

WAL TECH LLC.

524 W VIRGINIA AVE
PUNTA GORDA, FL 33950
PH. 941-628-0635

RE: Geotechnical Investigation/DCP Report

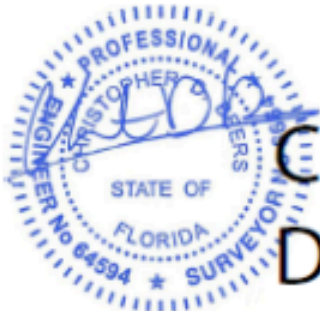
Parcel:
Balsey St
North Port, FL 34286
Lot 6 BLK 1446 29th Add to Port Charlotte
Property ID: 0956144607

To Whom It May Concern:

Our team has completed a limited subsurface soil analysis at the address in question in accordance with **Florida Building Code 8th Edition Chapter 18 and Residential Florida Building Code 8th Edition Chapter 4**. In the interest of time, a brief simplification of this report will inform the reader our findings **support** the development of the parcel in question for the purpose of residential development as the in-situ soils will sufficiently support a properly built foundation pad. The report includes but is not limited to the following information:

- Scope of work
- Test results
- Foundation Recommendations
- Lot suitability
- Fill parameters
- Site preparation parameters

PARCEL:



Christopher
D Beers

Digitally signed by
Christopher D Beers
Date: 2025.04.17
11:24:21 -04'00'

Signature

Date

Christopher D. Beers, PE, PSM

Florida Professional Engineer #64594

Florida Professional Surveyor/Mapper #6664

Date: March 21, 2025

Client: Joseph Fittante, Thomas Fittante, Michael Fittante c/o Joseph M Fittante
1063 Spitzig Rd
Breslau, ON, N0B 1M0, Canada

Scope Of Work

The client has commissioned WAL Tech LLC to supply limited subgrade analysis of in-situ soils on vacant lots to satisfy due diligence requirements and complete permit application requirements prior to commencement of construction. The methodology of the subgrade exploration was the placement of one (1) Dynamic Cone Penetrometer (DCP) test ("Exhibit B") into subgrade soils made to a depth of four (4) feet, or to depth of limiting materials i.e., bedrock. The location of the test point on the property in question is notated on the Plot Plan ("Exhibit A") included herein. The existing condition of the parcel was unimproved and vacant. The testing was completed in accordance with ASTM standard D7380. The penetration test was performed, and data assessed onsite by one of our Certified Environmental Health Professionals (CEHP) as licensed by the Florida Department of Environmental Protection (FDEP) and reviewed by our Professional Engineer (P.E.) for approval.

Findings

The DCP, combined with additional visual assessments of the lot made by our staff, reveal the following subgrade soil parameters can be observed.

Sub-grade number of blows: 46

Depth of test: 45"

Maximum California Bearing Ratio (CBR): 17.57%

Foundation Recommendations

In consideration of the findings, field analysis of in-situ soils, and experience in the field of structural engineering, we draw the following conclusions:

1. Given the existence of common soils and/or rock (void of major hydrologic features), we find this parcel to be generally suitable for residential development.
2. Upon completion of basic clearing, this parcel must be improved with a basic structural fill sand having been deposited and compacted in no more than one (1) foot lifts. Each lift of fill should be densified to at least 95 percent of the Modified Proctor test maximum dry density of the soil (ASTM D 1557), tested for compaction, and approved before the placement of subsequent lifts.
3. Given client supplied instruction to evaluate for typical 1 – 2 story residential construction complying with FBC 8th Edition, our analysis finds this parcel is suitable for standard residential development of a home with structural footings designed for soil with a minimum net bearing pressure of 2000 pounds per square foot. (psf).

The following recommendations are made based upon a review of the attached test data, our understanding of the proposed construction, and experience with similar projects and subsurface conditions. The applicability of geotechnical recommendations is dependent upon project characteristics such as improvement locations and grade alterations. WAL Tech LLC must review the final site and grading plans to validate all recommendations rendered herein. Additionally, if subsurface conditions are encountered during construction, which were not encountered in the testing, report those conditions immediately to WAL Tech LLC for observation and recommendations.

