APPENDIX K

Scofield Island Back-Barrier Geotechnical Analysis

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Scofield Island Back-Barrier Geotechnical Analysis

1.0 INTRODUCTION

The Scofield Island Back-Barrier Geotechnical Analysis was completed in support of the Feasibility Study and Preliminary Design Phases for the Riverine Sand Mining / Scofield Island Restoration Project (Project). The Project is sponsored by the Louisiana Department of Natural Resources (LDNR), State of Louisiana Office of Coastal Protection and Restoration (OCPR) and NOAA Fisheries. The Project design is funded and authorized in accordance with the provisions of the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) (16 U.S.C.A., Sections 3951-3956) and has been approved by the Public Law 101-646 Task Force. The Project's CWPPRA designation is BA-40.

The purpose of the geotechnical investigation was to provide design data for the marsh creation plan for Scofield Island as fully described in the Preliminary Design Main Report and Scofield Island Restoration Area Design Analysis (Appendix M). The scope of services included the drilling of soil test borings to determine subsoil conditions and stratification, and to obtain samples of the various substrata. Soil mechanics laboratory tests, performed on samples obtained from the borings, were used to evaluate the physical properties of the subsoils. Engineering analyses, based on the soil borings and laboratory test results, were made to evaluate the stability of the foundation support for the proposed shoreline protection and marsh creation features. Analyses were performed to evaluate stability of the containment dike and retained marsh fill. Analyses were also made to estimate settlement of the dike and marsh area fill and the time-rate of settlement of these features. The soil test borings and analyses were conducted by Eustis Engineering Company, LLC. (EEC, 2009) and reviewed by Coastal Engineering Consultants, Inc (CEC). SJB Group, LLC. (SJB) provided survey control.

The analyses and results were prepared in accordance with generally accepted geotechnical engineering practice for the exclusive use of OCPR and their designated representatives specific to the Project. In the event of significant changes in the marsh creation design, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and conclusions modified and verified in writing by EEC. Should these data be used by anyone other than OCPR and their designated representatives, EEC should be consulted for interpretation of data and to secure any other information pertinent to the Project.

2.0 PROJECT AREA AND LOCATION

Scofield Island is a 2.4 mile long barrier island located east of Pelican Island between Scofield Bayou and the merger of Bay Coquette and the Gulf of Mexico, Plaquemines Parish. The Project area is shown in Figure 1.

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FAX: (239) 643-1143
3106 SOUTH HORSESHOE DRIVE
NAPLES, FLORIDA 34104

Figure 1:
Scofield Island Native Sediment Sample Locations

January 2010 | Project Number: 11059.0

SJB GROUP, LLC
QUALITY BY DESIGN
P.O. BOX 1751 PHONE: (225) 769-3400
BATON ROUGE, LA. 70821 FAX: (225) 769-3596

3.0 SOIL BORINGS

Six undisturbed sample type soil test borings, designated as B-1 through B-6, were made on October 7 through 11, 2008 at the approximate locations shown on Figure 1. Each boring was drilled to a depth of 50 feet below the mudline using a skid mounted rotary type drill rig mounted on a shallow draft boat. The borings were located in the field using a hand held GPS unit. Based on site access, several of the borings had to be offset from their intended locations. The proposed and actual locations are identified on Figure 1. Subsequent to the drilling operations, the mudline elevations at the boring locations were surveyed on October 30, 2008. Upon completion of drilling operations, the borings were backfilled in accordance with the laws of the State of Louisiana. Detailed descriptive logs of the borings are shown in both tabular and graphical form in Annex K1. Included on these logs are the coordinates and mudline elevations.

Samples of cohesive or semi-cohesive subsoils were obtained at close intervals or changes in stratum using a 3-inch diameter thinwall Shelby tube sampling barrel. The samples were immediately extruded from the sampling barrel, inspected, and visually classified. Pocket penetrometer tests were performed on the soil samples to give a general indication of their shear strength or consistency. The results of these tests are shown on the boring logs under the column heading "PP." Representative portions were then promptly placed in moisture proof containers and sealed for preservation of their natural moisture content.

Samples of non-cohesive and semi-cohesive materials were obtained during the performance of in situ Standard Penetration Tests. This test consisted of driving a 2-inch diameter splitspoon sampler 1 foot into the ground after first seating it 6 inches. A 140-lb weight dropped 30 inches is used to advance the sampler. The number of blows required to drive the sampler is indicative of the relative density of non-cohesive soils and the approximate consistency of cohesive soils. The samples were retained in moisture proof containers for preservation of their natural moisture content. The results of the Standard Penetration Tests are shown on the boring logs under the column heading ASPT.@

4.0 LABORATORY TESTS

Soil mechanics laboratory tests, consisting of natural water content, unit weight, and either unconfined compression shear (UC) or one-point unconsolidated un-drained triaxial compression shear (OB), were performed on undisturbed samples obtained from the borings. In addition, Atterberg liquid and plastic limits tests were performed on selected samples to aid in classification of the subsoils and to give an indication of their relative compressibility. The results of the laboratory tests are summarized on the boring logs in Annex K1.

Organic content tests were performed on selected samples obtained from the borings to determine the amount of organic matter in the samples. The results of these tests are shown on the boring logs.

Consolidation tests (CONS) were performed on selected samples to determine their compressibility and stress history. Grain size analyses (SV) were performed on selected samples obtained from the borings to determine their particle distribution curves. The results of these tests are shown on separate sheets following the boring logs in Annex K1.

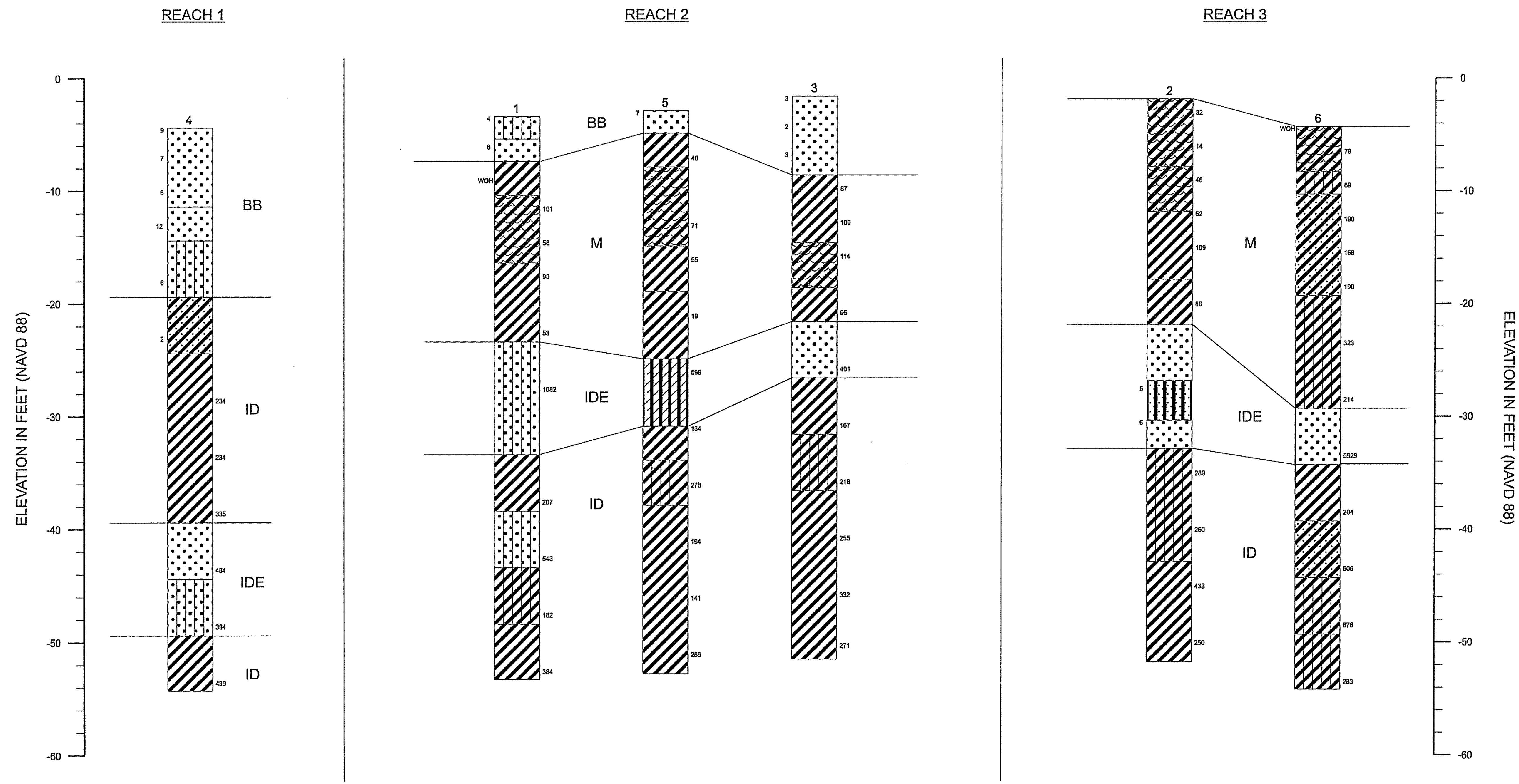
5.0 DESCRIPTION OF SUBSOIL CONDITIONS

5.1 Geologic Setting

The project is located at the distal end of the abandoned Lafourche Delta in southeastern Louisiana. Specifically, the project site is located due south of Buras, Louisiana, along the retreating Louisiana coastline. Severe land loss and shoreline retreat has resulted in isolating this remnant barrier beach complex located at the mouth of Scofield Island Bayou, an abandoned distributary of Big Cypress Bayou, which in turn, is an abandoned distributary of the Mississippi River. Continuous wave attack and landward retreat has winnowed out the fine clays and silts, leaving a frontal small barrier beach complex overlying the marsh and interdistributary deposits across which the shoreline is retreating.

5.2 Stratigraphy

A generalized geologic subsoil profile is presented on Figure 2. At most of the boring locations, the surface consists of a layer of beach sand with abundant shells. As a result of the retreat of the shoreline through storm overwash and breaching, this surface layer is absent at Borings 2 and 6 (eastern end of the island) and varies in thickness from 2 feet at Boring 5 to 15 feet in Boring 4. Underlying the sand deposits are very soft organic clay marsh deposits varying in thickness from approximately 25 feet in Boring 6 to about 9 feet in Boring 3. The marsh deposits are absent in Boring 4 because of the proximity to the active Scofield Bayou migrating channel. The marsh deposits are underlain by intradelta deposits of silty sand and sand which are in turn underlain by very soft to soft interdistributary clays to the termination of the borings at depths of 50 feet below the mudline. The interpretation of subsoil conditions are also shown on the individual boring logs.



STRATA SYMBOLS

- HIGH PLASTICITY ORGANIC CLAYS
- HIGH PLASTICITY CLAY
- CLAYEY SILT
- SILTY LOW PLASTICITY CLAY
- SILTY SAND
- POORLY GRADED SAND
- SANDY LOW PLASTICITY CLAY
- SANDY SILT

NOTES:

1) VALUES SHOWN TO THE RIGHT OF LOG ARE SHEAR STRENGTH IN PSF.

2) VALUES SHOWN TO THE LEFT OF LOG ARE SPT RESULTS.

GEOLOGIC UNIT

BB: BARRIER BEACH DEPOSITS

M: MARSH DEPOSITS

IDE: INTRADELTA DEPOSITS

ID: INTERDISTURBUTARY DEPOSITS

EUSTIS ENGINEERING SERVICES, L.L.C.
GEOTECHNICAL ENGINEERS
3011 28TH STREET METAIRIE, LOUISIANA

GEOLOGIC PROFILE

STATE OF LOUISIANA
RIVERINE SAND MINING/SCOFIELD
ISLAND RESTORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

DRAWN BY: J.L.S.	PLOT DATE: 19 MAR 09	CADD FILE: PROFILE.DGN
CHECKED BY: G.P.S.	JOB NO.: 19292	FIGURE 2

5.3 Water Levels

The borings were drilled in either standing water or in the marsh with ground water at the soil surface. Water depths measured at the time of the field investigation generally varied from 2 to 3 feet. Water depths will vary with climatic conditions, tidal fluctuations, and other factors. Site conditions should be investigated by the contractor for construction immediately prior to beginning work. Furnished information indicates the mean low water (MLW) is at +0.55 North American Vertical Datum of 1988 (NAVD88) and mean high water (MHW) is +1.60 NAVD88.

6.0 PROJECT DESCRIPTION

The Project goal is to repair breaches and tidal inlets in the shoreline, reinforce the existing shoreline with sand, and increase the island width with back barrier marsh creation. Preliminary project parameters and assumptions were provided by SJB and CEC in order to conduct foundation and settlement analysis as follows:

- Water Levels
  - MLW = +0.55 feet NAVD88,
  - MHW = +1.60 feet NAVD88
- Project design life is 20 years
- Topographic survey data including cross-sections
- Geologic Subsidence rate of 0.025 feet/year
- Sea-level Rise = 0.03 feet/year
- Containment Dike
  - Construction from borrow material excavated on site
  - Construction depth 6 to 8 feet below MLW
  - Crest elevations will range from +4 to +6 feet NAVD88, approximately 2 feet above the marsh platform elevation
  - Crest width = 20 feet
- Marsh Platform
  - Construction from material dredged and transported from the Scofield Offshore Borrow Area (SOBA)
  - Target platform elevation will range from +2 to +3.5 feet NAVD88
- Beach and Dunes
  - Construction from sand dredged from the Mississippi River and transported to the location by sediment pipeline
  - Target beach berm elevation will range from +4 to +6 feet NAVD88
  - Target dune crest elevation will range from +6 to +7 feet NAVD88

7.0 FOUNDATION ANALYSES

7.1 Design Parameters

A geologic subsoil profile of the three reaches is shown on Figure 2, as previously noted. Plots of the soil design parameters used in the analyses for each of these reaches are provided on Figures 3 through 5. For the settlement analyses, additional parameters, not shown on Figures 3 through 5, were also assumed below the available boring data as discussed with the settlement analysis results.

Design parameters for the in situ marsh containment fill materials were assumed to have an average wet unit weight of 88 pcf and remolded shear strength of 100 psf. The analyses assumed the marsh fill will be placed by uncompacted methods in standing water. A wet unit weight of 100 pcf was selected for the SOBA sediment comprised of a mixture of sand, silt, and clay (Appendix J).

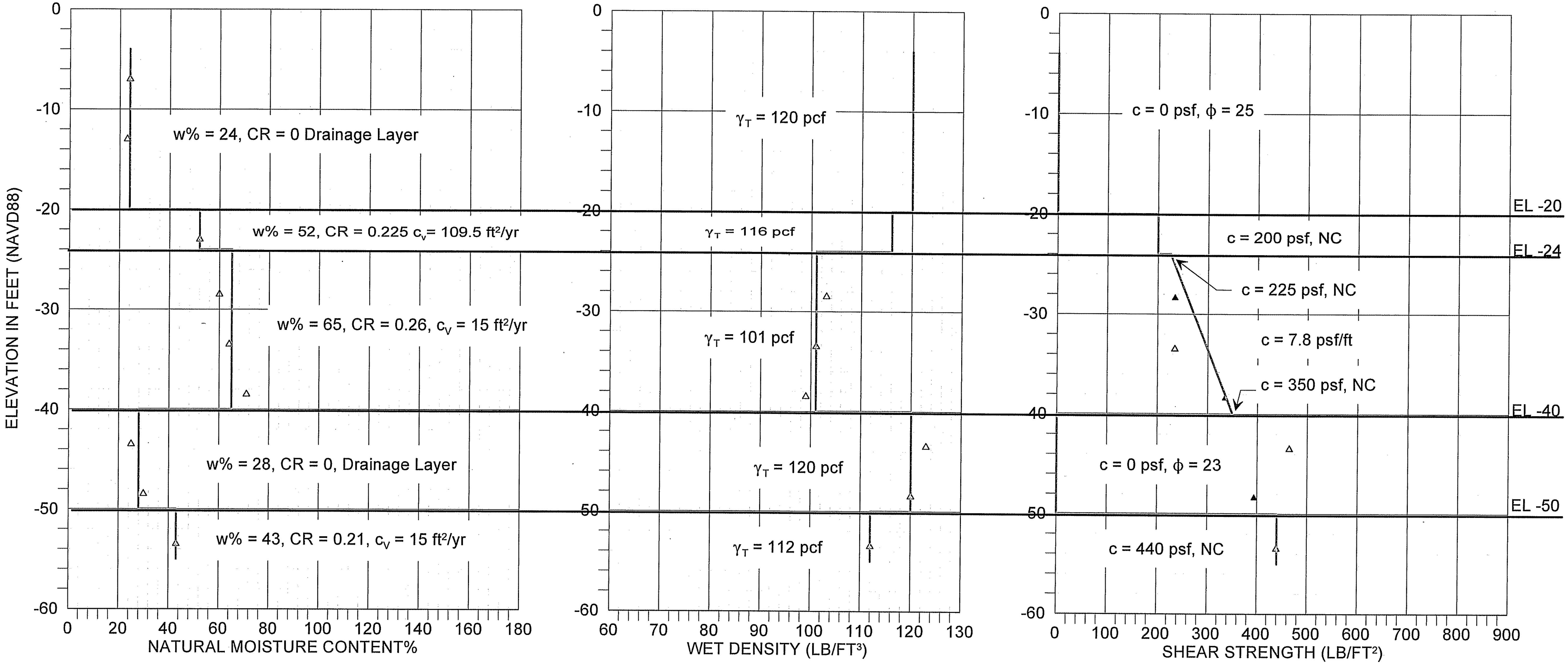
7.2 Stability Analyses

7.2.1 Methodology

Slope stability analyses were conducted by a two-dimensional limit equilibrium stability analysis of selected trial failure surfaces. These analyses were performed using GEO-SLOPE International, Ltd.'s program Slope/W 2007, Version 7.11. This program generally utilizes circular arcs to define the soil failure planes. These arcs are then divided into slices and the factor of safety computed by summing forces, summing moments, or both. For these analyses, the inter-slice forces are typically considered. The factors of safety presented are based on Spencer's Method of Slices. Using this method, the recommended minimum factor of safety was computed to be 1.3. Slope stability analyses were performed for the design of proposed containment dikes that will enclose the marsh creation features.

7.2.2 Design Assumptions

The design assumptions for the containment dikes included construction at a maximum bottom level (mudline elevation) of -2 feet NAVD88 and a crest height between +4 and +6 feet NAVD88. Further, the crest width will be approximately 20 feet and the dikes will be constructed from dredged material excavated from adjacent borrow areas / floatation channels.



NOTES:

1. LOGS OF SOIL BORINGS PROVIDED IN APPENDIX I.
2. UNIT WEIGHTS SHOWN ARE TOTAL UNIT WEIGHTS AND MUST BE APPROPRIATELY REDUCED TO ESTIMATE EFFECTIVE STRESS STATES.
3. DESIGN PROFILES SHOWN CAN NOT FULLY ANTICIPATE ALL PARAMETERS WHICH MAY INFLUENCE SELECTION OF DESIGN VALUES FOR A SPECIFIC ANALYSIS. FOR THIS REASON, THE USER SHOULD CONTACT EUSTIS ENGINEERING PRIOR TO USE OF DESIGN PROFILES IN ANY ANALYSES.
4. w% = NATURAL MOISTURE CONTENT, CR = COMPRESSION RATIO, c_V = COEFFICIENT OF CONSOLIDATION
   γ_T = TOTAL (WET) UNIT WEIGHT, C = COHESION, ϕ = FRICTION ANGLE
   NC = NORMALLY CONSOLIDATED, OCR = OVER CONSOLIDATION RATIO

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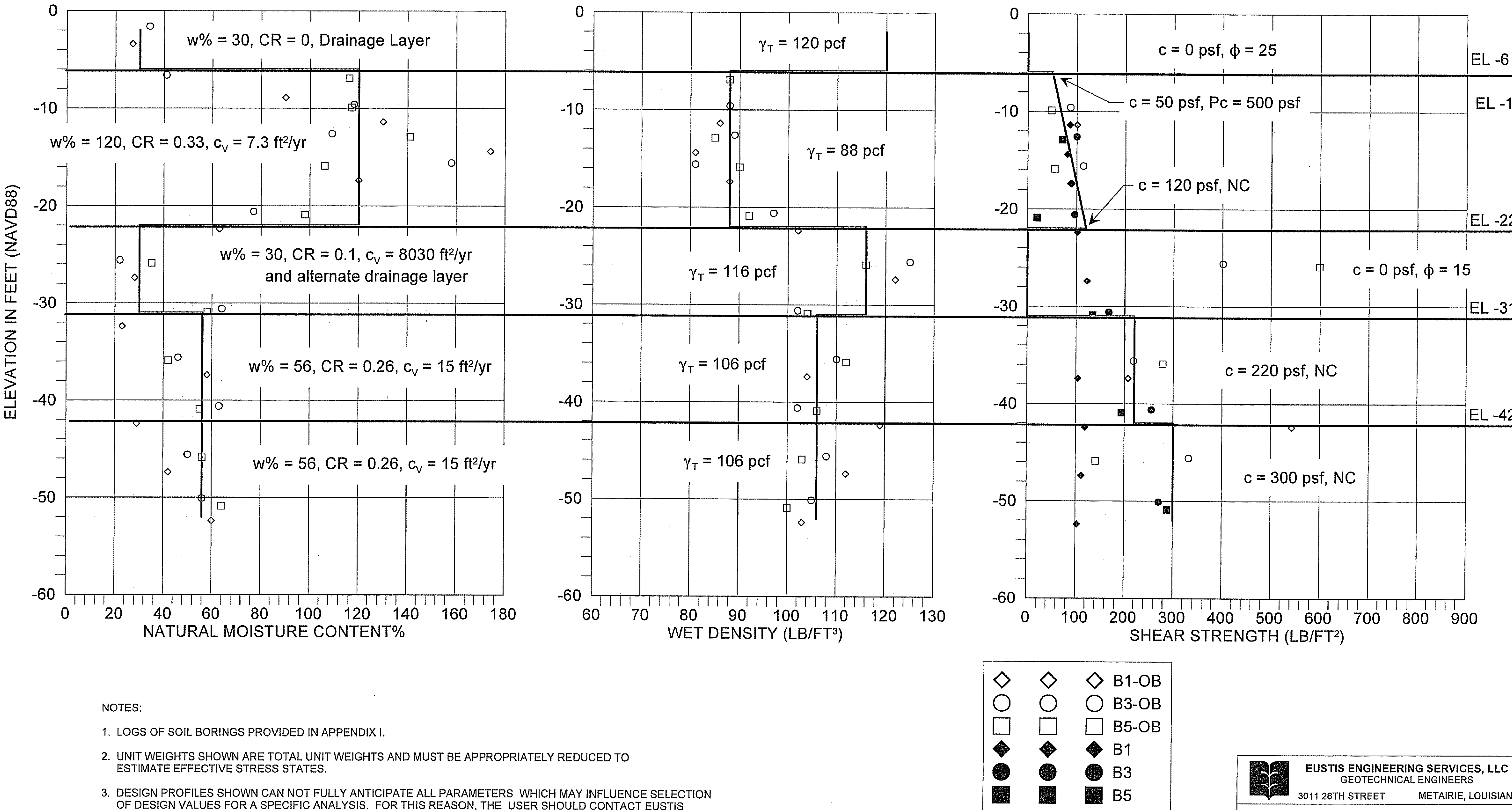
SOIL DESIGN PARAMETERS
SOIL REACH 1 (B-4)

STATE OF LOUISIANA
RIVERINE SAND MINING
SCOFIELD ISLAND RESTORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

DRAWN BY: J.T.H.	5 JAN 2009	FILE: FIGURE3_SHEET1 DESIGN REACH 1.GRF
CHECKED BY: G.P.S.	JOB NO.: 19292	January 2010



NOTES:

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3. DESIGN PROFILES SHOWN CAN NOT FULLY ANTICIPATE ALL PARAMETERS WHICH MAY INFLUENCE SELECTION OF DESIGN VALUES FOR A SPECIFIC ANALYSIS. FOR THIS REASON, THE USER SHOULD CONTACT EUSTIS ENGINEERING PRIOR TO USE OF DESIGN PROFILES IN ANY ANALYSES.
4. w% = NATURAL MOISTURE CONTENT, CR = COMPRESSION RATIO, c_V = COEFFICIENT OF CONSOLIDATION
   γ_T = TOTAL (WET) UNIT WEIGHT, C = COHESION, ϕ = FRICTION ANGLE
   NC = NORMALLY CONSOLIDATED, OCR = OVER CONSOLIDATION RATIO

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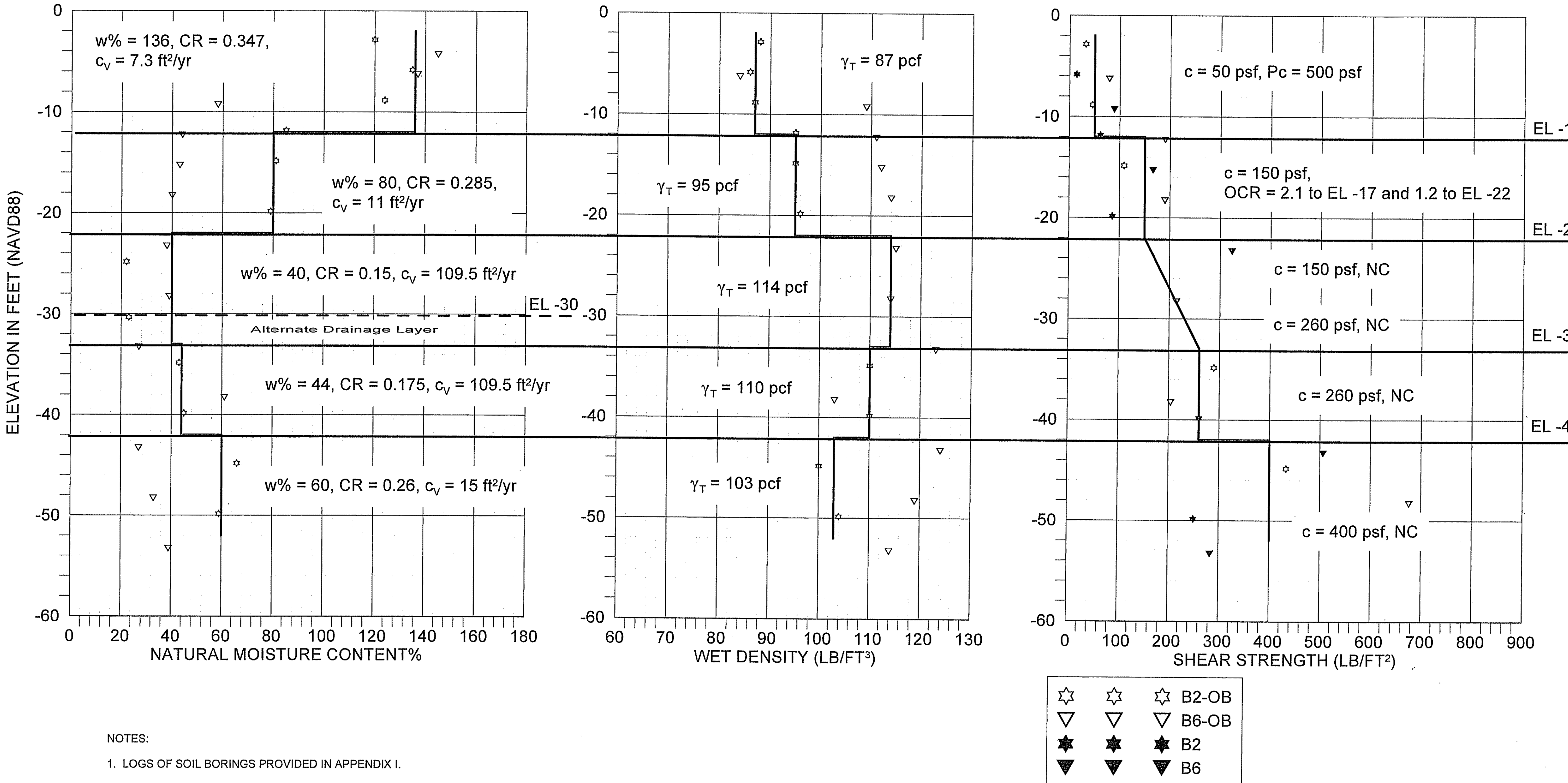
SOIL DESIGN PARAMETERS
SOIL REACH2 (B-1, B-3 AND B-5)

STATE OF LOUISIANA
RIVERINE SAND MINING
SCOFIELD ISLAND RESTORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

DRAWN BY: J.T.H.	5 JAN 2009	FILE: FIGURE3_SHEET2 DESIGN REACH 2.GRF
CHECKED BY: G.P.S.	JOB NO.: 19292	FIGURE 4



NOTES:

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4. w% = NATURAL MOISTURE CONTENT, CR = COMPRESSION RATIO, c_V = COEFFICIENT OF CONSOLIDATION
   γ_T = TOTAL (WET) UNIT WEIGHT, C = COHESION, ϕ = FRICTION ANGLE
   NC = NORMALLY CONSOLIDATED, OCR = OVER CONSOLIDATION RATIO

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SOIL DESIGN PARAMETERS
SOIL REACH 3 (B-2 AND B-6)

STATE OF LOUISIANA
RIVERINE SAND MINING
SCOFIELD ISLAND RESTORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

DRAWN BY: J.T.H.	5 JAN 2009	FILE: FIGURE3_SHEET3 DESIGN REACH 3.GRF
CHECKED BY: G.P.S.	JOB NO.: 19292	FIGURE 5

7.2.3 Data Evaluation

Based on the furnished topographic data, the average mudline in the vicinity of the marsh containment dike is at -2 to 0 feet NAVD88. This excludes the deeper channel elevations, which should be avoided.

7.2.4 Water Levels

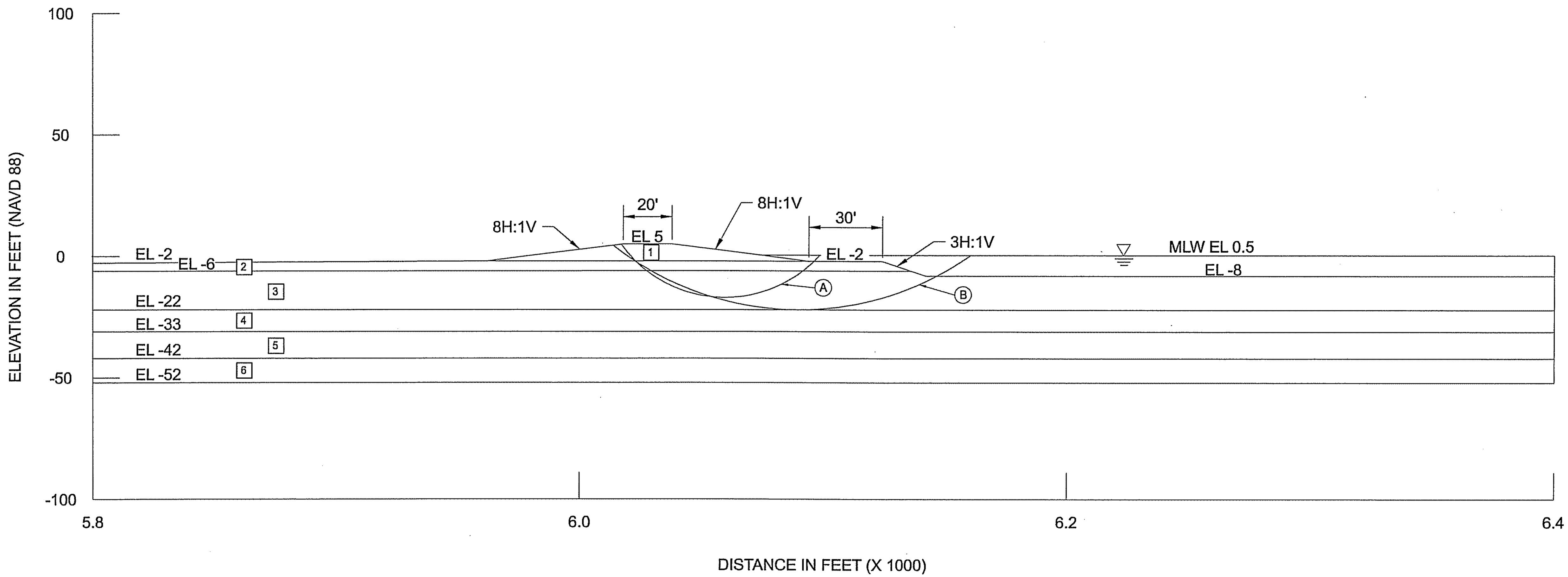
The stability analyses presented are based on the furnished low water level. Extreme low or high water levels due to a storm event were not evaluated. Water levels above or below that analyzed may result in localized sloughing or failure of the recommended section. Long term maintenance should consider this potential.

