require screening of employees and require satisfactory personal references in order to determine the character of employees.

8. PRE-QUALIFICATION OF SUBCONTRACTORS, VENDORS, AND SUPPLIERS

a. The Contractor agrees, within seven (7) calendar days of receipt of a written request from the Sheriff's Office, to promptly remove any personnel employed or retained by the Contractor, whom the Sheriff's Office may request in writing to be removed, with or without cause. Any substitution submitted by the Contractor shall be acceptable to the Sheriff and at no additional cost.

b. The Contractor agrees, within seven (7) calendar days of receipt of a written request from the Sheriff's Office, to promptly remove and replace any Subcontractors employed or retained by the Contract, whom the Sheriff's Office shall request in writing to be removed with or without cause. If the Sheriff's Office requires the removal of any Subcontractor, the Contractor shall submit a substitute acceptable to the Sheriff's Office, and the Contract Price may be increased or decreased by the reasonable difference in costs associated with such substitution, providing proof of increase or decrease is provided. If the Sheriff's Office request was made without cause an appropriate Change Order will be issued.

9. CONTRACTUAL OBLIGATIONS

The successful Bidder may not sublet or subcontract any the contractual obligations concerning this bid matter except as provided for in the written contract between the Sheriff's Office and Contractor. This statement does not prohibit subcontracting of the work but does prohibit subcontracting overall management obligations pertaining to the work and requires the contractor to retain ultimate liability for all contractual obligations.

10. PRECONSTRUCTION CONFERENCE

Prior to the start of construction, a joint meeting shall be held with representatives of all prime Contractors, Sheriff's Office staff, and other invited parties or government agencies which may be affected by or have jurisdiction over the project. This meeting is intended to introduce the various key personnel from each organization and to discuss the start of construction, order of work, labor and legal requirements, insurance requirements, names of the major subcontractors, method of payment, shop drawing requirements, protection of existing facilities, and other pertinent items associated with the project.

11. CONTRACT DOCUMENTS

a. Precedence

The Contract Documents comprise the entire agreement between the Sheriff's Office and Contractor concerning the Work and may be altered only by a Change Order.

1. The Sheriff's Office shall issue all communications to the Contractor through the Project Manager except for authorization required by Change Order pursuant to this Contract.

2. In connection with the Sheriff's request for changes in the Work, the Sheriff's Office Comptroller shall execute the appropriate Change Orders for such changes upon approval by the Project Manager.

It is the intent of the Contract Documents to describe the total Work to be constructed. The Contract Documents are complementary. What is called for by one is as binding as if called for by all. If the Contractor finds a conflict, error, or discrepancy in the Contract Documents, he will call it to the Buyer's attention in writing before proceeding with the Work. The Buyer will respond with a written clarification. Any delays associated with the clarification will be considered for time extensions only, but no damages for delay will be allowed. In resolving such conflicts, errors, and discrepancies, the Contract Documents shall be given preference in terms of the most stringent requirements as determined by the Project Manager. Enforcement of the most stringent requirements will be at the Sheriff's option. Figure dimensions on the Drawings (when provided) shall govern over scale dimensions, and the detailed Drawing shall govern over general Drawings. Any work that may reasonably be inferred from the Contract Documents as being required to produce the intended result shall be supplied whether or not it is specifically called for. Work, materials, or equipment described in words which so applied have a well-known technical or trade meaning shall be deemed to refer to such recognized standards. In case of conflict, the more stringent requirements shall take precedence. Clarifications and interpretations of the Contract Documents shall be issued by the Buyer. The Contract Documents will be governed by the Laws of the State of Florida.

b. Reuse of Documents

Neither Contractor nor any subcontractor, manufacturer, fabricator, supplier, or distributor shall have or acquire any title or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of the Architect. They shall not reuse any of them on extensions of the Project or any other project.

12. COMPLETION OF WORK AND LIQUIDATED DAMAGES

The Contractor shall prosecute work diligently, and shall complete the entire work ready for use not later than One Hundred Eighty (180) calendar days from the date of the Notice to Proceed. The time stated for completion shall include final cleanup of premises. Failure to complete the work in the time stated shall result in an assessment as liquidated damages of $250.00 for each calendar day this work remains incomplete. Deduction will be made from Contractor's final pay.

The Sheriff's Office Project Manager for this job is Francis A. Navales. The Architect/Consultant is Mr. Richard Schmitt of Ranon & Partners Inc., AIA. All work accomplished for this project will be scheduled, reviewed and approved by the Architect/Consultant and Project Manager or his designated personnel. All work will be coordinated with the Project Manager.

The Contractor's attention is directed to the fact that it is likely to rain on occasion during the life of this contract. The Contractor should expect a substantial number of days that he will be unable to work due to rain and/or wet conditions. It is the Contractor's responsibility to schedule his work so that lost time for rain and/or wet conditions is made up. No additional time shall be granted to the Contractor for rain and/or wet conditions. However, if there is any time extension required for unforeseen conditions or unfavorable weather days, the CONTRACTOR is required to submit proper documentation to Project Manager Mr. Francis A. Navales for time extension consideration.

13. ADDITION/DELETION

The Hillsborough County Sheriff's Office reserves the right to add or delete any items from this bid or resulting contract(s) when deemed to be in the best interest of the County.

14. WARRANTIES

a. The Awardee will warrant all workmanship and materials for a period of no less than one (1) year from date of acceptance.

1) The Contractor warrants and guarantees that all materials and equipment will be new unless otherwise specified and that all work will be of good quality, performed in a workmanlike manner, free from faults or defects, and in accordance with the requirements of the Contract Documents and any inspections, tests, or approvals referred to below. All unsatisfactory Work, all faulty Work and all Work not conforming to the requirements of the Contract Documents or such inspections, tests, approvals, or all applicable building construction and safety requirements shall be considered defective. Notice of all defects shall be given to the Contractor by the Architect. All defective Work, whether or not in place, may be rejected, corrected, or accepted as provided in Paragraph D).

2) If the Contract Documents, laws, ordinances, rules, regulations or order of any public authority having jurisdiction require any Work to specifically be inspected, tested, or approved by someone other than the Contractor, the Contractor will give the Project Manager timely notice of readiness therefore. The testing firm(s) if assigned by the Sheriff's Office to this project and all such inspections, tests, or approvals provided for by the Sheriff's Office shall be identified in writing by the Project Manager to the Contractor. All other inspections, tests or approvals shall be at the Contractor's expense including additional expenses for inspection and tests required as a result of delays by the contractor or hours worked beyond 40 hours in a work week. For all required inspections, tests, and approvals on any Work prepared, performed, of assembled away from the site, the Contractor will furnish the Project Manager/Architect with the required Certificates of Inspection, testing, or approval. All such tests will be in accordance with the methods prescribed by the American Society for Testing and Materials or such other applicable organizations as may be required by law or the Contract Documents. Materials or Work in place that fail to pass acceptability tests shall be retested at the direction of the Architect/Project Manager and at the Contractor's expense. If any such Work required to be inspected, tested, or approved is covered without written approval of the Architect/Project Manager, it shall be, if requested by the Project Manager, uncovered for observation in accordance with Paragraph 14. a. 4) and 5). The rates charged the Contractor pursuant to this paragraph shall be agreed upon in writing prior to testing.

3) Neither observations by the Architect/Project Manager or inspections, tests, or approvals by persons other than the Contractor shall relieve the Contractor of his obligations to perform the work in accordance with the requirements on the Contract Document.

4) If any work is covered contrary to the request of the Architect/Project Manager, the Work shall, if requested by the Architect/Project Manager, be uncovered for observation and replaced at the Contractor's expense.

5) If any Work has been covered which the Architect/Project Manager has not specifically requested to observe or if the Architect/Project Manager considers it necessary or advisable that covered Work be inspected or tested by other, the Contractor, by written request, will uncover, expose, or otherwise make available for observation inspection, or testing that portion of the Work in question, furnishing all necessary labor, material, and equipment. If it is found that such Work is defective, the Contractor will bear the expense of such uncovering, exposure, observation, inspection, testing, and satisfactory reconstruction. If, however, such Work is not found to be defective, the Contractor will be allowed an increase in the Contract price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, inspection, testing, and reconstruction, if he makes a claim.

b. When directed by the Architect/Project Manager, the Contractor will promptly, without cost to the Sheriff's Office and as specified by the Architect/Project Manager, either correct the defective Work whether fabricated, installed, or completed, or remove it from the site and replace it with non-defective Work. If the Contractor does not correct such defective Work or remove and replace such defective Work within a reasonable time, all as specified in a written notice for the Architect/Project Manager, the Sheriff's Office, after seven (7) days, may have the deficiency corrected. All direct and indirect costs of such correction shall be paid by the Contractor or deducted from payment to the Contractor. The Contractor will also bear the expense of making good all Work of others destroyed or damaged by correction, removal, or replacement of this defective work.

c. During the warranted period, the Awardee will restore or remove and replace warranted work to its original specified condition in the event of failure. He will restore or remove and replace other work which has been damaged by failure of warranted work, or which must be removed and replaced to gain access to warranted work. Cost of restoration or removal and replacement is the obligation of the successful bidder. Upon restoration or removal and replacement the warranted work which has failed, Awardee will reinstate the warranty by issuing an addendum to the original warranty for at least the remaining warranted period, but for no less than half of the original warranted period.

d. If, instead of requiring correction or removal and replacement of defective Work, the Sheriff's Office prefers to accept it, the Sheriff's Office may do so. In such case, if acceptance occurs prior to approval of final payment, a Change Order shall be executed by incorporating the necessary revisions in the Contract Documents, included an appropriate reduction in the Contract Price. If the acceptance occurs after approval, the Contractor shall pay an appropriate sum to compensate for the defect in the Work to the Sheriff's Office.

15. INDEMNIFICATION

The contractor will indemnify and hold harmless the Sheriff's Office and its employees and agents from and against all liabilities, claims, damages, losses, and expenses, including attorneys' fees arising out of or resulting from the performance of its Work, provided that any such liability, claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting there from and (b) is cause in whole or in part by an act or omission of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, whether or not it is caused in whole or in part by a party indemnified hereunder.

In any and all claims against the Sheriff's Office or any of its agents or employees by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation under the previous paragraph shall not be limited in any way as to the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under workmen's compensation acts, disability benefit acts, or other employee benefit acts.

The Contractor will indemnify and hold harmless the Sheriff's Office and anyone directly or indirectly employed by it from and against all claims, damages, losses, and expenses (including attorney's fees) arising out of any infringement of patent rights of copyrights held by others and shall defend all such claims in connection with any alleged infringement of such rights.

With respect to and in consideration for the indemnifications provided by the Contractor in paragraph 15, the Sheriff's Office agrees to pay to the Contractor $50.00, the sufficiency and receipt of which is hereby acknowledged.

16. CERTIFICATE OF INSURANCE

The Awardee shall not commence any work in connection with this Contract until he has obtained all the following types of insurance and such insurance has been approved by the Hillsborough County Sheriff's Office, nor shall the Awardee allow any Sub-Contractor to commence work on his sub-contract until all similar insurance required of the Sub-Contractor has been so obtained and approved. All insurance policies shall be with insurers qualified and doing business in Florida.

Worker's Compensation Insurance

The Awardee shall take out and maintain during the life of this Contract, Worker's Compensation Insurance for all of his employees connected with the work of this project and, in case any work is sublet, the Awardee shall require the Sub-Contractor similarly to provide Worker's Compensation Insurance for all the Latter's employees unless such employees are covered by the protection afforded by the Awardee. Such insurance shall comply fully with the Florida Worker's Compensation Law. In case any hazardous work under this contract at the site of the project is not protected under the Worker's Compensation statute, the Awardee shall provide, and cause each Sub-Contractor to provide adequate insurance, satisfactory to the Hillsborough County Sheriff's Office, for the protection of his employees not otherwise protected.

Contractor's Public Liability and Property Damage Insurance

The Awardee shall take out and maintain during the life of this Contract, Comprehensive General Liability Insurance and Comprehensive Automobile Liability Insurance and shall protect him from claims for damage for personal injury, including accidental death, as well as claims for property damage which may arise from operations under this Contract whether such operations be by himself or by anyone directly or indirectly employed by himself, and the amounts of such insurance shall be the minimum limits as follows:

Comprehensive General Liability	$300,000 bodily injury and property damage combined single limit.
Automobile	$300,000 bodily injury and property damage combined single limit.

17. PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

Bond Requirements: The Hillsborough County Sheriff shall, prior to the execution of the Contract, require the successful Proposer to furnish bonds covering the faithful performance of the Contract and the payment of all obligations arising there under in such form and amount as listed hereunder. Premiums for Bonds shall be paid by the successful Proposer.

The Surety Company shall be licensed to transact surety business in Florida, shall be certified to issue the total amount of the bond on any one risk, and shall be otherwise acceptable to the Hillsborough County Sheriff's Office.

Time of Delivery and Form of Bonds: The successful Proposer shall deliver the required bonds to the Hillsborough County Sheriff no later than the date of execution of the Contract.

"Performance and Payment Bond" shall be for 100% of the Contract sum in behalf of the Hillsborough County Sheriff. The bonds shall be written on the Surety Company's standard form.
The successful Proposer shall require the Attorney-In-Fact who executes the required bonds on behalf of the Surety Company to affix to the bond a certified and current copy of his Power of Attorney, indicating monetary limit of such power.

Alternative Forms of Security: In lieu of the bond required by this section, the successful Proposer may file with the Hillsborough County Sheriff's Office, an alternative form of security which shall be in the form of cash, money order, certified check, cashier's check, or irrevocable letter of credit. Such alternative forms of security shall be for the same purpose and shall be subject to the same conditions as those applicable to the bond required by this section. The determination of the value of such alternative forms of security shall be made by the Hillsborough County Sheriff's Office.

Release of Bonds: Bonds will be released after all conditions of the contract have been met, final acceptance has been given and all inspections have been satisfied and a statement of warranty and release of lien has been issued.

18. PROJECT CONDITIONS

a. Availability of Lands: The Sheriff's Office will furnish, at the times indicated in the Contract Documents, the lands upon which the Work is to be done, rights-of-way for access thereto, and such other lands which are designated for use by the Contractor. Easements for permanent structures or permanent changes in existing facilities will be obtained by the Sheriff's Office unless otherwise specified in the Contract Documents. If the Contractor believes that any delay

in the Sheriff's Office furnishing of these lands or easements is valid reason for an extension of the Contract Time, Contractor may make a claim for such time extension, but in no event will the Contractor be entitled to any damages or additional compensation for such delay. The Contractor will provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

Upon request, the Architect/Project Manager will furnish the Contractor copies of all available boundary surveys and subsurface tests.

b. Unknown or Concealed Conditions:

1) If conditions are encountered, excluding existing utilities, at the site which are (a) subsurface of otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents or (b) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then the Contractor shall give the Sheriff's Office notice thereof promptly before conditions are disturbed and in no event later than 48 hours after first observance of the conditions.

2) The Architect/Project Manager will promptly investigate such conditions, and, if they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, the Project Manager will recommend an equitable adjustment in the Contract Price or Contract Time, or both, to the Sheriff's Fiscal Director. If the Project Manager determines that the conditions at the site are not materially different from those indicated in the Contract Documents or are not materially different from those ordinarily found and that no change in the terms of the Contract is justified, the Sheriff's Office shall notify the Contractor in writing. However the Work shall be performed after direction is provided by the Project Manager.

3) Contractor shall ascertain such conditions, described in Paragraph 18, B.1 above, as may be readily determined by inspection and inquiry, such as the location, accessibility and general character of the site prior to submitting a bid proposal.

4) The basis of determining payment for unknown or concealed conditions involving excavation and/or fill will be by cross-sections before and after performing the work.

c. Reference Points: The Architect/Project Manager will establish on the drawings such general reference points as in its judgment will enable the Contractor to proceed with Work. For all projects the Architect/Project Manager shall establish the coordinates and elevations of two permanent benchmarks at the site. The Contractor shall establish construction control including but not limited to construction baseline, any additional temporary benchmarks and elevations at 1000-foot intervals by utilizing a registered land surveyor in compliance with all the requirements of Chapter 472, Florida Statutes (Land Surveying). The Contractor will be responsible for the layout of the Work and will protect and preserve the established reference points and will make no changes or relocations without the prior written approval of the Architect/Project Manager. The Contractor will give notice to the Project Manager or Sheriff's Office designee whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations. The Contractor will replace and accurately relocate all reference points so lost, destroyed, or moved by utilizing a registered land surveyor in compliance with all requirements of Chapter 472, Florida Statutes (Land Surveying).

d. Existing Utilities: Information shown on the Drawings as to the location of existing utilities has been prepared from the most reliable data available to the Hillsborough County Sheriff's Office. Prior to commencing work the Contractor shall be responsible for verification and location of underground utilities to the extent that the utilities can be reasonably located. The Contractor shall as a minimum, contact all utility companies for the purpose of having all utilities located by the utility companies. Furthermore, the Contractor shall pothole the work area to ascertain that the utilities shown, or otherwise identified, are in the area shown. The Sheriff's Office will not be liable for any damage or delay caused by any utility line that was identified or could have been identified using reasonable means. If Contractor fails to fulfill its due diligence investigation, obligations, or negligently conducts the due diligence investigations with respect to existing utilities prior to the commencement of Work, Contractor will be deemed to have waived any claim it might otherwise have had in an adjustment to the Contract Price or Contract Time. If Contractor fully performs its due diligence investigation obligations with respect to existing

utilities, prior to the commencement of Work, and Contractor is subsequently delayed by an unknown existing utility conflict, the Contractor may make a claim for any extension to the Contract Time in accordance with the requirements of this Contract, but in no event will the Contractor be entitled to any damages or overhead compensation from the Sheriff's Office.

19. CONTRACTOR'S RESPONSIBILITIES

a. Supervision and Superintendence: The Contractor will supervise and direct the Work efficiently and with his best skill and attention. He will be solely responsible for the means, methods, techniques, sequences, and procedures of construction unless specifically addressed in the Contract Documents. The Contractor will be responsible for seeing that the finished Work complies accurately with the Contract Documents. The Contractor will cooperate with and be responsible for coordination of the Work with other contractors and/or utilities at the site.

The Contractor will keep on the Work at all times during it progress a competent, resident superintendent who shall not be replaced without written notice to the Project Manager except under extraordinary circumstances. The Superintendent will be the Contractor's representative at the site and shall have authority to act on behalf of the Contractor. All communications given to the superintendent shall be as binding as if given to the Contractor.

b. Labor, Materials, and Equipment: The contractor will provide and pay for competent, suitable, qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. He will at all times maintain good discipline and order on the site.

The Contractor will furnish and pay for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water and sanitary facilities, and all other facilities and incidentals whether temporary or permanent necessary for the execution, testing, initial operation, and completion of the Work as required by the Contract Documents.

All materials and equipment will be new and of good quality, except as otherwise provided in the Contract Documents. If required by the Buyer, the Contractor will furnish satisfactory evidence as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the instructions of the applicable manufacturer, fabricator, or processors, except as otherwise provided in the Contract Documents.

c. Substitute Materials or Equipment: If the Contractor wishes to furnish or use a proposed substitute, he will, after the award of the Contract, make written application to the Buyer for approval of such substitute, certifying in writing that the proposed substitute will perform adequately the duties imposed by the general design, be similar and of equal substance or quality to that specified, and be suited to the same use and capable of performing the same function as that specified. No substitute shall be ordered or installed without the prior written approval of the Sheriff's Office, who shall be the sole judge of acceptability. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign, delays and claims of other Contractors affected by the resulting change, all of which shall be considered by the Sheriff's Office in evaluating the proposed substitute. Approval of any change in costs or schedule as result of acceptance of the substitute by the Sheriff's Office will be by Change Order.

d. Concerning Subcontractors: The Contractor will be fully responsible for all acts and omissions of his subcontractors and of persons directly or indirectly employed by them and of persons for whose acts any of them may be liable to the same extent as if they were employed by him. Nothing in the Contract Documents shall create any contractual relationship between any subcontractor and the Sheriff's Office or any obligation on the part of the Sheriff's Office to pay or to see to the payment of any monies due any subcontractor, except as may otherwise be required by law. The Sheriff's Office may furnish to any subcontractor, to the extent practicable, evidence of amounts paid to the Contractor for specific Work done.

The divisions and sections of the Specifications and the identifications of any Drawings shall not control the Contractor in dividing Work among subcontractors or delineating the Work to be performed by any specific trade.

The Contractor agrees to bind specifically every subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of the Sheriff's Office.

All work performed for the Contractor by a subcontractor shall be pursuant to an appropriate written agreement between the Contractor and the subcontractor which shall contain provisions that waive all rights the contracting parties may have against one another for damages caused by fire or other perils covered by insurance, except such rights as they may have to the proceeds of such insurance held by the Sheriff's Office as trustee. The Contractor will pay each subcontractor an appropriate amount determined by value of the Work, of any insurance monies received by the Contractor under this insurance.

e. Patent Fees and Royalties: The Contractor will pay all license fees and royalties and assume all costs incident to the use of any invention, design, process, or device which is the subject of patent rights or copyrights held by others.

f. Permits: The Contractor will secure and pay for construction permits and licenses and will pay all governmental charges and inspections fees which are applicable and necessary for the execution of the Work at the time of his Bid. Contractor will also pay all public utility charges. All required building and other permits shall be obtained before beginning construction. Any delays associated with the permitting process will be considered for time extensions only and no damages or additional compensation for delay will be allowed. The contractor shall be responsible for obtaining and paying for 100% of all permits, fees, and licenses required for performing the work of the Contract.

g. Laws and Regulations: The Contractor will give notices and comply with all laws, ordinances, rules, codes and regulations applicable to the Work. If the Contractor observes that any of the Contract Documents are contradictory to such laws, rules, and regulations, he will notify the Sheriff's Office promptly in writing. Any necessary changes will then be adjusted by an appropriate Change Order. If the Contractor performs any Work that it knows or should have known to the contrary of such laws, ordinances, rules, codes, and regulations and without such notice to the Sheriff's Office, he will bear all related costs.

h. Use of Premises: The Contractor will confine his equipment, the storage of materials and equipment, and the operations of his workers to the areas permitted by law, ordinances, permits, or the requirement of the Contract Documents. He shall not unreasonably encumber the premises with materials and equipment. Any loss or damage to the Contractor's or any subcontractor's equipment is solely at the risk of the Contractor.

The Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall the Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger them.

i. Record Drawings: Contract documents will be annotated to show all changes made during the construction process. These shall be available to the Project Manager and shall be submitted with the final payment application. Contractor shall provide as-built drawings.

The contractor shall maintain record drawings in accordance with the Special Provisions and the Special Conditions of Contract. The contractor shall keep and maintain at the job site one complete bid document approved by the Sheriff's Office. Said records shall be supplemented by any detailed sketches or typewritten changes to the specifications, as necessary or directed to indicate fully the work as actually constructed. These master records, including all revisions made necessary by addenda, change orders, and the like shall be maintained up-to-date during the progress of the work**.**

Record drawings shall be accessible to the Project Manager at all times during the construction period and shall be delivered to the Architect/Manager upon completion of the work prior to final acceptance of project.

j. Work Safety: The Contractor will be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. He will take all necessary precautions for the safety of and will provide necessary protection to prevent damage, injury, or loss to:

All employees on the Work and other persons who may be affected by it;

All the Work and all materials or equipment to be incorporated, whether in storage on or off the site;

Other property at the site or adjacent to it, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation, or replacement in the course of construction.

Job site safety is the contractor's responsibility. Appropriate first aid facilities and supplies shall be kept and maintained by the contractor at the site of the work. All persons within the construction area shall be required to wear protective helmets. In addition, all employees of the contractor and its subcontractors shall be provided with, and required to use, personal protective and life saving equipment as set forth in Subpart E of the OSHA Standards for Construction (29 CFR 1926).

During the performance of the work, contractor shall erect and maintain temporary protective barriers and take all other necessary precautions and place proper guards and warning signs for the prevention of accidents. Contractor shall erect and maintain suitable and sufficient lights and other signals as required.

The Contractor will comply with all applicable laws, ordinances, rules, codes regulations, and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss. Contractor will erect and maintain, as required by the conditions and progress of the Work, all necessary safeguards for safety and protection. Contractor will notify owner of adjacent property and utilities when execution of Work may affect them prior to start of work. All damage, injury, or loss to any property caused directly or indirectly, in whole or in part by the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable will be remedied by the Contractor.

k. Emergencies: In emergencies affecting the safety of persons, the Work or property at the site or adjacent thereto, the Contractor, without special instructions or authorization from the Project Manager if time or circumstances do not permit, is obligated to prevent threatened damage, injury, or loss. Contractor will give the Project Manager written notice that the emergency provision has been invoked and shall state the reasons therefore within twenty four (24) hours of the incident. If the Contractor believes the emergency resulted in additional Work, a claim for a Change Order is permissible.

The Contractor shall immediately notify the Project Manager of all events involving personal injuries to any person on the site, whether or not such person was engaged in the construction of the Project, and shall file a written report on such person(s) and any other event resulting in property damage of any amount within five (5) days of the occurrence.

l. Submittals and Samples: After checking and verifying all field measurements, the Contractor will submit to the Architect/Project Manager for approval, the proper number of submittals in accordance with Technical Specification Part C, which shall have been checked by and stamped with the approval of the Contractor and identified as the Architect/Project Manager may require. The data shown on or with the submittals will be complete with respect to dimensions, design criteria, materials of construction, and the like to the enable the Architect/Project Manager to review the submittal as required.

The Contractor will promptly submit to the Sheriff's Office for approval all submittals and samples required by the Contract Documents. All submittals and samples will have been checked by and stamped with the approval of the Contractor, identified clearly as to material, manufacturer, any pertinent numbers, and the intended use. At the time of each submission, the Contractor will

notify in writing the Sheriff's Office as to any deviations that the submittals or sample may have from the requirements of the Contract Documents.

The Architect/Project Manager will review and approve submittals and samples. The Architect/Project Manager's review and approval shall be only for conformance with the design concept of the Project and compliance with information given in the Contract Documents. The approval of a separate item as such will not indicate approval of the assembly in which the item functions. The Contractor will make any corrections required by the Architect/Project Manger and return the required number of corrected copies and resubmit until approved. The Contractor's stamp of approval on any submittal or sample shall constitute a representation to the Project Manager and the Sheriff that the Contractor has determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data, and that each submittal or sample has been reviewed or coordinated with the requirements of the Work and the Contract Documents.

No Work requiring a submittal or sample submission shall commence until the submission has been approved by the Architect/Project Manager. A copy of each approved submittal and each approved sample shall be kept in good order by the Contractor at the site and shall be available to the Project Manager and other designated Sheriff's Office personnel. Any delays associated with the submittal process will be considered for time extensions only, and no damages or additional compensation for delay will be allowed.

The Architect/Project Manager's approval of submittals and samples shall not relieve the Contractor of his responsibility for any deviations from the requirements of the Contract Documents unless the Contractor has called the Sheriff's Office attention to such deviation in writing at the time of submission and the Project Manager has given written approval to the specific deviation; nor shall any approval by the Project Manager relieve the Contractor from responsibility for errors or omissions in the submittals.

To facilitate review, the Contractor shall number consecutively each submittal. This numbering system shall be in order of submittal. Any re-submittal required shall have the same number as the original submittal followed by notation signifying that this is a second or third submittal, (e. g., #14 2nd submittal). All submittals will provide a space for the Architect/Project Manager's review stamp, preferably on the first page. In addition all submittals shall contain the following notation placed by the Contractor:

Project Number and Name: _____
Submittal Number: _____
Deviations: _____
None: _____
As listed: _____
Reference Specification Number: _____
Reference Drawing Number: _____
Space Requirement: _____
As designed: _____
Different as listed: _____

Contractor has reviewed and submitted for approval.
Signature: _____
Date: _____

The review of a particular submittal will be undertaken only if the above such information is provided.

m. Cleaning Up: The Contractor will maintain the premises from accumulations of waste materials, rubbish, and other debris resulting from the Work on a daily basis or as required. At the completion of the Work, he will remove all waste materials, rubbish and debris from the premises as well as all tools, construction equipment and machinery, and surplus materials and will leave the site clean and ready for occupancy by the Sheriff's Office. In addition to any other rights available to the Sheriff's Office under this Contract, the Contractors failure to maintain the site may result in withholding of any amounts due Contractor. The Contractor will restore to original condition those portions of the site not designated for alteration by the Contract Documents.

20. WORK BY OTHERS

The Sheriff's Office may perform additional work related to the Project with its own forces or may let other direct contracts. The Contractor will provide the other contractors who are parties to such direct contracts, including but not limited to the other contractors, employees, agents, subcontractors and suppliers (or the Sheriff's Office forces performing the additional work), reasonable opportunity for the introduction and storage of materials and equipment and the execution of Work, and shall properly connect and coordinate his Work with theirs. The Contractor is not entitled to exclusive use of the site.

If any part of the Contractor's Work depends (for proper execution or results) upon the work of any such other contractor (or the Sheriff's Office staff), the Contractor will inspect and promptly report to the Project Manager in writing of any defects or deficiencies in such work that render it unsuitable for such proper execution and results. Contractor's failure to report shall constitute an acceptance of the other work, except as to defects and deficiencies which may appear in the other work after the execution of his Work. Contractor shall be entitled to extension of time, but not to damages or additional compensation related to delay caused by such other contractor.

The Contractor will do all cutting, fitting, and patching of his Work that may be required to make its several parts come together properly, and fit it to receive or be received by such other work. The Contractor will not endanger any work of others by cutting, excavating, or otherwise altering such other work and will only cut or alter such other work with the written consent of the Project Manager, and if such alteration will not increase the cost or time of the Contract.

If the performance of additional work by other contractors or the Sheriff's Office is not noted in the Contract Documents prior to the execution of the contract, written notice shall be given to the Contractor prior to starting any such additional work. If the Contractor believes that the performance of such additional work by the Sheriff's Office or others involves additional expense or entitles him to an extension of the Contract Time, he may make a claim.

21. AWARD

Award shall be made to the best responsive and responsible proposer offering a product deemed suitable for use by the Hillsborough County Sheriff's Office. Award shall be made on an ALL-OR-NONE TOTAL OFFER basis.

In the event two (2) or more vendors have submitted the best proposal, preference may be given in the award in the following order. First, to the vendor who has his/her principal place of business in Hillsborough County; second, to the vendor who has a place of business in Hillsborough County; and, third, if the vendors involved in the "tie proposal" situation are all located inside/outside Hillsborough County, the toss of a coin will be used to break the tie.

22. CONTRACT DOCUMENT

The contract between David Gee, Sheriff, Hillsborough County and the contractor shall consist of: (1) the Request for Proposal and any amendments thereto and (2) the contractor's proposal submitted in response to the request for proposal. The Sheriff's Office reserves the right to clarify any contractual relationship in writing with the Contractor, and such written clarification shall govern in case of conflict with the applicable requirements stated in the request for proposal or the contractor's responsive proposal. In all other matters not affected by the written clarification, if any, the request for proposal and all amendments thereto shall govern. The proposer is cautioned that his proposal shall be subject to acceptance without further clarification.

To the extent that a provision of the contract is contrary to the Constitution or laws of Florida, or of the United States, the provision shall be void and unenforceable. However, the balance of the contract shall remain in force between the parties.

23. APPROPRIATIONS OF FUNDS

The Hillsborough County Sheriff, as an entity of Government, is subject to the appropriation of funds by the Hillsborough County Board of County Commissioners in an amount sufficient to allow continuation of its performance in accordance with the terms and conditions of any contract entered into as a result of this request for each and every fiscal year following the fiscal year in which this contract is executed and entered into and for which the contract shall remain in effect. The Hillsborough County Sheriff's Office shall, upon receipt of notice that sufficient funds are not available to continue its full and faithful performance under the contract, provide prompt written notice of such event and effective thirty (30) calendar days after the giving of such notice, or upon the expiration of the period of time for which funds were appropriated, whichever occurs first, be thereafter released of all further obligations in any way related to such contract.

24. DEFAULT

The contract may be cancelled or annulled by the Hillsborough County Sheriff's comptroller in whole or in part by written notice of default to the awardee upon non-performance or violation of contract terms. An award may be made to the next best responsive & responsible proposer, or articles specified may be purchased on the open market similar to those so terminated. Failure of the contractor to deliver materials or services within the time stipulated in this specification, unless extended in writing by the Fiscal Director, shall constitute contract default. Vendors who default on contracts may be removed from the vendor mailing lists for future contracts at the discretion of the Fiscal Director.

25. CANCELLATION

When deemed to be in the best interest of the Hillsborough County Sheriff's Office, any contract(s) resulting from this specification may be canceled by the following means:

a. Ten (10) calendar days written notice with cause, or;
b. Thirty (30) calendar days written notice without cause.

If it becomes necessary to terminate the agreement/contract without cause, all services and/or materials provided through the date of receipt of written notice of cancellation may be invoiced to the Hillsborough County Sheriff's Office and will be considered for payment providing documentation of said expenses are forwarded with the request for payment.

26. NEXT BEST PROPOSER

In the event of a default by the awarded vendor, the Hillsborough County Sheriff's Office reserves the right to utilize the next best proposer as the new awardee. In the event of this occurrence, the next best proposer shall be required to provide the proposal items at the prices as contained on their proposal for this specification for the remainder on the award period.

27. INVOICING AND PAYMENTS

Vendors may invoice the Hillsborough County Sheriff's Office (in duplicate) for service(s) as completed. It is a requirement of the Sheriff's Office to have the architect review and approve all invoices prior to the Sheriff's Office paying invoices. The contractor will submit application for payment documents to the Architect prior to the Sheriff’s Office. All invoices submitted to the Sheriff's Office will have a copy pf the application attached indicating the architect’s approval.

The invoice shall show: Location of service; Service performed; Percentage of completion; Period of time service performed. Always show purchase order number on invoices.

Timely payment of invoices is incumbent upon the Hillsborough County Sheriff's Office and in no case shall payment exceed thirty (30) calendar days from date of receipt of a properly approved invoice.

Invoices should be mailed for review and approval to:

Architect: Ranon & Partners Inc.
Mr.Richard Schmitt, AIA
515 West Bay St. Ste. 200
Tampa, Fl 33607-2701

Sheriff: Hillsborough County Sheriff's Office
Attn: Accounts Payable
P.O. Box 3371
Tampa, FL 33601

All progress payments will be subject to a ten (10%) retainer which will be reimbursed with the final payment after acceptance by the Hillsborough County Sheriff's Office.

All applications for partial payment shall be accompanied with schedule of values and indicate amount of work completed as of the application date.

Application for payment should be accompanied by Waivers of Lien from the contractor, all sub-contractors, any and all suppliers of equipment and materials. Payments may not be considered without these documents. A sample form is available upon request.

28. EXCEPTIONS TO PROPOSAL

All proposal submittals must clearly state with specific detail all deviations to the requirements imposed upon the Vendor by the General Terms and Provisions (Part A), the Special Provisions (Part B) and the Technical Specifications (Part C). Such deviations should be stated upon the Proposal Response (Part D) or appended thereto. Vendors are hereby advised that the Hillsborough County Sheriff will only consider proposals that meet the specifications and other requirements imposed upon them by this proposal package. In instances, where an exception is stated upon the Proposal Response (Part D), said proposal will be subject to rejection by the Hillsborough County Sheriff in recognition of the fact that said proposal does not meet the exact requirements imposed upon the Vendor by the General Terms and Provisions (Part A), the Special Provisions (Part B) and the Technical Specifications, (Part C).

SECTION 00700 - GENERAL CONDITIONS OF THE CONSTRUCTION AGREEMENT

1.0 IN GENERAL

A. The Work of the contract shall consist of all construction materials, labor, equipment and services required by the Drawings, Specifications and other Contract Documents, or as reasonably inferable from any or all of the Construction Documents. The Work shall be for the whole or part of the project as described in the Construction Agreement.

B. All materials and workmanship shall be equal to the highest standard and shall be to the satisfaction of the Owner. They shall also be in accordance with current standards of the American Society of Mechanical Engineers, American Society of Testing Materials, The National Board of Fire Underwriters that apply.

C. Substitution of items will not be permitted unless specifically approved by the Owner.

D. Specifications and requirements listed in each “Section” may also have related paragraphs covering additional requirements for each “Section”. Proposers should reference other related paragraphs throughout the proposal document.

2.0 PROPOSERS RESPONSIBILITIES

A. Vendors shall submit two (2) bid documents, one (1) original and one (1) photo copy of the original. Proposers shall provide all the required manufacturer's literature and information pertinent to the proposal document, in duplicate, with their proposal response, at the Proposal Opening time and date.

B. Vendors may contact Mr. Francis A. Navales (813) 247-8069, to view the job site. A walk-thru is scheduled during the Pre-Proposal Conference date. Any questions pertaining to the scope of work should be presented in writing to the Purchasing Office on or before the scheduled Pre-Proposal Conference date.

3.0 OWNER

A. The Owner shall furnish the Contractor with a survey of the project site if required.

B. The Owner shall obtain and pay for the necessary approvals, easements and/or variances required for the construction of the project.

C. If the Contractor fails to complete the work, or part of the work, of the Agreement in accordance with the Construction Documents and fails to correct such discrepancies, the Owner may, by written order, stop work on all or part of the project until the cause has been corrected.

4.0 CONTRACTOR

A. The Contractor shall be solely responsible for the work described in the construction agreement. He shall have complete control over construction methods, techniques and procedures and shall supervise such work with his best skill and attention.

B. The Contractor shall pay for all labor, equipment, materials and services required to complete the work as described in the Construction Agreement as well as building permits and other governmental fees, licenses and inspections necessary for the proper completion of the work.

C. All Contractors and Subcontractors shall be bondable, licensed contractors and will coordinate their work with that of other contractors so that all work will be in harmony with the other contractors on the project.

D. The contractor shall coordinate all the work and the work of the suppliers and subcontractors other works with Sheriff’s Project Manager**.**

E. The Contractor warrants to the Owner that all materials and equipment required to complete the work on the project will be of good quality and new, unless otherwise specified

F. The Contractor shall take care in working near existing areas to protect them from damage. The Contractor shall be responsible for any damage to existing areas and will repair such damage, at his expense, to the Owner's satisfaction.

G. The Contractor shall keep the project site and surrounding area free from waste materials and rubbish which results from his work on the project. Removal, hauling and disposal of rubbish and waste materials shall be the responsibility of the Contractor or as stipulated in the Specifications contained in the Project Manual.

H. The Contractor shall be held responsible for all damages resulting from his, or his subcontractors, errors, omissions or negligence in the performance of the Work of the Construction Agreement.

I. The Contractor shall hold harmless the Owner from and against all claims, damages, losses, expenses, legal fees or other costs resulting from the Contractor's performance of the Work of the Construction Agreement.

J. The Contractor shall provide the Owner access to the Work.

K. The contractor shall schedule and perform the work in such a manner as to result in the least possible disruption to normal operation of on-site Sheriff's activities.

5.0 SUBMITTALS, PRE-QUALIFICATIONS AND RESPONSIBILITIES OF CONTRACTOR

A. Within fifteen (15) calendar days after the Notice of Award, the Contractor shall submit to the Architect, for review and acceptance, a progress schedule covering the activities of work to include all materials, equipment etc. used during the course of the project. The schedule shall also include, start and completion dates of the various stages of the Work, a schedule of submittals, and a schedule of values of the Work. The list shall include Subcontractors and all other such persons and organizations whom the Contractor intends to utilize in performing portions of the Work.

B. Within fifteen (15) calendar days after the execution of the Agreement with the Sheriff, the contractor shall submit to the Architect, for review and acceptance, a preliminary progress schedule covering the activities of work during the first thirty (30) days of the contract. The schedule shall also include, start and completion dates of the various stages of the Work, a preliminary schedule of submittals, and a preliminary schedule of values of the Work. The preliminary schedules will be superseded by final schedules as called for in the Specifications.

C. The Contractor shall also submit within fifteen (15) calendar days after Award, a preliminary schedule of values (lump sum price breakdown) for all of the work which will include quantities and prices of items aggregating the contract price and will subdivide the work into component parts in sufficient details to serve as the basis for progress payments during construction. Such prices shall include an appropriate amount of overhead and profit applicable to each item of work which will be confirmed in writing by the contractor at the time of submittal.

D. Within fifteen (15) calendar days after Notice of Award, but not later than the Pre-Construction Meeting, the contractor shall submit the following:

   a. Shop Drawing Submittals
   b Preliminary Schedule of Value
   c. Bar Chart Schedule

E. Contractor shall prepare and submit all documentation that is required of the owner by the different governmental agencies. One (1) copy of each document will be given to the owner. Copies will be provided to the owner as the requirements occur.

F. Contractor to provide signed and sealed drawings (of the completed project) by Professional Engineer. Reference Part B. 19. i., for additional requirements.

G. Wherein the Contract Documents call for shop drawings or other submittal to be submitted to Architect, Contractor shall submit all shop drawings and other submittals for review.

H. A “Final List” of Subcontractor's and Suppliers of materials, names, addresses and phone numbers. Contractor shall notify the Architect when changes are made to the Subcontractor’s and material suppliers list, as they occur.

I. Vendors shall provide the following information with their Proposal package:

1. Provide proof of either current State of Florida Contractor Certification and/or current Hillsborough County Contractor Licenses with bid proposal or within 48 hours of notification by the Sheriff's Office that such has not been provided.

2. Evidence that the Bidder has at least five (5) years of successful experience in building construction, similar to that required for this project.

3. A preliminary list of all Subcontractors and all other such persons and organizations whom the Contractor intends to utilize in performing portions of the work.

4. Manufacturer's literature for primary products intended by the Proposer to be used for the job.

J. Within fifteen (15) calendar days after the Notice to Proceed date, the Contractor shall submit to the Architect, for review and acceptance, a final progress schedule covering the activities of work during the first thirty (30) calendar days of the Contract. The schedule shall also include, start and completion dates for the various stages of the work, a final schedule of submittals, and a final schedule of values of the work.

K. The Contractor shall prosecute work diligently, and shall complete the entire work ready for use not later than one hundred Eighty (180) calendar days from the date of the Notice to Proceed. The time stated for completion shall include final cleanup of premises. Failure to complete the work in the time stated shall result in an assessment of liquidated damages as indicated in Part B - Paragraph 12. Deduction to be made from Contractor's final pay.

L. The Sheriff's Office **Project Manager** for this job is **Mr. Francis A. Navales, 813-247-8069. The Architect is Mr. Richard Schmitt of Ranon & Partners, Inc., 813-253-3465.** All work accomplished for this project will be reviewed and approved by the Architect and Project Manager or his designated personnel. All work will be coordinated with the Project Manager.

M. The owner will occupy the site and the existing building during the entire work. Normal operation hours of the building by Sheriff's Office employees are from 6:00 am to 6:00 pm weekdays. Contractor may be permitted to work outside of these operating hours (including weekends) provided he coordinates in advance with Sheriffs Office Project Manager. If the contractor desires to work outside of normal operational hours (including weekends) the contractor shall not be entitled to additional monetary compensation or time.

6.0 DISPUTES

A. Any claims or disputes between the contractor and the Owner arising from this Agreement shall be resolved by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association unless both parties agree otherwise.

7.0 TEMPORARY UTILITIES

A. The contractor may use the existing on-site utilities (electrical, water and sanitary utilities) for construction work. Contractor shall coordinate such use with on-site Sheriff's representative.

B. The contractor is responsible to return all the utilities to their original state.

8.0 CHANGES

A. Changes, modifications, additions and/or deletions to the work under this agreement will only be made by written order signed by the Owner and the Contractor. Any such changes will not invalidate this Agreement. The time for project completion and the project cost will be adjusted accordingly.

9.0 TIME

A. If at any time the Contractor is delayed in performing the work under this agreement by Owner-requested changes, labor disputes, fire or other circumstances over which the Contractor has no control, the contract time shall be extended by the same amount of time as was caused by the delay.

10.0 PAYMENTS

A. Payments will be made by the Owner to the Contractor in accordance with the payment schedule stipulated in the Agreement.

B. Payments may be withheld because of any of the following conditions:

1. Defective work not corrected.

2. Failure of the Contractor to make payments to subcontractors or for materials, labor, equipment or services.

3. Continued failure to perform the work in accordance with the terms and conditions set fort in this Agreement.

4. Legal or other claims by third parties relating to the work performed under the Agreement.

C. Final payment shall become due when the Work of the Agreement is completed in accordance with the Construction Documents.

D. Refer to Sheriff's Office Standard language for "Invoicing and Payments", in Part B. 27.

11.0 INSURANCE

Refer to Sheriff's Office standard language for "Certificate of Insurance", Part B. 16.

12.0 CORRECTION OF DEFICIENCIES

A. The Contractor shall promptly correct any deficiencies in the work, any work not in accordance with the construction documents and/or any work rejected by the Owner.

B. The Contractor and Subcontractors shall provide guarantees of workmanship for at least one (1) year from the time of completion of their work under the agreement.

13.0 ENVIRONMENTAL CONTROLS

The cost of all environmental controls shall be at the contractor's expense.

A. During the progress of the work, contractor shall keep the site of the work and other areas used by contractor in a neat and clean condition and free from any accumulation of trash and debris and other materials resulting from demolition operation. Contractor shall dispose of all trash and debris and waste materials of any nature occurring at the work site and establish regular intervals of collection and disposal of such materials and waste. Contractor shall also keep haul and parking lot roads free from dirt, rubbish, and unnecessary obstructions resulting from contractor's operations. Equipment and material storage shall be confined to areas approved by the Project Manager. Disposal of all trash, debris and surplus materials shall be off the site of construction at the contractor's expense, all in accordance with local codes and ordinances governing locations and methods of disposal, in conformance with all applicable safety laws, and to the particular requirements of Subpart H. Section 1926.252 of the OSHA Standards for Construction.

B. Chemicals: If chemicals are used during project construction or furnished for project operation, whether defoliant, soil sterilant, herbicide, pesticide, disinfectant, polymer, reactant or of other classification, they shall be as approved by the U.S. Environmental Protection Agency or the U.S. Department of Agriculture. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instructions of the manufacturer.

14.0 MOBILIZATION

A. Definition and Scope

1. Mobilization shall include the obtaining of all permits, insurance, and bonds; moving onto the site of all plant and equipment; furnishing and erecting plants, temporary buildings, and other construction facilities; all as required for the proper performance and completion of the work. Mobilization shall include, but not be limited to, the following principal items:

2. Move onto the site all contractor's plant and equipment required for first month operations.

3. Submit all required insurance certificates and bonds.

4. Obtain all required permits.

5. Post all OSHA, EPA, Department of Labor, and all other required notices.

6. Provide on-site potable water facilities as required.

7. Have contractor's superintendent at the job site full time.

8. Submit a detailed construction schedule acceptable to the Sheriff as specified.

9. Submit a finalized schedule of values of the WORK in the Sheriff's approved format.

10. Submit a finalized schedule of submittals.

15.0 CLOSEOUT

A. The contractor shall comply with the Closeout requirements of the Contract Documents and Specifications.

B. Completion Procedures:

1. When the contractor believes Substantial Completion has been achieved, the contractor shall request, in writing, to the Architect, that Substantial Completion be recognized as

having been achieved and request that the Sheriff issue a Certificate of Substantial Completion.

C. Prior to making such a request, the contractor must have:

1. Completed all work necessary for the safe, proper and complete use of the facility.

2. Prepared a contractor generated punch list for submission with the request for issuance of a Certificate of Substantial Completion.

D. Upon receipt of the request from the contractor, the Architect shall review the request, the WORK and the above requirements to determine whether the contractor has achieved Substantial Completion. If this review fails to support Substantial Completion, the Architect shall so notify the contractor in writing citing the reasons for rejection. If the Architect determines the contractor has reached Substantial Completion, the following procedures will be followed:

1. The Architect and Project Manager, his/her representative and Sheriff's representatives will review the work and the Contractor's punch list to assure all deficiencies are noted on a final punch list.

2. The Project Manager and Architect will schedule and conduct a pre-final walk-through of the facility with representatives of the Sheriff, the contractor and others, for the purpose of formally reviewing the WORK, the final Punch List and the readiness of the Project for use. A copy of the final Punch List will be provided to all participants and any additional items noted during the walk-through will be added to the list.

3. Final Completion will be deemed to have occurred when all Work is completed including the following:

a. Final inspection will be accomplished by the Project Manager or designated representatives. It will be determined at that time if all conditions of the service have been met. The Awardee, at that time, will have policed the surrounding building and grounds to insure a clean condition exists.

b. Final acceptance will be given after all inspections are satisfied and when all Work required under the Contract Documents have been satisfactorily completed, including but not limited to:

1. All final Punch List items have been corrected, signed off by the Contractor and the Project Manager's representative, and demonstrated to the Sheriff during a final walk through.

2. All updates to the Record Documents have been made and accepted by the Architect and the Project Manager.

3. Demobilization and site clean up are complete.

4. The Architect and Project Manager have issued a Certificate of Final Completion.

5. Executed release of lien by the General Contractor with executed supporting documents has been received.

6. Release of lien by all Sub-contractors (to include Notice to Owner) has been received.

7. Executed Consent of Surety for Final Payment has been received.

8. List of all Sub-Contractors, addresses, telephone numbers and name of person responsible for the work has been received.

E. Warranty/Guarantee periods will commence at the issuance of the Certificate of Completion.

16.0 LIQUIDATED DAMAGES

A. Liquidated damages for each calendar day that each milestone date is not met are as follows:

Milestone	Calendar Days From Notice to Proceed to completion of the Corresponding Milestone	Amount of Liquidated Damages
Final Completion	180	$250.00

Liquidated damages shall be assessed on each milestone separately until that milestone is completed, up to a maximum of $250.00 per day.

17.0 PRODUCTS DELIVERY, STORAGE, HANDLING AND STOCK PILING OF MATERIALS & ON-SITE STORAGE

A. Contractor shall deliver, store and handle products in accordance with the manufacturer's recommendations, using means and methods that will prevent damage, deterioration and loss, including theft. Contractor shall submit to the Project Manager copies of all manufacturers' written recommendations regarding the same. Delivery schedules shall be controlled to minimize long-term storage at the site and to prevent overcrowding of construction spaces. In particular, contractor shall provide delivery/ installation coordination to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and sources of loss.

B. Minimum storage will be allowed on-site. Contractor shall coordinate with and request approval from the Project Manager prior to transporting and delivery of materials.

C. Staging area for the WORK will be at the Jobsite, at 14063 County Road 39, Lithia, Fl 33547-2052. The contractor shall take all precautions to protect existing building, pavements, landscaping, utilities and equipment during construction. Any damage sustained to the facilities and grounds shall be repaired at contractor’s expense.

18.0 TIME OF INSPECTION AND TESTS

A. Samples and tests specimens required under these Specifications shall be furnished and prepared for testing in ample time for the completion of the necessary tests and analyses before said articles or materials are to be used. Performance of the required tests will be by an independent testing company approved by the Sheriff and all costs therefore will be borne by the contractor. Whenever the contractor is ready to cover, or otherwise hide any work under this Contract, the Project Manager shall be notified not less than 24 hours in advance with a request for inspection. No such work of covering shall begin before the 24 hours has elapsed. Failure of the contractor to notify the Project Manager at least 24 hours in advance of any required inspections shall be reasonable cause for the Project Manager to order sufficient delay in the contractor's schedule to allow time for such inspection. The costs of any remedial or corrective work required, and all costs of such delays, including its impact on other portions of the work, shall be borne by the contractor**.**

19.0 SAMPLING AND TESTING

A. When not otherwise specified, all sampling and testing shall be in accordance with the methods prescribed in the current standards of the ASTM, as applicable to the class and nature of the article or materials considered. However, the Project Manager reserves the right to use any generally accepted system of inspection which, in the opinion of the Project Manager will ensure the Project Manager that the quality of the workmanship is in full accord with the Contract Documents.

B. The Sheriff reserves the right to waive tests or quality assurance measures, but waiver of any specific testing or other quality assurance measure, whether or not such waiver is accompanied by a guarantee of substantial performance as a relief from the specified testing or other quality assurance requirements as originally specified, and whether or not such guarantee is

accompanied by performance bond to assure execution of any necessary corrective or remedial work, shall not be construed as a waiver of any technical or qualitative requirements of the Contract Documents.

C. Notwithstanding the existence of such waiver, the Sheriff shall reserve the right to make independent investigations and tests as specified in the following paragraph and failure of any portion of the work to meet any of the qualitative requirements of the Contract Documents, shall be reasonable cause for the Sheriff to require the removal or correction and reconstruction of any such work.

D. In addition to any other inspection or quality assurance provisions that may be specified, the Sheriff shall have the right to independently select, test, and analyze, at the expense of the Sheriff, additional test specimens of tests and analyses shall be considered to determine compliance with the applicable specifications for the materials so tested or analyzed provided that wherever any portion of the work is discovered, as a result of such independent testing or investigation by the Project Manager, which fails to meet the requirements of the Contract Documents, all costs of such independent inspection and investigation and all costs of removal, correction, reconstruction, or repair of any such work shall be borne by the contractor**.**

20.0 RIGHT OF REJECTION

A. The Project Manager or designated representative, acting for the Sheriff**,** shall have the right at all times and places to reject any articles or materials to be furnished hereunder which, in any respect, fail to meet the requirements of the Contract Documents regardless of whether the defects in such articles or materials are detected at the point of manufacture or after completion of the WORK at the site. If the Project Manager or designated representative, through an oversight or otherwise, has accepted materials or WORK which are defective or in any way contrary to the Contract Documents, such materials, no matter in what stage or condition of manufacture, deliverance, or erection, may be rejected.

B. Contractor shall promptly remove or replace rejected articles or materials from the site of the WORK after notifications of rejection.

C. All costs of removal and replacement of rejected articles of materials, as specified herein, shall be borne by the contractor**.**

21.0 PROTECTION OF EXISTING UTILITIES

A. Contractor shall protect all existing utilities and improvements not designated for removal and restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than they were prior to such damage or temporary relocation, all in accordance with requirements specified herein, and in accordance with the requirements of the Contract Documents.

B. Contractor shall protect all utilities and other improvements which may be impaired during construction operations. It shall be contractor's responsibility to ascertain the actual location of all existing utilities and other improvements indicated on the drawings that will be encountered during construction, and to see that such utilities or other improvements are adequately protected from damage due to such operations.

Contractor shall take all possible precautions for the protection of unforeseen utility lines for uninterrupted service and such special protection as may be required by the Project Manager**.**

- **END OF SECTION – 00700**
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SECTION 01010 - SCOPE OF THE WORK

PART 1 - GENERAL

1.1 SUMMARY

A. The contractor shall furnish all necessary labor, materials, tools, equipment, supervision and incidentals necessary to perform all WORK as described herein. The scope of contractor's work shall include but not limited to the following:

1. Construction of Roadway and Observation Tower as per Drawings and Specifications by Ranon & Partners, Inc.

B. Related Work

1. The work of other contracts is described in various contract documents.

- END OF SECTION - 01010

SECTION 01028 - CHANGE ORDER PROCEDURE

PART 1 - GENERAL

1.1 SUMMARY

A. Make such changes in the Work, in the Contract Sum, in the Contract Time of Completion, or any combination thereof, as described in the Change Orders signed by the Owner and the Contractor.

1.2 PROCESSING CHANGE ORDERS

A. Change orders will be numbered in sequence and dated. The change order will describe the changes, changes in the Contract Sum, changes in the Contract Time of Completion and will be signed by the Owner and the Contractor. Request for estimates for possible changes are not to be considered Change Orders or direction to proceed with the proposed changes.

- END OF SECTION - 01028

SECTION 01370 - SCHEDULE OF VALUES

PART 1 - GENERAL

1.1 SUMMARY

A. Unless stipulated in the Construction Agreement, provide a detailed breakdown of the agreed Contract Sum showing values allocated to each of the various parts of the Work, as specified herein and in other provisions of the Contract Documents.

1.2 SUBMITTALS

A. Prior to the first application for payment, submit a proposed schedule of values to the Owner.

1.3 QUALITY ASSURANCE

A. When so required by the Owner, provide copies of the subcontracts or other data acceptable to the Owner substantiating the sums described.

- END OF SECTION - 01370

SECTION 01500 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section describes construction facilities and temporary controls required for the Work.

B. Permanent installation and hookup of the various utility lines are described in other Sections.

1.2 REQUIREMENTS

A. Make arrangements, provide and pay for all construction facilities and temporary controls needed for the Work including, but not limited to:

1. Enclosures such as tarpaulins, and barricades

2. Temporary fencing of the construction site.

PART 2 - PRODUCTS

2.1 TEMPORARY FACILITIES

A. Provide such temporary enclosures, barricades, and fencing as are required for the safe and proper completion of the Work.

PART 3 - EXECUTION

3.1 MAINTENANCE AND REMOVAL

A. Maintain temporary facilities and controls as long as needed for safe and proper completion of the Work.

B. Remove such temporary facilities and controls as rapidly as progress of the Work will permit, or as directed by the Owner.

- END OF SECTION - 01500

SECTION 01545 - CONTRACTOR'S USE OF THE PREMISES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section applies to all situations in which the Contractor or his representatives, including suppliers, subcontractors and employees, enter upon the Owner's property.

1.2 QUALITY ASSURANCE

A. Promptly upon award of the Contract, notify all pertinent personnel regarding requirements of this Section.

1.3 TRANSPORTATION FACILITIES

A. Truck and equipment access:

1. To avoid traffic conflict with vehicles of the Owner and to avoid overloading of streets and driveways elsewhere on or near the Owner's property, limit the access of trucks and equipment to the route specified by the Owner.

2. Provide adequate protection for curbs and sidewalks over which trucks and equipment pass to reach the job site.

B. Contractor's vehicles:

1. Require Contractor's vehicles, vehicles belonging to employees of the Contractor and all other vehicles entering upon the Owner's property in performance of the Work of the Contract to use only the access route specified by the Owner.

2. Do not permit such vehicles to park on any street or other area of the Owner's property except in the parking area specified by the Owner.

- END OF SECTION - 01545

SECTION 01630 - PRODUCT OPTIONS AND SUBSTITUTIONS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section describes procedures for securing approval of proposed product substitutions.

1.2 PRODUCT OPTIONS

A. The Contract is based on standards of quality established in the Contract Documents.

1. In agreeing to the terms and conditions of the Contract, the Contractor has accepted the responsibility to verify that the specified products will be available and to place orders for all required materials in such a timely manner as is needed to meet his agreed construction schedule.

2. The Owner has not agreed to the substitution of materials or methods called for in the Contract Documents, except as they may specifically otherwise state in writing.

B. Where materials and methods are specified by naming one single manufacturer or model number, without stating that equal products will be considered, only the material and method named is approved for incorporation into the Work.

C. Where materials and methods are specified by name or model number, followed by the words "or equal approved in advance by the Owner", materials and methods proposed by the Contractor to be used in lieu of the named materials and methods shall in all ways be equal or exceed the qualities of the named materials and methods.

D. Where the phrase "or equal," or "or equal as approved by the Owner," occurs in the Contract Documents, do not assume that the materials, equipment or methods will be approved as equal unless the item has been specifically so approved for this Work by the Owner.

E. The decision of the Owner shall be final.

1.3 DELAYS

A. Delays in construction arising because of the non-availability of a specified material or method will not be considered by the Owner as justifying an extension of the agreed Time of Completion.

- END OF SECTION - 01630

SECTION 01700 - CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 SUMMARY

A. This Section describes an orderly and efficient transfer of the completed Work to the Owner.

1.2 QUALITY ASSURANCE

A. Prior to requesting inspection by the Owner, use adequate means to assure that the Work is completed in accordance with the specified requirements and is ready for the requested inspection.

1.3 PROCEDURES

A. Submit final Application for Payment or Invoice identifying total adjusted Contract Sum, previous payments and balance due.

B. Final cleaning:

1. Execute final cleaning prior to final inspection.
2. Clean interior and exterior surfaces exposed to view.
3. Clean debris from site.
4. Remove waste and surplus materials, rubbish and construction facilities from the site.

1.4 SUBMITTALS

A. Closeout submittals (two sets in three ring binders) include but are not limited to:

1. Operation and maintenance data and manuals for equipment and other items when so directed by the Owner;
2. Warranties and bonds;

B. Evidence of compliance with requirements of governmental agencies having jurisdiction, including:

1. Certificates of Inspection;
2. Evidence of payment and release of liens from material suppliers and subcontractors;
3. List of subcontractors including names, addresses, and telephone numbers where they can be reached for emergency service.

1.5 INSTRUCTIONS

A. Instruct the Owner in proper operation and maintenance of systems, equipment and similar items which were provided as part of the Work.

- END OF SECTION - 01700

SECTION 01730 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SUMMARY

A. To provide a positive source of information regarding products incorporated into the Work, furnish and deliver to the Owner the data described in this Section and in the pertinent other Sections of these Specifications.

PART 2 - PRODUCTS

2.1 INSTRUCTION MANUALS

A. Submit manufacturer's instruction/maintenance manuals for all materials and equipment installed in the Project to the Owner.

B. If manufacturer's instruction/maintenance manuals are not available, supply a list of equipment showing model number, purchase date, name and address of manufacturer and name and address of installer.

PART 3 - EXECUTION

3.1 SUBMITTALS

A. Submit two (2) sets in 3-ring binder of all required operating instructions, maintenance manuals and other equipment documentation to the Owner prior to Contract Closeout.

- END OF SECTION - 01730

SECTION 042000 - UNIT MASONRY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Concrete masonry units (CMU's).

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For reinforcing steel. Detail bending and placement of unit masonry reinforcing bars. Comply with ACI 315, "Details and Detailing of Concrete Reinforcement."

1.3 QUALITY ASSURANCE

A. Masonry Standard: Comply with ACI 530.1/ASCE 6/TMS 602 unless modified by requirements in the Contract Documents.

1.4 PROJECT CONDITIONS

A. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

B. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

PART 2 - PRODUCTS

2.1 MASONRY UNITS, GENERAL

A. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated in the standard. Do not use units where such defects will be exposed in the completed Work.

2.2 CONCRETE MASONRY UNITS

A. CMUs: ASTM C 90.

1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 2150 psi (14.8 MPa).
2. Density Classification: Normal weight.

2.3 LINTELS

A. Concrete Lintels: Precast or formed-in-place concrete lintels complying with requirements in Division 03 Section "Cast-in-Place Concrete," and with reinforcing bars indicated.

2.4 MORTAR AND GROUT MATERIALS

A. Portland Cement-Lime Mix: Packaged blend of Portland cement and hydrated lime containing no other ingredients.

B. Aggregate for Mortar: ASTM C 144.

C. Aggregate for Grout: ASTM C 404.

D. Water: Potable.

2.5 REINFORCEMENT

A. Uncoated Steel Reinforcing Bars: ASTM A 615/A 615M or ASTM A 996/A 996M, Grade 60 (Grade 420).

B. Masonry Joint Reinforcement, General: ASTM A 951/A 951M.

1. Exterior Walls: Hot-dip galvanized, carbon steel.
2. Wire Size for Side Rods: 0.187-inch (4.76-mm) diameter.
3. Wire Size for Cross Rods: 0.148-inch (3.77-mm) diameter.
4. Spacing of Cross Rods, Tabs, and Cross Ties: Not more than 16 inches (407 mm) o.c.
5. Provide in lengths of not less than 10 feet (3 m).

C. Masonry Joint Reinforcement for Single-Wythe Masonry: Either ladder or truss type with single pair of side rods.

D. Masonry Joint Reinforcement for Multiwythe Masonry:

1. Ladder type with 1 side rod at each face shell of hollow masonry units more than 4 inches (100 mm) wide, plus 1 side rod at each wythe of masonry 4 inches (100 mm) wide or less.

2.6 DAMPPROOFING

A. Non-asbestos asphalt and water emulsion for application by spray or brush, complying with ASTM D-1187, Type ASTM DS-1227 Type III and I.

1. Basis-of-Design Product: Waterban 60P manufactured by the Lambert Corporation.

2.7 EMBEDDED FLASHING MATERIALS

A. Flexible Flashing: Use the following unless otherwise indicated:

1. Copper-Laminated Flashing: 7-oz./sq. ft. (2-kg/sq. m) copper sheet bonded between 2 layers of glass-fiber cloth. Use only where flashing is fully concealed in masonry.

   a. Products: Subject to compliance with requirements, provide one of the following:

      1) Advanced Building Products Inc.; Copper Fabric Flashing.
      2) Dayton Superior Corporation, Dur-O-Wal Division; Copper Fabric Thru-Wall Flashing.
      3) Hohmann & Barnard, Inc.; H & B C-Fab Flashing.
      4) Phoenix Building Products; Type FCC-Fabric Covered Copper.
      5) Sandell Manufacturing Co., Inc.; Copper Fabric Flashing.
      6) York Manufacturing, Inc.; Multi-Flash 500.

B. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.

2.8 MISCELLANEOUS MASONRY ACCESSORIES

A. Weep/Vent Products: Use the following unless otherwise indicated:

1. Cellular Plastic Weep/Vent: One-piece, flexible extrusion made from UV-resistant polypropylene copolymer, full height and width of head joint and depth 1/8 inch (3 mm) less than depth of outer wythe, in color selected from manufacturer's standard.

   a. Products: Subject to compliance with requirements, provide one of the following:

      1) Advanced Building Products Inc.; Mortar Maze weep vent.
      2) Blok-Lok Limited; Cell-Vent.
      3) Dayton Superior Corporation, Dur-O-Wal Division; Cell Vents.
      4) Heckmann Building Products Inc.; No. 85 Cell Vent.
      5) Hohmann & Barnard, Inc.; Quadro-Vent.
      6) Wire-Bond; Cell Vent.

2.9 MORTAR AND GROUT MIXES

A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures, unless otherwise indicated.

1. Do not use calcium chloride in mortar or grout.
2. Use portland cement-lime mortar unless otherwise indicated.
3. For reinforced masonry, use Portland cement-lime mortar.

B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.

C. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification. Provide the following types of mortar for applications stated unless another type is indicated.

1. For masonry below grade or in contact with earth, use Type S.

2. For reinforced masonry, use Type S.
3. For exterior, above-grade, load-bearing walls; for interior load-bearing walls; use Type N.

D. Grout for Unit Masonry: Comply with ASTM C 476.

1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with Table 1.15.1 in ACI 530.1/ASCE 6/TMS 602 for dimensions of grout spaces and pour height.
2. Proportion grout in accordance with ASTM C 476, Table 1 or paragraph 4.2.2 for specified 28-day compressive strength indicated, but not less than 2000 psi (14 MPa).
3. Provide grout with a slump of 8 to 11 inches (203 to 279 mm) as measured according to ASTM C 143/C 143M.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.

3.2 TOLERANCES

A. Dimensions and Locations of Elements:

1. For dimensions in cross section or elevation do not vary by more than plus 1/2 inch (12 mm) or minus 1/4 inch (6 mm).
2. For location of elements in plan do not vary from that indicated by more than plus or minus 1/2 inch (12 mm).
3. For location of elements in elevation do not vary from that indicated by more than plus or minus 1/4 inch (6 mm) in a story height or 1/2 inch (12 mm) total.

B. Lines and Levels:

1. For bed joints and top surfaces of bearing walls do not vary from level by more than 1/4 inch in 10 feet (6 mm in 3 m), or 1/2 inch (12 mm) maximum.
2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2 inch (12 mm) maximum.
3. For vertical lines and surfaces do not vary from plumb by more than 1/4 inch in 10 feet (6 mm in 3 m), 3/8 inch in 20 feet (9 mm in 6 m), or 1/2 inch (12 mm) maximum.
4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2 inch (12 mm) maximum.
5. For lines and surfaces do not vary from straight by more than 1/4 inch in 10 feet (6 mm in 3 m), 3/8 inch in 20 feet (9 mm in 6 m), or 1/2 inch (12 mm) maximum.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm), with a maximum thickness limited to 1/2 inch (12 mm).
2. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch (9 mm) or minus 1/4 inch (6 mm).
3. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm).

3.3 LAYING MASONRY WALLS

A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.

B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less than nominal 4-inch (100-mm) horizontal face dimensions at corners or jambs.

C. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.

D. Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.

E. Fill cores in hollow CMUs with grout 24 inches (600 mm) under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.

3.4 DAMPPROOFING

A. Apply dampproofing emulsion to exterior face of concrete block units, by brushing or spraying at rate of 0.6 to 0.1 L/sq. m (1.5 to 2.5 gal/ 100 sf, as required to produce uniform dry film thickness of not less than 0.4 mm (1.5 (mils). Apply in two coats if necessary to obtain required thickness, allowing time for complete drying between coats.

