EMERGENCY LIFT STATION 5507 REPLACEMENT

Design-Build Criteria Package

Prepared By:



Luis Molina, PG, PE | Engineer Lee County Utilities



1500 Monroe Street, Third Floor, Fort Myers, FL 33901 Nov 2022

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1. Project Objective

Lee County Utilities (LCU) has selected the design-build delivery method for this project. The purpose of the proposed project is to provide design, permitting, and construction to replace a section of the Pine Island WRF Collection System in Matlacha along Pine Island Rd. This section of sewer collection may require a full replacement of Lift Station 5507 and all associated gravity mains, manholes, service lines and force mains within the project limits.

2. Location and Background

Lee County Utility (LCU) owns and operates Lift Station 5507 and associated collection services and mains located at 4204/4206 Pine Island Rd NW, Matlacha, FL 33993. See **Appendix A** – Project Location and Limits to better understand the upstream and downstream limits for this section of Pine Island WRF collection system. This lift station was severely damaged during Hurricane lan along with most of the surrounding area. Inspection and system evaluation is ongoing. It is assumed at this time that the entire section as described in **Appendix A** is in need of a full replacement.

3. Project Site

Approximately 1300ft along Pine Island Rd in Matlacha within the project limits specified in **Appendix A**. The lift station 5507 is located at 4204/4206 Pine Island Rd NW, Matlacha, FL 33993.

3.1 Strap Number

24-44-22-00-00036.0000

3.2 Site Address

4204/4206 Pine Island Rd NW, Matlacha, FL 33993

3.3 Lift Station Location Description

PARL IN SEC 24 AS DESC IN OR 1191/2118

3.4 Survey

The Record Drawings have been provided in **Appendix B**. The Record Drawings shows location of Lift Station 5507 prior Hurricane Ian, in reference to the Pine

Island Road Right-Of-Way (ROW). Consultant is to verify location of ROW. Legal sketches and description for OR 1191/2118 have been provided in **Appendix C.**

3.5 Provisions for Utilities

The Record Drawings provided in **Appendix B** show the existing utilities to be replaced prior to Hurricane lan.

4. Project Components Analysis

The existing system shall be evaluated by the Design-Builder (DB) for a like-for-like system replacement, along with hardening of Lift Station 5507 in order to prevent future flood damage.

The DB is to prepare design plans and technical specifications for the replacement of equipment and materials and/or modifications to existing equipment and materials to allow the proposed system to achieve the intended system's functionality along with preventing future damage from flooding. In the components analysis, the evaluation should maximize functionality, operability while bringing proposed equipment up to current Code, if applicable. It is LCU's preference and where applicable, to match the manufacturer of existing equipment and materials for compatibility and cohesiveness with the rest of the collection system. Constructability and maintenance of operations should be taken into consideration as part of the evaluation and recommendation process.

Approval of the GMP is necessary to start the second phase of the Design-Build. If at any point an equitable GMP cannot be negotiated, the contract shall be cancelled. All design, design reports, and associated documents shall become property of LCU, who shall retain all rights to utilize them to re-solicit for the remaining design and construction services.

Procurement and construction of components shall be executed as soon as design permits. Following construction, components shall be completed through testing, startup, and full functionality and operational performance testing as soon as possible.

Other project components analysis shall include but not be limited to the following:

4.1 Lift Station Hardening/Improvements

- The DB is to prepare design plans and technical specifications for the
 replacement of equipment and materials and/or modifications to existing
 equipment and materials to allow the proposed system to achieve the
 intended system's functionality, per design criteria and specification in the
 Lee County Utilities Design Manual, which can be found in the following
 link: https://www.leegov.com/utilities/design-manual
- Evaluate and provide recommendations concerning the Electrical System

- Evaluations shall include all new electrical panels due to salt water damage
- All new electrical equipment will need to be flood hardened based on the latest information and flood surface elevations from FEMA for this area.
- Evaluations shall include backup generator and controls consideration
- As part of the evaluation, verify the backup power requirements to fully operate the lift station
- All new equipment and structures will need to include lightning protection
- After approval of the GMP, construct approved recommendations

4.2 Instrumentation, Controls, and SCADA Systems Upgrades:

- As part of the evaluation, verify the capabilities of the existing control panels, related to equipment that has been recommended for any modification and recommend any new instrumentation required
- After approval of the GMP, construct approved recommendations.

