

Karen DeMaria

From: Barnett, Michael <Michael.Barnett@tetrattech.com>
Sent: Thursday, July 27, 2017 3:51 PM
To: Steven P. McAlearney; Karen DeMaria
Cc: Stotler, Shauna; McGahee, Stuart; Czapinski, Richard; Davis, Jesse
Subject: RE: Rest Beach Seawall Permit
Attachments: MO-45 AR-FO_Corrected_Permit_Package.pdf; Permit MO-45 AR - revision/clarification to drawing sheets 4 and 5 of 13; CoKW_MO_0045_AR_Revised Permit Sketches_TetraTech_20170418.pdf

Steve/Karen –

The attached is the only regulatory authorization needed (and received) to realize the construction of the seawall and other proposed improvements/activities at Rest Beach. Since we are constraining all activities to upland of the MHWL, the USACE does not have jurisdiction. As well, since we aren't going into State waters with the Project elements, an ERP is not required – just the attached.

Sorry for the 'stitched' together emails and multiple files – but this is how the permitting went on this project. ..

Please call if questions.

Thanks
Mike

Michael R. Barnett, P.E.*, D.CE | Senior Coastal Engineer & Project Manager
Direct: 251.405.4862 | Fax: 251.405.0084 | Cell: 251.213.8518
michael.barnett@tetrattech.com

Tetra Tech | Complex World, Clear Solutions
www.tetrattech.com | NASDAQ:TTEK
61 St. Joseph Street, Suite 550 | Mobile, AL 36602

*Registered Professional Engineer in AL, FL, MS and TX

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Think Green - Not every email needs to be printed.

From: Steven P. McAlearney [mailto:smcalearney@cityofkeywest-fl.gov]
Sent: Thursday, July 27, 2017 12:47 PM
To: Karen DeMaria <kdemaria@cityofkeywest-fl.gov>
Cc: Barnett, Michael <Michael.Barnett@tetrattech.com>
Subject: RE: Rest Beach Seawall Permit

Michael,
Digging through files and coming up empty in an attempt to locate documents referred to below. Do you have copies of any of these?
Thank you,
Steve



STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Division of Water Resource Management
2600 Blair Stone Road - Mail Station 3522
Tallahassee, Florida 32399-2400
(850) 245-8336

PERMIT NUMBER: MO-45 AR (Corrected)

PERMITTEE

City of Key West
c/o Michael R. Barnett, P.E.
Tetra Tech, Inc.
61 St. Joseph Street, Suite 550
Mobile, AL 36602

NOTICE TO PROCEED AND CORRECTED PERMIT FOR CONSTRUCTION OR OTHER ACTIVITIES
PURSUANT TO SECTION 161.052, FLORIDA STATUTES

FINDINGS OF FACT: An application for authorization to conduct the activities seaward of the 50-foot setback line was approved by the Department of Environmental Protection on May 8, 2017. Subsequent to issuance of the permit, the Department staff identified certain items within the permit which needed corrections.

CONCLUSIONS OF LAW: After considering the merits of the proposal and any written objections from affected persons, the Department finds that upon compliance with the permit conditions, the activities indicated in the project description of this corrected permit are of such a nature that they will result in no significant adverse impacts to the beach/dune areas or to adjacent properties; that the work is not expected to adversely impact nesting sea turtles, their hatchlings, or their habitat; that the work is expendable in nature and/or is appropriately designed in accordance with Chapter 62B-33, Florida Administrative Code (F.A.C.). Based on the foregoing considerations, the Department approves the application; authorizes construction and/or activities at the location indicated below in strict accordance with the project description, the approved plans (if any) and the General Permit Conditions which are attached and are by this reference incorporated herein, and any additional conditions shown below, pursuant to Section 161.052, Florida Statutes, and Rule 62B-33, (F.A.C.).

EXPIRATION DATE: May 8, 2020

LOCATION: Between approximately 283 feet north and 377 feet south of the DEP's referenced monument MOV-413, in Monroe's County. Project address: Atlantic Boulevard, Key West.

PROJECT DESCRIPTION:

Cantilevered Steel Sheetpile Bulkhead

1. Perpendicular location relative to 50-foot setback line: Varies from 14.0 feet to 38 ~~47~~ feet seaward at the north and south ends, respectively.
2. Length of the bulkhead: Approximately 695 ~~650~~ feet.
3. Top of cap elevation: +3.0 feet (NAVD).
4. Bottom elevation of bulkhead: -10.0 feet (NAVD) (minimum).

5. Length of return wall: 35 feet on the north end.
6. Length of return wall: 10 feet on the south end.

Excavation/Fill

1. Volume of excavation relative to 50-foot setback line: Approximately 66 cubic yards.
 - 1.1. Volume of non-sandy material: Approximately 12 cubic yards.
 - 1.2. Volume of sandy beach material: Approximately 54 cubic yards.
2. Location of excavation: At the location of bulkhead.
3. Volume of fill to be placed: Approximately 54 cubic yards.
4. Location of fill to be placed: As backfill landward of the bulkhead.

Other Activities

1. Demolition to include but not limited to the removal of existing sidewalk sections.
2. Construction of new sidewalk sections landward of the bulkhead near the south end.
3. Plantings of native species in the areas landward of the bulkhead.

SPECIAL PERMIT CONDITIONS:

1. Prior to commencement of construction activity authorized by this permit, a preconstruction conference shall be held at the site among the contractor, the owner or authorized agent, and a staff representative of the Department to establish an understanding among the parties as to the items specified in the special and general conditions of the permit. The proposed locations of the structures shall be staked out for the conference. **Contact Jennifer Cowart at (941) 492-0701 to schedule a conference.**
2. All sand material excavated for installation of the bulkhead shall be placed in the immediate vicinity of the bulkhead seaward of the coastal construction control line. All sand material excavated for installation of the bulkhead from the seaward side of the wall shall be placed back on the seaward side of the bulkhead and not used as backfill material.
3. All backfill material shall be obtained from a source landward of the 50-foot setback line and shall consist of sand which is similar to that already on the site in both grain size and coloration. This fill material shall be free of construction debris, rocks, or other foreign matter. A sample of the sand shall be provided to the staff representative of the Department during the preconstruction conference.
4. All rubble, debris, and damaged or broken concrete on the site resulting from this construction shall be removed and relocated landward of the 50-foot setback line.

5. If work occurs during April 15 through August 30th, any sea turtle nests deposited within the project area shall be left in place and marked for avoidance. All nests shall be marked with a series of stakes with highly-visible survey ribbon or string to establish a 10-foot diameter around the nest. The permittee is responsible for ensuring that all nesting survey and protection work is conducted by persons authorized to conduct such activities through a valid permit issued by the FWC. Mr. Ralph Capone, the FWC-authorized Marine Turtle Permit Holder for Rest Beach, can be contacted at 305-517-6164 or denise1213122@gmail.com. Contact FWC's Marine Turtle Management Program in Tequesta at MTP@myfwc.com for any questions or issues related to the marine turtle permit holder in this area.
6. No activity shall occur within the marked area; nor shall any activity occur within a 10-foot buffer adjacent to the marked area that could result in direct or indirect impacts to the nest (such as driving heavy equipment or driving sheet pile or pilings, etc.). Nest sites shall be inspected daily by the Marine Turtle Permit Holder to ensure nest markers remain in place and that the nest has not been disturbed by the project activity. If the 10-foot diameter and 10-foot buffer area around the nest cannot be avoided during construction, the FWC shall be notified immediately at (850-922-4330) and MarineTurtle@myfwc.com.
7. Staging areas for construction equipment or materials shall be located off the beach. No nighttime storage of equipment on the beach is allowed. All activity on the beach shall cease prior to sunset each day, including but not limited to: removing equipment from the beach, debris removal, and smoothing disturbances in the sand (such as ruts, depressions, tracks, holes, or mounds using hand tools).
8. Any impacts to a nest or marine turtles that inadvertently occur during project work shall be immediately reported to FWC's Imperiled Species Management Section and all work shall stop unless otherwise authorized by the Department and FWC. No temporary lighting of the construction area is authorized at any time during the marine turtle nesting season. No additional exterior lighting is authorized.
9. Permittee shall submit compliance reports as specified in Special and General Permit Conditions of this permit. General Permit Conditions 1(q), and 1(s) pertain to written reports which must be submitted to the Department of Environmental Protection at specified times. The forms for the reports: 1(q) Periodic Progress Report (DEP Form 73-111), and 1(s) Final Certification (DEP Form 73-115B) are available by clicking on the following link <http://www.dep.state.fl.us/beaches/forms.htm#CCCL>. Each form may be submitted electronically. The periodic reports are due in the office on a monthly basis. No progress reports are required until such time as construction activities have started.

GENERAL PERMIT CONDITIONS

(1) The following general permit conditions shall apply, unless waived by the Department or modified by the permit:

(a) The permittee shall carry out the construction or activity for which the permit was granted in accordance with the plans and specifications that were approved by the Department as part of the permit. Deviations therefrom, without written approval from the Department, shall be grounds for suspension of the work and revocation of the permit pursuant to Section 120.60(7), F.S., and shall result in assessment of civil fines or issuance of an order to alter or remove the unauthorized work, or both. No other construction or activities shall be conducted. No modifications to project size, location, or structural design are authorized without prior written approval from the Department. A copy of the notice to proceed shall be conspicuously displayed at the project site. Approved plans shall be made available for inspection by a Department representative.

(b) The permittee shall conduct the construction or activity authorized under the permit using extreme care

to prevent any adverse impacts to the beach and dune system, marine turtles, their nests and habitat, or adjacent property and structures.

(c) The permittee shall allow any duly identified and authorized member of the Department to enter upon the premises associated with the project authorized by the permit for the purpose of ascertaining compliance with the terms of the permit and with the rules of the Department until all construction or activities authorized or required in the permit have been completed and all project performance reports, certifications, or other documents are received by the Department and determined to be consistent with the permit and approved plans.

(d) The permittee shall hold and save the State of Florida, the Department, and its officers and employees harmless from any damage, no matter how occasioned and no matter what the amount, to persons or property that might result from the construction or activity authorized under the permit and from any and all claims and judgments resulting from such damage.

(e) The permittee shall allow the Department to use all records, notes, monitoring data, and other information relating to construction or any activity under the permit, which are submitted, for any purpose necessary except where such use is otherwise specifically forbidden by law.

(f) Construction traffic shall not occur and building materials shall not be stored on vegetated areas seaward of the control line unless specifically authorized by the permit. If the Department determines that this requirement is not being met, positive control measures, such as temporary fencing, designated access roads, adjustment of construction sequence, or other requirements, shall be provided by the permittee at the direction of the Department. Temporary construction fencing shall not be sited within marine turtle nesting habitats.

(g) The permittee shall not disturb existing beach and dune topography and vegetation except as expressly authorized in the permit. Before the project is considered complete, any disturbed topography or vegetation shall be restored as prescribed in the permit with suitable fill material or revegetated with appropriate beach and dune vegetation.

(h) All fill material placed seaward of the control line shall be sand which is similar to that already existing on the site in both coloration and grain size. All such fill material shall be free of construction debris, rocks, clay, or other foreign matter; shall be obtained from a source landward of the coastal construction control line; and shall be free of coarse gravel or cobbles.

(i) If surplus sand fill results from any approved excavation seaward of the control line, such material shall be distributed seaward of the control line on the site, as directed by the Department, unless otherwise specifically authorized by the permit.

(j) Any native salt-tolerant vegetation destroyed during construction shall be replaced with plants of the same species or, by authorization of the Department, with other native salt-tolerant vegetation suitable for beach and dune stabilization. Unless otherwise specifically authorized by the Department, all plants installed in beach and coastal areas – whether to replace vegetation displaced, damaged, or destroyed during construction or otherwise – shall be of species indigenous to Florida beaches and dunes, such as sea oats, sea grape, saw palmetto, panic grass, saltmeadow hay cordgrass, seashore saltgrass, and railroad vine, and grown from stock indigenous to the region in which the project is located.

(k) All topographic restoration and revegetation work is subject to approval by the Department, and the status of restoration shall be reported as part of the final certification of the actual work performed.

(l) If not specifically authorized elsewhere in the permit, no operation, transportation, or storage of equipment or materials is authorized seaward of the dune crest or rigid coastal structure during the marine turtle nesting season. The marine turtle nesting season is May 1 through October 31 in all counties except Brevard, Indian River, St. Lucie, Martin, Palm Beach, and Broward counties where leatherback turtle nesting occurs during the period of March 1 through October 31.

(m) If not specifically authorized elsewhere in the permit, no temporary lighting of the construction area is authorized at any time during the marine turtle nesting season and no additional permanent exterior lighting is authorized.

(n) All windows and glass doors visible from any point on the beach must be tinted to a transmittance value (light transmission from inside to outside) of 45% or less through the use of tinted glass or window film.