3.5 MORTAR BEDDING AND JOINTING

A. Lay hollow CMUs as follows:

1. With face shells fully bedded in mortar and with head joints of depth equal to bed joints.
2. With webs fully bedded in mortar in all courses of piers, columns, and pilasters.
3. With webs fully bedded in mortar in grouted masonry, including starting course on footings.
4. With entire units, including areas under cells, fully bedded in mortar at starting course on footings where cells are not grouted.

B. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

3.6 COMPOSITE MASONRY

A. Bond wythes of composite masonry together using the following method:

1. Masonry Joint Reinforcement: Installed in horizontal mortar joints.

a. Where bed joints of both wythes align, use ladder-type reinforcement extending across both wythes.

B. Corners: Provide interlocking masonry unit bond in each wythe and course at corners unless otherwise indicated.

3.7 MASONRY JOINT REINFORCEMENT

A. General: Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch (16 mm) on exterior side of walls, 1/2 inch (13 mm) elsewhere. Lap reinforcement a minimum of 6 inches (150 mm).

1. Space reinforcement not more than 16 inches (406 mm) o.c.
2. Space reinforcement not more than 8 inches (203 mm) o.c. in foundation walls.

3.8 FLASHING, WEEP HOLES, CAVITY DRAINAGE, AND VENTS

A. General: Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated.

B. Install flashing as follows unless otherwise indicated:

1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended by flashing manufacturer.
2. Install metal drip edges beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch (13 mm) back from outside face of wall and adhere flexible flashing to top of metal drip edge.

C. Install weep holes in head joints in exterior wythes of first course of masonry immediately above embedded flashing and as follows:

1. Use specified weep/vent products to form weep holes.
2. Space weep holes 24 inches (600 mm) o.c. unless otherwise indicated.

3.9 REINFORCED UNIT MASONRY INSTALLATION

A. Temporary Formwork and Shores: Construct formwork and shores as needed to support reinforced masonry elements during construction.

1. Construct formwork to provide shape, line, and dimensions of completed masonry as indicated. Make forms sufficiently tight to prevent leakage of mortar and grout. Brace,

tie, and support forms to maintain position and shape during construction and curing of reinforced masonry.

2. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and other loads that may be placed on them during construction.

B. Placing Reinforcement: Comply with requirements in ACI 530.1/ASCE 6/TMS 602.

C. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.

1. Comply with requirements in ACI 530.1/ASCE 6/TMS 602 for cleanouts and for grout placement, including minimum grout space and maximum pour height.
2. Limit height of vertical grout pours to not more than 60 inches (1520 mm).

3.10 REPAIRING, POINTING, AND CLEANING

A. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.

B. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

1. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2A applicable to type of stain on exposed surfaces.

3.11 MASONRY WASTE DISPOSAL

A. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 042000

SECTION 055100 - METAL STAIRS

PART 4 - GENERAL

4.1 SUMMARY

A. Section Includes:

1. Preassembled steel stairs with concrete-filled treads.
2. Railings attached to metal stairs.
3. Handrails attached to walls adjacent to metal stairs.

B. See Division 05 Section "Pipe and Tube Railings" for pipe and tube railings not attached to metal stairs or to walls adjacent to metal stairs.

4.2 PERFORMANCE REQUIREMENTS

A. Delegated Design: Design metal stairs, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

B. Structural Performance of Stairs: Metal stairs shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated.

1. Uniform Load: 100 lbf/sq. ft. (4.79 kN/sq. m).
2. Concentrated Load: 300 lbf (1.33 kN) applied on an area of 4 sq. in. (2580 sq. mm).
3. Uniform and concentrated loads need not be assumed to act concurrently.
4. Stair Framing: Capable of withstanding stresses resulting from railing loads in addition to loads specified above.
5. Limit deflection of treads, platforms, and framing members to L/240 or 1/4 inch (6.4 mm), whichever is less.

4.3 SUBMITTALS

A. Product Data: For metal stairs.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

C. Delegated-Design Submittal: For installed products indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

4.4 QUALITY ASSURANCE

A. NAAMM Stair Standard: Comply with "Recommended Voluntary Minimum Standards for Fixed Metal Stairs" in NAAMM AMP 510, "Metal Stairs Manual," for class of stair designated, unless more stringent requirements are indicated.

1. Preassembled Stairs: Service class.

PART 5 - PRODUCTS

5.1 METALS

A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For components exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

B. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

C. Steel Tubing: ASTM A 500 (cold formed).

D. Uncoated, Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, either commercial steel, Type B, or structural steel, Grade 30 (Grade 205), unless another grade is required by design loads.

5.2 MISCELLANEOUS MATERIALS

A. Provide anchors for embedding units in concrete, either integral or applied to units, as standard with manufacturer.

B. Apply bituminous paint to concealed surfaces of cast-metal units set into concrete.

C. Fasteners: Provide zinc-plated fasteners with coating complying with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 12 for exterior use, and Class Fe/Zn 5 where built into exterior walls. Select fasteners for type, grade, and class required.

D. Shop Primers: Provide primers that comply with Division 09 painting Sections.

E. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.

F. Concrete Materials and Properties: Comply with requirements in Division 03 Section "Cast-in-Place Concrete" for normal-weight, air-entrained, ready-mix concrete with a minimum 28-day compressive strength of 3000 psi (20 MPa) unless otherwise indicated.

G. Welded Wire Fabric: ASTM A 185/A 185M, 6 by 6 inches (152 by 152 mm), W1.4 by W1.4, unless otherwise indicated.

5.3 FABRICATION, GENERAL

A. Provide complete stair assemblies, including metal framing, hangers, struts, railings, clips, brackets, bearing plates, and other components necessary to support and anchor stairs and platforms on supporting structure.

1. Join components by welding unless otherwise indicated.
2. Use connections that maintain structural value of joined pieces.

B. Preassembled Stairs: Assemble stairs in shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations.

C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges. Remove sharp or rough areas on exposed surfaces.

D. Form bent-metal corners to smallest radius possible without impairing work.

E. Weld connections to comply with the following:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds to comply with NOMMA's "Voluntary Joint Finish Standards" for Type 4 welds: good quality, uniform undressed weld with minimal splatter.

F. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners where possible. Locate joints where least conspicuous.

G. Fabricate joints that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

5.4 STEEL-FRAMED STAIRS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Alfab, Inc.
2. American Stair, Inc.
3. Sharon Companies Ltd. (The).

B. Stair Framing:

1. Fabricate stringers of steel plates or channels.
2. Construct platforms of steel plate or channel headers and miscellaneous framing members as needed to comply with performance requirements indicated.
3. If using bolts, fabricate and join so bolts are not exposed on finished surfaces.
4. Where masonry walls support metal stairs, provide temporary supporting struts designed for erecting steel stair components before installing masonry.

C. Metal-Pan Stairs: Form risers, subtread pans, and subplatforms to configurations shown from steel sheet of thickness needed to comply with performance requirements but not less than 0.067 inch (1.7 mm).

1. At Contractor's option, provide stair assemblies with metal-pan subtreads filled with reinforced concrete during fabrication.

5.5 STAIR RAILINGS

A. Steel Tube Railings: Fabricate railings to comply with requirements indicated for design, dimensions, details, finish, and member sizes, including wall thickness of tube, post spacings, and anchorage, but not less than that needed to withstand indicated loads.

1. Rails and Posts: 1-5/8-inch- (41-mm-) diameter top and bottom rails and 1-1/2-inch- (38-mm-) square posts.
2. Picket Infill: 1/2-inch- (13-mm-) square pickets spaced less than 4 inches (100 mm) clear.

B. Welded Connections: Fabricate railings with welded connections. Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.

1. Finish welds to comply with NOMMA's "Voluntary Joint Finish Standards" for Type 2 welds: completely sanded joint, some undercutting and pinholes okay.

C. Form changes in direction of railings by bending.

D. Form curves by bending members in jigs to produce uniform curvature without buckling.

E. Close exposed ends of railing members with prefabricated end fittings.

F. Provide wall returns at ends of wall-mounted handrails.

G. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, end closures, flanges, miscellaneous fittings, and anchors for interconnecting components and for attaching to other work.

1. Connect posts to stair framing by direct welding.

5.6 FINISHES

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Finish metal stairs after assembly.

C. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."

D. Apply shop primer to uncoated surfaces of metal stair components. Comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

PART 6 - EXECUTION

6.1 INSTALLATION

A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal stairs. Set units accurately in location, alignment, and elevation, measured from established lines and levels and free of rack.

B. Install metal stairs by welding stair framing to steel structure or to weld plates cast into concrete unless otherwise indicated.

C. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication.

D. Field Welding: Comply with requirements for welding in "Fabrication, General" Article.

E. Place and finish concrete fill for treads and platforms to comply with Division 03 Section "Cast-in-Place Concrete."

F. Attach handrails to wall with wall brackets. Use type of bracket with predrilled hole for exposed bolt anchorage.

6.2 ADJUSTING AND CLEANING

A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

END OF SECTION 055100

SECTION 055213 - PIPE RAILINGS

PART 7 - GENERAL

7.1 SUMMARY

A. Section Includes:

1. Aluminum pipe railings.
2. Aluminum shelves mounted on railing.

B. See Division 05 Section "Metal Stairs" for steel tube railings associated with metal stairs.

7.2 PERFORMANCE REQUIREMENTS

A. Delegated Design: Design railings, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

B. Structural Performance: Railings shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

1. Handrails and Top Rails of Guards:

a. Uniform load of 50 lbf/ ft. (0.73 kN/m) applied in any direction.
b. Concentrated load of 200 lbf (0.89 kN) applied in any direction.
c. Uniform and concentrated loads need not be assumed to act concurrently.

2. Infill of Guards:

a. Concentrated load of 50 lbf (0.22 kN) applied horizontally on an area of 1 sq. ft. (0.093 sq. m).
b. Infill load and other loads need not be assumed to act concurrently.

C. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

7.3 SUBMITTALS

A. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

B. Samples: For each type of exposed finish required.

C. Delegated-Design Submittal: For installed products indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

PART 8 - PRODUCTS

8.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Aluminum Pipe Railings:

   a. ATR Technologies, Inc.
   b. Blum, Julius & Co., Inc.
   c. Braun, J. G., Company; a division of the Wagner Companies.
   d. CraneVeyor Corp.
   e. Hollaender Manufacturing Company.
   f. Kee Industrial Products, Inc.
   g. Moultrie Manufacturing Company.
   h. Pisor Industries, Inc.
   i. Sterling Dula Architectural Products, Inc.; Div. of Kane Manufacturing.
   j. Superior Aluminum Products, Inc.
   k. Thompson Fabricating, LLC.
   l. Tri Tech, Inc.
   m. Tubular Specialties Manufacturing, Inc.
   n. Tuttle Railing Systems; Div. of Tuttle Aluminum & Bronze, Inc.
   o. Wagner, R & B, Inc.; a division of the Wagner Companies.

8.2 METALS, GENERAL

A. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.

8.3 ALUMINUM

A. Aluminum, General: Provide alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with not less than the strength and durability properties of alloy and temper designated below for each aluminum form required.

B. Extruded Structural Pipe: ASTM B 429/B 429M, Alloy 6063-T6.

C. Plate and Sheet: ASTM B 209 (ASTM B 209M), Alloy 6061-T6.

D. Universal Anchor Plate: Aluminum plate with six holes for mounting screws and a center mounting hole for 5/8” anchor bolt.

   1. Basis-of-Design Product: Wagner / Braun; B1658.

E. Base Flange: Aluminum cover flange with three holes.

   1. Basis-of-Design Product: Wagner / Braun; 1467A.

8.4 MISCELLANEOUS MATERIALS

A. Fasteners: Provide the following:

1. Aluminum Railings: Type 304 stainless-steel fasteners.

B. Aluminum Shelf: Formed 1/8” plate as indicated.

C. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

D. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.

E. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.

8.5 FABRICATION

A. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch (1 mm) unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

B. Form work true to line and level with accurate angles and surfaces.

C. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove flux immediately.
4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.

D. Form changes in direction by bending.

E. Bend members in jigs to produce uniform curvature without buckling or otherwise deforming exposed surfaces.

F. Close exposed ends of railing members with prefabricated end fittings.

G. Provide wall returns at ends of wall-mounted handrails unless otherwise indicated.

H. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise indicated.

8.6 ALUMINUM FINISHES

A. Mechanical Finish: AA-M12 (Mechanical Finish: nonspecular as fabricated).

PART 9 - EXECUTION

9.1 INSTALLATION

A. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.

1. Set posts plumb within a tolerance of 1/16 inch in 3 feet (2 mm in 1 m).
2. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet (5 mm in 3 m).

B. Corrosion Protection: Coat concealed surfaces of aluminum that will be in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.

C. Fasten aluminum shelves to railing with stainless steel fasteners.

D. Anchor posts to metal surfaces as indicated.

E. Anchor railing ends at walls with round flanges anchored to wall construction.

F. Attach railings to wall with wall brackets. Use type of bracket with predrilled hole for exposed bolt anchorage.

G. Secure wall brackets and railing end flanges to building construction as follows:

1. For concrete and solid masonry anchorage, use drilled-in expansion shields and hanger or lag bolts.
2. For hollow masonry anchorage, use toggle bolts.

END OF SECTION 055213

SECTION 074113 - METAL ROOF PANELS

PART 10 - GENERAL

10.1 SUMMARY

A. Section Includes:

1. Standing-seam metal roof panels.

10.2 PERFORMANCE REQUIREMENTS

A. Hydrostatic-Head Resistance: No water penetration when tested according to ASTM E 2140.

B. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.

1. Uplift Rating: UL 90.

C. FMG Listing: Provide metal roof panels and component materials that comply with requirements in FMG 4471 as part of a panel roofing system and that are listed in FMG's "Approval Guide" for Class 1 or noncombustible construction, as applicable. Identify materials with FMG markings.

1. Fire/Windstorm Classification: Class 1A-90.
2. Hail Resistance: MH.

10.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Show fabrication and installation layouts of metal roof panels; details of edge conditions, side-seam and endlap joints, panel profiles, corners, anchorages, trim, flashings, closures, and accessories; and special details. Distinguish between factory- and field-assembled work.

C. Samples: For each type of exposed finish required.

D. Delegated-Design Submittal: For metal roof panel assembly indicated to comply with performance requirements and design criteria, including analysis data and calculations signed and sealed by the qualified professional engineer responsible for their preparation.

E. Manufacturer Certificates: Signed by manufacturer certifying that roof panels comply with energy performance requirements specified in "Performance Requirements" Article.

1. Submit evidence of meeting performance requirements.

F. Maintenance data.

G. Warranties: Samples of special warranties.

10.4 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and approved by manufacturer.

B. Preinstallation Conference: Conduct conference at Project site.

10.5 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace metal roof panel assemblies that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal roof panels that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Finish Warranty Period: 10 years from date of Substantial Completion.

PART 11 - PRODUCTS

11.1 PANEL MATERIALS

A. Aluminum Sheet: Coil-coated sheet, ASTM B 209 (ASTM B 209M), alloy as standard with manufacturer, with temper as required to suit forming operations and structural performance required.

1. Surface: Smooth, flat finish.
2. Exposed Coil-Coated Finish:

a. 2-Coat Fluoropolymer: AAMA 620. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat.

3. Concealed Finish: White or light-colored acrylic or polyester backer finish.

B. Panel Sealants:

1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing; 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.
2. Joint Sealant: ASTM C 920; as recommended in writing by metal roof panel manufacturer.

11.2 FIELD-INSTALLED THERMAL INSULATION

A. Unfaced, Polyisocyanurate Board Insulation: ASTM C 591, Type II, compressive strength of 35 psi (240 kPa), with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, based on tests performed.

11.3 UNDERLAYMENT MATERIALS

A. Self-Adhering, High-Temperature Sheet: 30 to 40 mils (0.76 to 1.0 mm) thick minimum, consisting of slip-resisting, polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.

1. Thermal Stability: Stable after testing at 240 deg F (116 deg C); ASTM D 1970.
2. Low-Temperature Flexibility: Passes after testing at minus 20 deg F (29 deg C); ASTM D 1970.
3. Products: Subject to compliance with requirements, provide one of the following:

    a. Carlisle Coatings & Waterproofing Inc., Div. of Carlisle Companies Inc.; CCW WIP 300HT.
    b. Grace Construction Products; a unit of Grace, W. R. & Co.; Ultra.
    c. Henry Company; Blueskin PE200 HT.
    d. Metal-Fab Manufacturing, LLC; MetShield.
    e. Owens Corning; WeatherLock Metal High Temperature Underlayment.

B. Slip Sheet: Manufacturer's recommended slip sheet, of type required for application.

11.4 MISCELLANEOUS METAL FRAMING

A. Miscellaneous Metal Framing, General: ASTM C 645, cold-formed metallic-coated steel sheet, ASTM A 653/A 653M, G60 (Z180) hot-dip galvanized or coating with equivalent corrosion resistance unless otherwise indicated.

B. Z-Shaped Furring: With slotted or nonslotted web, face flange of 1-1/4 inches (32 mm), wall attachment flange of 7/8 inch (22 mm), and depth required to fit insulation thickness indicated.

1. Nominal Thickness: As required to meet performance requirements.

11.5 MISCELLANEOUS MATERIALS

A. Panel Fasteners: Self-tapping screws, bolts, nuts, self-locking rivets and bolts, end-welded studs, and other suitable fasteners designed to withstand design loads. Provide exposed fasteners with heads matching color of metal roof panels by means of plastic caps or factory-applied coating. Provide EPDM, PVC, or neoprene sealing washers.

B. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil (0.4-mm) dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

11.6 STANDING-SEAM METAL ROOF PANELS

A. General: Provide factory-formed metal roof panels designed to be installed by lapping and interconnecting raised side edges of adjacent panels with joint type indicated and mechanically attaching panels to supports using concealed clips in side laps. Include clips, cleats, pressure plates, and accessories required for weathertight installation.

1. Aluminum Panel Systems: Unless more stringent requirements are indicated, comply with ASTM E 1637.
2. Basis-of-Design Product: Subject to compliance with requirements, provide MBCI; a division of NCI Building Systems, L. P.; Superlock Interlock or comparable product by one of the following:

    a. AEP-Span.
    b. Architectural Building Components.
    c. Architectural Metal Systems.
    d. Architectural Roofing and Siding, Inc.
    e. ATAS International, Inc.
    f. Berridge Manufacturing Company.
    g. Butler Manufacturing; a BlueScope Steel company.
    h. CENTRIA Architectural Systems.
    i. Copper Sales, Inc.
    j. Dimensional Metals, Inc.
    k. Englert, Inc.
    l. Fabral.
    m. Flexospan Steel Buildings, Inc.
    n. Galvamet; Galvacer Building Systems.
    o. IMETCO.
    p. Integris Metals.
    q. McElroy Metal, Inc.
    r. Merchant & Evans.
    s. Metal-Fab Manufacturing, LLC.
    t. Metal Sales Manufacturing Corporation.
    u. Metecno-Morin; Division of Metecno Inc.
    v. Modern Metal Systems, Inc.
    w. Petersen Aluminum Corporation.
    x. Steelox Systems, L.L.C.
    y. Ultra Seam Incorporated.
    z. United Steel Deck Inc.; Subsidiary of Bouras Industries Inc.
    aa. VICWEST; Div. of Jenisys Engineered Products.

3. Profile: Vertical-rib, seamed-joint, as indicated on Drawings.

4. Material: Aluminum sheet, 0.032 inch (0.81 mm) thick.

    a. Exterior Finish: 2-coat fluoropolymer.
    b. Color: As selected by Architect from manufacturer's full range.

5. Clips: Floating to accommodate thermal movement.

    a. Material: Stainless steel.

6. Joint Type: As standard with manufacturer.
7. Panel Coverage: As indicated.

8. Panel Height: As indicated.

11.7 ACCESSORIES

A. Roof Panel Accessories: Provide components approved by roof panel manufacturer and as required for a complete metal roof panel assembly including trim, copings, fasciae, corner units, ridge closures, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal roof panels unless otherwise indicated.

1. Closures: Provide closures at eaves and ridges, fabricated of same metal as metal roof panels.
2. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- (25-mm-) thick, flexible closure strips; cut or premolded to match metal roof panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.
3. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.

B. Flashing and Trim: Formed from same material as roof panels, prepainted with coil coating, minimum 0.018 inch (0.45 mm) thick. Provide flashing and trim as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers. Finish flashing and trim with same finish system as adjacent metal roof panels.

11.8 FABRICATION

A. Fabricate and finish metal roof panels and accessories at the factory to greatest extent possible, by manufacturer's standard procedures and processes and as necessary to fulfill indicated performance requirements. Comply with indicated profiles and with dimensional and structural requirements.

B. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.

C. Fabricate metal roof panel side laps with factory-installed captive gaskets or separator strips that provide a tight seal and prevent metal-to-metal contact, in a manner that will seal weathertight and minimize noise from movements within panel assembly.

D. Sheet Metal Accessories: Fabricate flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of item indicated.

PART 12 - EXECUTION

12.1 UNDERLAYMENT INSTALLATION

A. Self-Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation. Apply at locations indicated on Drawings, wrinkle free, in shingle fashion to shed water, and with end laps of not less than 6 inches (150 mm) staggered 24 inches (600 mm) between courses. Overlap side

edges not less than 3-1/2 inches (90 mm). Roll laps with roller. Cover underlayment within 14 days.

B. Apply slip sheet over underlayment before installing metal roof panels.

12.2 THERMAL INSULATION INSTALLATION

A. Board Insulation: Extend insulation in thickness indicated to cover entire roof. Comply with installation requirements in Division 07 Section "Thermal Insulation."

1. Erect insulation and hold in place with Z-shaped furring members spaced 24 inches (610 mm) o.c. Securely attach narrow flanges of furring members to roof deck with screws spaced 24 inches (600 mm) o.c.

12.3 METAL ROOF PANEL INSTALLATION

A. Standing-Seam Metal Roof Panels: Fasten metal roof panels to supports with concealed clips at each standing-seam joint at location, spacing, and with fasteners recommended by manufacturer.

1. Install clips to supports with self-tapping fasteners.
2. Install pressure plates at locations indicated in manufacturer's written installation instructions.
3. Seamed Joint: Crimp standing seams with manufacturer-approved, motorized seamer tool so clip, metal roof panel, and factory-applied sealant are completely engaged.

12.4 ACCESSORY INSTALLATION

A. General: Install accessories with positive anchorage to building and weathertight mounting and provide for thermal expansion. Coordinate installation with flashings and other components.

1. Install components required for a complete metal roof panel assembly including trim, copings, ridge closures, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
2. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.

12.5 CLEANING

A. Remove temporary protective coverings and strippable films, if any, as metal roof panels are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of metal roof panel installation, clean finished surfaces as recommended by metal roof panel manufacturer. Maintain in a clean condition during construction.

END OF SECTION 074113

SECTION 079200 - JOINT SEALANTS

PART 13 - GENERAL

13.1 SUMMARY

A. Section Includes:

1. Urethane joint sealants.

13.2 SUBMITTALS

A. Product Data: For each joint-sealant product indicated.

B. Samples: For color of joint sealant required.

C. Product test reports.

D. Warranties.

13.3 QUALITY ASSURANCE

A. Testing Agency Qualifications: Qualified according to ASTM C 1021 to conduct the testing indicated.

13.4 WARRANTY

A. Special Installer's Warranty: Manufacturer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

B. Special Manufacturer's Warranty: Manufacturer's standard form in which joint-sealant manufacturer agrees to furnish joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.

1. Warranty Period: Five (5) years from date of Substantial Completion.

PART 14 - PRODUCTS

14.1 MATERIALS, GENERAL

A. Joint-Sealant Colors: As selected by Architect from manufacturer’s full range of colors.

14.2 URETHANE JOINT SEALANTS

A. Urethane Joint Sealant: ASTM C 920.

1. Basis-of-Design Product: Subject to compliance with requirements, provide Sika Corporation; Sikaflex-1a or comparable product by one of the following:

    a. BASF Building Systems.
    b. Bostik, Inc.
    c. Lymtal, International, Inc.
    d. May National Associates, Inc.
    e. Pacific Polymers International, Inc.
    f. Pecora Corporation.
    g. Polymeric Systems, Inc.
    h. Schnee-Morehead, Inc.
    i. Tremco Incorporated.

2. Type: Single component (S).
3. Grade: Nonsag (NS).
4. Class: 25.
5. Uses Related to Exposure: Nontraffic (NT).

14.3 JOINT SEALANT BACKING

A. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin). Type O (open-cell material), Type B (bicellular material with a surface skin) or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

B. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer.

14.4 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 15 - EXECUTION

15.1 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions.

1. Remove laitance and form-release agents from concrete.
2. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

15.2 INSTALLATION

A. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

B. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.
3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

C. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

D. Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

E. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

1. Remove excess sealant from surfaces adjacent to joints.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.

F. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

15.3 JOINT-SEALANT SCHEDULE

A. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.

1. Joint Locations:

a. Control and expansion joints in unit masonry.
b. Perimeter joints between concrete block and frames of doors.
c. Control and expansion joints in ceilings and other overhead surfaces and stucco soffits.

2. Joint Sealant: Urethane.

B. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces.

1. Joint Locations:

a. Control and expansion joints on exposed interior surfaces of exterior walls.
b. Perimeter joints of exterior openings.
c. Other joints as indicated.

2. Joint Sealant: Urethane.

END OF SECTION 079200

SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

PART 16 - GENERAL

16.1 SUMMARY

A. Section Includes:

1. Standard hollow metal doors and frames.

16.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Include elevations, door edge details, frame profiles, metal thicknesses, preparation for hardware, and other details.

PART 17 - PRODUCTS

17.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Amweld Building Products, LLC.
2. Benchmark; a division of Therma-Tru Corporation.
3. Ceco Door Products; an Assa Abloy Group company.
4. Curries Company; an Assa Abloy Group company.
5. Deansteel Manufacturing Company, Inc.
6. Firedoor Corporation.
7. Fleming Door Products Ltd.; an Assa Abloy Group company.
8. Habersham Metal Products Company.
9. Kewanee Corporation (The).
10. Mesker Door Inc.
11. Pioneer Industries, Inc.
12. Security Metal Products Corp.
13. Steelcraft; an Ingersoll-Rand company.
14. Windsor Republic Doors.

17.2 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, CS, Type B; suitable for exposed applications.

B. Frame Anchors: ASTM A 591/A 591M, Commercial Steel (CS), 40Z (12G) coating designation; mill phosphatized.

1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M, hot-dip galvanized according to ASTM A 153/A 153M, Class B.

C. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.

D. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil (0.4-mm) dry film thickness per coat.

17.3 STANDARD HOLLOW METAL DOORS

A. General: Comply with ANSI/SDI A250.8.

1. Design: Flush panel.
2. Core Construction: Manufacturer's standard kraft-paper honeycomb, polystyrene, polyurethane, polyisocyanurate, mineral-board, or vertical steel-stiffener core.

   a. Thermal-Rated (Insulated) Doors: R-value of not less than 6.0 deg F x h x sq. ft./Btu (1.057 K x sq. m/W) when tested according to ASTM C 1363.

3. Vertical Edges for Single-Acting Doors: Beveled edge, 1/8 inch in 2 inches (3 mm in 50 mm).
4. Top and Bottom Edges: Closed with flush or inverted 0.042-inch- (1.0-mm-) thick, end closures or channels of same material as face sheets.
5. Tolerances: SDI 117, "Manufacturing Tolerances for Standard Steel Doors and Frames."

B. Exterior Doors: Face sheets fabricated from metallic-coated steel sheet. Comply with ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:

1. Level 3 and Physical Performance Level A (Extra Heavy Duty), Model 2 (Seamless).

C. Hardware Reinforcement: ANSI/SDI A250.6.

17.4 STANDARD HOLLOW METAL FRAMES

A. General: Comply with ANSI/SDI A250.8.

B. Exterior Frames: Fabricated from metallic-coated steel sheet.

1. Fabricate frames with mitered or coped corners.
2. Fabricate frames as face welded unless otherwise indicated.
3. Frames for Level 3 Steel Doors: 0.053-inch- (1.3-mm-) thick steel sheet.

C. Hardware Reinforcement: ANSI/SDI A250.6.

17.5 FRAME ANCHORS

A. Jamb Anchors:

1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, not less than 0.042 inch (1.0 mm) thick, with corrugated or perforated straps not less than 2 inches (50 mm) wide by 10 inches (250 mm) long; or wire anchors not less than 0.177 inch (4.5 mm) thick.

B. Floor Anchors: Formed from same material as frames, not less than 0.042 inch (1.0 mm) thick, and as follows:

1. Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.

17.6 STOPS AND MOLDINGS

A. Moldings for Glazed Lites in Doors: Minimum 0.032 inch (0.8 mm) thick, same material as door face sheet.

B. Loose Stops for Glazed Lites in Frames: Minimum 0.032 inch (0.8 mm) thick, same material as frames.

17.7 FABRICATION

A. Tolerances: Fabricate hollow metal work to tolerances indicated in SDI 117.

B. Hollow Metal Doors:

1. Exterior Doors: Provide weep-hole openings in bottom of exterior doors. Seal joints in top edges of doors against water penetration.
2. Glazed Lites: Factory cut openings in doors.

C. Hollow Metal Frames: Where frames are fabricated in sections, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.

1. Welded Frames: Weld flush face joints continuously; grind, fill, dress, and make smooth, flush, and invisible.
2. Grout Guards: Weld guards to frame at back of hardware mortises in frames to be grouted.
3. Floor Anchors: Weld anchors to bottom of jambs and mullions with at least four spot welds per anchor.
4. Jamb Anchors: Provide number and spacing of anchors as follows:

a. Masonry Type: Locate anchors not more than 18 inches (457 mm) from top and bottom of frame. Space anchors not more than 32 inches (813 mm) o.c. and as follows:

1) Three anchors per jamb.

D. Hardware Preparation: Factory prepare hollow metal work to receive templated mortised hardware according to the Door Hardware Schedule and templates furnished as specified in Division 08 Section "Door Hardware."

1. Locate hardware as indicated, or if not indicated, according to ANSI/SDI A250.8.
2. Reinforce doors and frames to receive nontemplated, mortised and surface-mounted door hardware.
3. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.

E. Stops and Moldings: Provide stops and moldings around glazed lites where indicated. Form corners of stops and moldings with butted or mitered hairline joints.

1. Single Glazed Lites: Provide fixed stops and moldings welded on secure side of hollow metal work.
2. Provide fixed frame moldings on outside of interior doors and frames.
3. Provide loose stops and moldings on inside of hollow metal work.
4. Coordinate rabbet width between fixed and removable stops with type of glazing and type of installation indicated.

17.8 STEEL FINISHES

A. Prime Finish: Apply manufacturer's standard primer immediately after cleaning and pretreating.

1. Shop Primer: ANSI/SDI A250.10.

PART 18 - EXECUTION

18.1 INSTALLATION

A. Hollow Metal Frames: Comply with ANSI/SDI A250.11.

1. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.

a. Install frames with removable glazing stops located on secure side of opening.
b. Remove temporary braces necessary for installation only after frames have been properly set and secured.
c. Check plumbness, squareness, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
d. Field apply bituminous coating to backs of frames that are filled with grout containing antifreezing agents.

2. Floor Anchors: Provide floor anchors for each jamb that extends to floor, and secure with postinstalled expansion anchors.

a. Floor anchors may be set with powder-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.

3. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout.
4. Installation Tolerances: Adjust hollow metal door frames for squareness, alignment, twist, and plumb to the following tolerances:

a. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
b. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of wall.
c. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
d. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs at floor.

B. Hollow Metal Doors: Fit hollow metal doors accurately in frames, within clearances specified below. Shim as necessary.

1. Non-Fire-Rated Standard Steel Doors:

a. Jambs and Head: 1/8 inch (3 mm) plus or minus 1/16 inch (1.6 mm).
b. Between Bottom of Door and Top of Threshold: Maximum 3/8 inch (9.5 mm).

C. Glazing: Comply with installation requirements in Division 08 Section "Glazing" and with hollow metal manufacturer's written instructions.

1. Secure stops with countersunk flat- or oval-head machine screws spaced uniformly not more than 9 inches (230 mm) o.c. and not more than 2 inches (50 mm) o.c. from each corner.

18.2 ADJUSTING AND CLEANING

A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow metal work that is warped, bowed, or otherwise unacceptable.

B. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.

END OF SECTION 081113

SECTION 087100 - DOOR HARDWARE

PART 19 - GENERAL

19.1 SUMMARY

A. This Section includes the following:

1. Commercial door hardware.

19.2 SUBMITTALS

A. Product Data: For each type of product indicated.

19.3 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and approved by lock manufacturer.

1. Installer's responsibilities include supplying and installing door hardware and providing a qualified Architectural Hardware Consultant available during the course of the Work to consult with Contractor, Architect, and Owner about door hardware and keying.

B. Keying Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system.

19.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver keys to Owner by registered mail or overnight package service to:

1. Francis Navales, Hillsborough County Sheriff’s Office Project Manager, . 3310 South 78th Street, Tampa, Florida 33619.

19.5 COORDINATION

A. Templates: Distribute door hardware templates for doors, frames, and other work specified to be factory prepared for installing door hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

19.6 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Three years from date of Substantial Completion, except as follows:

a. Manual Closers: 10 years from date of Substantial Completion.

PART 20 - PRODUCTS

20.1 SCHEDULED DOOR HARDWARE

A. General: Provide door hardware for each door to comply with requirements in this Section and door hardware sets indicated in door and frame schedule and door hardware sets indicated in Part 3 "Door Hardware Sets" Article.

1. Door Hardware Sets: Provide quantity, item, size, finish or color indicated, and named manufacturers' products.

B. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of door hardware are indicated in Part 3 "Door Hardware Sets" Article. Products are identified by using door hardware designations, as follows:

1. Named Manufacturers' Products: Manufacturer and product designation are listed for each door hardware type required for the purpose of establishing minimum requirements. Manufacturers' names are abbreviated in Part 3 "Door Hardware Sets" Article.

20.2 HINGES, GENERAL

A. Template Requirements: Provide only template-produced units.

B. Hinge Base Metal: Unless otherwise indicated, provide the following:

1. Exterior Hinges: Stainless steel, with stainless-steel pin.

C. Nonremovable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for outswinging corridor doors with locks.

D. Fasteners: Comply with the following:

1. Machine Screws: For metal doors and frames. Install into drilled and tapped holes.

20.3 HINGES

A. Butts and Hinges: BHMA A156.1.

B. Template Hinge Dimensions: BHMA A156.7.

C. Manufacturers:

1. * Hager Companies (HAG).
2. Lawrence Brothers, Inc. (LB).
3. McKinney Products Company; an ASSA ABLOY Group company (MCK).
4. Stanley Commercial Hardware; Div. of The Stanley Works (STH).

20.4 LOCKS AND LATCHES, GENERAL

A. Accessibility Requirements: Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf (22 N).

B. Latches and Locks for Means of Egress Doors: Comply with NFPA 101. Latches shall not require more than 15 lbf (67 N) to release the latch. Locks shall not require use of a key, tool, or special knowledge for operation.

C. Lock Trim: Schlage Athens 606.

D. Backset: 2-3/4 inches (70 mm), unless otherwise indicated.

E. Strikes: Manufacturer's standard strike with strike box for each latchbolt or lock bolt, with curved lip extended to protect frame, finished to match door hardware set.

20.5 MECHANICAL LOCKS AND LATCHES

A. Lock Functions: Function numbers and descriptions indicated in door hardware sets comply with the following:

1. Bored Locks: BHMA A156.2.

B. Bored Locks: BHMA A156.2; Series 4000.

1. Manufacturer:

a. Schlage Commercial Lock Division, an Ingersoll-Rand Company (SCH). (no substitutions)

20.6 LOCK CYLINDERS

A. High Security Lock Cylinders: BHMA A156.30, Schlage Classic Primus.

B. Cylinders: Manufacturer's standard tumbler type, constructed from brass or bronze, stainless steel, or nickel silver, and complying with the following:

1. Number of Pins: Six.

C. Permanent Cores: Manufacturer's standard; finish face to match lockset; with interchangeable cores.

D. Construction Keying: Comply with the following:

1. Construction Cores: Provide construction cores that are replaceable by permanent cores. Provide 5 construction master keys.

a. Furnish permanent cores to Owner for installation.

E. Manufacturer:

1. Schlage Commercial Lock Division; an Ingersoll-Rand Company (SCH). (no substitutions)

20.7 KEYING

A. Keying System: Factory registered, complying with guidelines in BHMA A156.28, Appendix A. Incorporate decisions made in keying conference into grand master key system.

1. Existing System: Master key or grand master key locks to Owner's existing system.

B. Keys: Nickel silver.

1. Quantity: In addition to one extra key blank for each lock, provide five cylinder change keys and five grand master keys.

20.8 OPERATING TRIM

A. Standard: BHMA A156.6.

B. Materials: Fabricate from stainless steel, unless otherwise indicated.

C. Manufacturers:

1. Burns Manufacturing Incorporated (BM).
2. Don-Jo Mfg., Inc. (DJO).
3. Forms + Surfaces (FS).
4. Hager Companies (HAG).
5. Hiawatha, Inc. (HIA).
6. IVES Hardware; an Ingersoll-Rand Company (IVS).
7. * Rockwood Manufacturing Company (RM).
8. Trimco (TBM).

20.9 CLOSERS

A. Door Closers for Means of Egress Doors: Comply with NFPA 101. Door closers shall not require more than 30 lbf (133 N) to set door in motion and not more than 15 lbf (67 N) to open door to minimum required width.

B. Surface Closers: BHMA A156.4. Provide type of arm required for closer to be located on non-public side of door, unless otherwise indicated.

1. Manufacturer:

a. LCN Closers; an Ingersoll-Rand Company (LCN). (no substitutions)

20.10 PROTECTIVE TRIM UNITS

A. Size: 2 inches (50 mm) less than door width.

1. Kick Plates: 16 inches (400 mm) high except where otherwise indicated in “Door Hardware Sets”.

B. Metal Protective Trim Units: BHMA A156.6; beveled top and 2 sides; fabricated from the following material:

1. Material: 0.050-inch- (1.3-mm-) thick stainless steel.
2. Manufacturers:

a. American Floor Products Co., Inc. (AFP).
b. Baldwin Hardware Corporation (BH).
c. Burns Manufacturing Incorporated (BM).
d. Don-Jo Mfg., Inc. (DJO).
e. Hager Companies (HAG).
f. Hiawatha, Inc. (HIA).
g. IPC Door and Wall Protection Systems, Inc.; Div. of InPro Corporation (IPC).
h. IVES Hardware; an Ingersoll-Rand Company (IVS).
i. Pawling Corporation (PAW).
j. * Rockwood Manufacturing Company (RM).
k. Trimco (TBM).

20.11 STOPS AND HOLDERS

A. Stops and Bumpers: BHMA A156.16.

1. Wall Stops: Rockwood 408.

20.12 DOOR GASKETING

A. Standard: BHMA A156.22.

B. General: Provide continuous weather-strip gasketing on exterior doors. Provide stainless steel fasteners.

1. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

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

D. Gasketing Materials: ASTM D 2000 and AAMA 701/702.

E. Manufacturers:

1. Hager Companies (HAG).
2. M-D Building Products, Inc. (MD).
3. National Guard Products (NGP).
4. * Pemko Manufacturing Co. (PEM).
5. Reese Enterprises (RE).
6. Sealeze; a unit of Jason Incorporated (SEL).
7. Zero International (ZRO).

20.13 THRESHOLDS

A. Standard: BHMA A156.21.

B. Accessibility Requirements: Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 1/2 inch (13 mm) high.

C. Thresholds for Means of Egress Doors: Comply with NFPA 101. Maximum 1/2 inch (13 mm) high.

D. Manufacturers:

1. Hager Companies (HAG).
2. M-D Building Products, Inc. (MD).
3. National Guard Products (NGP).
4. *Pemko Manufacturing Company (PEM).
5. Reese Enterprises (RE).
6. Rixson Specialty Door Controls; an ASSA ABLOY Group Company (RIX).
7. Sealeze; a unit of Jason Incorporated (SEL).
8. Zero International (ZRO).

20.14 FABRICATION

A. Base Metals: Produce door hardware units of base metal, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18. Do not furnish manufacturer's standard materials or forming methods if different from specified standard.

B. Fasteners: Provide screws according to commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.

C. Finishes: BHMA A156.18, as indicated in door hardware sets.

PART 21 - EXECUTION

21.1 INSTALLATION

A. Steel Doors and Frames: Comply with DHI A115 Series. Drill and tap doors and frames for surface-applied door hardware according to ANSI A250.6.

B. Mounting Heights: Mount door hardware units at heights indicated unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."

C. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 09 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

D. Thresholds: Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section “Joint Sealants”.

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

1. Door Closers: Unless otherwise required by authorities having jurisdiction, adjust sweep period so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door.

3.2 DOOR HARDWARE SETS

Door Hardware Set No. 1
EACH TO HAVE:

No.	Item	Description		
3 EA	Hinges	BB1199	4.5 x 4.5	630
1 EA	Lockset	ND12D		626
1 EA	Closer	4110		Alm
1 EA	Kick Plate			630
1 EA	Threshold	2005 AV		
1 EA	Wall Stop	408		630
1 EA	Rain Drip	346 C		Alm
1 Set	Door Gaskets	305CR		

Door Hardware Set No. 2
EACH TO HAVE:

3 EA	Hinges	BB1199	4.5 x 4.5	630
1 EA	Latchset	ND10S		626
1 EA	Closer	4110		Alm
1 EA	Kick Plate	16 x 2 ldw		630
1 EA	Threshold	2005 AV		
1 EA	Wall Stop	408		630
1 EA	Rain Drip	346 C		Alm
1 Set	Door Gaskets	305CR		

END OF SECTION 087100

SECTION 088000 - GLAZING

PART 22 - GENERAL

22.1 SUMMARY

A. This Section includes glazing for the following products and applications, including those specified in other Sections where glazing requirements are specified by reference to this Section:

1. Door.

PART 23 - PRODUCTS

23.1 GLASS PRODUCTS

A. Heat-Treated Float Glass: ASTM C 1048; Type I (transparent flat glass); Quality-Q3; of class, kind, and condition indicated.

1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed, unless otherwise indicated.
2. Provide Kind FT (fully tempered) float glass in place of annealed or Kind HS (heat-strengthened) float glass where safety glass is indicated.

23.2 GLAZING GASKETS

A. Dense Compression Gaskets: Molded or extruded gaskets of material indicated below, complying with standards referenced with name of elastomer indicated below, and of profile and hardness required to maintain watertight seal:

1. Neoprene, ASTM C 864.
2. EPDM, ASTM C 864.
3. Silicone, ASTM C 1115.
4. Thermoplastic polyolefin rubber, ASTM C 1115.
5. Any material indicated above.

23.3 MISCELLANEOUS GLAZING MATERIALS

A. General: Provide products of material, size, and shape complying with referenced glazing standard, requirements of manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.

B. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.

C. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus or minus 5.

D. Spacers: Elastomeric blocks or continuous extrusions with a Shore, Type A durometer hardness required by glass manufacturer to maintain glass lites in place for installation indicated.

23.4 FABRICATION OF GLAZING UNITS

A. Fabricate glazing units in sizes required to glaze openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to comply with system performance requirements.

23.5 MONOLITHIC FLOAT-GLASS UNITS

A. Uncoated Clear Float-Glass Units: Class 1 (clear) Kind FT (fully tempered) float glass.

1. Thickness: 6.0 mm.

PART 24 - EXECUTION

24.1 GLAZING

A. Gasket Glazing (Dry): Fabricate compression gaskets in lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during installation.

1. Install gaskets so they protrude past face of glazing stops.

24.2 CLEANING AND PROTECTION

A. Do not apply markers to glass surface. Remove nonpermanent labels, and clean surfaces. Protect glass from contact with contaminating substances resulting from construction operations, including weld splatter. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended by glass manufacturer.

B. Remove and replace glass that is broken, chipped, cracked, or abraded or that is damaged from natural causes, accidents, and vandalism, during construction period.

END OF SECTION 088000

SECTION 092400 - PORTLAND CEMENT PLASTERING

PART 25 - GENERAL

25.1 SUMMARY

A. Section Includes:

1. Exterior portland cement plasterwork on metal lath.
2. Steel framing and furring.

25.2 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide exterior stucco soffits capable of withstanding exterior exposure and the effects of gravity loads and the following stresses without showing cracking of the stucco surfaces or damages to the supporting system.

1. Wind Load: Acting inward or outward, as indicated on the Drawings.

25.3 SUBMITTALS

A. Product Data: For each type of product indicated.

25.4 DELIVERY, STORAGE, AND HANDLING

A. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes.

25.5 PROJECT CONDITIONS

A. Comply with ASTM C 926 requirements.

B. Exterior Plasterwork:

1. Apply and cure plaster to prevent plaster drying out during curing period. Use procedures required by climatic conditions, including moist curing, providing coverings, and providing barriers to deflect sunlight and wind.
2. Apply plaster when ambient temperature is greater than 40 deg F (4.4 deg C).
3. Protect plaster coats from freezing for not less than 48 hours after set of plaster coat has occurred.

PART 26 - PRODUCTS

26.1 METAL LATH

A. Expanded-Metal Lath: ASTM C 847 with ASTM A 653/A 653M, G60 (Z180), hot-dip galvanized zinc coating.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. Alabama Metal Industries Corporation; a Gibraltar Industries company.
   b. CEMCO.
   c. Clark Western Building Systems.
   d. Dietrich Metal Framing; a Worthington Industries company.
   e. MarinoWARE.
   f. Phillips Manufacturing Co.

2. Diamond-Mesh Lath: Flat and Self-furring, 3.4 lb/sq. yd. (1.8 kg/sq. m).

26.2 METAL FRAMING

A. Steel Studs and Runners: ASTM C 645.

1. Minimum Base Metal Thickness: 0.0312 (0.79 mm).
2. Depth: As indicated on Drawings.

B. Hat-Shaped Rigid Furring channels: ASTM C 645, 7/8 inch (22.2 mm) deep.

26.3 ACCESSORIES

A. General: Comply with ASTM C 1063 and coordinate depth of trim and accessories with thicknesses and number of plaster coats required.

B. Metal Accessories:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. Alabama Metal Industries Corporation; a Gibraltar Industries company.
   b. CEMCO.
   c. Clark Western Building Systems.
   d. Dietrich Metal Framing; a Worthington Industries company.
   e. MarinoWARE.
   f. Phillips Manufacturing Co.

2. Casing Beads: Fabricated from zinc; square-edged style; with expanded flanges.
3. Control Joints: Fabricated from zinc; one-piece-type, folded pair of unperforated screeds in M-shaped configuration; with perforated flanges and removable protective tape on plaster face of control joint.
4. Expansion Joints: Fabricated from zinc; folded pair of unperforated screeds in M-shaped configuration; with expanded flanges.

26.4 MISCELLANEOUS MATERIALS

A. Water for Mixing: Potable and free of substances capable of affecting plaster set or of damaging plaster, lath, or accessories.

B. Fiber for Base Coat: Alkaline-resistant glass or polypropylene fibers, 1/2 inch (13 mm) long, free of contaminants, manufactured for use in portland cement plaster.

C. Steel Drill Screws: For metal-to-metal fastening, ASTM C 1002 or ASTM C 954, as required by thickness of metal being fastened; with pan head that is suitable for application; in lengths required to achieve penetration through joined materials of no fewer than three exposed threads.

D. Fasteners for Attaching Metal Lath to Substrates: Complying with ASTM C 1063.

E. Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, not less than 0.0475-inch (1.21-mm) diameter, unless otherwise indicated.

F. Admixture: Thoro System Products Acryl 60.

G. Acoustical Sealant: As specified in Division 07 Section "Joint Sealants"

26.5 PLASTER MATERIALS

A. Masonry Cement: ASTM C 91, Type N.

1. Color for Finish Coats: White.

B. Sand Aggregate: ASTM C 897.

1. Color for Job-Mixed Finish Coats: White.

26.6 PLASTER MIXES

A. General: Comply with ASTM C 926 for applications indicated.

1. Fiber Content: Add fiber to base-coat mixes after ingredients have mixed at least two minutes. Comply with fiber manufacturer's written instructions for fiber quantities in mixes, but do not exceed 1 lb of fiber/cu. yd. (0.6 kg of fiber/cu. m) of cementitious materials.
2. Admixture: Add 1 part admixture to 3 parts of water to mixes.

B. Base-Coat Mixes for Use over Metal Lath: Scratch and brown coats for three-coat plasterwork as follows:

1. Masonry Cement Mixes:

a. Scratch Coat: 1 part masonry cement and 2-1/2 to 4 parts aggregate.
b. Brown Coat: 1 part masonry cement and 3 to 5 parts aggregate, but not less than volume of aggregate used in scratch coat.

C. Job-Mixed Finish-Coat Mixes:

1. Masonry Cement Mix: 1 part masonry cement and 1-1/2 to 3 parts aggregate.

PART 27 - EXECUTION

27.1 EXAMINATION

A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

27.2 PREPARATION

A. Protect adjacent work from soiling, spattering, moisture deterioration, and other harmful effects caused by plastering.

B. Prepare solid substrates for plaster that are smooth or that do not have the suction capability required to bond with plaster according to ASTM C 926.

27.3 INSTALLING METAL LATH

A. Expanded-Metal Lath: Install according to ASTM C 1063.

1. Flat-Ceiling and Horizontal Framing: Install flat diamond-mesh lath.

27.4 INSTALLING ACCESSORIES

A. Install according to ASTM C 1063 and at locations indicated on Drawings.

B. Control Joints: Install control joints at locations indicated on Drawings.

27.5 PLASTER APPLICATION

A. General: Comply with ASTM C 926.

1. Do not deviate more than plus or minus 1/4 inch in 10 feet (6.4 mm in 3 m) from a true plane in finished plaster surfaces, as measured by a 10-foot (3-m) straightedge placed on surface.
2. Finish plaster flush with built-in metal items or accessories that act as a plaster ground unless otherwise indicated.
3. Provide plaster surfaces that are ready to receive field-applied finishes indicated.

B. Ceilings; Base-Coat Mixes for Use over Metal Lath: Scratch and brown coats for three-coat plasterwork; 1/2 inch (13 mm) thick 3/4 inch (19 mm) thick on concrete.

1. Masonry cement mixes.

C. Plaster Finish Coats: Apply to provide float finish to match Architect's sample.

27.6 PLASTER REPAIRS

A. Repair or replace work to eliminate cracks, dents, blisters, buckles, crazing and check cracking, dry outs, efflorescence, sweat outs, and similar defects and where bond to substrate has failed.

27.7 PROTECTION

A. Remove temporary protection and enclosure of other work. Promptly remove plaster from door frames, windows, and other surfaces not indicated to be plastered. Repair floors, walls, and other surfaces stained, marred, or otherwise damaged during plastering.

END OF SECTION 092400

SECTION 099113 - EXTERIOR PAINTING

PART 28 - GENERAL

28.1 SUMMARY

A. This Section includes surface preparation and the application of paint systems on the following exterior substrates:

1. Concrete.
2. Concrete masonry units (CMU).
3. Steel.
4. Galvanized metal.
5. Exterior portland cement (stucco).

28.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples: For each finish and for each color and texture required.

C. Product List: Printout of current "MPI Approved Products List" for each product category specified in Part 2, with the proposed product highlighted.

28.3 QUALITY ASSURANCE

A. MPI Standards:

1. Products: Complying with MPI standards indicated and listed in "MPI Approved Products List."
2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and paint systems indicated.

28.4 EXTRA MATERIALS

A. Furnish extra materials described below that are from same production run (batch mix) as materials applied and that are packaged for storage and identified with labels describing contents.

1. Quantity: Furnish an additional 2 gals. (7.6 L) of each material and color applied.

PART 29 - PRODUCTS

29.1 PAINT, GENERAL

A. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

B. Material Quality: Provide manufacturer's highest-quality paint material of the various coating types specified.

C. Colors: As selected by Architect from manufacturer's full range.

29.2 MASONRY SEALER

A. Acrylic Masonry Sealer.

1. VOC Content: E Range of E "O".

a. Basis-of-Design Product: Benjamin Moore's Acrylic Masonry Sealer 066.

29.3 METAL PRIMERS

A. Alkyd Anticorrosive Metal Primer: MPI #79.

1. VOC Content: E Range of E1.

a. Basis-of-Design Product: Benjamin Moore Super Spec D.T.M. Alkyd Low Lustre Enamel.

B. Waterborne Galvanized-Metal Primer: MPI #134.

1. VOC Content: E Range of E3.
2. Environmental Performance Rating: EPR 3.

a. Basis-of-Design Product: PPG Interior/Exterior WB Industrial Primer.

29.4 EXTERIOR LATEX PAINTS

A. Exterior Latex (Flat): MPI #10 (Gloss Level 1).

1. VOC Content: E Range of E3.

a. Basis-of-Design Product: Benjamin Moore 100% Exterior Flat.

B. Exterior Latex (Semigloss): MPI #11 (Gloss Level 5).

1. VOC Content: E Range of E1.

a. Basis-of-Design Product: PPG Sun-Proof Exterior House and Trim Semi-Gloss Latex.

29.5 EXTERIOR ALKYD PAINTS

A. Exterior Alkyd Enamel (Semigloss): MPI #94 (Gloss Level 5).

1. VOC Content: E Range of E2.

a. Basis-of-Design Product: Sherwin-Williams Classic 99 Interior/Exterior Semi-Gloss Oil.

29.6 ELASTOMERIC COATING

A. Exterior Elastomeric (Low Lustre).

1. VOC Content: E Range of E “O”.

a. Basis-of-Design Product: Benjamin Moore Moorelastic 100% Acrylic Elastomeric Waterproof Coating Low Lustre 055.

PART 30 - EXECUTION

30.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Concrete: 12 percent.
2. Masonry (Clay and CMU): 12 percent.
3. Plaster: 12 percent.

C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

D. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.

1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

30.2 PREPARATION AND APPLICATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.

B. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.

C. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

D. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

E. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

30.3 EXTERIOR PAINTING SCHEDULE

A. CMU Substrates:

1. Latex System: MPI EXT 4.2A.

   a. Prime Coat: Masonry sealer.
   b. Topcoat: Exterior elastomeric (low lustre).

B. Steel Substrates:

1. Alkyd System: MPI EXT 5.1D.

   a. Prime Coat: Alkyd anticorrosive metal primer.
   b. Intermediate Coat: Exterior alkyd enamel matching topcoat.
   c. Topcoat: Exterior alkyd enamel (semigloss).

2. Polyurethane System at Tower supporting chiller piping.

   a. Prime Coat: Alkyd anticorrosive metal.
   b. Intermediate Coat: Matching topcoat.
   c. Topcoat: WB urethane gloss enamel.

C. Galvanized-Metal Substrates:

1. Latex Over Water-Based Primer System: MPI EXT 5.3H.

   a. Prime Coat: Waterborne galvanized-metal primer.
   b. Intermediate Coat: Exterior latex matching topcoat.
   c. Topcoat: Exterior latex (semigloss).

D. Aluminum Substrates:

1. Alkyd System: MPI EXT 5.4F.

   a. Prime Coat: Quick-drying primer for aluminum.
   b. Intermediate Coat: Exterior alkyd enamel matching topcoat.
   c. Topcoat: Exterior alkyd enamel (semigloss).

E. Stucco Substrates:

1. Latex System: MPI EXT 9.1A.

a. Prime Coat: Exterior latex matching topcoat.
b. Intermediate Coat: Exterior latex matching topcoat.
c. Topcoat: Exterior latex (flat).

END OF SECTION 099113

SECTION 099123 - INTERIOR PAINTING

PART 31 - GENERAL

31.1 SUMMARY

A. This Section includes surface preparation and the application of paint systems on the following interior substrates:

1. Concrete masonry units (CMU).
2. Steel.
3. Galvanized metal.

31.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples: For each finish and for each color and texture required.

C. Product List: Printout of current "MPI Approved Products List" for each product category specified in Part 2, with the proposed product highlighted.

31.3 QUALITY ASSURANCE

A. MPI Standards:

1. Products: Complying with MPI standards indicated and listed in "MPI Approved Products List."
2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and paint systems indicated.

31.4 EXTRA MATERIALS

A. Furnish extra materials described below that are from same production run (batch mix) as materials applied and that are packaged for storage and identified with labels describing contents.

1. Quantity: Furnish an additional 2 gals. (7.6 L) of each material and color applied.

PART 32 - PRODUCTS

32.1 PAINT, GENERAL

A. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

B. Colors: As selected by Architect from manufacturer's full range.

32.2 BLOCK FILLERS

A. Interior/Exterior Latex Block Filler: MPI #4.

1. VOC Content: E Range of E2.

a. Basis-of-Design Product: Benjamin Moore Moorcraft Super Craft Latex Block Filler.

32.3 PRIMERS/SEALERS

A. Interior Latex Primer/Sealer: MPI #50.

1. VOC Content: E Range of E2.
2. Environmental Performance Rating: EPR 2.

a. Basis-of-Design Product: Benjamin Moore Regal First Coat Latex Primer / Undercoater.

B. Interior Alkyd Primer/Sealer: MPI #45.

1. VOC Content: E Range of E2.

a. Basis-of-Design Product: Benjamin Moore Super Spec Alkyd Enamel Undercoater and Primer.

32.4 METAL PRIMERS

A. Alkyd Anticorrosive Metal Primer: MPI #79.

1. VOC Content: E Range of E1.

a. Basis-of-Design Product: Benjamin Moore Super Spec D.T.M. Alkyd Low Lustre Enamel.

B. Waterborne Galvanized-Metal Primer: MPI #134.

1. VOC Content: E Range of E3.
2. Environmental Performance Rating: EPR 3.

a. Basis-of-Design Product: PPG Interior / Exterior WB Industrial Primer.

32.5 LATEX PAINTS

A. Interior Latex (Flat): MPI #53 (Gloss Level 1).

1. VOC Content: E Range of E2.
2. Environmental Performance Rating: EPR 1.5.

a. Basis-of-Design Product: Benjamin Moore Interior Latex Flat.

B. Interior Latex (Eggshell): MPI #52 (Gloss Level 3).

1. VOC Content: E Range of E1.
2. Environmental Performance Rating: EPR 1.

a. Basis-of-Design Product: Benjamin Moore Regal Aquavelvet Interior Latex Eggshell.

C. Interior Latex (Semigloss): MPI #54 (Gloss Level 5).

1. VOC Content: E Range of E1.
2. Environmental Performance Rating: EPR 2.

a. Basis-of-Design Product: Benjamin Moore Regal Premium 100% Acrylic Interior Semi-Gloss Finish.

32.6 ALKYD PAINTS

A. Interior Alkyd (Semigloss): MPI #47 (Gloss Level 5).

1. VOC Content: E Range of E2.
2. Environmental Performance Rating: EPR 2.

a. Basis-of-Design Product: Benjamin Moore Moorcraft Super Spec Alkyd Semi-Gloss Enamel.

32.7 FLOOR COATINGS

A. Concrete Hardener and Dustproofer:

1. Sonneborn Lapidolith.

PART 33 - **EXECUTION**

PART 34 - EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Concrete: 12 percent.
2. Masonry (Clay and CMU): 12 percent.
3. Wood: 15 percent.
4. Gypsum Board: 12 percent.

C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

D. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.

1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

34.2 PREPARATION AND APPLICATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.

B. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.

C. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

D. Painting Mechanical and Electrical Work: Paint items exposed in equipment rooms and occupied spaces including, but not limited to, the following:

1. Mechanical Work:

a. Uninsulated metal piping.
b. Uninsulated plastic piping.
c. Pipe hangers and supports.
d. Tanks that do not have factory-applied final finishes.
e. Visible portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets.
f. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.

g. Mechanical equipment that is indicated to have a factory-primed finish for field painting.

2. Electrical Work:

a. Switchgear.
b. Panelboards.
c. Electrical equipment that is indicated to have a factory-primed finish for field painting.

E. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

F. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

34.3 INTERIOR PAINTING SCHEDULE

A. Concrete Substrates, Traffic Surfaces:

1. Concrete Hardener and Dustproofer (Sealer / Hardener):

a. Two Coats: Hardener and Dustproofer.

B. CMU Substrates:

1. Latex System: MPI INT 4.2A.

a. Prime Coat: Interior/exterior latex block filler.
b. Intermediate Coat: Interior latex matching topcoat.
c. Topcoat: Interior latex (semigloss).

C. Steel Substrates:

1. Alkyd System: MPI INT 5.1E.

a. Prime Coat: Alkyd anticorrosive metal primer.
b. Intermediate Coat: Interior alkyd matching topcoat.
c. Topcoat: Interior alkyd (semigloss).

D. Galvanized-Metal Substrates:

1. Latex Over Waterborne Primer System: MPI INT 5.3J.

a. Prime Coat: Waterborne galvanized-metal primer.

END OF SECTION 099123

SECTION 260500 - GENERAL PROVISIONS FOR ELECTRICAL WORK

GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.
Refer to other sections of these specifications for related work, which is not work of this section.

CODES
Work herein shall conform to all applicable laws, ordinances, and to regulations of the local utility companies.
Work shall be in accordance with the latest applicable requirements of:National Fire Protection Association (Fire Code)

National Electrical Code - 2008

Underwriter's Laboratories, Inc.

Florida Building Code –2004 (with 2005 and 2006 supplements)

Local Hillsborough County ordinances or codes

QUALITY ASSURANCE

Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

Provide only materials that are new, and of the type and quality specified. Where Underwriters' Laboratories, Inc. have established standards for such materials, provide only materials bearing the UL label.

SUBSTITUTIONS AND SUBMITTALS

One manufacturer shall be selected for any specific classification of material, equipment or systems (i.e. switchgear, panelboards, transformers, etc.) shall be manufactured by one manufacturer. If more than one manufacturer is submitted, the Engineer shall select one at his discretion.

Submittals for substitutions of electrical equipment or materials shall be made at least ten (10) days prior to the bid date. Prebid substitutions to be made in writing and properly identified. Such substitutions will be identified in an addendum, if acceptable.

Shop drawings shall be reviewed and stamped by contractor, with all items identified and all technical data included. All shop drawings shall be submitted at one time.

The review of shop drawings is a general review subject to the contract documents, and verification of all measurements at the job. Review does not relieve the contractor from the responsibility of shop drawing errors. The contractor shall carefully check and correct all shop drawings prior to submission for review. Each shop drawing submittal shall bear the stamp and signature of the contractor, indicating he has reviewed and corrected all shop drawings.

Product data: Within 35 calendar days after the Contractor has received the Owner's notice to proceed, submit:

Materials list of items proposed to be provided under this Section.

Manufacturer's specifications and other data needed to provide compliance with the specified requirements;

Manufacturer's recommended installation procedures which, when approved by the Engineer, will become the

basis for accepting or rejecting actual installation procedures used on the work.

SHOP DRAWINGS

Shop drawings are required for the following:

Lighting Fixtures, Lamps and Ballasts

Wiring Devices

Branch Circuit Panels & Switchgear

Safety Switches

Lightning Protection System

HANDLING OF MATERIALS

Properly handle, house and protect, from damage and the weather, all materials, equipment and apparatus furnished under this section of the specifications.

Equipment damaged in the course of handling, installation or test shall be replaced or repaired to the satisfaction of the Engineer, without any additional charge.

EXAMINATION OF SITE

Each bidder shall visit the site of the project to acquaint himself with the difficulties which may attend the execution of work as shown on the drawings and as specified herein. The submission of the Bid proposal shall be constructed as evidence that such a visit and investigation has been made. Claims for labor, equipment or materials required for difficulties encountered shall not be considered.

Where exact locations are required for conduit entries, request shop drawings, equipment location drawings, foundation drawings, and any other data required to locate the concealed conduit before the floor slab is poured.

COORDINATION OF THE WORK

Examine architectural drawings for location of suitable openings and chases for the passage of equipment to be installed under this section. The contractor shall be responsible for having suitable openings, blockouts and chases left open until equipment has been properly installed.

RECORD DRAWINGS

Provide a set of prints on which actual installation is shown. Any variations from the contract drawings shall be clearly and completely indicated as the work progresses.

At the completion of the work, prepare a new set of sepia reproducible record drawings, of the work as actually noted on the marked-up prints, including the DIMENSIONED location of all underground conduit. Sepias may be obtained from the Architect at the contractors expense.

ELECTRICAL COORDINATION

Coordinate with all other trades to avoid interferences and conditions which will not allow the installation of equipment, piping, fixtures, etc., as indicated. It shall be the total responsibility of the various contractors to accomplish these installations without extra charges. If, in the opinion of the combined trades, an installation cannot be made as shown, the Architect shall be notified before installation. If interferences are allowed to develop, the Architect shall decide which equipment must be moved, regardless of which was installed first. Special care shall be given to coordinating with ceiling subcontractor where lay-in fixtures and recessed units require a particular ceiling pattern.

Provide power wiring, conduit and connections to all electrically operated equipment and provide disconnecting means, unless specifically indicated otherwise, or furnished as part of factory packaged equipment.

Contractor shall check that motors and equipment have proper voltage to operate on this system and that each motor has thermal overload protection, properly sized to nameplate data.

Contractor shall verify exact equipment locations with final architectural drawings. No extra compensation will be granted for reasonable adjustments to outlet location, as required.

ACCESS TO ELECTRICAL WORK

Provide access panels, per Architect's requirements, for concealed junction boxes, ballasts, disconnect switches, or other electrical devices where concealed, or in areas not otherwise accessible.

ELECTRICAL TEMPORARY FACILITIES

Provide 3-wire grounded power system for construction power.

Provide lighting for all work areas to levels required by OSHA.

Provide double duplex receptacles and 220V outlets in all work areas to allow maximum 50' extension cord to reach any location in building. Extension cords and supplementary lighting for finishing shall be provided by each trade.

Fixtures, which constitute final trim items, illuminated during construction, shall be cleaned and relamped after all trades have completed final inspection punch lists. The cost of this cleaning and relamping during construction shall be paid by the contractor.

Power wiring, disconnect switches, and connections for major construction equipment and machines, such as hoists, crane, belt loader, etc., shall be the responsibility of the contractor, including moving of these services during course of construction.

SYMBOLS

Symbols for outlets and equipment are scheduled on the plans. Some symbols may not be used, others may not be scheduled.

The contractor shall be responsible for request for clarification of unclear or unscheduled symbols prior to bid.

ELECTRICAL IDENTIFICATION

Provide typewritten directory in each branch circuit panel or switchboard and laminated engraved nameplate on exterior trim. Directory shall be in two columns with odd on left and even on right, to match numbers on breakers.

Safety switches, starters, transformers, control devices, and wall switches used to control motors, shall have legend plate of laminated, rigid engraved plastic.

EXCAVATION

Provide excavation, backfill and compaction in conformance with other divisions of the specification.

BASIS FOR WIRING DESIGN

The drawings and specifications describe specific sizes of switches, breakers, fuses, conduits, conductors, motor starters, and other electrical equipment. These sizes are based on specific items of power-consuming equipment, i.e., heaters, lights, motors for fans, compressors, pumps, etc. Wherever the contractor provides power-consuming equipment which differs from drawings and specifications, electrical equipment for such installation shall be changed to proper sizes to match at no additional expense to the owner.

MAINTENANCE MANUAL

Provide maintenance manuals in accordance with provisions of Section 017000 - Execution and Closeout Requirements. Include the following:

Copy of the approved Record Documents for this portion of the work

Copy of all circuit directories

Copies of all warranties and guarantees

Copies of all operating and maintenance manuals for equipment supplied

Approved set of shop drawings

END OF SECTION 260500

SECTION 260503 - BASIC MATERIALS AND METHODS
GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section. Refer to other divisions and sections of these specifications for related work, which is not work of this section.

CATALOG NUMBERS

Catalog numbers indicated with equipment, devices and lighting fixtures are for convenience only. Errors or obsolescence shall not relieve the furnishing of items, which meet the technical description given in specifications noted or required by function designated.

STANDARDS AND SYMBOLS

Equipment and devices to be manufactured to the General Requirements and Specific Requirements where indicated, of NEMA, ANSI and UL.

MATERIALS

RACEWAYS

Steel raceway shall be heavy-wall, threaded, rigid steel, or EMT, either hot-spray, hot-dipped, or electro-galvanized, as required, and bear the UL label.

Flexible conduit to be galvanized steel or galvanized steel with watertight jacket. Fittings used with jacketed conduit to be made specifically for that use with grounding sleeve and jacket seal. Aluminum flexible conduit may be used for lighting fixtures only.

EMT electrical metallic tubing shall be steel, zinc coated inside and out. EMT fittings, set-screw type, shall be all steel type. Sizes 1-1/2" and larger shall have insulating throat.