General Lot Suitability: Based on the results of the DCP testing, the near surface soils appear to be largely fine sands [SP] to the termination depth of four (4) feet below grade. It is our opinion that the proposed structure can be supported on properly designed and constructed shallow foundation systems. Provided the site preparation recommendations outlined in this report are followed, the parameters outlined below may be used for foundation design.

Structural Fill: All structural fill, if any, should consist of clean fine sands [SP] (less than 5 percent fines) placed in maximum 12-inch uniform loose lifts. Fill soils containing between 5 and 10 percent fines [SP-SM or SP-SC] may also be used, however, strict moisture control may be required. Each lift of structural fill should be densified to at least 95 percent of the Modified Proctor test maximum dry density of the soil (ASTM D 1557), tested for compaction, and approved before the placement of subsequent lifts.

Shallow footing foundations: We assume the proposed single-family residential structure will consist of 1- to 2-story, typical Florida stucco, block and wood frame construction. For the purposes of this report, we have assumed the maximum column loads will not exceed 25 kips and maximum wall loads will not exceed 4 kips per linear foot for the proposed residential structures. Provided the lots are properly prepared prior to construction, the proposed residence can be supported upon conventional, shallow footing foundations designed for a minimum net soil bearing pressure of 2,000 pounds per square foot (psf) in an effort to keep total and differential settlements to tolerable levels (i.e. 1-inch or less total settlement and ½-inch or less of differential settlement). The allowable net soil bearing pressure is pressure that may be transmitted to the soil in excess of the minimum surrounding overburden pressure. The allowable bearing pressure should include dead load plus sustained live load. Per the Florida Building Code (FBC), the foundations should be designed for the most unfavorable effects due to the combinations of loads.

The foundations may bear on either the compacted suitable native soils or compacted structural fill. The bearing level soils should be densified to at least 95 percent of the maximum dry density as determined by ASTM D 1557 (Modified Proctor) to a depth of at least 2 feet below foundation levels. The minimum width recommended for an isolated column footing is 24 inches. For continuous wall or thickened edge monolithic slab footings, the minimum widths should comply with the current FBC edition, but under no circumstances should be less than 12 inches in width. The base of all footings should bear at least 12 inches below finished grade elevation as required under the current Florida Building Code.

Site Preparation

We recommend normal, good practice site preparation procedures for the new construction areas. These procedures include stripping/clearing of the site to remove vegetation, roots, organics, debris, etc. Following stripping, the exposed subgrade soils should be proof-rolled, and all subgrade and subsequent fill/backfill soils should be properly densified. A more detailed description of this work is presented in this section.

1. Prior to construction, existing underground utility lines within the construction areas should be located. Please note, if underground pipes are not properly removed or plugged, they may serve as conduits for subsurface erosion which may lead to excessive settlement of overlying structures.
2. Perform necessary remedial dewatering prior to any earthwork operations. Dewatering should be performed to a depth of at least 2 feet below the bottom of any excavations or compacted surface.
3. Strip the proposed construction limits of existing vegetation, topsoil, roots, organic soils, debris, and other deleterious materials within and 5 feet beyond the perimeter of the new construction areas. Expect clearing and grubbing to depths of 6 to 18 inches. Deeper stripping may be necessary in certain areas of the site. We strongly recommend the stripped/excavated surfaces be observed and probed by representatives of WAL Tech LLC.
4. Proof-roll the exposed subsurface soils under the observation of WAL Tech LLC, to locate any soft areas of unsuitable soils, and to increase the density of the shallow loose fine sand soils. If deemed necessary by WAL Tech LLC, in areas that continue to "yield", remove any deleterious materials and replace with a clean, compacted sand backfill.
5. If organics soils are encountered during grading operations, excavate the organic soils under the full-time observation of WAL Tech LLC personnel, including a margin of at least 5 feet beyond foundation/pavement edges. After approval of the excavated surfaces, backfill to surrounding grades as recommended in Item 6 below. Failure to properly remove the organic material as recommended may lead to excessive settlement distress within the structures and pavements over their useful life. To ensure complete removal of the organic soils, and to aid in backfilling and compaction efforts, temporary dewatering will be required.
6. After approval of the stripped surface within the building areas, compact the upper 2 feet of the exposed subgrade soils (including the 5 feet margin) to at least 95 percent of the Modified Proctor test maximum dry density (ASTM D 1557).

