

DESIGN BUILD AGREEMENT

PINELLAS COUNTY GOVERNMENT IS COMMITTED TO PROGRESSIVE PUBLIC POLICY, SUPERIOR PUBLIC SERVICE, COURTEOUS PUBLIC CONTACT, JUDICIOUS EXERCISE OF AUTHORITY AND SOUND MANAGEMENT OF PUBLIC RESOURCES, TO MEET THE NEEDS AND CONCERNS OF OUR CITIZENS TODAY AND TOMORROW.



DESIGN BUILD SERVICES AGREEMENT

RFP TITLE: Pump Station 16 Improvements - Professional Design-Build Services\Advertisement

RFP CONTRACT NO. 25-0209-RFP-DB

COUNTY PID NO. 004360A

DB FIRM: PCL Civil Constructors, Inc.

DESIGN BUILD AGREEMENT

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DESIGN BUILD AGREEMENT

**PUBLIC NOTICE/LEGAL ADVERTISEMENT FOR THE REQUEST FOR
QUALIFICATIONS**

PUBLIC ANNOUNCEMENT AS REQUIRED BY THE CONSULTANTS
COMPETITIVE NEGOTIATIONS ACT, CHAPTER 287.055 FLORIDA STATUTES

DESIGN BUILD AGREEMENT**DESIGN BUILD AGREEMENT**

PINELLAS COUNTY, FLORIDA, ("Owner") by and through THE BOARD OF COUNTY COMMISSIONERS hereby contracts with **PCL Civil Constructors, Inc.** ("Design Builder") of Tampa, Florida, a Florida corporation authorized and licensed to do business in the State of Florida, to perform all work and services in connection with the design and construction of the Pinellas County Pump Station 16 Improvements Project", as said work and services is set forth in this Agreement, the Plans and Specifications to be prepared by or for Design Builder as hereafter provided and all other Contract Documents hereafter specified (the "Work").

Owner and Design Builder, for the consideration herein set forth, agree as follows:

SECTION 1. CONTRACT DOCUMENTS

- A. The Contract Documents consist of this Agreement, the Design Criteria Package, the Exhibits described in Section 6 hereof, the Public Notice/Legal Advertisement, and any duly executed and issued addenda, Change Orders, Work Directive Changes, Field Orders and amendments relating thereto. Further, the term Contract Documents shall include all plans and specifications for the construction of the Project ("Construction Documents") to be prepared by or for Design Builder, but only after said Construction Documents have been completed and approved in writing by Owner. All of the foregoing Contract Documents are incorporated by reference and made a part of this Agreement (all of said documents including the Agreement sometimes being referred to herein as the "Contract Documents" and sometimes as the "Agreement" and sometimes as the "Contract"). A copy of the Contract Documents shall be maintained by Design Builder at the Project site at all times during the performance of the Work.
- B. Design Builder shall furnish Owner one (1) sealed copy, one (1) reproducible set, and one (1) CD of the Contract Documents. All copies of the Construction Documents required by Design Builder for execution of the Work shall be made by Design Builder at Design Builder's sole cost and expense. Upon the completion or termination of this Agreement, as directed by Owner, Design Builder shall deliver to Owner copies or originals, as required by the Owner, of all records, documents, drawings, notes, tracings, plans, Auto CAD files, specifications, maps, evaluations, reports and other technical data, other than working papers, prepared or developed by or for Design Builder under this Agreement ("Project Documents"). Design Builder shall be solely responsible for all costs associated with delivering to Owner the Project Documents. Design Builder, at its own expense, may retain copies of the Project Documents for its files and internal use. Notwithstanding anything in this Agreement to the contrary and without requiring Owner to pay any additional fees, Design Builder hereby grants Owner a nonexclusive, irrevocable license in all of the Project Documents for Owner's use on this Project. Design Builder warrants to Owner that it has full right and authority to grant this license to Owner. Further, Design Builder consents to Owner's use of the Project Documents to complete the Project following Design Builder's termination for any reason or to perform reconstruction, additions to or remodeling or renovations of the Project.
- C. Nothing contained in the Contract Documents shall create a contractual relationship between Owner and any third party; however, it is agreed that Owner is an intended third-party beneficiary of all contracts for design and engineering services, all subcontracts, purchase orders and other agreements relating to the Project between Design Builder and third parties. Design Builder shall incorporate the obligations of this Contract into its respective consultant agreements, subcontracts, supply agreements and purchase orders.

DESIGN BUILD AGREEMENT**SECTION 2. SCOPE OF WORK**

The scope of the Work to be performed by Design Builder herein includes the design and construction as set out and described in the Contract Documents, including but not limited to all labor, services, materials and equipment as may be required to complete the Work in compliance with the Contract Documents.

This Project consists of the design and construction of Pump Station 16 Improvements. The Pump Station 16 Improvements will be located on County-owned property at 10548 Park Blvd in, Seminole, FL.

The Project consists of two phases, referred to herein as Phase 1 and Phase 2. Phase 1, described more specifically in the attached Exhibit O, will include the following sub-phases: Program Verification, Schematic Design, Design Development, preparation of 60% complete Construction Documents, and development of the Lump Sum Price proposal. Phase 2, described more specifically in the attached Exhibit P, if authorized, will include the preparation of 100% Complete Construction Documents, completion of the Building Permit Phase, and the construction of the Project. Identified within Exhibit S are key personnel of the Design Builder's subconsultants. Design Builder shall require all subconsultants to agree that any such key personnel who are assigned to the Project shall not be removed without Owner's prior written approval, and if so removed must be immediately replaced with a person acceptable to Owner.

DESIGN BUILD AGREEMENT**SECTION 3. CONTRACT AMOUNT**

In consideration of the faithful performance by Design Builder of the covenants in this Agreement to the full satisfaction and acceptance of Owner, Owner agrees to pay, or cause to be paid, to Design Builder the following Phase 1 Fee and Lump Sum Price amounts (collectively herein "Contract Amount"), in accordance with the terms of this Agreement:

- A. **Phase 1** - For all Phase 1 Services, including, but not limited to, causing the preparation of the 60% complete Construction Documents, providing value engineering services, reviewing Construction Documents for constructability, assisting and meeting with the Owner during the various design sub phases, and preparing cost estimates and schedules, Design Builder shall receive the fixed amount of **\$2,298,231.50** ("Phase 1 Fee") as the total lump sum compensation for all Phase 1 Services. Said lump sum amount shall be paid in accordance with the Phase 1 Compensation Schedule attached hereto as Exhibit Q.
- B. **Phase 2** - With respect to Phase 2 Services to be provided by Design Builder hereunder, Owner shall pay Design Builder the fixed lump sum amount ("Lump Sum Price") to be established in the Lump Sum Contract Price Amendment to the Agreement (the "Lump Sum Amendment"). Design Builder agrees to provide Owner with the Lump Sum Price proposal within forty-five (45) days after the Construction Drawings are at 60% Completion. The Lump Sum Price proposal shall be based upon the previous cost estimates provided by Design Builder as required hereunder. Further, the Lump Sum Price proposal shall be broken down into the categories and level of detail required by Owner. Design Builder agrees that all of its books, records and files, with respect to its development of the Lump Sum Amendment proposal, shall be open to Owner for review, examination and copying. The Lump Sum Price proposal shall include general condition expenses specified in the Lump Sum Amendment, and a profit markup not to exceed 7.75%. The Lump Sum Price shall be mutually agreed upon by Owner and Design Builder and shall be set forth in the Lump Sum Amendment. The form for the Lump Sum Amendment is attached hereto as Exhibit N. Design Builder guarantees that in no event shall the Design Builder's total compensation exceed the Lump Sum Price, as the Lump Sum Price may be adjusted pursuant to the terms herein for Change Orders and Construction Change Directives. In the event Design Builder and Owner fail to reach an agreement on the Lump Sum Amendment, Owner may elect to terminate this Contract. In the event of any such termination, Design Builder shall be entitled to receive that portion of the Contract Amount attributable to the Phase 1 Services earned through the date of termination plus that portion of any earned compensation associated with any Phase 2 Services provided, to the extent such services were expressly approved in advance and in writing by Owner; but Design Builder shall not be entitled to any further or additional compensation from Owner, including but not limited to damages or lost profits on portions of the Work not approved or performed.

DESIGN BUILD AGREEMENT**SECTION 4. BONDS**

- A. Concurrent with its execution of the Lump Sum Amendment, Design Builder shall provide Performance and Payment Bonds, in the form prescribed in Exhibit A, in the amount of 100% of the Lump Sum Price, the costs of which are to be paid by Design Builder. The Performance and Payment Bonds shall be underwritten by a surety authorized to do business in the State of Florida and otherwise acceptable to Owner; provided, however, the surety shall meet the requirements of the Department of the Treasury Fiscal Service, "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsurance Companies" circular. This circular may be accessed via the web at www.fms.treas.gov/c570/c570.html. Should the Contract Amount be less than \$500,000, the requirements of Section 287.0935, F.S. shall govern the rating and classification of the surety.
- B. If the surety for any bond furnished by Design Builder is declared bankrupt, becomes insolvent, its right to do business is terminated in the State of Florida, or it ceases to meet the requirements imposed by the Contract Documents, the Design Builder shall, within five (5) calendar days thereafter, substitute at its cost and expense another bond and surety, both of which shall be subject to the Owner's approval.
- C. At the time Design Builder executes this Agreement, Design Builder shall deliver to Owner proof, reasonably acceptable to Owner, of Design Builder's ability to deliver the Performance and Payment bonds required hereunder.

DESIGN BUILD AGREEMENT**SECTION 5. CONTRACT TIME AND LIQUIDATED DAMAGES**

- A. Time of Performance. Phase 1 Services performed pursuant to this contract shall remain in effect for Four Hundred and Fifty (450) consecutive calendar days from the commencement date on the Notice to Proceed. This Agreement shall become effective on the date of execution of the Agreement. Time is of the essence in the performance of the Work under this Agreement. The "Phase 1 Commencement Date" shall be established in the written Notice to Proceed to be issued by the Project Manager, as hereinafter defined. Design Builder shall commence the Phase 1 Services portion of the Work within five (5) calendar days from the Phase 1 Commencement Date. Any Work performed by Design Builder prior to the Phase 1 Commencement Date shall be at the sole risk of Design Builder. The "Phase 2 Commencement Date" shall be established in the Lump Sum Amendment, except to the extent otherwise agreed to in writing by Owner. Design Builder shall commence the Phase 2 Services portion of the Work within five (5) calendar days after the Phase 2 Commencement Date and mobilization on-site must be within sixty (60) days of the Phase 2 Commencement Date. No portion of the Work, with respect to the Phase 2 Services to be provided hereunder shall be performed prior to the Phase 2 Commencement Date, unless expressly approved in advance by Owner in writing. The total period of time beginning with the Phase 2 Commencement Date and ending on the date of Substantial Completion of the Work is referred to hereafter as the "Contract Time". The Contract Time is further discussed in Paragraph B below.
- B. Because the Work is to be completed in two phases (i.e. Phase 1 and Phase 2), the timely completion of Phase 1 is critical to the timely completion of Phase 2 and, therefore, completion of the entire Project. Accordingly, Design Builder agrees to provide the Phase 1 Services in accordance with Exhibit L. With respect to the Phase 2 Services, the Lump Sum Amendment shall include the date that portion of the Work associated with the Phase 2 Services must be substantially completed by Design Builder. That Substantial Completion date shall be established in terms of calendar days after the Phase 2 Commencement Date. In the event Design Builder and Owner fail to reach an agreement on the Contract Time and the Substantial Completion date, Owner may elect to terminate this Contract. In the event of any such termination, Design Builder shall be entitled to receive that portion of the Contract Amount attributable to the Phase 1 Services earned to the date of termination plus that portion of any earned compensation associated with any Phase 2 Services provided, to the extent such services were expressly approved in advance and in writing by Owner; but Design Builder shall not be entitled to any further or additional compensation from Owner, including but not limited to damages or lost profits on portions of the Work not approved or performed. Substantial Completion of the Work shall be achieved when the Work has been completed to the point where Owner can occupy or utilize the Work for its intended purpose. The entire Work shall be fully completed and ready for final acceptance by Owner within sixty (60) calendar days after the Substantial Completion Date. Final Completion shall occur when the Agreement is completed in its entirety, is accepted by the Owner as complete and is so stated by the Owner as completed. As used herein and throughout the Contract Documents, the phrase "Project Manager" refers to the Owner's duly authorized representative and shall mean the Division Administrator or Department Director, as applicable, acting directly or through duly authorized representatives.
- C. Liquidated Damages in General. Owner and Design Builder recognize that, since time is of the essence for this Agreement, Owner will suffer financial loss if the Work associated with the Phase 2 is not substantially completed within the Contract Time specified in the Lump Sum Amendment, as said time may be adjusted as provided for herein. In such event, the total amount of Owner's damages, will be difficult, if not impossible, to definitely ascertain and quantify. Should Design Builder fail to achieve Substantial Completion within the number of calendar days established herein, Owner shall be entitled to assess, as liquidated damages, but not as a penalty, the Liquidated Damages amount established in the Lump Sum Amendment, for each calendar day thereafter until Substantial Completion is achieved. Further, after Substantial Completion has been achieved, but Design Builder fails thereafter to achieve Final Completion within the required time period, Owner shall be entitled to assess, and Design Builder shall be liable for all actual damages incurred by Owner as a result of such failure. The Project shall be deemed to be substantially completed on the date the Design Professional issues a Certificate of Substantial Completion (after a Certificate of Occupancy has been issued by the local building official) pursuant to the terms hereof. Design Builder hereby expressly waives and relinquishes any right which it may have to seek to characterize the above noted liquidated damages as a penalty, which the parties agree represents a fair and reasonable estimate of the Owner's actual damages at the time of contracting if Design Builder fails to Substantially or Finally Complete the Work within the required time periods.
- D. Computation of Time Periods. When any period of time is referenced by days herein, it shall be computed to exclude the first day and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day shall be omitted from the computation, and the last day shall become the next succeeding day which is not a Saturday, Sunday or legal holiday.

DESIGN BUILD AGREEMENT

- E. Determination of Number of Days of Default. For all contracts, regardless of whether the Contract Time is stipulated in calendar days or working days, the Owner will count default days in calendar days.
- F. Right of Collection. The Owner has the right to apply any amounts due Design Builder under this Agreement or any other agreement between Owner and Design Builder, as payment on such liquidated damages due under this Agreement in Owner's sole discretion. Notwithstanding anything herein to the contrary, Owner retains its right to liquidated damages due under this Agreement even if Design Builder, at Owner's election and in its sole discretion, is allowed to continue and to finish the Work, or any part of it, after the expiration of the Contract Time including granted time extensions.
- G. Completion of Work by Owner. In the event Design Builder defaults on any of its obligations under the Agreement and Owner elects to complete the Work, in whole or in part, through another Design Builder or its own forces, the Design Builder and its surety shall continue to be liable for the liquidated damages under the Agreement until Owner achieves Substantial and Final Completion of the Work. Owner will not charge liquidated damages for any delay in achieving Substantial or Final Completion as a result of any unreasonable action or delay on the part of the Owner.
- H. Final Acceptance by Owner. The Owner shall consider the Agreement complete when the Design Builder has completed in its entirety all of the Work and the Owner has accepted all of the Work and notified the Design Builder in writing that the Work is complete. Once the Owner has approved and accepted the Work, Design Builder shall be entitled to final payment in accordance with the terms of the Contract Documents.
- I. Recovery of Damages Suffered by Third Parties. Design Builder shall be liable to Owner to the extent Owner incurs damages from a third party as a result of Design Builder's failure to fulfill all of its obligations under the Contract Documents. Owner's recovery of any delay related damages under this Agreement through the liquidated damages does not preclude Owner from recovering from Design Builder any other non-delay related damages that may be owed to it arising out of or relating to this Agreement.

DESIGN BUILD AGREEMENT**SECTION 6. EXHIBITS INCORPORATED**

The following documents are expressly agreed to be incorporated by reference and made a part of this Agreement.

Exhibit A:	Bonds
Exhibit B:	Insurance Requirements
Exhibit C:	Release and Affidavit Form
Exhibit D:	Form of Contract Application for Payment
Exhibit E:	Change Order
Exhibit F:	Design Builder Certificate of Substantial Completion
Exhibit G:	Final Payment Checklist
Exhibit H:	General Terms and Conditions
Exhibit I:	Supplemental Terms and Conditions
Exhibit J:	Design Criteria Package
Exhibit K:	Permits
Exhibit L:	Project Design Milestones and Deliverables
Exhibit M:	Design Professional, Engineers, & Contractor
Exhibit N:	Lump Sum Amendment Agreement Form
Exhibit O:	Scope of Phase 1 Services
Exhibit P:	Scope of Phase 2 Services
Exhibit Q:	Phase 1 Compensation Schedule
Exhibit R:	Truth-in-Negotiation Certificate
Exhibit S:	Design Builder's Key Personnel
Exhibit T:	Stored Materials Record
Exhibit U:	General Conditions Categories

DESIGN BUILD AGREEMENT

SECTION 7. NOTICES

- A. All notices required or made pursuant to this Agreement by the Design Builder to the Owner shall be deemed duly served if delivered by U.S. Mail or private delivery service, addressed to the following:

If to the Owner:

Jorge Atoche
Project Manager, Utilities
14 S. Ft. Harrison Building
Clearwater, Florida 33756

With a copy to:

Merry Celeste
Director of Purchasing
400 S. Ft. Harrison Ave.,
Clearwater, FL 33756

If to the Design Builder:

Ray Torrejon – Area Manager
PCL Civil Constructors, Inc.
1 N. Dale Mabry Hwy, Suite 600
Tampa, FL 33609

With a copy to:

- B. Either party may change its above noted address by giving 10 days written notice to the other party in accordance with the requirements of this Section.

DESIGN BUILD AGREEMENT**SECTION 8. MODIFICATION**

No modification or change to the Agreement shall be valid or binding upon the parties unless in writing and executed by the party or parties intended to be bound by it.

SECTION 9. E-VERIFY

The Contractor and their Subcontractor(s) must register with and use the E-verify system in accordance with Florida Statute 448.095. A Contractor and Subcontractor may not enter into a contract with the County unless each party registers with and uses the E-verify system.

If a Contractor enters a contract with a Subcontractor, the Subcontractor must provide the Contractor with an affidavit stating that the Subcontractor does not employ, contract with, or subcontract with unauthorized aliens. The Contractor must maintain a copy of the affidavit for the duration of the contract.

If the County, Contractor, or Subcontractor has a good faith belief that a person or entity with which it is contracting has knowingly violated Florida Statute 448.09(1) they shall immediately terminate the contract with the person or entity.

If the County has a good faith belief that a Subcontractor knowingly violated this provision, but the Contractor otherwise complied with this provision, the County will notify the Contractor and order that the Contractor immediately terminate the contract with the Subcontractor.

A contract terminated under the provisions of this section is not a breach of contract and may not be considered such. Any contract termination under the provisions of this section may be challenged to Section 448.095(2)(d), Florida Statute. Contractor acknowledges upon termination of this agreement by the County for violation of this section by Contractor, Contractor may not be awarded a public contract for at least one (1) year. Contractor acknowledges that Contractor is liable for any additional costs incurred by the County as a result of termination of any contract for a violation of this section.

Contractor or Subcontractor shall insert in any subcontracts the clauses set forth in this section, requiring the subcontracts to include these clauses in any lower tier subcontracts. Contractor shall be responsible for compliance by any Subcontractor or Lower Tier Subcontractor with the clause set forth in this section.

SECTION 10. SUCCESSORS AND ASSIGNS

Subject to other provisions hereof, the Agreement shall be binding upon and shall inure to the benefit of the successors and assigns of the parties to the Agreement.

SECTION 11. GOVERNING LAW AND VENUE

The Agreement shall be interpreted under, and its performance governed by the laws of the State of Florida. In the event of any dispute by and between the parties, the exclusive jurisdiction and venue for any such proceeding shall be Pinellas County, Florida.

SECTION 12. NO WAIVER

The failure of the Owner to enforce at any time or for any period of time any one or more of the provisions of the Agreement shall not be construed to be and shall not be a waiver of any such provision or provisions or of its right thereafter to enforce each and every such provision.

SECTION 13. ENTIRETY

Each of the parties hereto agrees and represents that the Agreement comprises the full and entire agreement between the parties affecting the Work contemplated, and no other agreement or understanding of any nature concerning the same has been entered into or will be recognized, and that all negotiations, acts, work performed, or payments made prior to the execution hereof shall be deemed merged in, integrated and superseded by the Agreement.

SECTION 14. SEVERABILITY

Should any provision of the Agreement be determined by a court to be unenforceable, such a determination shall not affect the validity or enforceability of any other section or part thereof.

DESIGN BUILD AGREEMENT**SECTION 15. CHANGE ORDER AUTHORIZATION**

A price quote for a Change Order will not be considered valid and will be rejected unless it is received in response to a written County request, and the County will not make any such request until the County and the Contractor have first established agreement about the contents and administrative requirements of the proposed Change Order, which will include at a minimum details about the proposed modifications to the scope of work, available budget and appropriations applicable to the change, and all other requirements established by the County for proceeding with the Change Order

SECTION 16. CONSTRUCTION

Any doubtful or ambiguous language contained in this Agreement shall not be construed against the party who physically prepared this Agreement. The rule sometimes referred to as "fortius contra proferentum" (pursuant to which ambiguities in a contractual term which appears on its face to have been inserted for the benefit of one of the parties shall be construed against the benefited party) shall not be applied to the construction of this Agreement.

SECTION 17. ORDER OF PRECEDENCE

In the event of any conflict between or among the terms of any of the Contract Documents, the following order of precedence shall be followed:

- Change Orders
- Exhibit N, Lump Sum Amendment
- General Terms and Conditions except the terms of any Supplemental Conditions shall take precedence over the Construction Agreement and the General Terms and Conditions.
- The Specifications
- Large Scale Details and Schedules
- The Drawings

To the extent any conflict in the terms of the Contract Documents cannot be resolved by application of the Order of Precedence, Supplemental Conditions, if any, shall take precedence or the conflict shall be resolved by imposing the more strict or costly obligation under the Contract Documents upon the Design Builder at Owner's discretion.

DESIGN BUILD AGREEMENT

IN WITNESS WHEREOF, the parties have executed this Agreement on the date(s) indicated below.

DESIGN BUILDER

By: 

Print Name: Erick Wahlstrom

Title: Manager, Finance & Commercial Risk

Date: 6/10/2026

PINELLAS COUNTY, by and through its Board of
County Commissioners

By: _____

Chairman

Date: _____

ATTEST:

Ken Burke, Clerk of the Circuit Court

By: _____

Deputy Clerk

Date: _____

APPROVAL AS TO FORM:

By: _____

Office of the County Attorney

APPROVED AS TO FORM

By: Miles Belknap
Office of the County Attorney

EXHIBIT A

EXHIBIT A - BONDS

The exact language in Section I must be used when submitting bonds

BOND NO. _____

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That _____, as Principal,

And _____, as Surety,

Located at:

(Business Address)

(Phone Number)

Are held and firmly bound unto Pinellas County, Florida, as Obligee in the sum of

_____ DOLLARS \$_____ For the payment whereof we bind

ourselves, our heirs, executors, personal representatives, successors and assigns, jointly and severally.

WHEREAS, Principal has entered into an Agreement with Obligee for Bid Title: **Pump Station 16 Improvements - Professional Design-Build Services**(PID # **004360A**), Bid No: **25-0209-RFP-DB** in accordance with Plans and Specifications, which Agreement is incorporated by reference and made a part hereof, and is referred to as the Agreement.

THE CONDITIONS OF THIS BOND is that if Principal:

1. Performs the Agreement at the times and in the manner prescribed in the Agreement; and
2. Pays Obligee any and all losses, damages, costs and attorneys' fees, including appellate proceedings, that Obligee sustains because of any default by Principal under the Agreement, including, but not limited to, all delay damages, whether liquidated or actual, incurred by Obligee; and
3. Performs the guarantee of all Work and materials furnished under the Agreement for the time specified in the Agreement; then this bond is void; otherwise it remains in full force.

Any changes in or under the Agreement and compliance or noncompliance with any formalities connected with the Agreement or the changes do not affect Surety's obligations under this bond.

The Surety, for value received, hereby stipulates and agrees that no changes, extensions of time, alterations or additions to the terms of the Agreement or other Work to be performed hereunder, or the Specifications referred to therein shall in anyway affect its obligation under this bond, and it does hereby waive notice of any such changes, extensions of time, alterations or additions to the terms of the Agreement or to Work or to the Specifications.

This instrument shall be construed in all respects as a statutory bond. It is expressly understood the time provisions and statute of limitation under Section 255.05 Florida Statutes, shall apply to this bond.

EXHIBIT A**BOND NO.** _____

By execution of this bond, the Surety acknowledges that is has read the Surety qualifications and obligations imposed by the construction Agreement and hereby satisfies those conditions.

IN WITNESS WHEREOF, the above bound parties have executed this instrument this _____ day of _____

_____, 20_____, the name of each party being affixed and these presents duly signed

by its undersigned representative, pursuant to authority of its governing body.

PRINCIPAL:

(Authorized Signature)

(Print Name)

(Title)

(Business Address)

STATE OF FLORIDA

COUNTY OF _____

The foregoing instrument was acknowledged before me this day of _____

By _____

of _____ a _____

Corporation, on behalf of the Corporation. He/She is personally known to me or has produced Florida Driver's License as identification and who did (did not) take an oath.

Notary: _____

Print Name: _____

Commission Number: _____

My Commission Expires: _____

EXHIBIT A

BOND NO. _____

SURETY:

(Print)

(Business Address)

(Signature As Attorney In Fact)

(Attach Power of Attorney)

(Print Name)

(Title)

(Business Address)

(Telephone Number)

Witness as to Attorney in Fact

STATE OF FLORIDA

COUNTY OF _____

The foregoing instrument was acknowledged before me this day of _____

By _____

of _____ a _____

Corporation, on behalf of the Corporation. He/She is personally known to me or has produced Florida Driver's License as identification and who did (did not) take an oath.

Notary: _____

Print Name: _____

Commission Number: _____

My Commission Expires: _____

EXHIBIT A

BOND NO. _____

PAYMENT BOND

BY THIS BOND, We _____

(hereinafter called the ("Principal" and _____

(hereinafter called the ("Surety"), located at _____

A surety insurer chartered and existing under the laws of the state of _____

and authorized to do Business in the State of Florida, are held and firmly bound unto Pinellas County

(hereinafter called the "County") in the sum of _____

_____ DOLLARS \$ _____

For payment of which we bond ourselves, our heirs, our personal representatives, our successors and our assignees, jointly and severally.

WHEREAS, Principal and County have reached a mutual agreement (hereinafter referred to as the "Agreement") for Bid Title: **Pump Station 16 Improvements - Professional Design-Build Services** (PID # **004360A**), Bid No: **25-0209-RFP-DB** said Agreement being made a part of this Bond by this reference.

NOW, THEREFORE, THE CONDITION OF THIS BOND IS THAT IF THE PRINCIPAL:

1. Shall promptly make payments to all claimants as defined in section 255.05(l), Florida Statutes, Supplying the Principal with labor, materials or supplies, as used directly or indirectly by the Principal in the prosecution of the Work provided for in the Agreement and;
2. Shall pay the County for all losses, damages, expenses, costs and attorneys' fees, including appellate proceedings, that the County sustains because of a default by the Principal in contravention to the Agreement in regard to payment for such labor, materials, or supplies furnished to the Principal; then this bond is void; otherwise this Bond remains in full force and effect.

BE IT FURTHER KNOWN:

1. Any changes in or under the Agreement and compliance or noncompliance with any formalities Connected with the said Agreement or alterations, which may be made in the terms of said Agreement, or in the Work to be done under it, or the giving by the County of any extension of time for the performance of the said Agreement, or any other forbearance on the part of the County or Principal to the other, shall not in any way release the Principal and the Surety, or either of them, their heirs, personal representatives, successors or assigns from liability hereunder, notice to the Surety of any such changes, alterations, extensions or forbearance being hereby waived.
2. Certain claimants seeking the protection of this Bond must timely comply with the strict Requirements set forth in Section 255.05, Florida Statutes, and as otherwise provided by law.
3. The Provisions of this bond are subject to the limitation of Section 255.05(2). The Design Builder is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Design Builder shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Design Builder shall designate in writing a representative who shall have express authority to bind the Design Builder with respect to all matters under this Contract. The term "Design Builder" means the Design Builder or the Design Builder authorized representative.

EXHIBIT A**BOND NO.** _____

By execution of this bond, the Surety acknowledges that it has read the Surety qualifications and obligations imposed by the construction Agreement and hereby satisfies those conditions.

THIS BOND DATE THE _____ DAY OF _____, 20_____

(the date of issue by the Surety or by the Surety's agent and the date of such agent's power-or-attorney)

PRINCIPAL:

(Authorized Signature)

(Print Name)

(Title)

(Business Address)

STATE OF FLORIDA

COUNTY OF _____

The foregoing instrument was acknowledged before me this day of _____

By _____

of _____ a _____

Corporation, on behalf of the Corporation. He/She is personally known to me or has produced Florida Driver's License as identification and who did (did not) take an oath.

Notary: _____

Print Name: _____

Commission Number: _____

My Commission Expires: _____

EXHIBIT A

BOND NO. _____

SURETY:

(Print)

(Business Address)

(Signature As Attorney In Fact)

(Attach Power of Attorney)

(Print Name)

(Title)

(Business Address)

(Telephone Number)

STATE OF FLORIDA

COUNTY OF _____

The foregoing instrument was acknowledged before me this day of _____

By _____

of _____ a _____

Corporation, on behalf of the Corporation. He/She is personally known to me or has produced Florida Driver's License as identification and who did (did not) take an oath.

Notary: _____

Print Name: _____

Commission Number: _____

My Commission Expires: _____

EXHIBIT B

EXHIBIT B - INSURANCE REQUIREMENTS

1. INSURANCE:

A. PHASE 1 INSURANCE REQUIREMENTS - DESIGN SERVICES

The Design Builder must provide a certificate of insurance and endorsement in accordance with the insurance requirements listed below, prior to recommendation for award. The Design Builder shall obtain and maintain, and require any subcontractor to obtain and maintain, at all times during its performance of the Agreement in Phase 1 insurance of the types and in the amounts set forth. For projects with a Completed Operations exposure, Design Builder shall maintain coverage and provide evidence of insurance for 2 years beyond final acceptance. All insurance policies shall be from responsible companies duly authorized to do business in the State of Florida and have an AM Best rating of

A. VIII or better.

- a) Submittals should include the Design Builder's current Certificate(s) of Insurance in accordance with the insurance requirements listed below. If Design Builder does not currently meet insurance requirements, Design Builder shall also include verification from their broker or agent that any required insurance not provided at that time of submittal will be in place prior to the award of contract.

Upon selection of the Design Builder for award, the selected Design Builder shall email certificate that is compliant with the insurance requirements. If the certificate received is compliant certificate no further action may be necessary. The Certificate(s) of Insurance shall be signed by authorized representatives of the insurance companies shown on the Certificate(s). **The Certificate holder section shall indicate Pinellas County, a Political Subdivision of the State of Florida, 400 S Fort Harrison Ave, Clearwater, FL 33756. Pinellas County, a Political Subdivision of the State of Florida shall be named as an Additional Insured for General Liability. A Waiver of Subrogation for Workers Compensation shall be provided if Workers Compensation coverage is a requirement.**

Approval by the County of any Certificate(s) of Insurance does not constitute verification by the County that the insurance requirements have been satisfied or that the insurance policy shown on the Certificate(s) of Insurance is in compliance with the requirements of the Agreement. County reserves the right to require a certified copy of the entire insurance policy, including endorsement(s), at any time during the RFP and/or contract period.

- b) If any insurance provided pursuant to the Agreement expires or cancels prior to the completion of the work you will be notified by CTrax.. Upon notification, renewal certificate(s) of Insurance and endorsement(s) should be furnished to Pinellas County Risk Management at InsuranceCerts@pinellascounty.org and to CTrax c/o JDI Data at PinellasSupport@jdidata.com by the Design Builder or their agent prior to the expiration date.
 - 1) The Design Builder shall also notify the County within seventy-two (72) hours after receipt, of any notices of expiration, cancellation, nonrenewal or adverse material change in coverage received by said Design Builder from its insurer. Notice shall be given by email to Pinellas County Risk Management at InsuranceCerts@pinellascounty.org. Nothing contained herein shall absolve Design Builder of this requirement to provide notice.
 - 2) Should the Design Builder, at any time, not maintain the insurance coverages required herein, the County may terminate the Agreement.
- c) If subcontracting is allowed under Phase 1 of RFP, the Prime Design Builder shall obtain and maintain, at all times during its performance of the Agreement, insurance of the types and in the amounts set forth; and require any subcontractors to obtain and maintain, at all times during its performance of the Agreement, insurance limits as it may apply to the portion of the Work performed by the subcontractor; but in no event will the insurance limits be less than \$500,000 for Workers' Compensation/Employers' Liability, and \$1,000,000 for General Liability and Auto Liability if required below.

All subcontracts between the Design Builder and its subcontractor shall be in writing and are subject to the County's prior written approval. Further, all subcontracts shall;

- 1) Require each subcontractor to be bound to the Design Builder to the same extent the Design Builder is bound to the County by the terms of the Contract Documents, as those terms may apply to the portion of the Work to be performed by the subcontractor;
- 2) Provide for the assignment of the subcontracts from the Design Builder to the County at the election of Owner upon termination of the Contract;

EXHIBIT B

- 3) Provide that County will be an additional indemnified party of the subcontract;
 - 4) Provide that the County will be an additional insured on all insurance policies required to be provided by the subcontractor except workers compensation and professional liability;
 - 5) Provide a waiver of subrogation in favor of the County and other insurance terms and/or conditions as outlined below;
 - 6) Assign all warranties directly to the County;
 - 7) Identify the County as an intended third-party beneficiary of the subcontract. The Design Builder shall make available to each proposed subcontractor, prior to the execution of the subcontract, copies of the Contract Documents to which the subcontractor will be bound by this Section C and identify to the subcontractor any terms and conditions of the proposed subcontract which may be at variance with the Contract Documents.
- d) Each insurance policy and/or certificate shall include the following terms and/or conditions:
- 1) The Named Insured on the Certificate of Insurance and insurance policy must match the entity's name that responded to the solicitation and/or is signing the agreement with the County.
 - 2) Companies issuing the insurance policy, or policies, shall have no recourse against County for payment of premiums or assessments for any deductibles which all are at the sole responsibility and risk of Design Builder.
 - 3) The term "County" or "Pinellas County" shall include all Authorities, Boards, Bureaus, Commissions, Divisions, Departments and Constitutional offices of County and individual members, employees thereof in their official capacities, and/or while acting on behalf of Pinellas County.
 - 4) All policies shall be written on a primary, non-contributory basis.
- e) The minimum insurance requirements and limits for this Agreement, which shall remain in effect throughout its duration and for two (2) years beyond final acceptance for projects with a Completed Operations exposure, are as follows:

- 1) **Workers' Compensation Insurance** Worker's Compensation Insurance is required if required pursuant to Florida law. If, pursuant to Florida law, Worker's Compensation Insurance is required, employer's liability, also known as Worker's Compensation Part B, is also required in the amounts set forth herein.

Limits

Employers' Liability Limits	Florida Statutory
Per Employee	\$ 500,000
Per Employee Disease	\$ 500,000
Policy Limit Disease	\$ 500,000

If Vendor/Contractor is not required by Florida law, to carry Workers Compensation Insurance in order to perform the requirements of this Agreement, County Waiver Form for workers compensation must be executed, submitted, and accepted by Risk Management. Failure to obtain required Worker's Compensation Insurance without submitting and receiving a waiver from Risk Management constitutes a material breach of this Agreement.

- 2) **Commercial General Liability Insurance** including, but not limited to, Independent Vendor, Contractual Liability Premises/Operations, Products/Completed Operations, and Personal Injury.

Limits

Combined Single Limit Per Occurrence	\$ 1,000,000
Products/Completed Operations Aggregate	\$ 2,000,000
Personal Injury and Advertising Injury	\$ 1,000,000
General Aggregate	\$ 2,000,000

EXHIBIT B

- 3) **Professional Liability (Errors and Omissions) Insurance** with at least minimum limits as follows. If “claims made” coverage is provided, “tail coverage” extending three (3) years beyond completion and acceptance of the project with proof of “tail coverage” to be submitted with the invoice for final payment. In lieu of “tail coverage”, Proposer may submit annually to the County, for a three (3) year period, a current certificate of insurance providing “claims made” insurance with prior acts coverage in force with a retroactive date no later than commencement date of this contract.

Limits

Each Occurrence or Claim	\$ 3,000,000
General Aggregate	\$ 3,000,000

For acceptance of Professional Liability coverage included within another policy required herein, a statement notifying the certificate holder must be included on the certificate of insurance and the total amount of said coverage per occurrence must be greater than or equal to the amount of Professional Liability and other coverage combined.

- 4) **Property Insurance** Vendor will be responsible for all damage to its own property, equipment and/or materials.

EXHIBIT B

B. PHASE 2 INSURANCE REQUIREMENTS - CONSTRUCTION SERVICES

The Design Builder must provide a certificate of insurance and endorsement in accordance with the insurance requirements listed below, prior to recommendation for award. The Design Builder shall obtain and maintain, and require any subcontractor to obtain and maintain, at all times during its performance of the Agreement in Phase 2 insurance of the types and in the amounts set forth. For projects with a Completed Operations exposure, Design Builder shall maintain coverage and provide evidence of insurance for 2 years beyond final acceptance. All insurance policies shall be from responsible companies duly authorized to do business in the State of Florida and have an AM Best rating of A- VIII or better.

- a) Submittals should include the Design Builder's current Certificate(s) of Insurance in accordance with the insurance requirements listed below. If Design Builder does not currently meet insurance requirements, Design Builder shall also include verification from their broker or agent that any required insurance not provided at that time of submittal will be in place prior to the award of contract.

Upon selection of the Design Builder for award, the selected Design Builder shall email certificate that is compliant with the insurance requirements. If the certificate received is compliant certificate no further action may be necessary. The Certificate(s) of Insurance shall be signed by authorized representatives of the insurance companies shown on the Certificate(s). **The Certificate holder section shall indicate Pinellas County, a Subdivision of the State of Florida, 400 S Fort Harrison Ave, Clearwater, FL 33756. Pinellas County shall be named as an Additional Insured for General Liability. A Waiver of Subrogation for Workers Compensation shall be provided if Workers Compensation coverage is a requirement.**

- b) Approval by the County of any Certificate(s) of Insurance does not constitute verification by the County that the insurance requirements have been satisfied or that the insurance policy shown on the Certificate(s) of Insurance is in compliance with the requirements of the Agreement. County reserves the right to require a certified copy of the entire insurance policy, including endorsement(s), at any time during the RFP and/or contract period.
- c) If any insurance provided pursuant to the Agreement expires or cancels prior to the completion of the work you will be notified by CTrax.. Upon notification, renewal certificate(s) of Insurance and endorsement(s) should be furnished to Pinellas County Risk Management at InsuranceCerts@pinellascounty.org and to CTrax c/o JD Data at PinellasSupport@jdidata.com by the Design Builder or their agent prior to the expiration date.
- 1) The Design Builder shall also notify the County within 72 hours after receipt, of any notices of expiration, cancellation, nonrenewal or adverse material change in coverage received by said Design Builder from its insurer. Notice shall be given by email to Pinellas County Risk Management at InsuranceCerts@pinellascounty.org. Nothing contained herein shall absolve Design Builder of this requirement to provide notice.
 - 2) Should the Design Builder, at any time, not maintain the insurance coverages required herein, the County may terminate the Agreement.
- d) If subcontracting is allowed under Phase 2 of RFP, the Prime Design Builder shall obtain and maintain, at all times during its performance of the Agreement, insurance of the types and in the amounts set forth; and require any subcontractors to obtain and maintain, at all times during its performance of the Agreement, insurance limits as it may apply to the portion of the Work performed by the subcontractor; but in no event will the insurance limits be less than \$500,000 for Workers' Compensation/Employers' Liability, and \$1,000,000 for General Liability and Auto Liability if required below.

All subcontracts between the Design Builder and its subcontractor shall be in writing and are subject to the County's prior written approval. Further, all subcontracts shall;

- 1) Require each subcontractor to be bound to the Design Builder to the same extent the Design Builder is bound to the County by the terms of the Contract Documents, as those terms may apply to the portion of the Work to be performed by the subcontractor;
- 2) Provide for the assignment of the subcontracts from the Design Builder to the County at the election of Owner upon termination of the Contract;
- 3) Provide that County will be an additional indemnified party of the subcontract;
- 4) Provide that the County will be an additional insured on all insurance policies required to be provided by the subcontractor except workers compensation and professional liability;

EXHIBIT B

- 5) Provide a waiver of subrogation in favor of the County and other insurance terms and/or conditions as outlined below;
 - 6) Assign all warranties directly to the County;
 - 7) Identify the County as an intended third-party beneficiary of the subcontract. The Design Builder shall make available to each proposed subcontractor, prior to the execution of the subcontract, copies of the Contract Documents to which the subcontractor will be bound by this Section C and identify to the subcontractor any terms and conditions of the proposed subcontract which may be at variance with the Contract Documents.
- e) Each insurance policy and/or certificate shall include the following terms and/or conditions:
- 1) The Named Insured on the Certificate of Insurance and insurance policy must match the entity's name that responded to the solicitation and/or is signing the agreement with the County.
 - 2) Companies issuing the insurance policy, or policies, shall have no recourse against County for payment of premiums or assessments for any deductibles which all are at the sole responsibility and risk of Design Builder.
 - 3) The term "County" or "Pinellas County" shall include all Authorities, Boards, Bureaus, Commissions, Divisions, Departments and Constitutional offices of County and individual members, employees thereof in their official capacities, and/or while acting on behalf of Pinellas County.
- f) The minimum insurance requirements and limits for this Agreement, which shall remain in effect throughout its duration and for two (2) years beyond final acceptance for projects with a Completed Operations exposure, are as follows:
- 1) **Workers' Compensation Insurance** Worker's Compensation Insurance is required if required pursuant to Florida law. If, pursuant to Florida law, Worker's Compensation Insurance is required, employer's liability, also known as Worker's Compensation Part B, is also required in the amounts set forth herein.

Limits

Employers' Liability Limits	Florida Statutory
Per Employee	\$ 500,000
Per Employee Disease	\$ 500,000
Policy Limit Disease	\$ 500,000

If Vendor/Contractor is not required by Florida law, to carry Workers Compensation Insurance in order to perform the requirements of this Agreement, County Waiver Form for workers compensation must be executed, submitted, and accepted by Risk Management. Failure to obtain required Worker's Compensation Insurance without submitting and receiving a waiver from Risk Management constitutes a material breach of this Agreement.

- 2) **Commercial General Liability Insurance** including, but not limited to, Independent Vendor, Contractual Liability Premises/Operations, Products/Completed Operations, and Personal Injury. No explosion, collapse, or underground damage or Boom, Lift or Crane exclusions allowed.

Limits

Combined Single Limit Per Occurrence	\$ 1,000,000
Products/Completed Operations Aggregate	\$ 2,000,000
Personal Injury and Advertising Injury	\$ 1,000,000
General Aggregate	\$ 2,000,000

- 3) **Business Automobile or Trucker's/Garage Liability Insurance** covering owned, hired, and non-owned vehicles. If the Consultant does not own any vehicles, then evidence of Hired and Non-owned coverage is sufficient. Coverage shall be on an "occurrence" basis, such insurance to include coverage for loading and unloading hazards, unless Consultant can show that this coverage exists under the Commercial General Liability policy.

EXHIBIT B

Limit

Combined Single Limit Per Accident	\$1,000,000
------------------------------------	-------------

- 4) **Excess or Umbrella Liability Insurance** excess of the primary coverage required, in paragraphs (1), (2), and (3) above. No explosion, collapse, or underground damage or Boom, Lift or Crane exclusions allowed.

Limits

Each Occurrence	\$ 4,000,000
General Aggregate	\$ 4,000,000

- 5) **Pollution Legal/Environmental Legal Liability Insurance** for pollution losses arising from all services performed to comply with this contract. Coverage shall apply to sudden and gradual pollution conditions including the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials or other irritants, contaminants or pollutants into or upon land, the atmosphere or any watercourse or body of water, which results in Bodily Injury or Property Damage. If policy is written on a Claims Made form, a retroactive date is required, and coverage must be maintained for 3 years after completion of contract or "tail coverage must be purchased. Coverage should include and be for the at least the minimum limits listed below:

- a. Bodily injury, sickness, disease, mental anguish or shock sustained by any person, including death; property damage including physical injury to or destruction of tangible property including the resulting loss of use thereof, cleanup costs, and the loss of use of tangible property that has not been physically injured or destroyed.
- b. Defense including costs, charges and expenses incurred in the investigation, adjustment or defense of claims for such compensation damages.
- c. Cost of Cleanup/Remediation.

Limits

Per Claim or Occurrence	\$ 2,000,000
General Aggregate	\$ 2,000,000

For acceptance of Pollution Legal/Environmental Legal Liability coverage included within another policy coverage required herein, a statement notifying the certificate holder must be included on the certificate of insurance and the total amount of said coverage per occurrence must be greater than or equal to the amount of Pollution Legal/Environmental Legal Liability and other coverage combined.

- 6) **Property Insurance** Vendor will be responsible for all damage to its own property, equipment and/or materials.

EXHIBIT C - RELEASE AND AFFIDAVIT**EXHIBIT C - RELEASE AND AFFIDAVIT**

STATE OF FLORIDA

COUNTY OF _____

Before me, the undersigned authority, personally appeared _____, who after being duly sworn, deposes and says:

- 1) In accordance with the Contract Documents and in consideration of \$ _____ paid, _____ ("Design Builder") releases and waives for itself and its subcontractors, materialmen, successors and assigns, all claims demands, damages, costs and expenses, whether in contract or in tort, against The County Commissioners of Pinellas County, Florida, a political subdivision of the State of Florida ("Owner") relating in any way to the performance of the Agreement between Design Builder and Owner, dated _____, 200__, for the period from _____ to _____.
- 2) This Release and Affidavit is given in connection with Design Builder [monthly/final] Application for Payment No. _____.

Design Builder:

By: _____

Its: _____ President

Date: _____

Witnesses

[Corporate Seal]

STATE OF FLORIDA

COUNTY OF _____

The foregoing instrument was acknowledged before me this ____ day of _____, 200__, by _____, as _____ of _____, a _____ corporation, on behalf of the corporation. He/She is personally known to me or has produced a _____ (state) driver's license no. _____ as identification.

My Commission Expires: _____

Notary Public (Signature)

(AFFIX NOTARY SEAL)

(Printed Name)

(Title or Rank)_____
(Serial Number, if any)

EXHIBIT D - FORM OF CONTRACT APPLICATION FOR PAYMENT

EXHIBIT D - FORM OF CONTRACT APPLICATION FOR PAYMENT**FORM OF CONTRACT APPLICATION FOR PAYMENT (PHASE 1 ONLY)****FORM OF CONTRACT APPLICATION FOR PAYMENT IN PHASE 2 SHALL BE AIA STANDARD FORM G702****FORM OF CONTRACT APPLICATION FOR PAYMENT**_____
(County Project Manager)

Contract No. _____

(County Department)

Pinellas County Board of County Commissioners (the OWNER)

Project No. _____

Application Date _____

Payment Application No. _____

FROM: _____ (Design Builder's Representative)

(Design Builder's Name)

(Design Builder's Address)

RE: _____ (Project Name)

Original Contract Time _____ Revised Contract Time _____

Original Contract Amount \$ _____

Total Net Changes \$ _____

Revised Contract Amount: \$ _____

Total Completed and Stored to Date \$ _____

Retainage @ 5% (Phase 2 only) \$ _____

Total Retained to date: (Phase 2 only) \$ _____

Total Earned Less Retainage (Phase 2 only) \$ _____

Less Previously Paid \$ _____

AMOUNT DUE THIS APPLICATION: \$ _____

Percent Work completed to Date: _____ %

Percent Contract Time completed to Date _____ %

Liquidated Damages to be Accrued \$ _____

BOND NO._____

ACCOMPANYING DOCUMENTATION TO THIS APPLICATION

Pinellas County Department

Purchase Order Number _____

CHANGE ORDER SUMMARY			
Change Order #	Date Approved	Additions	Deductions
TOTAL			
NET CHANGE			

Original Agreement Amount	\$ _____
Net Change by Change Order	\$ _____
Agreement Sum to Date	\$ _____
Total Completed to Date	\$ _____
Stored Materials to Install	\$ _____
TOTAL	\$ _____
Retainage _____ %	
Total Earned Less Retainage	\$ _____
Less Previous Payments	\$ _____
Current Payment Due	\$ _____

with the contract documents and in consideration of _____ paid. _____ ("Contractor") releases and waives for itself and its subcontractors, materialmen, successors, and assigns, all claims demands, damages, costs and expenses, whether in Contract or in tort, against the Board of County Commissioners of Pinellas County, Florida, Ex Officio the governing Board of the Pinellas County ("County") relating in any way to the performance of the agreement between contractors and owner, dated _____ for the period from _____ to _____.

Date _____

Director of _____ (Dept)

EXHIBIT D - CONSTRUCTION MANAGER AT RISK APPLICATION FOR PAYMENT

DESIGN BUILDER'S CERTIFICATION: The undersigned DESIGN BUILDER certifies that: (1) all previous progress payments received from OWNER on account of Work done under the Contract referred to above have been applied to discharge in full all obligations of DESIGN BUILDER incurred in connection with Work covered by any and all prior Applications for Payment; (2) title to all materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to OWNER at time of payment free and clear of all liens, claims, security interests and encumbrances (except such as covered by Bond acceptable to OWNER); (3) all amounts have been paid for work which previous payments were issued and received from the OWNER and that current payment is now due; and (4) DESIGN BUILDER has only included amounts in this Application for Payment properly due and owing and DESIGN BUILDER has not included within the above referenced amount any claims for unauthorized or changed Work that has not been properly approved by Owner in writing and in advance of such Work.

By DESIGN BUILDER: _____ (Design Builder's Name)

Date _____

(Signature)

(Type Name & Title)

(shall be signed by a duly authorized representative of DESIGN BUILDER)

SWORN TO (or affirmed) and subscribed before me this _____ day of , 20____, by _____ of FIRM NAME, a Florida corporation on behalf of the corporation. He is personally known to me or has produced _____ as identification.

(Signature)

(Printed Name)

NOTARY PUBLIC, STATE OF FLORIDA

(Commission Expiration Date)

Payment to the DESIGN BUILDER for the above AMOUNT DUE THIS APPLICATION is approved:

By OWNER'S Project Manager: _____

(Signature)

Date: _____

(Type Name and Title)

EXHIBIT E - CHANGE ORDER

EXHIBIT E - CHANGE ORDER

CHANGE ORDER NO. _____

CONTRACT NO. _____

TO: _____

DATE: _____

PROJECT NAME: _____

PROJECT NO.: _____

Under our AGREEMENT dated _____, 200__.

You hereby are authorized and directed to make the following change(s) in accordance with terms and conditions of the Agreement:

For the (Additive) (Deductive) Sum of: _____

(\$ _____).

Original Agreement Amount \$ _____

Sum of Previous Changes \$ _____

This Change Order (Add) (Deduct) \$ _____

Present Agreement Amount \$ _____

The time for completion shall be (increased/decreased) by _____ calendar days due to this Change Order. Accordingly, the Contract Time is now _____ (_____) calendar days and the Substantial Completion date is _____. Your acceptance of this Change Order shall constitute a modification to our Agreement and will be performed subject to all the same terms and conditions as contained in our Agreement indicated above, as fully as if the same were repeated in this acceptance. The adjustment, if any, to the Agreement shall constitute a full and final settlement of any and all claims arising out of or related to the change set forth herein, including claims for impact and delay costs.

Accepted: _____

EXHIBIT F - DESIGN BUILDER CERTIFICATE OF SUBSTANTIAL COMPLETION

**EXHIBIT F - DESIGN BUILDER CERTIFICATE OF SUBSTANTIAL
COMPLETION**

[AIA G704 Standard Certificate of Substantial Completion]

EXHIBIT G - FINAL PAYMENT CHECKLIST**EXHIBIT G - FINAL PAYMENT CHECKLIST**Bid No.: **25-0209-RFP-DB** Project No.: _____ Date: _____, 20____

Design Builder: _____

The following items have been secured by the _____

for the Project known as _____

and have been reviewed and found to comply with the requirements of the Contract Documents.

Original Contract Amount: _____ Final Contract Amount: _____

Commencement Date: _____

Substantial Completion Time as set forth in the Agreement: _____ Calendar Days.

Actual Date of Substantial Completion: _____.

Final Completion Time as set forth in the Agreement: _____ Calendar Days.

Actual Final Completion Date: _____.

YES

NO

1. All Punch List items completed on _____

2. Warranties and Guarantees assigned to Owner (attach to this form).

3. Effective date of General one year warranty from Design Builder is:

4. 2 copies of Operation and Maintenance manuals for equipment and system submitted (list manuals in attachment to this form).

5. As-Built drawings obtained and dated: _____

6. Owner personnel trained on system and equipment operation.

7. Certificate of Occupancy No.: _____ issued on

_____ (attach to this form).

8. Certificate of Substantial Completion issued on _____

9. Final Payment Application and Affidavits received from Design Builder on:

10. Consent of Surety received on _____

11. Operating Department personnel notified Project is in operating phase.

12. All Spare Parts or Special Tools provided to Owner: _____

13. Finished Floor Elevation Certificate provided to Owner: _____

14. Other: _____

If any of the above is not applicable, indicate by N/A. If NO is checked for any of the above, attach explanation.

Acknowledgments:

By Design Builder: _____ (Company Name)

_____ (Signature)

_____ (Typed Name & Title)

By Owner: _____ (Department Name)

_____ (Signature)

_____ (Name & Title)

EXHIBIT H - GENERAL TERMS AND CONDITIONS**EXHIBIT H - GENERAL TERMS AND CONDITIONS****1. INTENT OF CONTRACT DOCUMENTS**

1. It is the intent of the Contract Documents to describe a functionally complete Project (or portion thereof) to be designed and constructed by Design Builder in accordance with the Contract Documents. Any work, services, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result shall be supplied whether or not specifically called for in the Contract Documents. When words which have a well-known technical or trade meaning are used to describe work, materials or equipment, such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association or to the laws or regulations of any governmental authority having jurisdiction over the Project, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, law or regulation in effect at the time the Work is performed, except as may be otherwise specifically stated herein.
2. If before or during the performance of the Work Design Builder discovers a conflict, error or discrepancy in the Contract Documents, Design Builder immediately shall report same to the Project Manager in writing and before proceeding with the Work affected thereby shall obtain a written interpretation or clarification from the Project Manager; said interpretation or clarification from the Project Manager may require Design Builder to consult directly with another professional, if any, involved with the Project as directed by Owner. Design Builder shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to Design Builder with the Contract Documents before commencing any portion of the Work.
3. Construction Documents approved by Owner are intended to show general arrangements, design and extent of Work and are not intended to serve as shop drawings. Specifications are separated into divisions for convenience of reference only and shall not be interpreted as establishing divisions for the Work, trades, subcontracts, or extent of any part of the Work. In the event of a discrepancy between or among the drawings, specifications or other Contract Document provisions, Design Builder shall be required to comply with the provisions identified in Section 16 of the Agreement, "Order of Precedence". Unless otherwise specifically mentioned, all anchors, bolts, screws, fittings, fillers, hardware, accessories, trim and other parts required in connection with any portion of the Work to make a complete, serviceable, finished and first quality installation shall be furnished and installed as part of the Work, whether or not called for by the Contract Documents.

2. INVESTIGATION AND UTILITIES

1. Subject to Section 2.3 below, Design Builder shall have the sole responsibility of satisfying itself concerning the nature and location of the Work and the general and local conditions, and particularly, but without limitation, with respect to the following: those affecting transportation, access, disposal, handling and storage of materials; availability and quality of labor; water and electric power; availability and condition of roads; work area; living facilities; climatic conditions and seasons; physical conditions at the work site and the project area as a whole; topography and ground surface conditions; nature and quantity of the surface materials to be encountered; subsurface conditions; equipment and facilities needed preliminary to and during performance of the Work; and all other costs associated with such performance. The failure of Design Builder to acquaint itself with any applicable conditions shall not relieve Design Builder from any of its responsibilities to perform under the Contract Documents, nor shall it be considered the basis for any claim for additional time or compensation.
2. Design Builder shall locate all existing roadways, railways, drainage facilities and utility services above, upon, or under the Project site, said roadways, railways, drainage facilities and utilities being referred to in this Sub Section 2.2 as the "Utilities". Design Builder shall contact the owners of all Utilities to determine the necessity for relocating or temporarily interrupting any Utilities during the construction of the Project. Design Builder shall schedule and coordinate its Work around any such relocation or temporary service interruption. Design Builder shall be responsible for properly shoring, supporting and protecting all Utilities at all times during the course of the Work. The Design Builder is responsible for coordinating all other utility work so as to not interfere with the prosecution of the Work (except those utilities to be coordinated by the Owner as may be expressly described elsewhere in the Contract Documents).
3. Notwithstanding anything in the Contract Documents to the contrary, Design Builder assumes all risks with respect to the conditions which are encountered at the Project site, including all (i) subsurface or otherwise concealed physical conditions whether or not they differ materially from those indicated in the Contract

EXHIBIT H - GENERAL TERMS AND CONDITIONS

Documents and (ii) unknown physical conditions of any nature, whether or not they differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents. Design Builder will not be entitled to any adjustment to the Lump Sum Price or the Contract Time as a result of any site conditions encountered, except for hazardous materials as set forth in Section 9.4 below. It is the specific intention of the Parties that Design Builder will propose and perform as part of its Phase 1 Services any necessary investigation and testing that Design Builder deems necessary to assume such risk.

3. SCHEDULE

1. The Design Builder, within ten (10) calendar days after receipt of the Notice of Award, shall prepare and submit to Project Manager, for his or her review and approval, a progress schedule for the Project. Said schedule shall include but not be limited to an overall progress schedule for all portions of the design and construction of the Project ("Master Project Schedule"). The Master Project Schedule shall (i) relate to all Work required by the Contract Documents, (ii) utilize the Critical Path method of scheduling, (iii) shall provide for expeditious and practicable execution of the Work within the Contract Time, and (iv) be in such form and level of detail as may be required by Owner. The Master Project Schedule shall indicate the dates for starting and completing the various stages of the Work, including the Phase 1 Services to be provided by Design Builder.
2. The Master Project Schedule shall be updated monthly by the Design Builder or as specified in the Supplemental Terms and Conditions (if any) attached to the Agreement as Exhibit I. All monthly updates to the Master Project Schedule shall be subject to the Project Manager's review and approval. Design Builder shall submit the updates to the Master Project Schedule with its monthly Applications for Payment noted below. The Project Manager's review and approval of the submitted monthly Master Project Schedule updates shall be a condition precedent to the Owner's obligation to pay Design Builder.
3. All Work under this Agreement shall be performed in accordance with the requirements of all Pinellas County Noise Ordinances then in effect. Unless otherwise specified, Work at the Project site will generally be limited to the hours of 7:00 a.m. to 5:00 p.m., Monday through Friday. No Work at the Project site shall be performed outside the specified hours without the prior approval of the Project Manager.