7.2.5 Results of Analyses

The results of the stability analyses for the containment dike to be constructed in Reach 2 are shown on Figures 6 and 7 and in Annex K2.

7.2.6 Containment Dike Slopes

Considering containment dikes constructed from +4 to +6 feet NAVD88, the recommended side slope is 1 vertical on 8 horizontal. This slope will allow construction to the +6 feet NAVD88 crown when the mudline is at 0 feet NAVD88. For a mudline at -2 feet NAVD88, the maximum crown height that can be achieved is at +5 feet NAVD88. Evaluations for Reach 3 indicated construction within or directly adjacent to the existing channels should be avoided. Other limited reaches where marsh deposits have been exposed should also be anticipated to require additional measures during construction to attain a stable dike. Considering a crown width of 20 feet, placement of marsh area fill will have minimal impact on the stability of the dike. Area fill will, however, induce additional settlement at the dike as addressed below.



SOIL NO.	DESCRIPTION	FRICTION ANGLE IN DEGREES	UNIT WEIGHT IN PCF	COHESION IN PSF	
				AVG.	BASE
1	CONTAINMENT DIKE FILL	0	88	100	100
2	BARRIER BEACH SAND	25	120	0	0
3	MARSH CLAY	0	88	85	120
4	SILT/SAND	15	116	0	0
5	CLAY	0	106	220	220
6	CLAY	0	106	300	300

SLIP SURFACE DESIGNATION	TANGENT ELEVATION OF SLIP SURFACE	TYPE OF FAILURE SURFACE	POINT	DEFINED FAILURE SURFACE			COMPUTED FACTOR OF SAFETY	COMPUTER FILE
				X-COORDINATE	Y-COORDINATE	RADIUS		
(A)	EL -17	CIRCULAR	CENTER	6059.56	35	52	1.314	REACH2 INSITUDIKE CROWN5C.GSZ
(B)	EL -22	CIRCULAR	CENTER	6089.7	100	122	1.412	

NOTES:

1) SOIL DESIGN PARAMETERS AND STRATA BREAK ELEVATIONS BASED ON SOIL REACH 2.

2) STABILITY ANALYSES PERFORMED USING SLOPE/W AND SPENCER'S METHOD OF SLICES.

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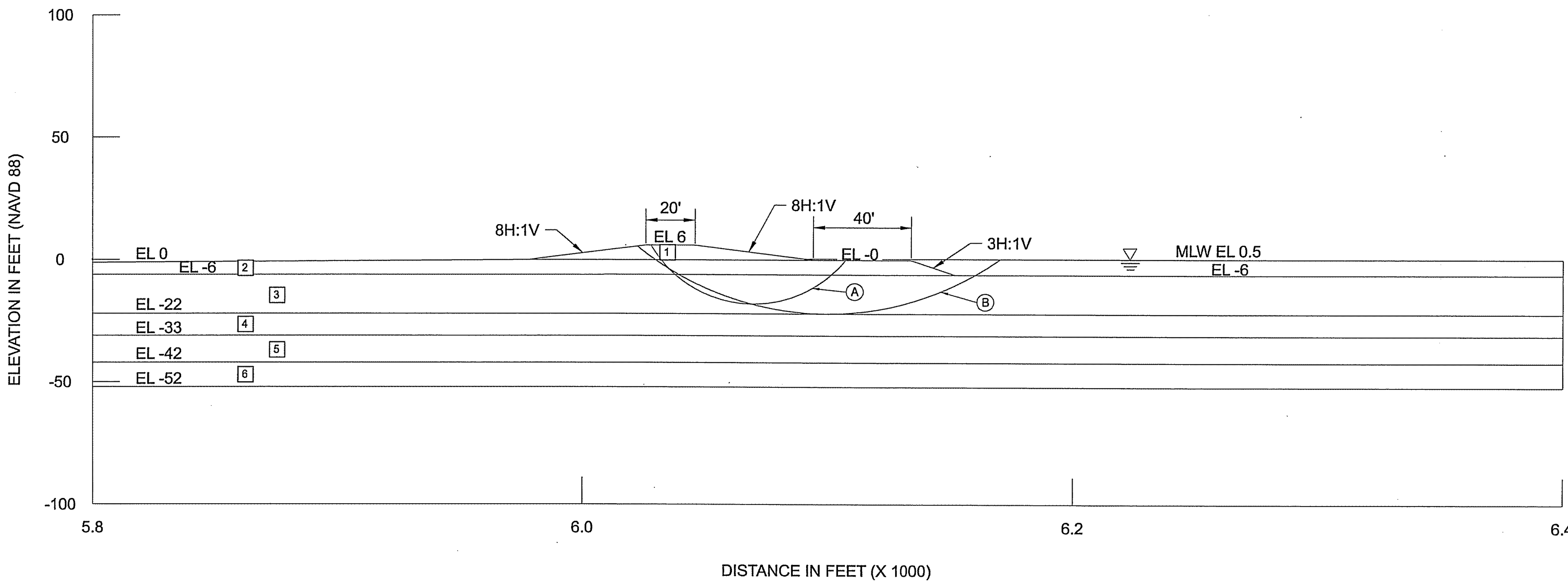
STABILITY OF CONTAINMENT DIKE AND BORROW
REACH 2 - MUDLINE AT EL -2

STATE OF LOUISIANA
RIVERINE SAND MINING/SCOFIELD
ISLAND RESTORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

DRAWN BY: J.L.S.	PLOT DATE: 23 MAR 09	CADD FILE: MUDLINE EL-2.DGN
CHECKED BY: G.P.S.	JOB NO.: 19292	January 2010



SOIL NO.	DESCRIPTION	FRICTION ANGLE IN DEGREES	UNIT WEIGHT IN PCF	COHESION IN PSF	
				AVG.	BASE
1	CONTAINMENT DIKE FILL	0	88	100	100
2	BARRIER BEACH SAND	25	120	0	0
3	MARSH CLAY	0	88	85	120
4	SILT/SAND	15	116	0	0
5	CLAY	0	106	220	220
6	CLAY	0	106	300	300

SLIP SURFACE DESIGNATION	TANGENT ELEVATION OF SLIP SURFACE	TYPE OF FAILURE SURFACE	POINT	DEFINED FAILURE SURFACE			COMPUTED FACTOR OF SAFETY	COMPUTER FILE
				X-COORDINATE	Y-COORDINATE	RADIUS		
A	EL -18	CIRCULAR	CENTER	6069.61	30	48	1.328	REACH2 INSITUDIKE CROWN6D.GSZ
B	EL -22	CIRCULAR	CENTER	6099.75	100	122	1.313	REACH2 INSITUDIKE CROWN6F.GSZ

NOTES:

1) SOIL DESIGN PARAMETERS AND STRATA BREAK ELEVATIONS BASED ON SOIL REACH 2.

2) STABILITY ANALYSES PERFORMED USING SLOPE/W AND SPENCER'S METHOD OF SLICES.

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GEOTECHNICAL ENGINEERS

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STABILITY OF CONTAINMENT DIKE AND BORROW
REACH 2 - MUDLINE AT EL 0

STATE OF LOUISIANA
RIVERINE SAND MINING/SCOFIELD
ISLAND RESTORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

DRAWN BY: J.L.S.	PLOT DATE: 23 MAR 09	CADD FILE: MUDLINE EL0.DGN
CHECKED BY: G.P.S.	JOB NO.: 19292	FIGURE 4

7.2.7 Containment Dike Buffer to Borrow/Floatation Channel

To provide a factor of safety of 1.3 with respect to the borrow area or floatation channel, the recommended buffer, defined by the distance between the toe of the containment dike and location of borrow area / floatation channel, should be at least 30 feet plus three times the dredge depth within the borrow area / floatation channel. For the -2 feet NAVD88 mudline, the buffer should be increased to at least 40 feet plus three times the dredge depth for the 0 feet NAVD88 mudline. These dimensions are all based on Reach 2 conditions and are suitable for use in Reach 1, although higher dikes or flatter slopes would also work in Reach 1. These analyses are based on a maximum cut of -8 feet NAVD88. Borrow area / floatation channel side slopes were assumed as 1 vertical on 3 horizontal, although actual slopes will depend on construction methods and borrow material properties. This buffer should also be provided between the proposed dike and any existing channels that are equal to or deeper than -8 feet NAVD88.

8.0 SETTLEMENT ANALYSES

8.1 Stress History

Consolidation tests were performed on samples of the subsoils. The results of these tests are summarized in Annex K3. Surficial barrier beach deposits were considered as an incompressible drainage layer. The underlying or surficial marsh deposits were considered slightly pre-compressed to normally consolidated. Intradelta deposits were modeled as both a second drainage layer or as a silt layer having a very high rate of consolidation. Interdistributary deposits were generally considered to be normally consolidated.

Soils below the boring depths were also considered to be normally consolidated to a depth of 80 feet. Settlement beyond the 80-foot depth was not considered in the analyses. The settlement design parameters through the boring depths are shown on Figure 3 with the other design values. Parameters assumed between the 50 and 80-foot depths were generally normally consolidated clays having a compression ratio of 0.2 and a coefficient of consolidation of 7 ft^2/yr. Isolated lenses and layers of sand may be present beneath the boring depths; however, available geologic data were not conclusive. Therefore, no additional drainage layers were assumed when estimating the rates of consolidation in these deposits.

8.2 Design Assumptions

The fill areas assumed in the settlement analyses considered a 1,000 foot x 10,000 foot marsh fill area, an adjacent 1,000 foot x 10,000 foot beach fill area, and a 20 foot x 10,000 foot containment dike area. Assuming the beach fill and containment dikes are constructed prior to placement of the marsh area fill, the settlement of the dike was considered with no influence from the area fill. Similarly, settlement estimates have been made considering the influence of the area fill on long term dike consolidation.

For the beach fill, the analyses considered fill having an average wet unit weight of 120 pcf and placed to an average height at +6 feet NAVD88. For the marsh area consolidation, it was assumed the area fill has an average wet unit weight of 100 pcf and is placed from +2 to +3.5 feet NAVD88. It was considered that the dikes would be constructed to +4 and +6 feet NAVD88 and a variation in the mudline along the dike between 0 and -2 feet NAVD88. A variation in the water surface level from +0.5 to +1.5 feet NAVD88 was assumed to compute the submerged fill weights.

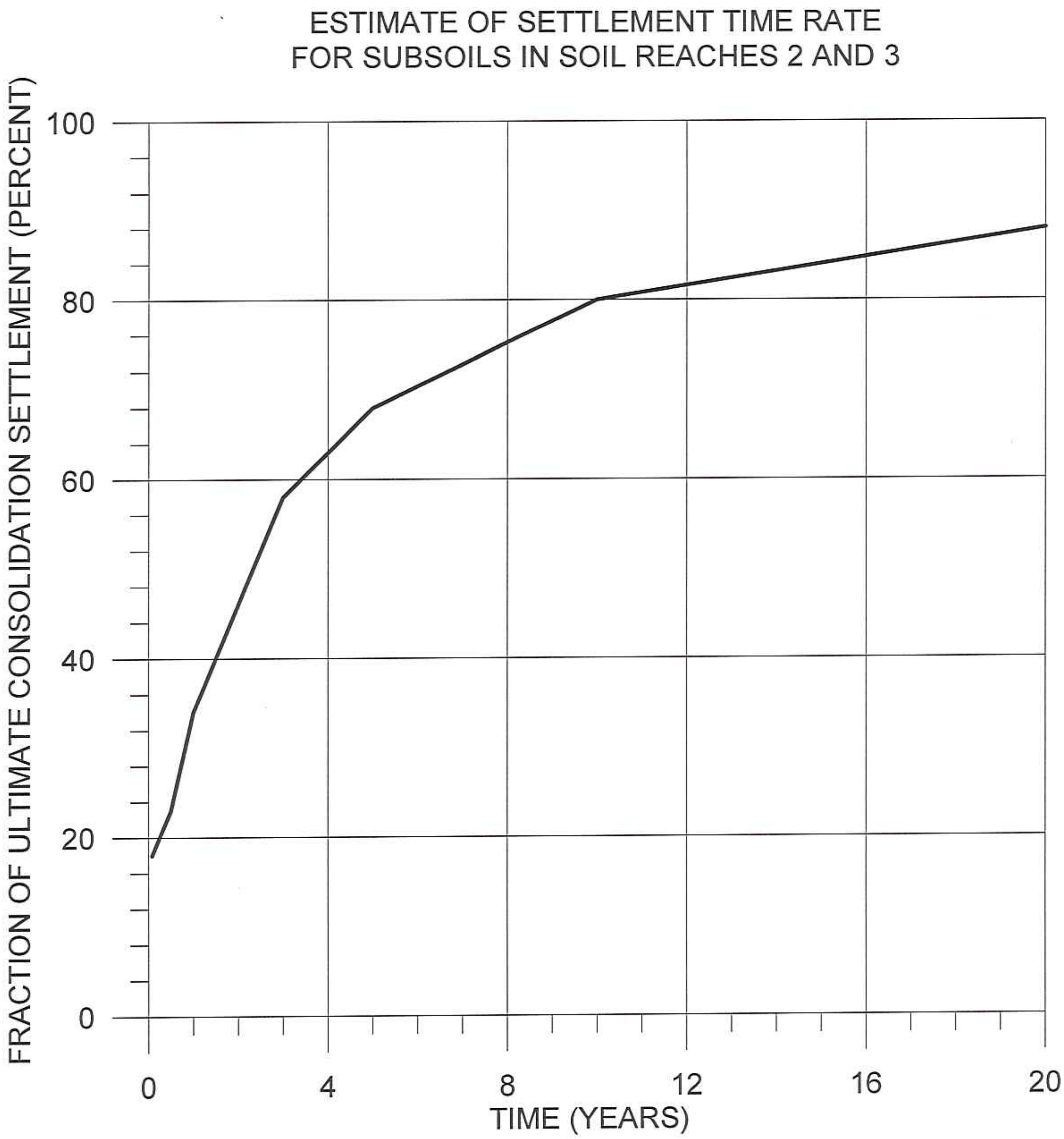
Time-rates of consolidation settlement of the dredged and pumped marsh fill material and the underlying subsoils were estimated within the proposed marsh creation and the containment dike areas. It is noted there may be differences in the time-settlements of excavated and pipeline placed materials.

8.3 Results

The results of the settlement analyses are presented in Figures 8 through 15. The analyses account for settlement of the subsoils due only to the weight of the fill, this consolidation plus the self-weight consolidation within the imported fill materials themselves, and finally, the effects of geologic subsidence. Summary tables, graphs, and sample settlement calculations are also included in Annex K3.

The dike consolidation graphs and tables are based on Reach 2, since Reach 1 would have minimal settlement and Reach 3 requires additional previously noted measures. There are two sets of values presented, one case where the dike is in place and no marsh fill has yet been placed, "no influence," and the other case that considers the additional influence of the area fill and beach fill.

In addition to settlement of the underlying subsoils, settlement or "shrinkage" of the un-compacted fill will occur. Shrinkage is due to drying, consolidation of the fill under its own weight, and deterioration due to biodegradation of organic fill materials inadvertently placed within the containment area. The desiccation of soft clays proceeds from the exposed surface inward and leads to formation of a crust that becomes thicker with age. Based on similar restoration projects in coastal Louisiana, the estimated volume loss, due to shrinkage of the fill, will be approximately 10% to 15% of the surficial crust formed by drying out of the soils.



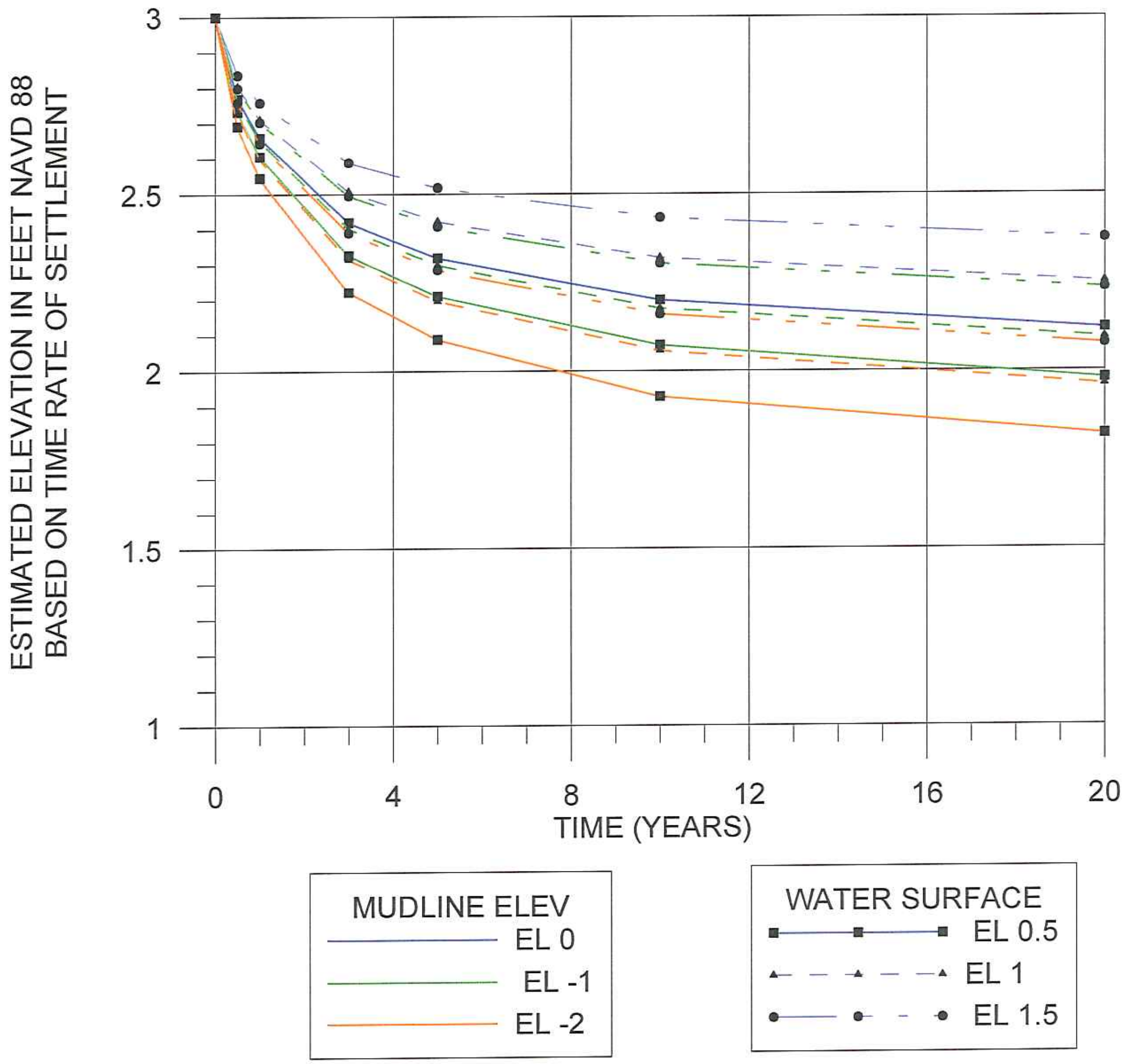
NOTES:

1) TIME RATE FOR CONSOLIDATION SETTLEMENT OF SUBSURFACE DEPOSITS ONLY.
2) COMPOSITE TIME RATE BASED ON SOIL REACHES 2 AND 3, ALTERNATE FILL HEIGHTS, MUDLINES AND WATER SURFACE ELEVATIONS.

EUSTIS ENGINEERING SERVICES, L.L.C. GEOTECHNICAL ENGINEERS 3011 28TH STREET METAIRIE, LOUISIANA		
ESTIMATED TIME-RATE OF SETTLEMENT		
STATE OF LOUISIANA RIVERINE SAND MINING SCOFIELD ISLAND RETORATION (BA-40) PLAQUEMINES PARISH, LOUISIANA		
DRAWN BY: G.P.S.	21 MARCH 2009	FILE: SETL_TIME_RATE.GRF
CHECKED BY: W.W.G.	JOB NO.: 19292	January 2010

ESTIMATES OF SETTLEMENT TIME RATE
MARSH FILL PLATFORM
CENTER OF 1,000' X 10,000' AREA

SOIL REACH 2
INITIAL PLATFORM EL 3 NAVD88
EXCLUDING SELF-WEIGHT CONSOLIDATION



NOTES:
1) PLOT COLOR REPRESENTS MUDLINE ELEVATION.
2) PLOT SYMBOL AND LINE TYPE REPRESENT WATER SURFACE ELEVATION.
3) SETTLEMENT ESTIMATES SHOULD BE ANTICIPATED TO VARY ± 25%.

EUSTIS ENGINEERING SERVICES, L.L.C.
GEOTECHNICAL ENGINEERS
3011 28TH STREET METAIRIE, LOUISIANA

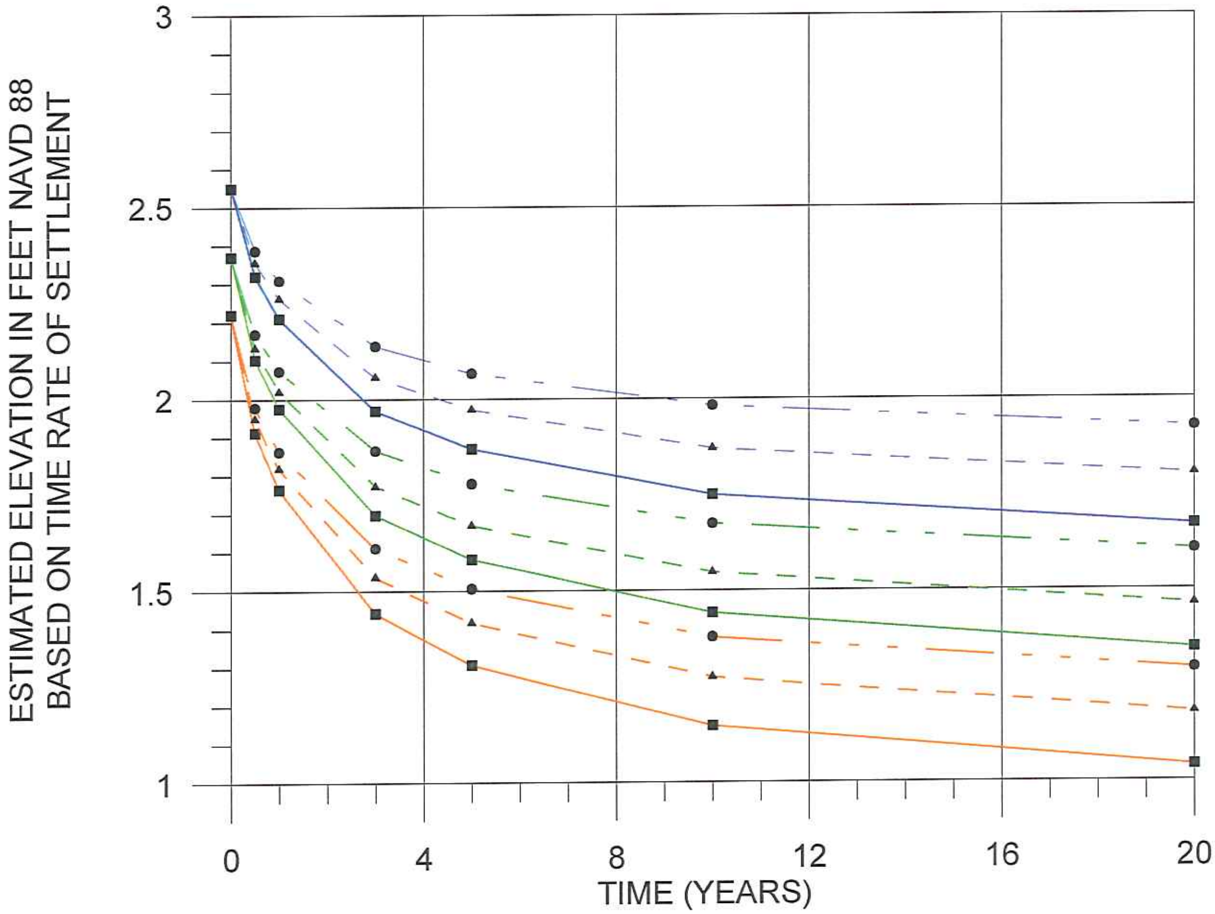
ESTIMATED TIME-RATE OF SETTLEMENT

STATE OF LOUISIANA
RIVERINE SAND MINING
SCOFIELD ISLAND RETORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

DRAWN BY: G.P.S.	16 MARCH 2009	FILE: SETL_TIME_RATE.GRF
CHECKED BY: W.W.G.	JOB NO.: 19292	FIGURE 4

ESTIMATES OF SETTLEMENT TIME RATE
MARSH FILL PLATFORM
CENTER OF 1,000' X 10,000' AREA

SOIL REACH 2
INITIAL PLATFORM EL 3 NAVD88
CONSIDERING SELF-WEIGHT CONSOLIDATION



NOTES:
1) PLOT COLOR REPRESENTS MUDLINE ELEVATION.
2) PLOT SYMBOL AND LINE TYPE REPRESENT WATER SURFACE ELEVATION.
3) SETTLEMENT ESTIMATES SHOULD BE ANTICIPATED TO VARY ± 25%.

EUSTIS ENGINEERING SERVICES, L.L.C.
GEOTECHNICAL ENGINEERS
3011 28TH STREET METAIRIE, LOUISIANA

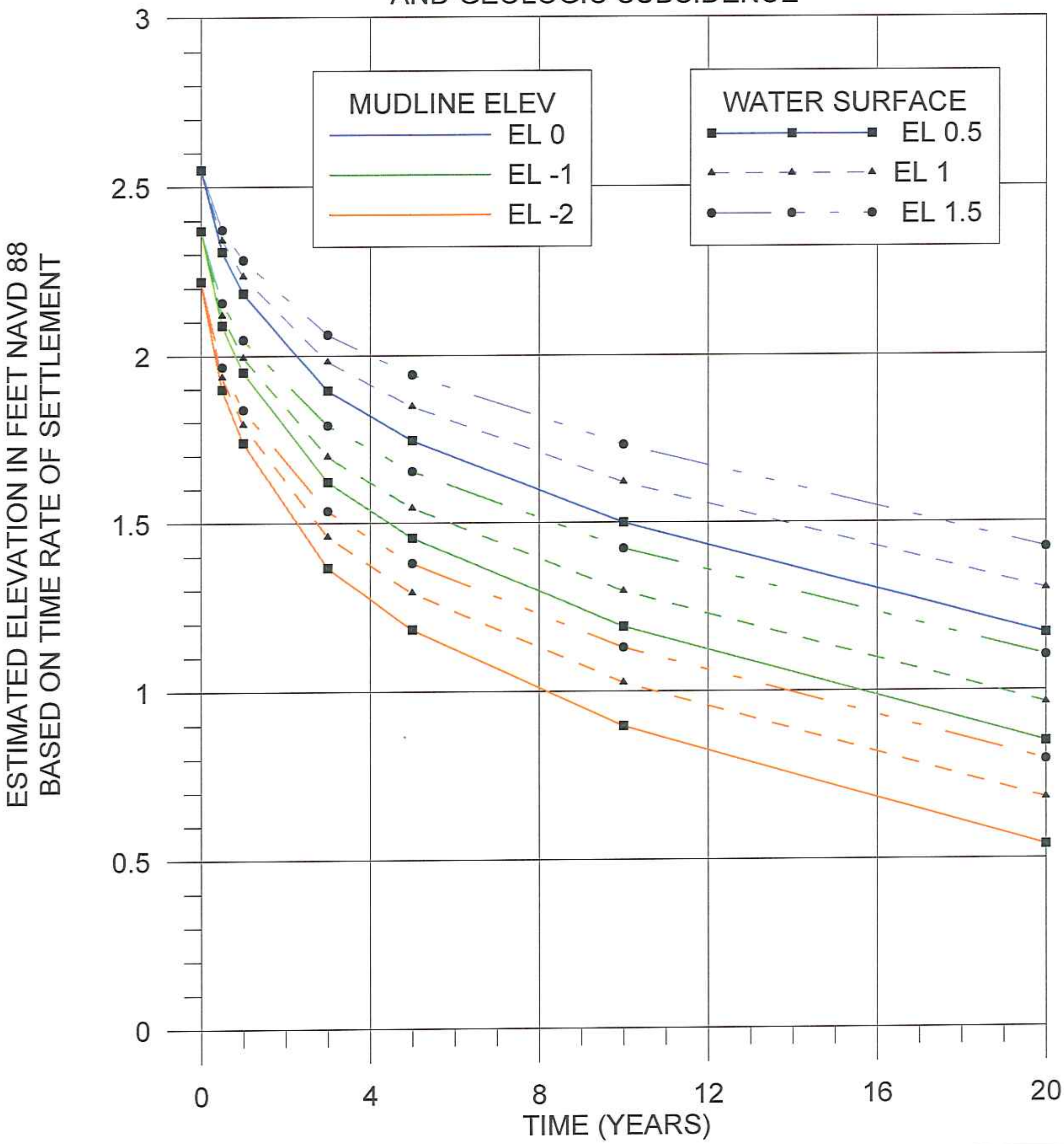
ESTIMATED TIME-RATE OF SETTLEMENT

STATE OF LOUISIANA
RIVERINE SAND MINING
SCOFIELD ISLAND RETORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

DRAWN BY: G.P.S.	16 MARCH 2009	FILE: SETL_TIME_RATE_SW.GRF
CHECKED BY: W.W.G.	JOB NO.: 19292	FIGURE 5

ESTIMATES OF SETTLEMENT TIME RATE
MARSH FILL PLATFORM
CENTER OF 1,000' X 10,000' AREA

SOIL REACH 2
INITIAL PLATFORM EL 3 NAVD88
CONSIDERING SELF-WEIGHT CONSOLIDATION
AND GEOLOGIC SUBSIDENCE



NOTES:
1) PLOT COLOR REPRESENTS MUDLINE ELEVATION.
2) PLOT SYMBOL AND LINE TYPE REPRESENT WATER SURFACE ELEVATION.
3) SETTLEMENT ESTIMATES SHOULD BE ANTICIPATED TO VARY ± 25%.

