

# FLAGLER SEAWALL AT PAINTER'S HILL CONSTRUCTION DRAWINGS FLAGLER COUNTY, FLORIDA

# DRAFT

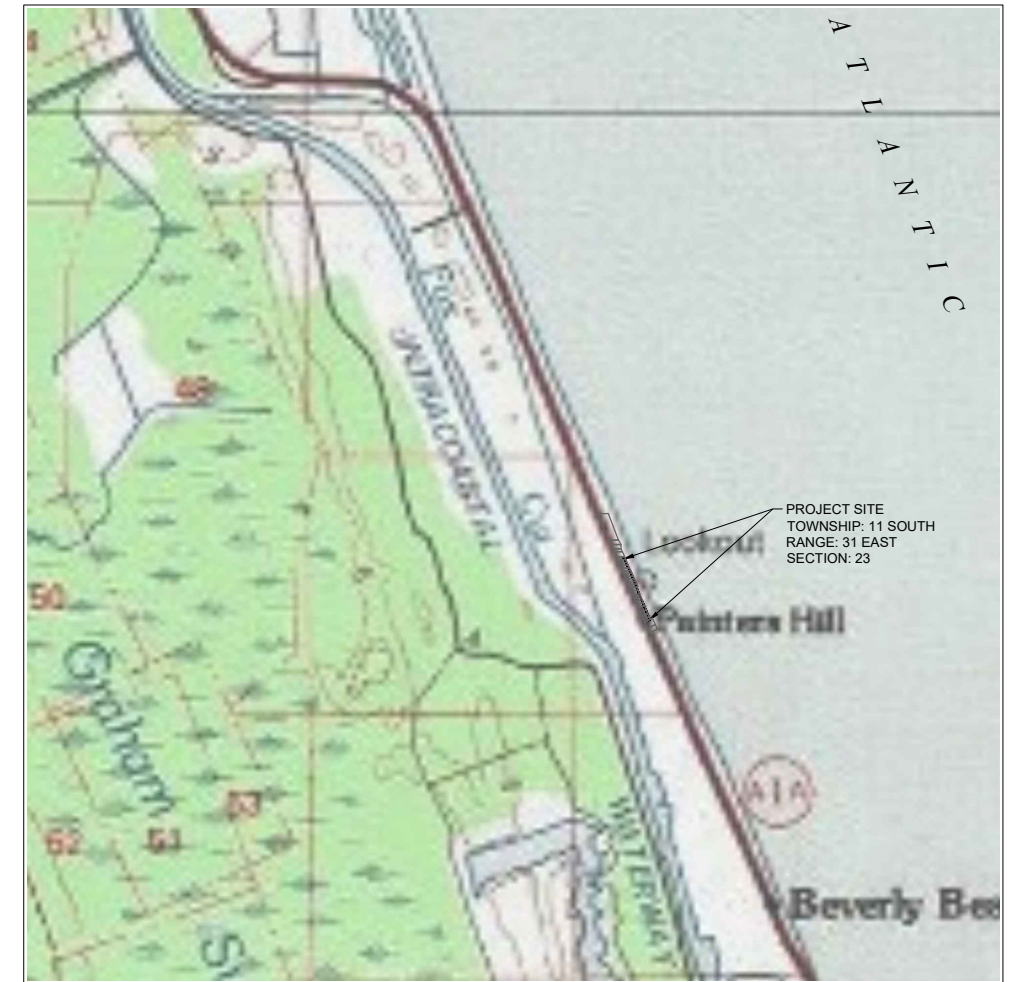


**LOCATION MAP**  
N.T.S.



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**VICINITY MAP**  
1"= 2,000' (22"x34")  
1"= 4,000' (11"x17")

REFERENCE:  
USGS 7.5' QUADRANGLE MAP,  
BEVERLY BEACH, FLORIDA 1992

SUNSHINE STATE ONE CALL OF  
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**TAYLOR ENGINEERING INC.**  
10151 DEERWOOD PARK BLVD  
BLDG 300, SUITE 300  
JACKSONVILLE, FLORIDA 32256  
(904)-731-7040  
1221 AIRPORT ROAD  
SUITE 210  
DESTIN, FL 32541  
(850)-460-7040  
CERTIFICATE OF AUTHORIZATION # 4815

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PROJECT TITLE  
**FLAGLER SEAWALL AT  
PAINTER'S HILL  
CONSTRUCTION DRAWINGS**  
FLAGLER COUNTY, FLORIDA

PROJECT NO C2016-079-03  
DATE MAY 2017

SEAL  
**DRAFT**  
HUGH C. VERKERK P.E.# 38031

**C-1**  
SHEET 1 OF 18

REBECCA JOHNSON, 5/12/2017 4:23:14 PM, X:\s\p\Projects\C2016-079-03\Flagler Coastal Seawall\Construction\Painter's Hill Seawall\C-Title.dwg

DEFINITIONS

- OWNER:** ENTITY OR INDIVIDUAL(S) UNDER CONTRACT WITH THE CONTRACTOR TO PERFORM THE WORK.
- ENGINEER:** OWNER'S DESIGNATED REPRESENTATIVE FOR CONSTRUCTION OBSERVATION AND OVERSIGHT.
- ENGINEER OF RECORD (EOR):** ENGINEER WHOSE NAME AND SEAL IS AFFIXED TO THE DRAWINGS AND SPECIFICATIONS.
- RECORD DRAWINGS:** RECORD DRAWINGS SHALL BE DEFINED AS A COPY OF THE ORIGINAL SIGNED AND SEALED DRAWINGS KEPT ONSITE AT ALL TIMES WHERE THE CONTRACTOR SHALL KEEP A RECORD OF ALL DEVIATIONS FROM THE ORIGINAL DRAWINGS MARKED IN RED PENCIL OR PEN.
- AS-BUILT SURVEY DRAWINGS:** AS-BUILT SURVEY DRAWINGS SHALL BE DEFINED AS POST-CONSTRUCTION SURVEY DRAWINGS SIGNED AND SEALED BY A REGISTERED PROFESSIONAL SURVEYOR AND REVIEWED AND MARKED/SIGNED/SEALED BY THE ENGINEER AS "AS-BUILT" DRAWINGS. THE ENGINEER SHALL MARK ON THESE AS-BUILT SURVEY DRAWINGS ALL SIGNIFICANT DEVIATIONS IN THE WORK AS RECORDED BY THE CONTRACTOR ON THE RECORD DRAWINGS OR AS KNOWN TO THE ENGINEER. IF THE DEVIATIONS ARE TOO EXTENSIVE TO TRANSFER, THE ENGINEER MAY STAPLE TOGETHER THE AS-BUILT SURVEY DRAWINGS WITH THE RECORD DRAWINGS AND MARK THE FIRST SHEET OF EACH AS "AS-BUILT".
- U.N.O.:** UNLESS NOTED OTHERWISE

GENERAL NOTES

- THE CONTRACTOR SHALL INVESTIGATE THE PROJECT SITE, PRIOR TO INITIATING ANY CONSTRUCTION.
- THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL STRUCTURES AND EXISTING UTILITIES, WHETHER SHOWN OR NOT ON THE DRAWINGS.
- THE CONTRACTOR SHALL PLACE BARRICADES AND SIGNS INDICATING THE AREAS AND LIMITS OF CONSTRUCTION.
- THE CONTRACTOR SHALL LIMIT CONSTRUCTION TO NORMAL WORKING HOURS FROM 8 AM TO 5 PM OR UNLESS OTHERWISE INSTRUCTED BY FLAGLER COUNTY.
- THE CONTRACTOR SHALL USE THE GEOTECHNICAL REPORTS, AS PREPARED BY UNIVERSAL ENGINEERING SCIENCES, DATED APRIL 14, 2017 TO EVALUATE EXISTING SITE CONDITIONS AND SUB-SURFACE PROFILES.
- DEMOLITION DEBRIS SHALL BE DISPOSED OF OFFSITE AT A LICENSED LANDFILL IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.
- THE CONTRACTOR SHALL ADVISE THE OWNER ON ALL SPECIAL INSPECTION REQUIREMENTS AS REQUIRED BY STATE REGULATORY AGENCIES AND LOCAL AUTHORITIES WITHIN TEN DAYS OF THE NOTICE TO PROCEED.
- THE CONTRACTOR SHALL MAINTAIN AN SET OF RECORD DRAWINGS AND SHALL KEEP A RECORD OF ALL DEVIATIONS FROM THE ORIGINAL DRAWINGS MARKED IN RED PENCIL OR PEN. THE RECORD DRAWINGS SHALL BE KEPT ONSITE AND SHALL BE AVAILABLE FOR INSPECTION BY THE ENGINEER.
- WHEN ALL SUBSTANTIAL WORK IS DONE AND BEFORE NOTICE OF FINAL COMPLETION OF THE WORK, THE CONTRACTOR SHALL SUBMIT THE ORIGINAL RECORD DRAWINGS TO THE ENGINEER AND UP TO 5 FULL SIZE OR REDUCED SIZE COPIES AS REQUESTED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE ACCESS TO THE WORK FOR EVALUATION BY THE ENGINEER, REGULATORY AGENCIES, AND OWNER.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH THE ENGINEER AS NECESSARY FOR CONSTRUCTION OBSERVATION AND AS-BUILT CERTIFICATION. THE CONTRACTOR SHALL NOTIFY THE EOR AT APPROPRIATE AND APPROVED TIMES DURING THE COURSE OF THE WORK THAT THE CONTRACTOR IS READY FOR OBSERVATION OF THE WORK. WORK THAT IS ASSEMBLED OR COVERED SO THAT THE ENGINEER CANNOT OBSERVE THE WORK PROPERLY SHALL BE DISASSEMBLED, UNCOVERED, OR DESTROYED AS NECESSARY FOR OBSERVATION. THE COSTS OF REPAIR OR RESTORATION OF THIS WORK SHALL BE BORNE SOLELY BY THE CONTRACTOR.
- THE CONTRACTOR SHALL PROVIDE PERSONNEL AND EQUIPMENT FOR EOR TO OBSERVE AND INQUIRE ABOUT THE WORK. THIS MAY INCLUDE PROJECT MANAGERS, SUPERINTENDENTS, FOREMAN, LABORERS, LADDERS, HARD HATS, LIFTS, SCAFFOLDING, MEASURING DEVICES, SURVEY EQUIPMENT, ETC..
- THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SHORING, BRACING, OR OTHER MEANS/METHODS NECESSARY TO STABILIZE THE STRUCTURE UNTIL COMPLETED WITH ALL COMPONENTS INSTALLED. UNLESS SPECIFICALLY STATED ON THE DRAWINGS, THE CONTRACTOR SHALL ASSUME THE EOR HAS ONLY DESIGNED THE STRUCTURE(S) FOR THE FINAL CONSTRUCTED AND ASSEMBLED STATE AS SHOWN ON THE DRAWINGS.
- THE CONTRACTOR SHALL WARRANTY THE WORK FOR A MINIMUM OF ONE YEAR UNLESS CLEARLY DEFINED OTHERWISE IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ALL DEFECTIVE MATERIALS AND WORK AT NO COSTS TO THE OWNER WITHIN THE STATED WARRANTY PERIOD.
- ALL PERMANENT MATERIAL SHALL BE NEW. USED, RECONDITIONED, OR REMANUFACTURED MATERIAL SHALL NOT BE ALLOWED UNLESS APPROVED BY THE OWNER IN WRITING.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL AND STATE BUILDING CODES. PRE-CONSTRUCTION PLAN APPROVALS REQUIRED BY LOCAL BUILDING AUTHORITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL FORWARD ALL ENGINEERING RELATED QUESTIONS TO THE ENGINEER FOR CONSIDERATION. INSPECTIONS REQUIRED BY LOCAL BUILDING AUTHORITIES SHALL BE COORDINATED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
- THE CONTRACTOR SHALL LOCATE ANY ABOVE-GROUND AND BELOW-GROUND UTILITIES BEFORE BEGINNING WORK.
- IN THE EVENT OF A CONFLICT BETWEEN THE SPECIFICATIONS AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ADJACENT FACILITIES AND STRUCTURES CAUSED BY HIS ACTIVITIES DURING PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL RESTORE ALL SUCH DAMAGES TO THEIR PRE-CONSTRUCTION CONDITION AT NO COSTS TO THE OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SHORING AND DEWATERING OF ALL OPEN EXCAVATIONS. SHORING AND TRENCHING SHALL COMPLY WITH OSHA STANDARDS AND THE FLORIDA TRENCH SAFETY ACT.
- THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN EROSION CONTROL MEASURES AS NECESSARY TO COMPLY WITH LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