4.3 Overall Site Layout

- As a part of the evaluation, consider FDOT plans for a road construction.
 Schedule, design and plan accordingly.
- As part of the evaluation, include hardening of the lift station

5. Design Services

Professional services will be provided by the DB, including but not limited to the following: prepare design plans and technical specifications with document and constructability reviews at 30%, 60% and 100% completion; evaluate design alternatives; prepare permit applications and obtain permits required by all regulatory agencies, including but not limited to FDEP, SFWMD, FDOT and Lee County. Provide geotechnical and survey services as necessary; conduct value engineering review meetings that focus on minimizing life cycle cost; coordinate various design and review meetings; and provide design schedule details.

Engineering inspection during construction shall be performed by all disciplines at least once a week. Red lines shall be incorporated for all design reviews. Record drawings and an assets management list shall be required for project completion.

6.0 Construction Services

Construction services will be provided by the DB, including but not limited to the following: self-perform work; prepare sub-contractor/vendor bid packages and

secure sub-contracts (who are not already part of the DB's team); obtain all construction permits required by Lee County and other agencies as required; manage the overall project construction; manage the on-site dewatering efforts; manage progress scheduling; manage procurement, delivery, and storage of all materials, including direct purchased materials by LCU; provide engineering support service during construction; provide engineering inspection; manage project costs within the GMP; coordinate regular progress meetings; coordinate all work with Operations and accomplish work without disruption to existing operations; red line and maintain a set of master red line drawings.

Construction personnel from each trade shall be present during the 30%, 60%, and 100% constructability reviews. Construction activities must be planned to minimize disruption of service to customers. LCU staff must approve any work requiring shutdown or any disruption to any plant operations. Continuous plant shutdowns of more than 3 hours shall require advanced notification and approval of activity at minimum 7 calendar days. A plant shutdown, which meets or exceeds a continuous 24 hours, shall require advance notification and approval of activity at minimum 14 calendar days.

The DB shall be solely responsible for ensuring the safety of its crews, employees, and subcontractors, when performing the work required under the contract. The DB shall operate under their own safety program that complies with all Occupational Safety and Health Administration (OSHA) guidelines and requirements throughout the project duration. The DB team must ensure safety of LCU staff at all times.

7. Lift Station Performance Guarantee

Compliance of the project to the performance guarantee shall be done through performance testing. The exact content of the performance testing specification shall be created in conjunction with the Design-Builder and specific to the final selected and approved design components. The purpose of the performance testing is to provide a guarantee that the following criteria are met:

- 1. Project design conditions were constructed and functioning as intended, meeting Lee County Utilities Design Manual.
- 2. Primary and backup (if applicable) electrical systems are capable of running the lift station under loads associated with the design conditions.
- 3. All programming and SCADA system is properly functioning and capable of running and monitoring equipment

Successful completion of performance testing will be a criteria in meeting the requirements for substantial completion, final completion and the one year close of warranty period.

8. Project Schedule

Substantial completion is planned for June 2023, which will consist of construction completion. Final completion for the entire project, planned for July 2023.

Warranty period will end twelve (12) months after Final completion to include all components.

9. Project Cost Estimate

The current project cost is estimated at approximately \$1.6 million. Lee County Utilities, through the Capital Improvement Program, will fund the project.