EUSTIS ENGINEERING SERVICES, L.L.C.
GEOTECHNICAL ENGINEERS
3011 28TH STREET METAIRIE, LOUISIANA

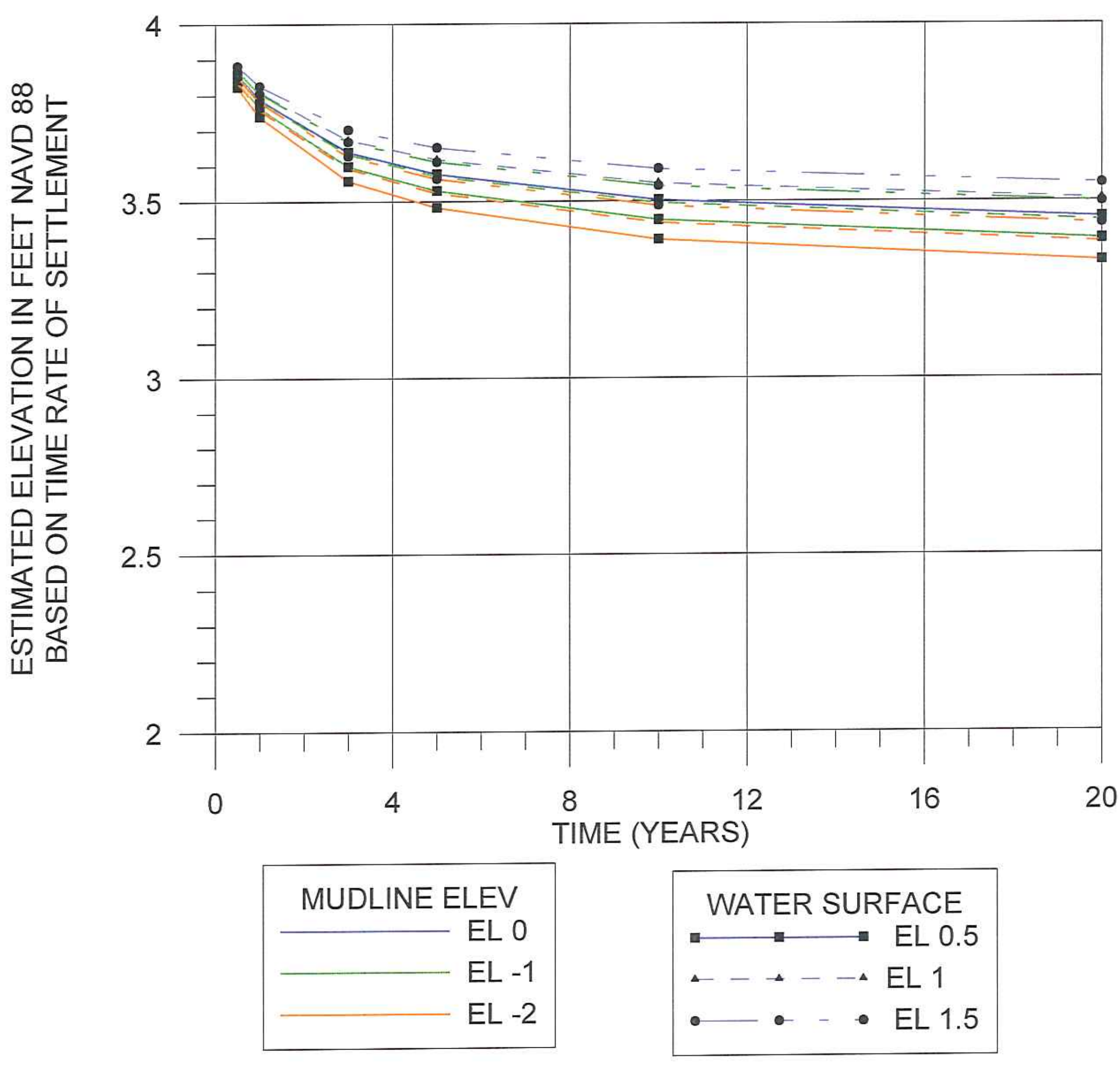
ESTIMATED TIME-RATE OF SETTLEMENT

STATE OF LOUISIANA
RIVERINE SAND MINING
SCOFIELD ISLAND RETORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

DRAWN BY: G.P.S.	16 MARCH 2009	FILE: SETL_TIME_RATE_ALL.GRF
CHECKED BY: W.W.G.	JOB NO.: 19292	FIGURE 11

ESTIMATES OF SETTLEMENT TIME RATE
CONTAINMENT DIKE
CENTER OF 20' X 10,000' AREA

SOIL REACH 2
INITIAL DIKE EL 4 NAVD88
EXCLUDING SELF-WEIGHT CONSOLIDATION
AND GEOLOGIC SUBSIDENCE
ALSO EXCLUDES ADJACENT FEATURE INFLUENCE



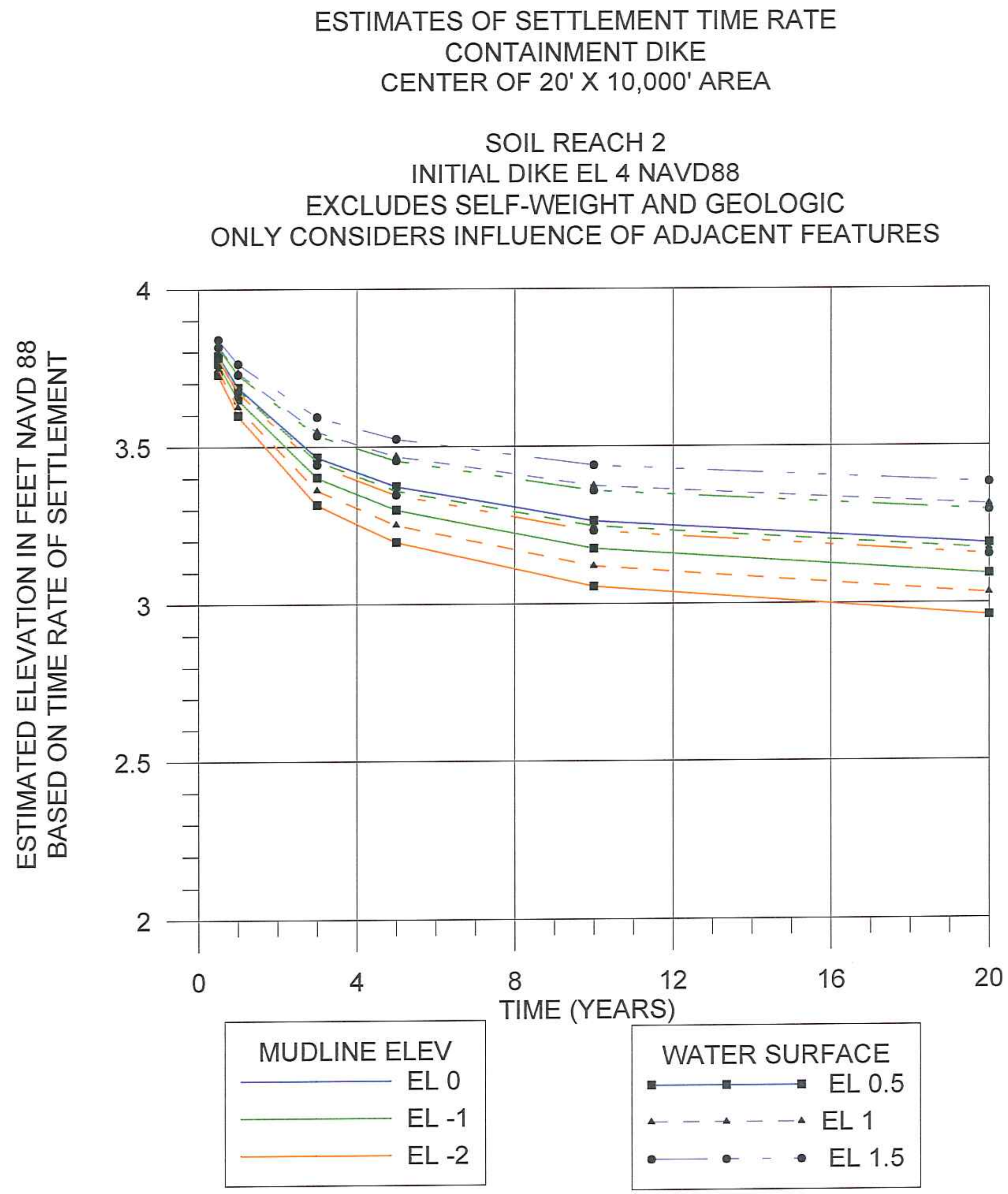
NOTES:
1) PLOT COLOR REPRESENTS MUDLINE ELEVATION.
2) PLOT SYMBOL AND LINE TYPE REPRESENT WATER SURFACE ELEVATION.
3) SETTLEMENT ESTIMATES SHOULD BE ANTICIPATED TO VARY ± 25%.

EUSTIS ENGINEERING SERVICES, L.L.C.
GEOTECHNICAL ENGINEERS
3011 28TH STREET METAIRIE, LOUISIANA

ESTIMATED TIME-RATE OF SETTLEMENT

STATE OF LOUISIANA
RIVERINE SAND MINING
SCOFIELD ISLAND RETORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

DRAWN BY: G.P.S.	16 MARCH 2009	FILE: SETL_TIME_RATE.GRF
CHECKED BY: W.W.G.	JOB NO.: 19292	FIGURE 12



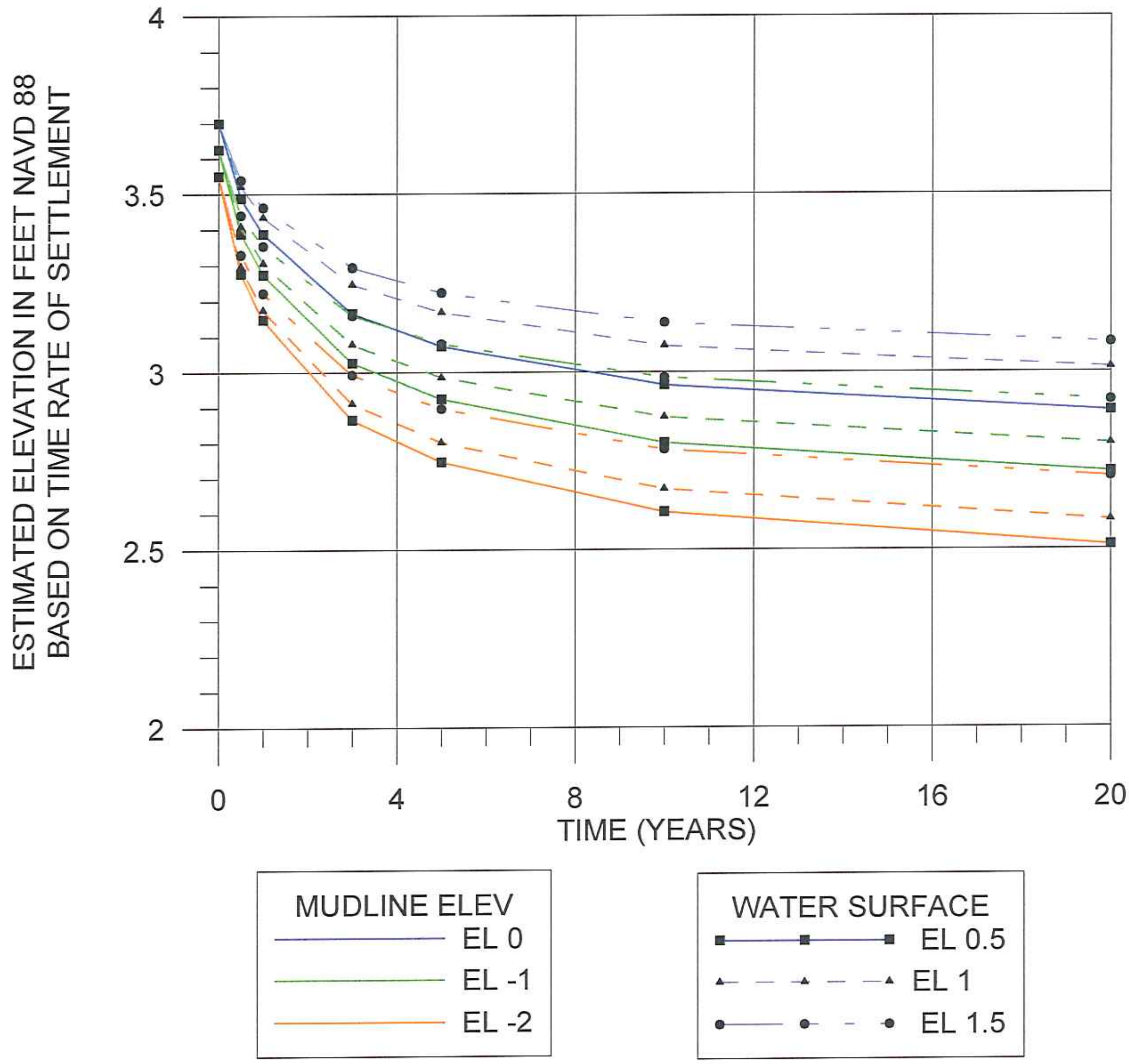
NOTES:

1) PLOT COLOR REPRESENTS MUDLINE ELEVATION.
2) PLOT SYMBOL AND LINE TYPE REPRESENT WATER SURFACE ELEVATION.
3) SETTLEMENT ESTIMATES SHOULD BE ANTICIPATED TO VARY ± 25%.

EUSTIS ENGINEERING SERVICES, L.L.C. GEOTECHNICAL ENGINEERS 3011 28TH STREET METAIRIE, LOUISIANA		
ESTIMATED TIME-RATE OF SETTLEMENT		
STATE OF LOUISIANA RIVERINE SAND MINING SCOFIELD ISLAND RETORATION (BA-40) PLAQUEMINES PARISH, LOUISIANA		
DRAWN BY: G.P.S.	16 MARCH 2009	FILE: SETL_TIME_RATE.GRF
CHECKED BY: W.W.G.	JOB NO.: 19292	FIGURE 13

ESTIMATES OF SETTLEMENT TIME RATE
CONTAINMENT DIKE
CENTER OF 20' X 10,000' AREA

SOIL REACH 2
INITIAL DIKE EL 4 NAVD88
CONSIDERING SELF-WEIGHT CONSOLIDATION



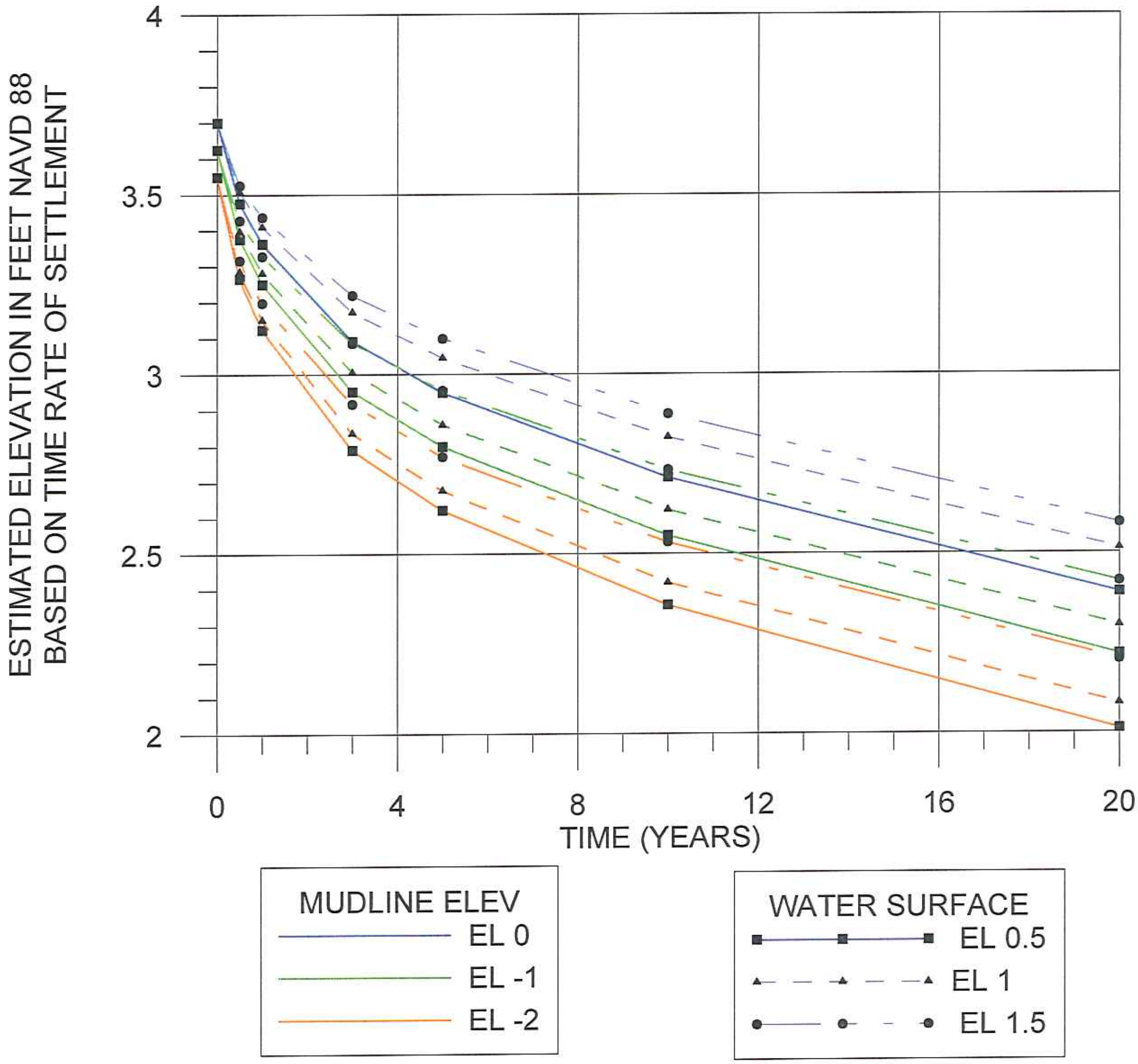
NOTES:

1) PLOT COLOR REPRESENTS MUDLINE ELEVATION.
2) PLOT SYMBOL AND LINE TYPE REPRESENT WATER SURFACE ELEVATION.
3) SETTLEMENT ESTIMATES SHOULD BE ANTICIPATED TO VARY ± 25%.

EUSTIS ENGINEERING SERVICES, L.L.C. GEOTECHNICAL ENGINEERS 3011 28TH STREET METAIRIE, LOUISIANA		
ESTIMATED TIME-RATE OF SETTLEMENT STATE OF LOUISIANA RIVERINE SAND MINING SCOFIELD ISLAND RETORATION (BA-40) PLAQUEMINES PARISH, LOUISIANA		
DRAWN BY: G.P.S.	16 MARCH 2009	FILE: SETL_TIME_RATE.GRF
CHECKED BY: W.W.G.	JOB NO.: 19292	FIGURE 14

ESTIMATES OF SETTLEMENT TIME RATE
CONTAINMENT DIKE
CENTER OF 20' X 10,000' AREA

SOIL REACH 2
INITIAL DIKE EL 4 NAVD88
CONSIDERING SELF-WEIGHT CONSOLIDATION
AND GEOLOGIC SUBSIDENCE



NOTES:
1) PLOT COLOR REPRESENTS MUDLINE ELEVATION.
2) PLOT SYMBOL AND LINE TYPE REPRESENT WATER SURFACE ELEVATION.
3) SETTLEMENT ESTIMATES SHOULD BE ANTICIPATED TO VARY ± 25%.

EUSTIS ENGINEERING SERVICES, L.L.C.
GEOTECHNICAL ENGINEERS
3011 28TH STREET METAIRIE, LOUISIANA

ESTIMATED TIME-RATE OF SETTLEMENT

STATE OF LOUISIANA
RIVERINE SAND MINING
SCOFIELD ISLAND RETORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

DRAWN BY: G.P.S.	16 MARCH 2009	FILE: SETL_TIME_RATE.GRF
CHECKED BY: W.W.G.	JOB NO.: 19292	FIGURE 15

Assuming a crust approximately 2.5 feet thick for the containment dikes, it was estimated that an additional 3 to 5 inches of settlement will occur. For the marsh areas, minimal skrinkage is anticipated since these features will generally remain saturated. The amount of time for shrinkage to occur will depend on the amount of organic matter present and variations in the moisture content of the fill. Moisture content is dependent on weather conditions, tidal fluctuations, and ground water levels. It was anticipated that shrinkage will occur relatively rapidly due to seasonal variations occurring the first year after fill placement. Due to variations in the organic matter present and moisture ranges, shrinkage will generally result in differential settlement along the dike alignment.

8.4 Borrow to Fill Ratios

8.4.1 Proposed Containment Dike Materials

Estimates of the amount of borrow required to construct the proposed dike section were obtained from the U.S. Army Corps of Engineers based on data compiled on similar projects. Ratios assume the fill material is placed by an excavator and not by pipeline. Based on the available data, a typical borrow-to-dike fill ratio is 2:1 for natural moisture contents ranging from approximately 40% to 60%. For higher moisture contents, a borrow-to-dike fill ratio of 3:1 or more may also occur. The tested water contents may not be indicative of the water contents of the placed material. These borrow-to-dike fill ratios do not include the volume of fill required due to settlement and shrinkage, which should be added to the theoretical volume prior to estimating the borrow required. In addition, any stripping or removal of organic material, which is considered to be unsuitable for the dike section, is not included in the estimated borrow ratio.

8.4.2 Proposed Dredged Sediments

Similar to estimating shrinkage, estimating the borrow-to-fill ratio for dredged sediments is difficult considering the variability of the potential borrow materials encountered. For sandy sediments, a borrow-to-fill ratio between approximately 1.25:1 and 1.5:1 may be used where moisture contents are less than 40%. Refer to the previous paragraph for borrow-to-fill ratios of other soil types.

9.0 CONSTRUCTION RECOMMENDATIONS

9.1 Constructability

Construction techniques are critical to the constructability and ultimate stability of the dike section. The analyses assumed the dike fill is placed as recommended. The stability of the dike constructed of in situ materials will be dependent on the borrow materials used and the rate at which the dredged fill is placed.

9.2 Site Preparation

Uncompacted fill material may be placed directly over any existing vegetation along the proposed dike alignments. Trees and stumps should be cut to existing grade. However, the root mass should remain in place to minimize disturbance of the subgrade and provide additional stability for the dike.

9.3 Water Levels

Water levels at the Project site are subject to seasonal and tidal fluctuations. Site conditions should be investigated immediately prior to initiating construction. If possible, placement of the initial fill lifts should not be in more than 18 inches of standing water. It is understood this is not always possible. However, when there is more than 18 inches of water, it will be difficult to control the fill because of impaired visibility.

9.4 Containment Fill Materials

The marsh containment dike will be constructed of borrow materials. Large roots and organic matter should not be placed within the dike section. Exposed marsh deposits, such as those identified in Reach 3, are not suitable as fill for the containment dike construction. These materials are generally exposed within existing channels. Thus, as previously noted, construction of the containment dikes should not coincide with these features.

9.5 Placement of Uncompacted Fill

The borrow material will be placed by uncompacted methods for construction of the containment dike. The stability analyses assume these materials will be excavated and placed by mechanical methods using a dragline, clamshell, conventional bucket, or similar mechanical equipment. Uncompacted dike fill should be placed in lifts of no more than 3 feet. Depending on the depth of standing water and moisture content of the borrow materials, consideration should be given to placing an initial fill lift for the entire length of the dike before proceeding to the next lift. This method will initiate consolidation of foundation soils as well as provide a means for the uncompacted fill to provide a sufficient wearing surface. This will also decrease the potential for slope failure within the fill as the dike is constructed. .

9.6 Staged Dike Construction

Construction of the marsh containment dike should be performed in stages, particularly in the area of Reach 3. Staged construction will allow consolidation of the subsoils to begin and affect a gain in strength in the rapidly consolidating marsh deposits. This will minimize the potential for lateral plastic deformation of these soils. Staged construction will also minimize localized failures within the un-compacted fill as described above, particularly when these materials remain saturated during initial lift placement. With existing grades generally at -2 feet NAVD88, the dike construction can be performed in three stages.

9.7 Marsh Area Fill Materials

The sediment from SOBA will be excavated by a cutterhead dredge and transported via the sediment pipeline to the marsh fill area. The placement limits of the hydraulic fill should be based on stability considerations (maximum fill heights) as previously presented as well as construction constraints and environmental factors (minimum fill heights). For decanting considerations, fill should be placed no higher than 1 foot below the crown of the containment dikes.

9.8 Drainage Controls

During the placement of the hydraulic fill, the contractor should provide drainage control measures to facilitate construction operations. Drainage control measures could include weirs, pipes, and drop inlets. The number, size, and location of these drainage control measures should be considered during the design of the borrow area and for the permit application. Some deciding factors will include the position of the dredge and floatation canal, natural slope of the land formations, and the type and size of the dredging equipment. Self weight consolidation of the marsh creation fill will create ponding of water at the surface as the settlement occurs over time. Some of this water will evaporate, but consideration should also be given to decanting free surficial water using weirs.

9.9 Maintenance

The stability and settlement analyses do not consider maintenance of the proposed crown elevation for the marsh containment, or beach/dune features. Long term maintenance may be required to accommodate the actual ongoing settlements and other observed movements or degradation. Maintenance may include the addition of materials as a result of accelerated settlement rates or erosion. Similarly, dike degrading to maintain tidal flows in areas where observed settlement is less than anticipated may also be required. A routine evaluation should be made to determine essential maintenance requirements.

9.10 Monitoring

Monitoring the performance of the containment dikes and marsh platform is essential. The use of settlement plates or other surveying methods is recommended to monitor the actual rates of settlement for the project. As indicated previously, the estimates of settlement and settlement time-rate are based on assumed conditions below the boring depths. Natural variations in the materials placed as well as the desiccation and biodegradation of these deposits may also affect the estimates. In addition, construction of the containment area may affect water levels due to tidal fluctuations in the Project area. If long term performance of the fill placement is to be evaluated, the monitoring should be performed at regular intervals to provide sufficient data.

10.0 REFERENCES

Eustis Engineering Services, LLC. 2009. Riverine Sand Mining / Scofield Island Restoration (BA-40), Geotechnical Investigation, Plaquemines Parish, LA. Back-barrier geotechnical investigation of Scofield Island. Submitted to SJB Group, LLC. Baton Rouge, Louisiana.

ANNEX K1

BORING LOGS AND LABORATORY TEST DATA

LEGEND AND NOTES FOR LOG OF BORING AND TEST RESULTS

PP Pocket penetrometer: Resistance in tons per square foot

SPT Standard Penetration Test: Number of blows of a 140-lb hammer dropped 30 inches required to drive 2-in. O.D., 1.4-in. I.D. sampler a distance of 1 foot into the soil after first seating it 6 inches

SPLR Type of Sampling — Shelby — SPT — Auger — No sample

SYMBOL Clay — Silt — Sand — Peat/Humus — Shells — Stone/Gravel

Predominant type shown heavy; Modifying type shown light

USC Unified Soil Classification

DENSITY Unit weight in pounds per cubic foot

SHEAR TESTS

TYPE

- UC Unconfined compression shear
- OB Unconsolidated undrained triaxial compression shear on one specimen confined at the approximate overburden pressure
- UU Unconsolidated undrained triaxial compression shear
- CU Consolidated undrained triaxial compression shear
- DS Direct shear

Ø Angle of internal friction in degrees

c Cohesion in pounds per square foot

ATTERBERG LIMITS

- LL Liquid Limit
- PL Plastic Limit
- PI Plasticity Index

OTHER TESTS

- CON Consolidation
- PD Particle size distribution (sieve and/or hydrometer)
- k Coefficient of permeability in centimeters per second
- SP Swelling pressure in pounds per square foot

Other laboratory test results reported on separate figures

GENERAL NOTES

(1) If a ground water depth is shown on the boring log, these observations were made at the time of drilling and were measured below the existing ground surface. These observations are shown on the boring logs. However, ground water levels may vary due to seasonal fluctuations and other factors. If important to construction, the depth to ground water should be determined by those persons responsible for construction immediately prior to beginning work.

(2) While the individual logs of borings are considered to be representative of subsurface conditions at their respective locations on the dates shown, it is not warranted that they are representative of subsurface conditions at other locations and times.

EUSTIS ENGINEERING COMPANY, INC.

LOG OF BORING AND TEST RESULTS

STATE OF LOUISIANA
RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

Ground Elev.: -3.4 **Datum:** NAVD88 **Gr. Water Depth:** **Job No.:** 19292 **Date Drilled:** 10/08/08 **Boring:** 1 **Refer to "Legends & Notes"**

Scale In Feet	PP	SPT	SPLR	Symbol	Visual Classification	USC	Sample Number	Depth In Feet	Water Content Percent	Density Dry	Density Wet	Shear Tests Type	Shear Tests ø	Shear Tests C	Atterberg Limits LL	Atterberg Limits PL	Atterberg Limits PI		Other Tests
0		4			Very loose gray silty sand w/shell fragments	SM	1	0-1.5	27										
		6			Loose gray fine sand w/silt & shell fragments	SP	2	2.5-4											SV
		WOH			Very soft gray clay w/organic matter & shell fragments	CH	3	5.5-7	90										
					Extremely soft gray organic clay w/wood	OH	4	8-9	130	38	86	OB	0	101					ORG CONT = 7.32%
10							5	11-12	174	29	81	UC	--	58					
					Extremely soft gray clay w/organic matter, wood, & shell fragments	CH	6	14-15	120	40	88	OB	0	90	114	27	87		CONS
20					w/silt pockets		7	19-20	63	63	102	UC	--	53					
					Loose to medium dense gray silty sand	SM													
	0.25						8	24-25	28	96	122	OB	0	1082	23	20	3		
30					Very soft gray clay w/silty sand lenses & layers	CH	9	29-30	23										
	0.25						10	34-35	58	66	104	OB	0	207					
					Loose to medium dense gray silty sand	SM													
40	0.25				Very soft to soft gray silty clay	CL	11	39-40	29	92	119	OB	0	543					
	0.25						12	44-45	42	79	112	UC	--	182	42	19	23		
					Soft gray clay w/silt lenses	CH													
50	0.25						13	49-50	60	65	103	UC	--	384					

Comments: Latitude: 29° 14.809' N
Longitude: 89° 33.423' W
3 feet of water

EUSTIS ENGINEERING COMPANY, INC.

LOG OF BORING AND TEST RESULTS

STATE OF LOUISIANA
RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

Ground Elev.: -1.85 **Datum:** NAVD88 **Gr. Water Depth:** **Job No.:** 19292 **Date Drilled:** 10/11/08 **Boring:** 2 **Refer to "Legends & Notes"**

Scale In Feet	PP	SPT	SPLR	Symbol	Visual Classification	USC	Sample Number	Depth In Feet	Water Content Percent	Density		Shear Tests			Atterberg Limits				Other Tests
										Dry	Wet	Type	ø	C	LL	PL	PI		
0					Extremely soft gray & brown organic clay w/wood	OH	1	1-2	120	40	88	OB	0	32	110	30	80		
							2	4-5	135	36	86	UC	--	14					ORG CONT = 6.51
					Extremely soft to very soft gray & brown organic clay w/wood	OH	3	7-8	124	39	87	OB	0	46					
10					Extremely soft gray clay w/wood	CH	4	10-11	85	51	95	UC	--	62					
							5	13-14	81	52	95	OB	0	109	86	26	60		ORG CONT = 6.33
	0.10				Extremely soft to very soft gray clay w/silty clay layers	CH	6	18-19	79	54	96	UC	--	86					
20					Very loose gray fine sand	SP	7	23-24	22										
		5			Loose gray sandy silt	ML	8	25.5-27											SV
30		6			Loose gray fine sand w/silt	SP-SM	9	28.5-30	23										
	0.10				Soft gray silty clay w/clay lenses & fine sand layers	CL	10	33-34	43	77	111	OB	0	289	37	19	18		
40	0.10						11	38-39	45	79	110	UC	--	260					
	0.25				Soft gray clay w/silt lenses	CH	12	43-44	66	60	100	OB	0	433					
50	0.25						13	48-49	59	65	104	UC	--	250					

Comments: Latitude: 29° 14.491' N
Longitude: 89° 31.915' W
3 feet of water

EUSTIS ENGINEERING COMPANY, INC.