4. PROGRESS PAYMENTS

1. Design Builder's Applications for Payment shall be in the form attached to the Agreement as Exhibit D. Design Builder shall not submit more than one Application for Payment each month.
2. At the time it submits its Lump Sum Price proposal to Owner, Design Builder also shall submit to Owner, for its review, a Schedule of Values based upon the Lump Sum Price proposal; all in C.S.I. format, listing the major elements of the Work and the dollar value for each element. That Schedule of Values, as further revised to reflect the final negotiated Lump Sum Price and as approved by Owner, and shall be used as the basis for Design Builder's monthly Applications for Payment thereafter. The revised Schedule of Values shall be updated for the current month Change Orders and Construction Change Directives and submitted each month to Owner by Design Builder along with a completed and notarized copy of the Application for Payment form attached to the Agreement as Exhibit D.
3. When Design Builder submits its Lump Sum Price proposal to Owner, Design Builder shall provide to the Project Manager a list of its Subcontractors and materialmen showing the work and materials involved and the dollar amount of each subcontract and purchase order. Design Builder acknowledges and agrees that any modifications to the list of Subcontractors and any subsequently identified Subcontractors are subject to Owner's prior written approval. The first Application for Payment shall be submitted no earlier than thirty (30) days after the Commencement Date. Notwithstanding anything herein to the contrary, if approved by Owner in its sole discretion, Design Builder may submit its invoice for any required Payment and Performance Bonds prior to the first Application of Payment provided that Design Builder has furnished Owner certified copies of the receipts evidencing the premium paid by Design Builder for the bonds.
4. Unless expressly approved by Owner in advance and in writing, said approval at Owner's sole discretion, Owner is not required to make any payment for materials or equipment that have not been incorporated into the Project. If payment is requested on the basis of materials and equipment not incorporated into the Project, but delivered and suitably stored at the site or at another location, and such payment and storage have been agreed to by Owner in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice or other documentation warranting that the Owner has received the materials and equipment free and clear of all liens, charges, security interests and encumbrances, together with evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect Owner's interest therein, all of

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which shall be subject to the Owner's satisfaction. Thereafter, with each subsequent Application for Payment, Design Builder also shall complete and submit to Owner as part of its Application for Payment, the Stored Materials Record attached hereto and made a part hereof as Exhibit T.

5. Design Builder shall submit a draft copy of its monthly Application for Payment to the Project Manager or his or her designee, as directed by Owner. After the Project Manager has reviewed and approved or corrected the draft, the Design Builder shall forward an electronic copy of the final version to Pinellas County's Finance Department (e-mail address to be confirmed upon execution of this Agreement). Payments of proper invoices in the amounts approved shall be processed in accordance with Section 218.735, Florida Statutes "Local Government Prompt Payment Act" and the administrative procedures established by the County's Purchasing Department and the Clerk of Court's Finance Department respectively. In the event of a total denial by Owner and return of the Application for Payment by the Project Manager, the Design Builder may make the necessary corrections and re-submit the Application for Payment. The Owner shall, within ten (10) business days after the Application for Payment is stamped and received and after Project Manager approval of an Application for Payment, pay the Design Builder the amounts so approved.
6. During Phase 2 only, Owner shall retain five percent (5%) of the gross amount of each monthly payment request or five percent (5%) of the portion thereof approved by the Project Manager for payment, whichever is less. Such sum shall be accumulated and not released to Design Builder until final payment is due unless otherwise agreed to by the Owner.
7. Monthly payments to Design Builder shall in no way imply approval or acceptance of Design Builder's Work.
8. Each Application for Payment, shall be accompanied by a Release and Affidavit, in the form attached as Exhibit C, acknowledging Design Builder's receipt of payment in full for all materials, labor, services, equipment and other bills that are then due and payable by Owner with respect to the current Application for Payment. Further, to the extent directed by Owner and in Owner's sole discretion, Design Builder shall also submit a Release and Affidavit in the form attached as Exhibit C acknowledging that each Subconsultant, Subcontractor, sub-subcontractor or supplier has been paid in full through the previous month's Application for Payment (for which the Design Builder has actually been paid). The Owner shall not be required to make payment until and unless these affidavits are furnished by Design Builder. Further, if Design Builder is withholding any portion of a payment to any subcontractor, supplier or subconsultant for any labor, services, equipment or materials for which Owner has paid Design Builder, Design Builder agrees to refund such money to Owner upon demand by Owner.
9. Notwithstanding anything in the Contract Documents to the contrary, Design Builder acknowledges and agrees that in the event of a dispute concerning payments for Work performed under this Agreement, Design Builder shall continue to perform the Work required of it under this Agreement pending resolution of the dispute provided that Owner continues to pay Design Builder all amounts that Owner does not dispute are due and payable.

5. PAYMENTS WITHHELD

1. The Project Manager may decline to approve any Application for Payment, or portions thereof, because of subsequently discovered evidence or subsequent inspections that reveal non-compliance with the Contract Documents. The Project Manager may nullify the whole or any part of any approval for payment previously issued and Owner may withhold any payments otherwise due Design Builder under this Agreement or any other agreement between Owner and Design Builder, to such extent as may be necessary in the Owner's opinion to protect it from loss because of: (a) defective Work not remedied; (b) third party claims filed or reasonable evidence indicating probable filing of such claims; (c) failure of Design Builder to make payment properly to subcontractors or for labor, materials or equipment; (d) reasonable doubt that the Work can be completed for the unpaid balance of the Contract Amount; (e) reasonable indication that the Work will not be completed within the Contract Time; (f) unsatisfactory prosecution of the Work by the Design Builder; or (g) any other material breach of the Contract Documents by Design Builder.
2. If any conditions described in 5.1. are not remedied or removed, Owner may, after three (3) days written notice, rectify the same at Design Builder's expense. Provided, however, in the event of an emergency, Owner shall not be required to provide Design Builder any written notice prior to rectifying the situation at Design Builder's expense. Owner also may offset against any sums due Design Builder the amount of any liquidated or non-liquidated obligations of Design Builder to Owner, whether relating to or arising out of this Agreement or any other agreement between Design Builder and Owner.

6. FINAL PAYMENT

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1. Owner shall make final payment to Design Builder in accordance with Florida Statutes Section 218.735 and the administrative procedures established by the County's Purchasing Department and the Clerk of Court's Finance Department after the Work is finally inspected and accepted by Project Manager as set forth in Section 20.1 herein, provided that Design Builder first, and as an explicit condition precedent to the accrual of Design Builder's right to final payment, shall have furnished Owner with a properly executed and notarized copy of the Release and Affidavit attached as Exhibit C, as well as, a duly executed copy of the Surety's consent to final payment and such other documentation that may be required by the Contract Documents and the Owner. Prior to release of final payment and final retainage, the Design Builder's Representative and the Project Manager shall jointly complete the Final Payment Checklist, a representative copy of which is attached to this Agreement as Exhibit G.
2. Design Builder's acceptance of final payment shall constitute a full waiver of any and all claims by Design Builder against Owner arising out of this Agreement or otherwise relating to the Project, except those previously made in writing in accordance with the requirements of the Contract Documents and identified by Design Builder as unsettled in its final Application for Payment. Neither the acceptance of the Work nor payment by Owner shall be deemed to be a waiver of Owner's right to enforce any obligations of Design Builder hereunder or to the recovery of damages for defective Work not discovered by the Project Manager at the time of final inspection.

7. SUBMITTALS AND SUBSTITUTIONS

1. Design Builder shall carefully examine the Contract Documents for all requirements for approval of materials to be submitted such as shop drawings, data, test results, schedules and samples. It is Design Builder's obligation to confirm and Design Builder will be deemed to have certified to Owner that all submittals reviewed and approved by it fully comply with all requirements of the Contract Documents. During Phase 1, Design Builder shall prepare and submit to Owner, for Owner's approval, procedures for Design Builder's handling and processing of submittals. Owner shall identify, in its sole discretion, which submittals must be submitted to Owner for its approval. Further, Design Builder shall submit all such materials at its own expense and in such form as required by the Contract Documents in sufficient time to prevent any delay in the delivery of such materials and the installation thereof. To the extent that a submittal requires Owner's approval as set forth above, Design Builder shall also carefully review and certify to Owner the accuracy and completeness of such shop drawings and other submittals and then forward the same to Owner for its review and approval. In such case, Owner will transmit them back to Design Builder who will then issue the submittals to the affected subcontractor for fabrication or revision. Design Builder shall maintain a suspense control system to promote the expeditious handling of shop drawings and all other submittals. At Owner's request, copies of submittals and/or Design Builder's responses will be provided to Owner. At the completion of the project, the Design Builder will provide the Owner with a complete set of approved submittals in scanned format on CDs.
2. Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular supplier, the naming of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other suppliers may be accepted by Owner if sufficient information is submitted by Design Builder to allow the Owner to determine that the material or equipment proposed is equivalent or equal to that named. Requests for review of substitute items of material and equipment will not be accepted by Owner from anyone other than Design Builder and all such requests, to the extent possible, must be submitted by Design Builder to Project Manager prior to the execution of Phase 2, unless otherwise mutually agreed in writing by Owner and Design Builder.
3. If Design Builder wishes to furnish or use a substitute item of material or equipment, Design Builder shall make application to the Project Manager for acceptance thereof, certifying that the proposed substitute shall adequately perform the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application shall state that the evaluation and acceptance of the proposed substitute will not prejudice Design Builder's achievement of substantial completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for the Project) to adapt the design to the proposed substitute and whether or not incorporation or use by the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service shall be indicated. The application also shall contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs for redesign and claims of other contractors affected by the resulting change, all of which shall be considered by the Project Manager in evaluating the proposed substitute. The Project Manager may require Design Builder to furnish at Design Builder's expense additional data about the proposed substitute.

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4. If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, Design Builder may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to the Project Manager, if Design Builder submits sufficient information to allow the Project Manager to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedures for submission to and review by the Project Manager shall be the same as those provided herein for substitute materials and equipment.
 5. The Project Manager shall be allowed a reasonable time within which to evaluate each proposed substitute. Owner shall be the sole judge of the acceptability of any substitute. No substitute will be ordered, installed or utilized without the Project Manager's prior written acceptance which shall be evidenced by either a Change Order, a Work Directive Change, a Field Order or an approved Shop Drawing. The Owner may require Design Builder to furnish at Design Builder's expense a special performance guarantee or other surety with respect to any substitute. The Project Manager will record time required by the Project Manager and the Project Manager's consultants in evaluating substitutions proposed by Design Builder and making changes in the Contract Documents occasioned thereby. Whether or not the Owner accepts a proposed substitute, Design Builder shall reimburse Owner costs of evaluating each proposed substitute.
 6. Notwithstanding anything in the Contract Documents to the contrary, Design Builder expressly acknowledges and agrees that Owner's review or approval of any design documents submitted by Design Builder, including but not limited to any submittals as described herein, shall not relieve Design Builder of its responsibilities or liabilities for design hereunder. Notwithstanding anything in the Contract Documents to the contrary, Design Builder further expressly acknowledges and agrees that any such review or approval shall not be deemed as Owner's approval of any deviations to such design documents unless such deviation is expressly brought to Owner's attention by Design Builder in writing and Owner expressly approves such deviation in writing.
8. DAILY REPORTS, AS BUILT AND MEETINGS
1. Design Builder shall prepare and maintain a daily log of the work on the job site. The daily log records shall be kept current and available for Owner's review. The daily log shall document activities at the Project site including, but not limited to, the following:
 - A. Weather conditions showing the high and low temperatures during work hours, the amount of precipitation received on the Project site, and any other weather conditions which adversely affect the Work;
 - B. Soil conditions which adversely affect the Work;
 - C. The hours of operation by Design Builder's and its subcontractors' and subconsultants' personnel;
 - D. The number of Design Builder's and Subconsultant's and Subcontractor's personnel present and working at the Project site, by subcontract and trade;
 - E. All equipment present at the Project site, description of equipment use and designation of time equipment was used (specifically indicating any down time);
 - F. Description of Work being performed at the Project site;
 - G. Any unusual or special occurrences at the Project site;
 - H. Materials received at the Project site;
 - I. A list of all visitors to the Project
 - J. Any problems that might impact either the cost or quality of the Work or the time of performance.
- The daily log shall not constitute nor take the place of any notice required to be given by Design Builder to Owner pursuant to the Contract Documents.
2. Design Builder shall maintain in a safe place at the Project site one record copy of the Contract Documents, including, but not limited to, all drawings, specifications, addenda, amendments, Change Orders, Work Directive Changes and Field Orders, as well as all written interpretations and clarifications issued by the Owner, in good order and annotated to show all changes made during construction. The annotated drawings shall be continuously updated by the Design Builder throughout the prosecution of the Work to accurately reflect all field changes that are made to adapt the Work to field conditions, changes resulting from Change Orders, Work Directive Changes and Field Orders, and all concealed and buried installations of piping, conduit and utility services. All buried and concealed items, both inside and outside the Project site, shall be accurately located on

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the annotated drawings as to depth and in relationship to not less than two (2) permanent features (e.g. interior or exterior wall faces). The annotated drawings shall be clean and all changes, corrections and dimensions shall be given in a neat and legible manner in a contrasting color. The "As Built" record documents, together with all approved samples and a counterpart of all approved shop drawings shall be available to the Project Manager for reference. Upon completion of the Work and as a condition precedent to Design Builder's entitlement to final payment, these "As Built" record documents, samples and shop drawings (along with electronic copies on CDs) shall be delivered to Project Manager by Design Builder for Owner.

3. Design Builder shall keep all records and supporting documentation which concern or relate to the Work hereunder for a minimum of five (5) years from the date of termination of this Agreement or the date the Project is completed or such longer period as may be required by law, whichever is later. Owner, or any duly authorized agents or representatives of Owner, shall have the right to audit, inspect and copy all such records and documentation as often as they deem necessary during the period of this Agreement and during the document retention period noted above; provided, however, such activity shall be conducted only during normal business hours.
4. Design Builder shall advise Owner, Project Manager and their representatives of their requested or required participation in any meeting or inspection giving each at least one week written notice unless such notice is made impossible by conditions beyond Design Builder's fault and control, in which case at least 48 hours prior written notice must be given.

9. CONTRACT TIME AND TIME EXTENSIONS

1. Design Builder shall diligently pursue the completion of the Work and coordinate the Work being done on the Project by its subconsultants, subcontractors and material-men, as well as coordinating its Work with all work of others at the Project Site, so that its Work or the work of others shall not be delayed or impaired by any act or omission by Design Builder or anyone for whom Design Builder is liable. Design Builder shall be solely responsible for all construction means, methods, techniques, sequences, and procedures, as well as coordination of all portions of the Work under the Contract Documents, and the coordination of Owner's suppliers and contractors as set forth in Paragraph 12.2. herein.
2. Should Design Builder be obstructed or delayed in the prosecution of or completion of the Work as a result of unforeseeable causes beyond the control of Design Builder, and not due to its fault or neglect, including but not restricted to acts of Nature or of the public enemy, acts of government, fires, floods, epidemics, quarantine regulation, strikes or lockouts, Design Builder shall notify the Owner in writing within forty eight (48) hours after the commencement of such delay, stating the cause or causes thereof, or be deemed to have waived any right which Design Builder may have had to request a time extension.
3. No interruption, interference, inefficiency, suspension or delay in the commencement or progress of the Work from any cause whatever, including those for which Owner may be responsible, in whole or in part, shall relieve Design Builder of its duty to perform or give rise to any right to damages or additional compensation from Owner. Design Builder expressly acknowledges and agrees that it shall receive no damages for delay. Design Builder's sole remedy, if any, against Owner will be the right to seek an extension to the Contract Time; provided, however, the granting of any such time extension shall not be a condition precedent to the aforementioned "No Damage For Delay" provision. This paragraph shall expressly apply to claims for early completion, as well as to claims based on late completion.
4. Notwithstanding anything contained within Section 2.3 to the contrary, if Design Builder encounters on the Project site any materials reasonably believed by Design Builder to be petroleum or petroleum related products or other hazardous or toxic substances which have not been rendered harmless, Design Builder immediately shall (i) stop Work in the area affected and (ii) report the condition to Owner in writing. If the Work is so stopped and hazardous material is found, the Work in the affected area shall not thereafter be resumed except by Change Order. Any such Change Order shall include, but not be limited to, an adjustment to the Lump Sum Price and Contract Time as appropriate. If no hazardous material is found after the Work is stopped, no Change Order is required to resume the Work in the affected area. Notwithstanding the foregoing sentences in this Section 9.4, if the hazardous material encountered was generated or caused by Design Builder or any of its employees, agents, subconsultants, subcontractors, or material suppliers, no adjustment to the Contract Time or Lump Sum Price shall be made and Design Builder shall indemnify Owner and hold Owner harmless for any costs incurred by Owner with respect to such hazardous material. Design Builder will coordinate and cooperate with any person or entity who is hired to perform any hazardous material mitigation services.

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5. In no event shall any approval by Owner authorizing Design Builder to continue performing Work under this Agreement or any payment issued by Owner to Design Builder be deemed a waiver of any right or claim Owner may have against Design Builder for delay damages hereunder.

10. CHANGES IN THE WORK

1. Owner shall have the right at any time during the progress of the Work to increase or decrease the Work. Promptly, but in no event more than 10 days after being notified of a change, Design Builder shall submit an itemized estimate of any cost or time increases or savings it foresees as a result of the change. Except in an emergency endangering life or property, or as expressly set forth herein, no addition or changes to the Work shall be made except upon written order of Owner, and Owner shall not be liable to the Design Builder for any increased compensation without such written order. No officer, employee or agent of Owner is authorized to direct any extra or changed work orally. Any alleged changes must be approved by Owner in writing prior to starting such items. Owner will not be responsible for the costs of any changes commenced without Owner's express prior written approval. Failure to obtain such prior written approval for any changes will be deemed: (i) a waiver of any claim by Design Builder for such items and (ii) an admission by Design Builder that such items are in fact not a change but rather are part of the Work required of Design Builder hereunder.
2. A Change Order, in the form attached as Exhibit E to this Agreement, shall be issued and executed promptly after an agreement is reached between Design Builder and Owner concerning the requested changes. Design Builder shall promptly perform changes authorized by duly executed Change Orders. The Contract Amount and Contract Time shall be adjusted in the Change Order in the manner as Owner and Design Builder shall mutually agree.
3. If Owner and Design Builder are unable to agree on a Change Order for the requested change, Design Builder shall, nevertheless, promptly perform the change as directed by Owner in a written Work Directive Change. In that event, the Contract Amount and Contract Time shall be adjusted as directed by Owner. If Design Builder disagrees with the Owner's adjustment determination, Design Builder must make a claim pursuant to Section 11 of these General Conditions or else be deemed to have waived any claim on this matter it might otherwise have had.
4. In the event a requested change is approved by Owner which results in an increase to the Lump Sum Price, a Change Order shall be issued which increases the Lump Sum Price by the amount of Design Builder's actual and reasonable direct increased Cost for such change work plus a maximum ten percent (10%) markup for Design Builder's overhead and profit. In the event such change work is performed by a subconsultant or subcontractor, a maximum ten percent (10%) total markup for all overhead and profit for all subconsultants', subcontractors', sub-subconsultants' and sub-subcontractors' direct labor and material costs and actual equipment costs shall be permitted. Design Builder shall not be entitled to any mark-up for Change Order work performed by subcontractors or subconsultants. All compensation due any Sub-consultant or Subcontractor for field and home office overhead is included in the markups noted above. Subcontractor's bond costs associated with any change order shall be included in the overhead and profit markups and shall not be paid as a separate line item.
5. Owner shall have the right to conduct an audit of Design Builder's books and records, as well as those of its subconsultants, subcontractors and suppliers to verify the accuracy of the Design Builder's claim with respect to Design Builder's costs associated with any Change Order or Work Directive Change.
6. The Project Manager shall have authority to order minor changes in the Work not involving an adjustment to the Contract Amount or an extension to the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes may be effected by Field Order or by other written order. Such changes shall be binding on the Design Builder.
7. No action, conduct, omission or course of conduct by Owner shall act to waive, alter, or change the requirement that Amendments, Change Orders, and Work Directive Changes must be in writing and signed by Owner. Such written and signed Amendments, Change Orders and Work Directive Changes are the sole and exclusive way to change either the amount of compensation to be paid to Design Builder or the time within which Design Builder is to perform its obligations hereunder. No changes will be allowed based upon actual, constructive, or oral notice or lack of prejudice to Owner.

11. CLAIMS AND DISPUTES

1. Claim is a demand or assertion by one of the parties seeking an adjustment or interpretation of the terms of the Contract Documents, payment of money, extension of time or other relief with respect to the terms of the Contract Documents. The term "Claim" also includes other disputes and matters in question between Owner and Design

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Builder arising out of or relating to the Contract Documents. The responsibility to substantiate a Claim shall rest with the party making the Claim.

2. Claims by the Design Builder shall be made in writing to the Project Manager within forty eight (48) hours from when the Design Builder knew or should have known of the event giving rise to such Claim or else the Design Builder shall be deemed to have waived the Claim. Written supporting data shall be submitted to the Project Manager within fifteen (15) calendar days after the occurrence of the event, unless the Owner grants additional time in writing, or else the Design Builder shall be deemed to have waived the Claim. Claims not settled by the aforesaid procedure, shall be resolved according to the Dispute Resolution Procedure copies of which are available in the County Attorney's Office or Purchasing Department. All Claims shall be priced in accordance with the provisions of Subsection 10.4.
3. The Design Builder shall proceed diligently with its performance as directed by the Owner, regardless of any pending Claim, action, suit or administrative proceeding, unless otherwise agreed to by the Owner in writing. Owner shall continue to make payments in accordance with the Contract Documents during the pendency of any Claim.

12. OTHER WORK

1. Owner may perform other work related to the Project at the site by Owner's own forces, have other work performed by utility owners or let other direct contracts. If the fact that such other work is to be performed is not noted in the Contract Documents, written notice thereof will be given to Design Builder prior to starting any such other work. If Design Builder believes that such performance will involve additional expense to Design Builder or require additional time, Design Builder shall send written notice of that fact to Owner within forty eight (48) hours of being notified of the other work. If the Design Builder fails to send the above required forty eight (48) hour notice, the Design Builder will be deemed to have waived any rights it otherwise may have had to seek an extension to the Contract Time or adjustment to the Contract Amount.
2. Design Builder shall afford each utility owner and other Design Builder who is a party to such a direct contract (or Owner, if Owner is performing the additional work with Owner's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work and shall properly connect and coordinate its Work with theirs. Design Builder shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. Design Builder shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of the Project Manager and the others whose work will be affected. The duties and responsibilities of Design Builder under this paragraph are for the benefit of such utility owners and other Contractors to the extent that there are comparable provisions for the benefit of Design Builder in said direct contracts between Owner and such utility owners and other contractors.
3. If any part of Design Builder's Work depends for proper execution or results upon the work of any other contractor of Owner or utility owner (or Owner), Design Builder shall inspect and promptly report to Project Manager in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. Design Builder's failure to report will constitute an acceptance of the other work as fit and proper for integration with Design Builder's Work.

13. INDEMNIFICATION AND INSURANCE

1. The Contractor must maintain insurance in at least the amounts required in the Request for Proposal throughout the term of this contract. The contractor must provide a Certificate of Insurance in accordance with Insurance Requirements of Exhibit B to the agreement, evidencing such coverage prior to issuance of purchase order or commencement of any work under this contract.
2. To the maximum extent permitted by Florida law, Design Builder shall indemnify and hold harmless Owner and its officers and employees from any and all liabilities, claims, damages, penalties, demands, judgments, actions, proceedings, losses or costs, including, but not limited to, reasonable attorneys' fees and paralegals' fees, whether resulting from any claimed breach of this Agreement by Design Builder or from personal injury, property damage, direct or consequential damages, or economic loss, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of Design Builder or anyone employed or utilized by the Design Builder in the performance of this Agreement.

14. COMPLIANCE WITH LAWS

1. Design Builder agrees to comply, at its own expense, with all federal, state and local laws, codes, statutes, ordinances, rules, regulations and requirements applicable to the Project, including but not limited to those

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dealing with taxation, worker's compensation, equal employment and safety (including, but not limited to, the Trench Safety Act, Chapter 553, Florida Statutes). If Design Builder observes that the Contract Documents are at variance therewith, it shall promptly notify Project Manager in writing. To the extent any law, rule, regulation, code, statute, or ordinance requires the inclusion of certain terms in this Agreement in order for this Agreement to be enforceable, such terms shall be deemed included in this Agreement. Notwithstanding anything in the Contract Documents to the contrary, it is understood and agreed that in the event of a change in any applicable laws, ordinances, rules or regulations subsequent to the date the Notice to proceed has been executed that increases the Design Builder's time or cost of performance of the Work, Design Builder is entitled to a Change Order for such increases, except to the extent Design Builder knew or should have known of the reasonable prospect of such changes prior to the date of the Notice to proceed.

15. CLEANUP AND PROTECTIONS

1. Design Builder agrees to keep the Project site clean at all times of debris, rubbish and waste materials arising out of the Work. At the completion of the Work, Design Builder shall remove all debris, rubbish and waste materials from and about the Project site, as well as all tools, appliances, construction equipment and machinery and surplus materials, and shall leave the Project site clean and ready for occupancy by Owner.
2. Any existing surface or subsurface improvements, including, but not limited to, pavements, curbs, sidewalks, pipes, utilities, footings, structures, trees and shrubbery, not indicated in the Contract Documents to be removed or altered, shall be protected by Design Builder from damage during the prosecution of the Work. Subject to the Section 2.3 above, any such improvements so damaged shall be restored by Design Builder to the condition equal to that existing at the time of Design Builder's commencement of the Work.

16. ASSIGNMENT

1. Design Builder shall not assign this Agreement or any part thereof, without the prior consent in writing of Owner. Any attempt to assign or otherwise transfer this Agreement, or any part herein, without the Owner's consent, shall be void. If Design Builder does, with approval, assign this Agreement or any part thereof, it shall require that its assignee be bound to it and to assume toward Design Builder all of the obligations and responsibilities that Design Builder has assumed toward Owner.

17. PERMITS, LICENSES AND TAXES

1. All permits, fees and licenses necessary for the prosecution of the Work shall be acquired and paid for by the Design Builder. If Design Builder performs any Work without obtaining, or contrary to, such permits or licenses, Design Builder shall bear all costs arising therefrom.
2. Design Builder shall pay all sales, consumer, use and other similar taxes associated with the Work or portions thereof, which are applicable during the performance of the Work.

18. TERMINATION FOR DEFAULT

1. Design Builder shall be considered in material default of the Agreement and such default shall be considered cause for Owner to terminate the Agreement, in whole or in part, as further set forth in this Section, if Design Builder: (1) fails to begin the Work under the Contract Documents within the time specified herein; or (2) fails to properly and timely perform the Work as directed by the Project Manager or as provided for in the approved Master Project Schedule; or (3) performs the Work unsuitably or neglects or refuses to remove materials or to correct or replace such Work as may be rejected as unacceptable or unsuitable; or (4) discontinues the prosecution of the Work; or (5) fails to resume Work which has been suspended within a reasonable time after being notified to do so; or (6) becomes insolvent or is declared bankrupt, or commits any act of bankruptcy; or (7) allows any final judgment to stand against it unsatisfied for more than ten (10) days; or (8) makes an assignment for the benefit of creditors; or (9) fails to obey any applicable codes, laws, ordinances, rules or regulations with respect to the Work; or (10) materially breaches any other provision of the Contract Documents.
2. Owner shall notify Design Builder in writing of Design Builder's default(s). If Owner determines that Design Builder has not remedied and cured the default(s) within seven (7) calendar days following receipt by Design Builder of said written notice or such longer period of time as may be consented to by Owner in writing and in its sole discretion, then Owner, at its option, without releasing or waiving its rights and remedies against the Design Builder's sureties and without prejudice to any other right or remedy it may be entitled to hereunder or by law, may terminate Design Builder's right to proceed under the Agreement, in whole or in part, and take possession of all or any portion of the Work and any materials, tools, equipment, and appliances of Design Builder, take assignments of any of Design Builder's subcontracts and purchase orders, and complete all or any portion of Design Builder's Work by whatever means, method or agency which Owner, in its sole discretion, may choose.

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3. If Owner deems any of the foregoing remedies necessary, Design Builder agrees that it shall not be entitled to receive any further payments hereunder until after the Project is completed. All moneys expended and all of the costs, losses, damages and extra expenses, including all management, administrative and other overhead and other direct and indirect expenses (including attorneys' fees) or damages incurred by Owner incident to such completion, shall be deducted from the Contract Amount, and if such expenditures exceed the unpaid balance of the Contract Amount, Design Builder agrees to pay promptly to Owner on demand the full amount of such excess, including costs of collection, attorneys' fees (including appeals) and interest thereon at the maximum legal rate of interest until paid. If the unpaid balance of the Contract Amount exceeds all such costs, expenditures and damages incurred by the Owner to complete the Work, such excess shall be paid to the Design Builder. The amount to be paid to the Design Builder or Owner, as the case may be, shall be approved by the Project Manager, upon application, and this obligation for payment shall survive termination of the Agreement.
4. The liability of Design Builder hereunder shall extend to and include the full amount of any and all sums paid, expenses and losses incurred, damages sustained, and obligations assumed by Owner in good faith under the belief that such payments or assumptions were necessary or required, in completing the Work and providing labor, materials, equipment, supplies, and other items therefor or re letting the Work, and in settlement, discharge or compromise of any claims, demands, suits, and judgments pertaining to or arising out of the Work hereunder.
5. If, after notice of termination of Design Builder's right to proceed pursuant to this Section, it is determined for any reason that Design Builder was not in default, or that its default was excusable, or that Owner is not entitled to the remedies against Design Builder provided herein, then the termination will be deemed a termination for convenience and Design Builder's remedies against Owner shall be the same as and limited to those afforded Design Builder under Section 19 below.
6. In the event (i) Owner fails to make any undisputed payment to Design Builder in accordance with the Local Government Prompt Payment Act, Section 218.70, et.seq. of the Florida State Statutes or Owner otherwise persistently fails to fulfill some material obligation owed by Owner to Design Builder under this Agreement, and (ii) Owner has failed to cure such default within fourteen (14) days of receiving written notice of same from Design Builder, then Design Builder may stop its performance under this Agreement until such default is cured, after giving Owner a second fourteen (14) days written notice of Design Builder's intention to stop performance under the Agreement. If the Work is so stopped for a period of one hundred and twenty (120) consecutive days through no act or fault of the Design Builder or its Subcontractors or their agents or employees or any other persons performing portions of the Work under contract with the Design Builder or any Subcontractor, the Design Builder may terminate this Agreement by giving written notice to Owner of Design Builder's intent to terminate this Agreement. If Owner does not cure its default within fourteen (14) days after receipt of Design Builder's written notice, Design Builder may, upon fourteen (14) additional days' written notice to the Owner, terminate the Agreement and recover from the Owner payment for Work performed through the termination date, but in no event shall Design Builder be entitled to payment for Work not performed or any other damages from Owner.

19. TERMINATION FOR CONVENIENCE AND RIGHT OF SUSPENSION

1. Owner shall have the right to terminate this Agreement without cause upon seven (7) calendar days written notice to Design Builder. In the event of such termination for convenience, Design Builder's recovery against Owner shall be limited to that portion of the Contract Amount earned through the date of termination, together with any retainage withheld and reasonable termination expenses incurred, but Design Builder shall not be entitled to any other or further recovery against Owner, including, but not limited to, damages or any anticipated profit on portions of the Work not performed.
2. Owner shall have the right to suspend all or any portions of the Work upon giving Design Builder not less than five (5) calendar days' prior written notice of such suspension. If all or any portion of the Work is so suspended, Design Builder's sole and exclusive remedy shall be to seek an extension of time to its schedule in accordance with the procedures set forth in the Contract Documents. In no event shall the Design Builder be entitled to any additional compensation or damages. Provided, however, if the ordered suspension exceeds six (6) months, the Design Builder shall have the right to terminate the Agreement with respect to that portion of the Work which is subject to the ordered suspension.

20. COMPLETION

1. Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use provided, however, that as a condition precedent to Substantial Completion, the Owner has received all certificates of occupancy and any other permits, approvals, licenses, and other documents, that

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are Design Builder's responsibility to obtain under the Contract Documents from any governmental authority having jurisdiction thereof necessary for the beneficial occupancy of the Work; provided, however, such condition precedent shall be waived to the extent the failure to obtain any such item is not due to the fault or neglect of Design Builder or anyone for whom Design Builder is responsible. In general, the only remaining Work shall be minor in nature, so that the Owner could occupy the Work on that date and the completion of the Work by the Design Builder thereafter would not unreasonably interfere with the Owner's normal business operations or create an unsafe condition. The "punchlist" shall be completed within 60 consecutive calendar days or as agreed upon following the Substantial Completion Date ("Final Completion").

2. When the entire Work (or any portion thereof designated in writing by Owner) is ready for its intended use, Design Builder shall notify Project Manager in writing that the entire Work (or such designated portion) is substantially complete and ready for Certificate of Substantial Completion (or Certificate of Partial Substantial Completion) to be issued. Said written notice from Design Builder shall include a proposed punch-list of all items of Work to be completed or corrected by Design Builder. Within a reasonable time thereafter, Owner and Design Builder shall make an inspection of the Work (or designated portion thereof) to determine the status of completion. If Owner does not consider the Work (or designated portion) substantially complete, Project Manager shall notify Design Builder in writing giving the reasons therefor. In such case, Design Builder shall pay the costs of all additional Substantial Completion inspections. If Owner considers the Work (or designated portion) substantially complete, Design Professional shall prepare a Certificate of Substantial Completion (or Certificate of Partial Substantial Completion), which includes a Certificate of Occupancy issued by the local building official, for Owner's review, approval and execution which shall fix the date of Substantial Completion for the entire Work (or designated portion thereof) and include a tentative punch-list of items to be completed or corrected by Design Builder before final payment. Failure to include an item on the final punch-list does not waive Owner's right to demand completion of the item pursuant to the Contract Documents either prior to or after final payment. Owner shall have the right to exclude Design Builder from the Work and Project site (or designated portion thereof) after the date of Substantial Completion, but Owner shall allow Design Builder reasonable access to complete or correct items on the tentative punch-list.
3. Upon receipt of written certification by Design Builder that the Work is completed in accordance with the Contract Documents and is ready for final inspection and acceptance, Project Manager will make such inspection and, if he or she finds the Work acceptable and fully performed under the Contract Documents shall promptly issue a final Certificate for Payment, recommending that, on the basis of his or her observations and inspections, and the Design Builder's certification that the Work has been completed in accordance with the terms and conditions of the Contract Documents, that the entire balance found to be due Design Builder is due and payable. Neither the final payment nor the retainage shall become due and payable until Design Builder submits:
 - 1) Receipt of Design Builder's Final Application for Payment.
 - 2) The Release and Affidavit in the form attached as Exhibit C.
 - 3) Consent of surety to final payment.
 - 4) Receipt of the final payment check list.
 - 5) If required by Owner, other data establishing payment or satisfaction of all obligations, such as receipts, releases and waivers of liens, arising out of the Contract Documents, to the extent and in such form as may be designated by Owner.

Owner reserves the right to inspect the Work and make an independent determination as to the Work's acceptability, even though the Project Manager may have issued his or her recommendations. Unless and until the Owner is completely satisfied, neither the final payment nor the retainage shall become due and payable.

21. WARRANTY

1. Design Builder shall obtain and assign to Owner all express warranties given to Design Builder or any subcontractors by any subcontractor or materialmen supplying materials, equipment or fixtures to be incorporated into the Project. Design Builder warrants to Owner that any materials and equipment furnished under the Contract Documents shall be new unless otherwise specified, and that all Work shall be of good quality, free from all defects and in conformance with the Contract Documents. Design Builder further warrants to Owner that all materials and equipment furnished under the Contract Documents shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable manufacturers, fabricators, suppliers or processors except as otherwise provided for in the Contract Documents. If, within one (1) year after Substantial Completion, any Work is found to be defective or not in conformance with the Contract Documents,

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Design Builder shall correct it promptly after receipt of written notice from Owner. Design Builder shall also be responsible for and pay for replacement or repair of adjacent materials or Work which may be damaged as a result of such replacement or repair. Further, in the event of an emergency, Owner may commence to correct any defective Work, without prior notice to Design Builder, at Design Builder's expense. These warranties are in addition to those implied warranties to which Owner is entitled as a matter of law.

2. No later than 30 days prior to expiration of the warranty, the Project Manager, or another representative of the Owner, shall conduct an inspection of the warranted work to verify compliance with the requirements of the Agreement. The Design Builder's Representative shall be present at the time of inspection and shall take remedial actions to correct any deficiencies noted in the inspection. Failure of the Design Builder to correct the cited deficiencies shall be grounds for the Owner to disqualify the Design Builder from future bid opportunities with the Owner, in addition to any other rights and remedies available to Owner.

22. TESTS AND INSPECTIONS

1. Owner and its respective representatives, agents and employees, and governmental agencies with jurisdiction over the Project shall have access at all times to the Work, whether the Work is being performed on or off of the Project site, for their observation, inspection and testing. Design Builder shall provide proper, safe conditions for such access. Design Builder shall provide Project Manager with timely notice of readiness of the Work for all required inspections, tests or approvals.
2. If the Contract Documents or any codes, laws, ordinances, rules or regulations of any public authority having jurisdiction over the Project requires any portion of the Work to be specifically inspected, tested or approved, Design Builder shall assume full responsibility therefore, pay all costs in connection therewith and furnish Project Manager the required certificates of inspection, testing or approval. All inspections, tests or approvals shall be performed in a manner and by organizations acceptable to the Project Manager.
3. Design Builder is responsible, without reimbursement from Owner, for re-inspection fees and costs; to the extent such re-inspections are due to the fault or neglect of Design Builder.
4. If any Work that is to be inspected, tested or approved is covered without written concurrence from the Project Manager, such work must, if requested by Project Manager, be uncovered for observation. Such uncovering shall be at Design Builder's expense unless Design Builder has given Project Manager timely notice of Design Builder's intention to cover the same and Project Manager has not acted with reasonable promptness to respond to such notice. If any Work is covered contrary to written directions from Project Manager, such Work must, if requested by Project Manager, be uncovered for Project Manager's observation and be replaced at Design Builder's sole expense.
5. The Owner shall charge to Design Builder and may deduct from any payments due Design Builder all engineering and inspection expenses incurred by Owner in connection with any overtime work. Such overtime work consisting of any work during the construction period beyond the regular eight (8) hour day and for any work performed on Saturday, Sunday or holidays.
6. Neither observations nor other actions by the Project Manager nor inspections, tests or approvals by others shall relieve Design Builder from Design Builder's obligations to perform the Work in accordance with the Contract Documents.
7. Owner shall have the right, but not the obligation, to hire any consultant it deems appropriate to perform a peer review on Design Builder's design documents. Design Builder agrees to cooperate with any such peer review.

23. DEFECTIVE WORK

1. Work not strictly conforming to the requirements of the Contract Documents shall be deemed defective Work. If required by Project Manager, Design Builder shall as directed, either correct all defective Work, whether or not fabricated, installed or completed, or if the defective Work has been rejected by Project Manager, remove it from the site and replace it with non-defective Work. Design Builder shall bear all direct, indirect and consequential costs of such correction or removal (including, but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby, and shall hold Owner harmless for same.
2. If the Project Manager considers it necessary or advisable that covered Work be observed or inspected or tested by others and such Work is not otherwise required to be inspected or tested, Design Builder, at Project Manager's request, shall uncover, expose or otherwise make available for observation, inspection or tests as Project Manager may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is defective, Design Builder shall bear all direct, indirect and consequential costs of

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such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals), and Owner shall be entitled to an appropriate decrease in the Lump Sum Price. If, however, such Work is not found to be defective, Design Builder shall be allowed an increase in the Lump Sum Price and/or an extension to the Contract Time, to the extent solely attributable to such uncovering, exposure, observation, inspection, testing and reconstruction.

3. If any portion of the Work is defective, or if Design Builder fails to supply sufficient skilled workers, suitable materials or equipment or fails to finish or perform the Work in such a way that the completed Work will conform to the Contract Documents, or satisfactorily maintain the Project schedules, Project Manager may order Design Builder to stop the Work, or any portion thereof, until the cause for such order has been eliminated. The right of Project Manager to stop the Work shall be exercised, if at all, solely for Owner's benefit and nothing herein shall be construed as obligating the Project Manager to exercise this right for the benefit of Design Builder or any other person.
4. Should the Owner determine, in its sole opinion, it is in the Owner's best interest to accept defective Work, the Owner may do so. Design Builder shall bear all direct, indirect and consequential costs attributable to the Owner's evaluation of and determination to accept defective Work. If such determination is rendered prior to final payment, a Change Order shall be executed evidencing such acceptance of such defective Work, incorporating the necessary revisions in the Contract Documents and reflecting an appropriate decrease in the Contract Amount. If the Owner accepts such defective Work after final payment, Design Builder shall promptly pay Owner an appropriate amount to adequately compensate Owner for its acceptance of the defective Work.
5. If Design Builder fails, within a reasonable time, which in no event shall be more than 14 days after the written notice from Project Manager, to correct defective Work or to remove and replace rejected defective Work as required by Project Manager or Owner, or if Design Builder fails to perform the Work in accordance with the Contract Documents, or if Design Builder fails to comply with any of the provisions of the Contract Documents, Owner may, after seven (7) days written notice to Design Builder, correct and remedy any such deficiency. Provided, however, Owner shall not be required to give notice to Design Builder in the event of an emergency. To the extent necessary to complete corrective and remedial action, Owner may exclude Design Builder from any or all of the Project site, take possession of all or any part of the Work, and suspend Design Builder's services related thereto, take possession of Design Builder's tools, appliances, construction equipment and machinery at the Project site and incorporate in the Work all materials and equipment stored at the Project site or for which Owner has paid Design Builder but which are stored elsewhere. Design Builder shall allow Owner and its respective representatives, agents, and employees such access to the Project site as may be necessary to enable Owner to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of Owner in exercising such rights and remedies shall be charged against Design Builder, and a Change Order shall be issued, incorporating the necessary revisions to the Contract Documents, including an appropriate decrease to the Contract Amount. Such direct, indirect and consequential costs shall include, but not be limited to, fees and charges of engineers, architects, attorneys and other professionals, all court costs and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of Design Builder's defective Work. Design Builder shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by Owner of Owner's rights and remedies hereunder.

24. SUPERVISION AND SUPERINTENDENTS

1. Design Builder is responsible for supervising, coordinating and performing the Work with the highest level of care and skill as would be provided by a designer and contractor with extensive and special expertise in the type of design and construction services required under the Contract Documents. Design Builder shall plan, organize, supervise, schedule, monitor, direct and control the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in strict accordance with the Contract Documents. Design Builder shall be responsible to see that the finished Work complies accurately with the Contract Documents. Design Builder shall keep on the Work at all times during its progress a competent resident superintendent, who shall be subject to Owner's approval and who shall not be replaced without prior written notice to Project Manager except under extraordinary circumstances. The superintendent shall be employed by the Design Builder and be the Design Builder's representative at the Project site and shall have authority to act on behalf of Design Builder. All communications given to the superintendent shall be as binding as if given to the Design Builder. Owner shall have the right to direct Design Builder to remove and replace its Project superintendent, with cause. Attached to the Agreement as Exhibit S is Design Builder's list identifying Design Builder's Project Superintendent and all of Design Builder's key personnel who are assigned to the

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Project; such identified personnel shall not be removed without Owner's prior written approval, and if so removed must be immediately replaced with a person acceptable to Owner.

2. Design Builder shall have a competent, experienced superintendent on the project at all times whenever Design Builder's work crews, or work crews of other parties authorized by the Project Manager are engaged in any activity whatsoever associated with the Project. Should the Design Builder fail to comply with the above condition, the Project Manager shall, at his discretion, deduct from the Design Builder's monthly pay estimate, sufficient moneys to account for the Owner's loss of adequate project supervision, not as a penalty, but as liquidated damages, separate from the liquidated damages described in Section 5, for services not rendered.

25. PROTECTION OF WORK

1. Design Builder shall fully protect the Work from loss or damage and shall bear the cost of any such loss or damage until final completion is achieved. If Design Builder or any one for whom Design Builder is legally liable for is responsible for any loss or damage to the Work, or other work or materials of Owner or Owner's separate contractors, Design Builder shall be charged with the same, and any moneys necessary to replace such loss or damage shall be deducted from any amounts due Design Builder.
2. Design Builder shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Design Builder subject any part of the Work or adjacent property to stresses or pressures that will endanger it.
3. Design Builder shall not disturb any benchmark established by the Owner with respect to the Project. If Design Builder, or its subcontractors, agents or anyone for whom Design Builder is legally liable, disturbs the Owner's benchmarks, Design Builder shall immediately notify Project Manager. The Owner shall reestablish the benchmarks and Design Builder shall be liable for all costs incurred by Owner associated therewith.

26. EMERGENCIES

1. In the event of an emergency affecting the safety or protection of persons or the Work or property at the Project site or adjacent thereto, Design Builder, without special instruction or authorization from Owner, is obligated to act to prevent threatened damage, injury or loss. Design Builder shall give Project Manager written notice within forty eight (48) hours after Design Builder knew or should have known of the occurrence of the emergency, if Design Builder believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If the Project Manager determines that a change in the Contract Documents is required because of the action taken in response to an emergency, and such emergency was not due to the fault or neglect of the Design Builder, a Change Order shall be issued to document the consequences of the changes or variations. If Design Builder fails to provide the forty eight (48) hour written notice noted above, the Design Builder shall be deemed to have waived any right it otherwise may have had to seek an adjustment to the Contract Amount or an extension to the Contract Time.

27. USE OF PREMISES

1. Design Builder shall maintain all construction equipment, the storage of materials and equipment and the operations of workers to the Project site and land and areas identified in and permitted by the Contract Documents and other lands and areas permitted by law, rights of way, permits and easements, and shall not unreasonably encumber the Project site with construction equipment or other material or equipment. Design Builder shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or any land or areas contiguous thereto, resulting from the performance of the Work.
2. Design Builder acknowledges that Work may be performed at a particular Project site where Owner simultaneously is conducting and continuing its operations upon the same site. In such event, Design Builder shall coordinate its Work and cooperate so as to cause no unreasonable interference with or disruption to Owner's operations.
3. Owner may take early occupancy of all or any portions of the Work, at Owner's election, by designating in writing to Design Builder the specific portions of the Work to be occupied and the date such occupancy shall commence. If any such specific early occupancy was not expressly identified at the time the Notice to Proceed was executed and such early occupancy negatively impacts Design Builder's cost or time of performance, Design Builder shall be entitled to an equitable adjustment to the Contract Amount and the Contract Time, all in accordance with the other terms and conditions of the Contract Documents.

28. SAFETY

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- A. Design Builder shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Design Builder shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
- A. All employees on or about the project site and other persons and/or organizations who may be affected thereby;
 - B. All the Work and materials and equipment to be incorporated therein, whether in storage on or off the Project site; and
 - C. Other property on Project site or adjacent thereto, including trees, shrubs, walks, pavements, roadways, structures, utilities and any underground structures or improvements not designated for removal, relocation or replacement in the Contract Documents.
- B. Design Builder shall comply with all applicable codes, laws, ordinances, rules and regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. Design Builder shall erect and maintain all necessary safeguards for such safety and protection. Design Builder shall notify owners of adjacent property and of underground structures and improvements and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation or replacement of their property. Design Builder's duties and responsibilities for the safety and protection of the Work shall continue until such time as the Work is completed and final acceptance of same by Owner has occurred.
- C. Design Builder shall designate a responsible representative located on a full time basis at the Project site whose duty shall be the prevention of accidents. This person shall be Design Builder's superintendent unless otherwise designated in writing by Design Builder to Owner.
- D. Alcohol, drugs and all illegal substances are strictly prohibited on any Owner property. All employees of Design Builder, as well as those of all Design Builder's subconsultants and subcontractors and those of any other person or entity for whom Design Builder is legally liable (collectively referred to herein as "Employees"), shall not possess or be under the influence of any such substances while on any Owner property. Further, Employees shall not bring on to any Owner property any gun, rifle or other firearm, or explosives of any kind.
- E. Design Builder acknowledges that the Work may be progressing on a Project site which is located upon or adjacent to an existing Owner facility. In such event, Design Builder shall comply with the following:
- A. All Owner facilities are smoke free. Smoking is strictly prohibited;
 - B. All Employees working at the Project site must log in and out with the Design Builder each day;
 - C. Design Builder shall strictly limit its operations to the designated work areas and shall not permit any Employees to enter any other portions of Owner's property without Owner's express prior written consent;
 - D. All Employees are prohibited from distributing any papers or other materials upon Owner's property, and are strictly prohibited from using any of Owner's telephones or other office equipment;
 - E. All Employees shall at all times comply with the OSHA regulations with respect to dress and conduct at the Project site. Further, all Employees shall comply with the dress, conduct and facility regulations issued by Owner's officials onsite, as said regulations may be changed from time to time;
 - F. All Employees shall enter and leave Owner's facilities only through the ingress and egress points identified in the site utilization plan approved by Owner or as otherwise designated, from time to time, by Owner in writing;
 - G. When requested, Design Builder shall cooperate with any ongoing Owner investigation involving personal injury, economic loss or damage to Owner's facilities or personal property therein;
 - H. The Employees may not solicit, distribute or sell products while on Owner's property. Friends, family members or other visitors of the Employees are not permitted on Owner's property; and
 - I. At all times, Design Builder shall adhere to Owner's safety and security regulations, and shall comply with all security requirements at Owner's facilities, as said regulations and requirements may be modified or changed by Owner from time to time.
 - J. At all times while at the Project site, all Employees shall refrain from any abusive or offensive language and shall refrain from the harassment of any Owner employee, agent or invitee on the Project site.

29. PROJECT MEETINGS

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Prior to the commencement of any Work, the Design Builder shall attend a conference with the Project Manager and others as appropriate to discuss the Master Project Schedule, procedures for handling design documents, shop drawings and other submittals, and for processing Applications for Payment, and to establish a working understanding among the parties as to the Work. During the prosecution of the Work, the Design Builder shall attend any and all meetings convened by the Project Manager with respect to the Project, when directed to do so by the Project Manager. The Design Builder shall have its subconsultants, subcontractors and suppliers attend all such meetings (including the pre-construction conference) as may be directed by the Project Manager.

30. MAINTENANCE OF TRAFFIC POLICY

For all projects that are conducted within a Pinellas County Right-of-Way, the Design Builder shall provide and erect Traffic Control Devices as prescribed in the current edition of the Manual On Uniform Traffic Control Devices (MUTCD), where applicable on local roadways and as prescribed in the Florida Department of Transportation Design Standards (DS), where applicable on state roadways. These projects shall also comply with Pinellas County's Maintenance of Traffic Policy, incorporated herein by reference. Copies are available through Owner's Risk Management.

The Design Builder will be responsible for obtaining copies of all required manuals, MUTCD, FDOT Roadway & Traffic Design Standards Indexes, or other related documents, so to become familiar with their requirements. Strict adherence to the requirements of the Maintenance of Traffic ("MOT") policy will be enforced under this Contract.

All costs associated with the Maintenance of Traffic shall be included within the Lump Sum Agreement.

If MOT is required, MOT is to be provided beginning with the Phase 2 Commencement Date.

31. SUBCONTRACTS

1. As the design is being developed by or for Design Builder, Design Builder shall review the design and shall determine how it desires to divide the sequence of construction activities. Design Builder will determine the breakdown and composition of bid packages for award of subcontracts, based on the current Master Project Schedule, and shall supply a copy of that breakdown and composition to Owner for its review and approval prior to submitting its Lump Sum Price proposal. Design Builder shall take into consideration such factors as natural and practical lines of severability, sequencing effectiveness, access and availability constraints, total time for completion, construction market conditions, availability of labor and materials, community relations and any other factors pertinent to saving time and costs.
2. A Subcontractor is any person or entity who is performing, furnishing, supplying or providing any portion of the Work pursuant to a contract with Design Builder, including any of the required design services. Design Builder shall be solely responsible for and have control over the Subcontractors. Design Builder shall negotiate all Change Orders, Work Directive Changes, Field Orders and Requests for Proposal, with all affected Subcontractors and shall review the costs of those proposals and advise Owner of their validity and reasonableness, acting in Owner's best interest, prior to requesting approval of any Change Order from Owner. All Subcontractors performing any portion of the Work on this Project must possess all licenses required by state or local law and must be "qualified," meaning a person or entity that has the capability in all respects to perform fully the Agreement requirements with respect to its portion of the Work and has the integrity and reliability to assure good faith performance.
3. When Design Builder submits its Lump Sum Price proposal to Owner, Design Builder shall identify all Subcontractors, including their addresses, licensing information and phone numbers, it intends to utilize for the Project. All Subcontractors must be approved by Owner prior to Design Builder entering into any subcontract or purchase order with them and prior to any Subcontractor commencing any work on the Project. The list identifying Subcontractors shall be attached as an Attachment to the Lump Sum Price proposal and cannot be modified, changed, or amended without prior written approval from Owner. Any and all Subcontractor work to be self-performed by Design Builder must be approved in writing by Owner in its sole discretion prior to commencement of such work. As additional Subcontractors may be approved by Owner after the Notice to Proceed is executed, Design Builder shall continuously update that Subcontractor list, so that it remains current and accurate throughout the entire performance of the Work.
4. Design Builder shall not enter into a subcontract or purchase order with any Subcontractor, if Owner reasonably objects to that Subcontractor. Design Builder shall not be required to contract with anyone to whom it reasonably objects. Design Builder shall keep on file a copy of the license for every Subcontractor and sub-subcontractor performing any portion of the Work, as well as maintain a log of all such licenses. All subcontracts and purchase orders between Design Builder and its Subcontractors shall be in writing and are subject to Owner's approval.

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Further, unless expressly waived in writing by Owner, all subcontracts and purchase orders shall (1) require each Subcontractor to be bound to Design Builder to the same extent Design Builder is bound to Owner by the terms of the Contract Documents, as those terms may apply to the portion of the Work to be performed by the Subcontractor, (2) provide for the assignment of the subcontract or purchase order from Design Builder to Owner at the election of Owner upon termination of Design Builder, (3) provide that Owner will be an additional indemnified party of the subcontract or purchase order, (4) provide that Owner will be an additional insured on all liability insurance policies required to be provided by the Subcontractor except workman's compensation and professional liability policies, (5) assign all warranties directly to Owner, and (6) identify Owner as an intended third-party beneficiary of the subcontract or purchase order. Design Builder shall make available to each proposed Subcontractor, prior to the execution of the subcontract, copies of the Contract Documents to which the Subcontractor will be bound. Each Subcontractor shall similarly make copies of such documents available to its sub-subcontractors.

5. All Subcontractors providing any construction services must agree to provide field (on-site) supervision through a named superintendent for each trade (e.g., general concrete forming and placement, masonry, mechanical, plumbing, electrical and roofing) included in its subcontract or purchase order. In addition, the Subcontractor shall assign and name a qualified employee for scheduling direction for its portion of the Work. The supervisory employees of the Subcontractor (including field superintendent, foreman and schedulers at all levels) must have been employed in a supervisory (leadership) capacity of substantially equivalent level on a similar project for at least two years within the last five years. The Subcontractor shall include a resume of experience for each employee identified by it to supervise and schedule its work.
6. Unless otherwise expressly waived by Owner in writing, all subcontracts and purchase orders shall provide:
 - A. That the Subcontractor's exclusive remedy for delays in the performance of the subcontract or purchase order caused by events beyond its control, including delays claimed to be caused by Owner or attributable to Owner and including claims based on breach of contract or negligence, shall be an extension of its contract time.
 - B. In the event of a change in the work, the Subcontractor's claim for adjustments in the contract sum are limited exclusively to its actual costs for such changes plus no more than 10% for overhead and profit.
 - C. The subcontract or purchase order, as applicable, shall require the Subcontractor to expressly agree that the foregoing constitute its sole and exclusive remedies for delays and changes in the Work and thus eliminate any other remedies for claim for increase in the contract price, damages, losses or additional compensation. Further, Design Builder shall require all Subcontractors to similarly incorporate the terms of this Section 31.6 into their sub-subcontracts and purchase orders.
7. Each subcontract and purchase order shall require that any claims by Subcontractor for delay or additional cost must be submitted to Design Builder within the time and in the manner in which Design Builder must submit such claims to Owner, and that failure to comply with such conditions for giving notice and submitting claims shall result in the waiver of such claims.

32. DESIGN BUILDER RESPONSIBILITIES

Design Builder shall provide the following review and commentary services, in addition to any other work required by the terms of this Contract:

1. Allowances. The Lump Sum Price for Phase 2 may include Allowances with respect to the work.. Design Builder may expend Allowance money (up to the amount designated) only with the express prior written approval of Owner.
2. Responsibility for Work. Notwithstanding any requirements herein for Owner's review, inspection, consent or approval, the parties acknowledge and agree that Design Builder shall be solely responsible and liable for the proper performance of the Work as provided for herein.
3. Notices and Compliance with Law. Design Builder shall be responsible for giving all notices and for complying with all laws, ordinances, rules, regulations and lawful orders of any public authorities having jurisdiction over the particular portion of the Project with respect to the performance of the subject Work. The Master Project Schedule for the subject Work and the Lump Sum Price associated therewith shall be based upon the laws, ordinances and regulations which are then in effect on the date the Notice to Proceed is executed. Any changes in laws, ordinances or regulations thereafter that require additional work outside Design Builder's established scope shall be the subject of a Change Order as provided in section 14.1 of these General Terms and Conditions.

EXHIBIT H - GENERAL TERMS AND CONDITIONS

4. Indemnification for Infringement. Design Builder shall pay all royalty and license fees required for the design and construction of any portion of the Project assigned to it. To the maximum extent permitted by law, Design Builder shall defend any and all suits or claims for infringement of patent rights and shall indemnify and save Owner harmless from all loss or expense on account thereof (including attorneys' and paralegals' fees).
5. Review, Recommendations and Warranty: Design Builder shall familiarize itself thoroughly with the evolving architectural, civil, mechanical, plumbing, electrical and structural plans and specifications being prepared by its Design Professionals and shall follow the development of the Project design through all required design sub-phases in Phase 1. Design Builder shall make recommendations with respect to the selection of systems and materials, and cost-reducing alternatives including assistance to Owner in evaluating alternative comparisons versus long term cost effects. The evaluation shall address the benefits of the speed of erection and early completion of the Work. Design Builder shall furnish pertinent information as to the availability of materials and labor that will be required. Design Builder shall submit to Owner such comments as may be appropriate concerning construction feasibility and practicality. Design Builder shall call to Owner's attention any defects in the design, drawings and specifications or other documents of which it is aware. Design Builder shall prepare estimates of the construction cost utilizing the unit quantity survey method in the CSI format. These estimates shall be performed at the completion of the Preliminary Design which shall be called 30% Price Model, followed by the completion of Design Development, which shall be followed by the setting of the Lump Sum Price based on the 60% Design.
6. Review Reports: Within ten (10) days after receiving the documents produced by its Design Professionals, Design Builder shall perform a specific review thereof, focused upon factors of a nature encompassed in Paragraph 34.5 above and on factors set out in Paragraphs 34.7 and 34.8 below. Within the same ten (10) day period, Design Builder shall submit to Owner a written report covering suggestions or recommendations previously submitted, additional suggestions or recommendations as Design Builder may deem appropriate, and all actions taken by Design Builder with respect to same, any comments Design Builder may deem to be appropriate with respect to separating the Work into separate subcontracts, alternative materials, and any other appropriate or required comments.
7. THE DESIGN BUILDER SHALL BE DEEMED TO HAVE WARRANTED TO OWNER, THAT THE CONSTRUCTION DOCUMENTS ARE CONSISTENT WITH EACH OTHER, PRACTICAL, FEASIBLE AND CONSTRUCTABLE FOR THE CONTRACT AMOUNT. FURTHER, THE DESIGN BUILDER SHALL BE DEEMED TO HAVE WARRANTED TO OWNER THAT THE WORK DESCRIBED IN THE CONSTRUCTION DOCUMENTS IS CONSTRUCTABLE WITHIN THE CONTRACT TIME, AND THAT NO ADDITIONAL SITE INVESTIGATION IS NECESSARY OR DESIRED BY DESIGN BUILDER.
8. Long Lead Procurement: Design Builder shall review the Project design for the purpose of identifying long lead procurement items (machinery, equipment, materials and supplies) and consult with the Project Manager concerning same. When each item is identified, Design Builder shall notify the subcontractors and Owner of the required procurement and schedule. Such information shall be included in the bid documents and made a part of all affected subcontracts. Design Builder shall keep itself informed of the progress of the respective subcontractors or suppliers, manufacturing or fabricating such items, and advise Owner of any problems or possible delays in delivery.
9. Interfacing:
 - A. Design Builder shall take such measures as are appropriate to provide that all construction requirements will be covered in the separate procurement of long lead items, the separate construction subcontractors and the general conditions items without duplication or overlap, and sequenced to maintain completion of all Work on schedule. Particular attention shall be given to provide that each bid package clearly identifies the Work included in that particular separate subcontract, its schedule for start and completion and its relationship to the other separate subcontractors.
 - B. Design Builder shall include in the reports required under Paragraph 32.6 above, comments on overlap with any other separate subcontracts, omissions, lack of correlation between drawings, and any other deficiencies noted, in order that Design Builder may arrange for necessary corrections.