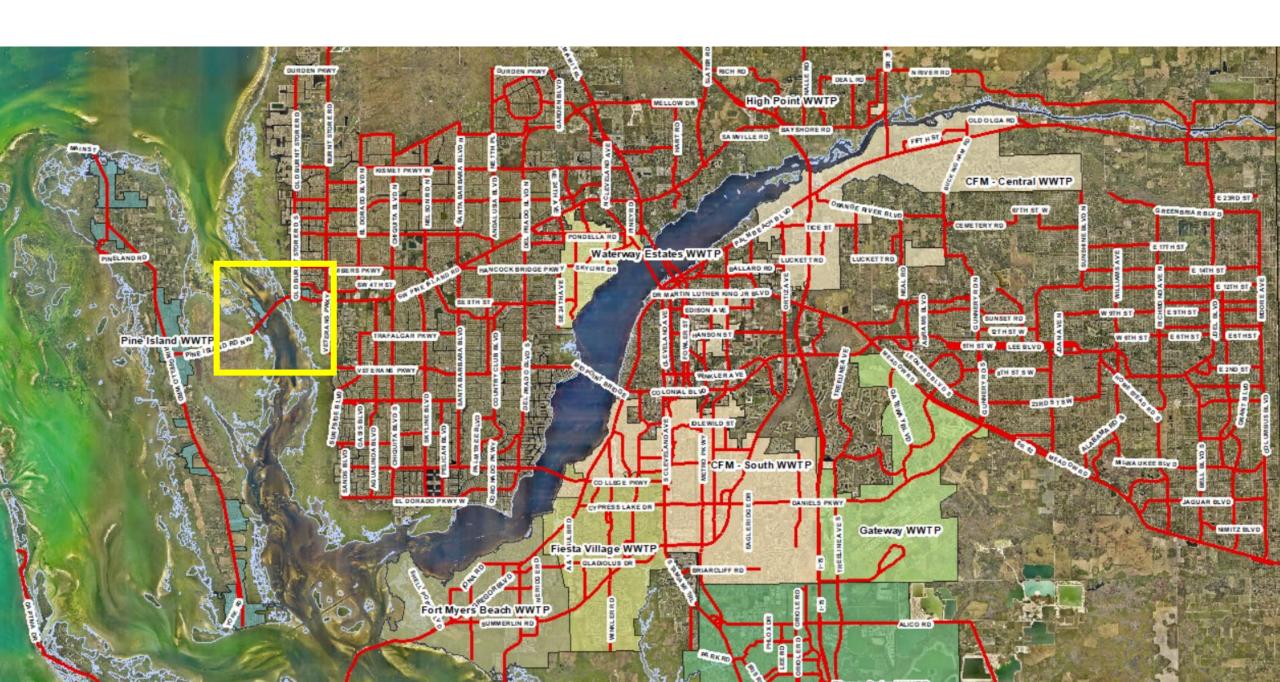
10. Record Drawings

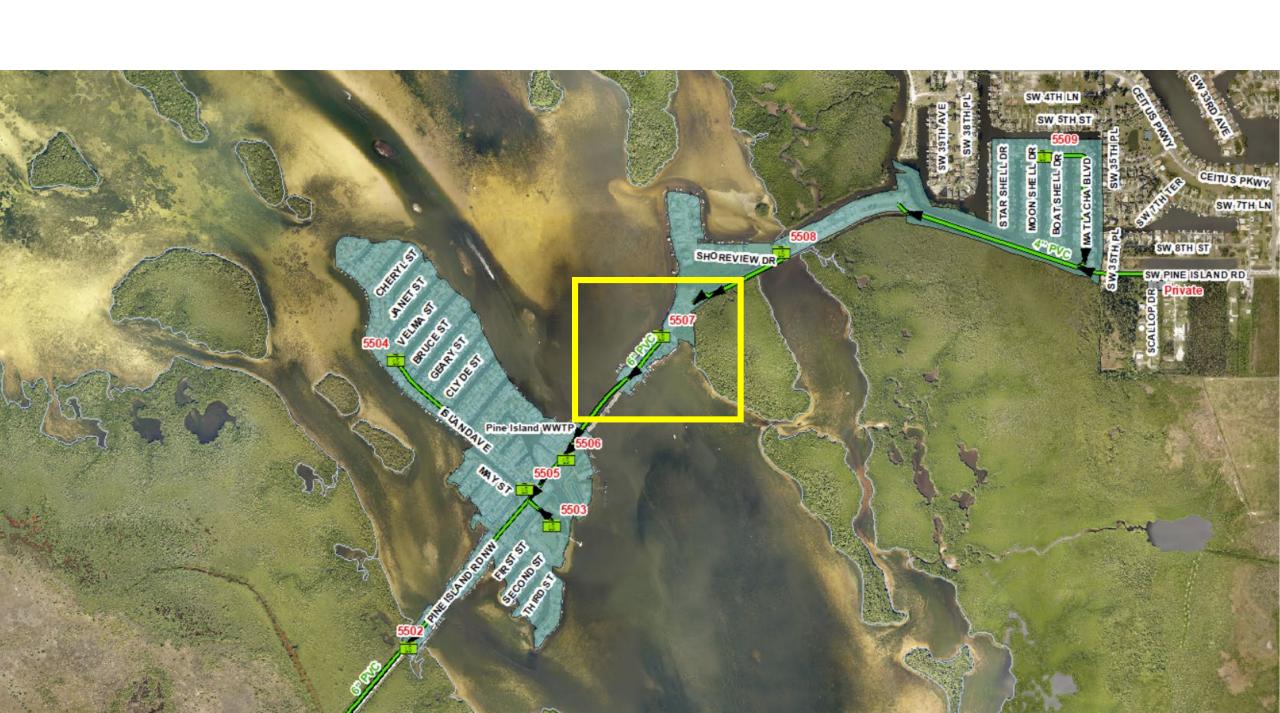
Copies of all relevant Record Drawings that the County has in their possession are in **Appendix B**.