7. Place fill/backfill as necessary. All fill should consist of clean sand with less than 10 percent soil fines and be free of organics, debris and other deleterious materials. Fill soils containing between 5 and 10 percent fines may require strict moisture control. Place fill in maximum 12-inch loose, uniform lifts and compact each lift at least 95 percent of the Modified Proctor maximum dry density.
8. Test the subgrade and each lift of fill for compaction at a frequency of not less than one test per 2,500 square feet in the building areas, with a minimum of 4 tests in each area.
9. Prior to the placement of reinforcing steel and concrete, verify compaction within the footing trenches to a depth of 2 feet. We recommend testing every column footing and at least one test every 100 feet of wall footing, with a minimum of 4 tests per building. Re-compaction of the foundation excavation bearing level soils, if loosened by the excavation process, can typically be achieved by making several passes with a walk behind vibratory sled or jumping jack.

Stability of the compacted soils is essential and independent of compaction and density control. If the near surface soils or the structural fill experience "pumping" conditions, terminate all earthwork activities in that area. Pumping conditions occur when there is too much water present in the soil-water matrix. Earthwork activities are attempting to compact the water and not the soil. The disturbed soils should be dried in place by scarification and aeration prior to any additional earthwork activities. Vibrations produced during vibratory compaction operations at the site may be significantly noticeable within 100 feet and may cause distress to adjacent structures if not properly regulated. Provisions should be made to monitor these vibrations so any necessary modifications in the compaction operations can be made in the field before potential damages occur. WAL Tech LLC can provide vibration monitoring services to help document and evaluate the effects of the surface compaction operation on existing structures. It is recommended that large vibratory rollers remain a minimum of 50 feet from existing structures. Within this zone, the use of a static roller or small hand guided plate compactors is recommended.

Dewatering And Excavation Considerations

Based on the groundwater level conditions encountered, dewatering will likely not be required for the successful construction of this project. Where excavations will extend only a few feet below the groundwater table, a sump pump may be sufficient to control the groundwater table. Deeper excavations may require well points and/or sock drains to control the groundwater table. Regardless of the method(s) used, we recommend drawing down the water level at least 2 feet below the bottom of the excavation. The method(s) of dewatering should be determined by the contractor. The design and discharge of the dewatering system must be performed in accordance with applicable regulatory criteria (i.e. water management district, etc.) and compliance with such criteria is the sole responsibility of the contractor. Excavations should be sloped as necessary to prevent slope failure and to allow backfilling. As a minimum, temporary excavations below 4-foot depth should be sloped in accordance with OSHA regulations. Where lateral confinement will not permit slopes to be laid back, the excavation should be stored in accordance with OSHA requirements. During excavation, excavated material should not be stockpiled at the top of the slope within a horizontal distance equal to the excavation depth. Provisions for maintaining workman safety within excavations is the sole responsibility of the contractor.

Compaction Testing Services

We recommend the owner retain WAL Tech LLC to provide inspection services during the site preparation procedures to confirm the adequacy of the earthwork operations. Considering the nature of this report, the data identified from investigation on the property, and our role in laying out design specifications and testing parameters for the foundation to be constructed on the property, we recommend the owner retain WAL Tech LLC to supply testing services during the course of construction on the property. Compaction tests and observations include verification of the foundation and subgrade conditions by monitoring delivery of fill material and performing compaction tests for quality assurance of the placement of compacted structural fill courses.

The geotechnical engineering design does not end with the development of the construction documents. The design is an on-going process throughout construction. Because of our familiarity with the site conditions and the intent of the engineering design, we are the most qualified geotechnical partner to identify and address site problems or changes in construction, which may arise during construction, in a timely and cost-effective manner.

Limitation

This report is submitted to the client, and other designated members (as specified by the client) of their design/construction team associated with the proposed construction for the specific project site discussed in this report. No other site or project location should be designed using the soil information contained in this report. As such, WAL Tech LLC will not be responsible for the performance of any other site improvement designed using the data in this report.

This report should not be relied upon for final design recommendations or professional opinions by unauthorized third parties without the expressed written consent of WAL Tech LLC. Unauthorized third parties that rely upon the information contained herein without the expressed written consent of WAL Tech LLC assume all risk and liability for such reliance.