(o) The permit has been issued to a specified property owner and is not valid for any other person unless formally transferred. An applicant requesting transfer of the permit shall sign two copies of the permit transfer agreement form, agreeing to comply with all terms and conditions of the permit, and return both copies to the Department. The transfer request shall be provided on the form entitled "Permit Transfer Agreement" – DEP Form 73-103 (Revised 1/04), which is hereby adopted and incorporated by reference. No work shall proceed under the permit until the new owner has received a copy of the transfer agreement approved by the Department. A copy of the transfer agreement shall be displayed on the construction site along with the permit. An expired permit shall not be transferred.

(p) The permittee shall immediately inform the Department of any change of mailing address of the permittee and any authorized agent until all requirements of the permit are met.

(q) For permits involving major structures or activities, the permittee shall submit to the Department periodic progress reports on a monthly basis beginning at the start of construction and continuing until all work has been completed. If a permit involves either new armoring or major reconstruction of existing armoring, the reports shall be certified by an engineer licensed in the State of Florida. The permittee or engineer, as appropriate, shall certify that as of the date of each report all construction has been performed in compliance with the plans and project description approved as a part of the permit and with all conditions of the permit, or shall specify any deviation from the plans, project description, or conditions of the permit. The report shall also state the percent of completion of the project and each major individual component. The reports shall be provided to the Department using the form entitled "Periodic Progress Report" – DEP Form 73-111 (Revised 6/04), which is hereby adopted and incorporated by reference. Permits for minor structures or activities do not require submittal of periodic reports unless required by special permit condition.

(r) For permits involving habitable major structures, all construction on the permitted structure shall stop when the foundation pilings have been installed. At that time the foundation location form shall be submitted to and accepted by the Department prior to proceeding with further vertical construction above the foundation. The form shall be signed by a professional surveyor, licensed pursuant to Chapter 472, F.S., and shall be based upon such surveys performed in accordance with Chapter 472, F.S., as are necessary to determine the actual configuration and dimensioned relationship of the installed pilings to the control line. The information shall be provided to the Department using the form entitled "Foundation Location Certification" – DEP Form 73-114B (Revised 9/05), which is hereby adopted and incorporated by reference. Phasing of foundation certifications is acceptable. The Department shall notify the permittee of approval or rejection of the form within seven (7) working days after staff receipt of the form. All survey information upon which the form is based shall be made available to the Department upon request. Permits for repairs or additions to existing structures with nonconforming foundations are exempt from this condition.

(s) For permits involving major structures, the permittee shall provide the Department with a report by an engineer or architect licensed in the State of Florida within thirty (30) days following completion of the work. The report shall state that all locations specified by the permit have been verified and that other construction and activities authorized by the permit have been performed in compliance with the plans and project description approved as a part of the permit and all conditions of the permit; or shall describe any deviations from the approved plans, project description, or permit conditions, and any work not performed. Such report shall not relieve the permittee of the provisions of paragraph 62B-33.0155(1)(a), F.A.C. If none of the permitted work is performed, the permittee shall inform the Department in writing no later than 30 days following expiration of the permit. The report shall be provided on the form entitled "Final Certification" DEP Form 73-115B (Revised 9/05), which is hereby adopted and incorporated by reference.

(t) Authorization for construction of armoring or other rigid coastal structures is based on an engineering review and assessment of the design and anticipated performance and impact of the structure as a complete unit. Construction of any less than the complete structure as approved by the Department is not authorized and shall result in the assessment of an administrative fine and the issuance of an order to remove the partially constructed structure. Modifications to the project size, location, or structural design shall be authorized by the Department in accordance with Rule 62B-33.013, F.A.C.

(2) The permittee shall not commence any excavation, construction, or other physical activity on or encroaching on the sovereignty land of Florida seaward of the mean high water line or, if established, the erosion control line until the permittee has received from the Board of Trustees of the Internal Improvement Trust Fund the required lease, license, easement, or other form of consent authorizing the proposed use.

(3) The permittee shall obtain any applicable licenses or permits required by Federal, state, county, or municipal law.

(4) This permit does not authorize trespass onto other property.

(5) In the event of a conflict between a general permit condition and a special permit condition, the special permit condition shall prevail.

(6) Copies of any forms referenced above can be obtained by writing to the Department of Environmental Protection, 2600 Blair Stone Road, MS 3522, Tallahassee, Florida 32399-2400, or by telephoning (850)245-8336.

This corrected permit, with the referenced attachments, comprises the entire permit, and supersedes the permit as previously issued.

Approved plans are incorporated into this permit by reference.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



Tony D. McNeal, P.E., Administrator
Coastal Construction Control Line Program

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this permit and all copies were sent on the filing date below to the following listed persons:

James Scholl, City Manager, City of Key West, jscholl@cityofkeywest-fl.gov

Michael R. Barnett, P.E., Agent, Michael.Barnett@tetrattech.com

Jennie Cowart, Field Inspector, Jennie.Cowart@dep.state.fl.us

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.



Clerk

05/10/2017

Date

NOTICE OF RIGHTS

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under sections 120.569 and 120.57, Florida Statutes, before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the application.

Petition for Administrative Hearing

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57, Florida Statutes. Pursuant to rule 28-106.201, Florida Administrative Code, a petition for an administrative hearing must contain the following information:

- (a) The name and address of each agency affected and each agency's file or identification number, if known;
- (b) The name, address, any e-mail address, any facsimile number, and telephone number of the petitioner, if the petitioner is not represented by an attorney or a qualified representative; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;
- (c) A statement of when and how the petitioner received notice of the agency decision;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;
- (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
- (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (**received by the Clerk**) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

Time Period for Filing a Petition

In accordance with rule 62-110.106(3), Florida Administrative Code, petitions for an administrative hearing by the applicant must be filed within 21 days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under section 120.60(3), Florida Statutes, must be filed within 21 days of publication of the notice or within 21 days of receipt of the written notice, whichever occurs first. Under section 120.60(3), Florida Statutes, however, any person who has asked the Department for notice of agency action may file a petition within 21 days of receipt of such notice, regardless of the date of publication. The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57, Florida Statutes, or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with rule 28-106.205, Florida Administrative Code.

Extension of Time

Under rule 62-110.106(4), Florida Administrative Code, a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, before the applicable deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation

Mediation is not available in this proceeding.

Judicial Review

Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to section 120.68, Florida Statutes, by filing a Notice of Appeal pursuant to rules 9.110 and 9.190, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this action is filed with the Clerk of the Department.

Newspaper Publication

The Agency will not publish or require the person requesting a permit to publish in a newspaper a notice of receipt of the permit application or notice of Agency action granting or denying the permit.

Persons receiving a permit are advised that interested parties who become aware of Agency action approving or denying the permit, or who observe work on the project within certain time frames without any prior notice, may have rights to petition for an administrative hearing under Chapter 120, F.S. For this reason, it may be in the best interest of the person proposing the activity to publish, at its expense, a one-time "Notice of Permit Issuance" in a newspaper of general circulation in the county where the activity is located meeting the requirements of Chapter 50, F.S. Agency staff can provide persons with the information for such a notice upon request. Persons who are substantially affected by the proposed action may petition for an administrative hearing within the time frames specified in the notice and Chapter 120, F.S.



STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Division of Water Resource Management
2600 Blair Stone Road - Mail Station 3522
Tallahassee, Florida 32399-2400
(850) 245-8336

PERMIT NUMBER: MO-45 AR

PERMITTEE

City of Key West
c/o Michael R. Barnett, P.E.
Tetra Tech, Inc.
61 St. Joseph Street, Suite 550
Mobile, AL 36602

**NOTICE TO PROCEED AND PERMIT FOR CONSTRUCTION OR OTHER ACTIVITIES
PURSUANT TO SECTION 161.053, FLORIDA STATUTES**

FINDINGS OF FACT: An application for authorization to conduct the activities seaward of the coastal construction control line that are indicated in the project description, was filed by the applicant/permittee named herein on November 9, 2016, and was determined to be complete pursuant to rule on January 13, 2017. However, on April 6, 2017, the applicant waived the 90-day time limit imposed on the Department for processing completed applications pursuant to Chapter 120, Florida Statutes, until May 12, 2017.

CONCLUSIONS OF LAW: After considering the merits of the proposal and any written objections from affected persons, the Department finds that upon compliance with the permit conditions, the activities indicated in the project description of this permit are of such a nature that they will result in no significant adverse impacts to the beach/dune areas or to adjacent properties; that the work is not expected to adversely impact nesting sea turtles, their hatchlings, or their habitat; that the work is expendable in nature and/or is appropriately designed in accordance with Chapter 62B-33, Florida Administrative Code. Based on the foregoing considerations, the Department approves the application; authorizes construction and/or activities at the location indicated below in strict accordance with the project description, the approved plans (if any) and the General Permit Conditions which are attached and are by this reference incorporated herein, and any additional conditions shown below, pursuant to Section 161.053(4), Florida Statutes.

EXPIRATION DATE: May 8, 2020

LOCATION: Between approximately 283 feet north and 377 feet south of the DEP's referenced monument MOV-413, in Monroe's County. Project address: Atlantic Boulevard, Key West.

PROJECT DESCRIPTION:

Cantilevered Steel Sheetpile Bulkhead

1. Perpendicular location relative to 50-foot setback line: Varies from 14.0 feet to 17 feet seaward at the north and south ends, respectively.
2. Length of the bulkhead: Approximately 650 feet.
3. Top of cap elevation: +3.0 feet (NAVD).
4. Bottom elevation of bulkhead: -10.0 feet (NAVD) (minimum).

5. Length of return wall: 35 feet on the north end.
6. Length of return wall: 10 feet on the south end.

Excavation/Fill

1. Volume of excavation relative to 50-foot setback line: Approximately 66 cubic yards.
 - 1.1. Volume of non-sandy material: Approximately 12 cubic yards.
 - 1.2. Volume of sandy beach material: Approximately 54 cubic yards.
2. Location of excavation: At the location of bulkhead.
3. Volume of fill to be placed: Approximately 54 cubic yards.
4. Location of fill to be placed: As backfill landward of the bulkhead.

Other Activities

1. Demolition to include but not limited to the removal of existing sidewalk sections.
2. Construction of new sidewalk sections landward of the bulkhead near the south end.
3. Plantings of native species in the areas landward of the bulkhead.

SPECIAL PERMIT CONDITIONS:

1. Prior to commencement of construction activity authorized by this permit, a preconstruction conference shall be held at the site among the contractor, the owner or authorized agent, and a staff representative of the Department to establish an understanding among the parties as to the items specified in the special and general conditions of the permit. The proposed locations of the structures shall be staked out for the conference. **Contact Jennifer Cowart at (941) 492-0701 to schedule a conference.**
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GENERAL PERMIT CONDITIONS

(1) The following general permit conditions shall apply, unless waived by the Department or modified by the permit:

(a) The permittee shall carry out the construction or activity for which the permit was granted in accordance with the plans and specifications that were approved by the Department as part of the permit. Deviations therefrom, without written approval from the Department, shall be grounds for suspension of the work and revocation of the permit pursuant to Section 120.60(7), F.S., and shall result in assessment of civil fines or issuance of an order to alter or remove the unauthorized work, or both. No other construction or activities shall be conducted. No modifications to project size, location, or structural design are authorized without prior written approval from the Department. A copy of the notice to proceed shall be conspicuously displayed at the project site. Approved plans shall be made available for inspection by a Department representative.

(b) The permittee shall conduct the construction or activity authorized under the permit using extreme care

to prevent any adverse impacts to the beach and dune system, marine turtles, their nests and habitat, or adjacent property and structures.

(c) The permittee shall allow any duly identified and authorized member of the Department to enter upon the premises associated with the project authorized by the permit for the purpose of ascertaining compliance with the terms of the permit and with the rules of the Department until all construction or activities authorized or required in the permit have been completed and all project performance reports, certifications, or other documents are received by the Department and determined to be consistent with the permit and approved plans.

(d) The permittee shall hold and save the State of Florida, the Department, and its officers and employees harmless from any damage, no matter how occasioned and no matter what the amount, to persons or property that might result from the construction or activity authorized under the permit and from any and all claims and judgments resulting from such damage.

(e) The permittee shall allow the Department to use all records, notes, monitoring data, and other information relating to construction or any activity under the permit, which are submitted, for any purpose necessary except where such use is otherwise specifically forbidden by law.

(f) Construction traffic shall not occur and building materials shall not be stored on vegetated areas seaward of the control line unless specifically authorized by the permit. If the Department determines that this requirement is not being met, positive control measures, such as temporary fencing, designated access roads, adjustment of construction sequence, or other requirements, shall be provided by the permittee at the direction of the Department. Temporary construction fencing shall not be sited within marine turtle nesting habitats.