Appendix A – Project Location and Limits

Emergency Lift Station 5507 Replacement

Project Location & Limits







Southwest Downstream Limit

Northeast Upstream Limit

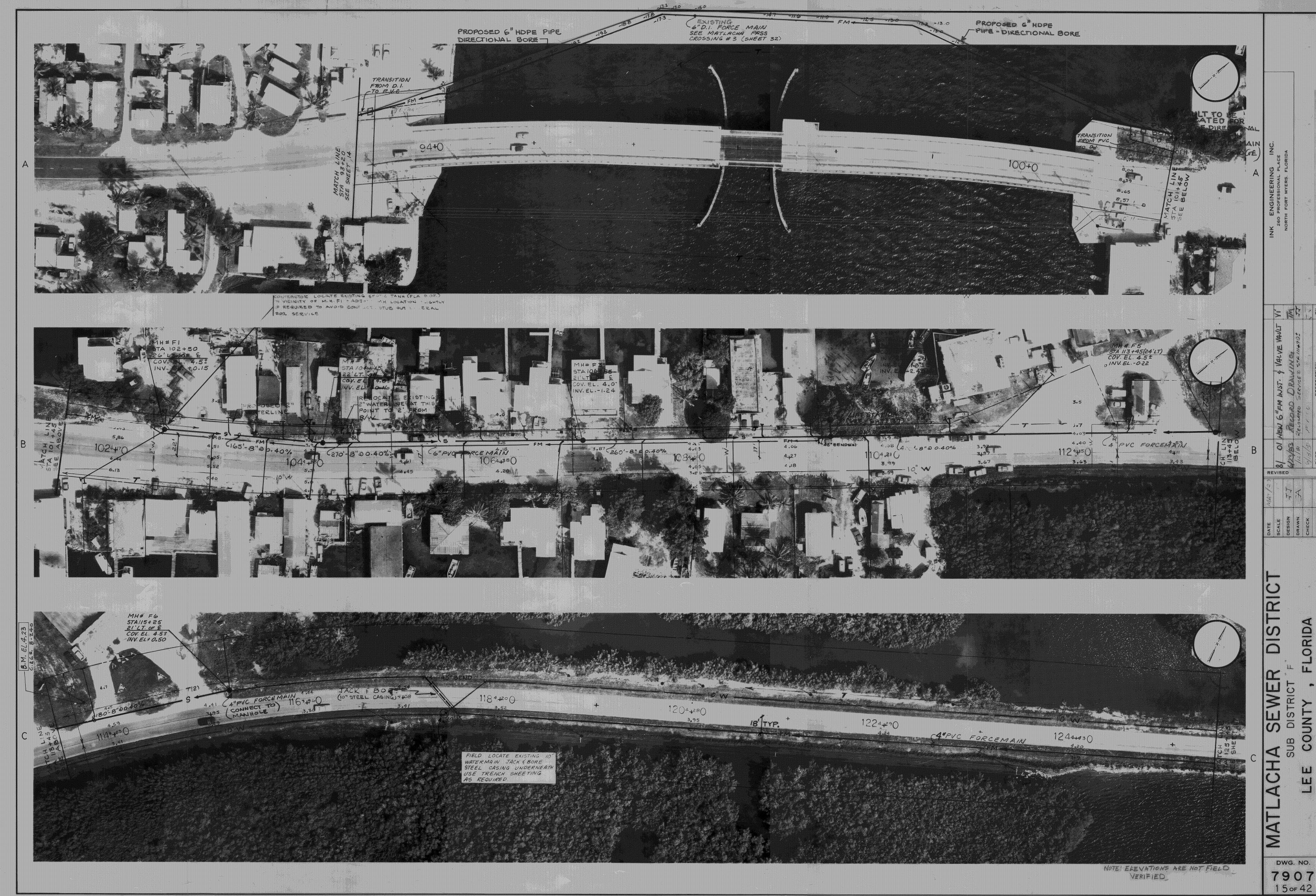
Proposed 6" PVC FM connection to existing 8" HDPE FM