Final Note

We appreciate your business. If you have any further questions regarding the above information, please contact our office at 941-628-0635 or email us at bgaraimondo@comcast.net.

Yours sincerely,

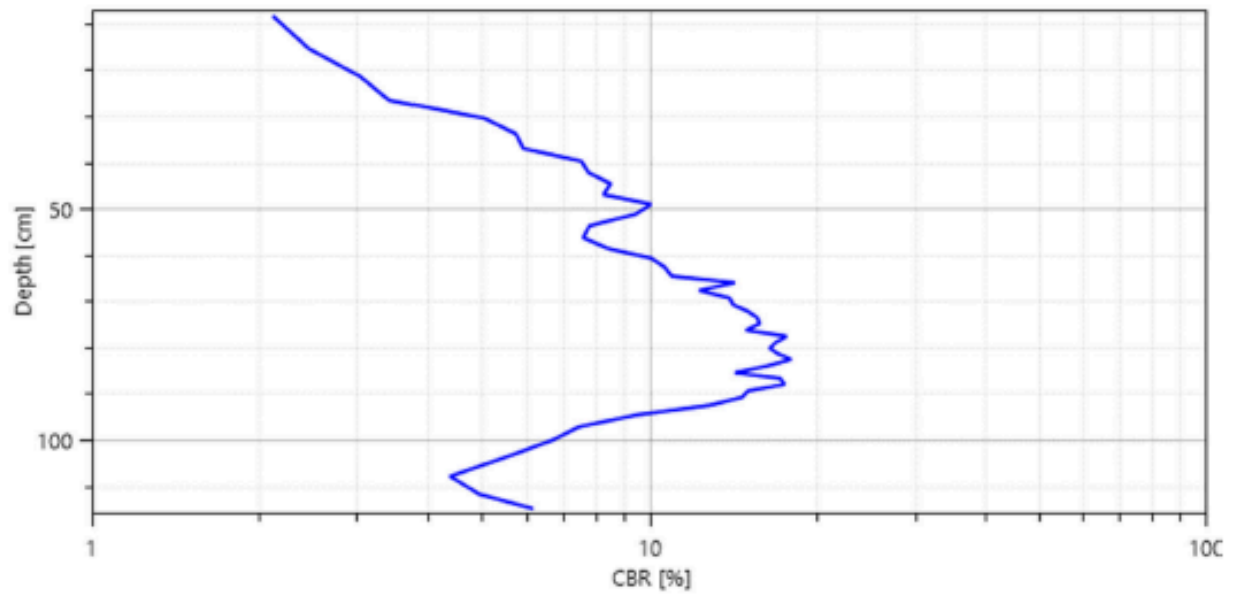
Christopher D. Beers, PE #64594

EXHIBIT A – Plot Plan

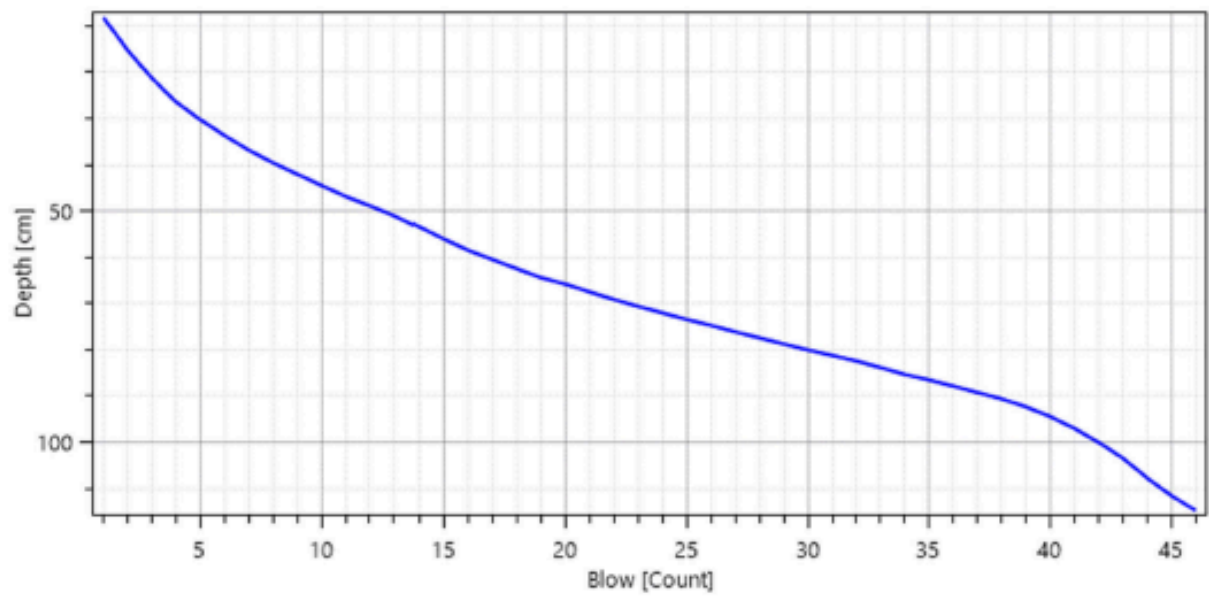


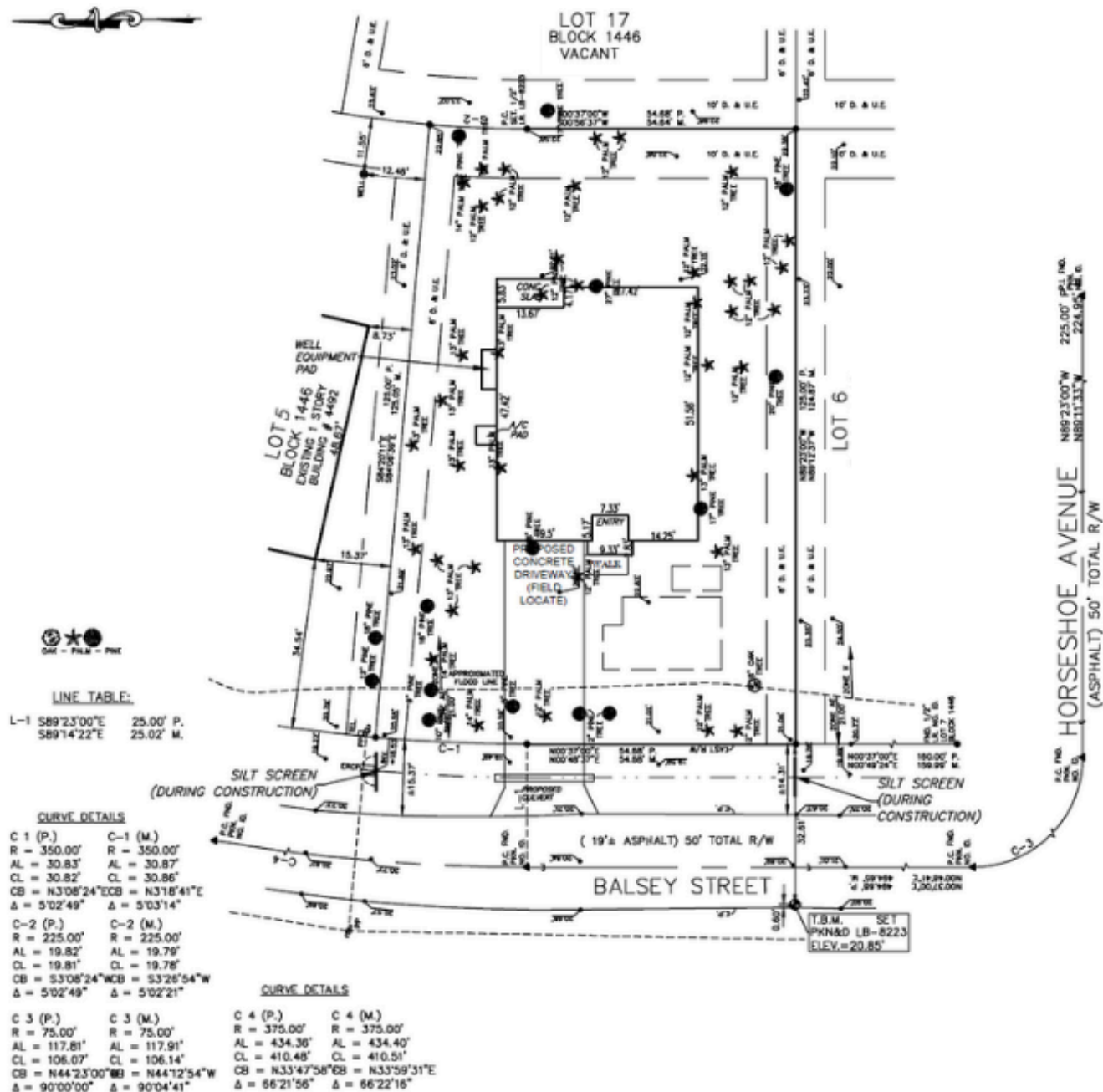
EXHIBIT B – DCP Data

CBR Plot



Depth Plot





NO EXISTING WELLS OR SEPTIC SYSTEMS ON SITE OR WITHIN 75 FEET OF SUBJECT PROPERTY UNLESS OTHERWISE NOTED.

DIGOUT REQUIRED & MIDPOINT INSPECTION REQUIRED

THE WATER METER AND WATERLINE SHOWN ARE PROPOSED. THE UTILITY COMPANY WILL SET THE ACTUAL LOCATION. CONTRACTOR TO VERIFY THESE LOCATIONS.