LOG OF BORING AND TEST RESULTS

STATE OF LOUISIANA
RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

Ground Elev.: -1.6 **Datum:** NAVD88 **Gr. Water Depth:** **Job No.:** 19292 **Date Drilled:** 10/09/08 **Boring:** 3 **Refer to "Legends & Notes"**

Scale In Feet	PP	SPT	SPLR	Symbol	Visual Classification	USC	Sample Number	Depth In Feet	Water Content Percent	Density		Shear Tests			Atterberg Limits				Other Tests
										Dry	Wet	Type	ø	C	LL	PL	PI		
0		3			Very loose gray fine sand w/silt	SP-SM	1	0-1.5	34										
		2					2	2.5-4											SV
		3			w/shells		3	5-6.5	41										
					Extremely soft gray clay w/organic matter & wood	CH	4	8-9	118	40	88	OB	0	87					ORG CONT = 7.08
10							5	11-12	109	43	89	UC	--	100	119	29	90		
					Extremely soft to very soft gray & dark gray organic clay w/wood	OH	6	14-15	158	31	81	OB	0	114					
					Extremely soft gray clay w/silty clay layers	CH													
20							7	19-20	77	55	97	UC	--	96					
					Loose gray fine sand w/clay lenses	SP													
	0.25						8	24-25	22	103	125	OB	0	401	NP	NP			CONS
					Very soft gray clay w/silty sand lenses	CH													
30	0.25						9	29-30	64	62	102	UC	--	167					
					Very soft gray silty clay w/sandy silt lenses	CL													
	0.25						10	34-35	46	75	110	OB	0	218					
					Soft gray clay w/silt lenses	CH													
40	0.25						11	39-40	63	62	102	UC	--	255	77	26	51		
	0.25						12	44-45	50	72	108	OB	0	332					
50	0.50				w/silty sand lenses		13	48.5-49.5	56	67	105	UC	--	271					

Comments: Latitude: 29° 14.408' N
Longitude: 89° 32.205' W
2 feet of water

EUSTIS ENGINEERING COMPANY, INC.

LOG OF BORING AND TEST RESULTS

STATE OF LOUISIANA
RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

(Sheet 1 of 1)

Ground Elev.: -4.4 **Datum:** NAVD88 **Gr. Water Depth:** **Job No.:** 19292 **Date Drilled:** 10/07/08 **Boring:** 4 **Refer to "Legends & Notes"**

Scale In Feet	PP	SPT	SPLR	Symbol	Visual Classification	USC	Sample Number	Depth In Feet	Water Content Percent	Density		Shear Tests			Atterberg Limits				Other Tests
										Dry	Wet	Type	ø	C	LL	PL	PI		
0		9			Loose gray fine sand w/silt & shells	SP	1	0-1.5											SV
		7					2	2.5-4	24										
		6					3	5.5-7											SV
					Medium dense gray fine sand w/silt & shells	SP-SM													
10		12					4	8.5-10	23										
					Loose gray silty sand w/shells	SM													
		6					5	13.5-15											SV
					Soft gray sandy clay w/shells	CL													
20		2					6	18.5-20	52										
					Very soft to soft gray clay w/silty sand pockets	CH													
	0.25						7	24-25	60	65	103	UC	--	234	76	20	56		
30	0.25				w/silty sand pockets & shell fragments		8	29-30	64	62	101	OB	0	234					
	0.50				w/sand lenses		9	34-35	71	58	99	UC	--	335					
					Loose gray fine sand w/clay lenses	SP													
40	0.25						10	39-40	25	98	123	OB	0	464	16	15	1		
					Loose gray silty sand w/clay lenses	SM													
	0.25						11	44-45	30	92	120	UC	--	394					
					Soft gray clay w/alternating silty sand lenses	CH													
50	0.25						12	49-50	43	79	112	OB	0	439	73	20	53		

Comments: Latitude: 29° 14.667' N
Longitude: 89° 33.662' W

EUSTIS ENGINEERING COMPANY, INC.

LOG OF BORING AND TEST RESULTS

STATE OF LOUISIANA
RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

Ground Elev.: -2.9 **Datum:** NAVD88 **Gr. Water Depth:** **Job No.:** 19292 **Date Drilled:** 10/11/08 **Boring:** 5 **Refer to "Legends & Notes"**

Scale In Feet	PP	SPT	Visual Classification	USC	Sample Number	Depth In Feet	Water Content Percent	Density		Shear Tests			Atterberg Limits				Other Tests
								Dry	Wet	Type	ø	C	LL	PL	PI		
0		7	Loose gray fine sand w/shell fragments	SP	1	0-1.5											SV
			Extremely soft gray clay w/organic matter	CH													
					2	4-5	116	41	88	OB	0	48	117	28	89		CONS, ORG CONT = 7.07
			Very soft gray & brown organic clay w/wood	OH													
					3	7-8	117										
10					4	10-11	141	35	85	UC	--	71	138	31	107		ORG CONT = 14.84
			Extremely soft gray clay w/decayed wood & roots	CH	5	13-14	106	44	90	OB	0	55					ORG CONT = 8.21
			Extremely soft gray clay	CH													
20					6	18-19	98	97	92	UC	--	19	98	23	75		ORG CONT = 7.30
			Loose to medium compact gray clayey silt w/silty sand layers	ML	7	23-24	35	86	116	OB	0	599					
30	0.10		Very soft gray clay w/silty sand lenses & layers	CH	8	28-29	58	66	104	UC	--	134					
			Soft gray silty clay w/decayed wood	CL													
	0.10				9	33-34	42	79	112	OB	0	278					
			Very soft to soft gray clay	CH													
40	0.20				10	38-39	55	68	106	UC	--	194	67	18	49		CONS
	0.25				11	43-44	56	66	103	OB	0	141					
50	0.25				12	48-49	64	61	100	UC	--	288					

Comments: Latitude: 29° 14.472' N'
Longitude: 89° 33.028' W
2 feet of water

EUSTIS ENGINEERING COMPANY, INC.

LOG OF BORING AND TEST RESULTS

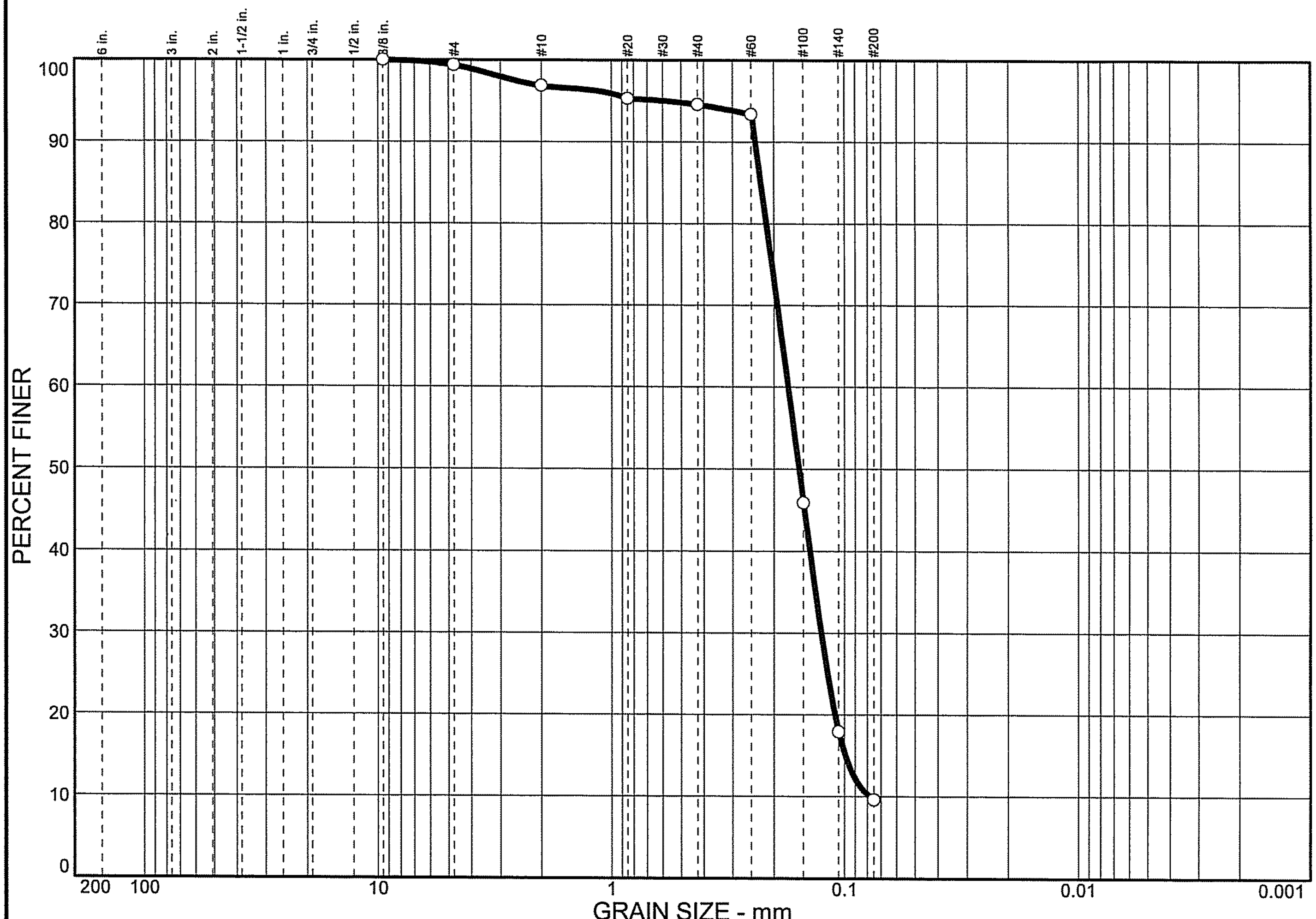
STATE OF LOUISIANA
RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

Ground Elev.: -4.3 **Datum:** NAVD88 **Gr. Water Depth:** **Job No.:** 19292 **Date Drilled:** 10/08/08 **Boring:** 6 **Refer to "Legends & Notes"**

Scale In Feet	PP	SPT	SPLR	Symbol	Visual Classification	USC	Sample Number	Depth In Feet	Water Content Percent	Density		Shear Tests			Atterberg Limits				Other Tests
										Dry	Wet	Type	ø	C	LL	PL	PI		
0		WOH			Extremely soft to very soft gray organic clay w/wood, decayed wood, & roots	OH	1	0-1.5	145										ORG CONT = 11.17
							2	2-3	137	36	84	OB	0	79					ORG CONT = 10.32
					Extremely soft gray silty clay w/decayed wood	CL	3	5-6	58	74	109	UC	--	89					ORG CONT = 3.84
					Very soft gray sandy clay w/decayed wood	CL	4	8-9	44	77	111	OB	0	190					
10							5	11-12	43	79	112	UC	--	166	41	23	18		
							6	14-15	40	82	114	OB	0	190					
					Very soft to soft brown silty clay w/trace of decayed wood	CL													
20	0.25						7	19-20	38	83	115	UC	--	323					
	0.50						8	24-25	39	82	114	OB	0	214	42	22	20		
					Loose to medium dense gray fine sand	SP													
30	0.50						9	29-30	27	97	123	OB	0	5929					
					Very soft to soft gray clay	CH													
	0.50						10	34-35	61	64	103	OB	0	204					
					Medium stiff gray sandy clay	CL													
40	0.50						11	39-40	27	98	124	UC	--	506	32	14	18		
					Medium stiff gray silty clay	CL													
	0.50						12	44-45	33	90	119	OB	0	676					
					Soft gray silty clay	CL													
50	0.50						13	49-50	39	82	114	UC	--	283					

Comments: Latitude: 29° 14.118' N
Longitude: 89° 31.945' W

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.6	2.5	2.3	85.0	9.6	

☒	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.228	0.174	0.157	0.126	0.0994	0.0781	1.17	2.23

MATERIAL DESCRIPTION	USCS	AASHTO
○ LO G FISA W/ SI & SH FRAG	SP-SM	

Project No. 19292 **Client:** LOUISIANA, STATE OF

Project: RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-40)

○ **Source:** BR-1 **Sample No.:** 2 **Elev./Depth:** 2.5

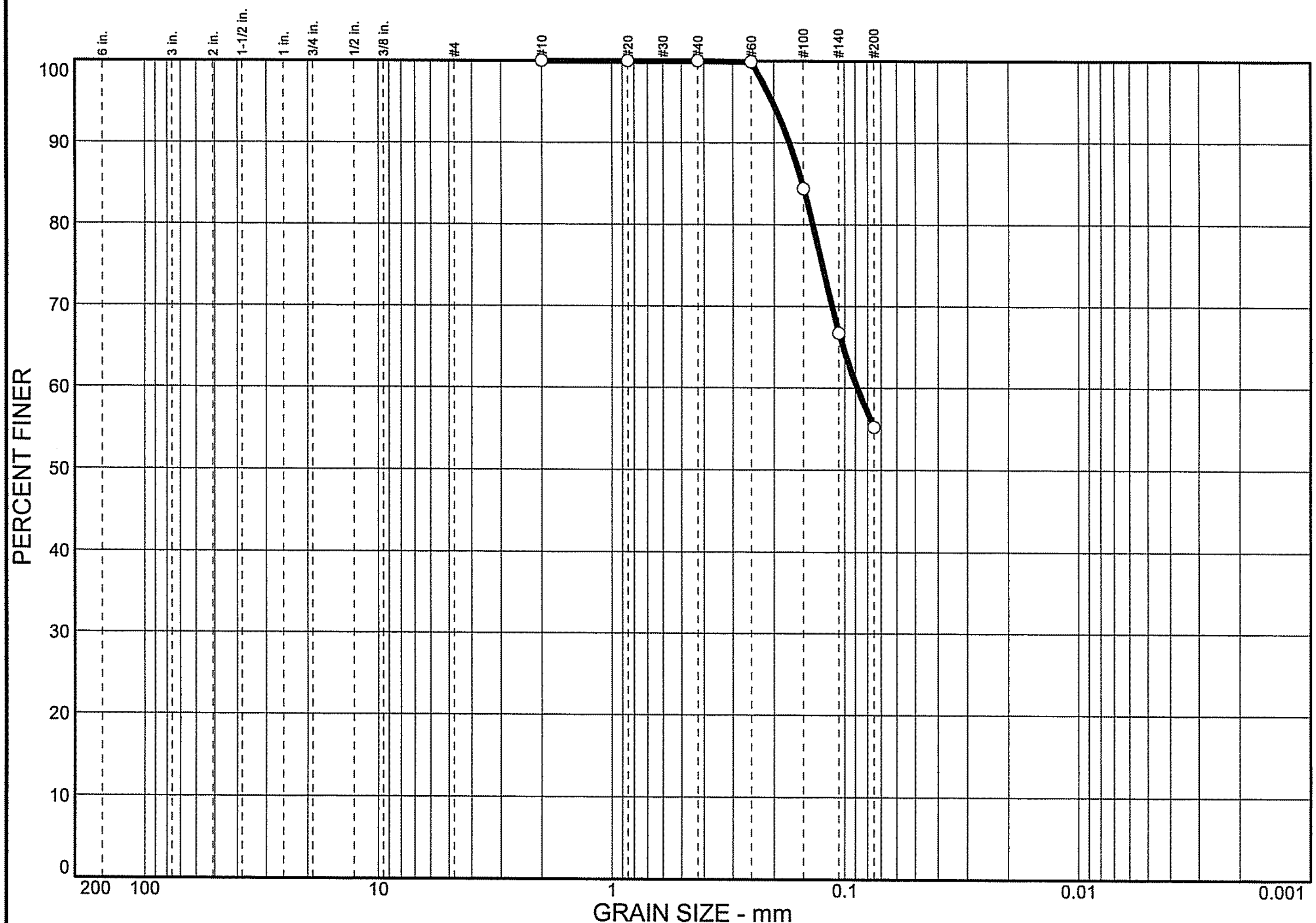
Remarks:

○

EUSTIS
Metairie, Louisiana
Lafayette, Louisiana
Gulfport, Mississippi

Figure

Particle Size Distribution Report



	% COBBLES	% GRAVEL CRS.	% GRAVEL FINE	% SAND CRS.	% SAND MEDIUM	% SAND FINE	% FINES SILT	% FINES CLAY
○	0.0	0.0	0.0	0.0	0.0	44.8	55.2	

X	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.152	0.0886						

MATERIAL DESCRIPTION	USCS	AASHTO
○ LO G SASI	ML	

Project No. 19292 **Client:** LOUISIANA, STATE OF

Project: RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-40)

○ **Source:** BR-2 **Sample No.:** 8 **Elev./Depth:** 25.5

Remarks:

○

EUSTIS
Metairie, Louisiana
Lafayette, Louisiana
Gulfport, Mississippi

Figure

Particle Size Distribution Report

	% COBBLES	% GRAVEL		% SAND			% FINES	
		CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
○				5.8	4.6	75.3	13.5	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.208	0.138	0.126	0.104	0.0783			

MATERIAL DESCRIPTION	USCS	AASHTO
○ VLO G FISA W/ SI	SP-SM	

Project No. 19292 **Client:** LOUISIANA, STATE OF

Project: RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-40)

○ **Source:** BR-3 **Sample No.:** 2 **Elev./Depth:** 2.5

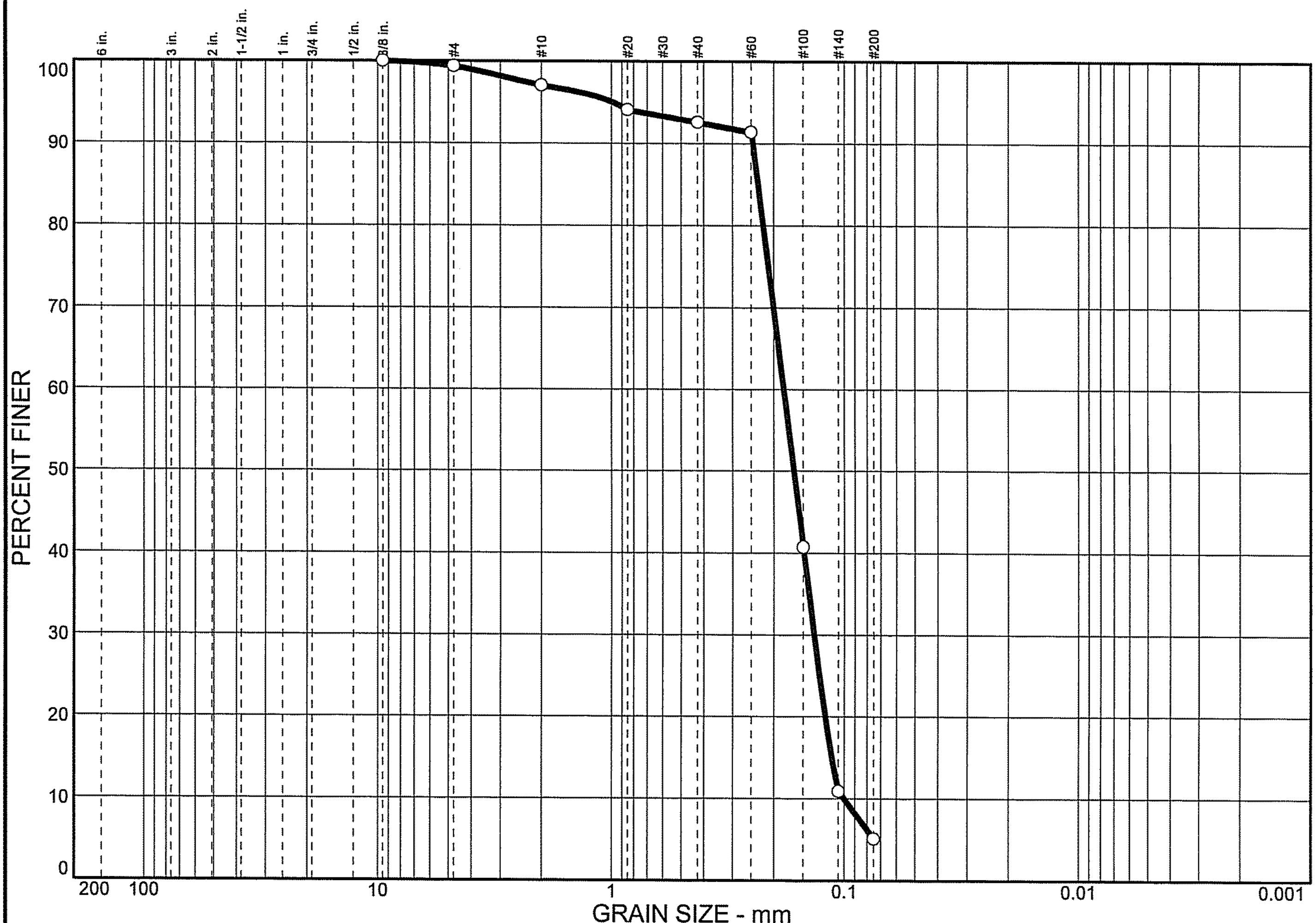
Remarks:

○

EUSTIS
Metairie, Louisiana
Lafayette, Louisiana
Gulfport, Mississippi

Figure

Particle Size Distribution Report



	% COBBLES	% GRAVEL CRS.	% GRAVEL FINE	% SAND CRS.	% SAND MEDIUM	% SAND FINE	% FINES SILT	% FINES CLAY
○	0.0	0.0	0.6	2.3	4.5	87.5	5.1	

☒	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.234	0.182	0.164	0.135	0.113	0.100	1.00	1.81

MATERIAL DESCRIPTION	USCS	AASHTO
○ LO G FISA W/ SI, SHELLS	SP-SM	

Project No. 19292 **Client:** LOUISIANA, STATE OF

Project: RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-40)

○ **Source:** BR-4 **Sample No.:** 1 **Elev./Depth:** 0

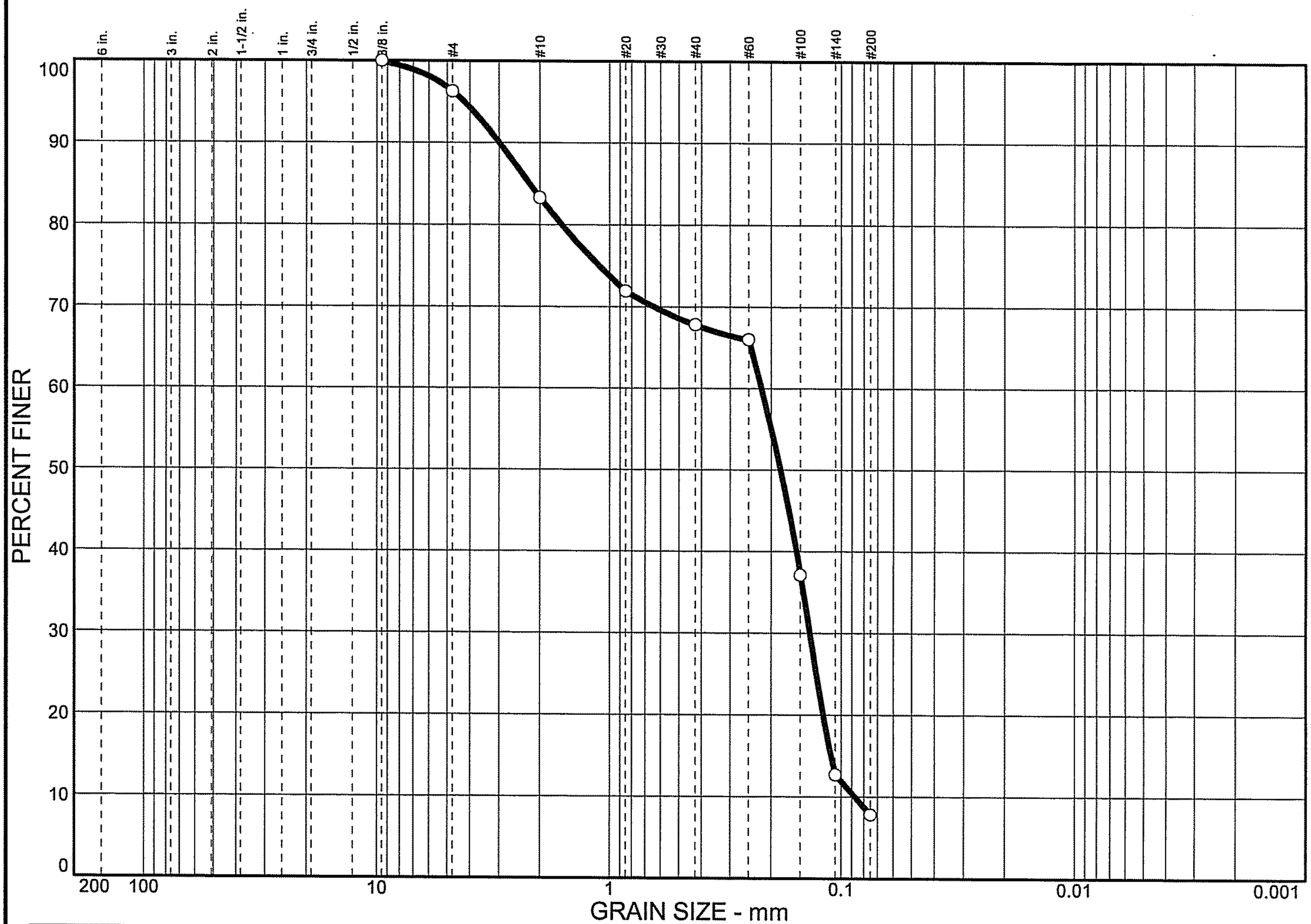
Remarks:

○

EUSTIS
Metairie, Louisiana
Lafayette, Louisiana
Gulfport, Mississippi

Figure

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	3.7	13.0	15.5	60.0	7.8	

☒	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			2.22	0.221	0.183	0.137	0.111	0.0876	0.97	2.52

MATERIAL DESCRIPTION	USCS	AASHTO
○ LO G FISA W/ SI, SHELLS	SP-SM	

Project No. 19292 **Client:** LOUISIANA, STATE OF

Project: RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-40)

○ **Source:** BR-4 **Sample No.:** 3 **Elev./Depth:** 5.5

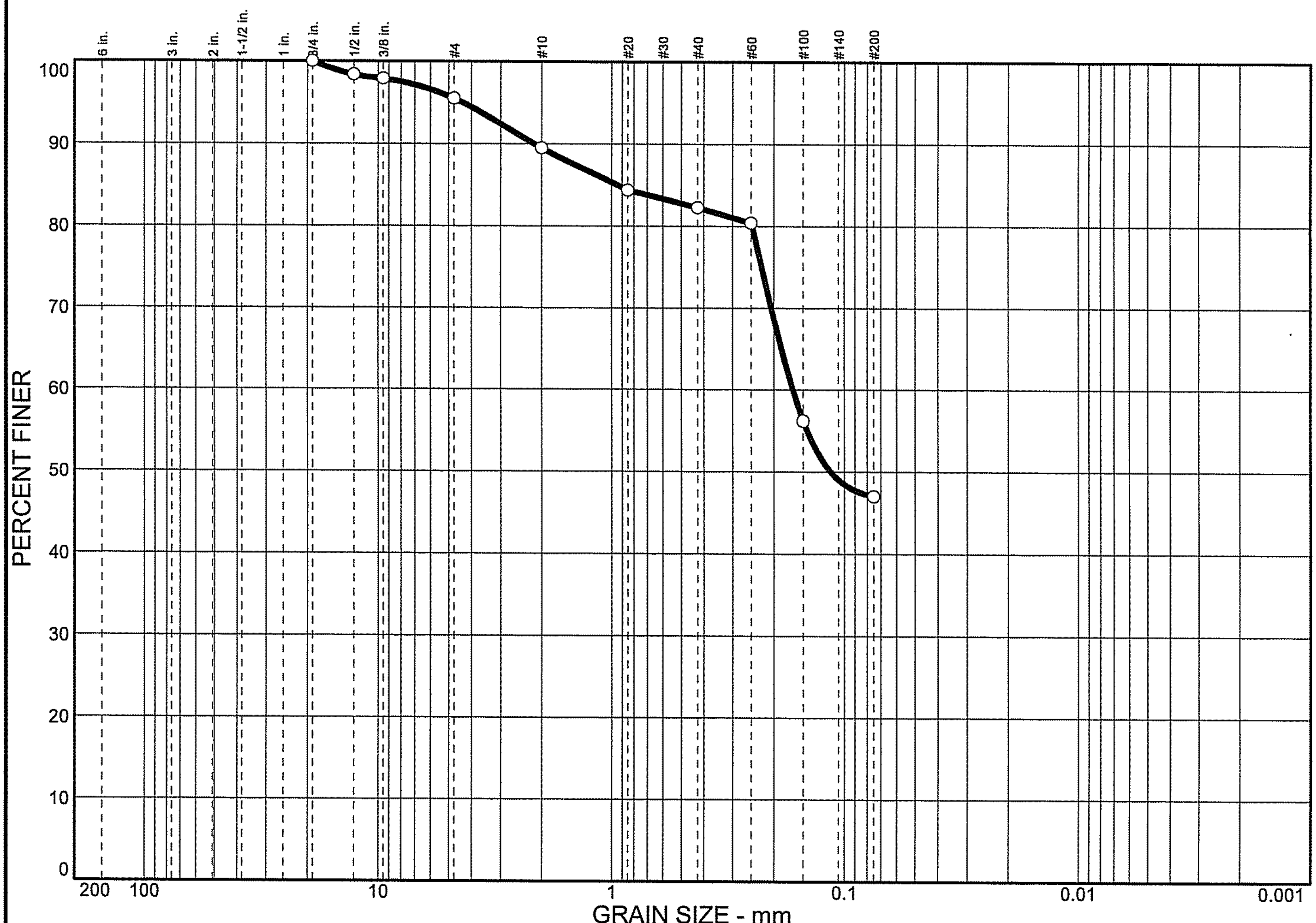
Remarks:

○

EUSTIS
Metairie, Louisiana
Lafayette, Louisiana
Gulfport, Mississippi

Figure

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	4.5	6.0	7.2	35.3	47.0	

╳	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.937	0.166	0.114					

MATERIAL DESCRIPTION	USCS	AASHTO
○ LO G SISA W/ SHELLS	SM	

Project No. 19292 **Client:** LOUISIANA, STATE OF

Project: RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-40)