(g) The permittee shall not disturb existing beach and dune topography and vegetation except as expressly authorized in the permit. Before the project is considered complete, any disturbed topography or vegetation shall be restored as prescribed in the permit with suitable fill material or revegetated with appropriate beach and dune vegetation.

(h) All fill material placed seaward of the control line shall be sand which is similar to that already existing on the site in both coloration and grain size. All such fill material shall be free of construction debris, rocks, clay, or other foreign matter; shall be obtained from a source landward of the coastal construction control line; and shall be free of coarse gravel or cobbles.

(i) If surplus sand fill results from any approved excavation seaward of the control line, such material shall be distributed seaward of the control line on the site, as directed by the Department, unless otherwise specifically authorized by the permit.

(j) Any native salt-tolerant vegetation destroyed during construction shall be replaced with plants of the same species or, by authorization of the Department, with other native salt-tolerant vegetation suitable for beach and dune stabilization. Unless otherwise specifically authorized by the Department, all plants installed in beach and coastal areas – whether to replace vegetation displaced, damaged, or destroyed during construction or otherwise – shall be of species indigenous to Florida beaches and dunes, such as sea oats, sea grape, saw palmetto, panic grass, saltmeadow hay cordgrass, seashore saltgrass, and railroad vine, and grown from stock indigenous to the region in which the project is located.

(k) All topographic restoration and revegetation work is subject to approval by the Department, and the status of restoration shall be reported as part of the final certification of the actual work performed.

(l) If not specifically authorized elsewhere in the permit, no operation, transportation, or storage of equipment or materials is authorized seaward of the dune crest or rigid coastal structure during the marine turtle nesting season. The marine turtle nesting season is May 1 through October 31 in all counties except Brevard, Indian River, St. Lucie, Martin, Palm Beach, and Broward counties where leatherback turtle nesting occurs during the period of March 1 through October 31.

(m) If not specifically authorized elsewhere in the permit, no temporary lighting of the construction area is authorized at any time during the marine turtle nesting season and no additional permanent exterior lighting is authorized.

(n) All windows and glass doors visible from any point on the beach must be tinted to a transmittance value (light transmission from inside to outside) of 45% or less through the use of tinted glass or window film.

(o) The permit has been issued to a specified property owner and is not valid for any other person unless formally transferred. An applicant requesting transfer of the permit shall sign two copies of the permit transfer agreement form, agreeing to comply with all terms and conditions of the permit, and return both copies to the Department. The transfer request shall be provided on the form entitled "Permit Transfer Agreement" – DEP Form 73-103 (Revised 1/04), which is hereby adopted and incorporated by reference. No work shall proceed under the permit until the new owner has received a copy of the transfer agreement approved by the Department. A copy of the transfer agreement shall be displayed on the construction site along with the permit. An expired permit shall not be transferred.

(p) The permittee shall immediately inform the Department of any change of mailing address of the permittee and any authorized agent until all requirements of the permit are met.

(q) For permits involving major structures or activities, the permittee shall submit to the Department periodic progress reports on a monthly basis beginning at the start of construction and continuing until all work has been completed. If a permit involves either new armoring or major reconstruction of existing armoring, the reports shall be certified by an engineer licensed in the State of Florida. The permittee or engineer, as appropriate, shall certify that as of the date of each report all construction has been performed in compliance with the plans and project description approved as a part of the permit and with all conditions of the permit, or shall specify any deviation from the plans, project description, or conditions of the permit. The report shall also state the percent of completion of the project and each major individual component. The reports shall be provided to the Department using the form entitled "Periodic Progress Report" – DEP Form 73-111 (Revised 6/04), which is hereby adopted and incorporated by reference. Permits for minor structures or activities do not require submittal of periodic reports unless required by special permit condition.

(r) For permits involving habitable major structures, all construction on the permitted structure shall stop when the foundation pilings have been installed. At that time the foundation location form shall be submitted to and accepted by the Department prior to proceeding with further vertical construction above the foundation. The form shall be signed by a professional surveyor, licensed pursuant to Chapter 472, F.S., and shall be based upon such surveys performed in accordance with Chapter 472, F.S., as are necessary to determine the actual configuration and dimensioned relationship of the installed pilings to the control line. The information shall be provided to the Department using the form entitled "Foundation Location Certification" – DEP Form 73-114B (Revised 9/05), which is hereby adopted and incorporated by reference. Phasing of foundation certifications is acceptable. The Department shall notify the permittee of approval or rejection of the form within seven (7) working days after staff receipt of the form. All survey information upon which the form is based shall be made available to the Department upon request. Permits for repairs or additions to existing structures with nonconforming foundations are exempt from this condition.

(s) For permits involving major structures, the permittee shall provide the Department with a report by an engineer or architect licensed in the State of Florida within thirty (30) days following completion of the work. The report shall state that all locations specified by the permit have been verified and that other construction and activities authorized by the permit have been performed in compliance with the plans and project description approved as a part of the permit and all conditions of the permit; or shall describe any deviations from the approved plans, project description, or permit conditions, and any work not performed. Such report shall not relieve the permittee of the provisions of paragraph 62B-33.0155(1)(a), F.A.C. If none of the permitted work is performed, the permittee shall inform the Department in writing no later than 30 days following expiration of the permit. The report shall be provided on the form entitled "Final Certification" DEP Form 73-115B (Revised 9/05), which is hereby adopted and incorporated by reference.

(t) Authorization for construction of armoring or other rigid coastal structures is based on an engineering review and assessment of the design and anticipated performance and impact of the structure as a complete unit. Construction of any less than the complete structure as approved by the Department is not authorized and shall result in the assessment of an administrative fine and the issuance of an order to remove the partially constructed structure. Modifications to the project size, location, or structural design shall be authorized by the Department in accordance with Rule 62B-33.013, F.A.C.

(2) The permittee shall not commence any excavation, construction, or other physical activity on or encroaching on the sovereignty land of Florida seaward of the mean high water line or, if established, the erosion control line until the permittee has received from the Board of Trustees of the Internal Improvement Trust Fund the required lease, license, easement, or other form of consent authorizing the proposed use.

(3) The permittee shall obtain any applicable licenses or permits required by Federal, state, county, or municipal law.

(4) This permit does not authorize trespass onto other property.

(5) In the event of a conflict between a general permit condition and a special permit condition, the special permit condition shall prevail.

(6) Copies of any forms referenced above can be obtained by writing to the Department of Environmental Protection, 2600 Blair Stone Road, MS 3522, Tallahassee, Florida 32399-2400, or by telephoning (850)245-8336.

Approved plans are incorporated into this permit by reference.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



Tony D. McNeal, P.E., Administrator
Coastal Construction Control Line Program

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this permit and all copies were sent on the filing date below to the following listed persons:

James Scholl, City Manager, City of Key West, jscholl@cityofkeywest-fl.gov

Michael R. Barnett, P.E., Agent, Michael.Barnett@tetrattech.com

Jennie Cowart, Field Inspector, Jennie.Cowart@dep.state.fl.us

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.



Clerk

05/08/2017

Date

NOTICE OF RIGHTS

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under sections 120.569 and 120.57, Florida Statutes, before the deadline

for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the application.

Petition for Administrative Hearing

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57, Florida Statutes. Pursuant to rule 28-106.201, Florida Administrative Code, a petition for an administrative hearing must contain the following information:

- (a) The name and address of each agency affected and each agency's file or identification number, if known;
- (b) The name, address, any e-mail address, any facsimile number, and telephone number of the petitioner, if the petitioner is not represented by an attorney or a qualified representative; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;
- (c) A statement of when and how the petitioner received notice of the agency decision;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;
- (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
- (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (**received by the Clerk**) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

Time Period for Filing a Petition

In accordance with rule 62-110.106(3), Florida Administrative Code, petitions for an administrative hearing by the applicant must be filed within 21 days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under section 120.60(3), Florida Statutes, must be filed within 21 days of publication of the notice or within 21 days of receipt of the written notice, whichever occurs first. Under section 120.60(3), Florida Statutes, however, any person who has asked the Department for notice of agency action may file a petition within 21 days of receipt of such notice, regardless of the date of publication. The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57, Florida Statutes, or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with rule 28-106.205, Florida Administrative Code.

Extension of Time

Under rule 62-110.106(4), Florida Administrative Code, a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard,

Mail Station 35, Tallahassee, Florida 32399-3000, before the applicable deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation

Mediation is not available in this proceeding.

Judicial Review

Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to section 120.68, Florida Statutes, by filing a Notice of Appeal pursuant to rules 9.110 and 9.190, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this action is filed with the Clerk of the Department.

Newspaper Publication

The Agency will not publish or require the person requesting a permit to publish in a newspaper a notice of receipt of the permit application or notice of Agency action granting or denying the permit.

Persons receiving a permit are advised that interested parties who become aware of Agency action approving or denying the permit, or who observe work on the project within certain time frames without any prior notice, may have rights to petition for an administrative hearing under Chapter 120, F.S. For this reason, it may be in the best interest of the person proposing the activity to publish, at its expense, a one-time "Notice of Permit Issuance" in a newspaper of general circulation in the county where the activity is located meeting the requirements of Chapter 50, F.S. Agency staff can provide persons with the information for such a notice upon request. Persons who are substantially affected by the proposed action may petition for an administrative hearing within the time frames specified in the notice and Chapter 120, F.S.



SHEET INDEX:

- 1 - LOCATION MAP
- 2 - EXISTING TOPOGRAPHY AND BATHYMETRY
- 3 - SEAWALL PLAN
- 4 - SEAWALL PLAN
- 5 - SEAWALL PLAN
- 6 - SEAWALL SECTIONS
- 7 - SEAWALL SECTIONS
- 8 - SEAWALL SECTIONS
- 9 - GRADING PLAN
- 10 - GRADING PLAN
- 11 - GRADING PLAN
- 12 - TURBIDITY CURTAIN PLAN
- 13 - NATURAL RESOURCE PROTECTION AND PLANTING PLAN

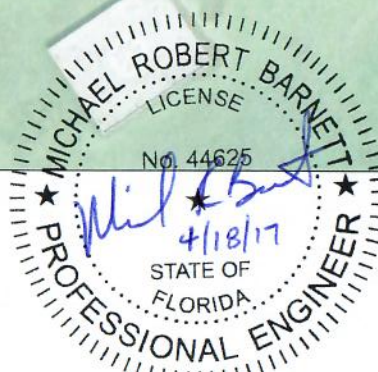
NOTES:

1. THE DESIGN PLANS AND SPECIFICATIONS SUBMITTED HEREIN ARE IN COMPLIANCE WITH THE REQUIREMENTS OF CHAPTER 62B-33, FLORIDA ADMINISTRATIVE CODE.

PROJECT NAME:
REST BEACH SHORELINE STABILIZATION

APPLICANT:
CITY OF KEY WEST

SITE ADDRESS:
WHITE STREET & ATLANTIC BLVD
KEY WEST, FL 33040



Michael R. Barnett P.E.
License No. 44625
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FOR REGULATORY REVIEW ONLY



0 75 150 300 600
Graphic Scale 1 Inch = 300 Ft.

