

INVITATION TO BID CITY OF NAPLES PURCHASING DIVISION CITY HALL, 735 8TH STREET SOUTH **NAPLES, FL 34102**

PH: 239-213-7100 FX: 239-213-7105

Cover Sheet

NOTIFICATION DATE: 02/19/18	TITLE Geothermal Cooling Wate and Facility Improvem		SOLICITATION NUMBER: 18-035	OPENING DATE & TIME: 03/20/2018 2:00 PM
PRE-BID CONFERENCE DATE, TIME AND LOCATION: A non-mandatory Pre-Bid conference will be held 3/9/2018 at 10:00 A.M. local time in the Community Development Building located at 295 Riverside Circle, Naples FL, 34102				
LEGAL NAME OF PARTNERSHIP, CORPORATION OR INDIVIDUAL:				
MAILING ADDRESS:				
CITY-STATE-ZIP:				
PH:	PH: EMAIL:			
FX:	FX: WEB ADDRESS:			
AUTHORIZED SIGN	ATURE DATE	PRINTED N	AME/TITLE	
I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a bid for the same materials, supplies, or equipment and is in all respects fair and without collusion or fraud. I agree to abide by all conditions of this bid and certify that I am authorized to sign this bid for the bidder. In submitting a bid to the City of Naples (City) the bidder offers and agrees that if the bid is accepted, the bidder will convey, sell, assign or transfer to the City of Naples all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the Anti-trust laws of the United States and the State of FL for price fixing relating to the particular commodities or services purchased or acquired by the City of Naples. At the City's discretion, such assignment shall be made and become effective at the time the City tenders final payment to the bidder.				
	FEI/EIN Numbe	er	-	
Addendum #	I acknowledge receipt/ revie		dendum endum #3	Addendum #4

PLEASE NOTE THE FOLLOWING

- >
- This page <u>must be completed and returned</u> with your bid. Bids must be <u>submitted in a sealed envelope</u>, <u>marked with solicitation number & opening date</u>. >
- > All submissions must be received and date stamped by Purchasing staff prior to the above "OPENING DATE & TIME".
- Submission received after the above opening date and time will not be accepted. >
- Bid Tabs or Evaluation scores will be available on the City of Naples web site <u>www.naplesgov.com</u>. <u>If you do not have</u> <u>computer access</u> and want a copy of the evaluation scores, please enclose a stamped, self-addressed envelope with your bid. >

GENERAL CONDITIONS

TO ENSURE ACCEPTANCE OF THE PROPOSAL, PLEASE FOLLOW THESE INSTRUCTIONS. ANY AND ALL SPECIAL CONDITIONS, ATTACHED HERETO, HAVE PRECEDENCE.

1. **SEALED PROPOSAL:** All proposals must be submitted in a sealed envelope. The face of the envelope shall contain the proposal name and proposal number. Proposals not submitted on attached cover form shall be rejected. All proposals are subject to the conditions specified herein. Those which do not comply with these conditions are subject to rejection.

2. **EXECUTION OF PROPOSAL**: Proposal must contain a manual signature of authorized representative in the proposal section. Proposal must be typed or printed in ink. Use of erasable ink is not permitted. All corrections made by proposer to his proposal must be initialed.

3. NO PROPOSAL: If not submitting a proposal, respond by returning the Statement of No Proposal and explain the reason in the spaces provided. Failure to respond 3 times in succession without justification shall be cause for removal of the supplier's name from the proposal mailing list. NOTE: To qualify as a respondent, proposer must submit a "NO PROPOSAL," and it must be received no later than the stated proposal opening date and hour.

4. PROPOSAL OPENING: Shall be public, on the date and at the time specified on the proposal form. It is the proposer's responsibility to assure that his proposal is delivered at the proper time and place of the proposal opening. Proposals which for any reason are not so delivered will not be considered. Offers by telegram; telephone; or fax are not acceptable. Proposal files may be examined during normal working hours.

5. WITHDRAWAL OF PROPOSALS: Withdrawal of a proposal within sixty (60) days after the opening of proposals is subject to suspension or debarment in accordance with Policy 7-4 for up to three years.

6. **PRICES, TERMS and PAYMENT**: Firm Prices shall be proposal and include all packing, handling, shipping charges and delivery to the destination shown herein. Proposer is encouraged to offer cash discount for prompt invoice payment. Terms of less than 20 days will not be considered.

A. TAXES: The City of Naples does not pay Federal Excise and Sales taxes on direct purchases of tangible personal property. See exemption number on face of purchase order. This exemption does not apply to purchases of tangible personal property made by contractors who use the tangible personal property in the performance of contracts for the improvement of City-owned real property.

B. MISTAKES: Proposers are expected to examine the specifications, delivery schedule, proposal prices, extensions, and all instructions pertaining to supplies and services. Failure to do so will be at proposer's risk. In case of mistake in extension, the unit price will govern.

C. CONDITION AND PACKAGING: It is understood and agreed that any item offered or shipped as a result of this proposal shall be a new, current standard production model available at the time of this proposal. All containers shall be suitable for storage or shipment, and all prices shall include standard commercial packaging.

D. SAFETY STANDARDS: Unless otherwise stipulated in the proposal, all manufactured items and fabricated assemblies shall comply with applicable requirements of Occupational Safety and Health Act and any standards there under.

E. UNDERWRITERS' LABORATORIES: Unless otherwise stipulated in the proposal, all manufactured items and fabricated assemblies shall carry U.L. approval and re-examination listing where such has been established.

F. PAYMENT: Payment will be made by the buyer after the items awarded to a vendor have been received, inspected, and found to comply with award specifications, free of damage or defect and properly invoiced. All invoices shall bear the purchase order number. Payment for partial shipments shall not be made unless specified in the proposal. Failure to follow these instructions may result in delay in processing

invoices for payment. In addition, the purchase order number must appear on bills of lading, packages, cases, delivery lists and correspondence.

7. **DELIVERY:** Unless actual date of delivery is specified (or if specified delivery cannot be met), show number of days required to make delivery after receipt of purchase order in space provided. Delivery time may become a basis for making an award (see Special Conditions). Delivery shall be within the normal working hours of the user, Monday through Friday, unless otherwise specified.

8. MANUFACTURERS' NAMES AND APPROVED EQUIVALENTS: Any manufacturers' names, trade names, brand names, information and/or catalog numbers listed in a specification are for information and not intended to limit competition. The proposer may offer any brand for which he is an authorized representative, which meets or exceeds the specification for any item(s). If proposals are based on equivalent products, indicate on the proposal form the manufacturer's name and number. Proposer shall submit with his proposal, cuts, sketches, and descriptive literature, and/or complete specifications. Reference to literature submitted with a previous proposal will not satisfy this provision. The proposer shall also explain in detail the reason(s) why the proposed equivalent will meet the specifications and not be considered an exception thereto. Proposals which do not comply with these requirements are subject to rejection. Proposals lacking any written indication of intent to quote an alternate brand will be received and considered in complete compliance with the specifications as listed on the proposal form.

9. INTERPRETATIONS: Any questions concerning conditions and specifications shall be directed in writing to this office for receipt no later than ten (10) days prior to the proposal opening. Inquiries must reference the date of proposal opening and proposal number. Failure to comply with this condition will result in proposer waiving his right to dispute the proposal.

10. CONFLICT OF INTEREST: All proposal awards are subject to Section 2-973 Conflict of Interest, City of Naples Code of Ordinances, which states: "No public officer or employee shall have or hold any employment or contractual relationship with any business entity or any agency which is subject to the regulation of or is doing business with the city; nor shall an officer or employee have or hold any employment or contractual relationship that will create a continuing or frequently recurring conflict between his private interests and the performance of his public duties or that would impede the full and faithful discharge of his public duties. Any member of the city council or any city officer or employee who willfully violates this section shall be guilty of malfeasance in office or position and shall forfeit his office or position. Violation of this section with the knowledge, express or implied, of the person or corporation contracting with or making a sale to the city shall render the contract or sale voidable by the city manager or the city council."

11. AWARDS: As the best interest of the City may require, the right is reserved to make award(s) by individual item, group of items, all or none, or a combination thereof; to reject any and all proposals or waive any minor irregularity or technicality in proposals received.

12. ADDITIONAL QUANTITIES: For a period not exceeding ninety (90) days from the date of acceptance of this offer by the buyer, the right is reserved to acquire additional quantities up to but not exceeding those shown on proposal at the prices proposal in this invitation. If additional quantities are not acceptable, the proposal sheets must be noted "PROPOSAL IS FOR SPECIFIED QUANTITY ONLY." (THIS PARAGRAPH DOES NOT APPLY FOR A TERM CONTRACT.)

13. SERVICE AND WARRANTY: Unless otherwise specified, the proposer shall define any warranty service and replacements that will be provided during and subsequent to this contract. Proposers must explain on an attached sheet to what extent warranty and service facilities are provided.

14. **SAMPLES:** Samples of items, when called for, must be furnished free of expense, on or before proposal opening time and date, and if not destroyed may, upon request, be returned at the proposer's expense. Each individual sample must be labeled with proposer's name, manufacturer's brand name and number, proposal number and item reference. Request for return of samples shall be accompanied by instructions which include shipping authorization and name of carrier and must be received with your

proposal. If instructions are not received within this time, the commodities shall be disposed of by the City of Naples.

15. **PROPOSAL PROTEST:** The city has formal proposal protest procedures that are available on request.

16. INSPECTION, ACCEPTANCE AND TITLE: Inspection and acceptance will be at destination unless otherwise provided. Title and risk of loss or damage to all items shall be the responsibility of the contract supplier until accepted by the ordering agency, unless loss or damage results from negligence by the ordering

17. DISPUTES: In case of any doubt or difference of opinion as to the items to be furnished hereunder, the decision of the buyer shall be final and binding on both parties.

18. GOVERNMENTAL RESTRICTIONS: In the event any governmental restrictions may be imposed which would necessitate alteration of the material, quality, workmanship or performance of the items offered on this proposal prior to their delivery, it shall be the responsibility of the successful proposer to notify the buyer at once, indicating in his letter the specific regulation which required an alteration. The City reserves the right to accept any such alteration, including any price adjustments occasioned thereby, or to cancel the contract at no expense to the City.

19. LEGAL REQUIREMENTS: Applicable provision of all Federal, State, county and local laws, and of all ordinances, rules, and regulations shall govern development submittal and evaluation of all proposals received in response hereto and shall govern any and all claims and disputes which may arise between person(s) submitting a proposal response hereto and the City of Naples by and through its officers, employees and authorized representatives, or any other person, natural or otherwise; and lack of knowledge by any proposer shall not constitute a cognizable defense against the legal effect thereof.

20. PATENTS AND ROYALTIES: The proposer, without exception, shall indemnify and save harmless the City of Naples and its employees from liability of any nature or kind, including cost and expenses for or on account of any copyrighted, patented, or unpatented invention, process, or article manufactured or used in the performance of the contract, including its use by the City of Naples. If the proposer uses any design, device, or materials covered by letters, patent or copyright, it is mutually agreed and understood without exception that the proposal prices shall include all royalties or cost arising from the use of such design, device, or materials in any way involved in the work.

21. ADVERTISING: In submitting a proposal, proposer agrees not to use the results there from as a part of any commercial advertising.

22. ASSIGNMENT: Any Purchase Order issued pursuant to this proposal invitation and the monies which may become due hereunder are not assignable except with the prior written approval of the buyer.

23. LIABILITY: The supplier shall hold and save the City of Naples, its officers, agents, and employees harmless from liability of any kind in the performance of this contract.

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

25. DISCRIMINATION: An entity or affiliate who has been placed on the discriminatory vendor list may not submit a proposal on a contract to provide goods or services to a public entity, may not submit a

proposal on a contract with a public entity for the construction or repair of a public building or public work, may not submit proposals on leases of real property to a public entity, may not award or perform work as a contractor, supplier, subcontractor, or consultant under contract with any public entity, and may not transact business with any public entity.

26. COUNTY TAXES: No proposal shall be accepted from and no contract will be awarded to any person, firm or corporation that is in arrears to the government of Collier County, Florida.

27. OFFER EXTENDED TO OTHER GOVERNMENTAL ENTITIES: The City of Naples encourages and agrees to the successful proposer extending the pricing, terms and conditions of this solicitation or resultant contract to other governmental entities at the discretion of the successful proposer.

IF THIS PROPOSAL IS FOR A TERM CONTRACT, THE FOLLOWING CONDITIONS SHALL ALSO APPLY

28. ELIGIBLE USERS: All departments of the City of Naples are eligible to use this term contract. Such purchases shall be exempt from the competitive proposal requirements otherwise applying to their purchases.

29. PRICE ADJUSTMENTS: Any price decrease effectuated during the contract period by reason of market change shall be passed on to City of Naples. Price increases are not acceptable.

30. CANCELLATION: All contract obligations shall prevail for at least one hundred eighty (180) days after effective date of contract. After that period, for the protection of both parties, this contract may be cancelled in whole or in part by either party by giving thirty (30) days prior written notice to the other party.

31. RENEWAL: The City of Naples reserves the option to renew the period of this contract, or any portion thereof for up to two (2) additional periods. Renewal of the contract period shall be by mutual agreement in writing.

32. ABNORMAL QUANTITIES: While it is not anticipated, should any unusual or abnormal requirements arise, the City reserves the right to solicit separate proposals thereon.

33. FISCAL NON-FUNDING CLAUSE: In the event sufficient funds are not budgeted for a new fiscal period, the City shall notify the contractor of such occurrence and the contract shall terminate on the last day of the current fiscal year without penalty or expense to the City.

IF THIS PROPOSAL IS FOR PERFORMING A SERVICE, THE FOLLOWING CONDITIONS SHALL ALSO APPLY

34. ALTERNATIVE PROPOSALS: Proposers offering service delivery methods other than those permitted by the scope of work may submit a separate envelope clearly marked "ALTERNATIVE PROPOSAL". Alternative proposals will be deemed non-responsive and will not be considered for award. All such responses will, however, be examined prior to award. Such examination may result in cancellation of all proposals received to permit rewriting the scope of work to include the alternative method, or the alternative method may be considered for future requirements of the City of Naples.

35. ANTITRUST: By entering into a contract, the contractor conveys, sells, assigns and transfers to the City of Naples all rights, titles and interest it may now have or hereafter acquire under the antitrust laws of the United States and the State of Florida that relate to the particular goods or services purchased or acquired by the City of Naples under said contract.

36. PROPOSER INVESTIGATIONS: Before submitting a proposal, each proposer shall make all investigations and examinations necessary to ascertain all site conditions and requirements affecting the full performance of the contract and to verify any representations made by the City of Naples upon which the proposer will rely. If the proposer receives an award as a result of its proposal submission, failure to have made such investigations and examinations will in no way relieve the proposer from its obligation to comply in every detail with all provisions and requirements of the contract documents, nor will a plea of ignorance of such conditions and requirements be accepted as a basis for any claim whatsoever by the contractor for additional compensation.

37. CERTIFICATES AND LICENSES: The Contractor, at time of proposal, shall possess the correct occupational licenses, all professional licenses or other authorizations necessary to carry out and perform the work required by the City of Naples and Collier County for this project pursuant to all applicable Federal, State and Local Laws, Statues, Ordinances, and rules and regulations of any kind.

38. CHANGE IN SCOPE OF WORK: The City of Naples may order changes in the work consisting of additions, deletions or other revisions within the general scope of the contract. No claims may be made by the contractor that the scope of the project or of the contractor's services has been changed, requiring changes to the amount of compensation to the contractor or other adjustments to the contract unless such changes or adjustments have been made by written amendment to the contract signed by the City of Naples and the contractor. If the contractor believes that any particular work is not within the scope of the project, is a material change, or will otherwise require more compensation to the contractor, the contractor must immediately notify the City in writing of this belief. If the City believes that the particular work is within the scope of the contract as written, the contractor will be ordered to and shall continue with the work as changed and at the cost stated for the work within the scope.

39. CONTRACTOR PERSONNEL: The City of Naples shall, throughout the life of the contract, have the right of reasonable rejection and approval of staff or subcontractors assigned to the work by the contractor. If the City reasonably rejects staff or subcontractors, the contractor must provide replacement staff or subcontractors satisfactory to the City in a timely manner and at no additional cost to the City. The day-to-day supervision and control of the contractor's employees and sub-contractors is the responsibility solely of the contractor.

40. COST REIMBURSEMENT: The contractor agrees that all incidental costs, including allowances for profit and tools of the trade, must be included in the proposal rates. If an arrangement is made between the contractor and the City to reimburse the contractor for the cost of materials provided in the performance of the work, the contractor shall be reimbursed in the following manner: The City shall reimburse the contractor on completion and acceptance of each assigned job, only for those materials actually used in the performance of the work that is supported by invoices issued by the suppliers of the contractor describing the quantity and cost of the materials purchased. No surcharge shall be added to the supplier's invoices or included in the contractor's invoice submitted to the City that would increase the dollar amount indicated on the supplier's invoice for the materials purchased for the assigned job.

41. EXCEPTIONS: Proposers taking exception to any part or section of the solicitation shall indicate such exceptions on the proposal form. Failure to indicate any exception will be interpreted as the proposer's intent to comply fully with the requirements as written. Conditional or qualified proposals, unless specifically allowed, shall be subject to rejection in whole or in part.

42. FAILURE TO DELIVER: In the event of the contractor to fail to deliver services in accordance with the contract terms and conditions, the City, after due oral or written notice, may procure the services from other sources and hold the contractor responsible for any resulting purchase and administrative costs. This remedy shall be in addition to any other remedies that the City may have.

43. FAILURE TO ENFORCE: Failure by the City at any time to enforce the provisions of the contract shall not be construed as a waiver of any such provisions. Such failure to enforce shall not affect the validity of the contract or any part thereof or the right of the City to enforce any provision at any time in accordance with its terms.

44. FORCE MAJEURE: The contractor shall not be held responsible for failure to perform the duties and responsibilities imposed by the contract due to legal strikes, fires, riots, rebellions and acts of God beyond the control of the contractor, unless otherwise specified in the contract.

45. INDEPENDENT CONTRACTOR: The contractor shall be legally considered an independent contractor and neither the contractor nor its employees shall, under any circumstances, be considered servants or agents of the City of Naples and the City of Naples shall be at no time legally responsible for any negligence or any wrongdoing by the contractor, its servants or agents. The City of Naples shall not withhold from the contract payments to the contractor any federal income taxes, Social Security tax, or any other amounts for benefits to the contractor. Further, the City shall not provide to the contractor any insurance coverage or other benefits, including Workers' Compensation normally provided by the City for its employees.

46. ORAL STATEMENTS: No oral statement of any person shall modify or otherwise affect the terms, conditions or specifications stated in this contract. All modifications to the contract must be made in writing by the City of Naples.

47. QUALIFICATIONS OF PROPOSERS: The proposer may be required, before the award of any contract, to show to the complete satisfaction of the City of Naples that it has the necessary facilities, ability, and financial resources to provide the service specified therein in a satisfactory manner. The proposer may also be required to give a past history and references in order to satisfy the City in regard to the proposer's qualifications. The City may make reasonable investigations deemed necessary and proper to determine the ability of the proposer to perform the work, and the proposer shall furnish to the City all information for this purpose that may be requested. The City reserves the right to reject any proposal if the evidence submitted by, or investigation of, the proposer fails to satisfy the City that the proposer is properly qualified to carry out the obligations of the contract and to complete the work described therein. Evaluation of the proposer's qualifications shall include:

- > The ability, capacity, skill and financial resources to perform the work or service.
- > The ability to perform the work service promptly or within the time specified, without delay.
- > The character, integrity, reputation, judgment, experience, and efficiency of the proposer.
- > The quality of performance of previous contracts or services.

48. QUALITY CONTROL: The contractor shall institute and maintain throughout the contract period a properly documented quality control program designed to ensure that the services are provided at all times and in all respects in accordance with the contract. The program shall include providing daily supervision and conducting frequent inspections of the contractor's staff and ensuring that accurate records are maintained describing the disposition of all complaints. The records so created shall be open to inspection by the City.

49. RECOVERY OF MONEY: Whenever, under the contract, any sum of money shall be recoverable from or payable by the contractor to the City, the same amount may be deducted from any sum due to the contractor under the contract or under any other contract between the contractor and the City. The rights of the City are in addition and without prejudice to any other right the City may have to claim the amount of any loss or damage suffered by the City on account of the acts or omissions of the contractor.

50. REQUIREMENTS CONTRACT: During the period of the contract, the contractor shall provide all the services described in the contract. The contractor understands and agrees that this is a requirements contract and that the City shall have no obligation to the contractor if no services are required. Any quantities that are included in the scope of work reflect the current expectations of the City for the period of the contract. The amount is only an estimate and the contractor understands and agrees that the City is under no obligation to the contractor to buy any amount of services as a result of having provided this estimate or of having any typical or measurable requirement in the past. The contractor further understands and agrees that the City may require services in excess of the estimated annual contract amount and that the quantity actually used whether in excess of, or less than, the estimated annual contract amount and that the quantity actually used

shall not give rise to any claim for compensation other than the total of the unit prices in the contract for the quantity actually used.

51. TERMINATION FOR CONVENIENCE: The performance of work under the contract may be terminated by the City in whole or in part whenever the City determines that termination is in the City's best interest. Any such termination shall be effected by the delivery to the contractor of a written notice of termination of at least seven (7) days before the date of termination, specifying the extent to which performance of the work under the contract is terminated and the date upon which such termination becomes effective. After receipt of a notice of termination, except as otherwise directed, the contractor shall stop work on the date of the receipt of the notice or other date specified in the notice; place no further orders or subcontracts for materials, services or facilities except as necessary for completion of such portion of the work not terminated all vendors and subcontracts; and settle all outstanding liabilities and claims.

52. TERMINATION FOR DEFAULT: The City of Naples reserves the right to terminate the contract if the City determines that the contractor has failed to perform satisfactorily the work required, as determined by the City. In the event the City decides to terminate the contract for failure to perform satisfactorily, the City shall give to the contractor at least seven (7) days written notice before the termination takes effect. The seven-day period will begin upon the mailing of notice by the City. If the contractor fails to cure the default within the seven (7) days specified in the notice and the contract is terminated for failure to perform satisfactorily, the contractor shall be entitled to receive compensation for all reasonable, allocable and allowable contract services satisfactorily performed by the City terminates the contract because of the default of the contractor, the contractor shall be liable for all excess costs that the City is required to expend to complete the work under contract.

53. STATE AND FEDERAL EMPLOYMENT LAWS: Contractors providing service to the City are required to comply with all state and federal employment laws. This includes, but is not limited to, laws resulting from the Immigration and Reform and Control Act of 1986, wherein all employers are required to verify the identity and employment eligibility of all employees. The Department of Homeland Security, U.S. Citizenship and Immigration Services require employees and employers to complete Form I-9 and the employer must examine evidence of identity and employment eligibility within three business days of the date employment begins. Non compliant contractors will be subject to contract sanctions, up to and including contract termination.

54. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY, AND VOLUNTARY EXCLUSION: The contractor agrees to comply with Executive Order 12549 "Debarment and Suspension" and 2 CFR 180 "OMB Guidelines to Agencies on Government wide Debarment and Suspension." These rules require all contractors using federal funds not be debarred or suspended from doing business with the Federal Government. This includes sub-recipients and lower tier participant for covered transactions. Signing and submitting this document certified the organization and its principals are not presently debarred, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency, and further have not within the preceding three-year period been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction.

THE CITY OF NAPLES IS AN EQUAL OPPORTUNITY EMPLOYER

GENERAL INSURANCE REQUIREMENTS

The Contractor shall not commence work until he has obtained all the insurance required under this heading, and until such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work until all similar insurance required of the subcontractor has also been obtained and approved by the Owner.

Certificates of insurance must be issued by an authorized representative of the insurance company at the request and direction of the policyholder and must include sufficient information so as to identify the coverage and the contract for Owner's improvements for which they are issued. Certificates of insurance must be issued by a nationally recognized insurance company with a Best's Rating of no less than B+VII, satisfactory to the Owner, and duly licensed to do business in the state of said Contract.

The Contractor shall procure and maintain, during the life of this Contract, Workmen's Compensation Insurance for all of his employees to be engaged in work under this Contract, and he shall require any subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees to be engaged in such work, unless such employees are covered by the protection afforded by the Contractor's insurance. In case any employees are to be engaged in hazardous work under this Contract, and are not protected under this Workmen's Compensation statute, the Contractor shall provide, and shall cause each subcontractor to provide, adequate coverage for the protection of such employees. It is acceptable to use a State-approved Workmen's Compensation Self-Insurance fund.

The Contractor shall take out and maintain during the life of this Contract, Public Liability and Property Damage and shall include Contractual Liability, Personal Injury, Libel, Slander, False Arrest, Malicious Prosecution, Wrongful Entry or Eviction, Broad Form Property Damage, Products, Completed Operations and XCU Coverage to be included on an occurrence basis, and to the full extent of the Contract to protect him, the Owner, and any subcontractor performing work covered by this Contract from damages for personal injury, including accidental death, as well as from claims for property damage, which may arise from operations under this contract, whether such operations be by himself or by a subcontractor, or by anyone directly or indirectly employed by either of them. The Contractor shall also maintain automobile liability insurance including "non-owned and hired" coverage. The entire cost of this insurance shall be borne by the Contractor.

The amount of such insurance shall be no less than \$1,000,000 annual aggregate for bodily injury and property damage combined per occurrence.

The City of Naples must be named as Additional Insured on the insurance certificate and the following must also be stated on the certificate. "These coverage's are primary to all other coverage's the City possesses for this contract only." The City of Naples shall be named as the Certificate Holder. The Certificate Holder shall read as follows:

The City of Naples 735 Eighth Street South Naples, Florida 34102

No City Division, Department, or individual name should appear on the Certificate. <u>No other format will be acceptable</u>.

The Certificate must state the solicitation number and title.

When using the ACORD 25 - Certificate of Insurance only the most current version will be accepted.

The City of Naples requires a copy of a cancellation notice in the event the policy is cancelled. The City of Naples shall be expressly endorsed onto the policy as a cancellation notice recipient.

STATEMENT OF NO BID

If you will not be bidding on this product/service, please help us by completing and returning <u>only this page</u> to:

City of Naples, Purchasing Division City Hall, 735 8th Street South Naples, FL 34102 Fax 239-213-7105

Bid #	and Description:	
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We, the undersigned, decline to bid on the above project for the following reason(s):

- _____ We are not able to respond to the Invitation to Bid by the specified deadline.
- ____ Our Company does not offer this product or service.
- ____ Our current work schedule will not permit us to perform the required services.
- ____ Specifications are incomplete or information is unclear (Please explain below).

____ Other (Please specify below)

Company Name_____

PH	Email

Name and Title of individual completing this form:

(Printed	Name)
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(Title)

(Signature)

(Date)

REFERENCES

THIS SHEET MUST BE COMPLETED AND RETURNED WITH BID

PROVIDE AT LEAST THREE NON-CITY REFE COMPANY HAS PROVIDED SAME OR SIMIL	
LAST 2 YEARS. (NOTE: "NON-CITY" refers to the project ov / RFP's.)	
COMPANY NAME:	
ADDRESS:	
TELEPHONE:	
CONTACT PERSON:	
CONTACT E-MAIL ADDRESS:	
COMPANY NAME:	
ADDRESS:	
TELEPHONE:	
CONTACT PERSON:	
CONTACT E-MAIL ADDRESS:	
COMPANY NAME:	
ADDRESS:	
TELEPHONE:	
CONTACT PERSON:	
CONTACT E-MAIL ADDRESS:	
Submitting Vendor Name:	

CONSTRUCTION SPECIAL CONDITIONS

A. TERMS OF CONTRACT

The resulting contract will commence on award and be in effect until completion of the project. Services to be rendered by the contractor shall be commenced subsequent to the execution of this Agreement upon written Notice to Proceed from the City for all or any designated portion of the Project must be completed by the contract dates specified within the Notice to Proceed for construction. Should CONTRACTOR fail to complete the project within this timeframe, daily liquidated damages in an amount consistent with the current Sec. 8-10.2 Florida Department of Transportation Standard Specifications will be assessed.

B. PROHIBITION OF CONTACT

Under no circumstances should any prospective organization or individual, or anyone acting for or on behalf of a prospective organization or individual, seek to influence or gain the support of any member of the City Council, public official or City staff favorable to the interest of any prospective organization or individual. Likewise, contact with City Council, any public official or city staff against the interests of other prospective organization (s) and or individual(s) is prohibited. Any such activities will result in the exclusion of the prospective organization or individual from consideration by the City.

C. REFERENCES

Bidder must submit a minimum of three references on the form provided. Additionally, a signed and dated IRS W-9 form with EIN is required from all vendors. Proof of insurance from the successful proposer is required at the time of issuance and award of a contract.

D. STATEMENT OF NO BID

If you will not be bidding on this producer/service, please help us by completing and returning the Statement of No Bid.

E. BID FORMAT

The Contract, if awarded, will be awarded on the basis of material and equipment illustrated and described on the Drawings or specified in the Specification. If a substitution or an "or equal" item is proposed, the proposer must submit this information to the City of Naples Purchasing Department ten (10) days prior to the Proposal Date for evaluation as an acceptable substitution or an "or equal" item. If the substitution or the "or equal" item is accepted, the City of Naples will issue an Addendum to all Proposers listing the allowable substitution or the "or equal" item. The cost of changes in related work, additional drawings which may be required to illustrate or define the substitute or "or equal" equipment and its relationship to the other parts or portions of the Work shall be paid by the Contractor. No change will be made in the amount of time in which to complete the Work or in the liquidated damages.

F. BID SECURITY / BID BOND

It is the policy of the City of Naples to require a Bid Bond for all <u>construction-related</u> sealed bids estimated to be in excess of \$100,000. A bid bond or equivalent financial security in the amount of five (5) percent of the bid price shall be required and must accompany all bids. The Bid Bond is to be provided by a surety company authorized to do business in the State of Florida or otherwise supplied in a form satisfactory to the City. The bid bond must be submitted with the bid. When the invitation for bids requires a bid bond, noncompliance will result in rejection of the bid. Note that failure or refusal of the awarded bidder to enter into a contract within twenty (20) calendar days after receipt of said contract will result in damages to the City and bid bond will be forfeited to the City as liquidated damages.

G. CONSTRUCTION PERFORMANCE & PAYMENT BONDS

A Performance and Payment Bond will be required of the Awarded Proposer for any <u>contract that is in excess of \$100,000.00 dollars</u> and will be in an amount equal to 100 (%) percent of the price specified in the Contract. The bond(s) shall be executed by a surety company authorized to do business in the State of Florida, or otherwise secured in a manner satisfactory to the City for the protection of all persons supplying labor and material to the contractor or its subcontractors for the performance of the work provided for in the contract.

H. QUESTIONS

Questions regarding this proposer packet must be received in writing in the Purchasing Division NO LATER THAN **TEN CALENDAR DAYS PRIOR** TO THE BID OPENING DATE TO ENSURE AN ANSWER IS PROVIDED PRIOR TO CLOSING.

Direct all questions to: Gerald "Jed" Secory, MBA / CPPO / CPM Purchasing and Contracts Manager City of Naples, Purchasing Division 735 8th Street South Naples, Florida 34102 PH: (239) 213-7102 FX: (239) 213-7105 Jsecory@naplesgov.com

SUBMISSION CHECKLIST

Bidder should check off each of the following items as completed and submit with bid response:

CHECKLIST ELEMENTS	INCLUDED
• Submit one (1) original signature and one (1) copy of your original bid / document AND a Windows© compatible PDF of the original document on a CD or Flash / Thumb Drive that is clearly labeled.	
• Include any required drawings; descriptive literature; qualifications; schedules; product compliance / exceptions; alternatives; questionnaire; references, forms, tabs, pricing/cost; and any information required of the proposer identified in the text of the bid including information for bid evaluation.	
• Include any Professional Licenses that qualify the firm for this solicitation as well as applicable bond documents, if required. Note if you are not a single prime contractor. List all subcontractors to be used for our project in your bid/proposal and their professional licenses.	
 Mandatory FORMS from this document to be included are: <u>Cover Sheet</u>, <u>References Sheet</u>, <u>Submission Checklist Sheet</u>, <u>IRS W-9</u> (NOV 2017) and <u>Cost Schedule</u>. 	
• Have an authorized individual sign the appropriate pages including the <u>Cover Sheet</u> with bid addenda initialed.	
 Bid document needs to be received by the OPENING DATE & TIME indicated on the Cover Sheet. The mailing envelope must be addressed to: City of Naples Purchasing Division 735 8th Street South Naples, Florida 34102 	
The mailing envelope must be sealed and marked with: Number: 18-035 Title: Geothermal Cooling Water Supply and Facility Improvements Opening Date: 03/20/2018	

ALL COURIER DELIVERED BIDS MUST HAVE THE BID NUMBER AND TITLE ON THE OUTSIDE OF THE COURIER PACKET.

Submitting Vendor Name: _____

At the discretion of the Purchasing Manager, bids or proposals with minor irregularities may be accepted and allowed to be corrected when in the best interest of the City.

THIS DOCUMENT CAN BE DOWNLOADED FROM THE IRS WEB SITE AT:

https://www.irs.gov/pub/irs-pdf/fw9.pdf



Request for Taxpayer Identification Number and Certification

Give Form to the requester. Do not send to the IRS.

Bevenue Service
 Go to www.irs.gov/FormW9 for instructions and the latest information.
 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

	2 Business name/disregarded entity name, if different from above		
page 3.	3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check following seven boxes.	ck only one of the	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):
LO S	Individual/sole proprietor or C Corporation S Corporation Partnership single-member LLC	Trust/estate	Exempt payee code (if any)
type	Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partners	hip) ▶	
Print or type.	Note: Check the appropriate box in the line above for the tax classification of the single-member own LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the ow another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single is disregarded from the owner should check the appropriate box for the tax classification of its owner another the tax classification of its owner another tax classification of the tax classification of tax classification of the tax classification of the tax classification of tax classifi	vner of the LLC is e-member LLC that	Exemption from FATCA reporting code (if any)
P Specific	Other (see instructions) >		(Applies to accounts maintained outside the U.S.)
See Sp	5 Address (number, street, and apt. or suite no.) See instructions.	Requester's name a	nd address (optional)
0)	6 City, state, and ZIP code		
	7 List account number(s) here (optional)		
Par	t I Taxpayer Identification Number (TIN)		
oacku reside entitie	your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid p withholding. For individuals, this is generally your social security number (SSN). However, for nt alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other s, it is your employer identification number (EIN). If you do not have a number, see <i>How to get</i>	a	urity number
TIN, la	ter. If the account is in more than one name, see the instructions for line 1. Also see What Name ai	or Employer i	dentification number

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Part II Certification

Under penalties of perjury, I certify that:

- 1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- 2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- 3. I am a U.S. citizen or other U.S. person (defined below); and
- 4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here	Signature of U.S. person ►	
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General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

Form 1099-INT (interest earned or paid)

 Form 1099-DIV (dividends, including those from stocks or mutual funds)

• Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)

• Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)

· Form 1099-S (proceeds from real estate transactions)

Date >

- · Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest),
- 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later. By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),

2. Certify that you are not subject to backup withholding, or

3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and

4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting*, later, for further information.

Note: If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

An individual who is a U.S. citizen or U.S. resident alien;

• A partnership, corporation, company, or association created or

organized in the United States or under the laws of the United States;

An estate (other than a foreign estate); or

A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States.

 In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;

 In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and

• In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515, Withholding of Tax on Nonresident Aliens and Foreign Entities).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.

2. The treaty article addressing the income.

3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.

 The type and amount of income that qualifies for the exemption from tax.

 $\,$ 5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 28% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester,

2. You do not certify your TIN when required (see the instructions for Part II for details),

3. The IRS tells the requester that you furnished an incorrect TIN,

4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or

5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See Exempt payee code, later, and the separate Instructions for the Requester of Form W-9 for more information.

Also see Special rules for partnerships, earlier.

What is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code*, later, and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note: ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. Sole proprietor or single-member LLC. Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. Partnership, LLC that is not a single-member LLC, C corporation, or S corporation. Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the Owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

Line 3

Check the appropriate box on line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3.

IF the entity/person on line 1 is a(n)	THEN check the box for
Corporation	Corporation
 Individual Sole proprietorship, or Single-member limited liability company (LLC) owned by an individual and disregarded for U.S. federal tax purposes. 	Individual/sole proprietor or single- member LLC
 LLC treated as a partnership for U.S. federal tax purposes, LLC that has filed Form 8832 or 2553 to be taxed as a corporation, or LLC that is disregarded as an entity separate from its owner but the owner is another LLC that is not disregarded for U.S. federal tax purposes. 	Limited liability company and enter the appropriate tax classification. (P= Partnership; C= C corporation; or S= S corporation)
Partnership	Partnership
Trust/estate	Trust/estate

Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

Exempt payee code.

 Generally, individuals (including sole proprietors) are not exempt from backup withholding.

• Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.

 Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.

 Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

1 - An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)

2-The United States or any of its agencies or instrumentalities

3-A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

4-A foreign government or any of its political subdivisions, agencies, or instrumentalities

5-A corporation

6-A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession

7-A futures commission merchant registered with the Commodity Futures Trading Commission

8-A real estate investment trust

9-An entity registered at all times during the tax year under the Investment Company Act of 1940

10-A common trust fund operated by a bank under section 584(a)

11-A financial institution

12-A middleman known in the investment community as a nominee or custodian

13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for	THEN the payment is exempt for
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over \$600 required to be reported and direct sales over \$5,000 ¹	Generally, exempt payees 1 through 5 ²
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

¹ See Form 1099-MISC, Miscellaneous Income, and its instructions.

² However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A-An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B-The United States or any of its agencies or instrumentalities

C-A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D-A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F-A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G-A real estate investment trust

H-A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I-A common trust fund as defined in section 584(a)

J-A bank as defined in section 581

K-A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

Page 4

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

Note: You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, write NEW at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note: See What Name and Number To Give the Requester, later, for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at *www.SSA.gov.* You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at *www.irs.gov/Businesses* and clicking on Employer Identification Number (EIN) under Starting a Business. Go to *www.irs.gov/Forms* to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to *www.irs.gov/OrderForms* to place an order and have Form W-7 and/or SS-4 mailed to you within 10 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note: Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code*, earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983. You must give your correct TIN, but you do not have to sign the certification.

2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.

4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLE accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
 Two or more individuals (joint account) other than an account maintained by an FFI 	The actual owner of the account or, if combined funds, the first individual on the account ¹
3. Two or more U.S. persons (joint account maintained by an FFI)	Each holder of the account
 Custodial account of a minor (Uniform Gift to Minors Act) 	The minor ²
 a. The usual revocable savings trust (grantor is also trustee) 	The grantor-trustee ¹
 b. So-called trust account that is not a legal or valid trust under state law 	The actual owner ¹
Sole proprietorship or disregarded entity owned by an individual	The owner ³
7. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i) (A))	The grantor*
For this type of account:	Give name and EIN of:
 Disregarded entity not owned by an individual 	The owner
9. A valid trust, estate, or pension trust	Legal entity ⁴
10. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
11. Association, club, religious, charitable, educational, or other tax- exempt organization	The organization
12. Partnership or multi-member LLC 13. A broker or registered nominee	The partnership The broker or nominee

For this type of account:	Give name and EIN of:
14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
 Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(()(B)) 	The trust

¹ List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

² Circle the minor's name and furnish the minor's SSN.

³ You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

⁴ List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships*, earlier.

*Note: The grantor also must provide a Form W-9 to trustee of trust. Note: If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records From Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

Protect your SSN,

- · Ensure your employer is protecting your SSN, and
- · Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

Protect yourself from suspicious emails or phishing schemes. Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

Page 5

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to *phishing@irs.gov*. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at *spam@uce.gov* or report them at *www.ftc.gov/complaint*. You can contact the FTC at *www.ftc.gov/idtheft* or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see *www.ldentityTheft.gov* and Pub. 5027.

Visit www.irs.gov/IdentityTheft to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

City of Naples FL

Geothermal Cooling Water Supply and Facility Improvements BID NO. 18-035

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SPECIFICATIONS

EXHIBIT A - GENERAL CONSTRUCTION BID DRAWINGS EXHIBIT B - LOBBY TRUSS PLAN EXHIBIT C - REVISED DRAWING 302 / LIST OF TRUSS FABRICATOR EXHIBIT D - PHASE 2 PARKING PLAN

Project Description

Geothermal Cooling Water Supply and Facility Improvements

The Community Development Facility Improvement Project, located at 295 Riverside Circle, is comprised of three major components. Geothermal cooling water supply for the existing HVAC System; Interior Lobby architectural truss installation; and Pervious Pavers Phase 2 improvements. The work shall be bid under one General Construction Work,

The Community Development Building must be kept in operation between 7 am and 5 pm during weekdays without major interruptions and all existing building components (ie computers, furniture) must be protected from dust and debris during activity inside the building.

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Pervious Pavers Phase 2 improvements were designed by ABB. Phase 1 was constructed in March/April 2017. Phase 2 is the extension of the service drive to the south. The area encompass approximately 70 square yards. The pavers for this area were purchased during Phase 1 and are stored within ½ a mile of the project site for contractors use. During Phase 1, the 12 inch drainage pipe and its surrounding geotextile was installed for Phase 2. During Phase 2, the Contractor shall carefully uncover the

installed pipe and continue with the supply and installation of additional geotextile fabric, the three grades of stone, concrete curbs, flume, site work, and installation of owner supplied pavers. The Pervious Pavers Phase 2 work can only start AFTER all on the HVAC System improvements work, exterior of the building, is completed.

The project duration is 135 days after Notice to Proceed to substantial completion and another 30 days to Final Completion and project closeout.

The Contractor and their subcontractors must demonstrate that they are qualified by the State of Florida or Collier County to perform the work scope described below and on the drawings.

The major project improvements includes:

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- 4. Electrical power supply. New feeders are to be run from appropriate power supply panels to local pump controller, well pump, close loop pumps disconnect. (outdoor heat exchange/pump enclosure Duplex Pump Controller, GFI outlets, lights, and well pump Starter Disconnect). And than from disconnects to equipment.
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- 7. All above and underground piping/valves outside and interior to the building
- 8. Interior lobby HVAC new air ducts including cutting concrete walls for new 16 inch air ducts
- 9. Construct Outside heat exchange enclosure and gate
- 10. Reroute underground 2 inch water line around pump room enclosure, and provide for a hose bib internal to new pump room enclosure.
- 11. Interior lobby trusses and truss lights (interior lights power supply modifications) installation. The City will provide the Lobby light fixtures to the Contractors who will provide power supply and installation.
- 12. New Interior mezzanine walls, ceilings
- 13. New Parking lot extension phase 2
- 14. Repair any irrigation and utility lines encountered in the installation of the above items.

To further delineate the various scopes and changes to the design drawings, see below

AMEC foster wheeler/AWSolutions design

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- A-102 Details 2 and 3, Add note to both aluminum enclosures: "Fasten the aluminum enclosure to the existing wall with 3/16 diameter, minimum 1 ½ inch long, stainless steel Tap cons with nylon washers on 48 inch centers. Stager the tap cons every 24 inches."
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- 15. M-003 adjacent to V1: Change note from "(relocate gauge)" to (provide new gauge)"
- 16. M- 100: Add Note: "The Contractor is responsible for work described on M-100 associated with the reject pipe and reject well.

The Contractor shall field measure the actual distance between the "New Mechanical Yard" and the existing "Rejection Well". The contractor shall be aware that a potential conflict exists between the Reject line and FPL underground power supply to the Community Development building as well as (480V) power supply to parking lot lights and be responsible for locating and avoiding these conflicts. The reject pipe shall be deflected below power supply to avoid conflict. The work associated with the supply well and reject well is the responsibility of the contractor. The pipes shall be installed in conformance with City of Naples Utility standards."

- 17. M-101: Remove note 3 reference from the outside CLR line that is parallel to the West wall of the Community Development Building (near HP-13)
- 18. M-302 Add note: "The HVAC contractor shall provide detail shop drawings of all piping to insure accurate payout."
- 19. M-302 Detail 1: Add a 4 inch swing check valve on the "RW" line just south of the "A" and "RW" Tee intersection.
- 20. M-302 See revised drawing M-302 for changes associated to expansion tank. Add note to "The overhead pipe shown within the mechanical yard layout, detail 1, shall be installed so bottom of pipe flange shall be 5 feet above grade to allow easy access to maintain the equipment."
- 21. M-304 detail 1: Change the note "transition from DIP to schedule 80 PVC inside building" to "use CPVC schedule 80 pipe at location where pipe is not in direct contact with the sun." also change note "transition from HDPE UG to DIP" to "transition from HDPE UG to CPVC"
- 22. M-304 detail 2: Change "HDPE pipe" to "CPVC pipe"
- 23. M-304 detail B: Please note that RW pipe/V1 and CLS pipe/V2 are not tied into the same pipe as implied in this detail.
- 24. M-401 Add note: Modify detail 1 to state that- "Direct buried pipe shall be installed in conformance with City Utility standards".
- 25. M-401 Detail 8 Reject Well Head Connection Elevation: Delete detail 8 and replace as shown at the end of these notes.
- 26. M-401 Detail 7 Well Pump Head Connection Elevation: Make the following modifications: Reverse the location of 4 inch check valve and gate valve. Eliminate the Dresser coupling and adjacent

gate valve, and install the flow meter (FM-1) and transmitter (Ts-1) at the current dresser coupling location.

- 27. E- 301: The work described is to be completed by the Contractor. The City will provide the light fixtures for the contractor's installation.
- 28. E-302 Detail 1 The contractor shall be responsible to provide power supply to: Duplex Pump Controller, LED wall pack, Supply Well pump controller and outdoor GFI outlets. Providing the Duplex Pump Controller and cabinet, The Duplex pump controller, Well pump disconnects, and the power supply and controls to the specific mechanical equipment is the responsibility of the HVAC contractor. Detail 2 - The power to the controller via circuit G-1 is by the contractor. All other wiring is control wiring by the contractor's responsibility. Detail 3 is the contractor's responsibility.

TKW lobby renovation design

1. S2 Add note – "The coating system is power coating with color to be selected by owner as specified."

ABB Phase 2 paver design

- Drawing #1 Add note "Contractor shall be required to provide the items, vendor, model number specified in the drawings. Should the Contractor wish to submit an alternate, this must be done 10 days prior to bid for owner review and approval."
- 2. Drawing #1 Add note "The Contractor shall carefully uncover the installed pipe and continue with the supply and installation of additional geotextile fabric, the three grades of stone, concrete curbs, flume, site work, and installation of owner supplied pavers. The Phase 2 work can only start AFTER all on the HVAC System improvements work, exterior of the building, is completed."

The below clarifications are issued as additional changes.

1. Replace original bid drawing M-302 with revised drawing M-302 (Find as Exhibit A below). The thermal expansion tank has been identified (see Note 8) and the tank location has changed (see detail A). A concrete support slab is added.

2. Any reference to Lobby Furniture in the bid documents shall be removed. The City will purchase and install the Lobby furniture.

3. The installation of the cooling water reject line shall under the parking pavement and the installation and restoration by the contractor shall be in conformance with the City Utility standards for installation of pipe under pavement.

4. All new pipes shall be pressure tested in conformance with City Utility standards.

5. The two storage containers in line with the cooling water reject line shall be temporarily relocated, by the contractor, on site and re-positioned after the City has accepted the cooling water reject line installation. The contractor shall coordinate with the City for the temporary relocation location.

6. A list of potential truss fabricators and installers are provided for the GC reference only.

12" THICK CONC PAD -REFER TO STRUCTURAL DRAWINGS FRDM HEAT EXCHANGERS 4" FLANGED D.I. ELBOW > 4" PVC GRADE 6"PVC SLEEVE 4"X8" SPOOOL D.I. 2424680 242480 20% m 4" GATE VALVE D.I.TD PVC TRANSITION FITTING HEAD CONNECTION ELEVATION E NDT TD SCALE 4* D.I. PIPE -AS REQUIRED -10000878 20000878 HDG SLEEVE/FLANGED ADAPTOR -PVC OH Г Г 4"X8" SPOOOL D.I. E 10. -[PRESSURE GAGE dit 87 340 EXTEND THE 6° PVC PIPE TD A DEPTH DF 40° DR 20° BELDW WATER TABLE WHICHEVER IS DEEPER. CONTRACTOR IS TO ESTABLISH WATER TABLE DEPTH PRIOR TD INSTALLATION 20202 4"X 6" D.I. REDUCING ELBOW HDT DIPPED GALVANIZED WELL HEAD EQUIPMENT SUPPORTS-SUBMIT FOR APPROVAL 6" PVC WELL FLANGE REJECTION WELL ĩ

	Bid Schedule					
	City of Naples Community Development Facility					
	Geothermal Cooling Water Supply and Facility Improvements					
	Contract # GC-1, CIP #560200					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST \$	SL	JB TOTAL \$
1	Well pump system1LS					
2	Heat exchanger and pump structural enclosur	1	LS			
3	Heat Exchangers and circulation pumps syster	1	LS			
4	Underground and above ground piping	1	LS			
5	HVAC System Controls	1	LS			
6	Panles B and C associated work	1	LS		Γ	
7	Panel G and associated work	1	LS			
8	Electrical power supply	1	LS			
9	Install owner supplied lobby lights	1	LS			
10	Interior trusses	1	LS			
11	interior mezzanine modifications	1	LS			
12	parking lot extension	1	LS			
13	Other items	1	LS			
14	permits	1	LS			
15	General Condition	1	LS			
16	Owner Allowance	1	LS	\$ 45,000.00	\$	45,000.00
					-	
				Base Bid	\$	
17	Owner supplied Lobby Light Allowance 1 LS \$ 25,000.00				\$	25,000.00
					\$	
	City may choose to proceed with award of the project based on the base bid only, or base bid plus lobby lights (item 17) based on what is in the best interest of the City.					
	Company Name:					
	EIN:					
	Email:					
	Name and Title of individual completing this schedule:					
	(Printed Name)			(Title)		
	· · · · · · · · · · · · · · · · · · ·					
	(Signature) (Date)					
				-		

NAPLES COMMUNITY DEVELOPMENT BUILDING RENOVATIONS

100% CONSTRUCTION DOCUMENTS - 08-15-17

COMMUNITY DEVELOPMENT BUILDING 295 RIVERSIDE CIRCLE, NAPLES, FLORIDA 34102

GENERAL CONTRACTOR CONSTRUCTION

APPROVALS AND SUBSTITUTIONS

CONTRACTOR SHALL BE REQUIRED TO PROVIDE ITEM, VENDOR, MODEL NUMBER SPECIFIED IN THE DRAWINGS. SHOULD CONTRACTOR WISH TO SUBMIT AN ALTERNATE, THIS MUST BE DONE 10 DAYS PRIOR TO BID DATE FOR OWNER REVIEW AND APPROVAL Cooling Water Supply and Facility Improvements ITB City of Naples FL

PROJECT TEAM

ARCHITECT OF RECORD Santiago Jimongz, R.A. Amac Foster Wheeler (305) 286-5588 PROJECT MANAGER Cestar A Rullifer, Assoc. AIA, CPTED Amac Foster Wheeler (305) 288-5588 ENGINEER OF RECORD / STRUCTURA James L Studer, PE Amec Fastar Whaeler (305) 288-5588 ENGINEER OF RECORD / MEP Gragory Johnson, PE AWS Solutions, Inc. (407) 260-0231

GENERAL TL-000 CON

G-000	GE
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SU-001	SU
000	1010

ARCHITECTURE

SP-100	SITE PLAN	
A-100	FLOOR PLANS	
A-101	REFLECTED CEILING PLAN	
A-102	EXTERIOR ELEVATIONS	
A-103	NEW PUMP ENCLOSURE	
A-400	SPECIFICATIONS	
A-401	SPECIFICATIONS	
A-402	SPECIFICANTIONS	

STRUCTURE

S-001 S-101 S-501 GEN FOU MAS

MECHANICAL

M-000	SYMBOL LEGEND	
M-001	CONTROLS - HEAT PUMP	
M-002	CONTROLS - HEAT PUMP	
M-003	CONTROL DIAGRAMS	
M-100	SITE PLAN	
M-101	1ST FLOOR PLAN - NEW	
M-201	2ND FLOOR PLAN - NEW	
M-301	ENLARGED PLANS - NEW	
M-302	YARD ENLARGED PLANS	
M-303	ELEVATIONS VIEWS	
M-304	ELEVATIONS VIEWS	
M-401	DETAILS	
M-601	SPECIFICANTIONS	

ELECTRICAL

E-000	SYMBOL LEGEND	
E-101	1ST FLOOR POWER - NEW	
E-301	ENLARGED PLANS	
E-302	ENLARGED PLANS	
E-401	ELECTRICAL DETAILS	
E-501	PANEL SCHEDULES	
E-601	SPECIFICATIONS	



amec foster wheeler

5845 NW 158th Steet Miami Lakes, FL 33014 USA P:+1(305) 826-5588 F:+1(305) 826-1799 www.amecfw.com

ARCHITECT OF RECORD

REVISION SCHEDULE

No.	DESCRIPTION	DATE
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1		

INDEX OF DRAWINGS

VER	11
NERAL NOTES	

SU-001	SURVEY	
SU-002	SURVEY	
SU-003	SURVEY	

VENERAL NOTES	· · · · · · · · · · · · · · · · · · ·
INDATION PLAN	
SONRY DETAILS	

SANTIAGO JIMENEZ R.A. AR-94369 PROJECT TEAM DESIGNER AMEC FOSTER WHEELER - CR BIM / DRAWINGS BY: CHECKED BY Naples **Community Center** 8 295 RIVERSIDE CIRCLE, NAPLES, FL 34102

6788-16-2867 100%CD 08/15/2017

PROJECT NUMBER | STATUS | ISSUE DATE COVER

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

SHEET NUMBER

.-000

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Geothermal Cooling Water Supply and Facility Improvements

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The Contractor shall field measure the actual distance between the "New Mechanical Yard" and the existing "Rejection Well". The contractor shall be aware that a potential conflict exists between the Reject line and FPL underground power supply to the Community Development building as well as (480V) power supply to parking lot lights and be responsible for locating and avoiding these conflicts. The reject pipe shall be deflected below power supply to avoid conflict. The work associated with the supply well and reject well is the responsibility of the contractor. The pipes shall be installed in conformance with City of Naples Utility standards."