○ **Source:** BR-4 **Sample No.:** 5 **Elev./Depth:** 13.5

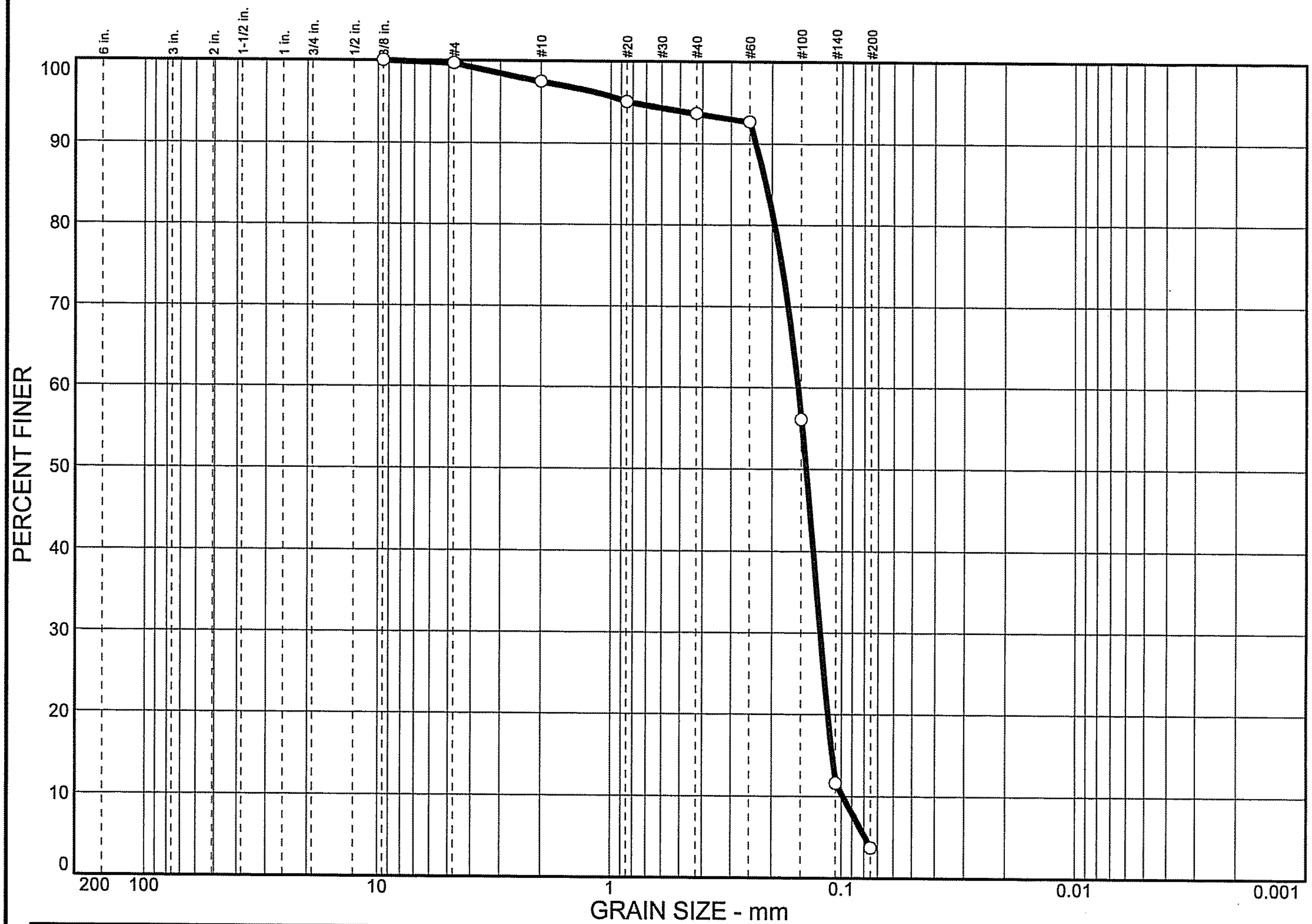
Remarks:

○

EUSTIS
Metairie, Louisiana
Lafayette, Louisiana
Gulfport, Mississippi

Figure

Particle Size Distribution Report



	% COBBLES	% GRAVEL		% SAND			% FINES	
		CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.3	2.2	3.8	90.0	3.7	

☒	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.213	0.155	0.143	0.124	0.110	0.0988	1.01	1.57

MATERIAL DESCRIPTION	USCS	AASHTO
○ LO G FISA W/ SH FRAG	SP	

Project No. 19292 **Client:** LOUISIANA, STATE OF

Project: RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-40)

○ **Source:** BR-5 **Sample No.:** 1 **Elev./Depth:** 0

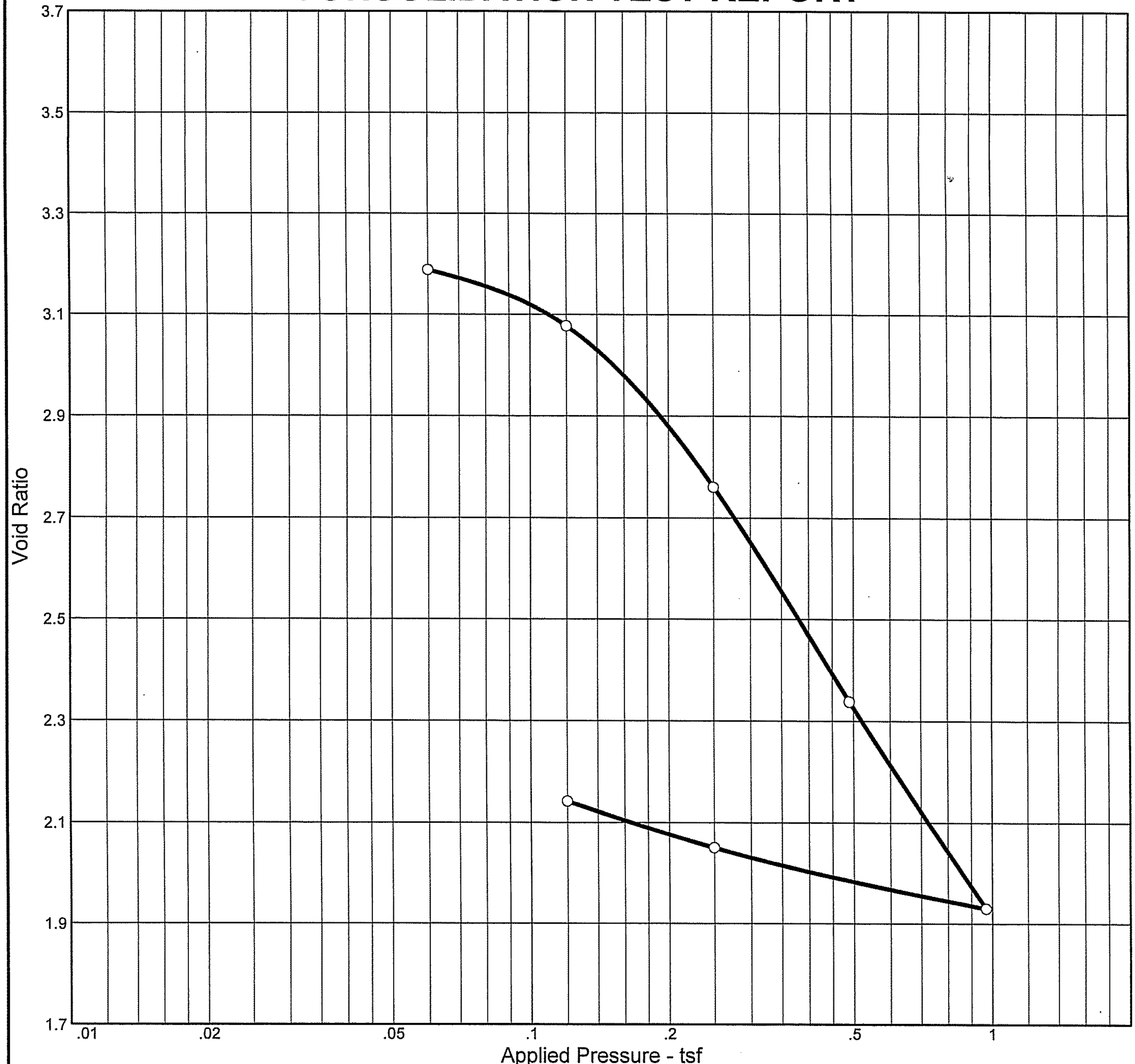
Remarks:

○

EUSTIS
Metairie, Louisiana
Lafayette, Louisiana
Gulfport, Mississippi

Figure

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (tsf)	P_c (tsf)	C_c	C_r	Swell Press. (tsf)	Swell %	e_o
Sat.	Moist.											
98.9 %	122.1 %	39.0	117	87	2.74		0.17	1.45	0.25			3.385

MATERIAL DESCRIPTION	USCS	AASHTO
XSO G CL W/ OM, WD, SH FRAG	CH	

Project No. 19292 **Client:** SJB GROUP, LLC

Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-40), PLAQUEMINES PARISH, LOUISIANA

Source: BR-1 **Sample No.:** 6 **Elev./Depth:** 14'

EUSTIS
Metairie, Louisiana
Lafayette, Louisiana
Gulfport, Mississippi

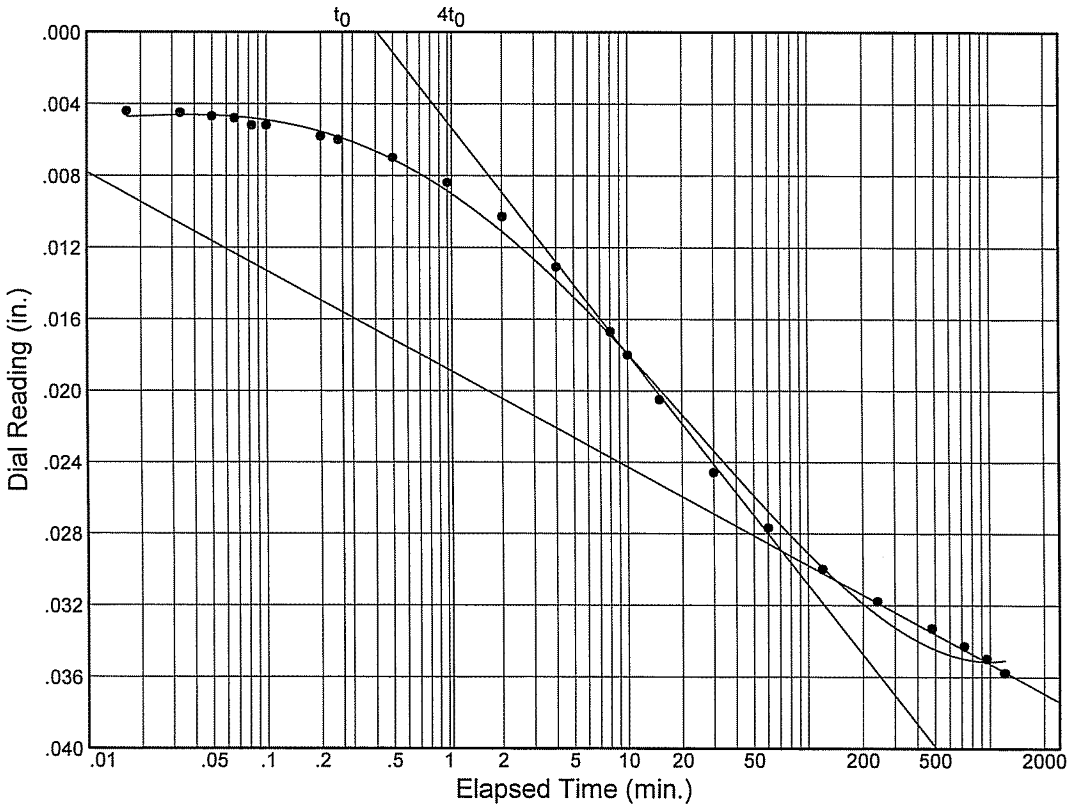
Remarks:
TESTED BY: RR
CHECKED BY: LR

Figure

Dial Reading vs. Time

Project No.: 19292
Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-

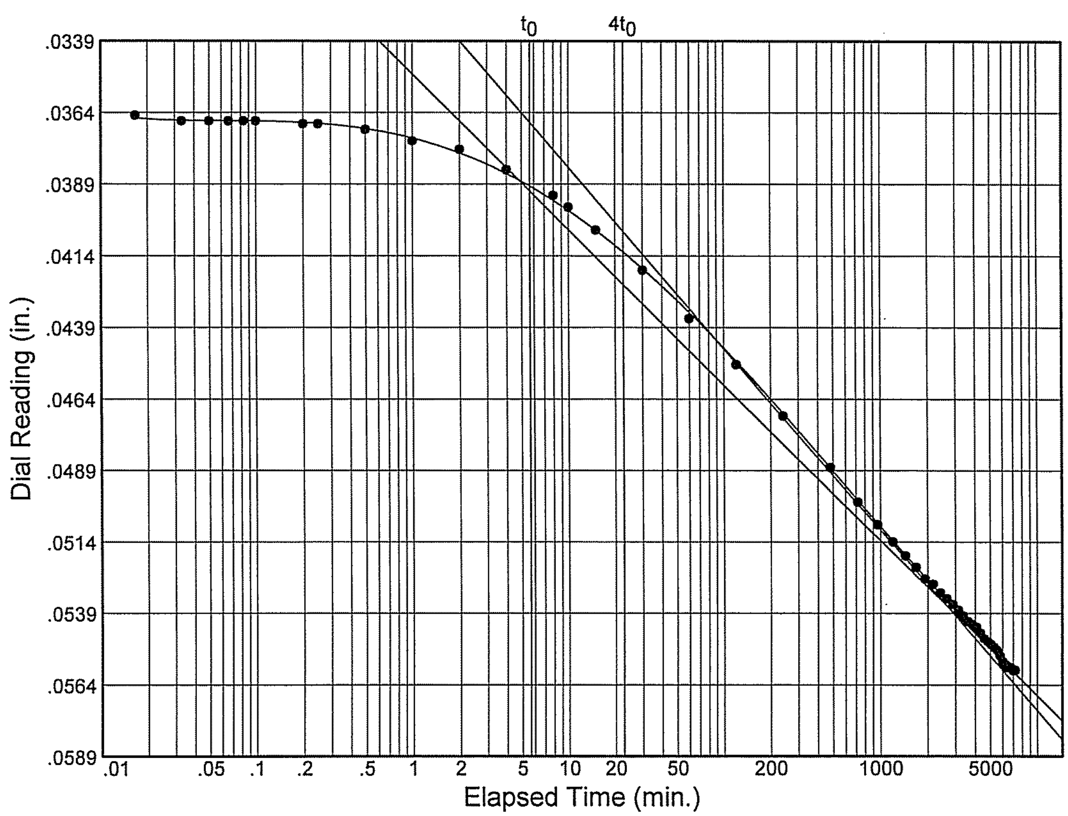
Source: BR-1 | Sample No.: 6 | Elev./Depth: 14'



Load No.= 1
Load= 0.06 tsf
D_0 = 0.00283
D_{50} = 0.01590
D_{100} = 0.02897
T_{50} = 6.45 min.

C_v @ T_{50}
0.05 ft.^{2}/day

C_α = 0.007



Load No.= 2
Load= 0.12 tsf
D_0 = 0.03667
D_{50} = 0.04516
D_{100} = 0.05364
T_{50} = 123.94 min.

C_v @ T_{50}
0.00 ft.^{2}/day

C_α = 0.007

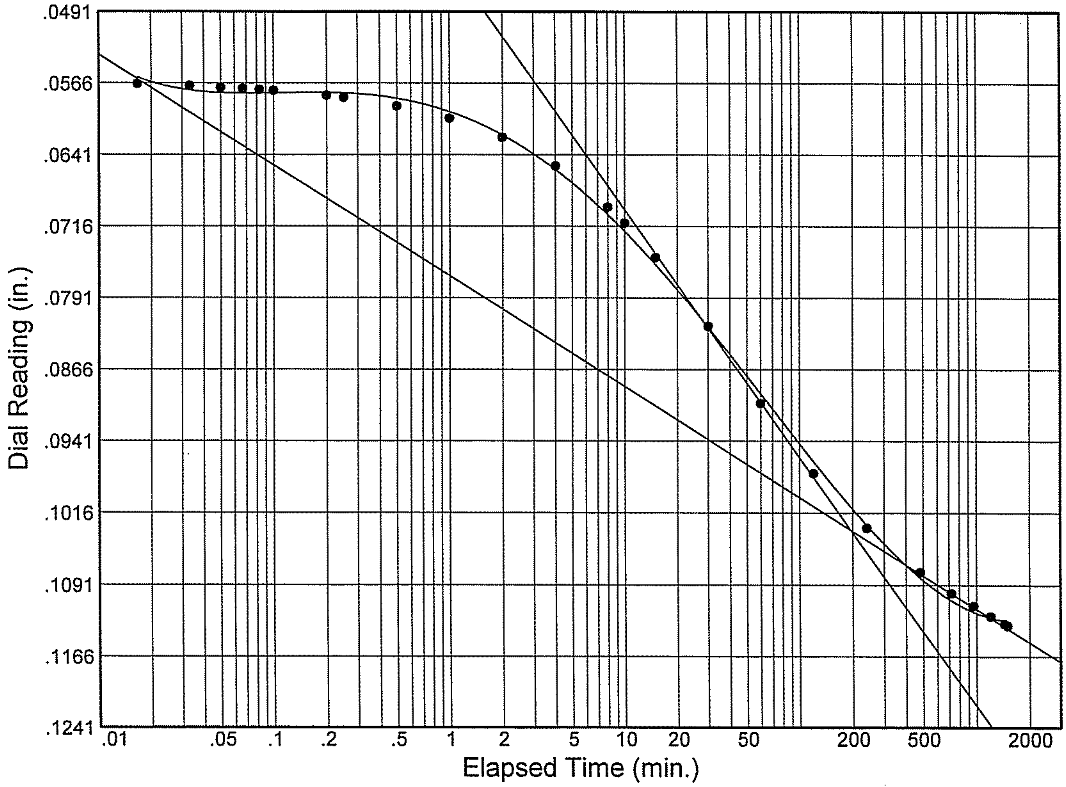
Figure

EUSTIS ENGINEERING COMPANY, INC.

Dial Reading vs. Time

Project No.: 19292
Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-

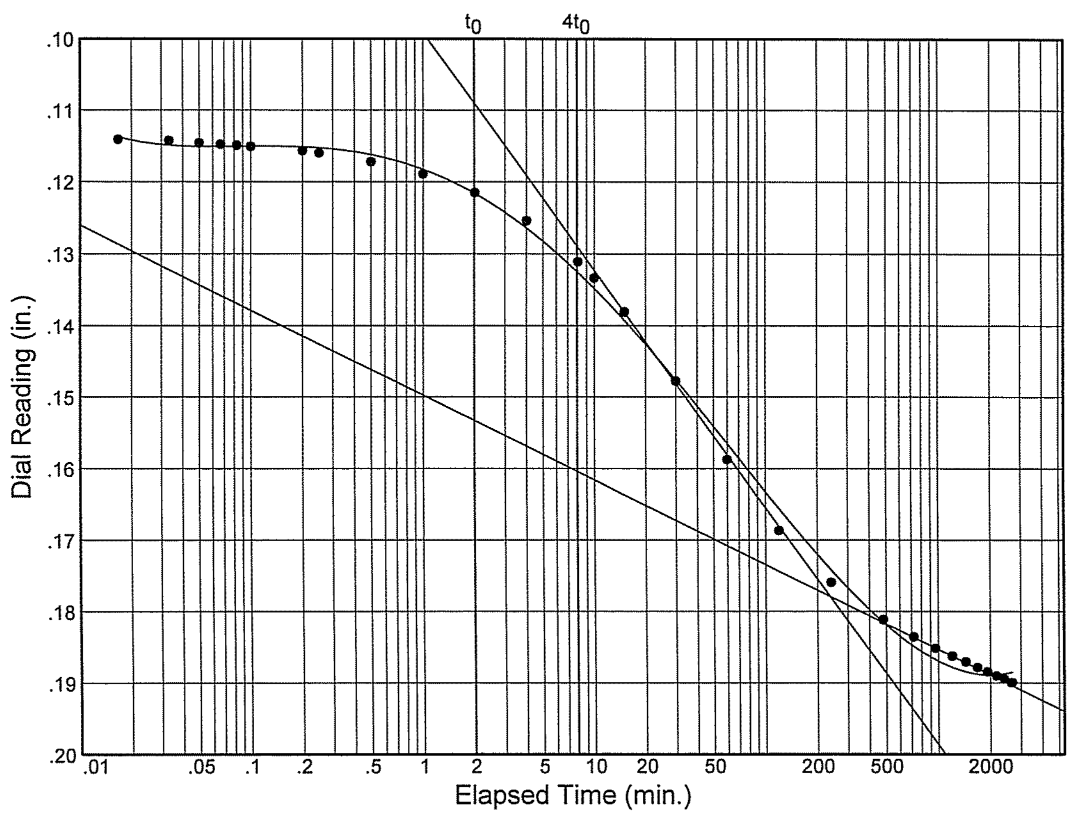
Source: BR-1 Sample No.: 6 Elev./Depth: 14'



Load No.= 3
Load= 0.25 tsf
D_0 = 0.05600
D_{50} = 0.07970
D_{100} = 0.10339
T_{50} = 23.35 min.

C_v @ T_{50}
0.01 ft.^{2}/day

C_α = 0.016



Load No.= 4
Load= 0.49 tsf
D_0 = 0.11066
D_{50} = 0.14429
D_{100} = 0.17792
T_{50} = 22.93 min.

C_v @ T_{50}
0.01 ft.^{2}/day

C_α = 0.017

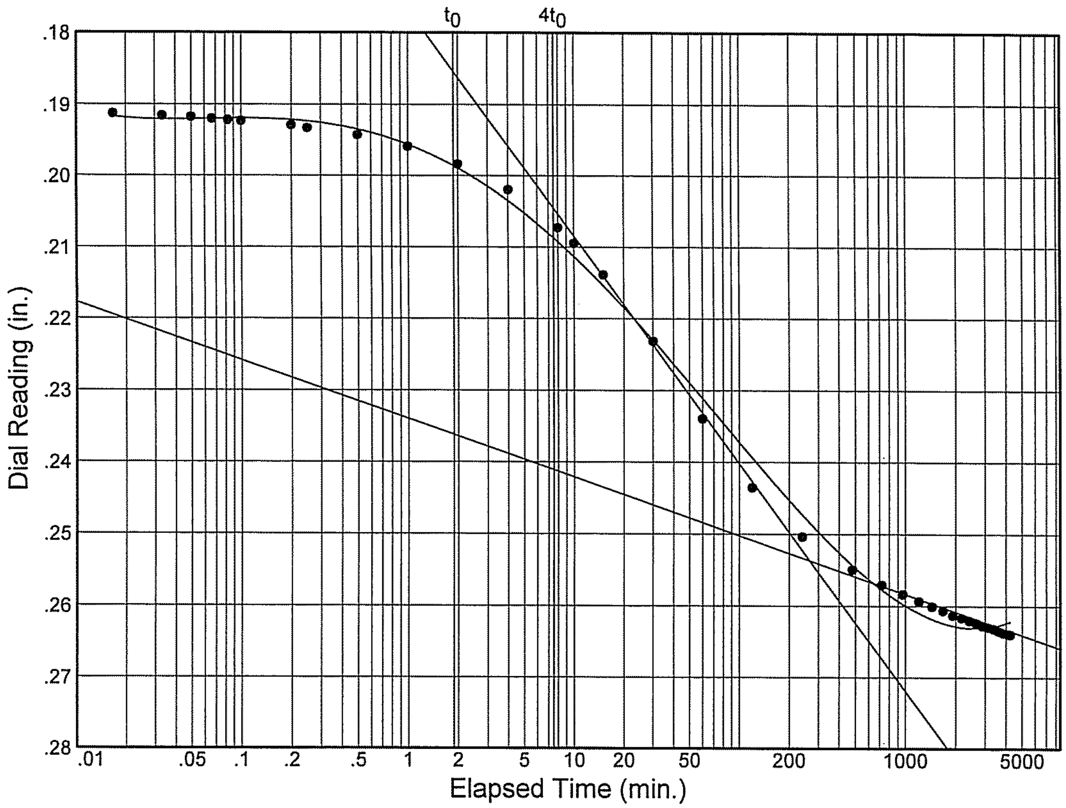
Figure

EUSTIS ENGINEERING COMPANY, INC.

Dial Reading vs. Time

Project No.: 19292
Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-

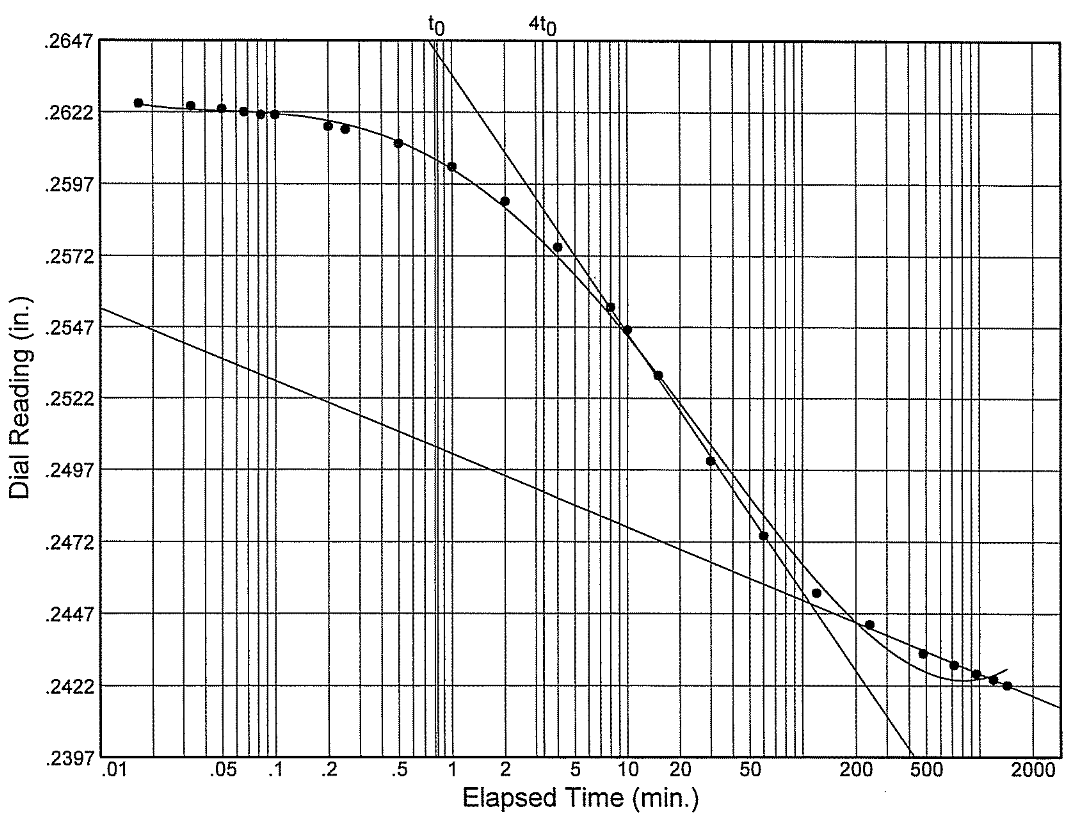
Source: BR-1 Sample No.: 6 Elev./Depth: 14'



Load No.= 5
Load= 0.97 tsf
D_0 = 0.18853
D_{50} = 0.22111
D_{100} = 0.25370
T_{50} = 25.37 min.

C_v @ T_{50}
0.01 ft.^{2}/day

C_α = 0.013



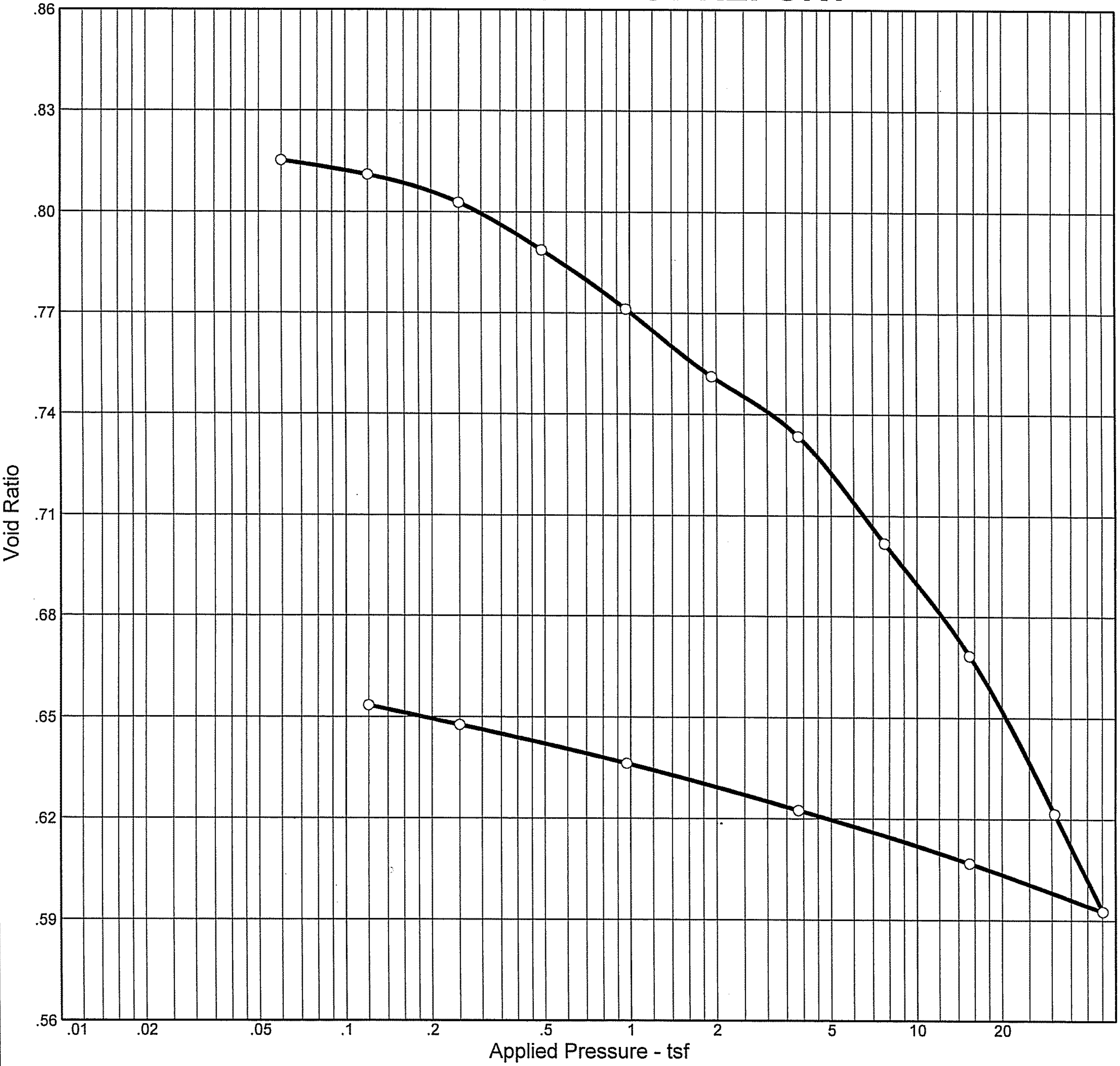
Load No.= 6
Load= 0.25 tsf
D_0 = 0.26336
D_{50} = 0.25421
D_{100} = 0.24505
T_{50} = 10.53 min.

C_v @ T_{50}
0.01 ft.^{2}/day

Figure

EUSTIS ENGINEERING COMPANY, INC.