**REST BEACH
SHORELINE STABILIZATION**

KEY WEST, FL

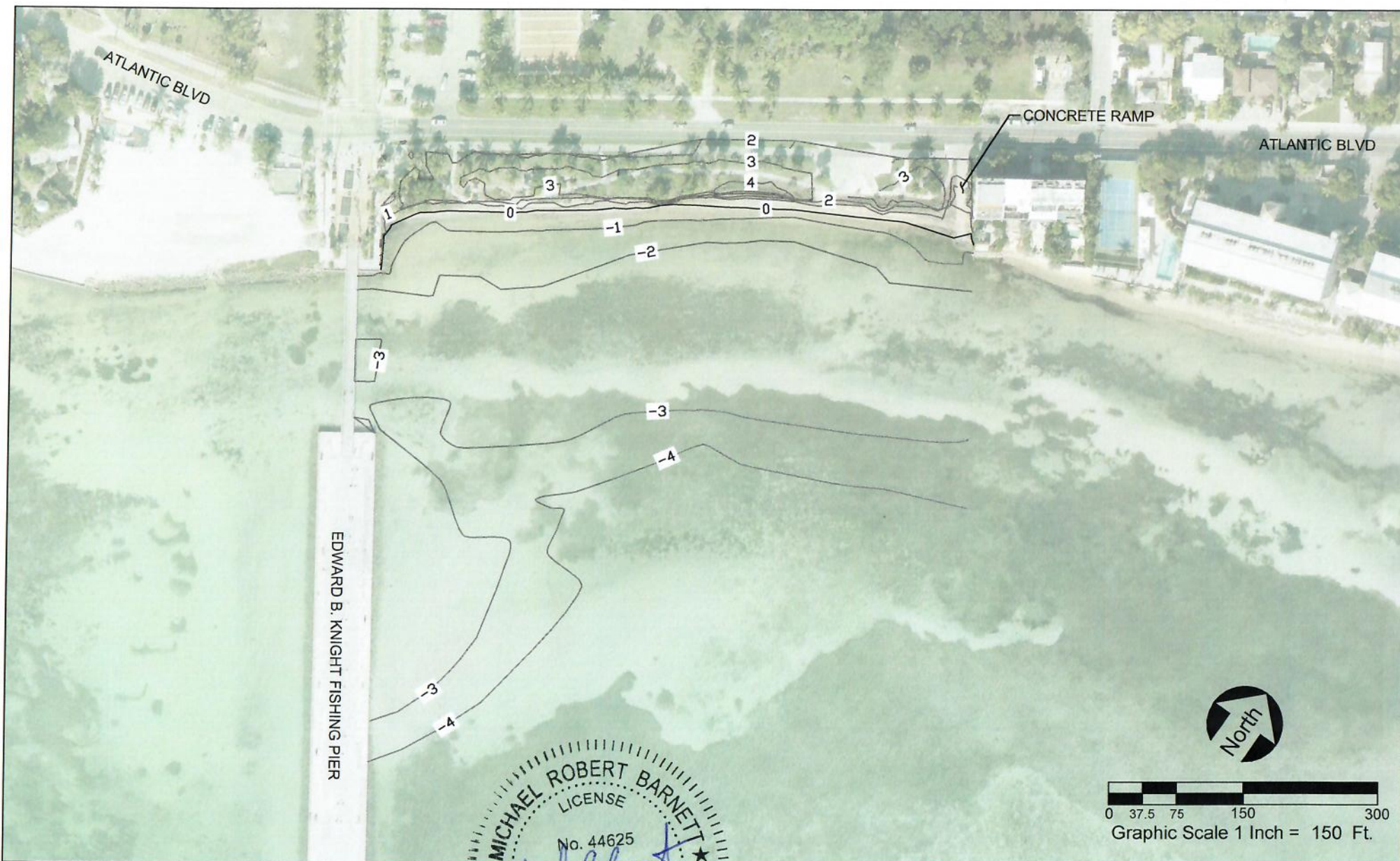
LOCATION MAP



TETRA TECH, INC.
759 SOUTH FEDERAL HWY
SUITE 314
STUART, FL 34994-2936
TEL: (772) 781-3400

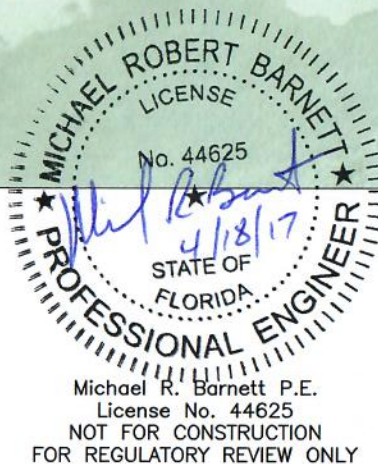
CERTIFICATE OF AUTHORIZATION NO. 2429

Drawn by:	J. DAVIS
Checked by:	R. CZAPINSKI
Reviewed by:	M. BARNETT
Design file no.	1_LocPlan.dwg
Drawing scale:	AS SHOWN
Date:	4-18-17
Sheet 1 of 13	



NOTES:

1. BATHYMETRIC SURVEY DATA COLLECTED BY AVIROM & ASSOCIATES, INC. ON MARCH 17, 2016.
2. ELEVATIONS SHOWN ARE IN FEET AND REFERENCED TO NAVD-88. CONTOURS ARE DEPICTED IN ONE-FOOT INTERVALS.
3. HORIZONTAL COORDINATES, WHERE DEPICTED, ARE IN FLORIDA, STATE PLANE EAST, NAD83, FEET.



LEGEND:

- MAJOR CONTOUR (5' INTERVALS)
- MINOR CONTOUR (1' INTERVALS)
- ## ELEVATION (FT, NAVD-88)

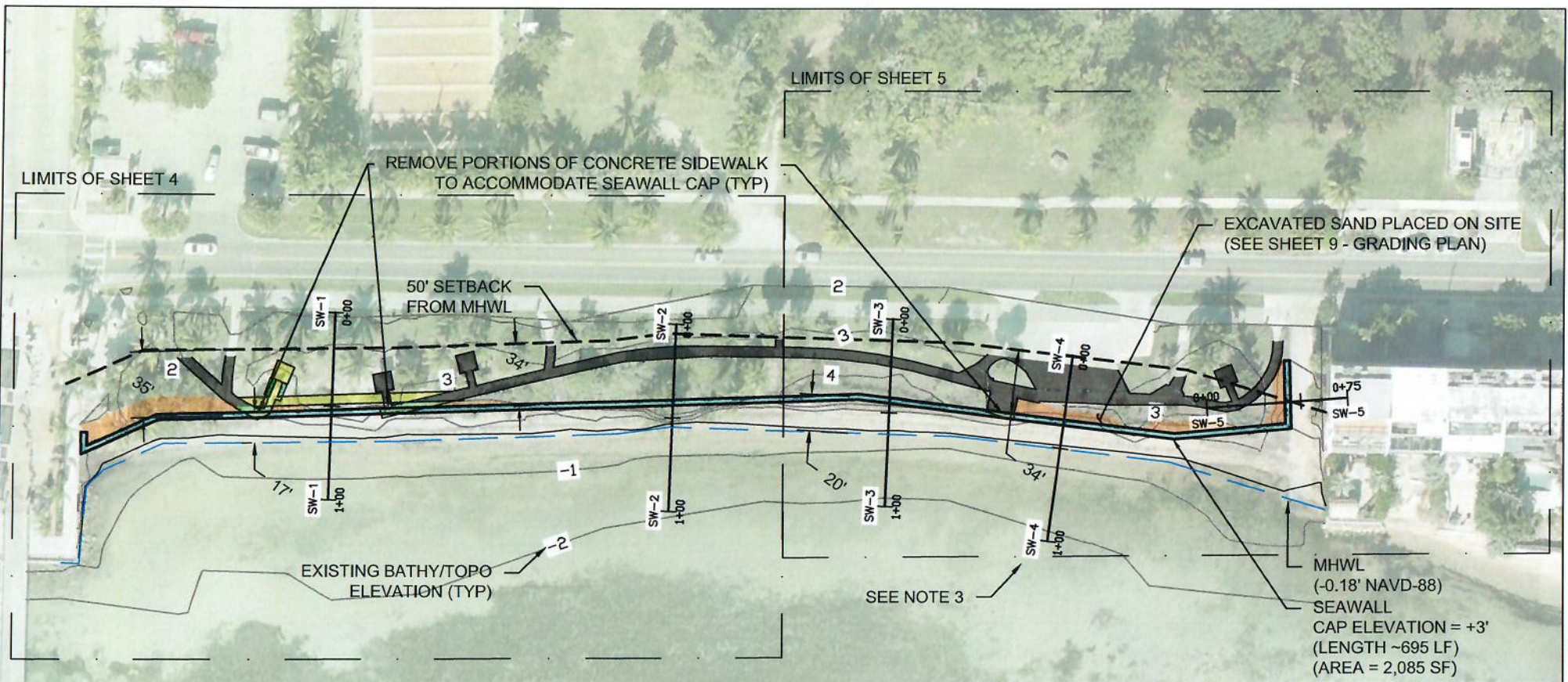
**REST BEACH
SHORELINE STABILIZATION**
KEY WEST, FL
EXISTING TOPOGRAPHY AND
BATHYMETRY



TETRA TECH, INC.
759 SOUTH FEDERAL HWY
SUITE 314
STUART, FL 34994-2936
TEL: (772) 781-3400

CERTIFICATE OF AUTHORIZATION NO. 2429

Drawn by:
J. DAVIS
Checked by:
R. CZLAPINSKI
Reviewed by:
M. BARNETT
Design file no.
2_Bathy.dwg
Drawing scale:
AS SHOWN
Date:
4-18-17
Sheet 2 of 13

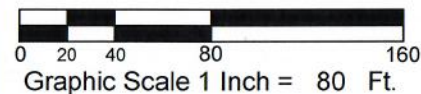
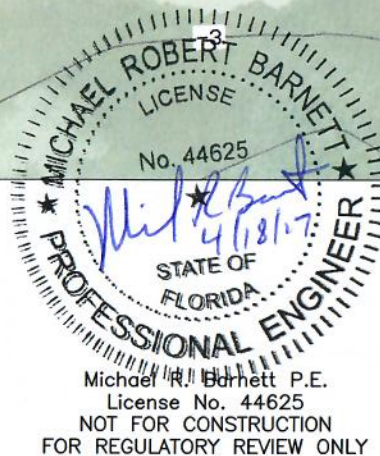


LEGEND:

- | | |
|--------------------------------|--|
| — MAJOR CONTOUR (5' INTERVALS) | ■ EXISTING CONCRETE SIDEWALK |
| — MINOR CONTOUR (1' INTERVALS) | ■ CONCRETE SIDEWALK (TO BE REMOVED) |
| ## ELEVATION (FT, NAVD-88) | ■ NEW CONCRETE SIDEWALK |
| — MHWL (-0.18 FT, NAVD-88) | ■ SAND FROM EXCAVATION (~54cy SEE SHEETS 9-11) |
| — PROPOSED SEAWALL LOCATION | |
| — 50' SETBACK FROM MHWL | |

NOTES:

- ELEVATIONS SHOWN ARE IN FEET AND REFERENCED TO NAVD-88. CONTOURS ARE DEPICTED IN ONE-FOOT INTERVALS.
- ALL WORK SHALL BE CONDUCTED ABOVE THE MEAN HIGH WATER LINE (MHWL) ELEVATION OF -0.18 FT, NAVD-88.
- SEE SHEETS 6-8 FOR SEAWALL SECTIONS.
- THE DESIGN PLANS AND SPECIFICATIONS SUBMITTED HEREIN ARE IN COMPLIANCE WITH THE REQUIREMENTS OF CHAPTER 62B-33, FLORIDA ADMINISTRATIVE CODE.

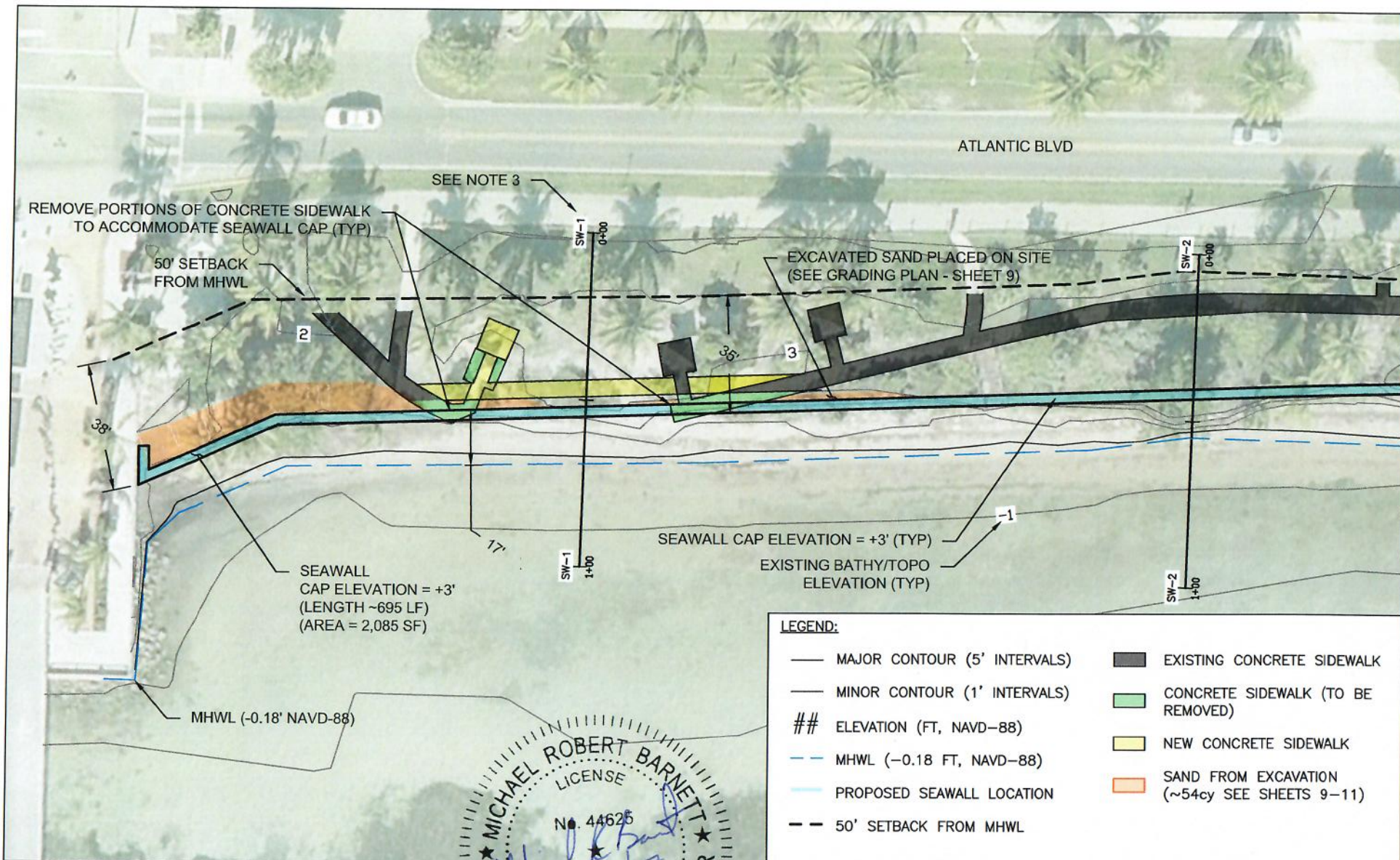


**REST BEACH
SHORELINE STABILIZATION**
KEY WEST, FL
SEAWALL PLAN

TETRA TECH, INC.
759 SOUTH FEDERAL HWY
SUITE 314
STUART, FL 34994-2936
TEL: (772) 781-3400

CERTIFICATE OF AUTHORIZATION NO. 2429

Drawn by:
J. DAVIS
Checked by:
R. CZAPINSKI
Reviewed by:
M. BARNETT
Design file no.
3.Seawall.dwg
Drawing scale:
AS SHOWN
Date:
4/18/17
Sheet 3 of 13