- 17. M-101: Remove note 3 reference from the outside CLR line that is parallel to the West wall of the Community Development Building (near HP-13)
- 18. M-302 Add note: "The HVAC contractor shall provide detail shop drawings of all piping to insure accurate payout."
- 19. M-302 Detail 1: Add a 4 inch swing check valve on the "RW" line just south of the "A" and "RW" Tee intersection.
- 20. M-302 See revised drawing M-302 for changes associated to expansion tank. Add note to "The overhead pipe shown within the mechanical yard layout, detail 1, shall be installed so bottom of pipe flange shall be 5 feet above grade to allow easy access to maintain the equipment."
- 21. M-304 detail 1: Change the note "transition from DIP to schedule 80 PVC inside building" to "use CPVC schedule 80 pipe at location where pipe is not in direct contact with the sun." also change note "transition from HDPE UG to DIP" to "transition from HDPE UG to CPVC"
- 22. M-304 detail 2: Change "HDPE pipe" to "CPVC pipe"
- 23. M-304 detail B: Please note that RW pipe/V1 and CLS pipe/V2 are not tied into the same pipe as implied in this detail.
- 24. M-401 Add note: Modify detail 1 to state that- "Direct buried pipe shall be installed in conformance with City Utility standards".
- 25. M-401 Detail 8 Reject Well Head Connection Elevation: Delete detail 8 and replace as shown at the end of these notes.
- 26. M-401 Detail 7 Well Pump Head Connection Elevation: Make the following modifications: Reverse the location of 4 inch check valve and gate valve. Eliminate the Dresser coupling and adjacent

gate valve, and install the flow meter (FM-1) and transmitter (Ts-1) at the current dresser coupling location.

- 27. E- 301: The work described is to be completed by the Contractor. The City will provide the light fixtures for the contractor's installation.
- 28. E-302 Detail 1 The contractor shall be responsible to provide power supply to: Duplex Pump Controller, LED wall pack, Supply Well pump controller and outdoor GFI outlets. Providing the Duplex Pump Controller and cabinet, The Duplex pump controller, Well pump disconnects, and the power supply and controls to the specific mechanical equipment is the responsibility of the HVAC contractor. Detail 2 - The power to the controller via circuit G-1 is by the contractor. All other wiring is control wiring by the contractor's responsibility. Detail 3 is the contractor's responsibility.

TKW lobby renovation design

1. S2 Add note – "The coating system is power coating with color to be selected by owner as specified."

ABB Phase 2 paver design

- Drawing #1 Add note "Contractor shall be required to provide the items, vendor, model number specified in the drawings. Should the Contractor wish to submit an alternate, this must be done 10 days prior to bid for owner review and approval."
- 2. Drawing #1 Add note "The Contractor shall carefully uncover the installed pipe and continue with the supply and installation of additional geotextile fabric, the three grades of stone, concrete curbs, flume, site work, and installation of owner supplied pavers. The Phase 2 work can only start AFTER all on the HVAC System improvements work, exterior of the building, is completed."

The below clarifications are issued as additional changes.

1. Replace original bid drawing M-302 with revised drawing M-302 (Find as Exhibit A below). The thermal expansion tank has been identified (see Note 8) and the tank location has changed (see detail A). A concrete support slab is added.

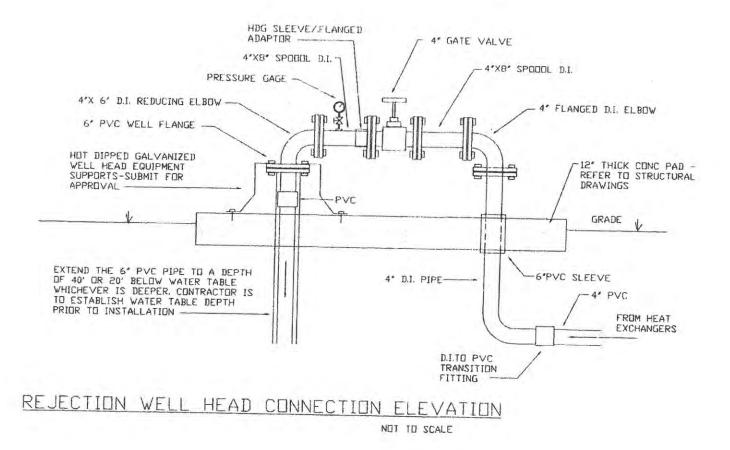
2. Any reference to Lobby Furniture in the bid documents shall be removed. The City will purchase and install the Lobby furniture.

3. The installation of the cooling water reject line shall under the parking pavement and the installation and restoration by the contractor shall be in conformance with the City Utility standards for installation of pipe under pavement.

4. All new pipes shall be pressure tested in conformance with City Utility standards.

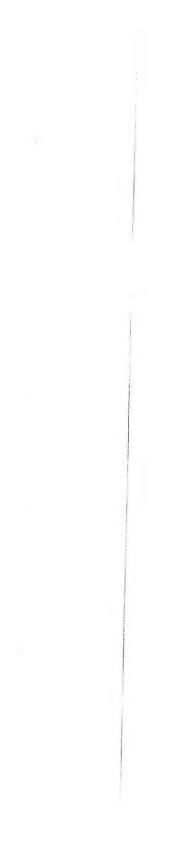
5. The two storage containers in line with the cooling water reject line shall be temporarily relocated, by the contractor, on site and re-positioned after the City has accepted the cooling water reject line installation. The contractor shall coordinate with the City for the temporary relocation location.

6. A list of potential truss fabricators and installers are provided for the GC reference only.



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PROJECT SCHEDULING / LOGISTICS

THIS FACILITY OPERATES DURING STANDARD BUSINESS HOURS SERVING THE PUBLIC. ALL WORK IN THE LOBBY AREA SHALL BE PERFORMED DURING SOUNDUSTING FOLUXS AFTER 4 PM AND BEFORE 7 AM, GENERAL CONTRACTOR IS EXPECTED TO WORK ON WEEKENDS TO MEET CONSTRUCTION DEADLINE.

GENERAL CONTRACTOR SHALL REMOVE TRASH AND DEBRIS FROM LOBBY AFTER WORKING ON A DAILY BASIS.

GENERAL CONTRACTOR SHALL PROTECT ALL COMPUTER EQUIPMENT, FURNITURE AND INTERIOR FINISHES DURING THE CONSTRUCTION OF ALL INTERIOR IMPROVEMENTS.

GENERAL NOTES

1. PRIOR TO PERFORMING ANY WORK, THE CONTRACTOR MUST OBTAIN AND SUBMIT COPIES OF THE REQUIRED PERMITS, FROM THE GOVERNING AGENCIES, TO THE CITY OF NAPLES PROJECT MANAGER.

- 2. DEFINITIONS: A. APPROVED AS APPROVED BY THE ARCHITECT OR ENGINEER. B. APPROVED EQUAL: AS ACCEPTED BY THE ARCHITECT OR ENGINEER AS BEING OF EQUIVALENT, QUALITY, UTILITY,
- OR ENGINEER AS BEING OF EQUIVALENT, QUALITY, UILLITY, AND APPEARANCE. C. AS APPLICABLE AS APPROPRIATE FOR THE PARTICULAR CONDITION CIRCUMSTANCE, OR STUDATION. D. AS REQUIRED: AS REQUIRED BY REGULATORY REQUIREMENTS, BY REFERENCED STANDARDS, BY EXISTING CONDITIONS, BY GENERALLY ACCEPTED CONSTRUCTION PRACTICE, OR BY THE CONTROLOCY DYCIMENT.
- DEMERALIT ACLEFIED CONSTRUCTION FOR DATA STORE CONTRACTOROUMENTS. DIRECTED: AS INSTRUCTED BY THE ARCHITECT IN WRITING. SUBJECT TO THE ARCHITECT ACCEPTANCE. TYPICAL IDENTICAL FOR ALL SUCH CONDITIONS, UNLESS

- G. TYPICAL IDENTICAL FOR ALL SUCH CONDITIONS. UNLESS OTHERWISE INDICATED. N. SIMILAR: COMPARABLE CHARACTERISTICS FOR THE CONDITION NOTED. DIFFERENCES CAN BE INFERRED FROM OTHER INFORMATION INDICATED. VERIFY DIMENSIONS AND ORIENTATIONS. I. FURNISH. SUPPLY ONLY: OTHERS WILL INSTALL. J.INSTALL: INSTALL: INSTALL. K. PROVIDE: FURNISH AND INSTALL.

3. ALL WORK TO BE PERFORMED SHALL COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (F.B.C.) LATEST EDITION AND ANY AGENCY HAVING JURISDICTION ON THIS PROJECT,

4.WORK NOT INCLUDED IN CONTRACT: WORK NOTED "N.I.C." OR "BY OTHERS" ON THE DRAWINGS OR SPECIFICATIONS, IF ANY MATERIALS, EQUIPMENT OR BOTH, INDICATED "NI.C." ARE TO BE INSTALLED BY THE CONTRACTOR, THEY WILL BE SO NOTED ON THE DRAWINGS OR SPECIFICATIONS.

5. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE 5. ALL OMISSIONS OR CONFLICTS BE IWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAININGS, SHALL BE BROJGHT OT THE IMBUDITE ATTENTION OF THE ARCHTECTENGINEER, BEFORE PROCEEDING WITH ANY WORK SO INVOLVED, ANY WORK INSTALLED IN CONFLICT WITH THE ARCHTECTURAL DRAININGS SHALL BE CORRECTED BY THE CONFRETOR AT HIS/HER OWN EXPENSE, AND NOT AT EXPENSE OF THE OWNER OR ARCHTECTICHONIKER,

6. CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS OF THE JOB. THE ARCHITECT/ENGINEER SHOULD BE NOTIFIED BEFORE PROCEEDING WITH THE WORK OF ANY DISCREPANCIES IN THE CONTRACT DOCUMENTS AND/OR UNFORESEEN CONDITIONS ON THESE DRAWINGS AND/OR ALL OSVIOJE FRANCIS AND/OR OMISSIONS.

7. CONTRACTOR SHALL PROMPTLY NOTIFY THE ARCHITECT/ENGINEER OF THE EXISTENCE OF ANY OBSERVED VARIATIONS BETWEEN THE CONTRACT DOCUMENTS AND ANY APPLICABLE CODE OR ORDINANCES.

8. FACILITIES SHALL COMPLY WITH THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION AND THE AMERICAN WITH DISABILITIES ACT, PUBLIC LAW 101-335 (A.D.A.) WHICHEVER IS MOST STRINGENT,

9. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND TOPOGRAPHIC SPOT ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY EXISTING DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.

10. CONTRACTOR ACKNOWLEDGES THAT HE HAS FULLY INFORMED HIMSELF / HERSELF, REGARDING REQUIREMENTS OF DRAWINGS, SPECIFICATIONS AND REGULATIONS PERTAINING TO THE PROJECT. SPECIFICATIONS AND DRAWINGS ARE COMPLEMENTARY, AND WHAT IS CALLED FOR BY ONE IS AS BINDING AS IF CALLED FOR BY ALL, VISIT SITE OF WORK, COMPARE REQUIREMENTS OF DRAWINGS AND SPECIFICATIONS AND BECOME FAMILIAR WITH EXISTING CONDITIONS UNDER WHICH WORK OF CONTRACT IS TO BE PERFORMED, APPROACHES AND IMPROVEMENTS ON DA BAOUT SITE, INCLUDING PROTECTION OF ADJACENT BUILDINGS AND PROPERTY.

11. EXERCISE ALL REQUIRED PRECAUTIONS NECESSARY TO PROTECT ALL BUILDINGS AND OTHER CONSTRUCTIONS ON PROPERTY ADJACENT TO THAT OF THE WORK OF THIS CONTRACT. THE WORK OF THIS CONTRACT OCCURS WITHIN EXISTING, FULLY FUNCTIONAL, FACILITES THAT ARE FREQUENTED BY THE GENERAL PUBLIC, ALL WORK AND OPERATIONS SHALL BE CARRIED OUT AND SCHEDULED SO AS TO PREVENT ANY DAMAGE OR INJURY TO. THE FUNSHED AREAS WITHIN THE EXISTING TO THE NEW WORKI, INS PRORE REGULAR, MODIFICATION TO CONFORM ONLY BUSINESS OPERATIONS. THE CONTRACTOR SHALL TWEE'S DAMA SUSTERS OPERATIONS. THE CONTRACTOR SHALL TWEE SO DAMAGES TO THE EXISTING FACILITIES (OTHER THAN THOSE REQUIRED TO PREVENT DAMAGES TO THE EXISTING FACILITIES (OTHER THAN THOSE REQUIRED DAMAGES TO THE EXISTING FACILITIES (OTHER THAN THOSE REQUIRED OF INJURIES OPERATIONS OR PROPERTY. ALL COST OF REPAIRS FOR FALURE ON THE PART OF THE CONTRACTOR TO TAKE NEESSARY PRECALITONS TO AVOID ANY DEVIDENTIAL TO ANY DAMAGES SHALL BE BORNE ENTRIEL BY THE CONTRACTOR AND REPAIRS SHALL BE FRECALITONS TO AVOID ANY DEVIDED AT THE ONTRACTOR TO TAKE NEESSARY PRECALITONS TO AVOID ANY DOUPLOTANCE AND REPAIRS SHALL BE SHALL BE BORNE ENTRIELY BY THE CONTRACTOR AND REPAIRS SHALL BE SHALL BE BORNE ENTRIELY BY THE CONTRACTOR AND REPAIRS SHALL BE SHALL BE BORNE SHALL REPAIRS SHALL BE BORNE DATIONS AND ADDITONAL COST TO THE OWNER.

12. THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION, FABRICATION, PROCUREMENT, SHIPMENT, DELIVERY OR INSTALLATION OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION TO THE WORK FOR THE ACTS OR OMISSIONS OF THE CONTRACTORS, SUBJOILERS, SUPPLIERS, OF THE CONTRACTORS, SUBPLIERS, SUPPLIERS, OF THE CONTRACTORS, SUBJOILERS, SUPPLIERS, SUPPLIERS, OF THE CONTRACTORS, SUBJOILERS, SUPPLIERS, SUPPLIERS, OF TAN OTHER PERSONS PERFORMING ANY OF THE WORK OR FOR THE FALURE OF ANY OF THEM TO CARRY OUT THE WORK OR TO MEET THEIR SCHEDULES FOR DELIVERY OR COMPLETION IN ACCORDANCE TO THE CONTRACT DOCUMENTS.

13. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS JF ANY DISCREPANCIES ARISE, THE ARCHITECTENGINEER SHALL BE NOTIFIED PRIOR TO TI COMMENCEMENT OF WORK, FOR CLARIFICATION. ALL DIMENSIONS INDICATED ON ARCHITECTURAL PLANS ARE AS FOLLOWS: TO THE

- A. HORIZONTAL DIMENSIONS ARE SHOWN FROM FACE OF ROUGH MASONRY/CONCRETE/STUD TO FACE OF ROUGH MASONRY/ CONCRETE/STUD, U.O.Y.
 DIMENSIONS NOTED "CLEAR" OR "CLR" MUST BE PRECISELY MAINTAINED. THOSE NOTED "HOLD" SHALL NOT VARY FROM STATED DIMENSION.

- F. DIMENSIONS MARKED V.I.F. SHALL BE "VERIFIED" IN FIELD BY THE CONTRACTOR.
- G. ROUNDING OF LENGTHS ONLY ALLOWED AS INDICATED IN THE PLANS.

14. CONTRACTOR SHALL VERIFY THAT NO CONFLICTS EXIST IN LOCATIONS OF ANY AND ALL MECHANICAL, TELEPHONE, ELECTRICAL, UIGHTING AND FLUMBING (TO INCLUDE ALL PIPING, DUCTWORK AND CONDUTS) AND THAT REQUIRED CLEARANCES FOR INSTALLATION AND MAINTENANCE OF ABOVE MENTIONED EQUIPMENT ARE PROVIDED.

15. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND / OR STRUCTURES SHOWN AND ANY OTHER UTILITIES OR STRUCTURES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.

16. ALL LABOR INSTALLATION SHALL BE PERFORMED IN THE BEST POSSIBLE WORKMANLIKE MANNER BY SKILLED AND EXPERIENCE WORKMEN TRAINED IN THEIR RESPECTIVE TRADES.

17. THE ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT MATERIALS AND WORK QUALITY WHICH ARE NOT CONSIDERED TO BE UP TO THE SPECIFIED STANDARDS OF THE VARIOUS TRADES INVOLVED. SUCH INFERIOR MATERIAL OR WORK QUALITY SHALL BE REPAIRED OR REPLACED. AS DIRECTED, AT NO ADDITIONAL COST TO THE OWNER.

18. ALL FINISH MATERIAL SHALL BE PROTECTED AT ALL TIMES AGAINST SUBSEQUENT DAMAGE UNTIL FINAL ACCEPTANCE BY THE OWNER.

19. THE ABSENCE OF A DETAIL DESCRIBING A PARTICULAR METHOD OF CONSTRUCTION SHALL IMPLY, THE CONTRACTOR SHALL CONSTRUCT SAID DETAILS IN COMPLIANCE WITH INDUSTRY STANDARDS FOR THE TYPE OF CONSTRUCTION OF THE BUILDING IN A WORKMANLIKE MANNER, AND PROVIDE SHOP DRAWINGS FOR DEPUTTERS APPROVA ARCHITECTS APPROVAL.

20. DRAWINGS INDICATE GENERAL DETAILS OF CONSTRUCTION. WHERE FIELD CONDITIONS ARE NOT IDENTICAL TO THE CONTRACT DOCUMENTS, BUT ARE OF SIMILAR CHARACTER TO THE DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY ARCHITECTIVAINEER PRIOR TO CONSTRUCTION. WHERE CONSTRUCTION DETAILS ARE SHOWN FOR SPECIFIC LOCATIONS. THEY SHALL ALSO APPLY TO SIMILAR CONDITIONS THROUGHOUT, WHETHER SPECIFICALLY MENTIONED IN THE DRAWINGS OR NOT.

21. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGERS, OR OTHER SUPPORT, FOR ALL BUILDING EQUIPMENT AN ACCESSORIES SHOWN ON PLANS, REGARDLESS OF WHOM SUPPLIES SAID EQUIPMENT OR ACCESSORY, UNLESS NOTED OTHERWISE.

22. VEHICULAR ACCESS MUST BE PROVIDED AND MAINTAINED SERVICEABLE THROUGHOUT CONSTRUCTION, THE CONTRACTOR, PRIOR TO START UP, SHALL COORDINATE WITH THE OWNER LOCATION OF STAGING AREAS, DELIVERY AREA, EMPLOYEE ENTRANCES, ETC.

23. ALL TRADES SHALL AT ALL TIMES, KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIAL OR RUBBISH CAUSED BY THEIR WORK, PROVIDE CLEANUP AND DISPOSE OF ALL DEBRIS, FOR A NEAT AND CLEAN JOB SITE CONDITION THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS, AT THE COMPLETION OF THE WORK, LEAVE: THE FLOOR AND PAVEMENT AREA IN A BROOM CLEAN CONDITION WITH NO STAINS, ROLL OFF CONTAINERS MUST BE USED.

24. NO PERSON SHALL PERFORM ANY WORK ON ANY BUILDING OR STRUCTURE ADJACENT TO A PUBLIC WAY IN GENERAL USE BY THE PUBLIC FOR PEDESTRIAN TRAVEL, UNLESS THE PEDESTRIANS ARE PROTECTED BY FENCES, CANOPIES OR OTHER DEVICES.

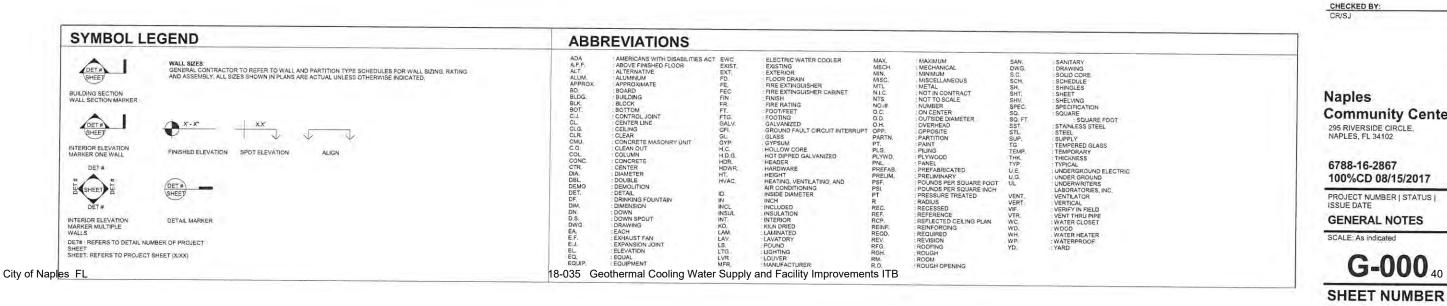
25. PREFABRICATED CONSTRUCTION ELEMENTS AND STRUCTURES SHALL BE MADE BY SHOPS WHICH HAVE CURRENT (CEO, UL, ETC.) CERTIFICATION AS APPROVED FABRICATORS FOR SUCH UNITS OR ELEMENTS. THE RESPONSIBLE DESIGN ARCHITECTENGINEER SHALL PROVIDE (A SHOP STAMP) AND APPROVE OF THE DESIGN, PLANS, CONSTRUCTION DETAILS, AND SPECIFICATIONS FOR ALL PREFABRICATED FRAMING MEMBERS AND SHALL SUBMIT SAME TO THE CORRESPONDENT BUILDING AND PLANING DEPARTMENT AND RECEIVE APPROVAL THEREFROM PRIOR TO THE ERECTION OF THE MEMBERS.

25. THE CONTRACTOR IS TO PROVIDE SECURITY BARRIERS AND OTHER APPLICABLE DEVICES AS REQUIRED TO CARRY OUT THE WORK AS REQUIRED BY LOCAL AND/OR STATE CODE AND REGULATIONS. PLACEMENT OF SAFETY DEVICES IS TO TAKE PLACE IN A MANNER SO AS NOT TO DISRUPT THE FACILITY OPERATIONS.

27. REMOVED EQUIPMENT AND MATERIALS NOT BEING REUSED OR RETURNED TH OWNER SHALL BE REMOVED FROM THE SITE AND LEGALLY DISPOSED OF BY THE CONTRACTOR.

28. ALL EXTERIOR PIPING SUPPORT BRACKETS AND EQUIPMENT CURBS SHALL HAVE RUST PROOFING COATING FROM MANUFACTURER AND TWO COATS OF PAINT (COLOR TO BE SELECTED BY OWNER).

29. ALL EXTERIOR PIPING TO RECEIVE TWO COATS OF PAINT TO MATCH EXISTING BUILDING







ZONNING CODE: COLLIER COUNTY

BUILDING CODE

SCOPE OF WORK

THIS PROJECT INCLUDES THE DESIGN FOR A NEW EXTERIOR MECHANICAL ENCLOSURE ADJACENT TO THE EXISTING ELECTRICAL ROOM BUILDING, NEW INTERIOR VERTICAL WALL EXTENSION TO EXISTING LOW WALLAT THE 2** EVEL MEZZANINE TO CONCEAL NEW MECHANICAL DUCTWORK AND THE DESIGN OF AN EXTERIOR WALL MOUNTED PIPE ENCLOSURE ALONG THE WEST BUILDING ELEVATION.

NEW LOBBY LIGHTING AND MECHANICAL DUCTWORK IN New LOBBY, AS WELLAS THE RECONFIGURATION OF THE WATER SOURCE HEAT PUMP FROM AN OPEN LOOP TO A CLOSE LOOP SYSTEM UTILIZING NEW WELL PUMPS AND MODIFICATIONS TO EXISTING RECLAIMED WATER SYSTEM.

PROJECT LOCATION 0





Community Development Building 295 Riverside Circle Naples, FL 34102

APPLICABLE CODES

FLORIDA BUILDING CODE 5TH EDITION 2014 ACCESIBILITY CODE: FLORIDA BUILDING CODE 5TH EDITION 2014 - ACCESSIBILITY PRE CODE: FIRE CODE: FLORIDA FIRE PREVENTION CODE 5TH EDITION LIFE SAFETY: NFPA 101 MECHANICAL / PLUMBING CODE: FLORIDA SULDING CODE 5TH EDITION 2014 ELECOTRICAL CODE: N.E.C. 2014

amec foster wheeler

5845 NW 158th Steet Miami Lakes, FL 33014 USA P:+1(305) 826-5588 F:+1(305) 826-1799 www.amecfw.com

ARCHITECT OF RECORD

REVISION SCHEDULE

No.	DESCRIPTION	DATE
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SANTIAGO JIMENEZ R.A. AR-94369

PROJECT	TEAM
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AMEC FOS	STER WHEELER - CR
	WINGS BY:
CR/GT	
CHECKED	BY:
CR/SJ	

Naples Community Center

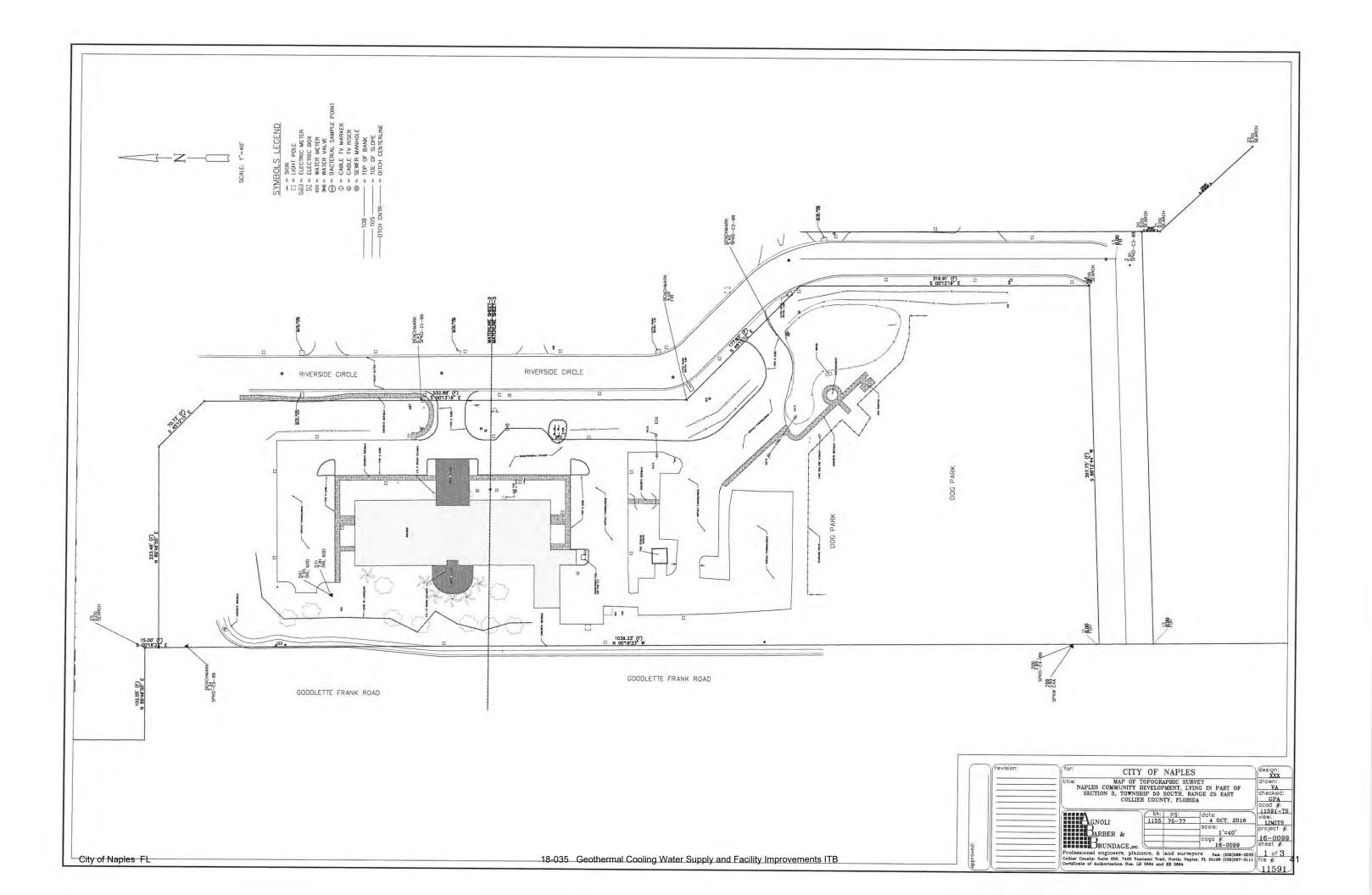
295 RIVERSIDE CIRCLE. NAPLES, FL 34102

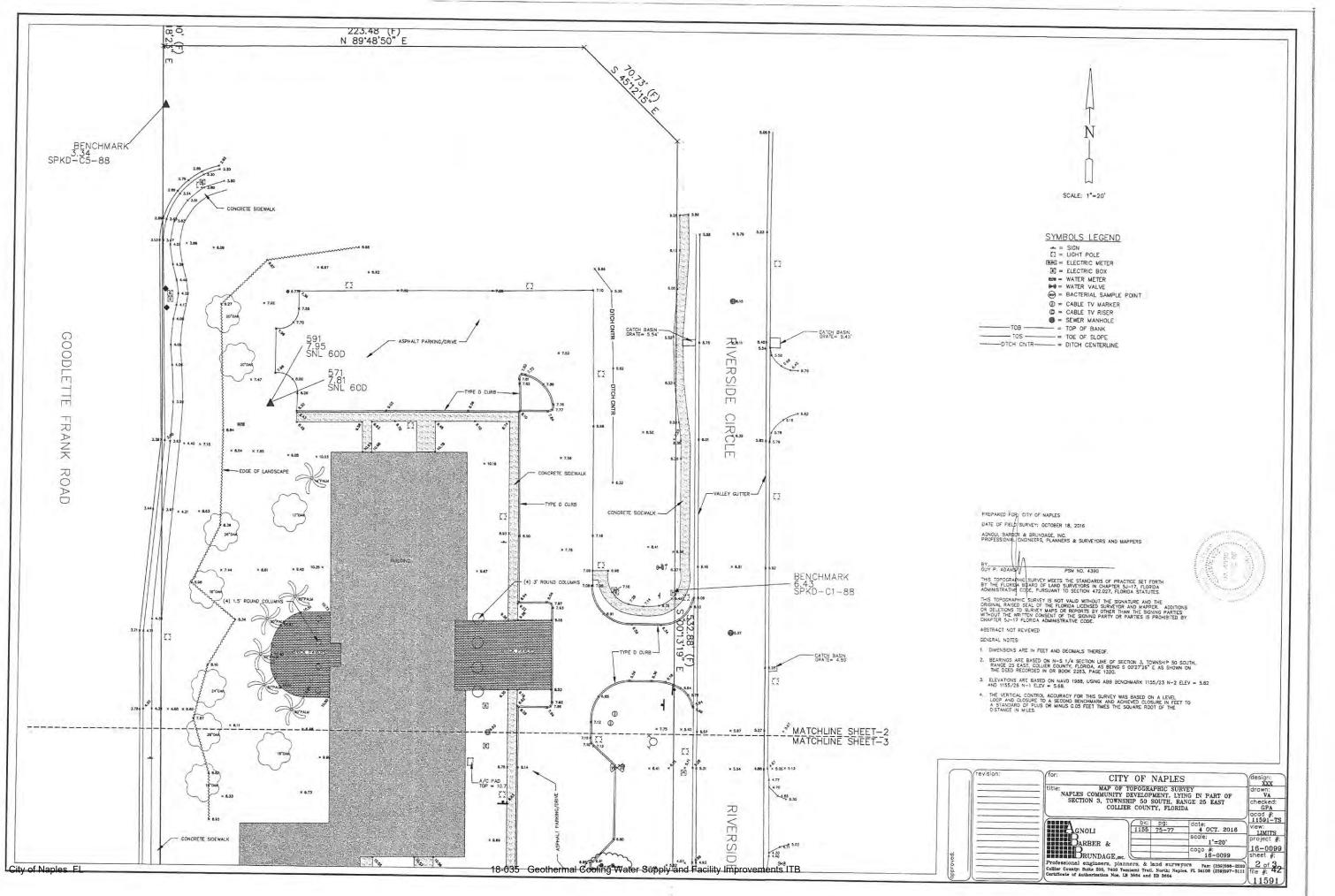
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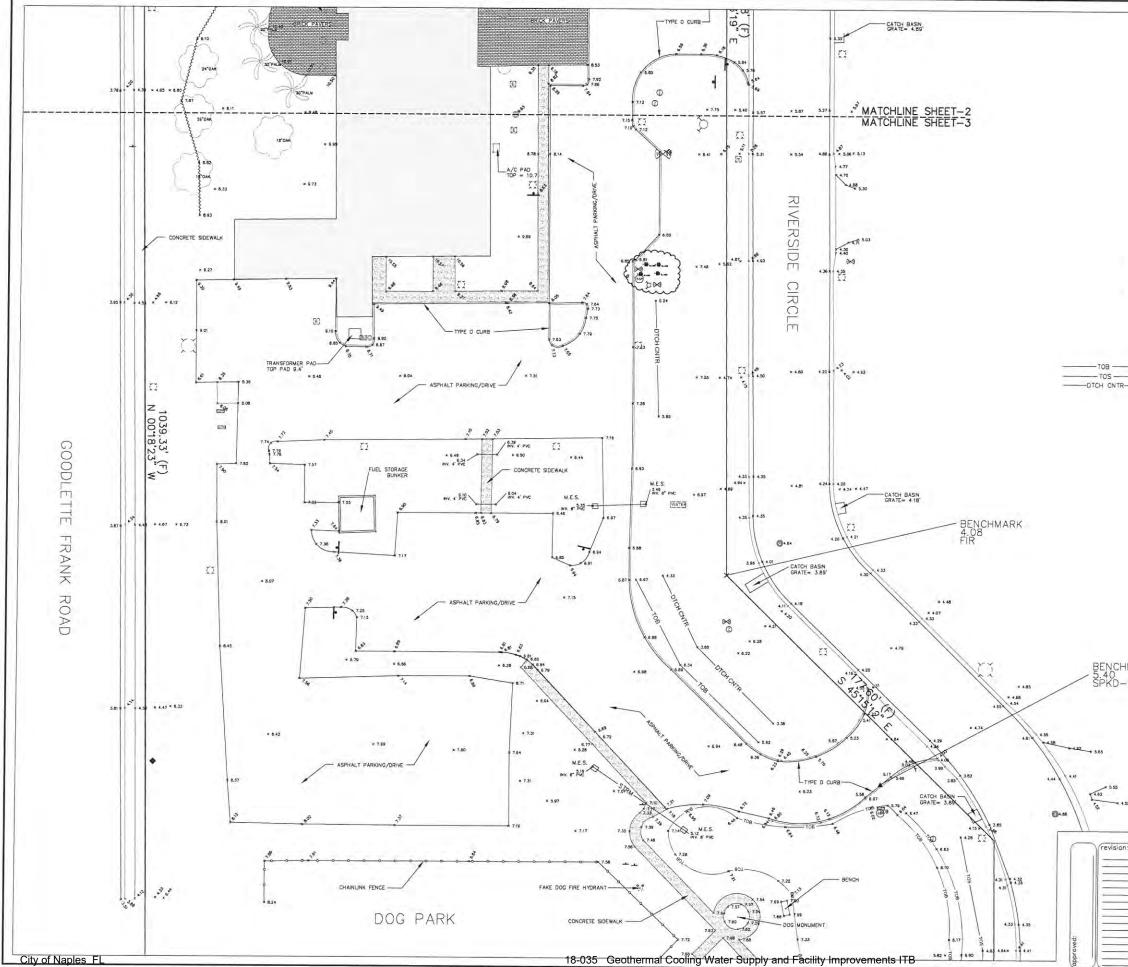
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GENERAL NOTES SCALE: As indicated

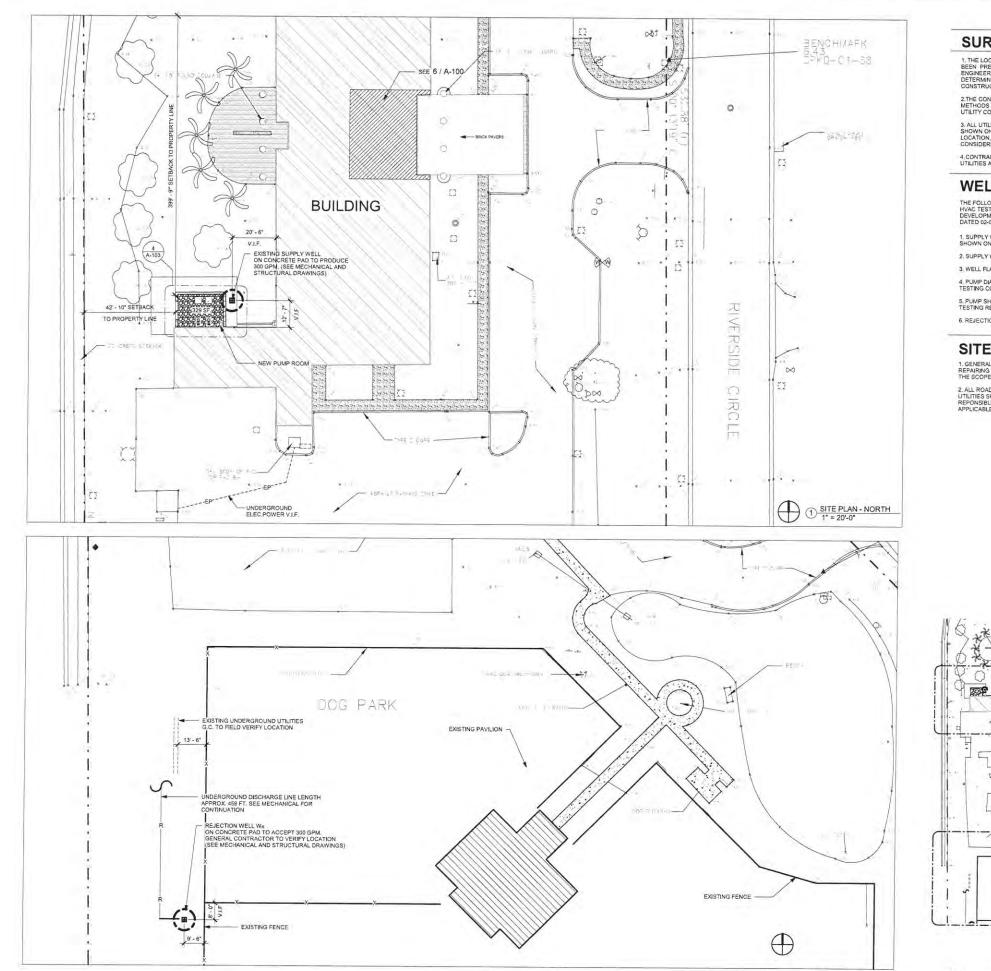
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SCALE: 1"=20'			
YMBOLS LEGEND			
II = LIGHT POLE EI = ELECTRIC METER EI = ELECTRIC BOX EI = WATER METER M = WATER VALVE ■ BACTERIAL SAMPLE POINT D = CABLE TV MARKER			
© = CABLE TV RISER ■ = SEWER MANHOLE = TOP OF BANK = TOE OF SLOPE = DITCH CENTERLINE			
₹K			
RK - 88			
- 88	TY OF NAPLES F TOPOGRAPHIC SURVEY BEVELOPMENT, LYNG SSHUP 50 SOUTH, RANG LER COUNTY, FLORIDA	f IN PART OF E 25 EAST	design: XXX drawn: Checked: GCD4 drawn:



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City of Naples FL

18-035 Geothermal Cooling Water Supply and Facility Improvements International Cooling Water Supply and Facility Intern

SURVEY & UTILITIES LOCATION:

1. THE LOCATION AND SIZE OF ALL EXISTING UTILITIES AND TOPOGRAPHY HAVE BEEN PREPARED FROM THE MOST RELIABLE INFORMATION AVAILABLE TO THE ENGINEER. THIS INFORMATION IS NOT GUARANTEED. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ANY EXISTING UTILITIES PRIOR TO CONSTRUCTOR.

2.THE CONTRACTOR SHALL VERIFY ALL UTILITIES, BY ELECTRONIC AND MAGNETIC METHODS AND, BY HAND EXCAVATION WHERE NECESSARY, IN COORDINATION WITH UTILITY COMPANIES, PRIOR TO BEGINNING ANY CONSTRUCTION OPERATIONS.

3. ALL UTILITIES ENCOUNTERED DURING CONSTRUCTION SHALL BE RECORDED AND SHOWN ON AS-BUILT PLANS WHICH INCLUDES TYPE OF UTILITY, DIRECTION, LOCATION, ELEVATIONS, ETC, THIS WORK BY THE CONTRACTOR SHALL BE CONSIDERED INGIDENTAL TO THE CONTRACT.

4. CONTRACTOR SHALL CONTACT UTILITY COMPANIES TO IDENTIFY UNDERGROUND UTILITIES AND/OR CABLES WITHIN THE PROJECT LIMITS AND/OR STAGING

WELL / PUMP PERFORMANCE

THE FOLLOWING WELL AND PUMP PERFORMANCE NOTES ARE PROVIDED BY THE HVAC TEST WELL COMPLETION & FINDINGS REPORT FOR THE COMMUNITY DEVELOPMENT CENTER, NAPLES FL, PERFARED BY ANEC FOSTER WHEELER AND DATED 02-09-17. SEE REPORT FOR ADDITIONAL INFORMATION.

1. SUPPLY WELL SHALL BE CONSTRUCTED TO HOUSE SUBMERSIBLE WELL PUMP SHOWN ON MECHANICAL DRAWINGS. SEE M-001

2. SUPPLY WELL TO PROVIDE UP TO 300 G.P.M. TO NEW CLOSED LOOP SYSTEM. 3. WELL FLANGE ELEVATION TO BE THAT OF THE TOP OF NEW CONCRETE PAD.

4. PUMP DIAMETER SHALL BE NO MORE THAN 5" DIA. TO MATCH THE REPORTS TESTING CONTROL UNIT.

5. PUMP SHALL BE INSTALLED AT A DEPTH OF 60' BELOW GRADE TO MATCH REPORT TESTING RESULTS.

6. REJECTION WELL TO ACCEPT UP TO 300 G.P.M. FROM NEW CLOSED LOOP SYSTEM.

SITE IMPROVEMENTS

1. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING AND/OR REPAIRING ANY TURF, PAVERS, PLANTERS OR OTHER SITE ELEMENTS IMPACTED BY THE SCOPE OF WORK

2. ALL ROAD WORK SHALL BE COMPLETED IN ACCORDANCE TO CITY OF NAPLES UTILITIES SPECIFICATIONS AND STANDARDS MANUAL GENERAL CONTRACTOR IS REPONSIBLE TO IDENTIFY, EVALUATE AND MEET THOSE REQUIREMENTS WHERE APPLICABLE. amec foster wheeler

5845 NW 158th Steet Miami Lakes, FL 33014 USA P:+1(305) 826-5588 F:+1(305) 826-1799 www.amecfw.com

ARCHITECT OF RECORD

REVISION SCHEDULE

No.	DESCRIPTION	DATE
-		
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PROJECT TEAM DESIGNER AMEC FOSTER WHEELER - CR BIM / DRAWINGS BY: CR/GT CHECKED BY:

CHECKED BY: CR/SJ

 Naples
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 Community Center
 295 RIVERSIDE CIRCLE, NAPLES, FL 34102
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 90% CD 08/15/2017
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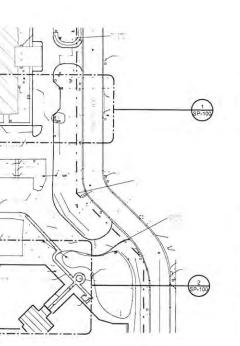
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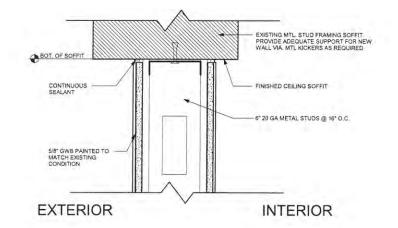
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SP-100₄

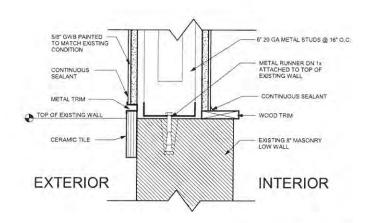
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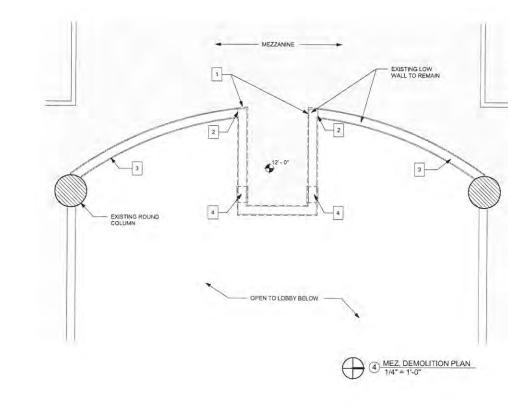
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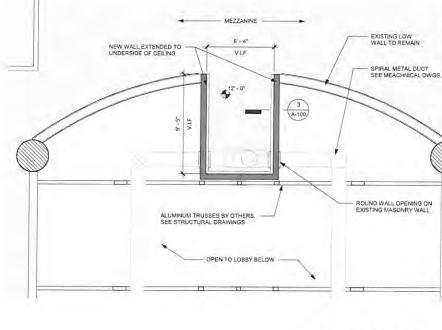




1 NEW INTERIOR WALL @ CEILING 3" = 1'-0"











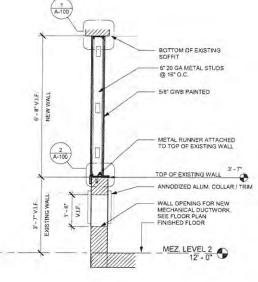
WALL OPENING NOTES

- 3. CONTRACTOR TO PATCH AND REPAIR SURROUNDING WALL AND PAINT AS APPLICABLE TO MATCH EXISTING CONDITIONS.



(5) MEZ. NEW WALL EXTENSION PLAN 1/4" = 1'-0"

2 NEW INTERIOR WALL @ BOTTOM



3 WALL SECTION

SYMBOL LEGEND

EXISTING WALL / PARTITION TO REMAIN

CIII EXISTING CERAMIC TILE CAP TO BE DEMOUSHED

NEW WALL / PARTITION

GENERAL DEMOLITON NOTES

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF CONDITIONS AND QUANTITIES AND NOTIFY IN WRITING THE AET TEAM AND THE CITY OF NAPLES PROJECT MANAGER OF ANY DISCREPANCIES FOUND.

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND NOTIFY THE ARCHITECT OF ANY EXISTING DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.

THE CONTRACTOR IS TO EXERCISE DUE CARE DURING THE DEMOLITION AND REMOVAL PHASE; TO ASSURE THAT ITEMS SCHEDULED FOR DEMOLITION AND REMOVAL ARE PROPERLY REMOVED WITHOUT DAMAGE TO THE SURROUNDING AREA(S).

ITEMS SCHEDULED TO BE RELOCATED OR TO REMAIN ARE TO BE COORDINATED WITH THE OWNER AND ARE TO BE SUBSEQUENTLY PROTECTED FROM DAMAGE.

ALL ITEMS THAT ARE CALLED TO BE DEMOLISHED ARE TO BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OI AS REQUIRED BY LOCAL AND STATE CODES AND AS REQUIRED BY AUTHORITIES HAVING JURISDICTION UNLESS OTHERWISE INDICATED.

THE CONTRACTORS SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PATCHING AND RE-FINISHING ANY DAMAGED SUPRACES AS A DIRECT OR INDIRECT RESULT OF THIS WORK, MATCH EXISTING FINISHES AND PAINT ALL SURFACES AFFECTED BY THE NEW CONSTRUCTION.

THE CONTRACTOR SHALL PROTECT THE EXISTING INTERIOR FINISHES NOT SCHEDULED TO BE REMOVED OR DEMOLISHED

DEMOLITION KEY NOTES

CERAMIC TILE CAP TO BE REMOVED TO EXPOSE TOP OFF EXISTING WALL PATCH, REPAIR AND LEVEL TO RECEIVE NEW WALL EXTENSION DURING NEW CONSTRUCTION,

2 SAW CUT EXISTING CERAMIC TILE CAP AS SHOWN, REMOVE TOP AND INTERIOR SIDE, PRESERVE TILE FACING LOBBY SIDE.

3 PROTECT AND REPAIR ADJACENT TILE CAP AND LOW WALL AS REQUIRED.

4 SAW CUT NEW ROUND OPENING ON EXISTING MASONRY WALL COORDINATE OPENING SIZE AND LOCATION WITH MECHANICAL DESIGN DOCUMENTS.

NEW FINISH NOTES:

1. GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE NEW WALL FINISH LAYER AND CEILINGS.

2. WALL FINISH LAYER EXTEND 6" MIN. ABOVE NEW ATC CEILING.

3. GENERAL CONTRACTOR SHALL RESEARCH AND MATCH EXISTING FINISHES, AND PROVIDE CITY OF NAPLES WITH PAINT CHIP FOR APPROVAL

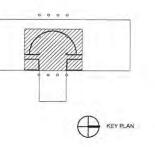
1. HEIGHT, SIZE AND LOCATION OF NEW DUCTWORK OPENINGS ON MASONRY WALLS SHALL BE COORDINATED BY GENERAL CONTRACTOR.