CONSOLIDATION TEST REPORT



Natural Sat.	Natural Moist.	Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (tsf)	P_c (tsf)	C_c	C_r	Swell Press. (tsf)	Swell %	e_o
94.5 %	29.3 %	90.8	NP	NP	2.65		6.76	0.17	0.02			0.821

MATERIAL DESCRIPTION	USCS	AASHTO
LO G FISA W/ CL LEN	SP	

Project No. 19292 **Client:** SJB GROUP, LLC

Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-40), PLAQUEMINES PARISH, LOUISIANA

Source: BR-3 **Sample No.:** 8 **Elev./Depth:** 24.0'

Remarks:
TESTED BY: RR
CHECKED BY: LR

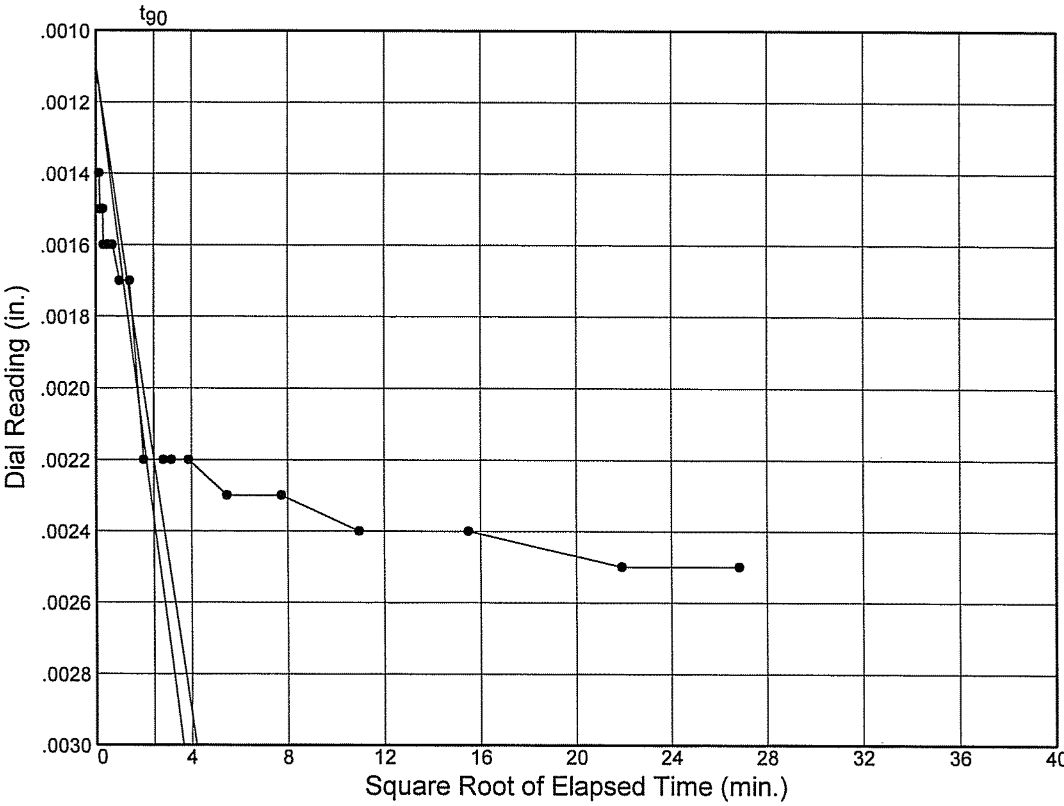
EUSTIS
Metairie, Louisiana
Lafayette, Louisiana
Gulfport, Mississippi

Figure

Dial Reading vs. Time

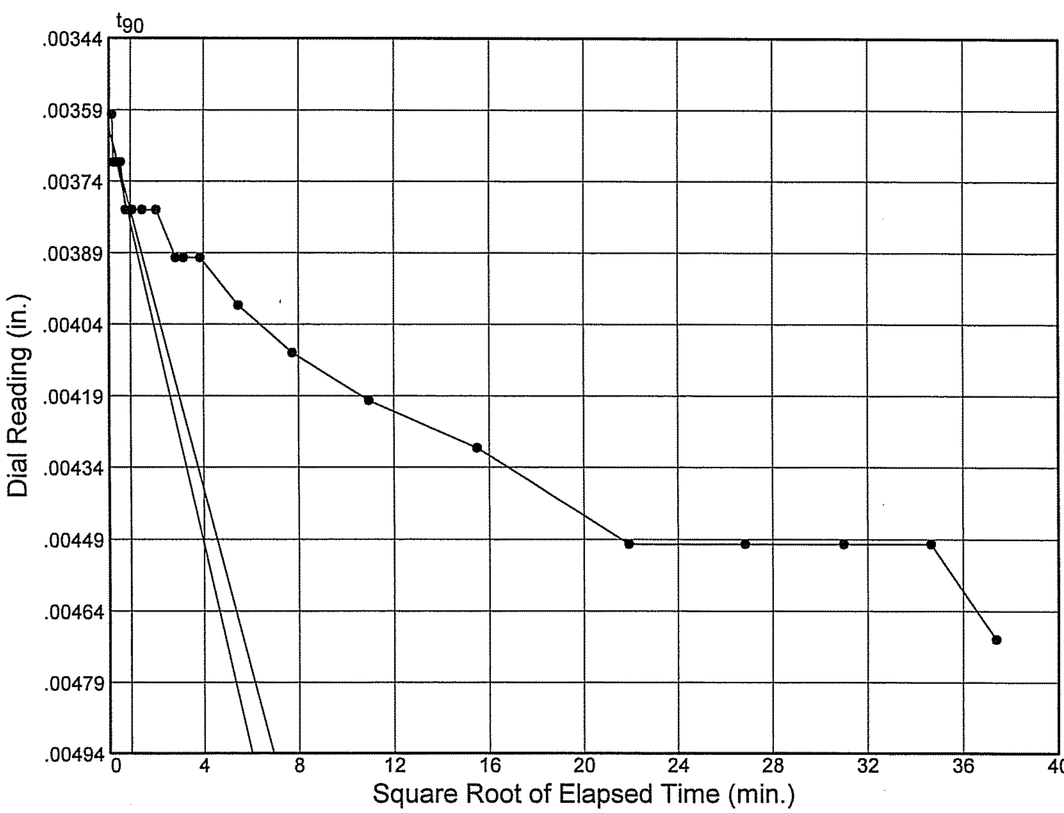
Project No.: 19292
Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-

Source: BR-3 Sample No.: 8 Elev./Depth: 24.0'



Load No.= 1
Load= 0.06 tsf
D_0 = 0.00110
D_{90} = 0.00220
D_{100} = 0.00232
T_{90} = 5.88 min.

C_v @ T_{90}
0.24 ft.^{2}/day



Load No.= 2
Load= 0.12 tsf
D_0 = 0.00363
D_{90} = 0.00380
D_{100} = 0.00382
T_{90} = 0.84 min.

C_v @ T_{90}
1.67 ft.^{2}/day

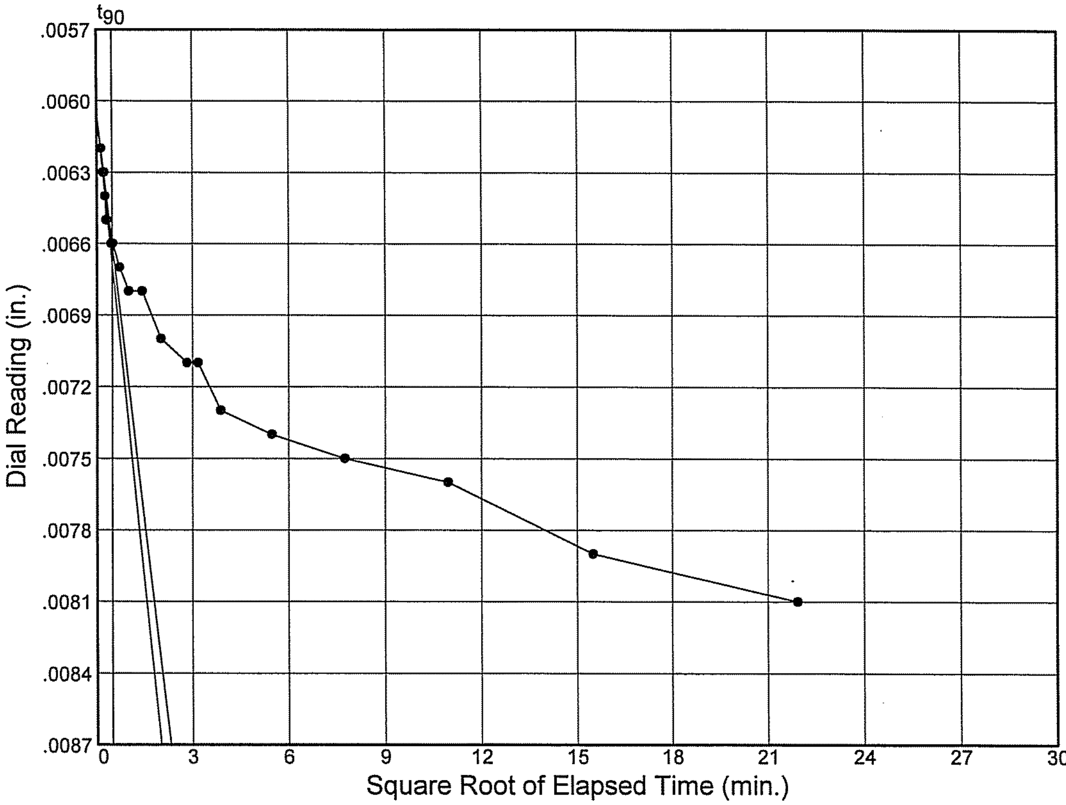
Figure

EUSTIS ENGINEERING COMPANY, INC.

Dial Reading vs. Time

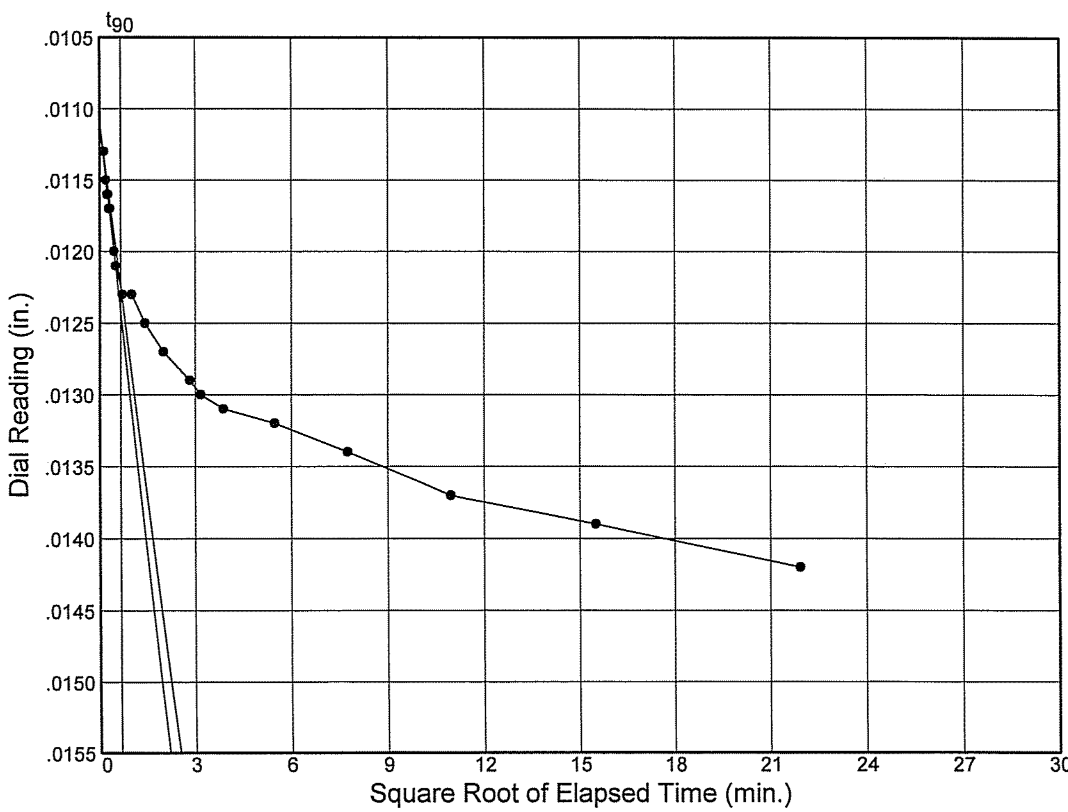
Project No.: 19292
Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-

Source: BR-3 | Sample No.: 8 | Elev./Depth: 24.0'



Load No.= 3
Load= 0.25 tsf
D_0 = 0.00605
D_{90} = 0.00660
D_{100} = 0.00666
T_{90} = 0.23 min.

C_v @ T_{90}
6.10 ft.^{2}/day



Load No.= 4
Load= 0.49 tsf
D_0 = 0.01109
D_{90} = 0.01225
D_{100} = 0.01238
T_{90} = 0.43 min.

C_v @ T_{90}
3.17 ft.^{2}/day

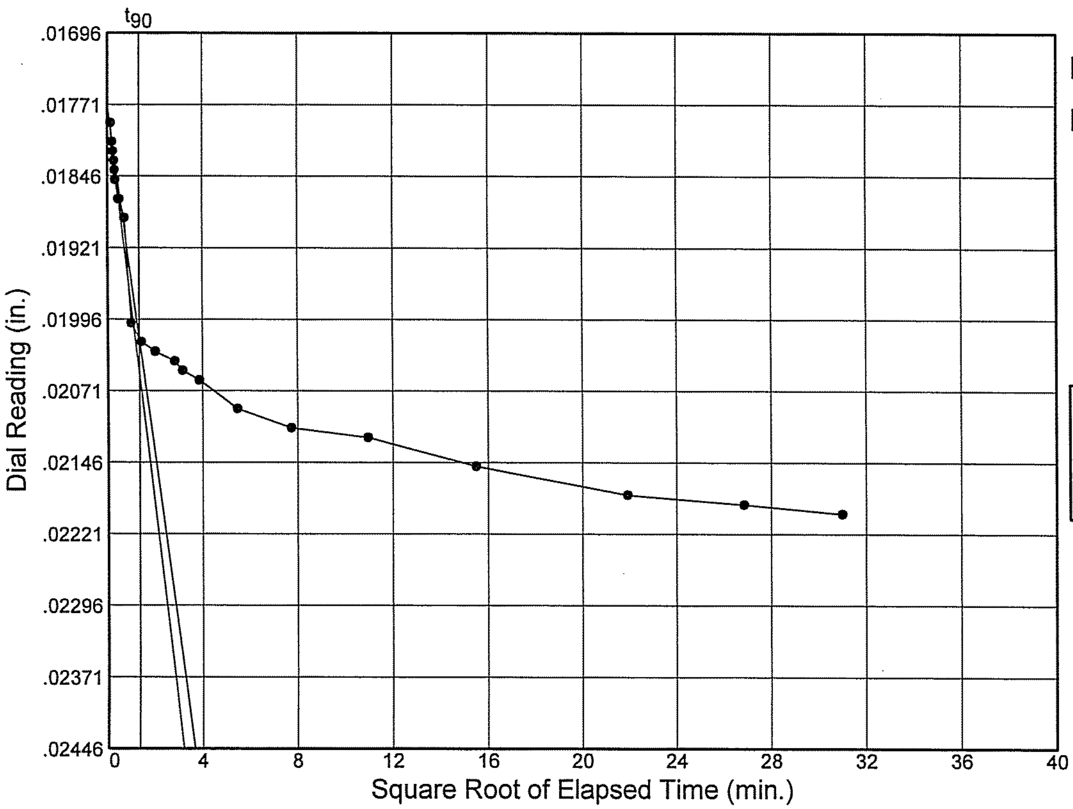
Figure

EUSTIS ENGINEERING COMPANY, INC.

Dial Reading vs. Time

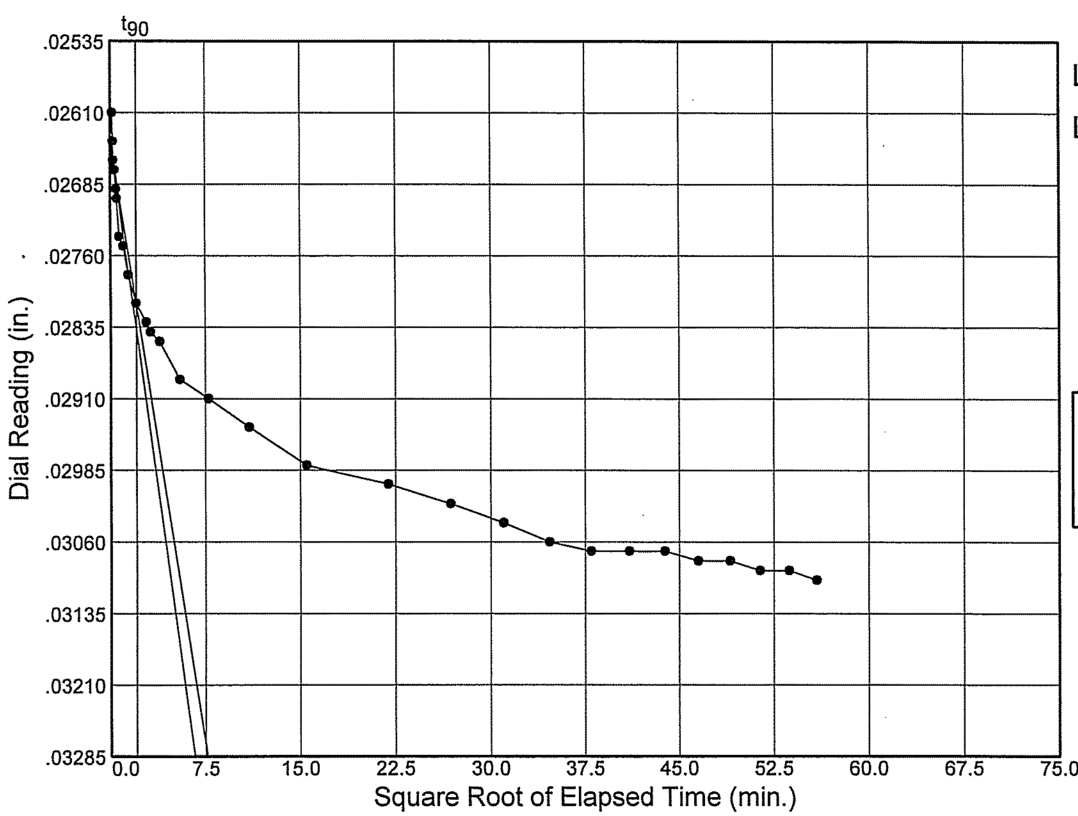
Project No.: 19292
Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-

Source: BR-3 Sample No.: 8 Elev./Depth: 24.0'



Load No.= 5
Load= 0.97 tsf
D_0 = 0.01771
D_{90} = 0.02016
D_{100} = 0.02043
T_{90} = 1.77 min.

C_v @ T_{90}
0.76 ft.^{2}/day



Load No.= 6
Load= 1.93 tsf
D_0 = 0.02639
D_{90} = 0.02811
D_{100} = 0.02830
T_{90} = 4.15 min.

C_v @ T_{90}
0.32 ft.^{2}/day

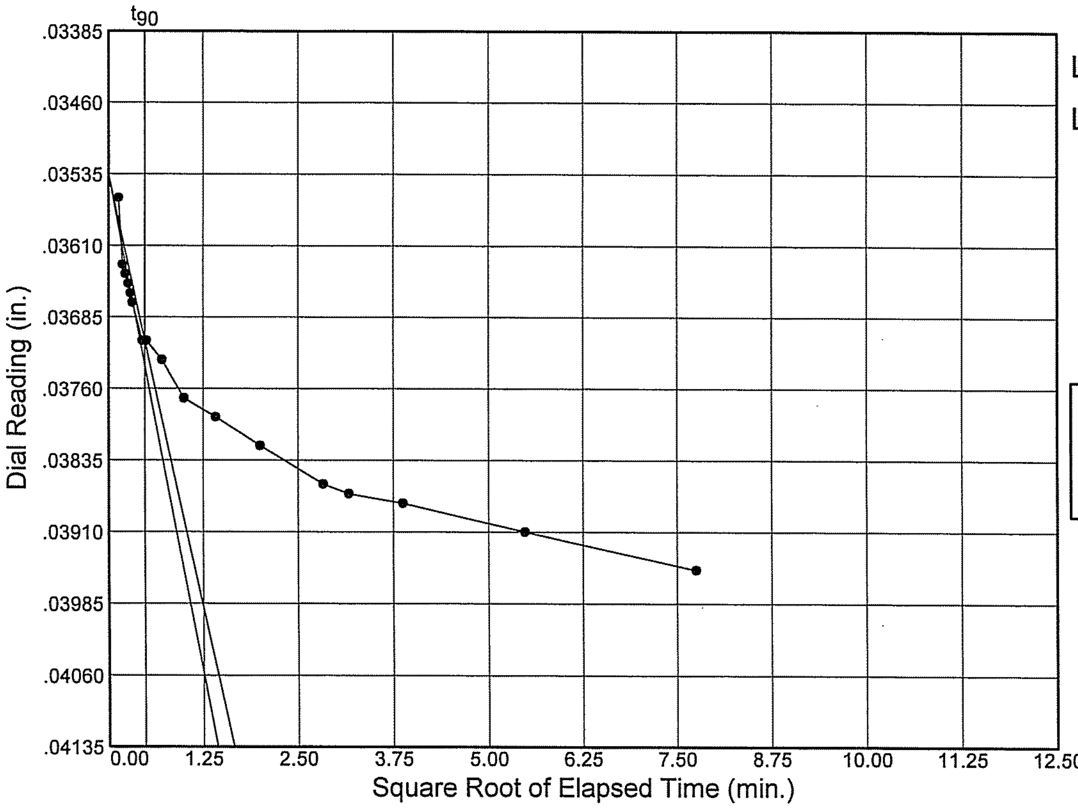
Figure

EUSTIS ENGINEERING COMPANY, INC.

Dial Reading vs. Time

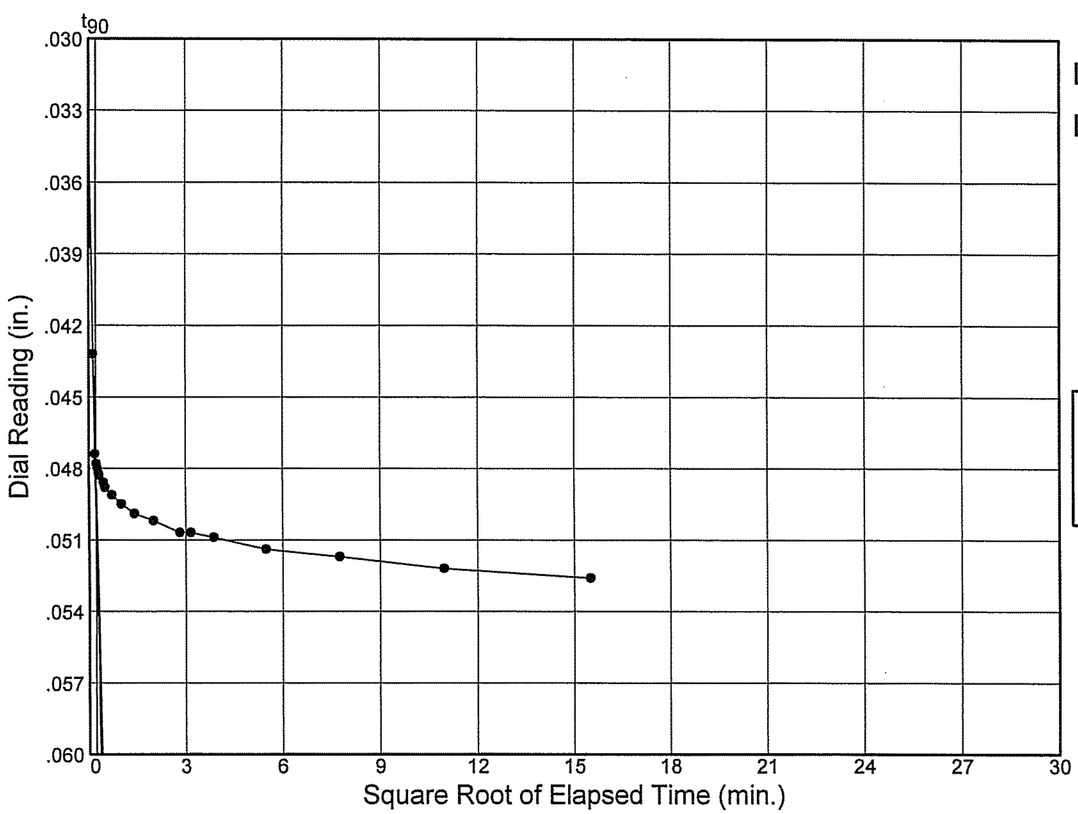
Project No.: 19292
Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-

Source: BR-3 Sample No.: 8 Elev./Depth: 24.0'



Load No.= 7
Load= 3.85 tsf
D_0 = 0.03536
D_{90} = 0.03710
D_{100} = 0.03729
T_{90} = 0.23 min.

C_v @ T_{90}
5.61 ft.^{2}/day



Load No.= 8
Load= 7.69 tsf
D_0 = 0.03301
D_{90} = 0.04771
D_{100} = 0.04934
T_{90} = 0.05 min.

C_v @ T_{90}
27.32 ft.^{2}/day

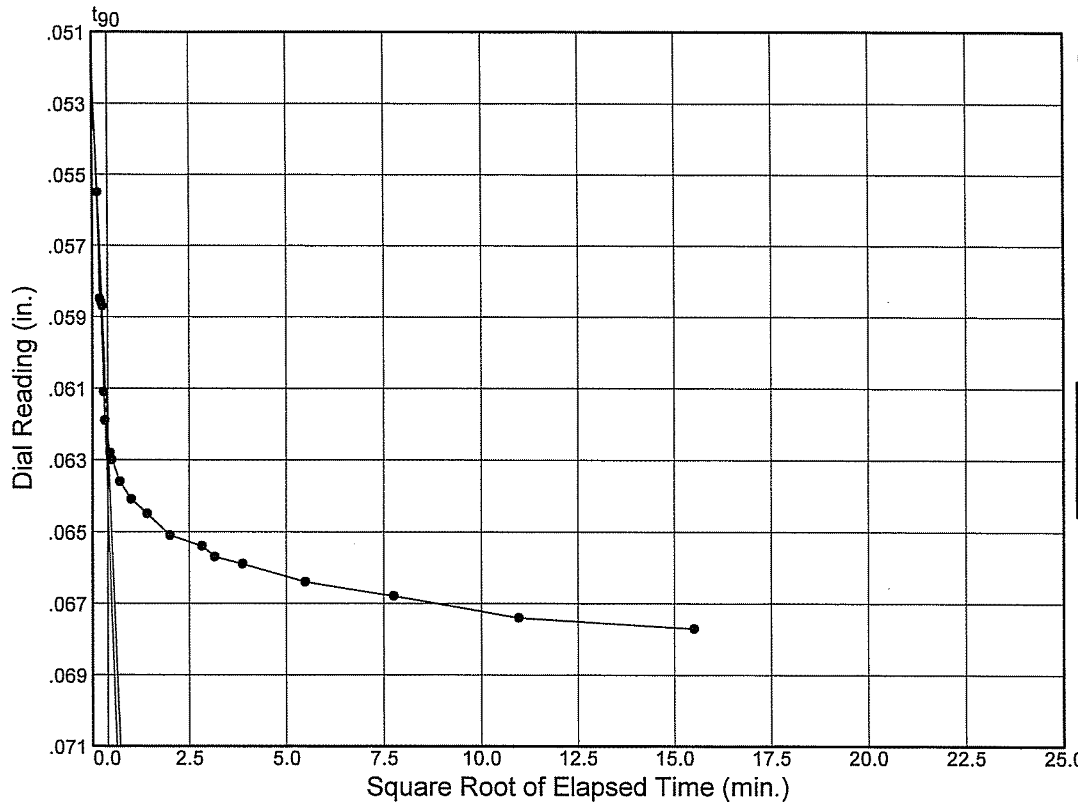
Figure

EUSTIS ENGINEERING COMPANY, INC.

Dial Reading vs. Time

Project No.: 19292
Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-

Source: BR-3 Sample No.: 8 Elev./Depth: 24.0'



Load No.= 9

Load= 15.37 tsf

D_0 = 0.05186

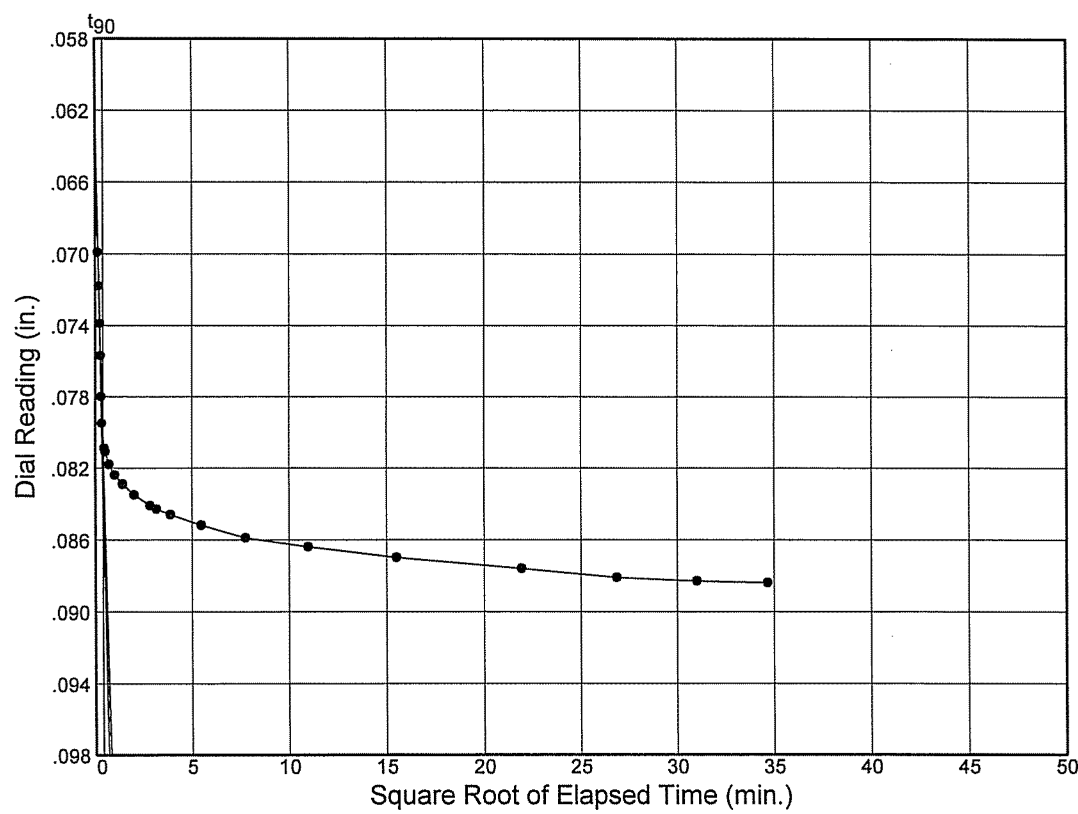
D_{90} = 0.06244

D_{100} = 0.06361

T_{90} = 0.16 min.

C_v @ T_{90}

7.79 ft.^{2}/day



Load No.= 10

Load= 30.73 tsf

D_0 = 0.06259

D_{90} = 0.08027

D_{100} = 0.08223

T_{90} = 0.15 min.