- EROSION CONTROL MEASURES SHOWN ON THE DRAWINGS ARE A MINIMUM. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY PERMIT AUTHORITIES. ANY ADDITIONAL EROSION CONTROL MEASURES SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR AT NO ADDITIONAL COSTS TO THE OWNER.
- DRAINAGE SHALL BE CONTROLLED ONSITE. DRAINAGE NOT PREVIOUSLY DISCHARGED OFFSITE SHALL NOT BE DISCHARGED TO ADJACENT PROPERTIES DURING THE COURSE OF THE WORK.
- ONSITE SOILS SHALL NOT BE ALLOWED TO ERODE OR OTHERWISE MOVE TO ADJACENT PROPERTIES.

PERMITS AND PERMIT CONDITIONS

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS NOT SUPPLIED BY THE OWNER. COSTS OF OBTAINING PERMITS NOT SUPPLIED BY THE OWNER SHALL BE BORNE BY THE CONTRACTOR. THIS SHALL INCLUDE BUT NOT BE LIMITED TO: NPDES PERMIT (OR NOI), CLEARING OR LAND DISTURBANCE PERMITS, TREE IMPACT PERMITS, CITY OR COUNTY BUILDING PERMITS, DRIVEWAY OR ENTRANCE PERMITS, TEMPORARY UTILITIES PERMITS, ETC.
- UNLESS CLEARLY SPECIFIED OTHERWISE BY THE OWNER IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR FILING ALL NOTICES OF COMMENCEMENTS AND NOTICES OF COMPLETION TO ALL PERMITTING AGENCIES INCLUDING PERMITS SUPPLIED BY THE OWNER.

AS-BUILT SURVEYS


- UNLESS CLEARLY SPECIFIED OTHERWISE IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL INCLUDE THE COST OF AN AS-BUILT SURVEY IN THE BID PRICE AND SHALL STATE A SEPARATE PRICE FOR AN AS-BUILT SURVEY IN THE BID PRICE. THE AS-BUILT SURVEY SHALL BE SIGNED AND SEALED BY A SURVEYOR LICENSED IN THE STATE OF FLORIDA AND SHALL SHOW THE LOCATION AND ELEVATION OF ALL CONSTRUCTED FEATURES AND EARTHWORK.
- THE AS-BUILT SURVEY SHALL BE SUBMITTED IN DIGITAL AND 22" X 34" PAPER VERSIONS (UP TO 5 COPIES) TO THE ENGINEER FOR APPROVAL. THE AS-BUILT SURVEY SHALL BE PERFORMED IN THE SAME HORIZONTAL AND VERTICAL COORDINATE SYSTEM THE DRAWINGS ARE IN. DIGITAL DRAWINGS SHALL BE IN AUTOCAD 2008 OR LATER VERSION.

SUBMITTALS AND TESTING REQUIREMENTS

- ALL TESTING, EITHER PRE-CONSTRUCTION OR CONSTRUCTION, AS REQUIRED HEREIN OR IN THE CONTRACT DOCUMENTS, SHALL BE PERFORMED BY AN INDEPENDENT QUALIFIED TESTING COMPANY. THE COSTS OF ALL SUCH TESTING SHALL BE BORNE BY THE CONTRACTOR AND SHALL BE INCLUDED IN THE BID PRICE.
- THE QUALIFIED TESTING AGENCY SHALL BE APPROVED PER FDOT STANDARDS, AASHTO STANDARDS OR SIMILAR SUCH STANDARDS AS APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER LICENSED IN FLORIDA AND SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IF REQUESTED.
- UNLESS MODIFIED BY THE CONTRACT DOCUMENTS, SUBMITTALS AND REQUEST FOR INFORMATION SHALL BE SUBMITTED TO THE ENGINEER IN WRITING IN A FORMAT ACCEPTABLE TO THE ENGINEER AND SHALL BE SUBMITTED A MINIMUM OF 6 WORKING DAYS, BEFORE ACTION IS REQUIRED.
- ALL REQUIRED SUBMITTALS OR MANUFACTURER'S INFORMATION SHALL BE IN U.S. CUSTOMARY UNITS.
- ALL SUBMITTALS REQUIRE APPROVAL BY THE ENGINEER U.N.O..
- SUBMITTALS SHALL INCLUDE UP TO 4 COPIES AS REQUESTED BY THE ENGINEER.

MATERIAL AND PERFORMANCE SPECIFICATIONS, SUBMITTAL AND TESTING PROCEDURES

- THESE DRAWINGS ARE ACCOMPANIED BY A SEPARATE "SPECIFICATION" PACKAGE THAT IS TO BE FULLY REVIEWED BY THE CONTRACTOR PRIOR TO BIDDING OR INITIATING CONSTRUCTION.



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 BLDG 300, SUITE 300  
 JACKSONVILLE, FLORIDA 32256  
 (904)-731-7040  
 1221 AIRPORT ROAD  
 SUITE 210  
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CERTIFICATE OF AUTHORIZATION # 4815

SEAL

DRAFT

HUGH C. VERKERK P.E.# 38031

PROJECT TITLE

**FLAGLER SEAWALL AT  
 PAINTER'S HILL  
 CONSTRUCTION DRAWINGS  
 FLAGLER COUNTY, FLORIDA**

SUNSHINE STATE ONE CALL OF  
 FLORIDA  
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NO	ZONE	REVISIONS / SUBMISSIONS	DATE
2			
2			
1			

PROJECT NO	C2016-079-03
DATE	MAY 2017
DESIGNED	HCV
DRAWN	RLJ/CAS
CHECKED	CAS
REVIEWED	KRC
SCALE	AS SHOWN

DRAWING TITLE

**PROJECT NOTES**

C-2

SHEET 2 OF 18

REBECCA JOHNSON: 5/12/2017 4:23:16 PM: X:\Iya\Projects\2016-079\Flagler Coastal Seawall Construction\Painters Hill Seawall\2016-079-C-Notes.dwg

- REFERENCES**
1. AERIAL: OCTOBER 8, 2016 (POST HURRICANE MATTHEW)
  2. SURVEY REFERENCE: A "SPECIFIC PURPOSE BOUNDARY AND TOPOGRAPHIC SURVEY" FOR TAYLOR ENGINEERING, INC. FOR USE ON PAINTER'S HILL SEAWALL IN FLAGLER COUNTY.
  3. VERTICAL REFERENCE: ALL ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988) BENCHMARK F 405 PID AQ2709, HAVING A PUBLISHED ELEVATION OF 8.05 FEET (9.08 FEET NGVD 1929).
  4. HORIZONTAL DATUM: NORTH AMERICAN DATUM 1983 FLORIDA STATE PLANES, EAST ZONE, US FOOT




**GENERAL PROJECT NOTES**

1. CONCRETE CAP WILL HAVE JOINTS IN CAP BASED ON ACTUAL LENGTH OF SEAWALL CONSTRUCTED AND WILL BE DETERMINED AT TIME OF ACTUAL CONSTRUCTION.
2. FINAL HELICAL ANCHOR LENGTH WILL BE DETERMINED AT TIME OF CONSTRUCTION AFTER TESTING.
3. FINAL HELICAL CONFIGURATION WILL BE DETERMINED AT TIME OF CONSTRUCTION AFTER TESTING.
4. FINAL RETURN WALL SUPPORT WILL BE DETERMINED AT TIME OF CONSTRUCTION.
5. BACKFILL IS TO OCCUR LANDWARD TO SEAWARD IN ALL INSTANCES AS NEAR AS PRACTICAL, IN 12" LIFTS.
6. BACKFILL COMPACTION WILL NOT OCCUR UNTIL ALL BACKFILL IS IN PLACE, UPPER 24" OF BACKFILL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY.
7. THREE (3) HELICAL ANCHOR TESTING LOCATIONS ARE NOTED ON THIS SHEET.

**VIBRATION MONITORING**

1. PRIOR TO BEGINNING THE SHEETPILE INSTALLATION, THE CONTRACTOR SHALL VISIT AND INSPECT EACH HOUSE ADJACENT TO THE PROPOSED SEAWALL LOCATION.
2. THE CONTRACTOR SHALL TAKE PHOTOGRAPHS OF BOTH THE INTERIOR AND EXTERIOR OF EACH HOUSE TO DOCUMENT ANY EXISTING HOUSE STRUCTURAL FAILURES.
3. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A QUALIFIED GEO-TECHNICAL ENGINEER TO INSTALL AND MONITOR A VIBRATION CONTROL INSTRUMENT AT EACH HOME WHERE A SEAWALL IS TO BE INSTALLED.
4. THE VIBRATION MONITOR SHALL BE MOVED TO THE NEXT HOME AS THE SEAWALL ADVANCES.
5. AFTER THE SEAWALL IS INSTALLED, THE CONTRACTOR SHALL PERFORM A "POST" EVALUATION AND INSPECTION OF EACH HOME.
6. THE CONTRACTOR IS TO OBTAIN SIGNED RELEASES FROM EACH HOMEOWNER AFTER THE SEAWALL IS INSTALLED.