2. CONTRACTOR SHALL PROVIDE PROPER FLASHING AND SEAL AT OPENINGS.

FACILITY OPERATIONS

1. GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING CONSTRUCTION AS TO MAINTAIN THE OVERALL OPERATION OF THE BUILDING DEFT. BUILDING VERATION OF ENTRON TO BE IMPACTED BY CONSTRUCTION THIS FACILITY SHALL REMAIN OPERATIONAL

2. CONSTRUCTION IN THE LOBBY HALL TAKE PLACE DURING NON WORKING HOURS.





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ARCHITECT OF RECORD

REVISION SCHEDULE

No.	DESCRIPTION	DATE
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1.1		
1.10		
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SANTIAGO JIMENEZ R.A. AR-94369

PROJECT TEAM DESIGNER AMEC FOSTER WHEELER - CR BIM / DRAWINGS BY: CR/GT

CHECKED BY

Naples

Community Center 295 RIVERSIDE CIRCLE, NAPLES, FL 34102

6788-16-2867 100%CD 08/15/2017

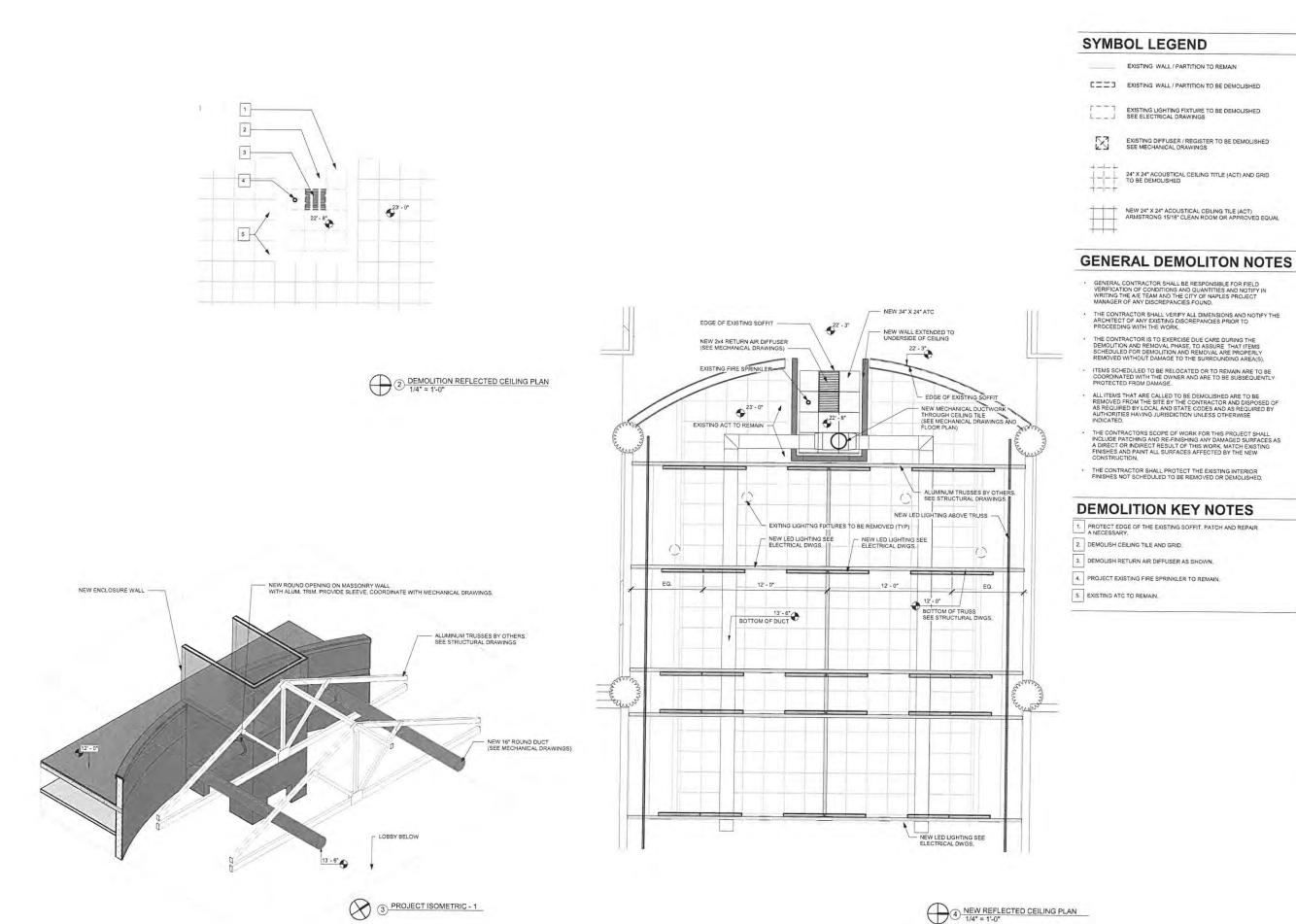
PROJECT NUMBER | STATUS | ISSUE DATE

A-100₄₅

SHEET NUMBER

FLOOR PLANS

SCALE: As indicated



18-035 Geothermal Cooling Water Supply and Facility Improvements ITB

	EXISTING WALL / PARTITION TO REMAIN
= 1	EXISTING WALL / PARTITION TO BE DEMOLISHED
]]	EXISTING LIGHTING FIXTURE TO BE DEMOLISHED SEE ELECTRICAL DRAWINGS
2	EXISTING DIFFUSER / REGISTER TO BE DEMOLISHED SEE MECHANICAL DRAWINGS
	24" X 24" ACOUSTICAL CEILING TITLE (ACT) AND GRID



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SANTIAGO	JIMENEZ	R.A
AR-94369		

AR-94369	-
PROJECT TEAM	
DESIGNER	
AMEC FOSTER WHEELER - CR	
BIM / DRAWINGS BY:	
CR/GT	
CHECKED BY:	-
CR/SJ	

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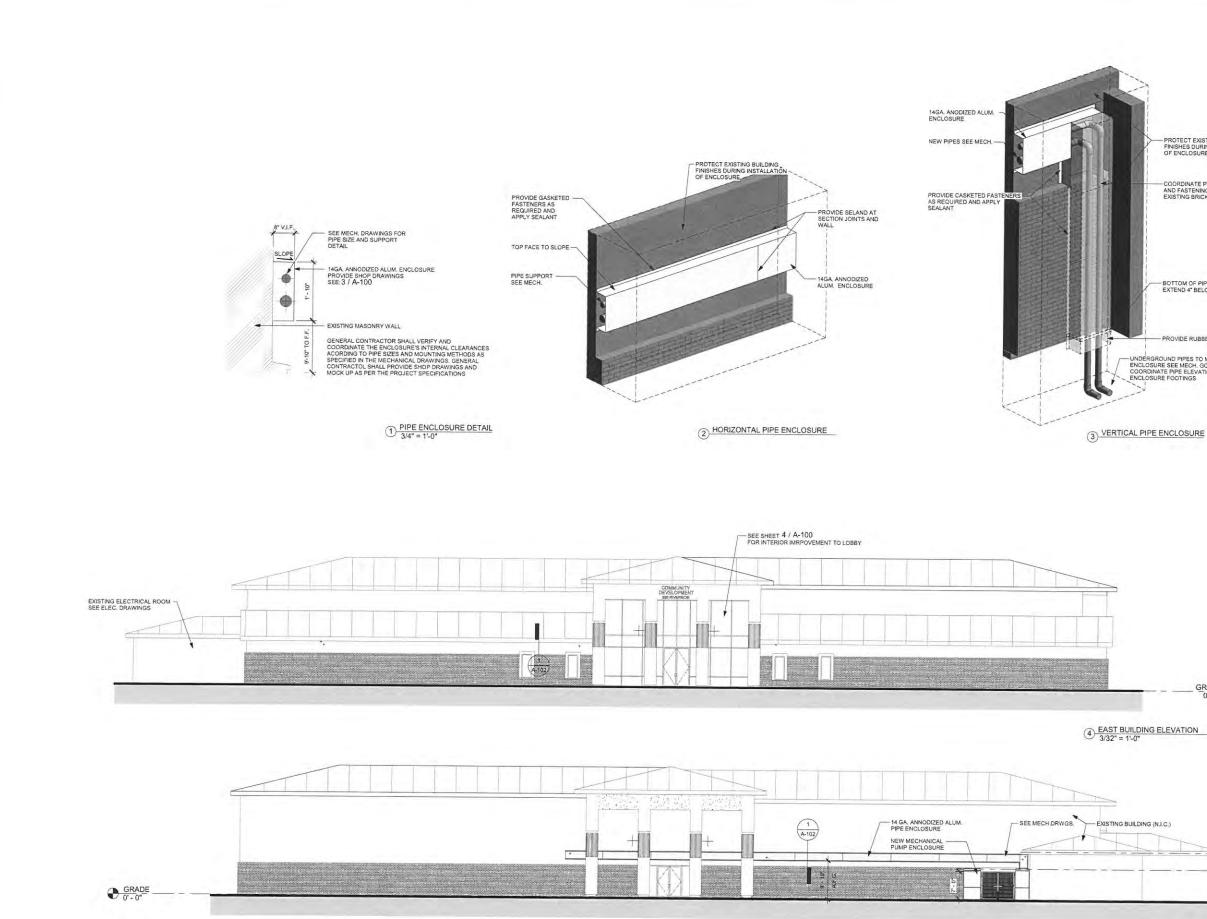
6788-16-2867 100%CD 08/15/2017

PROJECT NUMBER | STATUS | REFLECTED CEILING PLAN

A-101₄₆

SHEET NUMBER

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



Me

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ARCHITECT OF RECORD

REVISION SCHEDULE

No.	DESCRIPTION	DATE
		1.0

- BOTTOM OF PIPE ENCLOSURE TO EXTEND 4" BELOW GRADE

- PROTECT EXISTING BUILDING FINISHES DURING INSTALLATION OF ENCLOSURE

-COORDINATE PIPE ROUTING AND FASTENING WITH EXISTING BRICK WAINSCOT

PROVIDE RUBBER BASE TRIM TO GRADE

GRADE

EXISTING BUIILDING TOB 12' - 0"

T.O.B. 7'-8"

-UNDERGROUND PIPES TO MECH ENCLOSURE SEE MECH, GC, TO COORDINATE PIPE ELEVATION WITH NEW ENCLOSURE FOOTINGS

SANTIAGO JIMENEZ R.A. AR-94369

PROJECT TEAM DESIGNER AMEC FOSTER WHEELER - CR BIM / DRAWINGS BY: CR/GT

CHECKED BY: CR/SJ

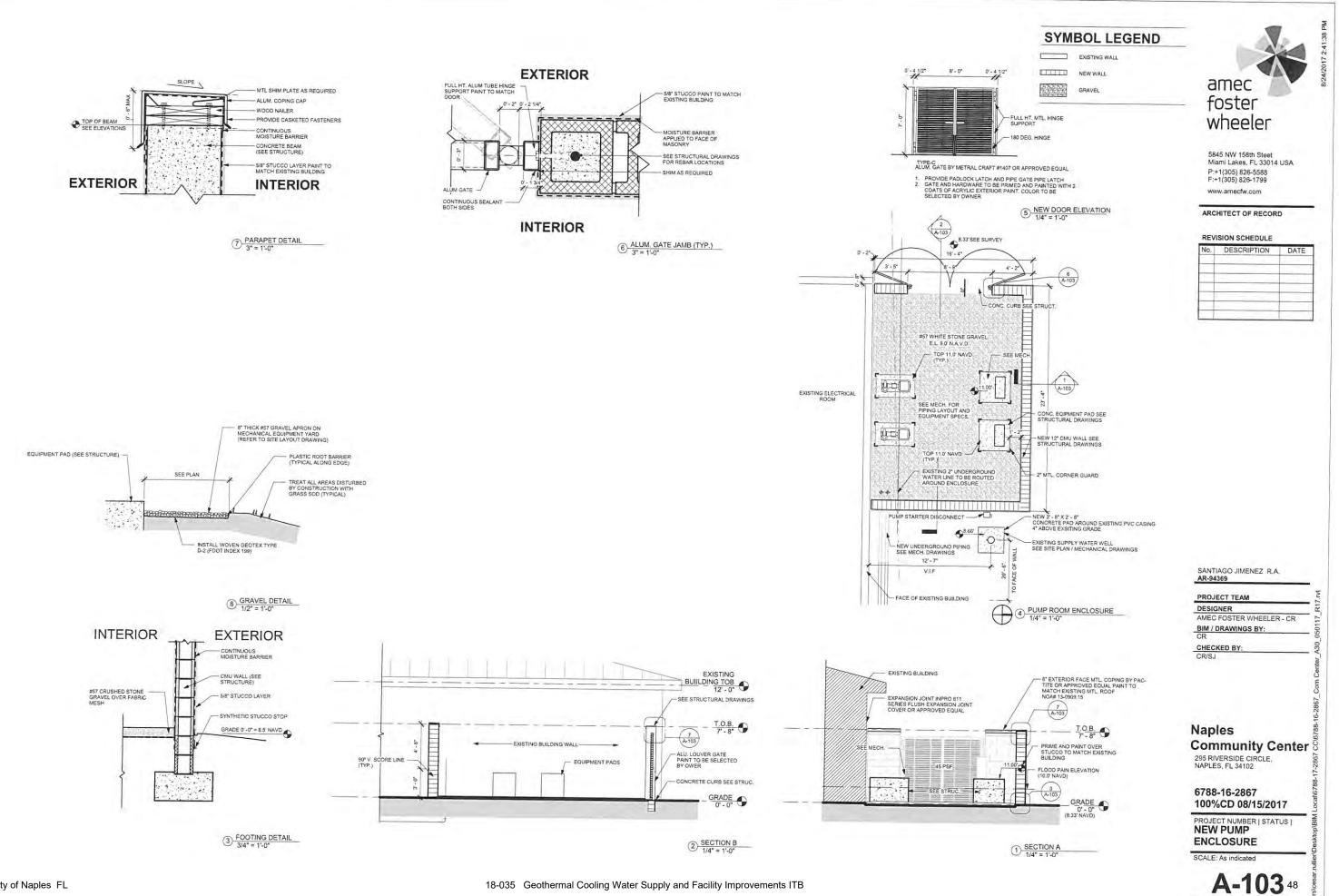
Naples Community Center 00 295 RIVERSIDE CIRCLE, NAPLES, FL 34102 6788-16-2867 100%CD 08/15/2017

PROJECT NUMBER | STATUS | EXTERIOR ELEVATIONS

A-10247

SHEET NUMBER

SCALE: As indicated



SHEET NUMBER

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

- 1.1 DEFINITIONS
- A. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.
- Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.
- 1.2 FIELD CONDITIONS
- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical. 1. Before selective demolition. Owner will remove the following items:
- a. Personal Items and Belongings.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition. D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
- If suspected hazardous materials are encountered, do not disturb: immediately notify Architect and Owner. Hazardous materials shall be removed under a separate contract.
- E. Sale of removed items or materials on-site is not permitted, items shall be returned to Owner.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition
- 1. Maintain fire-protection facilities in service during selective demolition operations.
- PART 2- PRODUCTS PART 3- EXECUTION
- 3.1 EXAMINATION
- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- 8. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Availaect.
- 8.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS
- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage
- B. Existing Services/Systems to Be Removed. Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
- If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
- Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated to be removed. a. Equipment to Be Removed: Disconnect and cap services and remove equipment.
- b. Equipment to Ba Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
- c. Ducts to Be Removed; Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible
- C. Refrigerant: Remove refrigerant from mechanical equipment to be selectively demolished according to 40 CFR 82 and regulations of authorities having jurisdiction.
- 3.3 PREPARATION
- A. Site Access and Temporary Controls: Conduct selective demoktion and debris-removal operations to ensure minimum interference with reads, streets, walks, walk walk ways, and other adjacent occupied and used facilities as well as access and operation of the apparetus bay.
- 3.4 SELECTIVE DEMOLITION, GENERAL
- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
- Neally cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damag construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or granding, not harmmening and chopping, to infrinize disturbance of adjacent surfaces. Temporarily cover openings to remain.
- 2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
- 3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duid and pipe interiors, varify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
- Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
- 5. Dispose of demolished items and materials promptly.
- 8. Removed and Reinstalled Items:
- 1. Clean and repair items to functional condition adequate for intended reuse.
- 2 Pack or crate items after cleaning and repairing. Identify contents of containers.
- 3. Protect items from damage during transport and storage,
- Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated. C. Existing Items to Remain: Protect construction indicated to remain against damage and sciling during selective demolition. When indicated in the plans, items shall be removed to a suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.
- 3.5 DISPOSAL OF DEMOLISHED MATERIALS
- A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project sile and legally dispose of them in an EPA-approved landfill.
- 1. Do not allow demolished materials to accumulate on-site.
- 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- 8. Disposal: Transport demolished materials off Owner's property and legally dispose of them.
- 3.6 CLEANING
- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

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END OF SECTION 024119

City of Naples FL

SECTION 054000 - COLD-FORMED METAL FRAMING

- PART 1- GENERAL
- 1.1 SUMMARY
- A. Section Includes
- 1. Interior non-load-bearing wall framing exceeding height limitations of standard, nonstructural metal framing,
- 1.2 ACTION SUBMITTALS
- A. Product Data: For each type of product.
- 1.3 INFORMATIONAL SUBMITTALS
- A. Welding certificates
- B. Product certificates.
- C: Product lest reports
- PART 2- PRODUCTS
- 2.1 PERFORMANCE REQUIREMENTS
- A. Cold-Formed Steel Framing Standards: Unless more stringent requirements are indicated, framing shall comply with AISI S100. AISI S200, and the following: 1. Wall Studs: AISI 5211
- 2. Headers: AISI S212.
- 3. Lateral Design; AISI 5213.
- Fire-Resistance Ratings: Comply with ASTM E 119; tasting by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
- 2.2 INTERIOR NON-LOAD-BEARING WALL FRAMING
- A. Steel Studs: Manufacturer's standard C-shaped steel studs, of web depths indicated, punched, with stiffened flanges, and as follows; 1. Minimum Base-Metal Thickness: 0,0428 inch (1.09 mm).
- 2. Flange Width: 2 Inches (51 mm).
- Steel Track: Manufacturer's standard U-shaped steel track, of web depths indicated, unpunched, with unstiffened flanges, and matching minimum base-metal thickness of steel study.
- 2.3 FRAMING ACCESSORIES
- A. Fabricate steel-framing accessories from ASTM A 1003/A 1003/A 1003M, Structural Grade, Type H, metallic coated steel sheet, of same grade and coating designation used for framing members. B. Provide accessories of manufacturer's standard thickness and configuration, unless otherwise indicated.
- 2.4 ANCHORS, CLIPS, AND FASTENERS
- A. Anchor Bolts: ASTM F 1554, Grade 55, threaded carbon-steel carbon-steel nuts, and flat, hardened-steel washers;
- B. Mechanical Fasteners; ASTM C 1513, corrosion-resistant-coated, self-dnilling, self-lapping, steel drill screws. 1. Head Type: Low-profile head beneath sheathing; manufacturer's standard elsewhere.
- 2.5 MISCELLANEOUS MATERIALS
- A. Galvanizing Repair Paint:

PART 3- EXECUTION

- 3.1 PREPARATION
- A. Before sprayed fire-resistive materials are applied, attach continuous angles, supplementary framing, or tracks to structural members indicated to receive sprayed fire-resistive materials.
- B. After applying sprayed fire-resistive materials, remove only as much of these materials as needed to complete installation of colds formed framing without reducing thickness of the-resistive materials below that required to obtain fire-resistance ratings indicated, Protect remaining fire-resistance materials from damage.
- C. Install load-bearing shims or grout between the underside of load-bearing wall bottom track and the top of foundation wall or slab at locations with a gap larger than 1/4 inch (6 mm) to ensure a uniform bearing surface on supporting concrete or masony
- D. Install sealer gaskets at the underside of wall bottom track or rim track and at the top of foundation wall or slab at stud or joist
- 3.2 INSTALLATION, GENERAL
- A. Cold-formed steel framing may be shop or field fabricated for installation, or it may be field assembled. Install cold-formed steel framing according to AISI S200, AISI S202, and manufacturer's written instructions unless more stringent requirements are indicated.
- C. Install cold-formed steel framing and accessories plumb, square, and true to line, and with connections securally fastened
- D. Install framing members in one-piece lengths unless splice connections are indicated for track or tension members
- E. Install temporary bracing and supports to secure framing and support loads equal to these for which structure was designed. Maintain braces and supports in place, undisturbed, until entire integrated supporting structure has been completed and per connections to framing are secured.
- F. Do not bridge building expansion joints with cold-formed steel framing. Independently frame both sides of joints. G. Install insulation, specified in Section 072100 "Thermal Insulation," in framing-assembly members, such as headers, sills, boxed joists, and multiple studs at openings, that are inaccessible on completion of framing work.
- H. Fasten hole-reinforcing plate over web penetrations that exceed size of manufacturer's approved or standard punched openings.

3. Bar Bridging: Proprietary bridging bars installed according to manufacturer's written instructions.

3.3 INTERIOR NON-LOAD-BEARING WALL INSTALLATION

1. Stud Spacing: 12 Inches (305 mm).

3.4 ERECTION TOLERANCES

3.5 REPAIRS AND PROTECTION

END OF SECTION 054000

A. Install continuous tracks sized to match studs, Align tracks accurately and securely anchor to supporting structure. B. Fasten both flanges of studs to top and bottom track unless otherwise indicated. Space studs as follows:

C. Set studs plumb, except as needed for diagonal bracing or required for non-plumb walls or warped surfaces and similar

D. Install horizontal bridging in wall studs, spaced vertically in rows more than 48 inches (1220 mm) apart. Fasten at each stud

1. Channel Bridging: Cold-rolled steel channel, welded or mechanically fastened to webs of punched studs, 2 Strap Bridging: Combination of flat, taut, steel sheet straps of width and thickness indicated and stud-track solid blocking of width and thickness to match studs. Fasteri flat straps to stud flanges and accure solid blocking to stud webs or flanges.

F. Top Bridging for Single Deflection Track: Install row of horizontal bridging within 18 inchas. (450 mm) of single deflection track. Install a combination of bridging and stud or stud-track solid blocking of width and thickness matching studs, secured to stud w or flanges.

G. Install miscellaneous framing and connections, including stud kickers, web sliffeners, dip angles, continuous angles, anchors, and fasteners, to provide a complete and stable wall-training system.

A. Install cold-formed steel framing level, plumb, and true to line to a maximum allowable tolerance variation of 1/8 inch in 10 feet (1:950) and as follows:

Space individual framing members no more than plus or minus 1/8 inch (3 mm) from plan location. Cumulative error shall not exceed minimum fastering requirements of sheathing or other finishing materials.

A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on fabricated and installed cold-formed steel framing with galvanized repair paint according to ASTM A 780/A 780M and manufacturer's written instructions.



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SANTIAGO JIMENEZ, R.A. AR-94369

PROJECT TEAM

DESIGNER AMEC FOSTER WHEFLER / CR BIM / DRAWINGS BY:

CHECKED BY: CR/SJ

Naples **Community Center**

672867-16-2867 100% CD 06-15-17

PROJECT NUMBER | STATUS | ISSUE DATE

SPECIFICATIONS SCALE:

A-40049

SHEET NUMBER

SECTION 095123 - ACOUSTICAL TILE CEILINGS

- PART 1- GENERAL
- 1.1 SUMMARY
- A. Section Includes:
- 1. Acoustical tiles for Interior cellings.
- 2. Fully concealed, direct-hung, suspension systems.
- 1.2 ACTION SUBMITTALS
- A. Product Data: For each type of product.
- B. Samples: For each exposed product and for each color and texture specified.
- PART 2- PRODUCTS
- 2.1 ACOUSTICAL TILES
- A. Basis-of-Design Product: Subject to compliance with requirements, provided on A-200 or comparable product by one of the following:
- 1. Armstrong World Industries. Inc. or approved equal
- B. Acoustical Tile Standard: Manufacturer's standard tiles of configuration indicated that comply with ASTM E 1264.
- C. Color: White,
- D. Light Reflectance (LR):
- E. Thickness: 5/8 inch (15 mm).
- F. Modular Size: As indicated on Drawings.
- 2.2 METAL SUSPENSION SYSTEM
- A. Basis-of-Design Product: Subject to compliance with requirements of 15/16" co-extruded celling.
- 1. Armstrong World Industries, Inc. or approved equal.
- B. Direct-Hung, Double-Web Suspension System: Main and cross runners roll formed from and capped with cold-rolled steel sheet, pre-painted, electrolytically zinc coated, or hol-dip galvanized, G30 (290) coating designation.
- 23 METAL EDGE MOLDINGS AND TRIM
- A. Basis-of-Design Product: Subject to compliance with requirements
- 1. Armstrong World Industries. Inc. or approved equal.
- PART 3- EXECUTION
- 3.1 PREPARATION
- A. Measure each ceiling area and establish layout of acoustical tiles to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width lites at borders unless otherwise indicated.
- 8. Layout openings for penetrations centered on the penetrating items.
- 3.2 INSTALLATION OF SUSPENDED ACOUSTICAL TILE CEILINGS
- A. Install suspended acoustical tile ceilings according manufacturer's written instructions.
- 8. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical tiles
- 1. Apply acoustical sealant in a continuous ribbon concealed on back of vertical legs of moldings before they are installed. 2. Do not use exposed fasteners, including pop rivets, on moldings and trim.
- C. Arrange directionally patterned acoustical tiles as indicated on reflected celling plans.
- 3.3 FIELD QUALITY CONTROL
- A. Special Inspections: Owner will engage a qualified special inspector to perform inspections: 1. Periodic Inspection during the installation of suspended ceiling grids according to ASCE/SEI 7

END OF SECTION 095123

City of Naples FL

SECTION 092900 - GYPSUM BOARD

- PART 1- GENERAL

- 1.1 RELATED DOCUMENTS
- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- 1.2 SUMMARY
- A. Section Includes
- 1.3 DELIVERY, STORAGE AND HANDLING
- A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other polential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.
- 1.4 FIELD CONDITIONS
- A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written instructions, whichever are more stringent.
- B. Do not install paper-faced gypsum panels until installation areas are enclosed and conditioned.
- C. Do not install panels that are wet, moisture damaged, and mold damaged.
- 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape. 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and
- PART 2- PRODUCTS
- 2.1 GYPSUM BOARD, GENERAL
- A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.
- PART 3- EXECUTION
- 3.1 EXAMINATION
- A. Examine areas and substrates including weided hollow-metal frames and support framing, with installer present, for compliance with requirements and other conditions affecting performance of the Work.
- B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected
- 3.2 APPLYING AND FINISHING PANELS, GENERAL
- A. Comply with ASTM C 840.
- B. Install celling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each celling. Stagger abutting end joints of adjacent panels not less than one framing member.
- C. Install panels with face side out. Bult panels together for a light contact at edges and ends with not more than 1/16 inch (1.5 mm) of open space between panels. Do not force into place.
- D. Locate edge and end joints over supports, except in celling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against rut edges or ends. Stagger vertical joints on opposile sides of partitions. Do not make joints other than control joints at corners of framed openings.
- E. Form control and expansion joints with space between edges of adjoining gypsum panels.
- F. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced
- Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. (0.7 sq. m) in area.
- 2. Fit gypsum panels around ducts, pipes, and conduits.
- Where partitions intersect structural members projecting below underside of floor/roof stabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch- (6.4- to 9.5-mm-) wide joints to install sealant.
- G. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments. Provide 1/4- to 1/2-inch- (6.4- to 1/2-inch-), wide spaces at these locations and itm edges with edge itm where edges of panels are exposed. Seal joints between edges and abuting structural surfaces with accessical sealant.
- H. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud
- Wood Framing: Install gypsum panels over wood framing, with floating internal corner construction. Do not attach gypsum panel across the flat grain of wide-dimension lumber, including floor joists and headers. Float gypsum panels over these members or provide countral joints to countract wood shrinkage.
- J. Install sound attenuation blankets before installing gypsum panels unless blankets are readily installed after panels have been installed on one side.
- 3.3 APPLYING INTERIOR GYPSUM BOARD

A. Single-Layer Application:

- On partitions/walls, apply gypsum panels vartically (parallel to framing) unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
- a. Stagger abutting end joints not less than one framing member in alternate courses of panels.
- b. At stairwells and other high walls, install panels horizontally unless otherwise indicated or required by fire-resistar
- 2. On Z-shaped furring members, apply gypsum panels vertically (parallel to framing) with no and joints. Locate edge joints over furring mem
- 3. Fastening Methods: Apply gypsum panels to supports with steel drill screws.
- B. Multilayer Application:
- On partitions/walls, apply gypsum board indicated for base layers and face layers vertically (paratiet to traming) with joints of base layers located over stud or huming member and face-layer joints offset at least one stud or furning member with base-lay joints unless otherwise indicated or required by thre-resistance-rated assembly. Staged joints one popolite wides of partitions 2 On Z-shaped furring members, apply base layer vertically (parallel to framing) and face layer either vertically (parallel to framing) or horizontally (perpendicular to framing) with vertical joints offset at least one furring members. Locate edge joints of base layer over furring members.
- C. Laminating to Substrate: Where gypeum panels are indicated as directly adhered to a substrate (other than studs, joists, furring members, or base layer of gypsum board), comply with gypsum board manufacturer's written instructions and temporarily brace or fasten gypsum panels until fastering adhesive has set.

For double-layer construction, fasten base layer to studs with screws 16 inches (400 mm) o.c. Center gypsum board face layer over joints in base layer, and fasten to studs with screws spaced 12 inches (300 mm) o.c.

A General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as reculried to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacen surfaces.

A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.

1. Indications that panels are wet or molsture damaged include, but are not limited to, discoloration, sagging, or irregular shape. 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and

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C. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.

B. Protect Installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

- D. Curved Surfaces: Install panels horizontally (perpendicular to supports) and unbroken, to extent possible: across curved surface plus 12-inch-(300-mm-) long straight sections at ends of curves and tangent to them.

B. Prefill open joints rounded and damaged surface areas.

D. Glass-Mat Faced Panels: Finish according to manufacturer's written Instructions

C. Remove and replace panels that are wet, moisture damaged, and mold damaged.

3.4 FINISHING GYPSUM BOARD

3.5 PROTECTION

END OF SECTION 092900

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

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

SECTION 099123 - INTERIOR PAINTING

E. MPI Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.

F. MPI Gloss Level 5: 70 to 85 units at 60 degrees, according to ASTM D 523.

t. Submit Samples on rigid backing, 8 inches (200 mm) scuare

G. MPI Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

1. Maintain containers in clean condition, free of foreign materials and residue.

C. Proceed with coasing application only after unsatisfactory conditions have been corrected 1. Application of coating indicates acceptance of surfaces and conditions.

A. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."

1. Use applicators and techniques suited for paint and substrate indicated,

A. Samples for Verification: For each type of paint system and in each color and plass of topcost

PART 1- GENERAL

1.2 SUMMARY

1.3 DEFINITIONS

1.1 RELATED DOCUMENTS

1. Gypsum board

1.4 ACTION SUBMITTALS

1.7 FIELD CONDITIONS

PART 2- PRODUCTS

2.1 MANUFACTURERS

3. Duron, Inc.

PART3 - EXECUTION

3.1 EXAMINATION

3.2 PREPARATION

painting.

3.3 APPLICATION

systems indicated

1. Behr Process Corporation.

4. Sherwin-Williams Company (The).

2. Benjamin Moore & Co.

1.5 MAINTENANCE MATERIAL SUBMITTALS

16 DELIVERY STORAGE AND HANDLING

2. Remove rags and waste from storage areas daily.

A. MPI Gloss Level 1: Not more than five units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523. B. MPI Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523. C. MPI Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523. D. MPI Gloss Level 4: 20 to 35 units at 60 degrees and not loss than 35 units at 85 degrees, according to ASTM D 523.

A. Furnish extra materials[, from the same product run.] that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Paint: 5 percent, but not less than [1 gal. (3.8 L)] <Insert number> of each material and color applied

A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).

B. Do not apply paints when relative humidity exceeds 65 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

A. <u>Basis-of-Design Product</u> Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:

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

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

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

B. Remove hardware; covers, plates, and similar items atready in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface proparation and

After completing painting operations, use workers skilled in the trades involved to reinstall tems that were removed. Remove surface-applied protection if any.

C. Clean substrates of substances that could impair bond of paints, including dust, dirt, cil, grease, and incompatible paints and

1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce pain

D. Shop-Primed Steet Substrates; Clean field welds, botted connections, and areas where shop paint is abraded. Paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.

Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.

3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces 4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature

5. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to

8. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat. C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and

D. 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.



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ARCHITECT OF RECORD

REVISION SCHEDULE

No.	DESCRIPTION	DATE
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PROJECT TEAM DESIGNER AMEC FOSTER WHEELER / CR BIM / DRAWINGS BY: CHECKED BY: CR/SJ

SANTIAGO JIMENEZ, R.A.

AR-94369

Naples **Community Center**

6877-6788-16-2806 100% CD 06-15-17

PROJECT NUMBER | STATUS | ISSUE DATE

SPECIFICATIONS SCALE:



SECTION 099123 - INTERIOR PAINTING

CONT

- E. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:
- 1. Paint the following work where exposed in equipment rooms:
- - A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

c. Metal conduit.

a. Uninsulated metal piping

b. Uninsulated plastic piping.

- d. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
- 2. Paint the following work where exposed in occupied spaces:
- a. Equipment, Including panelboards.
- b. Uninsulated metal piping.
- c. Uninsulated plastic piping.
- d. Pipe hangers and supports
- e. Metal conduit.
- f. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material,
- g. Other items as directed by Architect.
- h. Insert mechanical items to be painted
- 3. Paint portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets that are visible from occupied
- 3.4 FIELD QUALITY CONTROL
- A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.
- 1. Contractor shall touch up and restore painted surfaces damaged by testing.
- If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendat Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufactured, units and another additional coats as needed to provide dry film thickness that complies with paint
- 3.5 CLEANING AND PROTECTION
- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site. B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.
- 3.6 INTERIOR PAINTING SCHEDULE
- A. Insulation-Covering Substrates: Including [pipe and duct coverings] <Insert description>.
- END OF SECTION 099123

METAL BUILDING SYSTEMS 133419 - 4 SECTION 133419 - METAL BUILDING SYSTEMS PART 1- GENERAL

- 1.1 RELATED DOCUMENTS
- 1.2 DEFINITIONS
- A. Terminology Standard: See MBMA's "Metal Building Systems Manual" for definitions of terms for metal building system construction not otherwise defined in this Section or in standards referenced by this Section.
- 1.3 COORDINATION
- A. Coordinate sizes and locations of concrete foundations and casting of anchor-rod inserts into foundation walls and footings. Anchor rod installation. concrete, reinforcement, and formwork requirements are specified in Section 033000 "Cashin-Place Concrete."
- B. Coordinate metal panel assemblies with rain drainage work, flashing, trim, and construction of supports and other adjoining work to provide a leakproof, secure, and noncorrosive installation.
- 1.4 ACTION SUBMITTALS
- A. Shop Drawings: Indicate components by others. Include full building plan, elevations, sections, details and the following: Anchor-Rod Plans: Submit anchor-rod plans and templates before foundation work begins, include location, diameter, and minimum required projection of anchor rods required to attach metal building to foundation. Indicate column reactions at each
- Structural-Framing Drawings: Show complete fabrication of primary and secondary framing; include provisions for openings. Indicate welds and bolted connections, distinguishing between shop and field applications, include transverse cross-sections. a. Show provisions for attaching .
- Metal Panel Layout Drawings: Show layouts of panels including methods of support. Include details of edge conditions, joints, panel profiles, comers, anchorages, clip spacing, virm, flashings, dosures, and special details. Dislinguish between factory- and field-assembled work: show locations of exposed fasteners.
- a. Show roof-mounted items including roof hatches, equipment supports, pipe supports and penetrations, lighting fixtures, and items mounted on roof curbs.
- b. Show wall-mounted items including personnel doors, vehicular doors, windows, louvers, and lighting fixtures.
- . Show translucent panels.
- 1.5 QUALITY ASSURANCE
- A. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution. 1. Build mockups for typical wall metal panel including accessories.
- a. Size; 24" Long,
- 1.6 DELIVERY STORAGE, AND HANDLING
- A Deliver components, sheets, panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.
- B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.
- C. Stack metal panels hodzontally on platforms or pallets, covered with suitable weatheright and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surprise dramage.
- D. Protect foam-plastic insulation as follows:
- 1. Do not expose to sunlight, except to extent necessary for period of installation and concealment. 2. Protect against ignition at all times. Do not deliver foam-plastic insulation materials to Project site before installation time.
- 3. Complete installation and concealment of foam-plastic materials as rapidly as possible in each area of construction.
- 1.7 FIELD CONDITIONS
- A Weather Unitations: Proceed with psnel installation only when weather conditions permit metal panels to be installed according to manufacturers' written instructions and warranty requirements.
- PART 2- PRODUCTS
- 2.1 FABRICATION
- A. General: Design components and field connections required for erection to permit basy assembly. 1. Mark each piece and part of the assembly to correspond with previously prepared erection drawings, diagrams, and instruction
- Fabricale structural framing to produce clean, smooth cuts and bends. Punch holes of proper size, shape, and location. Members shall be free of cracks, tears, and ruptures.
- B. Tolerances: Comply with MBMA's "Metal Building Systems Manual" for fabrication and erection tolerances.
- C. Primary Framing: Shop fabricate framing components to indicated size and section, with baseptates, bearing plates, stiffeners, and other items required for erection welded into place. Cut, form, punch, dnill, and weld framing for botted field assembly.

- E. Metal Planets: Fabricate and finish metal panels at the factory to greatest extent possible, by manufacture's standard procedures and processes, as necessary to fulfill indicated performance requirements. Comply with indicated profiles and with dimensional and structured in structures. structural requirements.
- 1. Provide panel profile, including major ribs and intermediate stiffening ribs. If any, for full length of metal panel.
- PART 3- EXECUTION
- 3.1 EXAMINATION
- A. Examine substrates, areas, and conditions, with erector present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- 8. Proceed with erection only after unsatisfactory conditions have been corrected.
- 3.2 PREPARATION
- A. Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition
- 3.3 CLEANING AND PROTECTION
- A. Repair damaged galvanized costings on galvanized items with galvanized repair paint according to ASTM A 780/A 780/A and manufacturer's written instructions.

END OF SECTION 133419

- 1. Make shop connections by welding or by using high-strength bolts. 2. Join flanges to webs of built-up members by a continuous, submerged arc-welding process.
- Brace compression flange of primary framing with steel angles or cold-formed structural tubing between frame web and purlin web or girt web, so flange compressive strangth is within allowable limits for any combination of loadings.
- 4. Weld clips to frames for attaching secondary framing if applicable, or punch for bolts.
- Shop Priming: Prepare surfaces for shop priming according to SSPC-SP 2. Shop prime primary traming with specified primer after fabrication.
- O. Secondary Framing: Shop fabricate framing components to indicated size and section by roll forming or break forming, with baseptates, bearing plates, stiffeners, and other plates required for erection welded into place. Cut, form, punch, drill, and weld secondary framing for bated field connections to primary framing.
- 1. Make shop connections by welding or by using non-high-strength bolts.
- Shop Priming: Prepare uncoated surfaces for shop priming according to SSPC-SP 2. Shop prime uncoated secondary framing with specified primer after fabrication.



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PROJECT TEAM
DESIGNER
AMEC FOSTER WHEELER / CR
BIM / DRAWINGS BY:
CHECKED BY:
CR/SJ
Vaples
Community Center
877-6788-16-2806
00% CD 06-15-17

SANTIAGO JIMENEZ, R.A.

AR-94369

ISSUE DATE SPECIFICATIONS

SCALE:



A. DESIGN CRITERIA: 1. FLORIDA BUILDING CODE 5THE EDITION (2014) AND ALL LOCAL GOVERNING CODES. 2. ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES. 3. AGI 319-11 BUILDING CODE REQUIREMENTS FOR STRUCTUREL CONCRETE AND COMMENTARY. 4. ACI 301 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.

- 5. DESIGN DEAD LOADS:

	CONCRETE	150 PCF
Б.	WIND LOADS :	
	ENCLOSURE CLASSIFICATION	SOLID F

MC.	ENCLOSURE CLASSIFICATION	
	BASIC WIND SPEED	SOLID FREE STANDING WALL
	EXPOSURE -	V = 166 MPH
	RISK CATEGORY	
	GUST EFFECT FACTOR	- G = 0.85
	TOPOGRAPHIC FACTOR	Kzt = 1.0

7.		SMIC LOADS	
	0.2.5	SEC SPECTRAL RESPONSE ACCELERATION	-St = 0.048
	1 SE	C SPECTRAL RESPONSE ACCELERATION	- 51 = 0.023
	SHC	RT PERIOD DESIGN SPECTRAL ACCELERATION	- Sds = 0.051
	1 SE	C PERIOD DESIGN SPECTRAL ACCELERATION	-Sd1 = 0.036
		CATEGORY -	-11
	SITE	CLASS-	-0
	DES	IGN CATEGORY	-8
	IMPO	ORTANCE FACTOR	-1=10
	8.	STRUCTURAL TYPE ; ORDINARY REINFORCED MASONRY	1
	b.	RESPONSE MOD, FACTOR:	-R = 2
	C.	SYSTEM OVER-STRENGTH:	$= \Omega c = 2.5$
	đ.	DEFLECTION AMPLIFICATION FACTOR:	- Cd = 1.75
	8.	RESPONSE COEFFICIENT:	
	× .	DECICI DACE AUGUS	an cipien

g. ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

- B. GENERAL: 1. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS BEFORE STARTING WORK, NOTIFY THE STRUCTURAL ENGINEER IN WRITING OF CONDITIONS ENCOUNTRACE DOCUMENTS, CONTRADICTORY TO THOSE SHOWN ON THE STRUCTURAL CONTRACT DOCUMENTS,
- PROVIDE ADEQUATE BRACING FOR STRUCTURES SO THAT THEY WILL BE STABLE DURING ALL STAGES OF CONSTRUCTION. THE STRUCTURES AND FOUNDATIONS ARE DESIGNED FOR A COMPLETED CONDITION ONLY AND THEREFORE REQUIRE ADDITIONAL SUPPORT TO MAINTAIN STABILITY BEFORE COMPLETION. STRUCTURES SHALL BE CONSIDERED COMPLETE WING ALL STRUCTUREL MEMBERS ARE COMPLETED AND HAVE ATTAINED THEIR SPECIFIED DESIGN STRENGTH AS SHOWN ON THE DRAWINGS. DRAWINGS.
- 3. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, ADEQUACY, AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC.
- 4. COORDINATE STRUCTURAL CONTRACT DOCUMENTS WITH ARCHITECTURAL MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL, NOTIFY STRUCTURAL ENGINEER OF ANY CONFLICT AND/OR OMISSION
- COORDINATE AND VERIFY ALL OPENING SIZES AND LOCATIONS WITH ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
- PLUMBING AND ELECTIVES AND/OR SHOP DRAWINGS BY THE STRUCTURAL ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO REVIEW AND CHECK SHOP DRAWINGS BEFORE SUBMITTAL TO THE STRUCTURAL ENGINEER. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, AND DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS. CONTRACTOR IS ALSO RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION.

C. FOUNDATIONS:

- A BEOTECHNICAL ENGINEER REGISTERED IN THE STATE OF FLORIDA SHALL INSPECT THE CONDITION AND ASSURE THE ADEQUACY OF ALL SUB GRADES FILLS AND BACK FILLS BEFORE PLACEMENT OF FOUNDATIONS, FOOTINGS, LABS, AND WALLS, HE SHALL SUBMIT REPORTS TO THE OWNER'S REPRESENTATIVE DESCRIBING HIS FINDINGS, INCLUDING ANY NON-CONFORMING WORK.
- 2. FOUNDATIONS ARE DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 1500 PSF.
- 3. GROUND WATER SHALL BE KEPT AT LEAST 3 FEET BELOW THE DEEPEST FOUNDATION BEARING ELEVATION DURING CONSTRUCTION.
- 4. FOOTINGS MAY BE CAST INTO AN EARTH-FORMED TRENCH IF SOIL CONDITIONS PERMIT.
- EXCAVATION FOR FOOTING SHALL BE CUT TO ACCURATE SIZE AND DIMENSIONS AS SHOWN ON PLANS. ALL SOIL BELOW SLAB, AND FOOTINGS SHALL BE PROPERLY COMPACTED AND SUB-GRADE BROUGHT TO A REASONABLE TRUE AND LEVEL PLANE BEFORE PLACING CONCRETE.
- FOOTING CONCRETE SHALL BE CAST ON THE SAME DAY THE EXCAVATION IS APPROVED, IF THE BEARING SURFACE IS ALLOWED TO BECOME DISTURBED IN ANY WAY, IT SHALL BE REWORKED TO THE SATISFACTION OF THE TESTING ENGINEER PRIOR TO CASTING OF THE CONCRETE.
- NO EXCAVATION SHALL BE CLOSER THAN A SLOPE OF 3:1 (3 HORIZONTAL TO 1 VERTICAL) TO A FOOTING, PROVIDE SHORING AND PROTECTION FOR EXCAVATION BANKS AS NECESSARY TO PRESERVE SAFETY AND PREVENT CAVING.
- 8. ALL BEARING STRATA SHALL BE ADEQUATELY DRAINED BEFORE FOUNDATION CONCRETE IS PLACED
- 9. THERE SHALL BE NO HORIZONTAL OR VERTICAL CONSTRUCTION JOINTS IN ANY FOUNDATION WITHOUT PRIOR WRITTEN APPROVAL FROM ENGINEER.
- 10. CONCRETE CAST ON SLOPING SURFACES SHALL BEGIN AT THE LOWEST ELEVATION AND CONTINUE MONOLITHICALLY TOWARD THE HIGHER ELEVATION UNTIL THE INTENDED POUR IS COMPLETED.

D. CONCRETE: 1. ALL CONCRETE WORK SHALL CONFORM TO ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" DESIGN IS BASED ON ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".

2. CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH IN ACCORDANCE WITH THE FOLLOWING: LOCADON

a contract	SIRENGIA
FOUNDATIONS	4000 PSI
ALL OTHER CONCRETE	
ALL OTHER CONCRETE	4000 PSI

- 3. THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY AN INDEPENDENT TESTING LABORATORY. AND SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW A MINIMUM OF 15 DAYS PRIOR TO USE. RESPONSIBILITY FOR OSTAINING THE REDUIRED DESIGN STRENGTH IS THE CONTRACTOR'S.
- ALL MIXING, TRANSPORTING, PLACING AND CURING OF CONCRETE SHALL BE DONE IN ACCORDANCE. WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE.
- 5. USE OF CALCIUM CHLORIDE, CHLORIDE IONS, OR OTHER SALTS IN CONCRETE IS NOT PERMITTED,
- 6. REINFORCING STEEL SHALL CONFORM TO ASTM 4615, GRADE 50 UNLESS NOTED OTHERWISE
- WELDED WIRE REINFORCEMENT (W.W.R.) SHALL CONFORM TO ASTM A185 AND SHALL BE PROVIDED IN FLAT SHEETS (ROLLS NOT PERMITTED). LAP TWO SQUARES AT SPLICES.
- 8. UNLESS NOTED OTHERWISE, SAMPLES FOR STRENGTH TESTS OF EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN BY THE TESTING AGENCY NOT LESS THAN ONCE A DAY, NOR LESS THAN DINCE FOR EACH 100 CUBIC YARDS OF CONCRETE. ENA RULESS THAN DONCE FOR EACH 500 SOLUARE FEET OF SURFACE AREA FOR SLABS AND WALLS. SAMPLE CONCRETE IN ACCORDANCE WITH A STM CT27. PERFORM THE FOLLOWING TESTS IN ACCORDANCE WITH THE INDICATE DISTANDARD:
- SLUMP: ASTM C143
 AIR CONTENT: ASTM C231 OR C173
 COMPRESSIVE STREMGTH: ASTM C39, WITH ONE CYLINDER AT 7 DAYS, 2 CYLINDERS AT 28 DAYS.
 AND ONE DOCUMENT UP IN DESERVICE AND ONE SPECIMEN HELD IN RESERVE.
- B. HORIZONTAL CONSTRUCTION JOINTS ARE PERMITTED ONLY WHERE INDICATED. THE LOCATION OF VERTICAL CONSTRUCTION JOINTS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. CONSTRUCTION JOINTS SHALL BE THOROUGHLY ROUGHENED BY MECHANICAL MEANS, AND CLEANED
- 9 PROVIDE CONTINUOUS REINFORCEMENT WHEREVER POSSIBLE: SPLICE ONLY AS SHOWN OR APPROVED: STAGGER SPLICES WHERE POSSIBLE; USE CLASS 'B' TENSION SPLICE UNLESS NOTED

OTHERWISE. DOWELS SHALL MATCH THE SIZE AND SPACING OF THE SPECIFIED REINFORCEMENT AND. SHALL BE LAPPED WITH CLASS 'B' TENSION SPLICES, UNLESS NOTED OTHERWISE LAP LENGTHS EXPRESSED IN NUMBER OF BAR DIANETERS SHALL BE AS FOLLOWS, APPROVED MECHANICAL COUPLERS MAY BE USED IN LIEU OF PHYSICAL SPLICING;

REINFORCH	NG BAR LAP S	SPLICE SCHEDULE (GEN	ERAL USE), U.N.O.
BAR SIZE	CLASS	TOP BARS	OTHER BARS
		4000	4000
#6 OR SMALLER	8	64 DIA	49 DIA
LARGER THAN #6	B	BO DIA	62 DIA

NOTE: TOP BARS ARE HORIZONTAL BARS WHERE THE DEPTH OF CONCRETE CAST IN ONE LIFT BENEATH THE BAR EXCEEDS 12". PROVIDE TOP BAR LAP SPLICE LENGTH FOR ALL CONCRETE WALL HORIZONTAL BARS.

