



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NEW ORLEANS DISTRICT
7400 LEAKE AVE
NEW ORLEANS, LA 70118-3651

May 10, 2019

Operations Division
Eastern Evaluation Section

SUBJECT: MVN 2010-1291-2 EOO

Sydney Dobson
Coastal Protection and Restoration Authority
Post Office Box 44027
Baton Rouge, Louisiana 70804

Dear Mr. Dobson,

The proposal to haul-in and maintain material to rehabilitate bird habitat on Queen Bess Island, located in Barataria Bay, Jefferson Parish, Louisiana, as shown on the attached drawings, is authorized under Category II of the Programmatic General Permit (PGP II), provided that all conditions of the permit are met. This authorization and enclosed drawings will supersede the original PGP II authorization issued on March 28, 2019.

This authorization has a blanket water quality certification from the Louisiana Department of Environmental Quality; therefore, no additional authorization from DEQ is required.

However, prior to commencing work on your project, you must obtain approvals from state and local agencies as required by law and by terms of this permit. These approvals include, but are not limited to, a permit, consistency determination or determination of "no direct or significant impact (NDSI) on coastal waters" from the Louisiana Department of Natural Resources, Office of Coastal Management.

In addition, you must comply with the enclosed Best Management Practices (BMPs). These BMP's serve as a comprehensive list of the avoidance and minimization measures developed through the various Federal consultations required to construct and maintain your project.

This approval to perform work is valid for 5 years from the date of this letter.

Permittee is aware that this office may reevaluate its decision on this permit at any time the circumstances warrant.

Should you have any further questions concerning this matter, please call Brad LaBorde of this office at (504) 862-2225.

Sincerely,

FARABEE.MIC Digitally signed by
HAE.LVERNE, CN=FARABEE.MICHAEL.VE
1053559979, O=NE,1053559979
Date: 2019.05.10
13:12:52 -05'00'

for:

Martin S. Mayer
Chief, Regulatory Branch

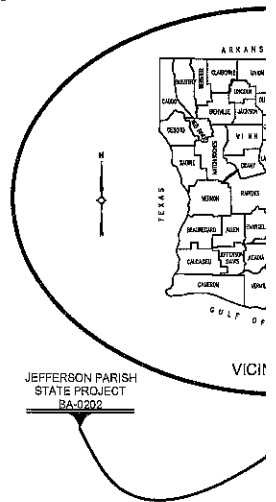
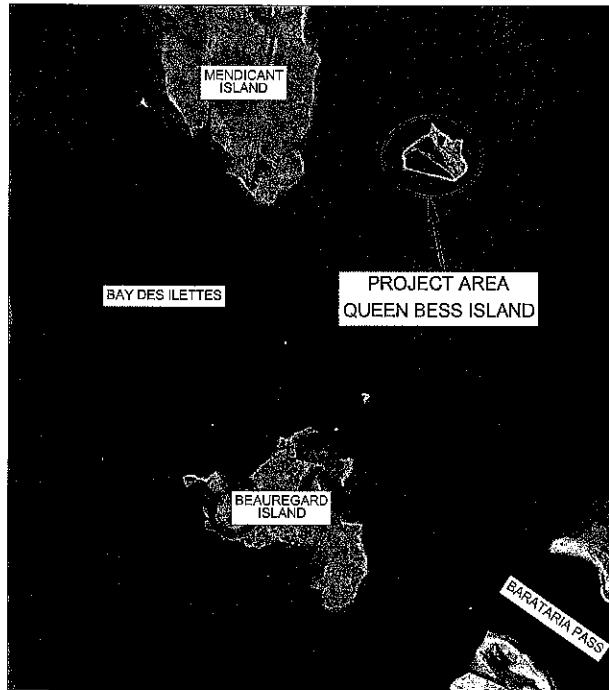
Enclosure

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STATE OF LOUISIANA
 COASTAL PROTECTION AND RESTORATION AUTHORITY

QUEEN BESS ISLAND RESTORATION
 PROJECT (BA-0202)
 JEFFERSON PARISH



VICINITY MAP

Scale: 1" = 5000'



TYPE OF CONSTRUCTION
 MAJOR CLASSIFICATION: HEAVY
 CONSTRUCTION

GENERAL NOTES:

1. THE CONTRACTOR SHALL NOT, AT ANY TIME, TREAD ON EXISTING MARSH OR VEGETATED WETLANDS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NAVIGATING WITHIN THE LIMITS OF THE PROJECT SITE. THE ENGINEER OR REPRESENTATIVE SHALL MONITOR THE CONTRACTOR'S LOCATION DURING CONSTRUCTION.
3. PLANS AND SPECIFICATIONS ARE COMPLEMENTARY; WHAT IS REQUIRED BY ONE IS BINDING AS IF REQUIRED BY ALL. CLARIFICATIONS AND INTERPRETATIONS OF, OR NOTIFICATIONS OF MINOR VARIATIONS AND DEVIATIONS IN THE CONTRACT DOCUMENTS, WILL BE ISSUED BY THE ENGINEER.
4. ANY DAMAGE TO EXISTING U.S. COAST GUARD NAVIGATION AIDS OR PRIVATE NAVIGATION AIDS SHALL BE REPAIRED BY THE CONTRACTOR TO U.S. COAST GUARD STANDARDS AT THE EXPENSE OF THE CONTRACTOR.
5. THE FILL AREAS AND ROCK CONTAINMENT DIKES MAY BE REVISED BY THE ENGINEER THROUGHOUT THE WORK TO REFLECT CHANGES IN FIELD CONDITIONS.
6. THE CONTRACTOR SHALL PERFORM A MAGNETOMETER SURVEY OF THE ACCESS CHANNELS, AND FILL AREAS PRIOR TO EXCAVATION. DRAWINGS SHOWING THE TRACK LINES, ANY MAGNETOMETER HITS, COORDINATES, AMPLITUDE, SIGNATURE TYPE, AND SIGNATURE WIDTH OF ALL MAGNETOMETER HITS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO EXCAVATION.
7. PIPELINES AND UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL LOCATE AND MARK ALL PIPELINES AND UTILITIES LOCATED WITHIN 150 FT OF THE WORK PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN THESE MARKERS DURING CONSTRUCTION.
8. THE CONTRACTOR IS RESPONSIBLE FOR CONTAINING ALL BARGED GRANULAR FILL MATERIAL WITHIN THE BOUNDARIES OF THE FILL AREAS.
9. GRANULAR FILL MATERIAL WILL BE FROM A USACE OR DOTD PRE-APPROVED SAND SOURCE. MATERIAL SUPPLIED SHALL BE BARGE DELIVERED THROUGH NAVIGABLE WATERWAYS UNTIL ENTRY INTO PROJECT SPECIFIC ACCESS CHANNELS.
10. ALL PROPOSED WORK ON THE ISLAND OR WITHIN 500 FEET OF THE ISLAND SHALL BE PROHIBITED BETWEEN FEBRUARY 15TH AND SEPTEMBER 15TH EACH YEAR UNLESS WRITTEN APPROVAL IS GRANTED BY THE LDWF NONGAME ORNITHOLOGIST. NO AIRBOATS ARE ALLOWED WITHIN 1,500 FEET OF THE ISLAND BETWEEN FEBRUARY 15TH AND SEPTEMBER 15TH EACH YEAR. BUFFER SIZES MAY BE DECREASED ON A CASE-BY-CASE BASIS IF LDWF PERSONNEL BELIEVE THE CHANGE IS WARRANTED AND NOT DAMAGING TO NESTING WILDLIFE. ANY DEVIATION FROM THESE RESTRICTIONS MUST BE APPROVED IN WRITING BY APPROPRIATE LDWF PERSONNEL. THE LDWF POC FOR THIS PROJECT WILL BE JON WIEBE (337) 736-8662. MR. WIEBE WILL NOTIFY ADDITIONAL LDWF PERSONNEL AS NEEDED.
11. IF ISLAND ACCESS IS REQUIRED DURING THE TIME PERIOD LISTED ABOVE, AN LDWF BIOLOGIST MUST VISIT THE SITE TO EVALUATE NESTING ACTIVITY ON THE REQUESTED AREA(S) OF THE ISLAND. THE SITE VISIT MUST BE COORDINATED WITH THE LDWF POC AT LEAST 2 WEEKS IN ADVANCE OF THE PROPOSED WORK. PROPOSED WORK WILL BE APPROVED AT THE DISCRETION OF LDWF IF NESTING BIRDS AND DIAMONDBACK TERRAPIN NESTS ARE NOT IN THE AREA OF PROPOSED WORK OR ALONG THE PROPOSED ACCESS CORRIDORS.
12. BACKGROUND IMAGERY WAS TAKEN IN 2009 FROM ATLAS: THE LOUISIANA STATEWIDE GIS.

DESIGN NOTES:

1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) U.S. SURVEY FEET. ALL HORIZONTAL COORDINATES ARE GIVEN IN THE NORTH AMERICAN DATUM OF 1983 (NAD 83, LOUISIANA STATE PLANE SOUTH ZONE U.S. FEET). ALL ELEVATIONS ARE BASED ON THE FOLLOWING MONUMENT DATA USING THE LATEST GEOID:

SURVEY MONUMENT	GEOID	ELEVATION	NORTHING	EASTING
BM-3	GEOID 12B	+1.56 FT	294,561.06	3,719,252.28
BA202-SM-01	GEOID 12B	+2.46 FT	294,962.21	3,717,961.49
NOAA 878 1724 11 TIDAL	GEOID 12B	+2.93 FT	280,769.62	3,719,520.79

2. THE EXISTING ELEVATIONS SHOWN ON THE PLANS ARE BASED ON THE SURVEYS PERFORMED FROM SEPTEMBER, 2017 THROUGH OCTOBER, 2017 BY C.H. FENSTERMAKER & ASSOCIATES, L.L.C. FOR THE CPRA.

DESIGN NOTES (CONT.):

3. DATA FROM CO-OPS GRAND ISLE STATION NO. 8781724 WAS USED. ELEVATIONS ARE REFERENCED TO NAVD 88, US FEET, GEOID 12B. 1 PROJECT AREA, AND MHW = +0.62 FT AND MLW = -0.12 FT IN THE BA
4. A GEOTECHNICAL SUBSURFACE INVESTIGATION WAS PERFORMED AND CPT LOCATIONS ARE SHOWN ON THE PLANS. THE GEOTECHNI PROVIDED IN THE SPECIFICATION APPENDICES.

NOTIFICATIONS:

1. THE CONTRACTOR SHALL CONTACT LOUISIANA ONE CALL AT 1-800 EXCAVATION AND/OR DREDGING TO LOCATE ALL PIPELINES OR UTI
2. THE CONTRACTOR SHALL NOTIFY THE LANDOWNERS LISTED IN TH DAYS PRIOR TO PERFORMING THE WORK AND ADHERE TO CPRA L/

SUMMARY OF ESTIMATED QUANTITIES (inc

ITEM NO.	DESCRIPTION
1	MOBILIZATION AND DEMOBILIZATION (TS-100)
2	SURVEYS (TS-210)
3	GRADE STAKES (TS-220)
4	SETTLEMENT PLATES (TS-250)
5	RIPRAP (TS-300)
6	FLOTATION FOR ACCESS CHANNEL (TS-330)
7	PERMANENT WARNING SIGN (TS-810)
8	FABRIC
9	SAND FILL
10	NO. 8 LIMESTONE
11	ARTICULATED MATS

1. THE QUANTITIES SHOWN WERE CALCULATED BASED ON THE SPEC OWNER RESERVES THE RIGHT TO ADJUST QUANTITIES 25% HIGHER ADJUSTMENT OF THE UNIT PRICE.
2. QUANTITY IS BASED ON THE FILL / CUT VOLUMES. PAYMENT QUANTITY WILL BE BASED ON PROCESS SURVEYS OF TH

ACRONYMS:

CMF	CONSTRUCTED MARSH FILL	CY
CPT	CONE PENETRATION TEST	EL
EAC	EQUIPMENT ACCESS CORRIDOR	FT
EACE	EQUIPMENT ACCESS CORRIDOR EXCAVATION	LF
RCD	ROCK CONTAINMENT DIKE	LS
FA	FILL AREA	NTS
MNA	MARSH NOURISHMENT AREA	SF
PL	PIPELINE	SY
SP	SETTLEMENT PLATE	
TS	TEMPORARY SPOIL	
MHW	MEAN HIGH WATER	
MLW	MEAN LOW WATER	

UNI

LEGEND

	ROCK CONTAINMENT DIKE		SOIL BORING		#8 LIMESTONE		ESTIMATED 20-YR SETTLED ELEVATION*
	EQUIPMENT ACCESS CORRIDOR		SETTLEMENT PLATE		PLANTING AREA		EXISTING GRADE*
	EQUIPMENT ACCESS CORRIDOR EXCAVATION		BIRD RAMPS / ARTICULATED MATS		OYSTER LEASE		CONSTRUCTION ELEVATION*
	PROPOSED STAGING AREA		SURVEY MONUMENT		DEPRESSION AREAS		MEAN HIGH WATER (MHW)*
	FILL AREA		TEMPORARY SPOIL		RCD / BREAKWATERS (DOTD 250LB RIPRAP STONE)*		MEAN LOW WATER (MLW)*
	MARSH NOURISHMENT AREA		PIPELINE		TEMPORARY CONTAINMENT DIKE*		10% EXCEEDANCE IN JUNE*



NOTES:

1. PIPELINES AND OYSTER LEASE LOCATIONS ARE BASED ON DEPT. OF NATURAL RESOURCES SONRIS DATA BASE. THE PIPELINE INFORMATION SHOWN ON PLANS IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS PRIOR TO MOBILIZATION. ALL PIPELINES LOCATED WITHIN 150' OF ANY CONSTRUCTION FEATURE SHALL BE PROBED TO CONFIRM NAVIGATION CLEARANCE AND THEIR LOCATIONS CONSPICUOUSLY MARKED FOR THE DURATION OF CONSTRUCTION ACTIVITIES.
2. EQUIPMENT ACCESS TO THE PROJECT SITE SHALL BE THROUGH NAVIGABLE WATERWAYS AND SHALL NOT DISTURB EXISTING WATER BOTTOMS UNLESS OTHERWISE NOTED.
3. OYSTER LEASE ACQUISITION BY CPRA ONGOING.