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**PROJECT OVERVIEW**

**C-3**

SHEET 3 OF 18

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**UNIVERSAL ENGINEERING SCIENCES BORING LOG**

PROJECT NO.: 0601170002-000  
 REPORT NO.:  
 PAGE: A-1

PROJECT: GEOTECHNICAL EXPLORATION  
 PAINTER'S HILL SHEET PILE  
 FLAGLER COUNTY, FLORIDA

BORING DESIGNATION: **B-1** SHEET: **1 of 1**  
 SECTION: TOWNSHIP RANGE:

CLIENT: TAYLOR ENGINEERING  
 U.S. ELEVATION (ft): DATE STARTED: 4/5/17  
 WATER TABLE (ft): 8.8 DATE FINISHED: 4/5/17  
 LOCATION: SEE BORING LOCATION PLAN  
 DATE OF READING: 4/5/17 DRILLED BY: DB/M  
 REMARKS: EST. W.S.T. (ft): TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	BLOWS PER FT. INCREMENT	S (BLOWS/FT.)	W.T.	M	D	DESCRIPTION	ATTENING LIMITS		K (FT./DAY)	ORG. CONT. (%)
							LL	PL		
0						Very loose to medium dense grayish-brown to reddish-brown fine SAND with some Shell (SP)				
0-1.2	2									
1-2.2	4						0.2	4.5		
2-3.2	5									
3-3.3	5									
3-3.2	4									
3-2.4	6									
4-9.8	27									
3-8-12	20									

**UNIVERSAL ENGINEERING SCIENCES BORING LOG**

PROJECT NO.: 0601170002-000  
 REPORT NO.:  
 PAGE: A-2

PROJECT: GEOTECHNICAL EXPLORATION  
 PAINTER'S HILL SHEET PILE  
 FLAGLER COUNTY, FLORIDA

BORING DESIGNATION: **B-2** SHEET: **1 of 1**  
 SECTION: TOWNSHIP RANGE:

CLIENT: TAYLOR ENGINEERING  
 U.S. ELEVATION (ft): DATE STARTED: 4/5/17  
 WATER TABLE (ft): 8.8 DATE FINISHED: 4/5/17  
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							LL	PL		
0						Very loose to dense grayish-brown to reddish-brown fine SAND with some Shell (SP)				
0-1.2	1									
1-2.1	3									
2-1.2	3						0.2	4.3		
3-2.4	6									
3-3.3	6									
3-3.3	6									
3-3.3	6									
2-6.9	14									
11-17-20	37									

**UNIVERSAL ENGINEERING SCIENCES BORING LOG**

PROJECT NO.: 0601170002-000  
 REPORT NO.:  
 PAGE: A-3

PROJECT: GEOTECHNICAL EXPLORATION  
 PAINTER'S HILL SHEET PILE  
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BORING DESIGNATION: **B-3** SHEET: **1 of 1**  
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							LL	PL		
0						Very loose to dense grayish-brown to reddish-brown fine SAND with some Shell (SP)				
0-1.2	1									
1-2.2	4									
2-3.3	6									
4-4.4	8						0.2	4.5		
5-5.5	10									
3-4.6	10									
4-7-13	20									
17-25-23	45									

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**UNIVERSAL ENGINEERING SCIENCES**

**KEY TO BORING LOGS**

**SYMBOLS**

**EMBL** No. of Blows of a 140-lb weight falling 30 inches required to drive standard spoon 1 foot

**WOR** Weight of Drill Rods

**WOH** Weight of Drill Rods and Hammer

**% REC** Percent Core Recovery from Rock Core Drilling

**RQD** Rock Quality Designation

**EOB** End Of Boring

**BT** Boring Terminated

**-200** Fines Content or % Passing No. 200 Sieve

**MC** Moisture Content

**LL** Liquid Limit

**PI** Plasticity Index

**K** Coefficient of Permeability

**OC** Organic Content

**⊠** Estimated seasonal high groundwater level

**⊡** Measured groundwater level at time of drilling

**UNIFIED CLASSIFICATION SYSTEM**

MAJOR DIVISION	SUBDIVISION	TYPICAL NAMES
GRAVELS More than 50% of coarse fraction is gravel	GW	Well-graded gravel and gravel-sand mixtures, 5% or less fines
	GP	Well-graded gravel and gravel-sand mixtures, 5% or less fines
	GM	Clayey gravel, gravel-sand mixtures
	GC	Clayey gravel, gravel-sand mixtures
SANDS More than 50% of coarse fraction is sand	SW	Well-graded sands and gravelly sands, 5% or less fines
	SP	Well-graded sands and gravelly sands, 5% or less fines
FINE GRAINED SANDS 5% to more than 50% of coarse fraction is sand	SM	Impure silts, very fine sands, less than 5% or less fines
	ML	Impure silts, very fine sands, less than 5% or less fines
	OL	Organic silts and organic clayey silts of low plasticity
SILTS AND CLAYS More than 50% of coarse fraction is silt or clay	ML	Impure silts, silty clays, silty silts, silty clays, lean clays
	CL	Organic silts and organic clayey silts of low plasticity
	OL	Organic silts, silty clays, silty silts, silty clays, lean clays
	OH	Organic silts, silty clays, silty silts, silty clays, lean clays
CLAYS More than 50% of coarse fraction is clay	ML	Impure clays, silty clays, silty silts, silty clays, lean clays
	OH	Organic clays or high plasticity, lean clays
OTHER	PT	Peat, muck and other highly organic soils
	PS	Partly sand and other highly organic soils

**MODIFIERS**

These modifiers provide our estimate of the amount of minor constituents (SILT or CLAY sized particles) in the soil sample.

Trace - 5% or less  
 With SILT or with CLAY - 6% to 11%  
 SILTY or CLAYEY - 12% to 30%  
 Very SILTY or Very CLAYEY - 31% to 50%

These modifiers provide our estimate of the amount of organic components in the soil sample.

Trace - 5% or less  
 Few - 6% to 20%  
 Some - 21% to 30%  
 Many - Greater than 31%

These modifiers provide our estimate of the amount of other components (Shell, Gravel, Etc.) in the soil sample.

Trace - 5% or less  
 Few - 6% to 10%  
 Some - 11% to 30%  
 Many - 31% to 50%

NO	ZONE	REVISIONS / SUBMISSIONS	DATE
2			
2			
2			
1			

PROJECT NO: C2016-079-03  
 DATE: MAY 2017  
 DESIGNED: HCV  
 DRAWN: RLJ/CAS  
 CHECKED: CAS  
 REVIEWED: KRC  
 SCALE: AS SHOWN

DRAWING TITLE

**CORE BORING PROFILES**

REBECCA JOHNSON, 5/12/2017 4:23:26 PM, X:\wp\Projects\C2016-079-03\Seawall\Construction\Painter's Hill Seawall\C2016-079-C-Overview.dwg

A1A-N OCEANSHORE BOULEVARD  
100' R/W - FDOT SECTION NO. 7303-201



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PAINTER'S HILL  
CONSTRUCTION DRAWINGS  
FLAGLER COUNTY, FLORIDA**

SUNSHINE STATE ONE CALL OF  
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PRELIMINARY DRAWINGS: THESE DRAWINGS  
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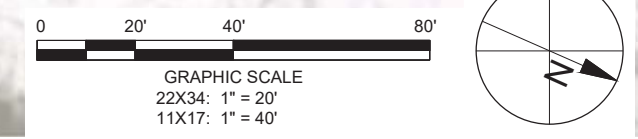
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PROJECT NO	C2016-079-03
DATE	MAY 2017
DESIGNED	HCV
DRAWN	RLJ/CAS
CHECKED	CAS
REVIEWED	KRC
SCALE	AS SHOWN

DRAWING TITLE  
**EXISTING CONDITIONS**  
**C-5**  
SHEET 5 OF 18



- REFERENCES**
1. AERIAL: OCTOBER 8, 2016 (POST HURRICANE MATTHEW)
  2. SURVEY REFERENCE: A "SPECIFIC PURPOSE BOUNDARY AND TOPOGRAPHIC SURVEY" FOR TAYLOR ENGINEERING, INC. FOR USE ON PAINTER'S HILL SEAWALL IN FLAGLER COUNTY.
  3. VERTICAL REFERENCE: ALL ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988) BENCHMARK F 405 PID AQ2709, HAVING A PUBLISHED ELEVATION OF 8.05 FEET (9.08 FEET NGVD 1929).
  4. HORIZONTAL DATUM: NORTH AMERICAN DATUM 1983 FLORIDA STATE PLANES, EAST ZONE, US FOOT



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**TAYLOR ENGINEERING INC.**  
 10151 DEERWOOD PARK BLVD  
 BLDG 300, SUITE 300  
 JACKSONVILLE, FLORIDA 32256  
 (904)-731-7040  
 1221 AIRPORT ROAD  
 SUITE 210  
 DESTIN, FL 32541  
 (850)-460-7040  
 CERTIFICATE OF AUTHORIZATION # 4815

SEAL

**DRAFT**

HUGH C. VERKERK P.E.# 38031

PROJECT TITLE

**FLAGLER SEAWALL AT  
 PAINTER'S HILL  
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 FLAGLER COUNTY, FLORIDA**

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2			
1			

PROJECT NO	C2016-079-03
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CHECKED	CAS
REVIEWED	KRC
SCALE	AS SHOWN

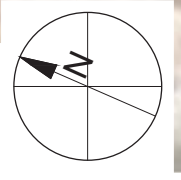
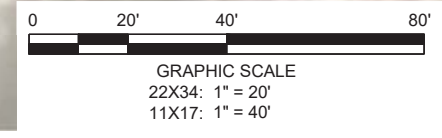
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**EXISTING CONDITIONS**

**C-6**

SHEET 6 OF 18

- REFERENCES**
1. AERIAL: OCTOBER 8, 2016 (POST HURRICANE MATTHEW)
  2. SURVEY REFERENCE: A "SPECIFIC PURPOSE BOUNDARY AND TOPOGRAPHIC SURVEY" FOR TAYLOR ENGINEERING, INC. FOR USE ON PAINTER'S HILL SEAWALL IN FLAGLER COUNTY.
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  4. HORIZONTAL DATUM: NORTH AMERICAN DATUM 1983 FLORIDA STATE PLANES, EAST ZONE, US FOOT



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**A1A-N OCEANSHORE BOULEVARD**  
**100' R/W - FDOT SECTION NO. 7303-201**

PROJECT BENCHMARK  
 SET 1/2" BAR AND CAP MARKED AT CONTROL  
 ELEVATION = 11.65'  
 NORTH AMERICAN VERTICAL DATUM 1988  
 NORTH: 1991135.22  
 EAST: 606972.45

FLOOD ZONE X (NO BFE)  
 FLOOD ZONE AE (BFE - 12 -  
 BASED ON NGVD 1929 DATUM)

COASTAL CONSTRUCTION CONTROL LINE  
 MB 28, PAGES 5-12

PROJECT BENCHMARK  
 FOUND COASTAL CONSTRUCTION CONTROL LINE  
 MONUMENT 73-77-416  
 ELEVATION = 10.52'  
 NORTH AMERICAN VERTICAL DATUM 1988