10. MINIMUM CONCRETE COVER (UNLESS NOTED OTHERWISE) SHALL BE

	CONCRETE COVER	and the second second
A	#11 BARS AND SMALLER	3/4 INCHES
В	UNFORMED SURFACE IN CONTACT WITH THE GROUND	3 INCHES
•	EXTERIOR BASEMENT WALLS	3 INCHES
•	INTERIOR BASEMENT WALLS	3 INCHES
C	FORMED SURFACES EXPOSED TO EARTH OR WATER	
	#6 BARS AND LARGER	2 INCHES
	#5 BARS AND SMALLER	1 1/2 INCHES
D	FORMED SURFACES NOT EXPOSED TO EARTH/WATER	
•	BEAMS, GIRDERS AND COLUMNS	1 1/2 INCHES
	SLABS, WALLS, JOISTS	3/4 INCHES

- 11. SCHEDULED OR DETAILED REINFORCING STEEL SHALL NOT BE TACK WELDED FOR ANY REASON. WELDEN REINFORCING STEEL SPILCES ARE NOT PERMITTED WITHOUT ENGINEER APPROVAL. WHERE WELDING IS APPROVED IT SHALL CONFORM TO ANS DITA STRUCTURAL WELDING CODE REINFORCING STEEL. STEEL.
- 12. CORNER BARS SHALL BE OF EQUAL SIZE AND SPACING AS THE MAIN REINFORCING AND SHALL BE LAPPED PER REINFORCING BAR LAP SPLICE SCHEDULE.
- 13. WHERE FOOTINGS, WALLS, OR OTHER STRUCTURAL ELEMENTS INTERSECT, CORNERS OR TEES, PROVIDE CORNER BARS WITH LAP LENGTHS AS SHOWN IN NOTE 12 ABOVE TO PROVIDE CONTINUITY OF HORIZONTAL STEEL REHYFORCING U.N.O.
- 14. PROVIDE A MINIMUM OF 5 BOLT DIAMETERS COVER FOR ANCHOR BOLTS AND LOCATE HORIZONTAL REINFORCEMENT TO THE OUTSIDE FOR ANCHOR BOLT CONTAINMENT, U.N.O.
- 15. PROVIDE TEMPORARY SHORING AND BRACING OF ALL STRUCTURAL AND MISCELLANEOUS ELEMENTS UNTIL CONCRETE HAS OBTAINED DESIGN STRENGTH AND ALL PERMANENT BRACING ELEMENTS ARE INSTALLED.
- 16. WHEN PLACING CONCRETE UNDER HOT OR COLD WEATHER CONDITIONS COMPLY WITH THE LATEST EDITIONS OF ACI305R: "HOT WEATHER CONCRETING" OR ACI305R: "COLD WEATHER CONCRETING".
- 17. TIE ALL REINFORCING STEEL AND EMBODIMENTS SECURELY IN PLACE PRIOR TO PLACING CONCRETE. PROVIDE SUFFICIENT SUPPORTS TO MAINTAIN THE POSITION OF REINFORCEMENT WITHIN SPECIFIED TOLERANCES DURING ALL CONSTRUCTION ACTIVITIES. "STICKING: DOWELS INTO WET CONCRETE IS NOT PERMITTED.
- JOINT BACK-UP MATERIAL: POLYETHYLENE FOAM, CLOSED CELL USE WITH ELASTOMERIC JOINT SEALANT ONLY.
- SUBMIT REINFORCING BAR SHOP DRAWINGS INCLUDING PLACEMENT PLANS, BAR BENDING DIAGRAMS SPILCE LENGTHS AND LOCATIONS, BAR SPACING, CONCRETE COVER, SUPPORT DEVICES AND ACCESSORIES CONFORM TO ACI 318 AND ACI SPAG.
- 20. SUBMIT PROPOSED CURING METHODS AND MATERIALS A MINIMUM OF 15 DAYS PRIOR TO USE.
- 21. TIE ALL REINFORCING STEEL AND EMBEDMENTS SECURELY IN PLACE PRIOR TO PLACING CONCRETE. PROVIDE SUFFICIENT SUPPORTS TO MAINTAIN THE POSITION OF REINFORCEMENT WITHIN SPECIFIED TOLERANCES DURING ALL CONSTRUCTION ACTIVITIES. "STICKING" DOWELS INTO WET CONCRETE IS NOT PERMITTED.
- 22. TOLERANCES SHALL CONFORM TO ACI 117 AND ACI 347.

E. MASONRY:

- CONCRETE MASORRY DESIGN AND CONSTRUCTION SHALL CONFORM TO; ACI 539-11/ASCE 5-11, BUILDING CODE REQUEREMENTS FOR MASORRY STRUCTURES, ACI 530,1-11/ASCE 6-11, SPECIFICATIONS FOR MASORRY STRUCTURES.
- 2. PROVIDE NORMAL WEIGHT, HOLLOW, LOAD-BEARING CONCRETE MASONRY UNITS (CMU) CONFORMING TO ASTM CS0.
- PROVIDE CONCRETE MASONRY WITH MINIMUM AVERAGE COMPRESSIVE STRENGTH. fm = 1,500 PSI.
- PROVIDE TYPE 'S' MORTAR IN ACCORDANCE WITH ASTM C270, U.N.O. MORTAR BED JOINTS SHALL NOT EXCEED 3/8" THICKNESS.
- 5 PROVIDE GROUT FOR REINFORCED MASONRY IN ACCORDANCE WITH ASTM C476 WITH MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI UNLESS NOTED OTHERWISE.
- PROVIDE HORIZONTAL JOINT REINFORCEMENT LADDER TYPE COMPLYING WITH ASTM A82, NO, 9 GAUGE OR HEAVIER, ZINC COATED, PLACED 16 INCHES ON CENTER UNLESS NOTED OTHERWISE.
- PROVIDE MINIMUM 265 VERTICAL IN TWO ADJACENT CELLS GROUTED FULL HEIGHT, AT EACH SIDE OF OPENINGS AND WALL ENDS, AND EACH SIDE OF MASONRY CONTROL JOINTS.
- 8. LAY MASONRY UNITS IN RUNNING BOND UNLESS NOTED OTHERWISE.
- SIDES AND TOPS OF MASONRY WALL PANELS SHALL BE ANCHORED TO STRUCTURE BY DOVETAIL ANCHORS, METAL STRAPS, OR EQUIVALENT UNLESS NOTED OTHERWISE.
- MASONRY TO BE INSPECTED PER INTERNATIONAL BUILDING CODE SECTION 1705.4, REQUIRED VERIFICATION AND INSPECTION OF MASONRY CONSTRUCTION.
- 11.
 ALL CONCRETE MASONRY UNITS REINFORCING (VERT. & HORIZ.) SHALL BE LAPPED THUS: BAR
 LAP LENGTH

 84
 1-6*
 DOWEL HOOK LENGTH

 85
 2-0*
 8*

 86
 3-0*
 12*

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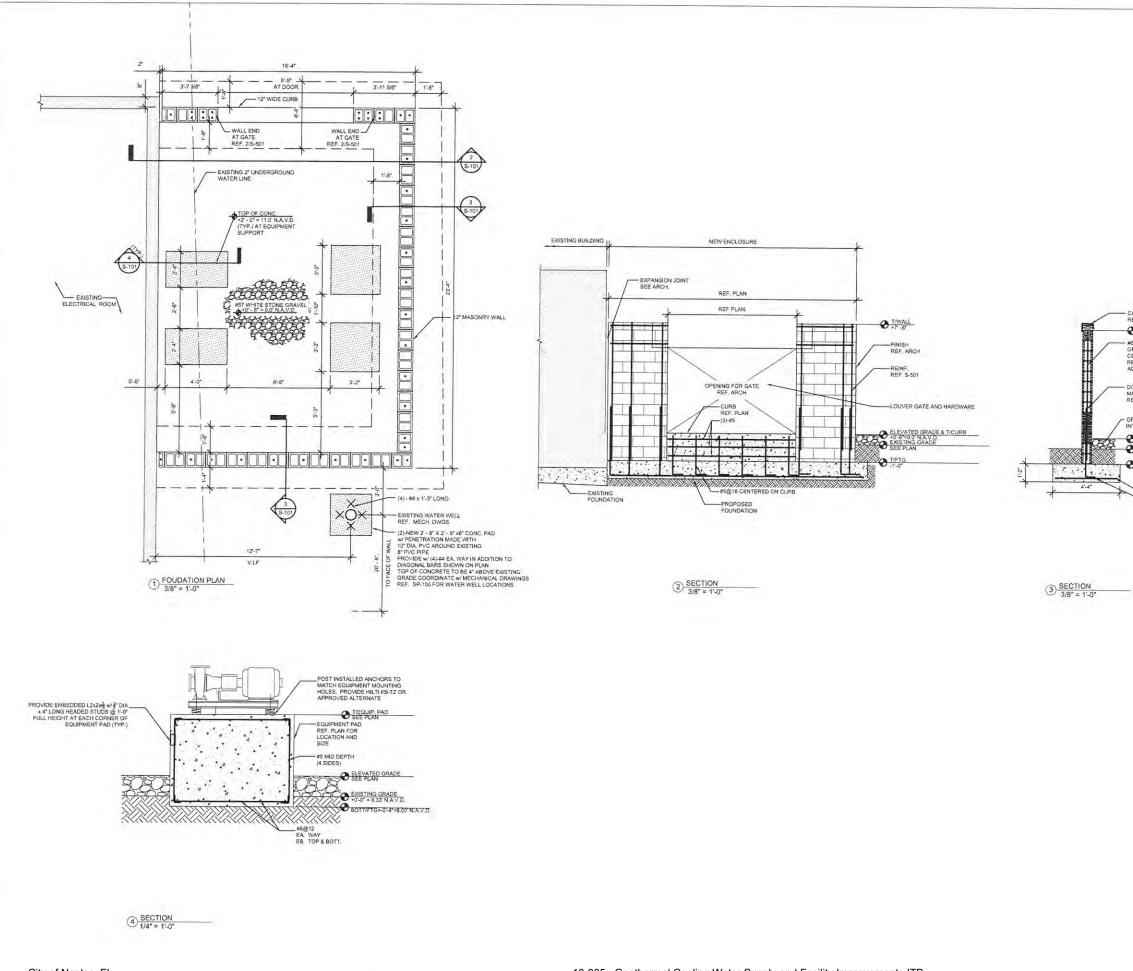
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ARCHITECT OF RECORD

REVISION SCHEDULE

NO.	DESCRIPTION	DATE
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F.D. SHIVER
PROJECT TEAM
DESIGNER
AMEC FOSTER WHEELER - CR
BIM / DRAWINGS BY:
MD
CHECKED BY:
AGS
BIM / DRAWINGS BY: MD CHECKED BY: AGS
Community
Development
Bldg. Renovations
6788-16-2867 100%CD 06/09/2017
PROJECT NUMBER STATUS ISSUE DATE
GENERAL NOTES
SCALE: 1/4" = 1'-0"
S-001
SHEET NUMBER



	1
1	12
ų -	12
	- 13
7	13
1.1	13
	- 13

amec foster wheeler

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ARCHITECT OF RECORD

REVISION SCHEDULE

No.	DESCRIPTION	DATE
0	FOR CONSTRUCTION	6/9/17
1	WATER WELL ADDED	8/4/17
-		_
		-

CAPPING REF. ARCH T/WALL +7'-8"

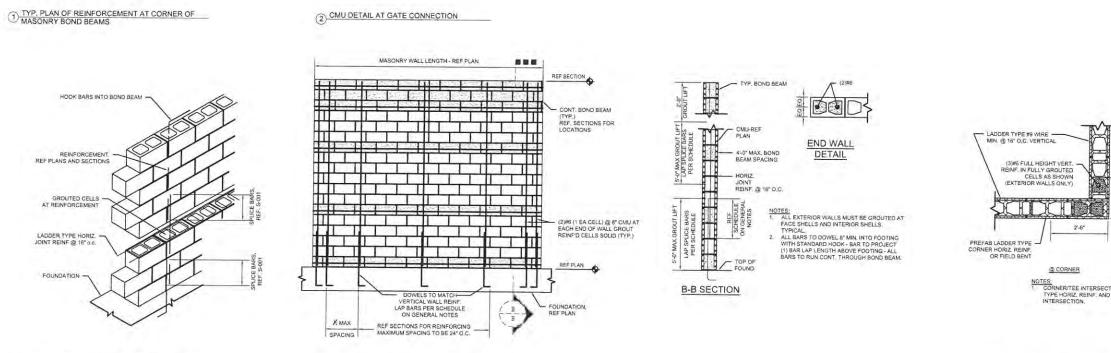
#6 CENTERED IN GROUT FILLED CELL AT 24" o.c. REF. S-501 FOR ADD'L INFO.

- DOWEL TO MATCH VERT REINF.

- GRAVEL AT INTERIOR

ELEVATED GRADE EXISTING GRADE +0'-0' = 8.33' N.A.V.D. O'.1'-0'





3 TYP. REINFORCED MASONRY CONSTRUCTION

 (3)#5 FULL HEIGHT VERT REINF. IN FULLY GROUTED CELLS

CORNER BARS MATCH SIZE & SPACING OF HORZ BARS WHERE SIZE & SPACING DIFFER MATCH LARGER AREA

(1) TYP. MASONRY WALL ELEVATION

3 CELLS W/ (2)-#6 PER CELL

A-A SECTION

1E

+

5 TYP. NON-COLUMN CMU WALL w/ PREFABRICATED CORNERS

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	ARCHITECT OF RECORD
TYPICAL TRUSS TYPE HORIZ. REINF, NOT	REVISION SCHEDULE
SHOWN FOR CLARITY	
EXTERIOR (4/#5 FULL HEIGHT VER WALL REINF, IN FULLY GROU	IT.
CELLS AS SHOWN (EXTERIOR WALLS ONL @ TEE INTERSECTION	
TION REINF, SHALL BE LAPPED WITH THE TYPICAL TRUSS EXTEND A MINIMUM OF 30° IN EACH DIRECTION AT THE	
ORNER AND TEE INTERSECTION TEES	
	F. D. SHIVER
	DESIGNER AMEC FOSTER WHEELER - CR BIM / DRAWINGS BY:
	MD CHECKED BY: AGS
	Com Cet
	16-2867_Com Car
	Community Development
	Community Bevelopment
	Community Development Bldg. Renovations
	Community Development Bldg. Renovations 6788-16-2867 100%CD 06/09/2017 PROJECT NUMBER STATUS ISSUE DATE
	Community Development Bldg. Renovations 6788-16-2867 100%CD 06/09/2017 PROJECT NUMBER STATUS BASONRY DETAILS SCALE: 1/4° = 1'-0°
	Bldg. Renovations 6788-16-2867 100%CD 06/09/2017 PROJECT NUMBER STATUS ISSUE DATE MASONRY DETAILS

STANDARD ABBREVIATIONS

-			
AFF	ABOVE FINISHED FLOOR		
AP A/C	ABOVE FINISHED FLOOR ACCESS PANEL AIR CONDITIONING UNIT	KW	KILOWATT
ACCI	AIR CONDITIONING UNIT J AIR COOLED CONDENSING UNIT AIR COOLED CONDENSER AIR HANDLING UNIT J ARCHITECTURAL	IVC	I FAMILY
ACC	AR COOLED CONDENSER	LAT	LEAVING AIR TEMPERATURE
AHU	AIR HANDLING LINIT	IWT	LEAVING WATER TEMPERATURE
ARCH	ARCHITECTURAL	15	LEAVING MATER TEMPERATURE
AlH	AIR INTAKE HOOD	LG	LONG
			633364
BD	BACKDRAFT DAMPER BOITOM OF DUCT	M/A	MAKE-UP AIR MANUAL VOLUME DAMPER MAXIMUM MECHANICAL
POD	BOTTOM OF PIPE	MVD	MANUAL VOLUME DAMPER
BOP	BOILER	MAX.	MAXIMUM MECHANICAL
	DULLA	MECH	MECHANICAL
B/A	BY-PASS AIR	MER	MECHANICAL EQUIPMENT ROOM
BIU	BRITISH THERMAL UNIT	MEZZ	MEZZANINE MOTOR OPERATED DAMPER
CLG	CEN INC	MOD	MOTOR OPERATED DAMPER
CLG	CEILING	MOV	MOTOR OPERATED VALVE
CG	CEILING DIFFUSER	MBH	HOUSAND BRITISH THERMAL UNITS PER
00	CEILING OFFILE CEILING REGISTER CHILLED WATER PUMP CONDENSER WATER PUMP		HOUR
GUINE	GEILING REGISTER		the state of the term of the state
CHWP	CHILLED WATER PUMP	NPSH	NET POSITIVE SUCTION HEAD NOISE CRITERIA
CWP	CONDENSER WATER PUMP	NC	NOISE CRITERIA
	CONDENSING UNIT	NIC	NOT IN CONTRACT
Ci	COOLING TOWER	1.5	332.02
CEM	CUBIC FEET PER MINUTE	OPNG	OPENING
CH	CABINET HEATER CHILLER CONTROL PANEL	OBD	OPPOSED BLADE DAMPER
CCP	CHILLER CONTROL PANEL	O/A	OPENING OPPOSED BLADE DAMPER OUTSIDE AIR OUTSIDE SUPPLY AR OPENING IN BUILTION DOUG SERVICE
-		OSA	OUTSIDE SUPPLY AIR
DA	DIRECT ACTING DRY BULB	OIP	OPENING IN PARTITION ABOVE CEILING
DCP	DISTRIBUTED CONTROL PROCESSOR DOOR GRILLE	nr	DUCULITIC DISCOURS SUFFERE
DG	DOOR GRILE	PE	PNEUMATIC-ELECTRIC SWITCH
DCP	DOOR GRILLE DATA GATHERING PANEL	PSI	POUNUS PER SQUARE INCH
DI	DUCTILE IRON	OTY.	OUNTED
	DIFFUSER	OF	QUANTITY QUICK FILL
DN	DIFFUSER DOWN	ur	DOICK FILL
DPT	DIFFERENTIAL PRESSURE TRANSMITTER	- 4	NUMBER OF ALL ADDRESS OF ADDRESS OF ALL ADDRESS OF ADDRESS OF ADDRESS OF ADDRESS OF ADDRESS OF A
DWG	DRAWING	R/A	RETURN AIR
one		RG	
FA	EACH	RR	RETURN REGISTER REVERSE ACTING
EAT	ENTERING AIR TEMPERATURE ELECTRIC CHILLER EXHAUST FAN ELEVATION	RA	RETURN REGISTER REVERSE ACTING REVOLUTIONS PER MINUTE ROOM SMOKE DAMPER SMOKE EVACUATION FAN SOUND ATTENUATOR SPUTTER DAMPER STATIC PRESSURE SUPPLY AIR
ECH	ELECTRIC CHILLER	RPM	REVOLUTIONS PER MINUTE.
FF	EXHAUST FAN	RM	RUUM
FI.	ELEVATION	5/0	SMOKE DAMPER
FLEC	ELECTRICAL	SEF	SMOKE EVACUATION FAN
FP	ELECTRIC-PNEUMATIC SWITCH	SA	SOUND ATTENUATOR
EO	EQUAL	SD	SPLITTER DAMPER
ESP	EXTERNAL STATIC PRESSURE	SP	STATIC PRESSURE
FTR	EXISTING TO REMAIN	S/A	SUPPLY AIR
FWT	ENTERING WATER TEMPERATING	SF	SUPPLY FAN
FXH	EXTERNAL STATIC PRESSURE EXISTING TO REMAIN ENTERING WATER TEMPERATURE EXHAUST	SG	SIAIC PRESSURE SUPPLY FAN SUPPLY FORLE SUPPLY REGISTER TOP REGISTER TOAL PRESSURE TRANSFER GRILLE PRICA
E/A	EXHAUST AIR	SR	SUPPLY REGISTER
E/M	CARAUSI AIR	TR	TOP REGISTER
ECUI	FAN CON LINE	TP	TOTAL PRESSURE
FCU	FAN COIL UNIT FEET PER MINUTE	TG	TRANSFER GRILLE
FPM	FIRE DAMPER	TYP	TYPICAL
10	FLEXIBLE CONNECTION	UG	UNDERGROUND
CON	FLOWMETER	UH	UNIT HEATER
GPM	GALLONS PER MINUTE	UV	UNIT VENTILATOR
GCH	GLICOL CHILLER		
HD	HALON DAMPER	VAV	VARIABLE AIR VOLUME
HOPE	HIGH DENSITY DOLYETLYLENE	VIF	VERIFY IN FIELD
HV	HEATING VENTILATING LINIT		
		WB	WET BULB TEMPERATURE, 'F
1.40	TOT TOTEL FUMP	WP	WORKING PRESSURE
iR	INFRARED HEATER	WCC	WAIER COULED CONDENSER
0.0	IN WILL TENER	WCCU	WATER COOLED CONDENSING UNIT
FM GPM GCH HD HDPE HV HWP	FLEXIBLE CONNECTION FLOWMETER GALLONS PER MINUTE GLYCOL CHILLER HIGH DENSITY POLYETHYLENE HIGH DENSITY POLYETHYLENE HEATING VENTILATING UNIT HOT WATER PUWP INFRARED HEATER	VAV VIF WB WP WCC	UNDERGROUND UNIT HEATER UNIT VENTILATOR VARIABLE AIR VOLUME\ VERIFY IN FIELD WET BULB TEMPERATURE, 'F WORKING PRESSURE WATER COOLED CONDENSER WATER COOLED CONDENSING U

BID NOTE

PRIOR TO SUBMITTING A BID FOR THIS WORK THE CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE COST IMPACT OF EXISTING CONDITIONS ON THE SCOPE OF WORK HEREIN. THE BID SHALL INCLUDE ANY COST ASSOCIATED WITH AN EXISTING CONDITION THAT IS MODIFIED, OR AFFECTED BY THE WORK IN THESE DOCUMENTS. FALLUMER TO VISIT THE SITE OR DETERMINE THESE COSTS PRIOR TO BID SHALL NOT ABSOLVE THE CONTRACTOR OF THIS RESPONSIBILITY.

SUBMITTALS

CONTRACTOR SUBMITTALS SHALL BE MADE IN COMPLIANCE WITH THE FOLLOWING STATEMENT:

T IS HEREBY CERTIFIED THAT THE MATERIAL/EQUIPMENT PRESENTED IN THIS SUBMITTAL/SHOP DRAWING/CATALOG CUT SHEET, ETC. HAS BEEN REVEWED AND IS APPROVED FOR USE ON THIS PROJECT BY THIS CONTRACTOR AS BEING IN CONFORMANCE TO THE DESIGN AS SHOWN ON THE CONTRACT DOCUMENTS AND CAN BE INSTALLED IN THE ALLOCATED SPACES, IS OF THE CORRECT ELECTRICAL CHARACTERISTICS AND IS SUBMITTED FOR REVIEW AND APPROVAL BY THE ARCHITECT/ENGINEER.

THE SUBMITTAL WILL BE SIGNED AND DATED BY AN AUTHORIZED AGENT OF THIS CONTRACTOR.

SYMBOL	DESCRIPTION		
MVD	MANUAL VOLUME DAMPER	E Mart	SOUND
FD.	FIRE DAMPER		CEILING
• SD	SMOKE DAMPER		UNLESS
BD	BACKDRAFT DAMPER		CEIUNG DIFFUSE
MOD	MOTOR OPERATED DAMPER	* *	NEW DUI
FD/SD	COMBINATION FIRE/SMOKE		RISE IN DIRECTIO DROP IN
Ð <u>s</u>	DAMPER SMOKE DETECTOR	2 1 2	DIRECTIO
\bigcirc	THERMOSTAT		HOT WAT
(T5)	TEMPERATURE SENSOR		ELECTRIC
\bigcirc_{N}	NIGHT SETBACK THERMOSTAT		90 BRAN
(H)	HUMIDISTAT		FLEXIBLE
C OR CFM	CUBIC FEET PER MINUTE		REDUCER
]	CAPPED END		
Ø	ROUND DUCT		DIRECTION OR PIPE
\Diamond	FLAT OVAL DUCT	200	SQUARE T
UD	UNDERGUT DOOR	SS	SANITARY
-	VARIABLE AIR VOLUME TERMINAL UNIT (VAV-) SYMBOL		RECLAIM
VAV-1-1-	VAV No.		CLOSED L
-		CLR	CLOSED L
	VARIABLE AIR VOLUME TERMINAL UNIT WITH ELECTRICAL HEATER	R	REJECTION
VAV-1		— A —	ABSORPTIC
	VARIABLE AIR VOLUME TERMINAL UNIT WITHOUT ELECTRICAL HEATER	— w —	POTABLE
~	SECTION SYMBOL SECTION No.	NOTES:	
Q	SHEET WHERE SHOWN	1, THIS IS A MAS APPLICABLE TI	D THIS PROJE
\boxtimes	SUPPLY OR PRECONDITIONED OUTSIDE AIR DUCT	THE DRAWINGS	
	RETURN OR EXHAUST AIRDUCT	2. REFER TO ARC CEILING PLANS ALL AIR DISTR PANELS.	FOR ACTUAL
H-1	VANED ELBOW	3 ALL DUCT DIM DIMENSIONS.	ENSIONS ARE

			_	G		ERAL	NO	IES	
		1. 0		DRAWINGS.	PMENT	SHALL BE V	ERIFIED	WITH MANU	FAC
SOUND ATTENUATORS		2. D P	MENSION	S SHALL B	BRICATI	VERIFIED A	ATE THE	WORK WIT	TH C
CEILING DIFFUSER, -4-WAY UNLESS SHOWN OTHERWISE		()	NCLUDING	NCES SHALL	BE P	NS SUCH AS RK) NEEDED ROVIDED AT	DUE TO	OBSTRUCT	IONS
CEILING OR SIDEWALL LINEAR DIFFUSER		IN A	NOLVING	RENOVATION	UCTUR	ROINATE NEW E AND ARCHI ND ELECTRIC	WORK	WITH EXIST	NG
NEW DUCTWORK		3. DI	UCT CONS	STRUCTION	SHALL	BE IN ACCOR	DANCE	WITH THE I	ATE
RISE IN DUCT IN THE DIRECTION OF AIRFLOW						IN ALL 90			AR
DROP IN DUCT IN THE DIRECTION OF AIRFLOW		C	DORDINATE	ED TO SUIT	EQUIP	IGS THROUGH	HED.		
FLEXIBLE CONNECTION		6. C(RE	FLECTED	CEILING PI	ANS AN	E AND REGIS	TER LO	L TRADES	rh A
HOT WATER COIL		7. LC SE	CATE THE	T 48" AFF	TEMPE	RATURE SEN	RWISE		AN
ELECTRIC DUCT HEATER		01	HER EQU	IPMENT, FL	RNITUR	E AND DOOR	SWINGS	š.	
90 BRANCH TAKE-OFF W/MVD		SP	ECIFIED.	PROVIDE A	DITION	etc. Shall e al supports lation,	AS RE	ORTED AS	PRO
						INSIDE CLE			
FLEXIBLE DUCTWORK		10. DA DIF	MPERS A	ND INSIDES SHALL BE	OF DL	FLAT BLACK	THROUG	H GRILLES.	RE
REDUCER						OR PIPING A			
DIRECTION OF FLOW IN DUCT DR PIPE		PR	OVIDED F	OR PROPER	DRAIN	FROM ALL	EQUIP	MENT FURM	VISH
SQUARE TO ROUND		REI	DUIRED F	OR OPERAT	ION, BA	AND CEILIN	MAINTEI	NANCE OF	ALL
SANITARY SEWER									
RECLAIM WATER									
CLOSED LOOP SUPPLY								HE	A
CLOSED LOOP RETURN	UNIT N			-	нот	SIDE			-
REJECTION WATER	(MARH	1			-		bas	-	-
ABSORPTION WATER			OW RATE (GPM)	TEMPER (*F	ATURE	OUTLET TEMPERATU ('F)		DROP OF H20)	FL
POTABLE MAKE UP WATER	HEX-1	0	267	96	1	86		23	
	HEX-2	2	267	96		86	1	23	
SHEET: FOR SYMBOLS IS PROJECT REFER TO			DESIGN IS SPECIFICA	BELL & C		GASKETED I VENT SPECIAL MINIMUM OF	LATE AM	ND FRAME	HEAT
CTURAL REFLECTED R ACTUAL LOCATION OF ON DEVICES AND ACCESS	DATE	4					a pos	NC33 DATS	EN
ONS ARE CLEAR INSIDE		_							F
	MARK (UNI		GPM	HEAD FT.	RPM	HP/BHP	MIN, % EFF.	ELECTRIC DATA (V/PH/H	
	P-1	1	267	120	1750	10.0/9.2	74	208/3/	60

GENERAL NOTES

- ACTURER'S
- OR TO H OTHER TRADES AND DUCTWORK ONS OR T. FOR PRODUCTS G ELEMENTS SUCH SPRINKLER
- ATEST EDITION OF
- BUCT ELBOWS.
- TION SHALL BE
- ARCHITECTURAL
- ND HUMIDITY LOCATIONS WITH
- TAILED AND/OR ROVIDE A
- REGISTERS AND
- EQUIPMENT. ENT SHALL BE
- HED.
- DED WHERE MECHANICAL

				HE	AT EXC	CHANGE	ER SCH	EDULE			
UNIT NO. (MARK)					COLD 5	SIDE	DESIGN MANUFACTURER	MODEL	REMARKS		
	FLOW RATE (GPM)	INLET TEMPERATURE (°F)	OUTLET TEMPERATURE (°F)	MAX. PRESS. DROP (FT. OF H20)	FLOW RATE (GPM)	INLET TEMPERATURE ('F)	TEMPERATURE	MAX. PRESS. DROP (FT. OF H20)	. · · · · · · · · · · · · · · · · · · ·		
HEX-1	267	96	86	23	267	70	80	23	BELL & GOSSETT	GPX	
HEX-2	267	96	86	23	267	70	80	23	BELL & GOSSETT	GPX	

17. NOT USED.

NECK.

AT EXCHANGER

PRIOR TO BID

						F	PUN	IP SCH	EDULE		
MARK NO. (UNIT)	GPM	HEAD FT.	RPM	НР/ВНР	MIN, % EFF.	ELECTRICAL DATA (V/PH/HZ)	MÍÑ. NPSH	TYPE	DESIGN MANUFACTURER	SERIES/SIZE	REMARKS
P-1	267	120	1750	10.0/9.2	74	208/3/60	N/A	END SUCTION	BELL & GOSSETT	E-1510/2.5EB	PROVIDE WITH VARIABLE FREQUENCY DRIVE BY AQUAVAR MODEL # AVB200100080D0X1 OR APPROVED EQUAL. SEE NOTES 1,2,3.
P-2	267	120	1750	10.0/9.2	74	208/3/60	N/A	END SUCTION	BELL & GOSSETT	E-1510/2.5EB	PROVIDE WITH VARIABLE FREQUENCY DRIVE BY AQUAVAR MODEL # AVB20010D0B0D0X1 OR APPROVED EQUAL SEE NOTES 1,2,3.
UPPLY WELL PUMP	320	200	÷	15	74	208/3/60	N/A	VERTICAL SUBMERSIBLE	COULDS	320L15	PROVIDE WITH VARIABLE FREQUENCY DRIVE BY AQUAVAR MODEL # AVB20015D0B0D0X1 OR APPROVED EQUAL. SEE NOTES 1,2,3,4 & 5.

NOTES:

- 1. PUMPS SHALL BE CAPABLE OF BEING SERVICED WITHOUT DISTURBING PIPING CONNECTION OR MOTORS.
- 2. PROVIDE VIBRATION ISOLATION.
- FLOW (GPM) SHALL BE CONTROLLED BY THE HEAT PUMP CONTROLLER LOCATED IN THE RECLAIM WATER ROOM.
- 4. PROVIDE 6 INCH STAINLESS STEEL (304) PUMP END WITH 4 INC DISCHARGE
- 5. WELL PUMP VED TO SET 100% CAPACITY AT 275 GPM.

SHEET	DES
M-000	SYMBOL LE
M-001	CONTROLS
M-002	CONTROLS
M-003	CONTROL D
M-100	SITE PLAN
M-101	1ST FLOOR
M-201	2ND FLOOR
M-301	ENLARGED
M-302	MECHANICAL
M-303	ELEVATION '
M-304	ELEVATION !
M-401	DETAILS
M-601	SPECIFICATIO

14. ALL DUCTWORK AND PIPING IS SHOWN SCHEMATICALLY. PROVIDE ALL TRANSTIONS, VANES, ELBOWS FITTINGS, ETC. TO ALLOW SMOOTH FLOWS, ALL SPUT DUCT FITTINGS SHALL TRANSTION TO FULL SIZE OF THE SUM OF BOTH BRANCHES, UPSTREAM OF SPLT.

15. VERIFY FINISH WITH OWNER PRIOR TO PURCHASING GRILLES, REGISTERS, DIFFUSERS, LOUVERS AND OTHER AIR DISTRIBUTION DEVICES.

16. THE CONTRACTOR SHALL BE RESPONSIBLE TO PREPARE AND SUBMIT FOR ALL REQUIRED PERMITS. THE CONTRACTOR WAY SEEK REIMBURSEMENT FOR PERMIT FEES FROM THE CITY.

18. INTERRUPTIONS TO EXISTING SERVICES SHALL BE SCHEDULED WITH THE BUILING OFFICIAL AT ALL TIMES. SUCH INTERRUPTIONS TO SERVICES SHALL NOT BE MADE WITHOUT THE PRIOR WRITTEN CONSENT OF THE OWNER'S REPRESENTATIVE AND PROPER COORDINATION WITH OTHER TRADES. PRE-WORK SHALL BE PERFORMED TO MAKE THE SHUTDOWN PERIOD AS BRIEF AS PROSUME

19. ALL EQUIPMENT, DUCTWORK, ETC. TO BE REMOVED SHALL BE DISPOSED OF BY CONTRACTOR.

20. MAINTAIN CLEARANCE OF A MINIMUM OF 6" BETWEEN DUCTWORK, PIPING. EQUIPMENT, ETC., AND ALL FIRE RATED AND FIRE /SMOKE RATED PARTITIONS, TO ALLOW FOR INSPECTIONS OF RATED WALLS. 21. DUCT RUNDUTS TO DIFFUSERS SHALL MATCH THE SIZE OF THE DIFFUSER

22. UNLESS OTHERWISE NOTED, ALL EQUIPMENT AND VALVE DRAINS SHALL BE INDEPENDENTLY PIPED FULL SIZE TO THE NEAREST PLUMBING DRAIN. 23. SLEEVE AND SEAL ALL PIPING PENETRATIONS THROUGH BUILDING PARTITIONS.

24. ALL NEW DUCTWORK SHALL BE INTERNALLY INSULATED. 25. ALL MATERIALS AND EQUIPMENT SHALL BE PROPERLY AND EFFECTIVELY PROTECTED BY THE CONTRACTOR DURING TGE EXECUTION OF THE WORK.

26. ALL EQUIPMENT AND MATERIAL SUBSTITUTIONS MUST BE APPROVED A MINIMUM OF 8 BUSINESS DAYS PRIOR TO BID DATE.

DULE	
	DESIGN MANUFACTURER

SHEET INDEX
CRIPTION
GEND, SCHEDULES & GENERAL NOTES
- HEAT PUMPS - NEW WORK
- HEAT PUMPS - NEW WORK
AGRAMS - CONDENSER WATER SYSTEMS
PLAN - NEW WORK
PLAN - NEW WORK
PLANS - NEW WORK
YARD - ENLARGED PLANS - NEW WORK
VIEWS & ENLARGED PLANS
VIEWS
DNS



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ARCHITECT OF RECORD

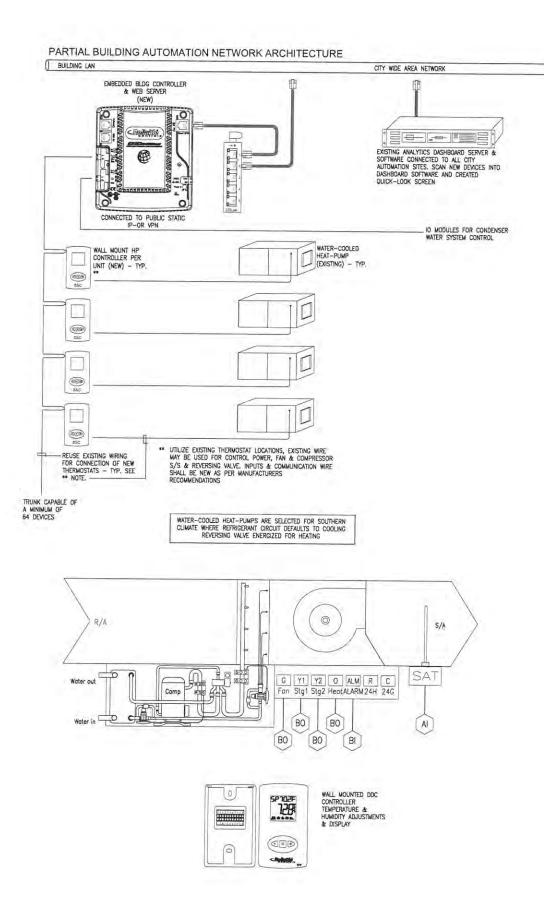
REVISION SCHEDULE

No.	DESCRIPTION	DATE
A	50% SUBMITTAL	4/18/17
в	90% Review Set	5/24/17
0	Permit Set	8/17/17
-		-
		-





GREGORY A. JOHNSON PE-57783
PROJECT TEAM
DESIGNER
BIM / DRAWINGS BY:
CHECKED BY:
GJ
i i
1
Community
Development
Bldg. Renovations
295 Riverside Circle Naples, FL 34102 8
6788-16-2867
100% CD - 08-17-17
PROJECT NUMBER STATUS ISSUE DATE
SYMBOL LEGEND, SCHEDULES & GENERAL NOTES
SCALE:-
M-000 55
SHEET NUMBER





BASED ON A USER-DEFINED SCHEDULE IN THE EMBEDDED OPERATORS WORKSTATION, IF WATER FLOW HAS BEEN PROVEN IN THE CONDENSER WATER PLANT, THE SYSTEM WILL RUN AS SCHEDULED, ONCE A WATER FLOW STATUS IS RECEMED PROVING WATER FLOW, WITH HAT-PUMP SCHEDULED TO BE ON WILL OPERATE AS LOCALLY ADJUSTED.

EACH HEAT PUMP SHALL BE CONTROLLED AND CONNECTED TO A WALL MOUNTED SPACE CONTROLLER, WITH LCD DISPLAY EQUIPPED WITH AN ADJUSTMENT KEYPAD. THE LCD SCREEN WILL DISPLAY SPACE TEMPERATURE & HUMIDITY, AS WELL AS THE ACTIVE SET POINT, AND INDICATE THROUGH SCREEN ICONS, IT'S MODE OF OPERATION, COOLING OR HEATING.

IN COOLING AS THE SPACE TEMPERATURE RISES TO ½ OVER THE COOLING SET POINT, THE CONTROLLER WILL ACTIVATE THE FAN, AND ENERGIZE THE COMPRESSOR, IF THE REVERSING VALVE IS NORMALLY PIPE FOR COOLING. IF NORMALLY CLOSED TO COOLING THE REVERSING VALVE SHALL BE ACTIVATE SIMULTANEOUS TO COMPRESSOR OPERATION.

AS THE SPACE TEMPERATURE DROPS TO λ' below the room set point cooling will be staged off. Depending upon the ventuation regularizements the unit may operate the fan in continuous operation while scheduled in the occupied mode.

SHOULD THE ROOM TEMPERATURE DROP 1' BELOW SET POINT, THE REVERSING VALVE WILL BE ACTIVATED AND THE COMPRESSOR WILL BE STAGED ON. SHOULD THE UNIT BE FOUIPPED WITH AUXILARY ELECTRIC HEAT, IT WILL BE LOCKED OUT BY THE BUILDING OPERATOR, BUT MAY BE SELECTED TO RUN IF THE SPACE TEMPERATURE DROPS TO A MINIMUM OF 2' BELOW THE HEATING SET POINT.

CODLING AND HEATING SHALL BE SEPARATED BY MINIMUM AND MAXIMUM SET POINTS, SET BY THE BUILDING OPERATOR FROM A SCREEN THROUGH THE BACNET EMBEDDED OPERATOR WORKSTATION

THERMOSTATS NOTE

EACH HEAT PUMP IS EQUIPPED WITH ONE THERMOSTAT. THESE THERMOSTATS ARE TO BE REPLACED WITH NEW, AS SHOWN ON THIS SHEET. REUSE EXISTING WIRING FOR CONNECTION OF NEW THERMOSTATS.



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0	Permit Set	8/17/17
-		
-		
-		



300 CROWN OAK CENTRE DRIVE. LONGWOOD, FL 32750 TEL: 407.260.0231 FAX: 407.260.0749



DIRECT DIGITAL CONTROL SYSTEM FOR HVAC

1.01 DIRECT DIGITAL CONTROL (DDC) SYSTEM DESCRIPTION

A INTENT. DOC CONTRACTOR IS FAMILIAR WITH THE SYSTEMS IN ALL CITY OF NAPLES BUILDINGS, REGULARLY ENGAGED BY THE CITY AND SHALL SUPPLY AND INSTALL A COMPLETE DIRECT DIGITAL CONTROL (DDC) SYSTEM AS REQUIRED TO ACCOMPLISH THE SPECIFIED SEQUENCES OF OPERATION FOR CONTROL AS INDICATED ON THE PLANS, AS WELL AS THE INTO THE CITIES ENERGY DASHBOAL

DDC SYSTEM REQUIREMENTS

- A BACNET. THE CONTROL SYSTEM SHALL CONSIST OF A HIGH-SPEED, PEER-TO-PEER INTERNETWORK OF ANSI/ASHRAE 135 NATIVE BACNET" DDC DEVICES. THE CONTROL SYSTEM SHALL ALSO NCORPORATE INPUT/OUTPUT DEVICES, MECHANICAL/ELECTRICAL AUTOMATIC TEMPERATURE CONTROL DEVICES, ENCLOSURES, INTERCONNECTING CONDUIT AND CABLING.
- 1.THE BACNET* OPERATING STACK MUST BE EMBEDDED DIRECTLY IN EACH INDIVIDUAL DD DEVICE AT THE MEDIA ACCESS CONTROLLER LEVEL AND IN ALL OPERATOR INTERFACE AND CONFIGURATION APPLICATIONS.
- B. BTL ALL DOC DEVICES SHALL BE TESTED, CERTIFIED, CLEARLY STAMPED AND LISTED BY THE BACNET TESTING LABORATORIES (BTL). ALL DOC PRODUCTS SHALL BE BY RELIABLE CONTROLS, AND COME WITH A 5 YEAR PARTS WARRANTY FROM DATE OF PURCHASE
- C. MODULARITY. THE DDC SYSTEM SHALL BE MODULAR IN NATURE AND IMPLEMENTED IN SUCH A MANNER THAT IT CAN BE EXPANDED IN BOTH CAPACITY AND FUNCTIONALITY THROUGH TI OF DDC CONTROLLERS, DEVICES AND WIRING.
- D. LOCAL DATABASE. ALL LOGIC REQUIRED TO PERFORM THE SPECIFIED SEQUENCES OF OPERATION, TRENDING AND ALARMING AS OUTLINED IN THIS SPECIFICATION SHALL RESIDE IN EACH INDIVIDUAL DDC DEMCE.

DDC SYSTEM ARCHITECTURE

- A THE STSTEM WILL USE A COMBINATION BACNET BUILDING CONTROLLER & EMBEDDED BACNET OPERATOR WORKSTATION, WHICH IS MOUNTED NEAR AN IP NETWORK CONNECTION, CAPAGLE OF HOLDING ALL GRAPHIC SCREENS, SKECHTING ALL PLANT CONTROL, AND COMMUNICATE WITH AS MANY BACNET DEVICES ON A MSTP COMMUNICATIONS TRUNK, THAT IS STANDARD WITH THE COMMUNICATE
- B. THE SUCCESSFUL DEALER MUST BE ABLE TO CONNECT THE NEW SYSTEM TO THE CITY OF NAPLES ING ENERGY DASHBOARD LEVEL, TO ALLOW FOR REMOTE ACCESS OF THE SERVICING CONTRACTOR AND CITY OF NAPLES EMPLOYEES
- C. FIELD LEVEL COMMUNICATION NETWORKS SHALL BE COMPRISED OF BACNET NETWORKS OF UNITARY BACNET* CONTROLLERS AND DEVICES USING THE BACNET DATA LINK MASTER SLAVE/TOKEN PASSING (MS/TP).
- 0. THE BACNET EMBEDDED OPERATOR WORKSTATION, OPERATOR INTERFACES USING THE BACNET DATA LINKS BACNET*/IP (B/IP) OR BACNET*/ETHERNET (ISO 8802.3). EMBEDDED OPERATOR WORKSTATION SHALL HAVE AN MS/TP COMMUNICATIONS PORT CAPABLE OF 127 DEVICES.

PRODUCTS FURNISHED BUT NOT INSTALLED UNDER THIS SECTION

- A PROMIDE, AND COORDINATE THE INSTALLATION OF COMPONENTS SUPPLIED UNDER THIS SECTION BUT INSTALLED UNDER OTHER DIVISIONS OF THE SPECIFICATION.
- B. AUTOMATIC CONTROL VALVES, THERMOWELLS, LIQUID FLOW SWITCHES, LIQUID FLOW METERS ARE TO BE INSTALLED BY THE MECHANICAL OR PIPING CONTRACTOR RESPONSIBLE FOR THE INSTALLATION OF THE APPLICABLE PIPING SYSTEM.
- C. WATER COOLED HEAT PUMP EQUIPMENT BEING USED TO REPLACE THE EXISTING SYSTEM SUITABLE FOR TYING INTO WITH STANDARD THERMOSTAT TERMINAL STRIPS. QUALITY ASSURANCE

- A DOC SYSTEM MANUFACTURER SHALL BE ENCAGED FULL-TIME IN THE MANUFACTURE OF EQUIPMENT AND DEVICES OF THE SCOPE, SIZE AND SERVICE REQUIRED.
- B. THE DDC SYSTEM MANUFACTURER SHALL OPERATE A QUALITY MANAGEMENT SYSTEM FORMALLY CERTIFIED TO BE IN COMPLIANCE WITH ISO 9001:2008. PROVIDE ALL HARDWARE FROM RELIABLE CONTROLS
- C. THE DDC SYSTEM CONTRACTOR SHALL SPECIALIZE AND HAVE A MINIMUM OF FIVE (10) YEARS OF RIENCE IN THE DESIGN, INSTALLATION, PROGRAMMING AND OPERATION OF DDC SYSTEMS OF THE EXPERIENCE IN THE DESIGN, INSTALLATION, PROGRA SCOPE, SIZE AND SERVICE SPECIFIED; AND SHALL:
- 1.BE AN OFFICIALLY AUTHORIZED REPRESENTATIVE OF THE DDC, WITH A BASE OF OPERATIONS EMPLOYING NO LESS THAN 10 ENGINEERING, PROJECT MANAGEMENT, PROGRAMMERS AND AS WELL AS A MINIMUM OF 10 FIFLD FMPLOYFES
- 2JJSE AND ASSIGN TO THE PROJECT TECHNICIANS AND ENGINEERS WHO ARE OFFICIALLY TRAINED AND CERTIFIED BY MANUFACTURER IN THE DESIGN, INSTALLATION, PROGRAMMING AND OPERATION OF THE DDC SYSTEM COMPONENTS.
- 3.MECHANICAL CONTRACTOR SHALL SECURE PRICING FROM THE LISTED VENDORS IN SECTION 1.08, ACCEPTABLE MANUFACTURER-BIDDERS, SUBSECTION C, AUTHORIZED DEALERS IN SOUTH FLORIDA.
- 1.02 CODES AND STANDARDS
- A ALL WORKMANSHIP, MATERIALS AND EQUIPMENT WILL BE OF COMMERCIAL GRADE, AND CONFORM TO APPLICABLE CODES, THE PREVALING APPLICABLE LOCAL, STATE BUILDING CODES AS WELL AS THE PLANS & SPECIFICATIONS, INCLUDING:
- 1.ANSI/ASHRAE STANDARD 135: BACNET
- 2. NATIONAL ELECTRIC CODE (NEC).
- 3. FLORIDA BUILDING CODE (FBC).
- 4. SOUTHERN STANDARD BUILDING CODE
- 5. UNDERWRITERS LABORATORIES (UL). (UL-916 ENERGY MANAGEMENT).
- 1.03 SYSTEM PERFORMANCE
 - A. GRAPHIC DISPLAY. PROVIDE GRAPHIC SCREENS THAT ARE ACCESSED FROM AN INTERNET BROWSER 1. FLOORPLAN GRAPHICS DELINEATING THE SPECIFIC AREAS CONDITIONED BY EACH SYSTEM
 - 2. MECHANICAL GRAPHICS FOR EACH HEAT PUMP SHOWING SYSTEM OPERATION, MIN/MAX SET POINTS ALLOWED, SPACE TEMPERATURE & HUMIDITY, AND ANIMATED GRAPHICS FOR FAN AND COMPRESSOR STATUS.
 - 3. CONDENSER WATER PLANT SHOWING ENTIRE PLANT ON ONE SCREEN WITH SUB SCREENS FOR INDMOUAL EQUIPMENT FEATURES SUCH AS OVERRIDE TO BACK-UP, LEVEL-1 & LEVEL-2
 - BIOTRADE COMMAND. PROVIDE THE OPERATOR WITH THE CAPACITY TO MAKE COMMANDS OR ADJUSTMENTS & CHANGES TO THE SET POINTS & SCHEDULES, AJARM RESPONSE. PROVIDE AJANDS ON ALL MOTORS AND LOOP TEMPERATURE, WHEN SYSTEM IS OVERRODEN INTO LEVEL-1 BACK-UP, AS WELL AS LEVEL-2 BACK-UP, PROGRAM EXECUTION. ALL PROGRAMS IN ALL DOC DEVICES SHALL BE ASLE TO EXECUTE AT A MINIMUM OF AT LEAST ONE TIME EVERY SECOND. PROGRAM EXECUTION TIME SHALL BE CONFIGURABLE TO BE CONSISTENT WITH THE PROCESS UNDER CONTROL.
 - C. ALL SUBMITTALS AND DOCUMENTATION INCLUDING COMPLETE DDC SYSTEM ENGINEERING DESIGN SHALL BE SUBMITTED IN ELECTRONIC FORM

D. DDC SYSTEM HARDWARE SUBMITTALS.

- CONTROL DRAWINGS: 11" X 17 WITH A TABLE OF CONTENTS, NETWORK TOPOLOGY, FLOOR PLAN DELINEATING MSTP TRUNK ROUTING THROUGH THE BUILDING, SYSTEM FLOW DIAGRAMS DETAILING ALL CONTROL COMPONENTS IN EACH SYSTEM, A WIRING DIAGRAM SHOWING THE CONNECTION OF COMMUNICATION, ALL INPUTS AND OUTPUTS, INCLUDING ANY POWER SUPPLIES , CONTROL PAREL LAYOUTS CONSISTENT WITH HOW THEY ARE TO BE CONSTRUCTED, PROVIDE A COMPLETE "BILL OF MATERIALS" AND FINALLY A CONTROL POINT LIST.
- 2. CUT SHEETS: PROVIDE FOR EVERY DEVICE IN THE CONTROL SYSTEM A SPECIFICATION SHEET

INDICATING ALL PHYSICAL DIMENSIONS, AND PERFORMANCE DATA. THIS INCLUDES ALL DOC HARDWARE, ALL SENSORS, CONTROL VALVES, FLOW METERS, POWER SUPPLIES, CONTROL TRANSFORMERS, CONTROL RELAYS, ENERGY METERING, AND SO ON.

- 2. EOR VALVES AND DAMPERS: PROVIDE SCHEDULES INDICATING VALVE SIZE FOR EACH UNIT, PRESSURE DROP, LINE SIZE, ON PAGE WITH PROJECT NAME INCLUDED IN SUBMITTAL PACKAGE ALL PROGRAMMING SHALL ADHERE TO THE SEQUENCE OF OPERATION OF THE PLANS AS
- INDICATED BY EACH SYSTEM
- 5. A SCHEDULE OF ALL CONTROL VALVES INCLUDING THE UNIQUE EQUIPMENT IDENTIFIER, VALVE SIZE, DIMENSIONS AND INSTALLATION/MAINTENANCE CLEARANCE, MODEL NUMBER (INCLUDING PATTERN AND CONNECTIONS), CLOSE-OFF RATING, FLOW, CV, PRESSURE DROP, PRESSURE RATING AND LOCATION. THE VALVE SCHEDULE SHALL ALSO CONTAIN ACTUATOR SELECTION DATA

E. PROJECT RECORD DOCUMENTATION

- 1. UPON COMPLETION OF INSTALLATION AND SYSTEMS COMMISSIONING SUBMIT RECORD (AS-BUILT) DOCUMENTS FOR REVIEW TO INCLUDE:
- A DEERATION AND MAINTENANCE (O&W) MANUAL AS-BUILT REVISIONS OF ALL SUBMITTAL DATA UPDATED TO REFLECT ACTUAL FIELD CONDITIONS, ARCHITECTURE AND DEECUTION, MAKES AND 24-HOUR CONTACT INFORMATION FOR INSTALLING CONTRACTORS AND SERVICE REPRESENTATIVES. OPERATOR'S MANUAL WITH ADMINISTRATOR AND OPERATOR LEVEL CREDENTIALS AND PROCEDURES

1.04 ACCEPTABLE MANUFACTURER-BIDDERS

A THE SYSTEM HAS BEEN DESIGNED AND PREPARED USING THE BACKET PROTOCOL AND COMMUNICATION, WITH RELIABLE CONTROLS, ALL PRODUCTS ARE REQUIRED TO BE STAMPED AND LISTED BY THE BACNET" TESTING LABORATORIES (BTL) PRIOR TO THE BID DATE FOR THIS PROJECT.