C_v @ T_{90}

7.66 ft.^{2}/day

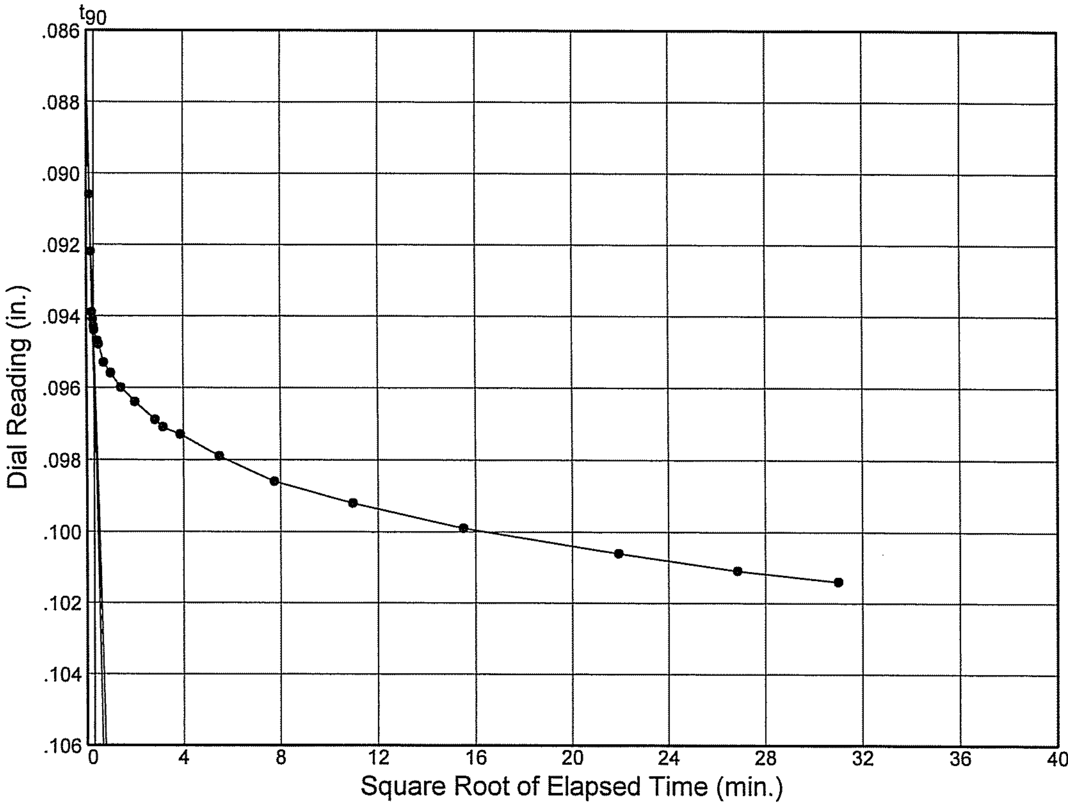
Figure

EUSTIS ENGINEERING COMPANY, INC.

Dial Reading vs. Time

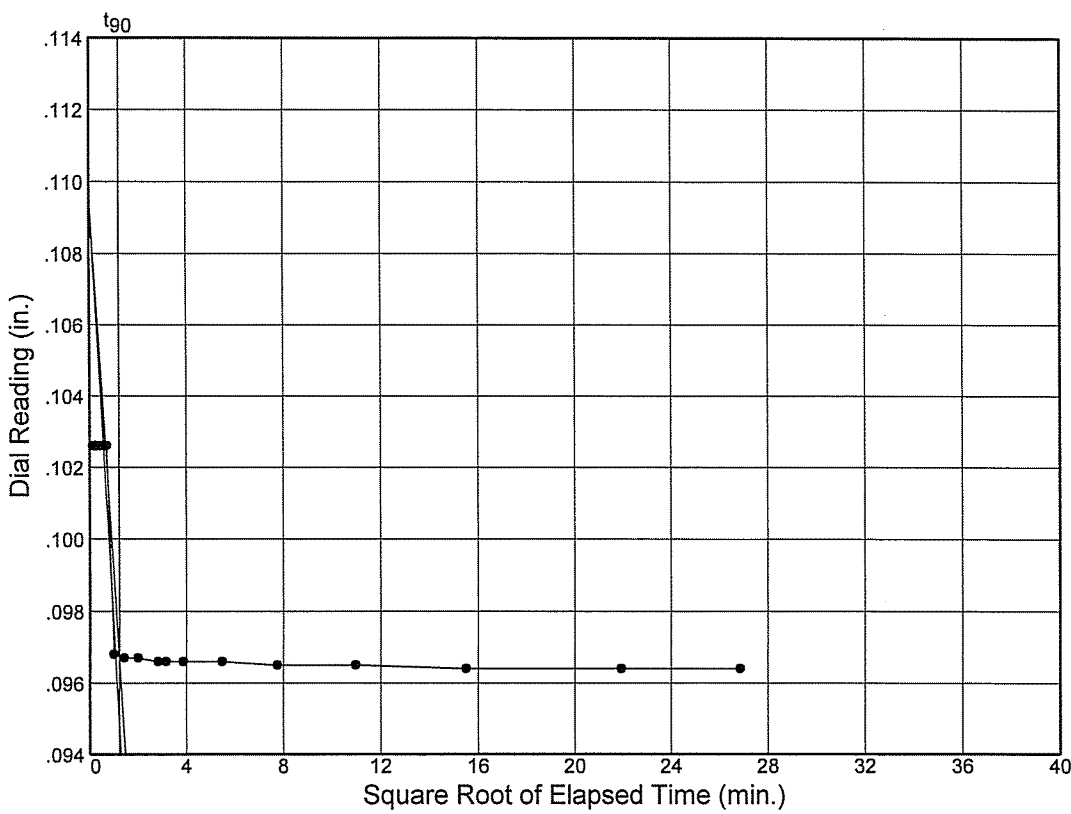
Project No.: 19292
Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-

Source: BR-3 Sample No.: 8 Elev./Depth: 24.0'



Load No.= 11
Load= 45.21 tsf
D_0 = 0.08697
D_{90} = 0.09431
D_{100} = 0.09513
T_{90} = 0.09 min.

C_v @ T_{90}
12.88 ft.^{2}/day



Load No.= 12
Load= 15.37 tsf
D_0 = 0.10960
D_{90} = 0.09675
D_{100} = 0.09532
T_{90} = 1.48 min.

C_v @ T_{90}
0.74 ft.^{2}/day

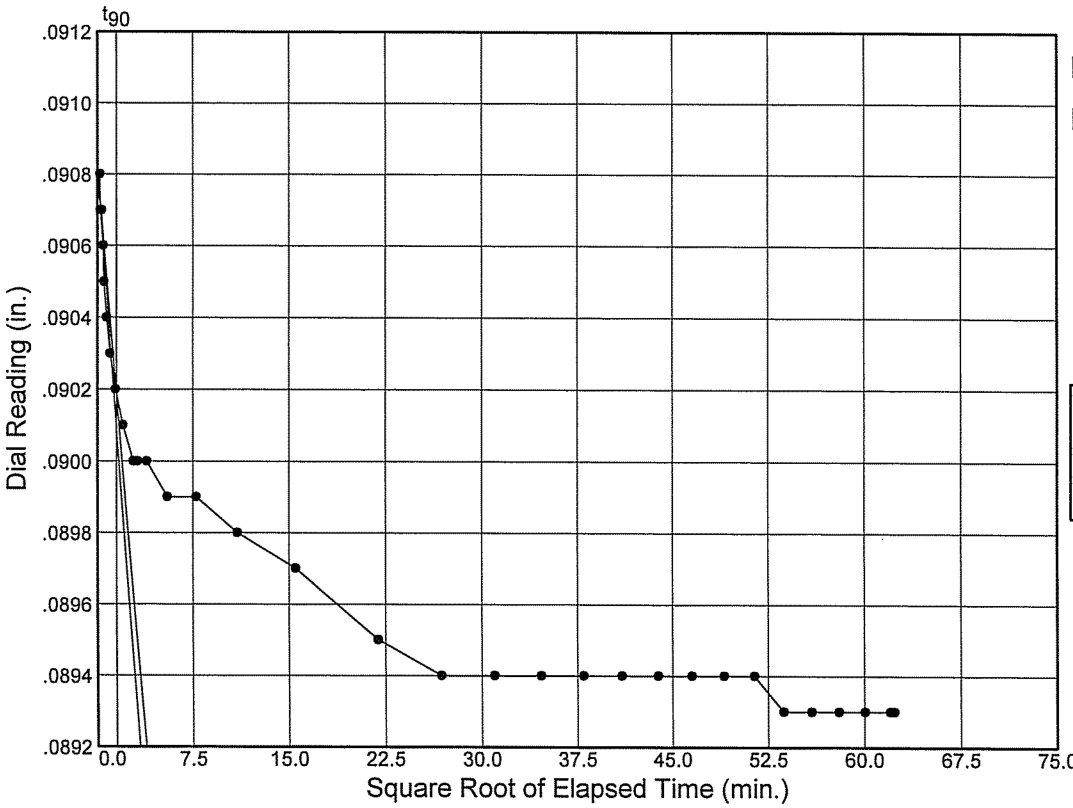
Figure

EUSTIS ENGINEERING COMPANY, INC.

Dial Reading vs. Time

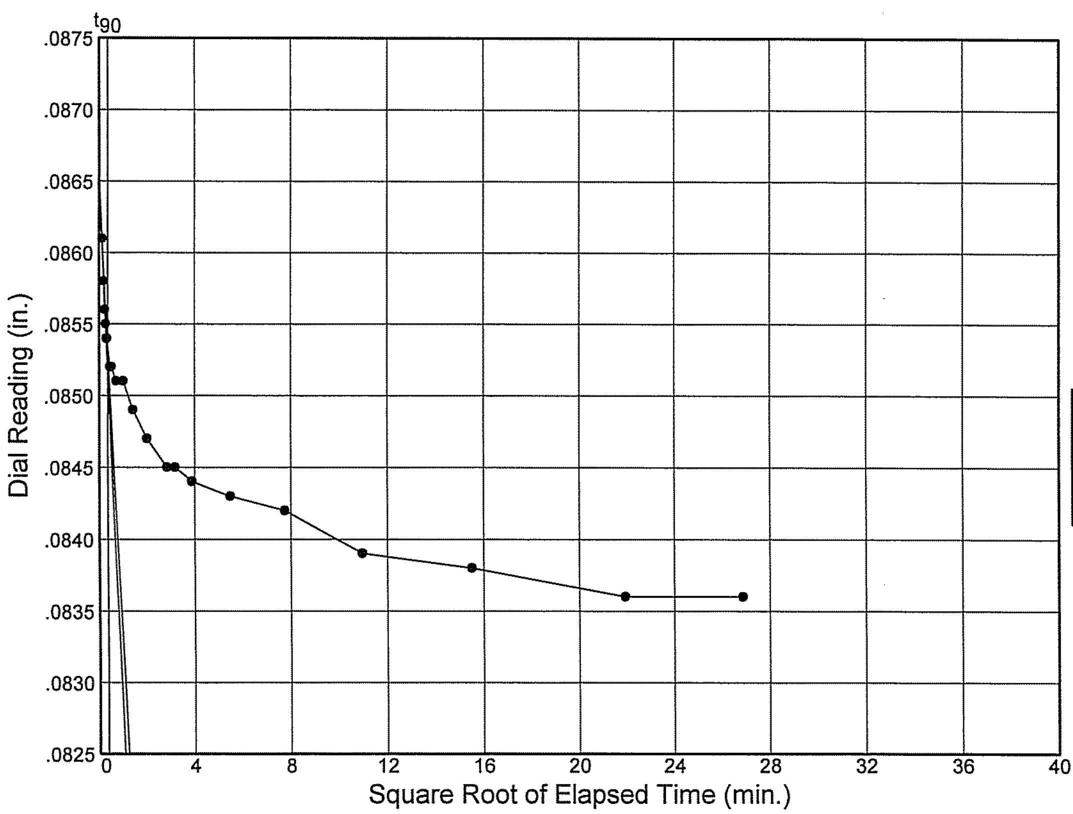
Project No.: 19292
Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-

Source: BR-3 Sample No.: 8 Elev./Depth: 24.0'



Load No.= 13
Load= 3.85 tsf
D_0 = 0.09082
D_{90} = 0.09019
D_{100} = 0.09012
T_{90} = 2.24 min.

C_v @ T_{90}
0.50 ft.²/day



Load No.= 14
Load= 0.97 tsf
D_0 = 0.08653
D_{90} = 0.08534
D_{100} = 0.08521
T_{90} = 0.13 min.

C_v @ T_{90}
8.92 ft.²/day

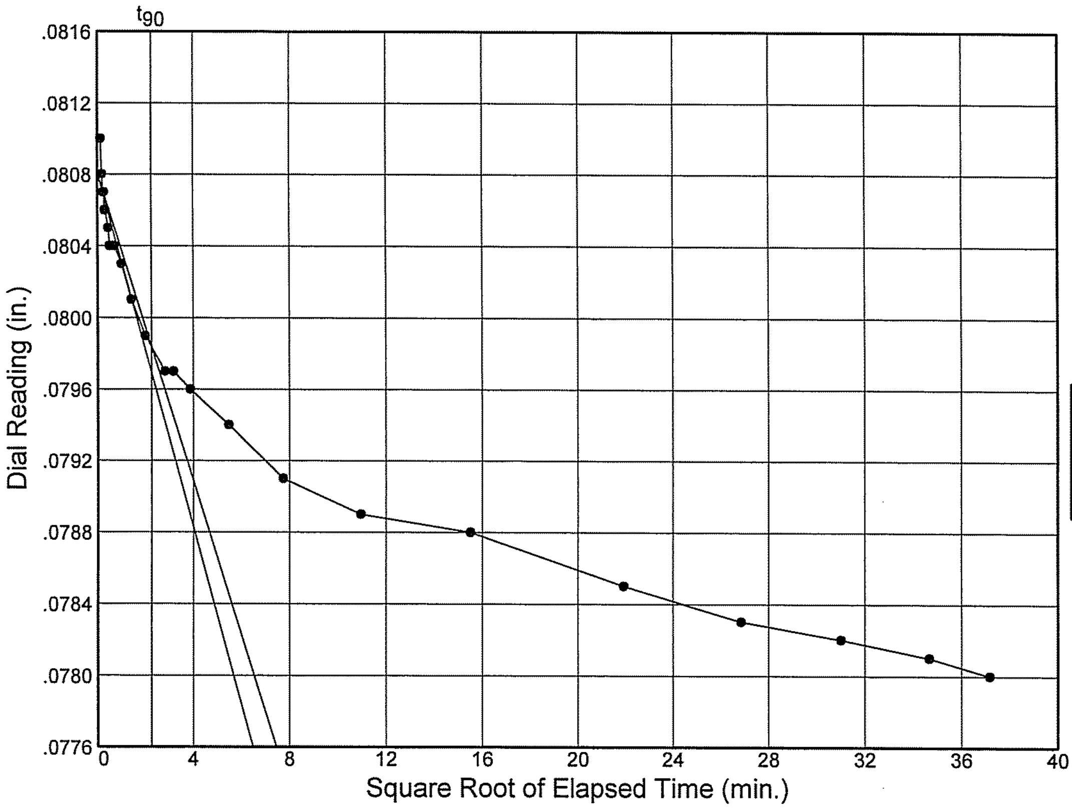
Figure

EUSTIS ENGINEERING COMPANY, INC.

Dial Reading vs. Time

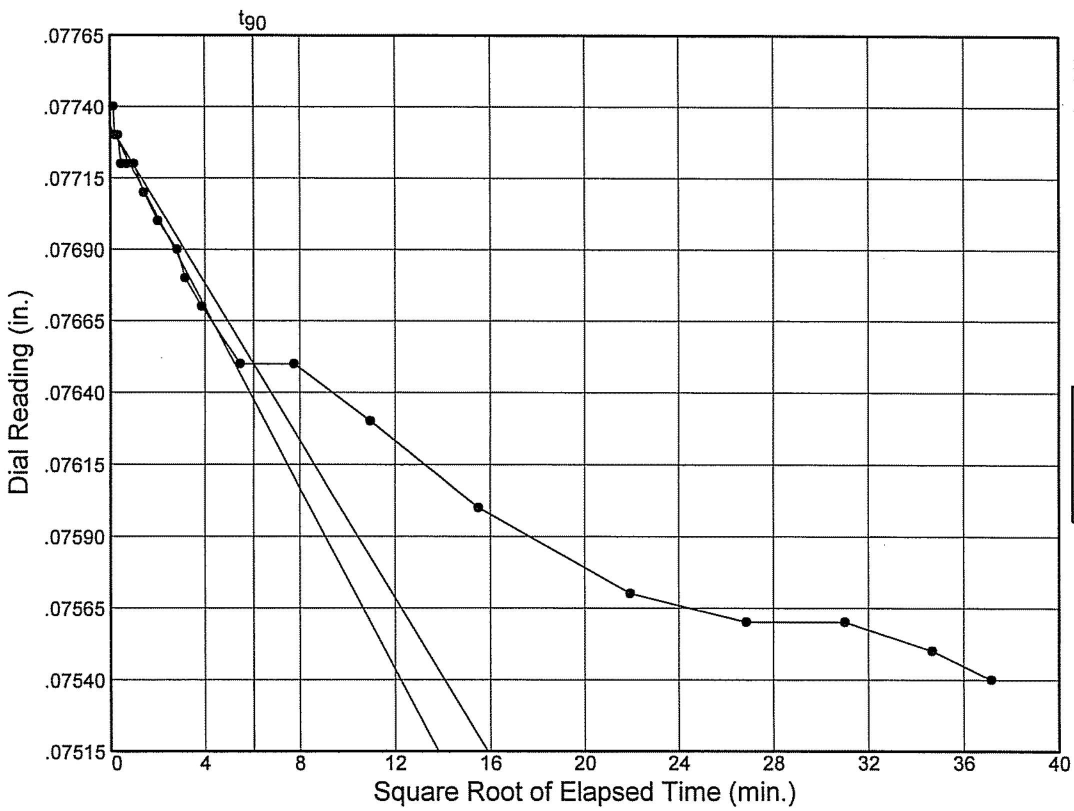
Project No.: 19292
Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-

Source: BR-3 Sample No.: 8 Elev./Depth: 24.0'



Load No.= 15
Load= 0.25 tsf
D_0 = 0.08081
D_{90} = 0.07984
D_{100} = 0.07973
T_{90} = 5.05 min.

C_V @ T_{90}
0.23 ft.^{2}/day



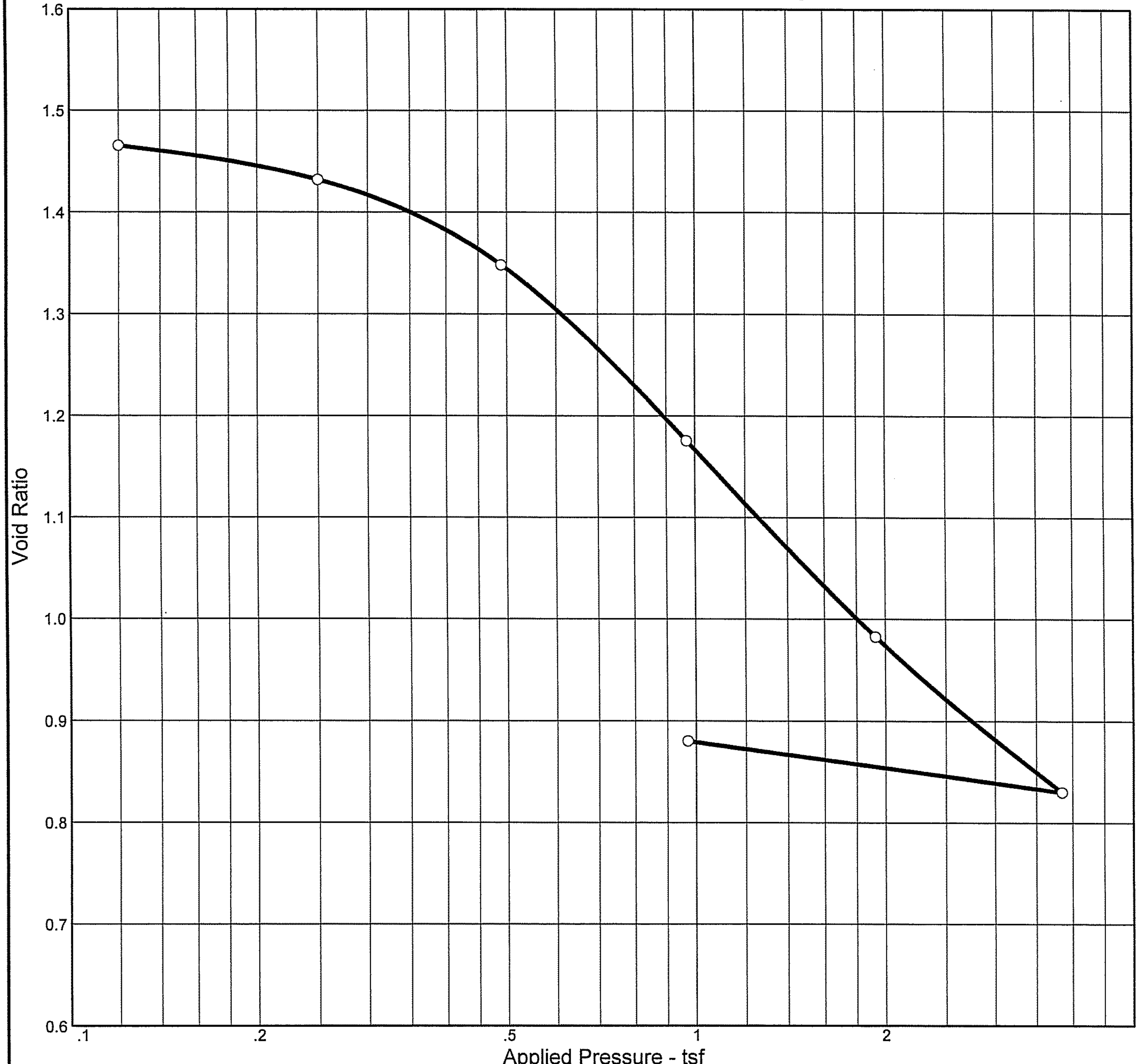
Load No.= 16
Load= 0.12 tsf
D_0 = 0.07733
D_{90} = 0.07650
D_{100} = 0.07641
T_{90} = 36.63 min.

C_V @ T_{90}
0.03 ft.^{2}/day

Figure

EUSTIS ENGINEERING COMPANY, INC.

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (tsf)	P_c (tsf)	C_c	C_r	Swell Press. (tsf)	Swell %	e_o
Sat.	Moist.											
99.9 %	55.4 %	67.9	67	49	2.74		0.49	0.66	0.08			1.521

MATERIAL DESCRIPTION	USCS	AASHTO
VSO G CL	CH	

Project No. 19292 **Client:** SJB GROUP, LLC

Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-40), PLAQUEMINES PARISH, LOUISIANA

Source: BR-5 **Sample No.:** 10 **Elev./Depth:** 38.0'

EUSTIS
Metairie, Louisiana
Lafayette, Louisiana
Gulfport, Mississippi

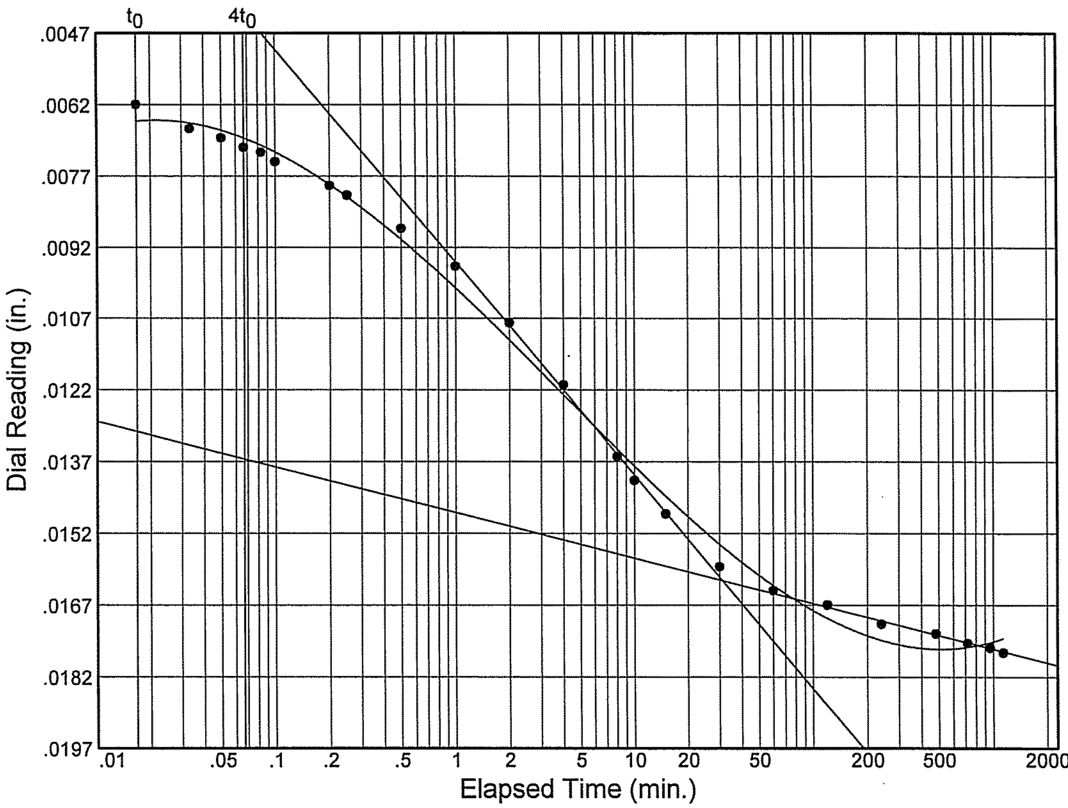
Remarks:
TESTED BY: RR
CHECKED BY: LR

Figure

Dial Reading vs. Time

Project No.: 19292
Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-

Source: BR-5 Sample No.: 10 Elev./Depth: 38.0'



Load No.= 1

Load= 0.12 tsf

D_0 = 0.00619

D_{50} = 0.01119

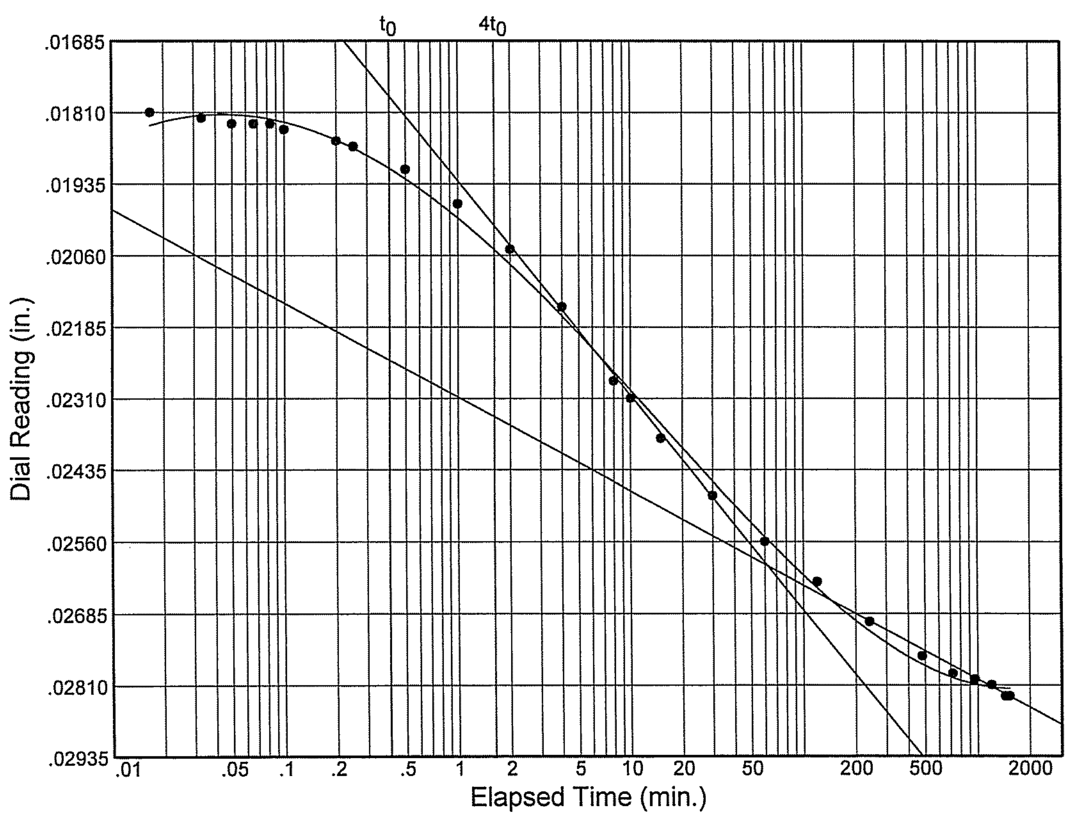
D_{100} = 0.01619

T_{50} = 2.03 min.

C_v @ T_{50}

0.15 ft.^{2}/day

C_α = 0.001



Load No.= 2

Load= 0.25 tsf

D_0 = 0.01767

D_{50} = 0.02185

D_{100} = 0.02603

T_{50} = 4.58 min.

C_v @ T_{50}

0.06 ft.^{2}/day

C_α = 0.002

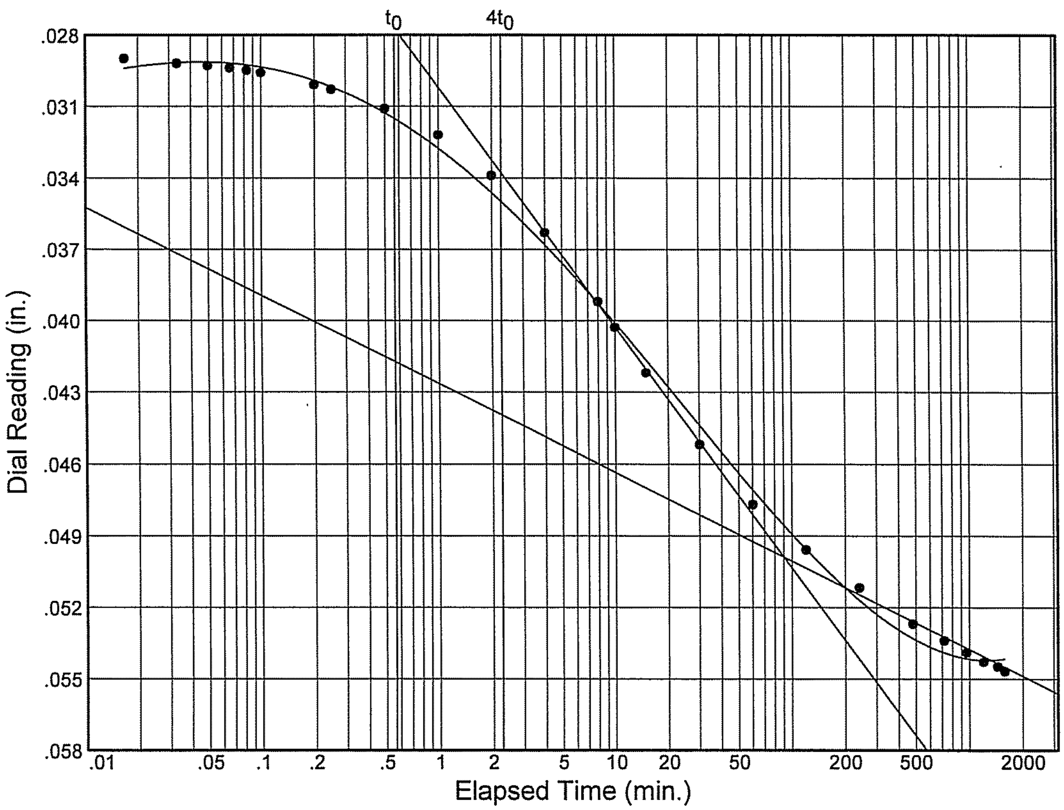
Figure

EUSTIS ENGINEERING COMPANY, INC.