183 N. OCEAN SHORE BLVD  
 PARCEL 23-11-31-5775-00000-0040  
 ORB 498 PAGES 501-503  
 LOT 4 TOWER OCEANFRONT

3189 N. OCEAN SHORE BLVD  
 PARCEL 23-11-31-5775-00000-0050  
 ORB 988 PAGES 1395-1396  
 LOT 5 TOWER OCEANFRONT

3195 N. OCEAN SHORE BLVD  
 PARCEL 23-11-31-5775-00000-0060  
 ORB 1104 PAGE 2  
 LOT 6 TOWER OCEANFRONT

3199 N. OCEAN SHORE BLVD  
 PARCEL 23-11-31-5775-00000-0070  
 NO AVAILABLE DEED REFERENCE  
 LOT 7 TOWER OCEANFRONT

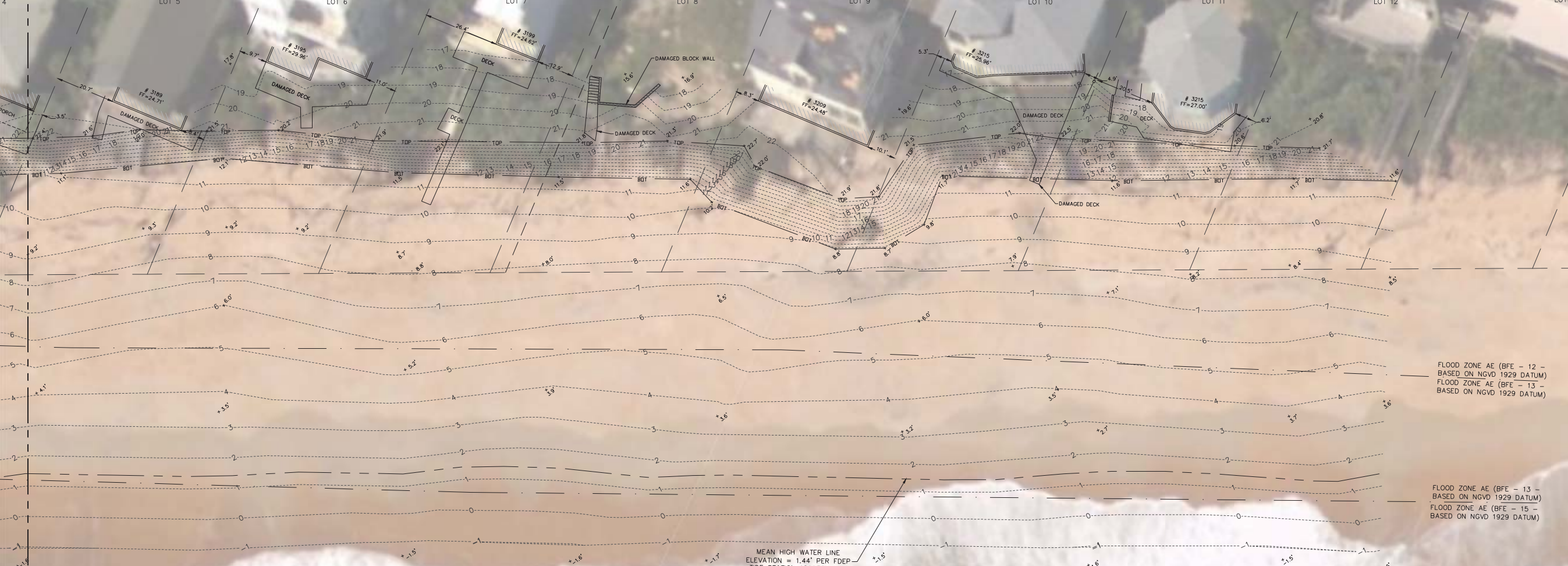
3203 N. OCEAN SHORE BLVD  
 PARCEL 23-11-31-5775-00000-0080  
 ORB 1684 PAGE 39  
 LOT 8 TOWER OCEANFRONT

3209 N. OCEAN SHORE BLVD  
 PARCEL 23-11-31-5775-00000-0090  
 ORB 2022 PAGES 31-32  
 LOT 9 TOWER OCEANFRONT

3215 N. OCEAN SHORE BLVD  
 PARCEL 23-11-31-5775-00000-0100  
 ORB 1060 PAGES 1651-1652  
 LOT 10 TOWER OCEANFRONT

3221 N. OCEAN SHORE BLVD  
 PARCEL 23-11-31-5775-00000-0110  
 ORB 2018 PAGES 679-680  
 LOT 11 TOWER OCEANFRONT

3227 N. OCEAN SHORE BLVD  
 PARCEL 23-11-31-5775-00000-0120  
 ORB 642 PAGE 833  
 LOT 12 TOWER OCEANFRONT

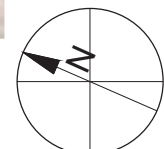
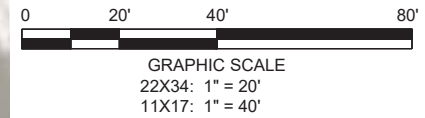


FLOOD ZONE AE (BFE - 12 -  
 BASED ON NGVD 1929 DATUM)  
 FLOOD ZONE AE (BFE - 13 -  
 BASED ON NGVD 1929 DATUM)

FLOOD ZONE AE (BFE - 13 -  
 BASED ON NGVD 1929 DATUM)  
 FLOOD ZONE AE (BFE - 15 -  
 BASED ON NGVD 1929 DATUM)

MEAN HIGH WATER LINE  
 ELEVATION = 1.44' PER FDEP  
 TIDE STATION 100930 NAVD  
 1988 VERTICAL DATUM

- REFERENCES**
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 10151 DEERWOOD PARK BLVD  
 BLDG 300, SUITE 300  
 JACKSONVILLE, FLORIDA 32256  
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 1221 AIRPORT ROAD  
 SUITE 210  
 DESTIN, FL 32541  
 (850)-460-7040  
 CERTIFICATE OF AUTHORIZATION # 4815

**DRAFT**

HUGH C. VERKERK P.E.# 38031

**FLAGLER SEAWALL AT  
 PAINTER'S HILL  
 CONSTRUCTION DRAWINGS  
 FLAGLER COUNTY, FLORIDA**

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PROJECT NO	C2016-079-03
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DESIGNED	HCV
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REVIEWED	KRC
SCALE	AS SHOWN

DRAWING TITLE  
**EXISTING CONDITIONS**

**C-7**  
 SHEET 7 OF 18

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A1A-N OCEANSHORE BOULEVARD  
100' R/W - FDOT SECTION NO. 7303-201



**TAYLOR ENGINEERING INC.**  
10151 DEERWOOD PARK BLVD  
BLDG 300, SUITE 300  
JACKSONVILLE, FLORIDA 32256  
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SUITE 210  
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(850)-460-7040  
CERTIFICATE OF AUTHORIZATION # 4815

**DRAFT**

HUGH C. VERKERK P.E.# 38031

PROJECT TITLE

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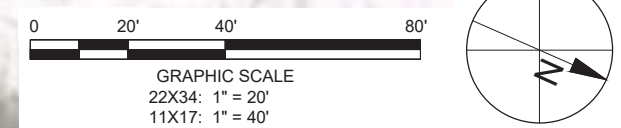
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**DEMOLITION PLAN**

**C-8**

SHEET 8 OF 18



- REFERENCES**
1. AERIAL: OCTOBER 8, 2016 (POST HURRICANE MATTHEW)
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A1A-N OCEANSHORE BOULEVARD  
100' R/W - FDOT SECTION NO. 7303-201

**TAYLOR ENGINEERING INC.**  
10151 DEERWOOD PARK BLVD  
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(904)-731-7040  
1221 AIRPORT ROAD  
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(850)-460-7040  
CERTIFICATE OF AUTHORIZATION # 4815

DRAFT

HUGH C. VERKERK P.E.# 38031

PROJECT TITLE

FLAGLER SEAWALL AT  
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FLAGLER COUNTY, FLORIDA

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PROJECT NO	C2016-079-03
DATE	MAY 2017
DESIGNED	HCV
DRAWN	RLJ/CAS
CHECKED	CAS
REVIEWED	KRC
SCALE	AS SHOWN

DRAWING TITLE

DEMOLITION PLAN

C-9

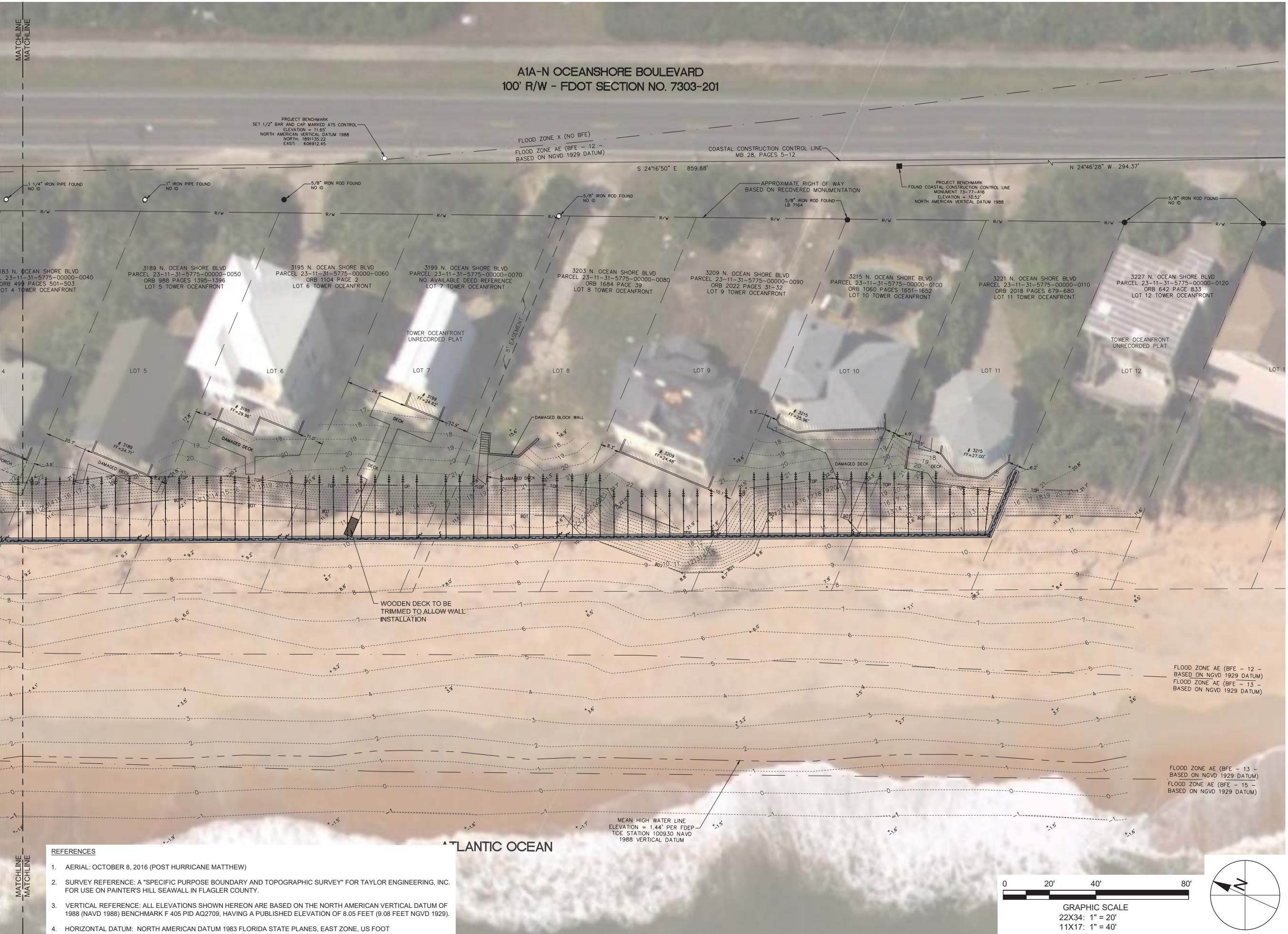
SHEET 9 OF 18



REFERENCES

1. AERIAL: OCTOBER 8, 2016 (POST HURRICANE MATTHEW)
2. SURVEY REFERENCE: A "SPECIFIC PURPOSE BOUNDARY AND TOPOGRAPHIC SURVEY" FOR TAYLOR ENGINEERING, INC. FOR USE ON PAINTER'S HILL SEAWALL IN FLAGLER COUNTY.
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4. HORIZONTAL DATUM: NORTH AMERICAN DATUM 1983 FLORIDA STATE PLANES, EAST ZONE, US FOOT

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**A1A-N OCEANSHORE BOULEVARD  
100' R/W - FDOT SECTION NO. 7303-201**