*** ESTIMATED EQUIPMENT ACCESS CORRIDOR EXCAVATION QUANTITIES**

EACE	LENGTH (FT)	AREA (ACRES)
WEST EAC	5,978	13.5
EAST EAC	5,352	12.5

* THE ESTIMATED TOTALS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

CENTER OF ISLAND
LAT. N 29° 18' 15.80"
LONG. W 89° 57' 34.13"

PROJECT AREA

EQUIPMENT ACCESS CORRIDOR EXCAVATION (SEE SHEET 16)

EAC EXCAVATION

EQUIPMENT ACCESS CORRIDOR EXCAVATION (SEE SHEET 16)

2

2

EAC

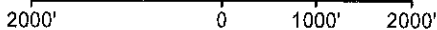
BARATARIA BAY WATERWAY CHANNEL

3

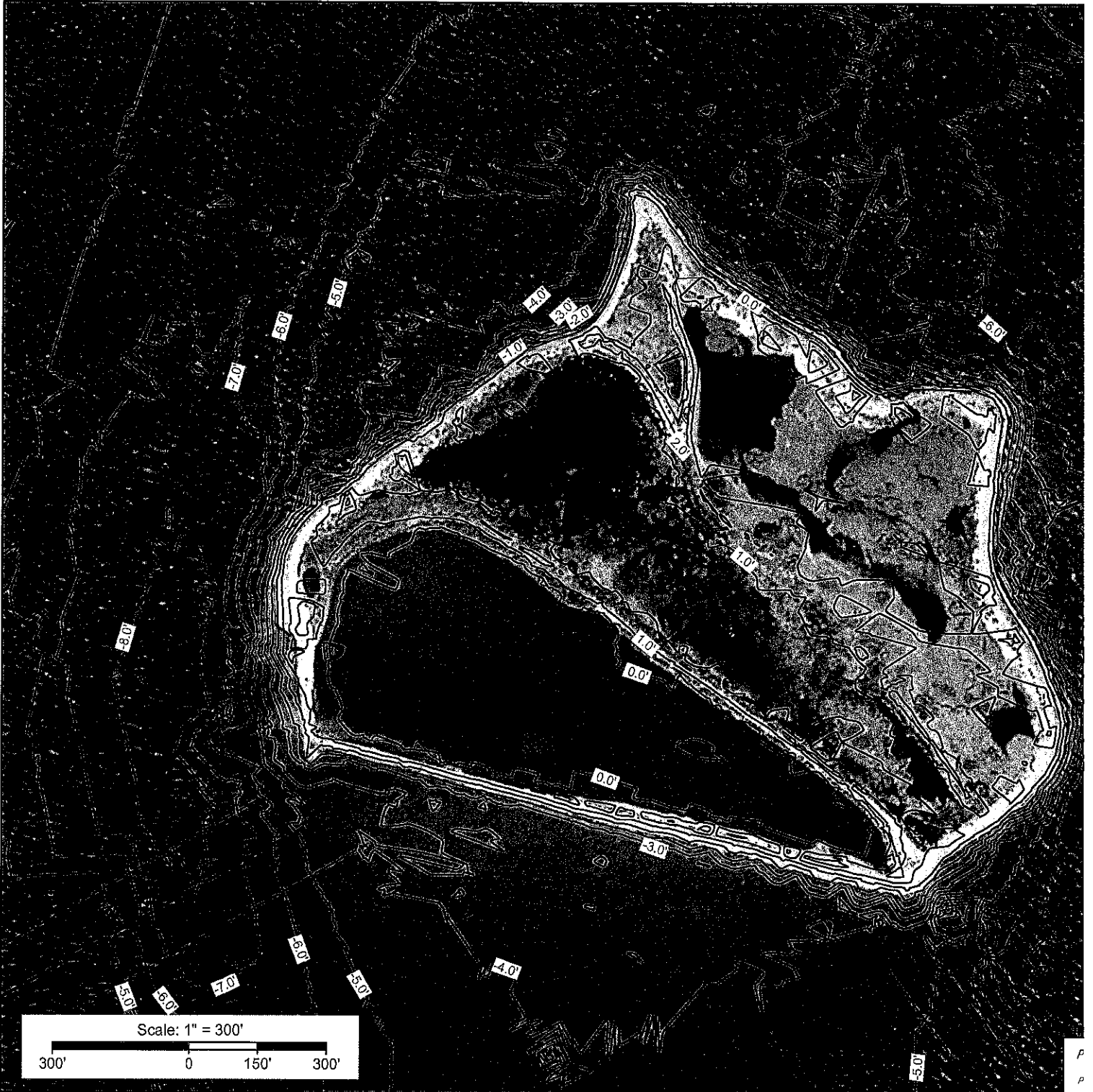
NOTES:

1. EQUIPMENT ACCESS CORRIDOR EXCAVATION SHALL NOT EXCEED ELEVATION -9.0FT NAVD88.
2. EQUIPMENT ACCESS TO THE PROJECT SITE SHALL BE THROUGH NAVIGABLE WATERWAYS AND SHALL NOT DISTURB EXISTING WATER BOTTOMS UNLESS OTHERWISE NOTED.
3. ACCESS CORRIDOR DREDGING SHOULD BE MINIMIZED AS MUCH AS POSSIBLE TO LIMIT THE DISTURBANCE TO THE WATER BOTTOMS AROUND THE PROJECT SITE.
4. CONTRACTOR MAY USE EQUIPMENT ACCESS CORRIDOR FOR SEDIMENT CONVEYANCE PIPELINE.

Scale: 1" = 2000'



P
P



Scale: 1" = 300'

300' 0 150' 300'

***ESTIMATED FILL AREA QUANTITIES**

SITE	VOLUME (CY)	AREA (ACRES)
FA	136,583	33

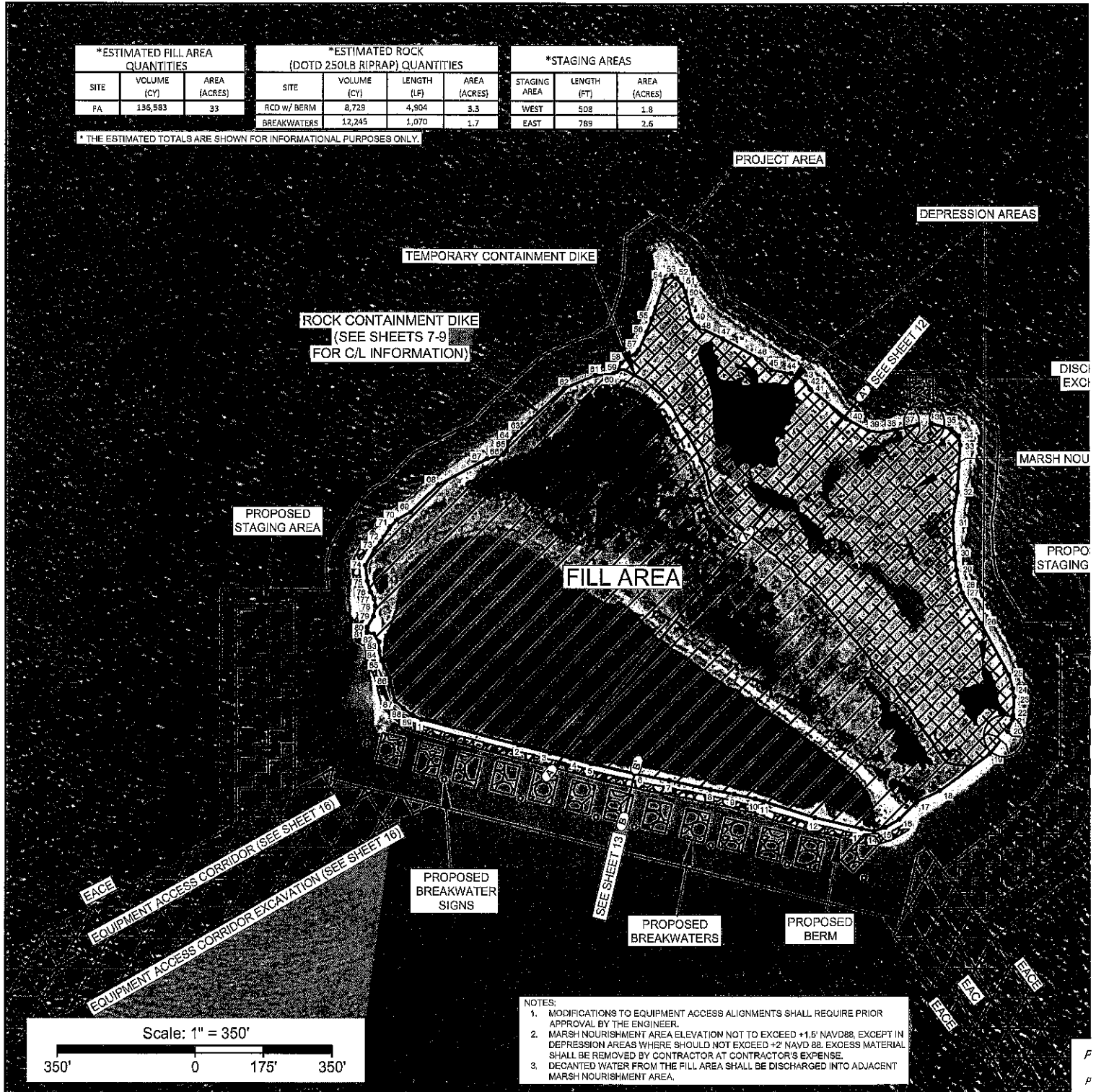
***ESTIMATED ROCK (DOTD 250LB RIPRAP) QUANTITIES**