- B. THE SYSTEM SHALL BE RELIABLE CONTROLS, BACNET PRODUCTS MACH-SYSTEM. 1. PLANT AND FRONT-END. USING THE MACH-PROWEBCOM COMBINATION BUILDING CONTROLLER AND BACNET OPERATOR WORKSTATION, PROVIDE BUILDING CONTROLLER WITH ADEQUATE
- INPUT/OUTPUT MODULES FOR THE PLANT OPERATION. PROVIDE 10% SPARE POINT CAPACITY 2. HEAT PUMPS SHALL BE CONTROLLED BY THE RELIABLE SMART SPACE CONTROLLER SSC
- EQUIPPED WITH TEMPERATURE AND HUMIDITY , A MINIMUM OF 3 UNIVERSAL INPUTS AND 4 UNIVERSAL OUTPUTS
- C. MECHANICAL CONTRACTOR SHALL SECURE PRICING FROM AT LEAST 2 OR MORE OF THE FOLLOWING SOUTH FLORIDA DEALERS:
- 1. ELECTRONIC SYSTEM SERVICES, INC. ATTN: MIKE MONTEIRO 239-561-3774 2. INTEGRITY CONTROLS - ATTN: LUIS PRATS 786-615-4146
- 3. MECHANICAL AIR CONCEPTS ATTN: VICTOR GOMEZ 786-380-7654
- 1.05 COMMUNICATION
- A BACNET ANSI/ASHRAE STANDARD 135, BACNET". B. BACNET OVER IP & BACNET OVER MSTP
- 1.06 EMBEDDED BACNET* OPERATOR WORKSTATION (B-OWS)
 - A. THE EMBEDDED BACNET* OPERATOR WORKSTATION (B-OWS) PROVIDES DAY-TO-DAY MONITORING AND BASIC OPERATION OF THE DOC SYSTEM. THE EMBEDDED BACKET OPERATOR WORKSTATIONS SHALL COMPLY WITH THE MINIMUM REQUIREMENTS OF ANSI/ASHRAE STANDARD 135 ANNEX L FOR BOTH A BACKET STATIONS & BUILDING CONTROLLERS. PIC STATEMENT SHALL SHOW LEVEL 6 COMPLIANCE.
 - B, EMBEDDED BACNET* OPERATOR WORKSTATIONS SHALL RESIDE ON THE WIDE AREA NETWORK OF THE CITY USING THE BACNET*/IP DATA LINK AS SPECIFIED IN ANSI/ASHRAE STANDARD 135 ANNEX J. CONTACT MARK JACKSON, IT DIRECTOR FOR CONNECTION & STATIC IP.
- C. THE EMBEDDED BACHET* OPERATOR WORKSTATION SHALL STORE THE ENTIRE DEVICE DATABASE AND ALL NECESSARY GRAPHICAL USER INTERFACE (GUI) RESOURCES INCLUDING ANIMATIONS LOCALLY ON
- ALL NECESSA THE DEVICE. D. SECURITY. EACH OPERATOR SHALL BE REQUIRED TO LOG ON TO THE SYSTEM WITH A UNIQUE USER
- NAME AND PASSWORD IN ORDER TO VIEW, EDIT, ADD OR DELETE DATA. 1.SYSTEM SECURITY PERMISSIONS SHALL BE MULTILAYERED AND DEFINED FOR EACH INDIVIDUAL
- OPERATOR TO RESTRICT/PERMIT DAY-TO-DAY OPERATIONS AND SYSTEM CONFIGURATION. 2.SECURITY DATA SHALL BE STORED AND TRANSMITTED IN AN ENCRYPTED FORMAT.
- E. GRAPHICAL USER INTERFACE (GUI). THE OPERATOR INTERFACE SHALL BE GRAPHICALLY ORIENTED. 1.ALL COLOR GRAPHIC DISPLAYS SHALL BE DYNAMIC WITH CURRENT POINT DATA AUTOMATICALLY UPDATED FROM THE BACNET" NETWORK TO THE EMBEDDED WORKSTATION WITHOUT OPERATOR INTERVENTION. THE OPERATOR WITH THE PROPER CREDENTIALS SHALL BE ABLE TO MANUALLY Adjust all data point values (HARDWARE OR SOFTWARE) IN THE STREM, Adjust values of control loops, and command points to manual override, timed override and automatic mode. Operators shall have the Ability to dynamical override, timed override and automatic instance of the energy of the ability to dynamical objects on a display or the display riself. These text files may be viewed and modified by other operators during during strematics. OTHER SESSIONS.
- F. ALARM PROCESSING. THE EMBEDDED WORKSTATION SHALL DISPLAY AND LOG ALARMS AND EVENTS FROM ANY BACNET" OBJECT IN THE SYSTEM AND SHALL SUPPORT OPERATOR CONFIGURATION OF THE ALARM LIMITS, DIFFERENTIALS, STATES AND REACTIONS FOR EACH OBJECT IN THE SYSTEM.
- 1.ALARM CLASSIFICATION. SYSTEM SHALL PROVIDE A MINIMUM OF 50 CONFIGURABLE NOTIFICATION CLASSES AND 100 CONFIGURABLE ALARM PRIORITIES.
- ZALARM AND EVENT LOG. THE OPERATOR SHALL BE ABLE TO VIEW ALL SYSTEM ALARMS FROM ANY LOCATION IN THE INTERNETWORK. WITH THE PROPER CREDENTALS, AN OPERATOR SHALL BE RALE TO ACKIONLEDGE AND CLEAR ALARMS. ALARM AND EVENT LOG SHALL DISPLAY AT A MINIMUM ALARM TIME, RECEIVED THE, STATE, NOTIFICATION CLASS, PRIORITY, MESSAGE, SOURCE, INF. MANUAL ALARM TIME, RECEIVED THE, STATE, NOTIFICATION CLASS, PRIORITY, MESSAGE, SOURCE, TIME ACKNOWLEDGED, ACKNOWLEDGED BY USER AND ACTION.
- JALARM MESSAGES. ALARM MESSAGES SHALL USE THE ENGLISH LANGUAGE NAME FOR THE OBJECT IN ALARM IN SUCH A WAY THAT THE SOURCE, LOCATION AND NATURE OF THE ALARM IS EASILY UNDERSTOOD WITHOUT RELYING UPON MNEMONICS OR OBJECT INSTANCES
- A ALARM MESSAGES SHALL BE FULLY CUSTOMIZABLE IN SIZE, CONTENT AND BEHAVIOR. ALARM ACTIONS. THE OPERATOR SHALL BE ABLE TO CONFIGURE ANY OF THE FOLLOWING AUTOMATIC ALARM ACTIONS PER WORKSTATION: LOGGING, PRINTING, STATING PROCEAUS OF ROUTINES, DISPLAYING MESSAGES, PAGING, AUDIBLE ANNUNCIATION, DISPLAYING SPECIFIC GRAPHICAL DISPLAYS OR FILES.
- 1.07 SPACE MOUNTED HEAT PUMP CONTROLLERS
 - A SPACE MOUNTED TERMINAL UNIT CONTROLLERS. AS REQUIRED, ONE (1) DEDICATED SPACE MOUNTED TERMINAL CONTROLLER SHALL BE PROVIDED FOR EACH HEAT PUMP. UTILIZE THE RELIABLE CONTROLS, SSCE SMART SPACE CONTROLLER WITH LCD DISPLAY
 - 1-PROMDE EACH HEAT-PUMP AS ZONED A WALL MOUNTED SMART SPACE CONTROLLER THAT EMULATES THERMOSTAT FEATURES, WHILE COMMUNICATING WITH THE OVERALL SYSTEM. EACH WILL HAVE THE HUMIDITY FEATURE, A MINIMUM OF 3 INPUTS AND 4 UNIVERSAL OUTPUTS
 - 2.THE SSCE SHALL COMMUNICATE EFFECTIVELY AT A BAUD OF 76.8 KBPS UNDER NORMAL NETWORK OPERATIONAL CONDITIONS WITH ALL DEVICES EXECUTING THE SPECIFIED SEQUENCES O OPERATION AT THE SPECIFIED PERFORMANCE CRITERU
- 1.08 AUTOMATIC CONTROL VALVES
 - A AUTOMATIC CONTROL VALVES. PROVIDE CONTROL VALVES FROM :
 - 1. BELIMO AIR CONTROLS
 - 2. BRAY CONTROLS

- 3. HONEYWELL INTERNATIONAL
- B. ALL BUTTERFLY VALVES SHALL COME WITH EPDM WAFER SEALS AND CLOSE OFF WITHOUT LEAKS
- TWO-WAY WATER VALVES: 150% OF TOTAL SYSTEM (PUMP) HEAD.
- THREE-WAY WATER VALVES: 100% OF PRESSURE DIFFERENTIAL BETWEEN PORTS A AND B AT DESIGN FLOW OR 100% OF TOTAL SYSTEM (PUMP) HEAD (WHICHEVER IS GREATER).
- AUTOMATIC VALVE ACTUATORS
 - A ELECTRIC ACTUATION. ELECTRIC, ALL BUTTERFLY VALVES SHALL BE CAPABLE OF 110 OR 24 VAC 1. THE ACTUATOR SHALL HAVE ELECTRONIC OVERLOAD OR STALL PROTECTION TO PREVENT
 - DAMAGE TO THE ACTUATOR THROUGHOUT ROTATION. MAINTAIN THEIR LAST COMMANDED POSITION WHEN POWER IS LOST TO THE ACTUATOR.
 - B. CLUTCH/GEAR RELEASE. ALL VALVE ACTUATORS SHALL HAVE AN EXTERNAL MANUAL CLUTCH/GEAR RELEASE TO ALLOW MANUAL POSITIONING OF THE DAMPER WHEN THE ACTUATOR IS NOT POWERED.
 - C. END SWITCH: VALVE ACTUATORS SHALL HAVE EITHER AN ADJUSTABLE END SWITCH TO VERIFY PORT POSITION REVERSAL, OR AN ANALOG POSITION FEEDBACK, USING 4-20MA OF D-10VDC.
 - D. ENCLOSURE. ACTUATOR CASING AND/OR ENCLOSURES SHALL BE APPROPRIATE TO THE APPLICATION. IF INSIDE THE CASE SHALL BE A MINIMUM RATING OF NEMA-1, FOR OUTSIDE APPLICATION USE NEMA-4 RATED ENCLOSURES.
- 1.10 FLOW CONTROL VALVES-ENERGY VALVE
- A. FLOW CONTROL VALVES AS SHOWN ON THE PLANS SHALL BE EQUAL TO THE BELINO INTELLIGENT ENERGY VALVE WITH BACNET MSTP COMMUNICATIONS. PROVIDE & CONTROL FLOW RATE, MEASURE WATER TEMPERATURE, AND ACTUATOR COMMANDS AND PERFORMANCE DATA.

1.11 CURRENT SWITCHES

- A. CURRENT SWITCHES. CURRENT-OPERATED SWITCHES SHALL BE SELF-POWERED, SOUD-STATE, SPLIT OR SOLID CORE TYPE WITH ADJUSTABLE TRIP CURRENT, STATUS LED AND DRY-CONTACT OUTPUT.
- 1.12 FLOW METERS WATER
- A PROMOTE AN INUINE FLOW METER USING EITHER TURBINE PULSE TO ANALOG, OR MAGNETIC ANALOG. FLOW METER GENERATES A SIGNAL FOR THE DOC SYSTEM TO SCALE AS WATER FLOW IN GALLONS PER MINUTE. SHALL BE WEATHER PROOF, OR HAVE A WEATHER ENCLOSURE IS MOUNTED OUTDOORS. PROVIDE FLOW METERS FROM FLOWEC (GPI TH SERIES), OR THE ONICON INSERTION TYPE WITH TURBUNE MALOC OFFICIENT. TURBINE ANALOG OUTPUT 1.13 POWER SUPPLIES AND LINE FILTERING
- - A POWER SUPPLIES & CONTROL TRANSFORMERS. CONTROL TRANSFORMERS AND POWER SUPPLIES SHALL BE UL-LISTED. PROVIDE CLASS 2 CURRENT-LIMITING TYPE OR OVER-CURRENT PROTECTION IN BOTH PRIMARY AND SECONDARY CIRCUINS FOR CLASS 2 SERVICE. SHALL HAVE BUILT IN SERVICE RECEPTACLE, SWITCHES FOR BOTH 110VAC AND 24VAC.

A WIRING & CABLE. ALL WIRING REGARDLESS OF SERVICE AND/OR VOLTAGE SHALL COMPLY WITH THE

CONTRACT DOCUMENT ELECTRICAL SYSTEM SPECIFICATIONS, THE NATIONAL ELECTRIC CODE (NEC), CSA C22.1-12 AND ANY/ALL APPLICABLE LOCAL CODES AND/OR AUTHORITIES HAVING JURISDICTION (AHJ).

A. THE DDC SYSTEM MANUFACTURER SHALL PROVIDE A WARRANTY CERTIFICATE COVERING ALL RELIABLE

A THE MAIN CONTROLLER PROVIDED SHALL BE A MACH-PROWEBCOM EMBEDDED BACNET OPERATOR WORKSTATION & BUILDING CONTROLLER AND WILL USE NATIVE BACNET COMMUNICATIONS DIRECTLY

B. EMBEDDED BACNET OPERATOR WORKSTATION SHALL NOT REQUIRE ANY HARDWARE, SOFTWARE OR

C. FUNCTIONALITY OF THE EMBEDDED BACNET OPERATOR WORKSTATIONS SHALL NEITHER BE DEFINED NOR

D. ALL DUBEDDED BACNET OPERATOR WORKSTATIONS PROVIDED UNDER THIS SPECIFICATION SHALL BE REQUIRED TO PROVIDE THE FOLLOWING SMULTANEOUS INTRINSIC AND ENABLED PHYSICAL COMMUNICATION NETWORKS AT A MINIMUM:

E. ALL EMBEDDED CONTROLLERS, AND FIELD LEVEL CONTROLLERS SHALL BE NATIVE BACKET.

B. ONE (1) MASTER SLAVE TOKEN PASSING (MS/TP): ANSI/ASHRAE STANDARD 135.9.

A TRANSPORT LAYER SECURITY (TLS) FOR SMTP MUST BE SUPPORTED INCLUDING COMPATIBILITY WITH STANDARD FREE EMAIL SERVICES.

C. THE ABILITY TO TRANSMIT A SIMPLE TEST EMAIL TO VERIFY SMTP CONFIGURATION WITH A

B. THE ABILITY TO MANAGE CUSTOM TLS CERTIFICATES FROM SMTP MUST BE SUPPORTED.

SINGLE OPERATOR ACTION (E.G., PRESSING A TEST EMAIL BUTTON) MUST BE PROVIDED.

F. EMBEDDED BACNET* OPERATOR WORKSTATIONS SHALL PROVIDE GRAPHICALLY-ORIENTED THIN-CLIENT

1.THE CURRENT VERSIONS OF THE FOLLOWING STANDARD WEB BROWSERS SHALL BE SUPPORTED AT A MINIMUM: MICROSOFT INTERNET EXPLORER, GOOGLE CHROME, MOZILLA FIREFOX,

JINDMIDUAL USER HOME PAGES AS DETERMINED BY THE USER CREDENTIALS SHALL BE

SUPPORTED. EACH USER'S ABILITY TO NAVIGATE THE B-OWS SHALL BE DETERMINED BY THEIR

G. EACH EMBEDDED BACNET* OPERATOR WORKSTATION SHALL SUPPORT UNLIMITED ACCESS FOR A

H. EMBEDDED BACNET" WORKSTATIONS SHALL PROVIDE AN AUDIT TRAIL FEATURE THAT AUTOMATICALLY

RECORDS THE DATE, TIME, USER, AND ACTION ASSOCIATED WITH ALL USER ACCESS AND CHANGES MADE VIA WEB BROWSER CLIENTS.

A. ONE (1) POINT-TO-POINT (PTP): ANSI/ASHRAE STANDARD 135.10.

C. ONE (1) ISO 8802-3 (ETHERNET): ANSI/ASHRAE STANDARD 135.7.

D. TWO (2) BACNET/IP: ANSI/ASHRAE STANDARD 135 ANNEX J.

A REMOTE TERMINAL UNIT (RTU) MASTER OR SLAVE.

ASIMPLE NETWORK MANAGEMENT PROTOCOL (SNMP).

2.A CUSTOMIZABLE NAVIGATION/FILE TREE SHALL BE PROVIDED.

SHYPERTEXT TRANSFER PROTOCOL (HTTP).

MINIMUM OF FIVE (5) SIMULTANEOUS USERS.

DDC HARDWARE FOR A PERIOD OF 5 YEARS FROM DATE OF OWNER'S ACCEPTANCE

1.14 INTERCONNECTING WIRING & RACEWAYS

1.16 EMBEDDED BACNET OPERATOR WORKSTATION (B-OWS)

WITH ALL DEVICES ON THE BMS NETWORK.

1.ONE (1) ISO 8802-3 ETHERNET PORT @ 100 MBPS.

2.0NE (1) EIA-232 PORT @ 115.2 KRPS

3.TWO (2) EIA-485 PORTS @ 76.8 KBPS.

1.ANSI/ASHRAE STANDARD 135: BACNET.

B. TCP MASTER OR SLAVE.

3.SIMPLE MAIL TRANSFER PROTOCOL (SMTP).

2MODBUS

OPERATOR INTERFACE.

AND APPLE SAFARI.

LOG-IN CREDENTIALS

1.17 SPACE MOUNTED TERMINAL UNIT CONTROLLERS

18-035 Geothermal Cooling Water Supply and Facility Improvements ITB

FIRMWARE LICENSING AGREEMENTS;

LIMITED BY FEATURE LICENSING.

1.15 WARRANTY

A THE SPACE MOUNTED TERMINAL CONTROLLERS PROVIDED SHALL COMPLY WITH ALL RELEVANT SECTIONS

OF THIS SPECIFICATION.

1.18 TEMPERATURE SENSORS

1.19 TEMPERATURE CONTROL PANELS

1.20 WIRING

THE EQUIPMENT SERVED.

JURISDICTION (AHJ).

1.22 DDC SYSTEM CHECK-OUT AND TESTING

EVERY 3'

1.21 PROGRAMMING

1.24 CLEANING

1.25 TRAINING

WARRANTY.

ORIENTATION & TRAINING

ADJUSTMENT, RELATIVE HUMIDITY,

B. ALL SPACE MOUNTED TERMINAL CONTROLLERS SERIES UNDER THIS SPECIFICATION SHALL BE AVAILABLE WITH THE FOLLOWING THE INTEGRAL HARDWARE SENSORS AT A MINIMUM: TEMPERATURE, SETPOINT AND

C. EACH SPACE MOUNTED TERMINAL CONTROLLER SHALL BE PROVIDED WITH A KEYPAD AND DISPLAY TO PERMIT LOW-LEVEL OPERATOR INTERFACE WITH FOLLOWING FEATURES AT A MINIMUM:

1. CONFIGURABLE BACK-LIGHTING, CONFIGURABLE TO DISPLAY ICONS, TIME, POINT NAMES AND ENGINEERING UNITS, CONFIGURABLE TO DISPLAY AND MODIFY OBJECT VALUES FROM ANY DEVICE ON THE INTERNETWORK. PROVIDE ACCESS TO A MINIMUM OF TEN (10) TOTAL OBJECT VALUES.

A AL SENSORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS CONSISTENT WITH ACCEPTABLE INDUSTRY STANDARDS FOR PERFORMANCE COMPLIANT WITH THE REQUIREMENTS OF THIS SPECIFICATION. ALL DUCT SENSORS SHALL BE 12" RIGID AVERAGING B. ALL PIPE-MOUNTED SENSORS SHALL BE INSTALLED IN WELLS. INSTALL ALL LIQUID TEMPERATURE SENSORS WITH HEAT-CONDUCTING FLUID IN THERMAL WELLS.

C. OUTDOOR AIR SENSORS SHALL BE MOUNTED OUTSIDE ON A NORTHERN EXPOSURE AS HIGH AS SERVICEABLE ON THE BUILDING. THE SENSOR SHALL BE MOUNTED WITHIN A VENTILATED ENCLOSURE TO SHIELD THE SENSOR FROM THE EFFECTS OF THE SUN. THE SENSOR LOCATION SHALL BE SELECTED SUCH THAT IT MAY NOT BE AFFECTED BY ARTIFICIAL AND/OR MECHANICAL AIRSTREAMS (I.E., BUILDING EXHAUST, BUILDING RELIEF, &C.).

A UNLESS OTHERWISE DIRECTED BY THE ANJ, ALL TEMPERATURE CONTROL PANELS AND ENCLOSURES SHALL BE LOCATED AS INDICATED SUCH THAT VISUAL OBSERVATION AND ADJUSTMENT CAN BE ACCOMPLISHED WHILE STANDING FLATFOOTED ON THE FLOOR IN A CONVENIENT LOCATION ADJACENT TO

B. ALL TEMPERATURE CONTROL PANELS SHALL HAVE KEYED, LOCKING LATCHES AND SHALL BE KEYED COMMONLY SUCH THAT ONE KEY SHALL OPEN ALL ENCLOSURES.

C. PROMDE EACH DDC PANEL WITH A POWER SUPPLY THAT IS NEWA-2 RATED, DISCONNECT SWITCHES FOR 110VAC & 24VAC, BOTH SIDES FUSED, AND A SERVICE RECEPTACLE IN THE POWER SUPPLY.

A DOC SYSTEM CONTROL WIRING SHALL BE PERFORMED BY PROFESSIONALS IN A WORKMANLIKE MANNER CONSISTENT WITH ACCEPTABLE INDUSTRY STANDARDS FOR PERFORMANCE AND IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, PROJECT ELECTRICAL SYSTEM SPECIFICATIONS, THE NATIONAL ELECTRIC CODE (NEC), CSA C22.1-12 AND ANY/ALL APPLICABLE LOCAL CODES AND/OR AUTHORITIES HAVING

B. UNLESS OTHERWISE SPECIFIED IT SHALL BE THE RESPONSIBILITY OF THE DOC SYSTEM CONTRACTOR TO PROVIDE ALL OF THE WIRING NECESSARY TO PROVIDE A COMPLETE DOC SYSTEM IN COMPLIANCE WITH THE REQUIREMENTS OF THIS SPECIFICATION.

C. ANY EXPOSED WIRING IN THE MECHANICAL SPACE SHALL BE IN BLUE CONDUIT, AND ANY EXPOSED WIRING IN CONCEALED LOCATIONS SHALL BE PLENUM RATED, BUNDLED NEATLY AND TE-WEAPPED

A PROMDE SUFFICIENT INTERNAL MEMORY FOR THE SPECIFIED SEQUENCES OF OPERATION AND DATA LOGGING WITH A MINIMUM OF 25% OF AVAILABLE MEMORY REMAINING FREE FOR FUTURE USE. B. PROVIDE A PRINTED COPY IN THE O&M MANUAL, OF THE PROGRAMMING IN EACH CONTROLLER.

A ALL TESTING LISTED IN THIS ARTICLE SHALL BE PERFORMED BY THE DDC SYSTEM CONTRACTOR. THIS TESTING SHALL BE COMPLETED BEFORE SYSTEM DEMONSTRATION IS INITIATED.

LTHE DOC SYSTEM CONTRACTOR SHALL FURNISH ALL OF THE NECESSARY LABOR AND TEST AND CALIBRATION APPARATUS REQUIRED TO CALIBRATE AND PREPARE FOR SERVICE ALL INSTRUMENTS, CONTROLS, AND ACCESSORY EQUIPMENT PROVIDED UNDER THIS SPECIFICATION. 2.VERIPY THAT ALL CONTROL TERMINATIONS ARE TIGHT AND ALL CONTROL WIRING IS PROPER AND FREE FROM SHORTS AND FAULTS.

SENABLE NORMAL OPERATIONAL CONTROL AND VERIFY CALIBRATION OF ALL INPUT DEVICES

INDIVIDUALLY ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

1.23 START-UP & CHECK OUT DOCUMENTATION

A DURING START-UP, THE DOC TECHNICIANS SHALL USE A START-UP SHEET LISTING THE INPUTS AND OUTPUTS OF EACH CONTROLLER. A LINE NEXT TO EACH CONTROL POINT SHALL BE INITIALED AND DATED BY THE TECHNICIAN AFTER POINTS ARE SHOWN OPERATIONAL

B. AS EACH DEVICE IS TESTED A LOG SHALL BE COMPLETED SHOWING THE DATE, TECHNICIAN'S INITIALS AND ANY CORRECTIVE ACTION TAKEN AS A RESULT OF OPERATIONAL FAILURES.

I.ANY TESTS THAT CANNOT BE PERFORMED DUE TO CIRCUMSTANCES BEYOND THE CONTROL OF THE DDC SYSTEM CONTRACTOR MAY BE PERFORMED AT THE DISCRETION OF THE OWNER AFTER ACCEPTANCE AND AS A PART OF THE WARRANTY PERIOD.

A. THE DDC SYSTEM CONTRACTOR SHALL CLEAN UP ALL DEBRIS RESULTING FROM HIS/HER ACTIVITIES DAILY. THE CONTRACTOR SHALL REMOVE ALL CARTONS, CONTAINERS, CRATES, ETC. UNDER HIS/HER CONTROL AS SOON AS THEIR CONTENTS HAVE BEEN REMOVED, AT THE COMPLETION OF WORK IN ANY AREA THE DOC SYSTEM CONTRACTOR SHALL CLEAN ALL WORK, EQUIPMENT, ETC. KEEPING IT FREE FROM DUST, DIRT, DEBRIS, ETC.

A THE DDC SYSTEM CONTRACTOR SHALL PROVIDE INSTRUCTION ON THE ADJUSTWENT, OPERATION AND MAINTENANCE OF THE DDC SYSTEM INCLUDING ALL HARDWARE AND SOFTWARE PROVIDED AND INSTALLED IN COMPLIANCE WITH THE REQUIREMENTS OF THIS SPECIFICATION.

I.PROVIDE A MINIMUM OF 4 HOURS OF INSTRUCTION TO AT LEAST 3 CITY EMPLOYEES POST EQUIPMENT START-UP. PROVIDE AN ADDITIONAL 4 HOURS PRIOR TO THE ONE YEAR INSTALLATION

2.PROVIDE THE OWNER A WARRANTY CERTIFICATE AND TRAINING AT THE INITIAL 4 HOUR

3.TURN OVER TO THE OWNER TWO DATABASE BACK-UPS ON IDENTICAL FLASH DRIVES. ONE SHALL BE PLACED IN THE CONTROL PANEL WHERE THE BACNET EMBEDDED BUILDING CONTROLLER IS MOUNTED, AND THE OTHER TO THE OWNERS REPRESENTATIVE ALONG WITH A COPY OF THE OPERATIONS AND MAINTENANCE MANUAL

amec foster wheeler

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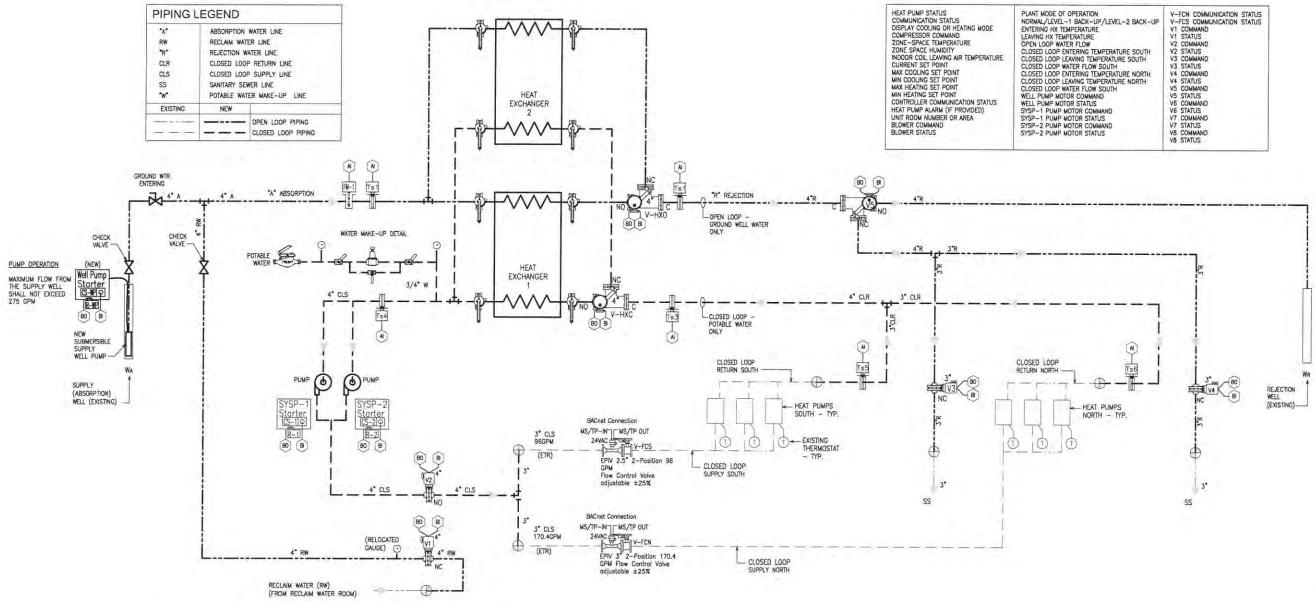


300 CROWN OAK CENTRE DRIV LONGWOOD, FL 32750





MINIMUM CONTROL POINTS DISPLAYED ON GRAPHICS FOR HEAT PUMPS AND PLANT



SEQUENCE OF OPERATION CONDENSER WATER SYSTEM

THE NORMAL SEQUENCE OF THE SYSTEM IS TO ALLOW WELL WATER TO ABSORD & REJECT HEAT FROM THE CLOSED LOOP SIDE GENERATED BY THE HEAT PUMPS. IN THE EVENT OF A PUMP FAILURE, THE SYSTEM WILL BE ABLE TO USE RECYCLED SECONDARY EFFLUENT TO BACK UP THE OPEN SIDE OF THE SYSTEM.

THE SYSTEM WILL USE A COMBINATION BTL LEVEL 6 RATED BACNET BUILDING CONTROLLER & AN EMBEDDED BICNET OPERATOR WORKSTATION (BOWS) WITH ONE WSTP TRUNK CONNECTION, AND ONE AUXILIARY 1/O EXPANSION THAT ALLOWS THE ENTRE PLANT TO RUN INSIDE ONE CONTROLLER WITH ONE PROGRAM FILE. THE BULLIDING CONTROLLER WILL BE CONNECTED TO THE OWNERS BULLIDING NETWORK, AND WILL BE CONNECTED TO THE EXISTING CITY ANALYTICS DASHBOARD FOR REMOTE ACCESS.

THE FLANT SHALL RUN ON A USER-DEFINED SCHEDULE, SET ON THE GRAPHIC SCREEN IN THE BACNET EMBEDDED BUILDING CONTROLLER. AS THE STSTEM STARTS OR UPON START-UP FROM A POWER INTERRUPTION, THE SUBMERGED WELL PUMP WILL START, AND PROVIDE RUN STATUS BY A CURRENT SWITCH AT THE PUMP STARTER, WATER FLOW PROOF FOR THE OPEN LOOP SHALL BE MADE WHEN THE CURRENT SWITCH IS MADE AND THE FLOW METER FM-1 IS WITHIN 80% (ADJUSTABLE) OF THE MAXIMUM WELL PUMP GPM OF 275 GPM AS SET BY WELL PUMP VFD.

AFTER OPEN LOOP FLOW PROOF, THE LEAD PUMP FOR THE CLOSED LOOP WILL BE ACTIVATED AND A CURRENT SWITCH WILL VERIFY OPERATION, IF THE CURRENT SWITCH IS MADE AND THE TOTAL FLOW BETWEEN FLOW CONTINGL VALUES V-FCD AR UV-FCS ARE WITHIN 80% (ADJUSTABLE) OF THE SPECIFIED FLOW RATE, THE SYSTEM WILL EXECUTE ALL PROGRAMMING FOR CONTROL AND SEND A FLOW SIGNAL TO THE BUILDING HEAT PUMPS ALLOWING THEM TO RUN,

DURING NORMAL OPERATION, THE BUILDING OPERATOR SHALL BE ABLE TO SELECT WHICH PLATE & FRAME HEAT EXCHANGER IS IN USE THROUGH THE MECHANICAL SYSTEM GRAPHIC SCREEN. IT IS RECOMMENDED THAT THIS SELECTION BE MADE PRIOR TO SYSTEM START-UP.

CLOSED LOOP PUMPS

THE SYSTEM LOOP PUMPS WILL ALTERNATE EACH TIME THE SYSTEM IS ACTIVATED OR SCHEDULED ON, BUT NO LESS THAN WEEKLY TO EVEN THE RUNTIME. SHOULD THE SYSTEM LOSE DETECTION OF FLOW FOR THE LEAD PUMP IN OPERATION. THE PROGRAMMING WILL SHIFT THE SYSTEM TO THE LAG PUMP AUTOMATICALLY, AND SEND A TEXT OR EMAIL ALARM TO THE BUILDING OPERATOR.

ALL VALVES ARE SELECTED TO OPERATE IN THE DEFAULT POSITION OF PRIMARY OPERATION FOR WELL WATER USE, THROUGH THE PLATE & FRAME HEAT EXCHANGER INTO THE INJECTION WELL ALL BUTTERRLY VALVES SHALL COME WITH A MANUAL WHEEL THAT MAY BE ENGAGED TO CONNECT DIRECTLY TO THE MOTOR SHAFT City of Naples FL

AND REPOSITION THE VALVE IN THE EVENT OF A FAILURE.

DURING NORMAL OPERATION WATER FLOW VOLUME SHALL BE METERED AND DISPLAYED FOR THE OPEN SIDE AS WELL AS THE CLOSED LOOP SIDE. THE CLOSED BUILDING LOOP WILL SHOW FLOW TO EACH BUILDING, NORTH & SOUTH THROUGH A BACNET CONNECTION FROM EACH FLOW CONTROL VALVE.

BACK-UP

SHOULD THE WELL PUMP REQUIRE SERVICING, TO CONTINUE SYSTEM OPERATION, THE SYSTEM VALVES CAN AUTOMATICALLY CHANGE POSITION FOR BACK-UP, THIS MAY BE SET TO WORK AUTOMATICALLY OR MANUALLY IN THE EVENT OF PUMP FAILURE, OR AS NEEDED. WHEN BACK-UP IS SELECTED, THE WELL PUMP STARTER IS DEACTIVATED, VALVE VS WILL BE ACTIVATED TO CLOSE OFF THE INJECTION WELL, AND DIVERT WATER TOWARDS THE SANITARY SEWERS, AND VALVES V1, V3, & V4 SHALL BE ACTIVATED TO OPEN.

ONCE VALVE V1 IS OPEN, RECYCLED WASTE WATER WILL FLOW FROM ITS SOURCE OF ORIGINATION, INTO, AND THROUGH THE SELECTED HEAT EXCHANGER, THEN BE DIRECTED TO DRAN OUT OF THE SYSTEM TO EACH RESPECTIVE SANTARY SEVER. THE CLOSED LOOP WILL PUNCTION NORMALLY WTHE THIRRE THE LEAD OR LAG PUMP BEING ACTIVATED. AN HISTORICAL TREND ON FM-1 WILL SHOW THE OPEN LOOP FLOW RATE

THE MACHPROWEBCOM BACNET BUILDING CONTROLLER, WILL PROVIDE ALL THE CONTROL LOGIC FOR THE MACH PROPONIT I/O MODULES, SO ALL PROGRAMMING FOR THE PLANT IS CARRIED OUT IN ONE LARGER CONTROLLER, PROVIDE SUFFICIENT MODULES TO ALLOW FOR A MINIMUM OF 10% SPARE POINTS.

SET UP ALARMS TO SEND TEXT MESSAGES OR EMAILS FOR THE FOLLOWING CONDITIONS:

T UP ALARMS TO SEND TEXT MESSAGES OR EMAILS FO WELL PUNP FAILS TO MAKE STATUS SYSTEM PUNPS FAIL TO MAKE STATUS FLOW METER 1 DROPS BELOW BOX FLOW VALVE V-FCS DROPS BELOW BOX FLOW VALVE V-FCN DROPS BELOW BOX FLOW ANY VALVE ALIS TO SHOW ACTIVATED POSITION ENTERING CLOSED LOOP WATER TEMP RISES TO 100 HEAT PUNP LOCK OUT DUE TO NO FLOW COMMUNICATION LOSS OF AN ANTWINE DEDGE

COMMUNICATION LOSS OR ANY NETWORK DEVICE

CS C FM NC NO R-x SYSP-1 SYSP-2 SS Ts-x V-FCN V-FCS V-HXO V-HXC WA WR

	C. B. M. M. Martin M. M. Martin and M. M. T. T. M. T. T. M.	
L-2 BACK-UP	V-FCN COMMUNICATION STATUS V-FCS COMMUNICATION STATUS	
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GREGORY A. JOHNSON PE-57783

PROJECT TEAM
DESIGNER

GJ BIM / DRAWINGS BY:

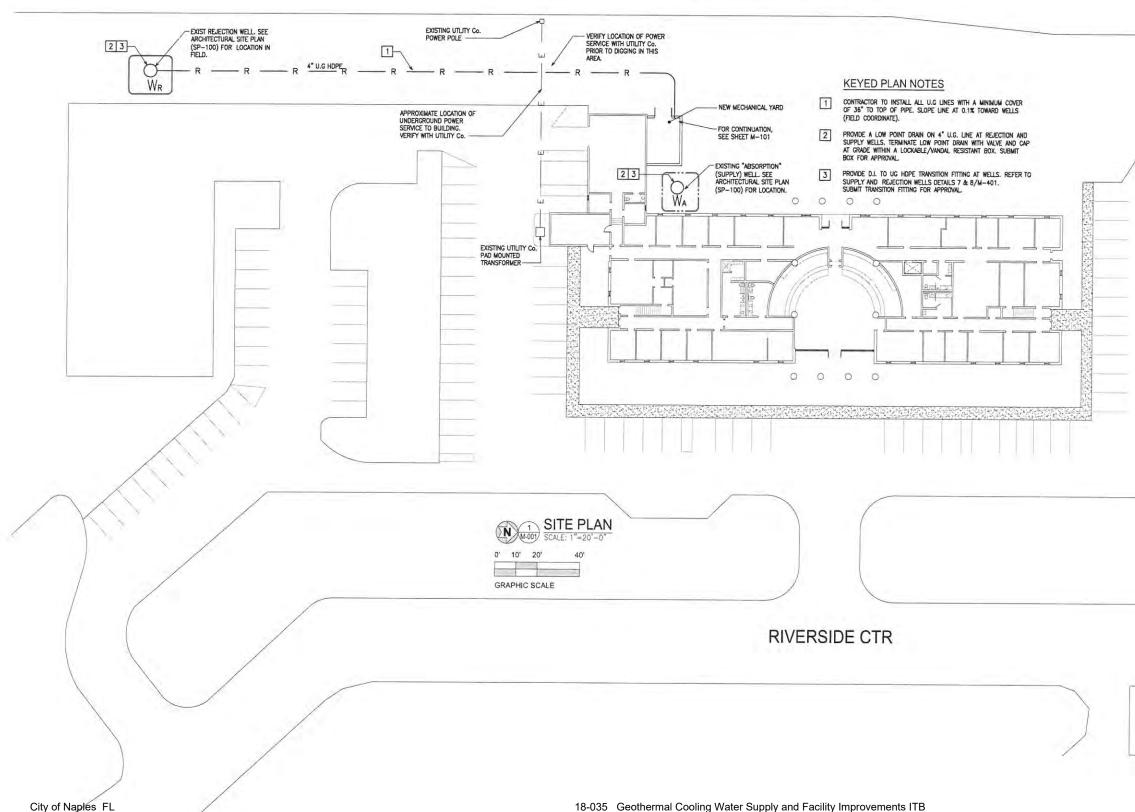
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295 Riverside Circle Naples, FL 34102
Naples, FL 34102
6788-16-2867
100% CD - 08-17-17
CONTROL DIAGRAMS -
CONDENSER WATER SYSTEMS
PROJECT NUMBER STATUS ISSUE DATE CONTROL DIAGRAMS - CONDENSER WATER SYSTEMS SCALE: NOT TO SCALE
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(CONTROL DIAGRAM LEGEND
	CURRENT SWITCH (ADJUSTABLE THRESHOLD
	COMMON POR
	FLOW METER-INLINE TURBINE PULS
	NORMALLY CLOSED VALVE POR
	NORMALLY OPEN VALVE POR
	RELAY 24VAC CONTRO
	CLOSED LOOP SYSTEM PUMP
	CLOSED LOOP SYSTEM PUMP
	SANITARY SEWE
	IMMERSION WELL MOUNTED WATER TEMPERATURE SENSOR
	FLOW CONTROL VALVE NORTH CLOSED LOOP (BACNET MSTP CONNECTED
	FLOW CONTROL VALVE SOUTH CLOSED LOOP (BACNET MSTP CONNECTED
	SANITARY SEWED
	IMMERSION WELL MOUNTED WATER TEMPERATURE SENSOR
	PRIMARY WATER WELL
	PRIMARY WATER REJECTION WELL







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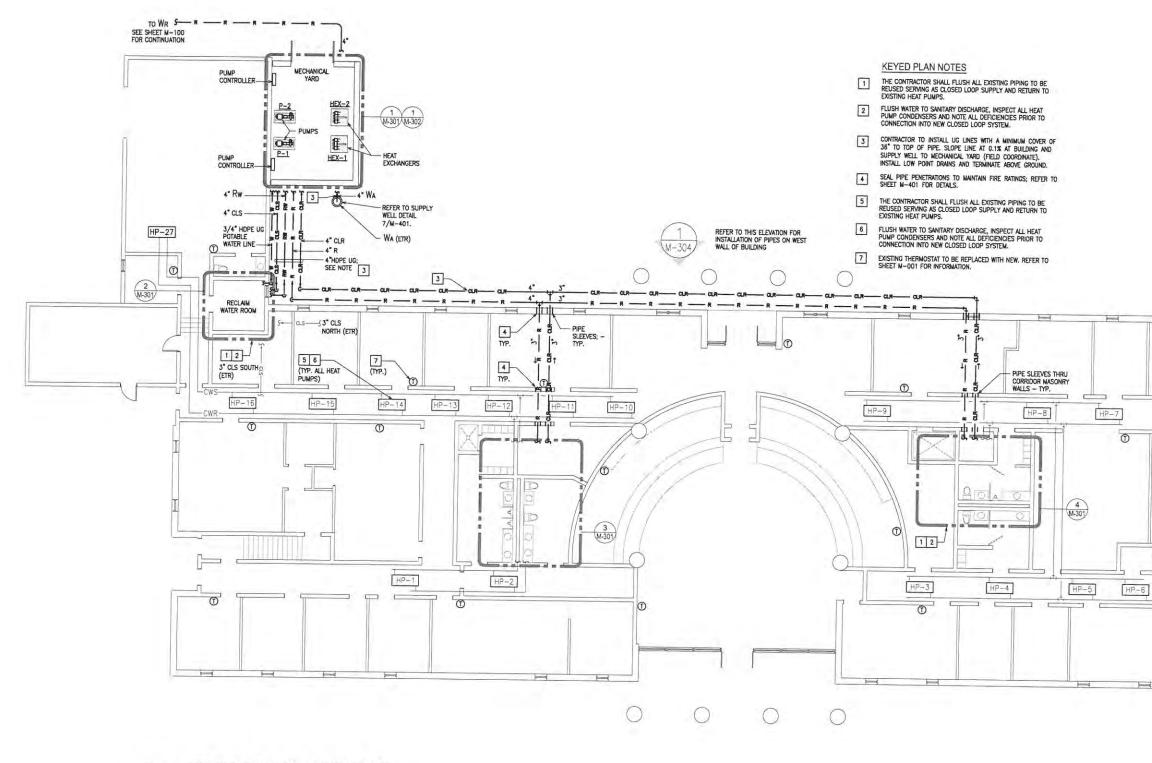
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GRAPHIC SCALE

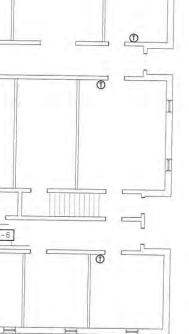


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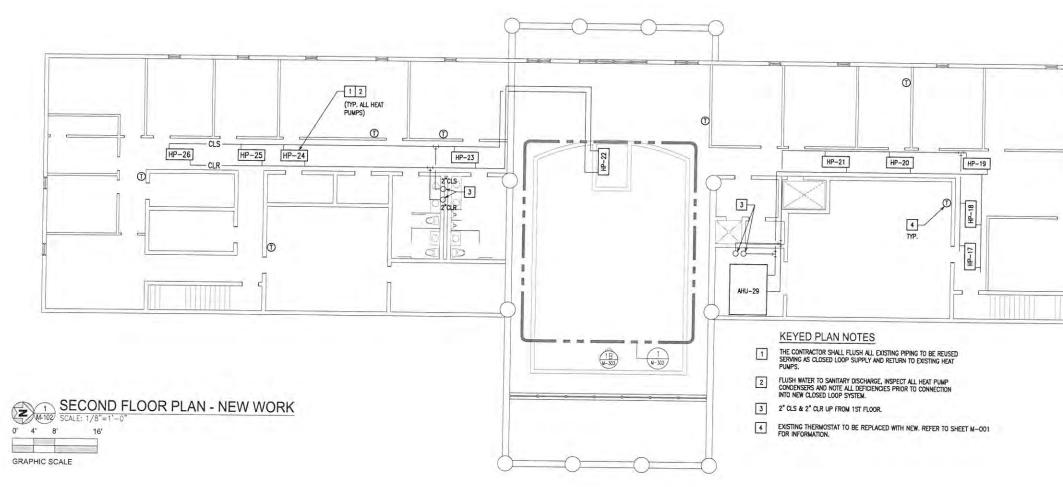
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PROJECT TEAM
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Community
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Bldg. Renovations
Naples, FL 34102
6788-16-2867
295 Riverside Circle Naples, FL 34102 6788-16-2867 100% CD - 08-17-17
PROJECT NUMBER STATUS ISSUE DATE
PROJECT NUMBER STATUS ISSUE DATE 1ST FLOOR PLAN - NEW WORK SCALE: 1/8"=1'-0"
M-101 ₆₀
SHEET NUMBER





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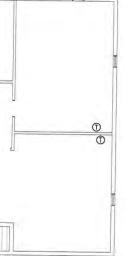
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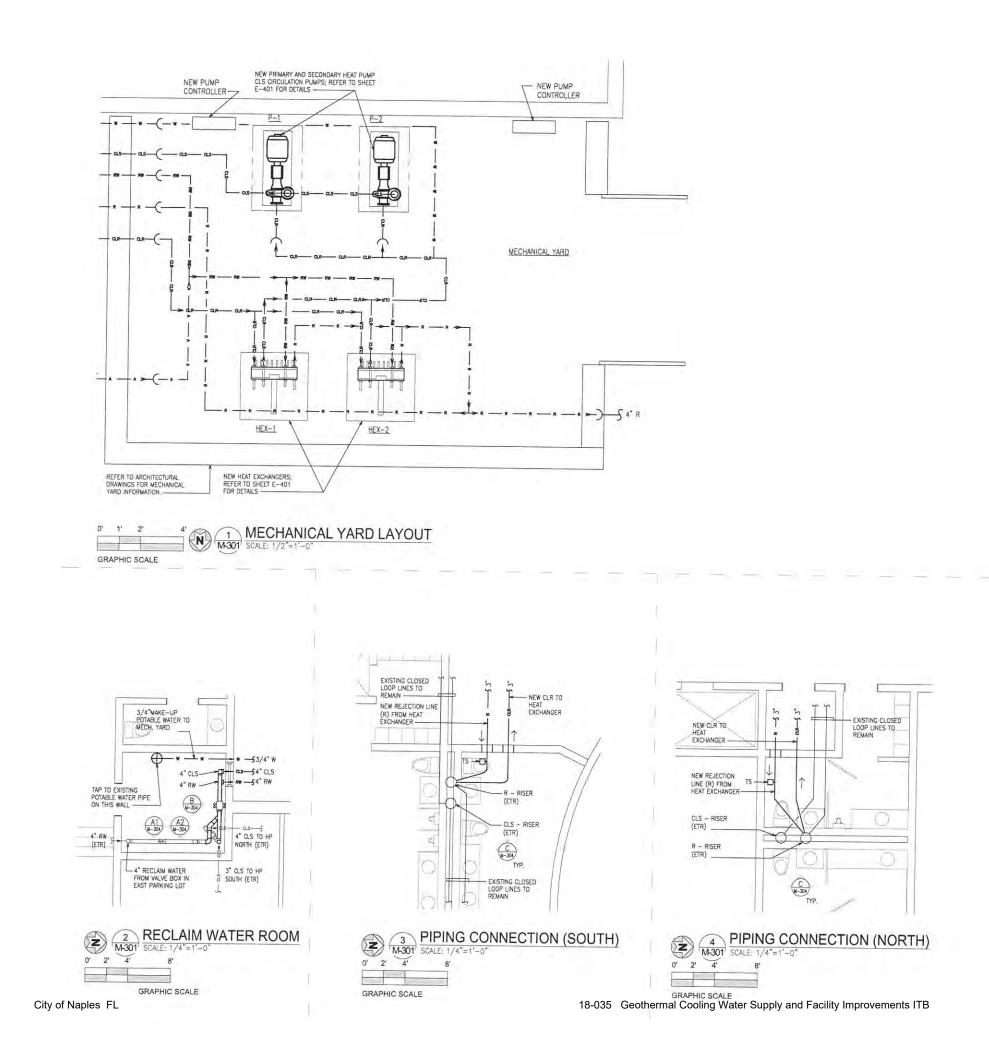