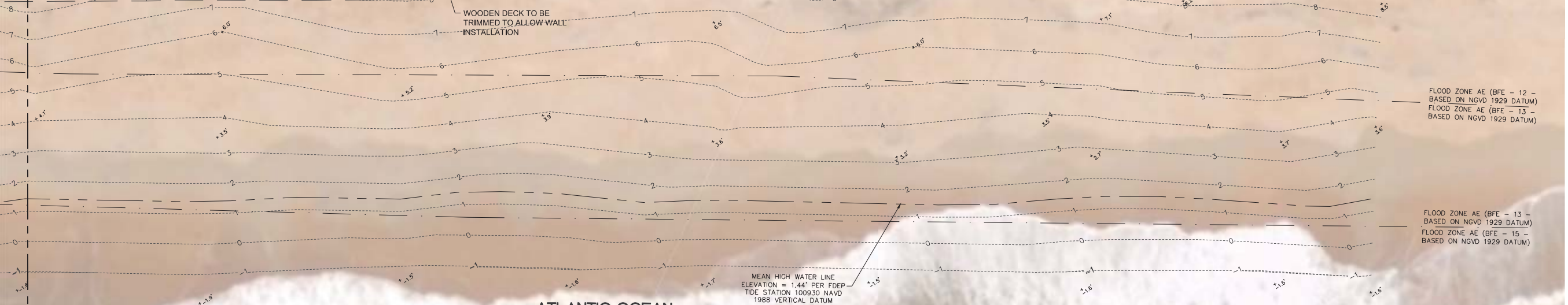
PROJECT BENCHMARK  
SET 1/2" BAR AND CAP MARKED ATTS CONTROL  
ELEVATION = 11.65'  
NORTH AMERICAN VERTICAL DATUM 1988  
NORTH: 199135.22  
EAST: 606912.45

FLOOD ZONE X (NO BFE)  
FLOOD ZONE AE (BFE - 12 -  
BASED ON NGVD 1929 DATUM)

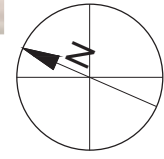
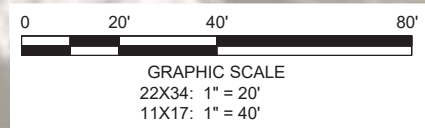
COASTAL CONSTRUCTION CONTROL LINE  
MB 28, PAGES 5-12

PROJECT BENCHMARK  
FOUND COASTAL CONSTRUCTION CONTROL LINE  
MONUMENT 73-77-A16  
ELEVATION = 18.52'  
NORTH AMERICAN VERTICAL DATUM 1988

183 N. OCEAN SHORE BLVD PARCEL 23-11-31-5775-00000-0040 ORB 488 PAGES 501-503 LOT 4 TOWER OCEANFRONT  
3189 N. OCEAN SHORE BLVD PARCEL 23-11-31-5775-00000-0050 ORB 988 PAGES 1395-1396 LOT 5 TOWER OCEANFRONT  
3195 N. OCEAN SHORE BLVD PARCEL 23-11-31-5775-00000-0060 ORB 1104 PAGE 2 LOT 6 TOWER OCEANFRONT  
3199 N. OCEAN SHORE BLVD PARCEL 23-11-31-5775-00000-0070 NO AVAILABLE DEED REFERENCE LOT 7 TOWER OCEANFRONT  
3203 N. OCEAN SHORE BLVD PARCEL 23-11-31-5775-00000-0080 ORB 1684 PAGE 39 LOT 8 TOWER OCEANFRONT  
3209 N. OCEAN SHORE BLVD PARCEL 23-11-31-5775-00000-0090 ORB 2022 PAGES 31-32 LOT 9 TOWER OCEANFRONT  
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10151 DEERWOOD PARK BLVD  
BLDG 300, SUITE 300  
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(904)-731-7040  
1221 AIRPORT ROAD  
SUITE 210  
DESTIN, FL 32541  
(850)-460-7040  
CERTIFICATE OF AUTHORIZATION # 4815

SEAL  
**DRAFT**  
HUGH C. VERKERK P.E.# 38031

PROJECT TITLE  
**FLAGLER SEAWALL AT  
PAINTER'S HILL  
CONSTRUCTION DRAWINGS  
FLAGLER COUNTY, FLORIDA**

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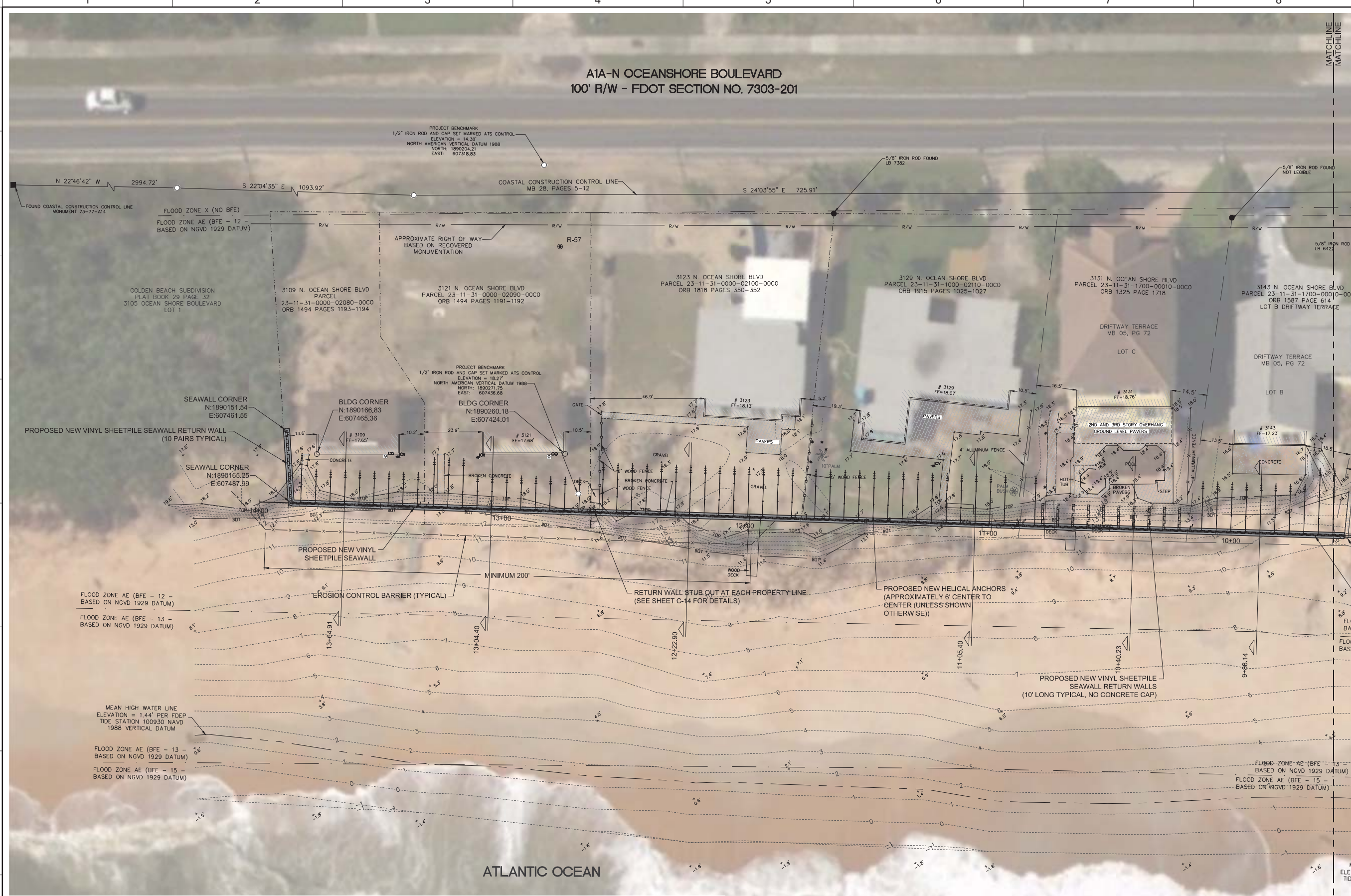
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DRAWN	RLJ/CAS
CHECKED	CAS
REVIEWED	KRC
SCALE	AS SHOWN


DRAWING TITLE  
**DEMOLITION PLAN**

**C-10**  
SHEET 10 OF 18

REBECCA JOHNSON: 5/12/2017 2:24:09 PM, X:\my\Projects\C2016-079-03\16-079-03-Demolition.dwg

**A1A-N OCEANSHORE BOULEVARD  
100' R/W - FDOT SECTION NO. 7303-201**



  
**TAYLOR ENGINEERING INC.**  
 10151 DEERWOOD PARK BLVD  
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 SUITE 210  
 DESTIN, FL 32541  
 (850)-460-7040  
 CERTIFICATE OF AUTHORIZATION #4815

SEAL  
  
**DRAFT**  
  
 HUGH C. VERKERK P.E.# 38031

PROJECT TITLE  
  
**FLAGLER SEAWALL AT  
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 FLAGLER COUNTY, FLORIDA

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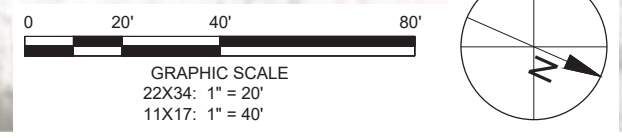
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PROJECT NO	C2016-079-03
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CHECKED	CAS
REVIEWED	KRC
SCALE	AS SHOWN

DRAWING TITLE  
  
**SITE PLAN**  
  
**C-11**  
 SHEET 11 OF 18

- REFERENCES**
- AERIAL: OCTOBER 8, 2016 (POST HURRICANE MATTHEW)
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  - HORIZONTAL DATUM: NORTH AMERICAN DATUM 1983 FLORIDA STATE PLANES, EAST ZONE, US FOOT

- EROSION CONTROL AND GENERAL VEGETATION NOTES:**
- EROSION CONTROL BARRIERS TO BE PLACED AT EACH SHEETPILE INSTALLATION AREA. BARRIER MAY BE MOVED AS SHEETPILE INSTALLATION ADVANCES.
  - THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.



REBECCA JOHNSON, 5/12/2017 4:32:21 PM, X:\yaya\p\c\c2016-079-03\Painter's Hill Seawall\C2016-079-C-11.dwg

A1A-N OCEANSHORE BOULEVARD  
100' R/W - FDOT SECTION NO. 7303-201

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(850)-460-7040  
CERTIFICATE OF AUTHORIZATION # 4815

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HUGH C. VERKERK P.E.# 38031  
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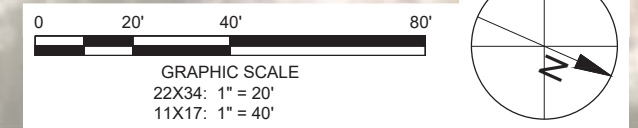
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SCALE	AS SHOWN