33. OWNER'S RESPONSIBILITIES

1. Design Criteria Package. Owner has provided Design Builder with the Design Criteria Package and will provide responses or clarification within a reasonable period of time to Design Builder's inquiries with respect to the Design Criteria Package.

EXHIBIT H - GENERAL TERMS AND CONDITIONS

2. Owner's Representative. Owner designates **Kerstin Kenty** as Project Manager who shall be fully acquainted with the scope of the Work and authorized to act on Owner's behalf with respect to Design Builder's services for the Project. Provided, however, that Project Manager is not authorized to issue any orders or instructions to Design Builder that would have the effect, or be interpreted to have the effect, of modifying or changing in any way whatsoever the: (1) scope of services to be provided and performed by Design Builder hereunder; (2) the time Design Builder is obligated to commence and complete all such services; or (3) the amount of compensation Owner is obligated or committed to pay Design Builder. As set forth herein, Project Manager shall review and make appropriate recommendations on all requests submitted by Design Builder for payment for services and work provided and performed in accordance with this Agreement.

34. MARKET ANALYSIS AND SOLICITATION OF BIDS

1. The purpose of this Paragraph is to insure that Design Builder makes a genuine effort to stimulate subcontractor interest in the Project and maximize participation of potential qualified subcontractors in the bidding process. At all times Owner shall have access to and the right to require copies of all correspondence, records, files and other bid documents (including all bid responses) with respect to the bidding process. Further, Design Builder shall notify Owner of the date, time and place of all bid openings and Owner shall have the right to attend any and all such bid openings. All bid openings shall be conducted in Pinellas County, Florida.
 - A. Design Builder shall monitor conditions in the construction market to identify factors that will or may affect costs and time for completing the Work; Design Builder shall make an analysis as necessary to (i) determine and report on availability of labor, materials, equipment, potential bidders, and possible impact of any shortages or surpluses of labor or material, and (ii) in light of such determination, make recommendations and take action as may be appropriate with respect to long lead procurement, separation of construction into bid packages, sequencing of Work, use of alternative materials, equipment or methods, other economics in design or construction, and other matters that will promote cost savings and completion within the Contract Time.
 - B. Within thirty (30) days after execution of this Contract, Design Builder shall submit a written "Construction Market Analysis and Prospective Bidders Report" setting out recommendations and providing information as to prospective bidders. As various bid packages are prepared for bidding, Design Builder shall submit to Owner a list of potential bidders for its review and approval. Design Builder shall be responsible for promoting and encouraging bid competition.
 - C. Design Builder shall carry out an active program of stimulating interest of qualified subcontractors in bidding on the Work and of familiarizing those bidders with the requirements of this Project.
2. Design Builder shall prepare invitations for bids and all other appropriate bid documents for all procurement of long lead items, materials and services, for subcontractor contracts and for site utilities. All such invitations for bids and bid packages shall be submitted to Owner for its review and approval prior to distribution to bidders.
 - A. Except as hereafter provided in Paragraph 34.3, all subcontracts are to be awarded to the lowest responsive and responsible bidder.
 - B. Design Builder shall procure the lump sum price through a competitive bid process. Design Builder shall obtain at least three bids, wherever possible, and shall provide all associated documentation to Owner within a reasonable time after receipt of Owner's written request.
3. Notwithstanding the provision above requiring award of subcontracts to the lowest responsive and responsible bidder, Design Builder may award a subcontract to someone other than the lowest responsive and responsible bidder provided Design Builder has first received Owner's express written consent to such award. Owner's consent to any such award will be at Owner's sole discretion. Whenever Design Builder wishes to award a subcontract to someone who is not the lowest responsive and responsible bidder, Design Builder must notify Owner in writing, setting out in detail the reasons and justifications for the suggested award.
4. To the extent that Design Builder desires to self-perform any portion of the Work, Design Builder shall obtain Owner's written approval and at least three (3) written sealed bids from subcontractors not affiliated with Design Builder.

35. SECURING AGREEMENT

1. Design Builder warrants that Design Builder has not employed or retained any company or person, other than a bona fide employee working solely for Design Builder, to solicit or secure this Contract and that Design Builder has not paid or agreed to pay any person, company, corporation, individual or firm, other than a bona fide

EXHIBIT H - GENERAL TERMS AND CONDITIONS

employee working solely for Design Builder, any fee, commission, percentage, gift or any other consideration contingent upon or resulting from the award or making of this Contract. At the time this Contract is executed, Design Builder shall sign and deliver to Owner the Truth-in-Negotiation Certificate attached hereto and made a part hereof as Exhibit R. The Design Builder's compensation shall be adjusted to exclude any sums by which Owner determines the compensation was increased due to inaccurate, incomplete, or non-current wage rates or other factual unit costs.

36. PUBLIC ENTITY CRIMES

1. DESIGN BUILDER is directed to the Florida Public Entity Crime Act, Fla. Stat. 287.133, and Fla. Stat. 287.135 regarding Scrutinized Companies, and DESIGN BUILDER agrees that its bid and, if awarded, its performance of the agreement will comply with all applicable laws including those referenced herein. DESIGN BUILDER represents and certifies that DESIGN BUILDER is and will at all times remain eligible to bid for and perform the services subject to the requirements of these, and other applicable, laws. DESIGN BUILDER agrees that any contract awarded to DESIGN BUILDER will be subject to termination by the County if DESIGN BUILDER fails to comply or to maintain such compliance.

37. PUBLIC RECORDS

1. Contractor acknowledges that information and data it manages as part of the services may be public records in accordance with Chapter 119, Florida Statutes and Pinellas County public records policies. Contractor agrees that prior to providing services it will implement policies and procedures to maintain, produce, secure, and retain public records in accordance with applicable laws, regulations, and County policies, including but not limited to the Section 119.0701, Florida Statutes. Notwithstanding any other provision of this Agreement relating to compensation, the Contractor agrees to charge the County, and/or any third parties requesting public records only such fees allowed by Section 119.07, Florida Statutes, and County policy for locating and producing public records during the term of this Agreement.

If the contractor has questions regarding the application of Chapter 119, Florida Statutes, to the contractor's duty to provide public records relating to this agreement, the contractor shall contact:

Pinellas County Board of County Commissioners

Purchasing and Risk Management Division

400 S. Ft. Harrison Ave, 6th Floor,

Clearwater, FL 33756

Public Records Liaison

Phone: 727-464-5139

Email: wharvey@pinellas.gov

EXHIBIT I - SUPPLEMENTAL TERMS AND CONDITIONS**EXHIBIT I - SUPPLEMENTAL TERMS AND CONDITIONS**

The following Supplemental Terms and Conditions hereby amend, modify and supersede in the event of a conflict the terms of the Agreement and the General Terms and Conditions attached thereto as Exhibit H.

A. Reports**1. Monthly Summary Reports:**

- 1.1 The Design Builder shall prepare monthly written reports as described hereunder. All reports shall be in 8 1/2" x 11" format.
- 1.2 The Reports shall include the following:
 - a. A Monthly Executive Summary which provides an overview of current issues and pending decisions, future developments and expected achievements, and any problems or delays, including code violations found by any permitting authority.
 - b. A Monthly Scheduling Report summarizing the current status of the overall Master Project Schedule and an explanation of all variances from the plan. This report shall include an analysis of the various Project sub-schedules, a description of the critical path, and other analyses as necessary to compare planned performance with actual performance.
 - c. A Monthly Design and Construction Progress Report during the Phase 1 and Phase 2 summarizing the Work of the various subconsultants and subcontractors. Once construction at the site commences, this report shall include information from the weekly job site meetings as applicable such as general conditions, long lead supplies, current deliveries, safety and labor relations, programs, permits, construction problems and recommendations, and plans for the succeeding month.
- 1.3 The Reports outlined in subparagraphs 1.2.1 through 1.2.3 above shall be bound with applicable computer schedule reports and submitted monthly during Phase 1 and Phase 2 and shall be current through the end of the preceding month. Copies shall be delivered to the Owner. A bound copy of the complete diary shall be submitted to the Owner at the conclusion of the Project. An electronic pdf file of each Progress Report shall be delivered to the Owner's Representative each month.

2. Schedule Control Subsystem.

- 2.1 Master Project Schedule: Prior to the submittal of its first Application for Payment, the Design Builder shall submit to the Owner for its review and approval a Master Project Schedule covering the planning and design approvals, construction, and Owner occupancy of the Project. This schedule shall conform to the format outlined in Paragraph 2.3 below. This schedule shall serve as the framework for the subsequent development of all detailed schedules and shall be updated monthly by the Design Builder throughout the Project. Within fifteen (15) calendar days of the Design Builder's submittal, the Owner shall review the schedule and provide the Design Builder a written list of corrections needed to approve the schedule. The Design Builder must make all corrections and resolve all comments within thirty (30) calendar days after its receipt of Owner's comments. If the schedule is not approved within said thirty (30) calendar days, the Owner will withhold all Contract payments until the schedule is approved. The acceptance of the schedule by the Owner in no way attests to the validity of the assumptions, logic constraints, dependency relationships, resource allocations, manpower and equipment, and any other aspect of the proposed schedule. The Design Builder is and shall remain solely responsible for the planning and execution of all Work in order to meet Project milestones or Contract completion dates.
- 2.2 Construction Schedule: The Design Builder shall prepare and submit to the Owner, for its review and approval, a Construction Schedule. This schedule shall conform to the format outlined in Paragraph 2.3 below. The approved Construction Schedule shall be attached.. The Construction Schedule shall be integrated into the Master Project Schedule.
 - a. Following development and approval of the Construction Schedule as aforesaid, the Design Builder shall, at the end of each calendar month occurring thereafter during the period of time required to finally complete the Project, or at such earlier intervals as circumstances may require, update and/or revise the Construction Schedule which shall be submitted to the Owner in duplicate. No additional compensation will be due the Design Builder for making such updates. Failure of the Design Builder to update, revise, and submit the Construction Schedule as aforesaid shall be sufficient grounds for the Owner to find the Design Builder in substantial default hereunder and that sufficient cause exists

EXHIBIT I - SUPPLEMENTAL TERMS AND CONDITIONS

to terminate the Contract or to withhold payment to the Design Builder until a schedule or schedule update acceptable to the Owner is submitted.

3. **Schedule Format:** The Master Project Schedule and the Construction Schedule shall be planned and recorded with a Critical Path Method (CPM) schedule in the form of an activity-on-node diagram. All activity-on-node diagrams shall include the Activity Identification, Activity Description, and the type of relationship between activities, including any lead or lag time.
4. **Recovery Schedule:** If the initial schedule or any current updates fail to reflect the Work's actual plan or method of operation, or a contractual milestone date is more than fifteen (15) days behind, the Owner may require that a recovery schedule for completion of the remaining Work be submitted. The Recovery Schedule must be submitted within seven (7) calendar days of the Owner's request. The Recovery Schedule shall describe in detail the Design Builder's plan to complete the remaining Work by the required Contract milestone date. The Recovery Schedule submitted shall meet the same requirements as the original Construction Schedule. The narrative submitted with the Recovery Schedule should describe in detail all changes that have been made to meet the Contract milestone dates.
5. **Change Orders:** When a Change Order is proposed, the Design Builder must identify all logic changes as a result of the Change Order. The Design Builder shall include, as part of each Change Order proposal, a sketch showing all schedule logic revisions, duration changes, and the relationships to other activities in the approved Construction Schedule. This sketch shall be known as the fragnet for the change. Upon acceptance of the fragnet, the Design Builder will revise the Construction Schedule or current update. The logic changes required by the Change Order will be considered incidental to the Design Builder's work. No separate payment will be made.

B. PROGRESS PAYMENTS

1. **Retainage:**
 - 1.1 The five percent (5%) retainage referenced in Section 4.6 of the General Conditions shall not be applied to this Project during Phase 1



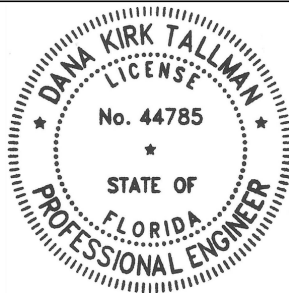
PINELLAS COUNTY, FLORIDA

**Pump Station No. 16 Improvements
Design/Build Project**

Technical Memorandum No. 2

PID #004360A

This item has been digitally signed and sealed by Dana K. Tallman on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on electronic copies.



Dana Kirk Tallman

Digitally signed by Dana Kirk Tallman
DN: C=US, E=tallmand@cdmsmith.com,
O=CDM Smith Inc., OU=NAU South,
CN=Dana Kirk Tallman
Date: 2024.02.19 16:05:53-05'00'

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(813) 281-2900
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Prepared February 2024



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Attachment 4 - Pump Station 016 Odor Control System Replacement As-Built Drawings (Arcadis, April 2020)	
Attachment 5 - Odor Control System Assessment (V&A Consulting Engineers, October 4, 2023) and Odor Control System Components Cost Proposed (BioAir, September 27, 2023)	

Section 1

Project Overview

Pinellas County Utilities (County) owns and operates Pump Station No. 16 (PS-16) on Park Boulevard near the southern shore of Lake Seminole in Seminole, Florida. The physical address of the facility is:

Pinellas County Pump Station No. 16
10548 Park Boulevard
Seminole, Florida 33772

PS-16 is a master wastewater pump station that conveys wastewater to the County's South Cross Bayou Advanced Water Reclamation Facility (SCBAWRF) located at 7401 54th Avenue North in St. Petersburg. PS-16 collects wastewater from four different collection basins and can convey up to 30 million gallons per day (MGD) to the SCBAWRF. It is a critical component of the County's wastewater transmission system.

The primary components of the pump station include:

1. Influent gravity sewer piping.
2. Asphalt parking, concrete sidewalks, and landscaping.
3. Influent sewer flow splitter containing eight slide (sluice) gates.
4. Two wetwells, each containing three variable-speed 250-hp submersible pumps.
5. Discharge piping, valves, and flow meters located in below grade vaults and connecting to a discharge force main.
6. An odor control system.
7. Backup diesel-engine driven generators.
8. A pump station building which includes an electrical room, a generator room, and a third room that formerly contained chemical feed pumps.
9. A masonry wall enclosure (no roof) that contains components of the odor control system.

The County desires to make repairs to PS-16 and to make other modifications that will improve functionality and reliability and will facilitate maintenance activities. The base improvements for the PS-16 Design/Build Project shall include the following construction:

- Six (6) new 250 horsepower Flygt N-Series submersible pumps to replace existing pumps
- New pump discharge riser piping, guiderails, and base elbow within existing wetwells

- New above-grade pump discharge piping, valves, fittings, and flow meters (and removal of existing piping, valves, and flow meters from below-grade valve vaults and flow meter vaults)
- Removal of six (6) existing sluice gates from influent splitter box and modification of the lift system for two (2) existing sluice gates to remain
- Yard piping modifications
- Odor control system modifications
- Expanded enclosed courtyard area
- New 480 volt electrical switchgear, two (2) new diesel-engine driven standby generators, new variable frequency drives (VFDs), and miscellaneous other electrical improvements
- Two (2) new diesel-engine driven bypass pumps, associated suction and discharge piping, and suction vault/manhole
- Instrumentation modifications
- Architectural modifications
- HVAC modifications
- Structural modifications

This document has been developed to describe the proposed improvements to PS-16, to provide preliminary design criteria for the proposed improvements, and to describe the scope of services to be provided by the Design-Build Team selected by the County. The Design-Build Team will be responsible for the preliminary and final design of the proposed improvements, and for construction of the scope items described herein. A more complete description of the responsibilities of the Design-Build Team is provided in Section 2 of this document.

The Design-Build Team must be licensed to practice as a general contractor in the State of Florida pursuant to Chapter 489 Florida Statutes by the submittal date for proposals.

The design of the improvements to PS-16 shall, at a minimum, meet the requirements of:

- Recommended Standards for Wastewater Facilities (a.k.a. Ten-States Standards), latest edition, A Report of the Wastewater Committee of The Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers (GLUMRB)
- Florida Administrative Code
- Class I Reliability requirements identified in the Design Criteria for Mechanical, Electric, and Fluid System and Component Reliability (MCD-05) (EPA-430-99-74-001), latest edition
- Hydraulic Institute Standards

- Pinellas County Material Specification Manual
- Pinellas County Standard Specifications for Utilities and Related Construction
- FM Global Standards and Requirements
- Florida Building Code, latest edition
- Florida Department of Business and Professional Regulations – Florida Approved Products list.
- NEC, latest edition
- NFPA 820, (Standard for Fire Protection in Wastewater Treatment and Collection Systems) requirements, latest edition
- OSHA Regulations
- UL 1558 – Standard for Metal-Enclosed Low-Voltage Power Circuit Breaker Switchgear
- ANSI/IEEE C37.20.1 – Standard for Metal-Enclosed Low-Voltage power Circuit Breaker Switchgear

Photographs of the existing facility are provided in **Attachment 1**. Conceptual drawings of the proposed improvements are provided in **Attachment 2**. Record (or “As-Built”) drawings of the existing facility are included in **Attachments 3 and 4**. An assessment of the existing odor control system by V&A Consulting Engineers and a cost proposal from BioAir to provide components required for proposed odor control system modifications are provided in **Attachment 5**.

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Section 2

Design Builder Scope of Services

The contract for DB services will consist of a Pre-Construction Services Phase and a Construction Services Phase. The Pre-Construction Services Phase will include final design, permitting, value engineering, constructability analysis, preliminary MOPO plans/construction sequencing, estimating, scheduling, and the development of a GMP at the completion of design development.

The Construction Services Phase shall include mobilization/demobilization, permitting, shop drawing submittals, procurement, implementation of MOPO plans/sequencing of work, installation, testing, start-up and commissioning, certifications, record drawings and O&M manuals, and County's acceptance.

The County's objectives for delivery of the Project are as follows:

- Design and construct system components, structures, and equipment that will provide a high level of reliability and the lowest level of maintenance cost and effort.
- Achieve the agreed upon scheduled completion date, including all interim milestones.
- Control project capital costs, while achieving operations, quality, and schedule objectives.
- Implement an effective safety program incorporating best industry standards. Implement a security protocol that will ensure a safe environment that will protect the premises, property and systems, and individuals.
- With exceptions of brief partial shutdowns required to make connections between existing piping and new piping, maintain the required pumping capacity throughout the construction period.

2.1 Pre-Construction Phase Services

The Pre-Construction Services phase shall be broken into a Preliminary Design Development Tasks and Final Design Development Tasks. The Preliminary Design Development tasks will include:

1. Provide schedule management of preconstruction phase services.
2. Conduct early, integrated, design work sessions with all related disciplines and users as part of project kick off to capture design and innovation opportunities that meet the objectives of the project while considering the constraints imposed by requirements for maintenance of plant operations (MOPO) and by site limitations.
3. Conduct site investigation and analysis. Provide necessary geotechnical investigations, soils classification and geotechnical recommendations. Provide field surveying to augment the existing information.

4. Provide design engineering and value analysis.
5. Identify all permits required for this project.
6. Provide conceptual design documents for the Improvements components to the County for review and comment.
7. Check design for sustainability and resiliency elements and link to Envision framework and documentation responsibilities.
8. Provide preliminary cost for schematic concepts and project phasing and sequencing. Provide work packages that may be bid out separately to accommodate project sequencing.
9. Facilitate and participate in all meetings required by the contract or requested by the County.

The Final Design Development Tasks will include:

1. Based on feedback from the County and the Design Criteria Professional/Owner's Advisor, prepare design development drawings in a sufficient level of detail to relay the overall project intent and included elements for review and approval by the County.
2. Provide detailed cost estimates and updated project phasing and sequencing.
3. Apply for and receive all environmental permits required for the performance of this work.
4. Facilitate and participate in all meetings required by the contract or requested by the County.
5. Develop GMP proposal upon completion of the Design Development Documents and approval by the County for all the Work (or such portions thereof as may be agreed upon by the County).
6. Provide final project phasing and sequencing schedule.
7. Provide signed and sealed construction drawings and specifications for all Work.
8. Provide phasing and shutdown/startup plans.
9. Facilitate and participate in all meetings required by the contract or requested by the County.

2.2 Construction Services Tasks

The Construction Phase Services will include, but not be limited to, the following:

1. Provide schedule development, management, and control.
2. Attend and participate in all meetings required by the contract or requested by the County.
3. Provide all labor, materials (including taxes), delivery and equipment required to construct the project according to the approved construction drawings and specifications.
4. Provide survey and engineering services necessary to layout, construct and document the Work.
5. Obtain and pay for all construction permits, licenses, inspection fees, and governmental charges necessary for the prosecution of the Work.
6. Coordinate with County operations and maintenance staff to ensure that the capacity to transmit wastewater to the SCBAWRF is not reduced during construction, with exception of brief periods of reduced capacity to complete connections between new and existing piping.
7. Maintain complete and accurate records of all activities related to construction (e.g. daily reports, progress meetings minutes, request for information, contingency expenditure logs, and change orders including all back-up data)..
8. Provide monthly photographs and construction progress photographs to effectively document the work in progress.
9. Coordinate with County Communications Staff regarding Public Outreach as required.
10. Manage safety/quality control programs.
11. Maintain construction traffic to ensure a safe working environment and to ensure that access by the County's operations and maintenance personnel is not impeded.
12. Provide start-up and commissioning, including operation and maintenance (O&M) manuals. Complete startup services shall be provided by a licensed engineer. The O&M manuals shall be provided in both hard copy and electronic format.
13. Provide operator training of new equipment along with video recording for each topic. Duplicate (or more) training sessions shall be provided to accommodate O&M staff from different shifts.
14. Provide Equipment Manufacturer's certification of satisfactory installation and start-up.
15. Provide programming services by County approved system integrator

16. Provide close-out/ warranty period services.
17. Provide Record Drawings. Update Record Drawings no less than monthly during the construction of the project and provide the Engineer of Record with redlined drawings by substantial completion date. Record Drawings shall be provided in both full-size hard copy and electronic format.

Section 3

Required Improvements and Repairs

This section of the DCP provides descriptions of, and design criteria relating to, the required improvements to PS-16. The descriptions and design criteria are organized by design discipline.

3.1 Process Mechanical

The required process mechanical improvements include the following:

- Replacement of existing submersible pumps, guiderails, and discharge riser piping located within the wet wells.
- Removal of six of the eight existing slide gates from the influent structure and modifications of the lifting configuration for the remaining two gates.
- Replacement/reconfiguration of the existing discharge piping and valves to provide above-ground valves and flow meters.
- Modifications of the existing odor control system.
- Installation of new diesel-engine driven backup pumps.
- Installation of monorail hoists to facilitate pump removal.

Design criteria related to these proposed process mechanical improvements is provided in the following subsections.

3.1.1 Pumps, Discharge Piping, Valves, and Flow Meters

Each of the two wetwells contains three 250-hp submersible pumps. The pumps are powered through variable frequency drives (VFDs). Plan and section views of the existing influent splitter box and wet wells are provided on preliminary process mechanical drawing Sheets M-1 and M-2.

Discharge piping from each set of three pumps manifold into a common discharge header and electromagnetic flow meter (all located in below-grade vaults) then combines with the manifolded piping from the other set of three pumps.

The proposed modifications include:

1. Removal and replacement of the existing submersible pumps (new pumps shall be Flygt N-Series), discharge base elbows, guiderails, discharge riser piping, and existing wall pipes (new discharge riser pipes and connecting fittings shall be Type 316 stainless steel).
2. Saw-cutting and removal of the top slabs of the valve vaults and flow meter vaults (including eight access hatches) and saw-cutting and removal of portions of the existing

wet well/valve vault divider walls as required to remove and replace existing wall pipes.

3. Removal of the existing discharge piping and valves from the valve vaults and flow meter vaults.
4. Construction of new above-grade piping, valves, and electromagnetic flow meters.
5. Fill the below grade portions of the existing valve and flow meter vaults.

Plan and section views related to the proposed modifications are provided on preliminary drawing Sheets C-2, C-3, and M-3 through M-6.

3.1.2 Monorail Hoist System

Two monorail hoists systems, each spanning over the pump hatches (as shown on Sheets C-3 and M-5 of the preliminary drawings) should be provided. It should be noted that the northern support columns for both monorail hoists would fall directly in front of existing door openings. Relocation of these doors (as further discussed further below under the “Architectural” subheading), would be required. Also, as shown on Sheet C-3, the existing pad-mounted electrical transformer would also need to be relocated. Addition of two moving overhead crane systems (in lieu of new monorail hoist systems), each spanning over a wet well and the associated discharge piping system, appears less feasible due to the space limitations in this area. However, if the discharge piping and valves are relocated above grade (as proposed and as shown on the preliminary drawings), the need for a hoist system spanning over the discharge piping and valves may be less critical.

3.1.3 Influent Slide Gates

The influent splitter box structure is located immediately ahead of the wet wells and includes two primary channels and two bypass channels and eight slide (sluice) gates. The slide gates are equipped with non-rising stems and actuators. The actuators are located within shallow concrete boxes that are integral to, and suspended from, the top slab of the influent structure. The actuators are accessed through access hatches.

Record drawings for the pump station show two grinders located in the influent splitter structure. These grinders have previously been removed.

Six of the eight existing slide gates shall be removed. The two slide gates that are to remain allow isolation of one the two wetwells (and three pumps) while the other wetwell (and three pumps) remains in service.

The slide gate plates of the six existing slide gates to be removed can likely be disconnected from the gate stems and removed through the hatch openings that are located above the previously removed grinders. Alternatively, the suspended shallow vaults located above each of these six slide gates could be demolished and gates removed through these hatches.

The existing gate stems and actuators (currently located within concrete vaults suspended from the top slab) for the two slide gates that are to remain shall be replaced with rising stems and electric actuators located above grade. The new rising stems and actuators for these two slide

gates will be inside the projection of the clear opening of the south (double) doors of the electrical room. Because these double doors are intended to allow for installation and removal of large electrical gear, the rising stem, actuator, and floor stand should be configured to be removable. It is likely that this modification will entail removing the leaves of the existing hatches and installing reinforced plate that will serve both as a cover over the openings and to support the actuator floor-stand. The new rising stems should also be segmented with couplings to facilitate removal of the rising stem when needed.

3.1.4 Diesel-Engine Driven Pumping System

The pump station currently does not include a backup diesel-engine driven pumping system. The project includes installation of a diesel-engine driven pumping system with capacity to be considered fully redundant to one set of three electrical submersible pumps (approximately 15 mgd).

The addition of a functional diesel-engine driven backup pumping system will require construction of a new junction box/manhole connected to the existing 36-inch influent gravity sewer system from which the backup pumps can draw suction. This junction box/manhole should be located somewhere within the expanded enclosed courtyard area discussed in Section 3.2. As shown on Sheets C-3 and M-5 and further discussed in Section 3.2, discharge piping from the proposed diesel-engine driven pumps should connect directly to the 36-inch discharge force main.

3.1.5 Odor Control System Modifications

The existing odor control system includes a first stage biotrickling filter, a second-stage ozone contactor, and a third-stage upflow dry media vessel (activated carbon and permanganate-impregnated alumina). The system was sized for an air-flow rate of 3,500 cubic feet per minute (cfm).

An assessment of the existing system has been performed by V&A Consulting Engineers (included in Attachment 5). According to the assessment, the third-stage dry media vessel was originally intended as a backup for situations where the trickling filter and ozone contactor were not performing as intended. The County has experienced significant operational and performance issues with the ozone contactor, which has resulted in higher organic odor loading on the third-stage dry media vessel and significant reduction of the media life. V&A has recommended that the existing ozone contactor be removed and replaced with a new second-stage biotrickling filter (to be operated in series with the existing first-stage biotrickling filter) and that a second 3,500 cfm dry media vessel be added in parallel with the existing dry media vessel (to provide a redundant third stage).

The removal of the existing second-stage ozone contactor will create adequate space to allow installation of the proposed new second-stage biotrickling filter, duct work, and ancillary components within the area enclosed by the existing masonry screen wall. The proposed new parallel third-stage dry media vessel and ancillary components will likely need to be placed to the north of the existing masonry screen wall, within the limits of the proposed new masonry screen wall enclosure.

3.2 Civil

3.2.1 Overall Site Layout

The pump station is located within a parking lot of a commercial shopping center. An aerial image of the existing pump station is included on Sheet G-2 of the preliminary drawings and the existing site plan is shown on Sheet C-1 of the preliminary drawings.

On the east, west, and south sides of the pump station, only relatively narrow strips of landscaping and concrete sidewalks separate the pump station building, walled enclosure, and top slabs of the wetwells, valve vaults, and meter vaults from parking stalls that are used by the public. Significant separation between the pump station and the public parking areas and driveways exists only on the north side of the existing wall-enclosed courtyard area.

Access for operation and maintenance shall be appropriately considered and provided in the design layout of the proposed improvements.

Because of space limitations on the south side of the pump station, the proposed diesel-engine driven backup pumping system (further discussed in Section 3.1), diesel-engine driven generators (further discussed in Section 3.3), and fuel storage tanks should be located on the north side of the site. New masonry walls should be constructed (beyond the existing masonry walls) to enclose additional area (see preliminary drawing Sheet C-3).

The expansion of the enclosed courtyard area to the north of the site will displace existing staff parking. These parking spaces can be recreated further to the north, immediately north of the new masonry wall.

The engine-driven diesel backup pumps and diesel-engine generators should be installed on concrete slabs on grade. The diesel-engine driven generators and diesel-engine driven backup pumps should be located above flood elevations.

New vinyl-coated chain link perimeter fencing should be provided to protect facilities that are exposed above-grade but located outside of buildings or the enclosed courtyard.

3.2.2 Yard Piping

The influent gravity sewers enter the pump station site from the north and from the east. The gravity sewer entering from the north deflects through several manholes around the east side of the pump station then merges with the influent gravity sewer from the east. A terminal manhole is located a short distance south of the influent structure within the asphalt parking area.

Discharge piping from each set of three pumps combines into a common 36-inch force main system which extends east from the pump site. This force main then branches to become two parallel force mains which continue to the SCBAWRF (approximately 19,000 linear feet). One of these two parallel force mains was recently constructed as a replacement for one of two older parallel force mains.

Yard piping modifications are required to:

1. connect the new diesel-engine driven pumping system to the pump station's discharge piping system, and
2. to make connections from the proposed new above-ground flow metering assemblies to the existing buried pump station discharge piping.

A preliminary layout for the proposed new yard piping to connect the diesel-engine backup pumps is shown on Sheets C-3 and M-5 of the preliminary drawings. Connection directly to the 36-inch discharge force main is proposed to provide backup pumping capability in the event that either set of three electrical submersible pumps must be shut down.

The proposed new yard piping should be ductile iron and conform to the County's standard technical specifications and materials specifications.

3.3 Electrical Systems

The required electrical system improvements include the following:

- Replacement of the 480-volt switchgear.
- Replacement of the two existing Caterpillar generators and fuel tanks.
- Conversion of the existing generator room into a new VFD room.
- Replacement of all six (6) VFDs. VFDs are to be Yaskawa.
- Replacement of the pump cable termination boxes.

Further design criteria related to these proposed improvements is provided below.

3.3.1 480 Volt Switchgear, Standby Generators and Distribution

The pump station receives normal utility power from a single pad-mounted Duke Energy transformer located immediately to the east of the influent splitter box. Primary components of the electrical system include GE AKD-8, 480-volt switchgear and six VFDs (all located in the electrical room) and two 700 kW 'standby' rated Caterpillar generators with 500-gallon belly tanks (located in the generator room). Generator exhaust silencers are located on the roof of the building. The 480-volt switchgear is double ended (Bus A and B) and includes two main circuit breakers (each connected to the secondary side of the single utility transformer), a bus tie switch and two generator tie circuit breakers. The two generators operate independently with no synchronization or parallel operation. There are six (6) VFDs connected to the switchgear. Three VFDs are fed from Bus A and three are fed from Bus B.

The existing pump station 480 volt switchgear will be replaced. Pinellas County Utilities operation staff desire that the existing 480-volt switchgear be replaced with similar UL/ANSI type equipment; so, switchgear type construction in accordance with the following standards should be applied:

- UL 1558 – Standard for Metal-Enclosed Low-Voltage Power Circuit Breaker Switchgear
- ANSI/IEEE C37.20.1 – Standard for Metal-Enclosed Low-Voltage power Circuit Breaker Switchgear

Based on the above standards, the new switchgear equipment footprint will be similar to the currently installed equipment. The switchgear design shall include the following:

- Maintain redundancy with two separate power feeds from the Duke Energy transformer.
- Switchgear controls that allow transfer operation via standalone PLC or independent auto-manual controls.
- Controls for the switchgear circuit breakers to allow for remote de-energizing and removal of breakers from bus bars to limit arc flash requirements.
- Hardwired and Modbus communications between the switchgear and control system.
- Built in arc-flash reduction circuitry to limit arc flash energy and improved safety.

The existing electrical equipment layout is shown on attached sheet E-1. The proposed configurations and location of the equipment is shown on attached sheet E-2. A proposed one-line power diagram is shown on attached sheet E-3.

The two 700kW diesel engine driven generators will be replaced. The generators are currently located in a dedicated room attached to the pump station. Each existing generator is equipped with a 500-gallon belly tank strapped to the generator skid. The fuel tank portion of the generator package is recessed in a vault/pit arrangement. The County requires a larger fuel tank capacity so that the standby generators can run and power the pump station for more hours than currently possible without having to re-fill the tanks. As a minimum, 72 hours run time at 75% load shall be provided for each generator for pump stations PS-16.

Each new diesel-engine driven generator will be housed in weather protected enclosures and located outdoors. The weather protected enclosures must include noise and sound attenuation options and should be constructed of aluminum. The generators will be located on the north side of the pump station. As also discussed in other sections of this report, it is proposed that new masonry walls be constructed to enclose additional area to the north of the existing north wall of the pump station (see preliminary drawing Sheet C-3). The generators shall be packaged units with sub-base fuel tanks and installed at grade on concrete pads.

3.3.2 Variable Frequency Drives (VFDs)

All six existing VFDs will be replaced. The new VFD's will include line isolation transformers to reduce noise and harmonics. The existing generator room will be repurposed to serve as a new dedicated VFD room. The six new VFDs would be installed in the room along with supporting HVAC equipment, miscellaneous electrical and new room lighting.

A currently active project (by others) to upgrade the pump station SCADA system and PLC system is underway. Due to limited space in the electrical room, the SCADA, PLC and I/O system

components will be located in at least two separate enclosures. PCU has requested of County, consideration will be given to finding a location suitable for a single cabinet so that all the PLC/SCADA equipment can be installed in a single enclosure.

The pump station PLC will be relocated to new VFD room also. Additional modifications to the room related to structural, HVAC and architectural needs are discussed elsewhere in this memorandum.

3.3.3 Pump Cable Terminal Boxes and NFPA 820

Per the requirements of NFPA 820 (Standard for Fire Protection in Wastewater Treatment and Collection Systems), the wetwell portion of the pump station is considered a hazardous Class I, Division 1 location. If the Odor Control system is operating properly and can provide at least twelve air changes per hour, then the wetwell hazardous classification level can be reduced to Class I, Division 2. In general, electrical equipment and installation requirements for areas designated as Class I, Division 2 are less stringent than Class 1, Division 1 locations; however, in both cases the, NEC requirements for wiring between a hazardous 'classified' location such as the wetwell and an 'unclassified' space such as the electrical room require that the conduits be sealed with a suitable material to prevent potentially explosive gases from traveling between the hazardous and non-hazardous location. The preferred conduit seal fitting will be a two-piece type similar to Crouse Hinds EYSR type.

Since the submersible pumps will come equipped from the manufacturer with a special flexible water-tight power cable and control cable assembly attached. Florida statutes and practical maintenance practices dictate that the submersible pump and pump cable be able to be removed together without compromising the integrity of any NEC required conduit seal material. To meet the above requirement, a pump terminal box located between the wet-well and the electrical room will be utilized. At PS16, the existing pump terminal boxes are located in the electrical room adjacent to each VFD. New pump cable terminal boxes shall be provided, the new terminal boxes will be located outdoors. The preferred outdoor location for the boxes will be evaluated by the designer and evaluated based on proposed piping and monorail hoist considerations. In all cases, fixed permanent wiring and conduits from the terminal boxes to the VFDs will include two-piece split type seal-off fittings. Conduits carrying the submersible pump cable from the terminal boxes to the wet-well will not be sealed thus allowing for easy removal of the pump and cable assembly. The terminal boxes should include a stainless-steel back plate. A terminal block such as 'Polaris Taps' shall be implemented within each of the terminal boxes to connect permanent fixed wiring to the flexible removable pump cable. The power block connector should be mounted to the stainless-steel back plate.

3.3.4 Reliability of Power and Location of Duke Energy Transformer

Basic reliability of power for the pump station will be accomplished by having two sources of power: a utility owned transformer for normal power from Duke Energy and back-up standby power from two onsite generators. And, as mentioned elsewhere in this report, additional reliability will be provided by diesel-engine driven pumps. One additional improvement to the normal utility power source should be discussed with PCU. Since the new switchgear configuration will include a dual ended bus design, two separate utility transformers could be utilized if desired and practicable.

In any case, the design-build team shall coordinate with Duke Energy for relocation of the existing pad mounted utility transformer. The transformer will need to be relocated due to a conflict with the proposed monorail that would span over the wet wells (see attached Sheets C-2 and C-3). Availability of space on the site for a second Duke Energy transformer shall be further evaluated and discussed with PCU.

3.3.5 Electrical Equipment Preferences

All electrical equipment shall conform to the area location classification as identified by the design engineer. At a minimum, all non-submersible motors shall be TEFC and electrical equipment shall be NEMA 4X unless installed in an air-conditioned space. Use approved sealing compounds to eliminate condensation potential when penetrating from outside ambient temperature to inside air-conditioned areas.

The preferred conduit seal fitting for hazardous locations will be a two-piece type similar to Crouse Hinds EYSR type.

Preferred 480 Volt electrical switchgear and electrical distribution equipment is Schnieder (Square D). Variable Frequency Drives shall be manufactured by Yaskawa.

3.3.6 Ductbanks, Pullboxes and Conduit

Conduit material for exposed conduit shall be aluminum with 316 stainless steel mounting hardware, except in areas where exposed to chlorine or chlorine vapors, where PVC coated rigid aluminum shall be used. Underground conduits shall be Schedule 40 PVC and installed in concrete steel reinforced ductbanks. Conduits in concrete slabs or columns shall be Schedule 40 PVC. Transitions from concrete imbedded conduits to exposed; shall be PVC coated rigid aluminum before exiting concrete and have conduit curbs or equipment pads. Direct buried conduits shall be kept to a minimum, but if installed, must be PVC coated rigid aluminum.

Conduits for power and signal shall be installed separated, with analog conduits spaced a minimum of 12" from power or installed in metallic conduit.

All manholes, handhole or pull-boxes shall be rated H-20 loading and have aluminum covers with opening assist hardware. Provide with fully enclosed bottom, sump area and cable racks. Slope conduit into enclosure for drainage.

All wiring shall be a minimum of THWN-2. No splicing of power wiring is allowed. Splicing of signal wiring must be kept to a minimum, and if needed, must be installed in waterproof enclosures using terminal blocks.

3.3.7 Lightning Protection, Surge Suppression and Grounding

Lightning protection for the pump station shall be maintained or installed new if modifications are needed. All down leads from aerials shall be installed in conduit and connected to separate ground rods, which are then bonded to the plant's main grounding grid. CadWeld all connections for grounding and lightning system leads. No crimped or compression connections allowed.

All power distribution switchboards, MCC's and panelboards shall have surge protection using a combination of type 1 & 2 surge protection, with counters, and indication of operational status. All control panels shall contain type 3 surge protection.

3.3.8 Lighting

All lighting shall incorporate LED technology. Outdoor lighting shall be full cut-off Dark Sky compliant. Outdoor lighting system shall be designed for both egress and task, with the ability to switch between the two. Provide an automated system with both operator manual and SCADA control. All timers shall be incorporated into this system. Care should be taken for fixture height and position to avoid light spill over into neighboring residences. Provide shields as necessary. Indoor lighting shall have motion sensing adjustable timer, and override capability. Lighting contactors shall be by Eaton.

3.3.9 Arc Flash Study

The Design-Build Team shall perform an Arc Flash Study for the proposed electrical systems in the preliminary treatment area of the plant during the development of the 60% design. The study shall address all electrical systems that make up power distribution and shall extend down to 208/120 Volt panelboards. Final design and equipment selections shall be provided to reduce PPE levels for equipment to be worked on live to Category 2 or less.

3.4 Structural

3.4.1 Structural Design

Structural scope includes:

- Removal of two existing man-doors on south wall and generator room louvers, and infill with CMU. Construct new door opening further west on south wall of existing generator room. Refer to Photo Nos. 2, 6, 7 and 8.
- Addition of monorail crane, with support framing spanning over the wet wells. Design of new foundation, as required, to south.
- Removal of valve vault top slab and infill vault with geofoam or aerated concrete as appropriate for existing concrete structure to remain (ensure no change for bearing, buoyancy, concrete wall design stresses). Specify any construction requirements, if required, for temporary shoring of walls after removal of top slab and before infill is installed. Refer to Photo No. 2.
- Removal and replacement of portions of the existing wet well/valve vault divider walls as required to replace existing wall pipes.
- Sealing of generator exhaust (silencer) opening in roof after removal of generators.
- Design of extension of the CMU screen wall and associated foundation to provide space needed for proposed new diesel-engine driven generators and proposed new diesel-engine driven backup pumps, and a proposed new activated carbon odor control scrubber vessel.

Structural modification for new access through existing wall to new extension. Refer to Photo Nos. 3 and 9.

- Addition and/or modification of concrete slabs on grade, housekeeping and equipment pads as required.
- CMU block repair in parapet above generator room. Refer to Photo No. 5.
- Modification to concrete and CMU as required for re-routing of electrical conduit.
- Potential modifications as required for proposed bathroom.
- Performance specification for precast structure(s) in new screened wall area.

3.4.2 Codes, Standards, and References

The governing codes for the project will be as indicated below. In no case will the strength, serviceability, or quality standards for materials and procedures be less than that required by the governing codes.

3.4.2.1 Building Code

The Florida Building Code (FBC) Seventh Edition (2020) is the latest adopted code for this project. The governing code is applicable to building structures as well as the process structures. Process structures shall conform to the provisions of ACI 350 in addition to the local building code. In addition to the requirements of the FBC, modifications to existing structures will conform to the requirements of the Florida Building Code, Existing Building Seventh Edition.

If guidelines or direction included in this document conflict with the latest adopted code, the more stringent criteria shall be used. If the latest adopted code is superseded, all referenced standards shall be updated for latest edition. Design of specific systems and materials will be performed in accordance with the codes, specifications, and other standards required by the latest adopted code.

3.4.2.2 Standards and References

All Structural systems shall be designed in accordance with the FBC and the following:

- American Society of Civil Engineers (ASCE) 7-16 Minimum Design Loads and Associated Criteria for Buildings and Other Structures with Supplement No. 1
- AISC 360-16 Specification for Structural Steel Buildings
- ADM1-2015 Aluminum Design Manual: Part 1-A, Specification for Aluminum Structures
- TMS 402-2016 Building Code for Masonry Structures
- ACI 318-14 Building Code Requirements for Structural Concrete and Commentary
- ACI 350-06 Code Requirements for Environmental Engineering Concrete Structures
- American Society of Testing and Material (ASTM) Standards

- Concrete Reinforcing Steel Institute (CRSI) Design Guides
- Precast/Prestressed Concrete Institute (PCI) Design Handbook – Precast Prestressed Concrete
- Occupational Safety and Health Administration (OSHA)
- AWS D1.1: 2020 Structural Steel Welding
- AWS D1.2: 2014 Structural Welding Code - Aluminum
- AWS D1.4: 2017 Structural Welding Code - Reinforcing Steel
- AWS D1.6: 2017 Structural Welding Code - Stainless Steel
- FM Global Requirements

Codes, standards, and references listed above refer to the latest adopted edition, unless otherwise noted. The most recent edition of the aforementioned documents shall be used in the absence of direction from the latest adopted code.

3.4.3 Design Loads

All applicable loads and load combinations will be determined as required by the FBC, occupancy, site and environmental effects, equipment, and processes. Appropriate load combinations, load factors, and safety factors (as applicable) will be established at the beginning of preliminary design and confirmed at the beginning of final design.

3.4.3.1 Dead Loads

Dead loads shall consist of the weights of all materials of construction incorporated into the structure, including but not limited to, walls, floors, roofs, finishes, fixed equipment and equipment bases, piping, and all other items permanently affixed to the structure. Values for dead loads can be found in the following references:

- ASCE 7
- AISC Manual
- Manufacturer's Catalogs for fabricated components
- CRSI Design Handbook

3.4.3.2 Live Loads

Live loads will consist of all loads due to occupancy, furnishings, and equipment. Live load reduction will not be employed for members of large influence area in the design of environmental and industrial facilities, due to the relatively high probability of simultaneous loads on all areas.

3.4.3.2.1 Floor Live Loads

Live loads shall consist of all loads other than dead loads that may be applied to the structure in order to comply with the requirements of the building codes or specific project requirements. Live loads shall include impact loads, and other loads that may be applied due to the use and/or occupancy of that particular structure. Specific attention shall be given to operating loads from the various pieces of equipment utilized in the water treatment process. Some of basic live loads are listed below.

Live loads in Process Areas shall not be reduced.

- Process and Maintenance areas 300 psf
- Electrical rooms 250 psf

3.4.3.2.2 Roof Live Loads

No new roof construction is anticipated. Roof live load, if required, shall be per FBC.

- Roof Live Load 20 psf

3.4.3.2.3 Equipment Loads

Loads from equipment will be considered live loads. The maximum loads and support details for each major piece of equipment will be provided by the discipline designing or specifying it. Final weights of process-mechanical equipment will be established during preliminary design. Preliminary weights of building service equipment (HVAC, plumbing, and electrical) will be established during preliminary design, and confirmed during final design.

In addition to the mechanism's static dead load, design will be performed for other effects, such as those due to operation, maintenance, and malfunction.

3.4.3.2.4 Impact Loads

Static loads will be increased for the effects of impact by the following percentages.

- Vehicular loads: In accordance with the AASHTO Specification.
- Light machinery supports, shaft or motor driven: 20% of the operating weight (minimum) or manufacturer's recommendation.
- Reciprocating machinery or power-driven unit supports: 50% of the operating weight (minimum) or manufacturer's recommendation.
- Bridge Crane or monorail: per FBC.

3.4.3.2.5 Construction Live Loads

The contractor is normally responsible for maintaining loads on partially or fully complete structures at or below the design live loads noted on the drawings, or for providing supplemental support. However, in certain cases, if the service load on a structural element is negligible, a design load will be used which would accommodate reasonable construction activities.

3.4.3.3 Environmental Loads

The proposed structures are designated as non-essential facilities in accordance with FBC.

- Risk Category III

3.4.3.3.1 Rainwater Loads

No new roof construction is anticipated. However, if required, roofs will be designed for retained water to its maximum depth (accounting for deflection) assuming that the primary drainage system is blocked. Overflow scuppers or other secondary drainage systems may be used to control this load. This criterion will be coordinated with architectural and plumbing disciplines. The governing load will be used in design.

3.4.3.3.2 Wind Loads

Wind loads shall be developed from the following criteria in accordance with the governing codes and FM Global requirements. Appropriate shape modification factors, uneven distributions, and orthogonal effects shall be considered for each structure. Main wind force resisting systems, as well as appropriate components and cladding, shall be designed for internal and external effects. Increased allowable stresses or reduced load factors will be used, as appropriate. The following are wind speed requirements per ASCE 7 and shall be coordinated with FM Global requirements for this site.

- Ultimate Design wind speed, V_{ult} : 155 mph
- Nominal Design wind speed, V_{asd} : 120 mph
- Exposure factor: "C"

Internal loads due to positive or negative air pressure caused by mechanical or process systems shall not be considered wind loads. These loads shall be considered in the manner of a process liquid load.

3.4.3.4 External Earth and Groundwater Loads

Earth and groundwater loads will be developed from the following criteria in accordance with the project geotechnical report and the governing code.

3.4.3.4.1 Design Grade Elevation

Design will be performed for ground surface at finish grade. Substructures will be designed to permit the external excavation to be backfilled after the construction of the ground level slab. Should substantial economic advantages be realized by altering this criterion, limits of backfill requirements will be indicated in the contract documents.

3.4.3.4.2 Design Groundwater Elevation

Design will be performed for groundwater at the 100-year flood elevation as listed below unless otherwise given in the geotechnical report.

- Not in a flood zone (Flood Zone X), per Flood Insurance Rate Map (FIRM) 12103C0183H, Panel 183 of 327, dated August 24, 2021.

When the project design groundwater level is below finish grade, design groundwater elevation will be established at finish grade for relatively small below-grade structures, such as vaults.

3.4.3.4.3 Groundwater Pressures

Design will be performed for pressures generated by groundwater acting laterally, downward and upward, as appropriate. Load factors appropriate for live loads will be used. Design will be performed for groundwater at flood elevation for normal allowable stresses or load factors, as appropriate.

3.4.3.4.4 Lateral Soil and Groundwater Pressures

For hydrostatic loads the following equivalent fluid pressures will be used in preliminary design for well-graded, granular, mineral soils with a moist unit weight of 120 pcf. Soil pressures for final design will be developed in accordance with the geotechnical report. Design for cantilevered walls of environmental engineering structures will be performed for at-rest soil pressures. **Table 3-1** summarizes the estimated design criteria. Final values will be provided in the Geotechnical Report.

Table 3-1 Hydrostatic Load Design Criteria

Pressure Condition	Pressure Coefficient	Equivalent Lateral Fluid Pressure	
		Above Groundwater	Below Groundwater
At rest	0.50	60 pcf	90 pcf
Active ¹	0.33	40 pcf	80 pcf
Passive ²	3.00	360 pcf	170 pcf

¹ Minimum

² Maximum

For surcharge, walls to which vehicles can reasonably be expected to approach within a distance equal to half the wall height will be designed for a uniform surcharge equal to 2 feet of soil.

3.4.3.5 Miscellaneous Loads

Design will be performed for other applicable loads as required by the project circumstances. Appropriate acceptable allowable stresses and load factors will be established.

3.4.3.6 Combination of Loads

3.4.3.6.1 General

Design will be performed for combinations of loads along with appropriate load factors or allowable stresses in accordance with the governing code. In the absence of specific direction by the code, the most severe distribution, concentration and combination of design loads and forces will be used. These combinations may be limited by practical considerations, such as the following:

- Combination of certain loads will not be considered when the probability of their simultaneous occurrence is negligible. Such loads include wind on superstructures, and live load surcharge, and flood on substructures.

- The effects of any load type (other than dead load) will not be used to reduce the effects of another load type. A maximum percentage of the dead load will be used in any combination where it reduces the effects of another load type per ASCE 7.

3.4.3.6.2 Below-grade Structures

Design will be performed for structures that extend below grade, for the following load combinations:

- Backfill and groundwater with liquid-containing compartments empty and full.
- Dampproofing will be required on all below grade exterior walls for tanks and building structures.

3.4.4 Serviceability

Additional requirements for serviceability will be considered as provided in subsequent sections and referenced standards for specific materials.

3.4.4.1 Deflection

Design will be performed to limit deflections to the following. In cases indicated with an asterisk (*), deflection limit will apply to live load effects only.

- | | |
|--|-----------------------------|
| ▪ Floor plates and gratings* | L/360 |
| ▪ Floors, concrete | Per ACI 318 |
| ▪ Beams, lintels or slabs supporting masonry | L/720 (3/8" max at windows) |
| ▪ Roofs without plastered ceilings* | L/240 |

3.4.4.2 Ponding

Ponding refers to water retention due to the effects of deflection on a flat roof. For flexible roof systems, sufficient stiffness will be provided to prevent successive water retention and deflection leading to failure.

3.4.4.3 Vibration

Design will be performed for the effects of vibration to provide appropriate protection against structural deterioration, mechanical deterioration, and significant occupant discomfort. Under normal circumstances, the guidelines below will generally be followed. If deemed necessary by the supervising structural personnel, a dynamic analysis of the system will be performed.

3.4.4.4 Mechanical Vibration

Concern for mechanical vibration is greatest for equipment such as blowers, induced-draft fans, generators, compressors, steady bearings at pump shafts and centrifuges. Operating frequencies, unbalanced loads, and specific design recommendations will be obtained from the manufacturer by the discipline specifying the equipment.

To avoid resonant vibration, the ratio of the structure's natural frequency to the operating frequency of the equipment will be restricted to less than 0.50 or greater than 1.50. Where

practical, the latter will be used to avoid resonance during equipment startup and shutdown. Consideration will be given to applicable modes of vibration, including vertical, lateral, and rotational.

Design will be performed in accordance with the following guidelines for equipment which produce significant vibrational effects, where possible and appropriate.

- Equipment will be mounted on concrete foundations or supporting systems rather than metal supporting systems.
- A foundation pad or mat will be provided with a mass equal to five times the rotating mass of the equipment or three times the gross mass of the equipment (minimum), whichever is greater.
- Major equipment foundations and supporting systems will be isolated by expansion joints or independent supports from the remaining structure to minimize vibrational transmission, where appropriate or possible.
- Vibration isolators, dampeners, and/or inertia blocks will be provided where appropriate.
- Anchorage to foundations will be provided by embedded anchor bolts. Use of post-installed anchors will be minimal.

3.4.4.5 Transient Vibration

For elevated steel walkways or platforms, beams will be provided with a depth greater than or equal to 1/20 of the span.

3.4.5 Foundation Design

The following subsections describe the approach to the foundation design.

3.4.5.1 Scope

Criteria will be established for the design of structure foundations in coordination with the geotechnical recommendations. Permanent structure foundation elements will be designed to distribute loads to the supporting soil using shallow foundations in accordance with their allowable loads, and to accommodate predicted deformations of the structure caused by settlement or movement of the supporting elements. Structure foundation elements will be designed to resist effects of groundwater, including buoyancy during a dewatering event. It is assumed deep foundations will not be required, however, if the geotechnical investigation indicates deep foundation, foundation shall be designed for such.

3.4.5.2 Geotechnical Report

The geotechnical report will provide a description of the subsurface conditions, as well as recommendations for structure design and construction. The draft report will be reviewed for applicability and feasibility of the recommendations to the preliminary structural design. Comments will be provided to the geotechnical engineer for incorporation in the final report.

3.4.5.3 Shallow Foundation Support

Design of shallow foundation elements (footings and mats), including excavation and backfill limits and details, will be performed in accordance with the recommendations of the geotechnical report.

To the extent possible, buried piping and ductbanks will be maintained outside the influence zone of the foundation elements. Limits of this zone will be established based on bearing materials' characteristics as documented in the geotechnical report. At a minimum, this zone will be defined by a line extended outward and downward from the bottom corners of a foundation element at a one vertical to one horizontal slope. A reinforced concrete encasement or other appropriate protection will be provided for any utilities extending into this zone.

3.4.5.4 Buoyancy

3.4.5.4.1 General Criteria

Buoyancy is defined as the condition of instability resulting when uplift forces due to groundwater exceed resisting forces due to dead load and anchorage systems. Design will be performed in accordance with the following.

3.4.5.4.2 Complete Structures

For groundwater at the design level, structures will be designed to resist buoyancy considering only the structure dead load, soil directly above the structure and footing extensions. The effects of live loads, liquid contents (unless relief valves are used), vertical soil friction and soil cohesion will be neglected. When anchorage systems are used, they will be designed to resist the net uplift force transmitted to the components of the anchorage. Structures will be designed to provide the following minimum factors of safety, calculated as the ratio of total resisting force to total buoyant force. The minimum factor of safety against buoyancy will be 1.10.

3.4.6 Concrete Design

3.4.6.1 Scope

Design of all cast-in-place, site-cast, and precast concrete structures will be performed, except as indicated below. Member sizes, reinforcement, and details will be determined in accordance with the governing codes.

Design of site concrete work, such as paving, curbing, and sidewalks will be performed by the civil discipline. Design of the following structures and elements will be performed by the fabricator or erector, in accordance with criteria provided in the contract documents.

- Precast site structures, including manholes, vaults.
- Precast architectural elements, including wall panels, copings, and sills

3.4.6.2 General Criteria

3.4.6.2.1 Codes and Standards

Concrete structures will be designed in accordance with the following, as appropriate.

- General structures: ACI 318
- Reinforcing steel, welding: AWS D1.4

3.4.6.2.2 Materials and Design Strengths

Design will be performed for concrete with the following minimum 28-day compressive strengths (f'_c).

- Structural concrete: 4,500 psi
- Precast concrete: 5,000 psi
- Flowable fill – non-excavatable (FDOT Specification Section 121) 300 psi
- Flowable fill – excavatable (FDOT Specification Section 121) 100 psi

Design will be performed for the strengths and properties of the following materials.

- Deformed reinforcing bars: ASTM A615, Grade 60
- Deformed reinforcing bars, welded or field bent: ASTM A706
- Welded wire fabric, plain and deformed: ASTM A1064

3.4.6.2.3 Design Methods

Reinforced concrete structures will be designed by the Load and Resistance Factor Design (LRFD) method with factored load cases, and serviceability requirements recommended in ACI 318.

3.4.7 Masonry Design

3.4.7.1 Scope

The size and layout of all loadbearing masonry elements (exterior walls, bearing walls, shear walls, pilasters, columns, beams, and lintels) will be designed to ensure a continuous and stable loadbearing system. Design of all loadbearing and non-loadbearing elements (such as partition walls and veneer) and their connections will be performed in accordance with applicable criteria.

3.4.7.2 General Criteria

3.4.7.2.1 Codes and Standards

Design of masonry structures, elements, and details will be performed in accordance with the following from The Masonry Society (TMS).

- Concrete masonry: TMS 402-2016

3.4.7.2.2 Materials and Design Strengths

Design will be performed for the specified strengths and properties of the following materials.

Masonry Units:

- Concrete masonry units ASTM C90, Type I (2000 psi)

Mortar and Grout:

- Mortar ASTM C270, Type S (1800 psi)
- Grout ASTM C476, Fine Grout (2500 psi)

Reinforcement:

- Deformed Bars ASTM A615, Grade 60
- Joint Reinforcing ASTM A1064

The specified compressive strength of masonry, f'_m , will be as follows.

- Concrete masonry 2000 psi

3.4.8 Structural Metal Design

3.4.8.1 Scope

Design of structural metal structures, systems, elements and details, will be performed, except as indicated below, for the applicable criteria.

Design of the following structures and elements will be performed by the fabricator or vendor, in accordance with criteria provided in the contract documents.