LEGEND:

- MAJOR CONTOUR (5' INTERVALS)
- MINOR CONTOUR (1' INTERVALS)
- ## ELEVATION (FT, NAVD-88)
- MHWL (-0.18 FT, NAVD-88)
- PROPOSED SEAWALL LOCATION
- - 50' SETBACK FROM MHWL
- EXISTING CONCRETE SIDEWALK
- CONCRETE SIDEWALK (TO BE REMOVED)
- NEW CONCRETE SIDEWALK
- SAND FROM EXCAVATION (~54cy SEE SHEETS 9-11)

NOTES:

1. ELEVATIONS SHOWN ARE IN FEET AND REFERENCED TO NAVD-88. CONTOURS ARE DEPICTED IN ONE-FOOT INTERVALS.
2. ALL SHORELINE STABILIZATION WORK SHALL BE CONDUCTED ABOVE THE MEAN HIGH WATER LINE (MHWL) ELEVATION OF -0.18 FT, NAVD-88.
3. SEE SHEETS 6-8 FOR SEAWALL SECTIONS.



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0 10 20 40 80
Graphic Scale 1 Inch = 40 Ft.

**REST BEACH
SHORELINE STABILIZATION**
KEY WEST, FL
SEAWALL PLAN



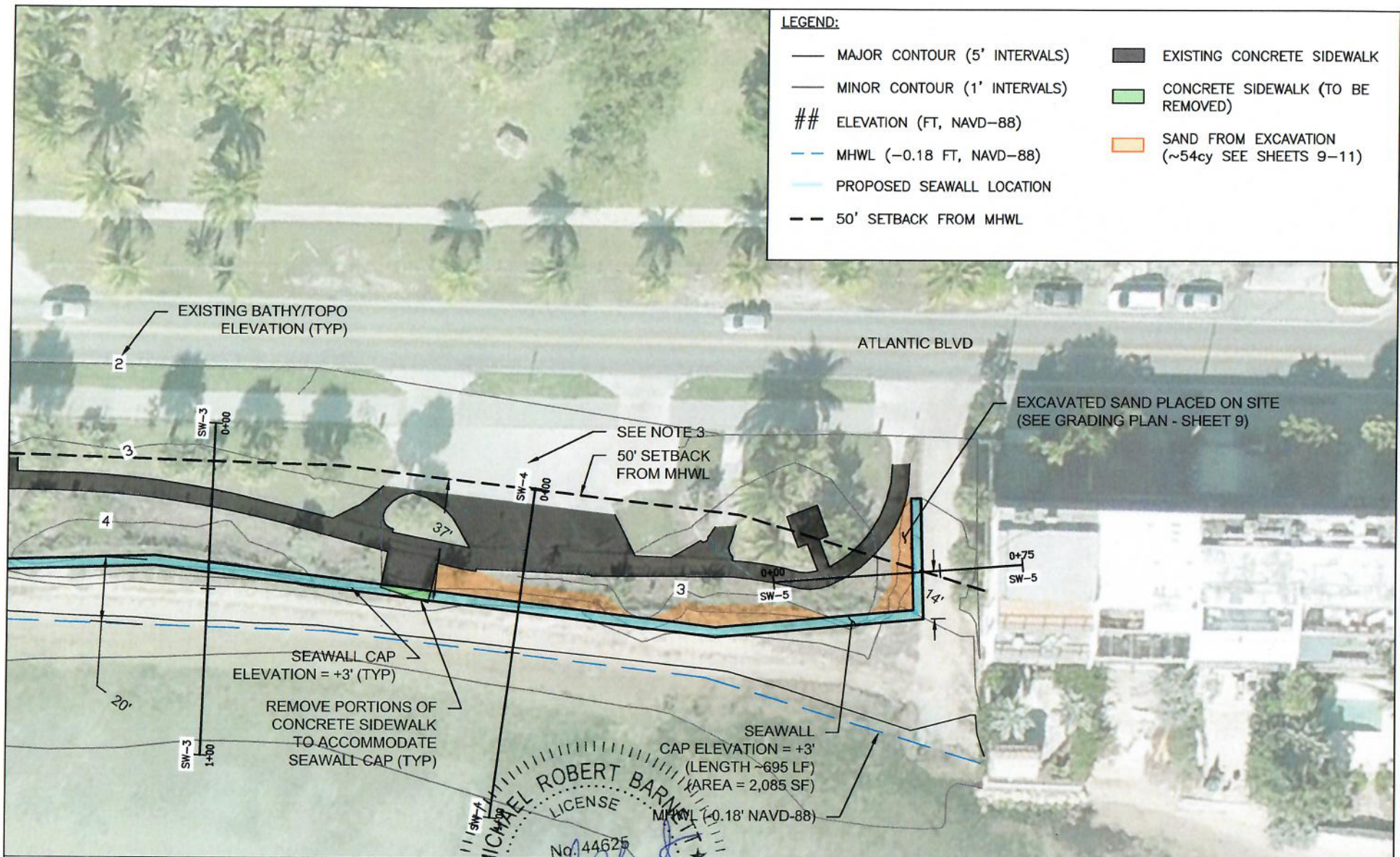
TETRA TECH, INC.
759 SOUTH FEDERAL HWY
SUITE 314
STUART, FL 34994-2936
TEL: (772) 781-3400

CERTIFICATE OF AUTHORIZATION NO. 2429

Drawn by:
J. DAVIS
Checked by:
R. CZLAPINSKI
Reviewed by:
M. BARNETT
Design file no.
3_Seawall.dwg
Drawing scale:
AS SHOWN
Date:
5-9-17
Sheet 4 of 13

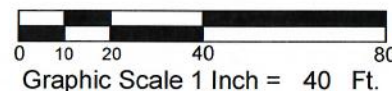
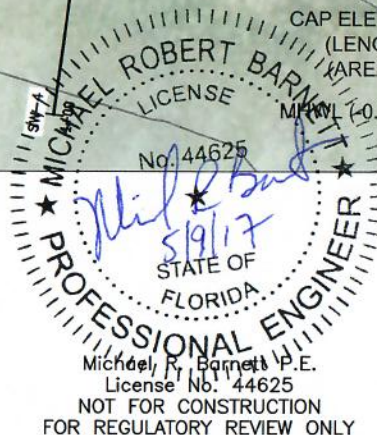
LEGEND:

- MAJOR CONTOUR (5' INTERVALS)
- MINOR CONTOUR (1' INTERVALS)
- ## ELEVATION (FT, NAVD-88)
- MHWL (-0.18 FT, NAVD-88)
- PROPOSED SEAWALL LOCATION
- 50' SETBACK FROM MHWL
- EXISTING CONCRETE SIDEWALK
- CONCRETE SIDEWALK (TO BE REMOVED)
- SAND FROM EXCAVATION (~54cy SEE SHEETS 9-11)



NOTES:

1. ELEVATIONS SHOWN ARE IN FEET AND REFERENCED TO NAVD-88. CONTOURS ARE DEPICTED IN ONE-FOOT INTERVALS.
2. ALL SHORELINE STABILIZATION WORK SHALL BE CONDUCTED ABOVE THE MEAN HIGH WATER LINE (MHWL) ELEVATION OF -0.18 FT, NAVD-88.
3. SEE SHEETS 6-8 FOR SEAWALL SECTIONS.



**REST BEACH
SHORELINE STABILIZATION**
KEY WEST, FL
SEAWALL PLAN

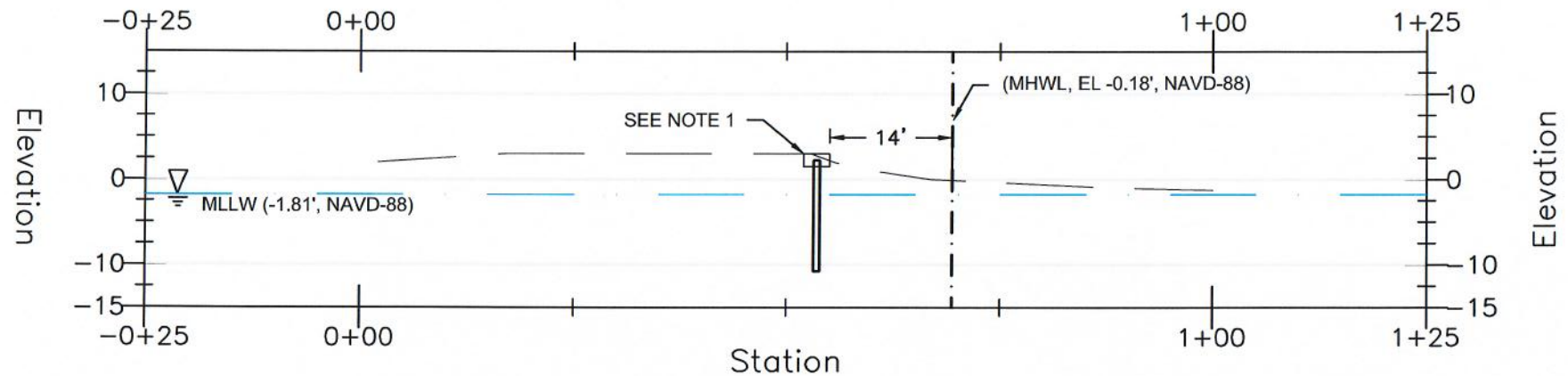


TETRA TECH, INC.
759 SOUTH FEDERAL HWY
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STUART, FL 34994-2936
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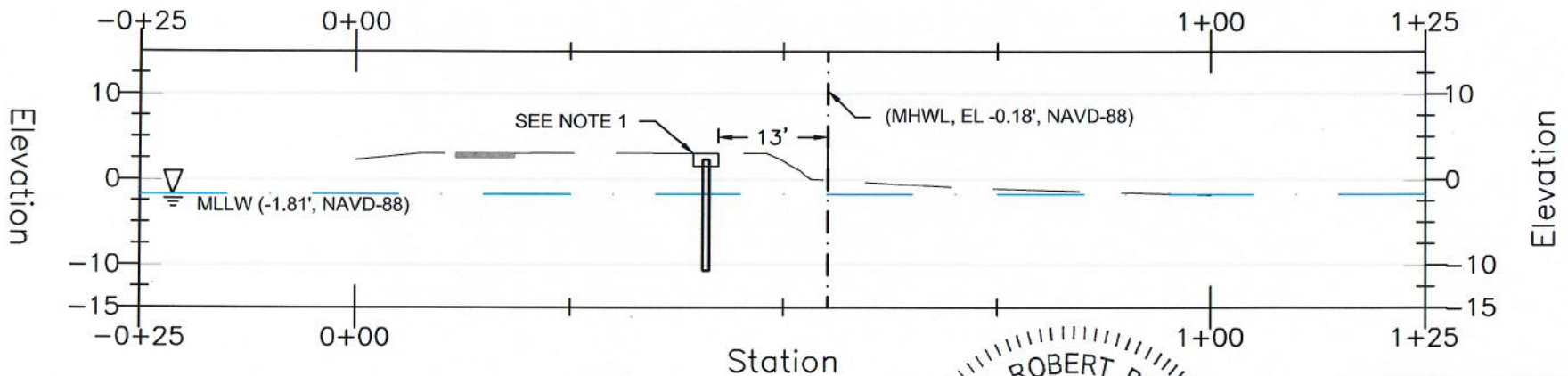
CERTIFICATE OF AUTHORIZATION NO. 2429

Drawn by:
J. DAVIS
Checked by:
R. CZLAPINSKI
Reviewed by:
M. BARNETT
Design file no.
3_Sewall.dwg
Drawing scale:
AS SHOWN
Date:
5-9-17
Sheet 5 of 13

Profile View of SW-1



Profile View of SW-2

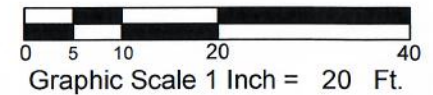


LEGEND:

— — EXISTING TOPO/BATHY — — MLLW (-1.81', NAVD-88)

NOTES:

1. CONTRACTOR SHALL EXCAVATE AS NECESSARY TO ACCOMMODATE SEAWALL CAP. TOP OF CAP SHALL BE SET AT AN ELEVATION OF +3' NAVD-88. EXCESS CUT MATERIAL SHALL BE REMOVED FROM THE SITE AND/OR PLACED AS SHOWN ON THE PLANS. A TOTAL OF 66 CY OF CUT MATERIAL IS ANTICIPATED (~54 CY SAND).
2. SEAWALL SHALL BE STEEL SHEETPILE WITH A CONCRETE CAP.