DRAWING TITLE  
**SITE PLAN**

**C-12**  
SHEET 12 OF 18

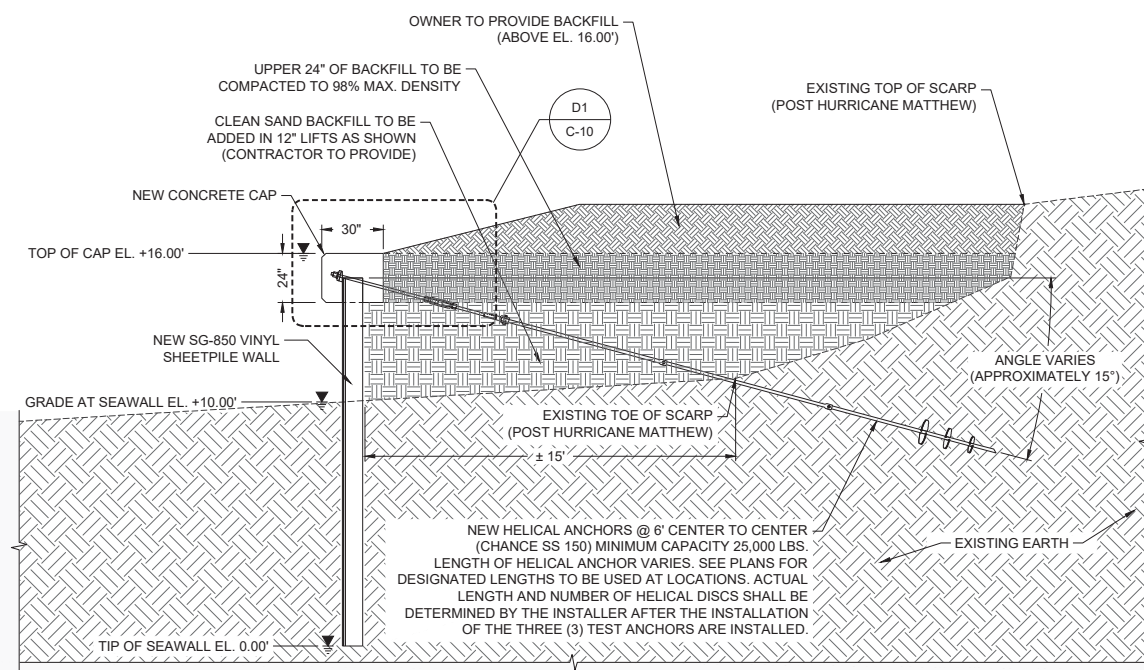


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  - VERTICAL REFERENCE: ALL ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988) BENCHMARK F 405 PID A02709, HAVING A PUBLISHED ELEVATION OF 8.05 FEET (9.08 FEET NGVD 1929).
  - HORIZONTAL DATUM: NORTH AMERICAN DATUM 1983 FLORIDA STATE PLANES, EAST ZONE, US FOOT

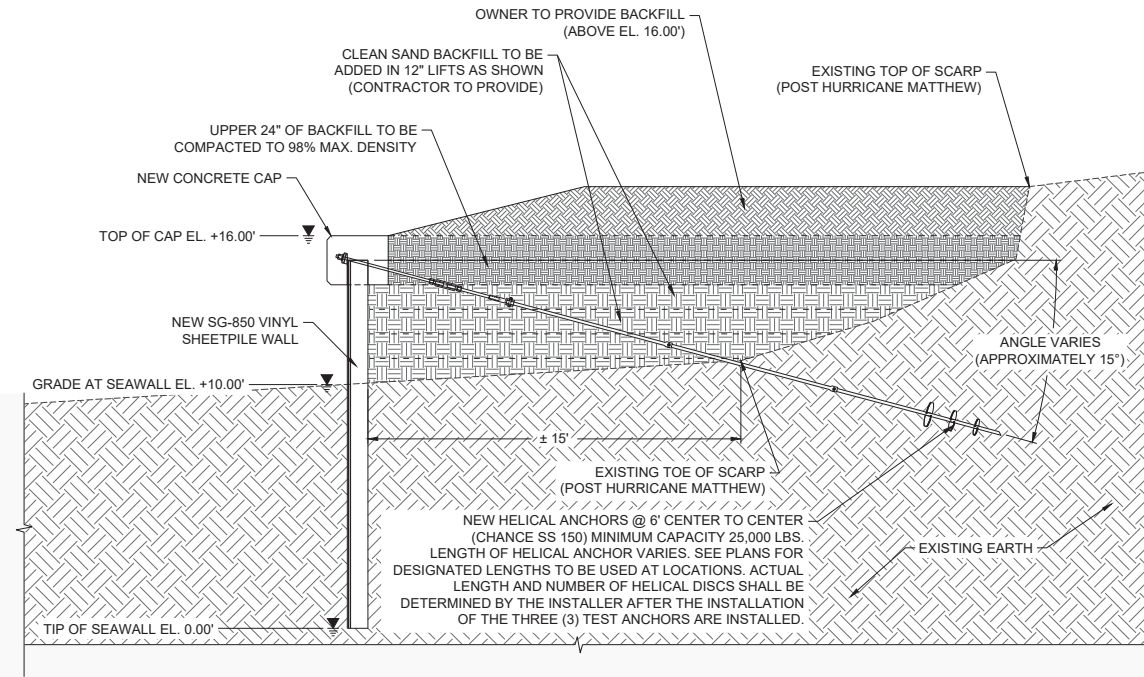


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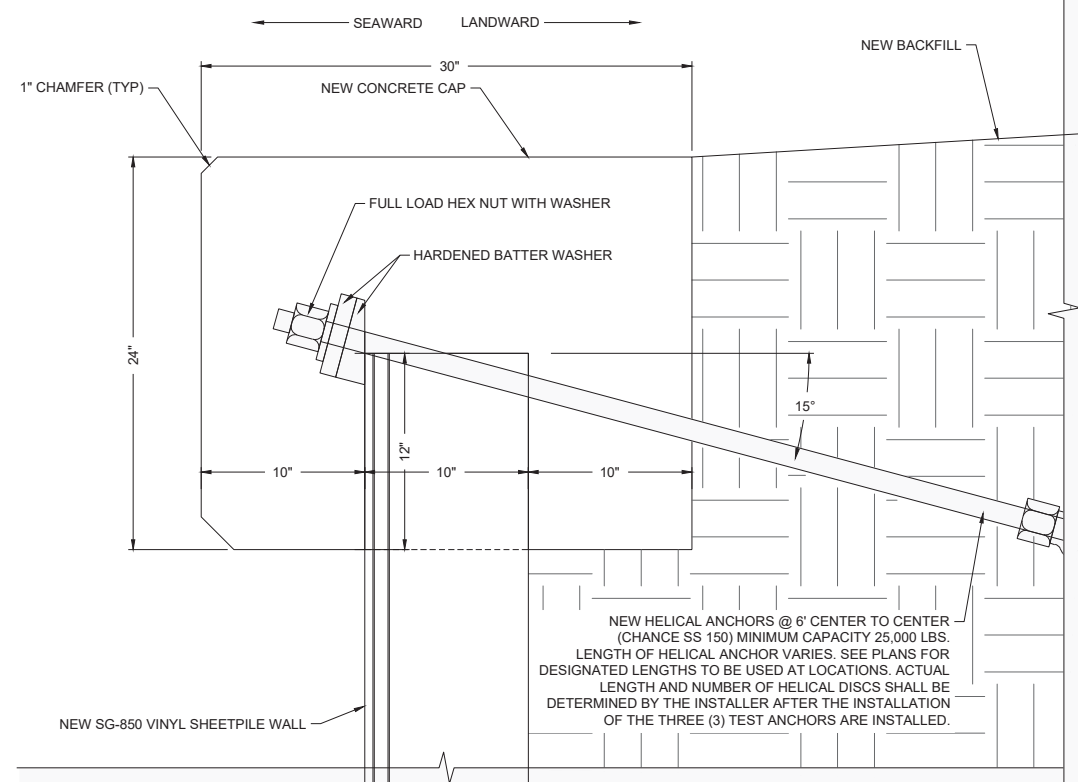




**S1 TYPICAL SECTION**  
 22X34: 1" = 1'  
 11X17: 1" = 2'

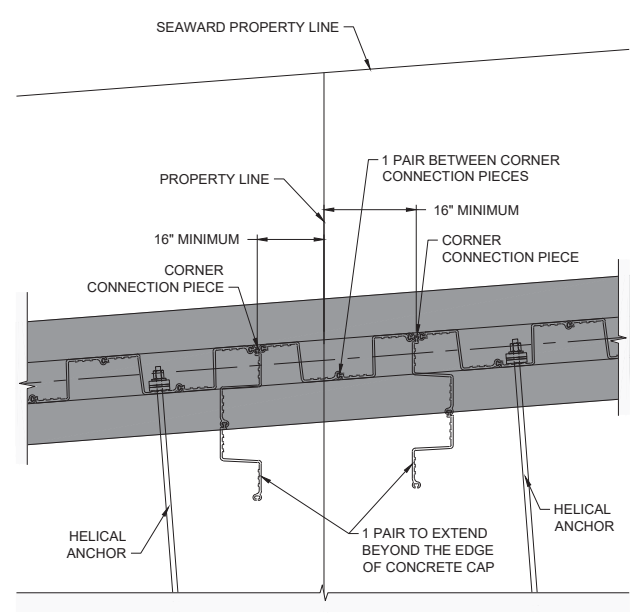


**FILL SEQUENCE DETAIL**  
 22X34: 1" = 1'  
 11X17: 1" = 2'

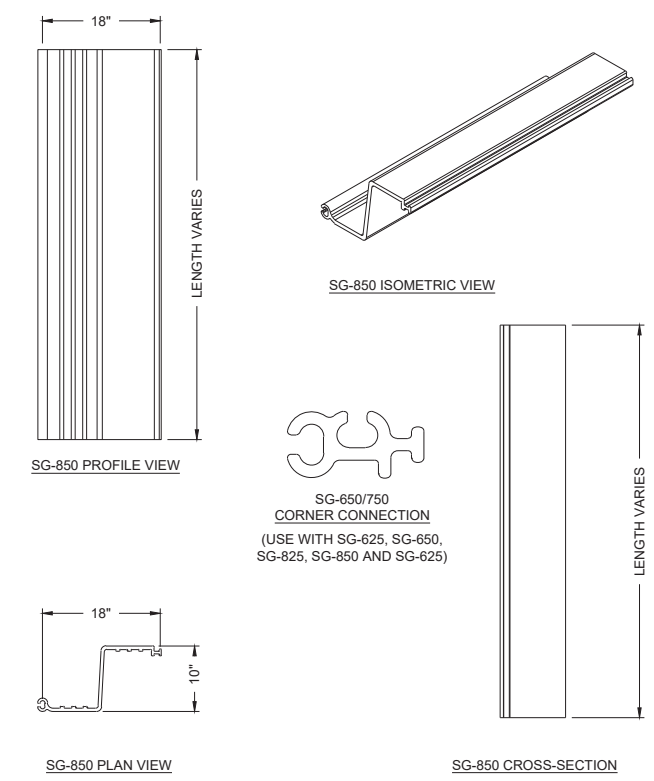


**D1 CONCRETE CAP TYPICAL DETAIL**  
 22X34: 1" = 6"  
 11X17: 1" = 12"

- OPTIONAL RETURN WALL STUB OUT NOTES:**
- CORNER CONNECTION MUST BE A MINIMUM OF 16" FROM PROPERTY LINE TO PREVENT ENCRoACHMENT OF CONCRETE CAP IF OPTIONAL RETURN WALL AT PROPERTY LINE IS INSTALLED.
  - RETURN WALL SHALL BE INSTALLED PARALLEL WITH PROPERTY LINE. CORNER CONNECTION AND SHEETPILE MAY BE ANGLED A MINIMUM OF 6° TO ALLOW ALIGNMENT.
  - CONTRACTOR TO EXTEND OPTIONAL RETURN WALL STUB OUTS BEYOND CONCRETE CAP TO ALLOW FOR ANY FUTURE RETURN WALL INSTALLATIONS.