PVC conduit to be Schedule 40 for direct burial and UL labeled as electrical raceway. Manufactured couplings and fittings to have UL label.

Bushings shall have metal threads and body with locked-in insulating ring in sizes above 1". 1" and smaller may

be all steel or all plastic.

BOXES

Surface mounted boxes in exterior and interior locations or where otherwise shown shall be of cast ferrous or aluminum alloys and shall have threaded hubs with minimum thread depth of 1/2". Box covers shall be galvanized steel, chrome plated steel and cast aluminum. Provide gaskets for outdoor and refrigerated locations. No-hub boxes are not acceptable.

General outlet boxes shall be galvanized steel of unit construction, sized for NEC wire count and conduit entrances. Field sectional or gangable boxes shall not be used.

Junction boxes shall be mounted no more than 6 feet above the finished ceiling.

SWITCHES AND RECEPTACLES

Wall switches shall be specification grade, quiet mechanical A.C. type, rated 20 amps, 277 volts with screw type connections and toggle operator. Contacts shall be silver or silver cadmium.

Common duplex receptacles shall be specification grade, 20 amp grounding type, 125 volts. Contacts shall be dual wipe phosphor bronze. Terminal connector shall have breakout to two circuit connections. Switches and receptacles or other types indicated, but not described in detail, shall conform to the construction quality required for specified items, or as otherwise shown. Finish shall be ivory unless noted or indicated otherwise.

Cover plates for switches, receptacles, and other outlets shall be 302 brushed stainless steel.

Weatherproof receptacles shall be G.F.C.I. type and shall be covered with gasketed stainless steel or cast aluminum cover plate with hinged cover.

Contractor shall be responsible for coordinating all device mounting heights and locations. Any variance from locations shown on drawings shall be noted and the Engineer shall be notified.

SAFETY SWITCHES

Fused safety switches shall be "Heavy Duty", 200,000 A.I.C. quick make and break, cover interlocked with voiding feature, fused as noted or required, cartridge type fuses, voltage rating for system used, current rating as indicated or required. Switches located outdoors shall have NEMA 3, 3R, or 4 enclosure.

Where non fusible disconnect device only is required, a general duty safety switch may be used if horsepower rated for motor service. For fractional horsepower motors, a horsepower rated, toggle type manual motor starter without overload protection may be used.

Provide control interlocks and fuse reducers where required.

FUSES

Fuses shall be cartridge type with dual element for motor feeders, rated for minimum 200,000 amps interrupting current. Current carrying capacity shall be as indicated or required by code. Provide current limiting, Class R fuses.

Provide spare fuses for each safety switch provided. Spare fuses shall be stored within each safety switch enclosure.

WIRE AND CABLE

Conductors for building wire and cable and secondary service cable shall have 600 volt insulation, unless specifically indicated or approved otherwise.

Control and systems wire operating at nominal 120 volts to ground or less shall use 300 volt insulation or as otherwise approved for the system.

Branch circuit wire shall be type THHN/THWN insulation. Service and panel feeders shall have type THHN/THWN insulation, unless noted otherwise.

Wire sizes are AWG copper. Aluminum conductors shall not be acceptable.

BRANCH CIRCUIT PANELS

Panelboards shall be bolt-on connection type with the following features:

Rating for the voltage and current imposed.

4" wiring gutters and minimum width of 20".

Consequent phasing of bus and breaker connection with odd numbers on left, even on right.

Separate neutral and equipment ground buses.

Hinged and lockable door.

Code gauge galvanized steel enclosure with baked enamel finish.

Short circuit rating for current imposed.

Where space is indicated, space shall be bussed for future breakers.

Branch connectors, mounting brackets and other hardware shall be provided for future breakers.

98% copper bus bars (phases, neutral & ground busses).

Individually mounted main breakers.

Circuit breakers shall be quick make and break, thermal-magnetic trip-free with temperature compensation; 2 and 3 pole breakers shall have internal common trip. Minimum 1" wide with separate bus connection for each pole.

Main breakers, where applicable, shall be individually mounted within panelboards.

GROUND RODS

Ground rods shall be 3/4" diam., 10 feet long sectional copperweld steel. Obtain 5-OHMS max. resistance as read with a ground reading megger using two reference rods. If 5-OHMS cannot be attained, drive additional sections until 5-OHMS has been obtained.

ACCEPTABLE MANUFACTURERS

The following manufacturers are acceptable for materials. Catalog numbers set the quality range for all manufacturers indicated:

Heavy wall steel conduit and EMT - U.S. Manufacturers.

Plastic PVC - Carlon.

Fittings - Appleton, Adalet, Killark.

Connectors, couplings, locknuts - Steel City, T&B, Appleton, Crouse-Hinds, Gedney, Raco.

Bushings - O.Z. Co. Type "B" or "BBT", Gedney.

Expansion fittings - O.Z. Co., Appleton.

Wire - U.S. Manufacturers

Switchgear - Square D, Siemens, General Electric, Eaton.

Safety switch - Square D, Siemens, General Electric, Eaton.

Fuses - Bussman.

Panels - Square D, Siemens, General Electric, Eaton.

Outlet Boxes - Steel City GW135/235 and 54151, Raco 695-696 and 191.

Single pole switch 20A, 277 VAC - Hubbell 1221-1, P&S, A-H, Leviton.

3-way switch 20A, 277 VAC - Hubbell 1223-1, P&S, A-H, Leviton.

Duplex receptacle 20A - Hubbell 5362, P & S, A-H, Leviton.

Photocell - Intermatic, Tork, Paragon.

Lamps - Philips, Osram/Sylvania.

Ballasts - Advance, Osram/Sylvania.

EXECUTION OF WORK

DIRECTORIES AND NAMEPLATES

Provide typewritten directory in each branch circuit panel and nameplate on exterior trim. Directory shall be in 2 columns with odd on left and even on right to match on breakers.

Distribution panels and individual switches on this panel, safety switches, starters, transformers, control devices and wall switches used to control motors shall have legend plate on laminated rigid engraved plastic. A list of legends shall be provided by mechanical contractor for devices furnished to the electrical contractor.

MOUNTING HARDWARE

Fasteners shall be designed for specific surface on which they are used. Mounting hardware for exterior use shall be galvanized, plated or brass. Nails shall not be used for mounting electrical outlet boxes or devices. Power drive, or "shot" anchors, shall be threaded type to allow removal of equipment.

AS-BUILT DRAWINGS

Contractor shall install and circuit all electrical work as indicated on drawings unless specific building construction requires the change or rerouting of his work. Contractor shall keep a record of the location of all concealed work, including the underground utility lines, and upon completion of the job, shall supply two sets of reproducible as-built drawings.

RACEWAYS

Raceway in slab-on-grade shall be same as underground. Minimum size of conduit in slab on grade, or underground, shall 3/4". Provide heavy wall rigid galvanized steel conduit for all exposed exterior locations.

Concealed raceway in walls or ceiling spaces shall be galvanized steel, EMT or aluminum. Exposed and

concealed raceways shall be square or parallel with architectural elements. Groups of conduit shall be mounted on common supports at maximum 8' centers. Raceway shall be secured with manufactured clamps, straps or spring steel fasteners. Steel tie wires shall not be used.

Underground conduit used for building power and systems wiring shall be heavy-wall, hot-spray or hot-dipped galvanized rigid steel, or Schedule 40 PVC with manufactured couplings and fittings, all with UL label. All 90 degree bends shall be heavy-wall, hot-dipped galvanized steel.

Underground conduit, which extends outside the structure shall be minimum 24" below finished grade. Conduit within the perimeter of the structure shall be minimum 6" below bottom of slab, unless otherwise indicated.

Schedule 40 PVC, non-metallic conduit shall rise above grade, through slab or into wall cavity with a heavy-wall, hot dipped galvanized steel elbow and riser. Schedule 40 PVC, non-metallic conduit shall not be utilized in above grade locations.

Raceway embedded in concrete shall be hot dipped galvanized steel or non metallic type. Raceways shall have expansion fittings at structural expansion joints or where necessary to compensate for thermal expansion and contraction. Raceways shall not be routed in slab-on-grade, but shall be routed below the floor slab.

Connections to motors and vibrating equipment shall be made with flexible conduit and connectors. Where liquids are present, (i.e., equipment rooms, kitchens, outdoors, etc.) a watertight jacketed flexible conduit shall be used.

EMT fittings for overhead and other concealed work shall be all-steel set-screw type, with insulated throat in fitting 1-1/2" and larger.

Bushings shall have metal threads with locked-in insulating ring, in sizes above 1". Plastic bushings will not be accepted.

Conduit stubs and panel terminations shall be closed during construction with bushings and pennies, or manufactured devices. Tape will not be accepted.

Raceways for homeruns shall be minimum 3/4" between panel and first outlet. All systems raceway shall be 3/4" minimum.

Provide sleeves where conduit passes through concrete structural elements or slabs above grade. Provide O.Z. Gedney fire seals on all required fire rated conduit penetrations.

Provide galvanized pull wire or nylon cord in empty conduit. String will not be accepted. Use maximum of 4-#12 THHN/THWN in 1/2" raceway.

Where galvanized steel conduit is installed in direct contact with earth it shall be coated with two coatings of approved Bitumastic paint prior to installation.

OUTLETS

Outlets, stubs, and receptacles required to match appliances, devices or equipment shall be installed with close correlation with supplier layout and connection diagrams. Drawing locations and indications are approximate only and shall not be used for dimension purposes unless dimensions are shown. Exact dimensions shall be as indicated by the Architect. Extra charges for relocation of outlets due to lack of coordination will not be accepted.

Outlet measurements are made to top of box and may vary 2" to match block joints, or as required by architectural elements. Close coordination shall be made with architectural details.

Boxes in masonry walls shall be deep masonry units or have tile rings to avoid offsets or cutting of blocks to install conduit.

Boxes shall trim to within 1/8" of finished wall. Boxes shall not extend beyond face of wall. Cut openings for boxes in exposed surfaces to exact size with masonry saw.

Provide cast ferrous or aluminum alloy type boxes, with deep threaded internal or external hubs for surface mounted switch, receptacle, or device outlets. No-hub boxes are not acceptable.

Exterior outlet shall be flush mounted and shall have cover of cast aluminum or stainless steel.

All outlet boxes shall be 4" square x 2 ½" deep with single or double gang ring, as required.

General outlet boxes shall be galvanized steel of unit construction sized for NEC wire count and conduit entrances. Field sectional or gangable boxes shall not be used.

Boxes other than wall or surface mount shall be supported and secured as required in NEC 370-13.

WIRE

Circuit and feeder sizes indicated or specified shall not be decreased. Outlets shall be connected to circuits as shown. Unavoidable changes to be made only after Engineer approval.

Color coded branch circuit wiring as indicated:

	120/208V	277/480V
Phase A	Black	Brown
Phase B	Red	Orange
Phase C	Blue	Yellow
Neutral	White	White/Yellow
Ground	Green	Green

Use same color for same phase throughout. Use same colors for switch legs. Travelers shall be pink. Phase rotation shall be same in all panels. Identify large cables with colored tape. Where two conductors from same phase occur in same conduit, provide additional neutral. Second neutral shall have tracer or gray jacket. Minimum branch circuit wire shall be #12 AWG.

Conductor sizes shown are AWG copper. All conductors #8 AWG and larger shall be “stranded”.

Wire counts indicated in system conduit shows general scheme only. Actual count and raceway size shall be provided to accommodate shop drawings for the system to be installed.

All multiple homerun circuits shall be provided with individual neutrals. Shared or common neutrals shall not be utilized.

CONNECTIONS

Splices in branch circuit conductors shall be made with pressure connectors using manufacturer recommended tools, or twist type spring steel pressure type connectors. Splices shall be adequately insulated with connectors, insulators, or plastic electrical tape. Standard wire nuts shall be used only for stranded fixture wire.

Copper cables shall be terminated with copper or bronze pressure connectors or lugs, except where connectors are furnished as integral parts or panels, switches, or circuit breakers and have copper ratings. Cable to bus connections shall be made with bronze bolts and washers.

Junction box and duct splices and joints shall be made with bronze pressure lugs. Joints shall be worked smooth and insulated with plastic electrical tape.

Splices within feeder conductors are not acceptable. Splices below grade are not acceptable.

GROUNDING

Electrical system shall comply with NEC requirements, and power system shall be completely and effectively

grounded.

Provide continuous green grounding conductor from panel grounding bus in all raceways.

Grounding screws on switches and receptacles shall be connected to continuous grounding conductor. Grounding through mounting screws is not acceptable.

SAFETY SWITCHES

Switches shall have appropriate NEMA enclosure for given atmospheric condition.

Interior location where nonfusible disconnect device only is required, a general duty safety switch with horsepower rating may be used. For fractional horsepower motors, a horsepower rated, toggle type manual motor starter with overload protection may be used, unless indicated otherwise.

FUSES

Provide fuses in safety switches as shown or required. All required fuses shall be furnished. Provide 200,000 A.I.C. current limiting fuses.

BRANCH CIRCUIT PANELS

Mount panels in or on walls with top of panel 6'-0" above finished floor, unless dimensioned or indicated otherwise.

EQUIPMENT AND APPLIANCES

Contractor shall verify exact equipment locations with final architectural and associated shop drawings. No extra compensation will be granted for reasonable adjustments to outlets as required.

Provide power wiring, conduit and connections to all electrically operated equipment and provide disconnecting means, unless specifically indicated otherwise or furnished as part of factory packaged equipment.

Contractor shall check all equipment to insure they are of the proper voltage to operate on this system and that each motor has a thermal overload protection, properly sized to nameplate data.

TESTING AND INSPECTION

Provide personnel and equipment, make required tests and secure required approvals, from the Engineer, and governmental agencies having jurisdiction.

Make written notice to the Engineer, 48 hours in advance of each of the following stages of construction:

In the underground condition prior to placing concrete floor slab, when all associated electrical work is in place;

When all rough-in is complete, but not covered;

At completion of the work of this section.

In the Engineer's presence:

Test all parts of the electrical system and prove that all such items provided under this Section function electrically in the required manner.

Cables 600V or less and size No. 3 or larger shall be meggered using an industry-approved “megger” with a minimum of 500V internal generating voltage. All inspection, cleaning and testing procedures shall be in compliance with the recommendations and standards outline in the “Maintenance Testing Specifications for Electrical Power Distribution Equipment and Systems,” latest edition, published by International Electrical Testing

Association (NETA). Readings shall be recorded in the presence of a Design Engineer or an Owner's Representative. Provide a schedule of testing to the Engineer a minimum of three days prior to testing. Insulation resistance test values shall be no less than 250 megaohms.

Measure voltages between phases and between phase wires and neutrals, and report these voltages to the Engineer.

PROJECT COMPLETION

Upon completion of the work, thoroughly clean all exposed portions of the electrical installation, removing all traces of soil, labels, grease, oil, and other foreign material, and using only the type cleaner recommended by the manufacturer of the item being cleaned.

Thoroughly indoctrinate the Owner's operation and maintenance personnel with the operations and maintenance manual required to be submitted.

In the first week the facility is in operation, for at least eight hours per day, provide a qualified foreman and crew to perform such electrical work as may be required.

END OF SECTION 260503

SECTION 264100 - LIGHTNING PROTECTION SYSTEM

PART 35 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and the General Requirements, apply to work of this section.

Refer to other sections of these specifications for related work, which is not work of this section.

SCOPE

The work covered by this section of the specifications consists of furnishing all labor, materials and items of service required for the completion of a functional and unobtrusive lightning protection and grounding system as approved by the Engineer and in strict accordance with this section of the specifications.

If any departure from these specifications or submittal drawings covered below are deemed necessary by the contractor, details of such departures and reasons therefore shall be submitted as soon as practicable to the Engineer for approval. No such departures shall be made without the prior written approval of the Engineer.

The following specifications and standards of the latest issue form a part of this specification: (a) Lightning Protection Institute Installation Code LPI-175; (b) Underwriters' Laboratories Master Label Code 96A; (c) NFPA Code #780.

QUALITY ASSURANCE

The lightning protection system shall conform to the requirements of the Lightning Protection Institute and Underwriters' Laboratories, Inc. standards for lightning protection systems.

The system to be furnished under this specification shall be the standard product of a manufacturer regularly engaged in the production of lightning protection systems and shall be the manufacturer's latest approved design. The equipment manufacturer shall also be a UL listed manufacturer. All materials specified for this work are manufactured by Harger Lightning Protection, Inc., Thompson Lightning Protection, Inc., Heary Brothers Lightning Protection, or approved equal. For approval of manufacturer other than specified, proposed material data, samples and installation drawings must be submitted for review not less than 10 days prior to bid.

SUBMITTALS

Prebid substitutions for approval shall be made in writing and shall also contain samples of pertinent items involved. Samples are for comparison only and shall not become property of the Engineer.

Complete shop drawings showing the type, size and locations of all equipment, grounds and cable routings, etc., shall be submitted to the Engineer for approval prior to start of work. Samples and pertinent catalog data shall be submitted to the Engineer for approval of shop drawings on request.

PRODUCTS

STANDARD

All equipment used in this installation shall be UL approved and labeled in accordance with UL procedures, with each air terminal bearing an "A" label and all main conductors bearing a "B" label at 10'-0" intervals.

All equipment shall be new, the product of a single manufacturer as outlined above, and of a design and construction to suit the application where it is used in accordance with accepted industry standards and L.P.I. and UL code requirements.

EQUIPMENT

All materials shall be copper, aluminum or bronze as indicated on the drawings. All materials shall be UL approved and labeled and of the size, weight, and construction for use on building in accordance with L.P.I. and UL Code requirements for Class I structures and as per manufacturer's recommendations.

Air terminal bases shall be of cast construction with bolted pressure cable connections and shall be securely mounted with stainless steel screws or bolts. Crimp type connectors are not acceptable. Bases shall have a minimum surface contact area of 8.5 square inches.

Cable fasteners shall be of cast construction with pressure cable connectors, electrolytically compatible with the conductor and mounting surface and shall be spaced according to UL, L.P.I. and NFPA Code requirements.

Bonding devices, cable splicers and miscellaneous connectors shall be of cast bronze with bolt pressure connections to cable. Cast or stamped crimp fittings are not acceptable.

All miscellaneous bolts, nuts and screws shall be brass, bronze or stainless steel. Crimp fittings are not acceptable. Stamped bronze materials are not acceptable.

Equipment enclosures less than 3/16" thick shall be provided with individual air terminals bonded to the main coursing conductors.

Equipment on ventilators, etc. shall be protected from corrosion in accordance with L.P.I. and UL requirements.

All miscellaneous bolts, nuts and screws shall be stainless steel.

EXECUTION

INSTALLATION

The installation shall be accomplished by an experienced installer listed with Underwriters' Laboratories as qualified. A master label shall be provided at completion of the installation.

All equipment shall be installed in a neat and workmanlike manner in the most inconspicuous place possible. Coursing and down conductors shall be routed concealed within the building envelopes.

Locate air terminals as required. Take care to insure that all points are within 2'-0" of outside building edge, outside corners and ridge ends, and that maximum spacing does not exceed 20'-0", and that minimum projection above object protected is 10".

Maintain horizontal or downward coursing of main conductor and insure that all bends have at least an 8" radius and do not exceed 90'.

Support all roof coursing conductors, down leads and bonding cables at 3'-0" on center maximum.

Ground electrodes shall be installed within concrete handholes, in unpaved, accessible areas, but in no instance shall they be less than 1'-0" below grade and 2'-0" from foundation wall. Driven rods shall penetrate earth at least 10'-0". All down conductors shall be bonded to the electrodes utilizing exothermic welds.

The electrical system, building steel, metallic water pipes and floor slab rebars shall be bonded together. Maximum resistance not to exceed 5 ohms.

Bond to all metal bodies of conductance on roof with main size conductors as shown and as required by UL codes. These bonds include, but are not limited to, exhaust fans, vents, handrails, metal screens and panels, HVAC units, hatches, skylights, cooling towers, flag poles, antennas, etc., or any large metal body subject to direct stroke or exceeds the height of adjacent air terminals.

Bond to metal bodies of conductance located within 6'-0" of main conductor or other bonded object with approved secondary bonding conductor as shown and as required by UL codes. Such objects include, but are not limited to, flashings, metal coping caps, gravel guards, fascias, roof drains, down-spouts, interior ducts, machinery or piping, etc., or, in general, any isolated body at or below the roof subject to inductance and within 6'-0" of system.

System shall be installed to insure proper code compliance and system certification. Any major variance shall entail resubmittal and new approval.

COORDINATION

The lightning protection installer shall work with other trades to insure a correct, neat and unobtrusive installation.

It shall be the responsibility of the lightning protection installer to assure a sound grounding system and to insure interconnection with other building ground systems.

The lightning protection installer shall coordinate all work with roofing contractor. All materials and installation shall be compatible with roofing materials and approved by the roofing contractor.

Upon completion, a UL inspector shall inspect the installation for appropriate code conformance.

END OF SECTION 264100

SECTION 265000 - LIGHTING/ELECTRICAL WORK

GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary conditions and other Division-1 Specification sections, apply to work of this section.

Refer to other sections of these specifications for related work, which is not work of this section.

MATERIALS

LIGHTING FIXTURES

Fluorescent fixtures shall contain high frequency, electronic type ballasts (10% THD) unless otherwise indicated. Ballast type shall be listed on shop drawings. Reflecting surfaces and body shall be finished with 300 degree baked white enamel or acrylic with minimum of 85% reflectance. Fixture body shall be constructed of #22 gauge steel or heavier. Diffuser door frame shall have built-in light seal, positive action spring type finger operated latches, and concealed reversible hinges. Conduit knockouts shall be provided on top and ends of housing. Diffuser shall be flat, crystal clear, 100% virgin acrylic plastic with hexagonal pyramidal pattern 12 prisms on one side. Nominal 1/8" total thickness.

Fluorescent lamps shall be F032/841XP/ECO, 3000 Lumens, 4100 degrees K unless noted otherwise. The ballast and lamp manufacturer shall provide six year ballast and three year lamp replacement warranty for all “T8” and “T5” ballast/lamp systems.

EXECUTION

FIXTURES

Lighting fixtures shall be installed complete with hangers, couplings, plaster rings, plates, and hardware. The contractor is responsible for all mounting provisions.

Recessed fixtures shall be installed without visible cracks or light leaks between ceiling and fixture trim. Provide gaskets under trim rings of all recessed fixtures mounted in plaster ceilings.

All ballasted fixtures shall be provided with in-line fuses internally mounted.

Fixtures mounted in fire-rated surfaces shall be installed with the material composing the surface completely surrounding the back of the fixture. Such fixtures shall be manufactured specifically to handle the resultant build-up of heat without undue lessening of ballast or lamp life, and without tripping thermal elements. Light fixtures are to be grounded.

Light fixtures and switches shall be grounded.

A complete set of new, unused lamps shall be installed in light fixtures throughout the project for final acceptance. Implementation of this requirement shall be at the sole discretion of the electrical engineer.

END OF SECTION 265000

PLEASE REFER ALSO TO THE FOLLOWING ATTACHMENTS TO RFP 20-08:

ADDENDUM #1 GEOTECHNICAL ENGINEERING SERVICES REPORT
Tierra, Inc.

ADDENDUM #2 CONSTRUCTION DOCUMENTS / DRAWINGS
Ranon & Partners, Inc. Architects
Hamilton Engineering & Surveying, Consulting Civil Engineers
Walter P. Moore & Associaties, Consulting Structural Engineers
Rolley Engineering, Inc., Consulting Electrical Engineers

PART D: ROADWAY AND OBSERVATION TOWER CONSTRUCTION PROJECT **RFP NO. 20-08**

The undersigned understands that this Proposal **must be signed** in ink and that the **unsigned** Proposal will be considered incomplete and subject to rejection by the Hillsborough County Sheriff's Office.

SUBJECT TO DEVIATIONS STATED BELOW, THE UNDERSIGNED, BY THE SIGNATURE EVIDENCED, REPRESENTS THAT THE PROPOSER ACCEPTS THE TERMS, CONDITIONS, MANDATES, AND OTHER PROVISIONS OF THE FOREGOING GENERAL TERMS AND CONDITIONS (PART A), THE SPECIAL PROVISIONS (PART B) AND TECHNICAL SPECIFICATIONS (PART C), SAID DOCUMENTS BEING THE STRICT BASIS UPON WHICH THE SAID PROPOSER MAKES THIS PROPOSAL.

* * * USE INK ONLY * * *

ALL THE FOLLOWING INFORMATION MUST BE HEREUPON GIVEN FOR THIS

PROPOSAL TO BE CONSIDERED BY THE HILLSBOROUGH

COUNTY SHERIFF'S OFFICE

EXCEPTIONS TO PROPOSAL: NOTES - ANY REPRESENTATION (BELOW) OR EXCEPTION(S) MAY CAUSE THIS PROPOSAL TO BE REJECTED BY THE HILLSBOROUGH COUNTY SHERIFF'S OFFICE. **ALL PROPOSERS SHOULD CAREFULLY READ PARAGRAPH 28 OF THE SPECIAL PROVISIONS (PART B)**.

1. EXCEPTIONS: The following represents every deviation (itemized by number) to the foregoing General Terms and Provisions (Part A) and the Special Conditions (Part B) and Technical Specifications (Part C), upon which this Proposal is based, to wit:

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2. PROPOSAL RESPONSE for **Roadway and Observation Tower Construction Project** RFP No. 20-08

V Name & Address
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The undersigned has carefully examined the proposal package and all conditions affecting the cost of the commodity/service required by the Hillsborough County Sheriff's Office.

The undersigned certifies that any exceptions to the proposal specifications are noted on the attached exceptions form. All specifications not noted thereon are as requested. The undersigned also understands that any exceptions presented after the award, may be cause for cancellation of award.

We hereby propose to furnish the commodity/services described herein in accordance with the proposal package, except as noted on attached Exceptions Form:

Roadway Cost: $_____

Observation Tower Cost: $_____

Total Net Proposal: $_____

Indemnification
See Part B - 15. $ + 50.00

Total Net Proposal: $_____

It is estimated to take approximately _____ calendar days after the Notice of Award to complete this project in accordance with the requirements and specifications of the contract. Furthermore, proposer acknowledges job completion shall be accomplished within one hundred eighty (180) calendar days after the Notice to Proceed Date.

SUB-CONTRACTORS LIST, TO INCLUDE ALL SUPPLIERS OF MATERIALS
(Attach additional pages as required)

1. Firm name _____

   Mailing Address _____

   Phone _____

   Contact _____

2. Firm name _____

   Mailing Address _____

   Phone _____

   Contact _____

3. Firm name _____

   Mailing Address _____

   Phone _____

   Contact _____

4. Firm name _____

   Mailing Address _____

   Phone _____

   Contact _____

5. Firm name _____

   Mailing Address _____

   Phone _____

   Contact _____

6. Firm name _____

   Mailing Address _____

   Phone _____

   Contact _____

Provide a detailed list of materials, equipment and supplies and describe your approach to start-up, construction process and completion of the project. You may attach additional pages as required to explain.

Attach here a company overview including current financial statement.

List below the names and qualifications of management personnel who will be assigned to this job. State their duties as they will relate to the job. Attach resumes behind this form.

REFERENCES

Participants shall provide references on this form. References shall be facilities currently or previously under contract where same or similar commodities/services have been provided.

1. Firm Name _____
   Contact _____
   Title _____

   Mailing Address _____

   Phone _____

2. Firm Name _____
   Contact _____
   Title _____

   Mailing Address _____

   Phone _____

3. Firm Name _____
   Contact _____
   Title _____

   Mailing Address _____

   Phone _____

4. Firm Name _____
   Contact _____
   Title _____

   Mailing Address _____

   Phone _____

5. Firm Name _____
   Contact _____
   Title _____

   Mailing Address _____

   Phone _____

. PROPOSAL TITLE: ROADWAY AND OBSERVATION TOWER CONSTRUCTION PROJECT RFP NO.20-08

V E N D O R Name & Address

Check One:
Proprietorship ( )
Partnership ( )
Corporation ( )

REMIT TO ADDRESS IF DIFFERENT THAN ABOVE:

_____

FEDERAL TAXPAYER IDENTIFICATION NUMBER: _____

TELEPHONE NUMBER: (_____)_____FAX NO. _____

CONTACT PERSON:_____EMAIL _____

OUR COMPANY HAS BEEN IN BUSINESS UNDER ITS PRESENT NAME SINCE:_____

At this present time we understand all requirements and state that as a serious bidder we will comply with all the stipulations included in the proposal package.

The above named Proposer affirms and declares:

1. that the Proposer is of lawful age and that no other person, firm or corporation has any interest in this proposal or in the contract proposed to be entered into;

2. that this proposal is made without any understanding, agreement, or connection with any other person, firm or corporation making a proposal for the same purpose, and is in all respects fair and without collusion or fraud;

3. that the Proposer is not in arrears to Hillsborough County or the Sheriff upon debt or contract and is not a defaulter, as surety or otherwise, upon any obligation to the Sheriff;

4. that no officer or employee or person whose salary is payable in whole or in part from the County Treasury is, shall be or become interested, directly or indirectly, surety or otherwise in this proposal; in the performance of the contract; in the supplies, materials, equipment, and work or labor to which they relate; or in any portion of the profits thereof.

The undersigned agrees that this proposal shall remain open for an evaluation period of sixty (60) calendar days following the opening of proposals.

Respectfully submitted,

PLEASE PRINT- By_____
Title_____
Date_____

Signature_____

STATEMENT OF NO PROPOSAL

NOTE: If you do not intend to respond to this requirement, please return this form immediately to:

HILLSBOROUGH COUNTY SHERIFF
PURCHASING
P.O. BOX 3371
TAMPA, FL 33601

We, the undersigned, have declined to respond to RFP 20-08 for the following reasons:

_____Specifications too "tight", i.e., geared toward one brand or manufacturer only (explain below).

_____Insufficient time to respond to the Invitation for Proposal.

_____We do not offer this product or an equivalent.

_____Our Product schedule would not permit us to perform.

_____Unable to meet specifications.

_____Unable to meet Bond Requirements.

_____Specifications unclear (explain below).

_____Remove our company from your vendor list.

_____Other (specify below)

_____

_____

_____

We understand that if the "no proposal" letter is not executed and returned, our name may be deleted from the list of qualified vendors for the Hillsborough County Sheriff's Office.

PLEASE PRINT- COMPANY NAME_____

COMPANY OFFICER_____

TELEPHONE NUMBER_____

DATE_____

SIGNATURE_____

REQUEST FOR PROPOSAL 20-08
ROADWAY & OBSERVATION TOWER CONSTRUCTION PROJECT
PROPOSAL EVALUATION MATRIX

Firm Name_____

		MAXIMUM POINTS	SCORE
1.	Price	25	_____
2.	References	25	_____
3.	Proposed Time for completion	25	_____
4.	Years of experience providing the RFP Service	25	_____
	Total	100	_____

What are the three primary reasons you have for recommending this firm?

_____

_____

_____

What are the three primary reasons for rejecting this firm?

_____

_____

_____

General comments/clarifications/questions_____

Below is an example of the information required on your Proposal package.
You may use this as a label if you wish.

DAVID GEE, SHERIFF
2008 E. 8TH AVE
TAMPA FL 33605

ATTN: PURCHASING

BID PAKCAGE SUBMITTAL

RFP/BID # 20-08

OPENING DATE/TIME:
November 21, 2008 3:00 PM

PROPOSAL TITLE: WCHPTS ROADWAY AND OBSERVATION TOWER CONSTRUCTION PROJECT

PROPOSAL NUMBER: RFP 20-08

ADDENDUM #1 GEOTECHNICAL ENGINEERING SERVICES REPORT

Tierra, Inc.

TIERRA

July 2, 2008

Rañon & Partners, Inc.
515 West Bay Street, Suite 200
Tampa, Florida 33606-2701

Attn: Mr. Richard Schmitt

RE: Geotechnical Engineering Services Report
HCSO South Training Facility
Hillsborough County, Florida
Tierra Project No.: 6511-08-137

Mr. Schmitt:

Tierra, Inc. has completed the geotechnical engineering study for the above referenced project. The results of the study are provided herein.

Should there be any questions regarding the report, please do not hesitate to contact our office at (813) 989-1354. Tierra would be pleased to continue providing geotechnical services throughout the implementation of the project. We look forward to working with you and your organization on this and future projects.

Respectfully Submitted,

TIERRA, INC.

7-29-08

Sean C. Olsen, E.I.
Geotechnical Engineer Intern

Kevin H. Scott, P.E.
Senior Geotechnical Engineer
Florida License No. 65514

7351 Temple Terrace Highway • Tampa, FL 33637
Phone (813) 989-1354 • Fax (813) 989-1355

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PROJECT DESCRIPTION

Project Information

The project site is located at the Hillsborough County Sheriff's Office (HCSO) South Training Facility at 14063 County Road 39 in Lithia, Florida. The project, as we understand it based on discussions with Rañon & Partners, Inc. (R&P), consists of constructing an approximately 20 to 25 foot tall observation tower, a roadway addition for vehicle training, and a stormwater management pond. Based on information provided by the client, the proposed roadways will also provide access to future building construction by fire department vehicles. The tower will be constructed with a combination of load bearing concrete masonry units at the ground floor with structural steel components at the upper level.

We understand that it is desired for the proposed tower structure to be supported on shallow foundations with a slab-on-grade floor system. Structural and grading information were not available at the time of this report. However, for the proposed tower, we have assumed that the maximum wall loads will not exceed 7 kips per lineal foot and that finished grades will be within 3 feet of existing site grades.

Scope of Services

The objective of our study was to obtain information concerning subsurface conditions at the site in order to obtain data from which to base engineering estimates and recommendations in each of the following areas:

1. Feasibility of utilizing shallow foundations and slab on grade for support of the proposed observation tower structure.
2. Design parameters required for the anticipated shallow foundation system including allowable bearing pressures, foundation sizes, foundation levels and soil compaction recommendations.
3. General pavement section recommendations and construction considerations.
4. General suitability of materials for use as structural fill, pavement subgrade fill and general backfill.
5. General location and description of potentially deleterious materials discovered in the borings which may interfere with construction progress, pavement and structure performance, including existing fills or surficial organics.
6. Identification of groundwater levels.
7. Estimation of Seasonal High Groundwater Table (SHGWT).

8. Estimate the infiltration rate of the near surface soils within the vicinity of the proposed drainage area.

In order to meet the preceding objectives, we provided the following services:

1. Reviewed readily available published soils and topographic information. This published information was obtained from the appropriate Florida Quadrangle Map published by the United States Geological Survey (USGS) and the Soil Survey of Hillsborough County, Florida, published by the United States Department of Agriculture (USDA) Soil Conservation Service (SCS).

2. Executed a program of subsurface exploration consisting of borings, subsurface sampling and field testing. We performed three (3) Standard Penetration Test (SPT) borings to depths ranging from approximately 30 to 40 feet below the existing site grades. One (1) SPT boring was performed within the vicinity of the proposed observation tower. The remaining two (2) SPT borings were performed within the vicinity of the proposed pond area. We also performed six (6) auger borings to depths ranging from approximately 6 to 11 feet below the existing site grades in the proposed vehicle training roadway areas.

3. Visually classified the samples in the laboratory using the Unified Soil Classification System (USCS). Identified soil conditions at each boring location.

4. Collected groundwater level measurements and estimated SHGWT.

5. Performed one (1) Double Ring Infiltration (DRI) test within the footprint of the proposed drainage area. The DRI test was performed at a depth of approximately 2 feet below the existing ground surface.

6. Prepared this formal engineering report in accordance with the scope of services herein that summarizes the course of study pursued, the field and laboratory data generated, subsurface conditions encountered and our engineering recommendations in each of the pertinent topic areas.

The scope of our services did not include an environmental assessment for determining the presence or absence of wetlands or hazardous or toxic materials in the soil, bedrock, groundwater, or air, on or below or around this site. The scope of our services did not include determination of the potential for sinkhole activity. Any statements in this report or on the boring logs regarding odors, colors, unusual or suspicious items or conditions are strictly for the information of our client.

SUBSURFACE CONDITIONS

General Site Information

The project site is currently a grassed field located north of the existing driving pad at the HCSO South Training Facility. Based on the "Lithia, Florida" United States Geological Survey (USGS) Quadrangle Map, ground elevations at the project site range from approximately +110 feet to +125 feet National Geodetic Vertical Datum of 1929 (NGVD 29).

Hillsborough County Web Soil Survey

Based on a review of the Hillsborough County Web Soil Survey, it appears that there is one (1) primary soil-mapping unit noted within the vicinity of the project site – Arents (Unit 4).

Arents consist of nearly level, heterogeneous soil material. This material has been excavated, reworked, and reshaped by earthmoving equipment. Arents are near urban centers, phosphate mining operations, major highways, and sanitary landfills. Arents do not have an orderly sequence of soil layers. This map unit is not associated with or confined to a particular kind of soil.

It should be noted that information contained in the USDA/NRCS Web Soil Survey may be outdated. Recent development in the project vicinity may have modified existing soils or surface/subsurface drainage, and therefore may not be reflective of current subsurface conditions.

Subsurface Conditions

The subsurface conditions within the footprint of the proposed structure and drainage retention areas were explored using three (3) SPT borings performed to depths ranging from approximately 30 to 40 feet below the existing site grades. In addition, six (6) auger borings were performed within the proposed pavement areas to depths of approximately 6 to 11 feet below existing grades. The borings were located in the field by a representative of Tierra using the site plan provided by R&P and measuring distances from existing site features. The locations of the SPT and auger borings were recorded with the aid of handheld Global Positioning System (GPS) equipment. The approximate boring locations are presented in the Appendix.

The SPT borings were performed with the use of a truck-mounted drill rig using Bentonite Mud drilling procedures. The soil sampling was performed in general accordance with American Society for Testing and Materials (ASTM) Test Designation D-1586 titled "Penetration Test and Split-Barrel Sampling of Soils." SPT resistance N-values were taken continuously from the ground surface to a depth of 10 feet and at intervals of 5 feet thereafter. The soil samples were classified in the field and transported to our laboratory for review.

The soil strata encountered in the borings performed at the proposed development site are summarized in the following table:

Stratum Number	Soil Description	USCS Symbol
1	Light Gray to Brown Fine SAND to Fine SAND With Silt	SP/SP-SM
2	Brown Silty SAND	SM
3	Green to Gray Clayey SAND to Sandy CLAY	SC/CL

The subsurface soil stratification is of a generalized nature to highlight the major subsurface stratification features and material characteristics. The soil profiles included in the Appendix should be reviewed for specific information at individual boring locations. These profiles include soil descriptions, stratifications and penetration resistances. The stratifications shown on the soil profiles represent the conditions only at the actual boring location. Variations may occur and should be expected between boring locations. The stratifications represent the approximate boundary between subsurface materials and the actual transition may be gradual.

Groundwater Information

The groundwater levels, when encountered in the borings performed, were encountered at depths ranging from approximately 3½ to 10 feet below the existing grades. Based on the topographic information on the site plan provided by R&P, the groundwater level appeared to be encountered at elevations ranging from approximately +106 to +113 feet Mean Sea Level (MSL). It should be noted that groundwater levels tend to fluctuate during periods of prolonged drought and extended rainfall and may be affected by man-made influences. In addition, a seasonal effect will also occur in which higher groundwater levels are normally recorded in rainy seasons. Based on the soil and groundwater conditions encountered in the borings at the time of this study, the seasonal high groundwater table at the boring locations is anticipated to be within 1 to 7 feet of the existing ground surface (or approximately elevations +110 to +114 MSL). In two of the auger borings the groundwater table was not encountered. As a result, GNE is shown on the soil profiles sheet in the Appendix.

Based on the Hillsborough County Soil Survey and a review of aerial photography, it appears the project site has been reworked in the past due to mining operations in the area. Thus, the borings performed during this study were performed in disturbed soil material in which historic SHGWT indicators are often difficult to discern or are nonexistent. Therefore, to obtain a more accurate estimate of the SHGWT at this site, piezometers would need to be installed so that the groundwater level could be monitored over a period of time.

Double Ring Infiltration Testing

One (1) DRIT was performed within the proposed drainage retention area. The test was performed in the vicinity of SPT boring B-1 at a depth of approximately 2 feet below grade. A hardpan layer was encountered at a depth of 4 feet below grade in the auger boring performed in conjunction with the DRIT. This "hardpan" layer will inhibit the infiltration of water into the soil. The result of the test is provided in the table below.

Test No.	Test Depth (ft)*	SHGWT Depth (ft)*	Infiltration Rate (ft/day)
DRIT-1	2	2	0.30
*Below the existing ground surface			

It should be noted that the infiltration rate reported above is not factored and it is up to the designer to apply an appropriate factor of safety.

EVALUATION AND RECOMMENDATIONS

General

Based on our understanding of the proposed loading conditions for the proposed observation tower, the foundations and floor slab may bear on the soils encountered in the borings. The results of the borings generally indicate that the encountered sandy soils will provide adequate support for lightly loaded shallow foundation systems when prepared in accordance with the recommendations provided herein.

The building pad area for the proposed structure will require proper site preparation before development. Our recommendations for site preparation, foundation design criteria, settlement, floor slabs, pavement design, and construction considerations are presented in the following report sections.

It should be noted that if design loads or foundation criteria deviates from what is stated in this report, Tierra should be given the opportunity to review the new information and amend our recommendations, if necessary.

A "hardpan" layer consisting of semi-cemented sands was encountered from approximately at the ground surface to a depth of approximately 6 feet below grade in borings HA-1, HA-2, HA-3 and B-1. However, it did not appear to be encountered in borings B-2, B-3, HA-4, HA-5, or HA-6. The inconsistent location and depth of this semi-cemented material may be due to past ground modification that occurred during mining operations that took place in the vicinity of the proposed project. Further subsurface investigation should be completed within the stormwater management area once pond locations are finalized to determine the extents of the hardpan layer. This hardpan layer, if continuous within the pond area, will

inhibit the infiltration of water into the soil. **The depth to hardpan will be a factor in the design of the stormwater management area.**

Based on the results of the geotechnical exploration, excavation of this hardpan layer within the pond limits should be anticipated by the Contractor. In addition, excavation through the hardpan, if necessary, may be difficult and the Contractor should anticipate the need for specialized equipment for excavating this material.

Site Preparation

Prior to construction, the location of any existing underground utilities within the construction area should be established. Material suitable for re-use may be stockpiled; however, any material stockpiled for re-use shall be tested for conformance to material specifications as indicated in the following sections of this report. Provisions should then be made to relocate any interfering utility lines within the construction area to appropriate locations and backfilling the resulting excavations with compacted structural fill. In this regard, it should be noted that if abandoned underground pipes are not properly removed or plugged, they might serve as conduits for subsurface erosion, which subsequently may result in excessive settlement.

As a minimum, it is recommended that the clearing operations extend to the depth needed to remove material considered deleterious at least 5 feet beyond the proposed development area. Deleterious materials to be removed include roots, organics, pavement and structure remnants including existing foundations, stumps or other buried or surface debris. Fill placement and subgrade preparation recommendations are presented in the "Construction Considerations" Section of this report.

Foundation Recommendations

The boring performed within the proposed observation tower area generally encountered loose to medium dense sandy soils within the foundation influence zone.

Based on our evaluation and analyses, these soils should be capable of supporting the assumed structural loads on shallow foundations after proper subgrade preparation, including vibratory surface compaction.

Based on the anticipated construction and assumed loading conditions, field results indicate shallow foundations may be designed for a net maximum allowable bearing pressure of 2,500 psf. The foundation and floor slab should bear on properly placed and compacted cohesionless (sand) structural fill. The existing near surface sandy soils should be improved by compaction after clearing operations to improve foundation support and reduce total and differential settlement. Compaction criteria are presented under the Construction Considerations Section of this report.

All footings should be embedded so that the bottoms of the foundations are a minimum of 18 inches below adjacent compacted grades on all sides. Strip or wall footings should be a

minimum of 24 inches wide. The minimum footing size should be used regardless of whether or not the foundation loads and allowable bearing pressure dictate a smaller size. The minimum footing size will tend to provide adequate bearing area to develop bearing capacity and account for minor variations in the bearing materials. All footings should be constructed in a dry fashion. All footing excavations should be covered during rain events. Uncovered excavations may become oversaturated and difficult to compact during rain events. Surface run-off water should be drained away from the excavations and not allowed to pond. It is important that the structural elements be centered on the footings such that the load is transferred evenly unless the footings are proportioned for eccentric loads.

Settlement

The settlement of shallow foundations supported on the compacted sand fill and natural sandy soils should occur rapidly after loading. Thus, the expected settlement based on the assumed loads should occur during construction as dead loads are imposed. Provided the recommended site preparation operations are properly performed and the recommendations previously stated are utilized, the total settlement of wall should not exceed approximately 1 inch. Differential settlement is estimated to be on the order of ½ of the total settlement. Differential settlement of this magnitude is usually considered tolerable for the anticipated construction; however, the tolerance of the proposed structure to the predicted total and differential settlement should be confirmed by the structural engineer. If final loading conditions differ from the loads assumed above, Tierra should be given the opportunity to review and amend (if necessary) our recommendations.

Floor Slab

The proposed floor slab may be safely supported as a slab-on-grade provided any undesirable materials are removed and replaced with controlled structural fill. It is recommended that the floor slab bearing soils be covered by a lapped polyethylene sheeting in order to minimize the potential for floor dampness which can affect the performance of glued tile and carpet (if any are used). This membrane should consist of a minimum six (6) mil single layer of non-corroding, non-deteriorating sheeting material placed to minimize seams and to cover all of the soil below the building floor. This membrane should be cut in a cross shape for pipes or other penetrations; the membrane should extend to within one-half inch of all pipes or other penetrations. All seams of the membrane should be lapped at least 12 inches. Punctures or tears in the membrane should be repaired with the same or compatible material.

Pavement Considerations

In general, following the completion of the recommended clearing and grading operations and fill placement, the compacted fill and existing shallow sandy soils should be acceptable for construction and support of a flexible (limerock, crushed concrete, or shell base) type pavement section.
Any fill utilized to elevate the cleared pavement areas to subgrade elevation should consist of reasonably clean (maximum 12% passing #200 sieve) fine sands uniformly compacted to

a minimum depth of 12 inches to a minimum density of 95% of the modified Proctor maximum dry density. In flexible pavement areas we recommend 12 inches of Type B stabilized subgrade (LBR = 40%) below the base course. Traffic should not be allowed on the subgrade as the base is placed to avoid rutting. The subgrade should be checked for soundness and be true to line and grade prior to the placement of the base course.

The choice of pavement base type will depend on final pavement grades. If a minimum separation of 18 inches between the bottom of the base and the seasonal high groundwater level is obtained, then a limerock, shell, or crushed concrete base can be utilized. A soil cement base should be utilized if the separation between final grade and the seasonal high groundwater is a minimum of 12 inches and less than 18 inches. Base material elevations should not be designed for saturated conditions. If the designer wishes to have base material closer than 12 inches to the SHGWT, then an underdrain system should be utilized that will maintain the 12 inches of separation. The SHGWT should be re-established relative to a known elevation prior to setting final grades. Limerock and shell base material should meet Florida Department of Transportation (FDOT) requirements including compaction to a minimum density of 98% of the Modified Proctor maximum dry density and a minimum Limerock Bearing Ratio (LBR) of 100%. Crushed concrete should be graded in accordance with FDOT Standard Specification Section 901-5. As a guideline for pavement design, we recommend that the base course be a minimum of 6 inches thick in parking areas and 8 inches thick in heavily traveled drives. Before paving, the base should be checked for soundness.

The asphaltic concrete structural course should consist of at least one and one-half (1½) inches of Type S or SP asphaltic concrete material. The asphaltic concrete should meet standard FDOT material requirements and placement procedures as outlined in the current FDOT Standard Specifications for Road and Bridge Construction.

As an alternate to the above referenced flexible pavement design, a rigid (concrete) pavement design could be used. The concrete should have a minimum compressive strength of 4,000 psi at 28 days when tested in accordance with ASTM C-39. Based on our experience, a minimum thickness of five (5) inches should be utilized for standard duty applications and a minimum thickness of six (6) inches should be utilized for heavy-duty applications. The steel reinforcement within the concrete pavement should be designed by the project civil engineer. The subgrade soils should be compacted to a minimum density of 98% of the modified Proctor maximum dry density.

Actual pavement section thickness should be provided by the design civil engineer based on traffic loads, volume, and the owners design life requirements. The above sections represent minimum thicknesses representative of typical load and construction practices and as such periodic maintenance should be anticipated. All pavement materials and construction procedures should conform to the FDOT or appropriate city or county requirements.

CONSTRUCTION CONSIDERATIONS

General

It is recommended that Tierra be retained to provide observation and testing of construction activities involved in the foundation earthwork, and related activities of this project. Tierra cannot accept any responsibility for any conditions, which deviate from those described in this report, if not engaged to provide construction observation and testing for this project.

Fill Placement and Subgrade Preparation

The following are our recommendations for overall site preparation and mechanical densification work for the construction of the proposed improvements based on the anticipated construction and our test boring results. These recommendations should be used as a guideline for the project general specifications prepared by the design engineer.

1. The site should be cleared; this primarily includes removing any deleterious materials currently on the site. It is recommended that any undesirable material be removed to the satisfaction of Tierra prior to beginning construction at the site. It is important that tree stumps and pavement and structure remnants, if present, be removed in their entirety. Resulting excavations should be backfilled with compacted structural fill. As a minimum, it is recommended that the clearing operations extend at least five (5) feet beyond the development perimeters.

2. Following the clearing operations, the exposed existing subgrade should be evaluated and proofrolled as directed by representatives of Tierra to confirm that all unsuitable materials have been removed. The proofrolling should consist of compaction using a fully loaded 2 cubic yard capacity front end loader or equivalent.

3. Careful observations should be made during proofrolling to help identify any areas of soft yielding soils that may require over excavation and replacement. Prior to any field operations, we recommend that a survey be performed (including pictures and/or video) of any existing structures (including utilities) that may be located adjacent to the proposed construction. Documentation should be made of any foundation problems or cracking noted by the owners and the survey crews. It is also recommended that a follow-up photographic survey be performed after the construction activities.

4. The proofrolling equipment should make a minimum of eight (8) overlapping passes over the structure and pavement areas with the successive passes aligned perpendicular. It is recommended that within the structure and pavement areas, the existing ground, to a minimum depth of one (1) foot below stripped grade, be compacted to a dry density of at least 95% of the modified Proctor maximum dry density.

5. Following satisfactory completion of the initial compaction, the structure and pavement areas may be brought up to finished subgrade levels, if needed, using

structural fill. Imported fill should consist of fine sand with less than 12% passing the No. 200 sieve, free of rubble, organics, clay, debris and other unsuitable material. Fill should be tested and approved prior to acquisition. Approved sand fill should be placed in loose lifts not exceeding 12 inches in thickness and should be compacted to a minimum density of 95% of the modified Proctor maximum dry density. Density tests to confirm compaction should be performed in each fill lift before the next lift is placed.

6. Prior to beginning compaction, soil moisture contents may need to be controlled in order to facilitate proper compaction. If additional moisture is necessary to achieve compaction objectives, then water should be applied in such a way that it will not cause erosion or removal of the subgrade soils. Moisture content within the percentage range needed to achieve compaction is recommended prior to compaction of the existing ground and fill.

7. After compaction and proofrolling, the observation tower foundation excavations can begin. Foundation excavations should be observed by the geotechnical engineer or a representative to explore the extent of any loose, soft, or otherwise undesirable materials. If the foundation excavations appear suitable as load bearing materials, the bottom of the foundation excavations should be compacted to a minimum density of 95% of the modified Proctor maximum dry density for a minimum depth of one (1) foot below the bottom of the footing depth, as determined by field density compaction tests.

8. Backfill soils placed adjacent to footings or walls should be carefully compacted with a light rubber-tired roller or vibratory plate compactor to avoid damaging the footings or walls. Approved sand fills to provide foundation embedment constraint should be placed in loose lifts not exceeding 6 inches and should be compacted to a minimum density of 95% of the modified Proctor maximum dry density.

9. If soft pockets are encountered in the footing excavations, the unsuitable materials should be removed and the proposed footing elevation may be re-established by backfilling. This backfilling may be done with a very lean concrete or with a well-compacted, suitable fill such as clean sand, gravel, or crushed FDOT No. 57 or FDOT No. 67 stone. Sand backfill should be compacted to a minimum density of 95% of the modified Proctor maximum dry density.

10. Immediately prior to reinforcing steel placement, it is suggested that the bearing surfaces of all footing and floor slab areas be compacted using hand operated mechanical tampers. In this manner, any localized areas, which have been loosened by excavation operations, should be adequately re-compacted.

Tierra should be retained to provide on-site observation of earthwork and ground modification activities. Density tests should be performed in the top one (1) foot of compacted existing ground, each fill lift, and the bottom of foundation excavations. It is important that Tierra be retained to observe that the subsurface conditions are as we have

discussed herein, and that foundation construction ground modification and fill placement is in accordance with our recommendations.

Drainage and Groundwater Concerns

The groundwater levels presented in this report are the levels that were measured at the time of our field activities. Fluctuation should be anticipated. We recommend that the Contractor determine the actual groundwater levels at the time of the construction to determine groundwater impact on this construction procedure.

Water should not be allowed to collect in the foundation excavation, on the floor slab areas, or on prepared subgrades of the construction either during or after construction. Undercut or excavated areas should be sloped toward one corner to facilitate removal of any collected rainwater, groundwater, or surface runoff. Positive site drainage should be provided to reduce infiltration of surface water around the perimeter of the building and beneath the floor slabs. The grades should be sloped away from the building and surface drainage should be collected and discharged such that water is not permitted to infiltrate the backfill and floor slab areas of the building.

Structural Fill

All materials to be used for structural fill or backfill should be evaluated and, if necessary, tested by Tierra prior to placement to determine if they are suitable for the intended use. Suitable fill materials should consist of fine to medium sand with less than 12% passing the No. 200 sieve, free of rubble, organics, clay, debris and other unsuitable material.

In general, the fine sands of Stratum 1 may be moved and used for grading purposes, site leveling, general engineering fill, structural fill and backfill in other areas, provided the fill is free of organic materials, clay, debris or any other material deemed unsuitable for construction and evaluated against engineering fill requirements.

Excavations

In Federal Register, Volume 54, No. 209 (October 1989), the United States Department of Labor, Occupational Safety and Health Administration (OSHA) amended its "Construction Standards for Excavations, 29 CFR, Part 1926, Subpart P". This document was issued to better ensure the safety of workmen entering trenches or excavations. It is mandated by this federal regulation that excavations, whether they be utility trenches, basement excavations or footing excavations, be constructed in accordance with the current OSHA guidelines. It is our understanding that these regulations are being strictly enforced and if they are not closely followed, the owner and the contractor could be liable for substantial penalties.

The contractor is solely responsible for designing and constructing stable, temporary excavations and should shore, slope, or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. The contractors "responsible

persons", as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in all local, state, and federal safety regulations.

We are providing this information solely as a service to our client. Tierra does not assume responsibility for construction site safety or the contractor's or other party's compliance with local, state, and federal safety or other regulations.

REPORT LIMITATIONS

The analyses, conclusions and recommendations contained in this report are professional opinions based on the site conditions and project layout described herein and further assume that the conditions observed in the exploratory borings are representative of the subsurface conditions throughout the site, i.e., the subsurface conditions elsewhere on the site are the same as those disclosed by the borings. If, during construction, subsurface conditions different from those encountered in the exploratory borings are observed or appear to be present, we should be advised at once so that we can review these conditions and reconsider our recommendations where necessary.

The scope of our services did not include an environmental assessment for determining the presence or absence of wetlands or hazardous or toxic materials in the soil, bedrock, groundwater, or air, on or below or around this site. The scope of our services did not include determination of the potential for sinkhole activity. Any statements in this report or on the boring logs regarding odors, colors, unusual or suspicious items or conditions are strictly for the information of our client.

This report was prepared for the exclusive use of Rañon & Partners, Inc. and their structural engineer, Walter P. Moore, for evaluating the design of the project as it relates to the geotechnical aspects discussed herein. It should be made available to prospective contractors for information on factual data only and not as a warranty of subsurface conditions included in this report. Unanticipated soil conditions may require that additional expense be made to attain a properly constructed project. Therefore, some contingency fund is recommended to accommodate such potential extra costs.

APPENDIX

Boring Location Plan and Soil Profiles

NOTE: BASE MAP PROVIDED BY THE CLIENT

BORING LOCATION PLAN

0 200'

PLAN SCALE

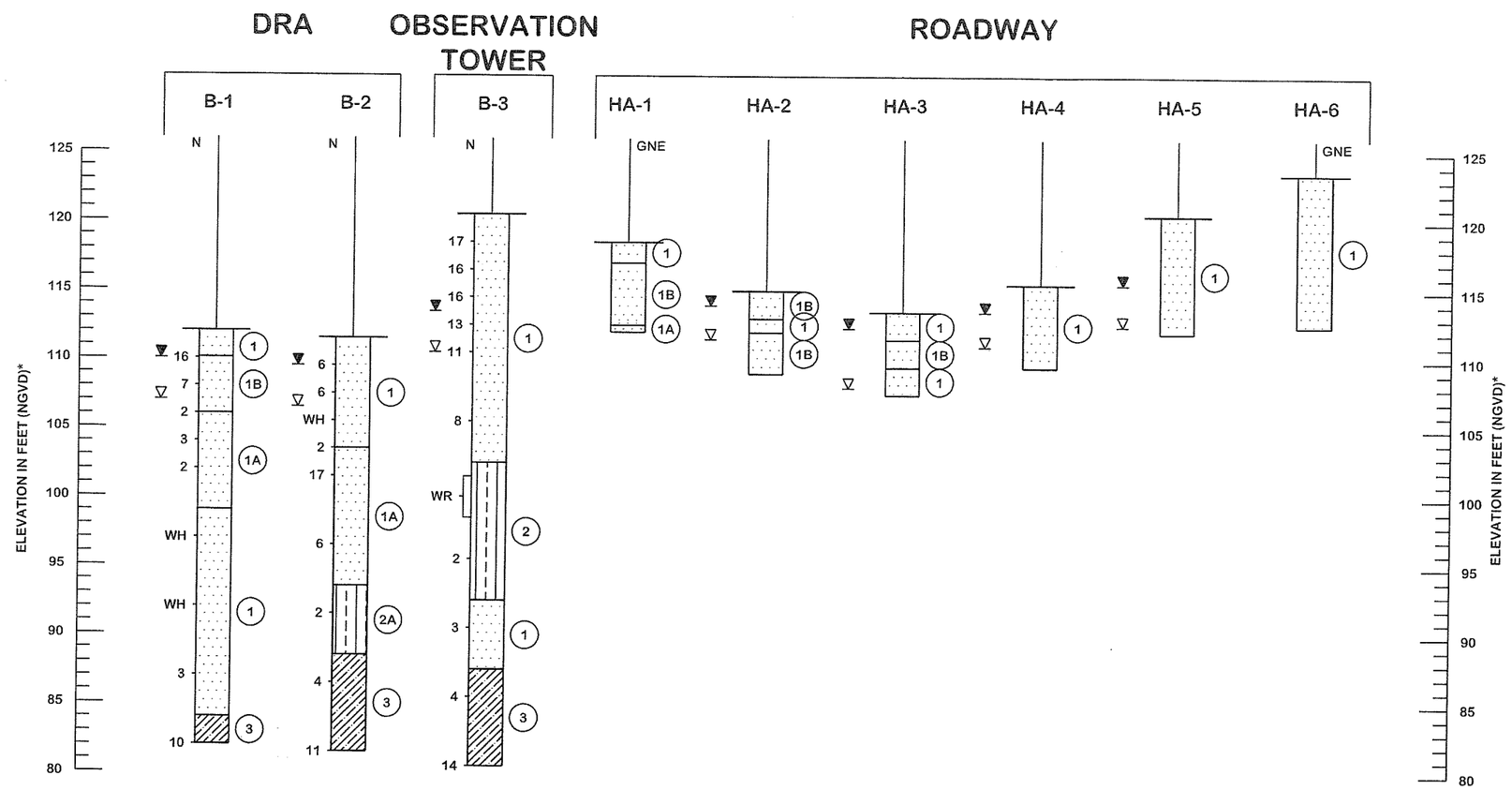
N

LEGEND

- APPROXIMATE LOCATION OF AUGER BORING
- APPROXIMATE LOCATION OF SPT BORING

DRAWN BY: SW CHECKED BY: SCO	APPROVED BY: KHS DATE: JUNE 2008	ENGINEER OF RECORD: KEVIN H. SCOTT, P.E. FLORIDA LICENSE NO.: 65514	TIERRA 7805 Professional Place Tampa, Florida 33637 Phone: 813-989-1354 Fax: 813-989-1355 FL Cert. No.: 6486	SCALE: NOTED	PROJECT NUMBER: 6511-08-137	GEOTECHNICAL ENGINEERING SERVICES HCSO SOUTH TRAINING FACILITY HILLSBOROUGH COUNTY, FLORIDA	SHEET 1

SOIL PROFILES



LEGEND

1 — LIGHT GRAY TO BROWN FINE SAND TO FINE SAND WITH SILT (SP/SP-SM)

2 — BROWN SILTY SAND (SM)

3 — GREEN TO GRAY CLAYEY SAND TO SANDY CLAY (SC/CL)

A - WITH PHOSPHATE PEBBLES

B - WITH CEMENTED SANDS

▽ GROUNDWATER TABLE

▼ ESTIMATED SEASONAL HIGH GROUNDWATER TABLE

N SPT N-VALUE IN BLOWS/FOOT FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED)

SP UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2488) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW

GNE GROUNDWATER TABLE NOT ENCOUNTERED

* ELEVATIONS APPROXIMATED BASED ON DESIGN FILES PROVIDED BY RANON & PARTNERS, INC.

GRANULAR MATERIALS-RELATIVE DENSITY	SPT (BLOWS/FT.)
VERY LOOSE	LESS THAN 4
LOOSE	4 TO 10
MEDIUM	10 TO 30
DENSE	30 TO 50
VERY DENSE	GREATER THAN 50

SILTS AND CLAYS CONSISTENCY	SPT (BLOWS/FT.)
VERY SOFT	LESS THAN 2
SOFT	2 TO 4
FIRM	4 TO 8
STIFF	8 TO 15
VERY STIFF	16 TO 30
HARD	GREATER THAN 30

DRAWN BY: SW CHECKED BY: SCO	APPROVED BY: KHS DATE: JUNE 2008	ENGINEER OF RECORD: KEVIN H. SCOTT, P.E. FLORIDA LICENSE NO.: 65514	TIERRA 7805 Professional Place Tampa, Florida 33637 Phone: 813-989-1354 Fax: 813-989-1355 FL Cert. No.: 6486	SCALE: NOTED	PROJECT NUMBER: 6511-08-137	GEOTECHNICAL ENGINEERING SERVICES HCSO SOUTH TRAINING FACILITY HILLSBOROUGH COUNTY, FLORIDA	SHEET 2

PROPOSAL TITLE: WCHPTS ROADWAY AND OBSERVATION TOWER CONSTRUCTION PROJECT

PROPOSAL NUMBER: RFP 20-08

ADDENDUM #2 CONSTRUCTION DOCUMENTS / DRAWINGS

Ranon & Partners, Inc. Architects

Hamilton Engineering & Surveying, Consulting Civil Engineers

Walter P. Moore & Associaties, Consulting Structural Engineers

Rolley Engineering, Inc., Consulting Electrical Engineers

HILLSBOROUGH COUNTY SHERIFF'S OFFICE

WCH PTS ROADWAY AND OBSERVATION TOWER

LITHIA, FLORIDA

R&P PROJECT: 0806L

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(813) 221-2424

Rolley Engineering, Inc.
Consulting Electrical Engineers
6301 Memorial Highway, Suite 303, Tampa, Florida 33615
(813) 889-0835

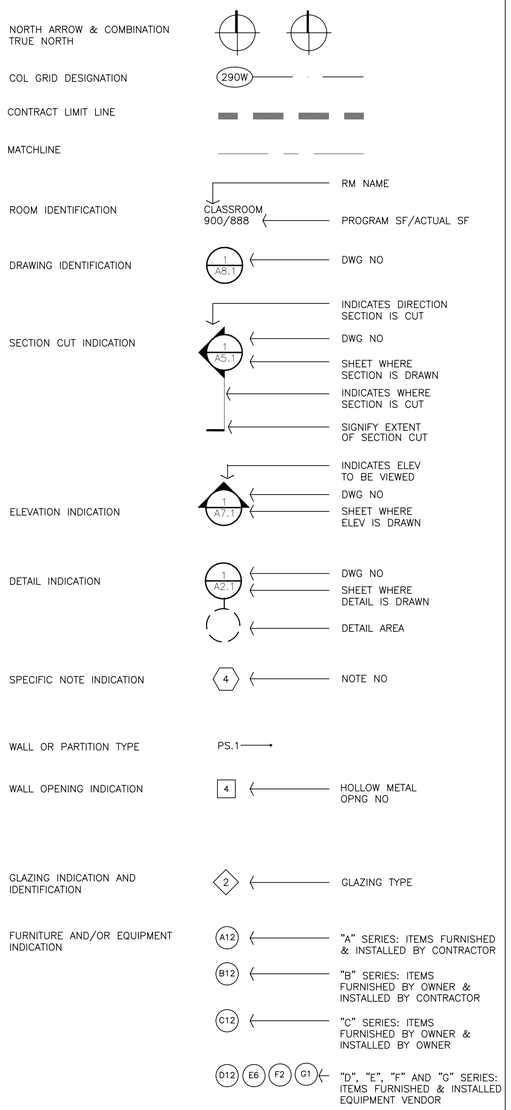
CONSTRUCTION DOCUMENTS
SEPTEMBER 19TH, 2008

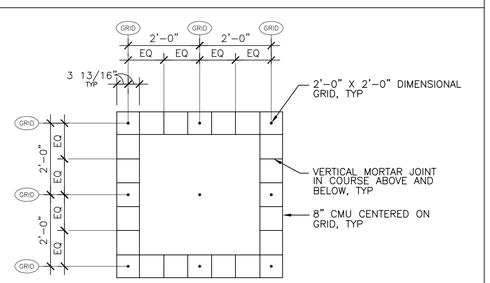
ARCHITECTURAL ABBREVIATIONS

NOTE: WHEN PLURAL OF A TERM IS INTENDED, THE SUFFIX "S" WILL BE ADDED TO ITS ABBREVIATION.