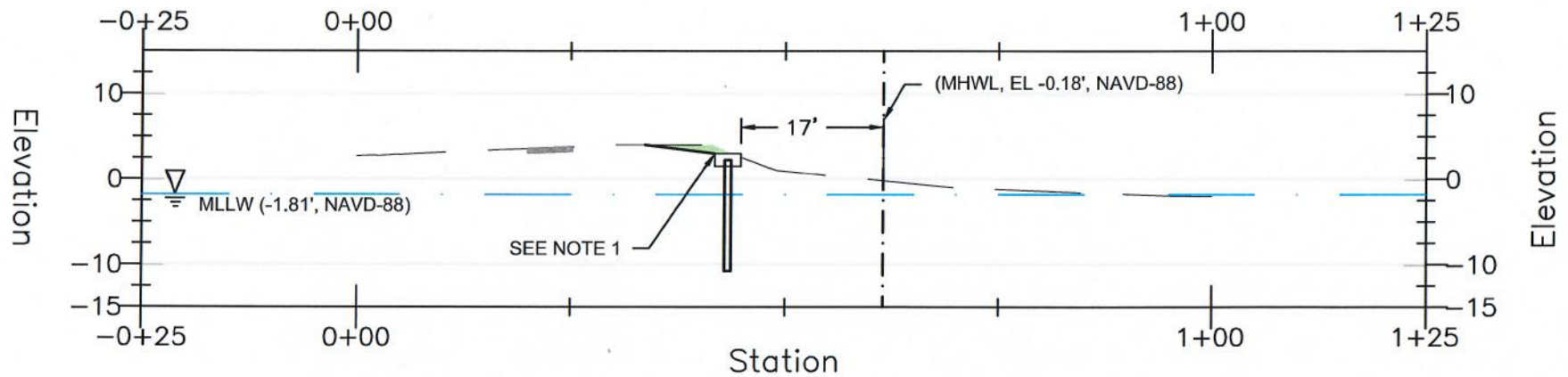
**REST BEACH
SHORELINE STABILIZATION**
KEY WEST, FL
SECTIONS

TETRA TECH, INC.
759 SOUTH FEDERAL HWY
SUITE 314
STUART, FL 34994-2936
TEL: (772) 781-3400

CERTIFICATE OF AUTHORIZATION NO. 2429

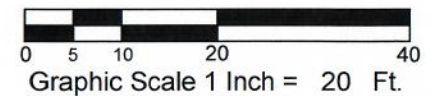
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J. DAVIS
Checked by:
R. CZAPINSKI
Reviewed by:
M. BARNETT
Design file no.
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Drawing scale:
AS SHOWN
Date:
4-18-17
Sheet 6 of 13

Profile View of SW-3



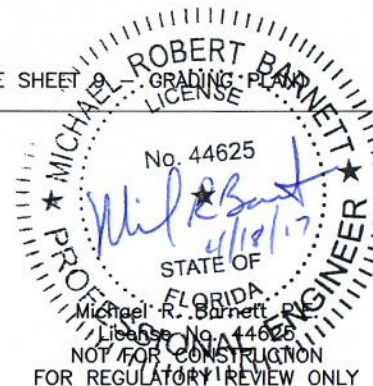
LEGEND:

— — EXISTING TOPO/BATHY — — MLLW (-1.81', NAVD-88) [Green Box] EXCAVATED AREA (SEE SHEET 9)



NOTES:

1. CONTRACTOR SHALL EXCAVATE AS NECESSARY TO ACCOMMODATE SEAWALL CAP. TOP OF CAP SHALL BE SET AT AN ELEVATION OF +3' NAVD-88. EXCESS CUT MATERIAL SHALL BE REMOVED FROM THE SITE AND/OR PLACED AS SHOWN ON THE PLANS. A TOTAL OF 66 CY OF CUT MATERIAL IS ANTICIPATED (~54 CY SAND).
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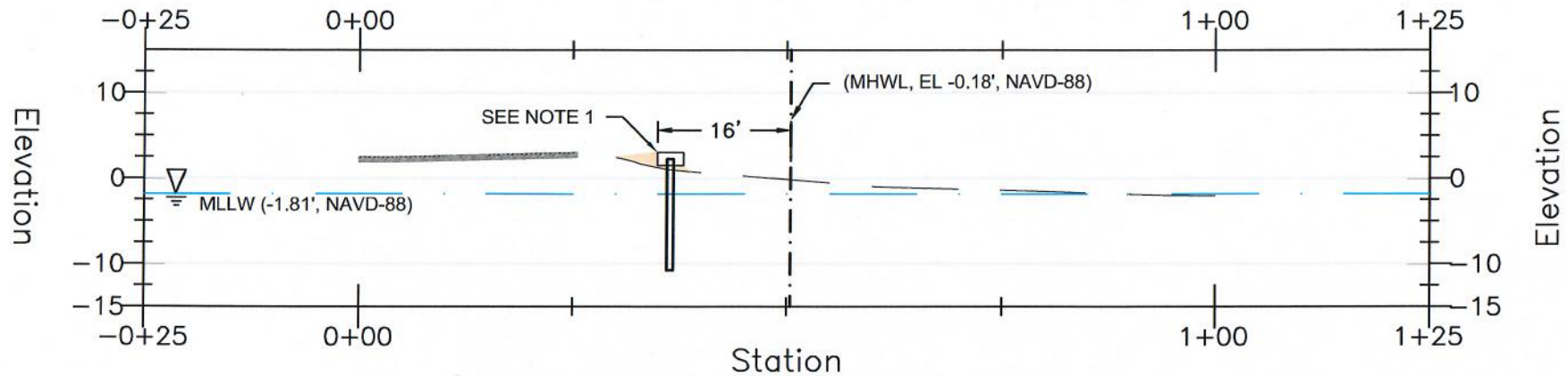
**REST BEACH
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STUART, FL 34994-2936
TEL: (772) 781-3400

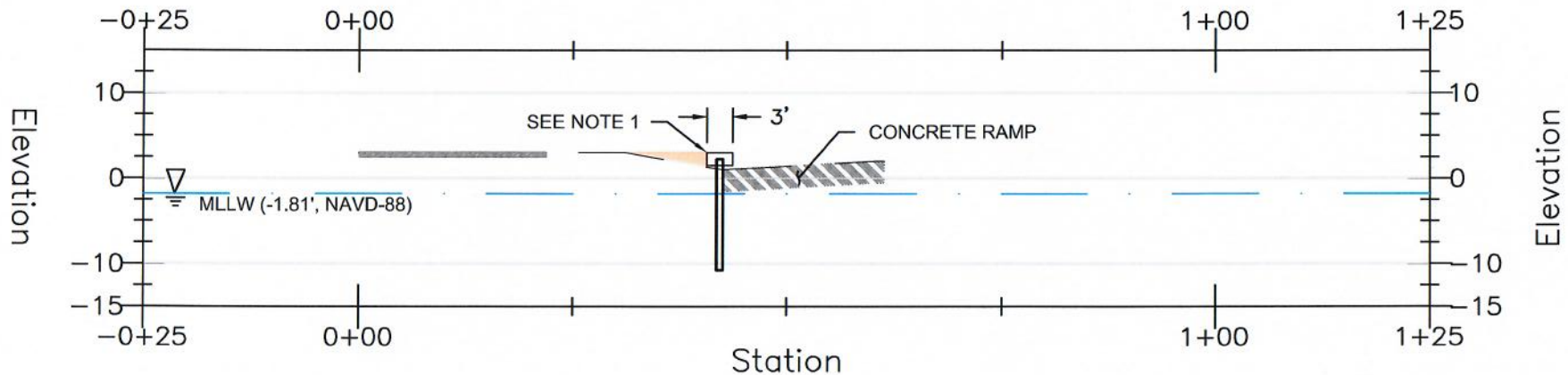
CERTIFICATE OF AUTHORIZATION NO. 2429

Drawn by:
J. DAVIS
Checked by:
R. CZLAPINSKI
Reviewed by:
M. BARNETT
Design file no.
J_Sewall.dwg
Drawing scale:
AS SHOWN
Date:
4-18-17
Sheet 7 of 13

Profile View of SW-4



Profile View of SW-5

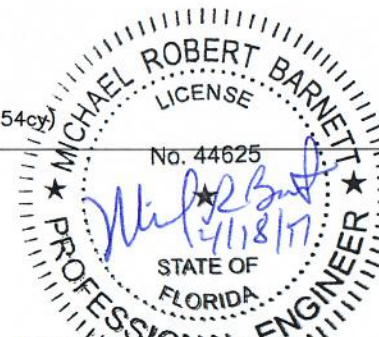


LEGEND:

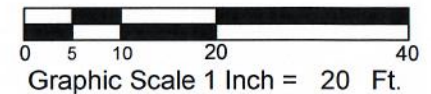
— — EXISTING TOPO/BATHY — — MLLW (-1.81', NAVD-88) SAND FROM EXCAVATION (~54cy)

NOTES:

1. CONTRACTOR SHALL EXCAVATE AS NECESSARY TO ACCOMMODATE SEAWALL CAP. TOP OF CAP SHALL BE SET AT AN ELEVATION OF +3' NAVD-88. EXCESS CUT MATERIAL SHALL BE REMOVED FROM THE SITE AND/OR PLACED AS SHOWN ON THE PLANS. A TOTAL OF 66 CY OF CUT MATERIAL IS ANTICIPATED (~54 CY SAND).
2. SEAWALL SHALL BE STEEL SHEETPILE WITH A CONCRETE CAP.



Michael R. Barnett
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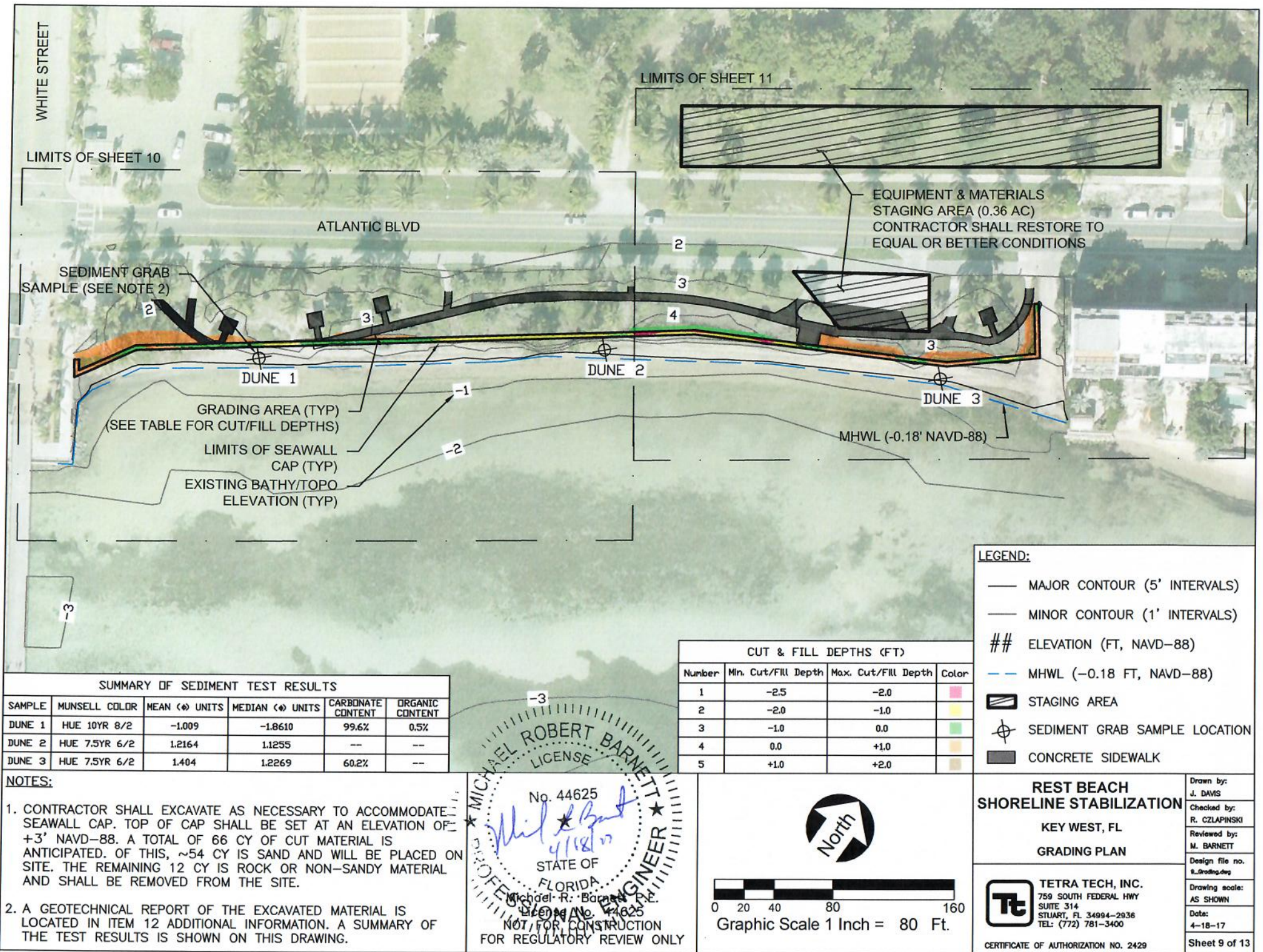