SITE	VOLUME (CY)	LENGTH (LF)	AREA (ACRES)
RCD w/ BERM	8,729	4,904	3.3
BREAKWATERS	12,245	1,070	1.7

***STAGING AREAS**

STAGING AREA	LENGTH (FT)	AREA (ACRES)
WEST	508	1.8
EAST	789	2.6

* THE ESTIMATED TOTALS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

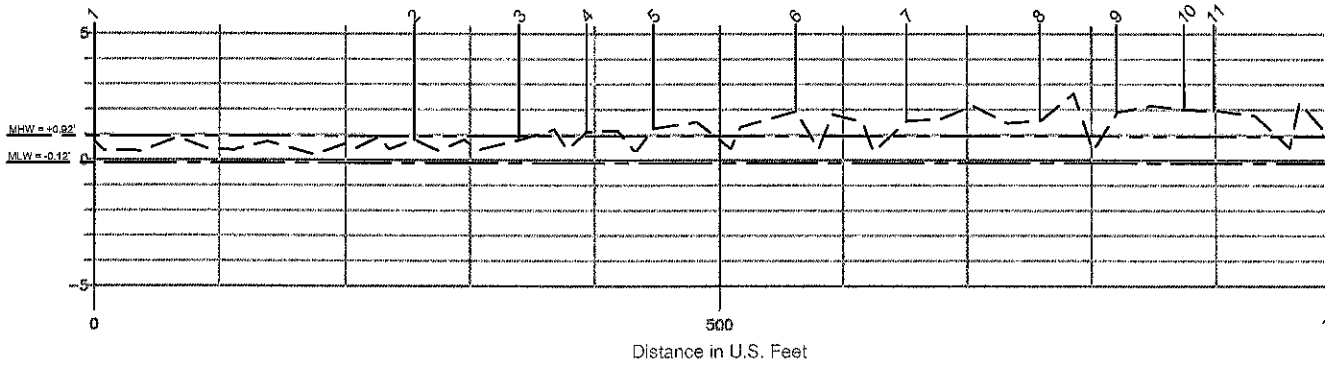


QUEEN BESS ISLAND
ROCK CONTAINMENT DIKE CENTERLINE

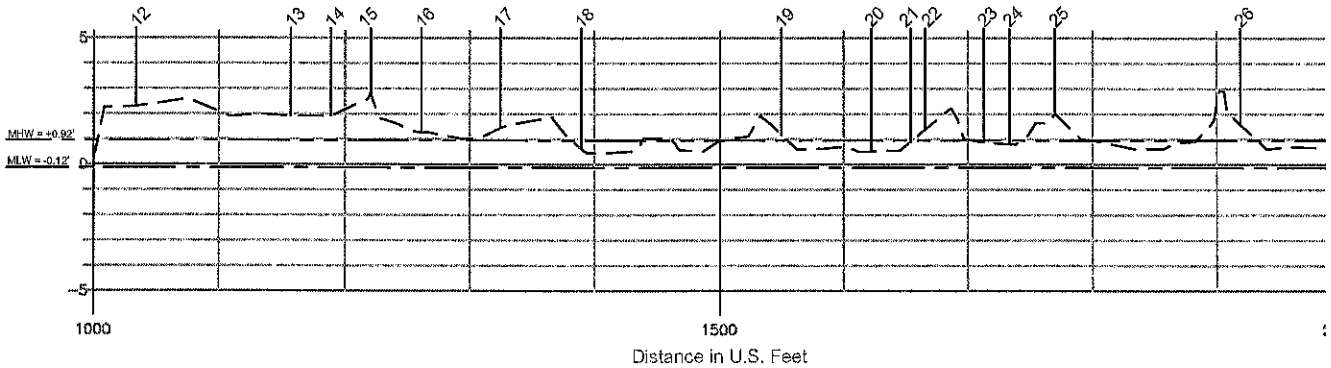
	NORTHING	EASTING	EXISTING ELEVATION	LATITUDE	LONGITUDE	STATION		NORTHING	EASTING	EXISTING ELEVATION	LATITUDE	LONGITUDE
1	294,775.47	3,717,989.88	0.73	N 29° 18' 12.10"	W 89° 57' 42.47"	0+00	46	295,682.26	3,718,858.50	1.12	N 29° 18' 20.98"	W 89° 57' 32.1
2	294,710.99	3,718,237.24	0.81	N 29° 18' 11.44"	W 89° 57' 39.69"	2+55.62	47	295,736.22	3,718,760.09	0.99	N 29° 18' 21.52"	W 89° 57' 33.1
3	294,690.94	3,718,318.24	0.80	N 29° 18' 11.23"	W 89° 57' 38.77"	3+39.07	48	295,765.82	3,718,697.15	0.78	N 29° 18' 21.82"	W 89° 57' 34.1
4	294,678.02	3,718,371.37	1.12	N 29° 18' 11.09"	W 89° 57' 38.18"	3+93.75	49	295,785.37	3,718,681.08	1.03	N 29° 18' 22.02"	W 89° 57' 34.1
5	294,664.74	3,718,423.12	1.26	N 29° 18' 10.96"	W 89° 57' 37.59"	4+47.18	50	295,854.95	3,718,664.63	1.07	N 29° 18' 22.71"	W 89° 57' 34.1
6	294,639.68	3,718,534.63	1.94	N 29° 18' 10.69"	W 89° 57' 36.34"	5+61.47	51	295,871.61	3,718,656.50	0.82	N 29° 18' 22.88"	W 89° 57' 34.1
7	294,622.53	3,718,622.55	1.56	N 29° 18' 10.51"	W 89° 57' 35.35"	6+51.05	52	295,887.57	3,718,643.46	0.58	N 29° 18' 23.03"	W 89° 57' 34.1
8	294,599.97	3,718,727.67	1.57	N 29° 18' 10.28"	W 89° 57' 34.16"	7+58.56	53	295,892.74	3,718,628.92	0.47	N 29° 18' 23.09"	W 89° 57' 35.1
9	294,588.35	3,718,788.26	1.91	N 29° 18' 10.16"	W 89° 57' 33.48"	8+20.25	54	295,884.17	3,718,612.81	0.53	N 29° 18' 23.00"	W 89° 57' 35.1
10	294,576.36	3,718,841.22	2.00	N 29° 18' 10.03"	W 89° 57' 32.88"	8+74.55	55	295,786.13	3,718,580.12	0.66	N 29° 18' 22.04"	W 89° 57' 35.1
11	294,569.66	3,718,864.32	1.98	N 29° 18' 09.96"	W 89° 57' 32.62"	8+98.60	56	295,753.05	3,718,567.24	0.70	N 29° 18' 21.71"	W 89° 57' 35.1
12	294,528.99	3,718,993.32	2.30	N 29° 18' 09.54"	W 89° 57' 31.17"	10+33.86	57	295,706.64	3,718,546.30	0.48	N 29° 18' 21.26"	W 89° 57' 36.1
13	294,501.44	3,719,113.44	1.91	N 29° 18' 09.26"	W 89° 57' 29.82"	11+57.10	58	295,674.59	3,718,502.26	1.47	N 29° 18' 20.94"	W 89° 57' 36.1
14	294,494.73	3,719,144.63	1.93	N 29° 18' 09.19"	W 89° 57' 29.47"	11+89	59	295,653.76	3,718,491.29	2.30	N 29° 18' 20.74"	W 89° 57' 36.1
15	294,504.00	3,719,174.21	2.83	N 29° 18' 09.28"	W 89° 57' 29.13"	12+20.89	60	295,646.92	3,718,480.68	2.37	N 29° 18' 20.67"	W 89° 57' 36.1
16	294,524.61	3,719,210.64	1.27	N 29° 18' 09.48"	W 89° 57' 28.72"	12+61.85	61	295,642.78	3,718,435.27	0.32	N 29° 18' 20.64"	W 89° 57' 37.1
17	294,568.96	3,719,255.30	1.48	N 29° 18' 09.91"	W 89° 57' 28.21"	13+24.79	62	295,610.17	3,718,354.39	1.78	N 29° 18' 20.32"	W 89° 57' 38.1
18	294,596.63	3,719,313.96	0.60	N 29° 18' 10.18"	W 89° 57' 27.54"	13+89.65	63	295,493.65	3,718,226.66	0.68	N 29° 18' 19.18"	W 89° 57' 39.1
19	294,690.24	3,719,443.94	1.13	N 29° 18' 11.09"	W 89° 57' 26.06"	15+49.83	64	295,474.31	3,718,208.98	1.54	N 29° 18' 19.00"	W 89° 57' 39.1
20	294,745.93	3,719,490.29	0.52	N 29° 18' 11.63"	W 89° 57' 25.53"	16+22.28	65	295,451.14	3,718,205.63	1.07	N 29° 18' 18.77"	W 89° 57' 39.1
21	294,775.22	3,719,502.71	0.94	N 29° 18' 11.92"	W 89° 57' 25.39"	16+54.09	66	295,443.04	3,718,197.53	0.97	N 29° 18' 18.69"	W 89° 57' 40.1
22	294,786.59	3,719,504.77	1.42	N 29° 18' 12.03"	W 89° 57' 25.36"	16+65.65	67	295,431.56	3,718,156.41	0.42	N 29° 18' 18.58"	W 89° 57' 40.1
23	294,833.54	3,719,507.43	0.88	N 29° 18' 12.50"	W 89° 57' 25.33"	17+12.68	68	295,365.53	3,718,031.22	0.64	N 29° 18' 17.94"	W 89° 57' 41.1
24	294,854.07	3,719,504.21	0.81	N 29° 18' 12.70"	W 89° 57' 25.36"	17+33.46	69	295,296.95	3,717,961.98	3.29	N 29° 18' 17.27"	W 89° 57' 42.1
25	294,888.76	3,719,493.83	1.99	N 29° 18' 13.05"	W 89° 57' 25.47"	17+69.66	70	295,276.70	3,717,926.47	1.25	N 29° 18' 17.07"	W 89° 57' 43.1
26	295,019.34	3,719,420.17	1.54	N 29° 18' 14.35"	W 89° 57' 26.29"	19+19.59	71	295,259.32	3,717,909.23	0.98	N 29° 18' 16.90"	W 89° 57' 43.1
27	295,093.59	3,719,374.16	1.32	N 29° 18' 15.09"	W 89° 57' 26.80"	20+06.94	72	295,222.12	3,717,886.76	0.92	N 29° 18' 16.54"	W 89° 57' 43.1
28	295,113.60	3,719,365.67	2.30	N 29° 18' 15.29"	W 89° 57' 26.89"	20+28.68	73	295,202.71	3,717,870.58	0.75	N 29° 18' 16.35"	W 89° 57' 43.1
29	295,152.86	3,719,357.76	0.77	N 29° 18' 15.68"	W 89° 57' 26.97"	20+68.73	74	295,162.89	3,717,847.62	0.63	N 29° 18' 15.96"	W 89° 57' 44.1
30	295,195.92	3,719,353.51	0.59	N 29° 18' 16.10"	W 89° 57' 27.01"	21+12	75	295,122.61	3,717,852.27	0.06	N 29° 18' 15.56"	W 89° 57' 43.1
31	295,272.92	3,719,348.50	0.37	N 29° 18' 16.87"	W 89° 57' 27.06"	21+89.16	76	295,095.81	3,717,860.32	0.24	N 29° 18' 15.29"	W 89° 57' 43.1
32	295,349.33	3,719,360.18	1.30	N 29° 18' 17.62"	W 89° 57' 26.92"	22+66.46	77	295,077.59	3,717,869.97	2.16	N 29° 18' 15.11"	W 89° 57' 43.1
33	295,467.78	3,719,368.08	1.11	N 29° 18' 18.79"	W 89° 57' 26.81"	23+85.18	78	295,059.91	3,717,872.65	2.83	N 29° 18' 14.93"	W 89° 57' 43.1
34	295,490.22	3,719,365.35	0.99	N 29° 18' 19.02"	W 89° 57' 26.84"	24+07.79	79	295,034.19	3,717,867.82	2.38	N 29° 18' 14.68"	W 89° 57' 43.1
35	295,508.11	3,719,345.32	0.84	N 29° 18' 19.20"	W 89° 57' 27.06"	24+34.64	80	295,006.89	3,717,852.19	1.58	N 29° 18' 14.41"	W 89° 57' 44.1
36	295,521.76	3,719,294.65	1.18	N 29° 18' 19.34"	W 89° 57' 27.63"	24+87.11	81	294,994.31	3,717,852.19	1.34	N 29° 18' 14.29"	W 89° 57' 44.1
37	295,518.73	3,719,260.37	0.78	N 29° 18' 19.31"	W 89° 57' 28.02"	25+21.53	82	294,988.56	3,717,868.61	1.09	N 29° 18' 14.23"	W 89° 57' 43.1
38	295,499.64	3,719,173.16	2.52	N 29° 18' 19.13"	W 89° 57' 28.01"	26+10.80	83	294,969.48	3,717,882.24	0.70	N 29° 18' 14.04"	W 89° 57' 43.1
39	295,501.76	3,719,133.42	0.53	N 29° 18' 19.16"	W 89° 57' 29.46"	26+50.60	84	294,944.83	3,717,882.59	0.44	N 29° 18' 13.79"	W 89° 57' 43.1
40	295,533.28	3,719,077.05	3.62	N 29° 18' 19.48"	W 89° 57' 30.09"	27+15.19	85	294,922.26	3,717,888.84	0.51	N 29° 18' 13.57"	W 89° 57' 43.1
41	295,608.72	3,718,983.25	2.90	N 29° 18' 20.23"	W 89° 57' 31.14"	28+35.56	86	294,879.14	3,717,908.27	0.34	N 29° 18' 13.14"	W 89° 57' 43.1
42	295,627.10	3,718,970.47	0.91	N 29° 18' 20.42"	W 89° 57' 31.28"	28+57.94	87	294,821.32	3,717,922.10	0.31	N 29° 18' 12.57"	W 89° 57' 43.1
43	295,639.84	3,718,954.62	1.06	N 29° 18' 20.55"	W 89° 57' 31.46"	28+78.28	88	294,802.12	3,717,943.92	0.29	N 29° 18' 12.37"	W 89° 57' 42.1
44	295,648.18	3,718,933.88	1.34	N 29° 18' 20.63"	W 89° 57' 31.69"	29+00.63	89	294,784.37	3,717,968.15	0.31	N 29° 18' 12.19"	W 89° 57' 42.1
45	295,656.54	3,718,884.01	2.33	N 29° 18' 20.72"	W 89° 57' 32.25"	29+51.20						