&	AND
L	ANGLE
@	AT
x	BY
℄	CENTER LINE
–	NONE REQUIRED
℞	PLATE
A/C	AIR CONDITION (–ER) (–ING)
AB	ANCHOR BOLT
AC P	ACOUSTICAL PANEL CEILING
AC T	ACOUSTICAL TILE
AC W	ACOUSTICAL WALL SYSTEM
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
ALM	ALUMINUM
ALT	ALTERNATE
APPROX	APPROXIMATELY
BLDG	BLDG
BLKG	BLOCKING
BM	BEAM
BRK	BRICK
BUR	BUILT–UP ROOFING
CB	CATCH BASIN
CEM PLS	CEMENT PLASTER (PORTLAND)
CHKBD	CHALKBOARD
CLG	CEILING
CLO	CLOSET
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONF	CONFERENCE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CORR	CORRIDOR
CPT	CARPET
CR	CLASSROOM
CT	CERAMIC MOSAIC TILE
CTRJT	CONTROL JOINT
CUS	CUSTODIAN'S UTILITY SHELF
D	DEEP, DEPTH
DBL	DOUBLE
DF	DRINKING FOUNTAIN
DIA, ø	DIAMETER
DIM	DIMENSION
DN	DOWN
DNSP	DOWNSPOUT
DP	DAMPPROOFING
DR	DOOR
DTL	DETAIL
DWG	DRAWING
EA	EACH
ELEC	ELECTRICAL
EL	ELEVATION
ELEV	ELEVATOR
ENCL	ENCLOSURE
EQ	EQUAL
EQUIP	EQUIPMENT
ETC	ET CETERA
EWC	ELECTRICAL WATER COOLER
EXIST	EXISTING
EXP JT	EXPANSION JOINT
EXT	EXTERIOR
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FIN	FINISH
FL	FLOOR
FLDR	FOLDING DOOR
FRTW	FIRE RETARDANT TREATED WOOD
FSS	FOLDING SHOWER SEAT
FT	FEET
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GCT	GLAZED CERAMIC MOSAIC
GL	GLASS, GLAZING
GT	GLAZED WALL TILE
GWC	GLAZED WALL COATING
GYP BD	GYPSUM BOARD
GYPLS	GYPSUM PLASTER
H	HEIGHT, HIGH
HC	HOLLOW CORE
HD	HAND DRYER
HDW	HARDWARE
HM	HOLLOW METAL
HNRL	HANDRAIL
HORIZ	HORIZONTAL(LY)
HR	HOUR
ID	INSIDE DIAMETER
INSUL	INSULATION
INT	INTERIOR
INV	INVERT
JAN	JANITOR
JT	JOINT
LA	LANGUAGE ARTS
LAM	LAMINATED
LAV	LAVATORY
LLH	LONG LEG HORIZONTAL
LMC	LINEAR METAL CEILING
LW	LIGHTWEIGHT
M	MIRROR
M/S	MIRROR/SHELF
MAINT	MAINTENANCE
MAT'L	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MN	MINUTE
MO	MASONRY OPENING
MPU	MULTI–PURPOSE UNIT
MRKBD	MARKERBOARD
MTD	MOUNTED
MTL	METAL
NIC	NOT IN CONTRACT
NO.,#	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OH	OPPOSITE HAND
OD	OUTSIDE DIAMETER
OPNG	OPENING
OPP	OPPOSITE
PART'N	PARTITION
PF RF	PREFORMED ROOFING
PLBG	PLUMBING
PLS	PLASTER
PNT	PAINT (PAINTED FINISH)
PROJ	PROJECT
PT	PRESSURE TREATED
PTD	PAPER TOWEL DISPENSER
PTD/WR	PAPER TOWEL DISPENSER /WASTE
	RECEPTACLE
PWD	PLYWOOD
QT	QUARRY TILE
R	RADIUS
R/W	RIGHT–OF–WAY
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REBAR	REINFORCING BAR
RECT	RECTANGULAR
REINF	REINFORCEMENT
REQ'D	REQUIRED
RES F	RESINOUS FLOORING
REV	REVERSE
RFG	REFRIGERATOR
RH	ROBE HOOK
RM	ROOM
RP RT	RAISED PROFILE RUBBER TILE
RT	RUBBER TILE
S/H	SEALER/HARDENER
SC	SOLID CORE
SCI	SCIENCE
SCR	SHOWER CURTAIN/ROD
SD	SOAP DISPENSER
SFT GL	SAFETY GLASS
SH	SOAP HOLDER
SHO	SHOWER
SHO C	SHOWER CONTROLS
SHO H	SHOWER HEAD
SIM	SIMILAR
SND	SANITARY NAPKIN DISPOSAL
SNV	SANITARY NAPKIN VENDOR
SNV/D	SANITARY NAPKIN VENDOR/DISPOSAL
SP C	SPECIAL COATING
SPECS	SPECIFICATIONS
SQ	SQUARE
SS	STAINLESS STEEL
STC	SOUND TRANSMISSION CLASS (RATING)
STD	STANDARD
STL	STEEL
STOR	STORAGE
STR	STRUCTURAL
SUPPL	SUPPLEMENTARY
SUS	SUSPENDED
SW	SWITCH
T	TOILET
T&G	TONGUE AND GROOVE
TB	TOWEL BAR
THR	THRESHOLD
TKBD	TACKBOARD
TMP	TEMPERED
TPO	TEACHER PLANNING OFFICE
TTD	TOILET TISSUE DISPENSER
TYP	TYPICAL, (UNLESS OTHERWISE NOTED)
U	URINAL
UON	UNLESS OTHERWISE NOTED
V	VINYL
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VSF	VINYL SHEET FLOORING
VT	VINYL TILE
W/	WITH
WC	WALL COVERING
WD	WOOD
WR	WASTE RECEPTACLE
WWF	WELDED WIRE FABRIC

ARCHITECTURAL SYMBOLS AND IDENTIFICATION LEGEND





PLAN-GRID/COURSING RELATIONSHIPS

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A1.2	ENLARGED SITE PLAN
A2.1	FLOOR PLAN, PLATFORM PLAN, REFLECTED CEILING PLAN, ROOF PLAN, PARTITION SCHEDULE, ROOF FINISH SCHEDULE, DOOR AND FRAME SCHEDULE/TYPES
A5.1	EXTERIOR ELEVATIONS
A5.2	BUILDING SECTION
A10.1	DETAILS
A14.1	PRODUCT APPROVAL CHART AND NOA DETAILS

CIVIL

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S2.1	FOUNDATION AND FRAMING PLANS
S2.2	STRUCTURAL BUILDING SECTIONS
S3.1	FOUNDATION DETAILS
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E2.1	POWER AND LIGHTING PLAN
E2.2	STAIR TOWER SECTION – LIGHTING

APPLICABLE CODES

FLORIDA BUILDING CODE (2004 EDITION) W/ 2005, 2006 AND 2007 SUPPLEMENTS

NFPA 101 LIFE SAFETY CODE

2004 FLORIDA FIRE PROTECTION CODE

NFPA–70 NATIONAL ELECTRICAL CODE REFERENCED BY THE FLORIDA BUILDING CODE

NFPA–72 NATIONAL FIRE/ALARM CODE

NFPA–110 STANDARD FOR EMERGENCY AND STAND–BY POWER SYSTEMS

FLORIDA STATUTE (663) STATE FIRE MARSHAL – RULES AND REGULATIONS

DATE: 09.19.08
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TO THE BEST OF THE ARCHITECT'S KNOWLEDGE THE PLANS AND SPECIFICATIONS COMPLY WITH THE MINIMUM BUILDING CODES

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SHEET NUMBER
A0.1

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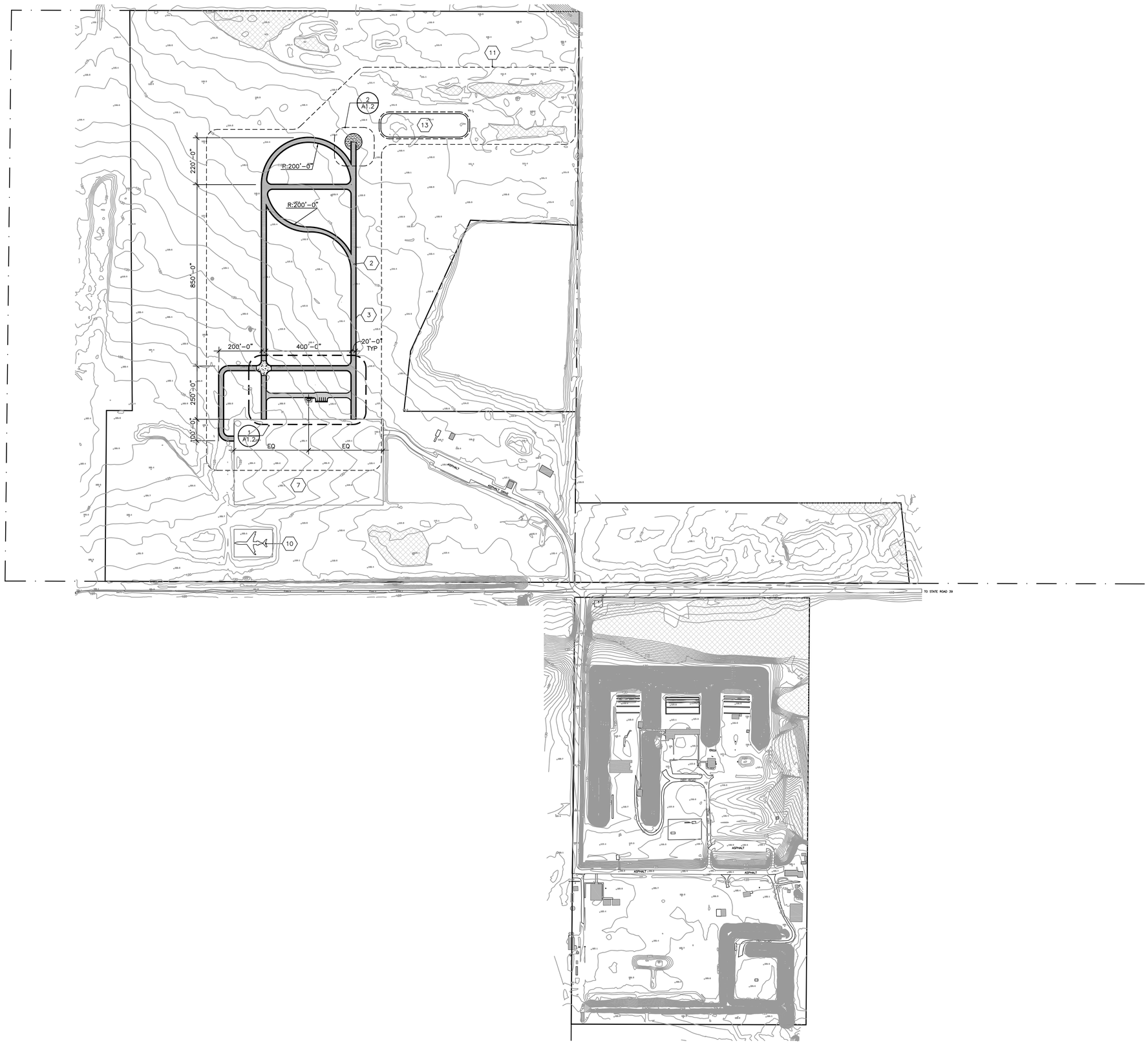

SITE PLAN GENERAL NOTES

SITE PLAN GENERAL NOTES APPLY TO SHEET NUMBER A1.1-A1.2 ONLY

A. ELEVATION 100'-0" INDICATED ON ARCHITECTURAL AND STRUCTUAL DWGS = 121.80 ON CIVIL DRAWINGS

B. RELOCATE EXISTING UTILITIES AS NEEDED FOR NEW CONSTRUCTION, SEE CIVIL DRAWINGS.

SITE PLAN SPECIFIC NOTES

SITE PLAN SPECIFIC NOTES APPLY TO SHEET NUMBER A1.1-A1.2 ONLY

1. SAND PIT, SEE CIVIL DWGS
2. 20'-0" WIDE HEAVY DUTY ASPHALT PAVED ROADWAY, SEE CIVIL DWGS
3. 2'-0" CONC CURBS AT EACH SIDE OF ROAD, SEE CIVIL DWGS
4. POURED CONC INTERSECTION, SEE CIVIL DWGS
5. OBSERVATION TOWER
6. 20'-0" LIGHT DUTY ASPHALT PAVED, SEE CIVIL DRAWINGS
7. EXISTING DRIVING PAD
8. CONC WALK
9. 6 PARKING SPACES
10. EXISTING AIRPLANE ON CONC PAD
11. LIMITS OF CONSTRUCTION
12. CONCRETE WHEEL STOPS, SEE CIVIL DRAWINGS
13. RETENTION POND, SEE CIVIL DWGS

OVERALL SITE PLAN
SCALE: 1:200
0 50 100 200 400

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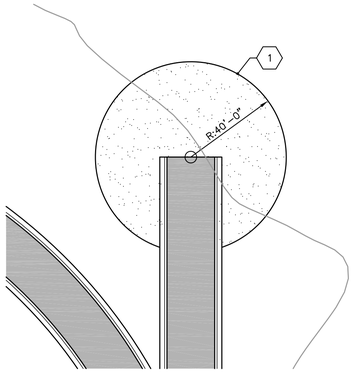
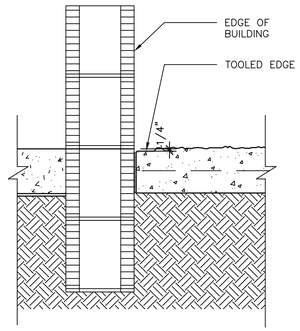
SHEET NUMBER
A1.1

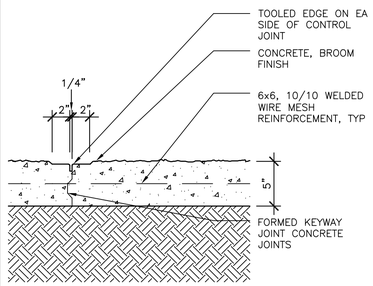
P:\0806L\A1.1-A1.2 SITE.DWG, A1.1, 9/23/2008 11:59:58 AM, cesar



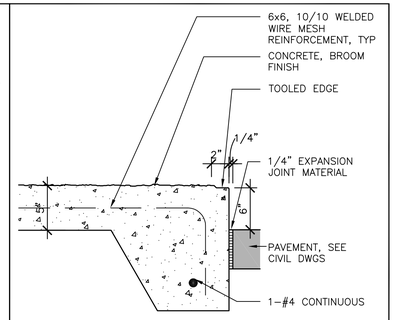
2 SITE PLAN
SCALE: 1:30
0 15 30 60



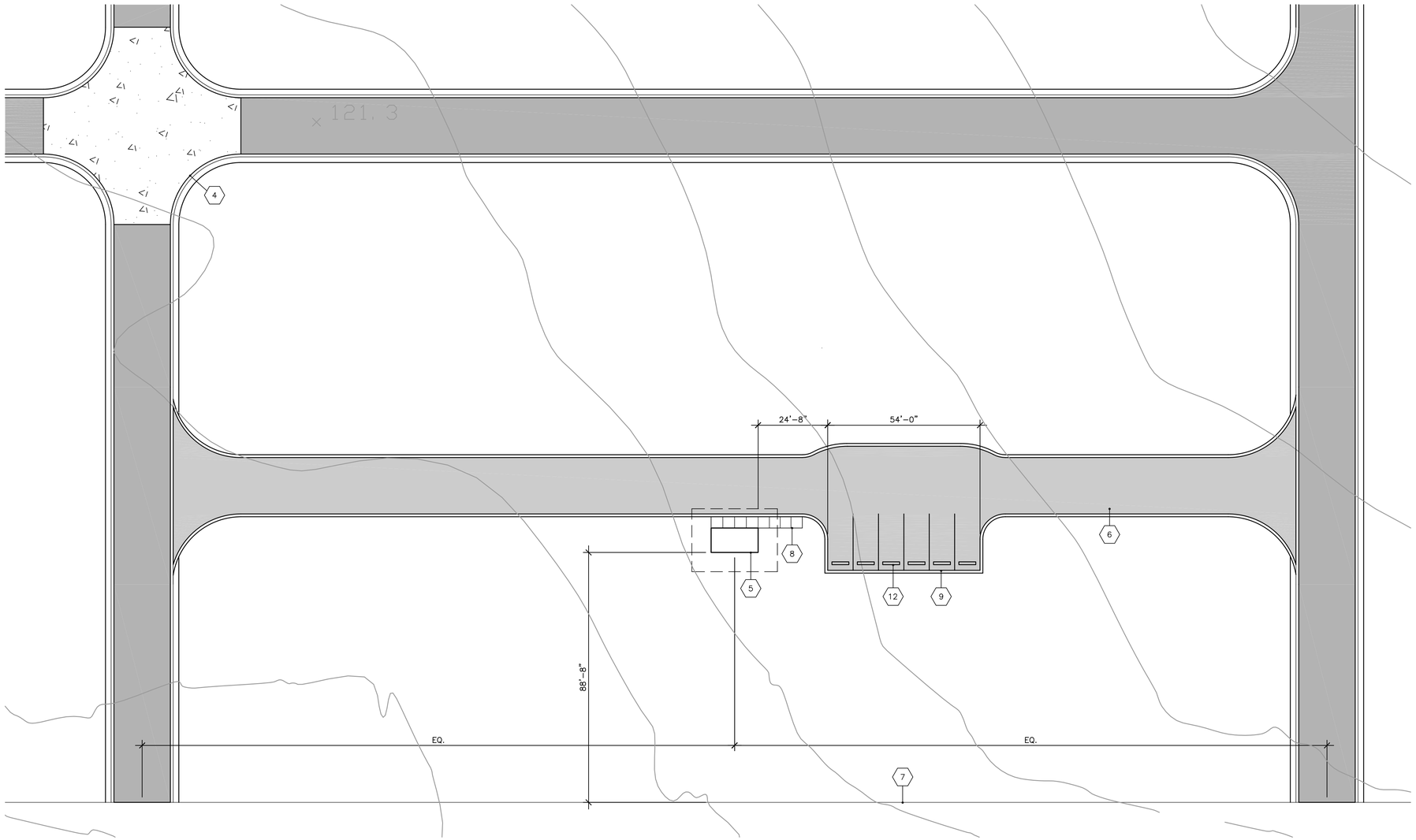
3 EDGE AT BUILDING
1 1/2" = 1'-0"



4 CONTROL JOINT
1 1/2" = 1'-0"



5 EDGE AT CONCRETE WALK AND PAVEMENT
1 1/2" = 1'-0"



1 SITE PLAN
SCALE: 1:20
0 10 20 40

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TO THE BEST OF THE ARCHITECT'S KNOWLEDGE THE PLANS AND SPECIFICATIONS COMPLY WITH THE MINIMUM BUILDING CODES

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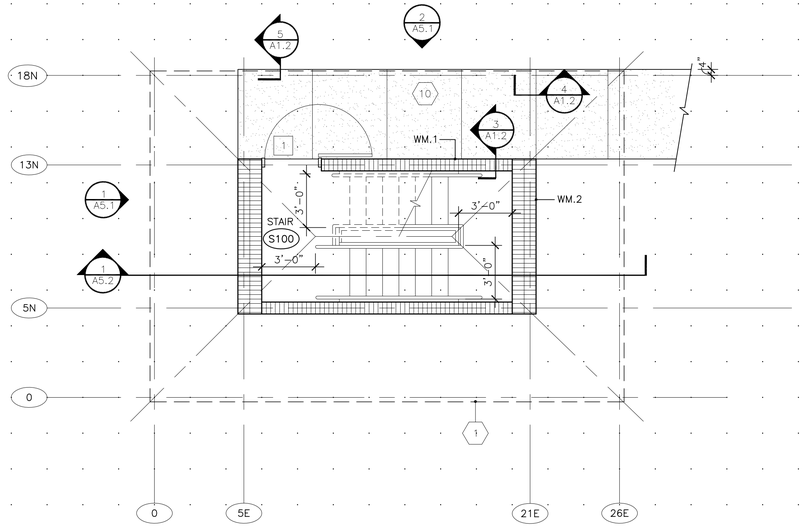
SHEET NUMBER
A1.2

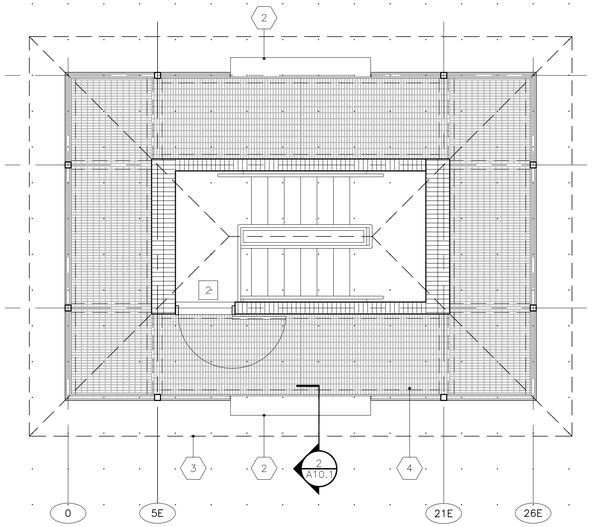
P:\0806L\A1.1-A1.2 SITE.DWG, A1.2, 9/23/2008 12:00:37 PM, cesar



GROUND LEVEL FLOOR PLAN

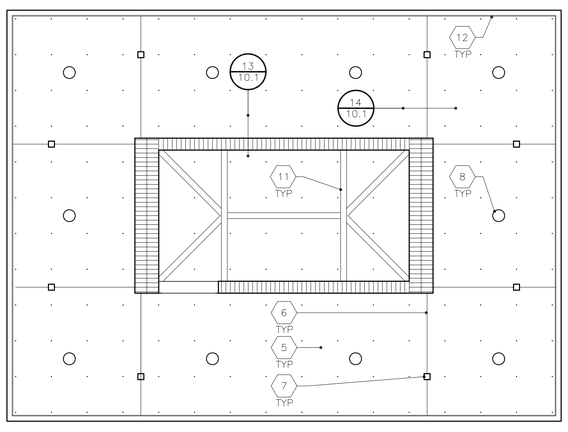
SCALE: 1/4" = 1'-0"

NOTE: OCCUPANCY CLASSIFICATION – GROUP U
CONSTRUCTION TYPE – IIB



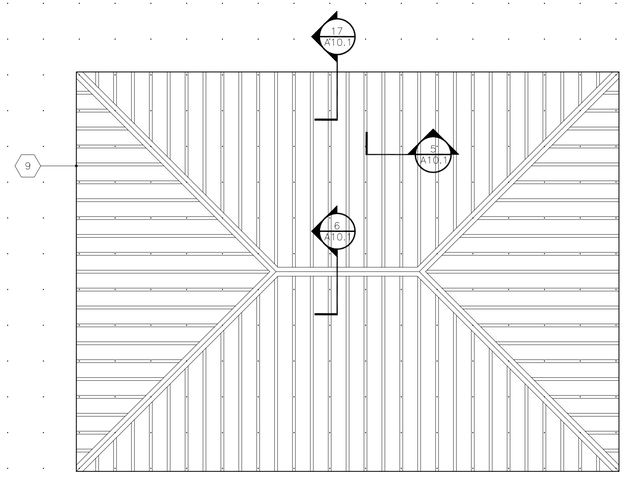
PLATFORM LEVEL FLOOR PLAN

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



REFLECTED CEILING PLAN

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



ROOF PLAN

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

PLAN GENERAL NOTES

PLAN GENERAL NOTES APPLY TO SHEET NUMBERS A2.1 ONLY

A. THIS BUILDING HAS BEEN DEVELOPED ON A 2'-0" x 2'-0" DIMENSIONAL GRID.

B. WALLS, PARTITIONS, COLUMNS AND OTHER ITEMS ARE CENTERED ON OR CENTERED BETWEEN GRID LINES.

C. OPENINGS (INCLUDING DOORS, FRAMES, LOUVERS, ETC.) ARE CENTERED ON OR CENTERED BETWEEN GRID LINES.

D. DIMENSIONS ARE TO (CENTERLINE/FACE OF STUD/MASONRY/FINISH).

PLAN SPECIFIC NOTES

PLAN SPECIFIC NOTES APPLY TO SHEET NUMBERS A2.1 ONLY

1. OUTLINE OF PLATFORM ABOVE
2. ALUMINUM SHELF FOR CLIPBOARD
3. OUTLINE OF ROOF ABOVE
4. STAINLESS STEEL GRATE FLOORING, SEE STR DWGS
5. 3/4" CEMENT PLASTER ON MTL FRAMING
6. CONTROL JOINT, TYP
7. COLUMN, SEE STR DWGS
8. RECCESSED LIGHT FIXTURE, SEE ELECTRICAL DWGS
9. STANDING SEAM METAL ROOF, 12" WIDE PANEL, TYP
10. CONCRETE WALK
11. EXPOSED STRUCTURE
12. PERIMETER ANGLE, SEE 17/A10.1

ROOM FINISH SCHEDULE

FINISH MATERIAL LEGEND
-- NONE REQUIRED
PNT PAINT
S/H SEALER/HARDENER

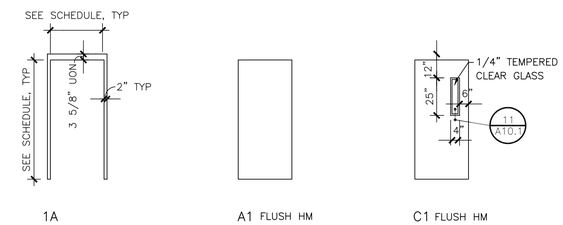
GENERAL NOTES
A REFER TO FLOOR PLAN/S FOR WALL FINISH SUBSTRATE.
B WHERE TWO OR MORE FINISHES ARE SCHEDULED, SEE FLOOR OR REFLECTED CLG PLAN (AS APPLICABLE) FOR EXTENT OF FINISHES.

ROOM NO	NAME	FL	BASE	WALLS N	WALLS S	WALLS E	WALLS W	CLG FIN	CLG HT	REMARKS
100	STAIR	S/H	--	PNT	PNT	PNT	PNT	* PNT	40'-0"	* EXPOSED STRUCTURE

DOOR AND FRAME SCHEDULE

OPNG NO.	ROOM NO.	DOOR SIZE W	DOOR SIZE H	DOOR TYPE	FRAME MAT'L	FRAME TYPE	DETAILS HEAD	DETAILS JAMB	DETAILS MULLION	DETAILS SILL	DETAILS THR	FIRE RATING	HDW SET NO.	REMARKS
1	S100	3'-0"	7'-0"	A1	HM	1A	9/A10.1	10/A10.1	--	--	4/A10.1	–	1	–
2	S100	3'-0"	7'-0"	C1	HM	1A	9/A10.1	10/A10.1	--	--	4A/A10.1	–	2	–

GENERAL NOTES
A DOOR THICKNESS IS 1 3/4", TYP.



1A

A1 FLUSH HM

C1 FLUSH HM

FRAME TYPES

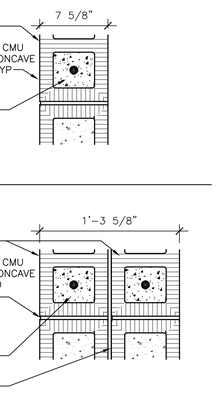
NO SCALE

DOOR TYPES

NO SCALE

EXTERIOR WALL SCHEDULE

TYPE	FIRE RATING	LAB DESIGN NUMBER	REMARKS	GRAPHIC DESCRIPTION
WM.1	--	--		8 X 8 X 16 CMU, TYP PROVIDE CLEAN FINISHED CMU SURFACE WITH TOOLED CONCAVE JOINTS AT BOTH SIDES, TYP REINFORCED CELL OR CONC PILASTER, SEE STR. DWGS., TYP
WM.2	--	--		TWO WYTHES OF 8 X 8 X 16 CMU, TYP PROVIDE CLEAN FINISHED CMU SURFACE WITH TOOLED CONCAVE JOINTS AT BOTH EXPOSED SIDES, TYP REINFORCED CELL OR CONC PILASTER, SEE STR. DWGS., TYP DAMPPROOFING MEMBRANE



DATE: 09.19.08
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REVISED:
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CHECKED BY: RS

TO THE BEST OF THE ARCHITECT'S KNOWLEDGE THE PLANS AND SPECIFICATIONS COMPLY WITH THE MINIMUM BUILDING CODES

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SHEET NUMBER
A2.1

P:\0806L\A2.1 PLANS.dwg, A2.1, 9/22/2008 2:50:52 PM,
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EXTERIOR ELEVATION GENERAL NOTES

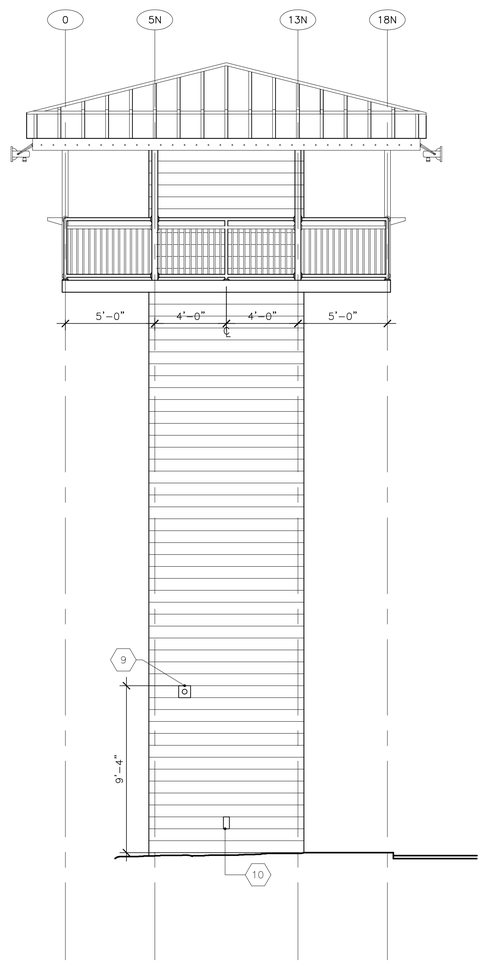
A. EXTERIOR ELEVATION GENERAL AND SPECIFIC NOTES APPLY TO SHEET NO A5.1 ONLY

B. VERTICAL CONTROL JOINTS ARE CENTERED ON COLUMNS AND/OR GRID LINES, TYP.

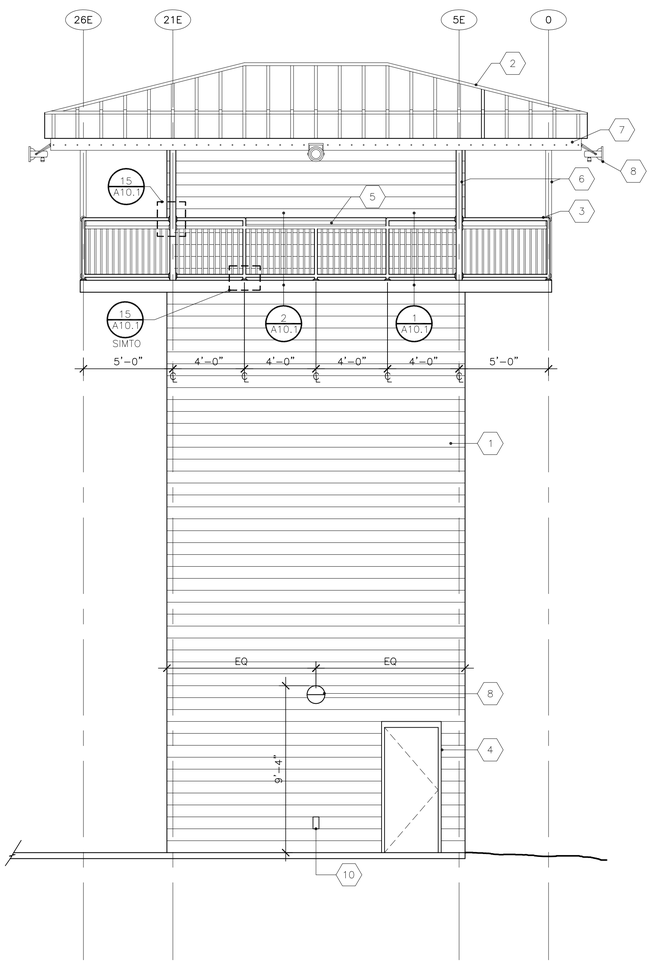
EXTERIOR ELEVATION SPECIFIC NOTES

SPECIFIC NOTES APPLY TO SHEET NUMBER A5.1 ONLY

1. PAINTED CONCRETE BLOCK
2. STANDING SEAM METAL ROOF
3. ALUMINUM GUARDRAIL AND HANDRAIL SYSTEM
4. HOLLOW METAL DOOR AND FRAME
5. ALUMINUM SHELF FOR CLIPBOARD
6. COLUMNS, SEE STR DWGS
7. PERIMETER ANGLE, SEE 17/A10.1
8. LIGHT FIXTURE, SEE ELECTRICAL DWGS
9. PHOTOCELL, SEE ELECTRICAL DWGS
10. GFI OUTLET, SEE ELECTRICAL DWGS



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



2/1 ELEVATION
SCALE: 1/4" = 1'-0"

DATE: 09.19.08
REVISED:
REVISED:
DRAWN BY: AK
CHECKED BY: RS

TO THE BEST OF THE ARCHITECT'S KNOWLEDGE THE PLANS AND SPECIFICATIONS COMPLY WITH THE MINIMUM BUILDING CODES

RICHARD SCHMITT
AR0006680

HILLSBOROUGH COUNTY SHERIFF'S OFFICE
WCH PTS ROADWAY AND OBSERVATION TOWER
LITHIA, FLORIDA

Rañon & Partners, Inc.
Architects
515 Bay Street, Tampa, Florida 33606
Telephone (813) 253-3465 (AA. C000531)

SHEET NUMBER
A5.1

P:\0806L\A5.1 ELEVATIONS.dwg, A5.1, 9/22/2008 1:50:38 PM, cesar

2 BUILDING SECTION
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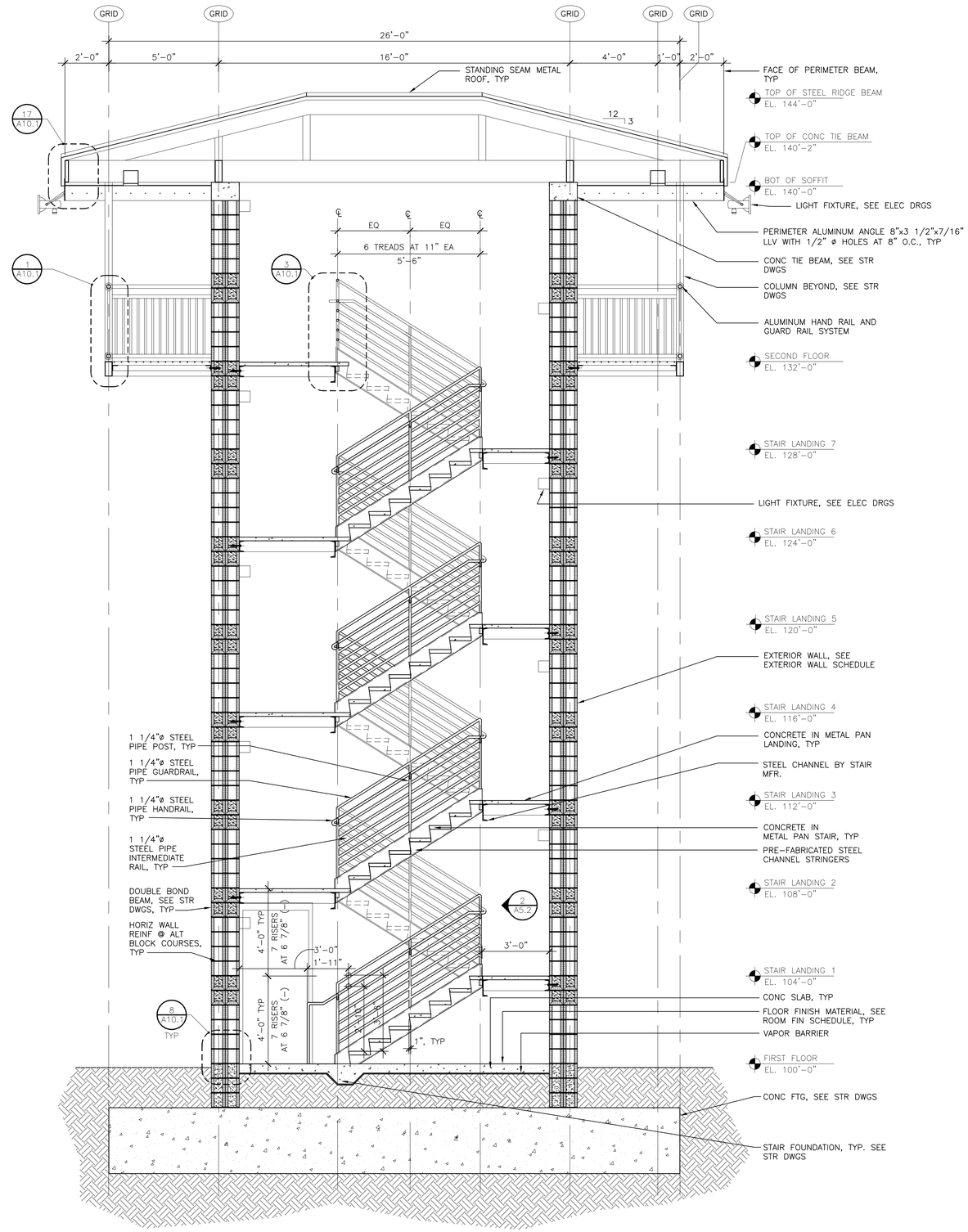

1 BUILDING SECTION
SCALE: 3/8" = 1'-0"

DATE: 09.19.08
REVISED:
REVISED:
DRAWN BY: AK
CHECKED BY: RS

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SHEET NUMBER
A5.2

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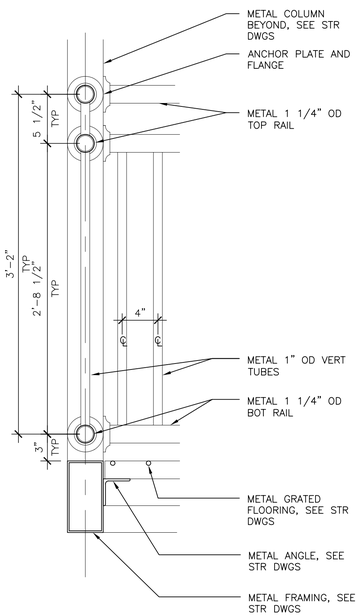

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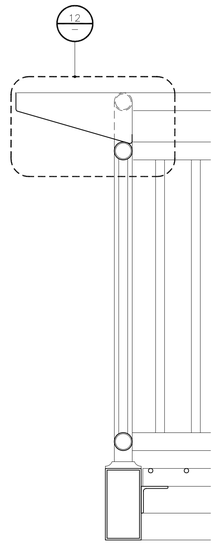

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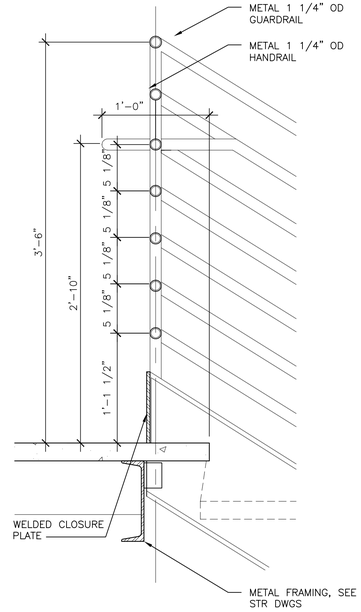

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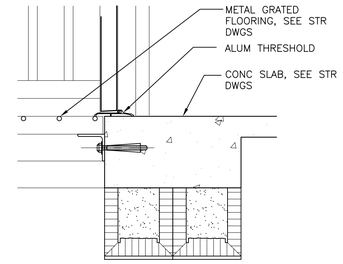

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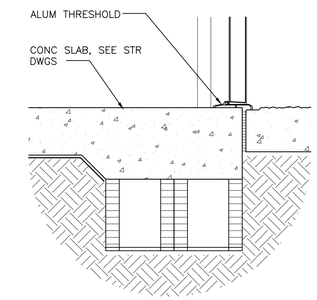

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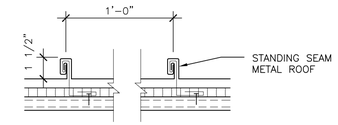

5 DETAIL
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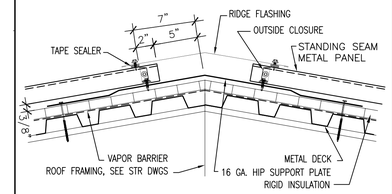
7 NOT USED
1 1/2" = 1'-0"



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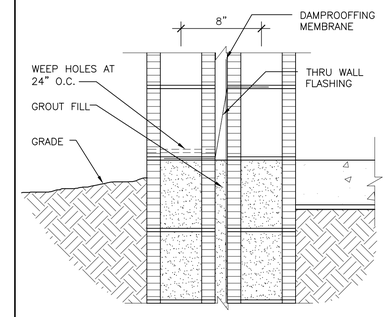

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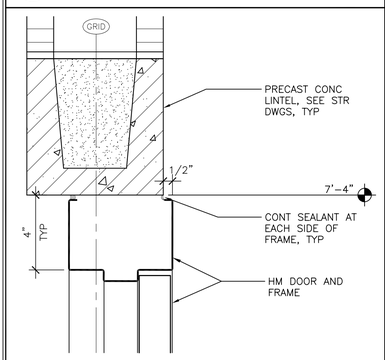

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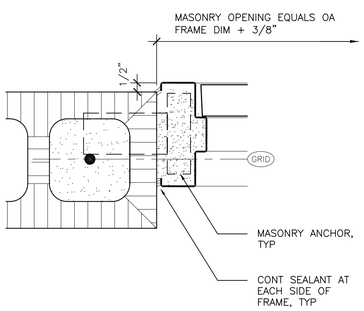

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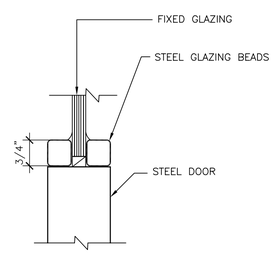
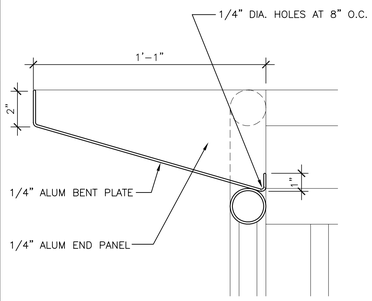


11 DETAIL
NTS



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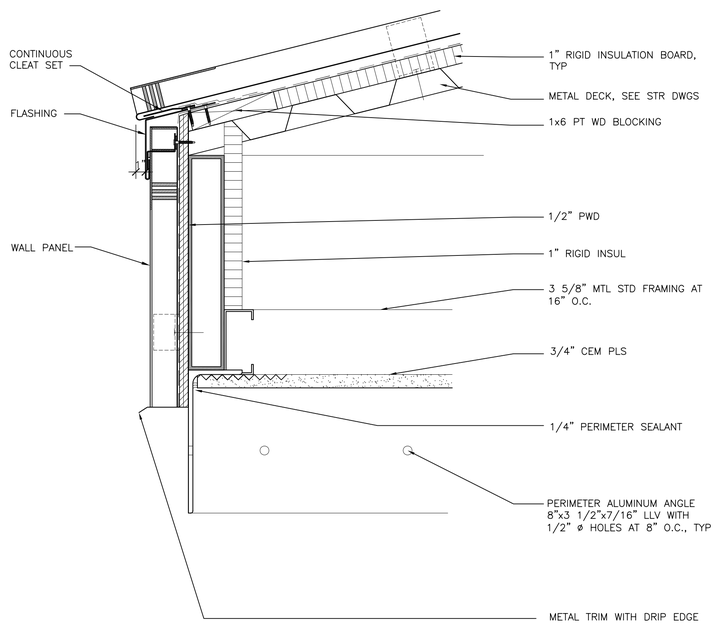

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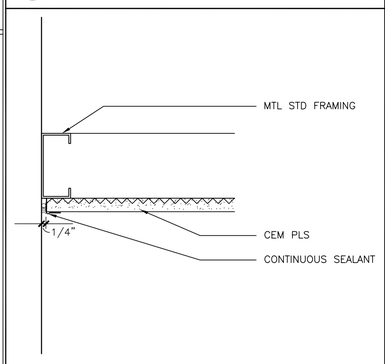

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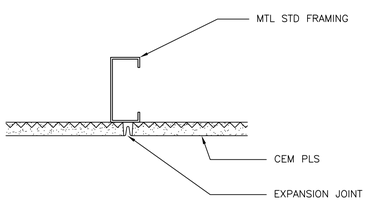

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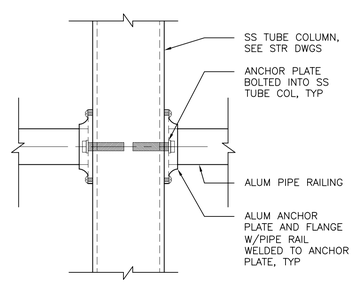

15 DETAIL
3" = 1'-0"

16 DETAIL
3" = 1'-0"

DATE: 09.19.08
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LITHIA, FLORIDA

Rañon & Partners, Inc.
Architects
515 Bay Street, Tampa, Florida 33606
Telephone (813) 253-3465 (AA C000531)

SHEET NUMBER
A10.1

MIAMI-DADE COUNTY
BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING

140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908
www.miamidade.gov

NOTICE OF ACCEPTANCE (NOA)

MBCI-Metal Building Components, Inc.
14031 West Hardy (PO Box 38217) 77238
Houston, TX 77060

SCOPE:
This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: "Superlok-16 " (0.024" min.) Structural Galvalume Coated Standing Seam Roof Panel

APPROVAL DOCUMENT: Drawing No. SL, titled " Superlok Details", sheets 1 through 7, prepared by Terrence E. Wolfe, P.E., dated March 25, 1998, last revision #2 dated September 28, 1998, signed and sealed by Terrence E. Wolfe, P.E., bearing the Miami-Dade County Product Control Renewal stamp with the Notice of Acceptance number and the expiration date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large and Small Missile Impact

LABELING: Each panel shall bear a permanent label with the manufacturer's name or logo, city, state and the following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **renews NOA # 06-0612.02** and consists of this page 1, evidence submitted pages E-1 & E-2 as well as approval document mentioned above.

The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**

01/03/2008

NOA No. 07-1025.04
Expiration Date: 12/10/2012
Approval Date: 01/03/2008
Page 1

MBCI-Metal Building Components, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 98-0529.06

A. DRAWINGS

1. *Drawing No. SL, titled "Superlok Details", prepared by Terrence E. Wolfe, P.E., dated March 25, 1998, last revision #2 dated September 28, 1998, sheets 1, 2, 3, 4, 5, 6, and 7, signed and sealed by Terrence E. Wolfe, P.E.*

B. TESTS

1. *Test report on Large Missile Impact Test, PA 201, on 24 ga. Superlok Roof Panel, prepared by Farabaugh Engineering and Testing, Inc., Report No. FET98001-T107-98, dated 02/12/98, signed and sealed by Daniel G. Farabaugh, P.E.*
2. *Test report on Uniform Static Air Pressure, ASTM 1592-95, on 24 ga. Superlok Roof Panel, prepared by Farabaugh Engineering and Testing, Inc., Report No. FET97005-T167-97, dated 11/26/97, signed and sealed by Daniel G. Farabaugh, P.E.*
3. *Susceptibility to leakage test in accordance with Miami-Dade county Protocol PA 114 Appendix G on 24 ga. Superlok Roof Panel, prepared by Celotex, Report No. 258444 CAE 97129, dated May 1 thru 8, 1998, signed and sealed by R. G. Miller, P.E.*
4. *Wind Driven Rain Test in accordance with Miami-Dade county Protocol PA 100-95 on 24 ga. Superlok Roof Panel, prepared by Celotex, Report No. 258444A CAE 97193, dated March 10, 1998, signed and sealed by R. G. Miller, P.E.*

C. CALCULATIONS

1. *Calculations titled "Superlok – 24 ga", dated 05/26/98, pages 1 and 2, prepared Terrence E. Wolfe, P.E., signed and sealed by Terrence E. Wolfe P.E.*

D. MATERIAL CERTIFICATIONS

1. *Mill Certified Test Report issued by Bethlehem Steel Corporation, dated 06/22/98, with chemical composition and mechanical properties of galvalume painted structural steel coils ASTM A792-96 SS Grade 50B.*
2. *Tensile Test File No. WP-9048 Report No. 055, prepared by West Penn Testing Laboratories, Inc., dated 12/12/97, signed Todd A. Ault (M.E.T.).*

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 01-0814.04

A. DRAWINGS

1. *None.*

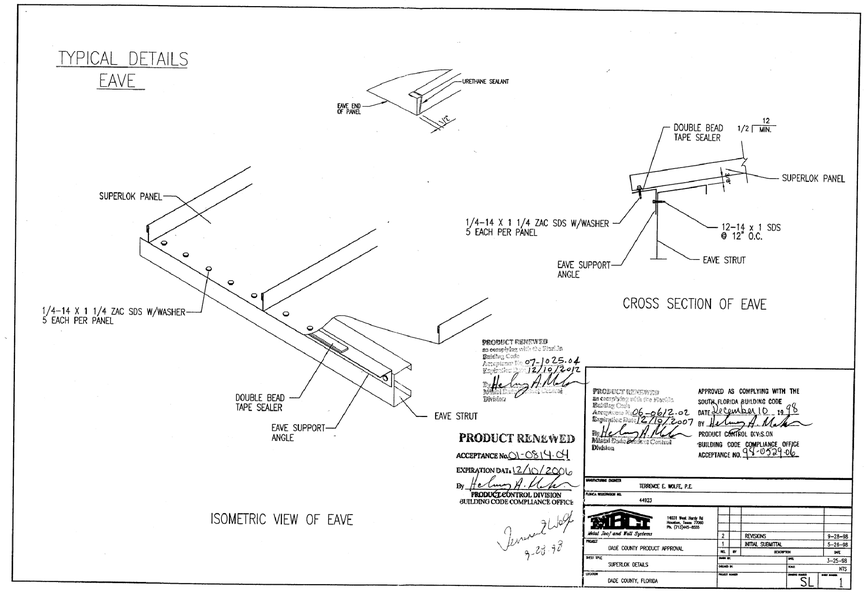
B. TESTS

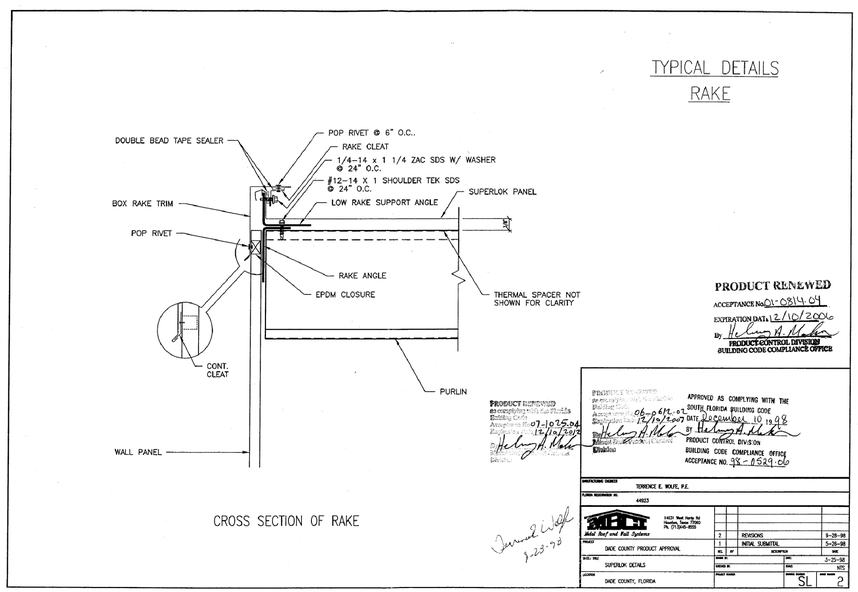
1. *None.*

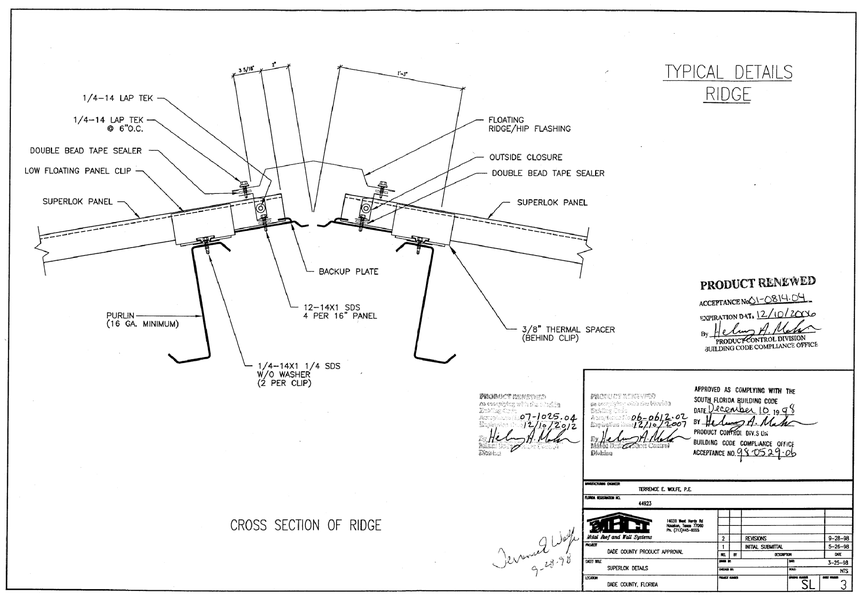
C. CALCULATIONS

1. *None.*

Helmy A. Makar, P.E., M.S.
Product Control Examiner
NOA No. 07-1025.04
Expiration Date: 12/10/2012
Approval Date: 01/03/2008







STANDING SEAM METAL ROOF

PRODUCT APPROVAL CHART

PRODUCT CLASSIFICATION	MANUFACTURER	FL APPROVAL NUMBER	MIAMI-DADE NOA NUMBER	APPROVAL DATE	EXPIRATION DATE
STANDING SEAM METAL ROOF	MBCI	5671.3	07-1025.04	01/03/2008	12/10/2012
HOLLOW METAL DOORS AND FRAMES	INGERSOL-RAND	FL 1589.1	04-0203.03	10/21/2004	10/21/2009

DATE: 09.19.08
REVISED:
REVISED:
DRAWN BY: AK
CHECKED BY: RS

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RICHARD SCHMITT
AR0006680

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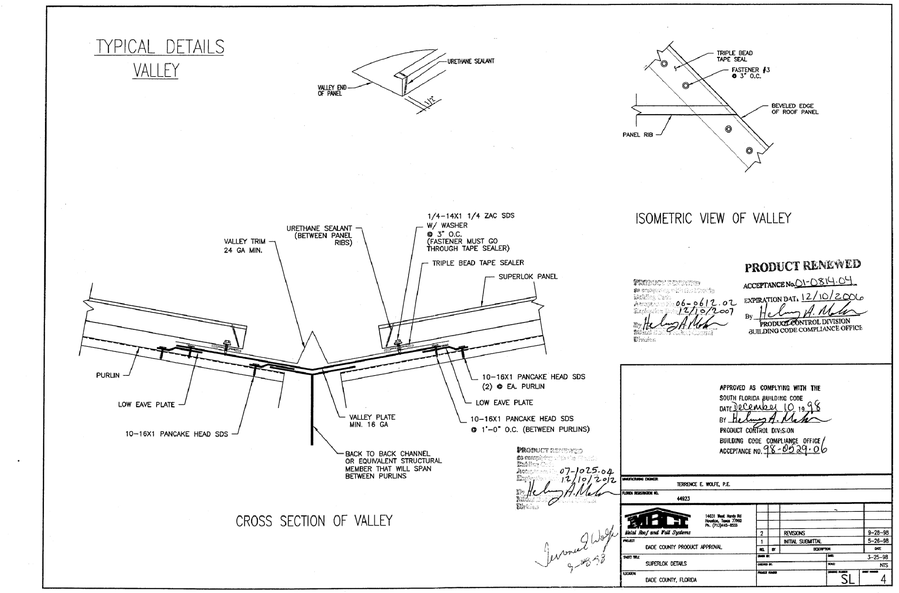
SHEET NUMBER
A14.1

P:\0806L\A14.1 NOA SHEETS.dwg, A14.1 NOA, 9/22/2008 3:32:15 PM,
cesar

TYPICAL DETAILS VALLEY



PRODUCT RENEWED
ACCEPTANCE No. 01-0514.04
EXPIRATION DATE 12/10/2006
By PRODUCT CONTROL DIVISION (BUILDING CODE COMPLIANCE OFFICE)

06-0612.02 12/10/2007

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE December 10 19 98
BY
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 98-0529.06

07-1025.04 12/10/2012

9-28-98

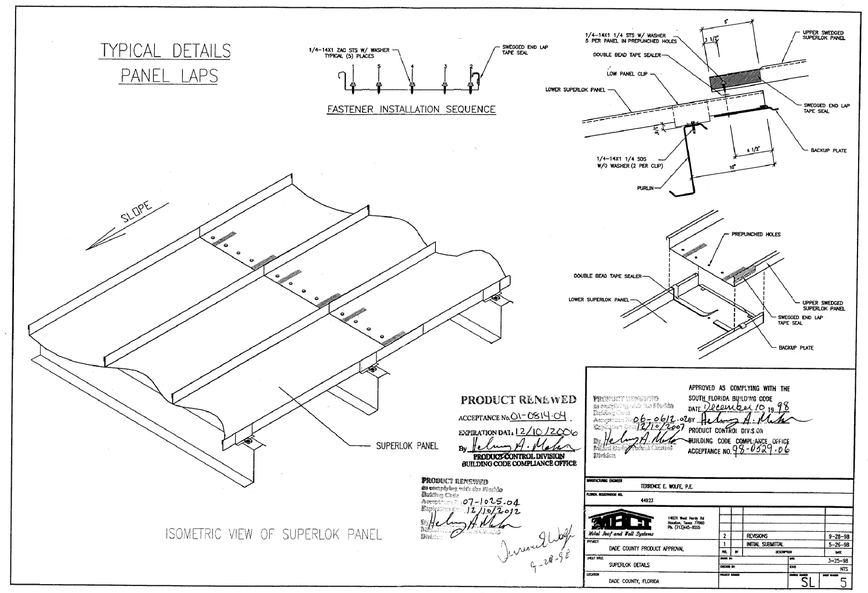
ARCHITECTURAL OWNER	TERRENCE E. WOLFE, P.E.
FLORIDA REGISTRATION NO.	44823

Metal Roof and Wall Systems — 14428 West Hardy Rd Houston, Texas 77040 Ph. (713)462-8555

NO.	BY	DESCRIPTION	DATE
2		REVISIONS	9-28-98
1		INITIAL SUBMITTAL	5-26-98

PROJECT: DADE COUNTY PRODUCT APPROVAL
SHEET TITLE: SUPERLOK DETAILS — DATE 3-25-98 — SCALE NTS
LOCATION: DADE COUNTY, FLORIDA — SHEET NUMBER SL 4

TYPICAL DETAILS PANEL LAPS



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EXPIRATION DATE 12/10/2006
By PRODUCT CONTROL DIVISION (BUILDING CODE COMPLIANCE OFFICE)

06-0612.02 12/10/2007

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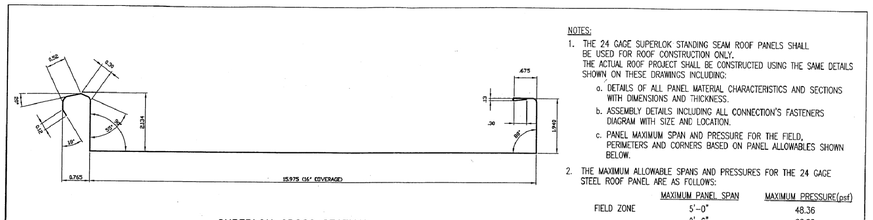
1		INITIAL SUBMITTAL	5-26-98

PROJECT: DADE COUNTY PRODUCT APPROVAL
SHEET TITLE: SUPERLOK DETAILS — DATE 3-25-98 — SCALE NTS
LOCATION: DADE COUNTY, FLORIDA — SHEET NUMBER SL 5



SUPERLOK CROSS SECTION

NOTES:

1. THE 24 GAGE SUPERLOK STANDING SEAM ROOF PANELS SHALL BE USED FOR ROOF CONSTRUCTION ONLY.
   THE ACTUAL ROOF PROJECT SHALL BE CONSTRUCTED USING THE SAME DETAILS SHOWN ON THESE DRAWINGS INCLUDING:
   a. DETAILS OF ALL PANEL MATERIAL CHARACTERISTICS AND SECTIONS WITH DIMENSIONS AND THICKNESS.
   b. ASSEMBLY DETAILS INCLUDING ALL CONNECTION'S FASTENERS DIAGRAM WITH SIZE AND LOCATION.
   c. PANEL MAXIMUM SPAN AND PRESSURE FOR THE FIELD, PERIMETERS AND CORNERS BASED ON PANEL ALLOWABLES SHOWN BELOW.
2. THE MAXIMUM ALLOWABLE SPANS AND PRESSURES FOR THE 24 GAGE STEEL ROOF PANEL ARE AS FOLLOWS:

	MAXIMUM PANEL SPAN	MAXIMUM PRESSURE(psf)
FIELD ZONE	5'-0"	48.36
	2'-6"	66.00
EDGE ZONE	1'-0"	83.84

3. ALL PANEL SUBMEMBERS SHALL BE STEEL WITH 16 GA. MINIMUM THICKNESS.

PANEL PROPERTIES

PANEL GAUGE	PANEL THICKNESS	YIELD STRENGTH	TENSILE STRENGTH	ELONGATION	HARDNESS	STEEL COATING	PAINT COATINGS
24	.024" MIN.	50 KSI	55-70 KSI	20-36%	50-65 HRB	AZ 55	SIG 300 KYNAR

PANEL ACCESSORIES

CONSTRUCTION FASTENERS INC.
SPRING STREET AND VAN REED ROAD
P.O. BOX 6326, WYOMISSING PA 19610

- #14 X 7/8" LAP TEK W/BOND SEAL WASHER
- 1/4-14 X 1 1/4 SDS W/ WASHER
- #12-14 X 1 SDS
- 1/4-14 X 1 1/4 SDS W/ PT. W/O WASHER
- #10-16 PANCAKE HEAD SDS
- 1/4-14 X 1 ZAC STS W/ WASHER
- #12-14 X 1 SHOULDER TEK SDS

GULF-SEAL SPECIALTIES, INC.
P.O. BOX 508
SOUTH HOUSTON, TX 77587

- DOUBLE BEAD — TAPE SEALER MS-19A (POLYISOBUTYLENE-ISOPRENE)
- TRIPLE BEAD — TAPE SEALER MS-19A (POLYISOBUTYLENE-ISOPRENE)
- SWEDGED LAP SEAL — TAPE SEALER MS-19A (POLYISOBUTYLENE-ISOPRENE)

SCHNEE-MOREHEAD, INC.
111 NORTH NURSERY ROAD
IRVING, TX 75060

PERMATHANE URETHANE CAULK

PRODUCT RENEWED
ACCEPTANCE No. 01-0514.04
EXPIRATION DATE 12/10/2006
By PRODUCT CONTROL DIVISION (BUILDING CODE COMPLIANCE OFFICE)

06-0612.02 12/10/2007

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9-28-98

10/7/98

ARCHITECTURAL OWNER	TERRENCE E. WOLFE, P.E.
FLORIDA REGISTRATION NO.	44823

Metal Roof and Wall Systems — 14428 West Hardy Rd Houston, Texas 77040 Ph. (713)462-8555

NO.	BY	DESCRIPTION	DATE
2		REVISIONS	9-28-98
1		INITIAL SUBMITTAL	5-26-98

PROJECT: DADE COUNTY PRODUCT APPROVAL
SHEET TITLE: SUPERLOK DETAILS — DATE 3-25-98 — SCALE NTS
LOCATION: DADE COUNTY, FLORIDA — SHEET NUMBER SL 7

STANDING SEAM METAL ROOF CONT..

DATE: 09.19.08
REVISED:
REVISED:
DRAWN BY: AK
CHECKED BY: RS

TO THE BEST OF THE ARCHITECT'S KNOWLEDGE THE PLANS AND SPECIFICATIONS COMPLY WITH THE MINIMUM BUILDING CODES

RICHARD SCHMITT
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SHEET NUMBER
A14.2

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MIAMI-DADE

BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

NOTICE OF ACCEPTANCE (NOA)

Ingersoll-Rand
6810 Hillsdale Court
Indianapolis, IN 46250

SCOPE:
This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Series H16-4 8080 Flush Double/Single Steel Commercial Outswing Doors

APPROVAL DOCUMENT: Drawing No. **1086W**, titled "Series H16-4 8080 Double/ Single Outswing IR Commercial Lock Hardware", sheets 1 through 8 of 8, prepared by manufacturer, dated 11/04/03 with revision "B" on 08/20/04, signed and sealed by Gordon Thomas, P. E., bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and approval date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.
This NOA consists of this page, evidence sheet E-1 and E-2, as well as, approval document mentioned above.
The submitted documentation was reviewed by **Herminio F. Gonzalez, P.E., Director, BCCO**

NOA No 04-0203.03
Expiration Date: October 21, 2009
Approval Date: October 21, 2004
Page 1

Ingersoll-Rand

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS
1. Manufacturer's die drawings and sections.
2. Drawing No. **1086W**, titled "Series H16-4 8080 Double/ Single Outswing IR Commercial Lock Hardware", sheets 1 through 8 of 8, prepared by manufacturer, dated 11/04/03 with revision "B" on 08/20/04, signed and sealed by Gordon Thomas, P. E.

B. TESTS
1. Test reports on 1) Air Infiltration Test, per FBC TAS 202-94
   2) Uniform Static Air Pressure Test, Loading per FBC TAS 202.
   3) Large Missile Impact Test per FBC, TAS 201-94
   4) Forced Entry Test, per FBC 2411 3.2.1 and TAS 202-94
   5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
   along with marked-up drawings and installation diagram of double steel commercial doors, prepared by Certified Testing Laboratories Inc., Test Report No. **CTLA – 1086W,** dated November 17, 2003, signed and sealed by Ramesh Patel, P. E
2. Test reports on 1) Air Infiltration Test, per FBC TAS 202-94
   2) Uniform Static Air Pressure Test, Loading per FBC TAS 202.
   3) Forced Entry Test, per FBC and TAS 202-94
   along with marked-up drawings and installation diagram of double steel commercial doors, prepared by Certified Testing Laboratories Inc., Test Report No. **CTLA – 1035W-2,** dated February 11, 2003, signed and sealed by Ramesh Patel, P. E
3. Test reports on 1) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94.
   2) Water Resistance Test per FBC TAS 202-94
   along with marked-up drawings and installation diagram of double steel commercial doors, prepared by National Certified Testing Laboratories Inc., Test Report No. **NCTL- 03-0514-11,** dated August 31, 2004, signed and sealed by Gerry Ferrara, P. E

C. CALCULATIONS
1. Anchor verification calculations, dated 01/07/04 and revised on 08/09-04, prepared, signed and sealed by Gordon Thomas, P.E.

D. QUALITY ASSURANCE BY:
1. Miami Dade Building Code Compliance Office (BCCO).

E. MATERIAL CERTIFICATIONS
1. Tensile test report prepared by Certified Testing Laboratories Inc., Test Report No. **CTL 0375J (CTLA1086W),** tested per ASTM E8/A370, dated November 17,2003, signed and sealed by Ramesh Patel, P. E.
2. See Item 10 of Bill of Materials page 1 of 8.

Herminio F. Gonzalez, P.E.
Director, Building Code Compliance Office
NOA No 04-0203.03
Expiration Date: October 21, 2009
Approval Date: October 21, 2004

E - 1

Ingersoll-Rand

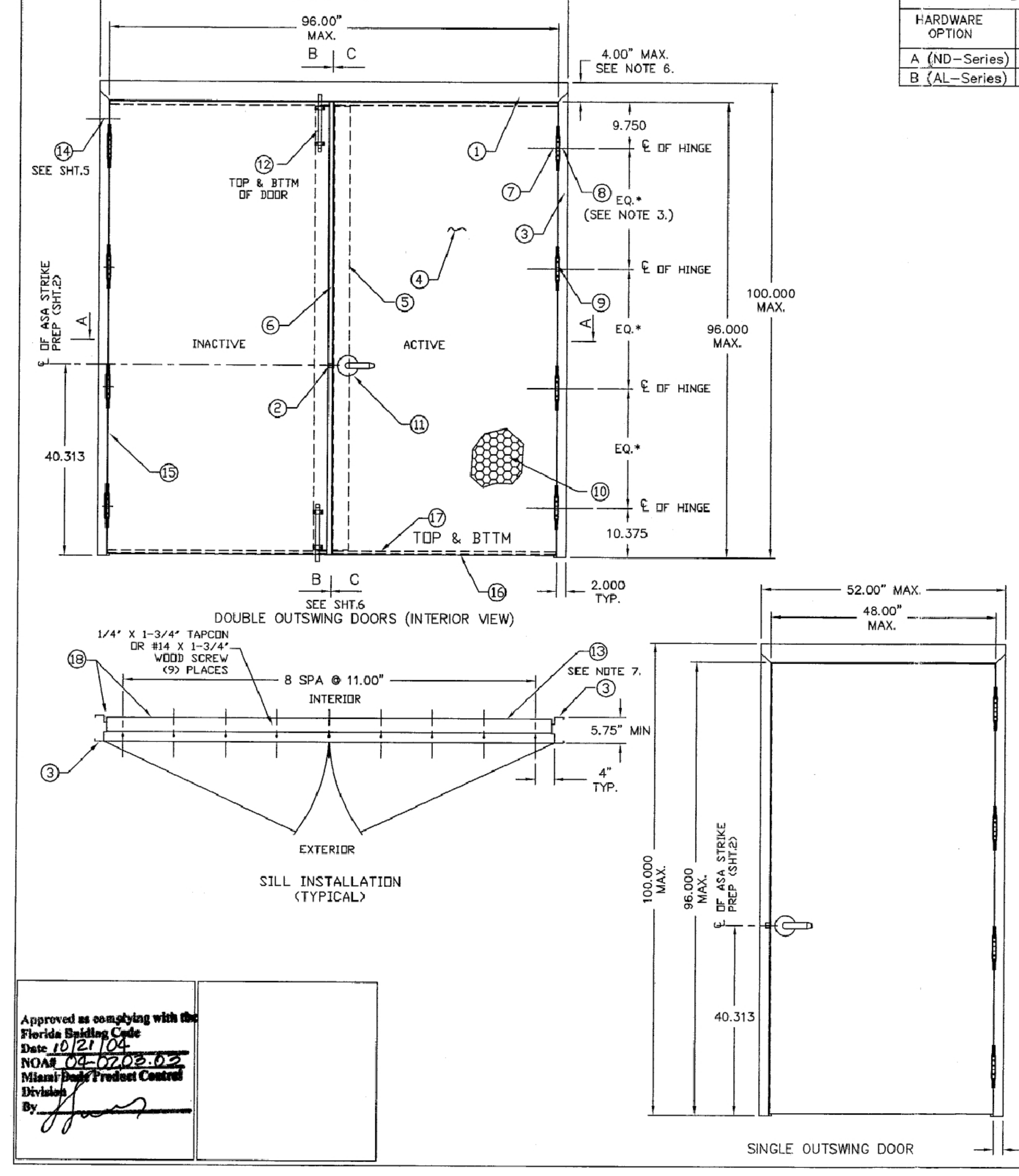
NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

F. STATEMENTS
1. Statement letter of conformance and no financial interest, dated 01/29/04, signed and sealed by Roger Vitt.