**REST BEACH
SHORELINE STABILIZATION**
KEY WEST, FL
SECTIONS

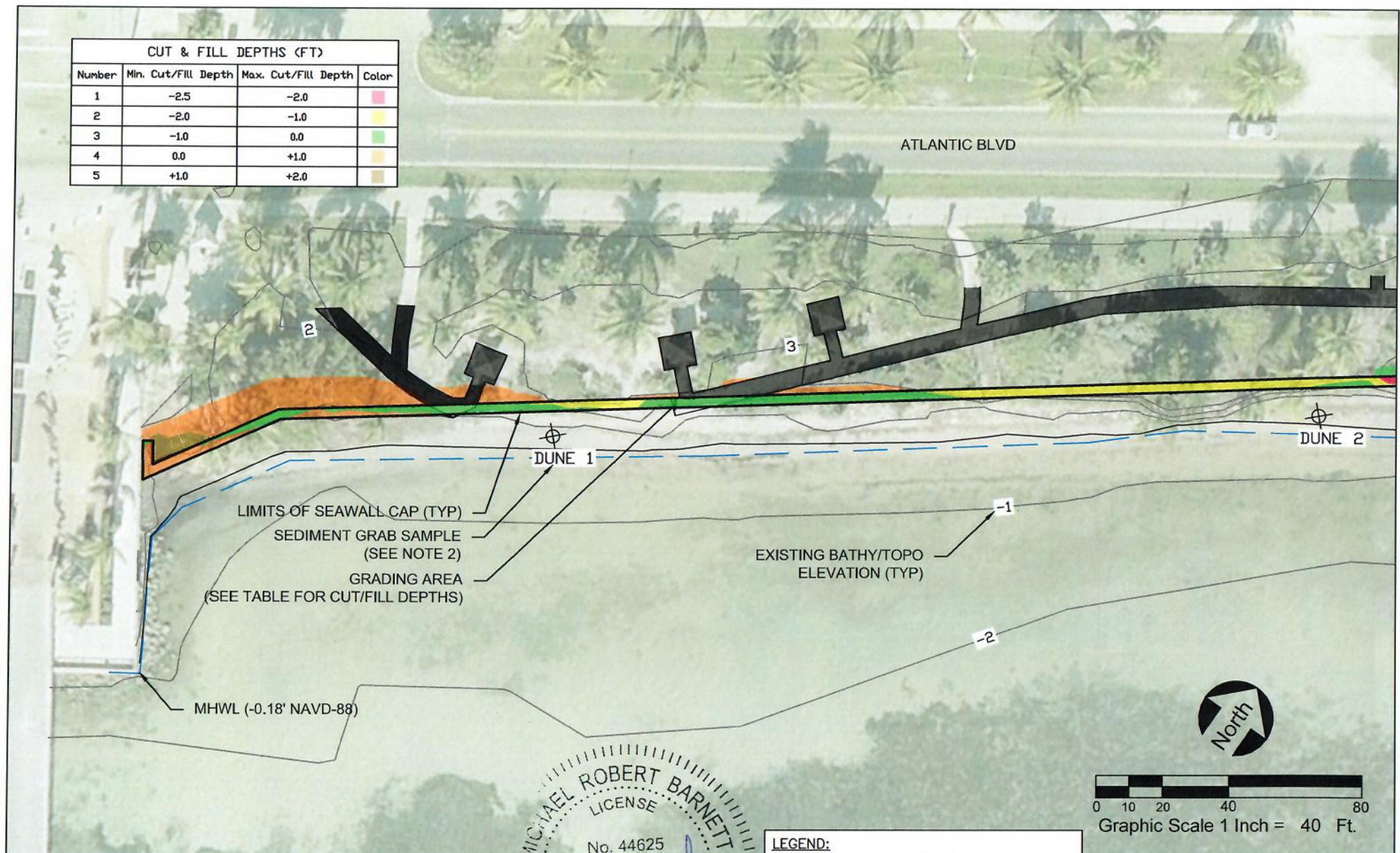
TETRA TECH, INC.
759 SOUTH FEDERAL HWY
SUITE 314
STUART, FL 34994-2936
TEL: (772) 781-3400

CERTIFICATE OF AUTHORIZATION NO. 2429

Drawn by:
J. DAVIS
Checked by:
R. CZAPINSKI
Reviewed by:
M. BARNETT
Design file no.
3_Sewall.dwg
Drawing scale:
AS SHOWN
Date:
4-18-17
Sheet 8 of 13



CUT & FILL DEPTHS (FT)			
Number	Min. Cut/Fill Depth	Max. Cut/Fill Depth	Color
1	-2.5	-2.0	Pink
2	-2.0	-1.0	Yellow
3	-1.0	0.0	Green
4	0.0	+1.0	Orange
5	+1.0	+2.0	Brown



NOTES:

- CONTRACTOR SHALL EXCAVATE AS NECESSARY TO ACCOMMODATE SEAWALL CAP. TOP OF CAP SHALL BE SET AT AN ELEVATION OF +3' NAVD-88. A TOTAL OF 66 CY OF CUT MATERIAL IS ANTICIPATED. OF THIS, ~54 CY IS SAND AND WILL BE PLACED ON SITE. THE REMAINING 12 CY IS ROCK OR NON-SANDY MATERIAL AND SHALL BE REMOVED FROM THE SITE.
- A GEOTECHNICAL REPORT OF THE EXCAVATED MATERIAL IS LOCATED IN ITEM 12 ADDITIONAL INFORMATION. A SUMMARY OF THE TEST RESULTS IS SHOWN ON THIS DRAWING.



LEGEND:

- MAJOR CONTOUR (5' INTERVALS)
- MINOR CONTOUR (1' INTERVALS)
- ## ELEVATION (FT, NAVD-88)
- - - MHWL (-0.18 FT, NAVD-88)
- ⊗ SEDIMENT GRAB SAMPLE LOCATION
- CONCRETE SIDEWALK

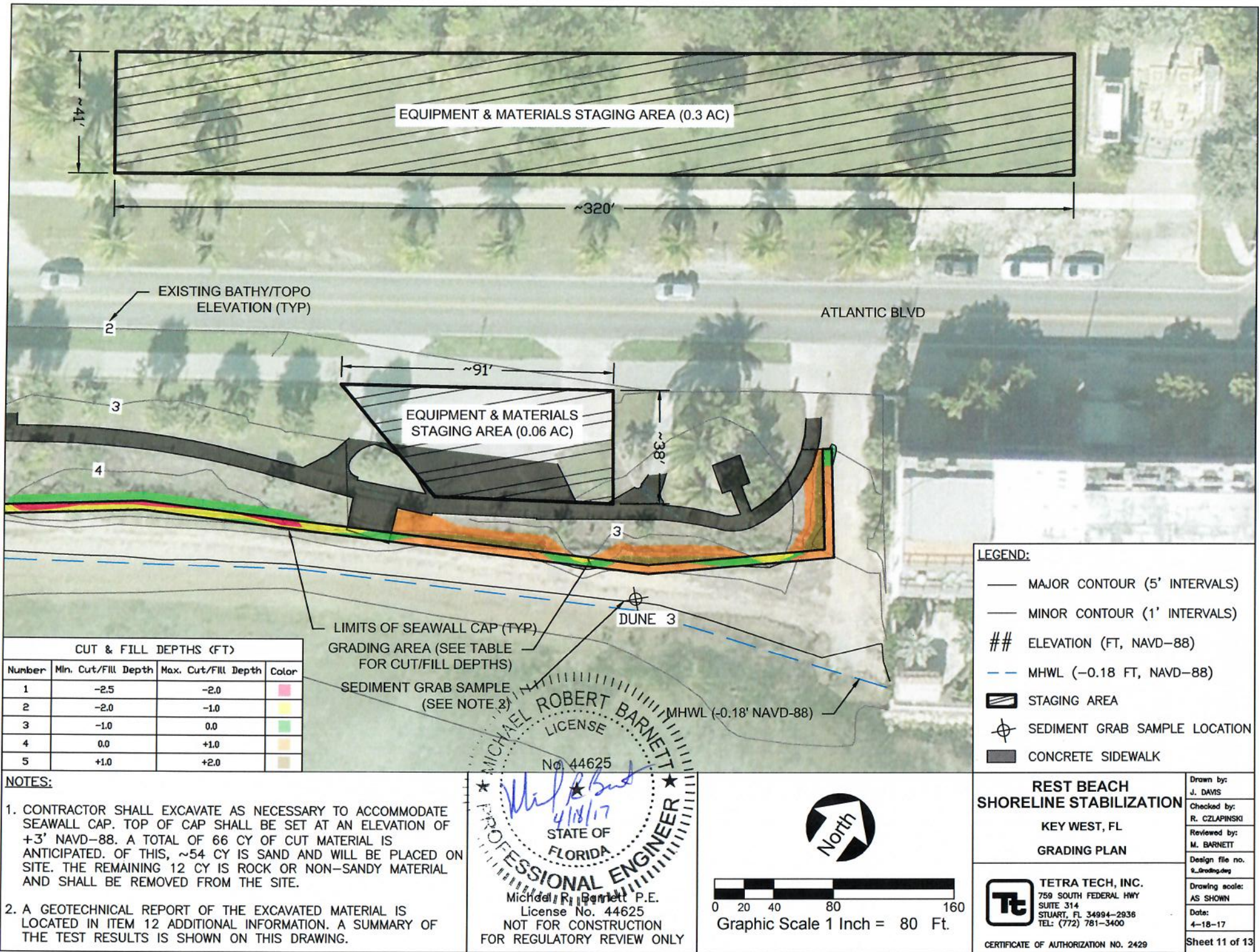
**REST BEACH
SHORELINE STABILIZATION**
KEY WEST, FL
GRADING PLAN



TETRA TECH, INC.
759 SOUTH FEDERAL HWY
SUITE 314
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CERTIFICATE OF AUTHORIZATION NO. 2429

Drawn by:
J. DAVIS
Checked by:
R. CZLAPINSKI
Reviewed by:
M. BARNETT
Design file no.
9_Grading.dwg
Drawing scale:
AS SHOWN
Date:
4-18-17
Sheet 10 of 13

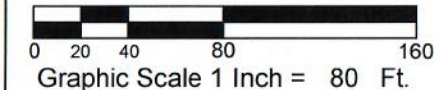


CUT & FILL DEPTHS (FT)			
Number	Min. Cut/Fill Depth	Max. Cut/Fill Depth	Color
1	-2.5	-2.0	Pink
2	-2.0	-1.0	Yellow
3	-1.0	0.0	Green
4	0.0	+1.0	Orange
5	+1.0	+2.0	Brown

NOTES:

1. CONTRACTOR SHALL EXCAVATE AS NECESSARY TO ACCOMMODATE SEAWALL CAP. TOP OF CAP SHALL BE SET AT AN ELEVATION OF +3' NAVD-88. A TOTAL OF 66 CY OF CUT MATERIAL IS ANTICIPATED. OF THIS, ~54 CY IS SAND AND WILL BE PLACED ON SITE. THE REMAINING 12 CY IS ROCK OR NON-SANDY MATERIAL AND SHALL BE REMOVED FROM THE SITE.
2. A GEOTECHNICAL REPORT OF THE EXCAVATED MATERIAL IS LOCATED IN ITEM 12 ADDITIONAL INFORMATION. A SUMMARY OF THE TEST RESULTS IS SHOWN ON THIS DRAWING.