- Access hatches
- Guardrails and handrails
- Grating
- Bridge crane (or monorail) bridge and runway beams
- Castings, such as manhole covers and trench grates
- Piping, ductwork, and conduit hangers and supports

3.4.8.2 General Criteria

3.4.8.2.1 Codes and Standards

Design of metal structures and elements will be performed in accordance with the following:

- Structural and miscellaneous steel: AISC Specification
- Aluminum: AA ADM

- Welding, steel: AWS D1.1
- Welding, aluminum: AWS D1.2
- Welding, stainless steel: AWS D1.6

3.4.8.2.2 Design Strengths

Design will be performed for the specified strengths and properties of the following materials:

Steel:

- Structural steel wide flange shapes: ASTM A992
- Other structural steel shapes; plate; and bars: ASTM A36
- Structural steel tubing: ASTM A500, Grade B
- Structural steel pipe: ASTM A53
- High strength steel bolts: ASTM F3125 SC
- Anchor bolts and threaded rods: ASTM F1554 Grade 36
- Welding electrodes: AWS E70XX

Aluminum:

- Aluminum extruded shapes: ASTM B221, 6061-T6
- Aluminum sheet and plate: ASTM B209, 6061-T6
- Aluminum extruded pipe: ASTM B429, 6063-T6 or 6061-T6

Stainless Steel:

- Stainless steel shapes: ASTM A276, Type 316
- Stainless steel plate and sheet: ASTM A167, Type 304 or 316
- Stainless steel bolts: ASTM A276, Type 316

3.5 Architectural

The required Architectural improvements include the following:

- Door replacement and revised opening locations at both exterior and interior conditions.
- Roofing replacement and expanded area, both low-slope membrane and metal mansard conditions.
- Expanded masonry wall area, infill of existing openings and demolition to create new openings.

- Expanded stucco-finished wall area.
- Provide new restroom with plumbing fixtures.

3.5.1 Applicable Codes, Standards and References

The applicable codes for Architectural design shall include the following:

- Florida Building Code (FBC) Seventh Edition (2020)
- Florida Energy Conservation Code Seventh Edition (2020)
- Florida Existing Building Code Seventh Edition (2020)

3.5.2 Architectural Design Criteria

Architectural modifications include:

1. Replace all existing interior and exterior metal doors and frames with aluminum flush doors and frames. All new doors to be solid and not contain vision lites. It should be noted that most of these doors are 6'-8" high in order to fit under the existing stucco wall projection, this height should be matched with the new doors. See Photo No. 10 in Attachment 1.
2. Remove the existing aluminum door and frame at the south wall of the odor control walled enclosure (remove canopy and fill in opening with matching split-faced CMU and stucco) due to conflict with the new monorail hoist that will span across the wet wells. Relocate the door opening at the south wall of the existing generator room to avoid conflict with the new monorail hoist. The existing door opening should be filled in with matching split-faced CMU and stucco and the canopy should be removed. This door could be in the same wall in a portion of the existing louver opening with the remainder of the louver opening to be infilled. Final location of door would be coordinated during design with exterior above-grade pipe locations and new electrical VFD room equipment layout. See Photo No. 2 & 6 in Attachment 1.
3. The pair of doors in the south wall of the existing electrical room conflict with the proposed rising stems and actuators of two sluice gates that will remain in the influent splitter box (as further discussed in the Process Mechanical section). As a result, a single egress door should be added in the corner of the electrical room which would be able to operate clear of the rising stems and serve as one of the two required exits from the room. To facilitate larger equipment access into the room without needing to temporarily remove the rising stems, the existing pair of doors into the electrical room should be replaced with a 6'-0" wide by 8'-0" high (match existing opening size) motorized automatic coiling door with controls and hood provided on the interior of the building.
4. The method of operation for the existing coiling door on the west wall accessing the odor control enclosure to be upgraded to motorized automatic with weatherproof controls provided on the interior side of the wall.

5. Recommendation is to replace the existing membrane roofing system at least at the lower roof level. This is due to the need to remove the existing ventilation equipment over the generator room and fill in the openings with new structure, insulation and membrane. If desired the roof membrane could be replaced at the upper roof level also, however there are no existing penetrations that require infilling. See Photo No. 11 in Attachment 1.
6. All corroded bottom trim pieces at the vertical metal wall panels should be replaced. This was observed at multiple conditions on the inside face of the odor control enclosure. See Photo No. 12 in Attachment 1.
7. Clean exposed CMU at the change in roof level on the east side of the existing HVAC unit. See Photo No. 13 in Attachment 1.
8. Clean and repaint all existing stucco wall surfaces using colors to match the existing. See Photo No. 14 in Attachment 1.
9. Install a single-user restroom that includes a shower stall. A suggested location would be the northwest corner of the former chemical room because of the presence of existing water supply / drainage lines and exhaust fan/wall opening. Include door and privacy lockset. If a three-fixture room cannot be created at this location due to space or other limitation, another option would be to split the plumbing fixtures into two separate rooms, such as locating the shower stall at the northeast corner of the space. To accommodate possible overnight stays by staff in the building, adequate space for a cot needs to be available in any corner of the room not occupied by plumbing fixtures or other equipment. See Photo No. 15 in Attachment 1.
10. Create a new walled enclosure (without roof) for the new generators, diesel-engine driven pumps, and activated carbon odor control scrubber vessel on the north side of the existing odor control enclosure. This should be integrated into the existing architectural aesthetic of the building. This would include matching the existing design of the split-faced concrete masonry, stucco and standing seam metal mansard roof and relocation of the existing signage facing Park Blvd. to the new north wall. Equipment access into this enclosure is required from the exterior in the form of a coiling door (suggested location is on the west wall) and two personnel entrance/egress doors located on the east and west walls. No doors should be located on the new north wall. The existing north wall should be left in place; a new single personnel door should be installed in this wall to allow access between the two exterior spaces. It would need to be confirmed if a door can be accommodated by the final equipment layout on both sides of the existing north wall. To accommodate the new equipment layout and door installation the existing framed mansard roof should be removed from the north face of the existing north wall. See Photo No. 16 in Attachment 1.
11. The existing generator room is proposed to be converted to an electrical VFD room. All of the existing louvers should be removed and openings filled in with split-faced CMU and stucco to match the existing building facade. The exterior door opening in the south wall should be relocated as needed for the layout of the new electrical equipment and

all requirements of exterior hoisting equipment and above grade piping. See Photo No. 7 in Attachment 1.

12. The east wall, north wall and sloped roof of the existing fuel tank closet on the west wall should be demolished so this exterior door can be used as a second means of egress (directly to the exterior) from the odor control walled enclosure.

The above list summarizes proposed architectural modifications that were requested by the County or that will be required to accommodate other improvements described in this report.

3.6 Instrumentation Systems

3.6.1 Required Improvements

The design is replacing and relocating the VFDs for all of the pumps at the pump station. The Instrumentation improvements shall replace in kind the monitoring and control signals from VFDs to the pump station PLC panel. In addition, the design shall include signals to monitor and control the two new generators and switchgear; provide new field instrumentation to monitor the wet well level (including backup floats); and temperature monitoring of the new VFD/electrical room.

3.6.2 Major Equipment

3.6.2.1 SCADA Control Room Equipment

The County upgrades their control room SCADA equipment on a revolving schedule. Upgrades to the control room SCADA equipment will not be required as part of this project.

3.6.2.2 PLC Equipment

None. The existing PLC panels are to be replaced/upgraded under a separate contract. This project shall identify a new location for the combined PLC panel to be located in the new VFD/electrical room.

3.6.2.3 Facility Network Communications Equipment

The existing RTU shall also be replaced/upgraded under a separate contract. This project shall identify a new location for the combined PLC panel to be located in the new VFD/electrical room. It is our understanding the Owner would like the pump station controlling PLC and communications RTU to be combined in the same panel and this project shall provide enough floor mounted panel space to accomplish this.

The existing method of communications (fiber optics) shall remain and shall be re-routed to the new PLC/RTU panel location. The hardwired phone lines to the fire panel shall also remain.

3.6.2.4 Instrumentation Field Equipment

The design shall include new wet well level monitoring field instrumentation. This shall include a level transmitter providing a continuous level measurement of the wet well and back up floats to be used in the case of a level transmitter malfunction. New field instrumentation shall be in conformance with the County's standards.

3.6.2.5 Facility Security System Equipment

The design shall include installation of security cameras networked to the new PLC/RTU control panel. This panel shall also include video recording equipment to be coordinated with the separate SCADA upgrade project.

3.6.2.6 Power Monitoring Equipment and Management Software

New switchgear shall be networked to the PLC/RTU panel for power monitoring. All power monitors installed as part of this project will communicate via Modbus. Switchgear breaker statuses shall also be hardwired to the PLC/RTU.

3.6.2.7 Process and Instrumentation Diagrams (P&IDs)

P&IDs shall be provided for this project using client standards and in the International Society of Automation (ISA) Standard S5.1.

3.7 Building Mechanical Systems

The required HVAC and plumbing improvements include the following:

- Removing roof mounted air intake hoods and silencers above the generator room.
- Providing new VFD room (previously generator room) with redundant air conditioning units.
- Potential removal of existing roof mounted air conditioning unit serving the electrical room based on updated electrical loads and replacement.
- New standalone diesel fuel tank, piping, appurtenances, etc. to serve new generators located outside.
- New office space including new bathroom (previously chemical storage room) with air conditioning units.
- Re-plumbing all sanitary piping in new administrative area (previously chemical storage room).
- New exhaust fan for new bathroom/shower stall area.
- New plumbing (sanitary and potable) to new bathroom/shower stall area.

3.7.1 Applicable Codes, Standards and References

The applicable codes for HVAC, plumbing, and fueling design shall include the following:

- 2020 Florida Building Code
- 2020 Florida Mechanical Code
- 2020 Florida Energy Conservation
- 2020 Florida Plumbing Code

- 2020 Florida Existing Building Code
- American Society of Heating, Refrigeration, and Air Conditioning (ASHRAE) Handbooks
- Air Conditioning and Refrigeration Institute (ARI)
- Sheet Metal and Air Conditioning Contractors National Association (SMACNA) HVAC Construction Standards – Metal and Flexible
- Sheet Metal and Air Conditioning Contractors National Association (SMACNA) Duct Manuals
- Air Moving and Conditioning Association (AMCA)
- Applicable Factory Mutual (FM) Insurance Underwriters Standards
- Air Conditioning and Refrigeration Institute (ARI)
- NFPA 30: Flammable and Combustible Liquid Code

3.7.2 Existing Conditions

The pump station's incoming potable water is served by four exterior backflow preventers. Two backflow preventers are located adjacent to Park Boulevard and the other two backflow preventers are located at the exterior building wall. Staff indicated that one backflow preventer at the building serves the odor control system and the other serves the domestic water for the building, this will need to be field verified.

The former chemical room is ventilated via a wall-mounted exhaust fan and outdoor air intake louver. The exhaust fan has an exterior exhaust hood to blow potentially harmful air down and away from walkways. The intake louver does not appear to have any control hardware associated with it. Plumbing in the space is limited to a service sink with associated domestic water and sanitary connections. During an initial site visit, it was indicated by the staff that the sanitary plumbing was recently shut off due to a slab leak and replumbed above grade.

Outside of the former chemical room adjacent to the chemical tanks is a hose bibb with associated wash hose station and an emergency shower/eyewash with alarms.

The electrical room is currently served by an exterior roof mounted packaged air conditioning unit that is ducted into the space. According to staff, the unit was replaced approximately two years ago. The duct access door on the ductwork at the exterior of the building is missing. This has led to water intrusion and degradation of the ductwork and interior components.

The generator room currently houses two generators with sub-base fuel tanks and associated intake and exhaust louvers. There is an existing diesel fill closet, but the associated remote fill stations have been removed and this area now only houses fuel tank alarms. The existing generator silencers are located on the roof. Two air intake hoods are also located on the roof. Plumbing in the space includes floor drains and sump pit.

3.7.3 HVAC Design Criteria

3.7.3.1 Administrative Areas

Administrative areas (Toilet/Shower Rooms, Administrative Areas, etc.) will be heated and cooled to maintain a temperature between 75°F summer and 70°F winter indoor temperature. A nighttime setback will be provided, 85°F summer and 68°F winter that will be field adjustable. A minimum of 5 cubic feet per minute (cfm) of outside air per person and 0.06 cfm per square foot of outside air will be introduced into the administrative area HVAC system.

A minimum of 70 CFM of outside air per water closet or urinal and 50 CFM of outside air per shower head will be introduced into the toilet/shower areas per Code.

3.7.3.2 Electrical Rooms

Electrical rooms (VFD Room, Electrical Room, etc.) will be cooled to maintain operation of electrical equipment and reduce the heat and humidity effects on the electrical equipment. The cooling design condition shall be a maximum temperature 80°F±5°F. For electrical rooms containing equipment essential to plant operation, such as variable frequency drive (VFD) rooms, redundant air conditioning systems will be provided. Heating systems will be provided to maintain a minimum temperature of 50°F±5°F. Temperature/trouble alarms shall be provided to alert plant operators if temperatures rise or fall outside of required operating ranges. Heating systems are provided for freeze protection only.

The Existing Electrical Room will be cooled to maintain operation of electrical equipment and to reduce the heat and humidity effects on the electrical equipment. Calculations will be performed to determine if the existing roof-top unit is sufficient for any modified electrical loads in this area and will be replaced as needed. If it is not possible to provide a redundant unit for this space, a properly size roof-top air handling unit will be provided with a high temperature alarm.

3.7.3.3 HVAC Equipment and Materials Construction

Heating, ventilation, and air conditioning (HVAC) design is implemented to ensure the appropriate environmental conditions are maintained during the daily operation of the facility. HVAC designs will be provided for all new structures identified during design. Design component descriptions are provided below:

- Supply, return, and outside air ductwork will be constructed of galvanized steel meeting SMACNA standards with external fiberglass insulation for typical non-corrosive areas. For corrosive areas, aluminum or stainless steel will be provided.
- Make-up air and exhaust ductwork will be constructed of aluminum or stainless-steel meeting SMACNA standards. External fiberglass insulation will be provided as applicable.
- Hangers and supports will be either galvanized steel or stainless steel and will match duct material provided. For corrosive areas, aluminum, stainless-steel, or FRP will be provided. Support spacing, and size of hangers will be as called for as required in the SMACNA standards.
- Air distribution devices will be aluminum construction with off-white enamel or anodized mill finish.

- Refrigerant piping will be Type K copper with closed cell foam type insulation.
- Condensate piping will be Type K copper with closed cell foam type insulation for above grade applications and Type K copper or polyvinyl chloride (PVC) for below grade applications.
- Exhaust fans will be all aluminum construction (when possible) with corrosion resistant coatings suitable for the intended application. All fans will be selected in compliance with AMCA 99, for spark resistant construction based on the environment the fans are subject to.
- Air conditioning systems will be either direct expansion split system, packaged air conditioning, or heat pump units with air cooled condensers. An air cooled, or evaporative cooled chiller will also be considered for the HVAC design. Areas provided with heating will be provided with auxiliary electric heating coils. Equipment will be provided with corrosion resistant coatings suitable for the intended application.
- Heating systems will be electric or natural gas powered.
- All HVAC system equipment will be high quality industrial equipment with corrosion resistant coatings suitable for the intended application.
- Control systems will be standard electric/electronic self-contained modular control systems. Direct digital control (DDC) systems will also be considered for the design.
- HVAC NEMA enclosures will be rated per the electrical hazard classification plan.

3.7.4 Plumbing Design Criteria

The plumbing design will include the following items as required by final design: sanitary drainage, waste and vent (DWV) systems; acid resistant DWV; primary and secondary stormwater systems; potable domestic cold and hot water systems serving the facility's plumbing fixtures; tempered water systems serving the emergency shower fixtures per ANSI Z358.1; non-potable protected water systems for wash downs; and process water systems. An emergency wash station will be provided in the new generator enclosure.

3.7.4.1 Plumbing Equipment and Materials of Construction

Plumbing design component descriptions are provided below:

- Sanitary drain, waste, and vent piping and stormwater piping will be hub and spigot cast iron soil pipe with resilient gasketed joints. Alternate plastic and polyethylene will be considered in the final design specifications. Fixtures will be trapped and vented per code requirements. Floor drains will be provided with trap primer connections and trap primers.
- Corrosive area drainage piping will be polypropylene pipe with thermal fusion butt welded polypropylene joints and fittings.
- Potable, non-potable, and plant water piping will be type K copper pipe with cast copper or brass fittings.

- Fittings will be constructed with flanged, threaded, and lead-free solder joints.
- Hangers, supports, and anchors will be galvanized steel and/or stainless steel.
- Hose stations will be 50-ft industrial hose with stainless steel hangers and chromed plated brass hose bib fixtures.
- Toilet fixtures will be commercial grade white vitreous china with chrome plated brass supply fixtures.
- Emergency fixtures will be commercial grade stainless steel with hold open brass control valves and stainless-steel dust covers.
- Tepid water and hot water lines will be provided per code. Recirculation pumps will be provided as required by final design.

3.7.5 Fuel Oil Design Criteria and System Equipment

The fueling design will include the following items as required by final design:

- The fuel system work will consist of providing a new above-ground diesel fuel storage tank and associated piping and accessories at the generator enclosure. Fuel piping will be provided between the new generator day tank and the above-ground double-wall diesel fuel storage tank. Leak detection systems will be provided to monitor all interstitial secondary containment systems, including the fuel storage tank and below-grade fuel piping if applicable. Remote fuel level indication will be provided at the fuel storage tank.
- Aboveground storage tank shall be a double wall protected storage tank (UL 2085). The primary steel tank will be concrete encased with a high density membrane secondary containment. Alternately, a double wall steel insulated storage tank may be provided with a primary inner steel tank and a secondary outer steel tank. Interstitial space between the primary tank and secondary tank shall be filled with insulation or lightweight concrete. Tank shall be UL Listed and meet the requirements for NFPA 30 and NFPA 37.
- Above fuel piping will be Schedule 80 black steel.
- Below-ground piping will be double wall secondary containment piping with a double containment piping sump. Primary piping will be schedule 80 black steel. Secondary piping will be fiberglass reinforced plastic. Alternately, a flexible fuel piping system with concrete encased fiberglass reinforced plastic secondary containment may be used if allowed by the local jurisdiction.
- Leak detection systems will be provided to monitor all interstitial secondary containment systems (fuel tank and below ground fuel piping).
- The need for an exterior wall mounted fill station outside of the Generator Enclosure will be evaluated.

Section 4

Constructability and Special Design Considerations

4.1 Geotechnical

The Design-Build Team shall contract with a geotechnical engineer to perform a project geotechnical investigation and issue a geotechnical investigation report that includes but not limited to the following:

- Soil boring logs with field and laboratory data, soil stratification based on visual soil classification
- Groundwater levels observed during and after completion drilling
- Site and boring location plans
- Subsurface exploration procedures
- Description of subsurface conditions
- Estimated seasonal high water table
- Discussion of the sinkhole potential for the site
- Discussion of development of the site related to geotechnical conditions
- Recommendations for foundation system for the proposed structures including allowable foundation bearing pressures, total and differential settlement values.

4.2 Site Access and Management

The Design-Build Team will utilize the access to the site through the Home Depot parking lot main entrance from Park Boulevard. Parking, set-up and maintenance of temporary facilities, and material/equipment laydown areas are limited. Available space for contractor use will be outlined during the design development phase in coordination with the County. Any additional space required by the Design-Build Team for employee parking, construction offices, or material storage at off-site locations will be the responsibility of the Design-Build Team.

Access by County personnel and vendors to all areas of the facility shall be maintained at all times during construction. Particularly, safe pedestrian and vehicular access shall be provided to the Administration Building. Roadways adjacent to the filters and CCC facilities may be temporarily blocked for construction of new facilities and demolition of existing facilities.

The Design-Build Team shall be responsible for maintaining the construction site in a manner acceptable to the County. Site maintenance shall include at a minimum the use of dumpsters for disposal of construction debris, trash clean-up and removal, installation and maintenance of silt fence around disturbed areas, maintaining lawn areas in and around the construction zones and

staging areas. Construction material, such as concrete forms, and scaffolding shall be neatly stacked by Design-Build Team when not in use. Waste shall not be buried or burned on site or disposed of into storm drains, sanitary sewer, streams, or water ways. All waste shall be removed from the site and disposed in a manner complying with local ordinance and laws. The County reserves the right to limit the movement of construction crews when an area is not acceptably cleaned and maintained.

Job site safety is of utmost importance to the County for all workers on the project. The Design-Build Team's past record of performance and safety will be evaluated as part of the Firm Experience component of the selection process. Indicators of past safety performance should be provided in the Statement of Qualifications. A comprehensive safety plan will be required as part of the project development; and adherence to safety practices during the project work will be required. The safety plan shall extend to educating County personnel working in and around the plant site during construction on safety measures and preventive procedures.

4.3 PS-16 Operation During Construction

The replacement of pumps, reconfiguration of pump station discharge piping and valves, and modifications to electrical systems, will all result in temporary reductions in the capacity of the installed pumping system. The Design-Build Team will be responsible for sequencing the work and providing all required temporary systems to maintain the required capacity to transmit flow through the force main system to the SCBAWRF.

The Design-Build Team shall prepare and submit for County review a proposed Maintenance of Plant Operations Plan (MOPO) that, at a minimum, includes the sequence of construction plan, identifies tie-ins to existing facilities, process pipe, monitoring and control, and electrical systems, and specifies when transfer of flows will occur. The sequence of construction plan shall identify all required temporary shutdowns of existing systems, the duration of the shutdowns, all impacted facilities and the temporary provisions to be put into place to maintain facility pumping capacity. The Design-Build Team shall schedule and attend a meeting with the County to discuss the MOPO. The Design-Build Team shall coordinate with the County's Project Manager to ensure that all necessary personnel are in attendance at the meeting. Within two weeks following the conference, the Design-Build Team shall submit a revised MOPO that addresses all County comments and discussion items from the conference.

4.4 Noise

4.4.1 Equipment Noise

Pinellas County provides rules for control of noise pollution. The rules are published in the Pinellas County Code of Ordinances, Chapter 58, Article XII. The rules specify overall sound level limits in decibels for the time of day for residential, commercial, and industrial receiving land use categories. The rules also specify sound level limits for individual octave bands detected on any parcel of property adjacent to the source or sound.

The Design-Build Team for PS-16 Improvements Design/Build Project shall meet the requirements of Chapter 58, Article XII, to mitigate any noise pollution that may be experienced by the neighboring communities. The Design-Build Team shall develop a testing program, to be

executed after substantial completion, to confirm all the sound level limits listed in Chapter 58 are not exceeded. The Design-Build Team shall take corrective action if the testing results are not in compliance with the listed sound level limits.

4.4.2 Construction Noise

Construction noise pollution control is essential to the success of the project. An effective noise pollution mitigation program can minimize or eliminate noise complaints from neighboring communities. Therefore, it is important to have a Design-Build Team that is sensitive to the community's need for an environment free from noise pollution and committed to using practical and proven noise control methods to minimize construction noise pollution and allow the project to move forward.

The Design-Build Team shall develop a noise control program that complies with all applicable federal and state noise guidelines and the requirements of local noise ordinance Chapter 58, Article XII, 58-449. Construction Noise. This program shall include guidelines and procedures for minimizing construction noise and provide the following:

1. Evaluate potential traffic and construction noise impact.
2. Set noise level limits at lot line.
3. List hours of operation.
4. List construction equipment noise limits.
5. Develop and submit noise control and monitoring plan prepared by an acoustical engineer. The plan shall include collection of baseline and compliance noise data, equipment noise certification tests, noise monitoring stations locations and design of noise mitigation measures.
6. Establish short-term and long-term noise compliance monitoring procedure.
7. Develop noise control strategies that include but are not limited to area specific noise control measures, large scale noise barrier systems, and off-site mitigation at the receiving end.
8. Train field staff on noise issues and how to identify noisy construction equipment and/or procedure and how to properly mitigate the noise.
9. Be prepared to stop noisy work and provide noise mitigation measures.
10. Document all noise mitigation measures and noise control compliance to be presented to the county and/or the community when noise issues come up.
11. Develop a process for promptly addressing noise complaints and properly responding to it.

4.5 Dust Control During Construction

Dust is particulate matter discharged into the atmosphere due to excavating, backfilling, earthmoving and grading operations, concrete drilling and coring, masonry cutting, brush cleaning, demolition, travel on unpaved roads within construction sites and dust blown by wind from uncovered graded areas and stored piles of soil. The Design-Build Team shall establish minimum standards for dust control to be met by all construction activities generating dust and prepare a Dust Control Plan. Minimum standards shall include but are not limited to the following:

1. Prior to ground disturbance apply sufficient water to the area to be disturbed to prevent any dust emissions from crossing the property line.
2. Minimize the area of disturbed soil at any given time to reduce dust generation and transport. This can be achieved by adjusting the construction sequence.
3. All unpaved access roads in the construction site shall be stabilized by regular mobile water sprinkling, by treatment with chemical dust suppressant or by covering the surface with a thin layer of gravel.
4. Limit the speed of vehicles and equipment traveling on unpaved roads to no more than 10 MPH to prevent fugitive dust.

4.6 County Insurance Review and Assessment

Prior to establishment of the GMP, draft design documents produced by the Design-Build Team will need to be provided to the County's insurance provider for review and assessment, and comments/recommendations shall be addressed by the Design-Builder for incorporation in the final design and GMP.

4.7 Performance Testing

Operation and performance of equipment and process systems installed as part of this project are required to be tested for at least 60 days to demonstrate compliance with the design criteria. At completion of installation, the Design-Build Team shall demonstrate that the filtration and disinfection systems operate at the efficiencies outlined herein.

4.8 Start-Up, Training and Commissioning

The Design-Build Team is responsible for coordinating and completing the testing, check-out, start-up, and commissioning of the project. The Design-Build Team shall coordinate in advance with County operations and maintenance staff for all planned equipment shutdowns, tie-ins, and start-ups to ensure existing plant operations are maintained at all times. The Design-Build Team shall submit a detailed start-up and training plan for review and approval by the County within seventy-five (75) calendar days from construction start. The plan shall be specific to each process and shall be incorporated into the overall construction schedule. The plan shall include how the Design-Build Team intends to test each piece of equipment along with its related appurtenances and demonstrate the operation and performance to the County personnel.

The Design-Build Team will provide documentation, complete with names and dates, that each piece of equipment has been started and operated by a manufacturer's representative along with witnessing by the County or a designated representative.

The Design-Build team shall develop an instructional program that includes training for the new filtration and disinfection systems. The Design-Build Team shall assemble training materials necessary for instructions, including specific operations and maintenance data from supplied manuals. Each training session shall be video recorded for the operational staff's use. The Design-Build Team shall provide training at mutually agreed times by the Design-Build Team and the County.

Following successful start-up and testing of systems, the Design-Build Team shall turn-over the entire system for operation by the County. The Design-Build Team shall verify that the asset management system is updated with accurate project related data and functioning as intended for scheduled maintenance procedures.

4.9 Coordination with Other Projects

The Design-Build Team will be required to coordinate onsite activities with other County projects underway at the PS-16.

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Section 5

Permits

5.1 Wastewater

For the Pump Station No. 16 improvements, the Design-Build Team shall prepare their design in accordance with Chapter 62 (F.A.C.) and shall be responsible for submitting and obtaining a permit for the proposed improvements.

5.2 Stormwater and Surface Water

For stormwater and surface water management, the Design-Build Team shall be required to prepare their design in accordance with Chapters 373 and 403 (F.S.) and Chapters 40 and 62 (F.A.C.). The Design-Build Team should develop a plan for no increase to impervious area on the plant site.

5.3 Building Permits

The Design-Build Team shall be responsible for obtaining necessary permits for construction of proposed improvements from the Pinellas County Building Department.

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Attachments

- Attachments

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Attachment 1

Photographs



Photo No. 1 - Influent Splitter Box Top Slab and Hatches



Photo No. 2 – East side Wetwell and Valve Vault Top Slab and Hatches and Man-Door to Odor Control Room



Photo No. 3 - North CMU Screen Wall



Photo No. 4 - Existing Wetwell Coating Example

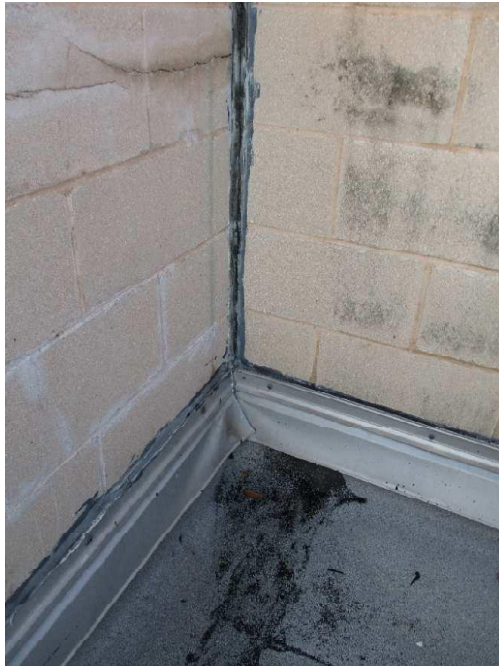


Photo No. 5 - Crack in CMU parapet above Generator Room - View from Roof



Photo No. 6 - Louver and Man- door, Southwest wall



Photo No. 7 - Louvers, West wall



Photo No. 8 - North Louvers



Photo No. 9 - Existing CMU Screening the Odor Control System



Photo No. 10 – Existing exterior metal doors



Photo No. 11 – Existing roof membrane over chemical room

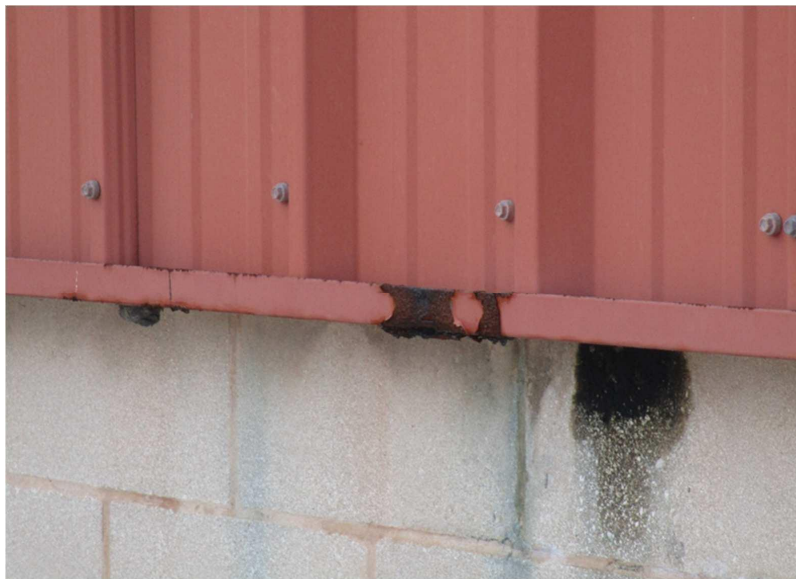


Photo No. 12– Existing vertical metal roof panels facing odor control walled enclosure



Photo No. 13 – Existing exposed CMU wall at roof change in level

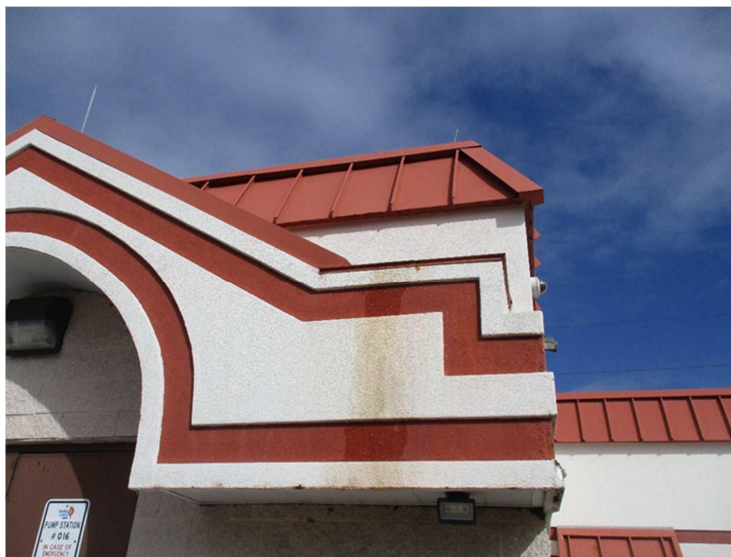


Photo No. 14 – Existing stucco over electrical room at south wall



Photo No. 15 – Existing plumbing in northwest corner of chemical room



Photo No. 16 – Existing north exterior wall

Attachment 2

Illustrative Drawings

PINELLAS COUNTY DEPARTMENT OF UTILITIES

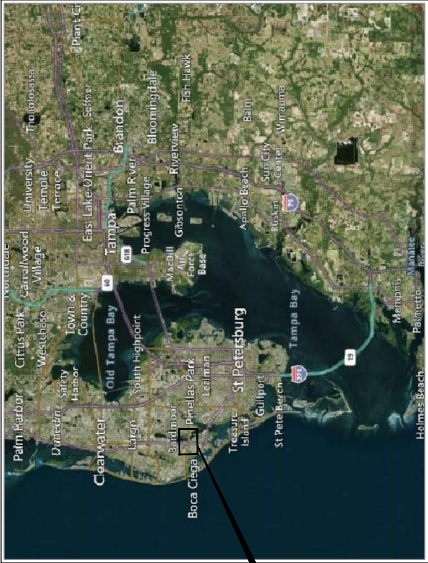
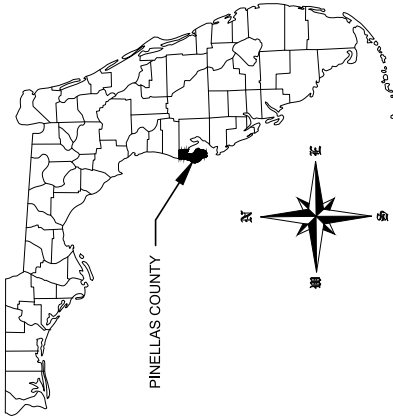
PUMP STATION NO. 16 IMPROVEMENTS

PID #004360A

NOVEMBER 2023



SITE LOCATION
10550 PARK BLVD
SEMINOLE FL,
33772



VICINITY MAP
(NOT TO SCALE)

PREPARED BY:



CDM Smith Inc.
2002 N. Lois Avenue, Suite 200
Tampa, FL 33607 | Tel: (813) 281-2900
FL COA No. EB-0000020
CDM SMITH PROJECT No. 6018-275698

STATE OF FLORIDA

DESIGN CRITERIA PACKAGE - NOT FOR CONSTRUCTION

DRAWING INDEX

NO.	DRAWING	SHEET TITLE
1	GENERAL	COVER/LOCATION MAP/DRAWING INDEX
2	G-1-A	SIGNATURE SHEET (INCLUDED IN DIGITAL SETS ONLY)
3	G-1	LEGEND, ABBREVIATIONS AND GENERAL NOTES
4	C-1	EXISTING SITE PLAN
5	C-2	SITE DEMOLITION PLAN
6	C-3	PROPOSED SITE PLAN
7	A-1	PROPOSED FLOOR PLAN
	M-1	EXISTING PUMP STATION LOWER LEVEL PLAN
8	M-2	EXISTING PUMP STATION LOWER LEVEL SECTIONS
9	M-3	EXISTING PUMP STATION LOWER DEMOLITION PLAN
10	M-4	EXISTING PUMP STATION LOWER DEMOLITION SECTIONS
11	M-5	EXISTING PUMP STATION LOWER MODIFICATIONS PLAN
12	M-6	EXISTING PUMP STATION LOWER MODIFICATIONS SECTIONS
13		
	E-1	PUMP STATION 030 UPPER LEVEL ELECTRICAL DEMOLITION PLAN
14	E-2	PUMP STATION 030 ELECTRICAL MODIFICATIONS PLAN
15	E-3	ONE LINE POWER DIAGRAM
16		

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B-2 CDM SMITH BORING LOCATION (2018)

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2. Objectives and scope of the project		2. Objectives and scope of the project
3. Methodology and data collection		3. Methodology and data collection
4. Results and discussion		4. Results and discussion
5. Conclusion and recommendations		5. Conclusion and recommendations



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2012 N Lois Avenue, Suite
W. 1000, St. Louis, MO 63103
Tel: 314.241.2000
Fax: 314.241.2001
www.3m.com/usa/industrial/

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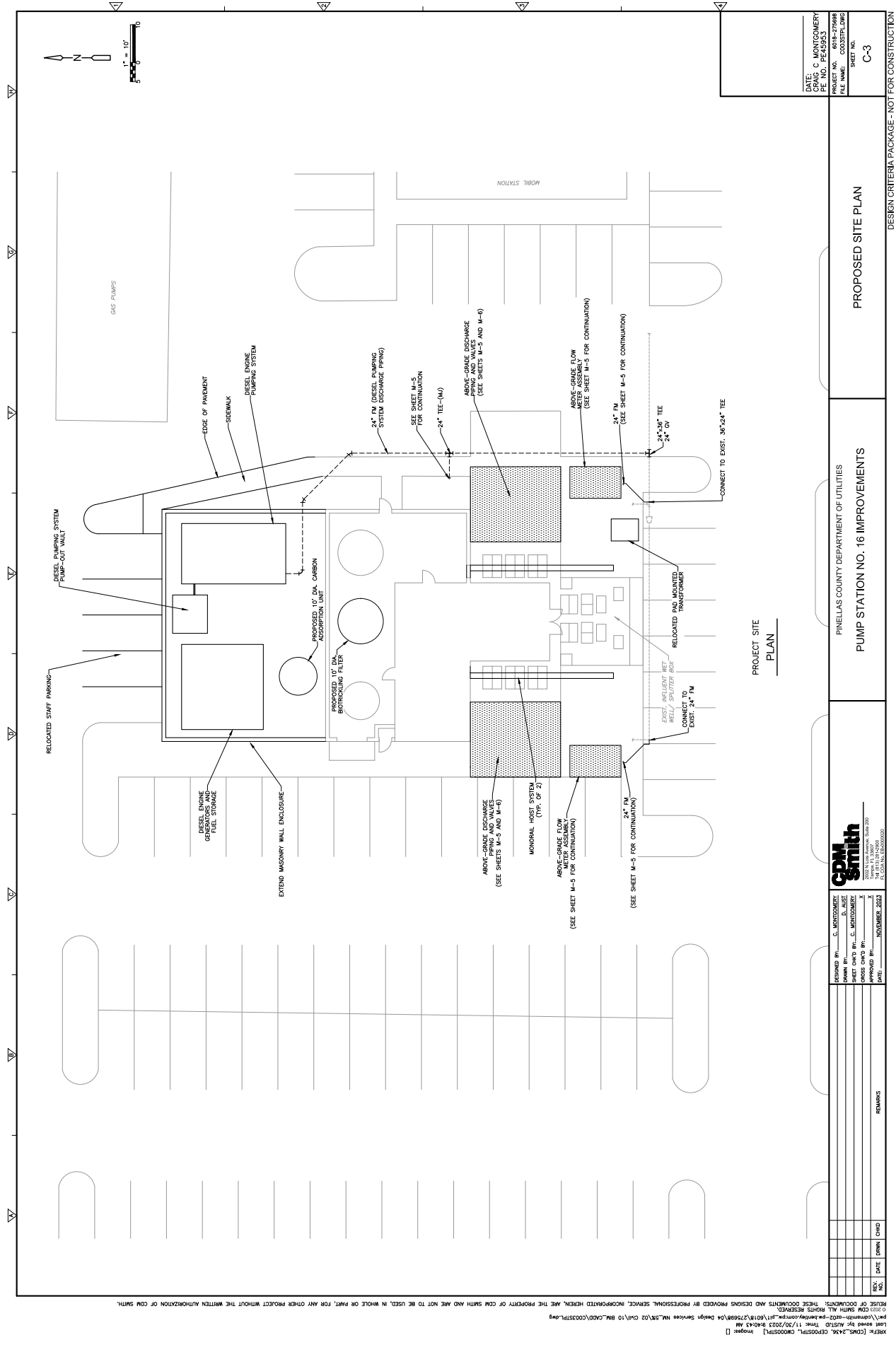


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DRAWN BY: D. ASHT
SHEET CHECKED BY: C. MONTGOMERY
CROSS CHECKED BY: J. J.
APPROVED BY: NOVEMBER 2023
DATE: NOVEMBER 2023

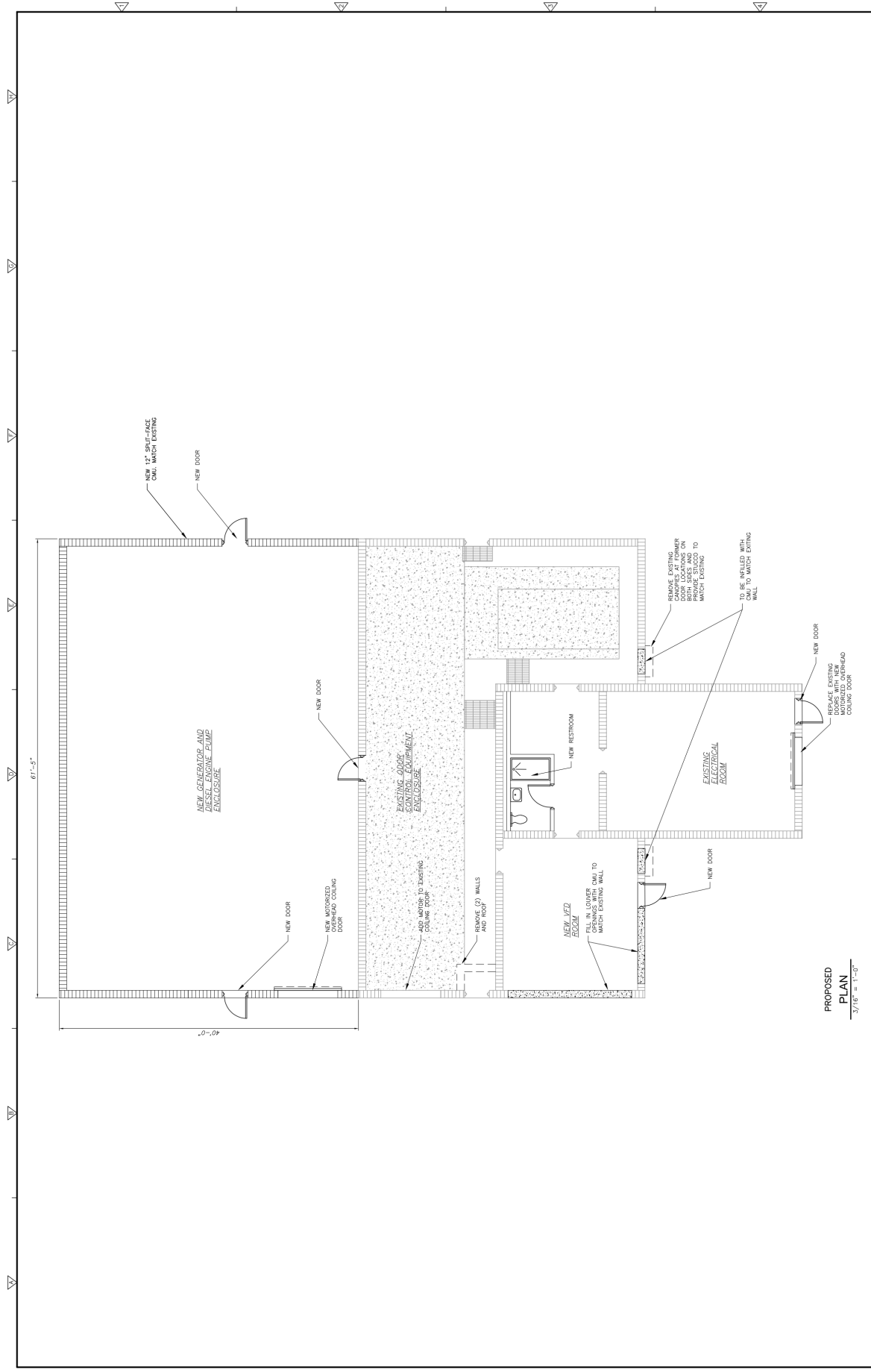
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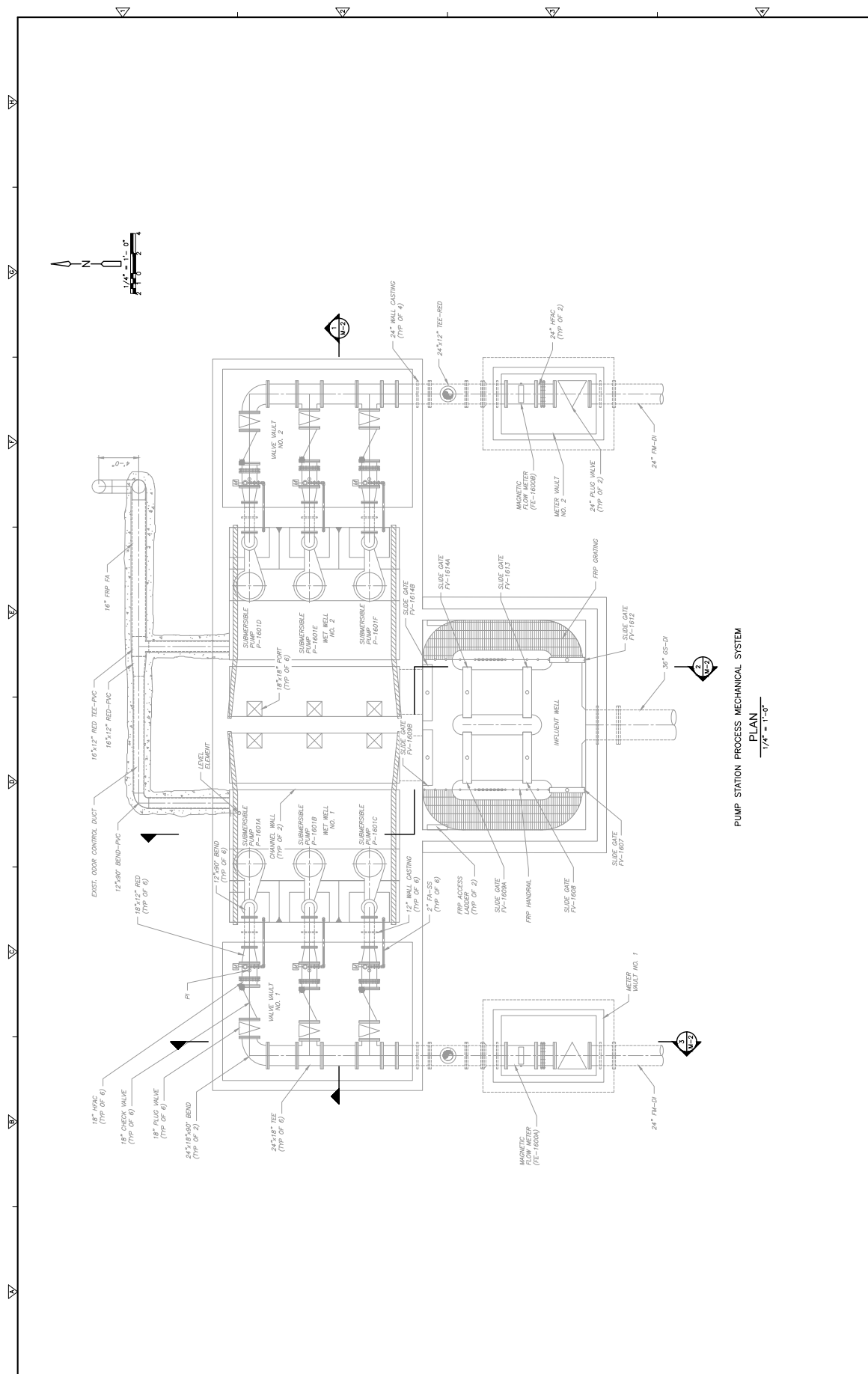
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												CDM Smith							
												2000 N. 54th Avenue, Suite 200							
												Tampa, FL 33635-3000							
												Tel: 813.973-9200							
												Fax: 813.973-9200							
												E: csmith@cdmsmith.com							
												SHEET NO. 1							
												SHEET CHD'D BY: C. MONTAGNE							
												DESIGN CHD'D BY: C. MONTAGNE							
												SHEET NO. 1							
												DATE: NOVEMBER, 2023							



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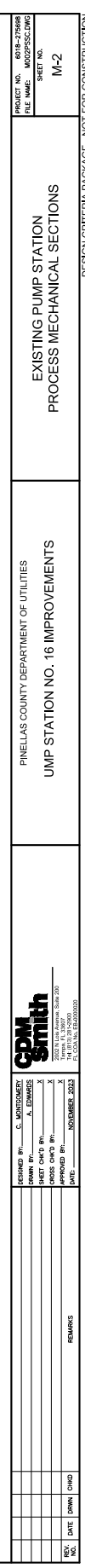
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DESIGNED BY: J. SMITH	CHECKED BY: J. SMITH	DATE: NOVEMBER 2023	NOVEMBER 2023
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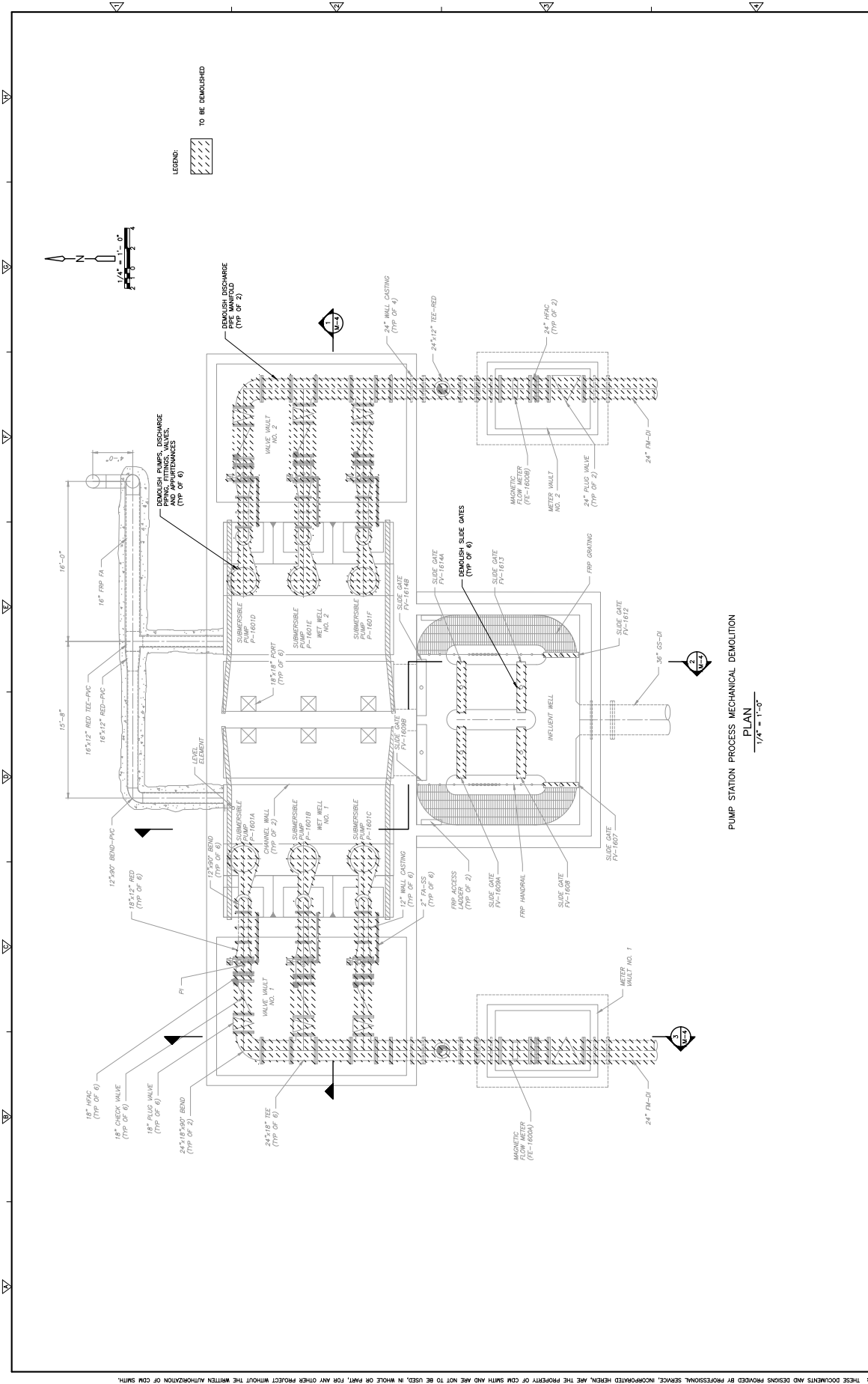


PUMP STATION PROCESS MECHANICAL SYSTEM

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PINELLAS COUNTY DEPARTMENT OF UTILITIES
UMP STATION NO. 16 IMPROVEMENTS

EXISTING PUMP STATION
PROCESS MECHANICAL DEMOLITION PLAN

DESIGNED BY: C. MONTOMAREL
DRAWN BY: A. EDMARIS
SHEET CHECK BY: C. MONTOMAREL
CROSS CHECK BY:
APPROVED BY: NOVEMBER, 2023

REVISIONS

NOVEMBER, 2023

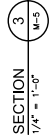
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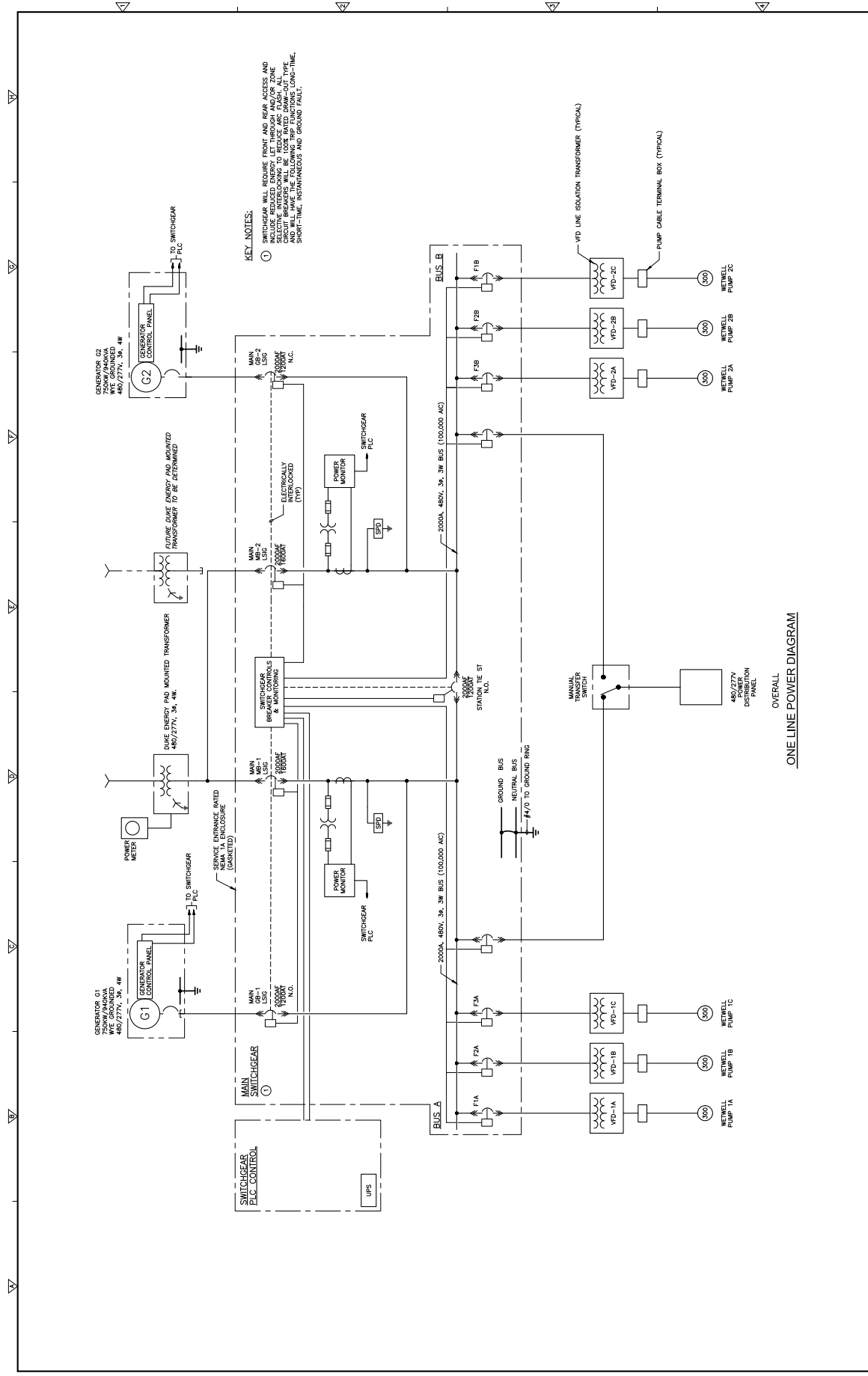
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© 2023 CDM SMITH ALL RIGHTS RESERVED.
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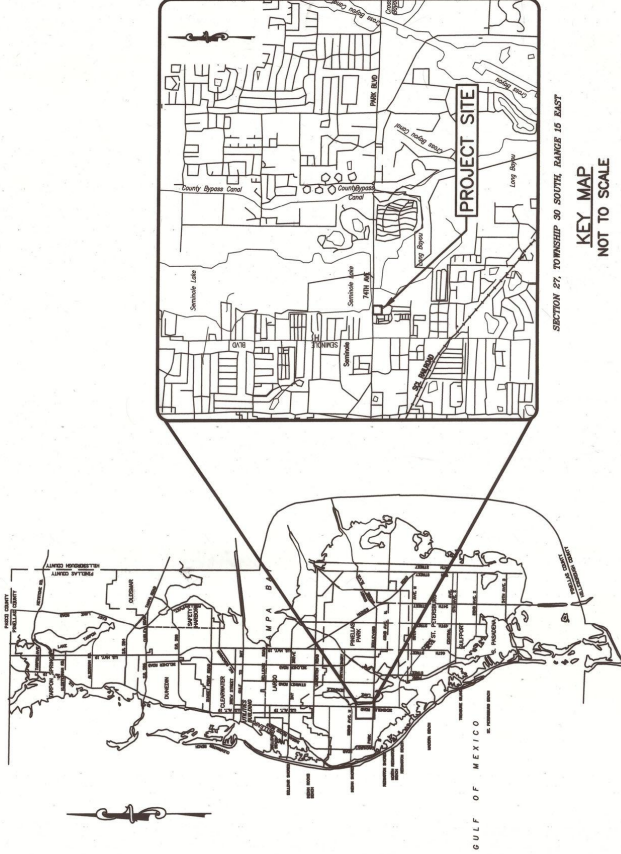
Attachment 3

Pump Station 016 Record Drawings
(Parsons Engineering Services, August 2001)

PUMP STATION 016

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1. THE RECORD DRAWINGS HAVE BEEN PREPARED USING INFORMATION COMPILED BY OTHERS DURING CONSTRUCTION OF THESE FACILITIES. THE ENGINEER HAS REVIEWED AND APPROVED THE INFORMATION FOR HIS RESPONSIBLE SUPERVISION, DIRECTION, OR CONTROL. THESE RECORD DRAWINGS ARE NOT TO BE USED AS A BASIS FOR ANY DESIGN OR CONSTRUCTION WORK, NOR ARE THEY TO BE RESPONSIBLE ON EITHER SIDE FOR ANY ERRORS OR OMISSIONS THAT HAVE BEEN INCORPORATED INTO THESE DRAWINGS.
2. THE ENGINEER'S CERTIFICATION OF RECORD DRAWINGS (IF PROVIDED BY SIGNATURE AND SEAL HEREON) IS ONLY INTENDED TO REPRESENT THAT:
 - A) THE ENGINEER WAS IN REASONABLE CHARGE OF INSPECTING CONSTRUCTION FOR THE PROJECT.
 - B) CONSTRUCTION HAS BEEN COMPLETED TO THE POINT WHERE IDENTIFIED FACILITIES ARE FUNCTIONALLY COMPLETE.
 - C) ALL DEVIATIONS FROM THE CONSTRUCTION PERMIT AND APPROVED DRAWINGS HAVE BEEN CORRECTED.
3. PLANS AND SPECIFICATIONS WILL NOT PRESENT THE PROJECT FROM FEDERAL FL-350 AND FL-360 (ROW SYSTEM) OF THE FLORIDA ADMINISTRATIVE CODE (FAC).
4. THE RECORD DRAWINGS FOR THE PROJECT ARE, IN THE ENGINEER'S OPINION, ACCURATE AND COMPLETE. THE ENGINEER HAS REVIEWED THE PLANS AND SPECIFICATIONS AND INDICATE ALL DEVIATIONS KNOWN TO EXIST ON THE PROJECT. THE ENGINEER'S REVIEW DOES NOT COVER ENGINEERING PLANS AND SPECIFICATIONS.
5. WORK OR COMPONENTS THAT ARE DENOTED AS DELETED OR OMITTED FROM THE PROJECT SHALL BE REMOVED FROM THE PROJECT. THE FOLLOWING SMALL PRODUCT ARE MARKED OUT USING THE



KEY MAP
NOT TO SCALE

LOCATION MAP

PUMP STATION
CONSTRUCTION PLANS

PREPARED BY:

P **PAULSEN ENGINEERING SCIENCE, INC.**
3450 Birchwood Park Drive
Suite 345
Tampa, Florida 33618
Phone (813) 953-4650

SUBMITTED AS RECORD DRAWINGS

HAROLD J. CURTIS II, P.E. REG. NO.47245
PROJECT MANAGER

WILLIAM H. GILL

ROBERT P. STASIS

ROBERT P. STASIS P.E.