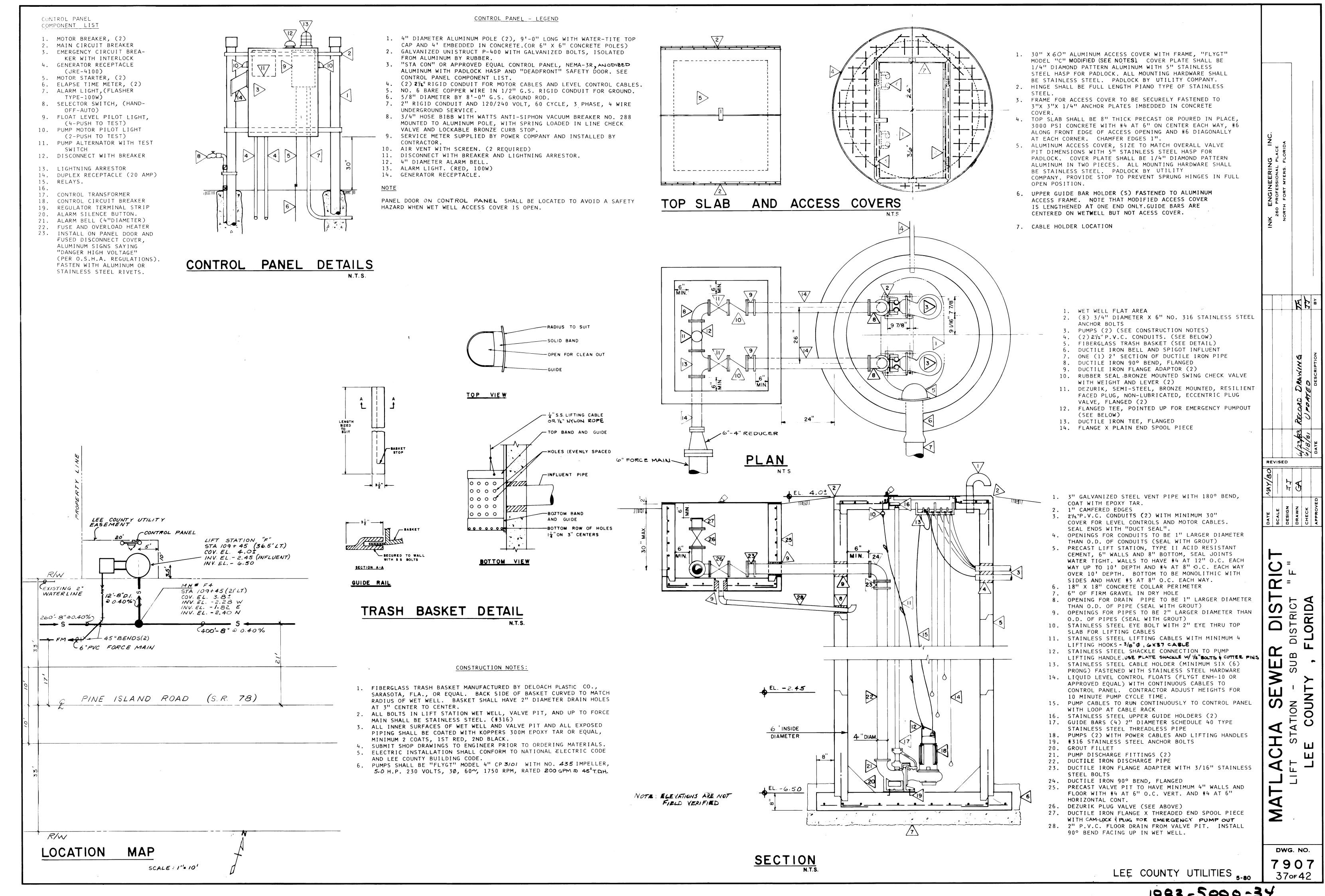


Existing 4" PVC FM connection to proposed manhole



Appendix B - Record Drawings





Appendix C – Property Deed Description OR 1191/2118



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IN THE CIRCUIT COURT OF THE TWENTIETH JUDICIAL CIRCUIT IN AND FOR LEE COUNTY, FLORIDA CIVIL ACTION

APR 7 1977

LEE COUNTY BANK, a Florida Banking Corporation,

76-2189CA-JRS

SAL GERACI, CLERK BY M-UMOOD.C.

Plaintiff,

vs.