MICHAEL ROBERT BARNETT
LICENSE
No. 44625
4/18/17
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
Michael R. Barnett P.E.
License No. 44625
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LEGEND:

- MAJOR CONTOUR (5' INTERVALS)
- MINOR CONTOUR (1' INTERVALS)
- ## ELEVATION (FT, NAVD-88)
- - - MHWL (-0.18 FT, NAVD-88)
- ▨ STAGING AREA
- ⊗ SEDIMENT GRAB SAMPLE LOCATION
- ▬ CONCRETE SIDEWALK

**REST BEACH
SHORELINE STABILIZATION**

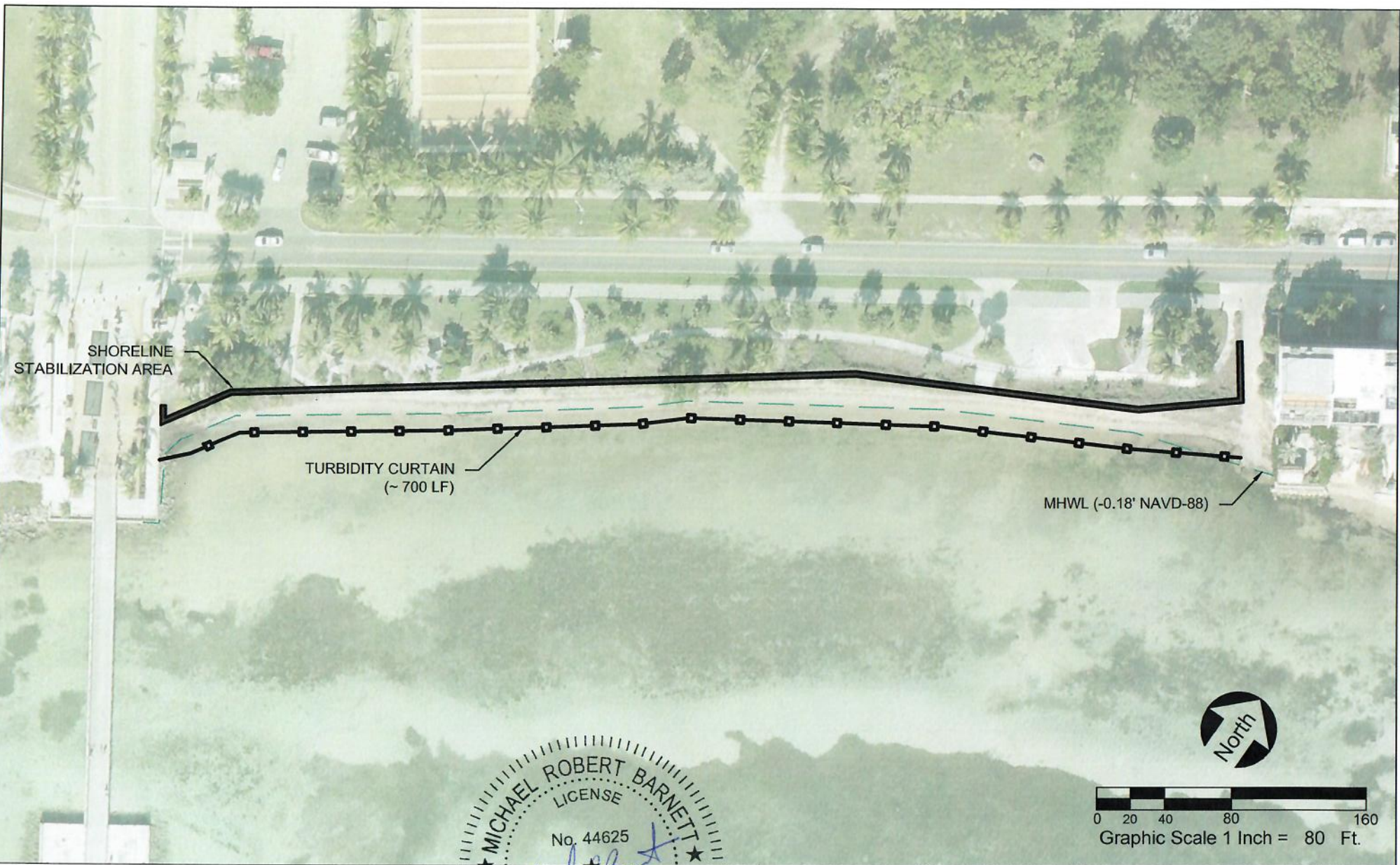
KEY WEST, FL

GRADING PLAN

TETRA TECH, INC.
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STUART, FL 34994-2936
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CERTIFICATE OF AUTHORIZATION NO. 2429

Drawn by:
J. DAVIS
Checked by:
R. CZAPINSKI
Reviewed by:
M. BARNETT
Design file no.
S_Grading.dwg
Drawing scale:
AS SHOWN
Date:
4-18-17
Sheet 11 of 13



NOTES:

1. TURBIDITY CURTAIN SHALL BE DEPLOYED & MAINTAINED FOR THE DURATION OF CONSTRUCTION ACTIVITIES.
2. WATER QUALITY SAMPLING SHALL BE CONDUCTED PER THE PERMIT REQUIREMENTS.



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LEGEND:

- MHW (-0.18 FT, NAVD-88)
- SHORELINE STABILIZATION AREA
- TURBIDITY CURTAIN

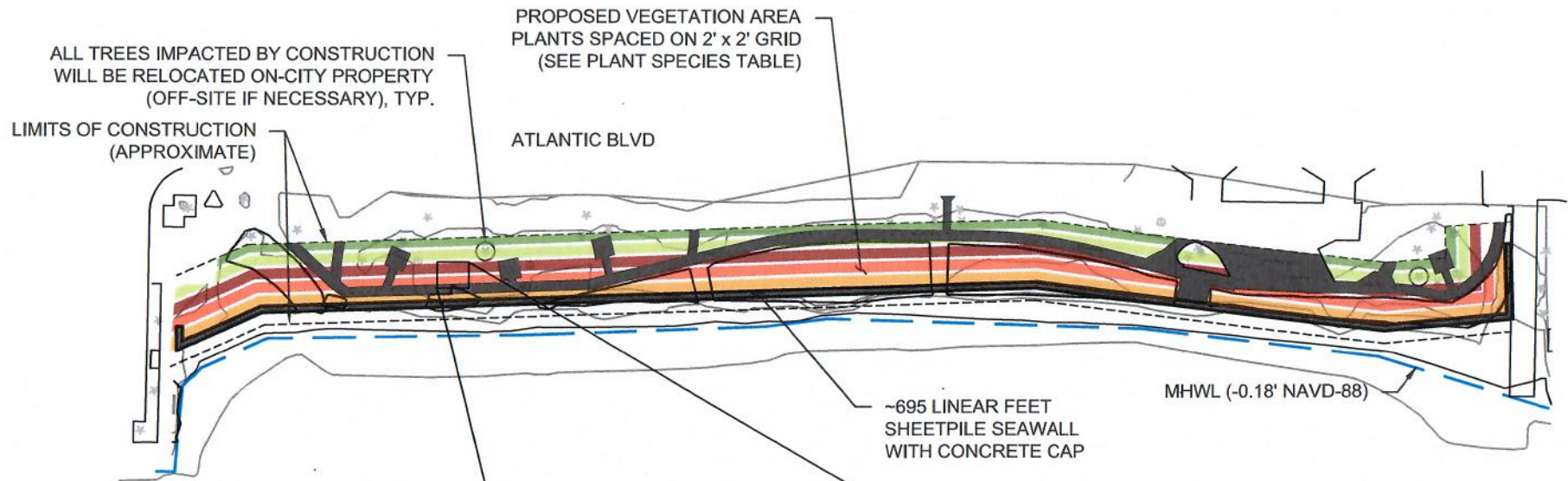
**REST BEACH
SHORELINE STABILIZATION**
KEY WEST, FL
TURBIDITY CURTAIN PLAN



TETRA TECH, INC.
759 SOUTH FEDERAL HWY
SUITE 314
STUART, FL 34994-2936
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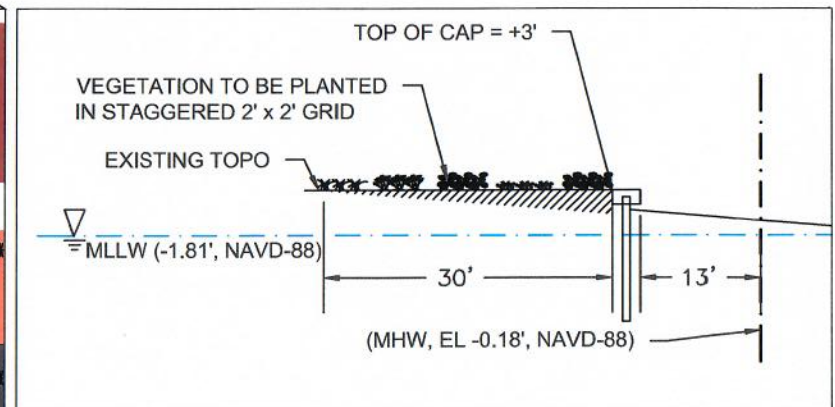
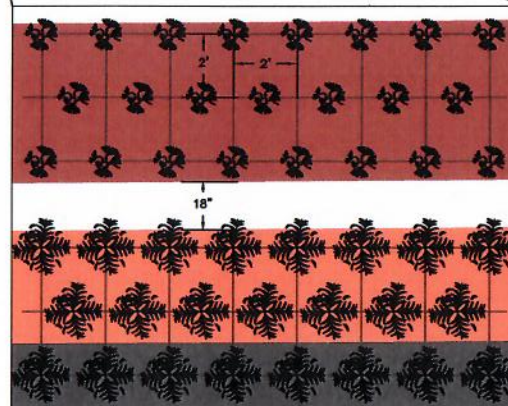
CERTIFICATE OF AUTHORIZATION NO. 2429

Drawn by:
J. DAVIS
Checked by:
R. CZAPINSKI
Reviewed by:
M. BARNETT
Design file no.
12_Turbidog
Drawing scale:
AS SHOWN
Date:
4-18-17
Sheet 12 of 13



Proposed Vegetation				
Taxa	Common Name	Vegetation Type	Approx. No. of Plantings	
<i>Borreria arborescens</i>	Green sea-oxeye-daisy	Herbaceous/Shrub	899	
<i>Helianthus debilis</i>	Dune Sunflower	Herbaceous	834	
<i>Uniola paniculata</i>	Sea oats	Herbaceous	658	
<i>Sesuvium portulacastrum</i>	Sea purslane	Herbaceous	611	
<i>Panicum amarum</i>	Beachgrass	Herbaceous	620	

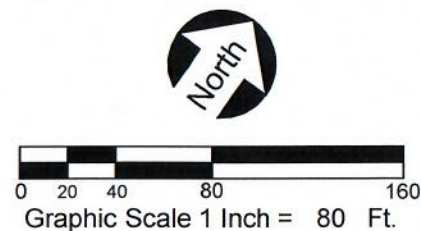
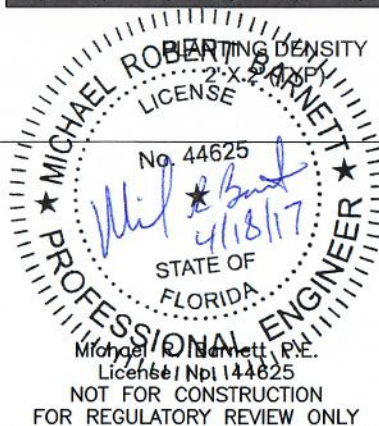
PLANT SPECIES



PLANTING DENSITY CROSS-SECTION

NOTES:

1. PLANTING PLAN AND CONSTRUCTION ACTIVITY PLANNING ARE IN ACCORDANCE WITH 62B-33.005, F.A.C.
2. APPROXIMATE AREA POTENTIALLY IMPACTED BY CONSTRUCTION IS 24,347 SF.
3. ALL TREES IMPACTED BY CONSTRUCTION WILL BE RELOCATED ON CITY PROPERTY (OFFSITE IF NECESSARY).



**REST BEACH
SHORELINE STABILIZATION**
KEY WEST, FL
NATURAL RESOURCE
PROTECTION & PLANTING PLAN



TETRA TECH, INC.
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CERTIFICATE OF AUTHORIZATION NO. 2429

Drawn by:
F. MARTINEZ
Checked by:
S. MCGAHEE
Reviewed by:
M. BARNETT
Design file no.
13_Planting Plan.dwg
Drawing scale:
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Date:
4-14-17
Sheet 13 of 13