DATE 08/09/01

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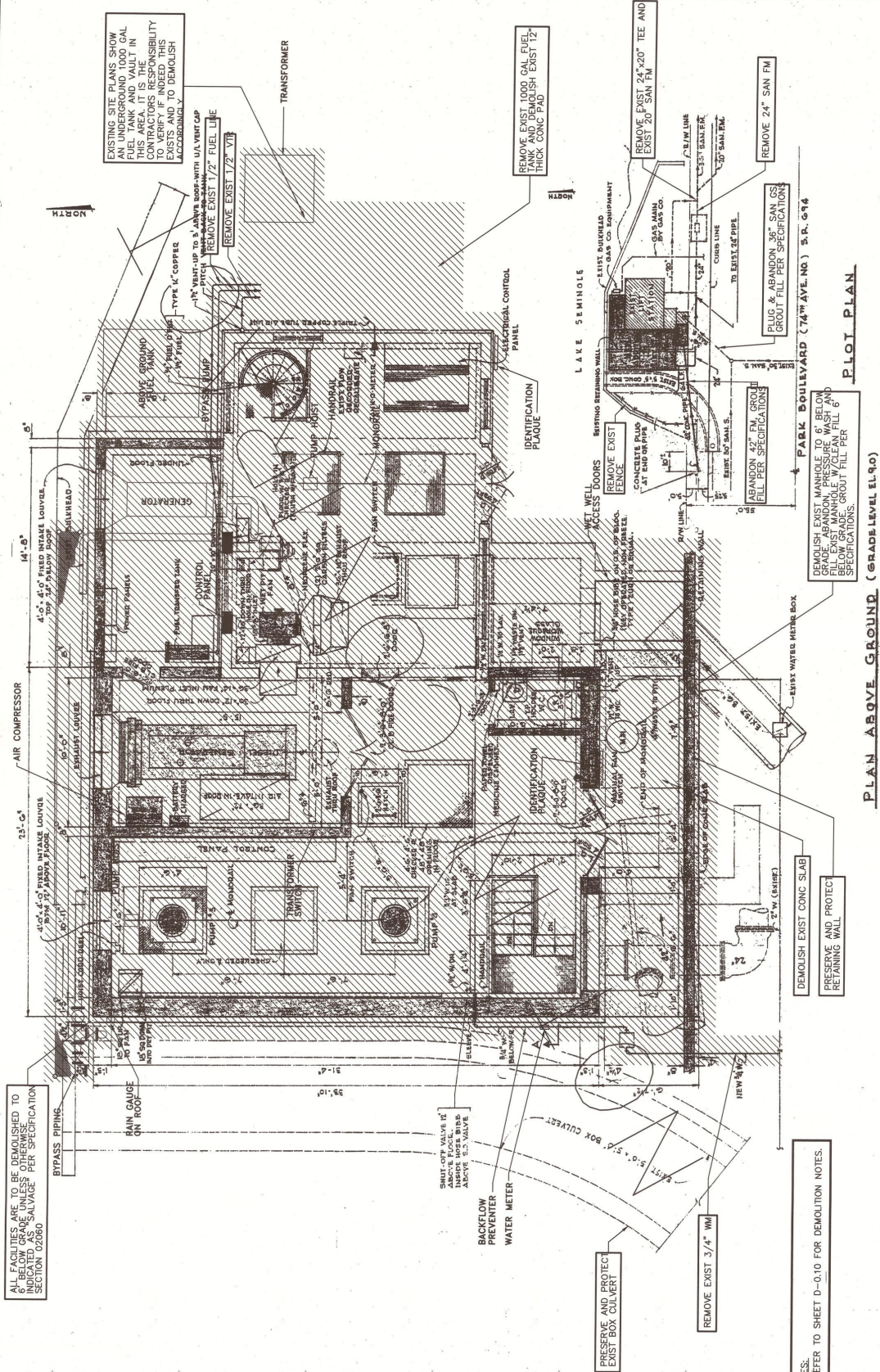
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BU	BURIED			
BSL	BLACK STEEL			
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BT	BUTTON			
BU	BURIED			
BSL	BLACK STEEL			
BS	BUILDING			
BT	BUTTON			

[illegible]

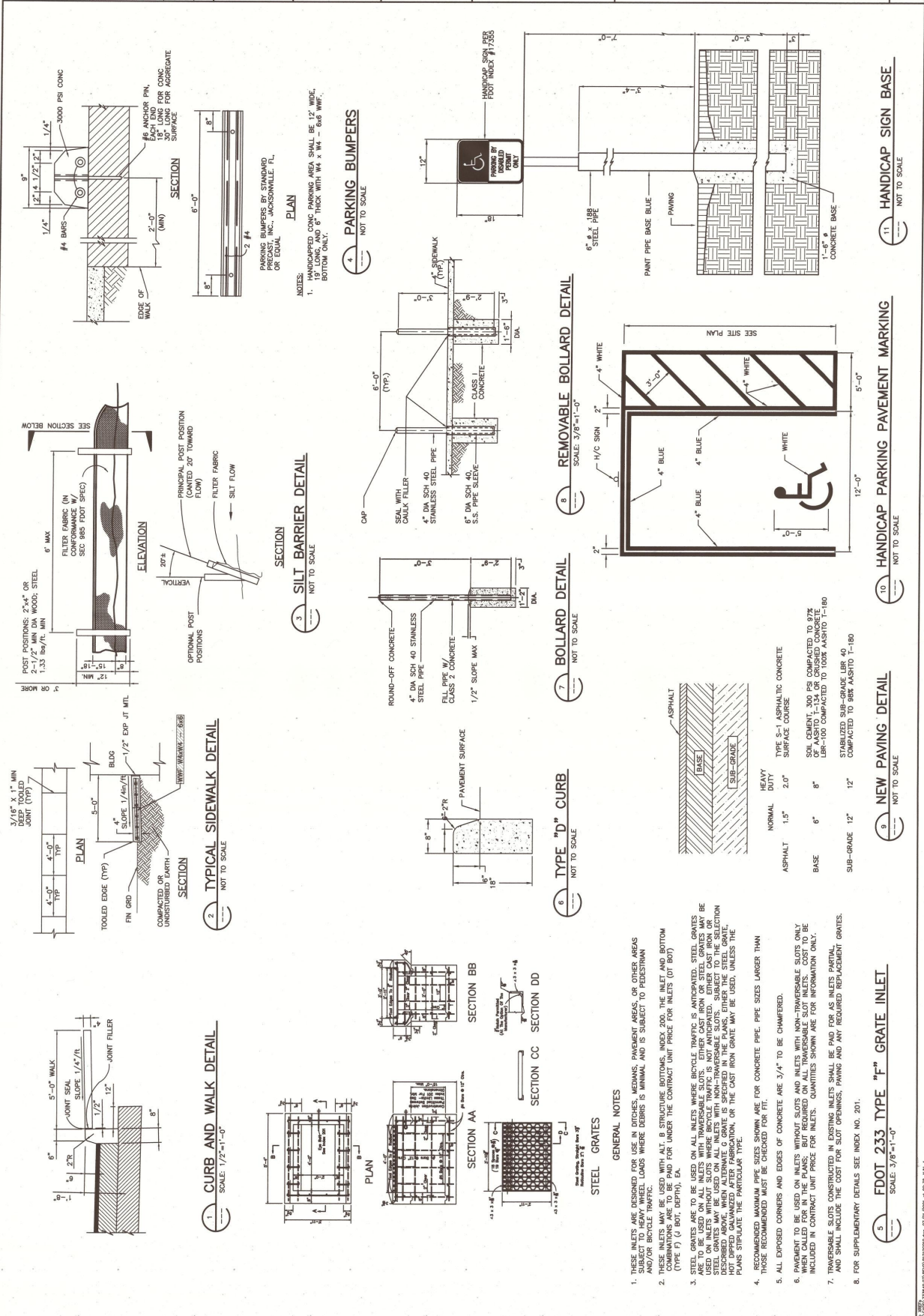
PCU PROJECT NO 734-617114-0878

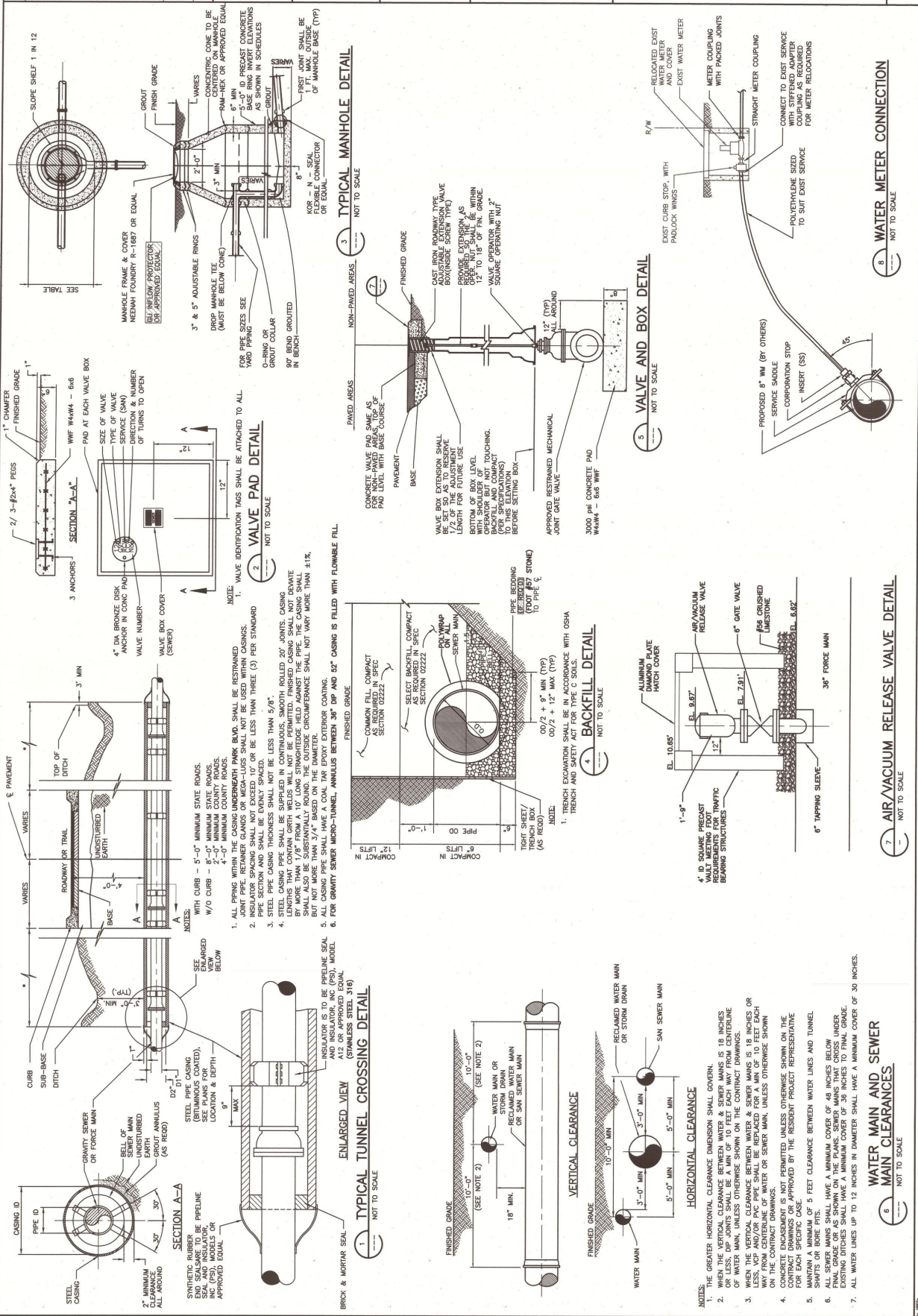
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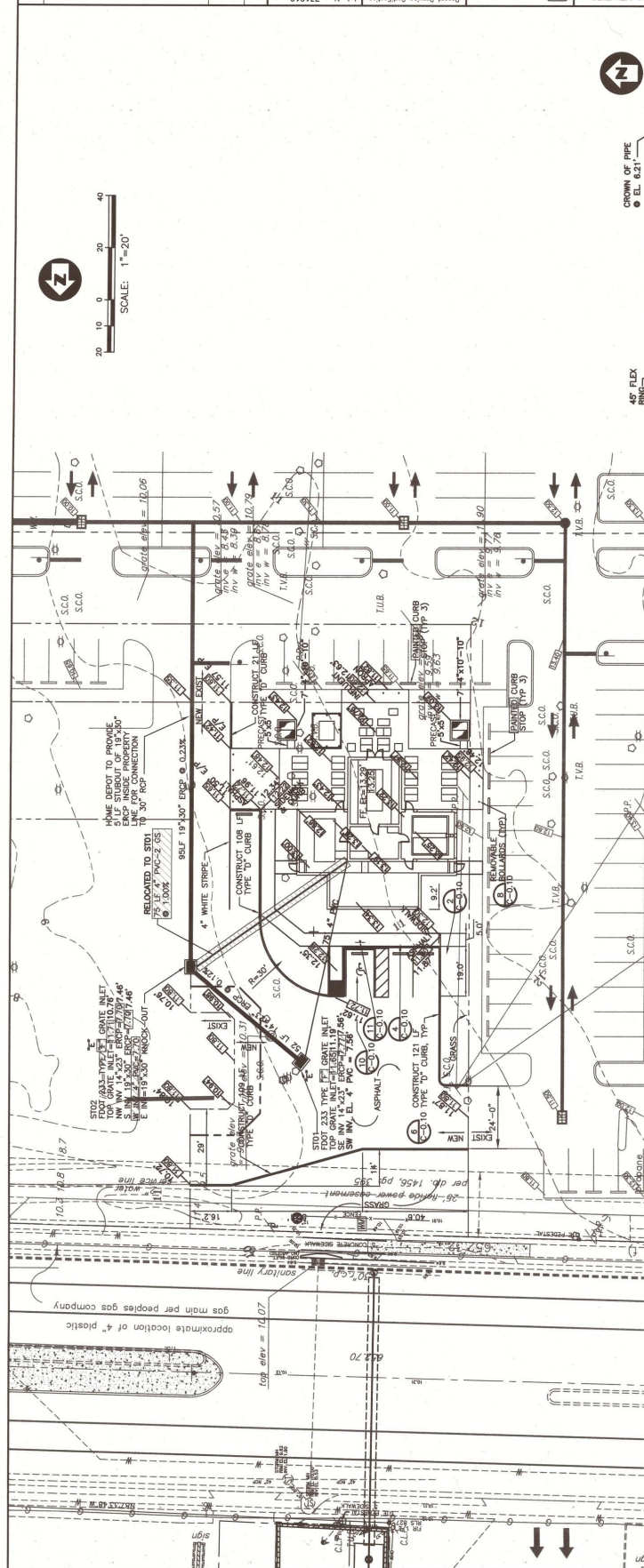
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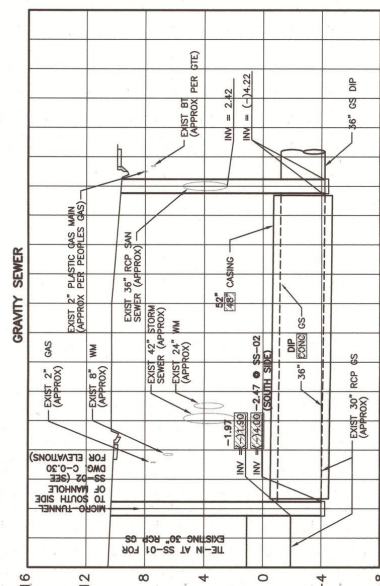
NOTES:
1. REFER TO SHEET D-0.10 FOR DEMOLITION NOTES.



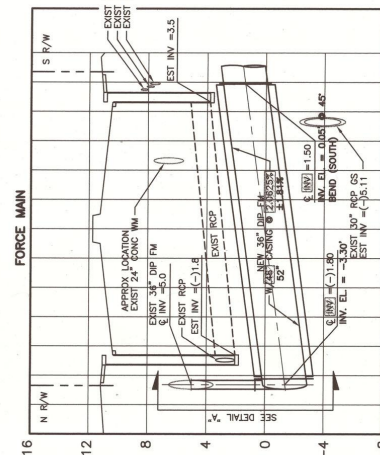




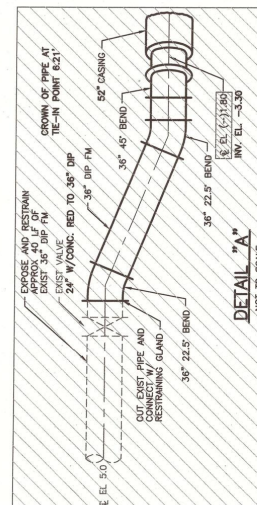
SITE PLAN



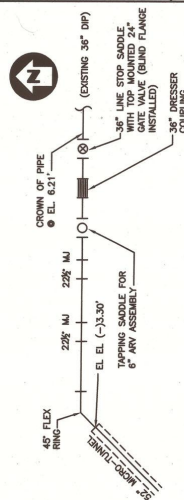
A SECTION
C-0.30 SCALE: HORIZ - 1"=20'
VERT - 1"=4'



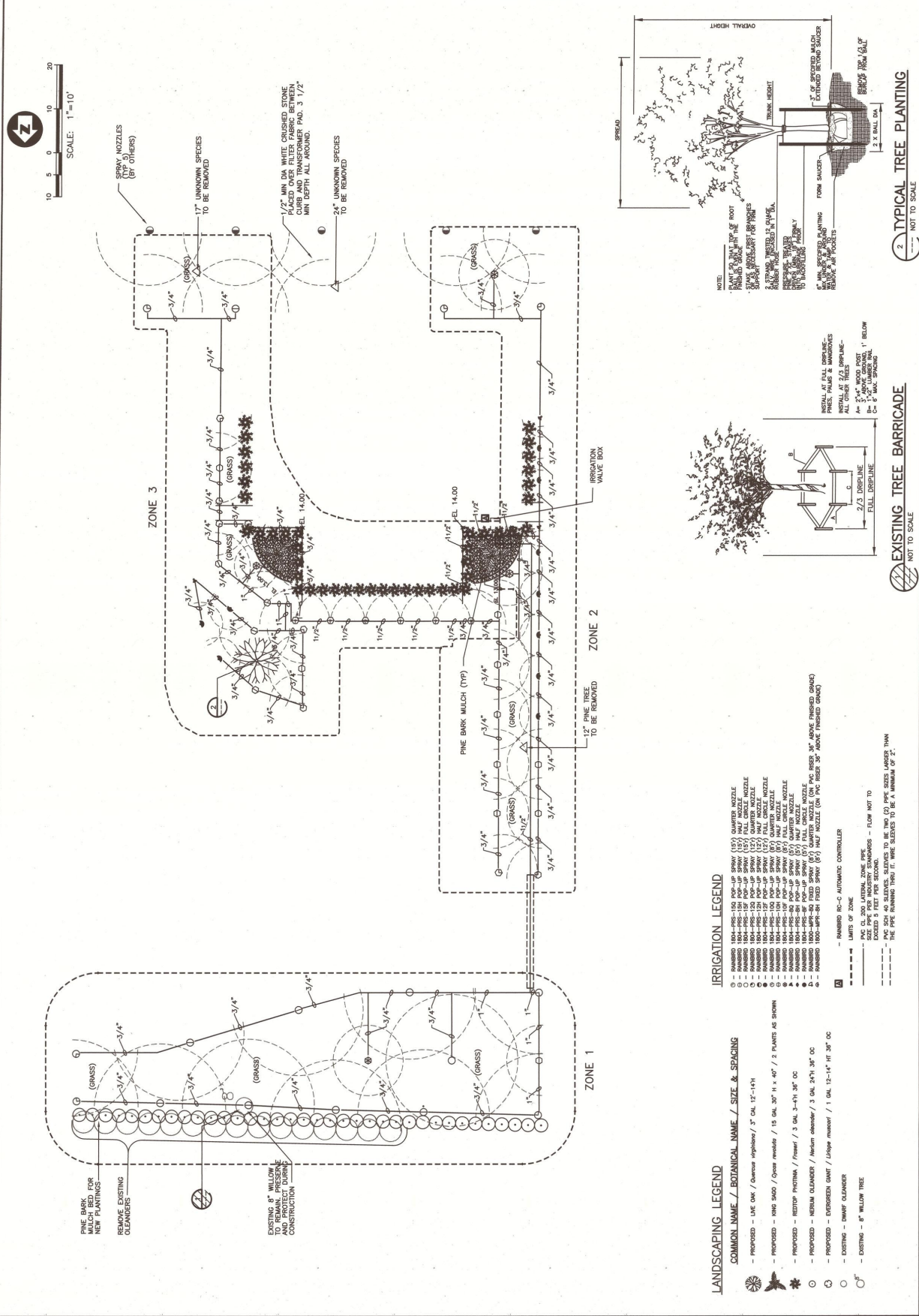
B SECTION
C-0.30 SCALE: HORIZ - 1"=20'
VERT - 1"=4'

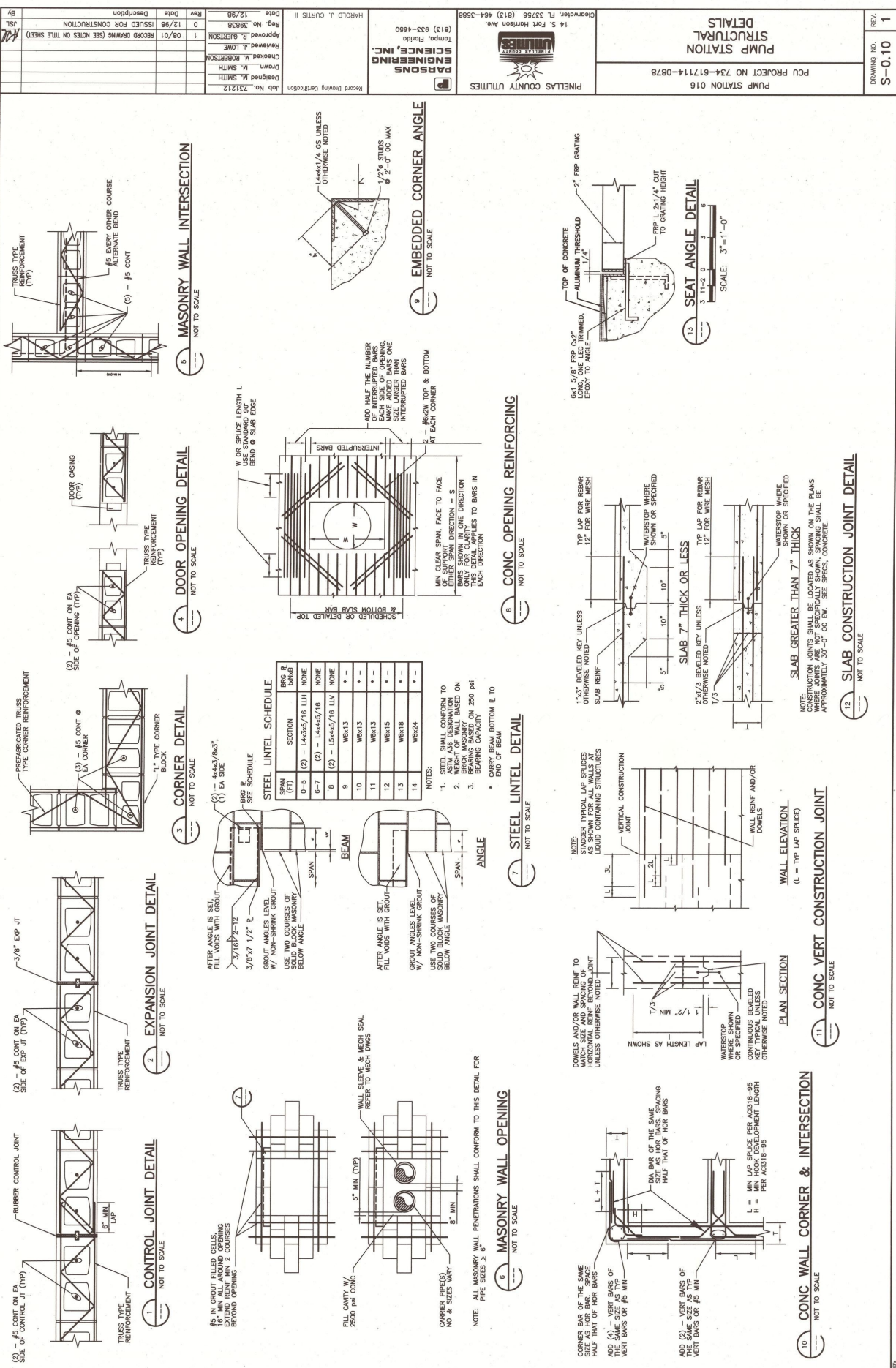


DETAIL "A"
NOT TO SCALE

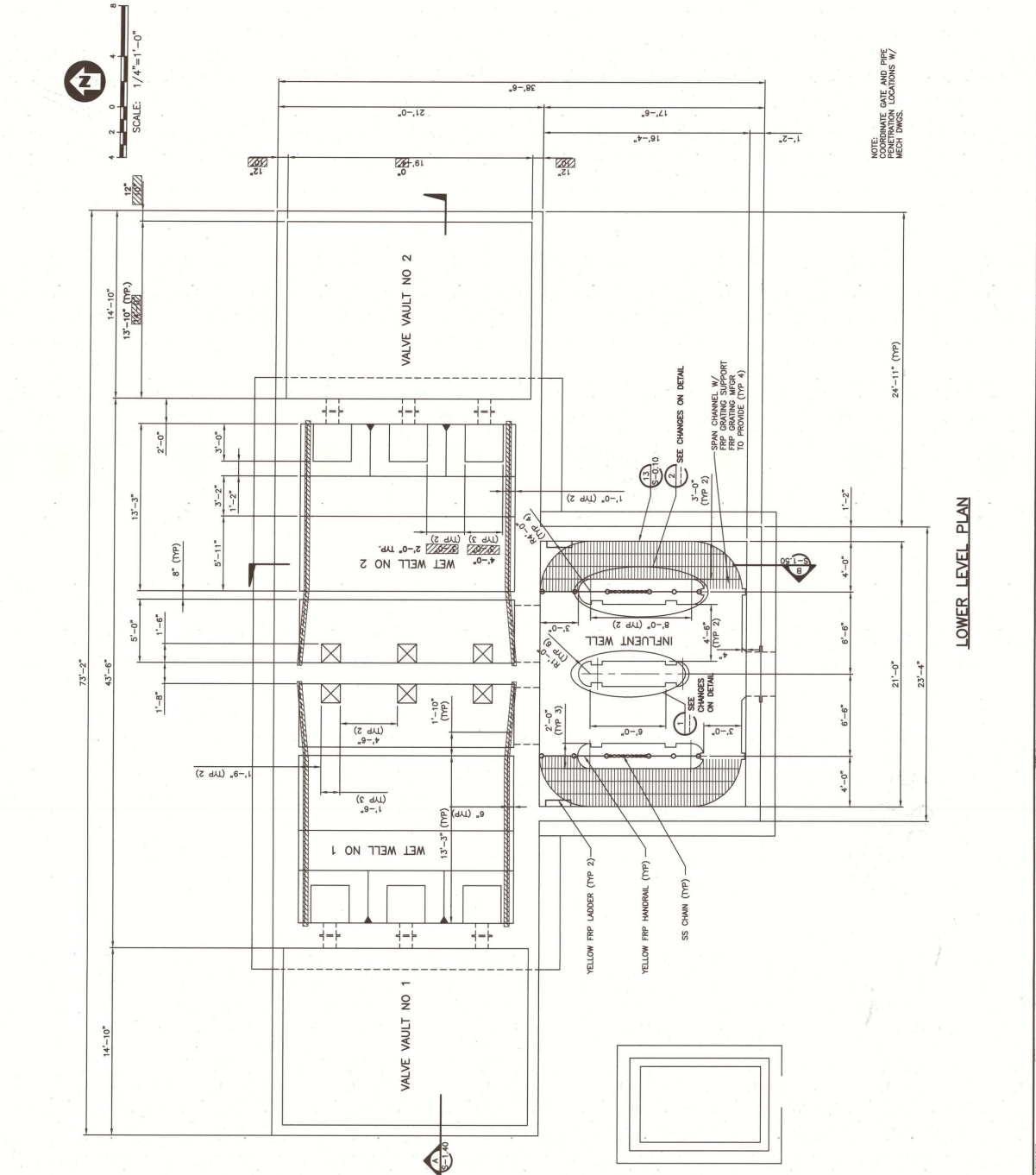
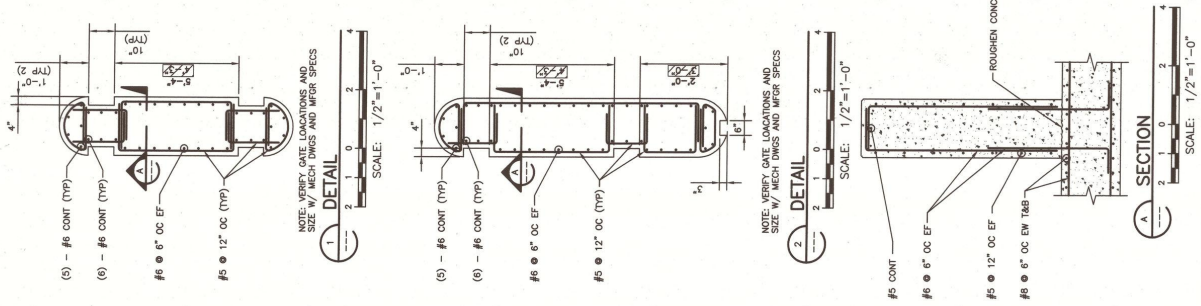


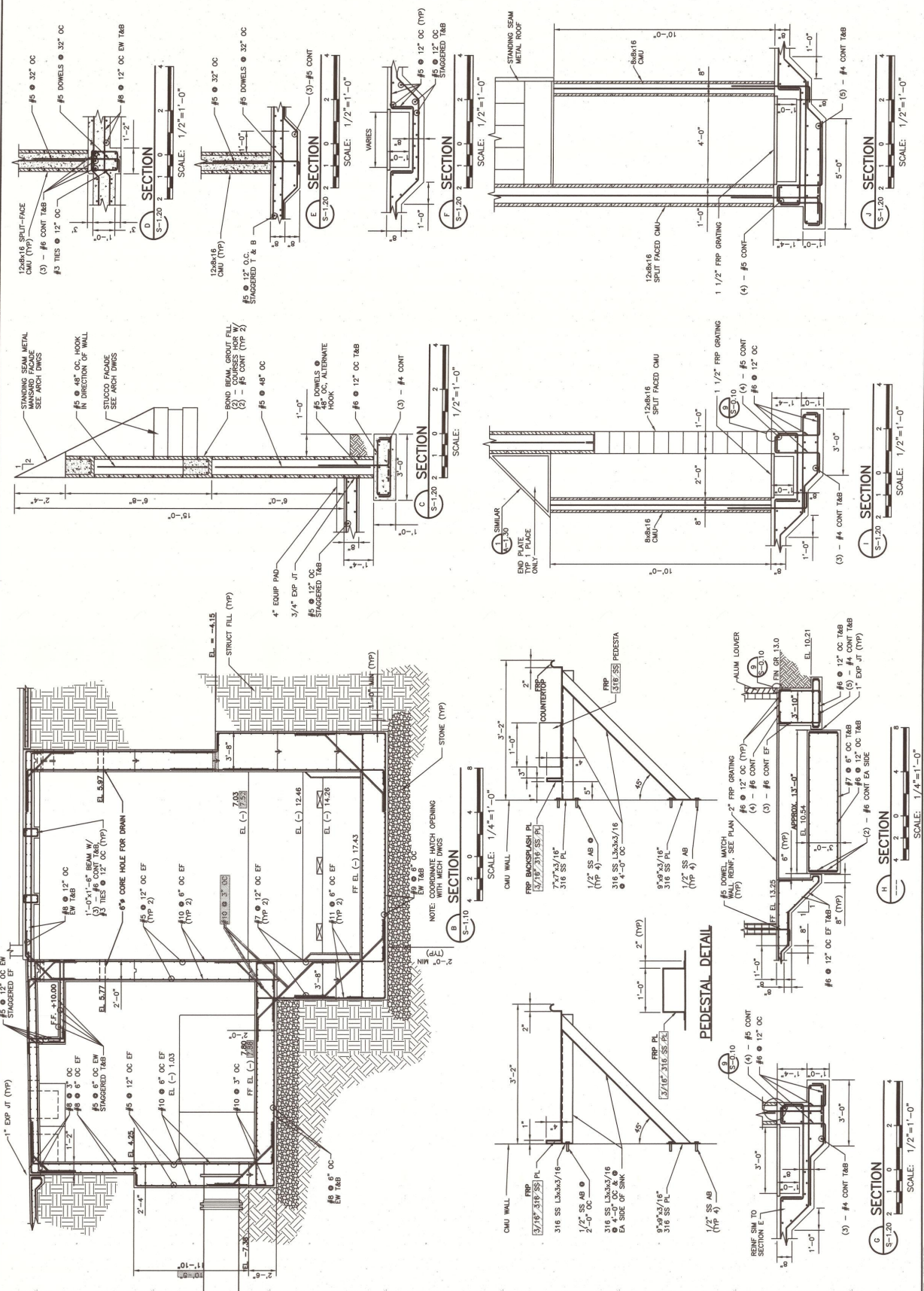
FORCE MAIN TIE-IN
NOT TO SCALE





DRAWING NO. S-1.10 REV. 1	PUMP STATION 016 PCU PROJECT NO 734-B17114-0878 PUMP LOWER LEVEL STRUCTURAL PLAN	PINELLAS COUNTY UTILITIES  14 S. Fort Harrison Ave. Clearwater, FL 33756 (813) 464-3588	PARSONS ENGINEERING SCIENCE, INC. Tampa, Florida (813) 933-4650 HAROLD J. CURTIS II Record Drawing Certification	Job No. 731212 Designed M. SMITH Checked M. ROBERTSON Approved R. GRIFFIN Reg. No. 39836 Date 12/98 Rev. 0 12/98 ISSUED FOR CONSTRUCTION 1 08/01 RECORD DRAWING (SEE NOTES ON TITLE SHEET) By JSL
--	---	--	---	---





11. *Chlorophyll *a** and *Chlorophyll *b** were determined by the method of Lichtenthaler and Whistler (1973). The total carotenoids were determined by the method of Arar and Johnson (1977).

PUMP STATION
ELEVATIONS

PUMP STATION 016
PCU PROJECT NO 734-617114-0878

14 S. Fort Harrison Ave.
Clearwater, FL 33756 (813) 464-358

PINELLAS COUNTY UTILITIES



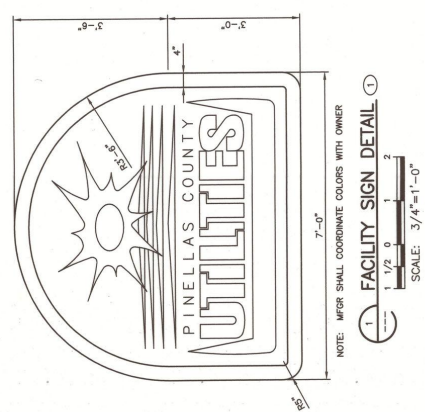
**PARSONS
ENGINEERING
SCIENCE, INC.**
Tampa, Florida
(813) 933-4650

HAROLD J. CURTIS II

Rev	Date	Description
1	08/01/98	RECORD DRAWING (SEE NOTES ON SHEET)
0	12/98	ISSUED FOR CONSTRUCTION
		By JSL



NOTE: SEE DWG A-1.20 FOR SIGN SCHEDULE



FUNCTION SYMBOL SCHEDULE

MEASURED OR INITIATING VARIABLE	FIRST LETTER	READOUT OR PASSIVE FUNCTION	SUCCESSING-LETTERS
A Analysis	MODIFIER	OUTPUT	MODIFIER
B Burner, Combustion		Alarm	
C Conductivity (Electrical)		Programmer	Control, Closed
D Density or Specific Gravity	Differential		
E Voltage		Sensor (Primary Element)	Education
F Flow Rate	Ratio (Fraction)		
G Logging		Glass, Viewing Device	
H Hand		Indicate	High
I Current (Electrical)		Scam	
J Power			
K Time, Time Schedule			
L Level		Light (Plot)	Low, Middle, Intermediate, Open
M Motor			
N Vibration		Igniter Offset	
O Operation		Office, Restriction Point (Test)	
P Pressure, Vacuum		Connection	
Q Quantity, Event		Integrate, Totalize	
R Radiation		Record, Print	Regulate
S Speed, Frequency		Safety	Switch
T Temperature			
U Multivariable		Trend	Multifunction
V Viscosity		Vacuum	Valve, Damper, Lower, Gate
W Weight, Force, Torque		Well	
X Unclassified			Unclassified
Y			Unclassified
Z Position			Relay, Computer, Convert, Final Control Element

BASIC SYMBOLS

SINGLE FUNCTION	MULTIPLE FUNCTION	FIELD MOUNTED INSTRUMENT OR DEVICE
OR	OR	FRONT OF PANEL MOUNTED INSTRUMENT ON UCP OR MCC, VFD
OR	OR	REAR OF PANEL MOUNTED INSTRUMENT ON UCP OR MCC, VFD
OR	OR	FRONT OF PANEL MOUNTED INSTRUMENT ON MAIN PANEL
OR	OR	REAR OF PANEL MOUNTED INSTRUMENT ON MAIN PANEL
OR	OR	RTU, PLC AND/OR COMPUTER SOFTWARE COMPONENT (OPERATOR ACCESSIBLE UNDER NORMAL CONDITIONS)
OR	OR	RTU, PLC AND/OR COMPUTER GENERATED COMPONENT (NOT OPERATOR ACCESSIBLE UNDER NORMAL CONDITIONS)

LINE CODES

---	ELECTRICAL SIGNAL
---	PROCESS OR MECH.
---	PNEUMATIC
---	CAPILLARY
---	SONIC OR R.F.
---	HYDRAULIC
---	TELEPHONE
---	NO ELECTRICAL CONNECTION (INDICATED BY DOTS)
---	ELECTRICAL CONNECTIONS (INDICATED BY DOTS)
---	VALVES, PUMPS & METERS
---	FLAME ARRESTOR
---	PINCH VALVE
---	GATE
---	NEEDLE
---	BUTTERFLY
---	BALL OR ROTARY
---	GLOBE
---	PLUG OR COCK
---	DIAPHRAGM
---	CHECK
---	DIAPHRAGM CHECK
---	CONTROL VALVE
---	POSITIONER
---	PRESSURE REGULATING VALVE
---	BACKPRESSURE REGULATING VALVE
---	PISTON OPERATED
---	S-SOLENOID OPERATED
---	M-MOTOR OPERATED
---	P-PNEUMATIC OPERATED
---	DRAIN
---	Y-WEIR GATE
---	T-SLIDE SLUICE GATE
---	I-STOP LOG
---	BLIND FLANGE
---	PULSATION DAMPENER
---	PRESSURE RELIEF OR SAFETY
---	3-WAY
---	4-WAY
---	TELESCOPING
---	REDUCER
---	HOSE CONNECTION
---	WATER/CHECK VALVE
---	(ANY) AIR RELEASE VALVE
---	(ANY) AIR VACUUM RELEASE VALVE
---	ELECTRIC MOTOR
---	ORIFICE/ANNUBAR
---	AIR DIFFUSER
---	LIQUID DIFFUSER

MISCELLANEOUS SYMBOLS

---	HEAT TRACED PROCESS
---	LINE OR EQUIPMENT
---	MATCHLINE
---	PROCESS LINE OR ELECTRICAL SYMBOL FROM SHEET NUMBER INDICATED
---	CONTINUATION ON SAME SHEET
---	CONTINUATION ON FACILITIES NOT SHOWN ON DRAWINGS
---	CAPACITANCE METER
---	REGULATOR/FILTER
---	SUBMERSIBLE PUMP
---	MAGNETIC METER (INLINE/INSERT)
---	SONIC METER
---	VENTURI OR FLOW TUBE
---	PROPELLER OR TURBINE METER
---	ROTAMETER
---	PROGRESSING CAVITY PUMP
---	CENTRIFUGAL PUMP
---	POSITIVE DISPLACEMENT PUMP
---	DIAPHRAGM OR METERING PUMP
---	EDUCTOR
---	STRAINER
---	DIAPHRAGM ISOLATOR
---	HORN
---	GRADUATED CYLINDER
---	CYLINDER
---	HYDRAULIC OR PNEUMATIC
---	LATERAL WYE
---	RUPTURE DISK
---	RESTRAINED FLEX CONN.
---	FLEX CONN.
---	FILTER AIR/WATER
---	CENTRIFUGAL BLOWER
---	POSITIVE DISPLACEMENT BLOWER
---	MANUAL BAR RACK
---	VERTICAL TURBINE PUMP
---	SUBMERSIBLE AERATOR/MIXER (ELECTRIC MOTOR DRIVEN)
---	UNION

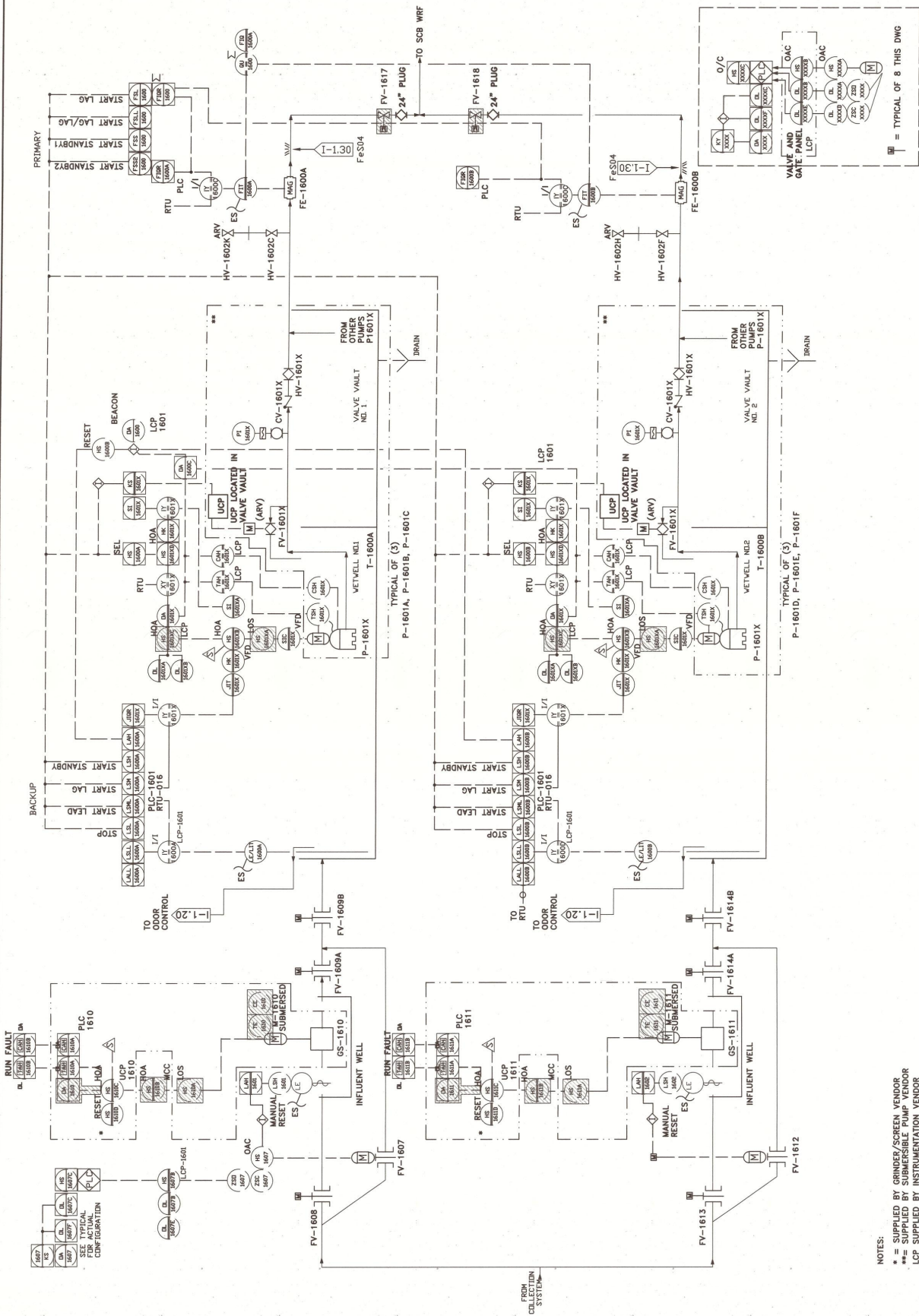
VALVE OPERATION NOTATION

---	EFC = ELECTRIC FAIL CLOSE
---	AFC = AIR FAIL CLOSE
---	EFO = ELECTRIC FAIL OPEN
---	AFO = AIR FAIL OPEN
---	AFS = AIR FAIL STATIC
---	EFS = ELECTRIC FAIL STATIC
---	CONTROLLER NOTATION
---	PV = PROCESS VARIABLE INPUT
---	SP = SET POINT INPUT
---	C = CONTROL OUTPUT
---	HAND SWITCH NOTATION
---	HOA = HAND-OFF-AUTO
---	S/S = START/STOP
---	SEL = SELECTOR
---	O/C = OPEN/CLOSE
---	O/O = ON/OFF
---	LOS = LOCKOUT-START
---	D/S = DUTY/STANDBY
---	FOS = FAST-OFF-SLOW
---	OAC = OPEN-AUTO-CLOSE
---	ROF = REVERSE-OFF-FORWARD
---	ROL = RAISE-OFF-LOWER
---	F/R = FORWARD/REVERSE
---	LOR = LOCAL-OFF-REMOTE
---	SAR = SILENCE-AUTO-RESET
---	MISCELLANEOUS NOTATIONS
---	S/O = SHUTDOWN
---	O/R = OVERRIDE
---	MCC = MOTOR CONTROL CENTER
---	VFD = VARIABLE FREQUENCY DRIVE
---	UCP = UNIT CONTROL PANEL
---	LCP = LOCAL CONTROL PANEL
---	ES = ELECTRICAL SUPPLY (120VAC)
---	IS = INLET SILENCER
---	DS = DISCHARGE SILENCER
---	SEQ = SEQUENCER/ALTERNATOR
---	AST = ABOVEGROUND STORAGE TANK

VALVE OPERATION NOTATION

---	EFC = ELECTRIC FAIL CLOSE
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PCU PROJECT NO. 734-617114-0878	P&ID LEGEND	PUMP STATION 016
14 S. Fort Harrison Ave. Tempe, Arizona (413) 833-4600	PARSONS SCIENCE, INC.	Client: Ft. 32756 (013) 464-3586
Job No. 231212	Designed S. SCHAFER	Drawn B. HERNANDEZ
Checked M. ROBERTSON	Reviewed J. LOWE	Approved M. DATE
Reg. No. 233343	Date 12/98	Rev 0
Revised 0	Date 12/98	Rev 1
Revised 0	Date 12/98	Rev 2
Revised 0	Date 12/98	Rev 3
Revised 0	Date 12/98	Rev 4
Revised 0	Date 12/98	Rev 5
Revised 0	Date 12/98	Rev 6
Revised 0	Date 12/98	Rev 7
Revised 0	Date 12/98	Rev 8
Revised 0	Date 12/98	Rev 9
Revised 0	Date 12/98	Rev 10
Revised 0	Date 12/98	Rev 11
Revised 0	Date 12/98	Rev 12
Revised 0	Date 12/98	Rev 13
Revised 0	Date 12/98	Rev 14
Revised 0	Date 12/98	Rev 15
Revised 0	Date 12/98	Rev 16
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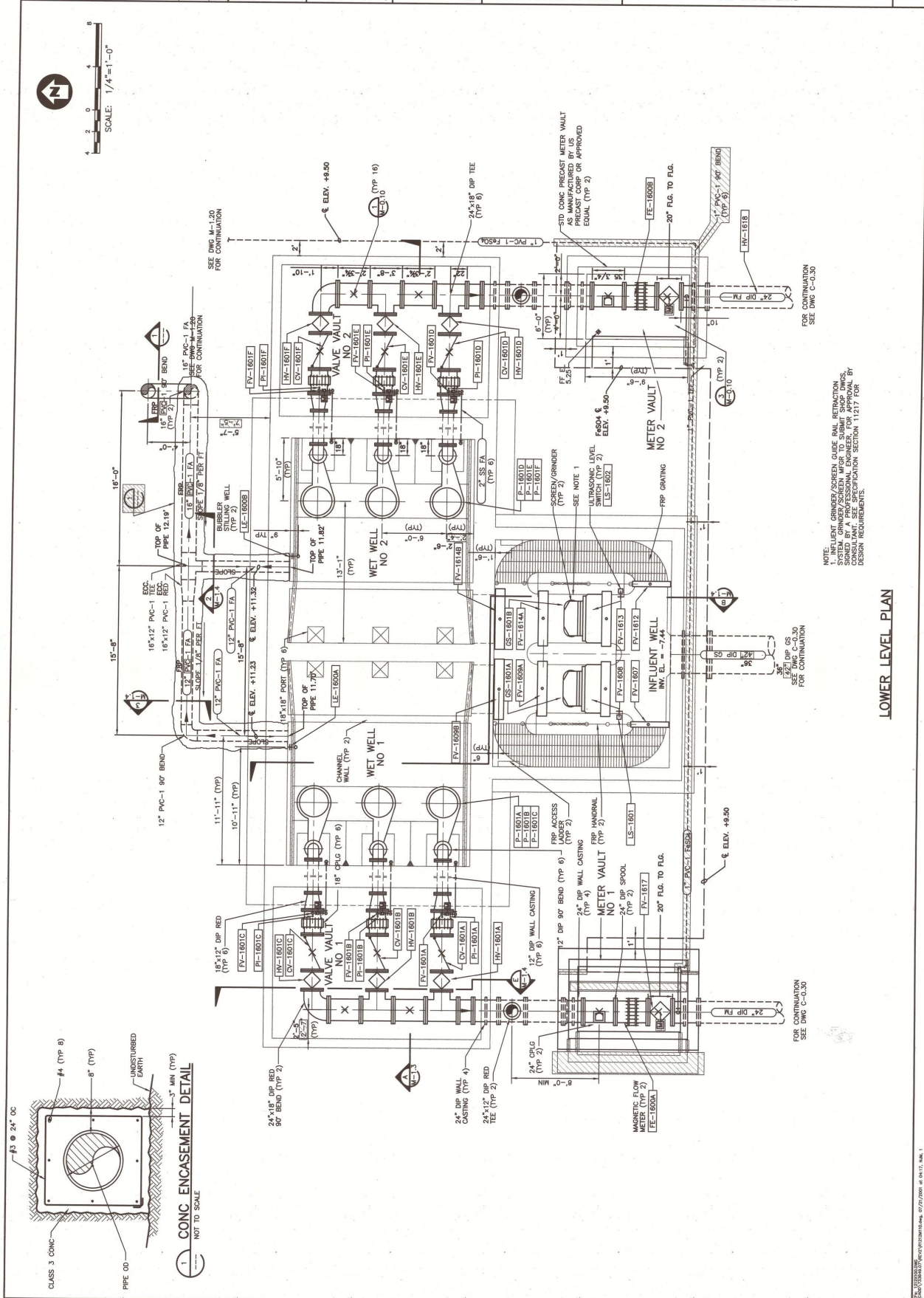


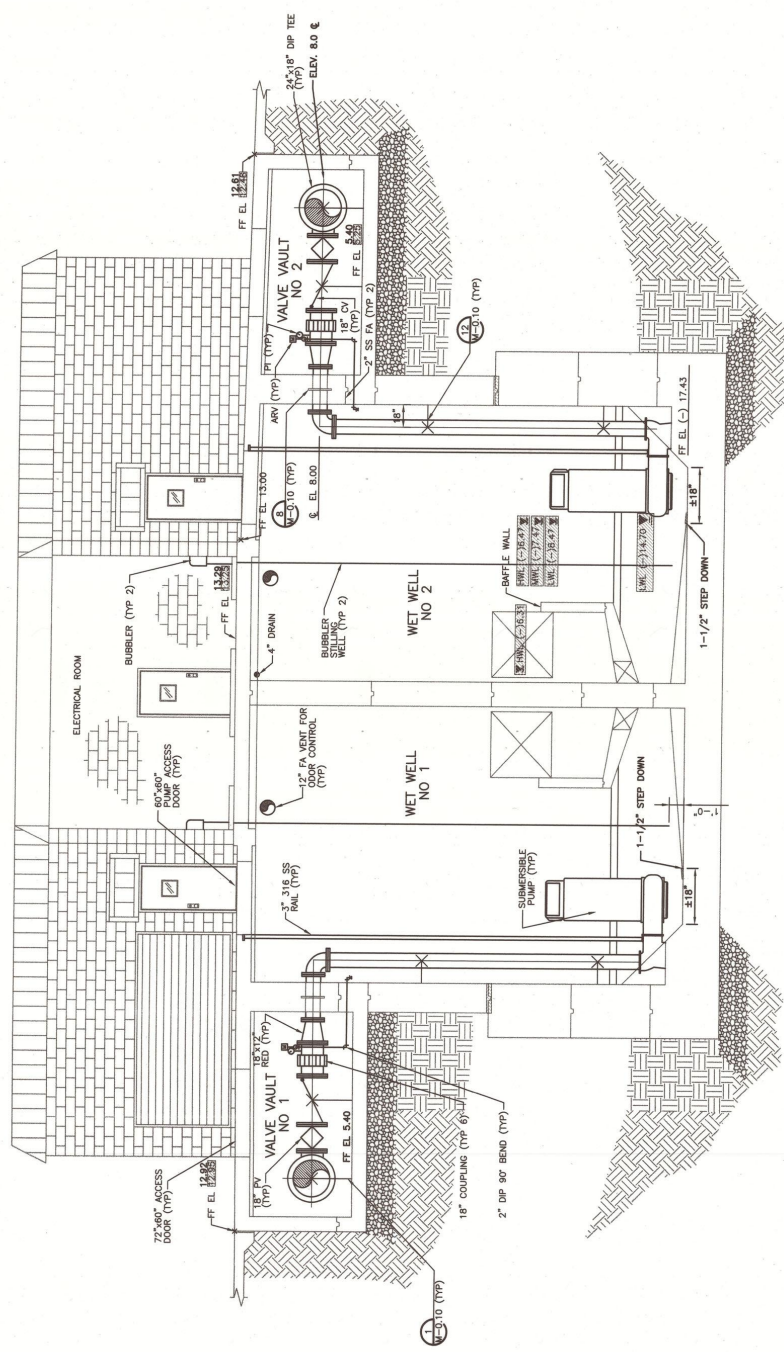
NOTES:

* = SUPPLIED BY GRINDER/SCREEN VENDOR
***= SUPPLIED BY SUBMERSIBLE PUMP VENDOR
LCP SUPPLIED BY INSTRUMENTATION VENDOR

X0627#
CATT\733649.07\8512\811212110.dwg. 07/21/2001 at 04:09. N.J.M. 1

PIPE & FITTING SYMBOLS	
	BLIND FLANGE
	FLANGED JOINT
	GROOVED PIPE JOINT
	MECHANICAL JOINT
	BELL AND SPIGOT JOINT
	ALL EXISTING PROCESS PIPES
	ALL NEW PROCESS PIPES
	FLANGED ADAPTER COUPLING
	EXPANSION COUPLING (FLANGED)
	MECHANICAL COUPLING
	BLIND FLANGE
	UNION
	CAP
	REDUCER
	OR
	HOSE BIBB
	HOSE RACK
	PIPE BEND (AWW)
	PIPE BEND (TOWARD)
	AIR RELEASE/AIR + VACUUM RELEASE
VALVE & GAGE SYMBOLS	
	(P) OR (1) PRESSURE GAUGE
	GATE VALVE
	PLUG VALVE
	BALL VALVE
	BUTTERFLY VALVE
	S = SOLENOID VALVE
	M = MOTORIZED VALVE
	CHECK VALVE
	QUICK CONNECT COUPLING W/ CAP





Rev	Date	Description
2	6/01	RECORD DRAWING (SEE NOTES ON TITLE SHEET)
1	12/06	(REVISED GRADING SHEET)
0	12/06	ISSUED FOR CONSTRUCTION
1	12/06	

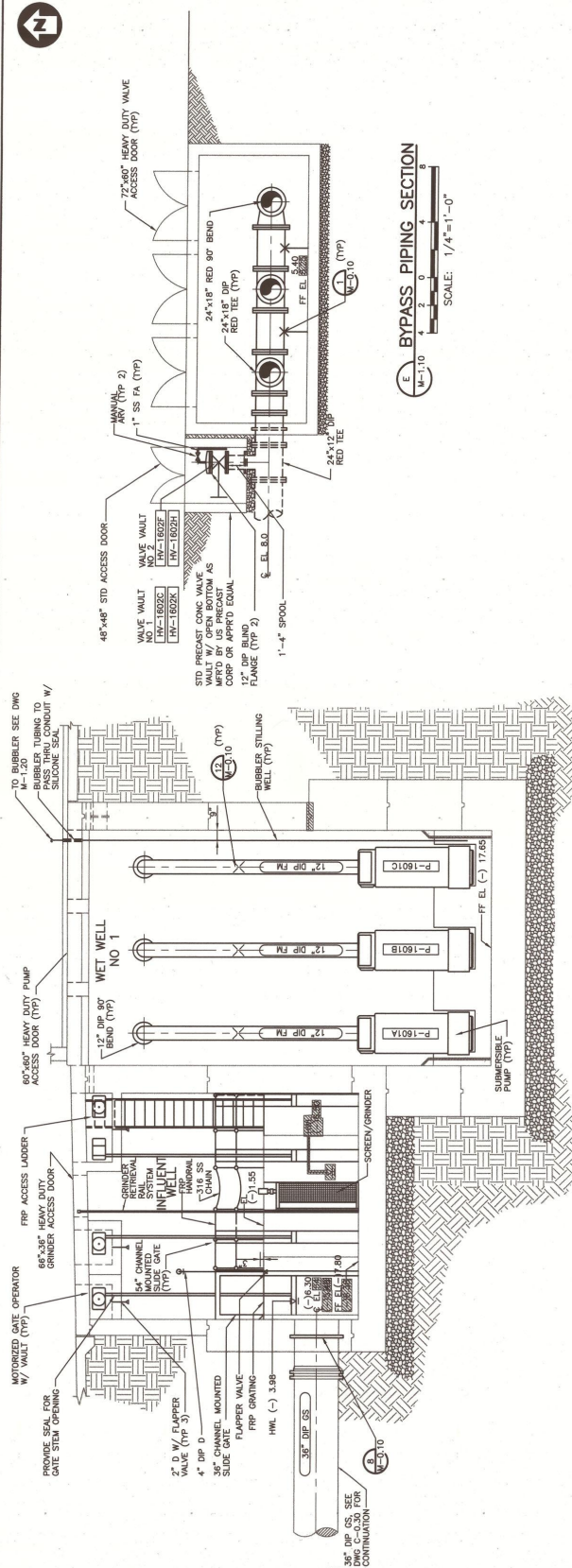
**PARSONS
ENGINEERING
SCIENCE, INC.**
Tampa, Florida
(813) 933-4650



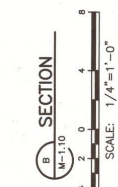
PINELLAS COUNTY UTILITIES

ION OF ALL
SUPPLIER.