EXISTING ROCK DIKE CENTERLINE ELEVATION PROFILES

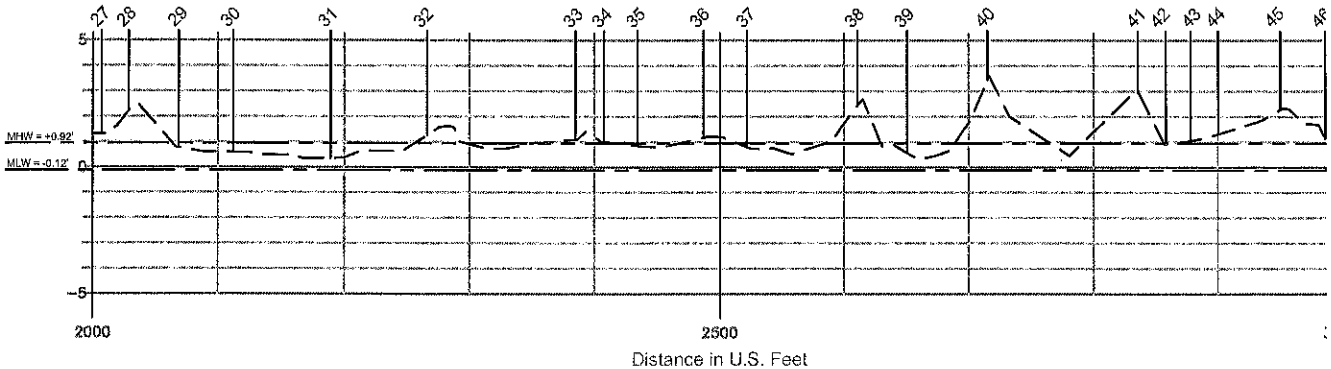
Elev. U.S. Feet (NAVD88)



Elev. U.S. Feet (NAVD88)

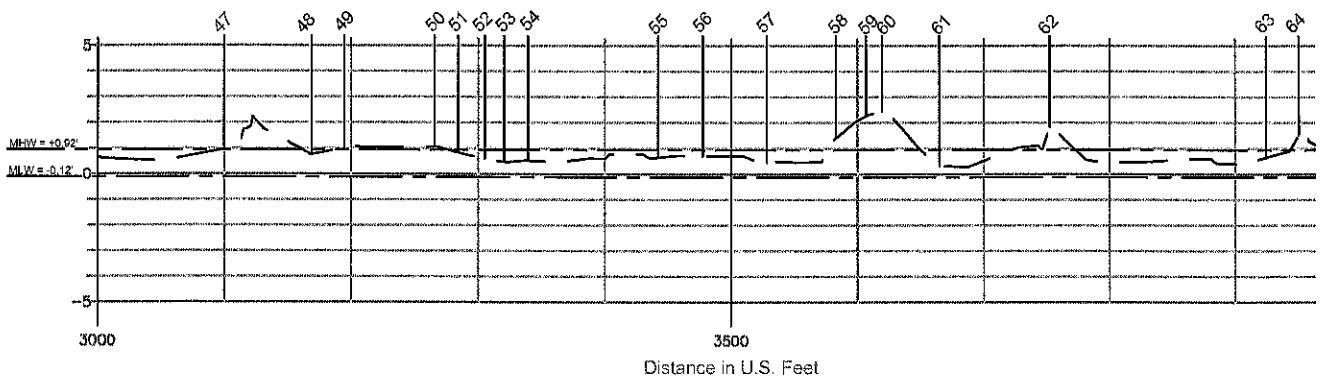


Elev. U.S. Feet (NAVD88)

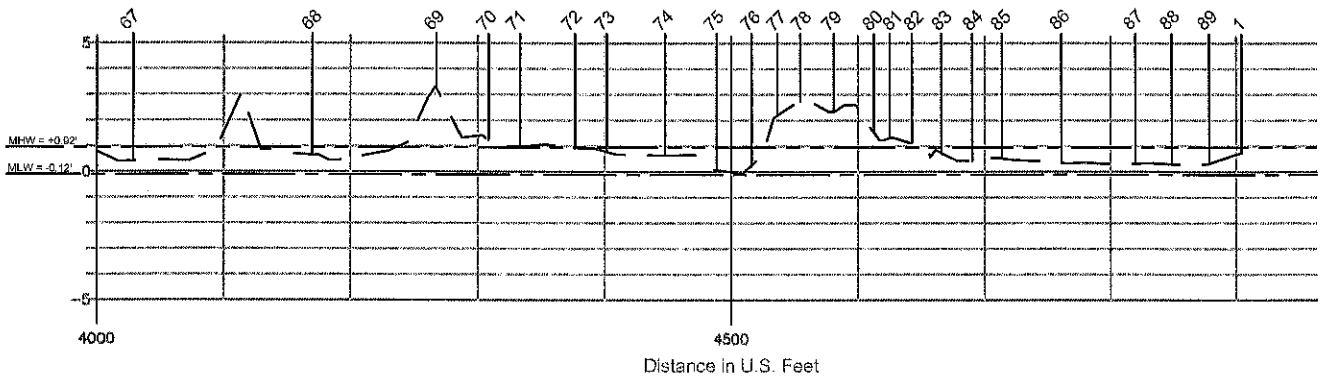


EXISTING ROCK DIKE CENTERLINE ELEVATION PROFILES (Continued)

Elev. U.S. Feet (NAVD88)



Elev. U.S. Feet (NAVD88)



****ESTIMATED LIMESTONE AND PLANTING AREA QUANTITIES**

MATERIAL/ FILL AREA	VOLUME (CY)	AREA (ACRES)
#8 LIMESTONE	9,347	12
PLANTING AREA	-----	11
MNA	-----	11

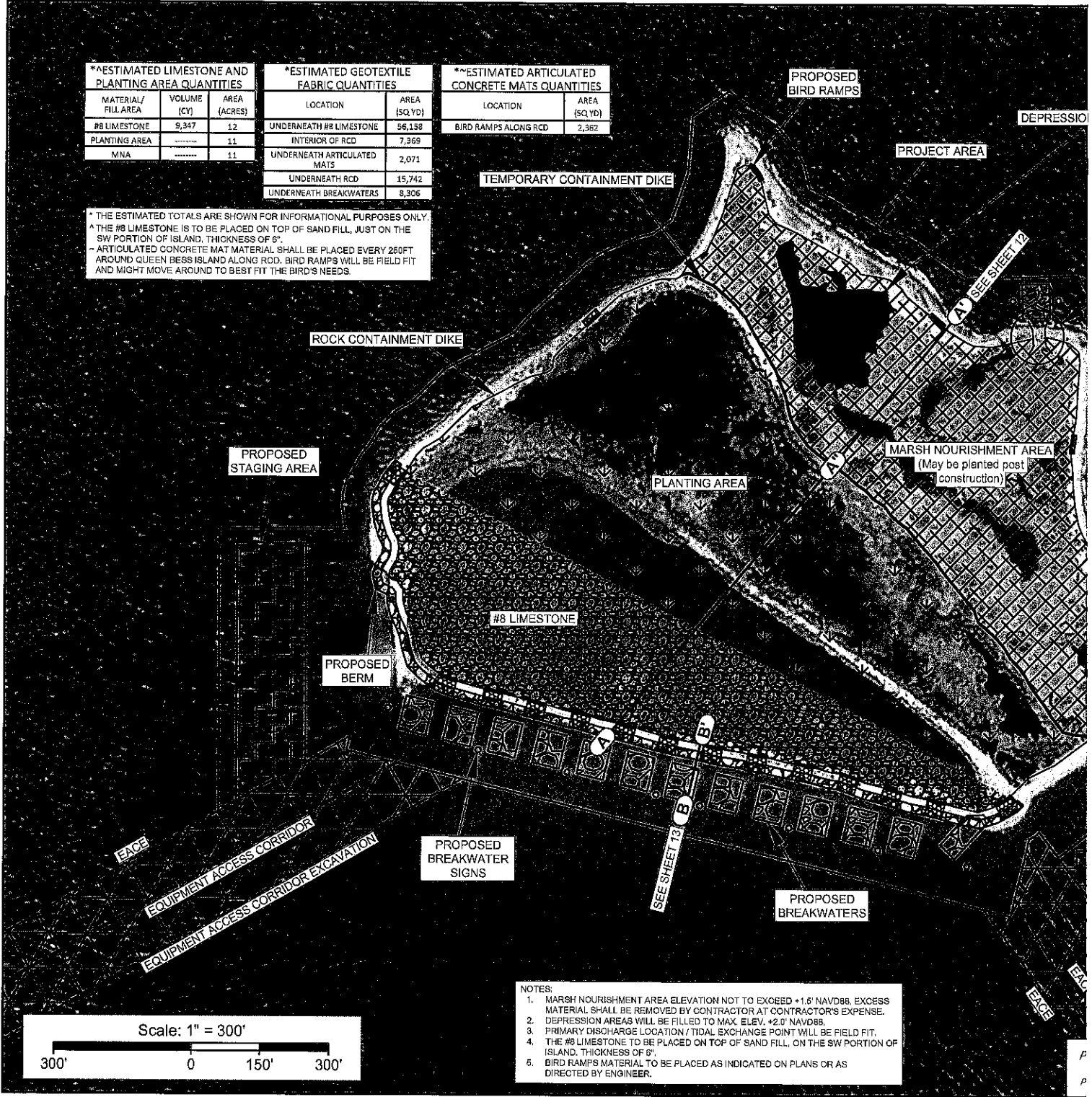
***ESTIMATED GEOTEXTILE FABRIC QUANTITIES**

LOCATION	AREA (SQ.YD)
UNDERNEATH #8 LIMESTONE	56,188
INTERIOR OF RCD	7,369
UNDERNEATH ARTICULATED MATS	2,071
UNDERNEATH RCD	15,742
UNDERNEATH BREAKWATERS	8,306