THE ONSITE SEWAGE DISPOSAL SYSTEM SHALL NOT BE LOCATED WITHIN 10 FEET OF POTABLE WATER LINES UNLESS THESE LINES ARE SEALED WITH A WATERPROOF SEALANT WITHIN A SLEEVE OF A SIMILAR MATERIAL PIPE TO A DISTANCE OF AT LEAST 10 FEET FROM THE NEAREST PORTION OF THE DRAINFIELD. IN NO CASE SHALL THE ENCASED LINE BE LOCATED WITHIN 2 FEET OF THE ONSITE SEWAGE DISPOSAL SYSTEM OR AT AN ELEVATION LOWER THAN THE DRAINFIELD ABSORPTION SURFACE.

EASEMENTS INDICATED ON SKETCH AND FLOOD ZONES (IF APPLICABLE) ARE PER THE SURVEY FURNISHED BY CLIENT. ALL ON SITE DRAINAGE SHALL BE DIRECTED BY SWALES TO AN OFFSITE DRAINAGE FACILITY. THIS SKETCH IS A SEPTIC DESIGN AS PER CHAPTER 64E-6 FAC AND APPLICABLE COUNTY CODES. THIS SKETCH DOES NOT REPRESENT A BOUNDARY, TOPOGRAPHICAL, OR TREE SURVEY.

THE SURVEY WAS PERFORMED BY: **GALLDO GROUP**

- ⊕² DENOTES EXISTING ELEVATION