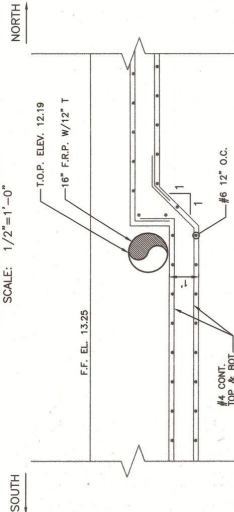
TO COORDINATE LOCATION OF ALL TANK WITH GENERATOR SUPPLIER.



E
 M-1.10
 BYPASS PIPING SECTION
 SCALE: 1/4" = 1'-0"



SECTION B

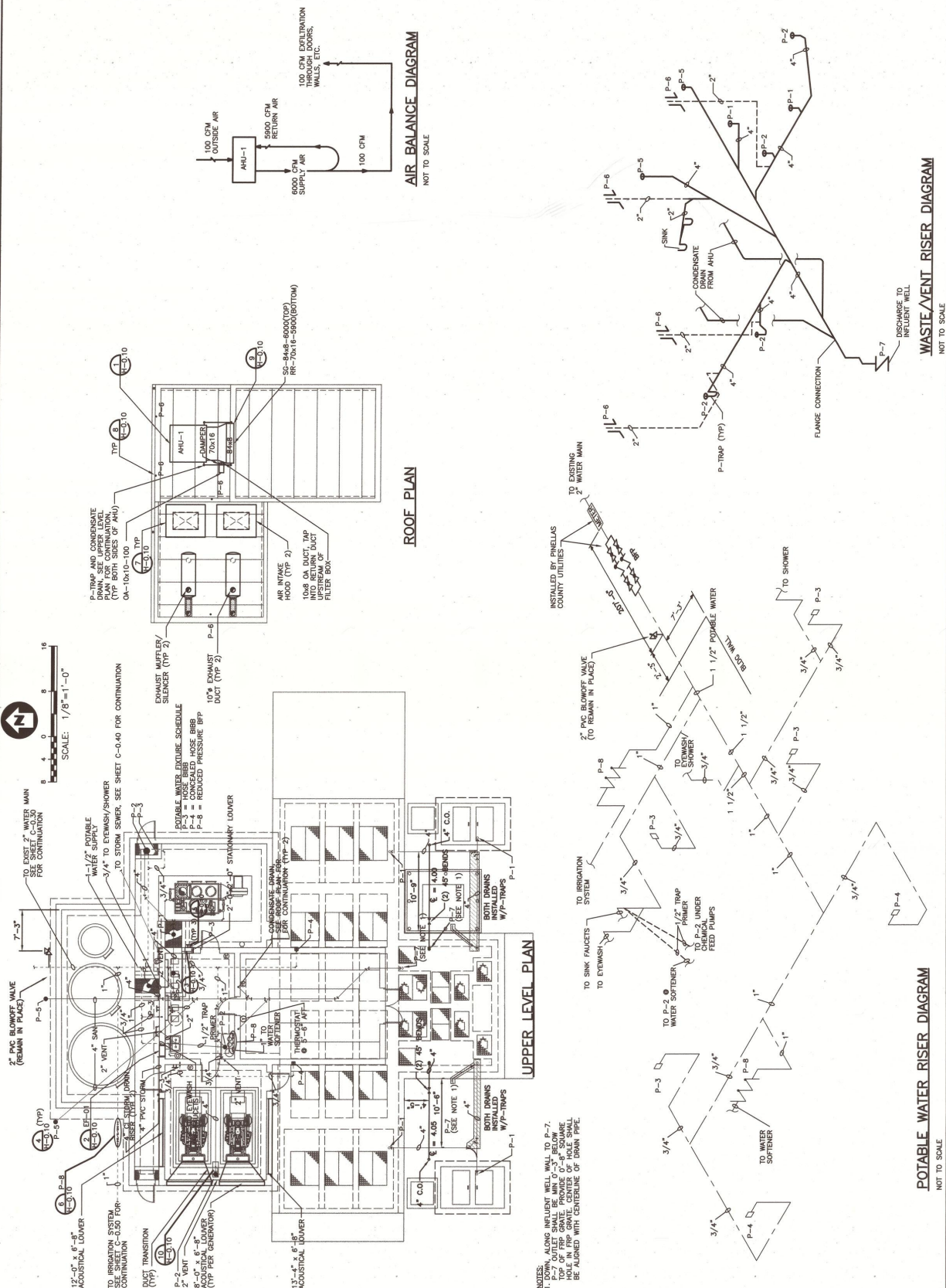


SECTION 2



SECTION 3

REF: 121201300100
VCAD00\7538-49 07\REV\012120140.dwg. 07/10/2001 at 02:50. NUM. 1



	CONTROL POWER TRANSFORMER (CPT) (INDICATE VOLTAGE RATIO)
	FUSE (INDICATE SIZE IN AMPERES)
	CIRCUIT BREAKER (INDICATE SIZE IN AMPERES)
	SINGLE POLE SINGLE THROW DISCONNECT SWITCH (SPST) (INDICATE SIZE IN AMPERES)
	CONTROL RELAY OR CONTACTOR C = CONTROL RELAY M = MOTOR STARTER RELAY LS = LATCHING RELAY (SET COIL) LR = LATCHING RELAY (RESET COIL)
	INSTANTANEOUS NORMALLY OPEN CONTACT (N.O.)—FOR CLOSING WHEN COIL IS ENERGIZED NORMALLY CLOSED CONTACT (N.C.)—FOR CLOSING WHEN COIL IS DE-ENERGIZED
	INTERLOCKING CONTACT (N.C.)—FOR OPENING WHEN COIL IS ENERGIZED
	INDICATING LIGHT, (LETTER DENOTES COLOR) R = RED G = GREEN B = BLUE W = WHITE Y = YELLOW
	THERMAL OVERLOAD CONTACT (CONTROL CIRCUIT)
	LIMIT SWITCH, NORMALLY OPEN, SWITCH CLOSURES ON RISE ABOVE SET LEVEL
	LIMIT SWITCH, NORMALLY CLOSED, SWITCH OPENS WITH MECHANICAL OPERATION.
	FLOW SWITCH, (AIR, WATER, ETC.) NORMALLY CLOSED, OPENS ON FLOW.
	FLOW SWITCH, (AIR, WATER, ETC.) NORMALLY OPEN, CLOSURES ON FLOW.
	LEVEL SWITCH, NORMALLY OPEN, CLOSURES ON RISE ABOVE SET LEVEL
	LEVEL SWITCH, NORMALLY CLOSED, OPENS ON RISE ABOVE SET LEVEL
	PRESSURE OR VACUUM SWITCH, NORMALLY OPEN, CLOSURES ON RISE IN PRESSURE

CURRENT TRANSFORMER

LIGHTNING ARRESTER AND SURGE CAPACITOR

POWER TRANSFORMER

POTENTIAL TRANSFORMER

INDICATING METER

- VOLTAGE
- CURRENT
- WATTMETER
- POWER FACTOR METER
- PHD - WITHOUT DEMAND METER

METER SWITCH

VOLTMETER SWITCH

RECORDING METER OR ANALOG DEVICE (RELAYS OR METERS)

ANXI NUMBER (e.g.)

DRAW-OUT DEVICE (FROM CABINET OR ENCLOSURE)

POWER CIRCUIT BREAKER (BODY OR BELOW EQUIPPED WITH LONGTIME-SHORT TIME E-ELECTRICALLY OPERATED M-MANUAL OPERATED)

FUSE (INDICATE SIZE IN AMPERES)

MAGNETIC MOTOR STARTER, 1 INDICATES STARTER SIZE, 2X INDICATES REDUCED VOLTAGE, 2S INDICATES SLOW SPEED MOTOR REVERSING.

S/S INDICATES SOLID STATE

INDUCTION MOTOR

NUMBER INDICATES HORSEPOWER

GROUND CONNECTION

PANELBOARD

- LP— LIGHTING PANEL—120/208V
- LS— LIGHTING PANEL—120/208W
- PF— POWER PANEL

UNIT CONTROL PANEL

VARIABLE FREQUENCY DRIVE

PUSH BUTTON CONTROL STATION, LOCK-OUT SWITCH OR SELECTOR SWITCH. SEE ELECTRICAL SCHEMATICS FOR REQUIREMENTS.

HANGSWITCH SELECTOR

HANGSWITCH PUSH BUTTON

THERMAL OVERLOAD

INDICATING LIGHT (LETTER DENOTES COLOR)

AUTOMATIC TRANSFER SWITCH

R.V.
1

15

HDA

 D.L.S

ANSI NUMBER (e.g.)

600 AF

	FIRE ALARM CONTROL PANEL
	SMOKE DETECTOR
	MANUAL PULL STATION
	HORN/STROBE ASSEMBLY (AAA)
	STROBE ASSEMBLY (AAA)
	CCTV MONITORS
	CCTV CAMERAS
	HEAT DETECTOR
	NUMBER INDICATES FIXED
	ULS
	TEMPERATURE RATING OF DETECTOR
	ALARM HORN
	CARBON MONOXIDE DETECTOR

EQUIPMENT

- MANHOLE OR HANDHOLE
- MANUAL MOTOR STARTER
- DUCT/BANK

IS

IN SLAB WHERE SO NOTED OR WHERE ALLOWED PER SPECIFICATIONS).

CONDUIT RUN TURNED UP

CONDUIT RUN TURNED DOWN

FLEXIBLE CONDUIT

HOMERUN TO PANEL BOARD

INDICATES NO. OF NEUTRAL CONDUCTORS,

PHASE CONDUCTORS, LONG SLASH LINE

INDICATES NO. OF NEUTRAL CONDUCTORS,

(PHASE) OR (THREE PHASE). EQUIPMENT

GROUNDING CONDUCTORS SHALL BE IN

CONTROL & INSTRUMENT CONDUITS MINIMUM

BUILDING CONDUCTOR SIZE IS #12

PANELBOARD PANE. 209 / 120V
 PF-POWER PANE. 277 / 480V

JUNCTION BOX

INDUCTION MOTOR

NUMBER INDICATES HORSEPOWER

DISCONNECT SWITCH, HEAVY DUTY

RATED AMPS/VOLTS/POLES/TIE SIZE

ENCLOSURE RATING-TYPE. (N=NON-FUSED)

40W AX-55

CONSUMPTION MOTOR / DISCONNECT

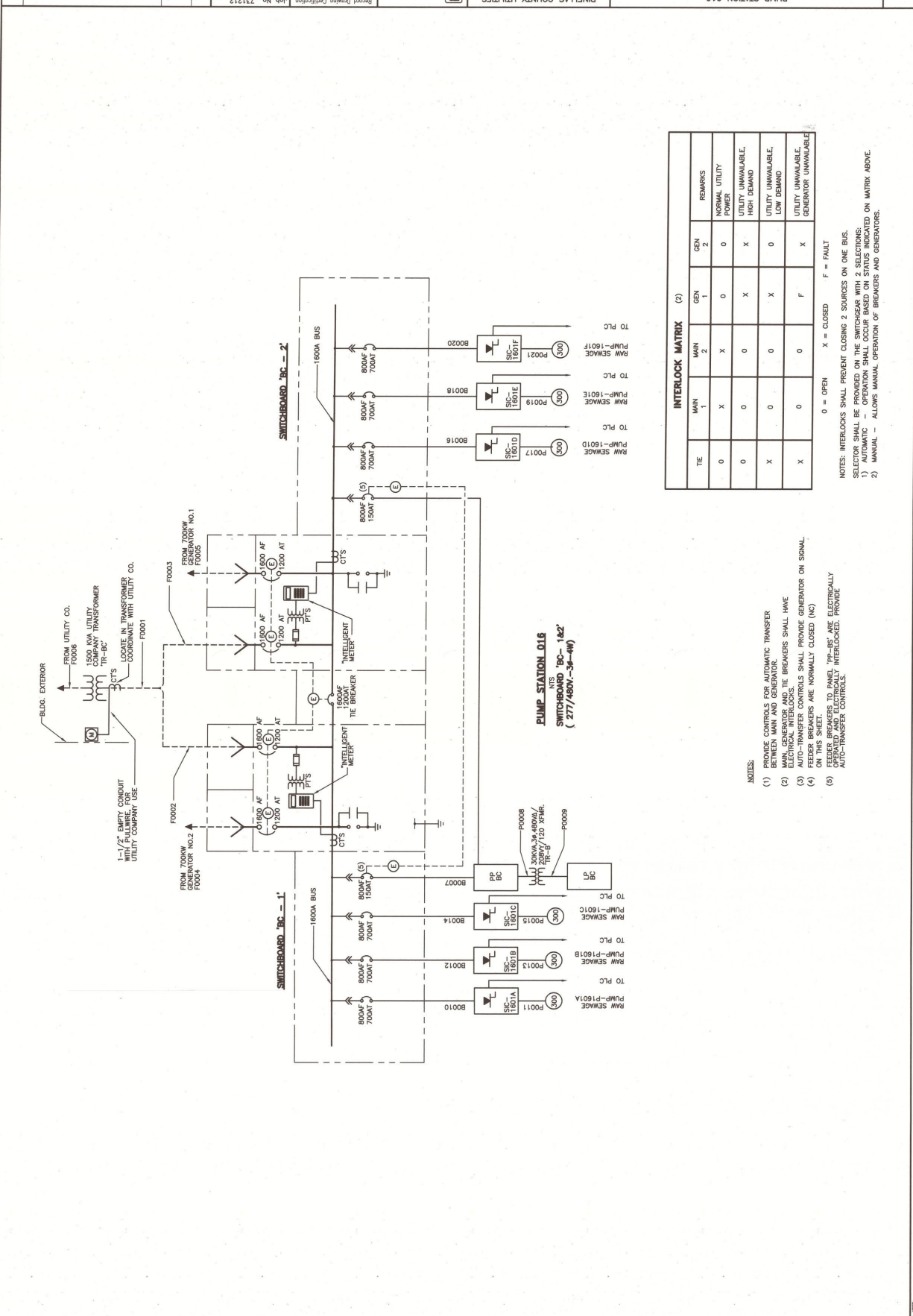
SWITCH, HORSEPOWER RATED, NEMA SIZE &

ENCLOSURE AS INDICATED.

[illegible]

DRAWING NO.	REV.
E-0.10	1

No 1007's
+ \CAM\713649-076802\912125000.doc 07/21/2004 at 03:36 PM. !



INTERLOCK MATRIX (2)					
TIE	MAIN 1	MAIN 2	GEN 1	GEN 2	REMARKS
0	X	X	0	0	NORMAL UTILITY POWER
0	0	0	X	X	UTILITY UNAVAILABLE, HIGH DEMAND
X	0	0	X	0	UTILITY UNAVAILABLE, LOW DEMAND
X	0	0	F	X	UTILITY UNAVAILABLE, GENERATOR UNAVAILABLE

0 = OPEN X = CLOSED F = FAULT

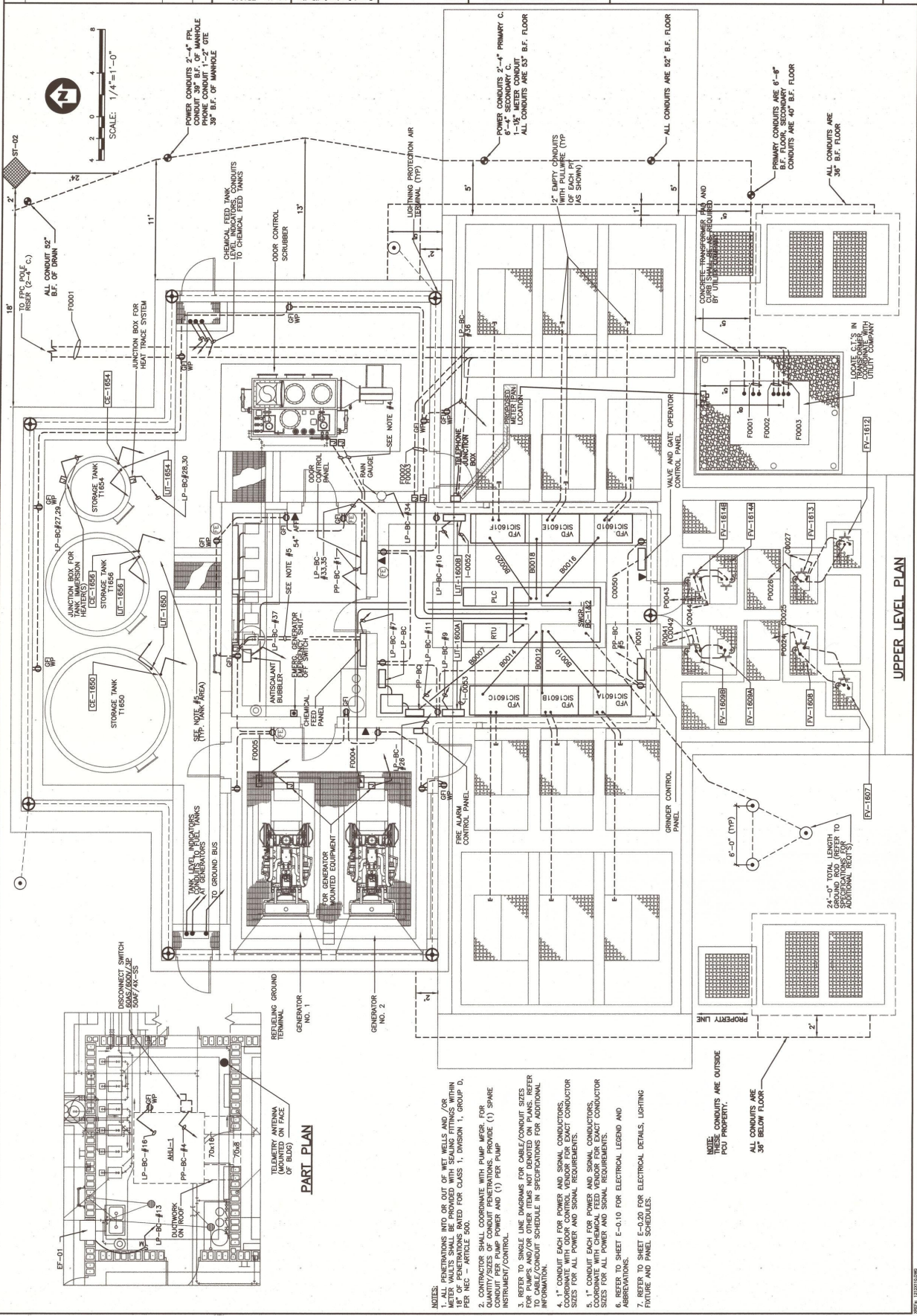
NOTES: INTERLOCKS SHALL PREVENT CLOSING 2 SOURCES ON ONE BUS.

SELECTOR SHALL BE PROVIDED ON THE SWITCHGEAR WITH 2 SELECTIONS:

- 1) AUTOMATIC - OPERATION SHALL OCCUR BASED ON STATUS INDICATED ON MATRIX ABOVE.
- 2) MANUAL - ALLOWS MANUAL OPERATION OF BREAKERS AND GENERATORS.

NOTES:

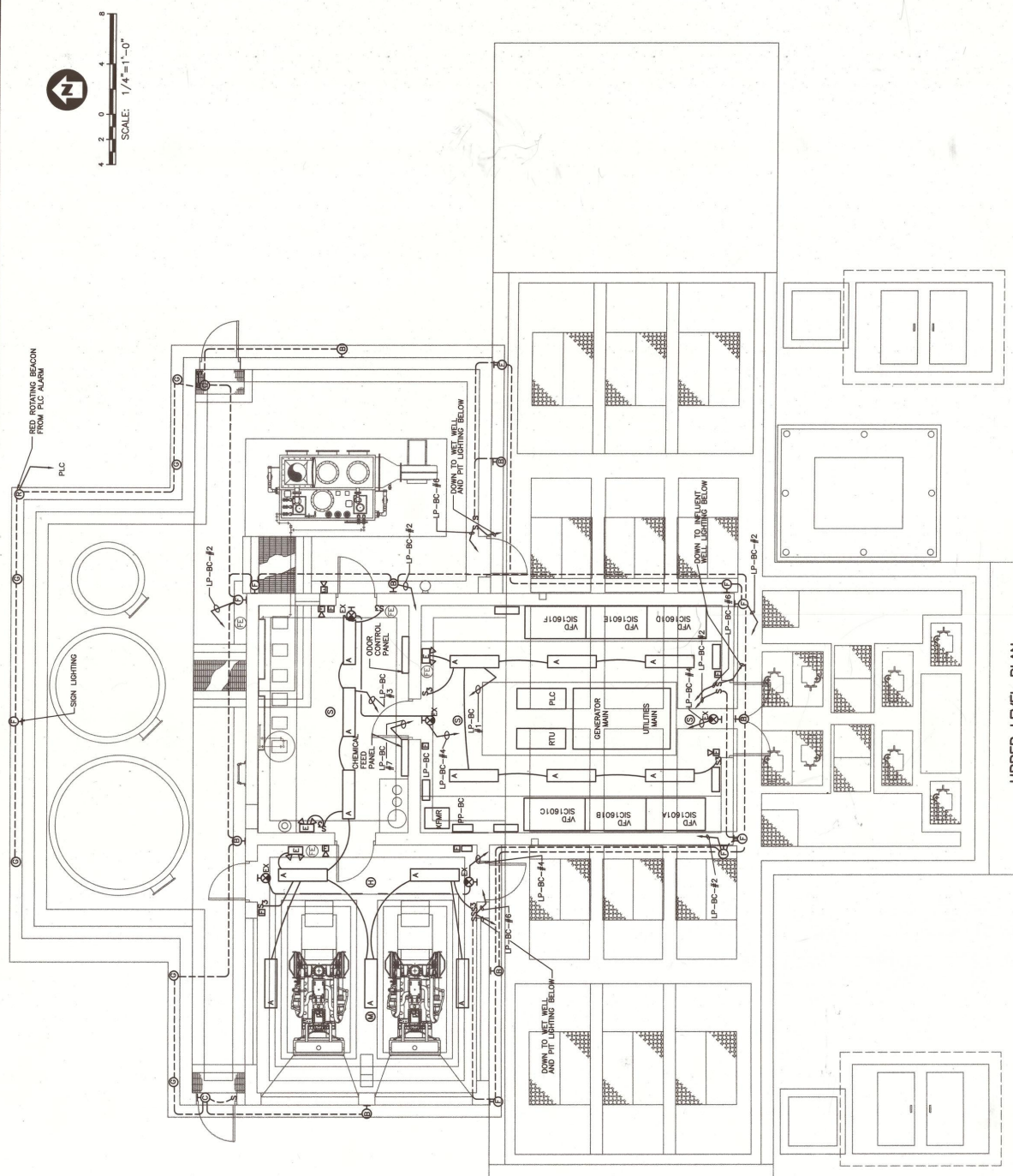
- (1) PROVIDE CONTROLS FOR AUTOMATIC TRANSFER BETWEEN MAIN AND GENERATOR.
- (2) GENERATOR WATER-LOGIC TIE BREAKERS SHALL HAVE ELECTRICALLY INTERLOCKED FEEDER BREAKERS.
- (3) AUTO-TRANSFER CONTROLS SHALL PROVIDE GENERATOR ON SIGNAL.
- (4) FEEDER BREAKERS ARE NORMALLY CLOSED (NC) ON THIS SHEET.
- (5) FEEDER BREAKERS TO PANEL "PP-B" ARE ELECTRICALLY OPERATED AND ELECTRICALLY INTERLOCKED. PROVIDE AUTO-TRANSFER CONTROLS.



PUMP STATION 016
PCU PROJECT NO 734-617114-0878
ELECTRICAL
UPPER LEVEL LIGHTING PLAN

PINELAS COUNTY UTILITIES
14 S. Fort Harrison Ave.
Clearwater, FL 33756 (813) 464-3585
(813) 933-4650
Tampa, Florida
PARSONS
ENGINEERING
SCIENCE, INC.

Record Drawing Certification	Job No. 231212	Designed M. DAKI	Checked M. ROBERTSON	Approved M. DAKI	Reg. No. 53343	Date 12/98
Record Drawing Certification	Job No. 231212	Designed M. DAKI	Checked M. ROBERTSON	Approved M. DAKI	Reg. No. 53343	Date 12/98
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Record Drawing Certification	Job No. 231212	Designed M. DAKI	Checked M. ROBERTSON	Approved M. DAKI	Reg. No. 53343	Date 12/98



UPPER LEVEL PLAN

- NOTES:
1. ALL PENETRATIONS INTO OR OUT OF WET WELLS AND /OR METER VAULTS SHALL BE PROVIDED WITH SEALS TO PREVENT INTRUSION OF WATER INTO THE CLASS 1, DIVISION 1, GROUP D, PER NEC - ARTICLE 500.
 2. REFER TO SHEET E-0.10 FOR ELECTRICAL LEGEND AND ABBREVIATIONS.
 3. REFER TO SHEET E-0.20 FOR ELECTRICAL DETAILS, LIGHTING FIXTURE AND PANEL SCHEDULES.

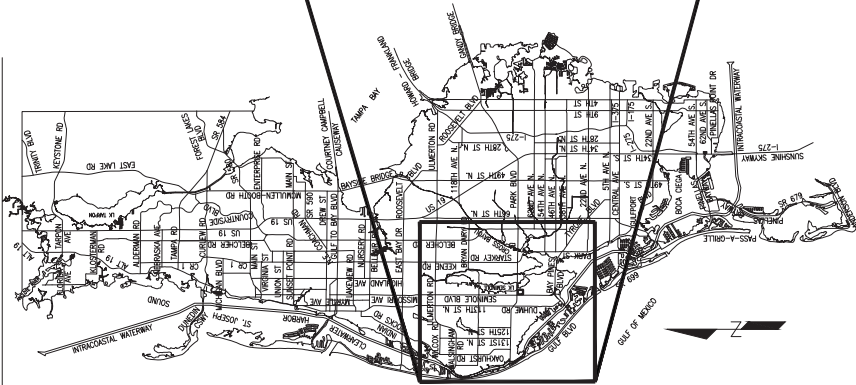
Attachment 4

Pump Station 016 Odor Control System
Replacement As-Built Drawings
(Arcadis, April 2020)

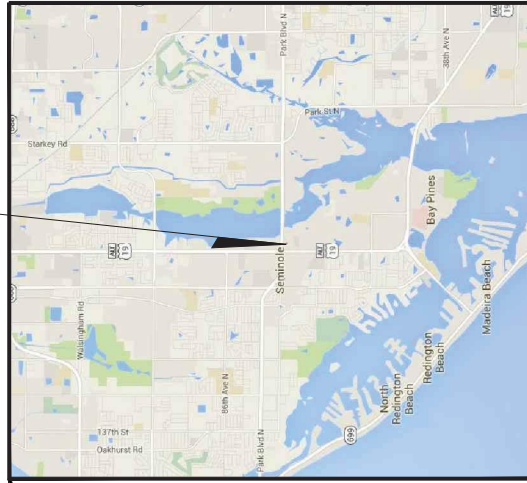


PUMP STATION 016
ODOR CONTROL SYSTEM REPLACEMENT
PID 002942A
PINELLAS COUNTY PUMP STATION 016
10548 PARK BLVD NORTH
SEMINOLE, FL 33772

PINELLAS COUNTY
LOCATION MAP



PROJECT LOCATION



DRAWING INDEX

GENERAL

- G-1 - COVER SHEET & DRAWING INDEX
- G-2 - GENERAL NOTES, LEGEND, SYMBOLS AND ABBREVIATIONS
- G-3 - PUMP STATION DEMO & PROPOSED ROOF FRAMING PLANS
- G-4 - OVERALL SITE PLAN

MECHANICAL

- M-1 - EXISTING ODOR CONTROL AREA PLAN
- M-2 - ODOR CONTROL AREA DEMOLITION PLAN
- M-3 - PUMP STATION DEMO & PROPOSED ROOF FRAMING PLANS
- M-4 - ODOR CONTROL SECTIONS (1 OF 2)
- M-5 - ODOR CONTROL SECTIONS (2 OF 2)
- M-6 - ODOR CONTROL DETAILS

STRUCTURAL

- S-1 - SYMBOLS, NOTES & LEGEND
- S-2 - ODOR CONTROL DEMO & PROPOSED FLOOR PLANS
- S-3 - ODOR CONTROL DEMO & PROPOSED ROOF FRAMING PLANS
- S-4 - PUMP STATION BUILDING ELEVATIONS
- S-5 - PUMP STATION BUILDING ELEVATIONS
- S-6 - SECTIONS & DETAILS (2 OF 2)

ELECTRICAL

- E-1 - SYMBOLS, NOTES & LEGEND
- E-2 - ODOR CONTROL POWER PLAN
- E-3 - ODOR CONTROL LIGHTING PLAN
- E-4 - ODOR CONTROL INTERCONNECT DIAGRAMS
- E-5 - SINGLE LINE DIAGRAM
- E-6 - INTERCONNECT DIAGRAMS
- E-7 - ELECTRICAL DETAILS

INSTRUMENTATION

- I-1 - SYMBOLS, NOTES & LEGEND
- I-2 - ODOR CONTROL SYSTEM BOTRIKING FILTER PAID
- I-3 - ODOR CONTROL SYSTEM 03 POLISHING UNIT P&ID

KEY MAP
NOT TO SCALE

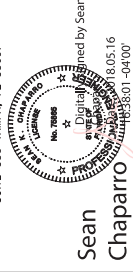
PROJECT MANAGER: JOHN FRENCH

PINELLAS COUNTY
14 SOUTH FORT HARRISON AVENUE
CLEARWATER, FLORIDA, 33766
PHONE: (727)464-3588

PREPARED BY:



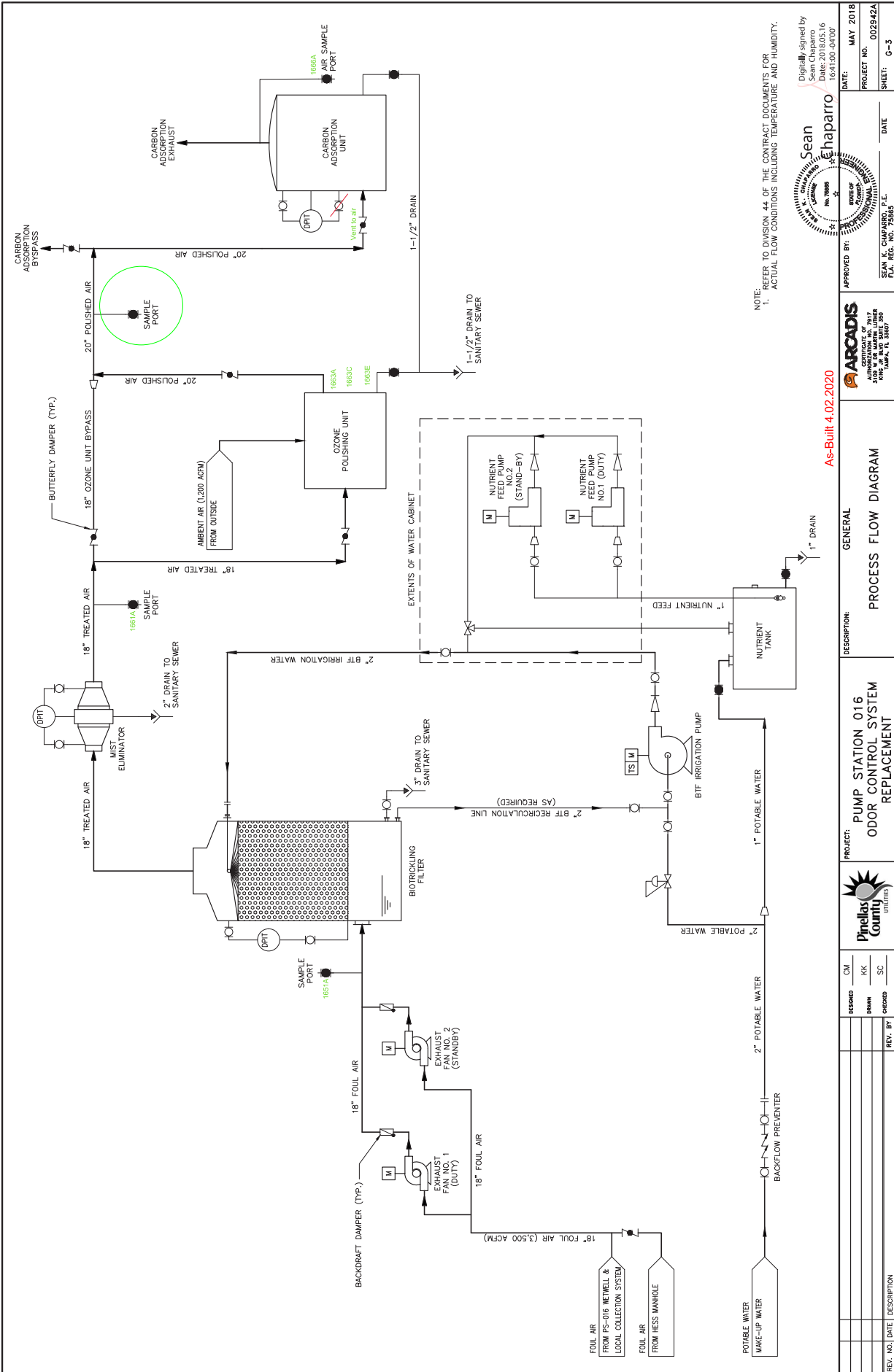
CERTIFICATE OF AUTHORIZATION NO. 7917
3109 W DR MARTIN LUTHER KING JR BLVD
SUITE 350 TAMPA, FL 33607



Sean
Chaparro

SEAN K. CHAPARRO, P.E.
ENGINEER OF RECORD FLA. REG. NO. 75865
DATE

As-Built 4.2.202



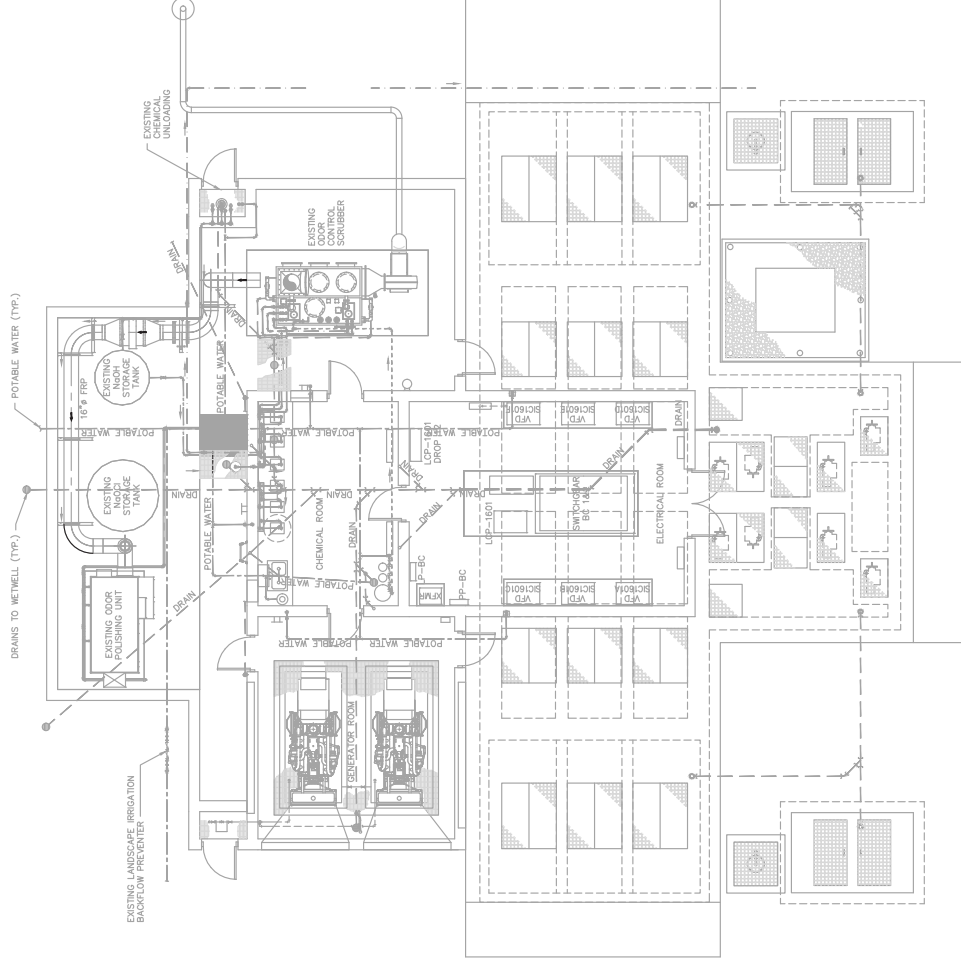
NOTE:
1. REFER TO DIVISION 44 OF THE CONTRACT DOCUMENTS FOR ACTUAL FLOW CONDITIONS INCLUDING TEMPERATURE AND HUMIDITY.

Digitally signed by
Sean Chaparro
Date: 2018.05.16
16:41:00 -0400



As-Built 4.02.2020		ARCADIS ENGINEERING & ARCHITECTURE 1400 N. W. 10TH AVENUE, SUITE 200 MIAMI, FL 33137		GENERAL PROCESS FLOW DIAGRAM		DESCRIPTION: PUMP STATION 016 ODOR CONTROL SYSTEM REPLACEMENT		PROJECT: 		APPROVED BY: SEAN J. CHAPARRO, P.E. FLA. REG. NO. 75885		DATE: MAY 2018 PROJECT NO.: 002942A SHEET: G-3	
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3/16" = 1'-0"

Sean Chaparro



DATE:	MAY 2018
PROJECT NO.	002942A
SHEET:	M-1

ARCADIS
CERTIFICATE OF
AUTHORIZATION NO. 7917
3109 W DR MARTIN LUTHER
KING JR BLVD SUITE 350
TAMPA, FL 35607

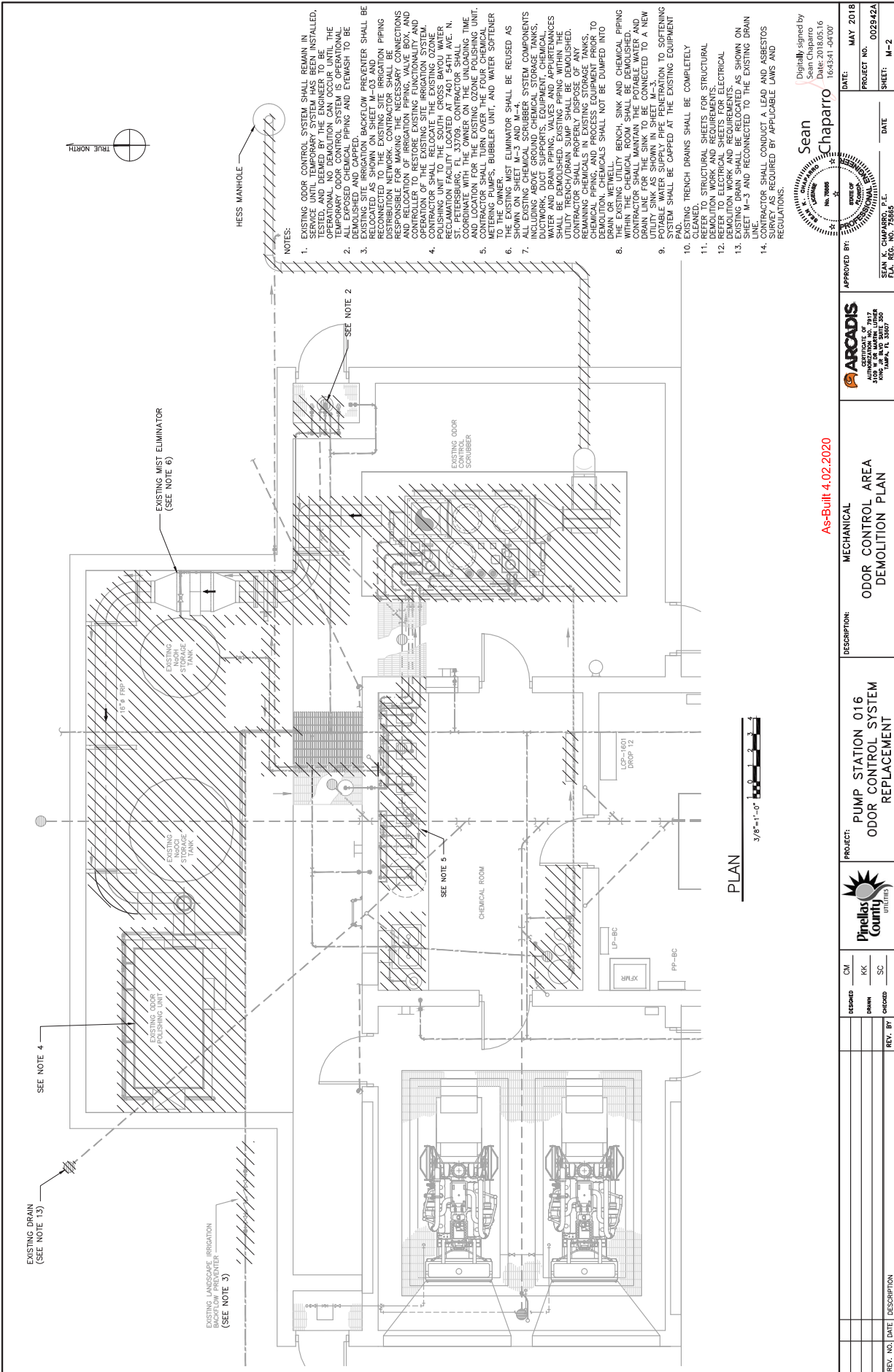
MECHANICAL
EXISTING ODOR
CONTROL AREA PLAN

ECT: PUMP STATION 016
ODOR CONTROL SYSTEM
REPLACEMENT



SIGNED	CM
AWM	KK
HECKED	SC

[illegible]



As-Built 4.02.2020

Sean Chaparro

Digitally signed by Sean Chaparro
DN: cn=Sean Chaparro, o=ACADEMIC, ou=Engineering, email=sean@sean-chaparro.com, c=US

APPROVED BY:

DATE: MAY 2018

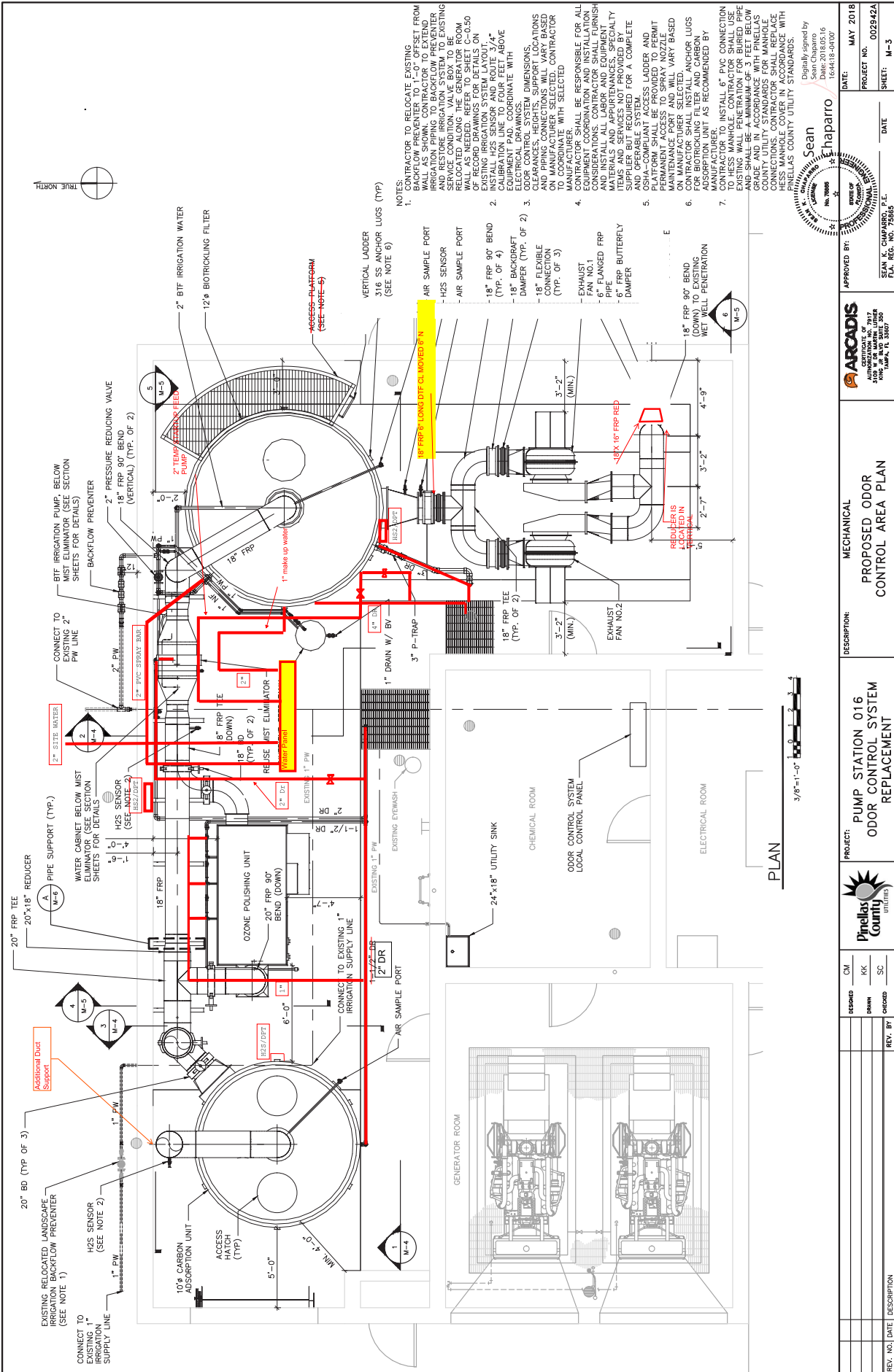
PROJECT NO. 002942A

SHEET: M-2

REV. NO.	DATE	DESCRIPTION

OM	REVISION	
KK	DRAWN	
SC	CHECKED	
REV. BY		

PROJECT: PUMP STATION 016 ODOR CONTROL SYSTEM REPLACEMENT	DESCRIPTION: MECHANICAL ODOR CONTROL AREA DEMOLITION PLAN	APPROVED BY: Sean Chaparro
PROJECT: PUMP STATION 016 ODOR CONTROL SYSTEM REPLACEMENT	DESCRIPTION: MECHANICAL ODOR CONTROL AREA DEMOLITION PLAN	DATE: MAY 2018
PROJECT: PUMP STATION 016 ODOR CONTROL SYSTEM REPLACEMENT	DESCRIPTION: MECHANICAL ODOR CONTROL AREA DEMOLITION PLAN	PROJECT NO. 002942A
PROJECT: PUMP STATION 016 ODOR CONTROL SYSTEM REPLACEMENT	DESCRIPTION: MECHANICAL ODOR CONTROL AREA DEMOLITION PLAN	SHEET: M-2



REV. NO. DATE DESCRIPTION

REV. NO.	DATE	DESCRIPTION

NOTES:

- CONTRACTOR TO RELOCATE EXISTING BACKFLOW PREVENTER TO 1'-0" OFFSET FROM MAIN TANK WALL. CONTRACTOR SHALL REPAIR AND RESTORE IRRIGATION SYSTEM TO EXISTING SERVICE CONDITION. VALVE BOX TO BE RELOCATED TO EXISTING SERVICE CONDITION. WALL AS NEEDED. REFER TO SHEET C-0.50 OF RECORD DRAWINGS FOR DETAILS ON EXISTING IRRIGATION SYSTEM LAYOUT.
- EXISTING IRRIGATION SYSTEM LAYOUT. CONTRACTOR SHALL REPAIR AND RESTORE IRRIGATION SYSTEM TO EXISTING SERVICE CONDITION. VALVE BOX TO BE RELOCATED TO EXISTING SERVICE CONDITION. WALL AS NEEDED. REFER TO SHEET C-0.50 OF RECORD DRAWINGS FOR DETAILS ON EXISTING IRRIGATION SYSTEM LAYOUT.
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- EXISTING IRRIGATION SYSTEM LAYOUT. CONTRACTOR SHALL REPAIR AND RESTORE IRRIGATION SYSTEM TO EXISTING SERVICE CONDITION. VALVE BOX TO BE RELOCATED TO EXISTING SERVICE CONDITION. WALL AS NEEDED. REFER TO SHEET C-0.50 OF RECORD DRAWINGS FOR DETAILS ON EXISTING IRRIGATION SYSTEM LAYOUT.

APPROVED BY: _____ DATE: _____

PROJECT NO. 002942A

SHEET: M-3

MECHANICAL PROPOSED ODOR CONTROL AREA PLAN

DESCRIPTION: PUMP STATION 016 ODOR CONTROL SYSTEM REPLACEMENT

PROJECT: PUMP STATION 016 ODOR CONTROL SYSTEM REPLACEMENT

DESCRIPTION: PUMP STATION 016 ODOR CONTROL SYSTEM REPLACEMENT

PROJECT: PUMP STATION 016 ODOR CONTROL SYSTEM REPLACEMENT

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DESCRIPTION: PUMP STATION 016 ODOR CONTROL SYSTEM REPLACEMENT

PROJECT: PUMP STATION 016 ODOR CONTROL SYSTEM REPLACEMENT

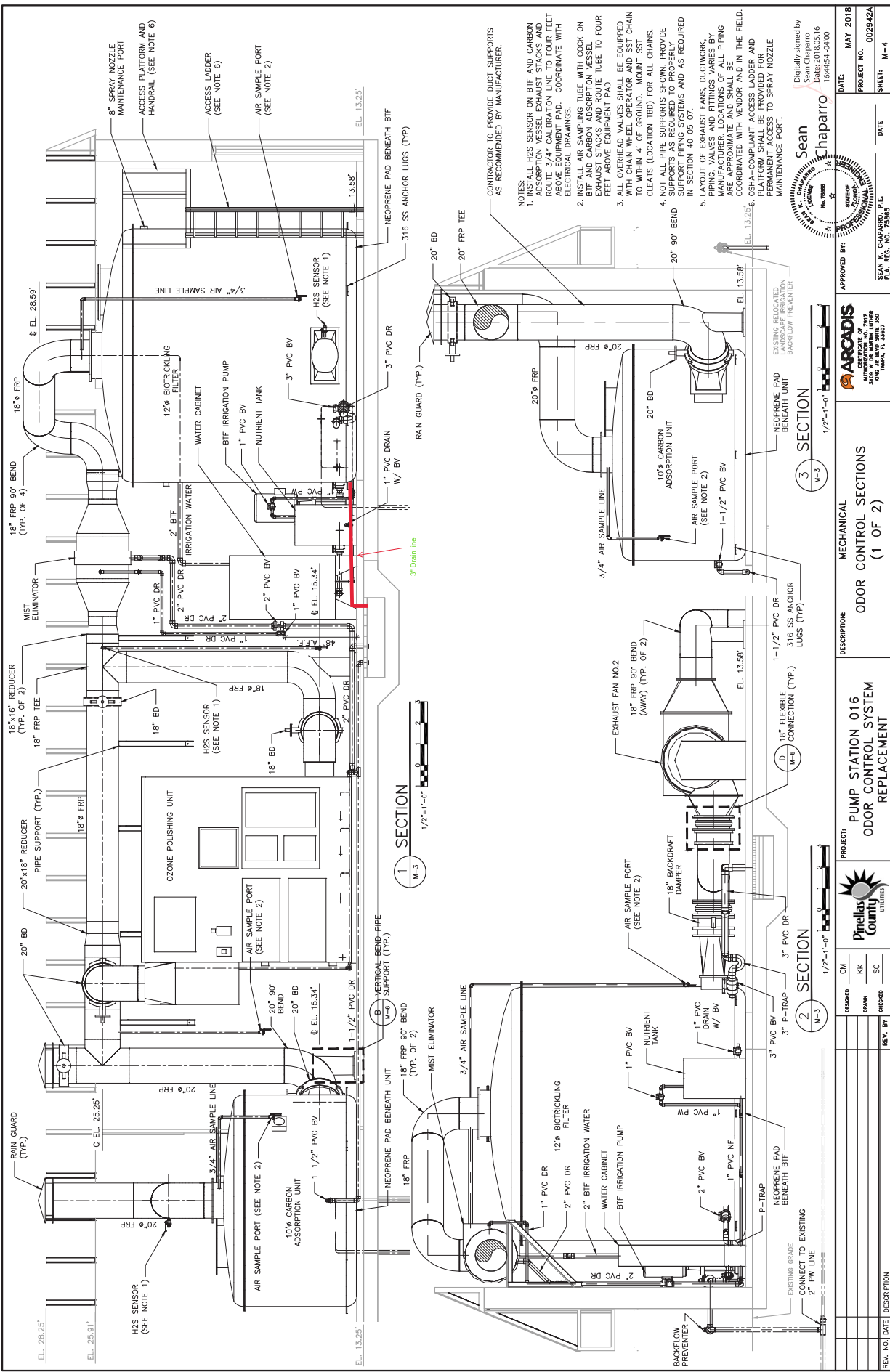
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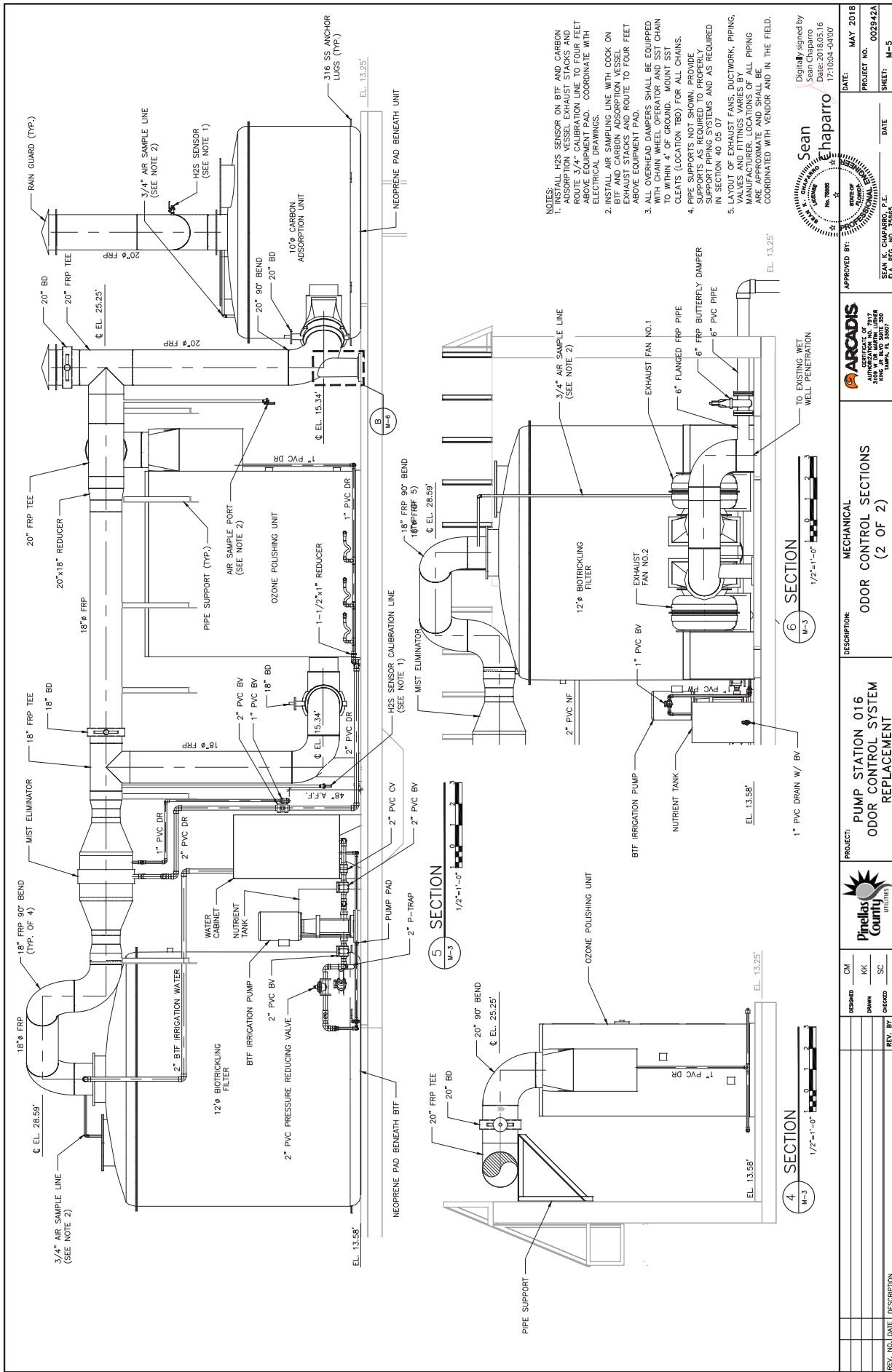
PROJECT: PUMP STATION 016 ODOR CONTROL SYSTEM REPLACEMENT

DESCRIPTION: PUMP STATION 016 ODOR CONTROL SYSTEM REPLACEMENT

PROJECT: PUMP STATION 016 ODOR CONTROL SYSTEM REPLACEMENT

DESCRIPTION: PUMP STATION 016 ODOR CONTROL SYSTEM REPLACEMENT





[illegible]

Attachment 5

Odor Control System Assessment (V&A Consulting Engineers, October 4, 2023) and Odor Control System Components Cost Proposed (BioAir, September 27, 2023)



V&A Consulting Engineers
8600 Hidden River Pkwy
Tampa, FL 33637

941.259.0940 Tel
510.903.6601 Fax
vaengineering.com

Pinellas County Pump Station 16 Vapor Phase Odor Control System Improvements Technical Memorandum Update

To: Dana Tallman, Project Manager; CDM Smith

From: David Hunniford, PE, V&A Client Service Manager

Date: 11/22/23

Subject: Pinellas County Utilities, PS No. 16 VPOC System Design Improvements (V&A Project 22-0085) – Updated TM Based on Revised BioAir Quote and Drawings

Background

V&A Consulting Engineers, Inc. (V&A) was retained by CDM Smith (CDM) to assess the existing three stage vapor phase odor control (VPOC) system at Pinellas County Pump Station No. 16 (PS -16) and provide recommendations for VPOC system changes as part of the Preliminary Engineering Report (PER). CDM will be developing for major improvements to PS-16. PS-16 is a critical master pumping station for Pinellas County Utilities (PCU). It receives wastewater from four upstream collection basins in the Seminole area and pumps up to 30 million gallons per day (MGD) to the South Cross Bayou Advanced Water Reclamation Facility (SCBAWRF). Influent is split between two wet wells, each with three (3) submersible pumps. Foul air from the wet wells was designed to be treated by a three stage VPOC system (installed 2019-20) to prevent fugitive odorous emissions and community odor complaints from the high traffic area surrounding PS-16.