G. OTHER
1. Letter from consultant stating that the product is in compliance with the Florida Building Code (FBC).

Herminio F. Gonzalez, P.E.
Director, Building Code Compliance Office
NOA No 04-0203.03
Expiration Date: October 21, 2009
Approval Date: October 21, 2004

E - 2



DESIGN PRESSURE RATING	
HARDWARE OPTION	APPROVED FOR WATER INFILTRATION SEE SHT. 8 FOR WEATHERSTRIPPING OPTIONS
A (ND–Series)	± 65 PSF
B (AL–Series)	± 55 PSF

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
B	APPROVAL DWG	08/20/04	

NOTES:

1. WHEN WATER INFILTRATION IS NOT NEEDED, INSTALL WEATHERSTRIPPING PER SHT.7. WHEN WATER INFILTRATION IS REQUIRED – INSTALL WEATHERSTRIPPING PER SHT.7 AND 8.
2. ANCHOR REQUIREMENTS: SEE SHEET 5 FOR APPROVED ANCHORS AND INSTALLATION.
3. HINGE REQUIREMENTS: FOR DOOR OPENING UP TO 7'6" HIGH – MIN (3) HINGES FOR DOOR OPENING 7'7" – 8'0" HIGH – MIN (4) HINGES LOCATIONS: 9.75" FROM RABBET IN HEAD TO CL OF TOP HINGE 10.38" FROM FLOOR TO CL OF BOTTOM HINGE, EQUALLY SPACED IN BETWEEN.
4. SEE SHEET 6 FOR AVAILABLE STANDARD OPENING SIZES AND SPECIFICATIONS.
5. HARDWARE INSTALLATION AS PER MANUFACTURER'S INSTRUCTIONS.
6. 4" FACE HEAD IS AVAILABLE.
7. APPLY CAULK AS NEEDED.
8. ITEMS 19 THROUGH 24 REQUIRED ONLY IF WATER INFILTRATION IS NEEDED.

ITEM	QUANTITY	DESCRIPTION	MATERIAL	SIZE
1	1	HEAD SECTION SEE SHT 7 ASTM A366	.053" MIN. STL	MAX. 100"
2	1	ASA STRIKE		
3	2	HINGE JAMB SEE SHT 5 ASTM A366	.053" MIN. STL	MAX. 100"
4	1	DOOR SLAB (16 GA)	SEE SHT 7	4'0" X 8'0" MAX.
5	2	LOCK SIDE REINFORCEMENT CHANNEL	.099" MIN. STL	3.5" X 93.44" MAX.
6	1	Z–ASTRAGAL	.067" MIN. STL	MAX. 95.5"
7	NOTE 3.	HINGE REINFORCEMENT DOOR ASTM A621	.171" MIN. STL.	1.28' X 9.19'
8	NOTE 3.	HINGE REINFORCEMENT FRAME ASTM A621	.171" MIN. STL.	1.5" X 9.187" MAX.
9	NOTE 3.	4.5" X 4.5" BUTT HINGES (SEE SHT.2)	.134 MIN.	(4) #12–24 MS PER HINGE
		OPTIONAL CONTINUOUS HINGE (SEE SHT.2)	.067" MIN.STL /.12 ALUM	MAX. 95"
10	2	CORE MATERIAL: A) HONEYCOMB B) STEEL STIFFENED C) POLYSTYRENE D) POLYURETHANE E) MINERAL BOARD TEMPERATURE RISE CORE	SEE SHEET 4	47.66" X 93.5" MAX.
11	1	LOCKING HARDWARE – LOCKSET A) SCHLAGE ND–SERIES CYLINDRICAL LOCK B) SCHLAGE AL–SERIES CYLINDRICAL LOCK		
12	2	IVES 360 12" SURFACE BOLT		
13	1	THRESHOLD SILL W/BUMPER GASKET 1) NAT'L GUARD 950A 3) ZERO 566A 2) PEMCO 2005AS	.100" ALUM. 6063 T5	5.50" X 0.5" X 96" MAX.
14	NOTE 2.	JAMB ANCHOR ASTM A924 SEE SHT.5	3/16" DIA. BASIC WIRE	5.19" X 9.56"
15	6	PSO74 WEATHER STRIPPING	TPE	MAX. 24'
16	2	FAS–SEAL DOOR SWEEP	TPE	MAX. 47.66"
17	4	END CHANNEL ASTM A924 INVERTED (14 GA)	.067" MIN. STL.	.69" X 1.66" X 47.66" MAX.
18	AS NEEDED	BUTYL RUBBER OR 100% SILICONE		
19	1	DOOR SEAL No.8144FS BY ZERO INT'L (NOTE 8.)	TPE	MAX. 24'
20	4	DOOR SWEEP No.539 BY ZERO INT'L (NOTE 8.)	TPE	MAX. 96"
21	2	DOOR SWEEP No.139 BY ZERO INT'L (NOTE 8.)	SEE SHEET 8	MAX. 48"
22	2	ADJUSTABLE STOP No.475 BY ZERO INT'L (NOTE 8.)	TPE	MAX. 48"
23	2	RAIN DRIP No.11 BY ZERO INT'L (NOTE 8.)	SEE SHEET 8	MAX. 48"
24	2	TOP CAP GALV. A60 ASTM A924 (NOTE 8.)	.024" MIN. STL	0.5" X 1.719" X 47.66" MAX.

INGERSOLL–RAND COMPANY
STEELCRAFT MFG.
9017 BlueAsh Rd. Cincinnati Ohio 45242

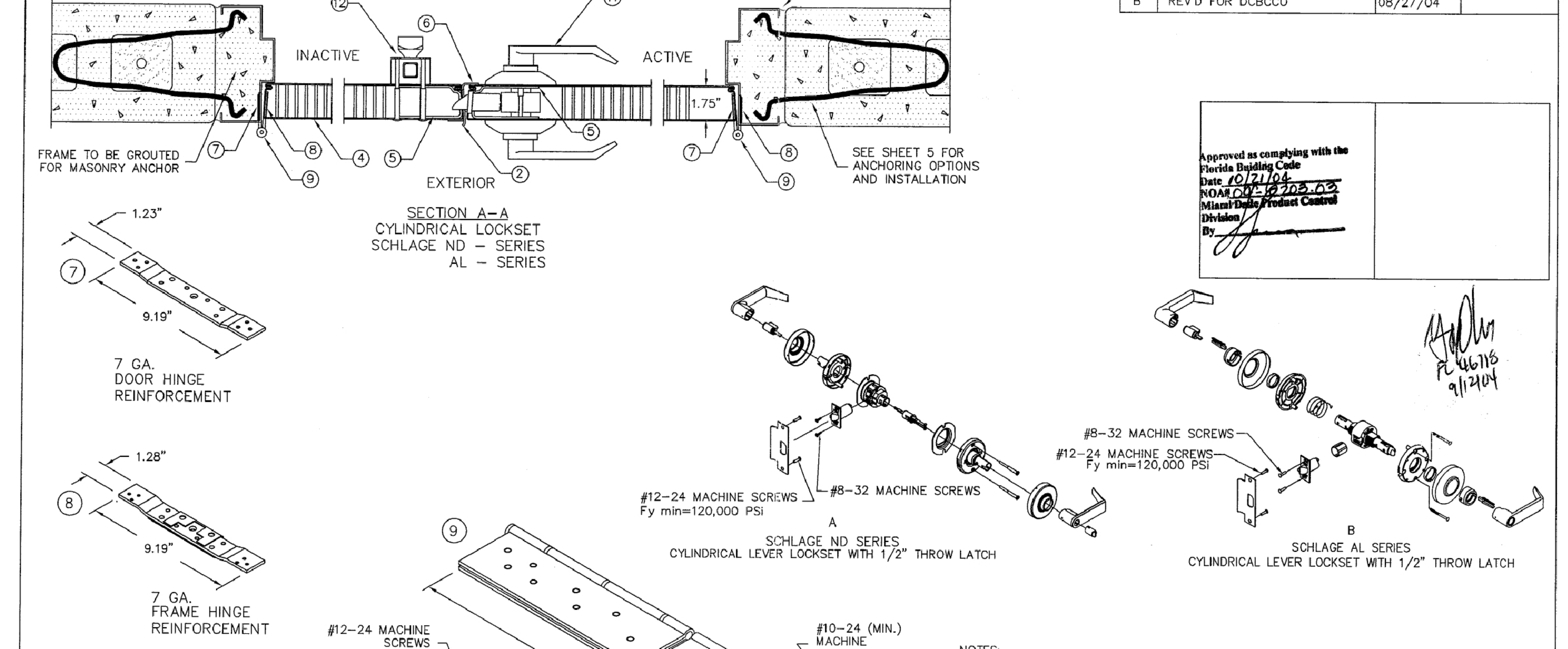
BEND RADIUS — THIRD ANGLE PROJECTION — DRAWN YMF — DATE 11/04/03 — CHECKED — APPROVED — ENG. APPVL

TITLE DADE COUNTY
DADE COUNTY
H16 – 4 8080 DOUBLE/SINGLE DOORS (OUTSWING)
IR COMMERCIAL LOCK
HARDWARE

SIZE — FLAT — DWG NO. 1086W SHEET 1 OF 8 — REV B
SCALE: NTS — AUTOCAD — SHEET OF

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
B	REV'D FOR DCBCCO	08/27/04	



NOTES:

1. SEE SHT.1 FOR ELEVATION, MATERIAL AND SIZE
2. SEE SHT.1 NOTE 2. AND SHT.5 FOR ANCHOR REQUIREMENTS
3. SEE SHT. 5 FOR WALL CONSTRUCTION AND ANCHORING SYSTEM OPTIONS AND INSTALLATION
4. SEE SHT.6 FOR AVAILABLE OPENING SIZES, JAMB DEPTHS AND SPECIFICATIONS
5. APPROVED HARDWARE INSTALLATION IS PER MANUFACTURER'S INSTRUCTIONS

INGERSOLL–RAND COMPANY
STEELCRAFT MFG.
9017 BlueAsh Rd. Cincinnati Ohio 45242

BEND RADIUS — THIRD ANGLE PROJECTION — DRAWN YMF — DATE 11/04/03 — CHECKED — APPROVED — ENG. APPVL

TITLE DADE COUNTY
CROSS SECTION OF DOOR AND FRAME
IR COMMERCIAL LOCK HARDWARE
8080 DOUBLE DOORS

SIZE — FLAT — DWG NO. 1086W SHEET 2 OF 8 — REV B
SCALE: NTS — AUTOCAD — SHEET OF

DATE: 09.19.08
REVISED:
REVISED:
DRAWN BY: AK
CHECKED BY: RS

TO THE BEST OF THE ARCHITECT'S KNOWLEDGE THE PLANS AND SPECIFICATIONS COMPLY WITH THE MINIMUM BUILDING CODES

RICHARD SCHMITT
AR0006680

HILLSBOROUGH COUNTY SHERIFF'S OFFICE
WCH PTS ROADWAY AND OBSERVATION TOWER
LITHIA, FLORIDA

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515 Bay Street, Tampa, Florida 33606
Telephone (813) 253-3465 (AA C000531)

HOLLOW METAL DOOR AND FRAMES

SHEET NUMBER
A14.3

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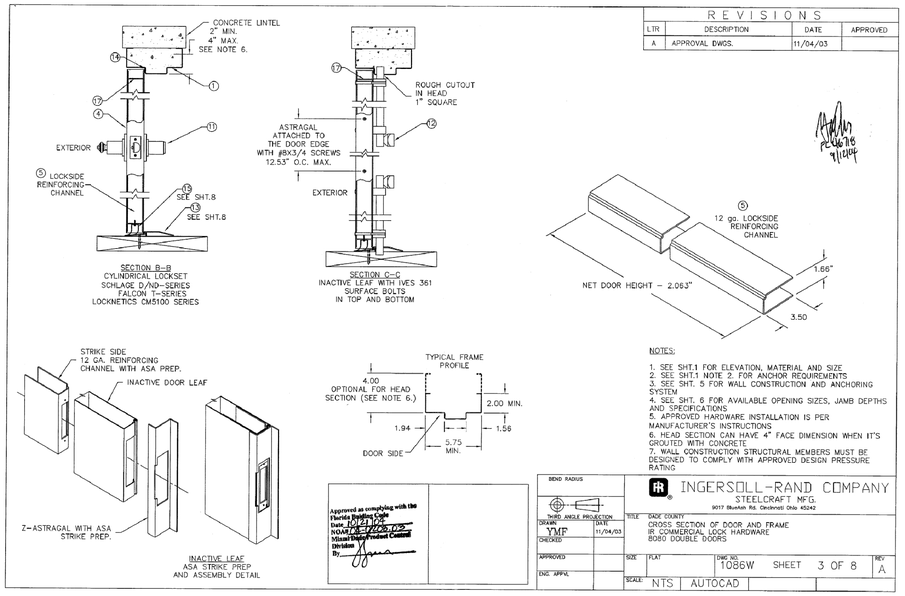


NOTES:

1. SEE SHT.1 FOR ELEVATION, MATERIAL AND SIZE
2. SEE SHT.1 NOTE 2. FOR ANCHOR REQUIREMENTS
3. SEE SHT. 5 FOR WALL CONSTRUCTION AND ANCHORING SYSTEM
4. SEE SHT. 6 FOR AVAILABLE OPENING SIZES, JAMB DEPTHS AND SPECIFICATIONS
5. APPROVED HARDWARE INSTALLATION IS PER MANUFACTURER'S INSTRUCTIONS
6. HEAD SECTION CAN HAVE 4" FACE DIMENSION WHEN IT'S GROUTED WITH CONCRETE
7. WALL CONSTRUCTION STRUCTURAL MEMBERS MUST BE DESIGNED TO COMPLY WITH APPROVED DESIGN PRESSURE RATING

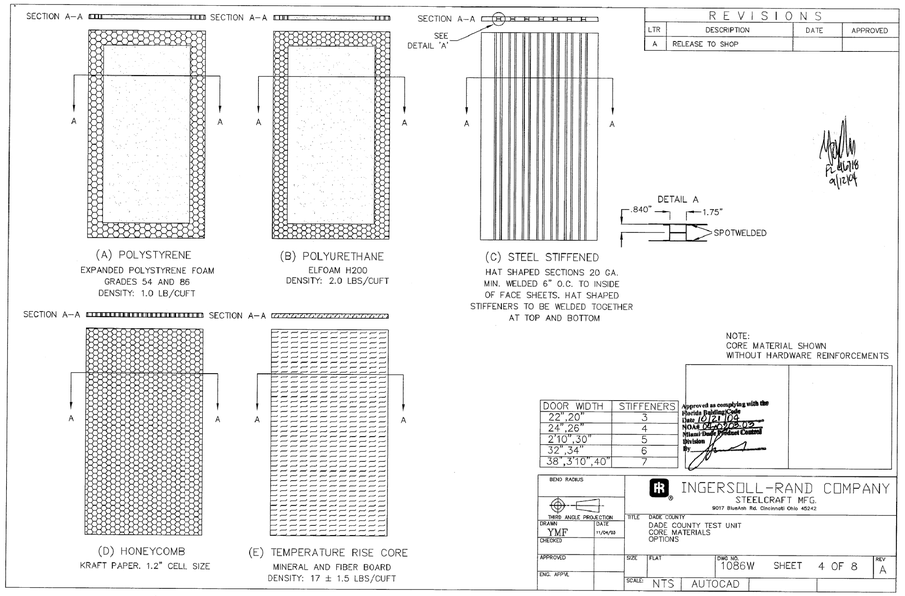
REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
A	APPROVAL DWGS.	11/04/03	

Approved as complying with the Florida Building Code
Date 10/21/08
NOAA 08-0728.02
Miami-Dade Product Control Division
By

INGERSOLL-RAND COMPANY
STEELCRAFT MFG.
9017 Blueash Rd. Cincinnati Ohio 45242

DRAWN YMF 11/04/03
TITLE DADE COUNTY
CROSS SECTION OF DOOR AND FRAME
IR COMMERCIAL LOCK HARDWARE
8080 DOUBLE DOORS
SIZE FLAT DWG NO 1086W SHEET 3 OF 8 REV A
SCALE NTS AUTOCAD



NOTE:
CORE MATERIAL SHOWN WITHOUT HARDWARE REINFORCEMENTS

DOOR WIDTH	STIFFENERS
22",20"	3
24",26"	4
2'10",30"	5
32",34"	6
38",3'10",40"	7

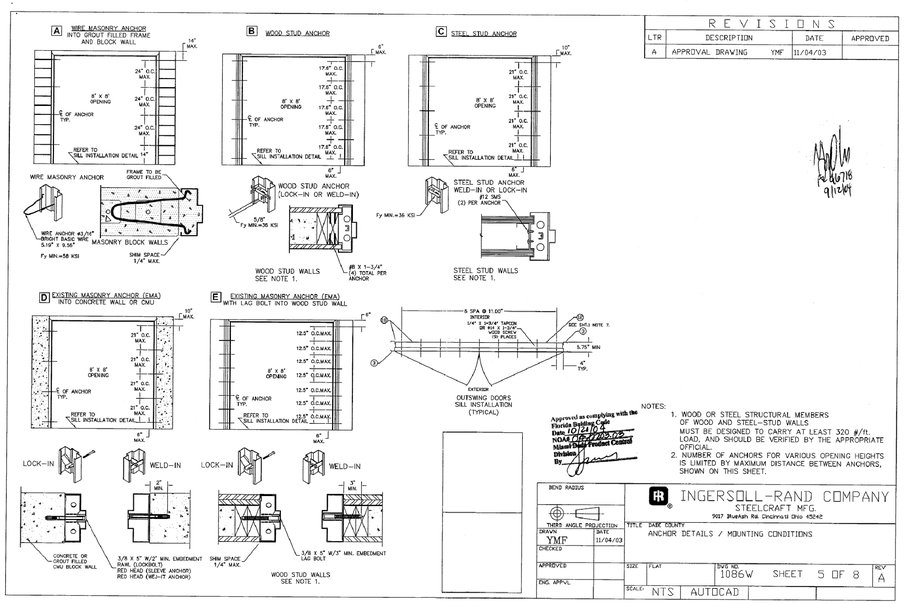
REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
A	RELEASE TO SHOP		

Approved as complying with the Florida Building Code
Date 10/21/08
NOAA 08-0728.02
Miami-Dade Product Control Division
By

INGERSOLL-RAND COMPANY
STEELCRAFT MFG.
9017 Blueash Rd. Cincinnati Ohio 45242

DRAWN YMF 11/04/03
TITLE DADE COUNTY
DADE COUNTY TEST UNIT
CORE MATERIALS
OPTIONS
SIZE FLAT DWG NO 1086W SHEET 4 OF 8 REV A
SCALE NTS AUTOCAD



NOTES:

1. WOOD OR STEEL STRUCTURAL MEMBERS OF WOOD AND STEEL-STUD WALLS MUST BE DESIGNED TO CARRY AT LEAST 320 #/ft. LOAD, AND SHOULD BE VERIFIED BY THE APPROPRIATE OFFICIAL.
2. NUMBER OF ANCHORS FOR VARIOUS OPENING HEIGHTS IS LIMITED BY MAXIMUM DISTANCE BETWEEN ANCHORS, SHOWN ON THIS SHEET.

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
A	APPROVAL DRAWING YMF	11/04/03	

Approved as complying with the Florida Building Code
Date 10/21/08
NOAA 08-0728.02
Miami-Dade Product Control Division
By

INGERSOLL-RAND COMPANY
STEELCRAFT MFG.
9017 Blueash Rd. Cincinnati Ohio 45242

DRAWN YMF 11/04/03
TITLE DADE COUNTY
ANCHOR DETAILS / MOUNTING CONDITIONS
SIZE FLAT DWG NO 1086W SHEET 5 OF 8 REV A
SCALE NTS AUTOCAD

AVAILABLE DOOR CONFIGURATIONS
(SEE NOTE 1.)

TABLE 1.

CORE MATERIAL PER SHT.7	MAXIMUM DOOR OPENING SIZE WIDTH	HEIGHT	SKIN MATERIAL DESCR.	GA./MIN. THK
HONEYCOMB POLYSTYRENE POLYURETHANE	8'0"	8'0"	CRS GALV	16/.053" 14/.067"
STEEL STIFFENED	8'0"	8'0"	CRS GALV	16/.053" 14/.067"
HONEYCOMB POLYSTYRENE POLYURETHANE	8'0"	8'0"	STAINLESS STEEL	16/.053"
MINERAL FIBER	8'0"	8'0"	CRS GALV	16/.053" 14/.067"
POLYSTYRENE/ HONEYCOMB	7'4" 6'0"	7'0" 8'0"	GALV	16/.053"

AVAILABLE FRAME CONFIGURATIONS
(SEE NOTE 2.)

TABLE 2.

FRAME SERIES	JAMB DEPTH	MAXIMUM DOOR OPENING SIZE WIDTH	HEIGHT	MATERIAL DESCR.	GA./MIN. THK
F	5.75" MIN.	8'0"	8'0"	CRS/HRS GALV	16/.053" 14/.067"
MU	5.75" MIN.	8'0"	8'0"	CRS/HRS GALV	16/.053" 14/.067"

MINIMUM YIELD STRENGTH = 26,500 PSI

TABLE 3.

CRS ASTM A1008
HRS ASTM A1011
GALV: A60 ASTM A924
STL: 304,306 ASTM A240

NOTES:

1. DOOR CONSTRUCTION
1.1. MINIMUM DOOR THICKNESS - 1 3/4"
1.2. DOORS AVAILABLE IN FLAT AND EMBOSSED SURFACE MODELS (SEE TABLE.1)
1.3. ALL DOORS ARE FLUSH - NO LITES OR LOUVERS ALLOWED PER THIS APPROVAL

2. FRAME CONSTRUCTION
1.1. MINIMUM JAMB DEPTH - 5 3/4", STOP HEIGHT - 5/8"
2.2. FRAMES AVAILABLE AS FLUSH (F-SERIES) AND MULT-USE (MU-SERIES) (SEE TABLE.2)

3. FOR MATERIAL SPECIFICATIONS REFERENCE SEE TABLE 3.

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
A	APPROVAL DWG YMF	11/04/03	

Approved as complying with the Florida Building Code
Date 10/21/08
NOAA 08-0728.02
Miami-Dade Product Control Division
By

INGERSOLL-RAND COMPANY
STEELCRAFT MFG.
9017 Blueash Rd. Cincinnati Ohio 45242

DRAWN YMF 11/04/03
TITLE DADE COUNTY
DOOR AND FRAME CONFIGURATIONS
AND MATERIAL SPECS.
SIZE FLAT DWG NO 1086W SHEET 6 OF 8 REV A
SCALE NTS AUTOCAD

HOLLOW METAL DOOR AND FRAMES CONT..

DATE: 09.19.08
REVISED:
REVISED:
DRAWN BY: AK
CHECKED BY: RS

TO THE BEST OF THE ARCHITECT'S KNOWLEDGE THE PLANS AND SPECIFICATIONS COMPLY WITH THE MINIMUM BUILDING CODES

RICHARD SCHMITT
AR0006680

HILLSBOROUGH COUNTY SHERIFF'S OFFICE
WCH PTS ROADWAY AND OBSERVATION TOWER
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Rañon & Partners, Inc.
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SHEET NUMBER
A14.4

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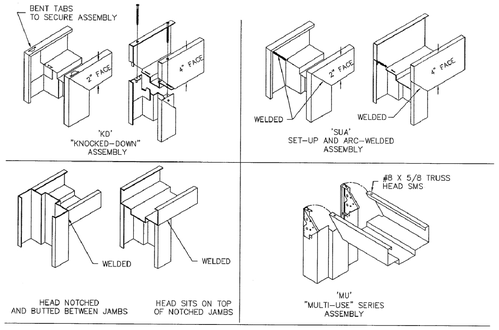
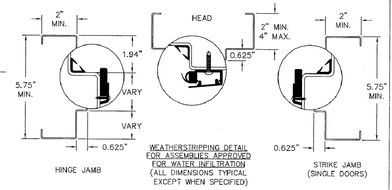
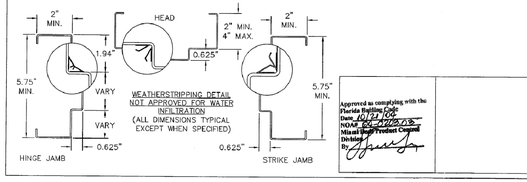
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
B	APPROVAL DWG	08/22/04	YMF





WEATHERSTRIPPING DETAIL FOR ASSEMBLIES APPROVED FOR WEATHERSTRIPPING (ALL DIMENSIONS TYPICAL EXCEPT WHEN SPECIFIED)

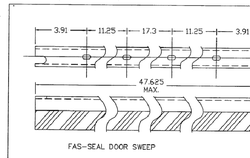


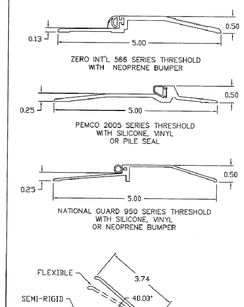
WEATHERSTRIPPING DETAIL NOT APPROVED FOR WATER INFILTRATION (ALL DIMENSIONS TYPICAL EXCEPT WHEN SPECIFIED)

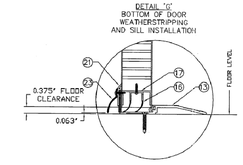
Approved as complying with the Florida Building Code
Date 10/17/2008
NOA# 04-0708.03
Miami-Dade Product Control Division
By

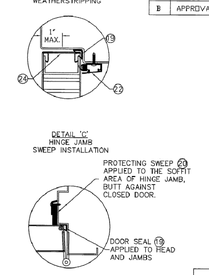
BEND RADIUS	INGERSOLL-RAND COMPANY STEELCRAFT MFG. 9027 Shaeffer Rd. Cincinnati Ohio 45242
THIRD ANGLE PROJECTION	TITLE DADE COUNTY CORNER DETAILS AND WEATHERSTRIPPING ATTACHMENT FOR FLUSH FRAME AND MU FRAMES
DRAWN YMF DATE 11/04/03	
CHECKED	
APPROVED	SIZE FLAT DWG NO. 1086W SHEET 7 OF 8 REV B
ENG. APPVL	SCALE NTS AUTOCAD

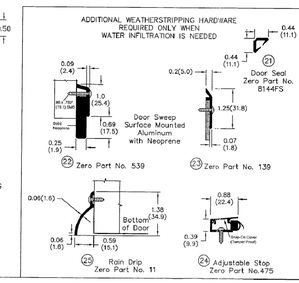
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
B	APPROVAL DWG	08/22/04	YMF











Approved as complying with the Florida Building Code
Date 10/17/2008
NOA# 04-0708.03
Miami-Dade Product Control Division
By

NOTES:

1. SWEEP MOUNTING SLOT LOCATIONS MAY VARY WITH DIFFERENT DOOR WIDTH.
2. DOOR SWEEP RIGID SECTION IS MADE OF PRO-FLEX #PD-199 POLYPROPYLENE HOMOPOLYMER
3. DOOR SWEEP FLEXIBLE SECTION IS MADE OF SANTOPRENE #101-73 73 DUROMETER - SHORE A SCALE

BEND RADIUS	INGERSOLL-RAND COMPANY STEELCRAFT MFG. 9027 Shaeffer Rd. Cincinnati Ohio 45242
THIRD ANGLE PROJECTION	TITLE DADE COUNTY DOUBLE DOORS ACCESSORIES BOTTOM SWEEP THRESHOLDS, SPLIT ASTRAGALS AND WEATHERSTRIPPING
DRAWN YMF DATE 11/04/03	
CHECKED	
APPROVED	SIZE FLAT DWG NO. 1086W SHEET 8 OF 8 REV B
ENG. APPVL	SCALE NTS AUTOCAD

HOLLOW METAL DOOR AND FRAMES CONT..

DATE: 09.19.08
REVISED:
REVISED:
DRAWN BY: AK
CHECKED BY: RS

TO THE BEST OF THE ARCHITECT'S KNOWLEDGE THE PLANS AND SPECIFICATIONS COMPLY WITH THE MINIMUM BUILDING CODES

RICHARD SCHMITT
AR0006680

HILLSBOROUGH COUNTY SHERIFF'S OFFICE
WCH PTS ROADWAY AND OBSERVATION TOWER
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Rañon & Partners, Inc.
Architects
515 Bay Street, Tampa, Florida 33606
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SHEET NUMBER
A14.5

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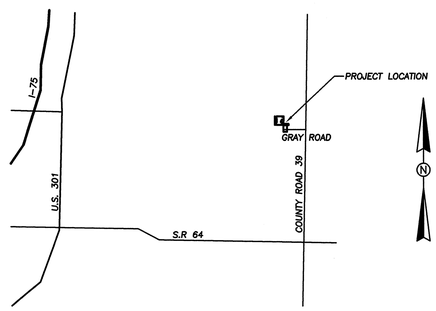
PRELIMINARY	X
RELEASED FOR CONSTRUCTION	

CONSTRUCTION PLANS
FOR:
HILLSBOROUGH COUNTY SHERIFF'S OFFICE
WCH PTS ROADWAY AND OBSERVATION TOWER

VICINITY MAP
NTS



HAMILTON
ENGINEERING & SURVEYING, INC.

311 NORTH NEWPORT AVENUE, SUITE 100
TAMPA, FL 33606
LB #8474
TEL (813) 250-3535
FAX (813) 250-3636

DRAWING INDEX

BOUNDARY SURVEY
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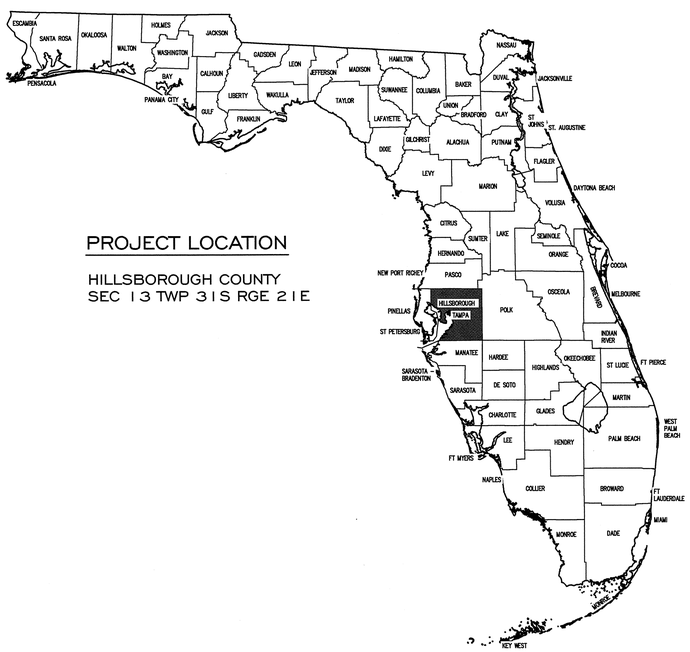


PROJECT LOCATION

HILLSBOROUGH COUNTY
SEC 13 TWP 31S RGE 21E

ENGINEER/SURVEYOR

HAMILTON ENGINEERING & SURVEYING, INC.
311 N. NEWPORT AVENUE, SUITE 100
TAMPA, FLORIDA 33606
(813) 250-3535
(813) 250-3636 (FAX)

OWNER/DEVELOPER

HILLSBOROUGH COUNTY BOCC
601 EAST KENNEDY BLVD.
TAMPA, FL 33602
(813) 272-5810

ARCHITECT

RANON & PARTNERS
515 W. BAY ST.
TAMPA, FLORIDA 33606
(813) 253-3465
(813)251-2033 (FAX)

REQUIRED PERMITS	SUBMITTED	PERMIT GRANTED	PERMIT NUMBER	EXPIRATION
S.W.F.W.M.D ENVIRONMENTAL RESOURCE PERMIT	7/28/2008	PENDING	44023380.005	
COUNTY CONSTRUCTION PLAN APPROVAL	7/28/2008	PENDING	88549	

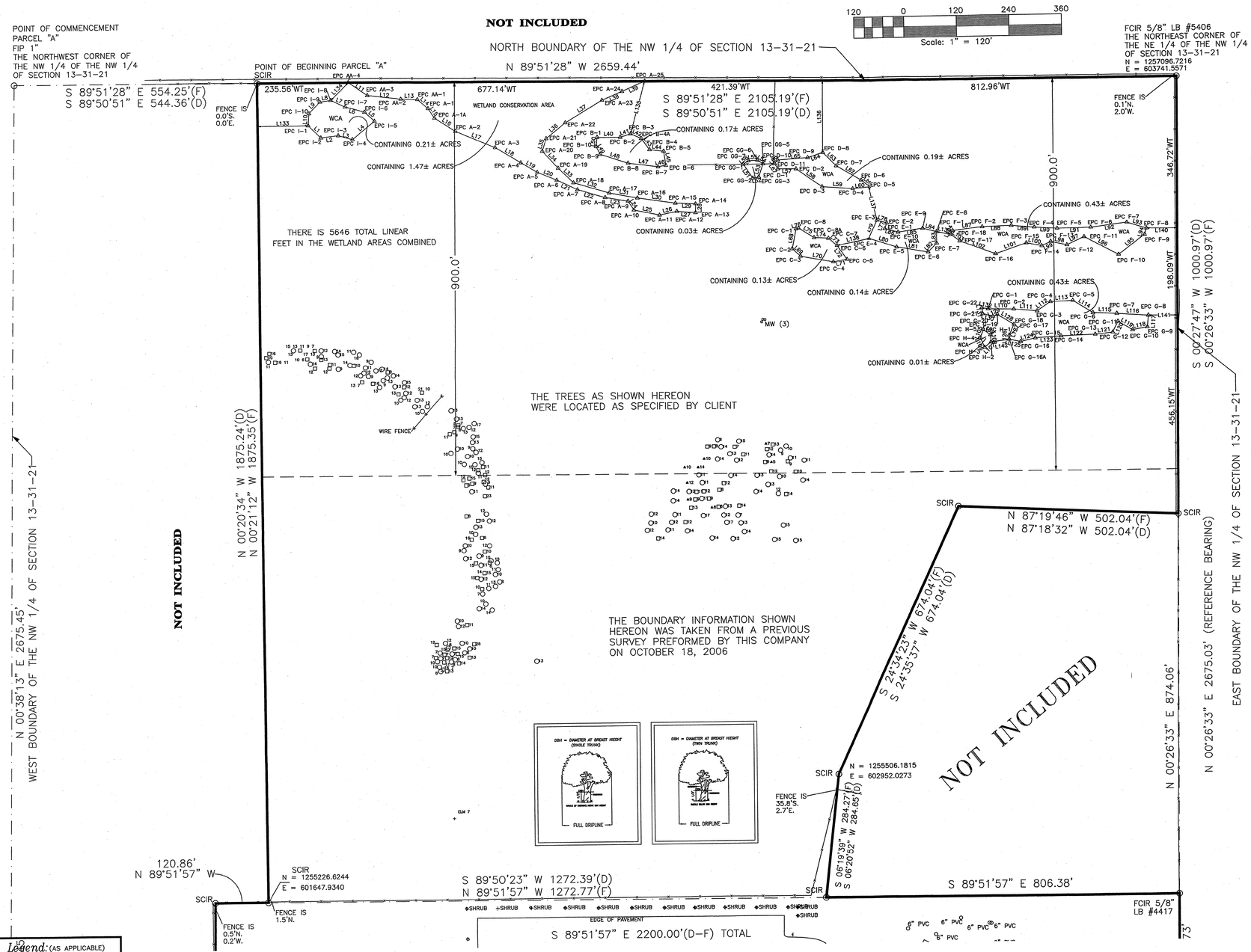
HCSO-SOUTH COUNTY TRAINING FACILITY
JOB # 20-070860

J:\ENGR\2007\20-070860 Master Plan For S Hillsborough County Training Center\1 DWGs\Construction\COVER.dwg (COVER) jpmesh Sep 15, 2008 - 3:25pm

MAP OF SPECIFIC PURPOSE SURVEY

SECTION 13, TOWNSHIP 31 SOUTH, RANGE 21 EAST, HILLSBOROUGH COUNTY, FLORIDA

THIS IS NOT A BOUNDARY SURVEY



Legend: (AS APPLICABLE)

SCIR	Set Capped Iron Rod 1/2" LB #7013
PRM	Set Concrete Monument 4" x 4" PRM LB #7013
(D)	DESCRIPTION
LB	Licensed Business
ID	Identification
FIP	Found Iron Pipe
(F)	FIELD
CMP	CORRUGATED METAL PIPE
UP	UTILITY POLE
OUL	OVERHEAD UTILITY LINES
WT	WETLAND TIE
RCP	REINFORCED CONCRETE PIPE
PP	PLASTIC PIPE
CTRH	CABLE TV HAND HOLD
WCA	WETLAND CONSERVATION AREA
LS	Licensed Surveyor
GA	Guy Anchor
PK	Parker Kalon
MW	MONITORING WELL

△ DENOTES DEAD TREE
○ DENOTES PALM TREE
□ DENOTES OAK TREE
⬡ DENOTES PINE TREE
✱ DENOTES OTHER (TYPE SPECIFIED)

Prepared By:

HAMILTON ENGINEERING & SURVEYING, INC.
CIVIL ENGINEERING / SURVEYING / ENVIRONMENTAL / LAND PLANNING
301 NORTH NEWPORT AVENUE, SUITE 100
TAMPA, FL 33606
TEL. (813) 250-3535
FAX (813) 250-3636

Prepared For:
RANON & PARTNERS, INC.

Project:
SHERIFF'S OFFICE PRACTICAL TRAINING FACILITY

Field Book:	#393
Party Chief:	VINCE
Survey Date:	07-23-08
Job Number:	20-070860
Drawing Number:	070860.DWG
Drawn By:	RHF

Surveyor's Notes: (As applicable)

1) Underground encroachments, such as utilities, structures, installations, improvements and foundations that may exist, have not been field located except as shown.
2) Underground utility locations and identifications shown hereon are between the utilities visible above ground appurtenances and do not necessarily show all utility locations.
3) This Survey has been prepared without the benefit of an Abstract or Title Commitment and is subject to any Dedications, Limitations, Restrictions, Reservations and/or Easements of Record. No Instruments of Record reflecting Easements, Rights of Way, and/or Ownership were furnished this Surveyor except as shown.
4) There may be additional Easements and/or Restrictions affecting this property that may not be found in the public records of this county.
5) No information on adjacent property owners or adjoining property recording information was provided to this surveyor.
6) The Surveyor has made no investigation or independent search for easements of record, encumbrances, restrictive covenants, ownership title evidence, or any other facts that an accurate and current title search may disclose.
7) The boundary corners and lines depicted by this survey were established per information as furnished.
8) Unless otherwise shown hereon, no Jurisdictional Wetland Areas or other physical topographic features have been located.
9) Bearings shown hereon are based on the East boundary of that NW 1/4 of Section 13-31-21 having a grid bearing of N. 00° 26' 33" E, based on the Florida State Plane Coordinate System, North American Datum of 1983 (1990 Adjustment).
10) This map does not determine or reflect ownership of property, boundary lines affected by adverse use, lines of conflicting/overlapping deeds, or other lines that may otherwise be determined by a court of law.
11) Ties from building corners, fence corners, shed corners, etc., are not to be used to re-establish property boundaries.
12) Additions or deletions to survey maps or reports made by other than the signing party or parties is prohibited without written consent of the signing party or parties.
13) This survey has been prepared expressly for the named entities and is not transferable. No other person or entity is entitled to rely upon and/or re-use this survey for any other purpose whatsoever without the express written consent of Hamilton Engineering & Surveying and the certifying Professional Surveyor and Mapper.
14) Nothing herein shall be construed to give any rights or benefits to anyone other than those certified to on this survey.
15) Fence ownership not determined.
16) Printed dimensions shown on the Map of Survey supersede scaled dimensions. There may be items drawn out of scale to graphically show their location.
17) Reproduction of this survey is expressly forbidden.
18) This survey is a representation of existing field conditions at the time of the field survey date and is based on found existing monumentation in the field.
19) This survey was performed for the specific purpose of locating wetlands and trees as specified by client.

NUMBER	DIRECTION	DISTANCE
L1	S 46°28'46" E	40.01'
L2	N 83°23'57" E	39.86'
L3	S 74°27'03" E	33.78'
L4	N 50°55'17" E	64.67'
L5	N 47°04'13" W	30.67'
L6	N 74°21'33" W	45.61'
L7	N 65°36'38" W	36.47'
L8	S 81°59'07" W	24.69'
L9	S 44°13'34" W	36.38'
L10	S 04°00'35" W	27.54'
L11	S 55°46'58" E	51.57'
L12	S 83°28'25" E	78.07'
L13	S 88°36'45" E	38.12'
L14	S 49°54'54" E	31.71'
L15	S 33°57'41" E	26.54'
L16	S 56°50'38" E	56.22'
L17	S 67°41'05" E	97.90'
L18	S 59°16'15" E	68.04'
L19	S 59°30'29" E	43.50'
L20	S 67°38'05" E	48.18'
L21	S 64°27'36" E	51.95'
L22	S 73°41'42" E	65.99'
L23	S 80°40'56" E	52.83'
L24	S 31°50'14" E	24.62'
L25	S 78°12'54" E	59.52'
L26	N 78°28'24" E	40.30'
L27	S 86°05'19" E	43.00'
L28	N 00°40'08" E	20.64'
L29	N 87°45'33" W	46.19'
L30	N 81°41'20" W	87.45'
L31	N 79°24'05" W	65.25'
L32	N 73°38'36" W	84.73'
L33	N 46°04'07" W	48.61'
L34	N 42°45'49" W	53.09'
L35	N 17°44'19" E	30.05'
L36	N 51°22'21" E	56.17'
L37	S 58°46'07" E	98.42'
L38	N 66°42'31" E	49.83'
L39	N 66°54'55" E	56.07'
L40	N 89°50'22" E	52.46'
L41	N 72°44'03" E	25.00'
L42	S 66°29'44" E	26.30'
L43	S 36°37'15" E	31.99'
L44	S 82°54'11" E	32.13'
L45	S 08°26'27" E	32.47'
L46	S 80°07'39" W	17.81'
L47	N 82°35'11" W	68.91'
L48	N 72°32'16" W	66.94'
L49	N 26°03'12" W	20.37'
L50	N 06°56'49" E	20.60'
L51	S 33°55'37" E	38.02'

L52	N 81°22'19" E	13.93'
L53	N 17°40'43" E	31.75'
L54	N 06°25'57" W	14.53'
L55	S 87°55'41" W	21.28'
L56	S 54°23'35" W	13.84'
L57	S 89°02'45" E	41.49'
L58	S 55°04'49" E	72.53'
L59	S 86°05'39" E	69.92'
L60	N 84°29'44" E	39.77'
L61	N 51°29'47" W	25.54'
L62	N 60°03'10" W	65.62'
L63	N 44°55'31" W	43.34'
L64	S 71°30'49" W	36.35'
L65	S 86°03'41" W	69.08'
L66	S 39°06'38" W	10.72'
L67	S 32°13'02" E	13.70'
L68	S 10°49'15" W	46.70'
L69	S 47°46'42" E	25.37'
L70	S 79°17'03" E	76.28'
L71	N 80°26'12" E	31.75'
L72	N 34°59'02" W	39.60'
L73	N 49°25'17" W	25.99'
L74	N 86°30'24" W	32.69'
L75	N 57°45'10" W	41.51'
L76	S 74°17'53" W	6.33'
L77	N 18°48'40" E	13.87'
L78	N 73°10'55" W	23.39'
L79	S 24°04'55" W	45.98'
L80	S 71°46'08" E	66.57'
L81	S 80°00'55" E	72.80'
L82	N 44°39'32" E	28.15'
L83	N 00°16'33" E	26.38'
L84	N 75°07'26" W	32.89'
L85	S 81°39'00" W	56.69'
L86	N 73°36'01" W	31.57'
L87	N 82°54'03" E	68.09'
L88	N 88°18'30" E	66.50'
L89	S 84°41'20" E	52.88'
L90	S 86°21'00" E	52.28'
L91	N 88°53'48" E	76.54'
L92	N 83°02'42" E	82.74'
L93	S 72°24'58" E	47.14'
L94	S 17°21'49" W	14.87'
L95	S 52°39'21" W	75.07'
L96	N 61°35'46" W	89.02'
L97	S 65°07'37" W	43.46'
L98	N 77°25'48" W	37.46'
L99	S 65°33'28" W	22.88'
L100	N 78°25'11" W	35.91'
L101	S 70°56'09" W	74.67'
L102	N 69°21'39" W	87.07'
L103	N 52°33'05" W	25.27'

L104	N 25°02'41" E	9.59'
L105	S 20°17'40" W	19.93'
L106	S 24°48'39" E	23.95'
L107	N 49°38'31" E	18.86'
L108	N 04°04'20" W	16.36'
L109	N 53°58'39" W	20.21'
L110	S 88°47'12" E	58.70'
L111	S 84°25'23" E	53.24'
L112	N 56°03'37" E	37.04'
L113	N 87°43'29" E	51.33'
L114	S 58°09'38" E	53.67'
L115	S 87°11'23" E	54.38'
L116	S 86°00'42" E	72.23'
L117	S 05°27'10" W	26.95'
L118	S 79°30'13" W	34.30'
L119	N 59°00'41" W	38.96'
L120	S 26°00'07" W	27.71'
L121	S 83°52'52" W	40.02'
L122	S 88°14'42" W	78.53'
L123	S 86°26'04" W	58.63'
L124	S 76°50'29" W	34.63'
L125	N 77°28'04" W	26.33'
L126	N 01°41'47" E	9.22'
L127	N 22°47'03" E	27.23'
L128	N 58°26'17" W	44.07'
L129	S 67°54'21" W	10.98'
L130	N 74°53'39" W	24.19'
L131	N 06°33'28" W	13.35'
L132	S 79°09'09" E	14.44'
L133	S 89°38'48" W	115.12'
L134	N 46°01'46" E	56.74'
L135	N 15°22'27" E	122.93'
L136	N 00°08'32" E	163.40'
L137	S 12°47'51" E	80.11'
L138	S 78°09'08" W	77.40'
L139	S 78°53'51" E	33.24'
L140	S 89°33'27" E	70.27'
L141	S 89°33'27" E	66.73'
L142	N 82°22'05" E	42.18'

I hereby certify that this survey meets or exceeds the Minimum Technical Standards as set forth by the Florida Board of Professional Surveyors and Mappers in Chapter 61G17-6, Florida Administrative Code, pursuant to Section 472.027, Florida Statutes.

Richard C. Hilton
FLORIDA REG. NO. LS# 3840
CERTIFICATE OF AUTHORIZATION LB #7013
Not valid without the signature and the original raised seal of a Florida Licensed Surveyor and Mapper

SHEET 1 OF 1

LEGAL DESCRIPTION

DESCRIPTION:
(AS FURNISHED BY CLIENT)

PARCEL "A"
THAT PART OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 31 SOUTH, RANGE 21 EAST IN HILLSBOROUGH COUNTY, FLORIDA.

LYING WITHIN THE FOLLOWING METES AND BOUNDS DESCRIPTION:

COMMENCE AT THE NORTHWEST CORNER OF NORTHWEST QUARTER OF SAID SECTION 13, THENCE S 89°50'51" E ON THE NORTH BOUNDARY OF THE NORTHWEST QUARTER OF SAID SECTION13, FOR A DISTANCE OF 544.36 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE S 89°50'51" E ON SAID NORTH BOUNDARY, FOR A DISTANCE OF 2105.19 FEET TO THE NORTHEAST CORNER OF THE NORTHWEST QUARTER OF SAID SECTION 13; THENCE S 00°27'47" W, ON THE EAST BOUNDARY OF THE NORTHWEST QUARTER OF SAID SECTION 13 FOR A DISTANCE OF 1000.97 FEET; THENCE N 87°18'32" W, FOR A DISTANCE OF 502.04 FEET; THENCE S 24°35'37" W, FOR A DISTANCE OF 674.04 FEET; THENCE S 06°20'52" W, FOR A DISTANCE OF 284.65 FEET; THENCE S 89°50'23" W, FOR A DISTANCE OF 1272.39 FEET; THENCE N 00°20'34" W, FOR A DISTANCE OF 1875.24 FEET TO THE POINT OF BEGINNING. PARCEL CONTAINING 76.04 ACRES MORE OR LESS.

AND

PARCEL "B"
THAT PART OF THE EAST 1/2 OF SECTION 13, TOWNSHIP 31 SOUTH, RANGE 21 EAST IN HILLSBOROUGH COUNTY, FLORIDA.

LYING WITHIN THE FOLLOWING METES AND BOUNDS DESCRIPTION:

COMMENCE AT THE SOUTHEAST CORNER OF NORTHWEST QUARTER OF SAID SECTION 13, FOR A POINT OF BEGINNING; THENCE N00°27'47" E ON THE WEST BOUNDARY OF THE NORTHEAST QUARTER OF SAID SECTION 13, FOR A DISTANCE OF 372.27 FEET; THENCE N 90°00'00" E, FOR A DISTANCE OF 1524.89 FEET; THENCE S 05°58'18" E TO THE SOUTH BOUNDARY OF THE NORTHEAST QUARTER OF SAID SECTION 13, FOR A DISTANCE OF 378.50 FEET; THENCE N 89°50'49" W ALONG THE SOUTH BOUNDARY OF THE NORTHEAST QUARTER OF SAID SECTION 13, FOR A DISTANCE OF 1567.28 FEET TO THE POINT OF BEGINNING. PARCEL CONTAINING 13.29 ACRES MORE OR LESS.

AND

PARCEL "C"
A PART OF SECTION 13, TOWNSHIP 31 SOUTH, RANGE 21 EAST IN HILLSBOROUGH COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF THE SOUTHEAST 1/4 OF SAID SECTION 13; THENCE RUN SOUTH ALONG THE WEST BOUNDARY OF THE SOUTHEAST 1/4, A DISTANCE OF 70 FEET TO THE POINT OF BEGINNING. THENCE CONTINUE SOUTH ALONG SAID WEST BOUNDARY OF THE SOUTHEAST 1/4 A DISTANCE OF 2,000 FEET; THENCE RUN EAST A DISTANCE OF 1,100 FEET; THENCE RUN NORTH A DISTANCE OF 2,000 FEET TO A POINT 70 FEET SOUTH OF THE NORTH BOUNDARY OF THE SOUTHEAST 1/4 OF SAID SECTION 13; THENCE RUN WEST 1,100 FEET TO THE POINT OF BEGINNING. PARCEL CONTAINING 50.50 ACRES MORE OR LESS.
AND ALSO:
TOGETHER WITH AN EASEMENT FOR INGRESS AND EGRESS ACROSS THE PHYSICAL ROAD LYING WITHIN THE FOLLOWING DESCRIBED PROPERTY: THE NORTH 70 FEET OF THE SOUTHEAST 1/4 OF SECTION 13, TOWNSHIP 31 SOUTH, RANGE 21 EAST IN HILLSBOROUGH COUNTY, FLORIDA, AND THE NORTH 70 FEET OF THE SOUTHWEST 1/4 OF SECTION 18, TOWNSHIP 31 SOUTH, RANGE 21 EAST IN HILLSBOROUGH COUNTY, FLORIDA LYING WESTERLY OF S.R. 39.

AND

PARCEL "D"
THE SOUTH 800.00 FEET OF THE EAST 2200.00 FEET OF THE NORTHWEST 1/4 OF SECTION 13, TOWNSHIP 31 SOUTH, RANGE 21 EAST IN HILLSBOROUGH COUNTY, FLORIDA. PARCEL CONTAINING 40.40 ACRES MORE OR LESS.

NATURAL RESOURCES NOTES

CONTRACTOR IS TO PROVIDE EROSION CONTROL/SEDIMENTATION BARRIER (HAY BALES OR SILTATION CURTAIN) TO PREVENT SILTATION OF ADJACENT PROPERTY STREETS, STORM SEWERS, AND WATERWAYS. BARRIERS ARE TO BE BUILT BEFORE LAND ALTERATION, MAINTAINED EFFECTIVELY DURING CONSTRUCTION, AND REMOVED AFTER FINAL SOIL STABILIZATION. IN ADDITION, CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON GROUND IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR VEHICULAR TRAFFIC, THE CONTRACTOR IS TO REMOVE AND CLEAN SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR AUTHORITIES.

IN ORDER TO COMPLY WITH SECTION 4.01.05A OF THE HILLSBOROUGH COUNTY LAND DEVELOPMENT CODE – TO MINIMIZE SOIL EROSION, PROPOSED LAND ALTERATION ACTIVITIES SHALL NOT UNNECESSARILY REMOVE EXISTING VEGETATION AND ALTER EXISTING TOPOGRAPHY. ADEQUATE PROTECTION MEASURES (IE HAY BALES, BAFFLES, SODDING AND SANDBAGGING) SHALL BE PROVIDED, AS NECESSARY TO MINIMIZE EROSION AND DOWNSTREAM SEDIMENTATION CAUSED BY SURFACE WATER RUN-OFF ON EXPOSED LAND SURFACES.

ANY AREAS SUBJECT TO EROSION MUST BE ADEQUATELY STABILIZED WITH VEGETATIVE MATERIAL THAT WILL, IN A REASONABLE TIME FRAME, DETER SOIL DISTURBANCE. SODDING, PLUGGING, SPRIGGING OR SEEDING IS ACCEPTABLE FOR STABILIZATION, HOWEVER, SODDING MAY BE REQUIRED IN AREAS OF EROSION-PRONE SOILS OR WHERE SLOPES ARE GREATER THAN 5:1. VEGETATION OTHER THAN GRASS IS ACCEPTABLE UNLESS OTHERWISE SPECIFIED.

ALL TREES TO REMAIN MUST BE PROTECTED BY TREE PROTECTION BARRICADES MEETING THE MINIMUM STANDARDS SHOWN. PROTECTIVE BARRICADES SHALL REMAIN IN PLACE UNTIL LAND ALTERATION AND CONSTRUCTION ACTIVITIES ARE COMPLETED.

INSTALL/EXPAND TREE BARRICADES TO THE FULLEST EXTENT OF THE DRIP LINE OF ALL TREES AS POSSIBLE AND/OR TO THE MAXIMUM LIMIT OF IMPROVEMENT(S) AS POSSIBLE (OF COURSE REALIZING THAT THE TREE BARRICADES MAY HAVE TO BE "BACKED OFF" THE IMPROVEMENT(S) 6" TO 2' MAXIMUM TO INSTALL THE IMPROVEMENT(S))

DO NOT INSTALL TREE BARRICADES (SPECIFICALLY SILT FENCING MATERIAL) BY TRENCHING WITHIN THE DRIPLINE OF EXISTING TREES.

CONTRACTOR SHALL CONTACT THE ENGINEER AND/OR OWNER PRIOR TO ANY CONSTRUCTION THAT MAY DAMAGE TREES WHICH ARE NOT MARKED TO BE REMOVED.

DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES, IT SHALL BE UNLAWFUL TO REMOVE VEGETATION (EXCEPT BY HAND) BY GRUBBING OR TO PLACE SOIL DEPOSITS, DEBRIS, SOLVENTS, CONSTRUCTION MATERIAL, MACHINERY OR OTHER EQUIPMENT OF ANY KIND WITHIN THE DRIPLINE OF A TREE TO REMAIN ON THE SITE UNLESS OTHERWISE APPROVED BY THE COUNTY.

ALL TRIMMING UNDERTAKEN ON A TREE PROTECTED BY THE PROVISIONS OF THE LDC SHALL BE PRUNED IN ACCORDANCE WITH THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) A-300 PRUNING STANDARDS.

ALL SIDEWALKS WITHIN THE DRIPLINE OF EXISTING TREES SHALL BE INSTALLED AT OR ABOVE EXISTING GRADE.

ANY TREE ROOTS EXISTING WITHIN APPROVED IMPROVEMENT AREAS AND ORIGINATING FROM A PROTECTED TREE, SHALL BE SEVERED CLEAN AT THE LIMITS OF THE PRESERVED AREA. ROOT PRUNING SHALL BE LIMITED TO THE AREAS DEPICTED ON THE SITE PLAN ONLY.

WETLAND CONSERVATION AREA NOTE:
THE WETLAND CONSERVATION AREA SHALL BE RETAINED IN A NATURAL STATE PURSUANT TO THE HILLSBOROUGH COUNTY LAND DEVELOPMENT CODE (LDC) AS AMENDED; THE HILLSBOROUGH COUNTY ENVIRONMENTAL PROTECTION ACT, CHAPTER 84-446; AND CHAPTER 1-11, RULES OF THE HILLSBOROUGH COUNTY ENVIRONMENTAL PROTECTION COMMISSION. IN ADDITION, A 30 FOOT SETBACK FROM THE WETLAND CONSERVATION AREA IS REQUIRED AND SHALL CONFORM TO THE PROVISIONS STIPULATED WITHIN THE HILLSBOROUGH COUNTY LAND DEVELOPMENT CODE.

PRUNING OF GRAND OAKS, WITH THE EXCEPTION OF MINOR PRUNING, IS PROHIBITED UNLESS CONDUCTED IN ACCORDANCE WITH THE ANSI-A-300 PRUNING STANDARDS, AND PERFORMED BY AN ARBORIST CERTIFIED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) OR A REGISTERED CONSULTING ARBORIST WIT THE AMERICAN SOCIETY OF CONSULTING ARBORISTS (ASCA). A NOTARIZED AFFIDAVIT AFFIRMING AN ISA CERTIFIED ARBORIST OR AN ASCA REGISTERED CONSULTING ARBORIST CONTRACTED BY A PROPERTY OWNER TO PRUNE A GRAND OAK SHALL ASSUME FULL RESPONSIBILITY FOR ALL PRUNING ACTIVITIES DETERMINED IN NONCOMPLIANCE WITH STANDARDS SPECIFIED WITHIN THE LAND DEVELOPMENT CODE.

MINOR PRUNING: MINOR PRUNING IS THE PRUNING OF A TREE BY THE REMOVING BRANCHES MEASURED NO GREATER THAN THREE INCHES IN DIAMETER AT THE POINT OF CONNECTION TO A SUPPORTING BRANCH AND SHALL BE IN ACCORDANCE TO THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) A-300 PRUNING STANDARDS.

EROSION CONTROL NOTES

THE EROSION AND TURBIDITY CONTROL MEASURES SHOWN HEREON ARE THE MINIMUM REQUIRED FOR REGULATORY AGENCY PLANS APPROVAL. ADDITIONAL CONTROL AND MEASURES MAY BE REQUIRED DUE TO REGULATORY AGENCY RULES, CONSTRUCTION SEQUENCING AND/OR WEATHER CONDITIONS. ANY ADDITIONAL MEASURES DEEMED NECESSARY BY THE REGULATORY AGENCIES OR BY THE SITE CONTRACTOR BEFORE OR DURING CONSTRUCTION SHALL BE IMPLEMENTED AND MAINTAINED.

THE APPROPRIATE TURBIDITY AND EROSION CONTROL METHODOLOGIES SELECTED BY THE SITE CONTRACTOR FOR THIS PROJECT SHOULD BE MADE FOLLOWING REVIEW OF THE PLANS AND PROJECT SITE SPECIFIC FACTORS AND AFTER CONSULTATIONS AS NEEDED WITH THE PROJECT ENGINEER AND REGULATORY AGENCIES. SEVERAL FACTORS TO CONSIDER ARE DURATION OF CONSTRUCTION ACTIVITIES; DEPTH OF CUT AND SEPARATION DISTANCE FOR PONDS, TRENCHES, AND UTILITY LINES; CLAY CONTENT IN EXCAVATED MATERIALS; FILL HEIGHT RELATIVE TO NATURAL GRADE AND LENGTH AND STEEPNESS OF THE PROPOSED SLOPES; GROUND WATER LEVELS; TIME OF YEAR RELATIVE TO THE RAINY SEASON; PROXIMITY TO WETLANDS, WATER BODIES OR OFFSITE PROPERTIES; EXISTING TOPOGRAPHY AND DIRECTIONS OF SURFACE FLOW.

THE TYPE OF EROSION CONTROL BARRIERS USED SHALL BE GOVERNED BY THE NATURE OF THE CONSTRUCTION OPERATION AND SOIL TYPE THAT WILL BE EXPOSED. SILTY AND CLAYEY MATERIAL MAY REQUIRE SOLID SEDIMENT BARRIERS TO PREVENT TURBID WATER DISCHARGE, WHILE SANDY MATERIAL MAY NEED ONLY SILT SCREENS OR HAY BALES TO PREVENT EROSION. FLOATING TURBIDITY CURTAINS SHOULD GENERALLY BE USED IN OPEN WATER SITUATIONS. DIVERSION DITCHES OR SWALES MAY BE REQUIRED TO PREVENT TURBID STORMWATER RUNOFF FROM BEING DISCHARGED TO WETLANDS OR OTHER WATER BODIES. IT MAY BE NECESSARY TO EMPLOY A COMBINATION OF BARRIERS, DITCHES, AND OTHER EROSION/TURBIDITY CONTROL MEASURES IF CONDITIONS WARRANT.

THE SITE CONTRACTOR IS RESPONSIBLE FOR HAVING THEIR DEWATERING PLAN AND TURBIDITY CONTROL PLAN APPROVED BY THE APPLICABLE REGULATORY AGENCIES, PRIOR TO CONSTRUCTION, AS NECESSARY. REFER TO THE SITE PERMIT CONDITIONS FOR AGENCIES REQUIRING SUCH REVIEW, APPROVAL AND/OR SEPARATE PERMITS. WHERE PUMPS ARE TO BE USED TO REMOVE WATER FROM CONSTRUCTION AREAS, THE WATER SHALL BE TREATED PRIOR TO DISCHARGE TO WETLANDS. TREATMENT METHODS INCLUDE, FOR EXAMPLE, TURBID WATER BEING PUMPED INTO GRASSED SWALES OR APPROPRIATE UPLAND VEGETATED AREAS (OTHER THAN UPLAND PRESERVATION AREAS AND WETLAND BUFFERS), SEDIMENT BASINS, OR CONFINED BY AN APPROPRIATE ENCLOSURE SUCH AS TURBIDITY BARRIERS OR LOW BERMS, AND KEPT CONFINED UNTIL TURBIDITY LEVELS MEET STATE WATER QUALITY STANDARDS.

HAY BALES OR SILT SCREENS SHALL BE INSTALLED PRIOR TO LAND CLEARING TO PROTECT WATER QUALITY AND TO IDENTIFY AREAS TO BE PROTECTED FROM CLEARING ACTIVITIES AND MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL ALL SOIL IS STABILIZED. FLOATING TURBIDITY BARRIERS SHALL BE IN PLACE IN OPEN WATER SYSTEMS PRIOR TO INITIATION OF EARTHWORK AND MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL ALL SOIL IS STABILIZED. THE INSTALLATION OF TEMPORARY EROSION CONTROL BARRIERS SHALL BE COORDINATED WITH THE CONSTRUCTION OF THE PERMANENT EROSION CONTROL FEATURES TO THE EXTENT NECESSARY TO ASSURE EFFECTIVE AND CONTINUOUS CONTROL OF EROSION AND WATER QUALITY THROUGHOUT THE DURATION OF THE PROJECT.

THE SITE CONTRACTOR SHALL SCHEDULE THEIR OPERATIONS SUCH THAT THE AREA OF UNPROTECTED ERODIBLE EARTH EXPOSED AT ANY ONE TIME IS NOT LARGER THAN THE MINIMUM AREA NECESSARY FOR EFFICIENT CONSTRUCTION OPERATION, AND THE DURATION OF EXPOSED, UNCOMPLETED CONSTRUCTION TO THE ELEMENTS SHALL BE AS SHORT AS PRACTICABLE. CLEARING AND GRUBBING SHALL BE SO SCHEDULED AND PERFORMED SUCH THAT GRADING OPERATIONS CAN FOLLOW IMMEDIATELY THEREAFTER. GRADING OPERATIONS SHALL BE SO SCHEDULED AND PERFORMED THAT PERMANENT EROSION CONTROL FEATURES CAN FOLLOW IMMEDIATELY THEREAFTER IF CONDITIONS ON THE PROJECT PERMIT. EXPOSED SOILS SHOULD BE STABILIZED AS SOON AS POSSIBLE, ESPECIALLY SLOPES LEADING TO WETLANDS. STABILIZATION METHODS INCLUDE SOLID SOD, SEEDING AND MULCHING OR HYDROMULCHING TO PROVIDE A TEMPORARY OR PERMANENT GRASS COVER MULCH BLANKETS, FILTER FABRICS, ETC., CAN BE EMPLOYED TO PROVIDE VEGETATIVE COVER. SHEET FLOW OF NEWLY FILLED OR SCRAPED AREAS MAY BE CONTROLLED OR CONTAINED BY THE USE OF BRUSH BARRIERS, DIVERSION SWALES, INTERCEPTOR DITCHES OR LOW BERMS. FLOW SHOULD BE DIRECTED TOWARD AREAS WHERE SEDIMENTS CAN SUFFICIENTLY SETTLE OUT. SPREADER SWALES MAY HELP DISSIPATE CLOUDY WATER PRIOR TO CONTACT WITH WETLANDS.

WATER DERIVED FROM VARIOUS DEWATERING METHODS SHOULD BE PASSED THROUGH SUFFICIENTLY WIDE AREAS OF EXISTING UPLAND VEGETATION TO FILTER OUT EXCESS TURBIDITY. IF THIS IS NOT SUFFICIENT, THE WATER SHALL BE RETAINED IN PREVIOUSLY CONSTRUCTED PERMANENT STORMWATER PONDS OR ELSE RETAINED IN TEMPORARY SEDIMENTATION BASINS UNTIL THE CLARITY IS SUITABLE TO ALLOW FOR ITS DISCHARGE. PLUGGING THE OUTFALLS FROM COMPLETED STORMWATER PONDS MAY BE NEEDED TO AVOID DISCHARGE. HOWEVER, SUCH SITUATIONS SHOULD BE MONITORED CLOSELY TO PRECLUDE BERM FAILURE IF WATER LEVELS RISE TOO HIGH.

IF THE ABOVE CONTROLS REMAIN INEFFECTIVE IN PRECLUDING RELEASE OF TURBID WATER, ESPECIALLY DURING POND OR UTILITY LINE DEWATERING, THEN THE CONTRACTOR MAY BE COMPELLED TO USE A VERTICAL DEWATERING SYSTEM SUCH AS WELL POINTS OR SOCK DRAINS TO WITHDRAW GROUNDWATER WHICH MAY ALREADY BE CLEAR ENOUGH TO ALLOW FOR DIRECT DISCHARGE TO WETLANDS.

ENERGY DISSIPATERS (SUCH AS RIP RAP, A GRAVEL BED, HAY BALES, ETC.) SHALL BE INSTALLED AT THE DISCHARGE POINT OF PIPES OR SWALES IF SCOURING IS OBSERVED. ATTEMPT TO INSTALL ROADWAY CURB AND GUTTERS AS SOON AS POSSIBLE TO REDUCE THE SURFACE AREA FOR EROSION TO OCCUR. IMPLEMENT STORM DRAIN INLET PROTECTION (HAY BALES OR GRAVEL) TO LIMIT SEDIMENTATION WITHIN THE STORMWATER SYSTEM. PERFORM INSPECTIONS AND PERIODIC CLEANING OF SEDIMENTS WHICH WASH OUT INTO THE STREETS UNTIL ALL SOIL IS STABILIZED. VEHICLE OR EQUIPMENT WASHDOWN AREAS WILL BE SUFFICIENTLY REMOVED FROM WETLANDS OR OFFSITE AREAS. FUGITIVE DUST CONTROLS (PRIMARILY BY USING WATER SPRAY TRUCKS) SHALL BE EMPLOYED AS NEEDED TO CONTROL WINDBORN EMISSIONS.