**OPTIONAL SHEETPILE RETURN WALL AT PROPERTY LINE DETAIL**  
 NOT TO SCALE



**SG-850 SHEETPILE COMPONENT DETAILS**  
 NOT TO SCALE

**TAYLOR ENGINEERING INC.**  
 10151 DEERWOOD PARK BLVD  
 BLDG 300, SUITE 300  
 JACKSONVILLE, FLORIDA 32256  
 (904)-731-7040  
 1221 AIRPORT ROAD  
 SUITE 210  
 DESTIN, FL 32541  
 (850)-460-7040  
 CERTIFICATE OF AUTHORIZATION # 4815

**DRAFT**

HUGH C. VERKERK P.E.# 38031  
 PROJECT TITLE  
**FLAGLER SEAWALL AT PAINTER'S HILL**  
**CONSTRUCTION DRAWINGS**  
 FLAGLER COUNTY, FLORIDA

SUNSHINE STATE ONE CALL OF FLORIDA  
 SUNSHINE 811 - ALWAYS CALL 811 BEFORE YOU DIG  
 1-800-638-4097  
 PRELIMINARY DRAWINGS: THESE DRAWINGS ARE NOT IN FINAL FORM, BUT ARE BEING TRANSMITTED FOR AGENCY REVIEW.

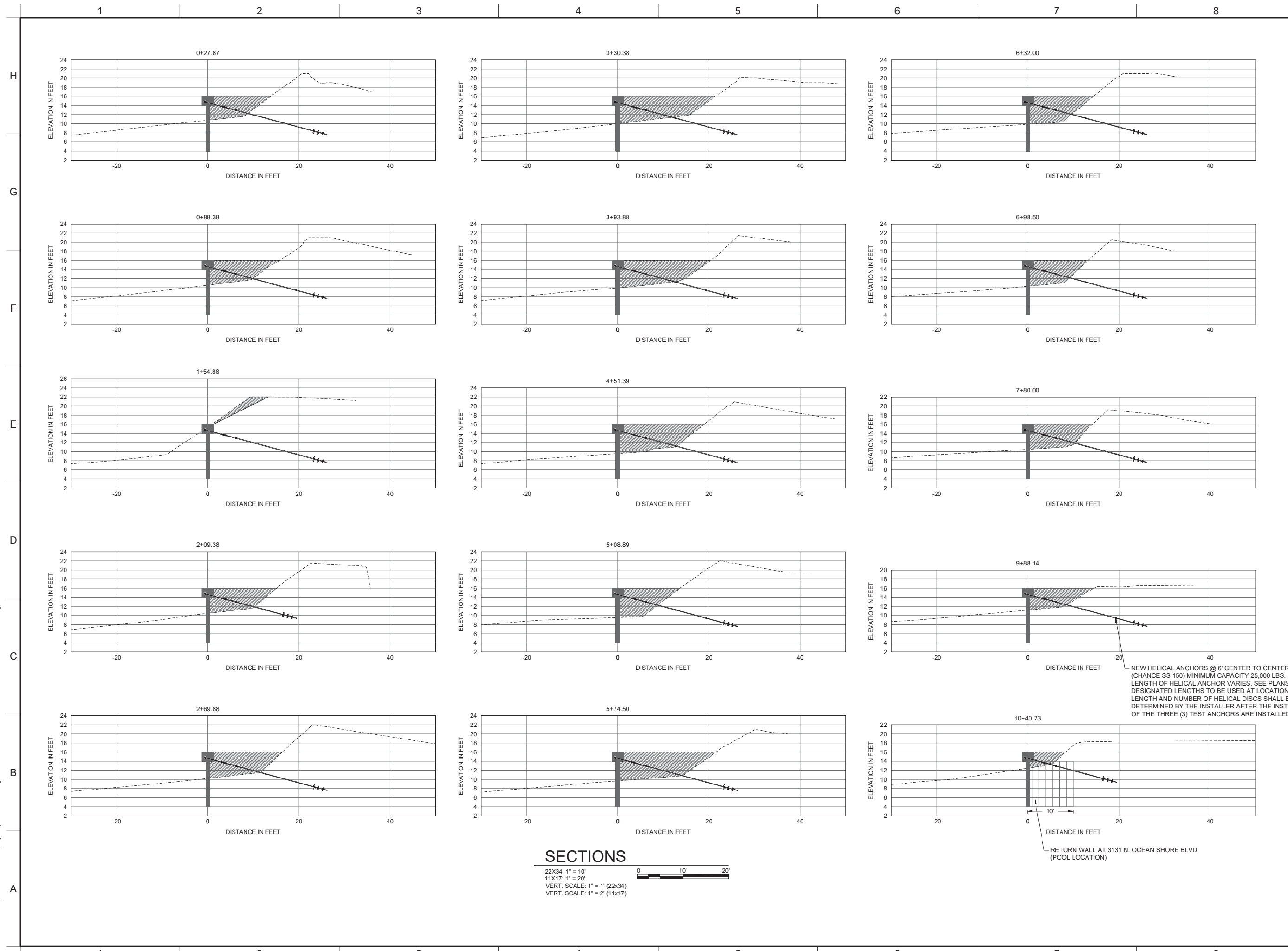
NO	ZONE	REVISIONS / SUBMISSIONS	DATE
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2			
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1			

PROJECT NO	C2016-079-03
DATE	MAY 2017
DESIGNED	HCV
DRAWN	RLJ/CAS
CHECKED	CAS
REVIEWED	KRC
SCALE	AS SHOWN

DRAWING TITLE  
**CROSS SECTION & DETAILS**

**C-14**  
 SHEET 14 OF 18

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**SECTIONS**

22x34: 1" = 10'  
 11x17: 1" = 20'  
 VERT. SCALE: 1" = 1' (22x34)  
 VERT. SCALE: 1" = 2' (11x17)



NEW HELICAL ANCHORS @ 6' CENTER TO CENTER (CHANGE SS 150) MINIMUM CAPACITY 25,000 LBS. LENGTH OF HELICAL ANCHOR VARIES. SEE PLANS DESIGNATED LENGTHS TO BE USED AT LOCATION! LENGTH AND NUMBER OF HELICAL DISCS SHALL BE DETERMINED BY THE INSTALLER AFTER THE INST/ OF THE THREE (3) TEST ANCHORS ARE INSTALLED

RETURN WALL AT 3131 N. OCEAN SHORE BLVD (POOL LOCATION)

**TAYLOR ENGINEERING INC.**  
 10151 DEERWOOD PARK BLVD  
 BLDG 300, SUITE 300  
 JACKSONVILLE, FLORIDA 32256  
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HUGH C. VERKERK P.E. # 38031

PROJECT TITLE

**FLAGLER SEAWALL AT PAINTER'S HILL CONSTRUCTION DRAWINGS**  
 FLAGLER COUNTY, FLORIDA

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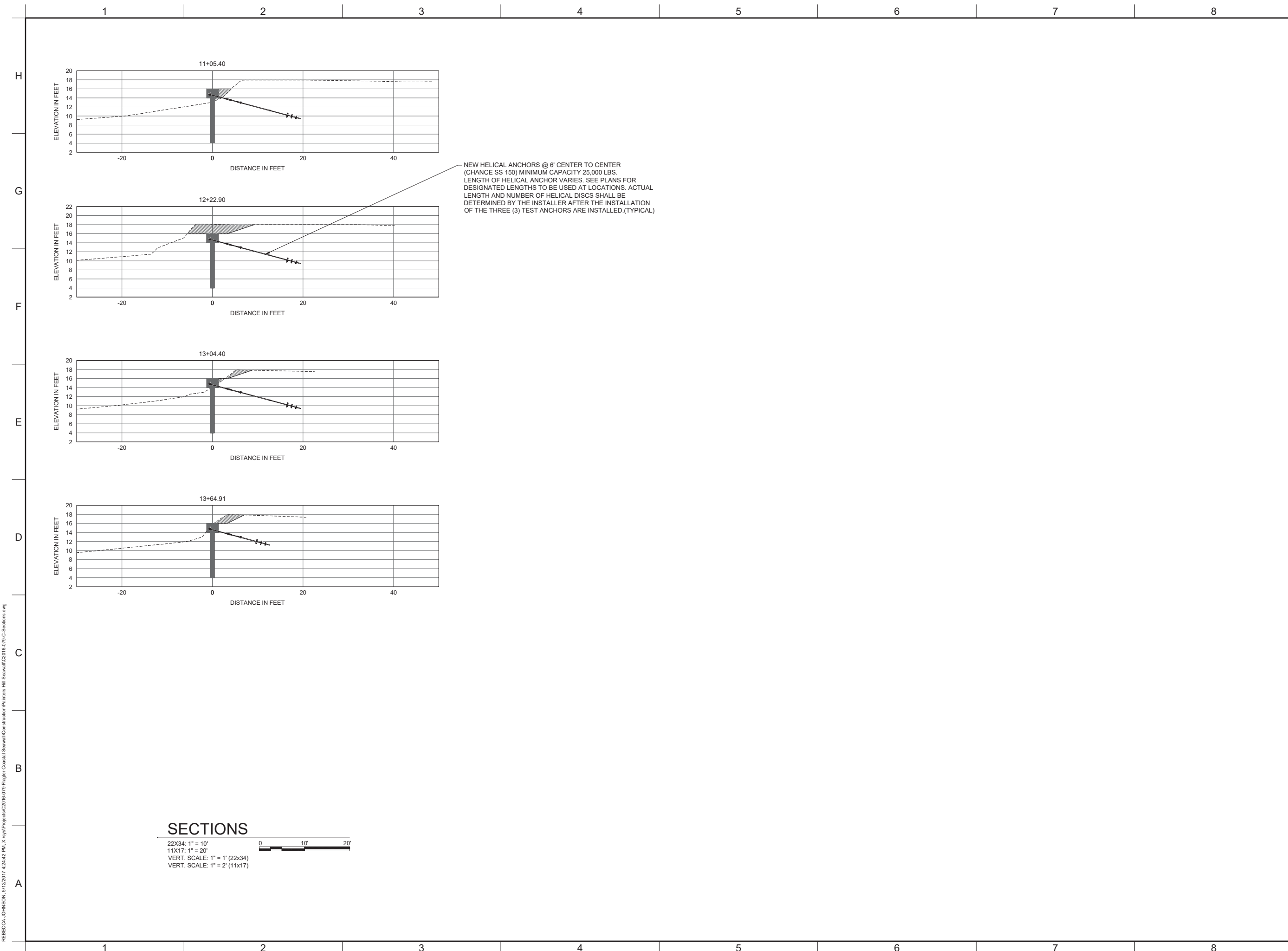
NO.	ZONE	REVISIONS / SUBMISSIONS	DATE
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2			
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PROJECT NO	C2016-079-03
DATE	MAY 2017
DESIGNED	HCV
DRAWN	RLJ/CAS
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SCALE	AS SHOWN

DRAWING TITLE

**SECTIONS**

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NEW HELICAL ANCHORS @ 6' CENTER TO CENTER  
 (CHANCE SS 150) MINIMUM CAPACITY 25,000 LBS.  
 LENGTH OF HELICAL ANCHOR VARIES. SEE PLANS FOR  
 DESIGNATED LENGTHS TO BE USED AT LOCATIONS. ACTUAL  
 LENGTH AND NUMBER OF HELICAL DISCS SHALL BE  
 DETERMINED BY THE INSTALLER AFTER THE INSTALLATION  
 OF THE THREE (3) TEST ANCHORS ARE INSTALLED.(TYPICAL)

**SECTIONS**  
 22X34: 1" = 10'  
 11X17: 1" = 20'  
 VERT. SCALE: 1" = 1' (22x34)  
 VERT. SCALE: 1" = 2' (11x17)



**TAYLOR ENGINEERING INC.**

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CERTIFICATE OF AUTHORIZATION # 4815