PINE ISLAND SEAFOODS, INC., a Florida Corporation, et al.

Defendants.

REE:1191 ec2118

CERTIFICATE OF TITLE

The undersigned, SAL GERACI, Clerk of the Court, certifies that he executed and filed a certificate of sale in this action on March 22, 1977, for the property described herein and that no objections to the sale have been filed within the time allowed for filing objections.

The following property in Lee County, Florida:

That certain portion of Government Lot #1 (mainland) in Section 24, Township 44 South, Range 22 East, described as follows: From the Southeasterly corner of Lot 12 in Block 1, Pine Island Fill Subdivision, according to the plat thereof recorded in Plat Book 8, at page 87, Public Records of Lee County, Florida; run Northeasterly parallel to and 33 feet from the center line of State Road No. 78, (formerly #183) for 250 feet; thence deflect left 23° 00' and run Northeasterly along the Westerly side of a county road (30 feet wide) for 100 feet to the point of beginning of the land herein described; thence on the same course for 98 feet; thence run Northwesterly, perpendicular to said county road, to an intersection with a line 150 feet from and parallel to center line of said State Road #78; thence Southwesterly along said line to an intersection with a line through the point of beginning perpendicular to the aforesaid county road; thence Southeasterly along said perpendicular line to the point of beginning.

From the Southeasterly corner of Lot 12, Block 1, Pine Island Fill Subdivision, according to the map or plat thereof on file and recorded in the office of the Clerk of the Circuit Court of Lee County, Florida, in Plat Book 8 at page 87, run Northeasterly parallel to and 33 feet from the center line of State Road No. 78 (formerly No. 183) for 115 feet to a POINT OF BEGINNING; thence on the same course for 135 feet; thence deflect left 23° 00' and run Northeasterly, along the Westerly side of a County Road 30 feet wide, for 50 feet; thence run Northwesterly perpendicular to said County Road to an intersection with a line 150 feet from and parallel to the center line of State Road No. 78; thence Southwesterly

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along said line to an intersection with a line perpendicular to said center line through the point of beginning; thence Southeasterly along said line 117 feet to the point of beginning.

PARCEL NO. 1: From the Southeasterly corner of Lot 12, Block 1 of Pine Island Fill Subdivision, according to the map or plat thereof recorded in Plat Book 8 at page 87 of the public records of Lee County, Run Northeasterly parallel with and 33 feet from the center line of State Road No. 78 (Formerly No. 183) for 250 feet; thence deflect left 23° 00' and run Northeasterly along the Northwesterly line of a County Road 30 feet wide for 50 feet to the point of beginning of the lands hereby conveyed. From said point of beginning continue Northeasterly along said Northwesterly line for 50 feet; thence run Northwesterly perpendicular to said County Road for 84.65 feet to an intersection with the Northwesterly Right-of-way line, 150 feet from the center line, of said State Road No. 78; thence run Southwesterly along said Right-of-way line for 54.32 feet to an intersection with a line through the point of beginning perpendicular to said County Road; thence run Southeasterly along said line for 105.89 feet to the point of beginning; SUBJECT to said Right-of-way of State Road No. 78

was sold to DONALD AMES and ELIZABETH S. AMES, husband and wife, c/o J. Dudley Goodlette, Esquire, 3174 East Tamiami Trail, Naples, Florida 33940.

WITNESS my hand and the seal of the court on the 7th day of April, 1977.

SAL GERACI, Clerk of the Circuit Court

By: Mork Wood
Deputy Clerk

This Instrument Prepared By: J. Dudley Goodlette, Esquire Neinas, Goodlette & Franke Suite A, The Legal Centre 3174 East Tamiami Trail Naples, Florida 33940 APR 7 9 9 M 171

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Copies furnished to: JOHN A. NOLAND, ESQ., P.O. Box 280, Fort Myers, Florida, 33902, GORDON P. BLITCH, ESQ., 1945 Colonial Blvd., Fort Myers, Florida, 33901, DAVID L. OROSZ, ESQ., 15284 Hendry Street, Fort Myers, Florida, 33901, J. DUDLEY GOODLETTE, ESQ., Suite A, The Legal Centre, 3174 E. Tamiami Trail, Naples, Florida 33940, R. THOMAS CORBIN, ESQ., P.O. Box 1480, Fort Myers, Florida 33902 and to KJELL PEDERSEN, ESQ. P.O. Box 2566, Fort Myers Beach, Florida 33931.