NO CLAY MATERIAL SHALL BE LEFT EXPOSED IN ANY STORMWATER STORAGE FACILITY. IF CLAY OR SANDY-CLAYS ARE ENCOUNTERED DURING STORMWATER STORAGE EXCAVATION, THE SITE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY BEFORE PROCEEDING WITH FURTHER EXCAVATION. IF THE ENGINEER HAS DETERMINED THAT SUCH SOILS ARE NON-CONFORMING AND MUST BE EXCAVATED TO MEET PERMIT AND DESIGN CONDITIONS, EXCAVATION MAY PROCEED AFTER OBTAINING WRITTEN AUTHORIZATION FROM THE APPROPRIATE LOCAL REGULATORY AGENCY. IF SAID SOILS ARE LEFT EXPOSED AT THE PERMITTED AND DESIGNED DEPTH, THE SITE CONTRACTOR SHALL OVER-EXCAVATE THE POND'S BOTTOM AND SIDE SLOPES BY A MINIMUM OF TWELVE (12") INCHES AND BACKFILL WITH CLEAN SANDS TO HELP PREVENT SUSPENSION OF FINE PARTICLES IN THE WATER COLUMN.

DISCHARGES WHICH EXCEED 29 N.T.U.'S OVER THE BACKGROUND LEVELS ARE IN VIOLATION OF STATE WATER QUALITY STANDARDS. DISCHARGES OF WATER QUANTITIES WHICH AFFECT OFFSITE PROPERTIES OR MAY DAMAGE WETLANDS ARE ALSO PROHIBITED BY REGULATING AGENCIES. WATER DISCHARGE VELOCITIES FROM IMPOUNDED AREAS AND TEMPORARY SEDIMENTATION BASINS SHALL BE RESTRICTED TO AVOID SCOURING IN RECEIVING AREAS. IF WATER CLARITY DOES NOT REDUCE TO STATE STANDARDS RAPIDLY ENOUGH IN HOLDING PONDS, IT MAY BE POSSIBLE TO USE CHEMICAL AGENTS SUCH AS ALUM TO FLOCCULATE OR COAGULATE THE SEDIMENT PARTICLES.

ONGOING INSPECTIONS AND PERIODIC MAINTENANCE BY THE SITE CONTRACTOR SHALL OCCUR THROUGHOUT CONSTRUCTION AS NECESSARY TO INSURE THE ABOVE METHODS ARE WORKING SUITABLY. THIS MAY BE NEEDED DAILY, IF CONDITIONS SO WARRANT. SITE CONTRACTORS ARE ENCOURAGED TO OBTAIN AND THOROUGHLY REVIEW THE FLORIDA DEVELOPMENT MANUAL. A GUIDE TO SOUND LAND AND WATER MANAGEMENT, WHICH WAS DEVELOPED BY THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION IN 1988. THIS PROVIDES FAIRLY IN DEPTH DISCUSSIONS OF RECOMMENDED TECHNIQUES AND ALSO PROVIDES SPECIFIC DESIGN AND TECHNICAL STANDARDS.

GENERAL NOTES

THESE DRAWINGS ARE TO BE CONSIDERED PRELIMINARY AND NOT FOR CONSTRUCTION UNTIL ALL PERMIT APPROVALS ARE CONFIRMED RECEIVED BY THE ENGINEER OF RECORD (EOR).

WHENEVER A CONFLICT OCCURS BETWEEN ANY SPECIFICATION AND/OR REGULATORY REQUIREMENT, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

THESE DRAWINGS ARE CURRENTLY UNDER REVIEW BY THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT AND OTHER REGULATORY AGENCIES. THE FINAL APPROVED PLANS MAY DEVIATE CONSIDERABLY FROM THESE DRAWINGS. THE CONTRACTOR MUST ASSURE CONSTRUCTION IS IN ACCORDANCE WITH THE APPROVED DRAWINGS. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL CONTACT HAMILTON ENGINEERING & SURVEYING TO VERIFY APPROPRIATE PLANS ARE BEING UTILIZED.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ASSURE THE STAKEOUT SURVEYOR HAS THE MOST CURRENT SET OF PLANS, INCLUDING ALL RECENT REVISIONS MADE BY ADDENDUM OR REQUEST FOR INFORMATION (RFI), AND REGARDLESS IF STAKEOUT IS CONTRACTED THROUGH HAMILTON ENGINEERING & SURVEYING'S SURVEY DEPARTMENT.

THESE DRAWINGS SHALL NOT BE UTILIZED FOR CONSTRUCTION PRIOR TO OBTAINING REQUIRED PERMITS FROM ALL GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK. THE CONTRACTOR SHALL OBTAIN ALL PERMITS FROM WORK WITHIN PUBLIC EASEMENTS AND RIGHTS-OF-WAY AND INSURE THAT ALL OTHER REQUIRED PERMITS ARE APPROVED PRIOR TO COMMENCING THE WORK.

SOME OF THE DETAILS SHOWN INCLUDED IN THIS DRAWING SET ARE PROVIDED BY THE REVIEWING REGULATORY AGENCIES AND ARE REQUIRED BY THOSE AGENCIES TO BE SHOWN ON THE DRAWINGS FOR PERMIT APPROVAL. BY SIGNING AND SEALING THESE DRAWINGS, THE EOR IS NOT ASSUMING RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS ON THESE DETAILS. CONTRACTOR SHALL VERIFY THE DETAILS ARE THE LATEST ISSUED BY THE REGULATORY AGENCY, THE DETAILS COMPLY WITH THE LATEST TECHNICAL MANUAL SPECIFICATIONS, AND THE REGULATORY AGENCY INSPECTOR DOES NOT HAVE ANY ALTERNATE REQUIREMENTS NOT SHOWN ON THE DETAILS.

UNLESS OTHERWISE NOTED, ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION.

CONTRACTOR IS TO COORDINATE ALL WORK WITH UTILITY COMPANIES IN ORDER TO PREVENT DAMAGE TO UTILITY LINES AND THE MAKING OF ADJUSTMENTS TO SAME, IF REQUIRED. THE CONTRACTOR SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE VARIOUS UTILITY OWNERS PRIOR TO CONSTRUCTION.

LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THE CONTRACTOR SHALL VERIFY THIS INFORMATION AND BE FAMILIAR WITH ALL SITE CONDITIONS (INCLUDING SUB-SURFACE CONDITIONS AND UTILITIES) PRIOR TO COMMENCING THE WORK. DAMAGES TO ANY EXISTING FACILITIES (ABOVE-GROUND AND UNDERGROUND) SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR, WHETHER OR NOT SHOWN HEREON. THE CONTRACTOR SHALL NOTIFY THE UNDERGROUND UTILITY NOTIFICATION CENTER (CALL SUNSHINE STATE ONE CALL AT 1-800-432-4770) 48 HOURS PRIOR TO COMMENCING THE WORK.

DEMOLITION WORK SHALL NOT BE LIMITED TO THESE DOCUMENTS TO COMPLETE PROJECT AS SHOWN. CONTRACTOR TO REMOVE ALL ITEMS NECESSARY TO ALLOW FOR NEW CONSTRUCTION.

REFERENCED INDEX NUMBERS REFER TO DETAILS DEPICTED IN THE F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS.

CONSTRUCTION SHOWN ON THESE PLANS IS PERMITTED ONLY FOR THE WORK LOCATED WITHIN THE PRIVATE PROPERTY. ALL WORK WITHIN THE RIGHT-OF-WAY AND EASEMENTS WILL REQUIRE A SEPARATE PERMIT AND MAY REQUIRE AN ALTERATION TO THE CONSTRUCTION OR MATERIALS SHOWN ON THESE PLANS.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MAINTENANCE OF TRAFFIC AND PEDESTRIAN CONTROL PER APPROPRIATE FDOT SPECIFICATIONS. SEE FDOT INDEX# 600 THROUGH 660.

ALL WORK WITHIN THE RIGHT-OF-WAY SHALL CONFORM TO ALL APPLICABLE PROVISIONS OF F.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION AS SUPPLEMENTED.

CONTRACTOR SHALL LOCATE PROPERTY LINES AS REQUIRED TO AVOID ENCROACHMENT ONTO ADJACENT PROPERTY. CONTRACTOR SHALL INVESTIGATE FOR EXISTING UTILITIES PRIOR TO CONSTRUCTION. NOTIFY A/E IN THE EVENT OF CONFLICT.

CONTRACTOR IS TO PROVIDE EROSION CONTROL/SEDIMENTATION BARRIER (HAY BALES OR SILTATION CURTAIN) TO PREVENT SILTATION OF ADJACENT PROPERTY STREETS, STORM SEWERS, AND WATERWAYS. BARRIERS ARE TO BE BUILT BEFORE LAND ALTERATION, MAINTAINED EFFECTIVELY DURING CONSTRUCTION, AND REMOVED AFTER FINAL SOIL STABILIZATION. IN ADDITION, CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON GROUND IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR VEHICULAR TRAFFIC, THE CONTRACTOR IS TO REMOVE AND CLEAN SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR AUTHORITIES.

UPON REQUEST, ELECTRONIC DATA (IN AUTOCAD FORMAT) ASSOCIATED WITH THESE SITE PLANS WILL BE PROVIDED FOR CONSTRUCTION LAYOUT PURPOSES. HOWEVER, HAMILTON ENGINEERING & SURVEYING, INC. WILL IN NO WAY BE RESPONSIBLE FOR ANY ADVERSE RESULTS IF THE ELECTRONIC DATA IS USED BY OTHERS FOR CONSTRUCTION PURPOSES (REGARDLESS OF WHETHER OR NOT THE ELECTRONIC DATA CONTAINS ERRORS). AS AN OPTION, COORDINATE GEOMETRY INFORMATION ASSOCIATED WITH THESE SITE PLANS WILL BE PROVIDED BY HAMILTON ENGINEERING & SURVEYING, INC.

CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL TEMPORARY CONSTRUCTION TRAFFIC RELATED ACCESS POINTS TO THE PROJECT SITE AND/OR SPECIFIC AREAS OF WORK ON THE PROJECT SITE AS NECESSARY.

ALL TREES TO REMAIN MUST BE PROTECTED BY TREE PROTECTION BARRICADES MEETING THE MINIMUM STANDARDS SHOWN. PROTECTIVE BARRICADES SHALL REMAIN IN PLACE UNTIL LAND ALTERATION AND CONSTRUCTION ACTIVITIES ARE COMPLETED.

ALL FILL SHALL CONSIST OF SATISFACTORY SOIL MATERIALS, DEFINED AS THOSE COMPLYING WITH ASTM D2487 SOIL CLASSIFICATION GROUPS GW, GP, GM, SW, AND SP FREE OF RUBBLE, ORGANICS, CLAY, DEBRIS AND OTHER SIMILAR UNSUITABLE MATERIALS. UNSATISFACTORY SOIL MATERIALS ARE DEFINED AS THOSE COMPLYING WITH ASTM D2487 SOIL CLASSIFICATION GROUPS GC, SM, SC, ML, MH, CL, CH, OL, OH, AND PT. UNLESS OTHERWISE NOTED, ALL FILL SHALL BE COMPACTED TO A MINIMUM OF 95% AASHTO T-180, METHOD D.

CONTRACTOR SHALL CONTACT THE ENGINEER AND/OR OWNER PRIOR TO ANY CONSTRUCTION THAT MAY DAMAGE TREES WHICH ARE NOT MARKED TO BE REMOVED.

TREE LIMBS SHALL BE PRUNED AS REQUIRED FOR NEW CONSTRUCTION. WHEN TREE LIMBS OVERHANG EXISTING OR NEW VEHICULAR USE AREAS, THE CONTRACTOR SHALL PRUNE SUCH TREES TO PROVIDE CLEARANCE MEETING THE STANDARDS SET FORTH BY THE FLORIDA DEPARTMENT OF TRANSPORTATION. PRUNING SHALL BE IN ACCORDANCE WITH THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) A-300 PRUNING STANDARDS.

ANY SIDEWALK WHICH BECOMES UNDERMINED OR DAMAGED DURING CONSTRUCTION MUST BE REMOVED AND REPLACED. PERMITS WILL BE OBTAINED BY THE CONTRACTOR FOR THE CLOSING OF SIDEWALKS IN THE RIGHT-OF-WAY. SIDEWALKS ARE TO BE RECONSTRUCTED WITHIN THREE (3) DAYS AFTER REMOVAL. WHEN EXISTING SIDEWALK IS REMOVED, IT IS TO BE REMOVED TO THE NEAREST JOINT.

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH ON THE SIDEWALK FOR A PERIOD OF MORE THAN ONE HOUR, CONTRACTOR SHALL PROVIDE PEDESTRIAN CONTROL FOR CLOSURE OF SIDEWALKS PER FDOT INDEX 660, UNLESS OTHERWISE NOTED.

ALL PEDESTRIAN ROUTES, SIDEWALKS AND RAMPS, AS WELL AS ALL HANDICAPPED SIGNS, SYMBOLS, PARKING SPACES, ETC. SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH LOCAL, STATE AND FEDERAL ADA REQUIREMENTS WHETHER OR NOT SHOWN HEREON. CONTRACTOR SHALL VERIFY REQUIREMENTS WITH LOCAL INSPECTORS PRIOR TO POURING SIDEWALKS AND RAMPS.

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH STATE AND LOCAL ORDINANCES AND BUILDING REGULATIONS. ALL PLUMBING SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE NFPA, THE FLORIDA BUILDING CODE – PLUMBING AND LOCAL REGULATORY REQUIREMENTS.

PORTIONS OF WORK AND/OR MATERIALS FOR THE UTILITY CONNECTIONS MAY BE PROVIDED BY THE GOVERNING MUNICIPALITY. CONTRACTOR TO VERIFY AND COORDINATE.

COMPACTION FOR PIPE BACKFILL SHALL COMPLY WITH AASHTO T-99 (100%).

UNLESS OTHERWISE NOTED, ALL RCP SHALL BE CLASS III, WALL "B".

PIPE LENGTHS SHOWN ARE APPROXIMATE AND MAY BE ADJUSTED AS REQUIRED.

ALL DIMENSIONS ARE TO OUTSIDE WALL OF BUILDING AND FRONT FACE OF CURB UNLESS OTHERWISE NOTED.

PROVIDE PAVEMENT MARKINGS AS SHOWN PER FDOT INDEX No. 17346.

SIGNS AND BARRICADES TO BE ACCORDING TO FDOT MANUAL OF SAFE PRACTICES; REFERENCE FDOT INDEXES 600 THRU 650.

THE CONTRACTOR SHALL REPLACE ALL PAVING, STABILIZED EARTH, CURBS, DRIVEWAYS, SIDEWALKS, ETC. WITH MATERIALS OF THE SAME TYPE OR BETTER THAN THAT REMOVED DURING CONSTRUCTION.

PRIOR TO PAVING, THE CONTRACTOR SHALL ENSURE ALL NEW UNDERGROUND UTILITIES, I.E. ELECTRIC, IRRIGATION, ETC., HAVE BEEN INSTALLED. IF PAVING IS TO OCCUR BEFORE THE INSTALLATION OF ANY UNDERGROUND UTILITIES, THE CONTRACTOR SHALL ENSURE THE NECESSARY CONDUITS ARE PROVIDED AND SHALL COORDINATE THE LOCATIONS WITH THE CONSTRUCTION PLANS.

CONTRACTOR SHALL SECURE ALL OPENINGS UNDER CONSTRUCTION AT THE END OF EACH WORKING DAY.

GRASS SOD AND SEED SHALL BE BAHIA, UNLESS OTHERWISE SHOWN ON THE LANDSCAPE PLANS. SEED AND MULCH ALL AREAS LEFT BARREN FROM CONSTRUCTION. SOD ALL SLOPES GREATER THAN 5:1, WHETHER OR NOT SHOWN HEREON. ALL RETENTION POND BANKS SHALL BE SODDED, REGARDLESS OF SLOPE, TO THE POND BOTTOM FOR DESIGNED DRY PONDS OR THE WATER LINE AT THE TIME OF INSTALLATION FOR DESIGNED WET PONDS. STEEP SLOPES TO BE SODDED AS SOON AS POSSIBLE AFTER FINE GRADING TO PREVENT EROSION.

THE CONTRACTOR SHALL PROVIDE HAMILTON ENGINEERING & SURVEYING WITH AS-BUILT SURVEYS PREPARED BY A LICENSED PROFESSIONAL LAND SURVEYOR OF ALL WATER, SANITARY SEWER AND STORMWATER MANAGEMENT SYSTEMS AS REQUIRED BY THE FDEP AND THE SWFWMD. SANITARY SEWER AS-BUILTS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTING PAVEMENT.

DEMOLITION NOTES

DEMOLITION WORK SHALL NOT BE LIMITED TO THESE DOCUMENTS. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND EXTENT OF REMOVAL OF ITEMS SHOWN PRIOR TO USING THIS INFORMATION FOR BID PURPOSES.

ANY STRUCTURE NOT SHOWN TO BE REMOVED IS TO REMAIN UNLESS OTHERWISE INSTRUCTED BY THE OWNER OR ARCHITECT, OR REQUIRED BY FIELD CONDITIONS.

CONTRACTOR TO COMPLETELY REMOVE EXISTING ITEMS ON SITE INCLUDING BUILDINGS, CURBS, ASPHALT, BASE COURSE, CONCRETE AND EXISTING UTILITIES AS SHOWN AND NECESSARY TO ALLOW FOR NEW CONSTRUCTION.

LOCAL CODES APPLY FOR ANY DEMOLITION SHOWN HEREON.

A SEPARATE PERMIT FOR THE DEMOLITION OF THE EXISTING BUILDINGS SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO STARTING WORK.

CONTRACTOR TO COORDINATE WITH LOCAL UTILITY COMPANIES, FOR ANY UTILITIES SHOWN TO BE REMOVED OR RELOCATED HEREON, EARLY IN CONSTRUCTION PROCESS, AS TO AVOID ANY DELAYS.

CONTRACTOR TO COORDINATE THE REMOVAL OR RELOCATION OF THE EXISTING POWER POLES WITH TECO/FLORIDA POWER PRIOR TO CONSTRUCTION AS NECESSARY.

CONTRACTOR TO FIELD COORDINATE PHASING OF ALL DEMOLITION AND CONSTRUCTION TO LIMIT INTERRUPTION OF TRAFFIC FLOW AND DAILY OPERATIONS.

CONTACT ENGINEER IMMEDIATELY IF ANY UNDERGROUND STRUCTURES, FOUND DURING EXCAVATION, IMPEDE THE COMPLETION OF CONSTRUCTION AS SHOWN.

CONTRACTOR SHALL ASSUME UTILIZATION OF THE EXISTING BASE COURSE UNDER NEW ASPHALT WHERE GRADE ALLOWS FOR BID PURPOSES.

ADDITIONAL ASPHALT AREAS, NOT SHOWN HEREON, MAY REQUIRE REMOVAL IF REGRADING NEEDS TO OCCUR FOR PROPER DRAINAGE. SEE PROPOSED GRADING PLAN FOR DETAILS.

SOME ITEMS SHOWN TO BE REMOVED MAY NEED TO BE RELOCATED TO OTHER AREAS ON SITE AT THE REQUEST OF THE OWNER. CONTRACTOR TO FIELD COORDINATE.

THERE MAY BE EXISTING IRRIGATION LINES IN THE AREA OF WORK THAT NEED TO BE REMOVED AND/OR RELOCATED, THAT ARE NOT SHOWN HEREON. CONTRACTOR TO FIELD VERIFY THE EXTENT OF IRRIGATION WORK TO BE PERFORMED PRIOR TO BID OR PROVIDE A REASONABLE ALLOWANCE AS NECESSARY. CONTRACTOR TO COORDINATE RELOCATION WITH OWNER OR LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.

SITE DATA

TOTAL SITE AREA	7,120,753 SF/	163.47 ACRES
PROJECT AREA	241,322 SF/	5.54 ACRES
EXISTING IMPERVIOUS AREA	0 SF/	
PROPOSED IMPERVIOUS AREA	127,159 SF/	2.92 ACRES
EXISTING "GREEN" AREA	241,322 SF/	5.54 ACRES
PROPOSED POND AREA	44,581 SF/	1.02 ACRES
PROPOSED BUILDING S.F.	144 S.F.	
CURRENT ZONING	AR	
LAND USE	PI	
FOLIO NUMBER	88549	
FLOOD ZONE MAP NUMBER	1201120545 H	

BENCHMARK DATUM
NAVD 1988

Elevations shown hereon are based on Hillsborough County Benchmarks VC-226 with a reported elevation of 106.59 feet (NAVD 1988), and VC-227 with a reported elevation of 97.81 feet (NAVD 1988) and VR-B with a reported elevation of 102.12 feet (NAVD 1988) and PC-A with a reported elevation of 106.17 feet (NAVD 1988).

DATUM CONVERSION

NGVD 1929 =NAVD 1988 + 0.91 FEET

FLOOD ZONE "C"

the property shown appears to lie within ZONE "C" PANEL NO. 120112 0545 D dated August 3, 1992 & PANEL NO. 120112 0250 C dated April 17, 1984.

LEGEND OF SYMBOLS

DESCRIPTION	EXISTING	NEW
PROPERTY LINE		
TEMPORARY EROSION CONTROL		
TREE BARRICADE		
CHAINLINK FENCE	x x	
MANHOLE		
GRATE INLET		
MITERED END SECTION		
SPOT ELEVATION	. 00.0	99.99 99.99 99.99
CONCRETE		
HEAVY DUTY ASPHALT		
LIGHT DUTY ASPHALT		

NOTES & LEGEND

HAMILTON
ENGINEERING & SURVEYING, INC
311 NORTH NEWPORT AVENUE, SUITE 100
TAMPA, FL 33606
LB #8474
TEL (813) 250-3535
FAX (813) 250-3636

Rañon & Partners, Inc.
Architects (AA 0000...)
515 Bay Street, Tampa, Florida 33606
Telephone (813) 253-3465

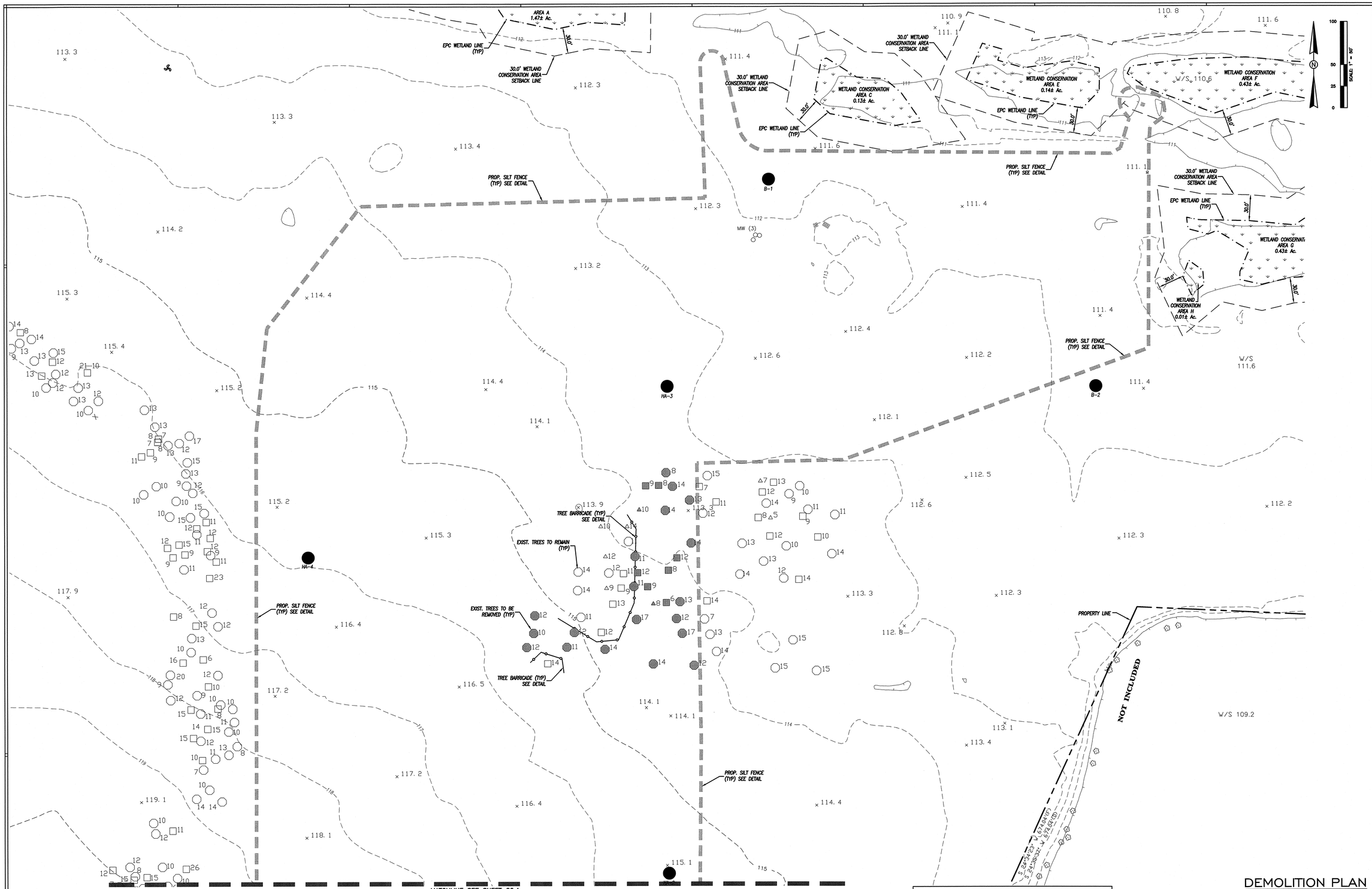
HILLSBOROUGH COUNTY SHERIFF'S OFFICE
WCH PTS ROADWAY AND OBSERVATION TOWER
LITHIA, FLORIDA

LUCAS CARLO, PE
LICENSE # 61636

SEP 15 2008

DATE:	07.08.08
REVISED:	09.09.08
REVISED:	
DRAWN BY:	WHB
CHECKED BY:	ESK

SHEET NUMBER
C1.0



TREES TO REMAIN	TREES TO BE REMOVED
DEAD TREE	DEAD TREE
OAK TREE	OAK TREE
PINE TREE	PINE TREE
OTHER (TYPE SPECIFIED)	OTHER (TYPE SPECIFIED)
SINGLE TREE	SINGLE TREE
PALM TREE	PALM TREE

DEMOLITION PLAN

HAMILTON
ENGINEERING & SURVEYING, INC
311 NORTH NEWPORT AVENUE, SUITE 100
TAMPA, FL 33606
LB #8474
TEL (813) 250-3535
FAX (813) 250-3636

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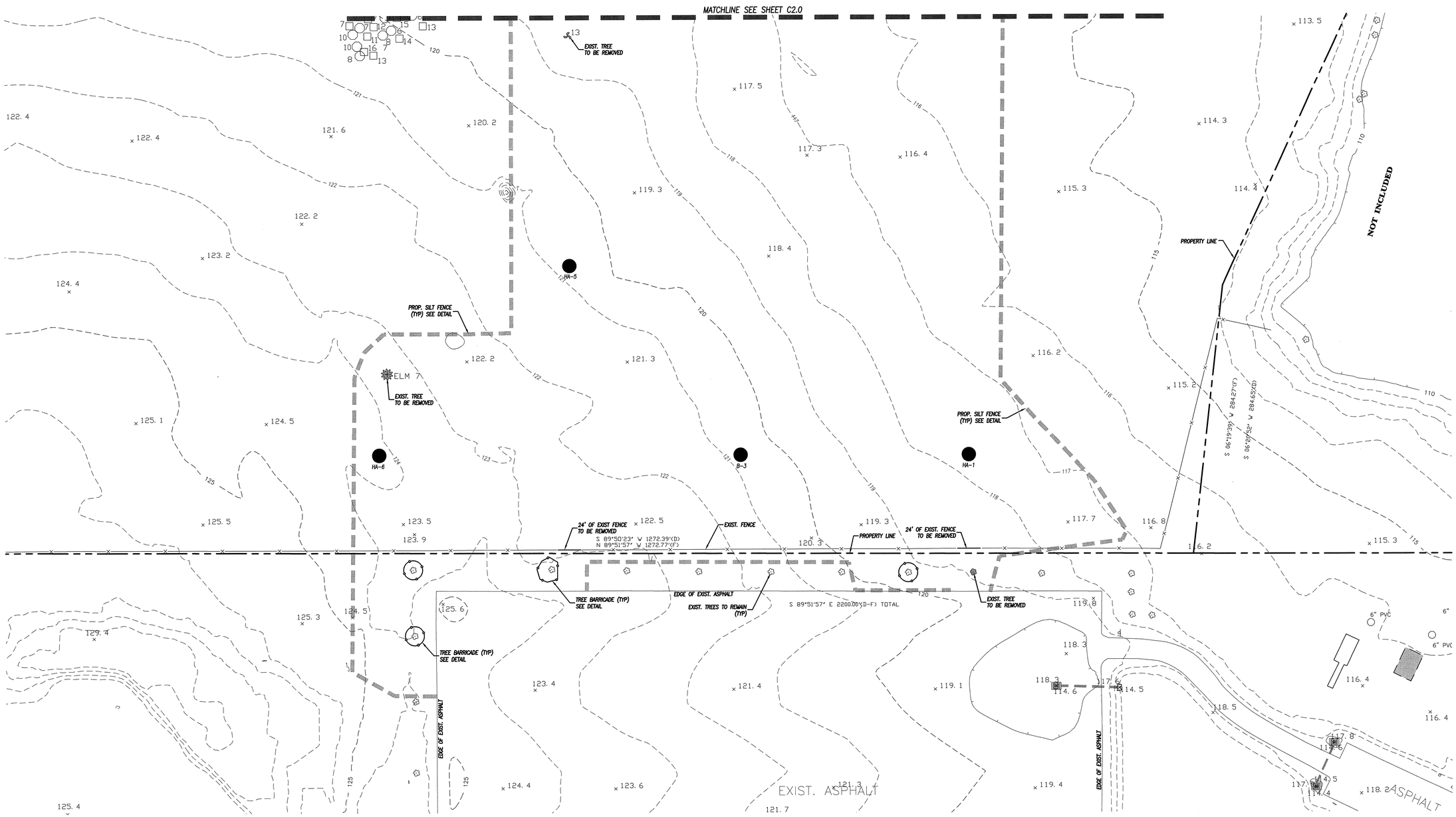
SHEET NUMBER
C2.0



DEMOLITION PLAN

TREES TO REMAIN	TREES TO BE REMOVED
DEAD TREE	DEAD TREE
OAK TREE	OAK TREE
PINE TREE	PINE TREE
OTHER (TYPE SPECIFIED)	OTHER (TYPE SPECIFIED)
SINGLE TREE	SINGLE TREE
PALM TREE	PALM TREE

HAMILTON
ENGINEERING & SURVEYING, INC
311 NORTH NEWPORT AVENUE, SUITE 100
TAMPA, FL 33606
LB #8474
TEL (813) 250-3535
FAX (813) 250-3636

DATE: 07.08.08
REVISED: 09.09.08
REVISED:
DRAWN BY: WHB
CHECKED BY: ESK

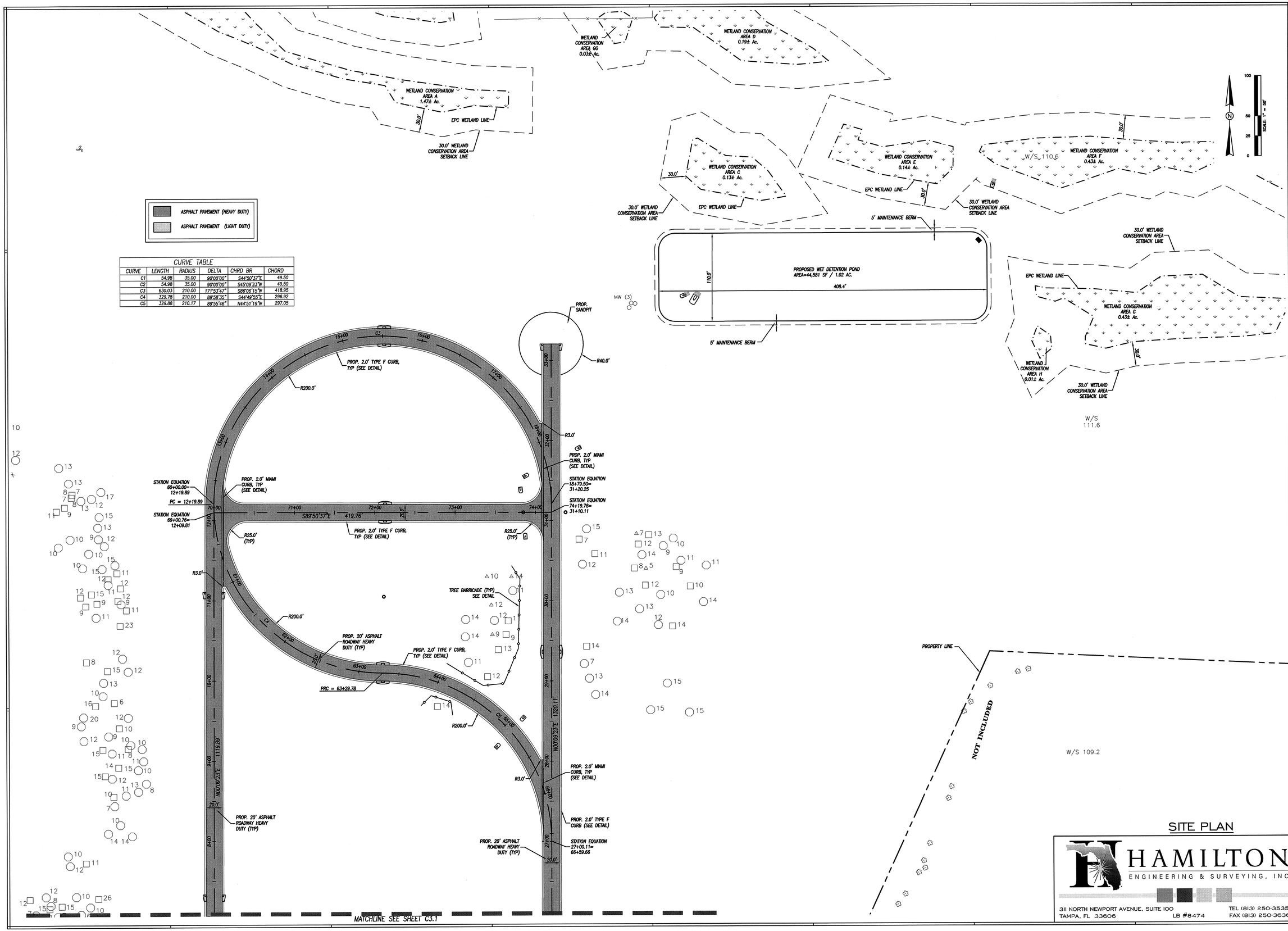
LUCAS CARLO, PE
LICENSE # 61636

SEP 15 2008

HILLSBOROUGH COUNTY SHERIFF'S OFFICE
WCH PTS ROADWAY AND OBSERVATION TOWER
LITHIA, FLORIDA

Rañon & Partners, Inc.
Architects
(AA C000331)
515 Bay Street, Tampa, Florida 33606
Telephone (813) 253-3465

SHEET NUMBER
C2.1



CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA	CHRD BR	CHORD
C1	54.98	35.00	90°00'00"	S44°50'37"E	49.50
C2	54.98	35.00	90°00'00"	S45°09'23"W	49.50
C3	630.03	210.00	171°53'47"	S86°06'15"W	418.95
C4	329.78	210.00	89°58'35"	S44°48'55"E	296.92
C5	329.88	210.17	89°55'46"	N44°51'19"W	297.05

SITE PLAN

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SHEET NUMBER
C3.0

ASPHALT PAVEMENT (HEAVY DUTY)

ASPHALT PAVEMENT (LIGHT DUTY)

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHRD BR	CHORD
C1	54.98	35.00	90°00'00"	S44°50'37"E	49.50
C2	54.98	35.00	90°00'00"	S45°09'23"W	49.50
C3	630.03	210.00	171°53'47"	S86°06'15"W	418.95
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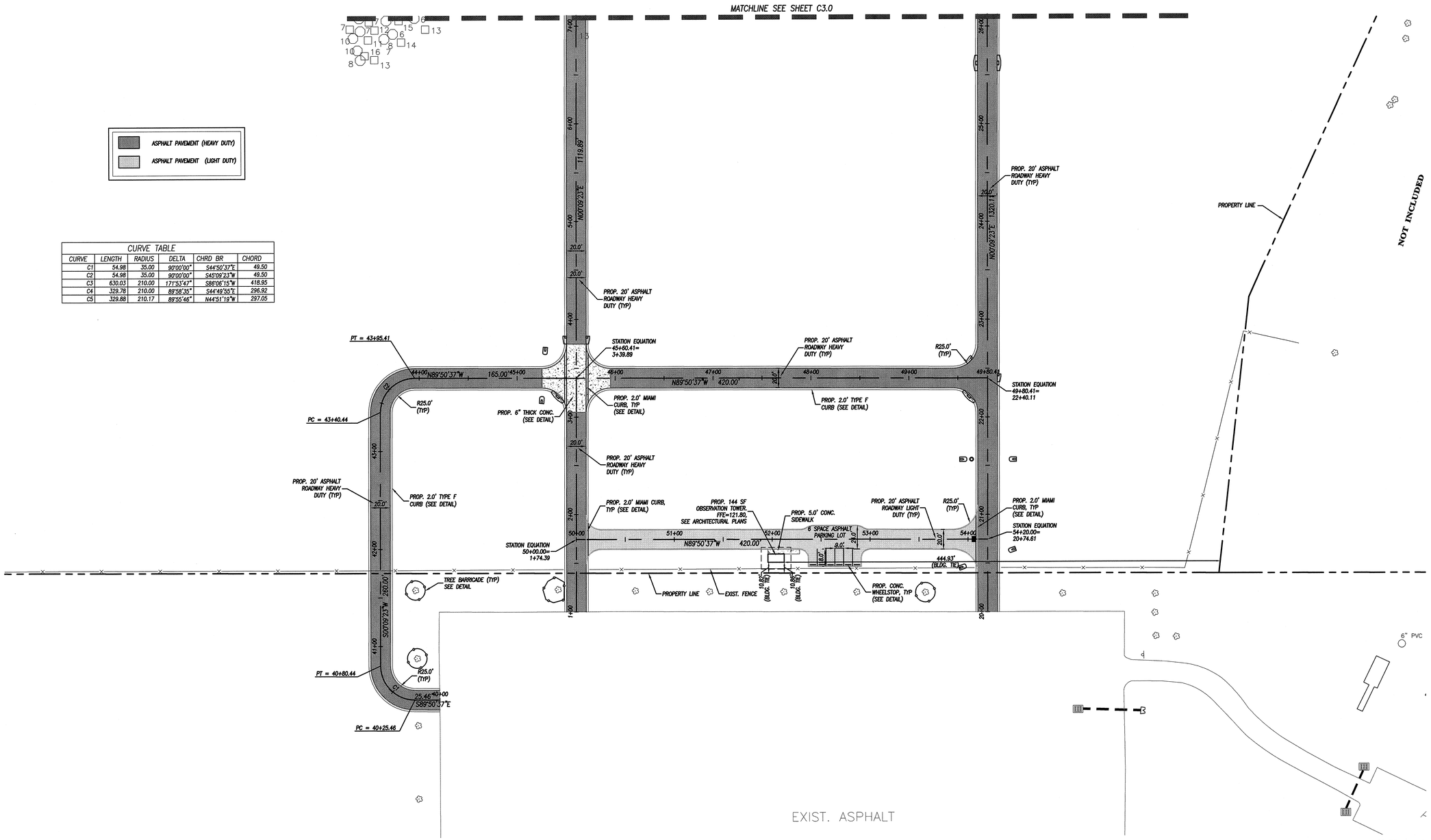

SITE PLAN

SCALE: 1" = 50'

DATE: 07.08.08
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LUCAS CARLO, PE
LICENSE # 61636

SEP 15 2008

HILLSBOROUGH COUNTY SHERIFF'S OFFICE
WCH PTS ROADWAY AND OBSERVATION TOWER
LITHIA, FLORIDA

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515 Bay Street, Tampa, Florida 33606
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SHEET NUMBER
C3.1

OPERATION AND MAINTENANCE GUIDELINES:

THE WORK SPECIFIED CONSISTS OF THE OPERATION AND MAINTENANCE ACTIVITIES REQUIRED TO INSURE CONTINUED AND PROPER PERFORMANCE OF THE STORMWATER MANAGEMENT

THE OPERATION AND MAINTENANCE ENTITY SHOULD PERFORM THE FOLLOWING OPERATION AND MAINTENANCE PROCEDURES:

1. *DISCHARGE STRUCTURES AND CONTROL DEVICES SHOULD BE MAINTAINED OPERATIONAL BY ELIMINATING CLOGGING OF THE BAFFLES, GRATES, ETC., CAUSED BY TRASH, DEBRIS AND SEDIMENT. THE INSPECTION FOR PROPER OPERATION AND MAINTENANCE OF THESE DEVICES SHOULD BE CONDUCTED QUARTERLY. ADDITIONAL MONITORING AND MAINTENANCE SHOULD BE CONDUCTED AFTER SEVERE RAINFALL EVENTS.*
2. *DRY DETENTION AND RETENTION AREAS SHOULD BE MAINTAINED OPERATIONAL BY REMOVING SEDIMENTS, TRASH AND INVADER VEGETATION WHICH CAN HINDER PROPER FUNCTIONING. THE INSPECTION SHOULD BE CONDUCTED QUARTERLY. ADDITIONAL MONITORING AND MAINTENANCE SHOULD BE CONDUCTED AFTER SEVERE RAINFALL EVENTS.*
3. *ALL GRASS IN THE DRY POND AREA SHOULD BE MOWED PERIODICALLY AND ALL CLIPPINGS RECOVERED AND DISPOSED OF OFF-SITE. IF PERCOLATION BECOMES RESTRICTED DUE TO A BUILD UP OF FINES THE BOTTOM MUST BE CLEANED AND REGRADED TO DESIGN ELEVATIONS.*
4. *ANY ERODED AREAS THAT ARE OBSERVED DURING ROUTINE MAINTENANCE SHOULD BE FILLED AS SOON AS DISCOVERED WITH SIMILAR SOILS AND GRASSED BY SODDING OR SEEDING WITH MULCH CUT IN, DEPENDING ON THE SEASON.*
5. *IN WET DETENTION AND RETENTION PONDS, THE LITTORAL SHELF AREA MAY BE ALLOWED TO VEGETATE NATURALLY FOR A PERIOD OF TWO YEARS. MOWING OR REMOVAL OF NATIVE VEGETATION, INCLUDING CATTAILS, IS PROHIBITED. REMOVAL INCLUDES DREDGING, THE APPLICATION OF HERBICIDE, INTRODUCTION OF GRASS CARP AND CUTTING. IF NOT ADEQUATELY VEGETATED AFTER THE TWO YEAR PERIOD, PLANTING AND MAINTENANCE OF WETLAND SPECIES MAY BE REQUIRED. MAINTENANCE ENTITY SHOULD CONTACT S.W.F.W.M.D. FOR A DETERMINATION.*

BENCHMARK DATUM

NAVD 1988

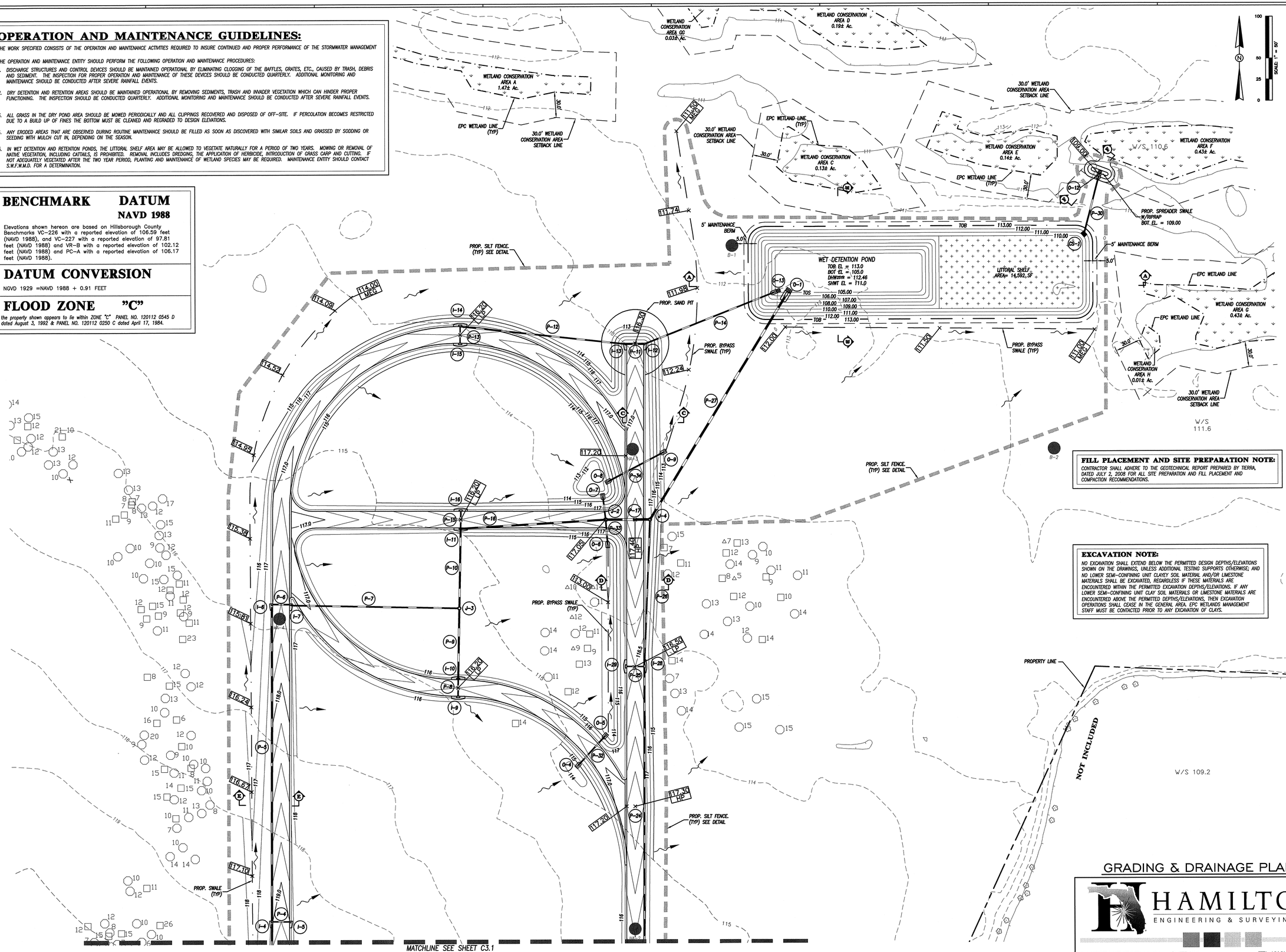
Elevations shown hereon are based on Hillsborough County Benchmarks VC-226 with a reported elevation of 106.59 feet (NAVD 1988), and VC-227 with a reported elevation of 97.81 feet (NAVD 1988) and VR-B with a reported elevation of 102.12 feet (NAVD 1988) and PC-A with a reported elevation of 106.17 feet (NAVD 1988).

DATUM CONVERSION

NGVD 1929 =NAVD 1988 + 0.91 FEET

FLOOD ZONE "C"

the property shown appears to lie within ZONE "C" PANEL NO. 120112 0545 D dated August 3, 1992 & PANEL NO. 120112 0250 C dated April 17, 1984.



GRADING & DRAINAGE PLAN

HAMILTON ENGINEERING & SURVEYING, INC
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515 Bay Street, Tampa, Florida 33606
Telephone (813) 253-3465

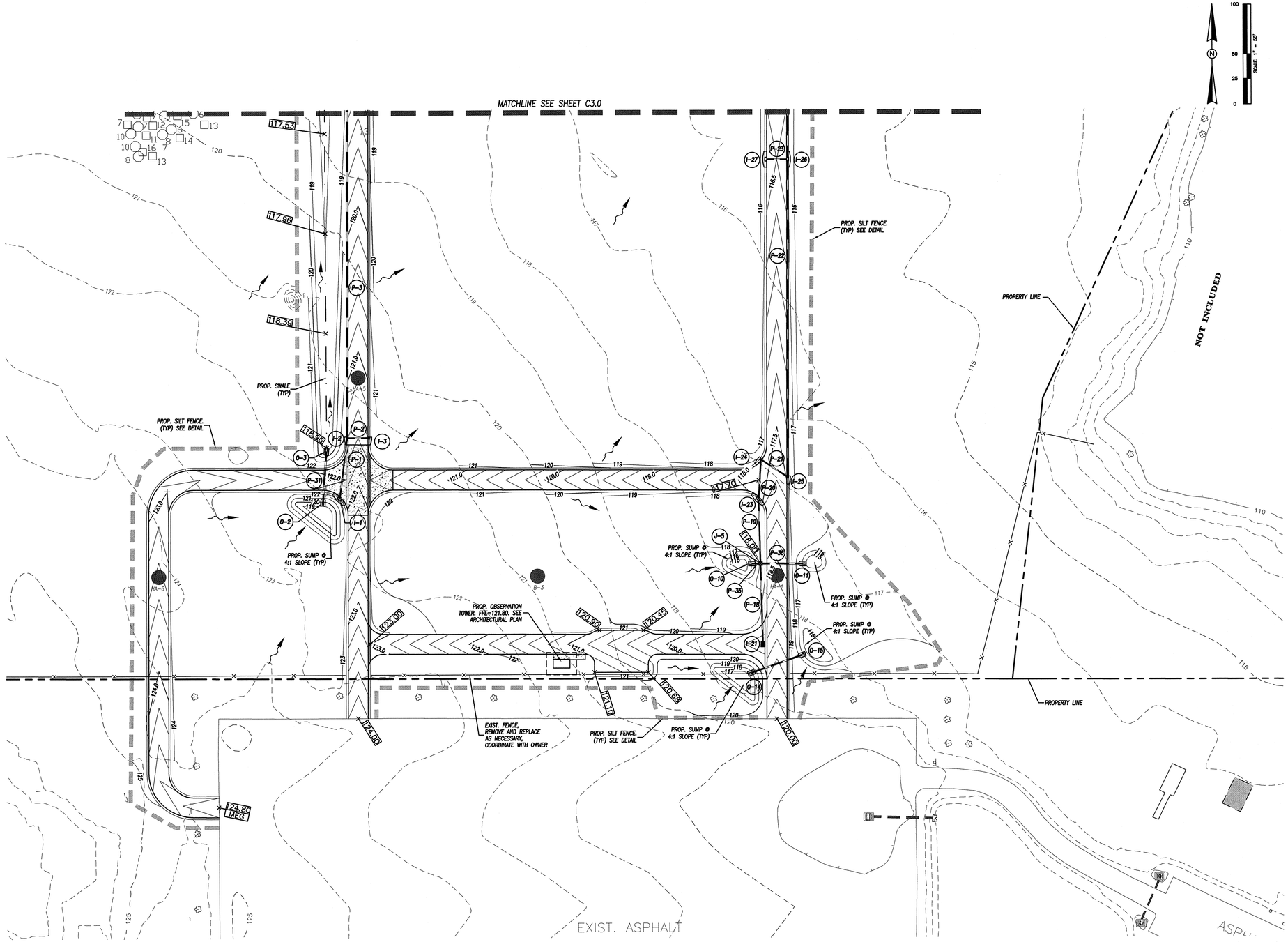
SHEET NUMBER
C4.0

PIPE TABLE

P-1	61 LF 12" PVC/HDPE	P-18	82 LF 12" PVC/HDPE
P-2	22 LF 12" PVC/HDPE	P-19	65 LF 12" PVC/HDPE
P-3	350 LF 12" PVC/HDPE	P-20	40 LF 12" PVC/HDPE
P-4	21 LF 12" PVC/HDPE	P-21	32 LF 15" PVC/HDPE
P-5	377 LF 15" PVC/HDPE	P-22	319 LF 15" PVC/HDPE
P-6	22 LF 18" PVC/HDPE	P-23	21 LF 12" PVC/HDPE
P-7	200 LF 18" PVC/HDPE	P-24	374 LF 18" PVC/HDPE
P-8	20 LF 12" PVC/HDPE	P-25	21 LF 12" PVC/HDPE
P-9	85 LF 12" PVC/HDPE	P-26	174 LF 24" PVC/HDPE
P-10	94 LF 24" PVC/HDPE	P-27	300 LF 30" PVC/HDPE
P-11	23 LF 12" PVC/HDPE	P-30	100 LF 18" PVC/HDPE
P-12	197 LF 12" PVC/HDPE	P-31	60 LF 18" PVC/HDPE
P-13	20 LF 12" PVC/HDPE	P-32	188 LF 18" PVC/HDPE
P-14	130 LF 15" PVC/HDPE	P-33	33 LF 18" PVC/HDPE
P-15	21 LF 15" PVC/HDPE	P-34	80 LF 24" PVC/HDPE
P-16	172 LF 24" PVC/HDPE	P-35	60 LF 18" PVC/HDPE
P-17	52 LF 24" PVC/HDPE	P-36	60 LF 18" PVC/HDPE

STRUCTURE TABLE

I-1	TYPE 6 CURB INLET GRATE EL = 121.80 INV. = 118.50	I-28	TYPE 6 CURB INLET GRATE EL = 116.30 INV. = 111.45
I-2	TYPE 5 CURB INLET GRATE EL = 121.40 INV. = 118.04	I-29	TYPE 6 CURB INLET GRATE EL = 116.30 INV. = 113.00
I-3	TYPE 5 CURB INLET GRATE EL = 121.40 INV. = 118.10	J-2	CONFLICT MANHOLE "A" TYPE RIM = 117.05 INV. = 110.45
I-4	TYPE 5 CURB INLET GRATE EL = 119.00 INV. = 115.45	J-3	MANHOLE "P" TYPE RIM = 118.00 INV. = 111.20
I-5	TYPE 5 CURB INLET GRATE EL = 119.00 INV. = 115.70	J-4	MANHOLE "P" TYPE RIM = 117.00 INV. = 110.33
I-6	TYPE 5 CURB INLET GRATE EL = 117.40 INV. = 113.60	J-5	MANHOLE "P" TYPE RIM = 118.00 INV. = 114.70
I-7	TYPE 5 CURB INLET GRATE EL = 117.40 INV. = 113.54	CS-1	CONTROL STRUCTURE SEE DETAIL
I-9	TYPE 6 CURB INLET GRATE EL = 116.00 INV. = 112.70	O-1	30" MES INV. = 105.00
I-10	TYPE 6 CURB INLET GRATE EL = 116.00 INV. = 112.64	O-2	18" MES INV. = 119.00
I-11	TYPE 6 CURB INLET GRATE EL = 116.00 INV. = 110.94	O-3	18" MES INV. = 118.90
I-12	TYPE 5 CURB INLET GRATE EL = 115.70 INV. = 112.40	O-4	18" MES INV. = 113.80
I-13	TYPE 5 CURB INLET GRATE EL = 115.70 INV. = 112.34	O-5	18" MES INV. = 113.60
I-14	TYPE 6 CURB INLET GRATE EL = 116.00 INV. = 111.78	O-6	18" MES INV. = 112.90
I-15	TYPE 6 CURB INLET GRATE EL = 116.00 INV. = 111.73	O-7	18" MES INV. = 112.70
I-16	TYPE 6 CURB INLET GRATE EL = 116.00 INV. = 111.17	O-8	24" MES INV. = 112.60
I-21	TYPE F GRATE INLET GRATE = 119.00 INV. = 115.70	O-9	24" MES INV. = 112.50
I-23	TYPE 6 CURB INLET GRATE EL = 117.50 INV. = 114.20	O-10	18" MES INV. = 115.40
I-24	TYPE 5 CURB INLET GRATE EL = 117.50 INV. = 113.95	O-11	18" MES INV. = 115.00
I-25	TYPE 5 CURB INLET GRATE EL = 117.50 INV. = 113.86	O-12	18" MES INV. = 109.00
I-26	TYPE 6 CURB INLET GRATE EL = 116.30 INV. = 112.50	O-13	15" MES INV. = 105.00
I-27	TYPE 6 CURB INLET GRATE EL = 116.30 INV. = 113.00	O-14	15" MES INV. = 117.00
		O-15	15" MES INV. = 116.50



BENCHMARK DATUM

NAVD 1988

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FLOOD ZONE "C"

the property shown appears to lie within ZONE "C" PANEL NO. 120112 0545 D dated August 3, 1992 & PANEL NO. 120112 0250 C dated April 17, 1984.

FILL PLACEMENT AND SITE PREPARATION NOTE:

CONTRACTOR SHALL ADHERE TO THE GEOTECHNICAL REPORT PREPARED BY TIERRA, DATED JULY 2, 2008 FOR ALL SITE PREPARATION AND FILL PLACEMENT AND COMPACTION RECOMMENDATIONS.

EXCAVATION NOTE:

NO EXCAVATION SHALL EXTEND BELOW THE PERMITTED DESIGN DEPTHS/ELEVATIONS SHOWN ON THE DRAWINGS, UNLESS ADDITIONAL TESTING SUPPORTS OTHERWISE; AND NO LOWER SEMI-CONFINING UNIT CLAYEY SOIL MATERIAL AND/OR LIMESTONE MATERIALS SHALL BE EXCAVATED, REGARDLESS IF THESE MATERIALS ARE ENCOUNTERED WITHIN THE PERMITTED EXCAVATION DEPTHS/ELEVATIONS. IF ANY LOWER SEMI-CONFINING UNIT CLAY SOIL MATERIALS OR LIMESTONE MATERIALS ARE ENCOUNTERED ABOVE THE PERMITTED DEPTHS/ELEVATIONS, THEN EXCAVATION OPERATIONS SHALL CEASE IN THE GENERAL AREA. EPC WETLANDS MANAGEMENT STAFF MUST BE CONTACTED PRIOR TO ANY EXCAVATION OF CLAYS.

GRADING & DRAINAGE PLAN

HAMILTON ENGINEERING & SURVEYING, INC
311 NORTH NEWPORT AVENUE, SUITE 100
TAMPA, FL 33606 LB #8474
TEL (813) 250-3535
FAX (813) 250-3636

DATE: 07.08.08
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LUCAS CARLO, PE
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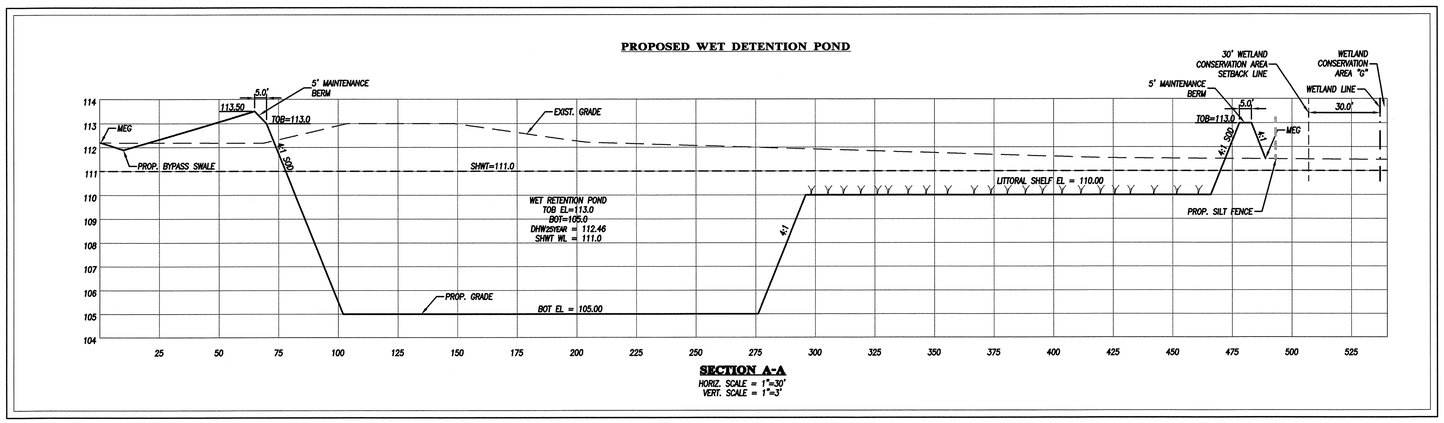
SEP 15 2008

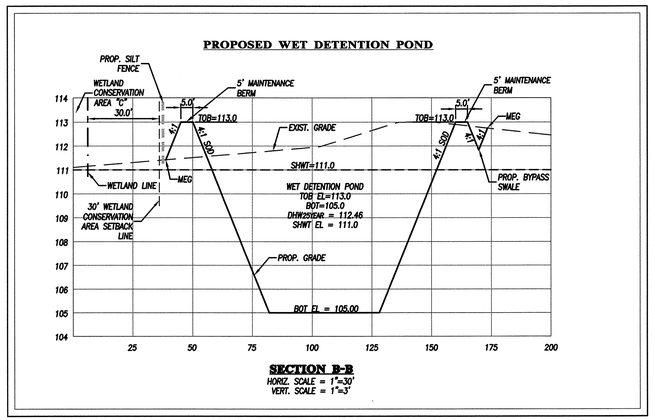
HILLSBOROUGH COUNTY SHERIFF'S OFFICE
WCH PTS ROADWAY AND OBSERVATION TOWER
LITHIA, FLORIDA

Rañon & Partners, Inc. Architects (AA C000051)
515 Bay Street, Tampa, Florida 33606
Telephone (813) 253-3465

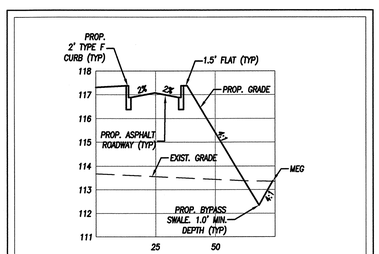
SHEET NUMBER
C4.1



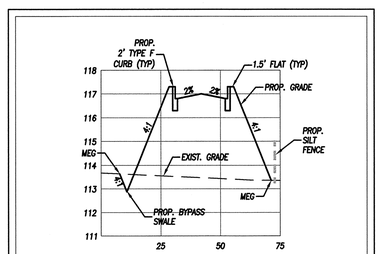
SECTION A-A
HORIZ. SCALE = 1"=30'
VERT. SCALE = 1"=3'



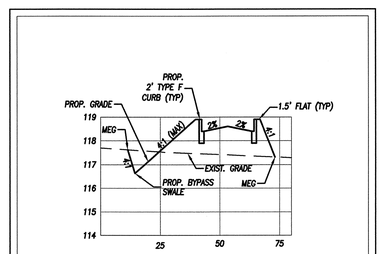
SECTION B-B
HORIZ. SCALE = 1"=30'
VERT. SCALE = 1"=3'



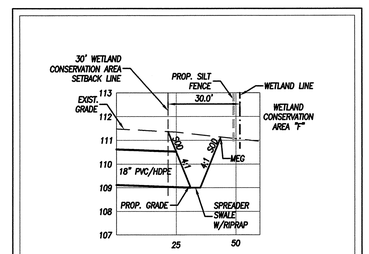
SECTION C-C
HORIZ. SCALE = 1"=30'
VERT. SCALE = 1"=3'



SECTION D-D
HORIZ. SCALE = 1"=30'
VERT. SCALE = 1"=3'



SECTION E-E
HORIZ. SCALE = 1"=30'
VERT. SCALE = 1"=3'



SECTION F-F
HORIZ. SCALE = 1"=30'
VERT. SCALE = 1"=3'

GRADING SECTIONS

HAMILTON
ENGINEERING & SURVEYING, INC.
311 NORTH NEWPORT AVENUE, SUITE 100
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TEL (813) 250-3535
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WCH PTS ROADWAY AND OBSERVATION TOWER
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515 Bay Street, Tampa, Florida 33606
Telephone (813) 253-3465

SHEET NUMBER
C4.2

CONTRACTOR / SUBCONTRACTOR

"I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND, AND SHALL COMPLY WITH, THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PREVENTION PLAN PREPARED THEREUNDER."