PCU has retained CDM to provide a 30% design for an extensive rehabilitation of structural, process, mechanical, electrical, and architectural components associated with PS-16. As odor control is a vital aspect of PS-16 operation, PCU desires evaluation of the existing VPOC system operation and performance and recommendations for improvements to be included in the subject project.

The current 3500 cfm VPOC system was designed for removal of hydrogen sulfide (H_2S), ammonia (NH_3), and other odorous sulfur and nitrogen containing compounds associated with municipal sewage that has undergone anaerobic biological activity. The first stage is a biotrickling filter, supplied by BioAir Solutions, designed to primarily remove H_2S and NH_3 . The second stage is an ozone contactor, supplied by Engineered Air, intended to oxidize odorous organic compounds (examples: mercaptans, dimethyl sulfide, dimethyl disulfide) remaining in the first stage exhaust to non-odorous compounds. The third stage, supplied by BioAir Solutions, is an up flow dry media vessel (activated carbon and permanganate impregnated alumina) intended to be used for "emergency" situations if first two stages were not performing as intended. In such cases, it was intended to adsorb any remaining odorous compounds from the second stage exhaust prior to discharge to the atmosphere.

In August 2022, V&A evaluated the operational history of the VPOC system and conducted onsite grab sample testing of H_2S , NH_3 , amines, and mercaptans. The biotrickling filter was performing nearly as designed in removal of H_2S , with 1.5 – 2.5 ppm in the exhaust. PCU had experienced extensive operational issues with the ozone contactor since start-up and it was not operational during V&A's site visit. Based on this initial assessment, V&A recommended that PCU not invest further funds into the ozone contactor based on its poor operational track record and limited theoretical organic odor compound removal capability. The lack of stage two organic odor removal resulted in higher organic odor compound loading to the dry media vessel. Therefore, the actual media life was significantly shorter (9 - 12 months) than originally expected (3-5 years). The dry media was identified as needing to soon be replaced, however, accomplishing that took significantly longer than expected due to media supply availability. This resulted in odorous air discharge from the dry media vessel for a period in early 2023 that prompted public odor complaints.

As the PS-16 site is in a high public traffic area VPOC system improvements associated with the rehab project need to enhance its reliability to provide cost-effective odor control. With these goals in mind, V&A and PCU identified VPOC system improvement recommendations for the 30% design level PER.

VPOC System Improvements Recommendations

Based on the original intent of the current VPOC system for the dry media vessel to serve as a final polishing stage in order to minimize media change out expense PCU desired to replace the ozone contactor with a reliable, yet low operational cost approach to "organic" odor removal. V&A recommended utilizing a second biotrickling filter stage designed for such a purpose as this is a proven technology for the types of organic odor compounds generated in municipal collection systems. The use of natural microbial processes, similar to that shown to be cost effective for H₂S removal in the first stage, avoids chemical expense and involves equipment proven to be reliable for first stage treatment of the PS-16 foul airstream. After evaluating a budget proposal from BioAir for an organic odor removal biotrickling filter stage PCU decided this approximately \$200K capital cost option was desirable. This cylindrical vessel (similar in size to the stage 1 biotrickling filter) would be placed in the space currently occupied by the ozone contactor.

Knowing the public sensitivity associated with PS-16 and the odor issues experienced due to logistical challenges in twice replacing the dry media, PCU desired to add a redundant dry media vessel to avoid VPOC system performance issues associated with dry media replacement. The additional dry media vessel will be equivalent to the existing one and is anticipated to be located to the north of the existing dry media vessel. The capital cost estimate provided by BioAir for this redundant dry media vessel is approximately \$140K.

Additional items to be supplied by BioAir include interconnecting ductwork, dampers, and a stand-alone mist eliminator prior to the dry media vessels. The capital cost estimate provided by BioAir for these items is approximately \$110K.

As BioAir supplied the existing first stage biotrickling filter and the final stage dry media vessel, it is recommended that the upgrade equipment described above also be supplied by BioAir. This will ensure one technology provider is responsible for the entire upgraded VPOC system. The total material budget cost estimate for this new VPOC equipment from BioAir is \$450K. See Appendix A for 11/16/23 quote and arrangement drawings of new components (in white) added to existing components (in blue).

Updated VPOC System Performance Specifications

The following are odor compound and odor unit inlet and outlet expectations for each stage of the upgraded VPOC system.

Stage 1: H₂S Removal Biotrickling Filter, 3500 cfm from Wet Well & Gravity System

Parameter	Inlet - ppm	Outlet - ppm	Remarks
Hydrogen Sulfide	30-100*	< 1	* Loading based on historical data
Mercaptans	< 5*	< 3	*Assumed, based on 8/22 Gastec Tube data
Amines	< 3*	< 2	*Assumed, based on 8/22 Gastec Tube data
Ammonia	< 5*	< 1	*Assumed, based on 8/22 Gastec Tube data

Stage 2: "Organic" Odor Compound Removal Biotrickling Filter, 3500 cfm from Stage 1

<u>Parameter</u>	<u>Inlet - ppm</u>	<u>Outlet - ppm</u>	<u>Remarks</u>
Hydrogen Sulfide	< 1	< 0.1	Overall Stage 1&2 removal = 99.9% or <0.1
Mercaptans	< 3	< 0.1	Overall Stage 1&2 removal = 90% or <0.1
Amines	< 2	< 0.1	Overall Stage 1&2 removal = 90% or <0.1
Ammonia	< 1	< 0.1	Overall Stage 1&2 removal = 90% or <0.1
Odor Units (D/T)		<500 OU	Overall Stage 1&2 removal = 95% or < 500

Stage 3: Dry Media Vessel, 3500 cfm from Stage 2

<u>Parameter</u>	<u>Inlet - ppm</u>	<u>Outlet - ppm</u>	<u>Remarks</u>
Hydrogen Sulfide	< 0.1	< 0.05	Expect media life of >24 months
Mercaptans	< 0.1	< 0.05	Expect media life of >24 months
Amines	< 0.1	< 0.05	Expect media life of >24 months
Ammonia	< 0.1	< 0.1	Expect media life of >24 months
Odor Units (D/T)	< 500 OU	<200 OU	Expect media life of >24 months

The biotrickling filters collectively are expected to use 6000-7000 gpd of make-up water. Water requirement is based on maintaining a target pH value in the drain water from each stage. Water supply may be reclaim or potable water. Minimum instantaneous flow rate requirement is 25 gpm at 65 psi.

The biotrickling filters are expected to need 810 pounds of nutrient powder per year. The nutrient powder is dissolved in water and dosed as a solution (81 gallons/month).

Appendix A

BioAir Budget Proposal and Layout Diagram



Proposed Treatment System System 1 - Pump Station / EF112 Outlet

BioAir Proposal No: Q221A076 R4 Pinellas PS016

Reactor Vessels: EcoFilter EF102 + EcoCarb EB10S

Technology Type: Biotrickling Filter + Activated Carbon (separate vessels)

Total Price: **\$ 448,000** (FOB Project Site)

November 16, 2023

Design Conditions				
Parameter	Units	Transient		Remarks
		Average	Maximum	
Airflow	(cfm)	3500	3500	
Hydrogen Sulfide (H ₂ S)	(ppmv)	100	180	
Methyl Mecaptan (MM)	(ppmv)	1.4	2	
Amines	(ppmv)	0.5	0.5	
NH ₃	(ppmv)	1	1	
Volatile Organic Compounds (VOCs)	(ppmv)	< 0.5	< 1.0	Assumed
Reduced Sulfur Compounds (RSCs)	(ppmv)	< 0.5	< 1.0	Assumed
Volatile Fatty Acids (VFAs)	(ppmv)	< 0.5	< 1.0	Assumed
Odorous Air Temperature	(°F)	59-100	105	
Ambient Air Temperature	(°F)	33-110	120	

EcoFilter EF102 Reactor Details	
Quantity:	1
Height:	17.6 ft (excluding stack)
Diameter:	10.0 ft
Operating Weight:	18900 lb
Pressure Drop:	0.6 in. w.c. (estimated)

EcoFilter Performance Guarantee over Two Biological Stages*	
H ₂ S (avg):	99.9% or < 0.1 ppmv
MM (avg):	90% or < 0.1 ppmv
Odor (avg):	95% or < 500 D/T
* Based on 'Design Conditions' above and 'BioAir Standard Performance Test Protocol'	

EcoCarb EB10S Reactor Details	
Quantity:	1
Height:	8.6 ft (excluding stack)
Diameter:	10.0 ft
Operating Weight:	13600 lb
Pressure Drop:	2.78 in. w.c. (estimated)

Overall Performance Guarantee*	
H ₂ S (avg):	99.9% or < 0.05 ppmv
MM (avg):	90% or < 0.05 ppmv
Odor (avg):	98% or < 200 OU
* Based on 'Design Conditions' above and 'BioAir Standard Performance Test Protocol'	

Major Equipment Included	
Interconnecting Ductwork	
Water Control Panel w/ Nutrient Dosing System	

Field Services Included	
Equipment Startup	
Performance Testing	

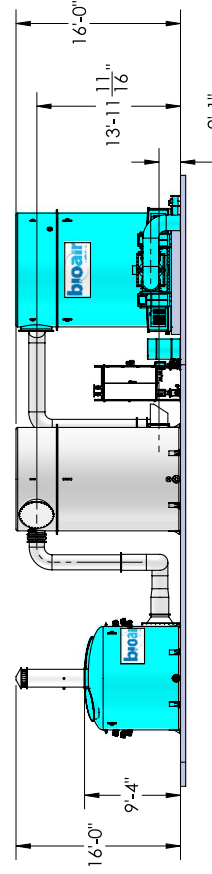
Required Utilities	
Electrical Power Supply:	480 V / 3-phase / 60 Hz
Energy Use:	91.4 (kw*hr)/day (estimated)
Instantaneous Water Supply:	25 gpm @ 65 psi (intermittent)
Water Use**:	6700 gal/day
Nutrient Powder***:	810 lb/year
Mixed Nutrient Solution***:	81 gal/month
Utilities exclude existing equipment	
** Water use is directly proportional to the avg H ₂ S concentration and assumes drain water pH = 1.7.	
If the actual H ₂ S concentration is lower, the water use will be lower.	
*** Nutrients are not required, provided that the water supply contains 1-5 mg/L total P and 3-20 mg/L total N.	

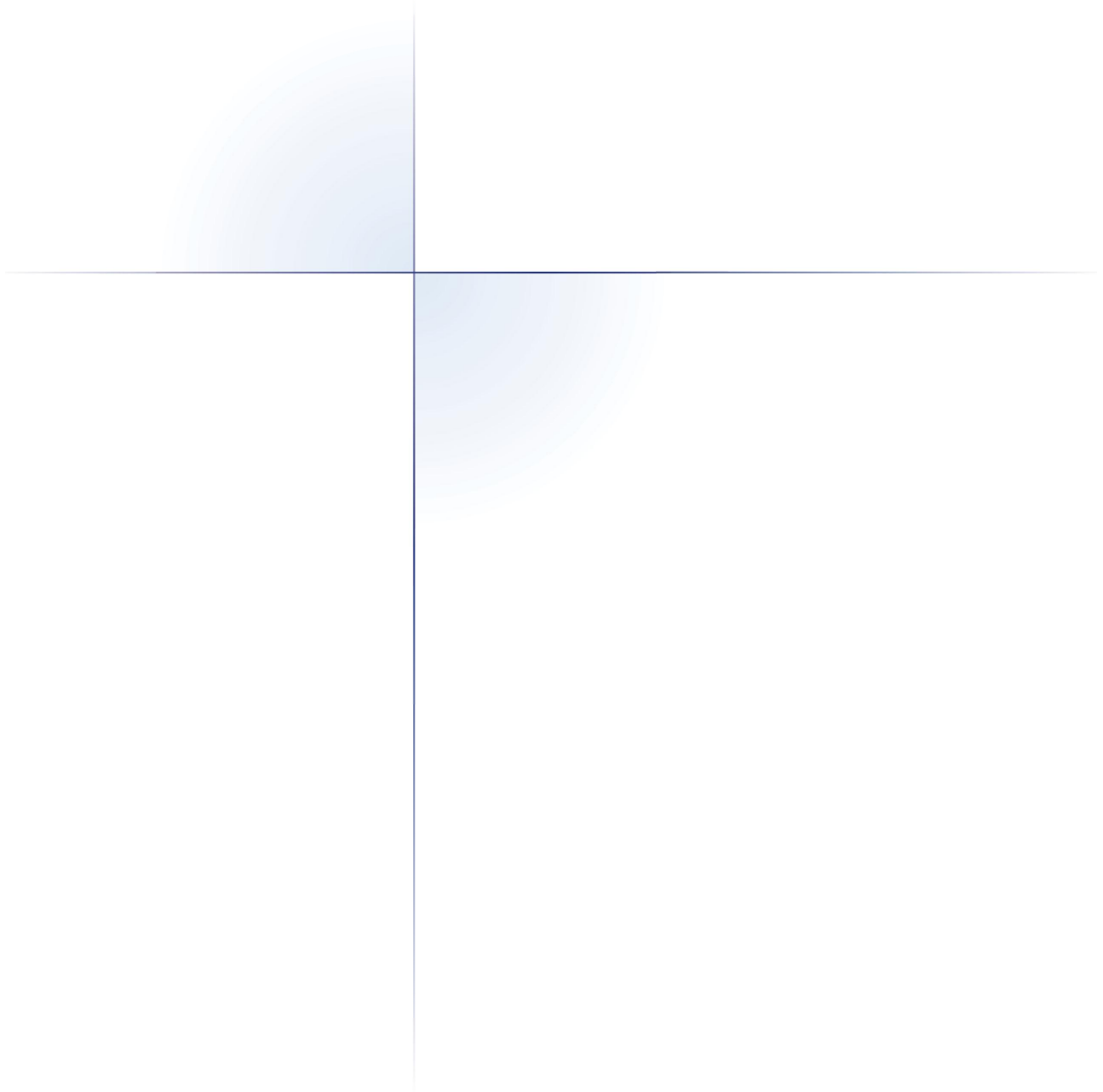


REV.	DATE	DR	CHK	bluair FLUOROCARBON SOLUTIONS bluair FLUOROCARBON SOLUTIONS	PROJECT NO:	DRAWN BY:	SEN:
A	11/21/2023	JH	JH	110 KRESSON-CARBON-ROD, SUITE 303 110 KRESSON-CARBON-ROD, SUITE 303 P1 # 856 324 6743 P1 # 856 324 6743 P1 # 856 324 6743	Q221 A076	JH	11/21/2023
B	11/22/2023	JH	JH	bluair FLUOROCARBON SOLUTIONS bluair FLUOROCARBON SOLUTIONS	PROJECT NAME:	DRAWN DATE:	SHI NO.:
-	-	-	-	GENERAL ARRANGEMENT ECOFILTER EF102 + ECOCARB EB105	Q221 A076	A3	1/2
-	-	-	-	bluair FLUOROCARBON SOLUTIONS bluair FLUOROCARBON SOLUTIONS	DRAWING TITLE:	DWG SIZE:	REV. NO.:
-	-	-	-	bluair FLUOROCARBON SOLUTIONS bluair FLUOROCARBON SOLUTIONS	GENERAL ARRANGEMENT ECOFILTER EF102 + ECOCARB EB105	A3	1/2
-	-	-	-	bluair FLUOROCARBON SOLUTIONS bluair FLUOROCARBON SOLUTIONS	DRAWING NO.:	SCALE:	B
-	-	-	-	bluair FLUOROCARBON SOLUTIONS bluair FLUOROCARBON SOLUTIONS	EF102+EB105-GA-Q221A076	1:128	B



1. FOUNDATION PAD MUST BE FABRICATED UNIFORM IN TEXTURE AND APPEARANCE AND MEET A SURFACE PLANE TOLERANCE OF $\frac{1}{8}$ " IN 10'
2. SYSTEM PLACEMENT AND CONCRETE DIMENSIONS ARE FOR ILLUSTRATION ONLY.
3. REACTOR TO BE SET ON MINIMUM TWO (2X) LAYERS OF TYPE II (NO. 30) ASTM D2266 FELT PAPER (PROVIDED BY OTHERS)
4. ECOFILTER EF102 (PER VESSEL)
 - VESSEL DIMENSIONS = ϕ 10'-0" X 16'-0"
 - LOAD DISTRIBUTION AREA = 78.54 Ft²
 - SHIPPING WEIGHT = 5,065 LB
 - OPERATING WEIGHT = 18,810 LB
5. ECOCARB EB10S (PER VESSEL)
 1. VESSEL DIMENSIONS = ϕ 10'-0" X 9'-4"
 2. LOAD DISTRIBUTION AREA = 78.54 Ft²
 3. C. SHIPPING WEIGHT = 1,800 LB
 4. D. OPERATING WEIGHT = 16,170 LB





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EXHIBIT K - PERMITS

EXHIBIT K – PERMITS

PERMIT INDEX

AGENCY

PERMIT NO.

PAGE NO. (s)

Contractor is not responsible for any permitting. All permits will be obtained and paid for by the County.

EXHIBIT L – PROJECT DESIGN MILESTONES AND DELIVERABLES
--

PHASE 1 PROJECT DESIGN MILESTONES AND DELIVERABLES

Major Milestones

Time from NTP

Investigations/Evaluations

4.5 Months

Preliminary Design - 30%

7 Months

30% Price Model

8 Months

Design Development - 60%

12 Months

GMP Submission

13.5 Months

Permit Development - 75%

15 Months

EXHIBIT L – PROJECT DESIGN MILESTONES AND DELIVERABLES

PROJECT DESIGN MILESTONES AND DELIVERABLES**PHASE 2****Anticipated Project Design Deliverables**

Drawings:

Architectural

Cover Sheet indicating name of projects, list of drawings, location map, County logo, County Project Number, Design/Builder and Design Professional(s) name, address and telephone number Life Safety Plan(s)

Site Plan

Floor

Plan(s)

Enlarged Floor Plans

Exterior Elevations

Building Sections and

Details Roof Plan

Reflected Ceiling

Plan(s) Interior

Elevations

Schedules – Room Finish, Door, Window, Hardware, & Equipment /Fixture

Civil

Location Plan

Existing Site Plan

Site Plan with layout dimensions and elevations

Grading and Drainage Plan

Utilities Plan

Sections &

Details

Site Plans - piping distribution layout to all proposed facilities to be served.

Structural

Foundation Plan

Framing Plans

Elevations

Exterior Elevations

Sections and Details

Schedules

HVAC

Floor Plan(s) double-line drawings indicating locations of all equipment, air distributions, devices, air quantities for each room, piping runs and chases Control Diagrams, sequence of operations, control point list and control system electrical requirements

Equipment Schedules

Enlarged Plans and

Details

EXHIBIT L – PROJECT DESIGN MILESTONES AND DELIVERABLES

Plumbing	Floor Plan(s) single-line drawings indicating fixture locations, piping Routes and sizes Riser & Isometric Diagrams Fixture Schedules Enlarged Plans and Details
Electrical	Floor Plans indicating location and sizes of electrical, telephone/data and specialty equipment. Site Plan indicating existing and proposed underground routing and structures.
Lighting Plan	Power Plan Specialty Area Layout/Plan Telephone/Data Plan Systems Riser Diagrams Equipment and Fixture Schedules Enlarged Plans and Details
Specifications: Project	Complete specifications in CSI Format of only those materials and equipment used in the

EXHIBIT L – PROJECT DESIGN MILESTONES AND DELIVERABLES

DESIGN SERVICE REQUIREMENTS AS TO PHASE 1 AND PHASE 2

1. Design Builder's design documents shall be consistent with the Final Program at all phases of design unless expressly authorized otherwise in writing by Owner.
2. Design Builder shall submit to Owner design notes and computations to document the design conclusions reached during the development of the Project design as requested by Owner.
 - A. The design notes and calculations shall include, but not be limited to, the following data:
 - 1) Design criteria used for the Project;
 - 2) Lighting calculations;
 - 3) Structural calculations;
 - 4) Drainage calculations;
 - 5) Acoustical calculations;
 - 6) HVAC calculations;
 - 7) Security and communications calculations;
 - 8) Calculations as required by provisions of the Florida Energy Conservation Standards Act (Department of Community Affairs), latest revision;
 - 9) Thermal Efficiency Standards (Florida Energy Efficiency Code for Building Construction, Department of Community Affairs, F.S. 552.900)
 - 10) Life Cycle Costs (Florida Administrative Code and F.S. 235.26)
 - 11) Calculations showing probable cost comparisons of various alternatives considered;
 - 12) Documentation of decisions reached resulting from meetings, telephone conversations or site visits; and
 - 13) Other Project related correspondence as appropriate.
3. All drawing documents for the Project shall be accurate, legible, complete in design, suitable for bidding purposes and in conformance to Owner's design guidelines. Documents shall be furnished in accordance with the Design Schedule.
4. Owner in no way obligates itself to check Design Builder's work, and further, is not responsible for maintaining the Design Schedule.
5. Owner's approval or acceptance of any service in any phase does not relieve Design Builder of any of its duties, obligations or responsibilities under the Agreement.
6. Design Builder will establish a Project budget with the Owner during Phase1. Once the budget has been established and agreed to by both the Owner and Design Builder, Design Builder will continue to maintain same through the end of Phase 1. The final lump sum price included in the proposal at the end of Phase 1 will be at or lower than the budget established in the earlier stages of Phase 1. Design Builder warrants that all professional services to be provided by it under the Agreement shall be in accordance with the terms and conditions set forth in the Agreement and the design of the Project shall be accomplished so that the total Project cost to Owner does not exceed the above noted Owner's budget. Notwithstanding anything herein to the contrary, Design Builder shall revise and modify the Construction Documents and rebid the Work at no additional cost to Owner, if subcontract bids from responsive and responsible bidders exceed Owner's Project budget, as said budget may be modified by Owner, as provided for herein. All such revisions and modifications of the Construction Documents shall be subject to the review and approval of Owner.

EXHIBIT M - DESIGN PROFESSIONAL, ENGINEERS, & CONTRACTOR

EXHIBIT M - DESIGN PROFESSIONAL, ENGINEERS, & CONTRACTOR

_____: Contractor

_____, Florida _____

_____: General Contractor

_____, Florida _____

_____: Mechanical Contractor

_____, Florida _____

_____: Design Professional

_____, Florida _____

_____: Civil & Environmental Engineering

_____. Florida _____

_____: Structural Engineering

_____, Florida _____

_____: Mechanical, Electrical, Plumbing, & Fire Protection Engineering

_____, Florida _____

_____: Other

_____, Florida _____

EXHIBIT N - LUMP SUM AMENDMENT AGREEMENT FORM**EXHIBIT N - LUMP SUM AMENDMENT AGREEMENT FORM**

Pursuant to Sections 3B and 5A of the Design Build Agreement, dated _____, between Pinellas County, Florida ("Owner") and "Design Builder", for the design and construction of the ("Project"), Owner and Design Builder establish the Lump Sum Price and Contract Time for all the Work as set forth below:

ARTICLE 1**SCOPE OF WORK**

The scope of the Work consists of the design and construction of the Project in accordance with the Agreement, this Amendment and other Contract Documents listed as Attachments 1 through 6 below, which are hereby incorporated into and made a part of the Amendment by this reference:

Attachment Number	Description	Pages	Dated
1.	List of Drawings and Specifications	____ through ____	_____
2.	Schedule of Values	____ through ____	_____
3.	Clarifications,& Exclusions	____ through ____	_____
4.	Completion Schedule	____ through ____	_____
5.	List of Subcontractors and Major Suppliers	____ through ____	_____
6.	Allowances	____ through ____	_____

EXHIBIT N - LUMP SUM AMENDMENT AGREEMENT FORM

DIRECT PURCHASES

The Owner, at its sole discretion, may elect to directly purchase materials and/or equipment included in the Guaranteed Maximum Price in order to take advantage of tax savings. Should the Owner elect to purchase materials and/or equipment directly, the general procedure shall be as follows:

1. All subcontracts shall be competitively bid by the Design Builder as outlined in other sections of this Agreement.
2. Each selected subcontractor shall submit a documented list of materials and/or equipment in the scope of its work in excess of \$15,000 along with the amount of sales tax applicable to such material and/or equipment.
3. The Design Builder shall forward these lists to the Owner, and the Owner shall obtain a purchase order for each item.
4. Once purchase orders have been obtained by the Owner for direct payment of these items, the Design Builder shall remove their direct cost from the schedule of Values accompanying its monthly pay applications. Tax savings realized from the Owner's direct purchase of each item, shall be transferred in the Schedule of Values to the line item for the Owner's Contingency. No retainage will be held on Direct Purchase material.
5. The Design Builder will order the materials as approved by the Owner (County Project Manager).
6. Invoices will be delivered directly to the Design Builder.
7. The Design Builder and the Owner will sign off on the packing slips to ensure materials ordered were received.

Design Builder will match the invoices to the packing slips and submit to the Owner (Pinellas County's Finance Department) via email to ClerkConstructionAP@MyPinellasClerk.org to ensure the vendor/subcontractor is paid timely. The invoices must be received in a timely manner in order to comply with Section 218.735, Florida Statutes "Local Government Prompt Payment Act". Design Builder should date and time stamp all direct purchases invoices

EXHIBIT N - LUMP SUM AMENDMENT AGREEMENT FORM**ARTICLE 2****LUMP SUM PRICE**

1. The Lump Sum Price for the Work, as defined in Section 3B of the Agreement, is _____ Dollars (\$_____).
2. Monthly installment payment of the Lump Sum Price shall be based upon the percent completion of the designated portion of the Work for each particular month.
3. In order to efficiently and timely address certain Change Order situations that may arise during Phase 2, the parties have agreed to establish an Owner controlled contingency within the Lump Sum Price in the amount of _____ (\$_____) ("Owner's Contingency"). The Design Builder acknowledges and agrees that any change work which is to be charged against the Owner's Contingency must be approved in advance in a Change Order or Construction Change Directive signed by _____. The Owner reserves the right, at its sole discretion, to withhold its consent on Owner's Contingency expenditures. Unused Owner's Contingency remaining at Substantial Completion will be deducted from the Lump Sum Price. Design Builder has no entitlement to any portion of any unused Owner's Contingency.
4. If the parties agree to establish Allowances within the Lump Sum Price, said Allowances items and amounts will be identified in Attachment 6. Design Builder shall not proceed with any portion of the Work associated with the aforesaid Allowances ("Allowance Work") without first obtaining Owner's express written authorization to proceed with said Allowance Work.
5. Design Builder recognizes that this Contract includes work for trench excavation in excess of five feet deep. Design Builder acknowledges the requirements set forth in Section 553.63 of the Florida Statutes titled Trench Safety Act. Design Builder certifies that the required trench safety standards will be in effect during the period of construction of the Project and Design Builder agrees to comply with all such required trench safety standards.
 - A. The amount of _____ dollars (\$_____) has been separately identified in Attachment 2, Schedule of Values, for the cost of compliance with the required trench safety standards; said amount is included within the Lump Sum Price.

EXHIBIT N - LUMP SUM AMENDMENT AGREEMENT FORM**ARTICLE 3****CONTRACT TIME**

1. The Phase 2 Commencement Date for the Work is _____. The total period of time beginning with the Phase 2 Commencement Date through the date required for Substantial Completion of the Work is _____ days ("Contract Time"). THE SUBSTANTIAL COMPLETION DATE IS THEREFORE ESTABLISHED AS _____.
2. As referenced in Section 5© of the Agreement, the liquidated damage rate is hereby established at \$_____, which the parties acknowledge and agree apply to this Amendment and Design Builder's responsibility to complete the Work within the Contract Time as stated herein. Accordingly, the liquidated damage rate established in this Amendment shall be assessed from Design Builder for each calendar day Design Builder fails to achieve Substantial Completion for the Designated Work within the Contract Time, in accordance with this Amendment and the provisions of the Agreement.

ARTICLE 4**MISCELLANEOUS**

1. Except as expressly modified herein, the terms and conditions of the Agreement remain unchanged. In the event of a conflict between the terms of this Amendment and those of the Agreement, Owner and Design Builder agree that the terms of this Amendment shall prevail and control.

Owner

By: _____

Print Name: _____

Its: _____

Date: _____

Design Builder

By: _____

Print Name: _____

Its: _____

Date: _____

ATTACHMENT 1

Attachment 1 - List of Drawings, Specifications, and Addendums

(See Attached)

ATTACHMENT 2

Attachment 2 - Schedule of Values

(See Attached)

ATTACHMENT 3

Attachment 3 - Assumptions, Clarifications, & Exclusions

(See Attached)

ATTACHMENT 4

Attachment 4 - Completion Schedule

(See Attached)

ATTACHMENT 5

Attachment 5 - List of Subcontractors and Major Suppliers

(See Attached)

ATTACHMENT 6

Attachment 6 -Allowances

(See Attached)

EXHIBIT O - SCOPE OF SERVICES**PINELLAS COUNTY UTILITIES****PUMP STATION 16 IMPROVEMENTS - PROFESSIONAL DESIGN-BUILD SERVICES****Contract No. 25-0209-RFP-DB****October 31, 2025****BACKGROUND**

Pinellas COUNTY Utilities (COUNTY) owns and operates Pump Station 16 (PS16) which receives and conveys a significant portion of the overall influent to the South Cross Bayou Advanced Water Reclamation Facility (SCBAWRF) which serves the South COUNTY Basin sanitary sewer collection system. PS16 collects wastewater from four different collection basins and can convey up to 30 million gallons per day (MGD) to the SCBAWRF. It is a critical component of the COUNTY's wastewater transmission system. The COUNTY desires to make repairs to PS16 and to make other modifications that will improve functionality and reliability and will facilitate maintenance activities. The design-build team of PCL Civil Constructors, Inc. as contractor and Stantec Consulting Services, Inc. as architects and engineers (Design-Builder) have been selected to execute Professional Design-Build Services to make the repairs and modifications to PS16. This document represents the Scope of Work (SOW) for Phase 1 of the Pinellas PS16 Project (PROJECT) which will advance the design to the 60% stage with a 30% submittal that will include a Preliminary Engineering Report (PER), and two Guaranteed Maximum Price (GMP) submission; one for Early Procurement and one for the 60% Design Submission.

PUMP STATION 16 SCOPE OF WORK OVERVIEW – PHASE 1**Task 1 – Project Administration**

The Design-Builder will be responsible for overall coordination and management of the PROJECT through its assigned Project Manager (PM). The PM will manage the agreed budget and scheduling aspects of the various work activities identified herein for the period indicated in the Project Schedule (Exhibit B, attached). The PM's efforts will be focused on completion of tasks and submittal of deliverables according to the project schedule and budget, coordinating staffing, facilitating QA/QC reviews of project efforts, and identifying and communicating to the COUNTY issues that arise, which may impact PROJECT progress.

1.1 – Project Management

The Design-Builder will manage the PROJECT budget, schedule, and team, including the following services:

- Management of the overall effort for which Design-Builder has responsibility.
- Monitor the PROJECT schedule in and provide notice to the COUNTY of slippage in project progress and impacts on overall project schedule with remedy suggestions or recommendations provided.
- Administrative services and support the Design-Build team project staff.

EXHIBIT O - SCOPE OF SERVICES

- Monitor and track decisions through the course of the project in the Design Decision Log.
- Provide input to the PROJECT risk register,
- Monitor and administer PROJECT change log
- Monitor PROJECT issues requiring discussion or resolution.
- Provide monthly invoicing, inclusive of a monthly status report in accordance with COUNTY requirements.

Meetings:

- N/A; See Task 1.2

Deliverables:

- Design Decision Log
- Change log
- Monthly invoice, schedule, and status report – electronic delivery

1.2 – Project Kickoff and Project Progress Meetings

The Design-Builder will facilitate various formal project meetings throughout the duration of the PROJECT. The following meetings are anticipated and budgeted:

1.2.1 – Project Kick-Off Meeting

- Design-Builder to complete Project Kick-off meeting within thirty (30) days of Notice to Proceed and will introduce the COUNTY to our collaborative delivery approach, understand first-hand the improvements needed at PS16, review the recommended PS16 improvements, document the COUNTY's goals for this project, and establish the definitions of success.
- Design-Builder to present the Preliminary Project Schedule.
- Design-Builder to present Preliminary Risk Register
- Project Kick-Off Meeting to be completed as an in-person meeting with a Virtual Attendance option.

1.2.2 – Progress Meetings

- Progress Meetings to present summary of work and an updated project schedule.
- Quantity of eight (8), 60-minute Progress Meetings are anticipated.
- Progress Meetings assumed to be completed virtually through Phase 1 of the PROJECT.

1.2.3 – Internal Project Coordination Meetings

- Internal PROJECT Coordination Meetings will be completed virtually as Conference Calls and will be completed as deemed necessary by Design-Builder.
- Up to 12 project coordination meetings are anticipated (or as needed).

The Design-Builder will prepare and distribute an agenda for organized PROJECT meetings, as well as record notes of formal meetings and telephone conversations conducted in executing this PROJECT. Meeting notes will document discussions during the meeting and resultant action item(s). Meeting notes will be transmitted to the COUNTY Project Manager via e-mail in draft form for review before finalizing.

EXHIBIT O - SCOPE OF SERVICESMeetings:

- Project Kick-Off Meeting
- Progress Meetings (Quantity: Eight (8))
- Up to 12 (or as-needed) internal project coordination meetings.
- Internal coordination conference calls; up to 24 regular internal coordination calls for Design-Builder.

Deliverables:

- Kick-off Meeting agenda (Electronic, PDF format)
- Preliminary Draft Schedule (Electronic, PDF format)
- Preliminary Risk Register (Electronic, MS Excel)
- Kickoff Meeting Summary Notes (Electronic, PDF format)
- Progress Meeting Agendas (Electronic, PDF format)
- Progress Meeting Summary Notes (Electronic, PDF format)

1.3 – Project Design Standards

Drawings for the PS16 improvements will define the design improvements. As part of the Project Administration tasks, the Design-Builder will develop Building Information Modeling (BIM) Standards based on Pinellas County Utility standards:

- Design-Builder shall set up PROJECT on Autodesk Construction Cloud (ACC).
- Setup Electronic files Template (Revit, Civil 3D, Plant 3D, AutoCAD)
- Design-Build Team Internal BIM Kick off meeting

Design-Builder will establish PROJECT design standards and develop the Design Standards manual that will be submitted to the COUNTY.

Development of the PROJECT design standards will be discussed at regular Project Progress Meetings (Task 1.2); no specific meetings for the Project Design Standards development are anticipated with the COUNTY.

Meetings:

- None

Deliverables:

- PS16 Project Design Standards (Electronic, PDF format)

Task 2 – Investigations & Evaluations2.1 – Data Collection

Design-Builder will submit a Request to obtain available reference information from COUNTY about PS16, including record drawings, shop drawings, previous studies and hydraulic evaluation(s), PS16 SCADA data, maintenance logs/maintenance records, and existing Legal agreements. The COUNTY's program manager will develop an MS Excel table to track and log available and received COUNTY data.

EXHIBIT O - SCOPE OF SERVICES

COUNTY will provide requested documents through a SharePoint site, which will also store the live Data Request Tracking Summary Sheet that the COUNTY's program manager will have the responsibility in updating. Once data collection is deemed to be complete, the COUNTY's program will send a written confirmation that final disposition of the Formal Data Request for record is completed.

Meetings:

- None

Deliverables:

- None

2.2 – Condition Assessment

The purpose of this condition assessment is to establish a baseline understanding of the existing infrastructure and components of PS16 prior to planned improvements. A multi-discipline team of engineers will conduct a comprehensive visual assessment, supported by photographic documentation and a written technical memorandum summarizing findings and recommendations.

The Design-Builder will conduct one (1) coordinated site visit with a multi-discipline team to visually assess the existing PS16 building and associated infrastructure. The assessment will confirm existing dimensions, validate record drawings, and document the current condition of facility components.

Visual condition assessment of PS16 facility by the following disciplines:

- Process-Mechanical
- HVAC
- Plumbing
- Architectural
- Civil
- Structural
- Landscape
- Electrical
- Instrumentation & Controls

Design-Builder will meet on-site with COUNTY operations personnel to obtain and document PS16 operation feedback and acquire key in-sights into the recommended PS16 improvements.

The Design-Builder's structural engineer will perform a structural condition assessment of PS16 to confirm dimensions and general condition of the influent chamber, as well as assess the existing generator room slab, including the known leak. With participation from the COUNTY, Design-Builder will enter the influent chamber and assess the structure condition above water level during low flow period, performing a visual inspection of structure and classifying condition of existing concrete and metal surfaces.

At the conclusion of the Condition Assessment, Design-Builder will develop field notes that will be included as attachments to the Preliminary Engineering Report (PER) developed under Task 3.

EXHIBIT O - SCOPE OF SERVICES

The condition assessment does not include a review of yard piping, and no allowance has been made for remote camera inspection in the scope of work.

Meetings:

- PS16 Site Visit, including on-site Meeting with COUNTY Operations

Deliverables:

- PS16 Site Visit Condition Assessment field notes directly included in the PER

2.3 – Survey and Subsurface Utility Investigation

The Design-Builder will provide Survey and Subsurface Utility service following the current Pinellas COUNTY Standards that will include:

- Boundary/property line and topographic survey of the pump station site
- Mapping of any above ground encroachments
- Graphical depiction of underground utilities based on visible appurtenances
- Graphical depiction of subsurface markings provided by others
- Survey coverage extending 20 feet from site or to EOP of major roads, whichever is less
- Locate living trees of 4" or greater, diameter at breast height
- Survey up to ten (10) soil borings

Survey drawings shall reference NAD 83/2011 and NAVD 88.

CAD files as well as a PDF of boundary and topographic surveys shall be provided. Survey CADD files to be prepared and submitted in accordance with COUNTY standards.

Meetings:

- None

Deliverables:

- Survey and Subsurface Utility Boundary and Topographic Surveys (Electronic, CAD and PDF format)

2.4 – Geotechnical Investigation

The Design-Builder will complete a geotechnical investigation of the PS16 site to investigate the subsurface soil and groundwater conditions in the area of the proposed PS16 building expansion that will include One (1) Standard Penetration Test (SPT) boring to a depth of 50 feet, utilized to provide penetration resistance data reflective of the strength and bearing capability of the soils penetrated. The SPT will be conducted in accordance with ASTM D-1586, and will be grouted in accordance with Southwest Florida Water Management District (SWFWMD) regulations and industry standards.

Standard laboratory tests may include sieve analyses, moisture content tests, and tests based on soil conditions. Geotechnical Report will be prepared by the Geotechnical Engineer. The results of the field

EXHIBIT O - SCOPE OF SERVICES

and laboratory testing will be included in a Geotechnical Report encompassing a discussion of the following:

- Soil boring log with field and laboratory data, soil stratification based on visual soil classification
- Groundwater levels observed during and after completion of drilling
- Site and boring location plans
- Subsurface exploration procedures
- Estimated seasonal high-water table
- Discussion of the subsidence potential for the site
- Discussion of development of the site related to geotechnical conditions
- Recommendation for foundation system for the proposed structures including allowable foundation bearing pressures, total and differential settlement values

A draft Geotechnical Report will be submitted to the COUNTY for review. Comments made by the COUNTY will be responded to in the COUNTY's comment response form and a Final Geotechnical Report will be prepared and incorporated into Task 5.1 PER as appendix.

Meetings:

- None

Deliverables:

- Geotechnical Report (Electronic, PDF format, incorporated into Task 5.1 PER as an appendix)

Task 3 – Preliminary Design**3.1 – Technical Development Workshops**

Following the initial data collection and condition assessment, the Design-Builder will conduct six (6) Technical Development Workshops in collaboration with COUNTY, which will cover specific elements of the PS16 improvements. The Design-Builder will present the results of the initial investigations on each of the design topics covered at the specific workshop and provide options and recommendations as to how to proceed with the final design.

These options and recommendations will be evaluated by the COUNTY and relevant stakeholders during the workshop, and discussed amongst all attendees in a collaborative manner, for the COUNTY to inform the Design-Builder of their preference(s) to proceed with the next phase of the design.

Prior to each workshop, the Design-Builder will prepare a meeting agenda and presentation materials to guide the conversation through the workshop. COUNTY preferences will be documented in meeting summary notes. For each workshop, meeting summary notes will be issued to the COUNTY. Meeting summary notes will serve as reference information for the preparation of the Preliminary Engineering Report (PER).

3.1.1 – Resiliency Assessment

Building additions and other improvements may be needed to accommodate the selected equipment and to meet the regulatory and resiliency requirements associated with the PS16 location.

EXHIBIT O - SCOPE OF SERVICES

The Design-Builder will assess the current PS16 elevation and compare it to a flood elevation determined by the COUNTY. The Design-Builder will identify equipment that could be raised above that elevation and provide a comparison to existing PS16 building elevations. A comparison will also be made to the current height restriction that was imposed on PS16 during initial development. Design-Builder will also evaluate flood doors to protect equipment that is not raised out of the flood elevation. Design-Builder will provide a high-level assessment of flood protection fencing and barriers, including whether or not a flood protection barrier may be contracted to a 3rd party for management of supply and installation ahead of storm events.

Design-Builder will discuss historical flooding in the area that has resulted from major storm events with COUNTY.

Design-Builder will discuss the recovery plan if the PS16 improvements do not plan for resilience.

Design-Builder will prepare a Class V OPCC to assist in evaluation of resiliency options for PS16 that will be presented to the COUNTY with the Resiliency Assessment alternatives in one (1), 3-hour workshop.

Meetings:Resiliency Assessment Workshop Deliverables:

- Resiliency Assessment Meeting Agenda (Electronic, PDF format)
- Resiliency Assessment Meeting Summary Notes (Electronic, PDF format)

3.1.2 – Pump Station Alternative Configurations

Design-Builder will conduct one (1), 3-hour workshop with the COUNTY and relevant PROJECT stakeholders. The objective of this task is to review modifications to the existing infrastructure suggested in the Design Criteria Package (DCP) and identify alternative improvements that would improve either the operation and meet the capacity targets or the functionality of the pumpstation, constrained within the existing physical and budgetary limits of the PROJECT.

Design-Builder will review:

- Primary PS16 pump selection
- Standby diesel pump selection
- Above and below ground piping alternatives
- Odor control selection and equipment layout / tie-ins
- Generator alternatives
- Fuel storage
- Equipment access, including monorail(s)/hoist(s)/bridge crane(s)
- Interior configuration improvements

Elements will be evaluated and discussed in the workshop for each of the following:

- Ability to meet capacity and redundancy requirements defined by the COUNTY
- Ability to maintain wastewater service during construction.

EXHIBIT O - SCOPE OF SERVICES

- Required major structural, architectural, electrical and control modifications
- Constructability
- Resiliency of the installation
- Community Impact
- Probable Construction Cost

Where necessary, updated sketches and conceptual configurations will be prepared to communicate for the purpose of assessing alternatives.

Meetings:

- PS16 Alternatives Configuration Workshop

Deliverables:

- PS16 Alternatives Configuration Meeting Agenda (Electronic, PDF format)
- PS16 Alternatives Configuration Meeting Summary Notes (Electronic, PDF format)

3.1.3 - Electrical and Control Systems Improvement Workshop

Based on the initial investigations of available record information and site visits, along with input provided by the COUNTY, the Design-Builder will assess proposed electrical and control system improvements.

The Design-Builder will conduct one (1) site visit to assess the electrical feed, standby power, electrical distribution, and controls system for the proposed improvements.

The Design-Builder will develop a preliminary one-line diagram to depict power distribution to the equipment, which will be presented as support for the discussions during the workshop. In preparation of the workshop, proposed drives, motors, control system, electrical and controls design will be coordinated with COUNTY preferences

Design-Builder will conduct one (1), 3-hour workshop with COUNTY and relevant PROJECT stakeholders. Specific elements which will be reviewed during the workshop are:

- Preliminary power requirements and assessment of existing available power supply.
- Coordination needs with the local electrical company
- Backup (UPS) and emergency power (generator) requirements, including generator monitoring and controls
- Power and switchgear monitoring requirements
- Preliminary one-line diagram
- Integration of controls into the COUNTY's existing SCADA system
- Design for PLC/SCADA equipment to be moved, combined with the RTU panel, and installed in a single enclosure in the new VFD room.
- Design for any control and monitoring signals that need to be added to or modified for the existing PLC panel

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- Design of facility security system cameras and integration of video recording equipment into the PLC panel
- Control hierarchy and amount of monitoring and control at the local and remote levels, e.g., local control stations, E-stops, local manual, remote manual, remote auto.
- Instrumentation redundancy requirements for operations and maintenance, and mandated by permit conditions
- Housing requirements for new and relocated electrical equipment, including space and access requirements and development of a schematic layout, with considerations for flood elevation (if required) and to blend in and integrate to be consistent with the aesthetics and current surroundings. Discussions to include major electrical distribution equipment, motor junction boxes, control panels, and VFDs.

Agenda will be developed prior to meeting and meeting summary will be captured and distributed by Design-Builder.

Meetings:

- One (1) site visit with COUNTY
- Electrical and Control Systems Improvement Workshop

Deliverables:

- Electrical and Control Systems Improvement Workshop Meeting Agenda (Electronic, PDF format)
- Preliminary One-line Diagram (Electronic, PDF format)
- Electrical and Control Systems Improvement Workshop Meeting Summary Notes (Electronic, PDF format)

3.1.4 - Pump Station Ancillary Systems and Aesthetics (Architectural) Workshop

The Design-Builder will develop an analysis of the alternatives for proposed improvements on ancillary systems and aesthetics, which will present options and recommend modifications (when applicable) to the following design elements:

- PS16 access for Operations and Maintenance
- Civil site paving, grading, and drainage
- Fencing, parking and sidewalks
- Discharge Pipe Valves and Meter Location
- Heating, Ventilation and Air Conditioning (HVAC)
- Architectural features and aesthetics
- Landscape architectural features

The Design-Builder will develop conceptual level design architectural features for discussion with the COUNTY. The Design-Builder will coordinate landscape design elements with the COUNTY as well as develop schematic level landscape design to illustrate the desired aesthetic via perspective images.

The Design-Builder will conduct one (1), 3-hour workshop with the COUNTY and relevant project stakeholders. An agenda will be developed prior to meeting and meeting summary will be captured and distributed by Design-Builder.

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Meetings:

- PS16 Ancillary Systems and Aesthetics (Architectural) Workshop

Deliverables:

- PS16 Ancillary Systems and Aesthetics (Architectural) Workshop Meeting Agenda (Electronic, PDF format)
- PS16 Ancillary Systems and Aesthetics (Architectural) Workshop Meeting Summary Notes (Electronic, PDF format)

3.1.5 - Early Procurement Assessment Workshop

Design-Builder will facilitate one (1), 2-hour workshop with the COUNTY for assessment of early procurement packages of long lead equipment for PS16. Design-Builder to develop of early procurement alternative options for the following equipment:

- Electrical: transformers, main switchgear, MCCs, VFDs
- Generator(s) and fuel tank
- Mechanical: pumps, odor control

The intent will be for identification of equipment for the PS16 improvements that are suitable for early procurement packages that will be prepared in parallel with the overall PS16 design but on an accelerated schedule.

The Early Procurement Assessment workshop will present:

- Preliminary schedule update(s)
- Identification of critical path elements
- Summary of benefits to procure long-lead items early

Meetings:

- Early Procurement Assessment Workshop

Deliverables:

- Early Procurement Assessment Workshop Meeting Agenda (Electronic, PDF format)
- Early Procurement Assessment Workshop Meeting Summary Notes (Electronic, PDF format)

3.1.6 - Facilitated Risk Workshop:

The Design-Builder will conduct a structured and collaborative risk identification and assessment process for the PROJECT, enabling proactive risk management throughout the project lifecycle. The risk assessment will be documented through participation by the Design-Building, COUNTY, and relevant stakeholders in one (1) 3-hour Facilitated Risk Workshop that will be facilitated by an independent third party and will result in the development of an initial risk register and scoring criteria.

Prior to the Workshop, the facilitator will review available project documentation, including design concepts, schedule, and operational constraints.

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The Facilitated Risk Workshop will consist of:

- Structured brainstorming and discussion to identify risks across design, construction, and operations.
- Preliminary Maintenance Of Plant Operations (MOPO) Assessment.
- Risk scoring based on likelihood and impact using agreed-upon criteria.
- Categorization of risks (e.g., technical, schedule, cost, safety, environmental).

The Initial Risk Register and Scoring Criteria will be a deliverable resulting from the Workshop. Maintenance of risk register through project life cycle will be performed by Design-Builder.

Meetings:

- Facilitated Risk Workshop Deliverables:
- Facilitated Risk Workshop Meeting Agenda (Electronic, PDF format)
- Facilitated Risk Workshop Meeting Summary Notes (Electronic, PDF format)
- Initial Risk Register and Scoring Criteria (Electronic, PDF format)

3.2 – Hydraulic Design Concept Validation

Building on Tasks 2.1 and 3.1, the Design-Builder will:

- Develop a flow assessment using PS16 SCADA data.
- Review SCADA information to evaluate performance, peak flows, and trends.
- Compare this data with the County's hydraulic model inputs.
- Use existing hydraulic studies and GIS data to identify any additional needs.

Following this review, the Design-Builder will facilitate one (1) 2-hr PS16 Hydraulic Capacity Workshop with the COUNTY to review and confirm the capacity of PS16. During the workshop, the Design-Builder will present:

- Results of the flow assessment.
- Initial pump performance curves.
- Review the collected data and recommend target capacities for the pump station.
- Present and discuss recommendations

The objective of this workshop is to confirm operational requirements for PS16 to inform subsequent design and hydraulic modeling (if required). Design-Builder will provide meeting summary notes for the workshop.

Meetings:

- PS16 Hydraulic Capacity Workshop

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- PS16 Capacity Workshop Agenda (Electronic, PDF format)

PS16 Capacity Workshop Meeting Summary Notes (Electronic, PDF format)

3.3 – Preliminary Design3.3.1–Preliminary Engineering Report & 30% Drawings

The information developed in the prior tasks will be compiled into a 30% Design and Preliminary Engineering Report (PER). The Design-Builder will develop preliminary design information for the improvements decided upon in the prior tasks. Design criteria will be presented on a discipline-by-discipline basis and will define the technical, engineering, and operational considerations used in the project development that will serve as the basis for subsequent detailed design documents.

Design-Builder will develop the following 30% Drawings in a Revit 3D model:

- Civil – Site layout and yard piping
- Demolition - Demolition of existing infrastructure necessary for improvements and utility abandonment will be provided through markups of record drawings in order to show conceptual level extent of demolition for PS16 improvements
- Landscape – Conceptual Planting Plan
- Architectural – Floor plan, exterior elevations, and building code analysis.
- Structural – Plan drawing – building expansion, identification of necessary equipment foundation raising above flood elevations
- Process-Mechanical – Plan Drawings, including odor control; wet well section drawing; pump station isometric
- HVAC – Plan layout
- Plumbing – Plan layout
- Electrical – Building plan, and site plan. One line diagram.
- Instrumentation & Controls – P&IDs, PLC panel re-location plan, instrument replacement plan, security system plan
- Table of content for expected specifications in the 60% submittal.

The PER and 30% Design Package will be submitted to the COUNTY for comments. The COUNTY will be provided 21 days to review. Design-Builder to conduct One (1) 4-hour review workshop with COUNTY.

Design-Builder will respond to COUNTY comments collected both through the review and in the 30% Review Workshop.

Design-Builder will carry comments forward into the 60% design.

Meetings:

- 30% Review Workshop

Deliverables:

- Preliminary Engineering Report and 30% Design Drawings (Electronic, PDF format)

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- Comment Log with responses and agreed modifications.
- 30% Review Meeting Agenda (Electronic, PDF format)
- 30% Review Meeting Summary Notes (Electronic, PDF format)

3.4– 30% Price Model Package

Following submission of the 30% Design with the PER and 30% Drawings, the Design-Builder will prepare the 30% Price Model Package consisting of the following items.

3.4.1 – Constructability and Value Engineering Assessment

Design-Builder will perform the following to assist with the design progression for the 30% documents:

- Constructability review and recommendations
- Value Engineering assessment including recommendations and pricing for potential alternate designs, systems, materials, and methods
- Provide options to gain efficiency in project delivery.
- Advise on proposed site use and improvements, selection of materials, and equipment.
- Advise on availability of labor and materials.
- Advise on potential long lead equipment to facilitate advanced progression of specific equipment technical specifications for the early procurement scope.

The Constructability and Value Engineering Assessment will be included for the COUNTY to provide input and approval for any items during 30% Price Model Package review.

3.4.2 – Scheduling

Design-Builder will provide a preliminary pre-construction schedule within thirty (30) days from NTP. The Design-Builder will monitor this schedule during the design phases of the Project, ensure that this schedule is updated, and advise the COUNTY of any deficiencies in adhering to this schedule by any party. This will include:

- Preliminary construction planning and scheduling
- Recommendations for accelerated procurement or phased construction
- Options for fast-track or accelerated scheduling
- Time requirements for procurement, installation, and construction
- Identification & tracking log for long lead items
- Identifying the critical path for regulatory agency approvals and permitting
- Staging and site utilization plan
- The scheduling software used will be Primavera P6
- Updated schedules will be included within each invoice, price model, and GMP submission

An updated schedule will be included for the COUNTY to provide input and approval for any items during 30% Price Model Package review.

3.4.3 – Price Modeling

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The 30% American Association of Cost Estimators (AACE) Level 3 Estimate will provide a high-level pricing of the pump station components. This estimate will outline a detailed assessment of the complete project budget broken down by work scope for the design. Potential self-perform work will be included along with updated market pricing from subcontractors and suppliers were applicable. Design-Builder will include recommendations for early procurement long-lead items.

A list of value engineering/alternate items will be included for discussion, review, and potential inclusion into next round of design. COUNTY to provide input and approval for any items during 30% Price Model Package review.

3.4.4 – Maintenance of Plant Operations (MOPO) Planning

Subsequent to the Design-Builder providing the 30% design, the Design-Builder will evaluate the proposed improvements and create specific construction phase planning that will minimize or eliminate interruption to COUNTY operations, including detailed development and involvement with MOPOs.

MOPO Planning will be included for the COUNTY to provide input and approval for any items during 30% Price Model Package review.

3.4.5 – 30% Price Model Package

Design-Builder will submit the 30% Price Model Package for County review that will be inclusive of the above, as well as the following sections:

- Executive Narrative
- Schedule
- Assumptions & Clarifications
- Detailed Price Estimate
- Document List
- Vendor Selection Matrix
- Vendor Quotes

The 30% Price Model Package will be submitted for COUNTY comments and will be provided 21 days to review. Design-Builder to conduct One (1) 4-hour review workshop with COUNTY.

Design-Builder will respond to COUNTY comments collected both through the review and in the 30% Price Model Package Workshop.

Design-Builder will carry comments forward into the 60% design.

Meetings:

- 30% Price Model Review Workshop

Deliverables:

- 30% Price Model Package (Electronic, PDF format)
- Comment Log with responses and agreed modifications.
- 30% Price Model Package Meeting Agenda (Electronic, PDF format)

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- 30% Price Model Package Meeting Summary Notes (Electronic, PDF format)

Task 4 – Public Outreach

Public engagement for the PS16 Improvements Project will focus on informing stakeholders about the project, the need for the project, its benefits and anticipated schedule.

4.1 – Preliminary Public Engagement and Community Outreach

Design-Builder will provide initial planning and coordination for Public Engagement and Community Outreach for the PS16 improvements:

- Complete County-required public participation planning worksheets outlines in Pinellas County Public Participation and Engagement Guidelines (August 21, 2024) Five Step Public Engagement Process.
- Complete COUNTY forms;
- Develop PS16 Public Engagement Plan tailored to the COUNTY's needs;
- Provide stakeholder notification & support services
 - » Identify stakeholders; Build a notification database and maintain contact list, including email addresses and phone lines.
 - » Maintain a database of stakeholders identified within the project radius.
 - » Conduct and summarize up to twelve (12) one-on-one or small group meetings with commercial/retail stakeholders.
- Allocate up to 10 hours for Design-Builders Public Outreach Lead for media preparation, stakeholder enquiries, and miscellaneous communications.

Design-Builder will also participate in and provide summary meeting notes for up to twelve (12) project coordination meetings with the COUNTY related to Public Engagement and Community Outreach planning.

Meetings:

- Twelve (12) 1-hour Stakeholder Meetings
- Twelve (12) 1-hour Project Coordination Meetings

Deliverables:

- Draft and final Completed County-required public participation planning worksheets and County forms
- Draft and Final PS16 Public Engagement Plan (Electronic, PDF format)
- Stakeholder list with contact information (Electronic)
- Twelve (12) 1-hour Stakeholder Meetings Summary Notes (Electronic, PDF format)
- Twelve (12) 1-hour Project Coordination Meetings Summary Notes (Electronic, PDF format)

4.2 – Public Information Materials

- Design-Builder will develop public information materials, including:
 - » Develop key messages and FAQs, updated at the 30% and 60% deliverable timeframes;

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- » Design a project fact sheet;
- » Draft content for the COUNTY's project web page;
- » Prepare up to six (6) social media posts and two (2) news releases.

Meetings:

- None; Included in Task 4.1

Deliverables:

- Draft and final key messages and FAQs
- Draft and final key messages and FAQs design phase submittal updates
- Draft and final project fact sheet
- Content for COUNTY's project web page
- Draft and final social media (6) posts and news releases (2)

4.3 – Public Engagement

In coordination with COUNTY staff, Design-Builder will plan, coordinate and implement two (2) virtual public meetings on the project using the COUNTY's Zoom account. Virtual meeting #1 will occur during the 30% design timeframe to introduce the project, answer questions and obtain community feedback that could be addressed during design. Virtual meeting #2 will occur at the 60% design phase to update stakeholders on key design features, discuss the schedule and anticipated construction start, and allow stakeholders an opportunity to ask questions.

- For each meeting, the Design-Builder will:
 - » Design and print a 4.25" x 6" direct mail postcard, using the County's template, mailed to approximately 1,000 addresses, first class postage, printed four color over four color.
 - » Design, produce and place up to 8 yard signs in nearby neighborhoods to promote the virtual meetings.
 - » Develop a PowerPoint presentation using the County's template.
 - » Facilitate the meeting, if needed.
- For each meeting, the COUNTY will:
 - » Schedule the Zoom meeting and provide the project team with meeting information for dissemination to stakeholders.
 - » Assist in publicizing the meetings via the project web page and the County's mass media and social media channels.

Meetings:

- 30% 1-hour Virtual Public Engagement Meeting
- 60% 1-hour Virtual Public Engagement Meeting

Deliverables:

- Draft and final 30% Public Engagement Meeting, with Summary Notes (Electronic, PDF format)
- Draft and Final 60% Public Engagement Meeting, with Summary Notes (Electronic, PDF format)
- Draft and final Public Engagement Meeting Promotional Materials

EXHIBIT O - SCOPE OF SERVICES**Task 5 – Permitting**

The permit requirements will be confirmed early in the design and summarized in the design specifications.

The permit assistance required for the design and construction of PS16 are as follows:

- Prepare FDEP Collection System Modification permit applications.
- Prepare an update to the Spill Prevention, Control and Countermeasure (SPCC) plan and assist the COUNTY with fuel tank registration.
- Prepare a Stormwater Pollution Prevention Plan, notice of intent and notice of termination application forms.
- Prepare and or assist with right-of-way (ROW) permitting, maintenance of traffic (MOT) compliance, COUNTY Road Utilization Permit, design conformance with Florida Department of Transportation (FDOT) requirements.
- Maintain the required certifications with the City of Seminole (Seminole Building Permits), submit the required building permit application, and schedule the required inspections prior to commissioning the PS16 improvements.