****ESTIMATED ARTICULATED CONCRETE MATS QUANTITIES**

LOCATION	AREA (SQ.YD)
BIRD RAMPS ALONG RCD	2,362

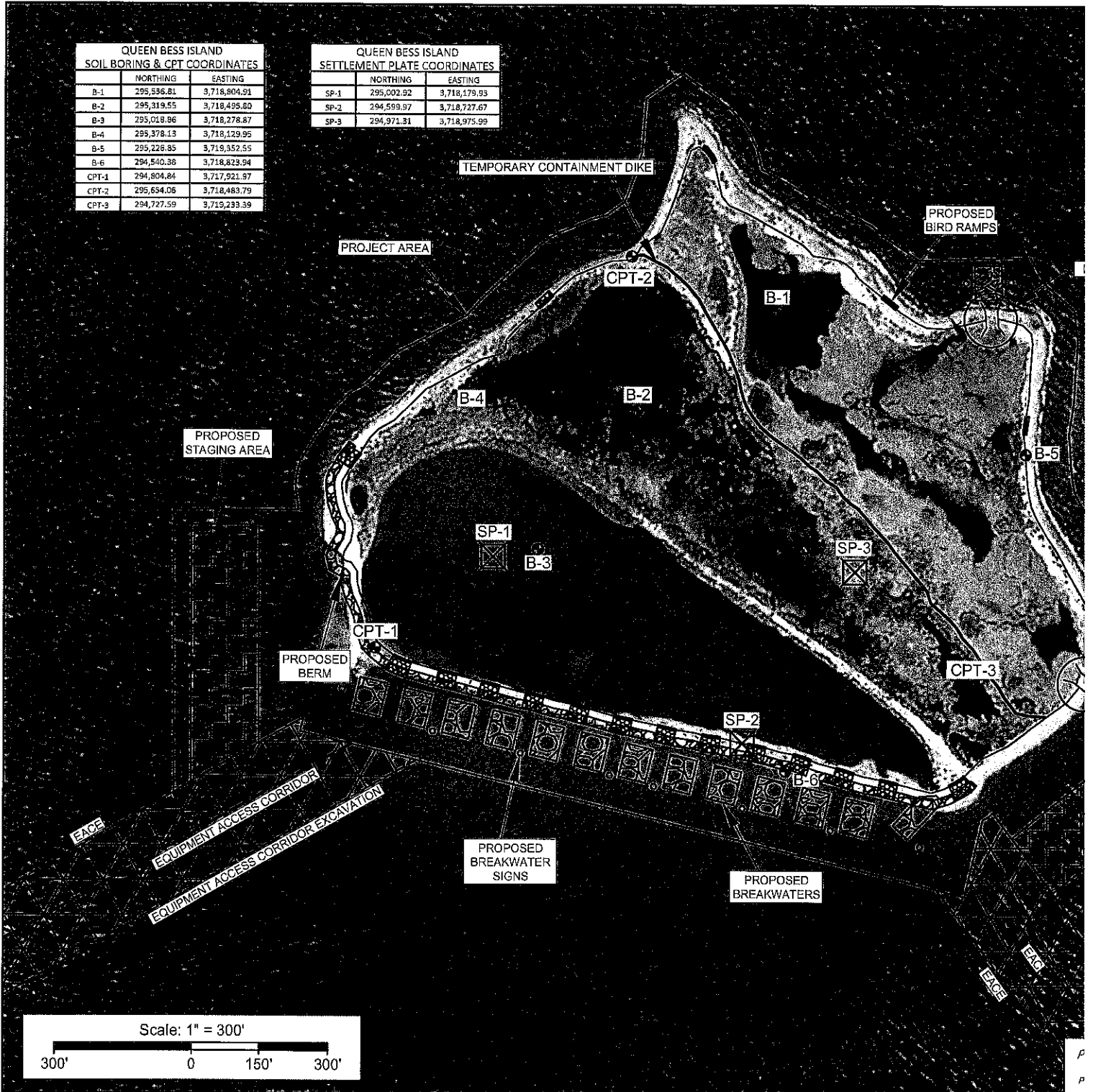
* THE ESTIMATED TOTALS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
 ^ THE #8 LIMESTONE IS TO BE PLACED ON TOP OF SAND FILL, JUST ON THE SW PORTION OF ISLAND, THICKNESS OF 6".
 - ARTICULATED CONCRETE MAT MATERIAL SHALL BE PLACED EVERY 260FT AROUND QUEEN BESS ISLAND ALONG RCD. BIRD RAMPS WILL BE FIELD FIT AND MIGHT MOVE AROUND TO BEST FIT THE BIRD'S NEEDS.

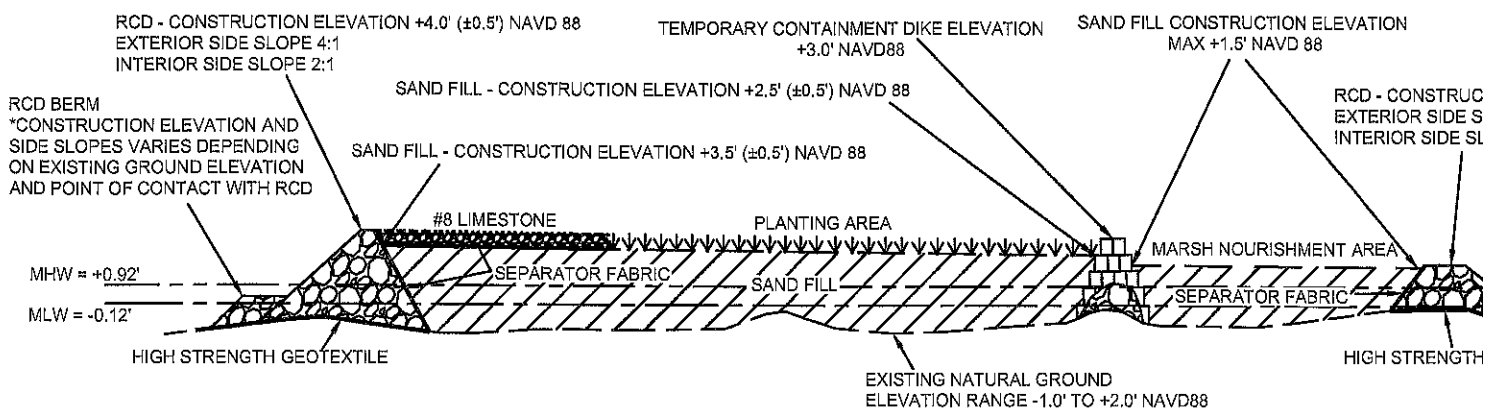


- NOTES:
1. MARSH NOURISHMENT AREA ELEVATION NOT TO EXCEED +1.6' NAVD88, EXCESS MATERIAL SHALL BE REMOVED BY CONTRACTOR AT CONTRACTOR'S EXPENSE.
 2. DEPRESSION AREAS WILL BE FILLED TO MAX. ELEV. +2.0' NAVD88.
 3. PRIMARY DISCHARGE LOCATION / TIDAL EXCHANGE POINT WILL BE FIELD FIT.
 4. THE #8 LIMESTONE TO BE PLACED ON TOP OF SAND FILL, ON THE SW PORTION OF ISLAND, THICKNESS OF 6".
 5. BIRD RAMPS MATERIAL TO BE PLACED AS INDICATED ON PLANS OR AS DIRECTED BY ENGINEER.

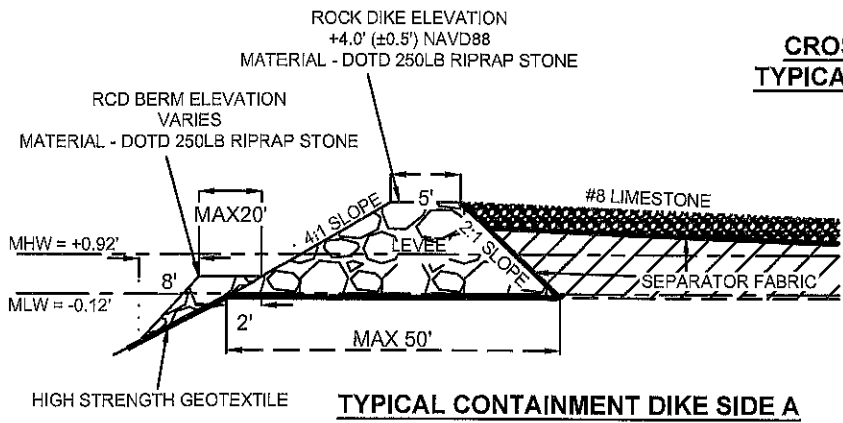
QUEEN BESS ISLAND SOIL BORING & CPT COORDINATES		
	NORTHING	EASTING
B-1	295,536.81	3,718,804.91
B-2	295,319.55	3,718,495.80
B-3	295,018.86	3,718,278.87
B-4	295,378.13	3,718,129.95
B-5	295,226.85	3,719,352.55
B-6	294,540.38	3,718,823.94
CPT-1	294,804.84	3,717,921.97
CPT-2	295,654.06	3,718,483.79
CPT-3	294,727.59	3,719,233.39

QUEEN BESS ISLAND SETTLEMENT PLATE COORDINATES		
	NORTHING	EASTING
SP-1	295,002.92	3,718,179.93
SP-2	294,599.97	3,718,727.67
SP-3	294,971.31	3,718,975.99

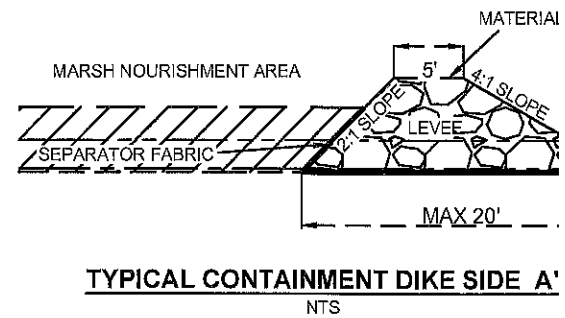




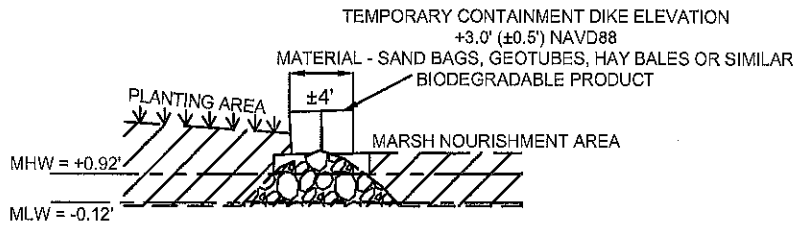
CROSS SECTION A-A'-A'
TYPICAL SECTION FILL AREA
 NTS



TYPICAL CONTAINMENT DIKE SIDE A
 NTS



TYPICAL CONTAINMENT DIKE SIDE A'
 NTS

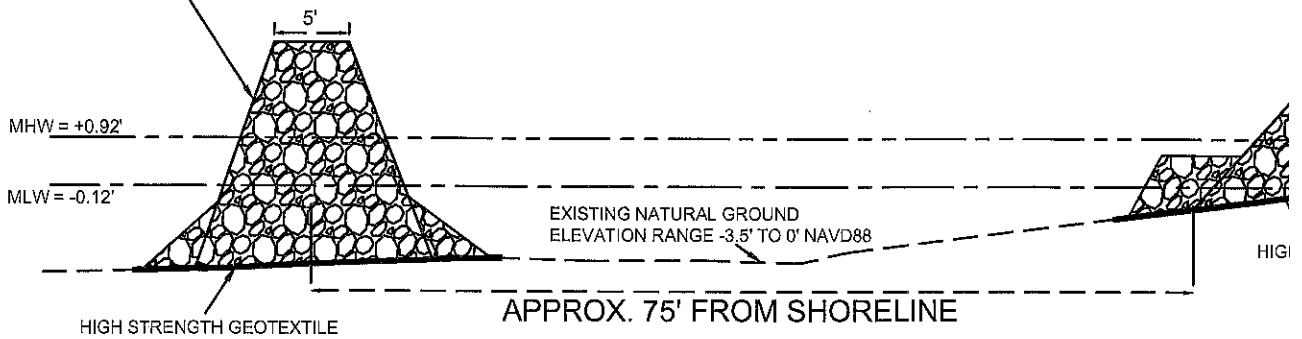


TYPICAL TEMPORARY CONTAINMENT
DIKE SIDE A''
 NTS

- NOTES:
1. THE #8 LIMESTONE IS TO BE PLACED ON TOP OF SAND FILL, AS INDICATED ON PLANS ON THE SW PORTION OF ISLAND. THICKNESS OF 6".
 2. MARSH NOURISHMENT AREA ELEVATION NOT TO EXCEED +1.5' NAVD88, EXCEPT IN DEPRESSION AREAS WHERE ELEVATION SHOULD NOT EXCEED +2' NAVD 88. EXCESS MATERIAL SHALL BE REMOVED BY CONTRACTOR AT CONTRACTOR'S EXPENSE.
 3. SEPARATOR GEOTEXTILE FABRIC TO BE PLACED ON THE INTERIOR OF RCD AND UNDERNEATH #8 LIMESTONE.
 4. EXCESS FABRIC AND ANY NON BIODEGRADABLE MATERIALS TO BE REMOVED AFTER CONSTRUCTION, PRIOR TO DEMOBILIZATION.