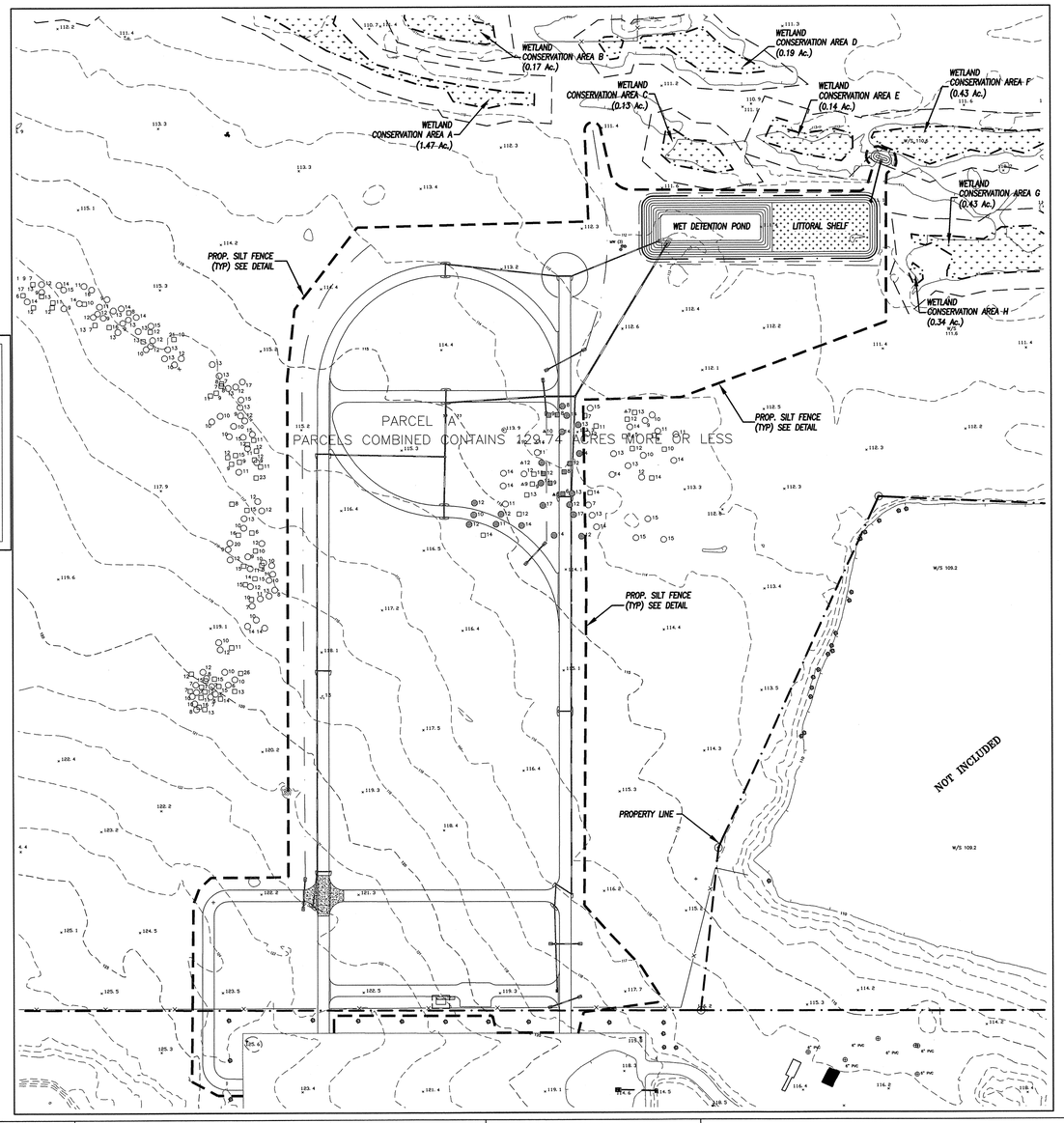
NAME	TITLE	COMPANY NAME, ADDRESS AND PHONE NUMBER	DATE

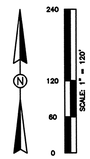
CONSTRUCTION SURFACE WATER MANAGEMENT PLAN INFORMATION

OWNER:
MICHAEL KELLY,
DIRECTOR OF REAL STATE
HILLSBOROUGH COUNTY BOCC
601 EAST KENNEDY BLVD
TAMPA, FL 33602
(813)272-5810

OWNER SIGNATURE

LUCAS CARLO
ENGINEER/AGENT: LUCAS CARLO, P.E.
HAMILTON ENGINEERING & SURVEYING, INC.
(813) 250-3535





DESCRIBE THE NATURE OF THE CONSTRUCTION ACTIVITY	CONSTRUCTION OF A ROADWAY FOR POLICE TRAINING AND A 144 S.F. OBSERVATION TOWER WITH ASSOCIATED PARKING AND STORMWATER MANAGEMENT SYSTEM.
DESCRIBE THE SEQUENCE OF MAJOR EVENTS	1. CONSTRUCT SILT FENCE (SEE GRADING & DRAINAGE PLAN) 2. EXCAVATE POND FOR SEDIMENT TRAPS FOR SITE RUNOFFS. 3. BEGIN BUILDING CONSTRUCTION. 4. INSTALL STORM SEWER SYSTEM. 5. COMPLETE FINAL GRADING AND PAVING. 6. INSTALL LANDSCAPING, AND FINAL STABILIZATION (GRASS SOD, SEED & MULCH, ETC.)
	TOTAL AREA OF SITE TO BE DISTURBED: 9.88 ACRES

WASTE DISPOSAL, THIS MAY INCLUDE CONSTRUCTION DEBRIS, CHEMICALS, LITTER, AND SANITARY WASTES:	ALL CONSTRUCTION MATERIALS AND DEBRIS WILL BE PLACED IN A DUMPSTER AND HAULED OFF SITE TO A LANDFILL OR OTHER PROPER DISPOSAL SITE. THE DUMPSTER SHALL BE LOCATED AS SHOWN ON THE SITE MAP. NO MATERIALS WILL BE BURIED ON SITE.
OFFSITE VEHICLE TRACKING FROM CONSTRUCTION ENTRANCES/EXITS:	OFF SITE VEHICLE TRACKING OF SEDIMENTS AND DUST GENERATION WILL BE MINIMIZED VIA A ROCK CONSTRUCTION ENTRANCE PER FDOT NUMBER 106, DAILY STREET SWEEPING AND THE USE OF WATER TO KEEP DUST DOWN.
THE PROPER APPLICATION RATES OF ALL FERTILIZERS, HERBICIDES AND PESTICIDES USED AT THE CONSTRUCTION SITE:	FERTILIZERS AND PESTICIDES WILL BE USED AT A MINIMUM AND IN ACCORDANCE WITH THE MANUFACTURER'S SUGGESTED APPLICATION RATES.
THE STORAGE, APPLICATION, GENERATION AND MIGRATION OF ALL TOXIC SUBSTANCES:	AT A MINIMUM A DOUBLE WALLED FUEL TANK WILL BE PLACED ON A DRIP PAN TO CONTAIN AND PREVENT ANY DRIPS OR LEAKS FROM BEING DISCHARGED IN STORMWATER RUNOFF. ALL PAINTS AND OTHER CHEMICALS WILL BE STORED IN A LOCKED COVERED SHED.
OTHER:	PORT-O-LETS WILL BE PLACED AWAY FROM STORM SEWER SYSTEMS, STORM INLET(S), SURFACE WATERS AND WETLANDS. NO VEHICLE MAINTENANCE SHALL BE CONDUCTED ON-SITE. A WASHDOWN AREA SHALL BE DESIGNATED AT ALL TIMES AND WILL NOT BE LOCATED IN ANY AREA THAT WILL ALLOW FOR THE DISCHARGE OF POLLUTED RUNOFF. A SMALL-VEGETATED BERM SHALL BE PLACED AROUND THE WASHDOWN AREA.

DESCRIPTION OF CONTROLS BMPS, AND MEASURES TO BE IMPLEMENTED FOR EACH SOIL DISTURBING ACTIVITY:

SILT FENCE WILL BE CONSTRUCTED AROUND THE ENTIRE PERIMETER OF THE SITE AD THE WETLAND. TWO SETTLING BASINS WILL BE CONSTRUCTED TO ACCEPT STORMWATER RUNOFF DURING AND AFTER THE COMPLETION OF CONSTRUCTION.

TEMPORARY STABILIZATION PRACTICES:

TOP OF SOIL STOCK PILES AND DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR AT LEAST 21 DAYS SHALL BE STABILIZED WITH TEMPORARY GRASS AND MULCH NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY. AREAS OF THE SITE WHICH ARE TO BE PAVED WILL BE TEMPORARILY STABILIZED BY APPLYING STABILIZATION AND BASE.

PERMANENT STABILIZAION PRACTICES:

ALL DISTURBED AREAS WILL BE STABILIZED WITH SOD AND / OR SEED & MULCH

STRUCTURAL CONTROLS IMPLEMENTED TO DIVERT STORMWATER FLOW FROM EXPOSED SOILS, STORE FLOWS, RETAIN SEDIMENT AND LIMIT STORMWATER RUNOFF:

THE STORMWATER COLLECTION SYSTEM WILL BE CONSTRUCTED FIRST.

SEDIMENT BASINS IMPLEMENTED FOR DISTURBANCE AREAS GREATER THAN 10 ACRES:

PERMANENT STORMWATER MANAGEMENT CONTROL SYSTEMS TO BE INSTALLED DURING CONSTRUCTION PROCESS (SUCH AS DETENTION/RETENTION SYSTEMS AND VEGETATED SWALES).

WATER QUALITY TREATMENT FOR THE FIRST 1" OF RUNOFF WILL BE PROVIDED WITH THE PROPOSED STORMWATER POND.

N/A

DESCRIPTION OF MAINTENANCE PLAN FOR ALL STRUCTURAL AND NON-STRUCTURAL CONTROLS:

CONTRACTOR SHALL PROVIDE ROUTINE MAINTENANCE OF PERMANENT AND TEMPORARY SEDIMENT AND EROSION CONTROL FEATURES IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS OR AS FOLLOWS, WHICHEVER IS MORE STRINGENT:

1. SILT FENCE SHALL BE INSPECTED AT LEAST WEEKLY. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

2. MAINTENANCE SHALL BE PERFORMED ON THE ROCK ENTRANCE WHEN ANY VOID SPACES ARE FULL OF SEDIMENT.

3. HAY BALES SHALL BE USED IN AREAS WHERE EFFECTIVENESS IS REQUIRED FOR LESS THAN 3 MONTHS. INSPECTION OF THE HAY BALES SHALL TAKE PLACE IMMEDIATELY AFTER EACH RAINFALL AND ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

4. INLET(S)/OUTFALLS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAIN EVENT AND ANY REQUIRED REPAIRS TO THE HAY BALES, SILT FENCE, OR FILTER FABRIC SHALL BE PERFORMED IMMEDIATELY.

5. BARE AREAS OF THE SITE THAT WERE PREVIOUSLY SEEDED SHALL BE RESEEDED PER MANUFACTURES' INSTRUCTIONS.

6. MULCH AND SOD THAT HAS BEEN WASHED OUT SHALL BE REPLACED IMMEDIATELY.

7. MAINTAIN ALL OTHER AREAS OF THE SITE WITH PROPER CONTROLS AS NECESSARY.

DESCRIPTION OF INSPECTION PROCEEDURES AND INSPECTION DOCUMENTATION PROCEDURES (MUST OCCUR WEEKLY AND WITHIN 24 HOURS OF STORM EVENT OF OVER 0.5":

1. ALL CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EACH WEEK AND FOLLOWING ANY STORM EVENT OF 0.5-INCHES OR GREATER BY A CONTRACTORS REPRESENTATIVE.
2. ALL MEASURES SHALL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.
3. BUILT UP SEDIMENT SHALL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE SILT FENCE.
4. SILT FENCE SHALL BE INSPECTED REGULARLY FOR DEPTH OF SEDIMENT AND TEARS TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND.
5. THE SEDIMENT BASINS SHALL BE INSPECTED DEPTH OF SEDIMENT AND BUILD UP OF SEDIMENT SHALL BE REMOVED WHEN IT REACHES 10% OF THE DESIGN CAPACITY OR AT THE END OF THE JOB.
6. TEMPORARY AND PERMANENT GRASSING AND MULCHING AND SODDING SHALL BE INSPECTED FOR BARE SPOTS AND WASHOUTS.
7. A MAINTENANCE INSPECTION REPORT SHALL BE MADE AFTER EACH INSPECTION BY THE CONTRACTOR AND SHALL BE KEPT IN AN ACTIVE LOG READILY AVAILABLE AT THE JOB SITE.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE, REPAIR ACTIVITIES AND COMPLETING THE INSPECTION AND MAINTENANCE REPORT.

IDENTIFICATION AND DESCRIPTION OF ALL SOURCES OF NON-STORMWATER DISCHARGES:

IT IS EXPECTED THAT THE FOLLOWING NON-STORM WATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD:

1. PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED).
2. UNCONTAMINATED GROUNDWATER (FROM DEWATERING EXCAVATION). ALL NON-STORM WATER DISCHARGES SHALL BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE.

STORMWATER POLLUTION PREVENTION PLAN

HAMILTON
ENGINEERING & SURVEYING, INC
311 NORTH NEWPORT AVENUE, SUITE 100
TAMPA, FL 33606
LB #8474
TEL (813) 250-3535
FAX (813) 250-3636

DATE: 07.08.08
REVISED: 08.09.08
REVISED:
DRAWN BY: WHB
CHECKED BY: ESK

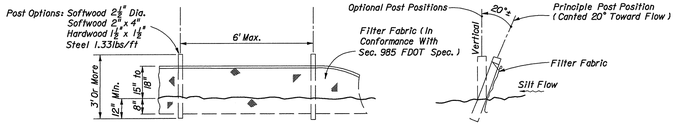
LUCAS CARLO, PE
LICENSE # 61636

SEP 15 2008

HILLSBOROUGH COUNTY SHERIFF'S OFFICE
WCH PTS ROADWAY AND OBSERVATION TOWER
LITHA, FLORIDA

Rañon & Partners, Inc.
Architects (AA C000331)
515 Bay Street, Tampa, Florida 33606
Telephone (813) 253-3465

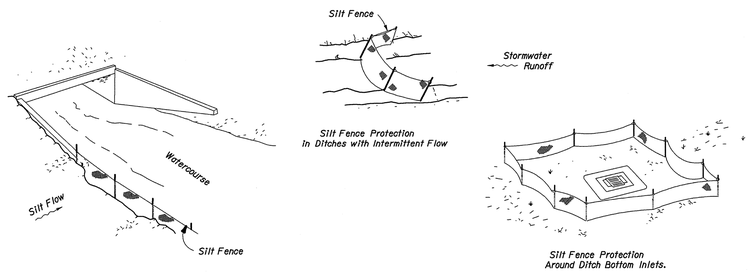
SHEET NUMBER
C5.0



ELEVATIONS

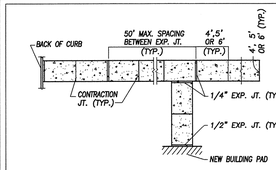
SECTIONS

TYPE III SILT FENCE



SILT FENCE APPLICATIONS

N.T.S.



NOTES:

1. ALL SIDEWALKS SHALL BE 4" THICK, 3000 PSI, FIBER REINFORCED CONCRETE.
2. CONTRACTION JOINTS SHALL BE SPACED @ 4' INTERVALS FOR 4' SIDEWALKS, 5' INTERVALS FOR 5' SIDEWALKS AND 6' INTERVALS FOR 6'-0" SIDEWALKS.
3. FOR 10' SIDEWALKS, SPACE CONTRACTION JOINTS AT 5'-0"INTERVALS AND A LONGITUDINAL CONTRACTION JOINT IN THE CENTERLINE OF SIDEWALK.
4. CONTRACTION JOINTS SHALL BE 1" DEEP AND EDGED WITH 1/8" RADIUS.
5. 1/2" EXPANSION MATERIAL REQUIRED WHERE CONCRETE SIDEWALK ABUT CONCRETE STRUCTURE, CURB OR PAVEMENT.
6. A LAYER OF 15# FELT IS REQUIRED BETWEEN WALK AND ADJACENT PARALLELING CONCRETE CURB.
7. ALL ACCESSIBLE ROUTES ARE TO BE IN STRICT ACCORDANCE WITH STATE OR FEDERAL ADA REQUIREMENTS, WHICHEVER IS STRICTER.

TYPICAL SIDEWALK LAYOUT

N.T.S.

ALL TREES SHOULD BE BARRICADED MEETING THE SPECIFICATIONS AS ILLUSTRATED ON THE ATTACHED DIAGRAM.

Protective barriers are used during land alteration and construction activities to protect trees and natural areas to be retained on a site.

Protective barriers must be erected around TREES to be retained within an area where land alteration and construction activities will occur as well as along NATURAL AREAS where such areas are adjacent to permitted land alteration and construction activities. A PROTECTIVE BARRIER must remain in place until the land alteration and construction activities are completed or until commencement of grade finishing and sodding. No ground disturbance must occur within the barricaded area.

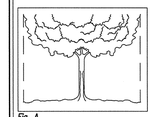


Fig. A

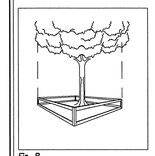


Fig. B

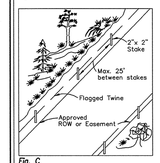


Fig. C

1. *TREES – To restrict access into the area within the DRIPLINE of a tree, a physical structure not less than 3 feet in height, comprised of wood or other suitable material, is placed around the tree at the DRIPLINE, except where land alteration or construction activities are approved within the dripline. See Ord. 87-2, Sec. 4.B.3.m.*
2. *The DRIPLINE of a tree is the imaginery, verticle line that extends downward from the outermost tips of the tree's branches to the ground. Fig. A.*

BARRIER SPECIFICATIONS FOR TREES:

Four corner upright stakes of no less than 2" x 2" lumber connected by horizontal members of no less than 1" x 4" lumber; or upright stakes spaced at 5' intervals of no less 2" x 2" lumber connected by silt screen fabric or material of comparable durability. Fig. B.

1. *NATURAL AREAS – To restrict access into areas where land alteration and construction activities are not authorized, a physical structure not less than 3 feet in height is placed along the perimeter of such areas.*

BARRIER SPECIFICATIONS FOR NATURAL AREAS:

Upright stakes of no less than 2" x 2" lumber spaced no more than 25' apart and connected by twine flagged with plastic surveying tape at regular intervals of 5-10'. Fig. C. Other methods of demarcation will be considered depending upon the characteristics of the site.

WHY A BARRIER

1. *To protect all above ground portions of trees and other significant vegetation from mechanical damage.*
2. *To protect root systems from compaction.*
3. *To provide awareness of protected areas to equipment operators.*

WHY IT WORKS

A tree's chance for survival is greatly enhanced if no construction material, heavy equipment or stockpiling of soil is allowed inside the barrier; only hand labor.

For additional information, contact the Department of Planning and Development Management. Tel.: 272-5920

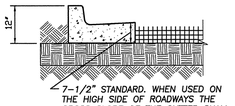
DRAWING NO. TD-16
SHEET NO. 1 OF 6
DWG FILE NAME: TREEPRO1

TREE PROTECTION TYPICAL DETAILS

Hillsborough County Florida

TRANSPORTATION TECHNICAL MANUAL

REVISION DATE :



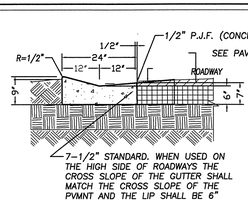
NOTES:

1. PROVIDE 1/8"-1/4" (SAW CUT) CONTRACTION JOINTS AT 10' CENTERS (MAXIMUM). MATCH PAVEMENT JOINTS FOR CONCRETE PAVEMENT.
2. PROVIDE END TRANSITIONS PER F.D.O.T. INDEX NO. 300.

F.D.O.T. INDEX NO. 300

TYPE "F" CURB AND GUTTER

N.T.S.



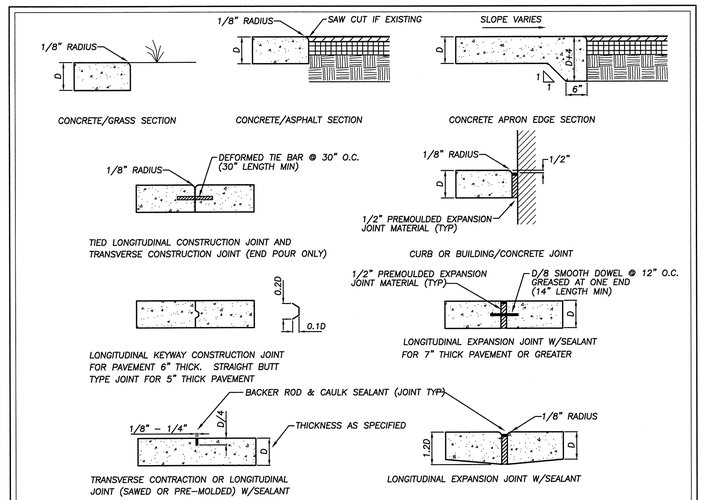
NOTES:

1. WHEN REMOVING EXISTING CURB, THE CURB SHALL BE SAW CUT AT THE NEAREST CONSTRUCTION JOINT AND A FULL SECTION OF CURB REPLACED.
2. INSTALL EXPANSION JOINTS AT 50' INTERVALS, STRIKE CONSTRUCTION JOINTS AT 10' INTERVALS.

F.D.O.T. INDEX NO. 300

DROP "MIAMI" CURB

N.T.S.

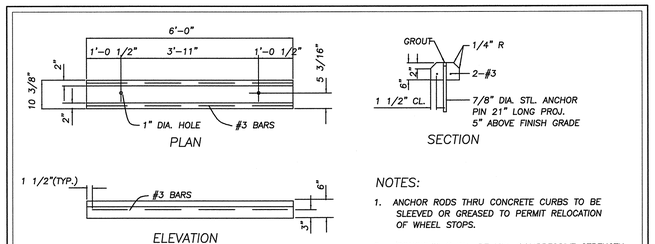


ALL ON-SITE CONCRETE PAVEMENT IS TO BE FIBERMESH REINFORCED. 5 INCH THICK CONCRETE IN PASSENGER CAR TRAFFIC AREAS, 6 INCH THICK CONCRETE IN TRUCK TRAFFIC AREAS AND 7 OR 8 INCH THICK CONCRETE IN HIGH FREQUENCY HEAVY TRUCK TRAFFIC AREAS AS SPECIFIED. MATERIAL AND CONSTRUCTION TO BE IN STRICT ACCORDANCE WITH "RECOMMENDED SPECIFICATIONS FOR NON-REINFORCED PORTLAND CEMENT CONCRETE PAVING" BY THE PORTLAND CEMENT ASSOCIATION. JOINTS TO BE SPACED AT 12 FEET MAXIMUM FOR 5 INCH THICK CONCRETE, 15 FEET MAXIMUM FOR 6 INCH THICK CONCRETE AND 18 FEET MAXIMUM FOR 7 AND 8 INCH THICK CONCRETE. JOINTS TO BE CONSTRUCTED AS DESCRIBED IN "GUIDE TO JOINTING OF NON-REINFORCED CONCRETE PAVEMENTS" BY THE FLORIDA CONCRETE AND PRODUCTS ASSOCIATION, INC.

CONCRETE PAVEMENT JOINT & END DETAILS

N.T.S.

Structural Number Calculation for proposed pavement:			
Material	Thickness (in)	Structural Coefficient (per in)	Structural Number (total)
Type 'S'	2	0.44	0.88
Crushed Concrete	8	0.14	1.12
Stabilized Subgrade	12	0.06	0.72
Total			2.72

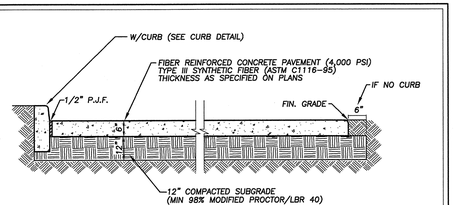


NOTES:

1. ANCHOR RODS THRU CONCRETE CURBS TO BE SLEEVED OR GREASED TO PERMIT RELOCATION OF WHEEL STOPS.
2. CONCRETE SHALL BE MIN. COMPRESSIVE STRENGTH OF 3,000 PSI, IN ACCORDANCE WITH ASTM C341.

CONCRETE WHEELSTOP

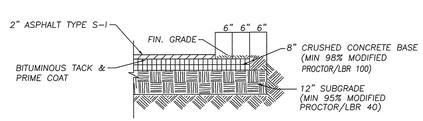
N.T.S.



NO STEEL REINFORCEMENT IS REQUIRED FOR PAVEMENT AREAS
PROVIDE FIBER REINFORCEMENT AT 1.5 LBS PER CUBIC YARD

TYP. CONCRETE PAVEMENT DETAIL

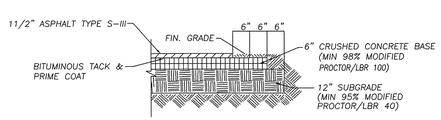
N.T.S.



CONSTRUCTED AS PER FDOT SPECIFICATIONS

TYP. DRIVEWAY PAVEMENT DETAIL (HEAVY DUTY)

N.T.S.



CONSTRUCTED AS PER FDOT SPECIFICATIONS

TYP. DRIVEWAY PAVEMENT DETAIL (LIGHT DUTY)

N.T.S.

SITE DETAILS

HAMILTON
ENGINEERING & SURVEYING, INC
311 NORTH NEWPORT AVENUE, SUITE 100
TAMPA, FL 33606
LB #8474
TEL (813) 250-3535
FAX (813) 250-3636

LUCAS CARLO, PE
LICENSE # 61636

SEP 15 2008

DATE: 07.08.08
REVISED: 09.09.08
REVISED:
DRAWN BY: WHB
CHECKED BY: ESK

HILLSBOROUGH COUNTY SHERIFF'S OFFICE
WCH PTS ROADWAY AND OBSERVATION TOWER
LITHIA, FLORIDA

Raíon & Partners, Inc.
Architects (AA C000031)
515 Bay Street, Tampa, Florida 33606
Telephone (813) 253-3465

SHEET NUMBER
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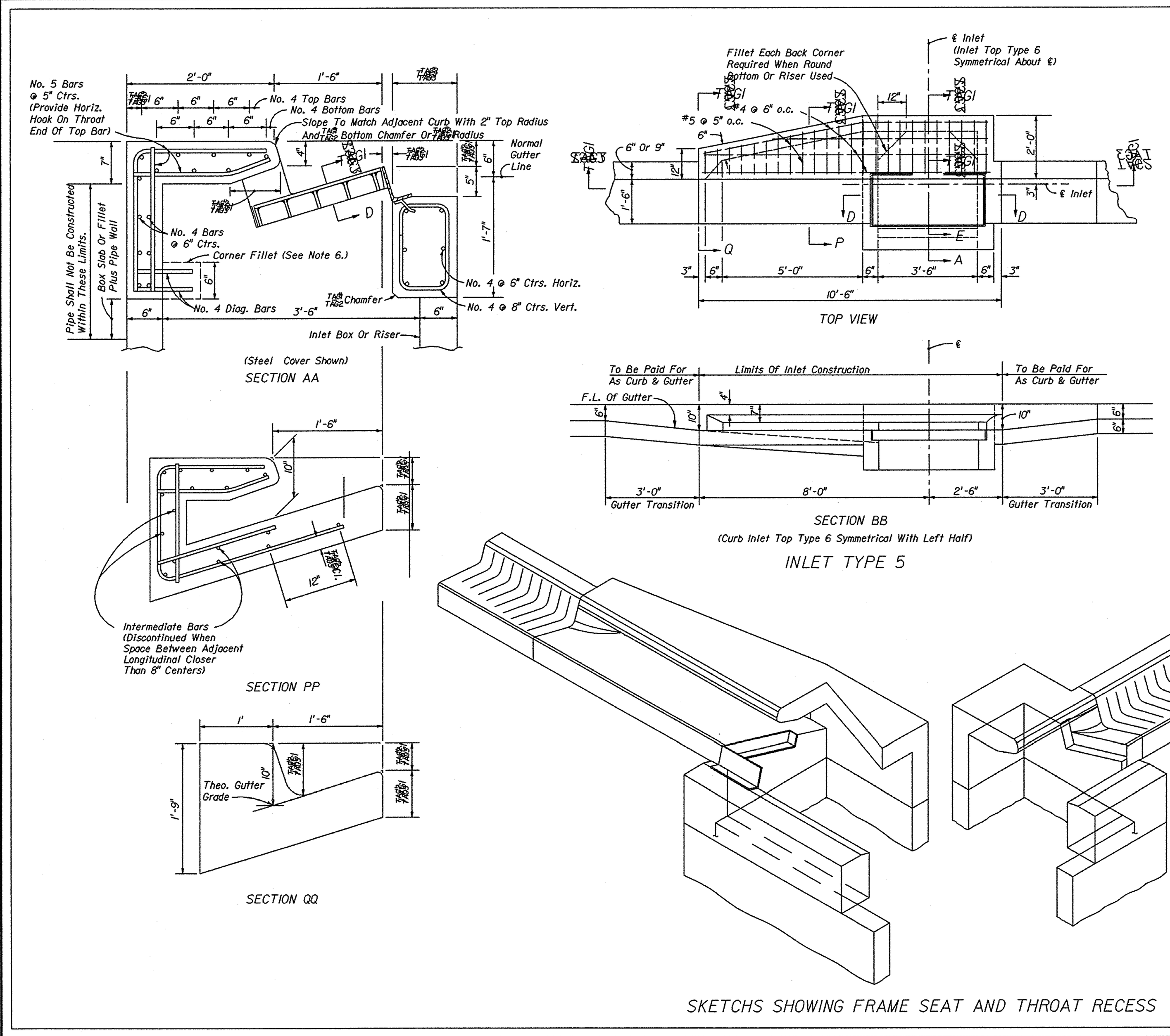
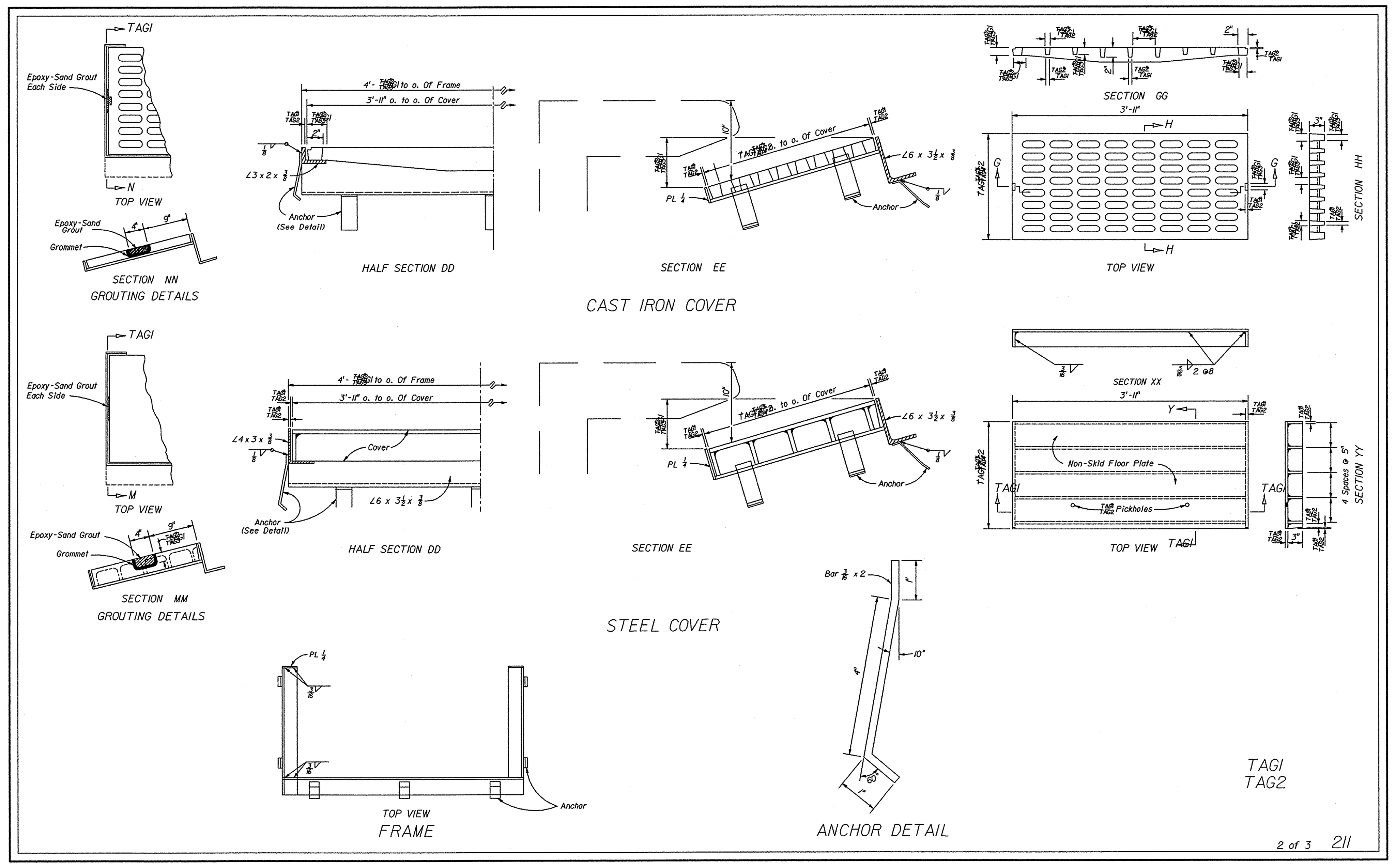


GENERAL NOTES

1. The finished grade and slope of the inlet tops are to conform with the finished cross slope and grade of the proposed sidewalk and/or parkway.
2. When inlets are to be constructed on a curve, refer to the plans to determine the radius and, where necessary, modify the inlet details accordingly. Bend steel when necessary.
3. All reinforcing steel shall have minimum cover unless otherwise shown. Inlet tops shall be either cast-in-place or precast concrete.
4. Precasting of this inlet top will be permitted. Precast units shall conform to the dimensions shown or in accordance with approved shop drawings. Request for shop drawing approval shall be directed to the State Drainage Engineer.
5. Concrete meeting the requirements of A.S.T.M. C 478 (4,000 P.S.I.) may be used in lieu of Class I concrete for precast units, manufactured in plants which are under the Standard Operating Procedures for the inspection of precast drainage products.
6. The corner fillets shown for rectangular throats are necessary only when throats are to be used in conjunction with circular inlet bottoms or when used on skew with rectangular inlet boxes.
7. For inlet bottoms see Index No. 200.
8. These inlet tops are designed for use with standard curb and gutter Type E and Type F. Locate outside of pedestrian crosswalk where practical.
9. See Index 201 for supplemental details.
10. All steel used for frame and cover shall meet the requirements of ASTM A-36.
11. Either cast iron covers or steel covers may be used. Iron covers shall be Class No. 30 castings in accordance with ASTM A-48.
12. When Alternate "G" Cover is specified in plans either the cast iron cover and galvanized steel frame or the the galvanized steel cover and frame must be used. Covers are to be grouted in accordance with the grouting detail shown on sheet 2 of 2, in lieu of tack welding.
13. Inlet to be paid for under the contract unit price for Inlets (Curb) (Type —), Each.

TAGI
TAG2

1 of 2 211

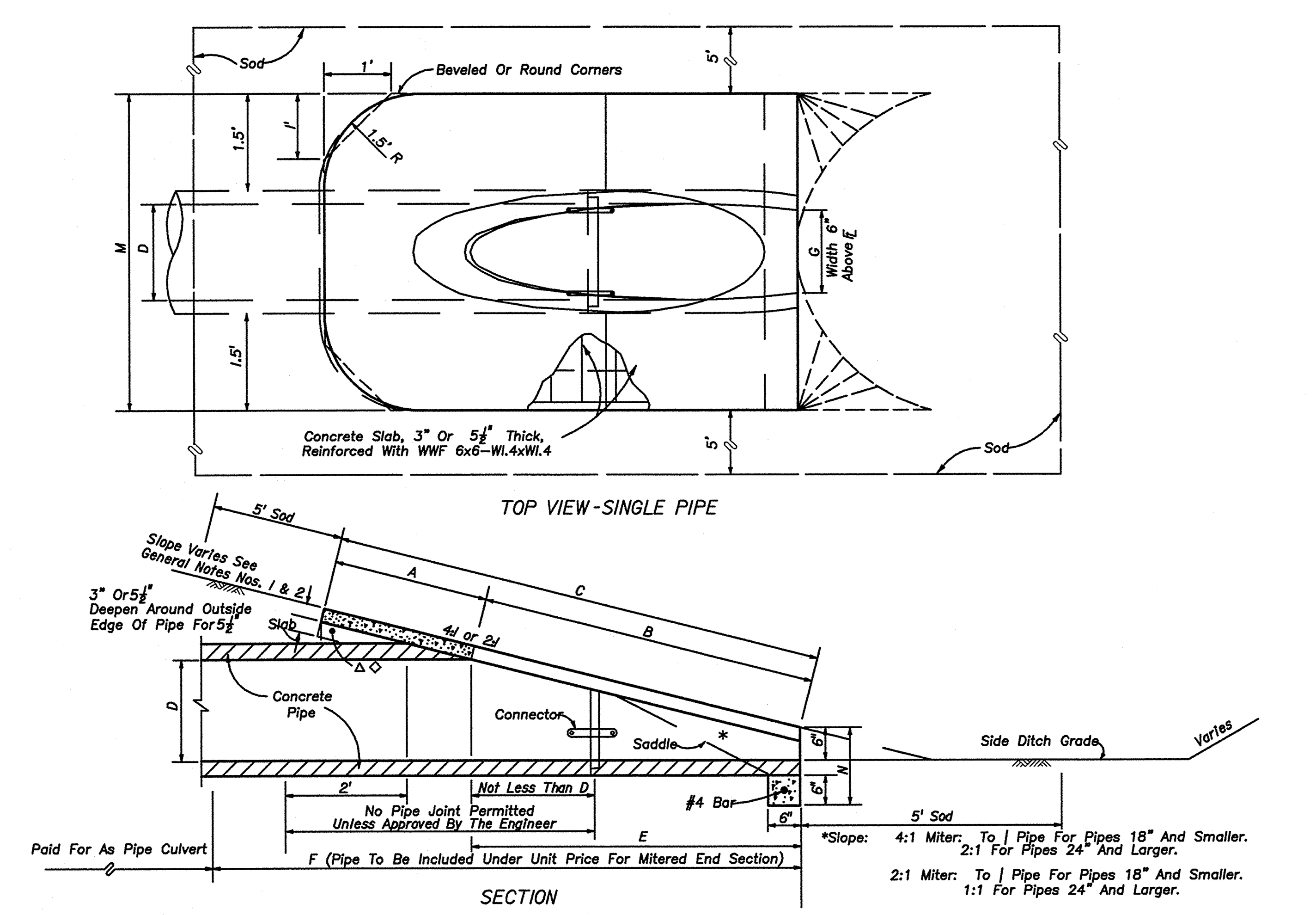


TAGI
TAG2

2 of 3 211

DIMENSIONS AND QUANTITIES

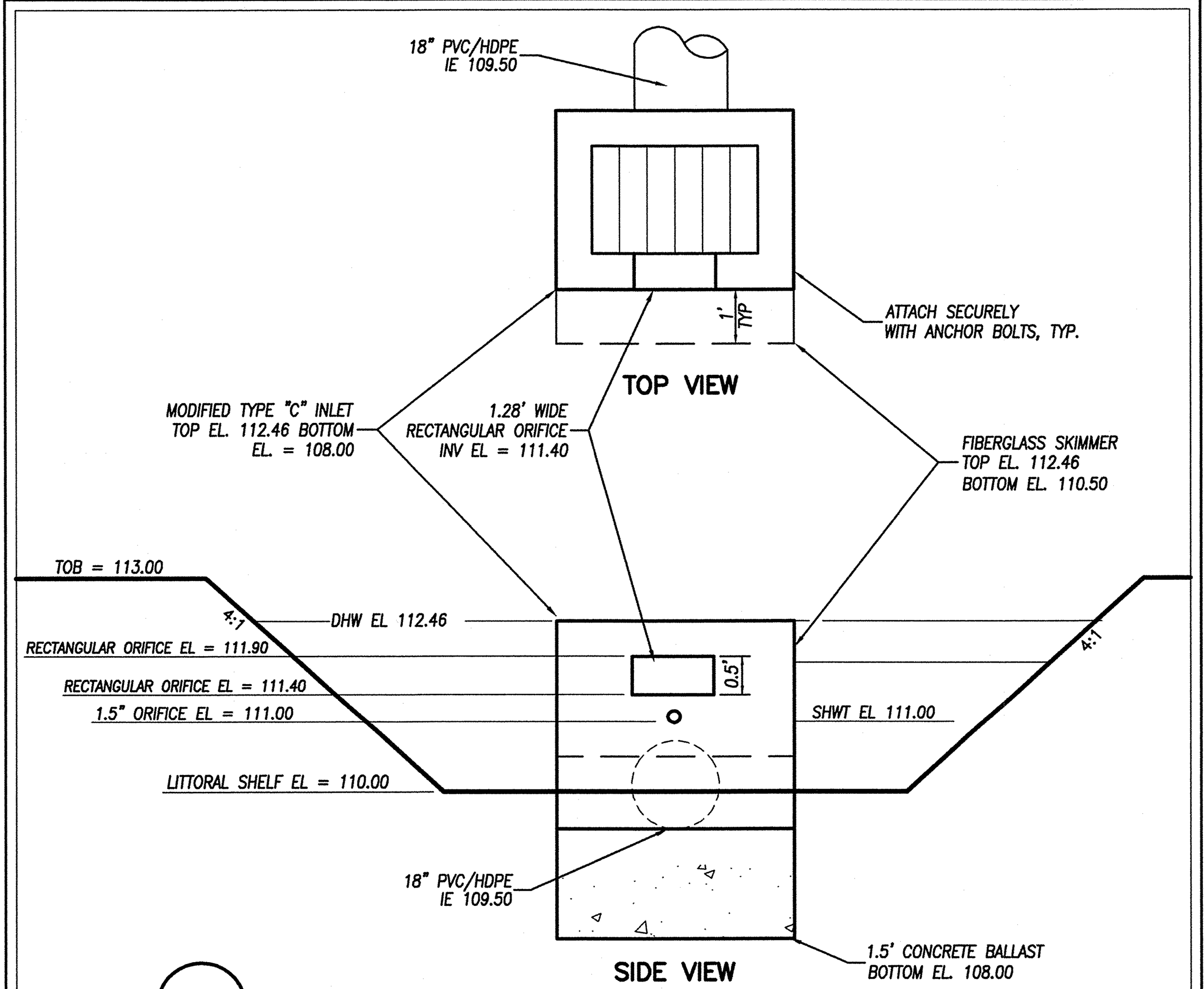
	D	X	A	B	C	E	F	G	M Single Pipe	M Double Pipe	M Triple Pipe	M Quad. Pipe	N	5½" Concrete Slab (CY) Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	Sodding (Sq. Yds.) Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
2:1 Slope	15"	2'-7"	1.92'	2.18'	4.10'	2.06'	5'	1.22'	4.63'	7.21'	9.79'	12.37'	1.19'	0.38	0.58	0.77	0.96	21	24	27	30
	18"	2'-10"	1.97'	2.74'	4.71'	2.56'	6'	1.41'	4.92'	7.75'	10.58'	13.42'	1.21'	0.44	0.65	0.87	1.09	22	25	28	31
	24"	3'-5"	2.06'	3.85'	5.91'	3.56'	7'	1.73'	5.50'	8.92'	12.33'	15.75'	1.25'	0.54	0.83	1.12	1.42	24	28	32	35
	30"	4'-3"	2.15'	4.95'	7.10'	4.56'	8'	2.00'	6.08'	10.33'	14.58'	18.83'	1.29'	0.66	1.09	1.50	1.91	26	31	35	40
	36"	5'-1"	2.25'	6.08'	8.33'	5.56'	9'	2.24'	6.67'	11.75'	16.83'	21.92'	1.33'	0.81	1.38	1.95	2.51	28	34	39	45
	42"	6'-0"	2.34'	7.21'	9.55'	6.56'	10'	2.45'	7.25'	13.25'	19.25'	25.25'	1.38'	0.97	1.70	2.45	3.19	30	37	43	50
	48"	6'-9"	2.43'	8.33'	10.76'	7.56'	11'	2.65'	7.83'	14.58'	21.33'	28.08'	1.42'	1.13	2.04	2.93	3.84	32	39	47	54
	54"	7'-8"	2.52'	9.44'	11.96'	8.56'	12'	2.83'	8.42'	16.08'	23.75'	31.42'	1.46'	1.31	2.44	3.58	4.72	34	42	51	59
	60"	8'-6"	2.62'	10.56'	13.18'	9.56'	14'	3.00'	9.00'	17.50'	26.00'	34.50'	1.50'	1.51	2.89	4.28	5.68	36	45	55	64
	66"	9'-2"	2.71'	11.68'	14.39'	10.56'	15'	3.18'	9.58'	18.75'	27.92'	37.08'	1.54'	1.68	3.25	4.84	6.43	38	48	58	68
	72"	10'-0"	2.80'	12.80'	15.60'	11.56'	16'	3.30'	10.16'	20.16'	30.16'	40.16'	1.58'	1.89	3.74	5.59	7.45	40	51	62	73
4:1 Slope	15"	2'-7"	2.27'	4.09'	6.36'	4.03'	8'	1.22'	4.63'	7.21'	9.79'	12.37'	1.19'	0.57	0.87	1.15	1.44	23	26	29	32
	18"	2'-10"	2.36'	5.12'	7.48'	5.03'	9'	1.41'	4.92'	7.75'	10.58'	13.42'	1.21'	0.66	0.99	1.31	1.65	25	28	31	35
	24"	3'-5"	2.53'	7.18' △	9.71'	7.03' △	11'	1.73'	5.50'	8.92'	12.33'	15.75'	1.25'	0.85	1.30	1.75	2.20	28	32	36	40
	30"	4'-3"	2.70'	9.25'	11.95'	9.03'	13'	2.00'	6.08'	10.33'	14.58'	18.83'	1.29'	1.10	1.74	2.39	3.05	31	36	41	46
	36"	5'-1"	2.87'	11.31' ◇	14.18'	11.03' ◇	15'	2.24'	6.67'	11.75'	16.83'	21.92'	1.33'	1.32	2.21	3.08	3.96	34	40	46	52
	42"	6'-0"	3.05'	13.37'	16.42'	13.03'	17'	2.45'	7.25'	13.25'	19.25'	25.25'	1.38'	1.58	2.76	3.91	5.09	38	44	51	58
	48"	6'-9"	3.22'	15.43'	18.65'	15.03'	19'	2.65'	7.83'	14.58'	21.33'	28.08'	1.42'	1.85	3.30	4.73	6.17	41	48	56	63
	54"	7'-8"	3.39'	17.49'	20.88'	17.03'	21'	2.83'	8.42'	16.08'	23.75'	31.42'	1.46'	2.14	3.95	5.77	7.58	44	52	61	69
	60"	8'-6"	3.56'	19.55'	23.11'	19.03'	23'	3.00'	9.00'	17.50'	26.00'	34.50'	1.50'	2.45	4.66	6.87	9.07	47	56	66	75
	66"	9'-2"	3.73'	21.62'	25.35'	21.03'	25'	3.18'	9.58'	18.75'	27.92'	37.08'	1.54'	2.88	5.54	8.18	10.84	49	59	69	80
	72"	10'-0"	3.91'	22.68'	26.59'	23.03'	27'	3.30'	10.16'	20.16'	30.16'	40.16'	1.58'	3.54	6.61	9.87	13.13	52	63	74	85



F.D.O.T. INDEX NO. 272
SINGLE ROUND CONCRETE PIPE

MITERED END SECTION

N.T.S.

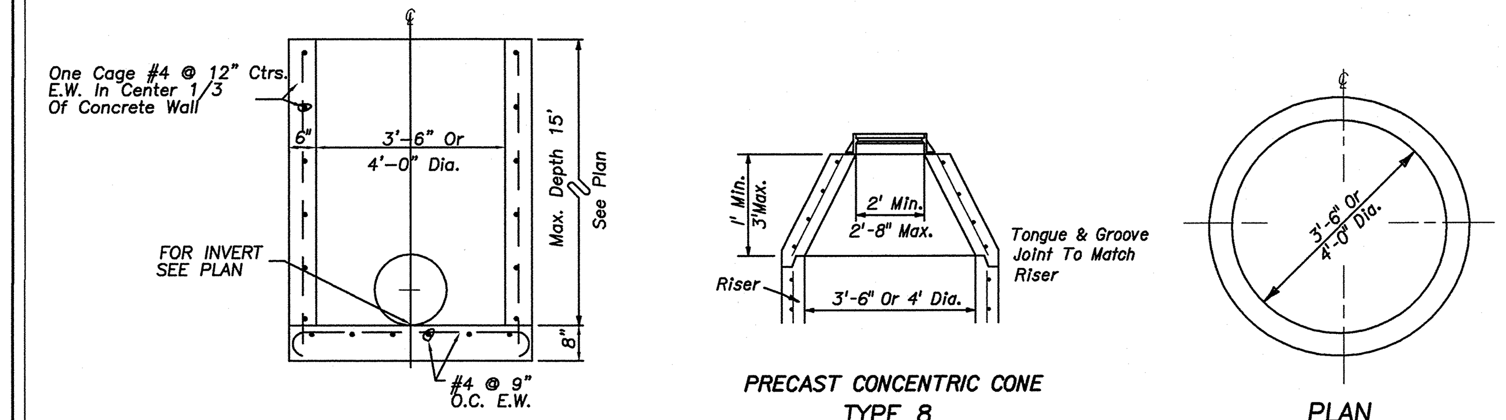


CS-1 **OUTFLOW CONTROL STRUCTURE**

N.T.S.

NOTES (TOPS)

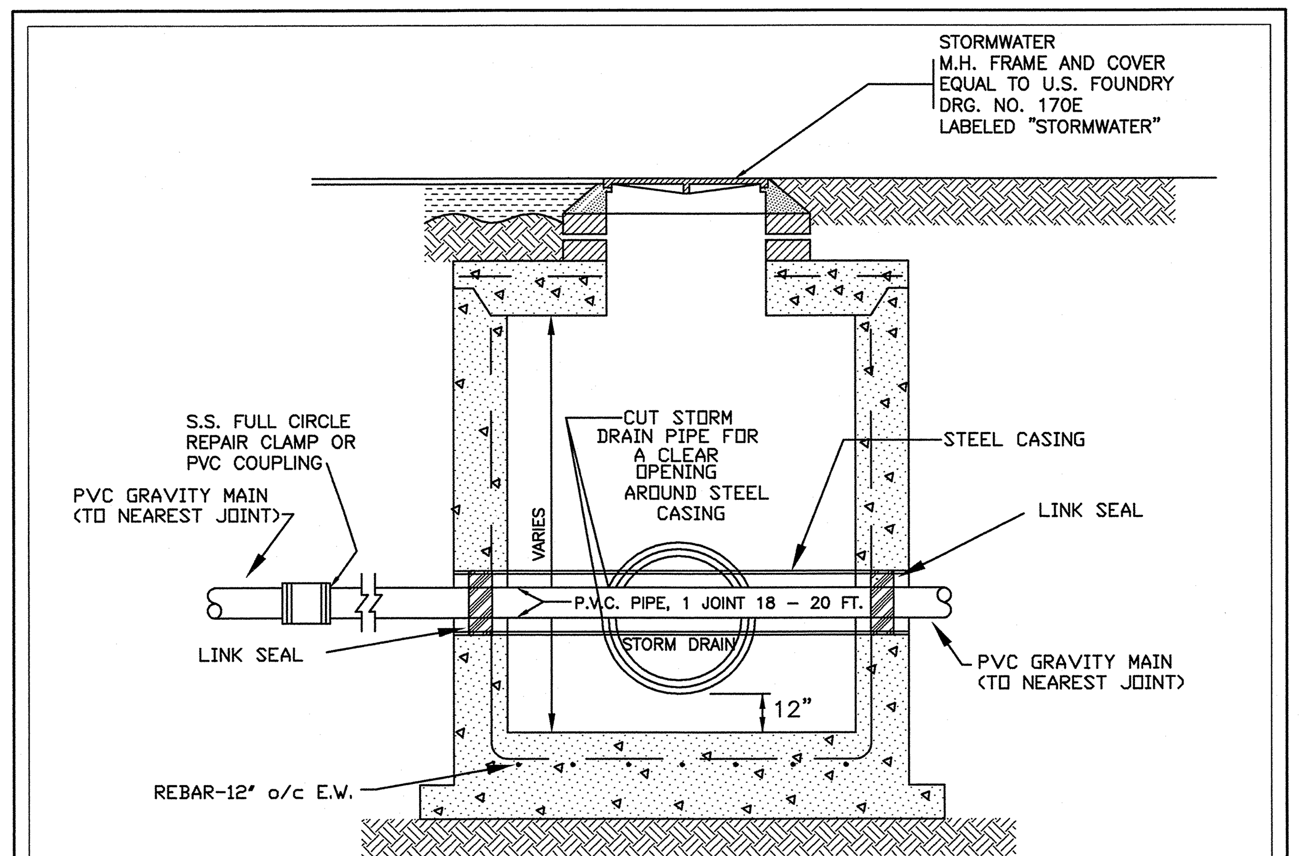
1. Manhole top Type 8 may be of cast-in-place or precast concrete construction or brick construction. For concrete construction, the concrete and steel reinforcement shall be the same as the supporting wall unit. An eccentric cone may be used.
2. Manhole tops shall be secured to structures by optional construction joints as shown on Sheet 3 of 6 of FDOT Index 201.



F.D.O.T. INDEX NO.'s 200 & 201

TYPE "P" STANDARD MANHOLE (ALT. A)

N.T.S.



WASTEWATER & STORMWATER PIPES

TYPE "A" CONFLICT MANHOLE

HILLSBOROUGH COUNTY
N.T.S.

STORMWATER DETAILS

HAMILTON
ENGINEERING & SURVEYING, INC

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TAMPA, FL 33606
LB #8474
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HILLSBOROUGH COUNTY SHERIFF'S OFFICE
WCH PTS ROADWAY AND OBSERVATION TOWER
LITHIA, FLORIDA

LUCAS CARLO, PE
LICENSE # 61636
SEP 15 2008

DATE: 07.08.08
REVISED: 09.09.08
REVISED
DRAWN BY: WHB
CHECKED BY: ESK

SHEET NUMBER
C7.0

I. DESIGN CRITERIA

A. GENERAL BUILDING CODE
The Contract Documents are based on the requirements of the 2004 Florida Building Code with 2005 and 2006 supplements.

B. DEAD LOADS
1. Hanging Ceiling Loads. An allowance of 10 PSF has been made for hanging ceiling loads.

C. LIVE LOADS
1. Design live loads are based on the more restrictive of the uniform listed below or the concentrated load listed acting over an area 2.5feet square or in the case of parking garages, 20 square inches.

	CATEGORY	UNIFORM LOAD (PSF)	CONCENTRATED LOAD (LB)
1.	Roof	20	N/A
2.	Observation Deck	100	0
3.	Stairs	100	0
4.	Sidewalks, Plazas, Driveways subject to Vehicular Traffic	250	16000

D. MECHANICAL EQUIPMENT LOADS
The General Contractor shall submit actual weights of equipment to be used in the project to the Structural Engineer for verification of loads used in the design at least three weeks prior to fabrication and construction of thesupporting structure.

E. WIND LOADS
1. Wind pressures are based on the provisions of the Florida Building Code which refer to the American Society of Civil Engineers, Minimum Design Loads for Buildings and Other Structures, ASCE 7-02 and the following criteria:
a. Basic wind speed = 110 MPH (3 sec. gust)
b. Wind importance factor (I) = 1.00
c. Wind exposure category = C
d. Internal pressure coefficient (Gcpi) = +/- 0.18
i. This structure is not located in a Wind-borne Debris Region and has been designed as enclosed. Therefore, impact resistant exterior glazing or impact resistant covering over exterior glazing is not required.
2. Wind pressures used in the design of components and cladding are shown in the following table:

CLADDING TYPE	LOCATION	TRIBUTARY AREA (SQ-FT)	WIND LOAD (PSF)
Wall	Interior	10	+34/-37
Wall	Interior	20	+32/-35
Wall	Interior	50	+30/-33
Wall	Interior	100	+29/-31
Wall	Edge	10	+34/-45
Wall	Edge	20	+32/-42
Wall	Edge	50	+30/-38
Wall	Edge	100	+29/-35
Roof	Interior	10	+20/-31
Roof	Interior	20	+18/-30
Roof	Interior	50	+16/-29
Roof	Interior	100	+14/-28
Roof	Edge	10	+20/-53
Roof	Edge	20	+18/-49
Roof	Edge	50	+16/-43
Roof	Edge	100	+14/-39
Roof	Corner	10	+20/-53
Roof	Corner	20	+18/-49
Roof	Corner	50	+16/-43
Roof	Corner	100	+14/-39
Overhang	Interior	All	+10/-62
Overhang	Edge	All	+10/-62

a. Edge strip = 3ft

F. LATERAL-FORCE RESISTING SYSTEM
The ability of the structural frame to resist lateral loads and provide stability under gravity loads derives from the complete installation of the lateral-force resisting systems and diaphragms described below. It shall be the Contractor's responsibility to provide all temporary bracing required to maintain the stability and safety of all elements during the construction process until all of these elements are completely installed and all designated concrete elements (if any) have reached a minimum of 75% of their design strength. The required structural elements are:
1. Masonry Load Bearing Wall System
a. Lateral-force Resisting System: Masonry walls upon which structural steel elements bear.
b. Diaphragm
i. A metal deck diaphragm that is completely attached to all roof members according to specifications and the creates a continuous element linking all lateral-load resisting systems.

G. FUTURE EXPANSION
No provisions have been made in the structural design for future expansion.

H. HANDRAILS AND GUARDS
The handrail assemblies and guards shall be designed for 50#/ft or a concentrated load of 200-pounds at any point applied in any direction at the top and to transfer this load through the supports to the structure. These loads need not be assumed to act concurrently.

I. THE CONCENTRATED LOAD FOR STAIR TREADS
The individual stair treads shall be designed to support a 300-pound concentrated load placed in a position, which would cause maximum stress.

II. FOUNDATION

A. GEOTECHNICAL REPORT
Foundation design is based on the geotechnical investigation report as follows:
1. "Geotechnical Engineering Services Report, HCSO South Training Facility, Hillsborough County, Florida, Tierra Project No. 6511-08-137" , "Tierra Inc." , "July 2, 2008".
The geotechnical report is available to the General Contractor upon request to the Owner. The information included therein must be used by the General Contractor. The Architect and Engineer will not be responsible for the accuracy or applicability of such data therein.

B. FOUNDATION TYPE
1. Spread Footing.
a. Allowable Bearing Pressure: 2500 PSF.

C. CONSTRUCTION DEWATERING
The Contractor shall determine the extent of construction dewatering required for the excavation. The Contractor shall submit to the Geotechnical Engineer for review the proposed plan for construction dewatering, prior to beginning the excavation.

III. REINFORCED CONCRETE

A. CLASSES OF CONCRETE
All concrete shall conform to the requirements as specified in the table below unless noted otherwise on the drawings:

	Usage	28 Day Comp. Strength (PSI)	Type	Max Conc Agg.	Size Remarks
1.	Spread Footings	3000	NWT	1 1/2"	
2.	Slab-on-Grade	3000	NWT	1"	
3.	Stair Risers and Landings	3000	NWT	1"	
4.	Tie Beams	3000	NWT	1"	

NWT = normal weight concrete

B. REINFORCING STEEL SPECIFICATION
1. All Reinforcing Steel shall be ASTM A615 Grade 60 unless noted otherwise on the drawings or in these notes.
2. Welded Reinforcing Steel. Provide reinforcing steel conforming to ASTM A706 for all reinforcing steel required to be welded and where noted on the drawings.
3. Deformed Bar Anchors. ASTM A496 minimum yield strength 70,000 PSI as noted on the drawings. Reinforcing bars shall not be substituted for deformed bar anchors.
4. Welded wire reinforcement. Welded smooth wire reinforcement, ASTM A 185, yield strength 65,000 PSI where noted on the drawings.

C. PLACEMENT OF WELDED WIRE REINFORCEMENT.
Wherever welded wire reinforcement is specified as reinforcement, it shall be continuous across the entire concrete surface and not interrupted by beams or girders and properly tapped one cross wire spacing plus 2".

D. REINFORCEMENT IN ALL SLABS
Provide welded smooth wire reinforcement minimum 6 x 6 W2.9 x W2.9 in all topping slabs unless specified otherwise on the drawings.

E. REINFORCING STEEL COVERAGE
Reinforcing steel coverage should conform to the requirements specified below. Cover specified shall be considered minimums that may require increasing where reinforcing steel intersects for different member types. Cover in structural members not specified below shall conform to the requirements of ACI 318 unless specified otherwise on the drawings.
1. Foundation Members
a. Foundation - 3" bottom, 2" top, 2" formed sides, 3" side cast against earth
b. Slab on Grade - 1 1/2" top cover
2. Mild Reinforced Members
a. Beams - 2" top, 1 1/2" side, 1 1/2" bottom

IV. STRUCTURAL STEEL

A. MATERIAL
1. Hot Rolled Structural Members. All hot rolled steel plates, shapes, sheet piling, and bars shall be new steel conforming to ASTM Specification A6.
2. ASTM Specification and Grade. Clearly mark the grade of steel on each piece, with a distinguishing mark visible from floor surfaces, for the purpose of field inspection of proper grade of steel. Unless noted otherwise on the drawings, structural steel shall be as follows:
a. Channel Beams. All channels used as beams shall conform to ASTM A36.
b. Edge Angles, Bent Plates, Angle Hanger, and Angle Kickers. All angles and bent plates shall conform to ASTM A36.
c. Round Hollow Structural Shapes. All round HSS shall conform to ASTM A500, Grade B (Fy=42 ksi).
d. Square and Rectangular Hollow Structural Shapes. All square and rectangular HSS shall conform to ASTM A500, Grade B (Fy=46 ksi).
e. Connection Material.
(1) All connection material, except as noted otherwise herein or on the drawings, including bearing plates, gusset plates, stiffener plates, filler plates, angles, etc. shall conform to ASTM A36 unless a higher grade of steel is required by strength and provided the resulting sizes are compatible with the connected members.
f. Other Steel. Any other steel not indicated otherwise shall conform to ASTM A992 or ASTM A572-50 except plates and angles that shall be ASTM A36.

B. STRUCTURAL BOLTS AND THREADED FASTENERS
1. A325 Bolts. All bolts in structural connections shall conform to ASTM A325 Type 1, unless indicated otherwise on the drawings.

C. WELDING
1. Unless noted otherwise, electrodes for welding shall conform to E70XX (SMAW), F7XX-EXXX (SAW), ER70S-X (GMAW), or E7XT-X (FCAW). Weathering steel electrodes shall conform to table 3.3 of the ANSI/AWS D1.1 Manual.

V. STEEL DECKS

B. ROOF DECK
1. Schedule.

Location	Depth	Gage	Type
Roof	1.5"	20	WR

NOTES:
WR: Wide Rib, Type B

2. Connection to Structure. Unless noted otherwise, the minimum attachment pattern for steel roof deck to structural steel shall be as follows:
a. Field of roof: 12 inches maximum
b. Perimeter strip, corner or eave overhang: 6 inches maximum.
c. At both sides of every deck side lap for interlocking laps or provide securement through both plies of deck at side laps for overlapping laps
d. Along girder (parallel to deck flute): at 18 inches on center.
3. Connection of Deck to Deck at Side Laps. Unless noted otherwise, the fastener spacing for steel roof deck to deck side lap connections shall be as follows:
a. 36 inches maximum

VI. GRATING

Location	Depth (In)	Uniform Load (psf)	Concentrated Load (plf)	Deflection (span ratio)
Observation Level	2	100	200	360

Note: The Uniform and Concentrated loads are not applied simultaneously.

VII. CONCRETE MASONRY

A. Refer to Unit Masonry specificaiton section 04200.

VIII. MISCELLANEOUS

A. CONTRACT DOCUMENTS
It is the responsibility of the General Contractor to obtain all Contract Documents and latest addenda and to submit such documents to all subcontractors and material suppliers prior to the submittal of shop drawings, fabrication of any structural members, and erection in the field.

B. DRAWING CONFLICTS
The General Contractor shall compare the Architectural and Structural drawings and report any discrepancy between each set of drawings and within each set of drawings to the Architect and Engineer prior to the fabrication and installation of any structural members.

C. RESPONSIBILITY OF THE CONTRACTOR FOR STABILITY OF THE STRUCTURE DURING CONSTRUCTION
All structural elements of the project have been designed by the Structural Engineer to resist the required code vertical and lateral forces that could occur in the final completed structure only. It is the responsibility of the Contractor to provide all required bracing during construction to maintain the stability and safety of all structural elements during the construction process until the lateral-load resisting or stability-providing system is completely installed and the structure is completely tied together.

D. CONFLICTS IN STRUCTURAL REQUIREMENTS
Where conflict exists among the various parts of the structural contract documents, structural drawings, general notes, and specifications, the strictest requirements, as indicated by the Engineer, shall govern.

E. CONTRACTOR SUBSTITUTIONS
Any materials or products submitted for approval that are different from the material or products specified in the structural contract documents will be approved only if the following criteria are satisfied:
1. A cost savings to the Owner is documented and submitted with the request.
2. The material or product has been approved by the International Conference of Building Officials (ICBO) and the ICBO report is submitted with the request.
Submittals not satisfying the above criteria will not be considered.

F. SITE OBSERVATION BY THE STRUCTURAL ENGINEER
The contract structural drawings and specifications represent the finished structure, and, except where specifically shown, do not indicate the method or means of construction. The Contractor shall supervise and direct the work and shall be solely responsible for all construction means, methods, procedures, techniques, and sequence.

The Engineer shall not have control nor charge of, and shall not be responsible for, construction means, methods, techniques, sequences, or procedures, for safety precautions and programs in connection with the work, for the acts or omission of the Contractor, Subcontractor, or any other persons performing any of the work, or for the failure of any of them to carry out the work in accordance with the contract documents.

Periodic site observation by field representatives of Walter P. Moore and Associates is solely for the purpose of determining if the work of the Contractor is proceeding in accordance with the structural contract documents. This limited site observation should not be construed as exhaustive or continuous to check the quality or quantity of the work, but rather periodic in an effort to guard the Owner against defects or deficiencies in the work of the Contractor.

G. MAINTENANCE STATEMENT
All structures require periodic maintenance to extend lifespan and to insure structural integrity f from exposure to the environment. A planned program of maintenance shall be established by the building owner. This program shall include such items such as but not limited to painting of structural steel, protective coating for concrete, sealants, caulked joints, expansion joints, control joints, spalls and cracks in concrete, and pressure washing of exposed structural elements exposed to a salt environment or other harsh chemicals.

IX. SUBMITTALS

A. SUBMITTAL LIST AND SCHEDULE
The General Contractor shall prepare a detailed list and schedule of all submittal items to be sent to the Structural Engineer prior to the start of construction. This list shall be updated and revised and kept current as the job progresses. The submittal list shall be organized as shown below:
1. Shop Drawings
2. Manufacturers Literature for Products, Assemblies, and Hardware
3. Products, Assemblies and Hardware
4. Product Certifications, Mill Certificates, and Affidavits
5. Design Calculations

B. SHOP DRAWINGS
1. The General Contractor shall submit for Engineer review shop drawings for the following items:
(1) Concrete Mix Designs (~)
(2) Embedded Items (Plates, Angles, Bolts, etc.)(#)
(3) Miscellaneous Steel
(4) Reinforcing Steel
(5) Roof Metal Deck
(6) Steel Stairs (*)
(7) Structural Steel, Shop and Erection Drawings (*)
Notes:
(*) Items marked thus shall have shop drawings sealed by a registered engineer in the state where the project is located per the project specifications.
(#) Items marked thus shall be submitted to Engineer for Owner's record only and will not have the Engineer's shop drawing stamp affixed.
(~) Items marked thus shall be submitted to the Owner's Testing Agency for their review.
2. All shop drawings must be reviewed and stamped by the General Contractor prior to submittal.
3. Contractor shall submit one set of reproducibles and two sets of prints for all shop drawings specified to be returned by the Engineer.
4. The omission from the shop drawings of any materials required by the Contract Documents to be furnished shall not relieve the Contractor of the responsibility of furnishing and installing such materials, regardless of whether the shop drawings have been reviewed and approved.

C. MANUFACTURERS LITERATURE
Submit two copies of manufacturers literature for all materials and products used in construction on the project.

D. DESIGN CALCULATIONS
The General Contractor shall submit for Engineer review two sets of design calculations sealed by a registered engineer in the state where the project is located for the following items:
1. Steel Stairs

E. REPRODUCTION
The use of electronic files or reproductions of these contract documents by any contractor, subcontractor, erector, fabricator, or material supplier in lieu of preparation of shop drawings signifies their acceptance of all information shown hereon as correct, and obligates themselves to any job expense, real or implied, arising due to any errors that may occur hereon.

X. DRAWING INTERPRETATIONS

A. STRUCTURAL ABBREVIATIONS
See structural abbreviations section below for abbreviations that may be used on the structural drawings.
B. STRUCTURAL ANNOTATIONS
See structural annotations section below for annotations that may be used on the structural drawings.