5.1 – Pre-Application Permitting

Pre-Application Meetings will be held with FDEP, SWFWMD, Pinellas County Health Department and Pinellas County BDRS and the City of Seminole during the initial 60% design stage of the project. It is anticipated that the PROJECT will be exempt from the requirements of an Environmental Resource permit as the activities will not disturb wetlands or add impervious area. A permitting specification will be developed outlining the permitting requirements.

The Design-Builder will develop and maintain a Permit Tracking Matrix.

Meetings:

- FDEP Pre-Application Meeting (Virtual)
- SWFWMD Pre-Application Meeting (Virtual)
- Pinellas County Health Department Pre-Application Meeting (Virtual)
- City of Seminole (Seminole Building Permits) Pre-Application Meeting (Virtual)
- Pinellas County BDRS – I'm not sure this is required if the City of Seminole will handle building permitting. A habitat permit may be required.

Deliverables:

- Permit Tracking Matrix
- Draft and final FDEP Pre-Application Meeting Summary Notes (Electronic, PDF format)
- SWFWMD Pre-Application Meeting Summary Notes (Electronic, PDF format)
- Draft and final Pinellas County Health Department Pre-Application Meeting Summary Notes (Electronic, PDF format)
- Draft and final City of Seminole (Seminole Building Permits) Pre-Application Meeting Summary Notes (Electronic, PDF format)

5.2 – Design Phase Permit Applications

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The Design-Builder will use the 75% design documents to update the permitting specification, submit permit exemption(s), and complete preliminary permit applications. The permitting specification will be updated. During Phase 1, the permit application will be completed using the 75% drawings for the FDEP collection system modification, and the Design-Builder will respond to Requests for Additional Information (RAI) from the permitting authority.

Design Element	Potential Project Constraint/Risks	Strategy
FDEP Collection System Modification Permitting	The pump station improvements will require a permit from FDEP	Design Builder will prepare application form 62-604.300(3)(a)

Future Construction Phase permitting will be completed in Phase 2 with the Issued For Construction drawings.

The Design-Builder will provide responses to one (1) RAI from the permitting agency to address any comments for each of the following disciplines: process mechanical, electrical, I&C, and HVAC.

Meetings:

- None

Deliverables:

- Updated Permit Tracking Matrix
- Completed permit application
- Electronically Signed and Sealed Drawings for initial submittal and revisions if required
- One (1) RAI response (Electronic, PDF files) and any revisions to the drawings if required for each of the following disciplines: process mechanical, electrical, I&C, and HVAC.

Task 6 – Design Development**6.1 – Early Procurement Design Development**

Design-Builder to develop early procurement drawing and specification packages as appropriate (up to 60% level of detail) for long lead equipment identified under Task 3.1.5. The Early Procurement Package will be used by the Design-Builder to develop the Early Procurement GMP for early equipment procurement activities. The Early Procurement Package will be prepared in parallel with the detailed design of the overall PS16, but on an accelerated schedule to clearly define the scope of work and for the purpose of developing the GMP.

The early procurement activities as part of these packages are intended to help accelerate the overall schedule by initiating the purchase of long lead items at the earliest possible point in the project and to initiate construction as soon as possible on critical path items. The goal is to streamline these essential activities, thereby facilitating timely progress.

Each work package will not include separate design deliverables (i.e. 60%, 90%, Final documents).

A Draft of each work package will be submitted to the COUNTY for review. The focus of the review of the Draft documents will be ensuring that the scope of work is clear and as intended, and there are no major

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deviations from the design intent. Detailed design changes will not be included in the revisions to a final early procurement package submission as those updates will be incorporated into the 60% Design.

The Design-Builder will meet with the COUNTY to review the Early procurement design and Early Procurement GMP.

The Design-Builder assumes the COUNTY will return comments in no more than twenty-one (21) calendar days.

Meetings:

- Early Procurement Review Meeting

Deliverables:

- Early Procurement Design Drawings and Specifications (Electronic, PDF format)
- Early Procurement GMP
- Early Procurement Review Comment Log (Excel)
- Early Procurement Review Meeting Agenda (Electronic, PDF format)
- Early Procurement Review Meeting Summary Notes (Electronic, PDF format)
- Submittals

6.2 – 60% Design Scope of Work

Design development to a level of completeness for Design-Builder to prepare the GMP, including advancement of the 30% design to 60% and preparation of technical specifications.

6.2.1 – Civil Scope:

- Design-Builder will provide pipeline drawings, specifications, and details for a new bypass force main to include the following elements at PS16:
 - » Access for operation and maintenance shall be provided
- Parking removed by the expansion of the station shall be replaced
 - » Concrete slabs for generators and backup pumps shall be above flood elevation.
- Vinyl coated chain link perimeter fencing shall be constructed where walls are not present
 - » Interconnection with the existing discharge force main for both the primary forcemain and the diesel pump bypass forcemain
 - » Site design for PS16 expansion
 - » No effort is included for environmental site assessment or soil remediation.
- No effort is included for asbestos testing or remediation

6.2.2 – Landscaping Scope:

- The Design-Builder will prepare landscape planting and irrigation drawings that will include:
 - » Tree removal and mitigation (if needed)

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- » Landscape screening including hedge and shrub material
- » Irrigation layout that connects to existing system (if available)

6.2.3 – Architectural Scope:

- The Design-Builder will provide architectural drawings, specifications and details for the addition to the existing PS16:
 - » Building code review for life safety of the existing PS16 with addition.
 - » Evaluation of existing PS16 modifications for door locations, roofing, and cleaning and painting
 - » Modify existing door locations and install new doors, frames, and hardware
 - » Design of a restroom with shower within the existing PS16
 - » Design an addition to the existing PS16 for new generators, pumps, and equipment to match the existing PS16 design
 - » Design aesthetic, façade refurbishment, building materials, and door hardware for PS16 modifications and addition to integrate with the existing building

6.2.4 – Structural Scope:

- Design-Builder will provide structural design for the rehabilitation and reconfiguration of PS16. Scope will include but is not limited to:
 - » Design the extension of the CMU screen wall.
 - » Removal and relocation of existing man-doors. Building structural evaluation if triggered by new opening configurations per Florida Existing Building Code (FEBC)
 - » Design members to support the addition of monorail crane. Building structural evaluation if triggered by new loading conditions per Florida Existing Building Code (FEBC)
 - » Abandonment of valve vault by grout filling
 - » Removal and replacement of portions of the existing wet well / valve vault divider walls as required to replace existing wall pipes.
 - » Addition or modification of concrete slabs on grade
 - » Repair of parapet above generator room
 - » Modifications as needed for proposed bathroom
 - » Provide performance specifications for precast structure(s) in new screened walls
 - » Design of new generator foundations (above flood elevations if determined in Resiliency Assessment).
 - » Condition assessment is a visual assessment of the existing infrastructure. If required, classification of deterioration of concrete and metal surfaces should be performed by a specialty materials investigation firm and is currently not included in the scope of work.

6.2.5 – Process Mechanical Scope:

- Design-Builder will provide process/mechanical general arrangement drawings and P&IDs, specifications, and details for the replacement of the equipment at PS16, including:
 - » Replacement of existing submersible pumps, guiderails, and discharge riser in the wet wells, including modifications to access hatches

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- » Removal of six (6) slide gates and modification of the lifting configuration of the other two (2) gates
- » Replacement or modification of discharge piping and valves to provide above ground valves and flow meters
- » Modification of the existing odor control system
- » Evaluation of layout alternatives for diesel pumps, fuel storage, generators and odor control systems
- » Perform hydraulic evaluation of intake conditions for the installation of new diesel-engine driven backup pumps
- » New diesel-engine driven backup pumps, as recommended by Hydraulics Concept Validation
- » New stand-alone diesel fuel tank, piping, appurtenances, etc. to serve new generators
- » New monorail hoists to facilitate pump removal
- Coordination with COUNTY for temporary pumping and MOPO requirements of the pump station during construction
- No effort is included for additional foul air sampling. Design-Builder assumes that previous foul air sampling results are applicable to the PS16 improvements design (Pump Station No. 16 Improvements Design/Build Project Technical Memorandum No. 2, CDM Smith 2024).
- No effort is included for air permitting

6.2.6 – HVAC Scope:

- Design-Builder will provide HVAC drawings, specifications and details to provide an air conditioning system for the proposed PS16 rehabilitation for the revised layout and heat loads. Scope shall include the following:
 - » Removing roof-maintained air intake hoods and silencers above the generator room
 - » Provide redundant air conditioning for the new VFD room
 - » Removal of existing roof mounted air conditioning unit serving electrical room, if needed
 - » Air conditioning of new office space
 - » New exhaust fan for new bathroom/shower stall area

6.2.7 – Plumbing Scope:

- Design-Builder will provide Plumbing drawings, specifications and details to provide the system for the proposed PS16 rehabilitation and for the revised layout.
 - » Replumbing of all sanitary piping
 - » Modifications to yard piping
 - » New eye wash/shower locations or hose bibbs, if required.

6.2.8 – Electrical Scope:

- Design-Builder will provide electrical drawings, specifications, and details for PS16, including design to provide:
 - » Coordination with Duke Energy for relocation of existing pad mounted utility transformer
 - » Redundancy with two separate power feeds from transformer

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- New 480-volt electrical switchgear to be operated via standalone Programmable Logic Controller (PLC) or manually
 - » Controls for the switch gear circuit breakers to allow for remote de-energizing
 - » New VFD room
 - » Two (2) new diesel-engine driven standby generators
 - » Six (6) new VFDs
 - » Built in arc-flash reduction circuitry
 - » Sealed conduits and fittings between wet wells and electrical room

6.2.9 – Instrumentation and Controls Scope:

- Design-Builder will provide instrumentation and control drawings, specifications, and details for the following elements of the Pump Station:
 - » Design of communication and programming to connect to the COUNTY's SCADA system.
 - » Design for PLC/SCADA equipment to be moved, combined with the remote terminal unit (RTU) panel, and installed in a single enclosure in the new VFD room.
 - » Design for any control and monitoring signals that need to be added to or modified for the existing PLC panel
 - » Design of replacement instrumentation throughout PS16
 - » Design of generator monitoring and controls
 - » Design to integrate power monitoring and switchgear monitoring and controls to the PS16 control system
 - » Design of facility security system cameras and integration of video recording equipment into the PLC panel
 - » P&IDs
 - » Updated instrumentation (input / output list) and control descriptions will provide an overview of the process control upgrades.

6.2.10 – Draft Start-up and Commissioning Plan Scope:

Design-Builder will prepare a draft Start-up and Commissioning Plan, which identifies preliminary requirements for equipment testing, systems testing, start-up, commissioning and acceptance testing.

Meetings:

- One (1) review internal workshop for Design-Builder.
- One (1), 3-hour review workshop with COUNTY.

Deliverables:

- 60% Design Drawings (Electronic, PDF format)
- 60% Specifications (Electronic, Word format)
- Draft Start-up and Commissioning Plan (Electronic, Word format)
- Design Decisions Log

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- 60% Design Comment Log with responses and agreed modifications.
- Meeting Summary Notes (Electronic, PDF format)

6.3– 75% Design Scope of Work

The Design-Builder will advance the design drawings and specifications up to a 75% completion, based on the 60% Design, and the approved comments and agreements as per 60% review workshop with the County. The 75% drawings will be used for necessary permit applications in Phase 1 (See Task 5).

Meetings:

- None.

Deliverables:

- 75% Design Drawings (Electronic, PDF format)
- 75% Design Specifications (Electronic, Word format)

Task 7 – Guaranteed Maximum Price (GMP) Submittal**7.1 – Early Procurement GMP (GMP-1)**

After completion of the 60% Early Procurement Design Documents Design-Builder prepare, review, and submit a Guaranteed Maximum Price (GMP) Proposal for the equipment and material contained within the documents. This detailed proposal will include assumptions, clarifications, pricing breakdown, reference documents, a project schedule, and value-based recommendations for award for each scope.

Meetings:

- One (1), 4-hour review workshop with COUNTY.

Deliverables:

- 60% Early Procurement GMP Package
 - » Executive Narrative
 - » Schedule
 - » Assumptions & Clarifications
 - » Detailed Price Estimate
 - » Document List
 - » Vendor Selection Matrix
 - » Vendor Quotes
 - » Bid Package(s)
- Meeting Summary Notes (Electronic, PDF format)

7.2 – GMP (GMP-2)

After completion of the 60% Design Documents Design-Builder prepare, review, and submit a Guaranteed Maximum Price (GMP) Proposal for the remaining project scope contained within the documents. This detailed proposal will include assumptions, clarifications, pricing breakdown, reference documents, a project schedule, and value-based recommendations for award for each scope.

Meetings:

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The Design-Builder will use the 75% design documents to update the permitting specification, submit permit exemption(s), and complete preliminary permit applications. The permitting specification will be updated. During Phase 1, the permit application will be completed using the 75% drawings for the FDEP collection system modification, and the Design-Builder will respond to Requests for Additional Information (RAI) from the permitting authority.

Design Element	Potential Project Constraint/Risks	Strategy
FDEP Collection System Modification Permitting	The pump station improvements will require a permit from FDEP	Design Builder will prepare application form 62-604.300(3)(a)

Future Construction Phase permitting will be completed in Phase 2 with the Issued For Construction drawings.

The Design-Builder will provide responses to one (1) RAI from the permitting agency to address any comments for each of the following disciplines: process mechanical, electrical, I&C, and HVAC.

Meetings:

- None

Deliverables:

- Updated Permit Tracking Matrix
- Completed permit application
- Electronically Signed and Sealed Drawings for initial submittal and revisions if required
- One (1) RAI response (Electronic, PDF files) and any revisions to the drawings if required for each of the following disciplines: process mechanical, electrical, I&C, and HVAC.

Task 6 – Design Development**6.1 – Early Procurement Design Development**

Design-Builder to develop early procurement drawing and specification packages as appropriate (up to 60% level of detail) for long lead equipment identified under Task 3.1.5. The Early Procurement Package will be used by the Design-Builder to develop the Early Procurement GMP for early equipment procurement activities. The Early Procurement Package will be prepared in parallel with the detailed design of the overall PS16, but on an accelerated schedule to clearly define the scope of work and for the purpose of developing the GMP.

The early procurement activities as part of these packages are intended to help accelerate the overall schedule by initiating the purchase of long lead items at the earliest possible point in the project and to initiate construction as soon as possible on critical path items. The goal is to streamline these essential activities, thereby facilitating timely progress.

Each work package will not include separate design deliverables (i.e. 60%, 90%, Final documents).

A Draft of each work package will be submitted to the COUNTY for review. The focus of the review of the Draft documents will be ensuring that the scope of work is clear and as intended, and there are no major

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deviations from the design intent. Detailed design changes will not be included in the revisions to a final early procurement package submission as those updates will be incorporated into the 60% Design.

The Design-Builder will meet with the COUNTY to review the Early procurement design and Early Procurement GMP.

The Design-Builder assumes the COUNTY will return comments in no more than twenty-one (21) calendar days.

Meetings:

- Early Procurement Review Meeting

Deliverables:

- Early Procurement Design Drawings and Specifications (Electronic, PDF format)
- Early Procurement GMP
- Early Procurement Review Comment Log (Excel)
- Early Procurement Review Meeting Agenda (Electronic, PDF format)
- Early Procurement Review Meeting Summary Notes (Electronic, PDF format)
- Submittals

6.2 – 60% Design Scope of Work

Design development to a level of completeness for Design-Builder to prepare the GMP, including advancement of the 30% design to 60% and preparation of technical specifications.

6.2.1 – Civil Scope:

- Design-Builder will provide pipeline drawings, specifications, and details for a new bypass force main to include the following elements at PS16:
 - » Access for operation and maintenance shall be provided
- Parking removed by the expansion of the station shall be replaced
 - » Concrete slabs for generators and backup pumps shall be above flood elevation.
- Vinyl coated chain link perimeter fencing shall be constructed where walls are not present
 - » Interconnection with the existing discharge force main for both the primary forcemain and the diesel pump bypass forcemain
 - » Site design for PS16 expansion
 - » No effort is included for environmental site assessment or soil remediation.
- No effort is included for asbestos testing or remediation

6.2.2 – Landscaping Scope:

- The Design-Builder will prepare landscape planting and irrigation drawings that will include:
 - » Tree removal and mitigation (if needed)

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- » Landscape screening including hedge and shrub material
- » Irrigation layout that connects to existing system (if available)

6.2.3 – Architectural Scope:

- The Design-Builder will provide architectural drawings, specifications and details for the addition to the existing PS16:
 - » Building code review for life safety of the existing PS16 with addition.
 - » Evaluation of existing PS16 modifications for door locations, roofing, and cleaning and painting
 - » Modify existing door locations and install new doors, frames, and hardware
 - » Design of a restroom with shower within the existing PS16
 - » Design an addition to the existing PS16 for new generators, pumps, and equipment to match the existing PS16 design
 - » Design aesthetic, façade refurbishment, building materials, and door hardware for PS16 modifications and addition to integrate with the existing building

6.2.4 – Structural Scope:

- Design-Builder will provide structural design for the rehabilitation and reconfiguration of PS16. Scope will include but is not limited to:
 - » Design the extension of the CMU screen wall.
 - » Removal and relocation of existing man-doors. Building structural evaluation if triggered by new opening configurations per Florida Existing Building Code (FEBC)
 - » Design members to support the addition of monorail crane. Building structural evaluation if triggered by new loading conditions per Florida Existing Building Code (FEBC)
 - » Abandonment of valve vault by grout filling
 - » Removal and replacement of portions of the existing wet well / valve vault divider walls as required to replace existing wall pipes.
 - » Addition or modification of concrete slabs on grade
 - » Repair of parapet above generator room
 - » Modifications as needed for proposed bathroom
 - » Provide performance specifications for precast structure(s) in new screened walls
 - » Design of new generator foundations (above flood elevations if determined in Resiliency Assessment).
 - » Condition assessment is a visual assessment of the existing infrastructure. If required, classification of deterioration of concrete and metal surfaces should be performed by a specialty materials investigation firm and is currently not included in the scope of work.

6.2.5 – Process Mechanical Scope:

- Design-Builder will provide process/mechanical general arrangement drawings and P&IDs, specifications, and details for the replacement of the equipment at PS16, including:
 - » Replacement of existing submersible pumps, guiderails, and discharge riser in the wet wells, including modifications to access hatches

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- » Removal of six (6) slide gates and modification of the lifting configuration of the other two (2) gates
- » Replacement or modification of discharge piping and valves to provide above ground valves and flow meters
- » Modification of the existing odor control system
- » Evaluation of layout alternatives for diesel pumps, fuel storage, generators and odor control systems
- » Perform hydraulic evaluation of intake conditions for the installation of new diesel-engine driven backup pumps
- » New diesel-engine driven backup pumps, as recommended by Hydraulics Concept Validation
- » New stand-alone diesel fuel tank, piping, appurtenances, etc. to serve new generators
- » New monorail hoists to facilitate pump removal
- Coordination with COUNTY for temporary pumping and MOPO requirements of the pump station during construction
- No effort is included for additional foul air sampling. Design-Builder assumes that previous foul air sampling results are applicable to the PS16 improvements design (Pump Station No. 16 Improvements Design/Build Project Technical Memorandum No. 2, CDM Smith 2024).
- No effort is included for air permitting

6.2.6 – HVAC Scope:

- Design-Builder will provide HVAC drawings, specifications and details to provide an air conditioning system for the proposed PS16 rehabilitation for the revised layout and heat loads. Scope shall include the following:
 - » Removing roof-maintained air intake hoods and silencers above the generator room
 - » Provide redundant air conditioning for the new VFD room
 - » Removal of existing roof mounted air conditioning unit serving electrical room, if needed
 - » Air conditioning of new office space
 - » New exhaust fan for new bathroom/shower stall area

6.2.7 – Plumbing Scope:

- Design-Builder will provide Plumbing drawings, specifications and details to provide the system for the proposed PS16 rehabilitation and for the revised layout.
 - » Replumbing of all sanitary piping
 - » Modifications to yard piping
 - » New eye wash/shower locations or hose bibbs, if required.

6.2.8 – Electrical Scope:

- Design-Builder will provide electrical drawings, specifications, and details for PS16, including design to provide:
 - » Coordination with Duke Energy for relocation of existing pad mounted utility transformer
 - » Redundancy with two separate power feeds from transformer

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- New 480-volt electrical switchgear to be operated via standalone Programmable Logic Controller (PLC) or manually
 - » Controls for the switch gear circuit breakers to allow for remote de-energizing
 - » New VFD room
 - » Two (2) new diesel-engine driven standby generators
 - » Six (6) new VFDs
 - » Built in arc-flash reduction circuitry
 - » Sealed conduits and fittings between wet wells and electrical room

6.2.9 – Instrumentation and Controls Scope:

- Design-Builder will provide instrumentation and control drawings, specifications, and details for the following elements of the Pump Station:
 - » Design of communication and programming to connect to the COUNTY's SCADA system.
 - » Design for PLC/SCADA equipment to be moved, combined with the remote terminal unit (RTU) panel, and installed in a single enclosure in the new VFD room.
 - » Design for any control and monitoring signals that need to be added to or modified for the existing PLC panel
 - » Design of replacement instrumentation throughout PS16
 - » Design of generator monitoring and controls
 - » Design to integrate power monitoring and switchgear monitoring and controls to the PS16 control system
 - » Design of facility security system cameras and integration of video recording equipment into the PLC panel
 - » P&IDs
 - » Updated instrumentation (input / output list) and control descriptions will provide an overview of the process control upgrades.

6.2.10 – Draft Start-up and Commissioning Plan Scope:

Design-Builder will prepare a draft Start-up and Commissioning Plan, which identifies preliminary requirements for equipment testing, systems testing, start-up, commissioning and acceptance testing.

Meetings:

- One (1) review internal workshop for Design-Builder.
- One (1), 3-hour review workshop with COUNTY.

Deliverables:

- 60% Design Drawings (Electronic, PDF format)
- 60% Specifications (Electronic, Word format)
- Draft Start-up and Commissioning Plan (Electronic, Word format)
- Design Decisions Log

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- 60% Design Comment Log with responses and agreed modifications.
- Meeting Summary Notes (Electronic, PDF format)

6.3– 75% Design Scope of Work

The Design-Builder will advance the design drawings and specifications up to a 75% completion, based on the 60% Design, and the approved comments and agreements as per 60% review workshop with the County. The 75% drawings will be used for necessary permit applications in Phase 1 (See Task 5).

Meetings:

- None.

Deliverables:

- 75% Design Drawings (Electronic, PDF format)
- 75% Design Specifications (Electronic, Word format)

Task 7 – Guaranteed Maximum Price (GMP) Submittal**7.1 – Early Procurement GMP (GMP-1)**

After completion of the 60% Early Procurement Design Documents Design-Builder prepare, review, and submit a Guaranteed Maximum Price (GMP) Proposal for the equipment and material contained within the documents. This detailed proposal will include assumptions, clarifications, pricing breakdown, reference documents, a project schedule, and value-based recommendations for award for each scope.

Meetings:

- One (1), 4-hour review workshop with COUNTY.

Deliverables:

- 60% Early Procurement GMP Package
 - » Executive Narrative
 - » Schedule
 - » Assumptions & Clarifications
 - » Detailed Price Estimate
 - » Document List
 - » Vendor Selection Matrix
 - » Vendor Quotes
 - » Bid Package(s)
- Meeting Summary Notes (Electronic, PDF format)

7.2 – GMP (GMP-2)

After completion of the 60% Design Documents Design-Builder prepare, review, and submit a Guaranteed Maximum Price (GMP) Proposal for the remaining project scope contained within the documents. This detailed proposal will include assumptions, clarifications, pricing breakdown, reference documents, a project schedule, and value-based recommendations for award for each scope.

Meetings:

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- One (1), 4-hour review workshop with COUNTY.

Deliverables:

- 60% GMP Package
 - » Executive Narrative
 - » Schedule
 - » Assumptions & Clarifications
 - » Detailed Price Estimate
 - » Document List
 - » Vendor Selection Matrix
 - » Vendor Quotes
 - » Bid Package(s)
- Meeting Summary Notes (Electronic, PDF format)

Task 8 – Unspecified Work

The following unspecified work are included for items that could not be clearly defined at the time of scope development. Work on these activities will not proceed without written approval from the COUNTY. Additional work requested by the COUNTY and performed through the use of the County's Design Allowance may require any adjustment in the fee and/or schedule.

8.1 – Structural Wet Well Condition Assessment

The COUNTY may direct the Design-Builder to complete a condition assessment of one or both of the wet wells. This would require that the Design-Builder implement solutions for wet well isolation as well as by-pass pumping. The Design-Builder will meet with the County to plan and coordinate bypass pumping.

Once bypass pumping is in place, the COUNTY would clean and disinfect the wet well prior to the Design-Builder personnel entering the wet well for the inspection.

The Design-Builder's structural engineer will perform a structural condition assessment of PS16 wet well(s) to confirm dimensions and general condition of the structure, performing a visual inspection of the structure and classifying condition of existing concrete and metal surfaces.

At the conclusion of the Structural Wet Well Condition Assessment, the Design-Builder will develop and deliver a supplemental Structural Wet Well Condition Assessment Technical Memorandum, including structural condition assessment and recommendations. Design-Builder will provide a Draft Technical Memorandum for the COUNTY to review and provide comments (21-day review period). The Design-Builder will receive and respond to comments and submit a final Technical memorandum incorporating the COUNTY's feedback.

The condition assessment does not include a review of yard piping, and no allowance for remote camera inspection is included.

Meetings:

- PS16 Bypass Pumping Coordination, Virtual on-site Meeting with COUNTY Operations
- PS16 Structural Wet Well Condition Assessment

EXHIBIT O - SCOPE OF SERVICESDeliverables:

- Draft PS16 Structural Wet Well Condition Assessment Technical Memorandum (Electronic, PDF format) (supplemental to Site Visit Condition Assessment Technical Memorandum)
- Responses to COUNTY review comments (Electronic)
- Final PS16 Structural Wet Well Condition Assessment Technical Memorandum (Electronic, PDF format)

8.2 – Other Unspecified Work

Other unspecified work shall be as directed by the County. The Design-Builder shall develop a scope and fee for review and acceptance by the County prior to commencement of the work.

Meetings:

- To be determined

Deliverables:

- To be determined

DELIVERABLES AND MEETINGS

A combined list of all project deliverables and meetings detailed above in the scope are listed by task below. COUNTY will be provided with 21 calendar days to review and comment on all deliverables.

Task 1: Project Administration**Task 1.1: Project Management – Deliverables**

- Design Decision Log
- Change log
- Monthly invoice, schedule, and status report – electronic delivery

Task 1.1: Project Management – Meetings

- N/A; See Task 1.2

Task 1.2: Project Kickoff and Project Progress Meetings – Deliverables

- Kick-off Meeting agenda (Electronic, PDF format)
- Preliminary Draft Schedule (Electronic, PDF format)
- Preliminary Risk Register (Electronic, MS Excel)
- Kickoff Meeting Summary Notes (Electronic, PDF format)
- Monthly Progress Meeting Agendas (Electronic, PDF format)
- Monthly Progress Meeting Summary Notes (Electronic, PDF format)

Task 1.2: Project Kickoff and Project Progress Meetings – Meetings

- Project Kick-Off Meeting
- Monthly Progress Meetings (Quantity: Eight (8))
- Up to 12 bi-weekly (or as-needed) internal project coordination meetings.
- Internal coordination conference calls; up to 24 regular internal coordination calls for Design-Builder.

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Task 1.3: Project Design Standards – Deliverables

- PS16 Project Design Standards (Electronic, PDF format)

Task 1.3: Project Design Standards – Meetings

- None

Task 2: Investigations & Evaluations

Task 2.1: Data Collection – Deliverables

- None

Task 2.1: Data Collection – Meetings

- None

Task 2.2: Condition Assessment – Deliverables

- PS16 Condition Assessment Field Notes (Electronic, PDF format, incorporated into PER as an appendix)

Task 2.2: Condition Assessment – Meetings

- PS16 Site Visit, including on-site Meeting with COUNTY Operations

Task 2.3: Survey and Subsurface Utility Investigation – Deliverables

- Survey and Subsurface Utility Boundary and Topographic Surveys (Electronic, CAD and PDF format)

Task 2.3: Survey and Subsurface Utility Investigation – Meetings

- None

Task 2.4: Geotechnical Investigation – Deliverables

- Geotechnical Report (Electronic, PDF format, incorporated into PER as an appendix)

Task 2.4: Geotechnical Investigation – Meetings

- None

Task 3: Preliminary Design

Task 3.1: Technical Development Workshops

Task 3.1.1: Resiliency Assessment – Deliverables

- Resiliency Assessment Meeting Agenda (Electronic, PDF format)
- Resiliency Assessment Meeting Summary Notes (Electronic, PDF format)

Task 3.1.1: Resiliency Assessment – Meetings

- Resiliency Assessment Workshop

Task 3.1.2: Pump Station Alternative Configurations – Deliverables

- PS16 Alternatives Configuration Meeting Agenda (Electronic, PDF format)
- PS16 Alternatives Configuration Meeting Summary Notes (Electronic, PDF format)

Task 3.1.2: Pump Station Alternative Configurations – Meetings

- PS16 Alternatives Configuration Workshop

EXHIBIT O - SCOPE OF SERVICES**Task 3.1.3: Electrical and Control Systems Improvement Workshop – Deliverables**

- Electrical and Control Systems Improvement Workshop Meeting Agenda (Electronic, PDF format)
- Preliminary One-line Diagram (Electronic, PDF format)
- Electrical and Control Systems Improvement Workshop Meeting Summary Notes (Electronic, PDF format)

Task 3.1.3: Electrical and Control Systems Improvement Workshop – Meetings

- One (1) site visits with COUNTY
- Electrical and Control Systems Improvement Workshop

Task 3.1.4: Pump Station Ancillary Systems and Aesthetics (Architectural) Workshop – Deliverables

- PS16 Ancillary Systems and Aesthetics (Architectural) Workshop Meeting Agenda (Electronic, PDF format)
- PS16 Ancillary Systems and Aesthetics (Architectural) Workshop Meeting Summary Notes (Electronic, PDF format)

Task 3.1.4: Pump Station Ancillary Systems and Aesthetics (Architectural) Workshop – Meetings

- PS16 Ancillary Systems and Aesthetics (Architectural) Workshop

Task 3.1.5: Early Procurement Assessment Workshop – Deliverables

- Early Procurement Assessment Workshop Meeting Agenda (Electronic, PDF format)
- Early Procurement Assessment Workshop Meeting Summary Notes (Electronic, PDF format)

Task 3.1.5: Early Procurement Assessment Workshop – Meetings

- Early Procurement Assessment Workshop

Task 3.1.6: Facilitated Risk Workshop – Deliverables

- Facilitated Risk Workshop Meeting Agenda (Electronic, PDF format)
- Facilitated Risk Workshop Meeting Summary Notes (Electronic, PDF format)
- Initial Risk Register and Scoring Criteria (Electronic, PDF format)

Task 3.1.6: Facilitated Risk Workshop – Meetings

- Facilitated Risk Workshop

Task 3.2: Hydraulic Design Concept Validation – Deliverables

- PS16 Capacity Workshop Agenda (Electronic, PDF format)
- PS16 Capacity Workshop Meeting Summary Notes (Electronic, PDF format)

Task 3.2: Hydraulic Design Concept Validation – Meetings

- PS16 Capacity Workshop

Task 3.3: Preliminary Design**Task 3.3.1: Preliminary Engineering Report & 30% Drawings – Deliverables**

- A. Preliminary Engineering Report and 30% Design Drawings (Electronic, PDF format)
- B. Comment Log with responses and agreed modifications.
- C. 30% Review Meeting Agenda (Electronic, PDF format)
- D. 30% Review Meeting Summary Notes (Electronic, PDF format)

Task 3.3.1: Preliminary Engineering Report & 30% Drawings – Meetings

- E. 30% Review Workshop

EXHIBIT O - SCOPE OF SERVICES**Task 3.4: 30% Price Model Package – Deliverables**

- 30% Price Model Package (Electronic, PDF format)
- Comment Log with responses and agreed modifications.
- 30% Price Model Package Meeting Agenda (Electronic, PDF format)
- 30% Price Model Package Meeting Summary Notes (Electronic, PDF format)

Task 3.4: 30% Price Model Package – Meetings

- 30% Price Model Review Workshop

Task 4: Public Outreach**Task 4.1: Preliminary Public Engagement and Community Outreach – Deliverables**

- Draft and final Completed County-required public participation planning worksheets and County forms
- Draft and Final PS16 Public Engagement Plan (Electronic, PDF format)
- Stakeholder list with contact information (Electronic)
- Twelve (12) Stakeholder Meetings Summary Notes (Electronic, PDF format)
- Twelve (12) Project Coordination Meetings Summary Notes (Electronic, PDF format)

Task 4.1: Preliminary Public Engagement and Community Outreach – Meetings

- Twelve (12) Stakeholder Meetings
- Twelve (12) Project Coordination Meeting

Task 4.2: Public Information Materials – Deliverables

- Draft and final key messages and FAQs
- Draft and final key messages and FAQs design phase submittal updates
- Draft and final project fact sheet
- Content for COUNTY's project web page
- Draft and final social media (6) posts and news releases (2)

Task 4.2: Public Information Materials – Meetings

- None; Included in Task 4.1

Task 4.3: Public Engagement – Deliverables

- Draft and final 30% Public Engagement Meeting, with Summary Notes (Electronic, PDF format)
- Draft and Final 75% Public Engagement Meeting, with Summary Notes (Electronic, PDF format)
- Draft and final Public Engagement Meeting Promotional Materials

Task 4.3: Public Engagement – Meetings

- 30% Virtual Public Engagement Meeting
- 75% Virtual Public Engagement Meeting

Task 5: Permitting**Task 5.1: Pre-Application Permitting – Deliverables**

- Permit Tracking Matrix
- Draft and final FDEP Pre-Application Meeting Summary Notes (Electronic, PDF format)
- SWFWMD Pre-Application Meeting Summary Notes (Electronic, PDF format)

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- Draft and final Pinellas County Health Department Pre-Application Meeting Summary Notes (Electronic, PDF format)
- Draft and final City of Seminole (Seminole Building Permits) Pre-Application Meeting Summary Notes (Electronic, PDF format)

Task 5.1: Pre-Application Permitting – Meetings

- FDEP Pre-Application Meeting (Virtual)
- SWFWMD Pre-Application Meeting (Virtual)
- Pinellas County Health Department Pre-Application Meeting (Virtual)
- City of Seminole (Seminole Building Permits) Pre-Application Meeting (Virtual)
- Pinellas County BDRS – I'm not sure this is required if the City of Seminole will handle building permitting. A habitat permit may be required.

Task 5.2: Pre-Application Permitting – Deliverables

- Updated Permit Tracking Matrix
- Completed permit application
- Electronically Signed and Sealed Drawings for initial submittal and revisions if required
- One (1) RAI response (Electronic, PDF files) and any revisions to the drawings if required

Task 5.2: Pre-Application Permitting – Meetings

- None

Task 6: Design Development**Task 6.1: Early Procurement Design Development – Deliverables**

- Early Procurement Design Drawings and Specifications (Electronic, PDF format)
- Early Procurement GMP
- Review Comment Log (Excel)
- Early Procurement Review Meeting Agenda (Electronic, PDF format)
- Early Procurement Review Meeting Summary Notes (Electronic, PDF format)
- Submittals

Task 6.1: Early Procurement Design Development – Meetings

- Early Procurement Review Meeting

Task 6.2: 60% Design Scope of Work – Deliverables

- 60% Design Drawings (Electronic, PDF format)
- 60% Specifications (Electronic, Word format)
- Draft Start-up and Commissioning Plan (Electronic, Word format)
- Design Decisions Log
- Comment Log with responses and agreed modifications.
- Meeting Summary Notes (Electronic, PDF format)

Task 6.2: 60% Design Scope of Work – Meetings

- One (1) review internal workshop for Design-Builder.
- One (1), 3-hour review workshop with COUNTY.

Task 6.3: 75% Design Scope of Work – Deliverables

- 75% Design Drawings (Electronic, PDF format)
- 75% Design Specifications (Electronic, Word format)

Task 6.2: 60% Design Scope of Work – Meetings

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- None

Task 7: Guaranteed Maximum Price (GMP) Submittal

Task 7.1: Early Procurement GMP (GMP-1) – Deliverables

- 60% Early Procurement GMP Package
 - A. Executive Narrative
 - B. Schedule
 - C. Assumptions & Clarifications
 - D. Detailed Price Estimate
 - E. Document List
 - F. Vendor Selection Matrix
 - G. Vendor Quotes
 - H. Bid Package(s)
- Meeting Summary Notes (Electronic, PDF format)

Task 7.1: Early Procurement GMP (GMP-1) – Meetings

- One (1), 4-hour review workshop with COUNTY.

Task 7.2: GMP (GMP-2) – Deliverables

- 60% GMP Package
 - A. Executive Narrative
 - B. Schedule
 - C. Assumptions & Clarifications
 - D. Detailed Price Estimate
 - E. Document List
 - F. Vendor Selection Matrix
 - G. Vendor Quotes
 - H. Bid Package(s)
- Meeting Summary Notes (Electronic, PDF format)

Task 7.2: GMP (GMP-2) – Meetings

- One (1), 4-hour review workshop with COUNTY.

Task 8: Unspecified Work

Task 8.1: Structural Wet Well Condition Assessment – Deliverables

- Draft PS16 Structural Wet Well Condition Assessment Technical Memorandum (Electronic, PDF format) (supplemental to Site Visit Condition Assessment Technical Memorandum)
- Responses to COUNTY review comments (Electronic)
- Final PS16 Structural Wet Well Condition Assessment Technical Memorandum (Electronic, PDF format)

Task 8.1: Structural Wet Well Condition Assessment – Meetings

- PS16 Bypass Pumping Coordination, Virtual on-site Meeting with COUNTY Operations
- PS16 Structural Wet Well Condition Assessment

EXHIBIT O - SCOPE OF SERVICES**SCHEDULE****Design Milestones**

	Time from NTP
Workshops	4.5 months
30% Design Package Submission	7 months
60% Design Package Submission	12 months
75% Design Package Submission	15 months

Pricing Milestones

	Time from NTP
30% Price Model Submission	30% Design + 4 Weeks
Early Procurement GMP-1	60% Early Proc. Design Package + 4 Weeks
GMP-2	60% Design Package + 6 Weeks

EXHIBIT P - SCOPE OF PHASE 2 SERVICES**EXHIBIT P - SCOPE OF PHASE 2 SERVICES**

After Owner's review and approval of the 60% Construction Documents and upon the Parties' ability to reach agreement as to the Proposal evidenced by the Parties' execution of the Notice to Proceed, and Owner's written authorization to proceed, Design Builder shall provide the following:

1. COMPLETION OF CONSTRUCTION DOCUMENTS

- 1.1 Design-Builder shall prepare Construction Documents up to a 100% completion level based on the final 50% Construction Documents approved by the Owner in Section 5 hereof. Construction Documents shall include calculations and shall set forth each discipline's requirements in detail and into a cohesive and coordinated whole based upon the approved 50% Construction Documents, the Final Program and consultation with the Owner. The parties shall meet to discuss the 100% complete Construction Documents and agree upon what revisions, if any, should be made. Design Builder shall perform such agreed-upon revisions. Design Builder shall meet with Owner during completion of the Construction Documents as often as required until 100% complete Construction Documents have been approved by the Owner. The 100% complete Construction Documents will include 100% complete specifications in CSI format.
- 1.2 At the completion of the 100% Construction Documents, Design Builder will provide a certification of the structural standards to which the facility has been designed.
- 1.3 Design Builder shall furnish documents in type, format, version and quantities indicated in the Final Program. Design Builder shall provide Owner with reproducible copies of all design documents, including electronic copies if so required by the Owner.

2. BUILDING PERMIT PHASE

- 2.1 Design Builder is responsible for applying for and obtaining all necessary and required building permits and approvals for the Project.

3. CONSTRUCTION

Design Builder shall provide the following services in addition to all other Phase 2 Services required by the terms of this Contract:

- 3.1
 - 1) Prepare a list of required submittals for shop drawings, product data, samples, warranties, and other submittals required by Contract Documents, in tabular form which will indicate specification section number and section name (CSI Format).
- 3.2 Process, review, respond and distribute in accordance with the terms of the Contract Documents shop drawings, product data, samples, substitutions and other submittals required by the Construction Documents within ten (10) business days.
- 3.3 Maintain a master file of all submittals, including submittal register. Owner's copy shall be in electronic/CD format and submitted at time of Substantial Completion.
- 3.4 Prepare, reproduce and distribute supplemental drawings, specifications and interpretations in response to requests for clarification by Owner or Subcontractors as required by construction exigencies. Design Builder's response to any such request must be received by Owner and the effected Subcontractor within ten (10) business days. Design Builder will review and respond to all submittals from Subcontractors, including but not limited to shop drawings, within a reasonable period of time so as not to delay the progress of the Work, but in no event, more than ten (10) business days, unless Owner expressly agrees otherwise in writing. Review of Design Builder's submittals by Owner is not conducted for the purpose of determining the accuracy and completeness of such submittals, such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of Design Builder as required by the Contract Documents. Owner's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences or procedures. Owner's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

EXHIBIT P - SCOPE OF PHASE 2 SERVICES

- 3.5 Owner shall have authority to reject Work which does not conform to the Construction Documents. Whenever, in its reasonable opinion, Owner considers it necessary or advisable to insure the proper implementation or the intent of the Construction Documents, Owner will have authority to require special inspection or testing of any Work in accordance with the provisions of the Construction Documents whether or not such Work be then fabricated, installed or completed.
- 3.6 Design Builder shall submit to the applicable building permit office the number of sets of drawings and/or documents reflecting the approved changes in the Work as may be required by that office. Code compliance issues must be approved by the applicable building permit office prior to inspection of the subject Work.
- 3.7 Review the Work to confirm that the construction complies with the current applicable Florida Building Code, and maintain a copy of the current applicable Florida Building Code at its Project Site office for review by Design Builder. Report any discrepancies observed or noted to Owner.
- 3.8 Assist Owner in the training of the facility operation and maintenance personnel with respect to the proper operations, schedules, procedures and inventory controls for the various Project equipment and systems. Such assistance shall include assisting Owner in arranging for and coordinating the instruction and training on operations and maintenance of the Project's equipment and systems in conjunction with the various manufacturer representatives. Further, Design Builder is to attend all such training sessions, unless otherwise consented to by Owner in writing.
- 3.9 Review for compliance with Design Builder's obligation under the Contract Documents, all operation and maintenance manual submittals, prior to submittal to Owner.
- 3.10 Schedule and visit with Owner at the Project at six (6) and eleven (11) months after issuance of the Certificate of Substantial Completion. During each Project visit, Design Builder shall observe, troubleshoot and advise in the operation of building systems. This shall not relieve Design Builder of its obligation to make other visits to the Project based on need should specific issues arise.
- 3.11 Design Builder will revise the final approved Construction Documents to incorporate all "As-Built" information contained in the Design Builder's marked-up "As-Built" drawings and specifications, as well as to reflect all addenda, contract changes and field changes (sometimes referred to herein as the "Record Documents"). Design Builder shall provide Owner with one (1) electronic copy on compact disk (CD) of the Record Documents, two sets of the conformed, signed and sealed drawings and prints, and two sets of the conformed Project Manual/Specifications signed and sealed.
- 1) The electronic copy on CD of the Record Documents shall be provided in AutoCAD.dwg format, "purged and bound", and compatible with Owner's system.
 - 2) Throughout Phase 2, Design Builder shall review its marked-up "As-Built" drawings and Project Manual/Specifications, on a daily basis, to reflect all "As-Built" conditions at the Site, maintaining such "As-Built" drawings and specifications is a condition precedent to Design Builder's entitlement to payment hereunder.
- 3.12 Consult with, and recommend solutions to, Owner during the duration of warranties in connection with inadequate performance of equipment, materials or systems under warranty.
- 3.13 Submit a facility and equipment review schedule to Owner at the time of Substantial Completion. Perform reviews of facilities and equipment prior to expiration of warranty period(s) to ascertain adequacy of performance, materials, systems and equipment. Submit a written report to Owner.
- 3.14 Document noted defects or deficiencies and assist Owner in confirming Design Builder's correction of such noted defects.
- 3.15 Design Builder shall arrange for all job-site facilities as required by Owner and otherwise necessary to enable Design Builder to perform its respective duties and to accommodate any representatives of Owner which Owner may choose to have present on the job, the description of such facilities to be finalized prior to the execution of Notice to Proceed.
- 1) Tangible personal property, otherwise referred to as job-site facilities, include, but are not limited to such things as trailers, toilets, typewriters, computers and any other equipment necessary to carry on the Work. The method of acquiring such job-site facilities, which are planned to become the property of Owner at the conclusion of the Work, shall be evaluated based on their cost over the life of the Project. Owning versus leasing shall be considered by Design Builder, obtaining at least three (3) proposals for leasing and at least three (3) proposals for purchasing and then analyzing which is least

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expensive over the usable life of the item. Design Builder shall present its evaluation with recommendation to Owner for approval.

- 2) When Design Builder wishes to supply job-site facilities from its own equipment pool, it shall first evaluate buy versus lease as discussed in subparagraph 3.15.1 above. If leasing is found to be the least expensive approach, then it may lease such job-site facilities from its own equipment pool at a price not greater than the lowest of the three (3) lease proposals obtained.
- 3) For all such job-site facilities purchased, which may become the property of Owner at the conclusion of the Work, Design Builder shall maintain ownership responsibilities of such facilities until final acceptance of the Work. Reimbursement for cost of such equipment will be made at the conclusion of the Work at the documented purchase price. At that time, Design Builder shall provide Owner with a complete inventory for each unit of equipment. The inventory shall describe the equipment and identify the purchase price, serial number, model number and condition. Where said equipment has a title, said title shall be properly transferred to Owner or to its designee.
- 4) Design Builder is responsible for proper care and maintenance of all equipment while in its control. At the time of transfer to Owner, Owner may refuse acceptance of the equipment if Owner determines, in its sole discretion, that the equipment has not been properly cared for by Design Builder or that such acquisition would not otherwise be in the best interest of Owner. In such event, Design Builder will be reimbursed for such item in accordance with Section 3C to the Agreement.

3.16 Design Builder's administration of the Work shall include the following:

- 1) Maintain a log of daily activities, including manpower records, weather, delays, major decisions, etc.
- 2) Maintain a roster of companies on the Project with names and telephone numbers of key personnel.
- 3) Establish and enforce job rules governing parking, clean-up, use of facilities and worker discipline.
- 4) Provide labor relations management for a harmonious, productive Project.

3.17 Design Builder also shall provide job site administration functions during construction to assure proper documentation, including but not limited to the following:

- 1) Job Meetings: Design Builder shall attend meetings such as pre-construction conferences, progress meetings, job conferences, pre-closeout meetings, and other Project-related meetings, as may be directed by Owner. Design Builder's Design Professionals are also required to attend any such meetings as directed by Owner. Design Builder shall provide meeting minutes for these meetings. Conduct a preconstruction conference with each subcontractor after award of the subcontract and prior to the start of its portion of the Work. Hold weekly progress and coordination meetings, or more frequently if required by Work progress, to provide for the timely completion of the Work. In addition, Design Builder shall arrange and conduct regular monthly Project status meetings with Owner.
- 2) Design Builder shall use the job site meetings as a tool for the preplanning of Work and enforcing schedules, and for establishing procedures, responsibilities, and identification of authority for all parties to clearly understand. During these meetings, Design Builder shall identify the party or parties responsible for following up on any problems, delay items or questions, and Design Builder shall note the action to be taken by such party or parties. Design Builder shall revisit each pending item at each subsequent meeting until resolution is achieved. Design Builder shall attempt to obtain from all present any problems or delaying event known to them for appropriate attention and resolution.
- 3) Shop Drawing Submittals/Approvals: Provide staff to review and approve shop drawings and other submittals and to implement procedures for transmittal to Owner of such submittals for action, and closely monitor their review process. Owner reserves the right to review the shop drawings and other submittals and require Design Professional's approval on such shop drawings and other submittals.
- 4) Material and Equipment Expediting: Provide staff to closely monitor material and equipment deliveries, check and follow-up on supplier commitments for all subcontractors and maintain a material and equipment expediting log.
- 5) Payments to Subcontractors: Develop and implement a procedure for the review, processing and payment of applications by subcontractors for progress and final payments.
- 6) Document Interpretation: Promptly respond to all questions for interpretation of the Contract Documents made by subcontractors and copy Owner on all such responses.

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- 7) Reports and Project Site Documents: Record the progress of the Work. Submit written progress reports to Owner, including information on subcontractors' Work, and the percentage of completion. Keep a daily log available to Owner and any permitting authority inspectors.
 - 8) Subcontractors Progress: Prepare periodic punch lists for subcontractors' work including unsatisfactory or incomplete items and schedules for their completion.
 - 9) Substantial Completion: Pursuant to the provisions of Paragraph 23.1 of the General Terms and Conditions, notify Owner in writing when the Work or designated portions thereof are ready for the Substantial Completion inspections. From the punch lists of incomplete or unsatisfactory items prepared by Design Builder and reviewed and supplemented by Owner, prepare a schedule for their completion indicating completion dates for Owner's review and approval. At Substantial Completion, Design Builder will provide a certification from itself and its Design Professional that the building was constructed in accordance with the approved Construction Documents.
 - 10) Final Completion: Monitor the subcontractors' performance on the completion of the Work and provide notice to Owner when the Work is ready for final inspection. Secure, review and certify compliance with the Contract Documents, then transmit to Owner all required guarantees, warranties, affidavits, releases, bonds, waivers, manuals, record drawings, and maintenance books.
 - 11) Start-Up: With Owner's personnel, direct the check-out of utilities, operations, systems and equipment for readiness and assist in their initial start-up and testing by the subcontractors.
 - 12) Record Drawings: Pursuant to the terms of Paragraph 8.2 of the General Terms and Conditions, Design Builder shall monitor the progress of its own forces and its subcontractors on marked up field prints which shall be developed by Design Builder into the final record drawings.
- 3.18 Design Builder shall maintain at the Project site, originals or copies of, on a current basis, all Project files and records, including, but not limited to, the following administrative records:
- 1) Subcontracts and Purchase Orders
 - 2) Shop Drawing Submittal/Approval Logs
 - 3) Equipment Purchase/Delivery Logs
 - 4) Contract Drawings and Specifications with Addenda
 - 5) Warranties and Guarantees
 - 6) Cost Accounting Records
 - 7) Labor Costs
 - 8) Material Costs
 - 9) Equipment Costs
 - 10) Cost Proposal Request
 - 11) Payment Request Records
 - 12) Meeting Minutes
 - 13) Cost-Estimates
 - 14) Bulletin Quotations
 - 15) Lab Test Reports
 - 16) Insurance Certificates and Bonds
 - 17) Contract Changes
 - 18) Permits
 - 19) Material Purchase Delivery Logs
 - 20) Technical Standards
 - 21) Design Handbooks

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- 22) "As-Built" Marked Prints
- 23) Operating & Maintenance Instruction
- 24) Daily Progress Reports
- 25) Monthly Progress Reports
- 26) Correspondence Files
- 27) Transmittal Records
- 28) Inspection Reports
- 29) Bid/Award Information
- 30) Bid Analysis and Negotiations
- 31) Punch Lists
- 32) Schedule and Updates
- 33) Suspense (Tickler) Files of Outstanding Requirements
- 34) Policy and Procedure Manual
- 35) Subcontractor licenses
- 36) Final Program

The Project files and records shall be available at all times to Owner or its designees for reference, review or copying.

3.19 Design Builder shall provide the following services with respect to the Work, to facilitate the smooth, successful and timely occupancy of the Project by Owner:

- 1) Design Builder shall provide consultation and Project management to facilitate Owner's occupancy of the Project and provide transitional services to place the Work "on line" in such conditions as will satisfy Owner's operations requirements. The services include Design Builder's coordination of the delivery of Owner supplied furniture, fixtures and equipment for the Project.
- 2) Design Builder shall catalog operational and maintenance requirements of equipment to be operated by maintenance personnel and convey these to Owner in such a manner as to promote their usability. Design Builder shall provide Owner's operations and maintenance personnel with operations and maintenance training with respect to the equipment and systems being provided as part of the Work. This training may be recorded by Owner for subsequent presentation to Owner's operations and maintenance personnel.
- 3) Design Builder shall secure required guarantees and warranties, and shall assemble and deliver same to Owner in the manner required by Owner

PINELLAS COUNTY UTILITIES
PUMP STATION 16 IMPROVEMENTS - PROFESSIONAL DESIGN-BUILD SERVICES
Contract No. 25-0209-RFP-08
PCL Construction
PRECONSTRUCTION PHASE

1,14

7 Subtotal - Task 6 - Design Development

Task 7 - Guaranteed Maximum Price (GMP) Subtotal
7.1 - Early Procurement GMP (GMP-1)
7.2 - GMP (GMP-2)

8 Subtotal - Task 7 - Guaranteed Maximum Price (GMP) Subtotal

Task 8 - Unspecified Work
8.1 - Structural Wet Well Condition Assessment
8.2 - Hydraulic Design Validation (CFD Modeling)
8.3 - Other unspecified Work as directed by County

Subtotal - Task 8 - Unspecified Work

Conceptual Design Scope of Services - All Tasks TOTAL

Allowance for Additional Services

Subtotal - Allowances

Conceptual Design Scope of Services - All Tasks & Allowances TOTAL

B. Expenses
Bonus / Incentive
Vehicle / Vehicle Insurance
Utilities / Fuel / Mileage
Cell Phones
Computers / Software
Office / Documents
Mark-up on Under-Ten and Subcontractors

Section B. Total

Section A. Total

Total Fee

0	0	28	19	5	37	5	65	85	0	18	19	46	878,178.00	325	52,088.00	930,266.00
4	48	24	6	64	64	10	96	4	20	4	4	20	6,665.00	280	49,243.00	55,908.00
8	48	48	48	96	96	18	96	18	20	4	4	20	4,850.00	375	45,433.00	50,283.00
12	114	72	72	144	144	28	192	20	40	8	8	40	11,610.00	605	117,744.00	129,354.00
0	0	0	0	0	0	0	0	0	0	0	0	0	33,595.00	0	293,000.00	263,405.00
48	421	265	265	25	586	43	488	213	348	40	65	348	1,612,834.50	1425	685,397.00	2,298,231.50
0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	-	-
48	421	265	265	25	586	43	488	213	348	40	65	348	1,612,834.50	1425	685,397.00	2,298,231.50

Cost	Subtotal	Workers Comp/Vehicle Ins
Bonus / Incentive		
Vehicle / Vehicle Insurance		
Utilities / Fuel / Mileage		
Cell Phones		
Computers / Software		
Office / Documents		
Mark-up on Under-Ten and Subcontractors		
Section B. Total		
Section A. Total		
Total Fee		

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[illegible]

Subtotal - Task 7 - Guaranteed Maximum Price (GMP) Subtotal	
8	Task 8 - Unspecified Work 8.1 - Structural Wall & Mill Condition Assessment 8.2 - Hydraulic Design Validation (C/D Modeling) #(NFI)
Subtotal - Task 8 - Unspecified Work	
Conceptual Design Scope of Services - All Tasks TOTAL	
0	
Allowance for Additional Services:	
0	Allowance
0	
0	
D. Exclusions Bonds and Insurance Permits and Licenses Utilities, Field, and Instrumentation Cell Phones Computers / Software Mark-up Subcontractors	
Section B. Total	
Section A. Total	
Total Fee	

PRECONSTRUCTION PHASE

[illegible]

PRECONSTRUCTION PHASE

[illegible]

Task ID	Task Description	Project Manager	Engineering Manager	Senior Professional Engineer	Project Engineer	Staff Engineer	Senior Scientist	Staff Scientist	GIS CAD Technician	Student Intern	Subtotal	Labor Hours	Total Price
1	Task 1 - Project Administration 1.1 - Project Management 1.2 - Project Kickoff and Project Progress Meetings 1.3 - Project Kickoff Meeting 1.2.2 - Internal Project Progress Meetings 1.2.3 - Internal Project Coordination Meetings 1.3 - Project Design Standards	\$ 180.00											
	Subtotal - Task 1 - Project Setup and Administration	0	0	0	0	0	0	0	0	0	\$ -	0	\$ -
2	Task 2 - Investigations & Evaluations 2.1 - Data Collection 2.2 - Condition Assessment 2.3 - Geotechnical Investigation 2.4 - Geotechnical Investigation												
	Subtotal - Task 2 - Investigations & Evaluations	0	0	0	0	0	0	0	0	0	\$ -	0	\$ -
3	Task 3 - Preliminary Design 3.1 - Technical Development Workshops 3.1.1 - Resiliency Assessment 3.1.2 - Pump Station Alternative Configurations 3.1.3 - Electrical and Control Systems Improvement Workshop 3.1.4 - Pump Station Auxiliary Systems and Aesthetics (Architectural) Workshop 3.1.5 - Environmental Impact Statement Workshop 3.1.6 - Facilities Risk Workshop 3.2 - Hydraulic Design Concept Validation 3.3 - Preliminary Design 3.3.1 - Preliminary Engineering Report & 30% Drawings 3.4.1 - Constructability, Value Engineering, and Alternate Assessment 3.4.2 - Scheduling 3.4.3 - Price Modeling 3.4.4 - Maintenance of Plant Operations (MOP) Planning 3.4.5 - 30% Price Model Package												
	Subtotal - Task 3 - Preliminary Design	0	0	0	0	0	0	0	0	0	\$ -	0	\$ -
4	Task 4 - Public Outreach 4.1 - Preliminary Public Engagement and Community Outreach 4.2 - Public Information Materials 4.3 - Public Engagement												
	Subtotal - Task 4 - Public Outreach	0	0	0	0	0	0	0	0	0	\$ -	0	\$ -
5	Task 5 - Permitting 5.1 - Pre-Application Permitting 5.2 - Design Phase Permitting	38 6		38 20		64 52					\$ 17,550.00 \$ 9,690.00	140 78	\$ 26,510.00
	Subtotal - Task 5 - Permitting	44	0	58	0	116	0	0	0	0	\$ -	218	\$ -
6	Task 6 - Design Development 6.1 - Early Procurement Design Development 6.2 - 60% Design Scope of Work 6.2.1 - Civil Scope 6.2.2 - Landscaping Scope 6.2.3 - Structural Scope 6.2.4 - Mechanical Scope 6.2.5 - Process Mechanical Scope 6.2.6 - HVAC Scope 6.2.7 - Plumbing Scope 6.2.8 - Electrical Scope 6.2.9 - Instrumentation and Controls Scope 6.2.10 - Draft Start-up and Commissioning Plan Scope												
	Subtotal - Task 6 - Design Development										\$ -	0	\$ -

PRECONSTRUCTION PHASE

Allowance for Additional Services:

EXHIBIT R - TRUTH-IN-NEGOTIATION CERTIFICATE

EXHIBIT R - TRUTH-IN-NEGOTIATION CERTIFICATE

In compliance with the Consultants' Competitive Negotiation Act, Section 287.055, Florida Statutes,
_____ hereby certifies that wage rates and other factual unit costs supporting the
compensation for the design and construction management services of DESIGN BUILDER to be provided under this
Agreement, concerning _____ (the Project) are accurate, complete and current as of the time of contracting.

DESIGN BUILDER:

By: _____

Print Name: _____

Title: _____

Date: _____

EXHIBIT S - DESIGN BUILDER'S KEY PERSONNEL

EXHIBIT S - DESIGN BUILDER'S KEY PERSONNEL

Design/Build Contractor: _____

Project Executive: _____

Design Partner: _____

Engineering Manager: _____

Project Manager: _____

Project Superintendent: _____

EXHIBIT T - STORED MATERIALS RECORD

EXHIBIT T - STORED MATERIALS RECORD

Stored Materials Record

Formula: $A + B - C - D = E$

[illegible]

[illegible]