BREAKWATERS - CONSTRUCTION ELEVATION +3.0' ($\pm 0.5'$) NAVD 88
 EXTERIOR SIDE SLOPES 3:1
 MATERIAL - DOTD 250LB RIPRAP STONE

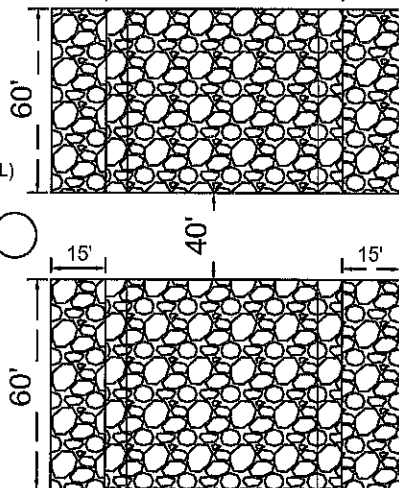
RCD - CONSTRUCTION ELEVATION -
 EXTERIOR SIDE SLOPE 4:1
 MATERIAL - DOTD 250LB RIPRAP ST



B-B'
TYPICAL CROSS SECTION OF BREAKWATERS
 NTS

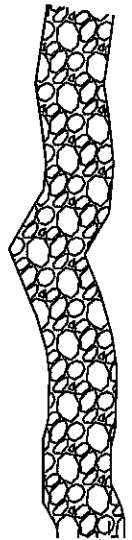
VARIES - APPROX. 45'

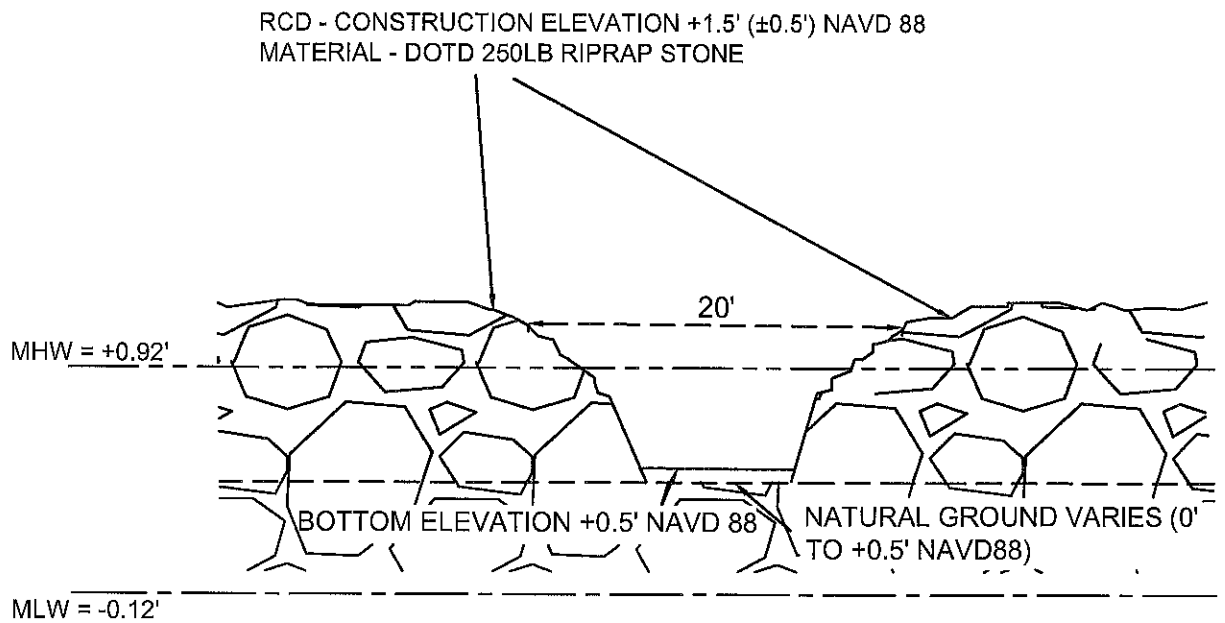
WARNING SIGN
 (SEE SHEET 18 FOR DETAIL)



APPROX. 75' FROM SHORELINE

B-B'
PLAN VIEW OF BREAKWATERS
 NTS

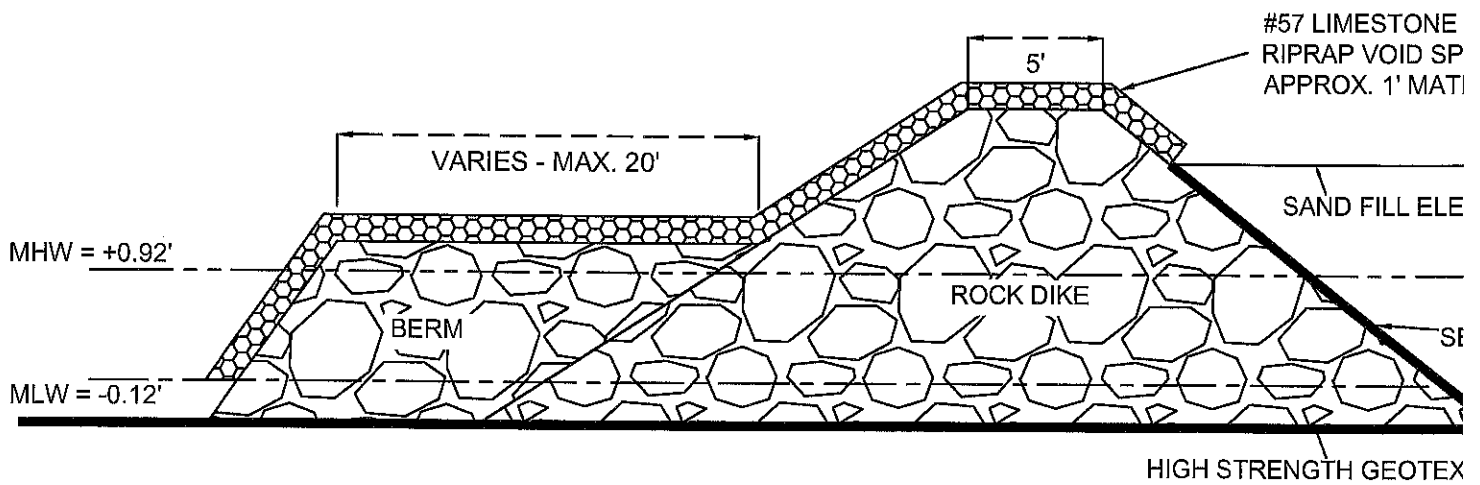




TYPICAL SECTION
DISCHARGE LOCATION / TIDAL EXCHANGE POINT

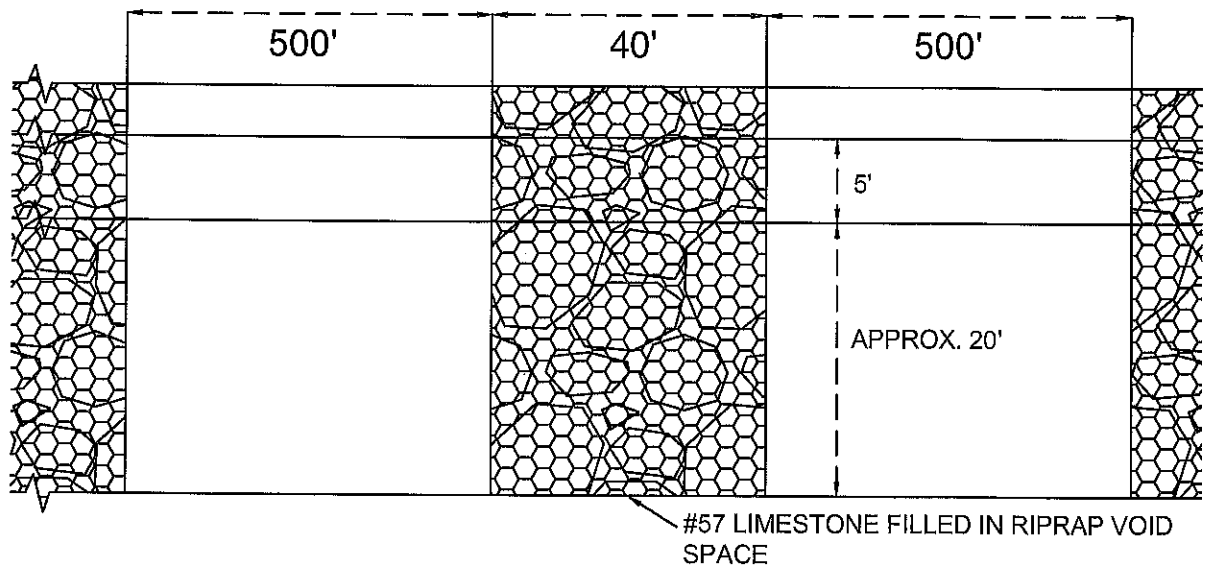
NTS

- NOTES:
1. THE PRIMARY DISCHARGE LOCATION / TIDAL EXCHANGE POINT WILL BE FIELD FIT.
 2. TIDAL EXCHANGE TARGET BOTTOM ELEVATION OF +0.5' NAVD 88 MAY REQUIRE REMOVAL OF EXISTING STONE. REMOVAL SHOULD OCCUR UNDER THE DIRECTION OF LOWF AND/OR ENGINEER



TYPICAL SECTION OF BIRD RAMPS

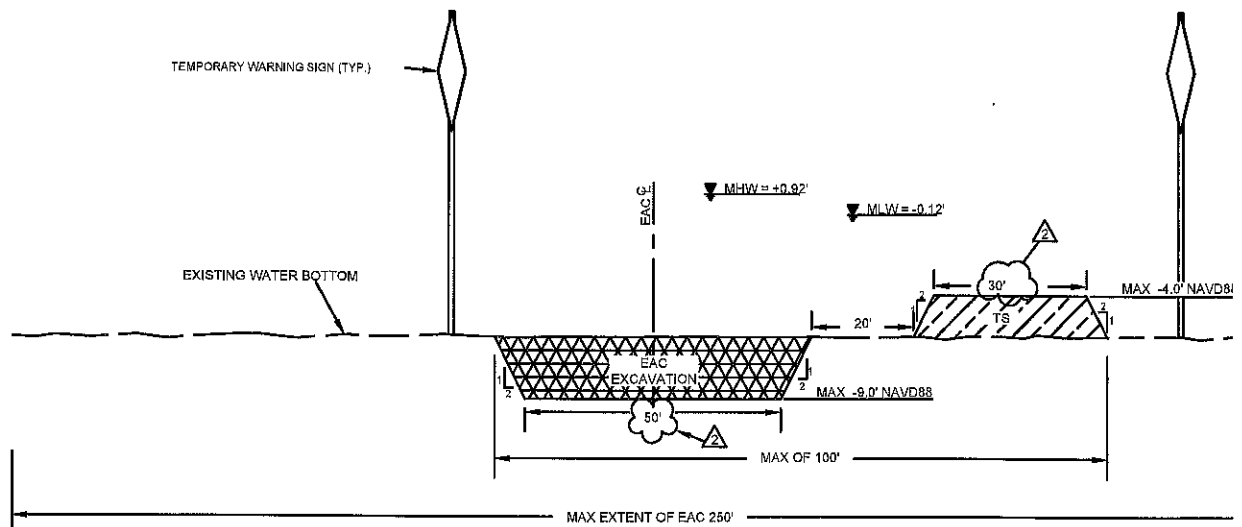
NTS



PLAN VIEW OF BIRD RAMPS

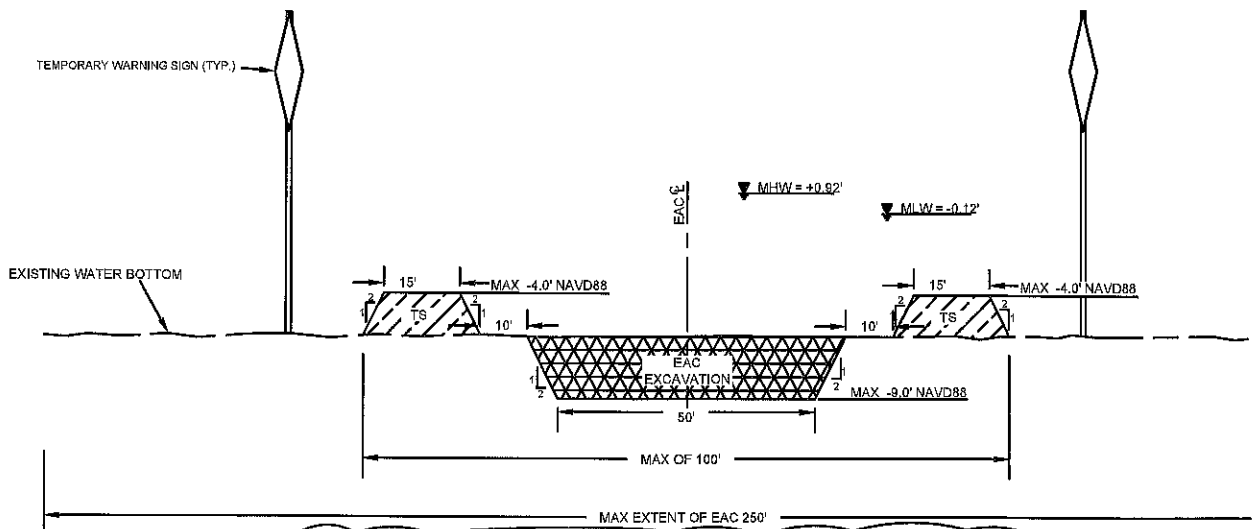
NTS

- NOTES:
1. BIRD RAMPS MATERIAL TO BE PLACED AS INDICATED ON PLANS OR AS DIRECTED BY ENGINEER.
 2. BIRD RAMP MATERIAL SHALL BE TRANSITIONED INTO SAND FILL MATERIAL SO AS TO NOT CREATE EXCESSIVE MOUNDING OF LIMESTONE MATERIAL.
 3. IN AREAS OF NO. 8 LIMESTONE, NO. 57 MATERIAL SHALL TRANSITION SMOOTHLY INTO NO. 8 LIMESTONE.