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HUGH C. VERKERK P.E.# 38031

PROJECT TITLE

**FLAGLER SEAWALL AT  
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 CONSTRUCTION DRAWINGS**  
 FLAGLER COUNTY, FLORIDA

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NO	ZONE	REVISIONS / SUBMISSIONS	DATE
2			
2			
2			
1			

PROJECT NO	C2016-079-03
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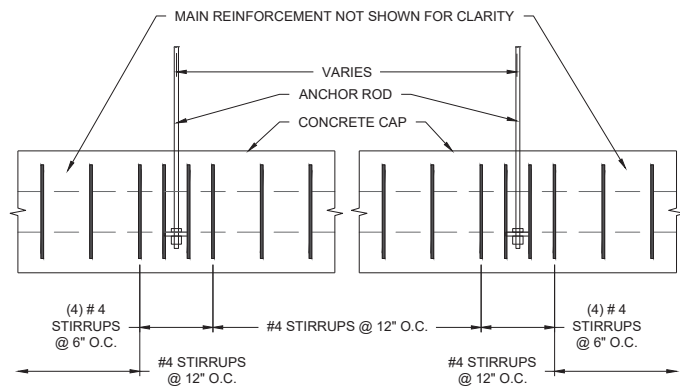
DRAWING TITLE  
**SECTIONS**

**C-16**

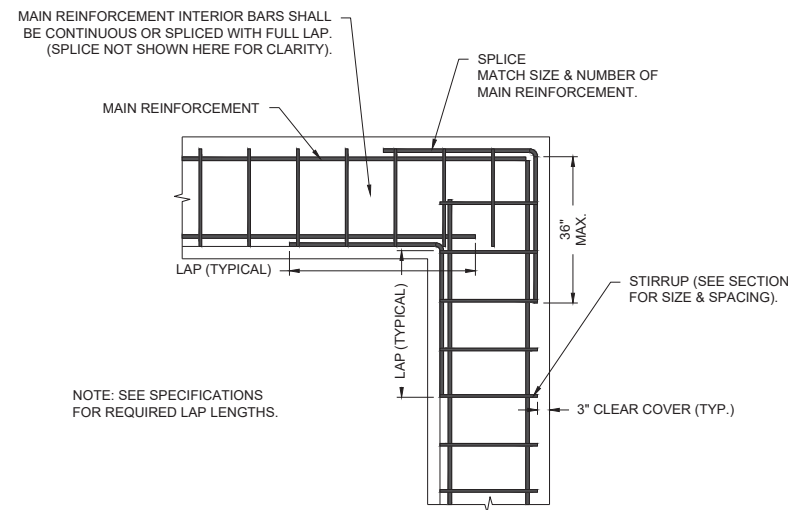
SHEET 16 OF 18

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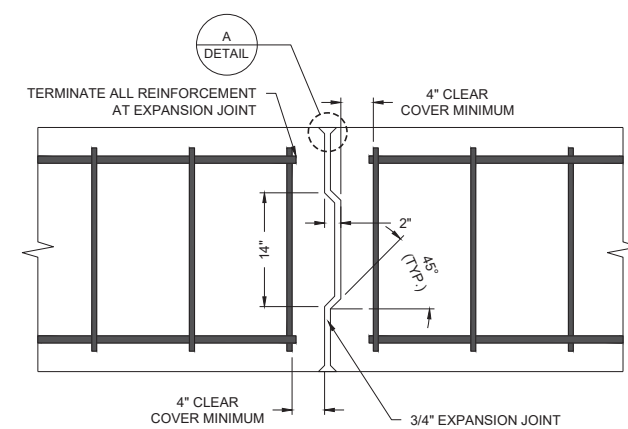




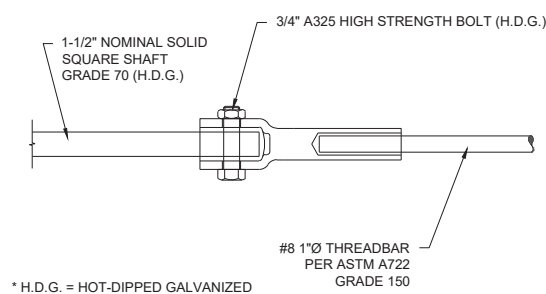
**CONCRETE CAP TYPICAL STIRRUP SPACING AT HELICAL ANCHOR RODS**  
NOT TO SCALE



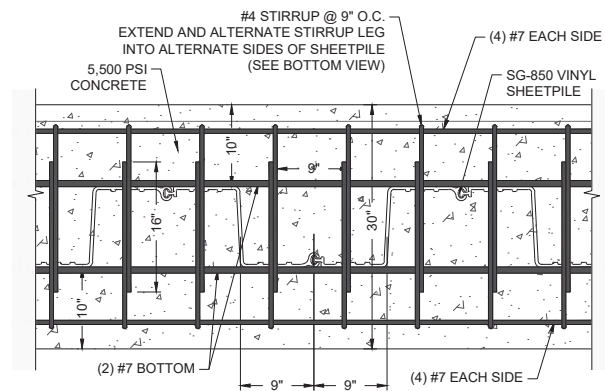
**TYPICAL REINFORCEMENT DETAIL CONCRETE CAP 90° ANGLE CORNER**  
NOT TO SCALE



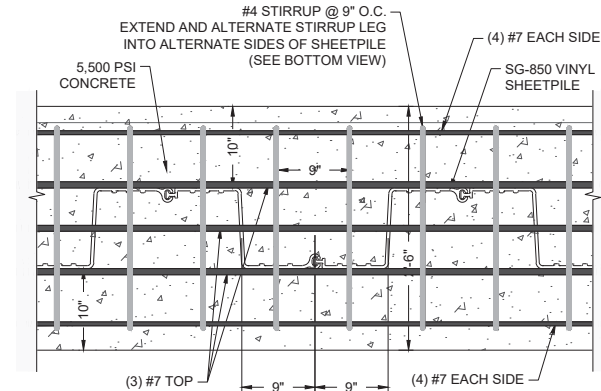
**PLAN VIEW CONCRETE CAP EXPANSION JOINT AT EACH PROPERTY LINE**  
NOT TO SCALE



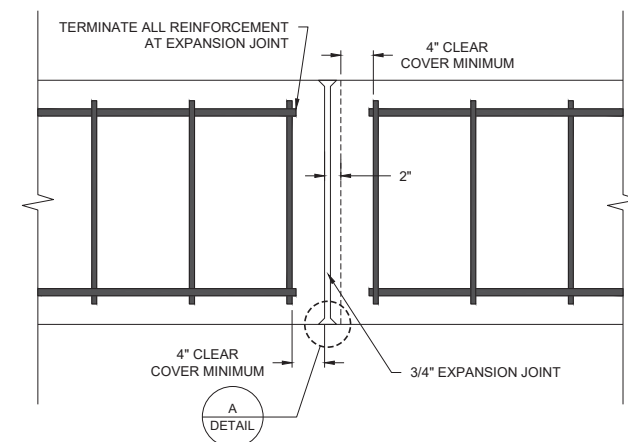
**HELICAL ANCHOR ROD ADAPTER DETAIL**  
NOT TO SCALE



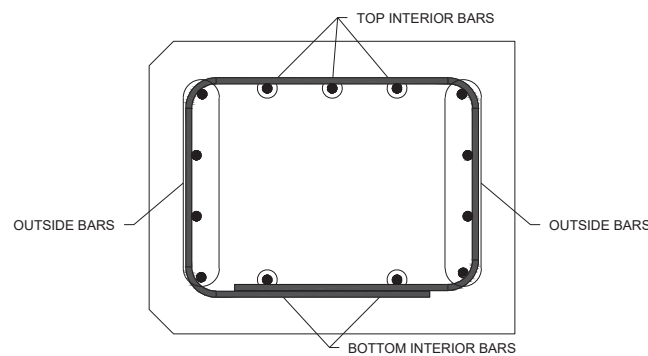
**BOTTOM VIEW CONCRETE CAP REINFORCEMENT DETAIL**  
NOT TO SCALE



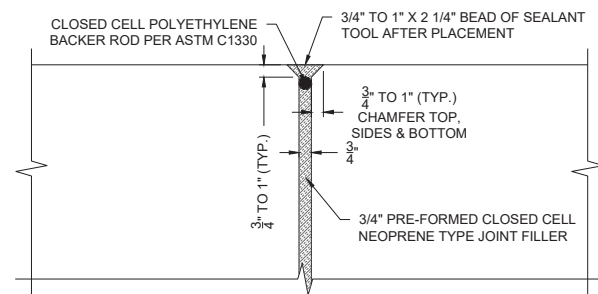
**TOP VIEW CONCRETE CAP REINFORCEMENT DETAIL**  
NOT TO SCALE



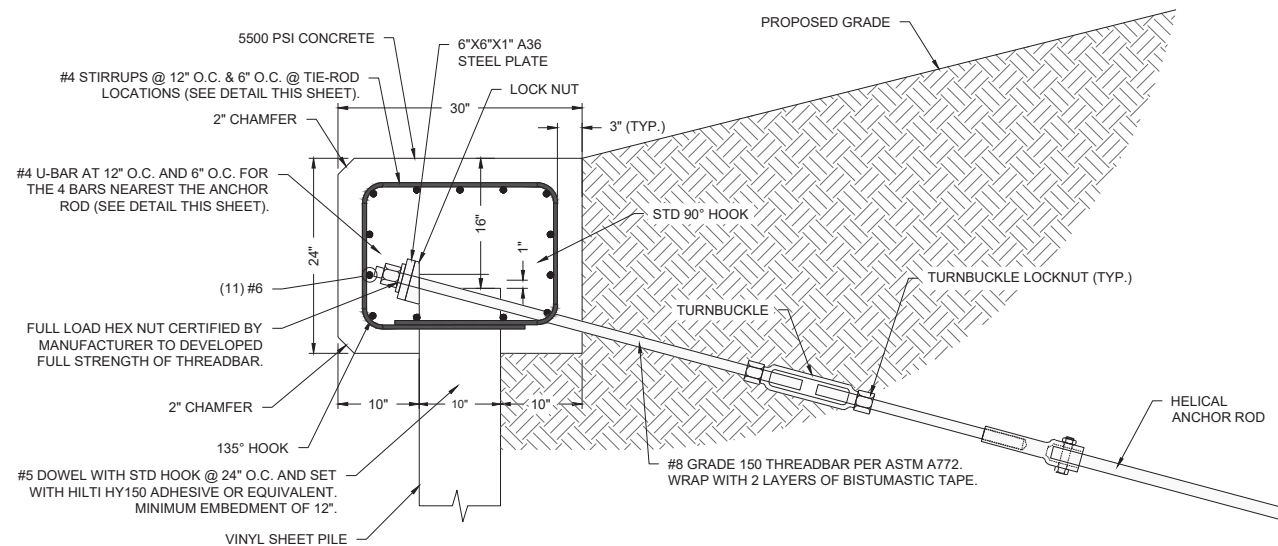
**ELEVATION VIEW CONCRETE CAP EXPANSION JOINT AT EACH PROPERTY LINE**  
NOT TO SCALE



**BAR DESIGNATIONS**  
NOT TO SCALE



**DETAIL A EXPANSION JOINT FILLER**  
NOT TO SCALE



**CONCRETE CAP DETAIL**

22X34: 1" = 1'  
11X17: 1" = 2'



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DRAWING TITLE  
**DETAILS**

**C-17**  
SHEET 17 OF 18

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