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2ND FLOOR PLAN - NEW
PROJECT NUMBER STATUS ISSUE DATE 2ND FLOOR PLAN - NEW WORK
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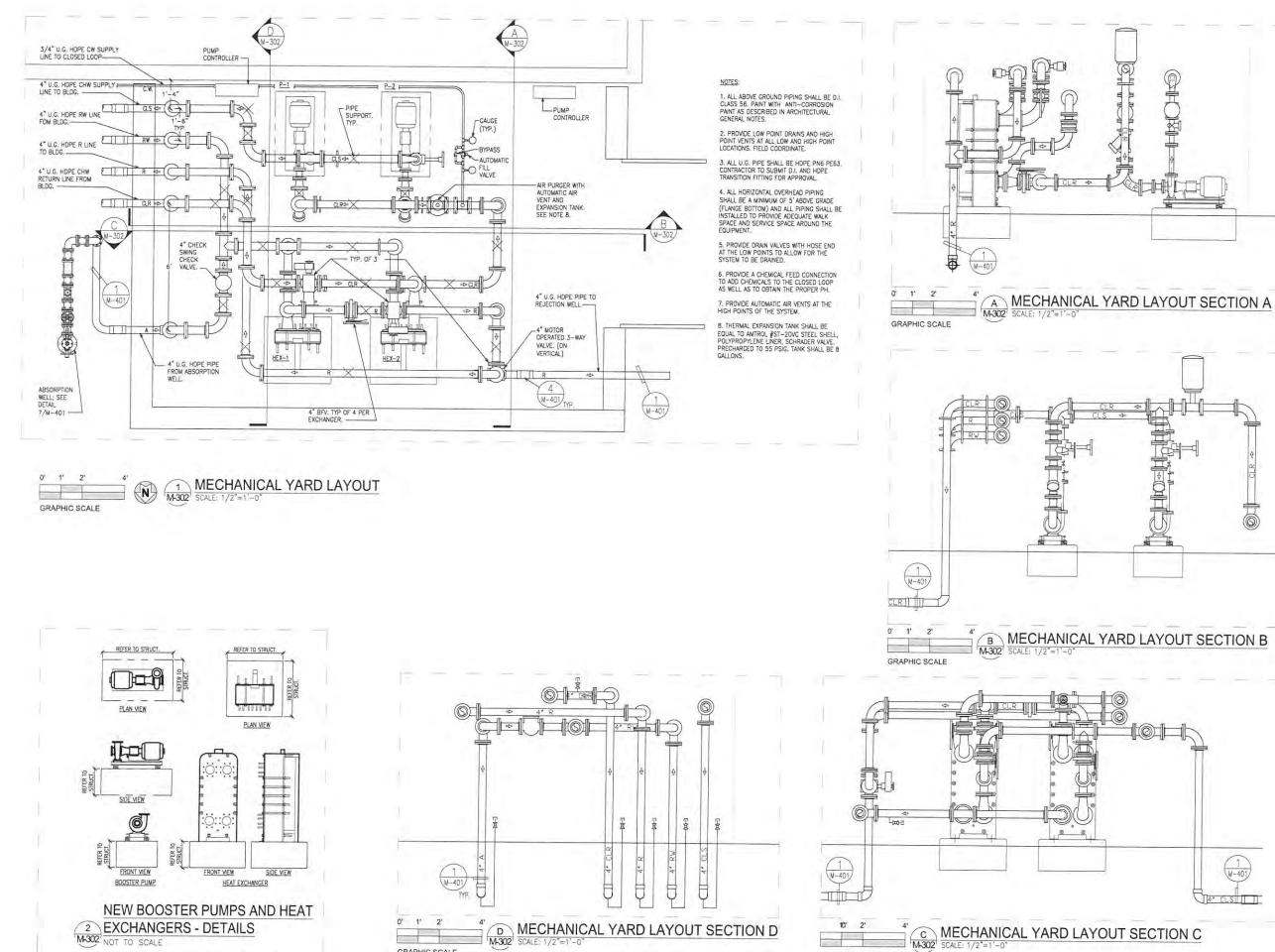
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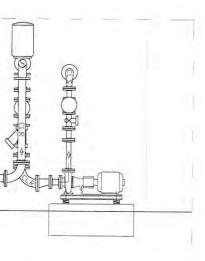


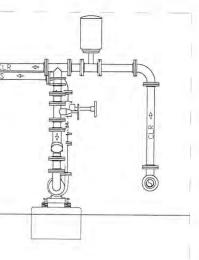
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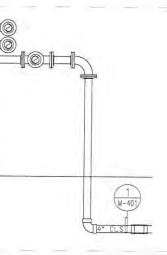
City of Naples FL

18-035 Geothermal Cooling Water Supply and Facility Improvements ITB





B MECHANICAL YARD LAYOUT SECTION B





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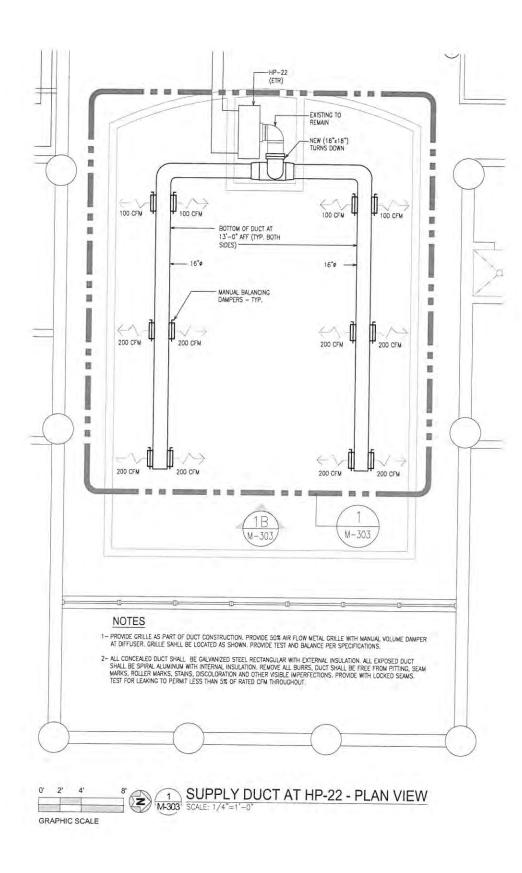
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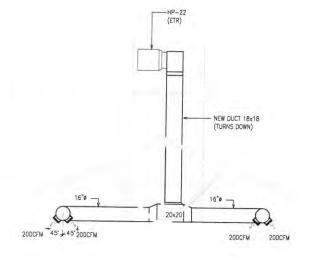


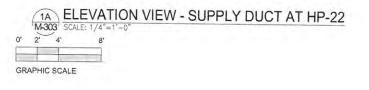
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Community
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295 Riverside Circle Naples, FL 34102 6788-16-2867 100% CD - 08-17-17
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PROJECT NUMBER STATUS ISSUE DATE MECHANICAL YARD - ENLARGED PLANS - NEW WORK
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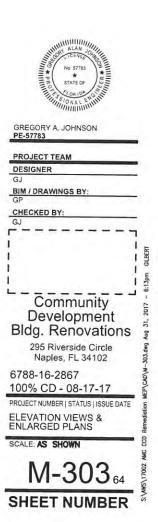
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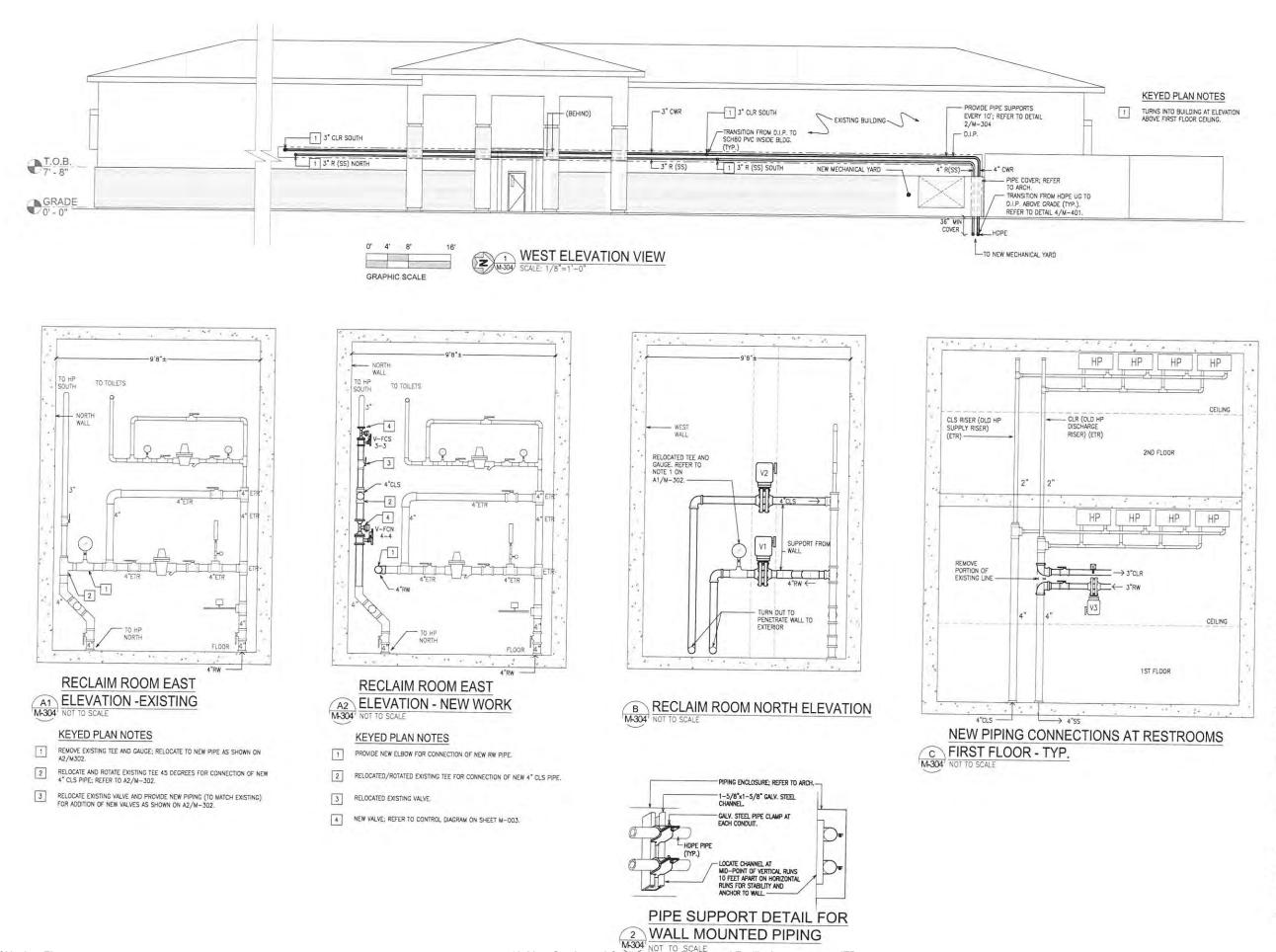
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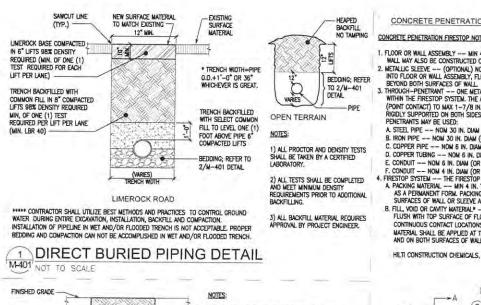
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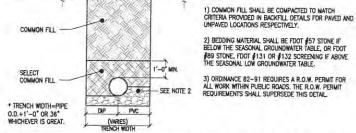


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Community Development Bldg. Renovations 295 Riverside Circle Naples, FL 34102
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2) BEDDING MATERIAL SHALL BE FDOT #57 STONE IF BELOW THE SEASONAL GROUNDWATER TABLE, OR FDOT #89 STONE, FDOT #131 OR #132 SCREENING IF ABOVE THE SEASONAL LOW GROUNDWATER TABLE. 3) ORDINANCE 82-91 REQUIRES A R.O.W. PERMIT FOR ALL WORK WITHIN PUBLIC ROADS. THE R.O.W. PERMIT REQUIREMENTS SHALL SUPERSEDE THIS DETAIL

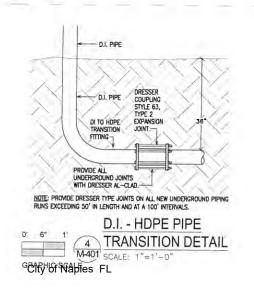
**** CONTRACTOR SHALL UTILIZE BEST METHODS AND PRACTICES TO CONTROL GROUND WATER DURING ENTIRE EXCAVATION, INSTALLATION, BACKFILL AND COMPACTION. INSTALLATION OF PIPELINE IN WET AND/OR FLOODED TRENCH IS NOT ACCEPTABLE. PROPER BEDDING AND COMPACTION CAN NOT BE ACCOMPLISHED IN 1'11ET AND/OR FLOODED TRENCH

**** INSTALLATION OF ANY WATER, WASTEWATER, OR RECLAIN WATER LINE REQUIRED TO PASS UNDER OR TRENCHING CAUSING UNDERMINING OF ANY EXISTING CONCRETE CURB, GUTTER, OR SIDEWALK; TUNNELING UNDER IS NOT ALLOWED, ANY AFFECTED CONCRETE CURB, GUTTER, OR SIDEWALK SHALL BE CLEANLY REMOVED (ALL SECTIONS AFFECTED, 5 FT MINIMUM). FULL BACKFILL AND PROPER COMPACTION PERFORMED, CONCRETE REPLACED REQUIRING A MINIMUM OF 5 FT BETI'ITEEN EXPANSION JOINTS.

PIPE BEDDING & BACKFILL DETAIL M-401 NOT TO SCALE

DIAMETER	SPACING	DIAMETER	ROD	STRAP	 STRAPS ARE GALVANIZED STEEL; ROOS ARE UNCOATED OR GALVANIZED STEEL; WIRE IS
10" DN	12'	ONE 12 GA	1/4"	1" x 22 GA	BLACK ANNEALED, BRIGHT BASIC OR
11-18"	12'	TWO 12 GA OR ONE 8 GA	1/4"	1" * 22 GA	GALVANIZED STEEL ALL ARE ALTERNATIVES
19-24*	12'	TWO 10 GA	1/4"	1" x 22 GA	
25-36"	12'	TWO 8 GA	3/8"	1" x 20 GA	
37-50"	12'		TWO 3/8*	TWO 1" x 20 GA	
51-60"	12'		TWO 3/8"	TWO 1" x 18 GA	
61-84"	12'		TWO 3/8"	TWO 1" x 16 GA	

MIN. HANGER SIZES FOR ROUND DUCT M-401 NOT TO SCALE



CONCRETE PENETRATION FIRESTOP NOTES:

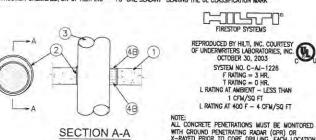
CONCRETE PENETRATION FIRESTOP NOTES:

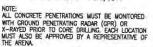
FLOOR OR WALL ASSEMBLY --- MIN 4-1/2 IN. THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF MY UL CLASSIFIED CONCRETE BLOCKS*. MAX DAM OF OPENING IS 32 IM.
 METALLIC SLEEVE --- (OPTIONAL) NON 32 IN. DIAM (OR SIMALLER) SCHEDULE 40 (OR HEAVER) STEEL SLEEVE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY, FLUSH WITH FLOOR OR WALL SUFFACES OR EXTENDING A MAX OF 3 IM. ABOVE FLOOR OR BEYOND BOTH SUFFACES OF WALL
 THROUGH-PENETRANT --- ONE METALLIC PIPE, TUBE OR CONDUIT TO BE INSTALLED ETHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRSTOR 575250. THE ANNUAR SPACE BETWEEN PENETRANT AND PERPHERVY OF OPENING SHALL BE MIN 0 IN. (POINT CONTACT) TO MAX 1-7/8 IN. PENETRANT MAY BE INSTALLED WITH CONTINUOUS POINT CONTACT. PENETRANT TO BE RIGDLY SUPPORTED ON BOTH SUBS OF FLOOR OR WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PENETRANTS MAY BE USED: A STEEL PIPE -- NOM 30 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVER) STEEL PIPE. B. IRON PIPE -- NOM 30 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVER) STEEL PIPE.

B. IRON PIPE --- NOM 30 IN: DAM (OR SMALLER) CAST OR DUILDLE INO (HIPKINE() STELL PIPE. C. COPPER PIPE --- NOM 5 IN: DIAM (OR SMALLER) CAST OR DUILTLE IRON PIPE. D. COPPER TUBING --- NOM 6 IN: DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER TUBING. D. COPPER TUBING --- NOM 6 IN: DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.

D. COPPER TUBING — NOM 6 IN. DUM (OR SMALLER) TYPE L (OR HEAVER) COPPER TUBING. E CONDUT — NOM 6 IN. DUM (OR SMALLER) STEEL CONDUT. F. CONDUT — NOM 6 IN. DUM (OR SMALLER) STEEL ELECTRICAL WETALLIC TUBING (EMT). I. FRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING: A PACKING MATERIAL — WIN 4 IN. THICKNESS OF MIA 4 PCF NIMERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. FACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR SLEVE OR FROM BOTH SUFFACES OF WALL OR SLEVEY AS REQUIRED TO ACCOMDATE THE REQUIRED THICKNESS OF FILL MATERIAL — SLEVE OR FROM BOTH SUFFACES OF WALL OR SLEVEY AS REQUIRED TO ACCOMDATE THE RECESSED FROM TOP SURFACE OF FLOOR OR SLEVE OR WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR OR SLEVEY OR WITH BOTH SURFACES OF WALL OR SLEVE OR FROM BOTH UNIT TOP SURFACE OF FLOOR OR SLEVEY OR WITH BOTH SURFACES OF WALL OR SLEVE OR THON FOR TO ACCOMMING THE THE RECESSED FWALL OR SLEVENCE AT THE POINT OR CONTINUOUS CONTACT LOCATIONS BETWEEN PENETRANT AND CONCRETE OR SLEVE, A NIM 1/4 IN TAKE AND TO RECENT TO THE AND TO RECENT TO THE ADDIT OF RECENT OR SLEVE OR THE TOR TO THE ADDIT OF THE ORD SLEVE OR THE TO THE ADDIT OF THE ORD TO RECENT OR SLEVE OR THE FORM TO PENTRO R CONTINUOUS CONTACT LOCATIONS BETWEEN PENETRANT AND CONCRETE OR SLEVE, A NIM 1/4 IN THE AND TO RECENT THE OND TO R CONTINUOUS CONTACT LOCATIONS BETWEEN PENETRANT AND CONCRETE OR SLEVE, A NIM 1/4 IN TO ADDIT FOR OR TO THE TO THE TAKE ON THE ADDIT TO RECENT THE TO THE ADDIT OR TO THE TO THE TAKE ON THE ADDIT TO DERIVE TO RECENT THE TO DERIVE TO THE TAKE ON THE TO DERIVE TO THE TO THE TO THE TO THE TAKE ON THE TO THE TO THE TO THE TO THE TAKE ON THE TO THE TO THE TO THE TAKE ON THE TO THE TAKE ON THE TO MATERIAL SHALL BE APPLIED AT THE CONCRETE OR SLEEVE/ PIPE PENETRANT INTERFACE ON THE TOP SURFACE OF FLOOR

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC --- FS-ONE SEALANT *BEARING THE UL CLASSIFICATION MARK

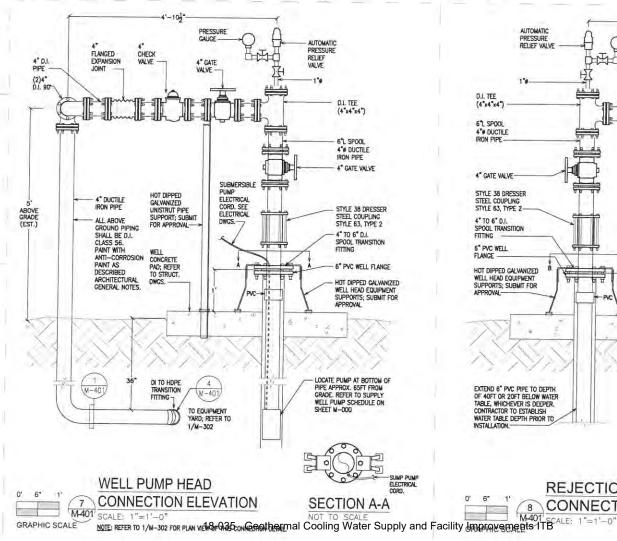




FIRESTOP SYSTEMS

SYSTEM NO. C-AJ-1226

CONCRETE PENETRATION FIRESTOP DETAIL 5 M-401



STUD WALL / GYPSUM BOARD FIRESTOP NOTES

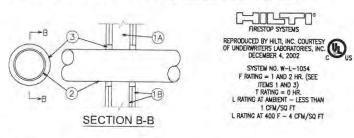
STUD WALL / GYPSUM BOARD FIRESTOP NOTES

- WALL ASSEMBLY THE 1 OR 2 HR FIRE—RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR LIVED SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUE THE FOLLOWING CONSTRUCTION FEATURES: A STUDS WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOW 2 BY 4 IN.

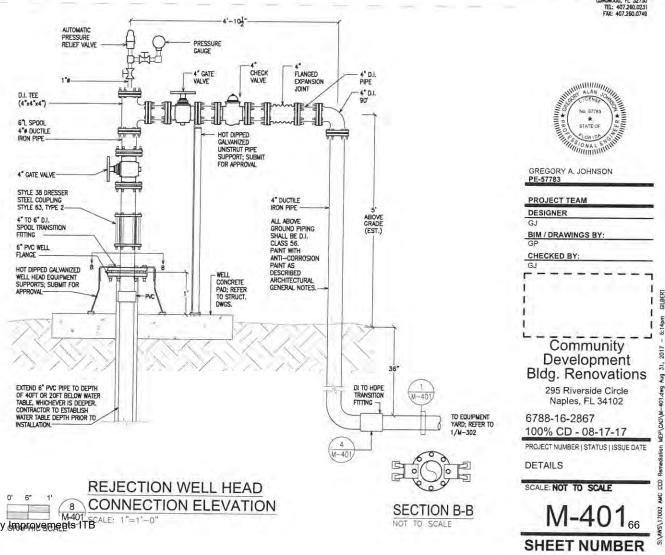
A. STEEL PIPE -- NON 30 IN DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE. B. IRON PIPE -- NON 30 IN. DIAM (OR SMALLER) CAST OR DUCTLE IRON PIPE.

- C. CONDUIT -- NOM 4 IN DUAL (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR 6 IN. DUAN STEEL CONDUIT. D. COPPER TUBING -- NOM 6 IN. DUAN (OR SMALLER) TYPE L (OR HEAVER) COPPER TUBING, E. COPPER PIPE -- NOM 6 IN. DUAM (OR SMALLER) REGULAR (OR HEAVER) COPPER PIPE.
- 3. FILL, VOID OR CANTY MATERAL." -- SEALANT -- MIN 5/8 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL AT THE POINT OR CONTINUOUS CONTACT LOCATIONS BETWEEN PIPE AND WALL, A MIN 1/2 IN. DIAM BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE PIPE WALL INTERFACE ON BOTH SURFACES OF WALL.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC -- FS-ONE SEALANT *BEARING THE UL CLASSIFICATION MARK



MADT STUD WALL / GYPSUM BOARD FIRESTOP DETAIL



FIRESTOP NOTES:

1. DETAILS SHOWN ARE TYPICAL DETAILS. IF FIFLD T. DEIALS SHOWN ME TYPICAL DETAILS. IF FIEL CONDITIONS DO NOT MATCH REQUIREMENTS OF TYPICAL DETAILS, APPROVED ALTERNATE DETAILS SMALL BE UTILIZED. FIELD CONDITIONS AND DIMENSIONS NEED TO BE VERTIFIED FOR CONDITIONS AND DIMENSIONS NEED TO BE VERTIFIED FOR CONDUCANCE WITH THE DETAILS, INCLUDING BUT NOT LIMITED TO THE BELL DIMENSION OF THE DETAILS, INCLUDING BUT NOT LIMITED TO THE

COLUMING: • UNINUM AND MAXIMUM WIDTH OF JOINTS • TYPE AND THICKNESS OF FIRE-RATED CONSTRUCTION. THE MINIMUM ASSEMBLY RATING OF THE FIREST ASSEMBLY SALLA MEET OR XOCED THE HIGHEST RATING OF THE ADJACENT CONSTRUCTION.

- 2. REFERENCES:
- * 2005 UNDERWRITER'S LABORATORIES FIRE RESISTANCE DIRECTORY, VOLUMES 1 & 2 * NFPA 101 LIFE SAFETY CODE * NFPA 70 NATIONAL ELECTRIC CODE
- * ALL GOVERNING LOCAL AND REGIONAL BUILDING CODES
- 3. FIRESTOP SYSTEM INSTALLATION MUST MEET REQUIREMENTS OF ASTM E-814 (UL 1479) TESTED ASSEMBLIES THAT PROVIDE A FIRE RATING EQUAL TO THAT OF CONSTRUCTION BEING PENETRATED.
- 4. ALL RATED THROUGH PENETRATION ASSEMBLIES SHALL BE PROMINENTLY LABELED WITH THE FOLLOWING INFORMATION: * ATTENTION: FIRE RATED ASSEMBLY * UL SYSTEM # * PRODUCT(S) USED
- + HOURLY RATING (F-RATING)
- * INSTALLATION DATE
- 5. FOR OUTLET BOXES REQUIRING PROTECTION, USE ONLY WALL OPENING PROTECTIVE MATERIALS, CATEGORY CLV AS CLASSIFIED BY UNDERWRITER'S LABORATORIES, FIRE RESISTANCE DIRECTORY (VOLUME 1.)



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ARCHITECT OF RECORD

REVISION SCHEDULE

No.	DESCRIPTION	DATE		
A	50% SUBMITTAL	4/18/17		
B	90% Review Set	5/24/17		
0	Permit Set	8/17/17		
-				
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MECHANICAL SPECIFICATIONS

- ALL WORK SHALL COMPLY WITH THE LATEST ADOPTED STATE AND LOCAL CODES, AS WELL AS FEDERAL, STATE, AND MUNICIPAL REGULATIONS.
- DRAWINGS ARE DIAGRAMMATIC, CONTAINING INFORMATION TO A DEGREE OF DETAIL CONSISTENT WITH THEIR SCALE AND ADEQUATE TO CONVEY THE DESIGN INTENT.
- 3. DIMENSIONS, WHERE SHOWN, ARE FOR REFERENCE. EQUIPMENT AND MATERIAL SHOWN ON DRAWINGS, ARE BASED ON MANUFACTURER'S PUBLISHED DATA, AND ARE, IN THE DESIGNER'S PROFESSIONAL OPINION, REPRESENTATIVE OF TYPICAL SIZES. ALL EQUIPMENT AND MATERIAL PROVIDED SHALL FIT WITHIN THE SPACE PROVIDED.
- ALL EQUIPMENT AND SERVICEABLE DEVICES AS PROVIDED BY THE CONTRACTOR SHALL BE INSTALLED WITH ACCESS AND CLEARANCE FOR MAINTENANCE. COORDINATE WITH THE GENERAL CONTRACTOR AND OTHER TRADES TO PROVIDE THIS ACCESS AND CLEARANCE.
- 5. IF EQUIPMENT AND MATERIAL, OTHER THAN THAT SCHEDULED OR SPECIFIED, IS APPROVED AND PROVIDED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE AND PROVIDE REVISED UTILITIES AND SERVICE CONNECTIONS. THIS INCLUDES BUT IS NOT LUMITED TO REVISED POWER, CONTROLS, HYDRONICS, WASTE DRAINS, FLUES, AND VENT SCHUENELTT.
- PROVIDE AND DOCUMENT CORRESPONDENCE TO THE GENERAL CONTRACTOR AND ALL TRADES, REQUIREMENTS FOR INSTALLATION, CHASES, OPENINGS, AND UTILITY SERVICE CONNECTIONS. THIS INCLUDES SUPPORTING DEVICES, POINT LOADS, ACCESS OPENINGS, SLEEVES AND CULT-CUTS.
- 7. PROVIDE STARTERS FOR ELECTRICAL EQUIPMENT UNLESS SPECIFICALLY IDENTIFIED ON MECH DWGS AS BEING PROVIDED BY THE ELECTRICAL CONTRACTOR. PROVIDE ALL INTERNAL OVER CURRENT PROTECTION DEVICES AND INTERNAL TRANSFORMERS FOR PACKAGED EVILIDATION
- 8. PROVIDE APPROVED SLEEVES AND SEALS AT ALL WALL, CEILING, ROOF, AND FLOOR PENETRATIONS.
- 9. ACCESS DOORS AND/OR PANELS SHALL BE PROVIDED AT ALL MAINTENANCE AND SERVICE LOCATIONS. UNLESS A SIZE IS SPECIFICALLY NOTED, PANELS SHALL BE SIZED TO SERVICE EQUIPMENT. DOORS AND PANELS SHALL HAVE THE SAME FIRE RATING AS THE WALL IN WHICH THEY ARE INSTALLED. COORDINATE ACCESS PANEL SIZE AND LOCATION WITH THE
- 10. RECTANGULAR DUCT SHALL BE GALVANIZED SHEET STEEL PER SMACNA "HVAC DUCT CONSTRUCTION STANDARDS METAL". FLEXIBLE METAL DUCT SHALL BE METAL WITH LINER AND INSULATED PER FBC. SUPPORT HORIZONTAL DUCTWORK WITH 1" WIDE STRAP HANGERS EVERY 6"-0" AND WITHIN 24 INCHES OF EACH ELBOW AND WITHIN 48 INCHES OF EACH BRANCH INTERSECTION. INSTALL DUCTS PARALLEL TO BUILDING LINES. ALL EXPOSED ROUND DUCTWORK SHALL BE SPIRAL TYPE.
- 11. ALL UNDERGROUND PIPING SHALL BE IDENTIFIED WITH A SUITABLE MARKER, TAG, OR SIGN AT 12" ABOVE LINE.
- 12. INSULATION AND VAPOR BARRIER SHALL BE PROVIDED ON ALL DUCT SYSTEMS AND EQUIPMENT SUBJECT TO HEAT LOSS, HEAT GAIN, CONDENSATION, OR CONSTITUTING A POTENTIAL BURN HAZARD
- J3. INSULATION SHALL BE FIRMLY SECURED TO THE DUCT WITH ENDS SEALED TO MAINTAIN THE INTEGRITY OF THE VAPOR BARRIER. INSULATION SHALL NOT BE CRUSHED OR COMPRESSED AT HANGERS OR THROUGH INTERFERENCE WITH EQUIPMENT INSTALLED BY OTHER TRADES. ALL EXTERIOR DUCTS SHALL BE INSULATED AND MADE WATERTIGHT.
- 14. WHERE SPECIFICALLY CALLED OUT, INSTALL DUCTWORK AND PIPING AS TIGHT AS POSSIBLE TO THE BUILDING STRUCTURE
- 15. DUCTWORK SIZES ARE AIR-STREAM DIMENSIONS.
- EXCEPT AS SHOWN OTHERWISE, ALL DUCTWORK, FITTINGS, SUPPORT, AND ACCESSORIES SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA AND NFFA STANDARDS.
- ALL CLOSED LOOP PIPING AND OUCT SYSTEMS SHALL BE TESTED, BALANCED, AND ADJUSTED BY THE MECHANICAL CONTRACTOR.
- A. TEST AND BALANCE SHALL BE PROVIDED BY THIS CONTRACTOR THROUGH A CONTRACT WITH AN INDEPENDENT TEST AND BALANCE CONTRACTOR. FINAL PAYMENT OF HVAC CONTRACT AMOUNT SHALL BE WITHHELD UNTIL THE TEST AND BALANCE IS COMPLETE.
- BALANCING FOR AIR AND WATER SHALL BE BY ACTUAL FLOW MEASUREMENTS. METHOD OF BALANCING BY TEMPERATURE DIFFERENCE IS NOT ACCEPTABLE.
- B. THIS CONTRACTOR SHALL PREPARE SYSTEM FOR BALANCING AS FOLLOWS:
 - MECHANICALLY CHECK FANS, BLOWERS, CONDENSING UNIT AND AIR HANDLING EQUIPMENT AND MAKE OPERABLE AS PER DESIGN CONDITIONS. SET RUNNING AMPS BELOW F.L.A.
 - SET SPLITTERS, VOLUME DAMPERS, FIRE DAMPERS AND VANES IN THEIR NEUTRAL POSITIONS.
 - 3. INSTALL GRILLES, DIFFUSERS, ETC. WITH VOLUME CONTROL DAMPER BLADES IN THEIR NEUTRAL POSITIONS.
 - 4. MECHANICALLY CHECK CONTROLS AND MAKE OPERABLE AS PER DESIGN CONDITIONS
- ALL DUCTWORK SHALL BE SEALED WITH MASTIC COATING AND EXTERNALLY INSULATED EXCEPT SPIRAL DUCT.
- ALL SQUARE ELBOWS SHALL HAVE TURNING VANES. 20. DUCT CONNECTION TO EQUIPMENT SHALL BE FABRICATED AFTER EQUIPMENT HAS BEEN SET IN PLACE AND DIMENSIONS VERIFIED.
- 21. NOT USED.
- 22. IT WILL BE THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO ROUTE ALL DUCTWORK, PIPING, AND LOCATE THE EQUIPMENT SHOWN ON THE DRAWINGS. ALL INTERFERENCES DUE TO ROUTING OF THE DUCTWORK, PIPING, OR EQUIPMENT WILL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. VERIFY ALL DIMENSIONS PRIOR TO FABRICATION, ERECTION OR CONSTRUCTION OF DUCTWORK. DRAWINGS MAY NOT REFLECT ACTUAL FIELD
- 23. NOT USED.
- 24. THE INSIDE OF ALL DUCTWORK VISIBLE THROUGH A GRILL OR DIFFUSER SHALL BE PAINTED FLAT BLACK.
- 25. WARRANTY:

City of Naples FL

A. FURNISH (1) YEAR SERVICE AND GUARANTEE ON ALL CONTROLS, DUCTWORK,

- FOLIPMENT AND MATERIALS
- EVENTMENT AND WALENAMS. FURNISH A RIVE (5) YEARS EXTENDED WARRANTY FOR HEAT EXCHANGERS, THE CLOSED LOOP BOOSTER PUMPS AND THE WELL PUMP.
- 26. NOT USED

27. MECHANICAL SUBMITTALS:

A. SUBNITTALS: SUBNIT SHOP DRAWINGS AND OTHER INFORMATION NECESSARY FOR THE ENGINEER TO MAKE COMPLETE EVALUATION OF THE MATERIALS, ACCESSORIES, AND METHODS PROPOSED FOR THE WORK, ALL SUBNITTALS SHALL BE ELECTRONC, NO HARD COPIES. ASSEMBLE ALL REQUIRED SUBNITTALS ON A SINGLE FLASH DRIVE STORAGE DEVICE. AT A MINIMUM INCLUDE: HEAT EXCHANGER, PUMPS, HEAT PUMP CONTROLS, THERMOSTATS, ALL VALVES AND SENSORS, DLI PIPE, PVC PIPE AND WELL PUMP AND CONTROLS. PUMP AND CONTROLS.

28. RECORD DRAWINGS

THE CONTRACTOR SHALL MAINTAIN AT THE STE A CLEAN UNDAMAGED SET OF BLUE- OR BLACK-LINE WHITE PRINTS OF THE CONTRACT DRAWINGS. THIS RECORD SET OF DRAWINGS SHALL BE WARKED TO SHOW THE ACTUAL INSTALLATION, AND WHERE THE ACTUAL INSTALLATION VARIES SUBSTANTIALLY FROM THE WORK AS ORIGINALLY SHOWN. MARK WHICHEVER DRAWINGS ARE MOST CAPABLE OF SHOWING CONDITIONS FULLY AND ACCURATELY, GIVE PARTICULAR ATTENTION TO CONCEALED LEVENTS THAT WOULD BE DIFFICULT TO MEASURE AND RECORD AT A LATER DATE. MARK RECORD DRAWINGS WITH RED ERASABLE PENCIL, USE OTHER COLORS TO DISTINGUISH BETWEEN VARIATIONS IN SEPARATE CATEGORIES OF THE WORK.

- 29. CLOSEOUT SUBMITTALS:
- A. CLOSEOUT DOCUMENTS SHALL INCLUDE, CERTIFICATE OF OCCUPANCY, ALL WARRANTIES, USERS MANUAL, WRITTEN MAINTENANCE INSTRUCTIONS FOR ALL MATERIAL AND EQUIPMENT, AND RECORD DOCUMENTS ('AS-BUILT'), SUBMITTALS AND CHANGE ORDERS. ALL SUBMITTALS SHALL BE LECTRONIC, NO HARD COPIES. ASSEMBLE ALL REQUIRED SUBMITTALS ON A SINGLE FLASH DRIVE STORAGE DEVICE
- B. CONTRACTOR SHALL SUBMIT ONE ELECTRONIC COPY OF 0&M MANUALS FOR THE FOLLOWING ITEMS: HEAT EXCHANGERS, PUMPS, HEAT PUMP CONTROLS, VALVES, THERMOSTATS, OPERATORS AND SENSORS
- 30. CLEANING:
- A. AFTER COMPLETING SYSTEM INSTALLATION, INCLUDING OUTLET FITTINGS AND DEVICES, INSPECT THE COMPLETE SYSTEM AND VACUUM ALL DUCTS TO REMOVE DUST AND DEBRIS, BEFORE FINAL ACCEPTANCE.

31. GASKETED PLATE HEAT EXCHANGER SPECIFICATION:

- XYLEM INC. PLATE & FRAME SPECIFICATION WITH AHRI STANDARD 400
- I. DESIGN
- DESIGN A. PREPERENCE SHOULD BE GIVEN TO SINGLE PASS DESIGNS WITH ALL CONNECTIONS LOCATED ON THE FRAME PLATE (FIXED HEAD) TO ALLOW FOR REMOVAL OF PLATES AND INSPECTION WITHOUT DISMATLING THE PROCESS PIPING. B. FOR SINGLE PASS UNITS, ALL CONNECTIONS SHOULD BE LOCATED ON THE FRAME PLATE

B. FOR SINGLE PASS UNITS, ALL CONNECTIONS SHOULD BE LOCATED ON THE FRAME PLATE (FIXED HEAD), ALLOWING THE PRESSURE PLATE (MOVABLE HEAD) TO SUDE BACK AND HAVE PLATES ADDED, REMOVED, OR REPLACED FROM THE PLATE PACK WITHOUT DISTURBING THE CONNECTIONS OR ASSOCIATED PIPING. C. THE DESIGN SHOULD ALLOW FOR THE REMOVAL OF ANY PLATE IN THE PLATE PACK WITHOUT REQUIRING THE REMOVAL OF ANY OTHER PLATES. D. THE UNIT SHALL BE PROVIDED WITH AN ALUMINUM SPLASH SHIELD COVERING THE SIDES AND TOP OF THE FLATE PACK. THE BOITOM SHOULD BE LET OPEN FOR LEAK DETECTION. E. THE UNIT SHALL BE DESIGNED, TESTED, AND U STAMPED IN ACCORDANCE WITH ASME SECTION WIL DIVISION 1 AND REGISTERED WITH IND ALL BOARD. A U-1 DATA REPORT TO BE FURNISHED UPON REQUEST.

- F. MANUFACTURE MUST BE CERTIFIED AND REGISTERED WITH ISO 9001:2008. A CERTIFICATE OF REGISTRATION SHALL BE SUPPLIED UPON REQUEST. C. UNIT MUST BE FACTORY PRESSURE TESTED WITH ASME U STAMP APPLIED ON NAMEPLATE PRIOR TO LEAVING THE FACTORY.

II. FRAME A THE FRAME AND PRESSURE PLATES SHALL BE CARBON STEEL SA 516 GRADE 70. B. THE FRAME AND PRESSURE PLATES SHALL BE OF SUFFICIENT THICKNESS TO MEET THE ASME DESIGN PRESSURE WITHOUT THE USE OF STIFFENERS OR OTHER TYPE OF REINFORCEMENT. C. CARBON STEEL FRAME COMPONENTS, EXCEPT HARDWARE, SHALL BE PAINTED WITH GRAY MCROB CPOXY PAINT TO A MINIMUM OF 4 MILS DRY FILM THICKNESS. D. CARBON STEEL FRAME AND PRESSURE PLATES SHALL BE SITEL GRIT BLASTED TO SSPC-SP6/NACE 3 (COMMERCIAL BLAST CLEANING) WITH SURFACE PROFILE OF 2 MILS ON ETHER FACE ALL SURFACES AND OPENINGS MUST HAVE A RECOATABLE EPOXY PRIMER APPLIED WITHIN 8 HOURS OF BLAST OR BEFORE FLASH RUSTING OCCURS. E. FRAME PLATES SHALL HAVE INFERDAL LITTING COCURS. E. FRAME PLATES SHALL HAVE INFERDAL DIFTING COCURS. F. UNITS WITH STUDDED PORT CONNECTIONS SHALL HAVE INFERD PRIMER OF UNED OR WELDED ON LIFTING LUGS NOT ALLOWED.

WELDED ON UFTING LUGS NOT ALLOWED. SHALL HAVE UNLINED OR ALLOY LINED STUDDED F. UNITS WITH STUDDED PORT CONNECTIONS SHALL HAVE UNLINED OR ALLOY LINED STUDDED PORTS TO MATE WITH A RAISED FACE OR FLAT FACED ANSI FLANGE WHERE 150% HAVE THAN FLANGES ARE ACCEPTABLE. RUBBER LINERS ARE NOT ALLOWED. G. UNITS WITH NT CONNECTIONS, EXCEPT 1: PORT SIZES, SHALL HAVE THE FRAME PLATE TAPPED WITH CARBON STEEL FEMALE NPT CONNECTIONS OR, IF ALLOY MATERIAL IS REQUIRED, EXTENDED WALLE NPT NOZZLES. H. UNITS WITH 1: PORTS SHALL HAVE CARBON STEEL OR 316 STAINLESS STEEL FEMALE TAPPED NPT OR ALLOY MATERIAL MALE NPT CONNECTIONS, THE STUDS AROUND THE PORTS MUST BE PROVIDED BY THE MANUFACTURER.

- BE PROVIDED BY THE MANUFACTURER

- I. FOR UNITS WITH STUDDED PORT TYPE CONNECTIONS, THE STUDS AROUND THE PORTS MUST BE PRONDED BY THE MANUFACTURER.
 J. UNITS WITH CONNECTIONS GREATER THAN 3" REQUIRE THAT THE THERMAL PLATES BE SUPPORTED BY THE FUDY CARRY BAR. THE BOTTOM GUIDE BAR SHALL ONLY ASSIST IN PROPERLY ALIGNING THE PLATES.
 K. THE DESIGN FOR UNITS WITH 2.5" CONNECTIONS OR SMALLER SHALL ALLOW THE PLATES TO BE SUPPORTED BY THE BOTTOM GUIDE BAR AND THE TOP CARRY BAR. SHALL HELP PROPERLY ALIGNING THE PLATES.
 L. THE DESIGN FOR UNITS WITH 2.5" CONNECTIONS OR SMALLER SHALL ALLOW THE PLATES TO BE SUPPORTED BY THE BOTTOM GUIDE BAR AND THE TOP CARRY BAR SHALL HELP PROPERLY ALIGN THE PLATES.
 L. THE CARRY AND GUIDE BAR FOR 2" PORT MODELS SHALL BE STAINLESS STEEL FOR MODELS WITH 3.5" PORTS AND GREATER. THE THERMAL PLATE CONTACT SURFACES OF THE CARRY AND GUIDE BARS SHALL BE STAINLESS STEEL FOR UNITS WITH 1. CONNECTIONS, THE CARRY AND GUIDE BARS SHALL BE STAINLESS STEEL CARDON STEEL
 M. FOR FASE OF MOVEMENT DURING ASSEMBLY AND MAINTENANCE, THE MOVABLE PRESSURE PLATE SHALL BE SUPPORTED BY A ROLLER ASSEMBLY OVER THE CARRY BAR FOR 4" PORTED MODELS GREATER THAN 90" IN HEIGHT AND FOR ALL 6" AND LARGER PORTED MODELS. FOR 4" PORTED MODELS GREATER THAN 90" IN HEIGHT AND FOR ALL 6" AND LARGER PORTED MODELS. FOR 4" PORTED MODELS GREATER THAN 90" IN HEIGHT AND FOR ALL 6" AND LARGER PORTED MODELS. FOR 4" PORTED MODELS GREATER THAN 90" IN HEIGHT AND FOR ALL 6" AND LARGER PORTED MODELS. FOR 4" PORTED MODELS GREATER THAN 90" IN HEIGHT AND FOR ALL 6" AND LARGER PORTED MODELS. FOR 4" PORTED MODELS GREATER THAN 90" IN HEIGHT AND FOR ALL 6" AND LARGER PORTED MODELS. FOR 4" PORTED MODELS GREATER THAN 90" IN HEIGHT AND FOR ALL 6" AND HEIGHT AND FOLL THA HIGH MOLECULAR WEIGHT POLYETHAND OF TWO MONITING FEAT AT THE RAWRE PLATE AND ONE AT THE SUPPORT COLLUMN, IF A SUPPORT COLLUMN IS USED ON THE MOVABLE PRESSURE PLATE.
 N. UNITS WITH 300 PSIG DESIGN PRESSURE OR LESS, EXCLUDING WIDE CAP' DESIGNS, PRAMES MUST BE DESIGNED TO WITHSTAIND FULL

- P. THE NOMINAL CONNECTION SIZE SHALL MATCH THE NOMINAL THERMAL PLATE PORT HOLE

III. HARDWARE

A ALL BOLTING, INCLUDING TIGHTENING BOLTS, SHALL BE CARBON STEEL SA193 GRADE B7 AND GALVANIZED VIA ELECTROPLATING OF ZINC COATING. B. ALL NUTS SHALL BE CARBON STEEL SA194 GRADE 2H AND GALVANIZED VIA ELECTROPLATING OF ZINC COATING.

- OF ZINC COATING. C. MOUNTING FEET SHALL BE ZINC PLATED CARBON STEEL. D. THE TICHTENING BOLT ASSEMBLES ON UNITS WITH 3' AND GREATER CONNECTIONS SHALL INCLUDE LOCK WASHERS AT THE MOVABLE PRESSURE PLATE SUCH THAT THE UNIT CAN BE OPENED AND CLOSED WITH ONE WRENCH FROM THE FRONT OF THE UNIT. E. ALL THE TICHTENING BOLT ASSEMBLES ON UNITS WITH 3' AND GREATER CONNECTIONS SHALL INCLUDE BERAING WASHERS AT THE FIXED FRAME PLATE TO REDUCE FRICTION. BEARING ASSEMBLIES ONLY ON SOME OF THE BOLTS IS NOT ALLOWED. F. THE NUTS ON THE TIGHTENING BOLT ASSEMBLES ON UNITS WITH 3' AND GREATER CONNECTIONS SHALL BE PEENED ON, NOT WELDED, AT THE FRAME PLATE.

IV. PLATES

4. PLATES
A. PLATES SHALL BE PRESSED IN A ONE-STEP STAMPING PROCESS, EXCEPT FOR PLATES 132' AND OREATER IN LENGTH, WHERE MULTI STEP PRESSING IS ALLOWED.
B. PLATES SHALL USE AN INTEGRAL ROLLED EDGE HANGING SYSTEM TO PROVDE A RIGID HANGER DEVICE BETWEEN THE PLATE AND CARRY BAR AND GUIDE BAR. WELDED ON HANGING BRACKETS OR STIFFEDERS RE NOT ACCEPTABLE.
C. THE PLATE TO CASKET SALLS THEOREDHICH OF HATE TO PLATE ALIGNMENT SYSTEM TO ENSURE PROPER PLATE TO ALTE TO ALTE TO CASKET LUG WHICH FITS WITHIN A PLATE RECESS ON THE PROTEDIATE TO ALTE TO ALTE TO CASKET LUG WHICH FITS WITHIN A PLATE RECESS ON THE PROCEDURE PLATE TO RAKET SALLS THROUGHOUT THE PLATE PACE ALIGNMENT SYSTEM SHALL ETHER BE A GASKET LUG WHICH FITS WITHIN A PLATE RECESS ON THE PROCEDURE PLATE TO ASKET DELLE WALLOF HITS WITHIN A PLATE RECESS ON THE PROCEDURE PLATE TO ASKET ULG WHICH FITS WITHIN A PLATE RECESS ON THE PROCEDURE PLATE TO ASKET DE LINGUEHI OR GOVER FOR THE DATES OR AN EXTENDED ROLLED EDGE HANGER WHICH NESTS SUCCESSIVE PLATES TO RAUE MOUND THE EXTIRTE PLATE HANGER WHICH NESTS SUCCESSIVE PLATES TOR AND EXTENDED ROLLED EDGE HANGER WHICH NESTS SUCCESSIVE PLATES TOR AUGUNENT THROUGH CONTACT AROUND THE DATE RALE ALLOWING FOR THERMAL EXPANSION.
E. PLATES SHALL HAVE AN EXCLOSING BOOVE FOR THE ENTIRE GASKET DESIGNED TO CONTANT THE GASKET WHILE ALLOWING FOR THERMAL EXPANSION.
E. PLATES SHALL BE PERMANENTLY MARCED TO INDICATE PLATE MATERIAL AND THICKNESS.
F. DUBLE WALL PLATES SHALL HAVE AN AIR CAP WITH A LEAX DETECTION PATH.
G. STAINLESS STALL HAVE AN AIR CAP WITH A LEAX DESTION THE TO ENSURE
A CLOSE FT WITH STAIL HAVE AN AIR CAP WITH A LEAX DESTION FOR THE.
H. FOR UNITS WITH 300 PSIG DESIGN PRESSURE OR LESS, EXCLUDING WIDE CAP DESIGNS, THERMAL PLATES MUST BE DESIGNED TO WITH WITH THERMAL PLATES MUST BE DESIGNED TO WITHSTAIN FULL TEST PRESSURE IN ONE CIRCUIT WITH THERMAL PLATES MUST BE DESIGNED TO WITHSTAIN FULL TEST PRESSURE IN ONE CIRCUIT WITH HERMAL PLATES MUST BE DESIGNED TO WITHSTAIN F

V. GASKETS TO ANY POSSIBLE CROSS CONTAMINATION.

VI. THERMAL/HYDRAULIC DESIGN AND CERTIFICATION

LIQUID CERTIFICATION MODEL NUMBER:

2. WOLDEL NUMBER; 2. VOLUMETRIC FLOW RATE; 3. INLET TEMPERATURES ON BOTH CIRCUITS; 4. OUTLET TEMPERATURES ON BOTH CIRCUITS; 5. PRESSURE DROPS ON BOTH CIRCUITS; SURFACE MARGIN (ALSO KNOWN AS EXCESS SURFACE AREA);

HEAT DUTY (ALSO KNOWN AS HEAT LOAD): HEAT DUTY (ALSO KNOWN AS HEAT LOAD);
 HEAT TRANSFER COEFFICIENT;
 HEAT TRANSFER COEFFICIENT;
 HEAT TRANSFER ACA;
 NUMBER OF PLATES;
 CHANNEL ARRANGENIONTS ON BOTH CIRCUITS;
 PLATE MATERIAL AND THICKNESS;
 SHOLD THE HEAT EXCHANCER NOT PERFORM TO THE SPECIFIED CONDITIONS AS DEFINED IN AHRI STANDARD 400, THE MANUFACTURER IS RESPONSIBLE TO REPLACE OR REPAIR THE EXCHANCER TO ACHIEVE THE STATED PERFORMANCE.
 FITLE MANUFACTURER IS NOT CERTIFIED WITH THE AR-CONDITIONING, HEATING AND REFRIGERATION INSTITUTES LOUID TO LIQUID HEAT EXCHANCER CERTIFICATION PROGRAM, AHRI STANDARD 400, A WITNESSED FACTORY PERFORMANCE TEST MUST BE COMPLETED PER THE TESTING SPECIFICATION OF AHRI STANDARD 400.

ZERO PRESSURE IN THE OPPOSITE CIRCUIT.

A. ALL GASKETS FOR SINGLE PASS DESIGNS, EXCEPT THE GASKET ON THE FIRST PLATE, SHALL

A ALL GORELS FOR SINGLE PASS USIGNS, EALENT THE GOREL ON THE FIRST FLATE, SHALL BE IDENTICAL B. THE GARKETS SHALL BE A ONE-PIECE CONSTRUCTION WITH A DOUBLE GARKET BARRIER AT THE PORT REGION. THE AREA ISOLATED BY THE DOUBLE GARKET SHALL BE VENTED TO THE ATMOSPHERE, SO THAT A GARKET FAILURE IS DETECTED BY LEAVAGE TO THE EXTERIOR PRIOR

TO WAT POSSIBLE CROSS CONTAINATION. C. GASKETS SHALL HAVE TAPERED SIDES TO ASSURE POSITIVE SEATING OF THE COMPRESSED GASKET AND ASSIST IN AUGNING THE THERMAL PLATES DURING COMPRESSION. D. WHEN AWAILBLE, GLUE-FREE GASKETS ARE PREFERRED TO GLUED-ON GASKETS. GLUE-FREE GASKET ATTACHMENT METHODS WHICH BREAK DURING CASKET REMOVAL OR PLATE MAINTENANCE, THUS DESTROYING THE GASKET, ARE NOT ALLOWED. E. CARE SHOULD BE TAKEN IN THE SELECTION OF GASKET MATERIALS TO INSURE COMPATIBILITY WITH THE FLUIDS AND OPERATING TEMPERATURES.