TYPICAL SECTION OF EQUIPMENT ACCESS CORRIDOR / STAGING AREA

NTS



TYPICAL SECTION OF EQUIPMENT ACCESS CORRIDOR / STAGING AREA

(*OPTIONAL CORRIDOR)

NTS

NOTES:

1. EQUIPMENT ACCESS CORRIDOR SHALL NOT BE DUG DEEPER THAN ELEV. -9.0FT NAVD88.
2. FULLY LOADED VESSEL DRAFT SHALL NOT EXCEED A DEPTH OF 0.6FT FROM DREDGED ACCESS CORRIDOR BOTTOM. IF ACCESS CORRIDOR IS DREDGED TO THE MAXIMUM ALLOWED DEPTH OF -9.0FT NAVD88 THEN THE FULLY LOADED VESSEL DEPTH CANNOT EXCEED -8.5FT NAVD88. ACCESS CORRIDOR DREDGING SHOULD BE MINIMIZED AS MUCH AS POSSIBLE TO LIMIT THE DISTURBANCE TO THE WATER BOTTOMS AROUND THE PROJECT SITE.
3. ALL MATERIAL REMOVED FROM EQUIPMENT ACCESS CORRIDOR SHALL BE STOCK PILED NEXT TO CHANNEL. THIS MATERIAL SHALL NOT BE STOCK PILED IN SUCH A MANNER SO AS TO BECOME A HAZARD TO NAVIGATION. TEMPORARY SIGNS OR OTHER NOTICES TO MARINERS SHALL BE USED AS REQUIRED BY THE USCG.
4. MATERIAL REMOVED FOR EQUIPMENT ACCESS SHALL BE REDEPOSITED IN THE ACCESS CORRIDOR UPON COMPLETION OF PROJECT. ALL TEMPORARY SIGNS OR NOTICES SHALL BE REMOVED AT THIS TIME.
5. SIDE CAST MATERIAL WILL BE PLACED A MINIMUM OF 150FT FROM ANY OYSTER LEASE AND SHALL NOT BE PLACED ON EXISTING VEGETATION.

PDARP/PEIS Chapter 6 – Appendix A – Best Management Practices

Birds

Migratory Birds

- Use care to avoid birds when operating machinery or vehicles near birds.
- During the project design phase, coordinate with the USFWS and the state trust resource agency to site and design projects to avoid or minimize impacts to migratory bird nesting habitats or important feeding/loafing areas.
- If vegetation clearing is necessary, clear vegetation outside the migratory bird nesting season (approximately mid-February through late August) or have a qualified biologist inspect for active nests. If no active nests are found, vegetation may be removed. If active nests are found, vegetation may be removed after the nest successfully fledges.
- Avoid working in migratory bird nesting habitats during breeding, nesting, and fledging (approximately mid-February through late August). If project activities must occur during this timeframe and breeding, nesting, or fledging birds are present, contact the state trust resource agency to obtain the most recent guidance to protect nesting birds or rookeries, and their recommendations will be implemented. Conservation areas may already be marked to protect bird nesting areas. Stay out of existing marked areas.

Piping Plover

- Provide all individuals working on a project with information in support of general awareness of piping plover presence and means to avoid birds and their critical or otherwise important habitats.

Mammals

Bottlenose Dolphin

- For projects with any in-water construction activities, dredging, or wetland/barrier island creation and nourishment, follow the most current version of the NMFS Southeast Region's *Measures for Reducing Entrapment Risk to Protected Species*.
- For projects that enhance recreational and commercial vessel based activities, follow NMFS's *Southeast U.S. Marine Mammal and Sea Turtle Viewing Guidelines*.

Tortoises/Turtles

Sea Turtle

- In Water Implement the following guidelines: NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions* (revised March 23, 2006), NMFS's *Measures for Reducing Entrapment Risk to Protected Species* (revised May 22, 2012) and NMFS's *Vessel Strike Avoidance Measures and Reporting for Mariners* (revised February 2008).

Invasive Species

- Implement an Integrated Pest Management (IPM) approach to facility design, sanitation, and maintenance to prevent and control invasive and pest species.
- Inspect sites, staging, and buffer areas for common invasive species prior to the onset of work. Map any invasive species detected and note qualitative or quantitative measures regarding abundance.
- Implement a control plan, if necessary, to ensure these species do not increase in distribution or abundance at a site due to project implementation. Inspect sites periodically to identify and

control new colonies/individuals of an invasive species not previously observed prior to construction.

- Prior to bringing any equipment (including personal gear, machinery, vehicles, or vessels) to the work site, inspect each item for mud or soil, seeds, and vegetation. If present, clean the equipment, vehicles, or personal gear until they are free from mud, soil, seeds, and vegetation. Inspect the equipment, vehicles, and personal gear each time they are being prepared to go to a site or prior to transferring between sites to avoid spreading exotic, nuisance species.
- Have the appropriate state agency inspect any equipment or construction materials for invasive species prior to use.
- Inspect and certify propagated or transplanted vegetation as pest and disease free prior to planting in restoration project areas.

General Construction Measures

Protected Species

- Provide all individuals working on a project with information in support of general awareness of and means to avoid impacts to protected species and their habitats present at the specific project site.
- Survey for other at-risk or imperiled species. If found on site, contact the USFWS and state trust resource agency to determine if avoidance or minimization measures or a Candidate Conservation Agreement with Assurances may be appropriate.

Maintenance and Conduct

- Develop and implement a spill prevention and response plan, including conducting daily inspections of all construction and related equipment to ensure there are no leaks of antifreeze, hydraulic fluid, or other substances and cleaning and sealing all equipment that would be used in the water to rid it of chemical residue. Develop a contract stipulation to disallow use of any leaking equipment or vehicles.

Wetland and Aquatic Resource Protection

- Complete an engineering design and post-construction inspection for projects where geomorphic elevations are restored in wetlands, marshes, and shallow water habitats to ensure the success of the restoration project. Manage elevation of fill material to ensure projected consolidation rates are accomplished and that habitat suitable for wetland and marsh vegetation is developed.
- Avoid and minimize, to the maximum extent practicable, placement of dredged or fill material in wetlands and other aquatic resources.
- Design construction equipment corridors to avoid and minimize impacts to wetlands and other aquatic resources to the maximum extent practicable.
- To the maximum extent possible, implement the placement of sediment to minimize impacts to existing vegetation or burrowing organisms.

Land and Vegetation Protection

- Develop and implement an erosion control plan to minimize erosion during and after construction and where possible use vegetative buffers (100 feet or greater), revegetate with native species or annual grasses, and conduct work during dry seasons.

- Prohibit use of hazardous materials, such as lead paint, creosote, pentachlorophenol, and other wood preservatives during construction in, over or adjacent to, sensitive sites during construction and routine maintenance.
- Where landscaping is necessary or desired, use native plants from local sources. If non-native species must be used, ensure they are noninvasive and use them in container plantings.
- Apply herbicide in accordance with the direction and guidance provided on the appropriate U.S. Environmental Protection Agency (EPA) labels and state statutes during land-based activities.
- Evaluate methods prior to dredging to reduce the potential for impacts from turbidity or tarballs. Perform maintenance of generators, cranes, and any other stationary equipment operated within 150 feet of any natural or wetland area, as necessary, to prevent leaks and spills from entering the water.
- Use silt fencing where appropriate to reduce increased turbidity and siltation in the project vicinity. This would apply to both on land and in water work.
- Upon completion of construction activities, restore all disturbed areas as necessary to allow habitat functions to return.
- Incorporate containment levees for fill cells for projects using marsh creation or other barrier island restoration. Remove these containment levees after construction to allow for the restoration of natural tidal exchange.
- Make all efforts to reduce the peak sound level and exposure levels of fish to reduce the potential impact of sound on fish present in the project areas.

Conservation Measures for Coast Guard Obstruction Lighting

1. Lighting should be minimized to the greatest extent practicable.
 - a. minimize the number of obstruction lights to what is necessary
 - b. install obstruction lighting out away from the island to the greatest extent practicable
 - c. install directional lighting and shading to direct light outward away from the island
 2. Use flashing lights with longer off-cycles (time between blinks)
 3. Avoid using red and yellow lights. Use white lights or low-intensity/lower-wavelength blue or turquoise lights. Lower wavelengths tend not to disrupt the magnetic orientation of several families of birds.
-

From MMS 2010:

The avian magnetic compass is responsive to specific wavelengths of light, with disorientation occurring under red light (especially if the bird is not used to the red light) and yellow light, but no effect occurring under green light.

Light of a particular wavelength is needed for magnetic-compass orientation to work (Beason 2003; Wiltschko et al. 1993, 2004; Wiltschko and Wiltschko 1999, 2001; Muheim et al. 2002). Based on the literature, MMS (2010) concluded birds have been shown to be disoriented by longer-wavelength (i.e., red) light that may interfere with the bird's magnetic compass.

Starlight is a celestial cue (i.e., stellar compass) that also may aid in navigation during migration (Alerstam 1990, Gill 1995, Weidensaul 1999, Wiltschko and Wiltschko 2003).

Many birds are strictly nocturnal migrants, requiring a strong sense of stellar cues (Emlen 1967a, 1967b, cited in Wiltschko and Wiltschko 2003). The importance of such cues is reflected in the fact that many birds become disoriented and attracted to other sources of light when the sky becomes cloudy or foggy (Overing 1936, 1938; Alerstam 1990).

Spatial disorientation may be the result of a bird using lights as a visual reference after losing its visual cues to the horizon, as suggested by Herbert (1970).

Attraction of seabirds to offshore oil and gas platforms also has been recorded in the Gulf of Mexico (Ortego 1977, Russell 2005)...In the Gulf of Mexico, the dominant species being attracted are passerines migrating over the Gulf, with seabirds being a minor component.

Results [from Russell 2005] showed that weather had an important effect on the number of birds circulating around the platforms. Large numbers of birds were attracted during overcast nights, especially with rain, whereas clear nights attracted birds infrequently. During haze or extensive cloud cover and on moonless nights, birds tended to circle the platforms.

Birds appeared to be attracted to platform lights and were unwilling or unable to leave the cone of broadcasted light. The authors concluded that, during overcast nights, birds may become spatially disoriented by bright light due to the loss of navigational reference points such as stars and the moon.

Birds have been shown to be differentially attracted to both light type and color spectrum. With regard to FAA obstruction lighting on wind farms and communication towers, continuous (non-flashing) lights at night were more attractive than flashing lights. Red incandescent lighting may be more attractive than white strobes are, but this hypothesis has not been tested in a controlled experiment (Kerlinger and Hatch 2001, Kerlinger 2004). In addition, lights with shorter off-cycles (time between blinks) may be more attractive to night migrants than are lights with longer off-cycles (Kerlinger and Hatch 2001).

Beason (1999) stated that birds can be attracted to communication towers based on lighting color and the duration (i.e., flashing, strobe, or continuous). He believed that red lights may be more attractive than white lights, and that strobe lights may be less attractive than continuous lighting, but these conclusions have not been proven experimentally. Disorientation is another potential impact of artificial lighting. For five species of birds, he showed that disorientation or a change in direction of orientation may be produced by longer wavelengths such as red or orange. He suggested that these wavelengths may interfere with the magnetic compass.

Wiltschko et al. (1993) and Gauthreaux and Belser (2006) also concluded that red lights may cause disorientation in birds.

Poot et al. (2008) showed that bird orientation was influenced more by white and red light than by green and blue light.

Noted in the MMS (2010) Joop Marquenie (pers. com.) of NAM (Nederlandse Aardolie Maatschappij; owned by Shell and ExxonMobil) has initiated and directed a research team, including research scientist Hanneke Poot, which has experimented with the attraction of birds to artificial light in the Netherlands, with eventual potential application to lighting of offshore oil platforms. The study demonstrated that birds reacted most strongly to white and red light and the most weakly to green and blue light. For all artificial light colors, responses were strongest on overcast nights.