- ⊕ DENOTES PROPOSED ELEVATION
- / / / DENOTES SOIL REPLACEMENT AREA
- DENOTES PERFORATED DRAINLINES
- DENOTES BOUNDARY OF UNOBSTRUCTED AREA
- DENOTES NON-PERFORATED PIPE, EDGE OF DRAINBED AND TOP OF MOUND

- ~ DENOTES DRAINAGE FLOW
- OHL DENOTES OVERHEAD LINES
- PP DENOTES POWER POLE
- W-W-W- DENOTES WATER LINES

LOTS 6 BLOCK 1446 SUBDIVISION 29TH ADDITION TO PORT CHARLOTTE

THIS SKETCH IS CERTIFIED ONLY AS TO FIELD CONDITIONS ON:

3/13/2025

WTE JOB # -

SCALE: 1"=30'

DRAWN BY: BJR

ELEVATIONS
(TO BENCHMARK)

H.W.T.-0.56

BOT OF DF+1.45

STUBOUT+2.44

FFE+3.94

TOP OF MOUND
ELEVATIONS
(TO BENCHMARK)

HIGH END+3.34 MIN.

LOW END+3.24 MIN.

⊗ DENOTES RISER+3.34 EL.

WA TECH, LLC.
WATER, AIR, LAND

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CHRISTOPHER BEERS, PE
FLORIDA REG. NO. 64594
DATE