STRUCTURAL ABBREVIATIONS

@	At	CJP	Complete joint penetration	ELEV	Elevator	GR	Grade	LWC	Light weight concrete	PAR	Parallel	SHT	Sheet	VERT	Vertical
&	And	CL	Center line	EMBED	Embedment	H	Horizontal reaction	M	Moment	PCC	Precast concrete	SIM	Similar	WF	Wide flange
#	Number	CMU	Concrete masonry unit	ENGR	Engineer	HGR	Hanger	MAS	Masonry	PCF	Pounds per cubic foot	SLBB	Short leg back to back	WP	Work point
Ø	Round, diameter	COL	Column	EQ	Equal	HORIZ	Horizontal	MAX	Maximum	PERP	Perpendicular	SPA	Spacing	WS	Waterstop
ADDL	Additional	CONC	Concrete	EQUIP	Equipment	HSA	Headed stud anchor	MC	Moment connection	PL	Plate	SPEC	Specification	WT	Weight
AFF	Above finished floor	CONN	Connection	EQUIV	Equivalent	HSS	Hollow structural section	MECH	Mechanical	PLF	Pounds per linear foot	SPRT	Support	WWR	Welded wire reinforcing
AHR	Anchor	CONSTR	Construction	EW	Each way	ID	Inside diameter	MEZZ	Mezzanine	PJP	Partial joint penetration	SQ	Square	XS	Extra strong
AHU	Air handling unit	CONT	Continuous	EXIST	Existing	INFO	Information	MFR	Manufacture(r)	PRELIM	Preliminary	SSLP	Short-slotted hole parallel	XXS	Double extra strong
ALT	Alternate	COORD	Coordinate	EXP	Expansion	INT	Interior	MIN	Minimum	PROP	Property	SSLT	Short-slotted hole transverse		
APPROX	Approximate	COV	Cover	EXT	Exterior	JT	Joint	MISC	Miscellaneous	PSF	Pounds per square foot	STD	Standard		
AR	Anchor rod	CPRS	Compressible	FAB	Fabricate	K	Kips (1000 lbs)	MTL	Metal	PSI	Pounds per square inch	STIF	Stiffener		
ARCH	Architectural	CTRS	Centers	F'c=	28 day concrete strength=	KSF	Kips per square foot	NIC	Not in contract	PT	Post-tension(ed)	STIR	Stirrup		
BLDG	Building	db	Bar diameter	FD	Floor drain	KSI	Kips per square inch	NS	Near side	QTY	Quantity	STL	Steel		
BM	Beam	DBA	Deformed bar anchor	FDTN	Foundation	LBS	Pounds	NTS	Not to scale	R	Radius, reaction, remainder	STRUCT	Structure, structural		
BO	Bottom of	DET	Detail	FIN	Finish(ed)	Ld	Development length	NWC	Normal weight concrete	REF	Reference	SYMM	Symmetric, symmetrical		
BOT	Bottom	DIA	Diameter	FLR	Floor	LLBB	Long leg back to back	OC	On center	REINF	Reinforcing	T	Plate thickness, tread		
BRDG	Bridging	DIM	Dimension	FS	Far side	LLH	Long leg horizontal	OD	Outside diameter	REQD	Required	THD	Threaded		
BRG	Bearing	DWA	Deformed wire anchor	FTG	Footing	LLV	Long leg vertical	OPH	Opposite hand	REV	Revision	TO	Top of		
BTWN	Between	DWG	Drawing	FUT	Future	LONG	Longitudinal	OPNG	Opening	RTU	Roof top unit	TOC	Top of concrete		
C	Camber	EA	Each	FV	Field verify	LSH	Long side horizontal	OPP	Opposite	SC	Slip critical, shear connector	TOM	Top of masonry		
CANTIL	Cantilever	EF	Each face	Fy=	Yield strength=	LSLP	Long-slotted hole parallel	OVS	Oversized hole	SCHED	Schedule(d)	TOS	Top of steel, top of slab		
CIP	Cast-in-place	EJ	Expansion joint	GALV	Galvanize(d)	LSLT	Long-slotted hole transverse	P	Axial load	SDS	Self-drilling screw	TYP	Typical		
CJ	Construction/control joint	EL	Elevation	GEN	General	LSV	Long side vertical	PAF	Powder actuated fastener	SECT	Section	UNO	Unless noted otherwise		

STRUCTURAL ANNOTATIONS

Grid and/or Center Line

Bar Grating Span

CMU

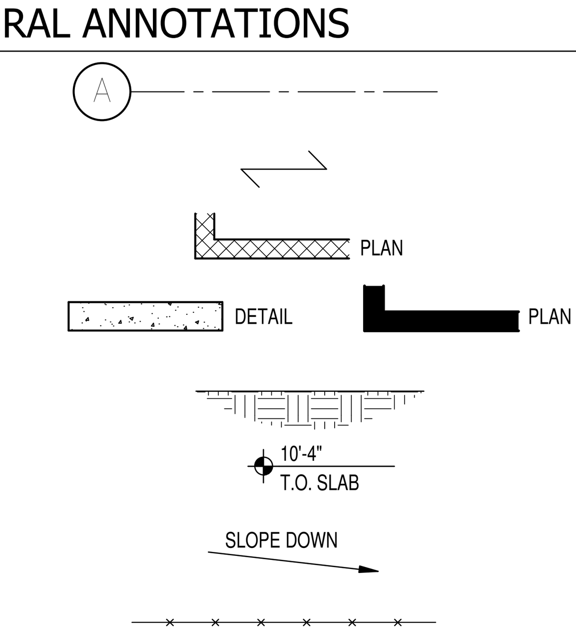
Concrete

Earth (refer to specifications)

Elevation Designation

Floor or Roof Slope

Welded Wire Reinforcement



DATE: 09.19.08
REVISED:
REVISED
DRAWN BY: SS
CHECKED BY: DSR

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WPM PROJECT NO. 35-08024-00
CERTIFICATE OF AUTHORIZATION NO. 3818

HILLSBOROUGH COUNTY SHERIFF'S OFFICE
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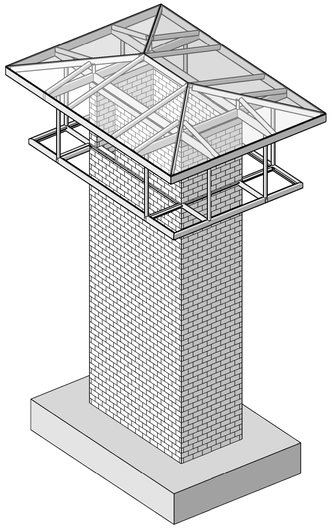
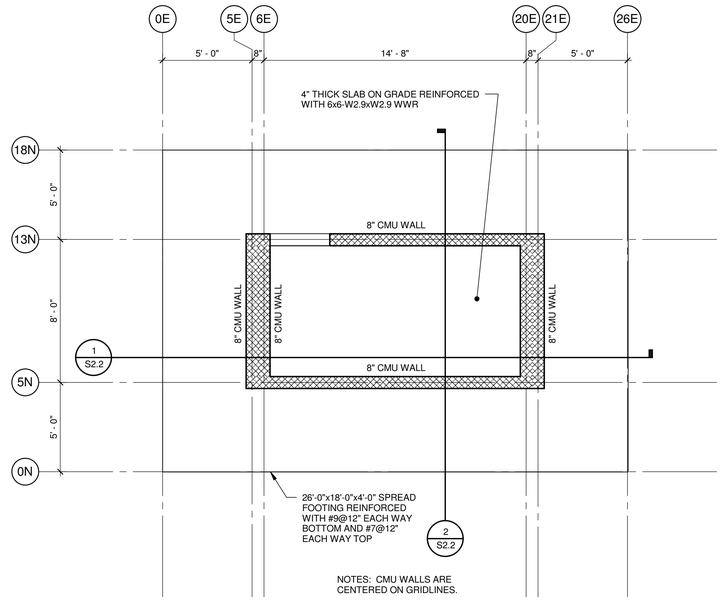
GENERAL NOTES
S1.1



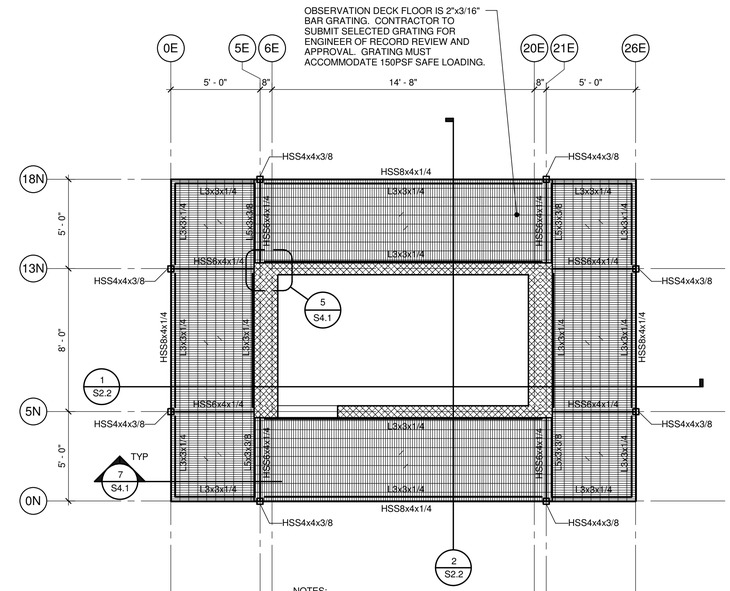
1 3D ISOMETRIC



NOTES: CMU WALLS ARE CENTERED ON GRIDLINES.

2 GROUND LEVEL

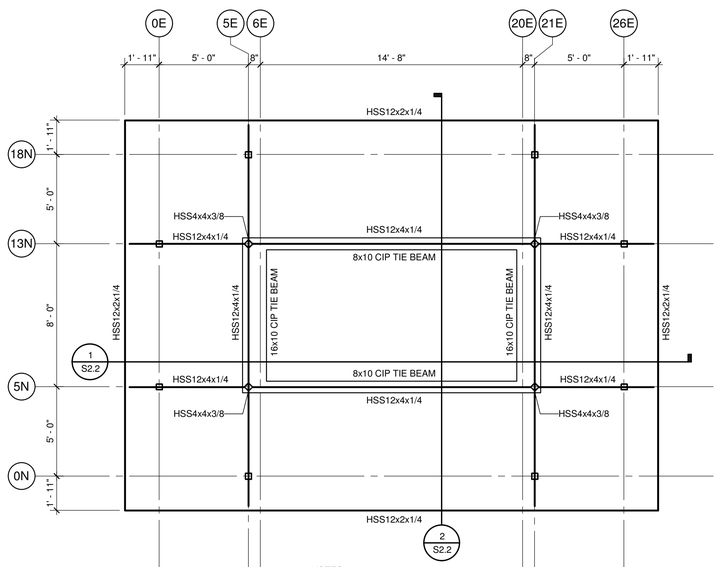
1/4" = 1'-0"



NOTES:
1. ALL STEEL IDENTIFIED IN THIS DETAIL (3/S2.1) IS STAINLESS STEEL AND MUST CONFORM TO ASTM A276 OR A666 AND MUST BE 316 ALLOY. ALL STAINLESS STEEL WELDING MUST BE PROVIDED PER AWS D1.6 STRUCTURAL WELDING CODE (STAINLESS STEEL 2007).
2. ALL HSS FRAMING TO BE WELDED COMPLETELY AT CONNECTIONS USING 3/16" MINIMUM WELDS. PROVIDE FULLY WELDED AND MITERED JOINTS AT ALL CORNERSAND FULLY WELDED CAP PLATES AT ALL ENDS.

3 OBSERVATION LEVEL

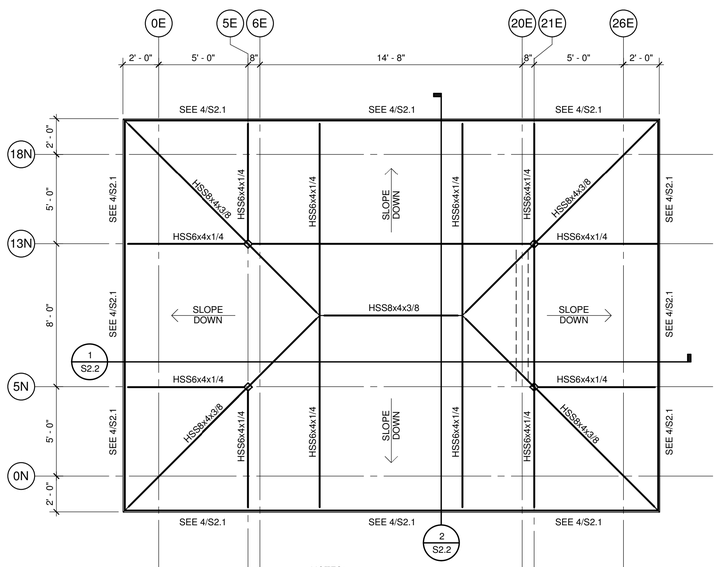
1/4" = 1'-0"



NOTES:
1. ALL STEEL IDENTIFIED IN THIS DETAIL (4/S2.1) MUST CONFORM TO THE REQUIREMENTS OF SECTION "IV. STRUCTURAL STEEL" OF THE GENERAL NOTES ON SHEET S1.1.
2. ALL HSS FRAMING TO BE WELDED COMPLETELY AT CONNECTIONS USING 3/16" MINIMUM FILLET WELDS. PROVIDE FULLY WELDED AND MITERED JOINTS AT ALL CORNERSAND FULLY WELDED CAP PLATES AT ALL ENDS.

4 ROOF LEVEL (LOWER FRAMING)

1/4" = 1'-0"



NOTES:
1. ALL STEEL IDENTIFIED IN THIS DETAIL (5/S2.1) MUST CONFORM TO THE REQUIREMENTS OF SECTION "IV. STRUCTURAL STEEL" OF THE GENERAL NOTES ON SHEET S1.1.
2. ALL HSS FRAMING TO BE WELDED COMPLETELY AT CONNECTIONS USING 3/16" MINIMUM FILLET WELDS. PROVIDE FULLY WELDED AND MITERED JOINTS AT ALL CORNERSAND FULLY WELDED CAP PLATES AT ALL ENDS.

5 ROOF LEVEL (UPPER FRAMING)

1/4" = 1'-0"

DATE: 09.19.08
REVISED:
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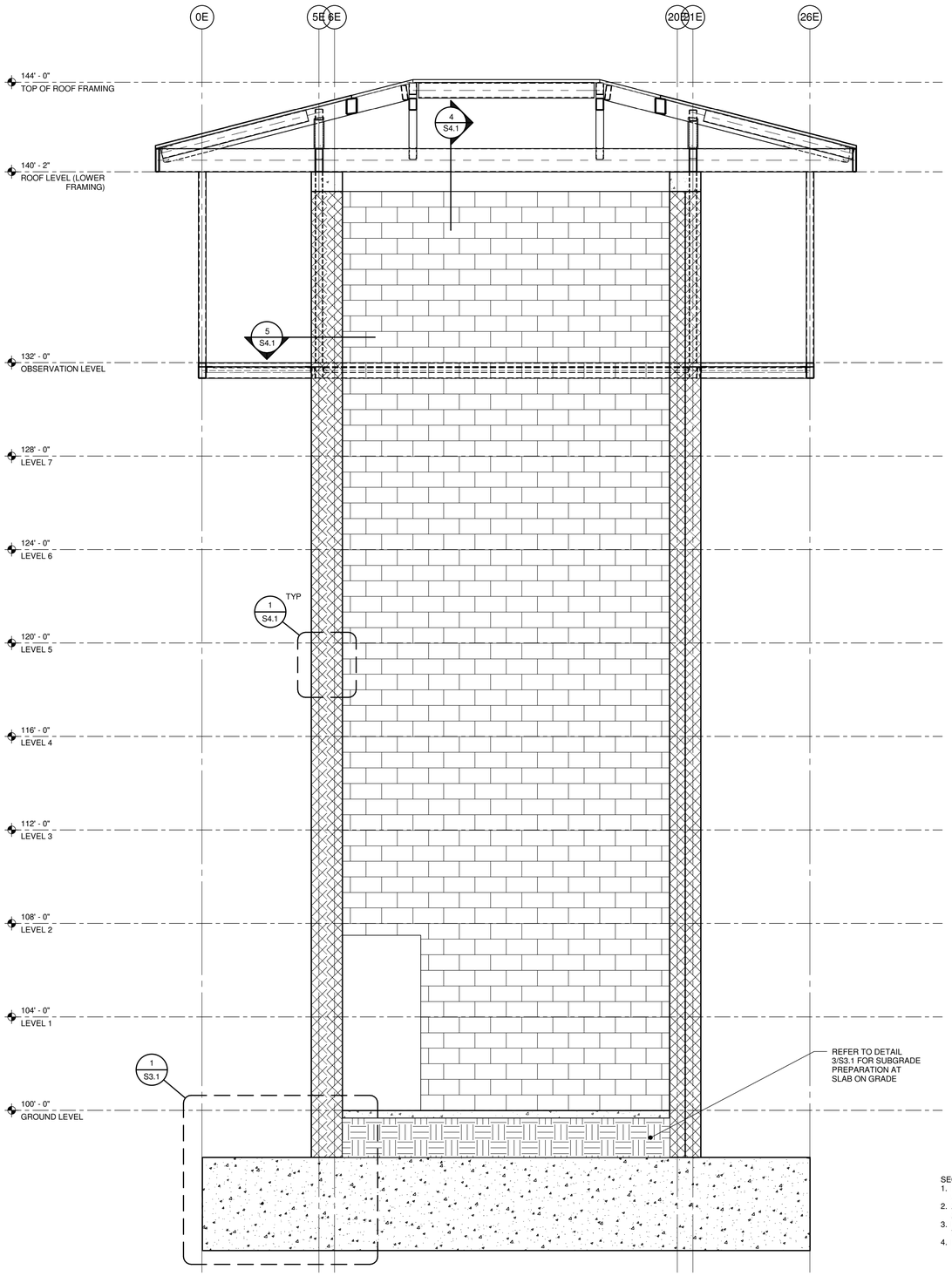
STRUCTURAL FRAMING

S2.1

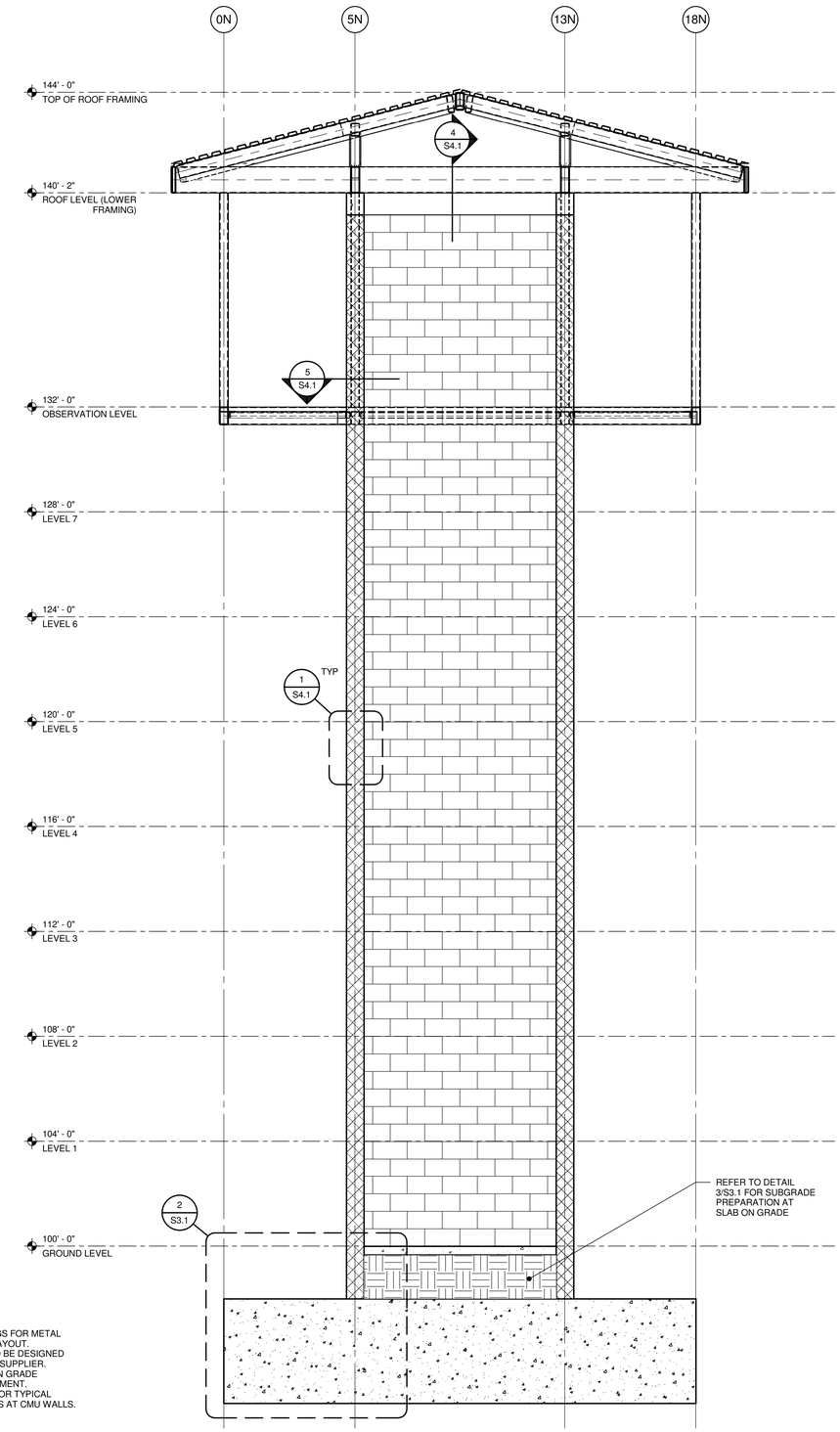


1 STRUCTURAL SECTION (LONG DIRECTION)

3/8" = 1'-0"

SECTION NOTES:

1. REFER TO ARCHITECTURAL DRAWINGS FOR METAL STAIR AND LANDING CRITERIA AND LAYOUT.
2. ALL METAL STAIRS AND LANDINGS TO BE DESIGNED AND PROVIDED BY THE METAL STAIR SUPPLIER.
3. REFER TO DETAIL 4/S3.1 FOR SLAB ON GRADE TURNDOWN AT METAL STAIR ATTACHMENT.
4. REFER TO DETAIL 2/S4.1 AND 3/S4.1 FOR TYPICAL METAL STAIR FRAMING CONNECTIONS AT CMU WALLS.



2 STRUCTURAL SECTION (SHORT DIRECTION)

3/8" = 1'-0"

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ON-LINE ENGINEER OF RECORD: D. DAVIS
WPM PROJECT NO. 31-0000-00
CERTIFICATE OF AUTHORIZATION NO. 3818

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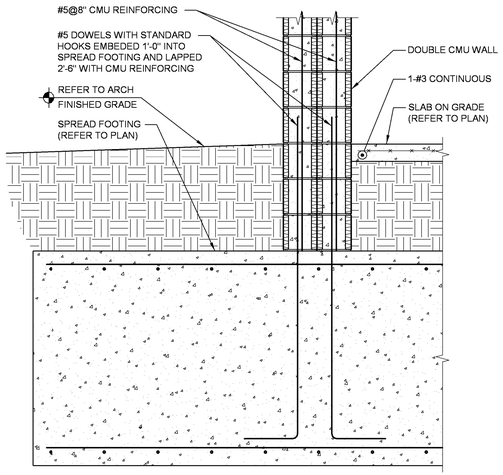
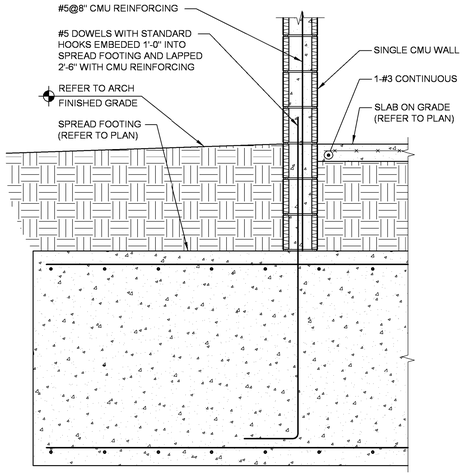
STRUCTURAL SECTIONS
S2.2



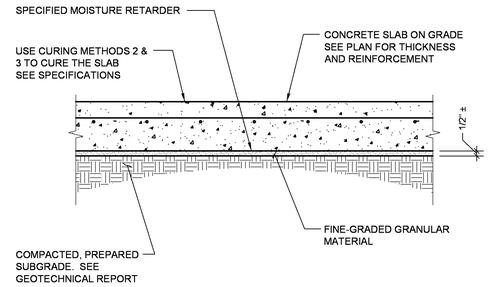
1 DOUBLE CMU WALL AT GROUND LEVEL

3/4" = 1'-0"



2 SINGLE CMU WALL AT GROUND LEVEL

3/4" = 1'-0"

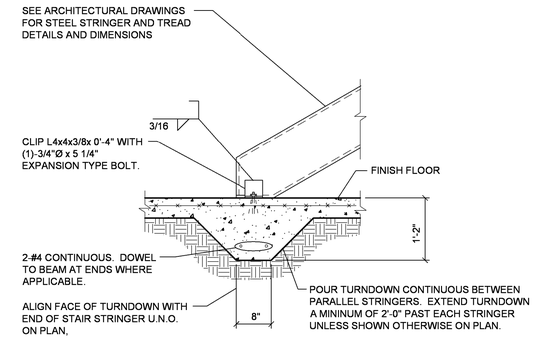


MATERIAL SPECIFICATIONS:

A) FINE-GRADED GRANULAR MATERIAL: CLEAN MIXTURE OF CRUSHED STONE, CRUSHED GRAVEL, OR MANUFACTURED OR NATURAL SAND; ASTM D448, SIZE 10, WITH 100%%% PASSING A No.4 SIEVE AND 10-30%%% PASSING A No.100 SIEVE.

3 SUBGRADE PREPARATION AT SLAB ON GRADE

3/4" = 1'-0"



NOTES:

1. GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF STAIR STRINGER LOCATIONS WITH ARCHITECTURAL DRAWINGS AND PROVIDE TURNDOWNS WHERE REQUIRED WHEATHER SHOWN ON STRUCTURAL DRAWINGS OR NOT.
2. CLIP ANGLE TO BE HIDDEN BENEATH FIRST TREAD WHERE OPEN RISERS ARE USED. COORDINATE THE LOCATION WITH THE ARCHITECT.

4 SLAB ON GRADE TURNDOWN AT METAL STAIR

3/4" = 1'-0"

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WPM PROJECT NO. 00-0050-00
CERTIFICATE OF AUTHORIZATION NO. 8615

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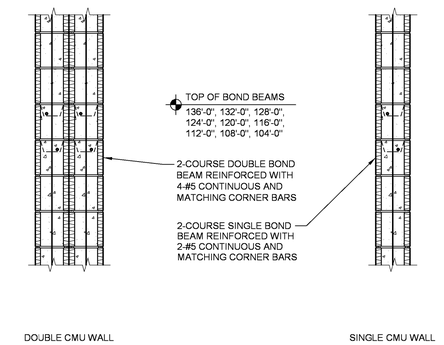
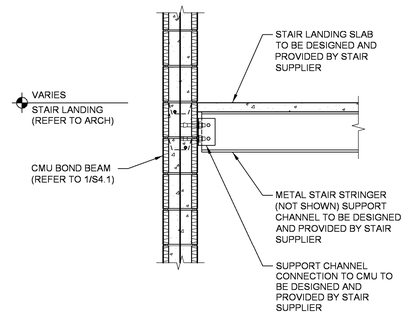
FOUNDATION DETAILS

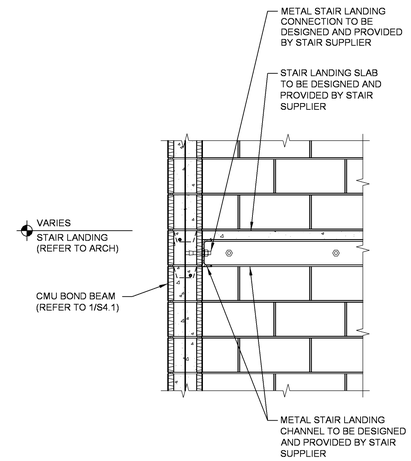
S3.1



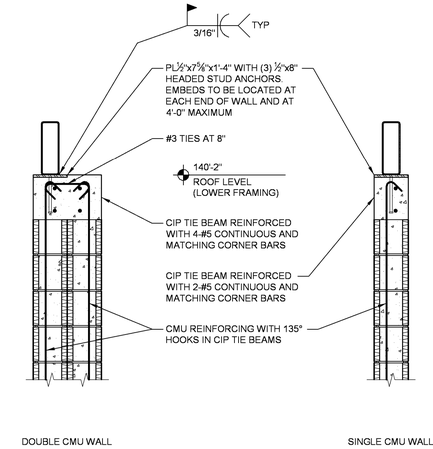
1 CMU BOND BEAMS
3/4" = 1'-0"



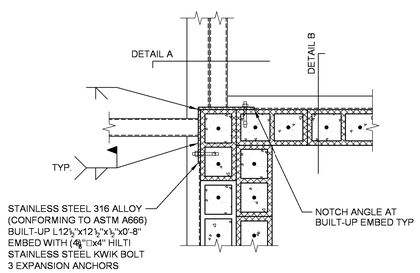
2 METAL STAIR STRINGER SUPPORT CHANNEL AT CMU WALL
3/4" = 1'-0"

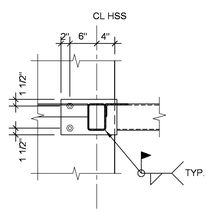


3 METAL STAIR LANDING CHANNELS AT CMU WALL
3/4" = 1'-0"

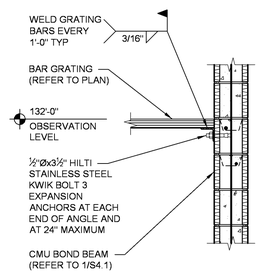


4 CMU WALL TO CIP TIE BEAM TO HSS FRAMING
3/4" = 1'-0"



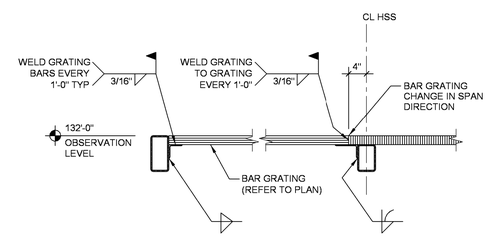


DETAIL A



DETAIL B

5 OBSERVATION LEVEL STAINLESS STEEL FRAMING CONNECTIONS AT CMU WALLS
3/4" = 1'-0"



7 BAR GRATING CHANGE IN SPAN DIRECTION
3/4" = 1'-0"

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WPM PROJECT NO. 30-0000-00
CERTIFICATE OF AUTHORIZATION NO. 8818

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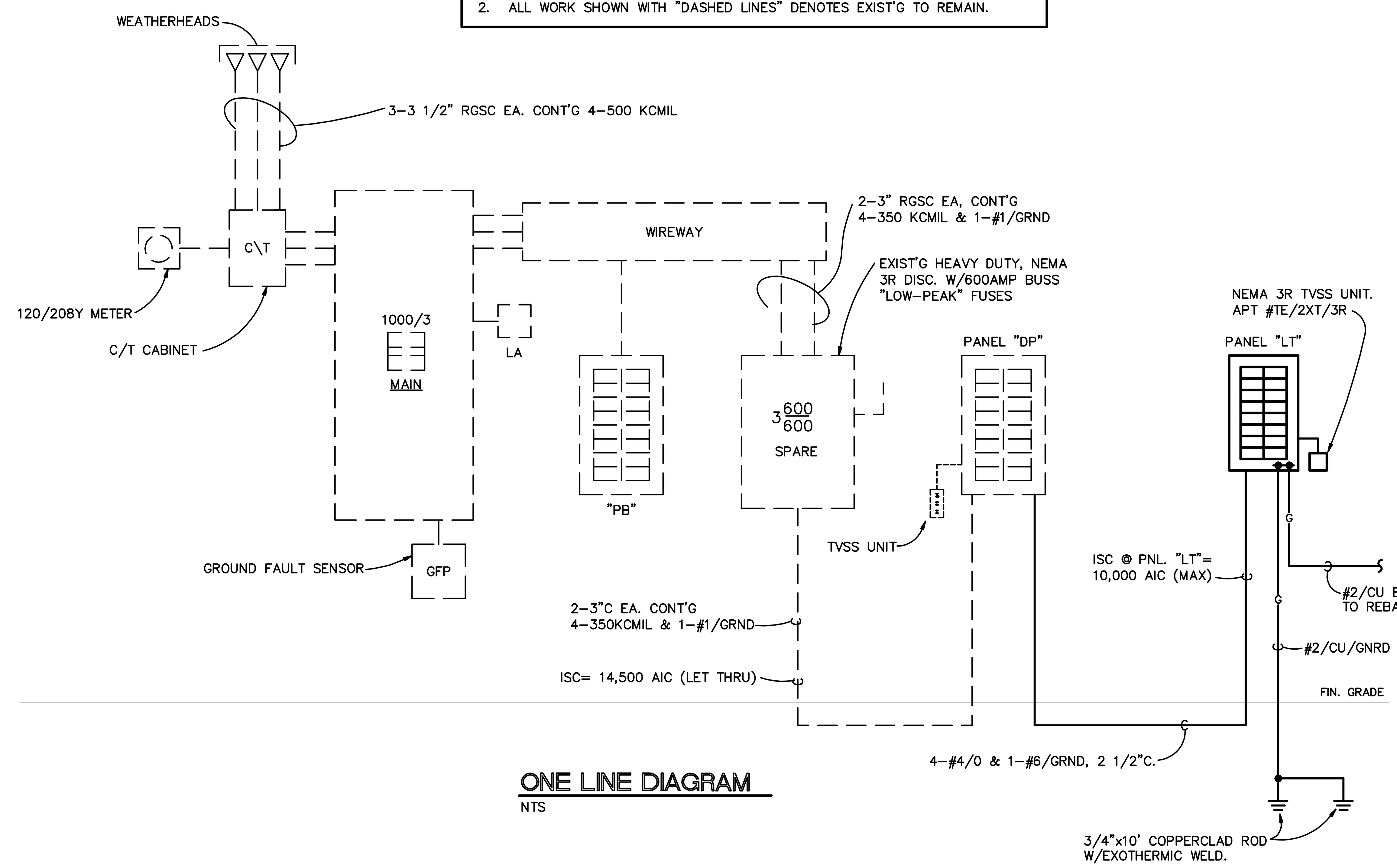
FRAMING DETAILS
S4.1

NOTES

1. ALL WORK SHOWN WITH "SOLID LINES" DENOTES "PROPOSED AND SHALL BE PROVIDED.
2. ALL WORK SHOWN WITH "DASHED LINES" DENOTES EXIST'G TO REMAIN.



ONE LINE DIAGRAM
NTS

GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NEC 2008, THE HILLSBOROUGH COUNTY ELECTRICAL CODE AND ANY OTHER APPLICABLE LOCAL ORDINANCES.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE VERIFIED EXIST'G. JOB SITE CONDITIONS DURING THE BIDDING PERIOD SO HE WILL HAVE OBTAINED THE SCOPE OF THE ELECTRICAL WORK.
3. CONTRACTOR SHALL VERIFY SIZE AND LOCATION OF ALL EXIST'G. EQUIPMENT IN THE FIELD PRIOR TO INSTALLATION OF CONDUIT.
4. EXIST'G. EQUIP. THAT IS DAMAGED BY THE CONTRACTOR DURING THE CONSTRUCTION PROCESS, SHALL BE REPLACED AT NO ADD'L. COST TO THE OWNER.
5. THE CONTRACTOR SHALL WORK AT THE CONVENIENCE OF THE OWNER SO AS NOT TO DISRUPT DAILY ACTIVITIES AND INCONVENIENCE PERSONNEL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SCHEDULE WORK PROCEDURES THAT PRODUCE A CONDITION THAT WILL BE DISRUPTIVE, AT A TIME WHEN PERSONNEL ARE NOT OCCUPYING THE BUILDING. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE OWNER'S DAILY SCHEDULE AND USE THAT AS A GUIDELINE FOR PLANNING DISRUPTIVE WORK PROCEDURES.
6. THE CONTINUITY OF THE EQUIPMENT GROUNDS, NEUTRALS AND HOT LEGS SHALL NOT BE INTERRUPTED BY THE WORK.
7. ALL WIRE IS TO BE COPPER WITH "THWN""THHN" INSULATION. MINIMUM SIZE #12. SPLICES WITHIN DISTRIBUTION & CONTROL PULLBOXES ARE NOT PERMITTED.
8. ALL ELECTRICAL EQUIPMENT IS SHOWN DIAGRAMMATICALLY. EXACT LOCATIONS ARE TO BE DETERMINED IN THE FIELD TO AVOID INTERFERENCES.
9. PROVIDE GROUND CONDUCTOR IN ALL RACEWAYS.
10. ALL INTERIOR CONDUITS SHALL BE "EMT" WITH STEEL COMPRESSION TYPE COUPLINGS. ALL EXPOSED CONDUITS (EXTERIOR) SHALL BE HEAVY WALL, RIGID GALVANIZED STEEL TYPE.
11. ALL CONCEALED & EXPOSED CONDUIT SHALL BE ROUTED PARALLEL & PERPENDICULAR TO STRUCTURAL ELEMENTS. CONDUIT PENETRATIONS THROUGH FIRE RATED PARTITIONS SHALL BE SEALED PER "FIRE RATED CONDUIT PENETRATION DETAIL" THIS SHEET.
12. SCHEDULE 40 PVC OR OTHER DIRECT BURIAL, NON-METALLIC CONDUIT SHALL RISE ABOVE GRADE, THROUGH SLAB OR INTO WALL CAVITY WITH HEAVY WALL, HOT DIPPED GALVANIZED STEEL ELBOW AND RISER. SCHEDULE 40 PVC NON-METALLIC CONDUIT SHALL NOT BE UTILIZED ABOVE GRADE. WHERE GALVANIZED STEEL CONDUIT IS INSTALLED IN DIRECT CONTACT W/EARTH OR CONCRETE, IS SHALL BE COATED WITH TWO COATINGS OF BITUMASTIC PAINT PRIOR TO INSTALLATION.
13. ELECTRICAL PANELS SHALL NOT BE UTILIZED AS RACEWAYS.
14. A SHUTDOWN, (SCHEDULE 1 WEEK IN ADVANCE), WILL BE NECESSARY TO PROVIDE FINAL POWER CONNECTIONS WITHIN EXIST'G. PANEL "DP".
15. EXIST'G. CONDUIT & UTILITY ROUTINGS ARE NOT KNOWN. ALL PROPOSED UNDERGROUND CONDUIT ROUTINGS SHALL BE COORD. W/ EXIST'G UTILITIES. PRIOR TO INSTALLATION OF CONDUITS, EXIST'G. PIPING SHALL BE TRACED AND MARKED. NEW TRENCHING SHALL BE "HAND" DUG TO AVOID ALL EXIST'G. UTILITIES.

LIGHTING FIXTURE SCHEDULE

MARK	WATTS	LAMP	VOLTS	DESCRIPTION	COMMENTS
A	74	2-F032/841XP/ECO (3000 LUMENS)	120/6V.	4FT. LONG, HIGH ABUSE FLUOR. W/H.F. ELECT. BALLAST EXTR. AL. HOUSING, HIGH IMPACT LENS, INTEGRAL BATTERY PACK & FUSING. MARK #CP4-MXEX-S-232-TA-120-OSEB-4'-TP-GLS-DL-EMPK	WALL MTD. TOP @ 6'-8" AFF.
B	35	1-CF32DT/E/827/ECO (2400 LUMENS) (RAPID START)	120V.	7" DIA. OPEN FLUOR. DOWNLIGHT W/H.F. ELECT. BALLAST, WHITE REFLECTOR, VERT. LAMP & FUSING. LIGHTOLIER #8022WHW-S7132UF CAPRI, GOTHAM, HALO	RECESSED (SELF-FLANGED) (DL LABEL)
C				13" DIA. DECORATIVE FLUOR. WALL SCONCE W/H.F. ELECT. BALLAST, POLYCARBONATE LENS & FUSING. EXCELINE #PR13SW-132-HF-F-W-8-B-0-W KENALL, LUMINAIRE	RECESS WALL MTD. TOP @ 9'-6" AFF. (U.L. WET LOC'N.) (WHITE FINISH)
D	294	1-MS250/C/HOR (22,000 LUMENS) (10,000 HRS)	120V.	250W. METAL HALIDE FLOOD LT. W/"CWA" BALLAST, CAST AL. HOUSING, 12'x44' BEAM SPREAD, GLARE SHIELD, YOKE BRACKET & FUSING. QUALITY #FLV10-3X1-WHT-120V-YB-BLS	TRUNNION MTD. FROM AL. ANGLE SEE DETAIL. (U.L. WET LOC'N.) (WHITE FINISH) PROVIDE 36" LONG "SOW" CORD CONNECT'N.

NOTES:

1. PROVIDE LAMP AND BALLAST SUBMITTAL FOR APPROVAL PRIOR TO INSTALLATION.
2. ALL METAL COMPONENTS OF LTG FIXTURES SHALL BE FACTORY PAINTED AFTER FABRICATION.
3. ALL T8 BALLASTS INDICATED TO BE "HIGH FREQ" ELECTRONIC SHALL BE PARALLEL LAMP 10% THD, TYPE. WITH 1.2 BALLAST FACTOR OSRAM/SYLVANIA "QHE-ISH" SERIES, OR ADVANCE.
4. ALL LAMPS SHALL BE "ENVIRONMENTALLY FRIENDLY", LOW MERCURY TYPE AS MFR'D. BY OSRAM/SYLVANIA OR PHILIPS.
5. PROVIDE 6YR. BALLAST & 3YR. LAMP REPLACEMENT " FACTORY" WARRANTY. (FLUOR. LAMPS).
6. ALL INTERGRAL BATTERY PACKS SHALL BE RATED @ 1100 LUMENS FOR 90 MINUTES.
7. ALL H.F. ELECT BALLASTS SERVING COMPACT FLOUR LAMPS SHALL BE RAPID START/PROSTART. OSRAM/SYLVANIA # QTP/CF SERIES.

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	FLUORESCENT FIXTURE - WALL MTD.
	FLUORESCENT FIXTURE WITH EMERGENCY POWER PACK
	FLOODLIGHT
	INCAND./FLUOR./H.I.D. FIXTURE - CEILING MTD.
	INCAND./FLUOR./ H.I.D. FIXTURE - WALL MTD.
$	SINGLE POLE SWITCH 20A, 120/277V, TOP @ 48" A.F.F.
$3	THREE WAY SWITCH 20A, 120/277V, TOP @ 48" A.F.F.
$P	SWITCH WITH PILOT LIGHT, 20A., 120/277V., TOP @ 48" A.F.F.
	20A, 125V 3-WIRE DUPLEX GRND'G RECEP., BOTTOM @ 16" A.F.F.
J	JUNCTION BOX - SIZED PER N.E.C.
	4" SQ. OUTLET BOX W/ SINGLE GANG RING & BLANK COVER - BOTTOM @ 16" A.F.F.
	CONDUIT CONCEALED ABOVE CLG. OR IN WALL SPACE
	CONDUIT IN SLAB OR UNDERGROUND
	CONDUIT EXPOSED
	120V., 1 PHASE, CIRCUIT HOMERUN FROM 1 POLE BRKR.
	SLASH MARKS DENOTE NUMBER OF WIRES; LONG-NEUTRAL; X-GROUND. NO SLASHES IDENTIFIES 3-#12, 1/2"C.
	BRANCH CIRCUIT PANELBOARD, TOP @ 6'-0" A.F.F.
3-60/40	HEAVY DUTY SAFETY SWITCH, 60A., 3 POLE FUSED @ 40A. - TOP 6'-0" A.F.F.
A.F.F.	ABOVE FINISHED FLOOR
AL.	ALUMINUM
A.W.G.	AMERICAN WIRE GAUGE
C.	CONDUIT
CU.	COPPER
D.E.	DUAL ELEMENT
E.M.T.	ELECTRICAL METALLIC TUBING
EX.	EXISTING
F.L.A.	FULL LOAD AMPS
GRND.	GROUND
G.F.I.	GROUND FAULT INTERRUPTER
H.P.R.S.	HORSE POWER RATED SWITCH
J.B.	JUNCTION BOX
N.F.	NON-FUSIBLE
O/H	OVERHEAD
U/G	UNDERGROUND
U.O.N.	UNLESS OTHERWISE NOTED
W/	WITH
W/I	WITH-IN
W.P.	WEATHERPROOF
TVSS	TRANSIENT VOLTAGE SPIKE SUPPRESSION

EXISTING PANEL "DP" PANELBOARD SCHEDULE

bus amps A	bus amps B	bus amps C	LOAD	poles	amps	ckt	bus A B C	ckt	amps	poles	LOAD	bus amps A	bus amps B	bus amps C
80			MODULAR UNIT	2	100	1		2	100	2	MODULAR UNIT	80		
	80												80	
		80	MODULAR UNIT	2	100	5		6	100	2	MODULAR UNIT			80
80												80		
	80		MODULAR UNIT	2	100	9		10	100	2	MODULAR UNIT		80	
		80												80
19			PANEL "LT" *	2	100	13					225/3 SPACE			
	31													
		32												
			225/3 SPACE					20	60	3	TVSS UNIT			

RATED VOLTAGE: 120/208V., 3 PHASE, 4 WIRE	BRANCH POLES: AS SHOWN	
RATED AMPS: 600A	CABINET: SURFACE	MAIN LUGS ONLY
FULL NEUTRAL BUS	GROUND BUS	HINGED DOOR / KEYED DOOR LATCH / NEMA 3R ENCLOSURE
CIRCUIT BREAKER (BOLT -IN) BRANCH DEVICES	FEED IS: BOTTOM	COPPER BUS
ALL BREAKERS ARE RATED TO INTERRUPT A SHORT CIRCUIT ISC OF 22,000 AMPS SYMMETRICAL		
	MAIN LUGS: 2	SET(S); SIZE: 350KCMIL/THWN/CU
TOTAL AMPS: BUS A 339 BUS B 351 BUS C 352	CONNECTED KVA 125.0	DEMAND KVA 87.5

* PROVIDE 100A./3P. BRKR. W/I SPACES NOTED TO FEED PROPOSED PANEL "LT". BRKR. SHALL BE EQUIPPED W/#4/0/CU LUGS.

PROPOSED PANEL "LT" PANELBOARD SCHEDULE

bus amps A	bus amps B	bus amps C	LOAD	poles	amps	ckt	bus A B C	ckt	amps	poles	LOAD	bus amps A	bus amps B	bus amps C
7			LIGHTING	1	20	1					SPACE			
	13		FLOOD LTS.			3								
		13				5								
3			SOFFIT LTG.			7								
	9		RECEPS @ GRADE			9								
		9				11								
9			@ PLATFORM			13								
	9					15								
			SPARE			17								
						19		20	30	3	TVSS UNIT	-		
						21							-	
						23								-

RATED VOLTAGE: 120/208V., 3 PHASE, 4 WIRE	BRANCH POLES: 24	
RATED AMPS: 225	CABINET: SURFACE	100A./3P. MAIN BRKR.
FULL NEUTRAL BUS	GROUND BUS	HINGED DOOR / KEYED DOOR LATCH / NEMA 3R ENCL.
CIRCUIT BREAKER (BOLT -IN) BRANCH DEVICES	FEED IS TO BE: BOTTOM	COPPER BUS
ALL BREAKERS MUST BE RATED TO INTERRUPT A SHORT CIRCUIT ISC OF 10,000 AMPS SYMMETRICAL		
APPROVED MF'RS: SQUARE "D", G.E., SIEMENS	MAIN LUGS: 1	SET(S); SIZE: #4/0/THWN/CU
TOTAL AMPS: BUS A 19 BUS B 31 BUS C 22	CONNECTED KVA 8.6	DEMAND KVA 7.5

DATE: 09.19.08
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DRAWN BY: JDC
CHECKED BY: RAR

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Robert Andrew Rolley: Florida Reg. #21600

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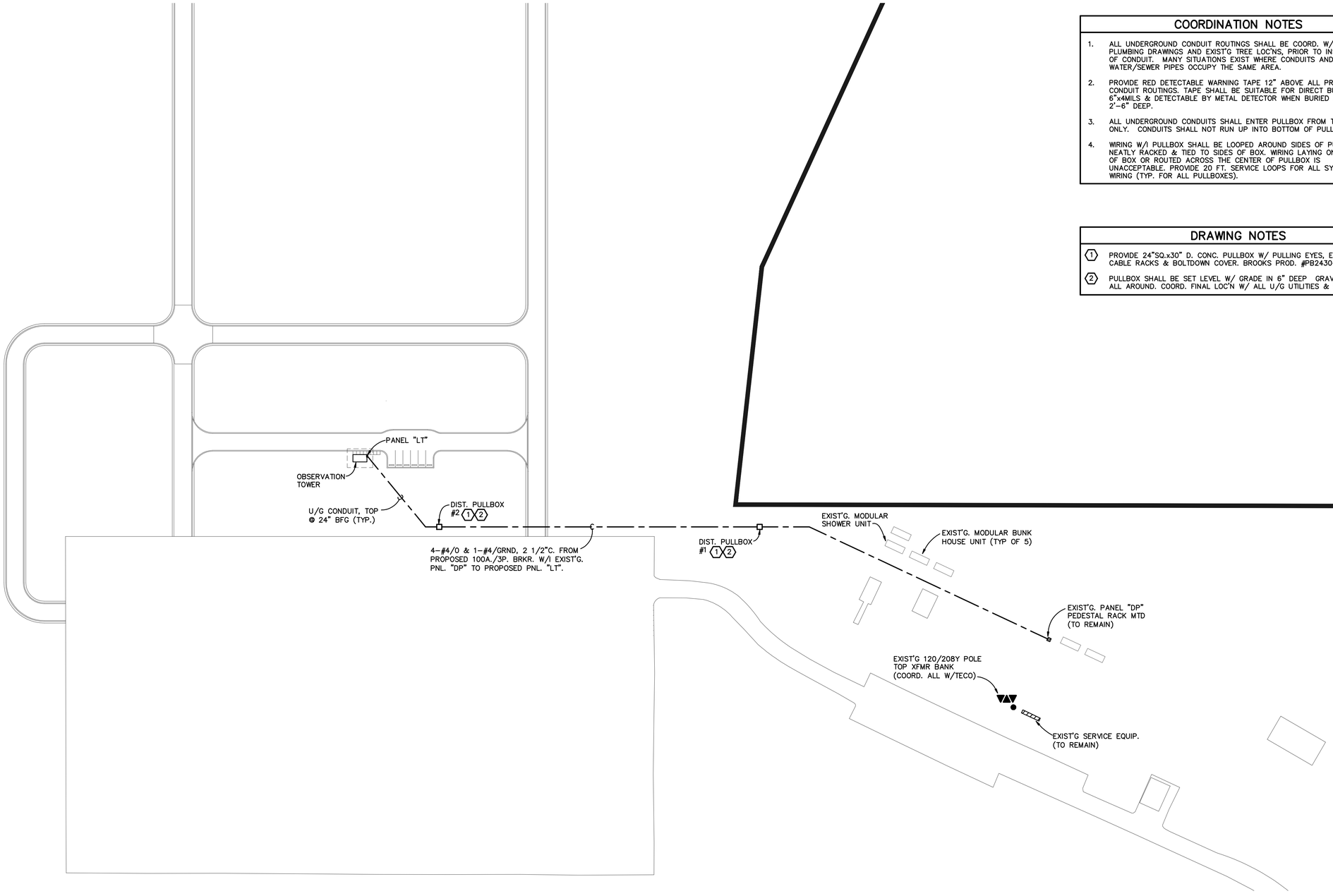

PARTIAL SITE PLAN - ELECTRICAL

SCALE: 1:60

COORDINATION NOTES

1. ALL UNDERGROUND CONDUIT ROUTINGS SHALL BE COORD. W/CIVIL & PLUMBING DRAWINGS AND EXIST'G TREE LOC'NS, PRIOR TO INSTALLATION OF CONDUIT. MANY SITUATIONS EXIST WHERE CONDUITS AND WATER/SEWER PIPES OCCUPY THE SAME AREA.
2. PROVIDE RED DETECTABLE WARNING TAPE 12" ABOVE ALL PROPOSED U/G CONDUIT ROUTINGS. TAPE SHALL BE SUITABLE FOR DIRECT BURIAL, 6"x4MILS & DETECTABLE BY METAL DETECTOR WHEN BURIED UP TO 2'-6" DEEP.
3. ALL UNDERGROUND CONDUITS SHALL ENTER PULLBOX FROM THE SIDES ONLY. CONDUITS SHALL NOT RUN UP INTO BOTTOM OF PULLBOX.
4. WIRING W/I PULLBOX SHALL BE LOOPED AROUND SIDES OF PULLBOX AND NEATLY RACKED & TIED TO SIDES OF BOX. WIRING LAYING ON BOTTOM OF BOX OR ROUTED ACROSS THE CENTER OF PULLBOX IS UNACCEPTABLE. PROVIDE 20 FT. SERVICE LOOPS FOR ALL SYSTEMS WIRING (TYP. FOR ALL PULLBOXES).

DRAWING NOTES

1. PROVIDE 24"SQ.x30" D. CONC. PULLBOX W/ PULLING EYES, END BELLS, CABLE RACKS & BOLTDOWN COVER. BROOKS PROD. #PB2430-PS-F
2. PULLBOX SHALL BE SET LEVEL W/ GRADE IN 6" DEEP GRAVEL BED 4" ALL AROUND. COORD. FINAL LOC'N W/ ALL U/G UTILITIES & SIDEWALKS.

DATE: 09.19.08
REVISED:
REVISED:
DRAWN BY: JDC
CHECKED BY: RAR

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0808-E0.1.dwg September 11 2008 1:30pm
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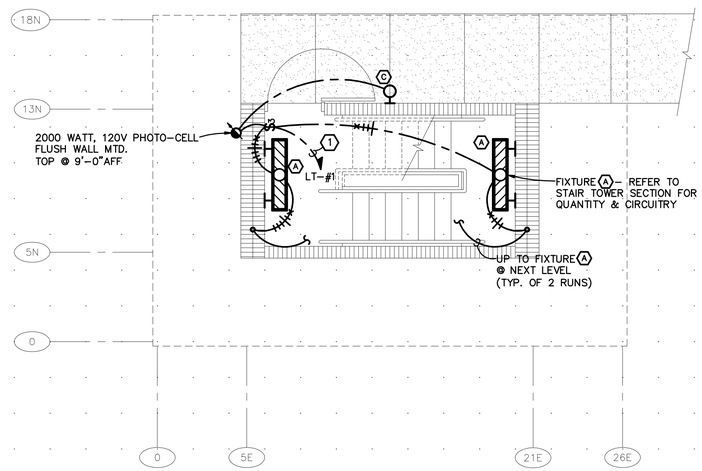
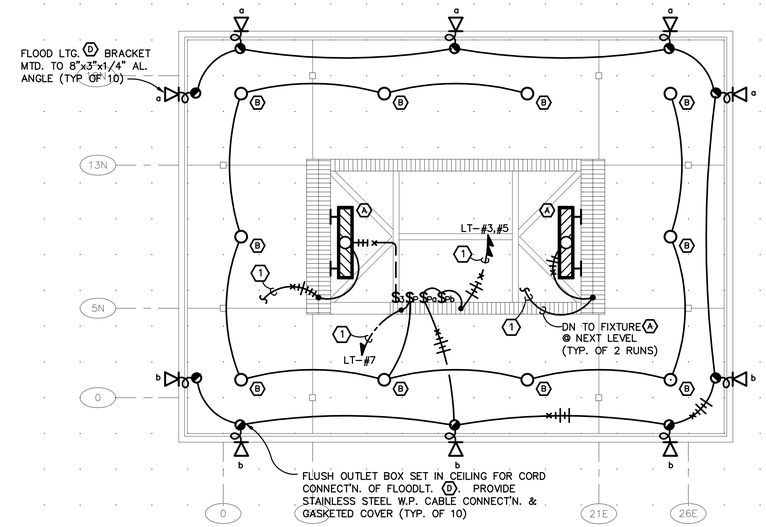
DRAWING NOTES

(1) PROVIDE #10/THWN/CU CONDUCTORS (TYP. FOR ENTIRE RUN).



GROUND LEVEL - LIGHTING
SCALE: 1/4" = 1'-0"



PLATFORM LEVEL - LIGHTING
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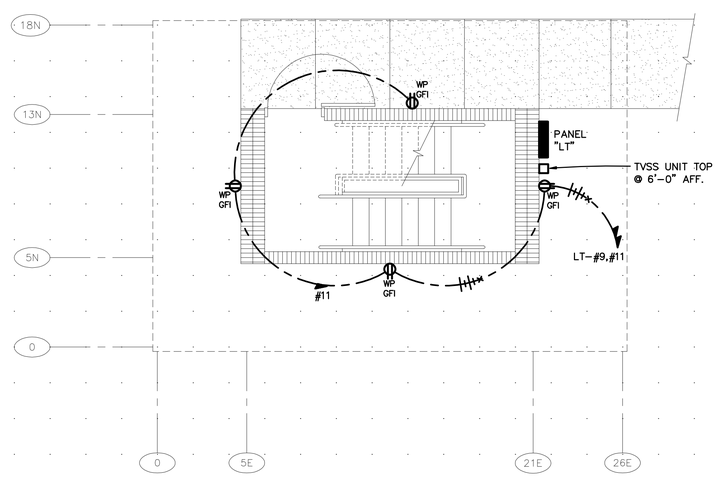
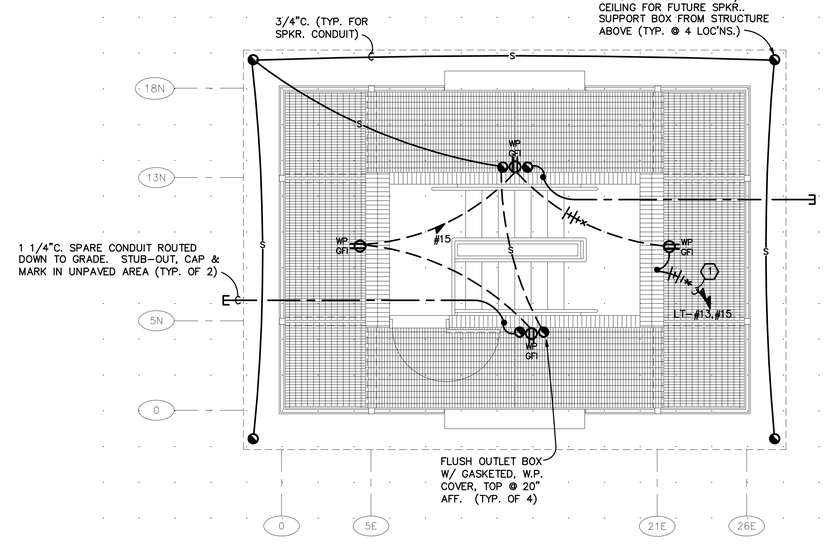


GROUND LEVEL - POWER & MISC.
SCALE: 1/4" = 1'-0"



PLATFORM LEVEL - POWER & MISC.
SCALE: 1/4" = 1'-0"

DATE: 09.19.08
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DRAWN BY: JDC
CHECKED BY: RAR

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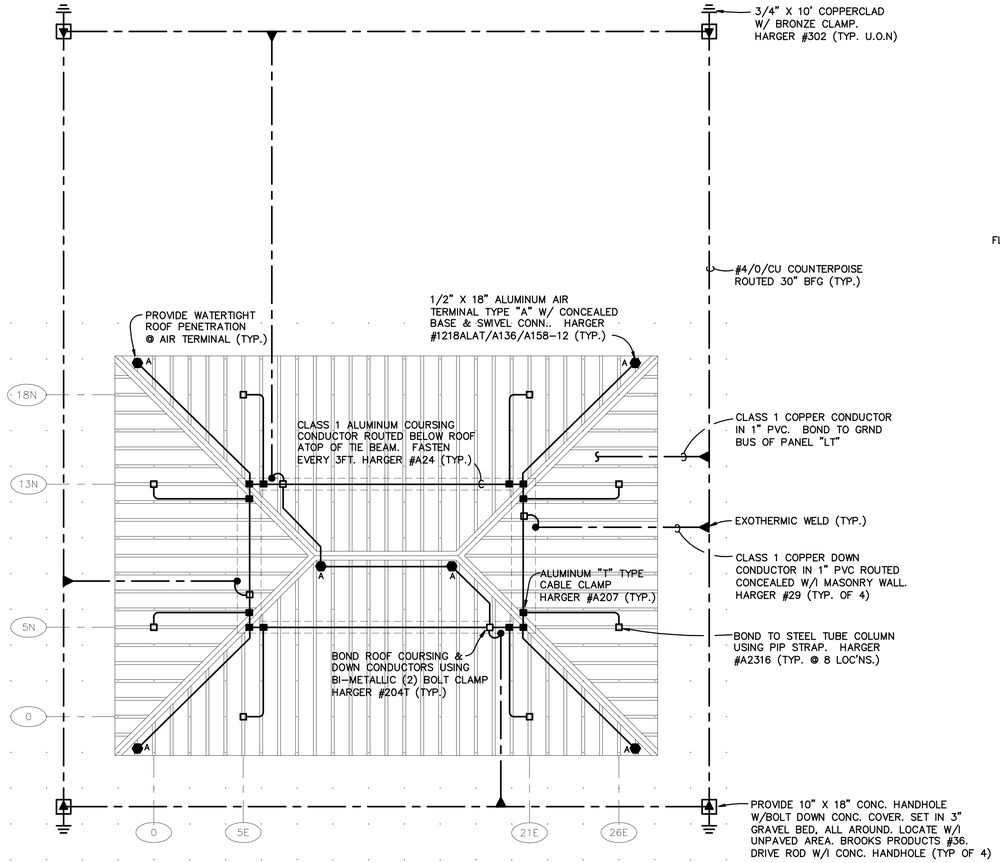
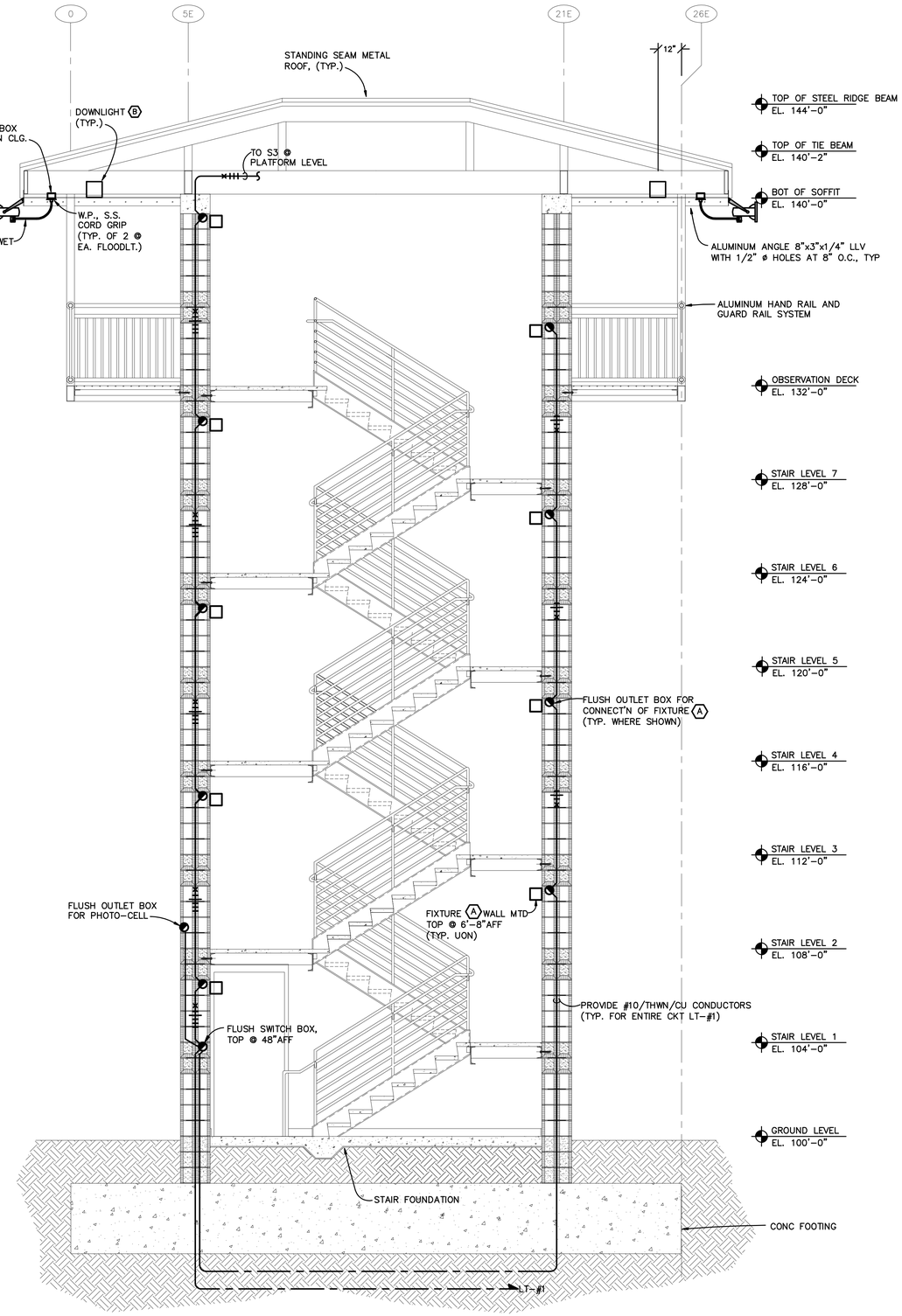


ROOF PLAN - LIGHTNING PROTECTION

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

LIGHTNING PROTECTION SYSTEM NOTES

1. THE LIGHTNING PROTECTION SYSTEM SHALL BE INSTALLED IN CONFORMANCE WITH A U.L. MASTER LABEL AND SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 780, U.L. 96A, LPI LIGHTNING COMPONENTS STANDARD, LPI-176 AND STANDARD OF PRACTICE LPI-175
2. ALL MATERIAL AND COMPONENTS SHALL BE LISTED AND/OR CERTIFIED TO INDICATE THAT (1) THEY HAVE BEEN MANUFACTURED FOR USE IN LIGHTNING PROTECTION SYSTEMS UNDER THE CODE PROVISIONS LPI-176 AND (2) THEY HAVE BEEN TESTED AND INSPECTED FOR COMPLIANCE WITH LPI-176 BY A RECOGNIZED INDEPENDENT TESTING AGENCY, DESIGNATED BY THE INSTITUTE.
3. ROOF COURSING CONDUCTORS SHALL INTERCONNECT ALL AIR TERMINALS INCLUDING THOSE ON ROOF PROJECTIONS AND SHALL AFFORD A TWO WAY PATH TO GROUND FROM THE BASE OF EACH AIR TERMINAL. ROOF CONDUCTORS SHALL BE COURSED THROUGH OR AROUND OBSTRUCTIONS IN A HORIZONTAL PLANE WITH MAIN CONDUCTOR.
4. COPPER LIGHTNING PROTECTION MATERIALS SHALL NOT BE INSTALLED ON ALUMINUM ROOFING OR SIDING MATERIAL OR OTHER ALUMINUM SURFACES; AND ALUMINUM LIGHTNING PROTECTION MATERIALS SHALL NOT BE INSTALLED ON COPPER SURFACES, ECT.
5. NO BEND OF A CONDUCTOR SHALL FORM AN INCLUDED ANGLE OF LESS THAN 90 DEGREES NOR HAVE A RADIUS BEND LESS THAN 8 INCHES. THIS RADIUS REQUIREMENT IS NOT APPLICABLE WHERE APPROVED CLAMPS OR CONNECTORS ARE USED TO ACCOMPLISH CABLE BENDS.
6. CONDUCTORS SHALL MAINTAIN A HORIZONTAL OR DOWNWARD COURSE, FREE FROM "U" OR "V" (DOWN AND UP) POCKETS.
7. AIR TERMINALS SHALL EXTEND ABOVE THE OBJECT TO BE PROTECTED NOT LESS THAN 10 INCHES.
8. AIR TERMINALS SHALL BE PLACED AT OR WITHIN 2 FEET OF THE EDGE AND CORNERS OF THE ROOF AND SHALL BE SPACED AT 20' MAXIMUM ABOUT THE PERIMETER.
9. CABLE FASTENERS SHALL BE SPACED NOT MORE THAN THREE FEET APART ON ALL CONDUCTORS. SCREWS OR BOLTS EMPLOYED TO SECURE THE FASTENERS SHALL BE STAINLESS STEEL.
10. GALVANIZED OR PLATED STEEL NAILS, SCREWS OR BOLTS ARE NOT ACCEPTABLE.
11. MASONRY ANCHORS SHALL HAVE A DIAMETER OF NOT LESS THAN 1/4 INCH AND SHALL BE SET WITH CARE. HOLE TO RECEIVE THE SHANK OF THE FASTENER OR FITTING SHALL BE CORRECT SIZE, MADE WITH PROPER TOOLS AND MADE IN THE BLOCK RATHER THAN IN MORTAR JOINTS. WHEN SET, THE FIT SHALL BE TIGHT AGAINST MOISTURE AND CAPABLE OF WITHSTANDING A PULL TEST OF 100 POUNDS. PLASTIC OR FIBER ANCHORS MEETING THE ABOVE REQUIREMENTS ARE ACCEPTABLE.
12. CONNECTOR FITTING SHALL BE USED ON ALL LIGHTNING CONDUCTORS AS "END-TO-END", "TEE" OR "Y" SPLICES. THEY SHOULD BE ATTACHED SO AS TO WITHSTAND A PULL TEST OF 200 POUNDS.
13. FITTINGS FOR CONNECTION OF METAL TRACKS, GUTTERS, DOWNSPOUTS, VENTILATORS, OR OTHER METAL PARTS ABOUT THE STRUCTURE SHALL BE OF AN ACCEPTABLE TYPE MADE TIGHT TO THE OBJECT BY COMPRESSION. BOLTED CLAMPS AND SPLICERS OF CAST METAL SHALL ONLY BE USED.
14. ALL ROOF PENETRATIONS SHALL BE SEALED. METHOD OF SEALING SHALL BE APPROVED BY THE ROOFING SUBCONTRACTOR. COORD. USE OF ROOF ADHESIVE WITH THE ROOFING SUBCONTRACTOR.
15. CONTRACTOR SHALL SUBMIT SHOP DRAWING OF LIGHTNING PROTECTION SYSTEM FOR ENGINEERS APPROVAL. SHOP DRAWINGS SHALL INCLUDE TYPES AND LOCATION OF ALL AIR TERMINALS, CONDUCTORS, CONNECTORS, GROUND RODS, METHODS AND TYPES OF BONDING. SUBMIT CATALOG CUTS OF ALL EQUIPMENT.



STAIR TOWER SECTION - LIGHTNING

SCALE: 3/8" = 1'-0"

DATE: 09.19.08
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