Bright lights near some seabird colonies can potentially cause disruption of breeding activities, increased predation by gulls and owls, and/or a reluctance of nocturnal birds to visit the colony because of high predation rates (Watanuki 1986, Rojek 2001, Montevicchi 2006).

In the Hawaiian Islands, fledgling Newell's shearwaters (*Puffinus newelli*) are attracted to streetlights and other external illumination around the New Moon (Telfer et al. 1987).

Literature Citation

Able, K. P. 1995. Orientation and navigation: a perspective on fifty years of research. *Condor* 97: 592–604.

Alerstam, T. 1990. *Bird migration*. Cambridge University Press, Cambridge, UK.

Beason, R. C. 2003. Through a bird's eye-exploring avian sensory perception. Retrieved from <http://www.birdstrikecanada.com/Papers2003/Robert%20Beason.doc>

Gauthreaux, S. A. and C. G. Belser. 2006. Effects of artificial light on migrating birds. Pp. 67–93 in: *Ecological consequences of artificial night lighting* (C. Rich and T. Longcore, eds.). Island Press, Washington, DC.

Gill, F. B. 1995. *Ornithology*. Second Edition. W. H. Freeman, New York, NY.

Herbert, A. D. 1970. Spatial disorientation in birds. *Wilson Bulletin* 82:400–419.

Kerlinger, P. 2004. Attraction of night migrating birds to FAA and other types of lights. Presented at National Wind Coordinating Committee—Wildlife Working Group meeting, November 3–4, 2004, Lansdowne, VA.

Kerlinger, P., and J. Hatch. 2001. Appendix 5.7A—A preliminary avian risk assessment for the Cape Wind Energy Project. Report prepared for Cape Wind Associates, L.L.C., Boston, MA; and Environmental Science Services, Inc., Sandwich, MA.

Montevecchi, W. A. 2006. Influences of artificial light on marine birds. Pp. 94–113 in: *Ecological consequences of artificial night lighting* (C. Rich and T. Longcore, eds.). Island Press, Washington, DC.

Muheim, R., J. Backman, and S. Akesson. 2002. Magnetic compass orientation in European robins is dependent on both wavelength and intensity of light. *Journal of Experimental Biology* 205:3845–3856.

Ortego, B. 1977. Birding on an oil production platform. *Louisiana Ornithological Society Newsletter* 78: 8–9.

Overing, R. 1936. The 1935 fall migration at the Washington Monument. *Wilson Bulletin* 48: 222–224.

Overing, R. 1938. The 1937 fall migration at the Washington Monument. *Wilson Bulletin* 50: 146.

Poot, H., B.J. Ens, H. de Vries, M.A.H. Donners, M.R. Wernand, and J.M. Marquenie. 2008. Green light for nocturnally migrating birds. *Ecology and Society* 13 (2): 47. Retrieved from <http://www.ecologyandsociety.org/vol13/iss2/art47/>

Rojek, N. 2001. Biological rationale for artificial night-lighting concerns in the Channel Islands. Unpublished report by California Department of Fish and Game, Marine Region, Monterey, CA.

Russell, R.W. 2005. Interactions between migrating birds and offshore oil and gas platforms in the northern Gulf of Mexico. Final Report. U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, LA. OCS Study MMS 2005-009.

Telfer, T. C., J. L. Sincock, G. V. Byrd, and J. R. Reed. 1987. Attraction of Hawaiian seabirds to lights: conservation efforts and effects of moon phase. *Wildlife Society Bulletin* 15: 406–413.

U.S. DOI, Minerals Management Service. 2010. Literature Review, Synthesis, and Design of Monitoring of Ambient Artificial Light Intensity on the OCS Regarding Potential Effects on Resident Marine Fauna. OCS Study MMS 2007-055.

Watanuki, Y. 1986. Moonlight avoidance behavior in Leach's storm-petrels (*Oceanodroma leucorhoa*) as a defense against slaty-backed gulls (*Larus schistosagus*). *Auk* 103: 14–22.

Wiltschko, R., and W. Wiltschko. 2003. Avian navigation: from historical to modern concepts. *Animal Behavior* 65: 257–272.

Wiltschko, W., U. Munro, H. Ford, and R. Wiltschko. 1993. Red light disrupts magnetic orientation of migratory birds. *Nature* 364: 525–527.

Wiltschko, W., A. Möller, M. Gesson, C. Noll and R. Wiltschko. 2004. Light-dependent magnetoreception in birds: analysis of the behaviour under red light after pre-exposure to red light. *Journal of Experimental Biology* 207: 1193–1202

Wiltschko, W., and R. Wiltschko. 1999. The effect of yellow and blue light on magnetic compass orientation in European robins, *Erithacus rubecula*. *Journal of Comparative Physiology* 184: 295–299.

Wiltschko, W., and R. Wiltschko. 2001. Light dependent magnetoreception in birds: the behaviour of European robins *Erithacus rubecula* under monochromatic light of various intensities and wave lengths. *Journal of Experimental Biology* 204: 3295–3302.

Additional Resources:

<https://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

<https://www.faa.gov/news/updates/?newsId=85204&cid=TW413>

<http://www.tc.faa.gov/its/worldpac/techrpt/tctn12-9.pdf>

1. Activities authorized under this general permit shall not be used for piecemeal work and shall be applied to single and complete projects. All components of a single and complete project shall be treated together as constituting one single and complete project. All planned phases of multi-phased projects shall be treated together as constituting one single and complete project. This general permit shall not be used for any activity that is part of an overall project for which an individual permit is required.
2. No activity is authorized under this general permit which may adversely affect significant cultural resources listed or eligible for listing in the National Register of Historic Places until the requirements for Section 106 of the National Historic Preservation Act are met. Upon discovery of the presence of previously unknown historic and/or prehistoric cultural resources, all work must cease and the permittee must notify the State Historic Preservation Office and the Corps of Engineers. The authorization is suspended until it is determined whether or not the activity will have an adverse effect on cultural resources. The authorization may be reactivated or modified through specific conditions if necessary, if it is determined that the activity will have no adverse effect on cultural resources. The PGP authorization will be revoked if it is determined that cultural resources would be adversely affected, and an individual permit may be necessary.
3. There shall be no unreasonable interference with navigation by the existence or use of the activity authorized herein. The permittee will, at his or her expense, install and maintain any safety lights, signals, and signs prescribed by the United States Coast Guard, through regulations or otherwise, on authorized facilities or on equipment used in performing work under the authorization.
4. No activity may substantially disrupt the movement of those species of aquatic life indigenous to the water body, including those species which normally migrate through the area, unless the activity's primary purpose is to block or impound water.
5. If the **authorized** activity involves the installation of aerial transmission lines, submerged cable, or submerged pipelines across navigable waters of the United States the following is applicable:

The National Ocean Service (NOS) has been notified of this authorization. You must notify NOS and this office in writing, at least two weeks before you begin work and upon completion of the activity authorized by this permit. Your notification of completion must include a drawing which certifies the location and configuration of the completed activity (a certified permit drawing may be used). Notification to NOS will be sent to the following address: National Ocean Service, Office of Coast Survey, N/CS261, 1315 East West Highway, Silver Spring, Maryland 20910-3282.

6. For pipelines under an anchorage or a designated fairway in the Gulf of Mexico the following is applicable: The NOS has been notified of this authorization. You must notify NOS and this office in writing, at least two weeks before you begin work and upon completion of the activity authorized by this permit. Within 30 days of completion of the pipeline, 'as built' drawings certified by a professional engineer registered in Louisiana or by a registered surveyor shall be furnished to this office, the Commander (dpw), Eighth Coast Guard District, Hale Boggs Federal Building, 500 Poydras Street, Room 1230, New Orleans, Louisiana 70130, and to the Director, National Ocean Service, Office of Coast Survey, N/CS261, 1315 East West Highway, Silver Spring, Maryland 20910-3282. The plans must include the location, configuration and actual burial depth of the completed pipeline project.

7. If the **authorized** project, or future maintenance work, involves the use of floating construction equipment (barge mounted cranes, barge mounted pile driving equipment, floating dredge equipment, dredge discharge pipelines, etc.,) in the waterway, you are advised to notify the Eighth Coast Guard District so that a Notice to Mariners, if required, may be prepared. Notification with a copy of your permit approval and drawings should be mailed to the Commander (dpw), Eighth Coast Guard District, Hale Boggs Federal Building, 500 Poydras Street, Room 1230, New Orleans, Louisiana 70130, about 1 month before you plan to start work. Telephone inquiries can be directed to the Eighth Coast Guard District, Waterways Management at (504) 671-2107.

8. All activities authorized herein shall, if they involve, during their construction or operation, any discharge of pollutants into waters of the United States, be at all times consistent with applicable water quality standards, effluent limitations and standards of performance, prohibitions, pretreatment standards and management practices established pursuant to the Clean Water Act (PL 92-500:86 Stat 816), or pursuant to applicable state and local laws.

9. Substantive changes to the Louisiana Coastal Resources Program may require immediate suspension and revocation of this permit in accordance with 33 CFR 325.7.

10. Irrespective of whether a project meets the other conditions of this permit, the Corps of Engineers retains discretionary authority to require an individual Department of the Army permit when circumstances of the proposal warrant this requirement.

11. Any individual authorization granted under this permit may be modified, suspended, or revoked in whole or in part if the Secretary of the Army or his authorized representative determines that there has been a violation of any of the terms or conditions of this permit or that such action would otherwise be in the public interest.

12. The Corps of Engineers may suspend, modify, or revoke this general permit if it is found in the public interest to do so.

13. Activities proposed for authorization under the PGP must comply with all other necessary federal, state, and/or local permits, licenses, or approvals. Failure to do so would result in a violation of the terms and conditions of PGP.

14. The permittee shall permit the District Commander or his authorized representative(s) or designee(s) to make periodic inspections of the project site(s) and disposal site(s) if different from the project site(s) at any time deemed necessary in order to assure that the activity being performed under authority of this permit is in accordance with the terms and conditions prescribed herein.

15. This general permit does not convey any property rights, either in real estate or material, or any exclusive privileges; and it does not authorize any injury to property or invasion of rights or any infringement of federal, state, or local laws or regulations nor does it obviate the requirements to obtain state or local assent required by law for the activity authorized herein.

16. In issuing authorizations under this permit, the federal government will rely upon information and data supplied by the applicant. If, subsequent to the issuance of an authorization, such information and data prove to be false, incomplete, or inaccurate, the authorization may be modified, suspended, or revoked, in whole or in part.

17. For activities resulting in sewage generation at the project site, such sewage shall be processed through a municipal sewage treatment system or, in areas where tie-in to a municipal system is not practical, the on-site sewerage system must be approved by the local parish sanitarian before construction.

18. Any modification, suspension, or revocation of the PGP, or any individual authorization granted under this permit, will not be the basis for any claim for damages against the United States.

19. Additional conditions deemed necessary to protect the public interest may be added to the general permit by the District Commander at any time. If additional conditions are added, the public will be advised by public notice. Individual authorizations under the PGP may include special conditions deemed necessary to ensure minimal impact and compliance with the PGP.

20. The PGP is subject to periodic formal review by MVN and OCM in coordination with the Environmental Protection Agency, US Fish and Wildlife Service, the National Marine Fisheries Service, and the Louisiana Department of Wildlife and Fisheries. Comments from reviewing agencies will be considered in determination as to whether modifications to the general permit are needed. Should the District Commander make a determination not to incorporate a change proposed by a reviewing agency, after normal negotiations between the respective agencies, the District Commander will explain in writing to the reviewing agency the basis and rationale for his decision.

21. CEMVN retains discretion to review the PGP, its terms, conditions, and processing procedures, and decide whether to modify, reissue, or revoke the permit. If the PGP is not modified or reissued within 5 years of its effective date, it automatically expires and becomes null and void.

22. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

23. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party as described in Special Condition 25 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

24. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

25. If you sell the property associated with this permit, you must provide this office with a copy of the permit and a letter noting your agreement to transfer the permit to the new owner and the new owner's agreement to accept the permit and abide by all conditions of the permit. This letter must be signed by both parties.

26. Many local governing bodies have instituted laws and/or ordinances in order to regulate dredge and/or fill activities in floodplains to assure maintenance of floodwater storage capacity and avoid disruption of drainage patterns that may affect surrounding properties. Your project involves dredging and/or placement of fill; therefore, you must contact the local municipal and/or parish governing body regarding potential impacts to floodplains and compliance of your proposed activities with local floodplain ordinances, regulations or permits.

27. In issuing authorizations under this permit, the federal government does not assume any liability for: damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes; damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest; damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit, and; design or construction deficiencies associated with the permitted work.