A. THE MANUFACTURER SHALL PROVIDE WRITTEN GUARANTEE TO THE ACCURACY OF THE HEAT EXCHANGER THERMAL DESIGN. B. THE MANUFACTURER SHALL BE CERTIFIED WITH THE AIR-CONDITIONING, HEATING AND REPRICERATION INSTITUTES LOUDID TO LOUD HEAT EXCHANGER CERTIFICATION PROGRAM, AHRI STANDARD 400, FOR THE MODEL BEING SUPPLIED.

D CERTIFICATION PROGRAM OF 2000 GPM AND/OR 24,000,000 BTU/HR. MODEL IS AHRI STANDARD 400 CERTIFIED MODEL".

C. IN ACCORDANCE WITH AHRI STANDARD 400, THE MANUFACTURERS OUTPUT/SPECIFICATION SHEET SHALL HAVE THE FOLLOWING NFORMATION:



5845 NW 158th Steet Miami Lakes, FL 33014 USA P:+1(305) 826-5588 F:+1(305) 826-1799 www.amec.com

ARCHITECT OF RECORD

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-		
-		
-		



300 CROWN OAK CENTRE DRIVE, LONGWOOD, FL 32750 TEL: 407.260.0231 FAX: 407.260.0749



DEMOLITION GENERAL NOTES

- THIS CONTRACTOR SHALL DISCONNECT AND REMOVE ALL ELECTRICAL SUPPLY EQUIPMENT AND CONDUCTORS SERVING EQUIPMENT DESIGNATED HEREIN TO BE REMOVED. THIS CONTRACTOR SHALL DISCONNECT AND RELOCATE ALL WIRING TO LIGHTING TO MATCH THE NEW LOCATIONS SHOWN ON THE CEILING PLANS, ALL EXISTING LIGHTING CONTROLS SHALL BE SUSTAINED.
- NO EQUIPMENT REMOVED SHALL BE REUSED, EXCEPT AS SPECIFICALLY DIRECTED ON THE DRAWINGS OR ELSEWHERE HEREIN. EXCEPT FOR CONDUIT, CONDUCTORS AND MISCELLANEOUS HARDWARE, ALL ELECTRICAL EQUIPMENT SHALL REMAIN THE PROPERTY OF THE OWNER AND HARDWARE, ALL ELECTRICAL EQUIPMENT SHALL REMAIN THE PHOPENTY OF THE OWNEY AND SHALL BE STORED ON THE STIF FOR REMOVAL. PER THE OWNEYS DIRECTION, ABANDONED OR REMOVED CIRCUITS SHALL BE DISCONNECTED AT THEIR OVERCURRENT DEVICE, THE CONDUCTORS REMOVED AND THE CIRCUIT SPACE MARKED SPARE ON THE APPLICABLE DIRECTORY USING ADHESIVE BACKED CORRECTION TARE, EXCEPT WHERE SAD DEVICE/EQUIPMENT TO BE REMOVED IS PART OF A BRANCH CIRCUIT THAT ALSO SERVES DEVICES/EQUIPMENT THAT ARE TO REMAIN IN PLACE IN THE LATTER CASE, THIS CONTRACTOR SHALL REMOVE ALL BRANCH CIRCUIT CONDUCTORS AND CONDUIT BACK TO THE FIRST DEVICE CONNECTION OR JUNCTION BOX SERVING GUIPMENT TO REMAIN, UPON COMPLETION OF THIS. REMOVAL THE CONTRACTOR SHALL TEST THE CIRCUIT TO ENSURE THAT THE DEVICES/EQUIPMENT BRANCH CIRCUIT INTEGRITY IS SUSTAINED FOR EQUIPMENT/DEVICES TO
- 3. ANY EXISTING CIRCUITS OR EQUIPMENT NOT SHOWN ON THE DRAWINGS AND WHICH ARE ANY EXISTING CIRCUITS OR EQUIPMENT NOT SHOWN ON THE DRAWINGS AND WHICH ARE LOGICALLY EXPECTED TO BE CONTINUED IN SERVICE AND WHICH MAY BE INTERRUPTED OR DISTURBED DURING CONSTRUCTION, SHALL BE RECONNECTED IN AN APPROVED MANNER. IN ADDITION, ANY EXISTING CIRCUIT OR EQUIPMENT WHICH MAY REQUIRE RELOCATION OR REROUTING SA RESULT OF CONSTRUCTION, SHALL BE CONSIDERED A PART OF THE WORK OF THIS SECTION AND SHALL BE DONE BY THIS CONTRACTOR WITH NO ADDITIONAL COMPENSATION.
- 4. OUTLET BOXES BEING ABANDONED IN EXISTING WALLS, THAT HAVE WIRING REMOVED, IN REMODELED AREAS SHALL HAVE ITS OPENING PATCHED TO MATCH EXISTING WALL FINISH. BLANK COVERS ARE NOT ACCEPTABLE.
- 5. EXISTING CONDUIT AND WIRING IN THE REMODEL AREA THAT IS NOT BEING REMOVED, BUT WHICH WILL BE IN CONFLICT WITH NEW WORK BEING INSTALLED, SHALL BE REPOUTED AS REQUIRED
- 6. THIS CONTRACTOR SHALL PROVIDE REQUIRED ADDITIONAL SUPPORT FOR EXISTING CONDUIT IN ERMODEL AREA THAT IS NOT BEING REMOVED AND IS NOT PROPERLY SUPPORTED IN ACCORDANCE WITH N.E.C. REQUIREMENTS.
- 7. PRIOR TO DEMOLITION OR ALTERATION OF STRUCTURES, THE FOLLOWING SHALL BE ACCOMPLISHE
- COORDINATE SEQUENCING WITH OWNER AND OTHER CONTRACTORS. SURVEY AND RECORD CONDITION OF EXISTING FACILITIES TO REMAIN IN PLACE THAT MAY BE AFFECTED BY DEWOLTION OF PERITORS. ATTER DEMOLITION OPERATIONS ARE COMPLETED, SURVEY CONDITIONS AGAIN AND RESTORE EXISTING FACILITIES TO THEIR PREDEWOLTION CONDITION, AT NO ADDITIONAL COST TO OWNER. SALVAGE EQUIPMENT SCHEDULED FOR REUSE IN NEW WORK OR SCHEDULED TO BE DELINGED TO OWNED? SCHEDULED FOR REUSE IN NEW WORK OR SCHEDULED TO BE C;
- DELIVERED TO OWNER'S STORAGE FACILITY.

BID NOTE

PRIOR TO SUBMITTING A BID FOR THIS WORK THE CONTRACTOR SHALL WSIT THE SITE TO DETERMINE THE COST IMPACT OF EXISTING CONDITIONS ON THE SCOPE OF WORK HEREIN. THE BID SHALL INCLUDE ANY COST ASSOCIATED WITH AN EXISTING CONDITION THAT IS MODIFIED, OR AFFECTED BY THE WORK IN THESE DOCUMENTS. FAILURE TO VISIT THE SITE OR DETERMINE THESE COSTS PRIOR TO BID SHALL NOT ABSOLVE THE CONTRACTOR OF THIS RESPONSIBILITY

SUBMITTALS

CONTRACTOR SUBMITTALS SHALL BE MADE IN COMPLIANCE WITH THE FOLLOWING STATEMENT:

IT IS HEREBY CERTIFIED THAT THE MATERIAL/EQUIPMENT PRESENTED IN THIS SUBMITTAL/SHOP DRAWING/CATALOG CUT SHEET, ETC. HAS BEEN REVEWED AND IS APPROVED FOR USE ON THIS PROJECT BY THIS CONTRACTOR AS BEING IN CONFORMANCE TO THE DESIGN AS SHOWN ON THE CONTRACT DOCUMENTS AND CAN BE INSTALLED IN THE ALLOCATED SPACES, IS OF THE CORRECT ELECTRICAL CHARACTERISTICS AND IS SUBMITTED FOR REVIEW AND APPROVAL BY THE ARCHITECT/ENGINEER.

THE SUBMITTAL WILL BE SIGNED AND DATED BY AN AUTHORIZED AGENT OF THIS CONTRACTOR.

SHEET INDEX

SHEET	DESCRIPTION	
E-000	SYMBOL LÉGEND, SCHEDULES & GENERAL NOTES	
E-101	1ST FLOOR POWER PLAN - NEW WORK	
E-301	ENLARGED PLANS	
E-302	ENLARGED PLANS	
E-401	ELECTRICAL DETAILS	
E-501	ELECTRICAL ONE LINE DIAGRAM AND PANEL SCHEDULES	
E-601	ELECTRICAL SPECIFICATIONS	

a cardena a	CTRICAL SYMBOL LEGEND AND ALL SYMBOLS AND CONTRACT.			
SYMBOL	DESCRIPTION			
	SURFACE MOUNTED DISTRIBUTION PANEL			
	FLUSH MOUNTED DISTRIBUTION PANEL			
O	JUNCTION BOX PER N.E.C.			
-	WIRING AND RACEWAY EXPOSED WIRING AND RACEWAY CONCEALED IN/OR UNDER FLOOR OR UNDERGROUND			
~~				
	INDICATES CONDUIT TURNED DOWN TO FLOOR BELOW			
	INDICATES CONDUIT TURNED UP TO FLOOR ABOVE			
LPI-2 HOMERUN - PANEL DESIGNATION AND CIRCUIT NUMBER				
\$	SINGLE POLE SWITCH - 20A - 120/277V - MOUNT 40" A.F.F.			
\$D	SINGLE POLE SWITCH - 20A - 120/277V - MOUNT 40" A.F.F. "D" STANDS FOR DIMME			
\$3	THREE-WAY SWITCH - 20A - 120/277V - MOUNT 40" A.F.F.			
\$M	MANUAL MOTOR STARTER - SINGLE PHASE WITH OVERLOADS			
\$T	SINGLE POLE SWITCH WITH INTEGRAL TIMER, 20A - 120/277V - MOUNT 40" A.F.F.			
\$WP	SINGLE POLE SWITCH WITH WP COVER, 20A - 120/277V - MOUNT 40" A.F.F.			
\$a	SINGLE POLE SWITCH, "o" DENOTES FIXTURES CONTROLLED			
\$	SINGLE POLE SWITCH, SURFACE MOUNTED			
٢	115 OR 277 VOLT MOTOR AS NOTED ON PLANS			
D	NON-FUSIBLE HEAVY DUTY DISCONNECT SWITCH - BY DIVISION 16			
ĽΩ ^j	FUSED HEAVY DUTY DISCONNECT SWITCH - BY DIVISION 16			
wn ⇔	STANDARD CONVENIENCE OUTLET - WP NEMA 5-20R DUPLEX - "CFI" DENOTES GROUN FAULT RECEPTACLE			
-0	SPECIAL POWER OUTLET, NEMA DESIGNATION AS SHOWN ON PLANS			
*	TWO STANDARD CONVENIENCE OUTLETS IN A 2-GANG BOX - NEMA 5-20R DUPLEX - COMMON COVER PLATE - MOUNT 18" AF.F.			
Þ	SURFACE MOUNTED STANDARD CONVENIENCE OUTLET			
DH⊘	SURFACE MOUNTED SPECIAL POWER OUTLET			
Ţ	GROUNDING FOR SERVICE OR SEPARATELY DERIVED SYSTEM, PER N.E.C.			
T	INDICATED CONDUIT STUBBED OUT INTO SPACE - PROVIDE CONDUIT BUSHING			
-	EXPLOSION-PROOF CONDUIT SEAL PER N.E.C.			
©	INDICATES ELECTRICAL CONNECTION BY ELECTRICAL CONTRACTOR TO EQUIPMENT PROVIDED AND INSTALLED BY OTHERS			
()	IONIZATION TYPE CEILING MOUNTED SMOKE DETECTOR.			
	ESTIMATED LOCATION OF NEW SYSTEM CONNECTION TO EXISTING SYSTEM, CONTRACTOR			

SHALL LOCATE ACTUAL POINT TO CONNECT TO EXISTING SYSTEM AND PROVIDE ANY REQUIRED ADJUSTMENTS. EXISTING SYSTEM IDENTIFIED BY SUBSCRIPT. 9

2x2 RECESSED LIGHT FIXTURE - LETTER INDICATES FIXTURE TYPE

GENERAL NOTES

- ALL WORK PERFORMED SHALL BE DONE BY A LICENSED ELECTRICAL CONTRACTOR AND IN A FIRST CLASS WORKMANLIKE MANNER. SAID CONTRACTOR SHALL MEET ALL REQUIREMENTS SET FORTH BY ANY LOCAL ORDINANCE AND/OR GOVERNING AUTHORITIES.
- ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, NATIONAL ELECTRICAL CODE, LATEST EDITION AND THE LATEST EDITIONS OF ALL LOCAL CODES, RULES, AND ORDINANCES HAVING JURISOLICION.
- 3. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO PROVIDE ALL LABOR MATERIALS, AND SUPERVISION NECESSARY TO ACCOMPLISH THE WORK SHOWN AND/OR NOTED ON THE DRAWINGS
- LOCATIONS, DIMENSIONS AND COUNTS AS SHOWN AND/OR NOTED ON THE DRAWINGS. THIS SHALL INCLUDE ANY AND ALL FABRICATIONS REQUIRED PRIOR TO INSTALLATION.
- CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN (1) YEAR FROM DATE OF ACCEPTANCE, UNLESS INDICATED OR SPECIFIED OTHERWISE.
- 9. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR TO ORGINAL CONDITIONS ANY AND ALL DAMAGES TO BUILDING SURFACES, EQUIPMENT AND FURNISHINGS CAUSED DURING PERFORMANCE
- 11. ALL ELECTRICAL EQUIPMENT, DEVICES, WIRE, ETC., SHALL BE LISTED FOR THE INTENDED USE, WITH UNDERWRITER'S LABORATORIES, INC. (UL) WHERE STANDARDS HAVE BEEN ESTABLISHED BY UL AS A MINNIUM, ALL EQUIPMENT SHALL MEET APPLICABLE STANDARDS FOR THE TYPE OF EQUIPMENT AND INTENDED USE OF THE FOLLOWING:

 - A. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI).
 B. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM).
 - NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA).
- NOTE: THESE STANDARDS ARE SUBORDINATE TO CODES AND STANDARDS SET BY UL. 12. IT IS NOT THE INTENT OF THESE PLANS AND/OR SPECIFICATIONS TO SHOW EVERY DETAIL OF
- CONSTRUCTION. THE ELECTRICAL CONTRACTOR SHALL BE EXPECTED TO PROVIDE ALL ITEMS AND EQUIPMENT NECESSARY FOR A COMPLETE AND FULLY FUNCTIONAL ELECTRICAL SYSTEM.
- 13. ALL CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY. EXACT ROUTING SHALL BE DETERMINED IN THE FIELD, UNLESS OTHERWISE NOTED. THE ELECTRICAL CONTRACTOR SHALL PROVDE AND INSTALL THE PROPER NUMBER OF CONDUCTORS IN ALL RACEWARS AS REQUIRED TO ACCOMPLISH THE PROPER FUNCTIONING OF THE DEVICE OR EQUIPMENT AS SHOWN.
- 14. THE ELECTRICAL CONTRACTOR SHALL KEEP ALL AREAS IN WHICH WORK IS BEING PERFORMED, FREE FROM DEBRIS AT ALL TIMES AND SAID AREAS SHALL BE LEFT BROOM CLEAN AT THE END OF EACH WORKING DAY.
- 15. CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS, AND TESTING.
- 16. NOT USED.
- 17. COORDINATE ALL ELECTRICAL SITE WORK WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.

- ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
- 5. ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BID AND VERIFY ALL CONDITIONS,
- 6 IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR FOR THE ADVANCED ORDERING OF LONG LEAD ITEMS SO AS NOT TO INTERFERE WITH THE PRODUCTION OF OTHER TRADES RESULTING IN ANY DOWN OR LAG TIME.
- CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAWAGED THEREBY.
- OF WORK
- ELECTRICAL CONTRACTOR SHALL NOT SCALE DRAWINGS. CONTRACTOR SHALL FIELD COORDINATE EXACT LOCATIONS OF ALL EQUIPMENT UNLESS NOTED OTHERWISE.

ALL CONDUITS IN HAZARDOUS AREAS (PER NEC) SHALL MEET THE REQUIREMENTS OF NEC CHAPTER 5.

- RELOW GRADE

- - CLASSIFIED AREAS.

 - NONTIME DELAY FUSES IN MAIN SWITCHES AND SWITCHES
 TIME DELAY FUSES FOR MOTOR AND A/C CIRCUITS.
- WELDED CONNECTIONS, UNLESS OTHERWISE NOTED.
- 31. THE ELECTRICAL CONTRACTOR SHALL FURNISH A COMPLETE SET OF AS-BUILT DRAWINGS, SHOWING



ALL CONDUCTORS SHALL BE IN CONDUITS. ALL CONDUITS SHALL BE RIGID GALVANIZED STEEL (RGS) EXCEPT THAT:

 (d) POLYVINYL CHLORIDE (PVC) CONDUITS MAY BE USED IN CONCRETE SLABS AND UNDERGROUND PROVDED ELBOWS AND RISERS ARE RGS.
 (b) ELECTRICAL METALLO TUBING (EWT) MAY BE USED IN OR ON WALLS OR CEILING WHERE NOT SUBJECT TO MECHANICAL DAMAGE, DAMP CONDITIONS OR CORROSIVE CONDITIONS; (c) LIQUID-TIGHT FLEXIBLE CONDUCT WHERE REQUIRED;
 (e) THE USE OF AC OR MC CABLES SHALL BE PROHIBITED.

19. FOR UNDERGROUND ELECTRICAL CONDUITS, PROVIDE PULL BOXES, SUCH THAT NO SINGLE CONDUIT RUN HAS BEINDS IN EXCESS OF 360. PULL BOXES SHALL BE H20 TRAFTIC LOAD RATED SIZED PER NEC, SUITABLE AND APPROVED FOR THE INTENDED USE, WHERE UNDERGROUND CONDUITS ARE NOT EXPOSED TO MECHANICAL DAMAGE OR ARE NOT UNDER PAVED AREAS, THEY MAY BE SCHEDULE 40 PVC, BUT ALL CONDUIT RISERS SHALL BE RGS. RGS CONDUITS SHALL EXTEND A MINIMUM OF 18"

20. APPLY BITUMASTIC COATING TO ALL METALLIC CONDUITS (TRANSITIONS) IN SLABS OR UNDERGROUND.

21. ALL CONDUCTORS SHALL BE COPPER U.O.N., TYPE THIN / THWN INSULATION, RATED 75'C WET/DRY EXCEPT WHERE OTHERWISE REQUIRED BY U.L. OR CODES UNLESS OTHERWISE NOTED. MINIMUM WIRE SIZE SHALL BE #10 AWG EXCLUDING CONTROL WIRING.

22. ALL ELECTRICAL EQUIPMENT SHALL BE RAINTIGHT WHERE EXPOSED TO THE WEATHER. ALL FLEX. CONDUITS CONNECTED TO SUCH EQUIPMENT SHALL BE LIQUID-TIGHT.

23. OUTLET BOXES SHALL BE CAST ALLOY WITH THREADED HUBS AND SPECIAL ENCLOSURE FOR OTHER

24. FURNISH AND INSTALL DISCONNECT SWITCHES AND WIRING FOR AIR CONDITIONING EQUIPMENT PER MANUFACTURER RECOMMENDATIONS. ELECTRICAL CONTRACTOR SHALL VERIFY CIRCUIT PROTECTIVE DEVICE RATING FOR EQUIPMENT PROVIDED.

25. DISCONNECT SWITCHES SHALL BE SIZED PER NEC TO ACCOMMODATE EQUIPMENT SERVED, INCLUDING REQUIRED FUSES, U.O.N. DISCONNECT SWITCHES SHALL BE HORSEPOWER RATED, HEAVY-DUTY TYPE.

26. FUSES SHALL BE CURRENT LIMITING, PER U.L., RATED 600 VOLTS, UNLESS OTHERWISE NOTED. NONTIME DELAY FUSES IN MAIN SWITCHES AND SWITCHES FEEDING PANELS.

27. CIRCUIT BREAKERS SHALL BE BOLT-ON U.O.J., INVERSE TIME-TYPE (THERMAL-MAGNETIC). TWO AND THREE-POLE CIRCUIT BREAKERS SHALL HAVE COMMON TRIP. ALL PANELBOARDS SHALL HAVE COPPER BUS.

28. ALL CONNECTIONS TO GROUND RODS & BUILDING STEEL SHALL BE MADE WITH UL APPROVED

29. PROVIDE TEMPORARY ELECTRICAL SERVICE FOR USE BY ALL TRADES DURING CONSTRUCTION AND REMOVE SAME AT COMPLETION OF PROJECT,

ALL CHANGES AND DEVIATIONS TO THE ARCHITECT/ENGINEER PRIOR TO COMPLETION OF THE PROJECT.

32. PREPARE AND AFFIX A TYPEWRITTEN DIRECTORY TO THE INSIDE COVER OF EACH PANELBOARD INDICATING LOADS SERVED BY EACH CIRCUIT.

33. ALL GROUND RODS TO BE COPPER CLAD STEEL, WITH EXOTHERMIC WELDED CONNECTIONS.

34. ALL EQUIPMENT AND MATERIAL SUBSTITUTIONS MUST BE APPROVED A MINIMUM OF 8 BUSINESS DAYS PRIOR TO BID DATE.

foster wheeler

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ARCHITECT OF RECORD

REVISION SCHEDULE

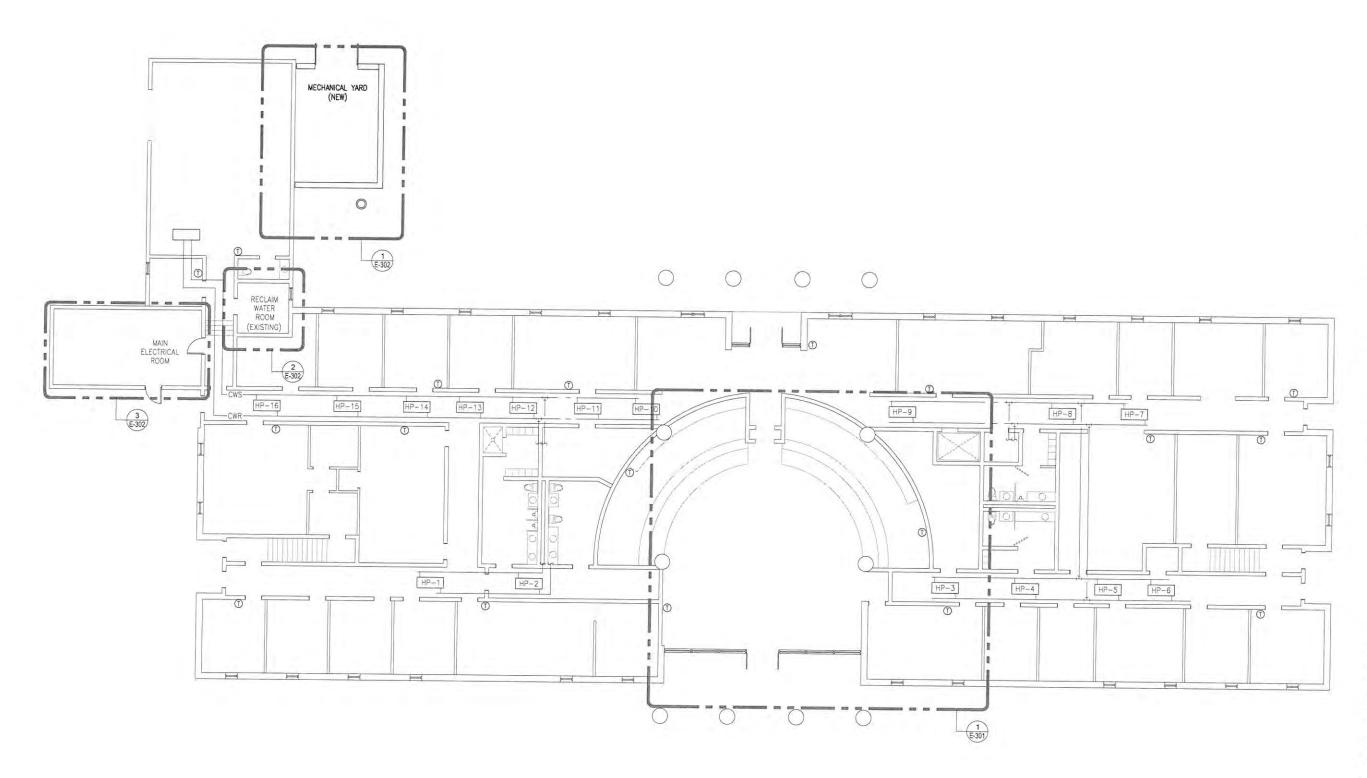
No.	DESCRIPTION	DATE
A	50% SUBMITTAL	4/18/17
B	90% Review Set	5/24/17
0	Permit Set	8/17/17
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NGWOOD, FL 32750 TEL: 407.260.023



PROJECT TEAM
DESIGNER
GJ
BIM / DRAWINGS BY:
CHECKED BY:
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Community Development Bldg. Renovations 295 Riverside Circle Naples, FL 34102 6788-16-2867 100% CD - 08-17-17
PROJECT NUMBER STATUS ISSUE DATE SYMBOL LEGEND, SCHEDULES & GENERAL NOTES
SCALE: NTS
E-000 68
SHEET NUMBER





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ARCHITECT OF RECORD

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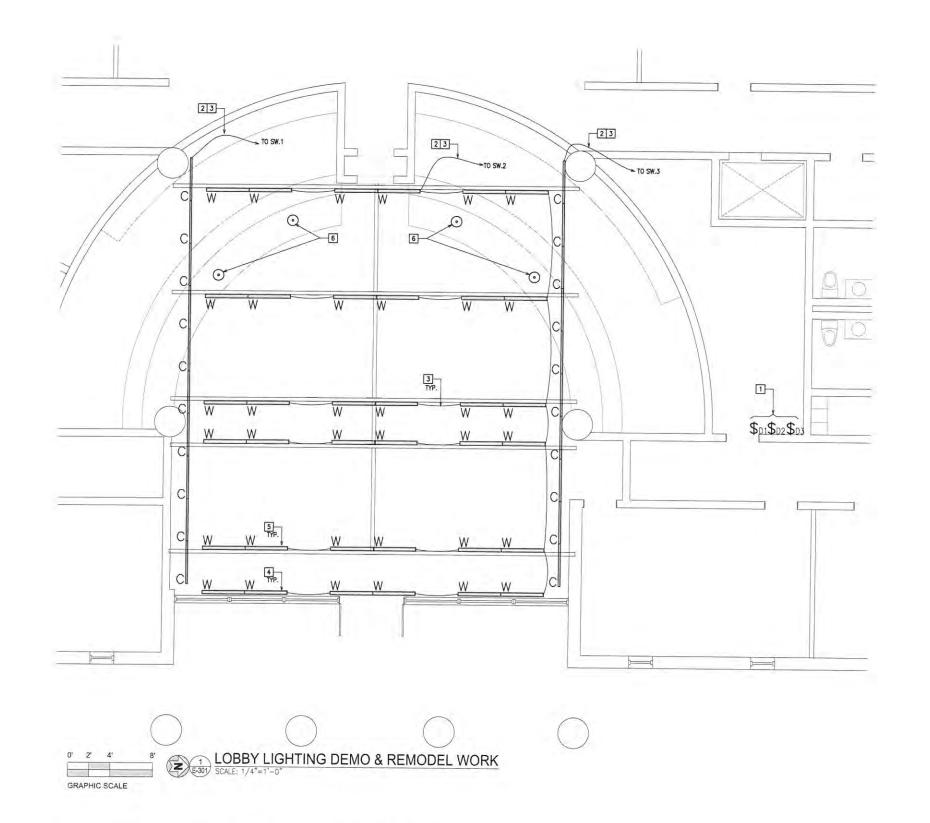
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300 CROWN OAK CENTRE DRIVE, LONOWOOD, FL 32750 TEL: 407.260.0231 FAX: 407.260.0749



PROJECT TEAM
DESIGNER
GJ
BIM / DRAWINGS BY:
CHECKED BY:
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Community Development Bldg. Renovations ²⁹⁵ Riverside Circle Naples, FL 34102 6788-16-2867 100% CD - 08-17-17
6788-16-2867 100% CD - 08-17-17
DOO IN OT LIVE IN THE PARTY OF LIVE INTERPARTY OF LIVE ANTY OF LIVE ANTY OF LIVE ANTY OF L
1ST FLOOR POWER - NEW
SCALE: 1/8"=1'-0"
E-101 69
SHEET NUMBER



 EXISTING LOBBY LIGHTING SWITCHES AND CONTROL TO BE REMOVED. REUSE EXISTING POWER & CONTROL WIRNG FOR NEW LIGHTS. PROVIDE NEW LED COMPARILE DIMMERS SWITCHES. PROVIDE NEW WALL BOXES TO ACCOMMODATE NEW DIMMERS. 2 RE-CONFIGURE SWITCHING AS SHOWN. 3 RUN ALL NEW RACEWAYS CONCEALED IN WALLS, DROP CEILINGS, ATOP OF TRUSS OR COVES.

KEYED PLAN NOTES

4 WALL MOUNTED. 12' AFF TO BOTTOM.

5 MOUNTED ON THE TRUSS BEAM SIDE (AS PER MANUFACTURER'S REQUIREMENTS), 12' AFF TO BOTTOM. 6 REMOVE EXISTING PENDANT LOBBY LIGHTS. REUSE CIRCUIT FOR NEW UCHTS. REMOVE EXISTING CEILING BOXES AND REMOVE CONDUM & WIRING FROM DROP CEILING. REPLACE CEILING TILE TO MATCH EXISTING.

NOTE: EXISTING EGRESS EMERGENCY LIGHTS ARE EXISTING TO REMAIN AND UNALTERED BY THIS WORK.

TYPE

DESCRIPTION MANUE.

AL COVE ECO LIGHTING

BEAM4LED

HE

WILLIAMS

WALL DIRECT

WALL PACK

LED

LIGHTING FIXTURE SCHEDULE

WATTS LAMP COLOR VOLTS MOUNTING REMARKS

120

COVE

WALL

LED 5000 120 WALL WALL HPHOTOCELL MOUNTED (MECHANICAL YARD)

MOUNTED

MOUNT ON

THE SIDE OF TRUSS BEAM

15 LED 3500 120

17.2 LED 3500

48

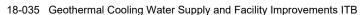
CATALOG NUMBER

ACE120DADU

BBWLED 500 80 35 50 4 W 120 DP 1

WP1-L44/850 SF PC 120

WG





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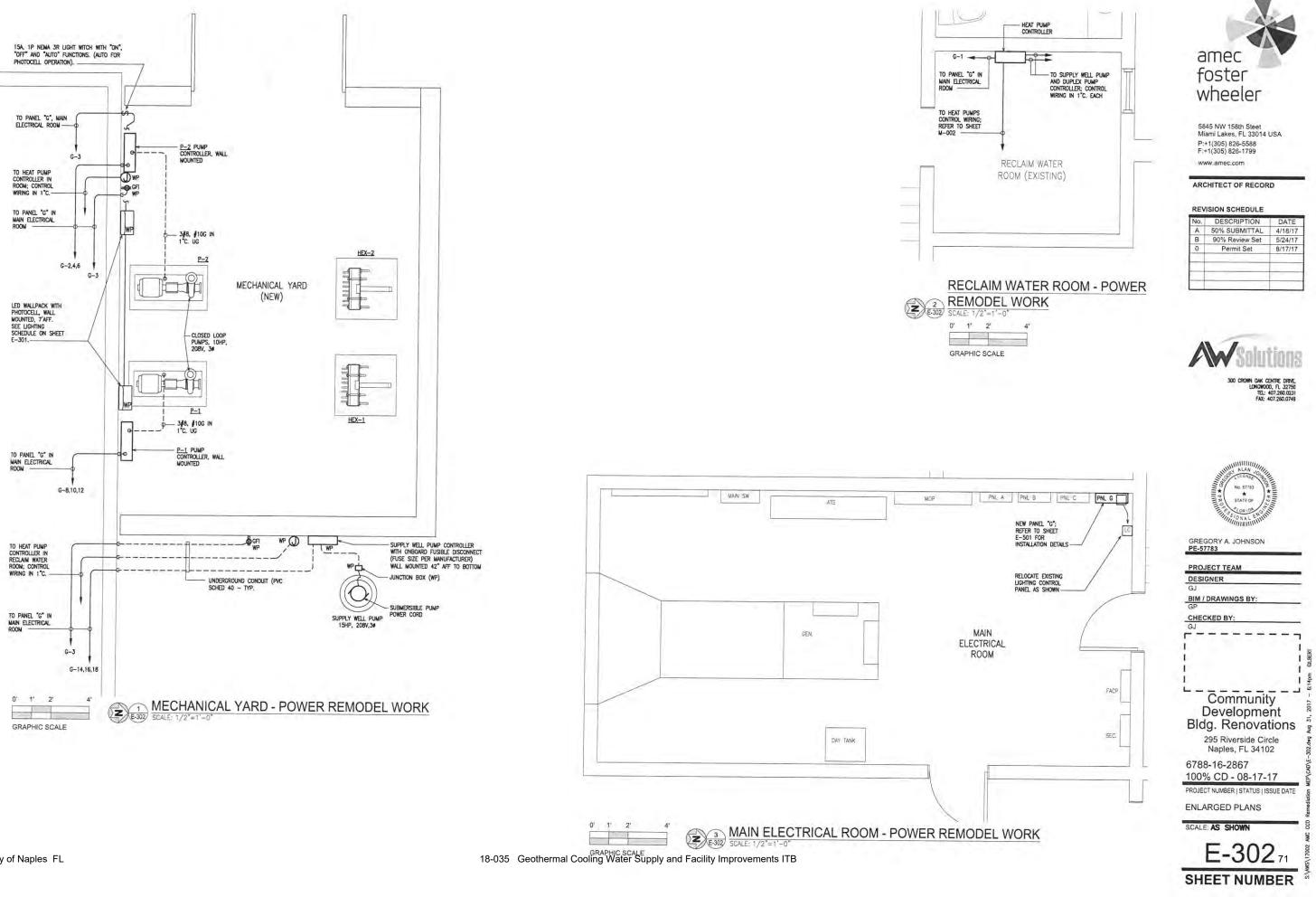
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90% Review Set	5/24/17
Permit Set	8/17/17
	50% SUBMITTAL 90% Review Set



N OAK CENTRE DRIVE, LONGWOOD, FL 32750 TEL: 407.260.0231 FAX: 407.260.0749

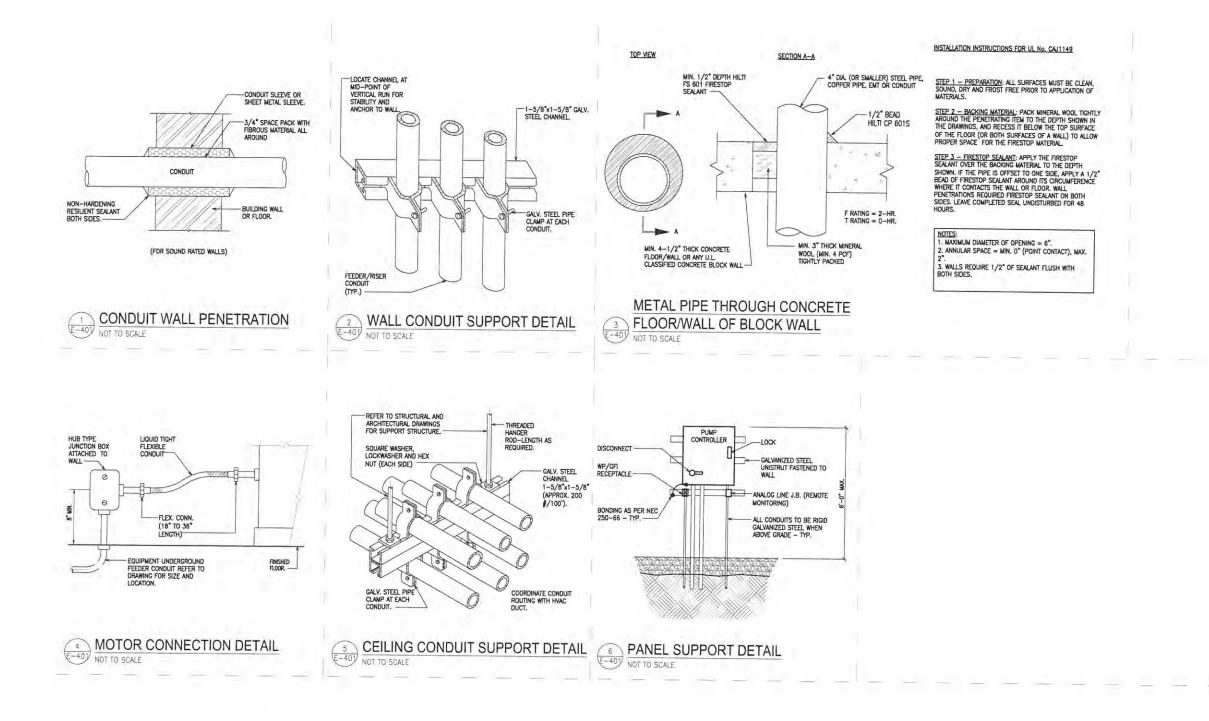






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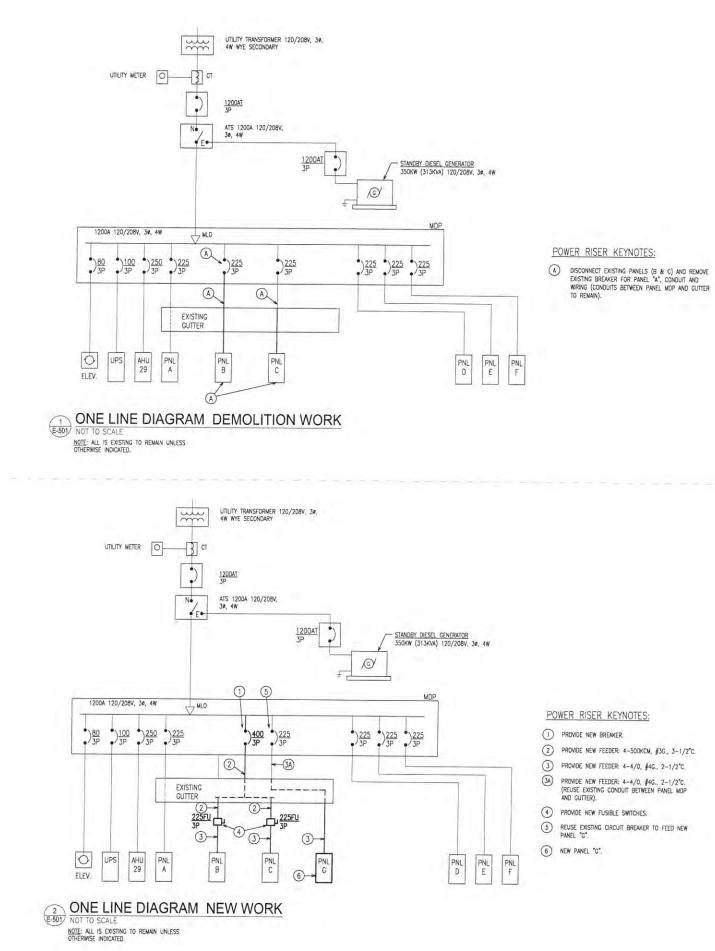
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300 CROWN QAK CENTRE DRVE, LONGWOOD, FL 32750 TEL: 407.260.0231 FAX: 407.260.0749





MODE	FAC:	CUTTLER HAMMER	ROOM				PANE	EL FROM:	M	DP (exi TL CO	sting)	-		AICM	JECT: IEMA:	17002 CDB MEP M0 1	DIFIC	AT
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NON-VE	TION		_			0	100	0		1		NOTES: 1-PROVID	DE NEW C	RCUITE	REAKER	(TO MATCH EXISTING) AN		
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FUTURE TOTAL				-	2	0	100	256		(VA)		LOAD CA Per 2011	NEC Article	220.87	for existin	g facilities with new and de	mo load:	
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	_				-		1		_	1		247.1 kVA	= 687.0 Ar	nps at 20	18V, 3 pha	150 - 247.1 KVA.		
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ANUFAC	2: - W	LOAD H. P. CONTROLLER RCPT (MECH YARD) LTG (MECH YARD)	12 12	12 12 12	12 12 12	3/4	20							10	1	P-2 PUMP CONTROLLER	6 8 10	36 36 36
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City of Naples FL

18-035 Geothermal Cooling Water Supply and Facility Improvements ITB



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REVISION SCHEDULE

No.	DESCRIPTION	DATE
A	50% SUBMITTAL	4/18/17
B	90% Review Set	5/24/17
0	Permit Set	8/17/17
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WN OAK CENTRE DRIVE, LONGWOOD, FL 32750 TEL: 407.260.0231 FAX: 407.260.0749



GREGORY A. JOHNSON PE-57783

PROJECT TEAM
DESIGNER
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BIM / DRAWINGS BY:
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Community Development
Bldg. Renovations
295 Riverside Circle Naples, FL 34102 6788-16-2867 100% CD - 08-17-17
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100% CD - 08-17-17
PROJECT NUMBER STATUS ISSUE DATE ELECTRICAL ONE LINE DIAGRAM AND PANEL SCHEDULES
SCALE: NTS
E-50173
SHEET NUMBER

ELECTRICAL SPECIFICATIONS

SECTION 16000 - ELECTRICAL

GENERAL:

- 1. SCOPE: ELECTRICAL WORK MAY INCLUDE BUT IS NOT LIMITED TO THE FOLLOWICS SYSTEMS: POWER DISTRIBUTION LIGHTING
- QUALITY ASSURANCE: THE COMPLETE ELECTRICAL INSTALLATION SHALL COMPLY WITH THE CURRENT EFFECTIVE EDITION OF THE FOLLOWING CODES:
 - NFPA 70 NATIONAL ELECTRICAL CODE
 - NFPA 110 EMERGENCY & STANDBY POWER SYSTEMS NFPA 72 - INSTALLATION, MAINTENANCE AND USE OF PROTECTIVE SIGNALING SYSTEM
 - NFPA 90A INSTALLATION OF AIR CONDITIONING SYSTEMS
 - NFPA 101 LIFE SAFETY CODE
 - 2014 FLORIDA BUILDING CODE
- SUBMITTALS: SUBMIT SHOP DRAWINGS AND OTHER INFORMATION NECESSARY FOR THE ARCHITECT TO MAKE COMPLETE EVALUATION OF THE MATERIALS, ACCESSORIES, AND METHODS PROPOSED FOR THE WORK, SHOP DRAWINGS SHALL BE FOR THE FOLLOWING: LIGHT FIXTURES AND ALARM SYSTEMS.
 - ARCHITECTURAL AND/OR ENGINEERING EXPENSES THAT ARE INCURRED DUE TO REMISIONS OR SUBSTITUTIONS REQUESTED BY THE CONTRACTOR SHALL BE PAID FOR BY THAT CONTRACTOR.

PRODUCTS:

- ALL MATERIAL SHALL BE NEW AND SHALL BE LISTED BY UNDERWRITERS LABORATORIES.
- 5. CONDUITS SHALL BE 3/4" MINIMUM SIZE, RIGID GALVANIZED STEEL, INTERNEDIATE METAL CONDUIT, LIQUID TIGHT FLEXIBLE CONDUIT, ELECTRICAL METALLIC TUBING, FLEXIBLE METAL CONDUIT, METALL CLAD CABLE OR RIGD NON METALLIC CONDUIT, AND SHALL BE SIZED AND APPLIED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. CONDUIT FITNICS SHALL BE ALL PLATED STEEL, THREADED OR COMPRESSION TYPE.
- 6. OUTLET AND JUNCTION BOXES SHALL BE 4" SQUARE MINIMUM SIZE, GALVANIZED, STAMPED STEEL, EXCEPT AS NOTED. OUTLET BOXES SHALL BE EQUIPED WITH PLASTER RINGS OF APPROPIATE DEPTH TO FINISH FLUSH WITH FINISHED WALL MULTRANG BOXES SHALL BE OF SINGLE PIECE CONSTRUCTION. OUTLET BOXES IN CONCRETE OR MASONRY WALLS SHALL BE MASONRY TYPE. OUTLET BOXES FOR EXPOSED EXTERIOR WALLS SHALL BE WEATHERPROOF WITH THREADED CONDUIT HUBS.
- 7. WIRES AND CABLES SHALL BE COPPER CONDUCTORS AND HAVE APPROVED INSULATION FOR THE SPACES WHERE THEY ARE TO BE USED AND SHALL COMFORM TO THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE. THE MINIMUM TEMPERATURE RATING SHALL BE 75°C, TYPE THHN/THWN.
- 8. NO WIRE SMALLER THAN \$12 SHALL BE USED FOR LIGHTING, DUPLEX, AND MOTOR CIRCUITS. ALL WIRE \$10 GAUGE AND SMALLER MAY BE SOLID OR STRANDED CONDUCTOR. FOR SIZE \$8 AND LARGER STRANDED CABLE SHALL BE USED. ALL WIRES AND CABLES SHALL BE INSTALLED IN CONDUIT UNLESS OTHERWISE NOTED. "IDEAL WIRE LUBE" OR EQUAL SHALL BE USED AS A LUBRCANT. WHERE THE DISTANCE FROM THE PANEL BOARD TO THE LAST OUTLET ON ANY 120V CIRCUIT EXCEEDS 50, THE BRANCH CIRCUIT WIRE FROM THE FIRST OUTLET BEYOND 50' FROM THE PANEL BOARD SHALL NOT BE SMALLER THAN \$10 AWG.
- 9. WRING DEVICES SHALL BE THREE-WIRE, SPECIFICATION GRADE, 20 AMPERE MINIHUM, DUAL VOLTAGE SWITCHES, DUPLEX RECEPTACLES AND GROUND-FAULT GRCUIT INTERRUPTING RECEPTACLES. PROVIDE 302 SATIN STAINLESS STELL PLATES FOR FINISHED AREAS. PROVIDED GASTED WEATHERPROOF COVERPLATES FOR EXTERIOR AREAS. SWITCHES AND PLATES FOR ALUMINUM MULLIONS SHALL BE "THINUNE". COVER PLATES SHALL BE INSTALLED ON ALL SWITCHES, DUPLEX RECEPTACLES, TELEPHONE AND OTHER OUTLETS. DEVICES SHALL BE MANUFACTED BY HUBBELL, BRYANT ELECTRIC COMPANY, LEVITON OR P & S COMPANY.
- 10. SAFETY SWITCHES SHALL BE GENERAL DUTY, QUICK-MAKE, QUICK-BREAK, TYPES OF THE SIZE AND FUSE AMPAOTY AS DENOTED ON THE DRAWINGS. PROVIDE GROUND BUS, SOLID NEUTRAL, CLASS RK-5 DUAL ELEMENT, TIME DELAY FUSES, AND NEMA RELATED ENCLOSURE.

- 11. ALL GROUNDING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, AND AS REQUIRED BY THE DRAWINS.
- 12. BRANCH CIRCUIT BREAKERS SHALL BE OF INDIVIDUAL UNIT CONSTRUCTION COMPLETE WITH QUICK-MAKE, QUICK-BREAK MECHANISM; THERMAL MAGNETIC TRIP; AMBIENT COMPENSATION; AND SHALL BE INTERCHANGEABLE IN THE PANELBOARD ASSEMBLY IN RATINGS FROM 15 TO 100 AMPERES WITHOUT NECESSITATING BUS, LINK OR ASSEMBLY REARRANGENWENT. CIRCUIT BREAKERS SHALL HAVE SUITABLE SCREW TYPE LINE TERMINALS SO THAT THEY WILL BE HELD IN POSITIVE CONTACT WITH THEIR RESPECTIVE LINKS OR BUSSES.
- LAMPS AND LIGHTING FIXTURES SHALL BE AS DESCRIBED IN LIGHT FIXTURES SCHEDULE ON THE DRAWINGS.
- INSTALLATION:
- 14. ALL CIRCUIT WIRING SHALL BE INSTALLED IN CONDUIT. IN GENERAL, CONCEAL CONDUIT IN CEILINGS AND WALLS, ROUTE AT THE CEILING AND FEED DOWN TO OUTLETS ON THE WALLS. IN MECHANICAL AREAS OF THE BUILDING, CONDUIT SHALL BE EXPOSED AND ROUTED ON SURFACE OF THE CEILING AND/OR WALLS AS HIGH AS POSSIBLE AND ROUTED SO AS TO NOT INTERFERE WITH OTHER TRADES.
- 15. RGS CONDUIT SHALL BE USED IN ALL AREAS SUBJECTED TO PHYSICAL DAMAGE. FLEX CONDUIT SHALL BE USED FOR ALL CONNECTIONS TO EQUIPMENT SUBJECT TO VIBRATION. ENT MAY BE INSTALLED ONLY IN CONCELLED INTERIOR SPACES ABOVE COLLINGS, OR IN WALLS. SCHEDULE 40 PVC WITH A GROUND WIRE MAY BE USED IN THE FLOOR SLABS OR EXTERIOR BELOW GRADE. NO EXPOSED PVC WILL BE ALLOWED.
- 16. BEFORE INSTALLING OUTLETS, THE ELECTRICAL CONTRACTOR SHALL CONFER WITH THE ARCHITECT TO DETERMINE IF THE OUTLETS ARE TO BE INSTALLED AT HEIGHTS OTHER THAN THOSE GIVEN HEREIN.
- 17. FURNISH AND INSTALL ANY MISCELLANEOUS METAL OR WOOD SUPPORTS, FASTENERS, MOUNTS, HANGERS, SIDE BRACES, ETC, WHICH MAY BE REQUIRED TO SEQUELY ANCHOR AND SUPPORT ELECTRICAL EQUIPMENT FURNISHED UNDER THIS CONTRACT.
- MAKE PROVISION AND PROVIDE POWE WRING INCLUDING FINAL EQUIPMENT CONNECTION TO ALL EQUIPMENT FURNISHED AND INSTALLED BY OTHERS. VERIFY THE EXACT REQUIREMENT OF EQUIPMENT BEFORE INSTALLATION OF ELECTRICAL WORK.
- 19. ALL REQUIRED BUILDING PERMIT FOR THE ELECTRIAL PORTION OF THE WORK SHALL BE INCLUDED. A FINAL INSPECTION BY THE OWNER, ARCHITECT, ENGINEER, AND ALL INVOLVED AGENCIES MILL BE CONDUCTED UPON COMPLETION OF THE WORK TO DETERMINE ACCEPTABILITY OF THE WORK, IN ADDITION, AN INSPECTION BY THE ELECTRICAL INSPECTOR AND CERTIFICATE OF APPROVAL MILL BE REQUIRED PRIOR TO FINAL PAYMENT FOR THE WORK. ALL FEES FOR BUILDING PERMITS AND ELECTRICAL INSPECTIONS SHALL BE INCLUDED.

END OF SECTION 16000

CONTRACTOR SHALL REVIEW ARCHITECTURAL LIFE SAFETY DRAWINGS FOR FIRE RATED PARTITIONS AND PROVIDE U.L. USTED FIRE RATED ASSEMBLIES FOR PENETRATIONS.



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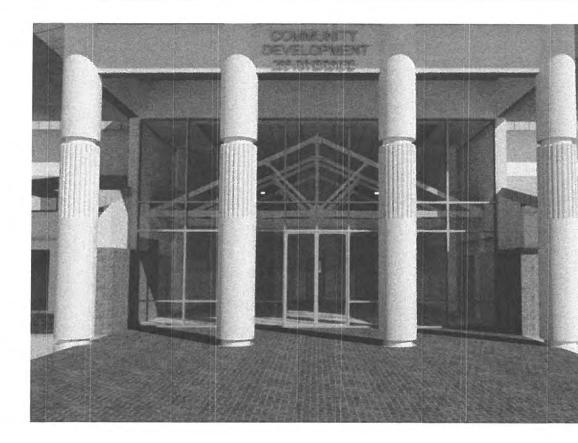


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CITY OF NAPLES

COMMUNITY DEVELOPMENT LOBBY RENOVATION



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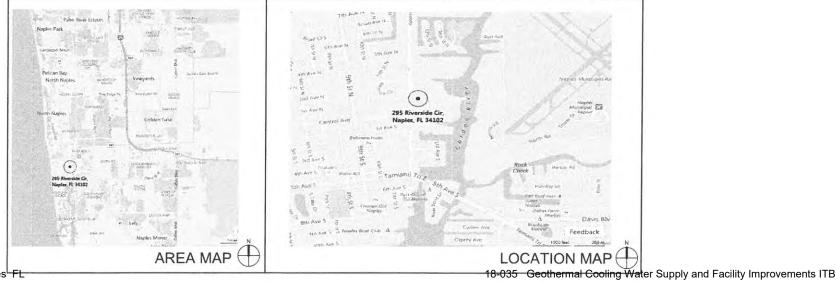
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City of Naples FL

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GENERAL STRUCTURAL NOTES

1. GENERAL: DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE TYPICAL AND APPLY TO SIMILAR SITUATIONS ELSEWHERE. ADAPT REQUIREMENTS OF DETAILS, SECTIONS, PLANS, AND NOTES AT LOCATIONS WHERE CONDITIONS ARE SIMILAR.

2. CODE REQUIREMENTS: FLORIDA BUILDING CODE 5TH EDITION (2014).

3. TEMPORARY CONDITIONS: PROVIDE ADEQUATE BRACING, SHORING, AND OTHER TEMPORARY SUPPORTS AS REQUIRED TO SAFELY COMPLETE THE WORK. THE STRUCTURE SHOWN ON THE DRAWINGS HAS BEEN DESIGNED FOR STABILITY UNDER FINAL CONFIGURATION ONLY.

4. EXISTING CONDITIONS: THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS. DIMENSIONS AND ELEVATIONS AND NOTIFY THE OWNER AND ENGINEER OF ANY SIGNIFICANT DISCREPANCIES FROM CONDITIONS SHOWN ON THE DRAWINGS.

5. EXISTING STRUCTURE: INFORMATION SHOWN FOR THE EXISTING STRUCTURE WAS TAKEN FROM DRAWINGS TITLED 'DEVLELOPMENT SERVICES'. BY W. L OVERSTREET, DATED 5/12000. WORK SHOWN ON THESE PLANS ASSUMES THAT THE ORIGINAL CONSTRUCTION WAS PERFORMED IN ACCORDANCE WITH THESE DRAWINGS INCLUDING DIMENSIONS, ELEVATIONS, MEMBER SIZES, MATERIALS, DETAILS, ETC. THE CONTRACTOR SHALL VERIFY THE CONDITIONS RELATING TO THE EXISTING STRUCTURE AND NOTIFY THE OWNER AND ENGINEER OF ANY DISCREPANCIES OR CONFLICTS.

DESIGN CRITERIA: IN ADDITION TO DEAD LOADS, THE FOLLOWING LOADS WERE USED: CEILING PANELS: 20 PSF ON TOTAL AREA WIND: 5 PSF INTERIOR PRESSURE

7. SUBMITTALS: FOUR SETS OF SHOP DRAWINGS SHALL BE SUBMITTED PRIOR TO FABRICATION AND CONSTRUCTION REGARDING STRUCTURAL STEEL, ALUMINUM TRUSSES, AND METAL ACCOUSTICAL CELLING PANELS. IF THE SHOP DRAWINGS DIFFER FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE REVIEW AND ACCEPTANCE BY THE OWNER AND ENGINEER. SHOP DRAWINGS WILL BE REVIEW AND ACCEPTANCE BY THE OWNER AND ENGINEER. SHOP DRAWINGS WILL BE REVIEW DONG ENERTIC COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS ONLY. THE CONTRACTOR SHALL VERIFY COMPLIANCE WITH THE CONTRACT DOCUMENTS AS TO QUANTITY, LENGTH, ELEVATIONS, DIMENSIONS, ETC.

8. MECHANICAL ANCHORS: MECHANICAL ANCHORS SHALL HAVE A CURRENT ICC-ES EVALUATION REPORT NOICATING CONFORMANCE WITH CURRENT APPLICABLE ICC-ES ACCEPTANE CRITERIA. MECHANICAL ANCHORS SHALL BE SOREW TYPE ANCHORS SHALL BE USED TITEL ANCHORS ARE NOT PERMITTED). SCREW TYPE ANCHORS SHALL BE USED TO ANCHORS ARE NOT PERMITTED). SCREW TYPE ANCHORS SHALL BE USED TO ANCHORS ARE NOT PERMITTED). SCREW TYPE ANCHORS SHALL BE USED WINCARTE. ACCEPTABLE ANCHORS SHALL BE USED TITEL HD. HILTI KWIK HUS-EZ AND POWERS WEDGE BOLT+. ANCHORS SHALL BE 316 STAINLESS STEEL

9. ADHESIVE ANCHORS: ADHESIVE ANCHORS SHALL HAVE A CURRENT ICC.ES EVALUATION REPORT INDICATING CONFIRMANCE WITH CURRENT APPLICABLE ICC.ES ACCEPTANCE CRITERIA. ADHESIVE SHALL BE INSTALLED IN DRY HOLES AND HAVE PERFORMANCE DATA FOR INSTALLATION IN WATER SATURATED HOLES. ACCEPTABLE ADHESIVES IN CONCRETE ARE SIMPSON ATXP. HILTI HIT-HY 200 AND FOWERS ACTOR GOLD. THREADED RODS SHALL BE 136 STANLESS STEEL UTH MANUFACTURER SPINIED INSTALLATION INSTRUCTIONS. INSTALLATIONS SHALL ASIS INCLUDE BRUSHING AND CLEANING OF DRILLED HOLES WITH COMPRESED AIR. INSTALLERS SHALL BE RAINED BY THE MANUFACTURERS REPRESENTATIVE. EMBEDMENT SHALL BE AS INDICATED ON THE STRUCTURAL DRAWINGS.

IDENTIFY POSITION OF REINFORCING STEEL AND OTHER EMBEDDED ITEMS PRIOR TO DRILLING HOLES FOR ANCHORS. EXERCISE CARE WHEN DRILLING TO AVOID DAMAGING EXISTING REINFORCING OR EMBEDDED ITEMS. IMMEDIATELY NOTIFY THE OWNER AND ENGINEER FOR DIRECTION IF REINFORCING STEEL OR OTHER EMBEDDED ITEMS ARE ENCOUNTERED DURING DRILLING.

IDENTIFYING THE LOCATION OF EXISTING REINFORCING STEEL SHALL BE BY VISUAL OBSERVATION, SOUNDING, PROBABLE LOCATIONS, AND USE OF A BAR FINDER. X-RAY IS NOT REQUIRED.

10. STRUCTURAL STEEL: STRUCTURAL STEEL SHAPES AND PLATES SHALL BE 316 STANLESS STEEL BOLTS AND THREADED ROD SHALL BE 316 STANLESS STEEL WITH MATCHING NUTS AND WASHERS, WELDING SHALL CONFORM TO THE AWS CODES AND SHALL BE 31/6 "MINUM. WELDING SHALL BE 0X WAS CERTIFIED WELDERS PRECOLALIFIED WELDING PROCEDURES ARE TO BE USED. ALL BOLTED CONNECTIONS SHALL CONSIST OF MINIMUM TWO X"-DUMATER BOLTS. ALL STAINLESS STEEL BRACKETS AND ASSEMBLIES ARE TO REMAIN NATURAL (NO PAINT).

11. STRUCTURAL ALUMINUM: ALUMINUM TUBULAR TRUSSES ARE DESIGNED IN ACCORDANCE WITH SPECIFICATIONS FOR ALUMINUM STRUCTURES PUBLISHED BY THE ALUMINUM ASSOCIATION. ROLLED, EXTRUDED AND TUBULAR MEMBERS SHALL BE ALLOY AND TEMPER 6015-T6, CONNECTIONS ARE DESISINED TO BE SHOP WELDED AND FIELD BOLTED. WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY AWS D12 - STRUCTURAL WELDING CODE, ALUMINUM, BOLTS, NUTS, AND WASHERS SHALL BE ALSI 316 STAINLESS STEEL WITH A MINIMUM TWO X-DIAMETER BOLTS PER CONNECTION.

ALL ALUMINUM COMPONENTS, INCLUDING BUT NOT LIMITED TO TRUSSES AND GUSSET PLATES, SHALL BE PRIMED AND PAINTED, OWNER WILL SELECT A COLOR FROM THE MANUFACTURERYS STANDARD COLOR CHART.

TRUSSES ARE TO BE PAINTED IN THE SHOP AND PROTECTED FROM DAMAGE DURING SHIPMENT AND INSTALLATION. IF DAMAGED DURING SHIPMENT OR INSTALLATION, THE CONTRACTOR SHALL REPAIR THE DAMAGE USING APPROPRIATE METHODS.

ALUMINUM TRUSSES SHALL BE PRE-ASSEMBLED IN THE FABRICATORS SHOP FOR INSPECTION BY THE OWNER AND ENGINEER PRIOR TO DISASSEMBLY AND DELIVERY TO THE SITE.

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EXST. KNEE WALL TO REMAIN 6'-0" 6. 52) П CONTRACTOR TO FIELD VERIFY LOCATION OF THIS TRUSS è. 38' - 0" FACE TO FACE TO MASONRY FIELD VERIFY DUC TAL DUCT METAL ACOUSTICAL CEILING TREATMENT UP APPROX, 24' EA, END OF TRUSS, PROVIDE TRIM AT ALL EXPOSED EDGES SPIRAL MET SPIRAL M EXST. ROUND CONC. COLUMNS ALUMINUM TRUSSES TYP, OF (5)

è REP 8

1) INTERIOR TRUSS PLAN

12 METAL ACCOUSTICAL CEILING: METAL ACCOUSTICAL CEILING PANELS SHALL BE COLD-FORMED STEEL GALVANIZED AND PAINTED WITH A PROFILE CAPABLE OF SPANNING 10 FT (TWO SPAN MINIMUM) AT 20 PSF LOAD WITH DEFLECTION LESS THAN UZ40 ATTACHMENTS. CLOSURES, ETC. SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS; DECK ATTACHMENTS AT TRANSVERSE AND PERIMETER SUPPORTS SHALL BE MECHANICALLY FASTENED AND MUST NOT BE VISIBLE FROM THE UNDERSIDE. SIDE LAP CONNECTIONS SHALL BE ACCOMPLISHED BY HIDDEN MECHANICAL FASTENERS OR ORIMPING THE DECK BOGES. OWNER WILL SELECT A SHADE OF WHITE PAINT COLOR FROM A STANDARD COLOR CHART.

1

Consultants:

Seal:

JANES T.LA

MCN6. 6259

STATE OF

CORIO ONAL E James T. Lange P.E.

REG. # 52594 TKW Job. # 15906.04

6/16/2017 12:07:03

COMMUNITY DEVELOPMENT

CITY OF NAPLES

Description

295 Riverside Circle,

Naples, FL 34102

No. Date

LOBBY RENOVATION

TEL: 239.278.1992 + FAX: 239.278. E-MALL: Info@8kwontline.com Engineering Certification # 5762

THE BASIS OF DESIGN FOR THE METAL ACCOUSTICAL CEILING PANELS IS 2% * 20-GAGE TORIS A (ACOUSTIC) CEILING PANELS MANUFACTURED BY EPIC METALS, RANKIN, PA. SMILAR PANELS MEETING THE PERFORMANCE REQUIREMENTS MAY BE SUBMITTED AS AN ALTERNATE. BUT ARE SUBJECT TO APPROVAL BY THE OWNER AND ENGINEER AND MUST MEET SIMILAR PRODUCT AND INSTALLATION REQUIREMENTS.

POST-INSTALLATION: DAMAGED GALVANIZING, POWDER COATING, AND PAINT MUST BE D REPAIRED USING APPROPRIATE METHODS AND IS THE RESPONSIBILITY OF THE REACTOR.

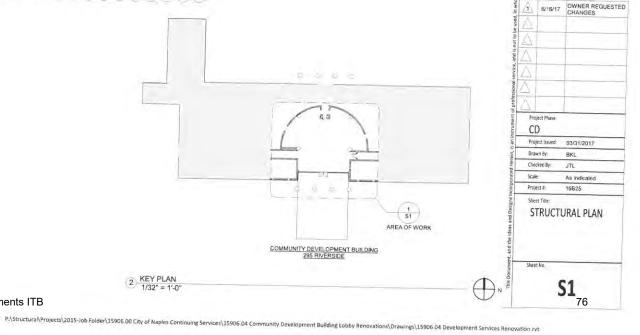
GENERAL CONDITIONS

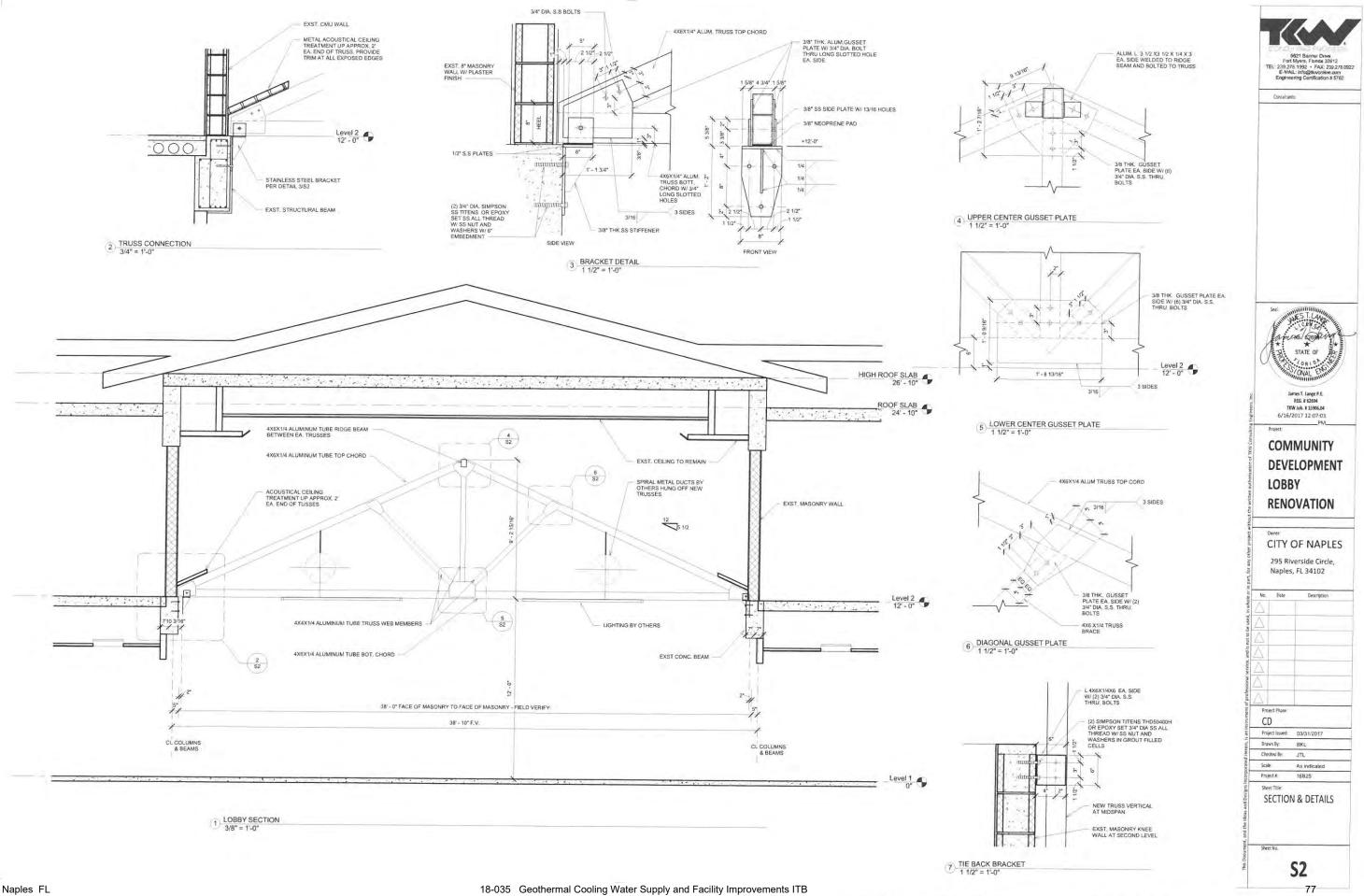
1. ALL ON-SITE WORK IS TO BE PERFORMED AND COMPLETED BETWEEN SPM FRIDAY AND 7AM MONDAY. IF MORE THAN ONE WEEKEND IS REQUIRED TO COMPLETE THE WORK, CONTRACTOR SHALL COORDINATE WITH OWNER FOR LOCATIONS FOR MATERIAL STORAGE.

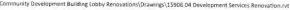
2. FRONT ENTRANCE AND LOBBY FURNITURE AND EQUIPMENT MAY NEED TO BE TEMPORARILY RELOCATED DURING THE WORK, COORDINATE RELOCATION WITH OWNER. ALL FURNITURE AND EQUIPMENT THAT IS RELOCATED MUST BE REINSTALLED BY 7AM MONDAY MORNING,

COVER AND PROTECT FROM DAMAGE ALL FURNITURE AND EQUIPMENT THAT IS NOT TEMPORARILY RELOCATED.

4. COVER AND PROTECT EXISTING TILE FLOOR WITH MINIMUM 1/2" PLYWOOD.



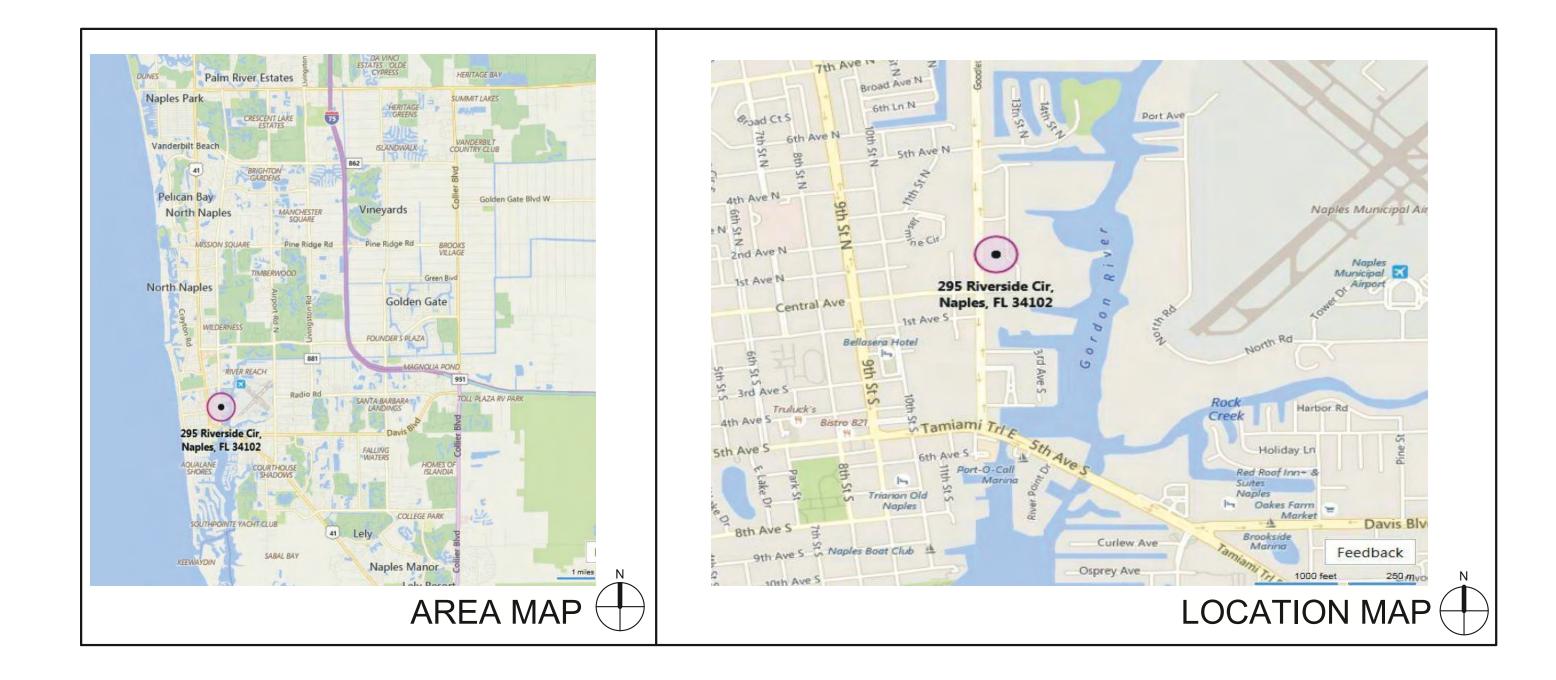




COMMUNITY DEVELOPMENT LOBBY RENOVATION



18-035 Geothermal Cooling Water Supply and Facility Improvements ITB



<u>CITY OF NAPLES</u>

PROJECT NUMBER 16B25

PREPARED FOR

CITY OF NAPLES BUILDING DEPARTMENT 295 RIVERSIDE CIRCLE NAPLES, FL 34102

MAYOR

Bill Barnett

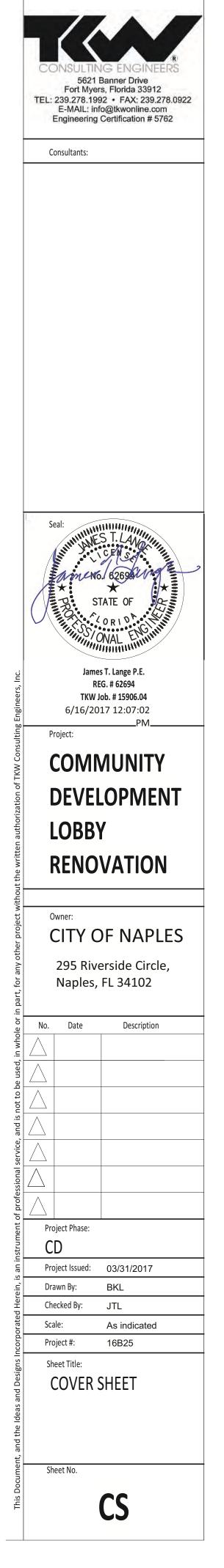
VICE MAYOR

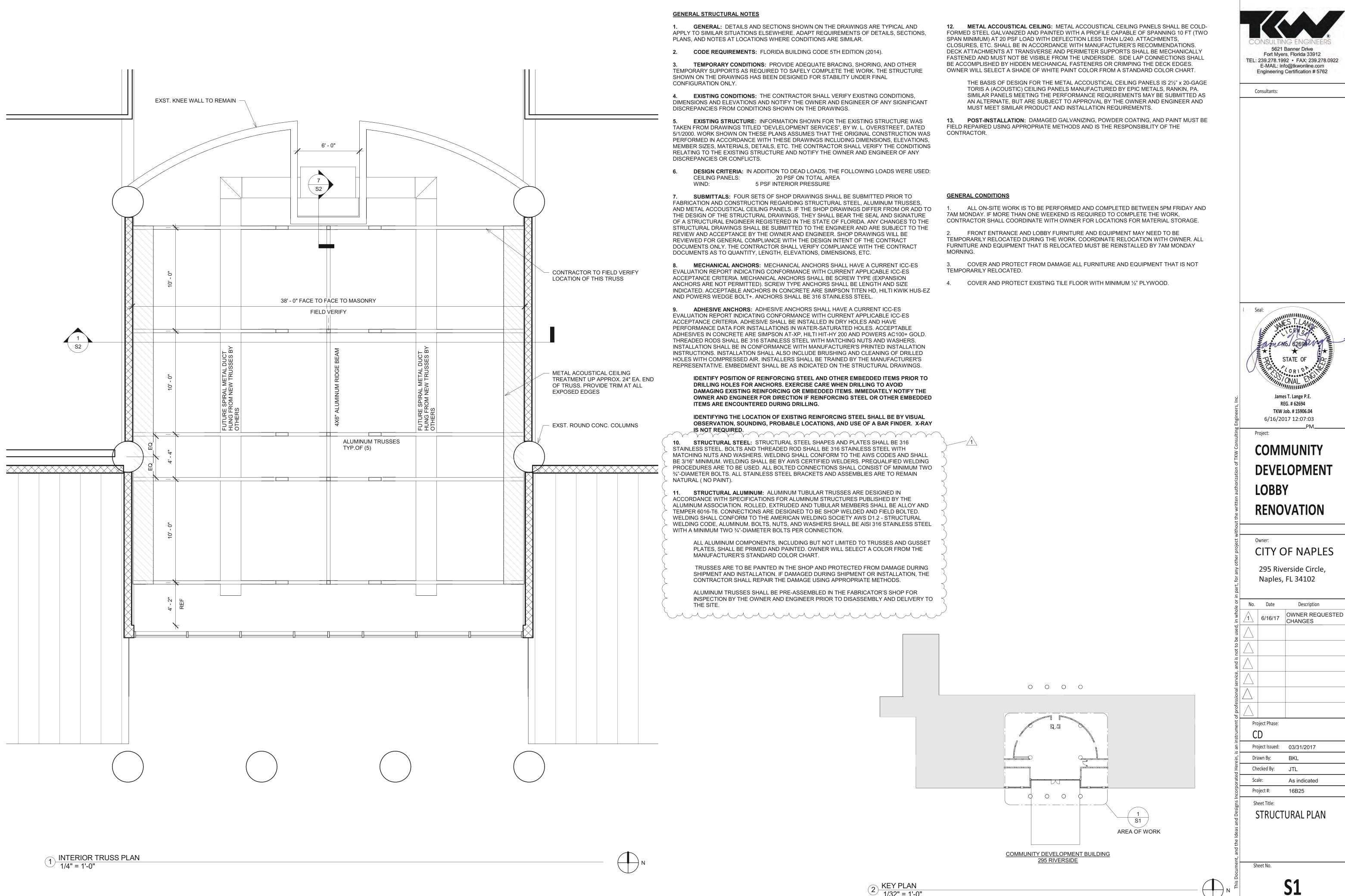
Linda Penniman

Reg Buxton Doug Finlay Michelle McLeod Sam Saad III Ellen Seigel

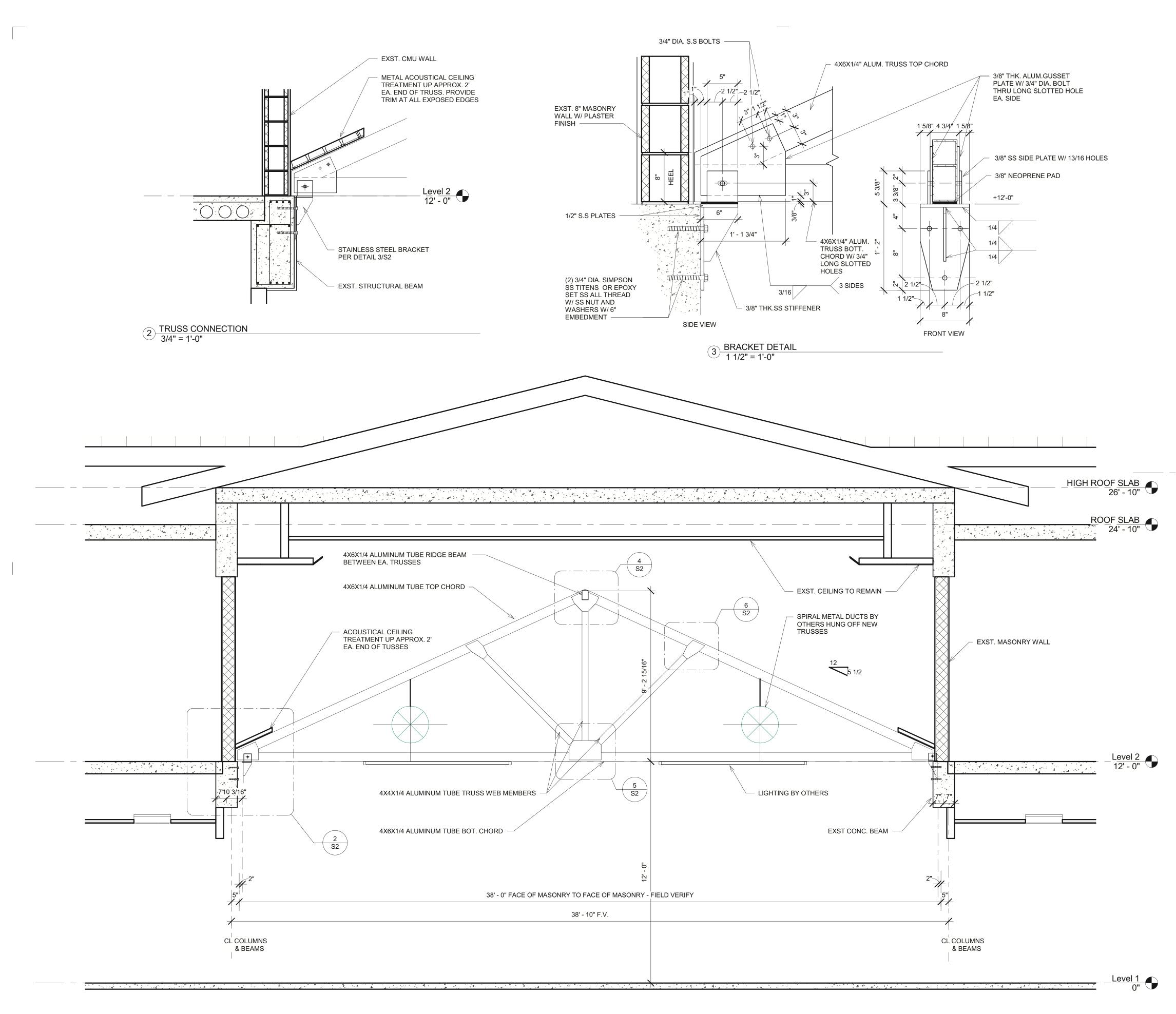
TABLE OF CONTENTS

- CS COVER SHEET
- S1 STRUCTURAL PLAN
- S2 SECTION & DETAILS

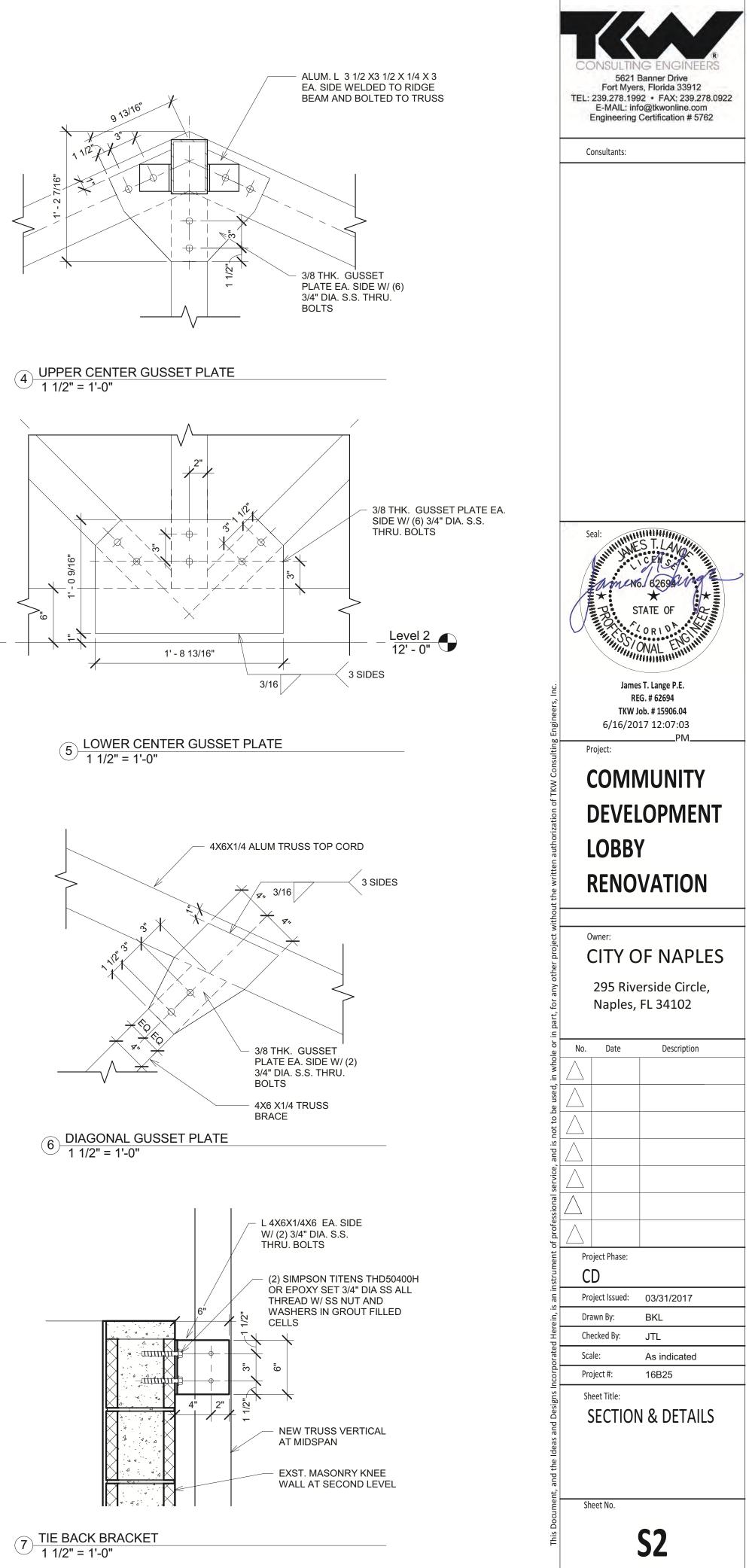




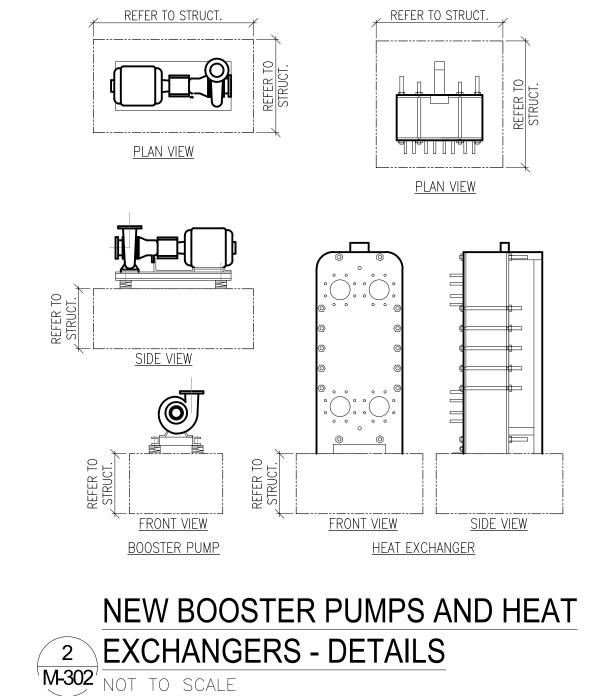
2 KEY PLAN 1/32" = 1'-0"

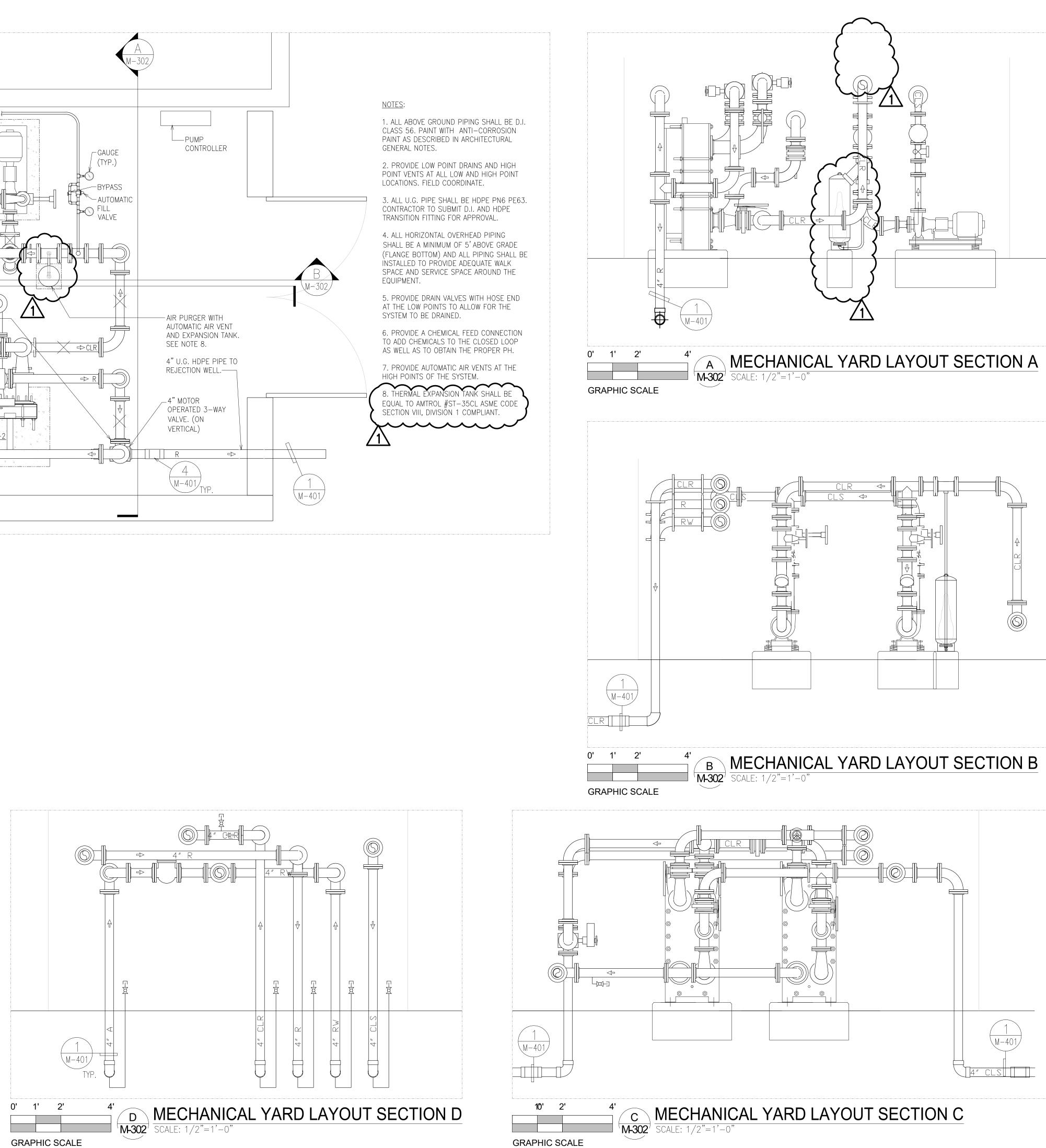


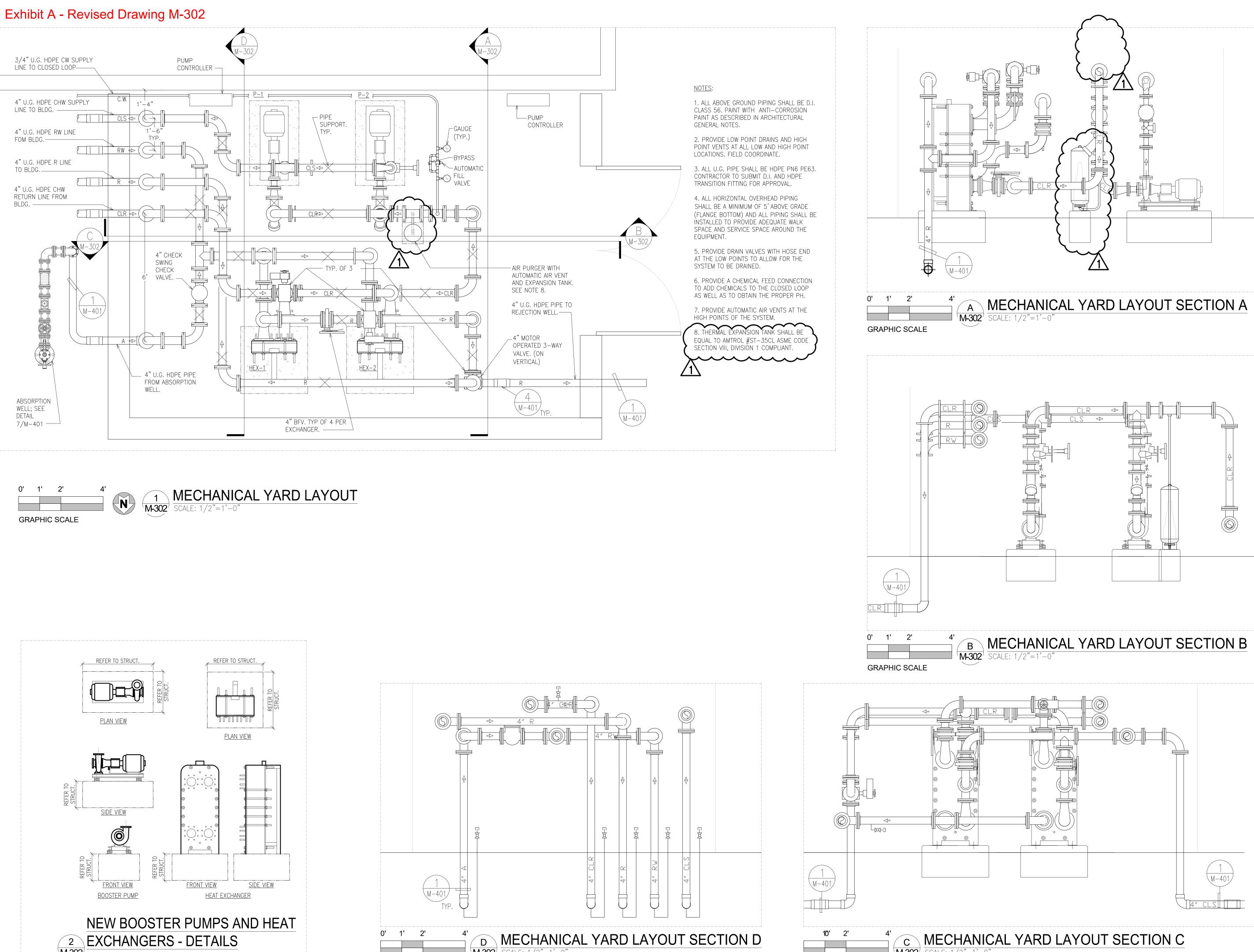
1 LOBBY SECTION 3/8" = 1'-0"











18-035 Geothermal Cooling Water Supply and Facility Improvements ITB

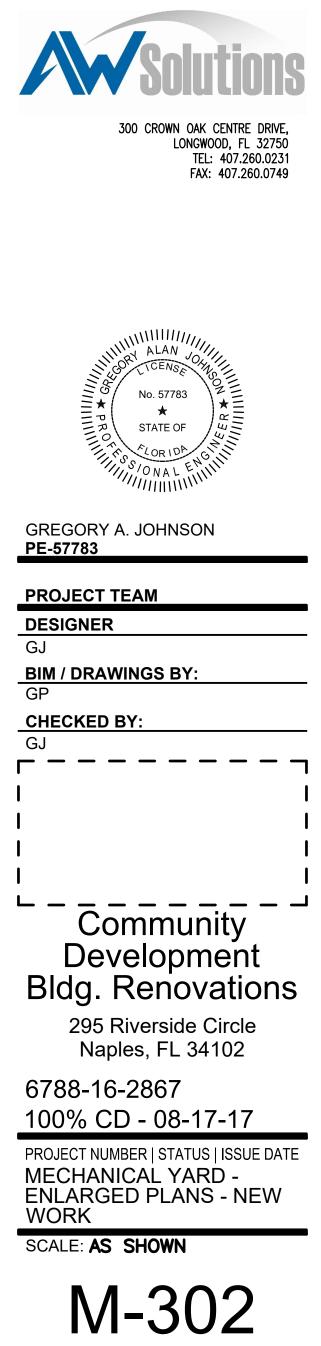


5845 NW 158th Steet Miami Lakes, FL 33014 USA P:+1(305) 826-5588 F:+1(305) 826-1799 www.amec.com

ARCHITECT OF RECORD

REVISION SCHEDULE

	DECODIDITION	
No.	DESCRIPTION	DATE
А	50% SUBMITTAL	4/18/17
В	90% Review Set	5/24/17
0	Permit Set	8/17/17
1	Rev. 1	11/7/17



SHEET NUMBER

Exhibit C - Potential Truss Fabricators

Potential fabricators and installers:

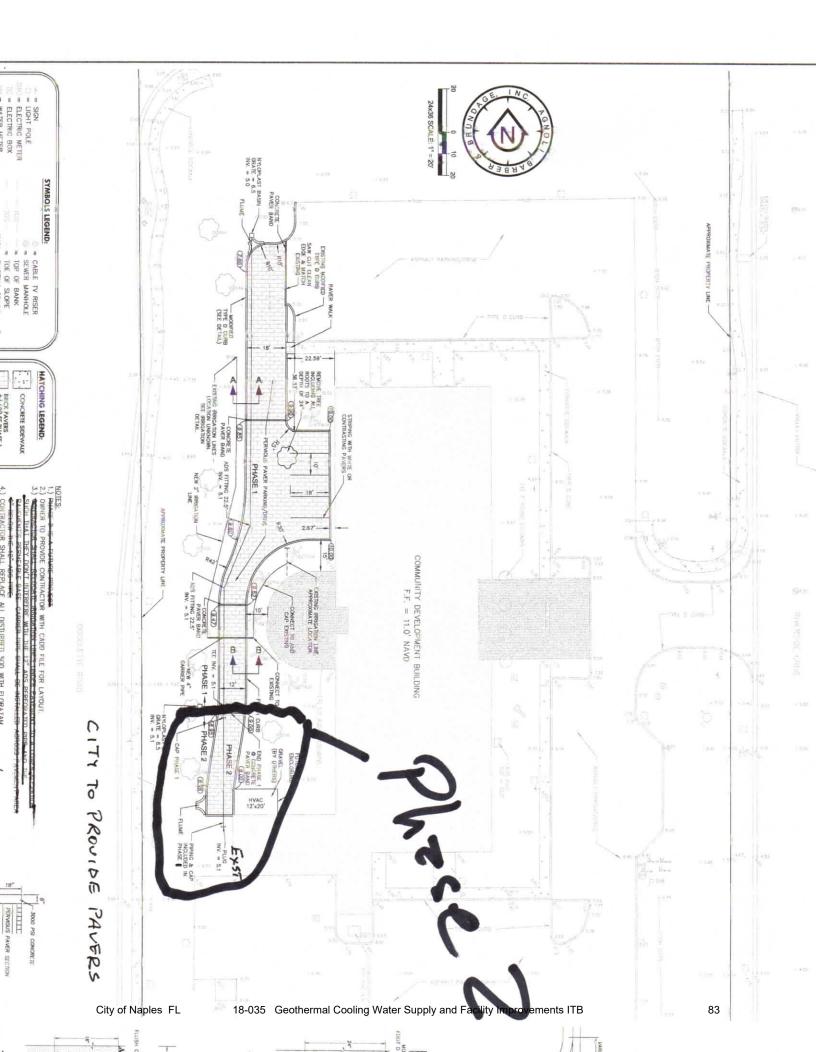
Billy Whitt FAB II INC. 2304 Bruner Lane #1 Ft. Myers, FL 33912 Phone: 239-481-1376 Fax: 239-481-1586 Info@fab2inc.com

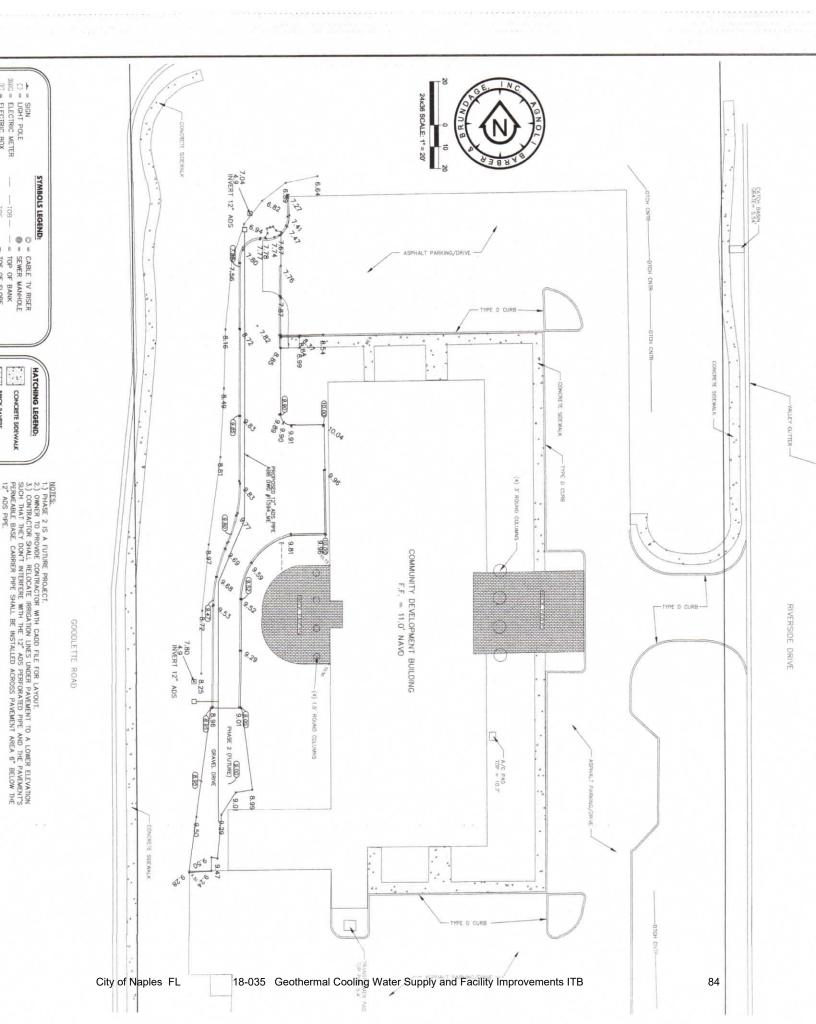
Mike Blackwell Southern Machine & Steel Inc 3945 Edison Ave Fort Myers, FL 33916 Phone; (239) 334-0724 FAX (239) 334 0724 mikeb@southernmachineandsteel.com

Robert Brown GCM Contracting Solutions, Inc. 16121 Lee Road, Suite 101 Fort Myers, FL 33912 Ph: 239-334-8800 Fax: 239-334-8300 www.gcmcontracting.com www.gulfcoastmaterials.com

Greg Valentine The Valentines 2840 Hunter Street Fort Myers, FL 33916 Voice (239) 332-0855 Fax (239) 332-0867 Mobile (239) 229-9814 gregvalentine@thevalentinesweb.com

Doing Steel Fabrication 8000 Summerlin Lakes Dr, Ste 201 Fort Myers, FL 33907 (239) 590-3983















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