Dial Reading vs. Time

Project No.: 19292
Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-

Source: BR-5 Sample No.: 10 Elev./Depth: 38.0'



Load No.= 3

Load= 0.49 tsf

D_0 = 0.02803

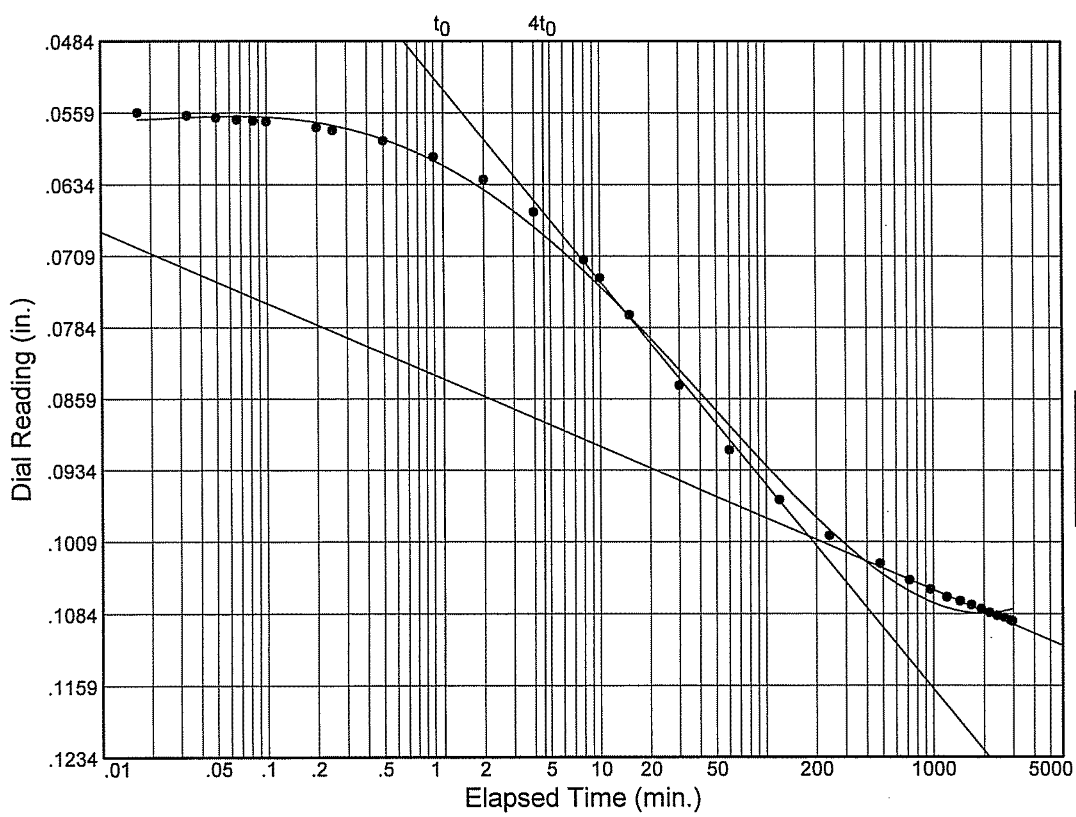
D_{50} = 0.03896

D_{100} = 0.04990

T_{50} = 7.37 min.

C_v @ T_{50}
0.04 ft.^{2}/day

C_α = 0.005



Load No.= 4

Load= 0.97 tsf

D_0 = 0.05412

D_{50} = 0.07721

D_{100} = 0.10030

T_{50} = 14.96 min.

C_v @ T_{50}
0.02 ft.^{2}/day

C_α = 0.010

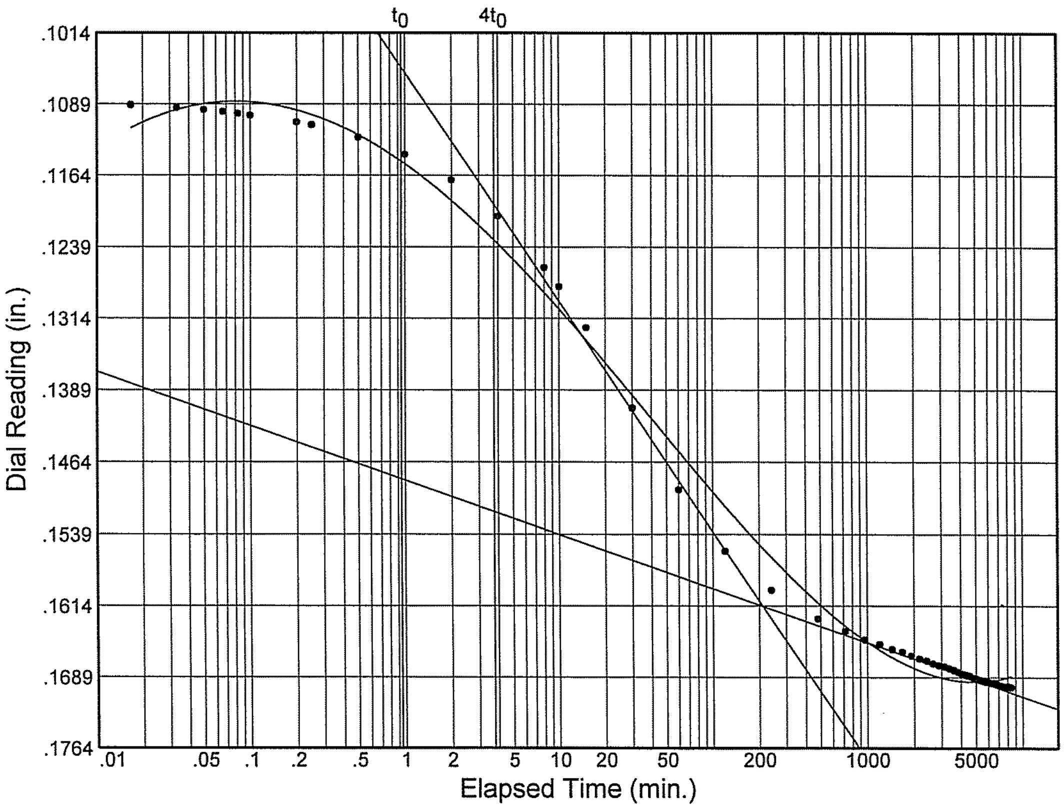
Figure

EUSTIS ENGINEERING COMPANY, INC.

Dial Reading vs. Time

Project No.: 19292
Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-

Source: BR-5 Sample No.: 10 Elev./Depth: 38.0'



Load No.= 5

Load= 1.93 tsf

D_0 = 0.10663

D_{50} = 0.13405

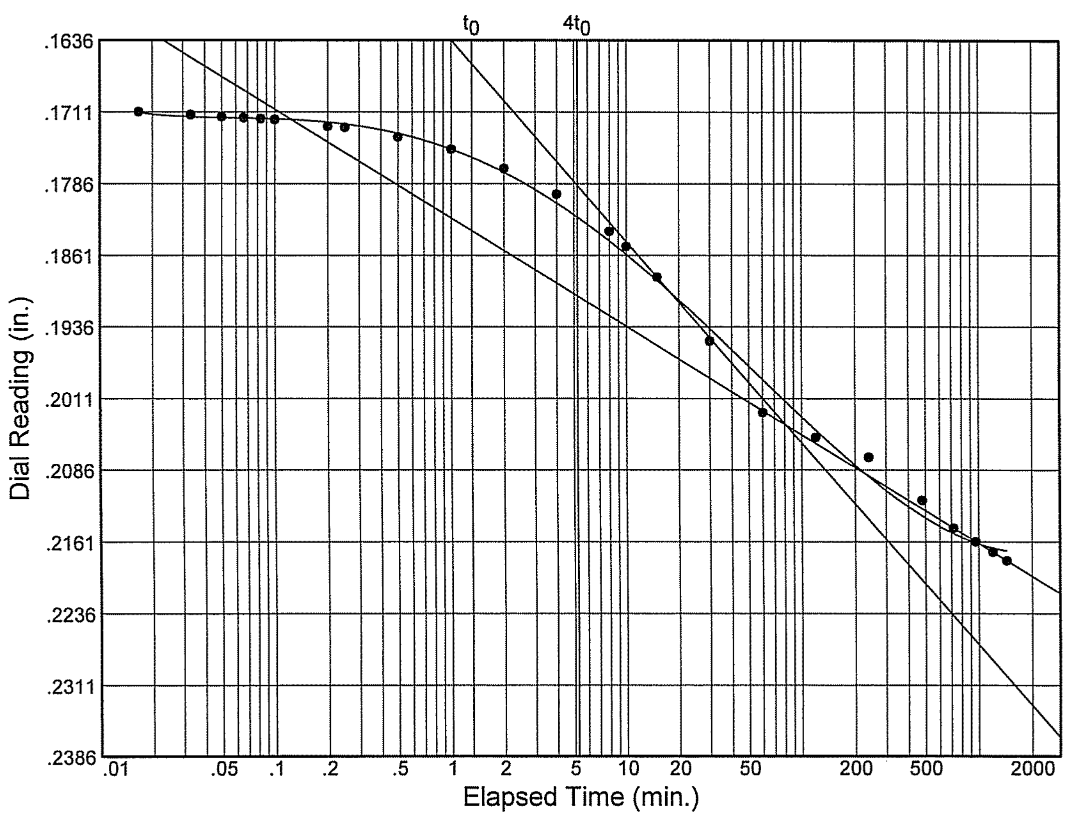
D_{100} = 0.16148

T_{50} = 15.63 min.

C_v @ T_{50}

0.01 $ft.^2$/day

C_α = 0.008



Load No.= 6

Load= 3.85 tsf

D_0 = 0.16959

D_{50} = 0.18676

D_{100} = 0.20393

T_{50} = 11.18 min.

C_v @ T_{50}

0.02 $ft.^2$/day

C_α = 0.018

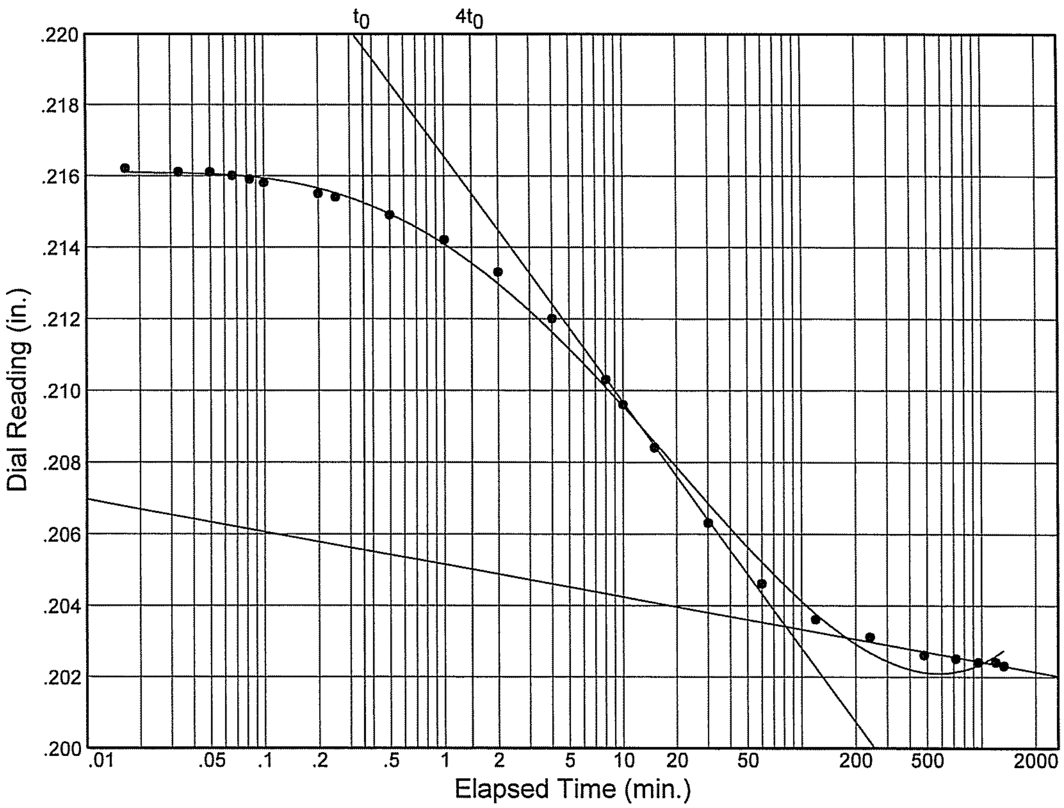
Figure

EUSTIS ENGINEERING COMPANY, INC.

Dial Reading vs. Time

Project No.: 19292
Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-

Source: BR-5 Sample No.: 10 Elev./Depth: 38.0'

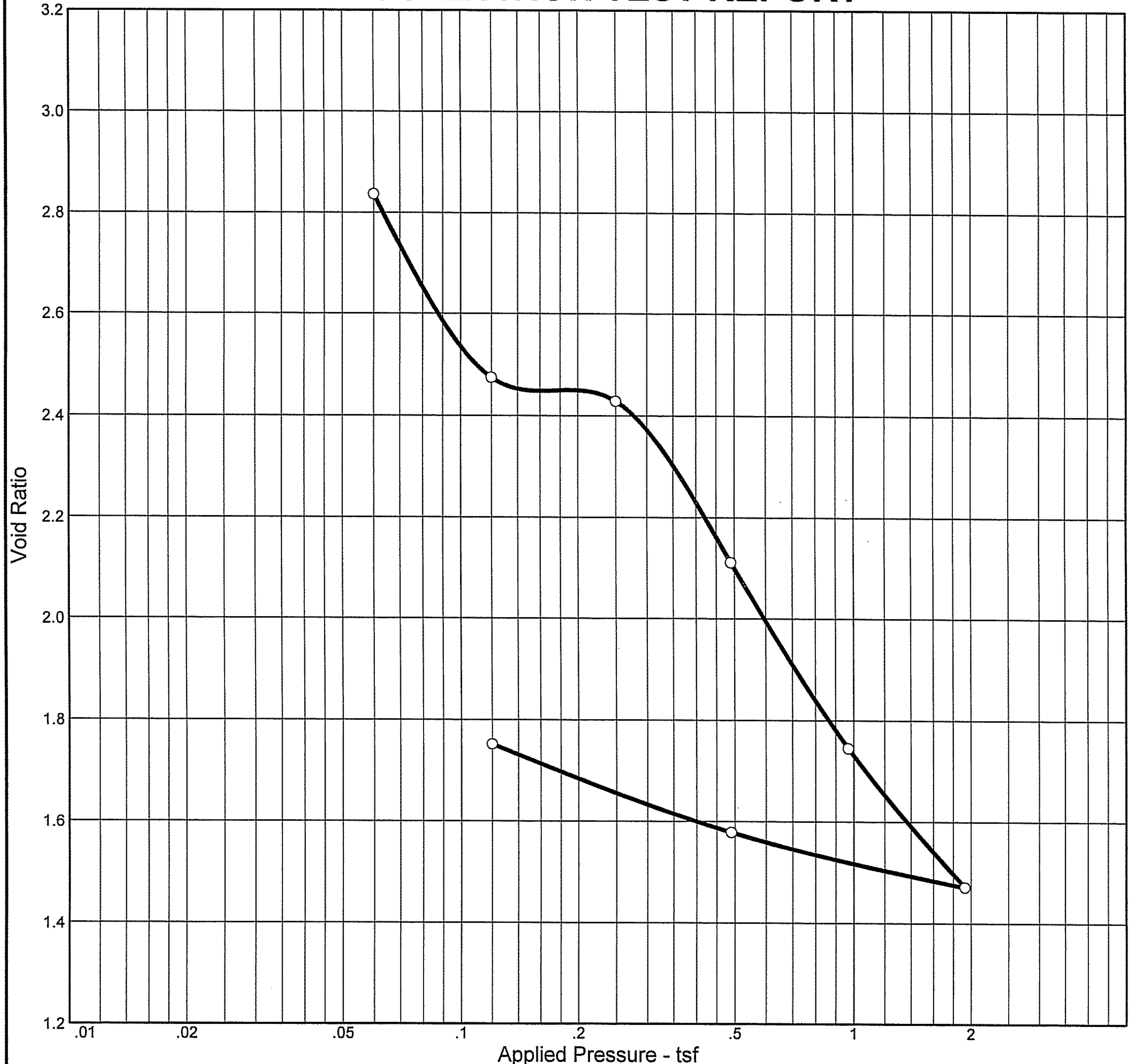


Load No.= 7
Load= 0.97 tsf
D_0 = 0.21694
D_{50} = 0.21017
D_{100} = 0.20340
T_{50} = 7.69 min.

C_v @ T_{50}
0.02 ft.^{2}/day

Figure

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (tsf)	P_c (tsf)	C_c	C_r	Swell Press. (tsf)	Swell %	e_o
Sat.	Moist.											
99.8 %	110.6 %	42.4	117	89	2.74		0.28	1.27	0.23			3.037

MATERIAL DESCRIPTION	USCS	AASHTO
XSO G CL W/ OM	CH	

Project No. 19292 **Client:** SJB GROUP, LLC

Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-40), PLAQUEMINES PARISH, LOUISIANA

Source: BR-5 **Sample No.:** 2 **Elev./Depth:** 4.0'

EUSTIS
Metairie, Louisiana
Lafayette, Louisiana
Gulfport, Mississippi

Remarks:

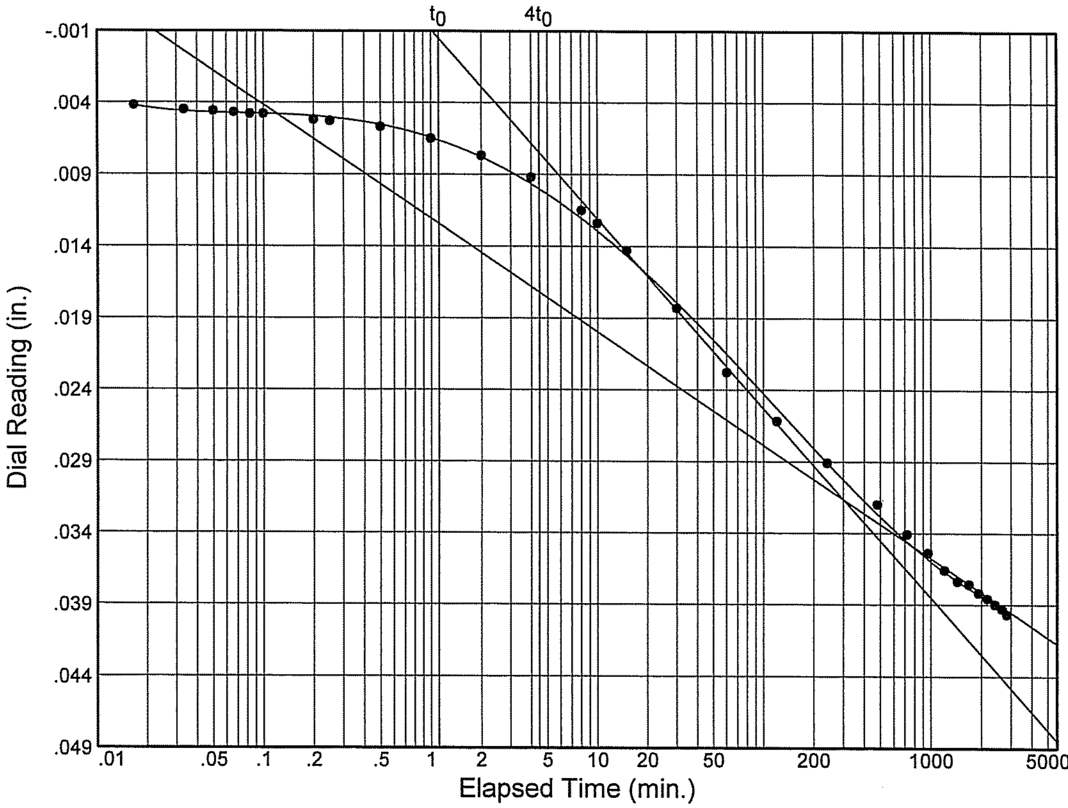
TESTED BY: RR
CHECKED BY: LR

Figure

Dial Reading vs. Time

Project No.: 19292
Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-

Source: BR-5 Sample No.: 2 Elev./Depth: 4.0'



Load No.= 1

Load= 0.06 tsf

D_0 = 0.00321

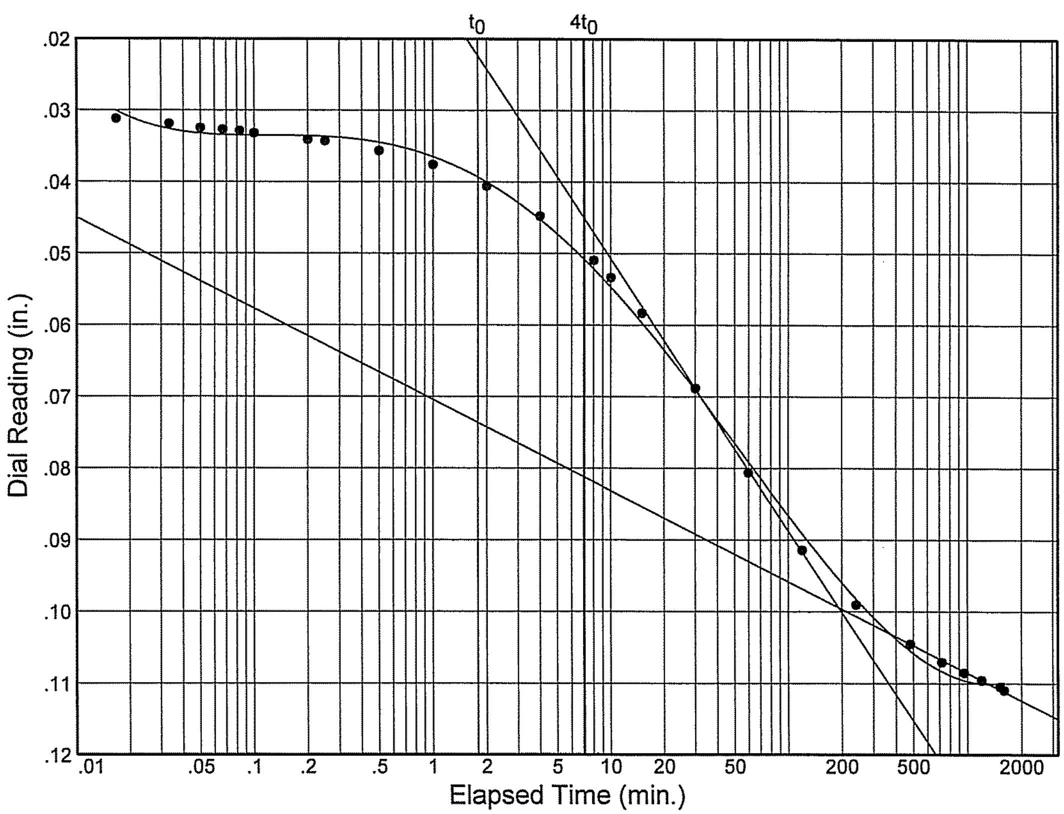
D_{50} = 0.01744

D_{100} = 0.03168

T_{50} = 27.30 min.

C_v @ T_{50}
0.01 ft.²/day

C_α = 0.010



Load No.= 2

Load= 0.12 tsf

D_0 = 0.02778

D_{50} = 0.06363

D_{100} = 0.09948

T_{50} = 20.17 min.

C_v @ T_{50}
0.01 ft.²/day

C_α = 0.017

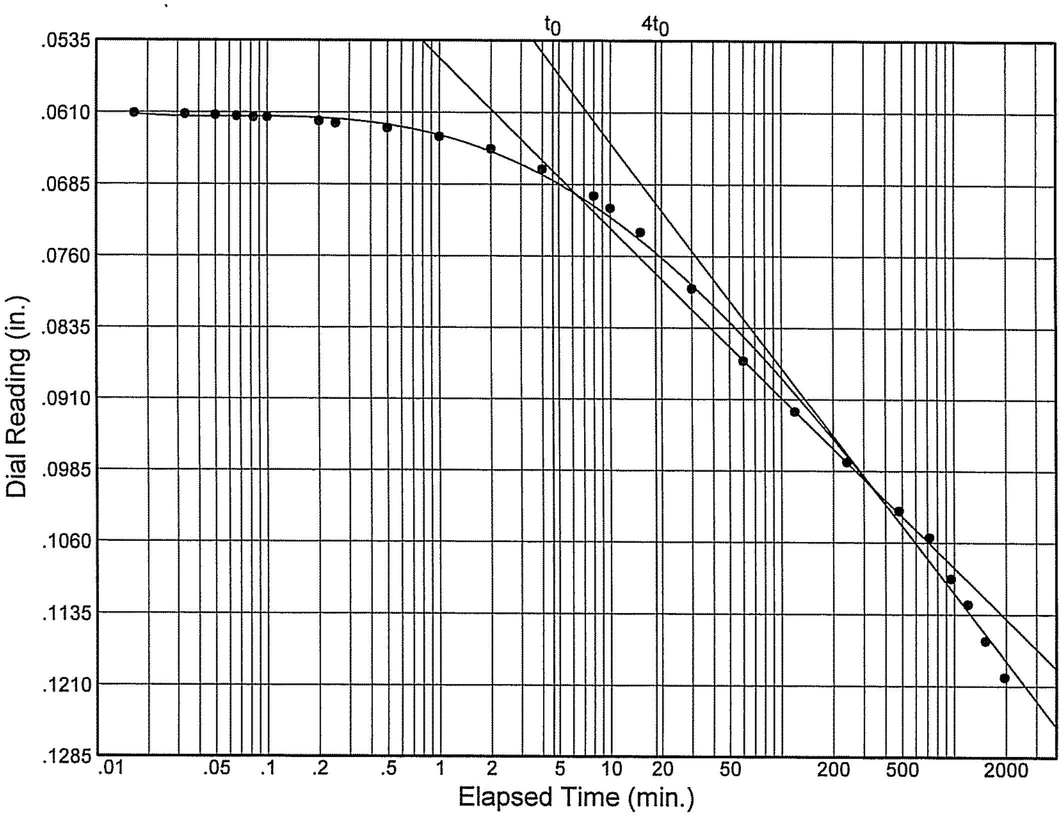
Figure

EUSTIS ENGINEERING COMPANY, INC.

Dial Reading vs. Time

Project No.: 19292
Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-

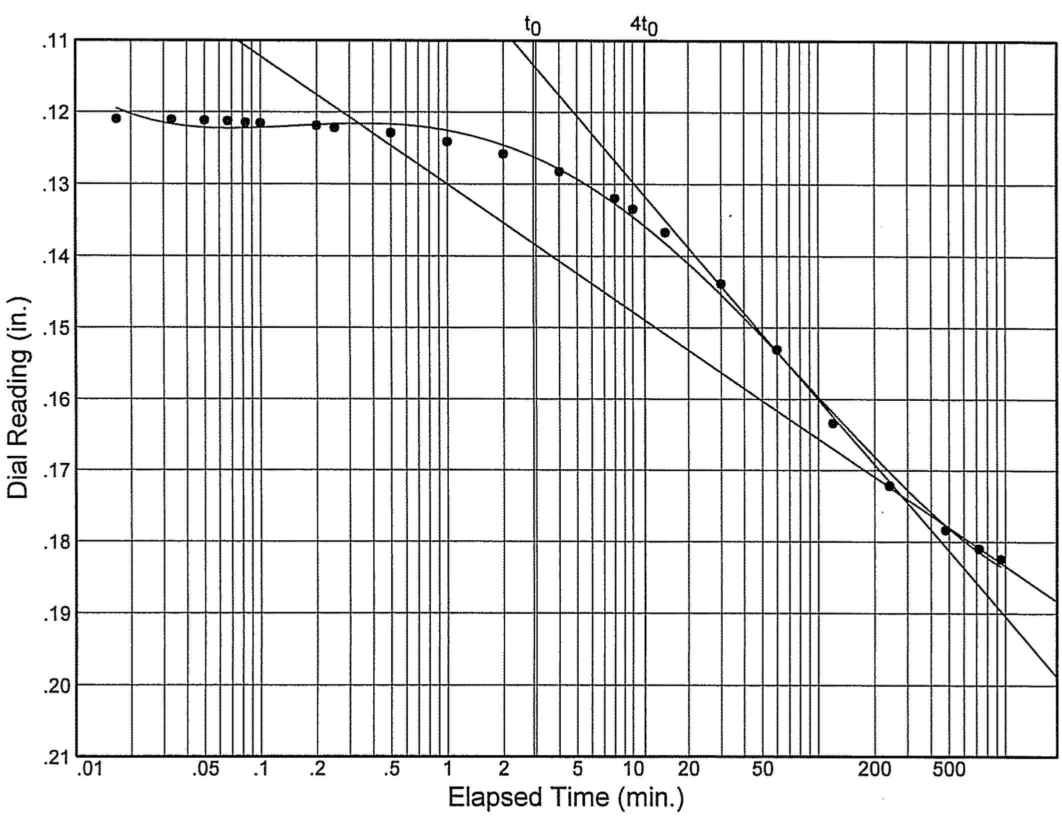
Source: BR-5 Sample No.: 2 Elev./Depth: 4.0'



Load No.= 3
Load= 0.25 tsf
D_0 = 0.06058
D_{50} = 0.08048
D_{100} = 0.10037
T_{50} = 36.58 min.

C_v @ T_{50}
0.01 ft.^{2}/day

C_α = 0.024



Load No.= 4
Load= 0.49 tsf
D_0 = 0.11653
D_{50} = 0.14503
D_{100} = 0.17352
T_{50} = 28.98 min.

C_v @ T_{50}
0.01 ft.^{2}/day

C_α = 0.026

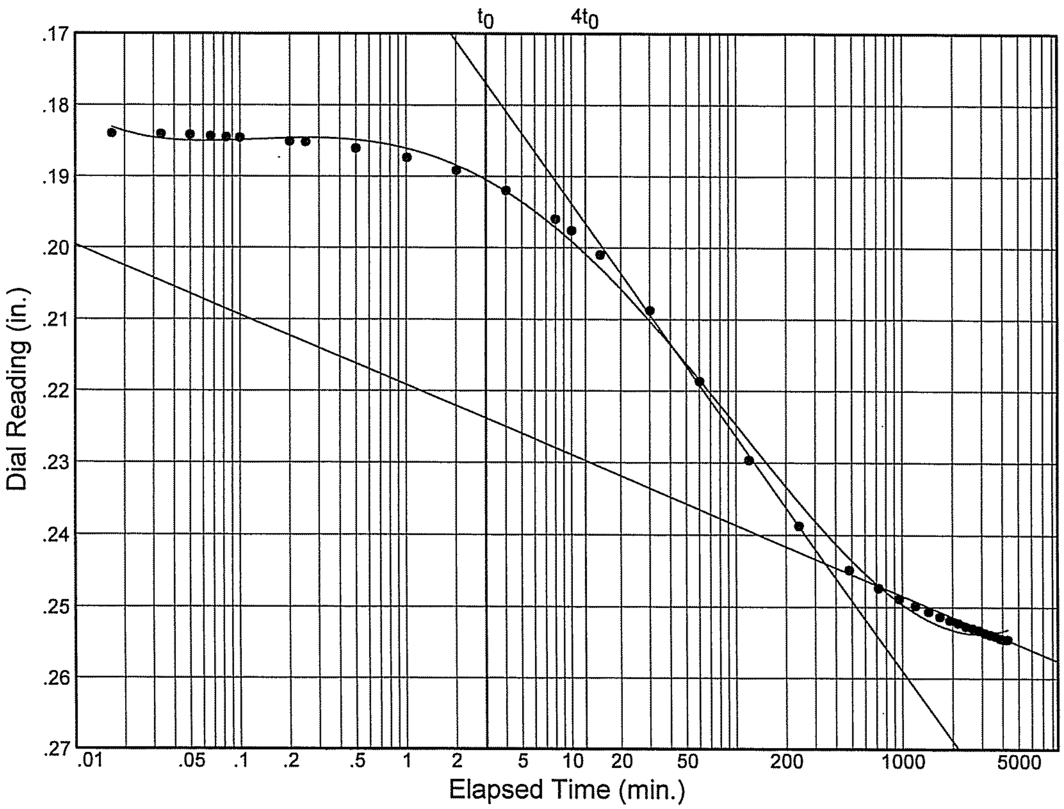
Figure

EUSTIS ENGINEERING COMPANY, INC.

Dial Reading vs. Time

Project No.: 19292
Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-

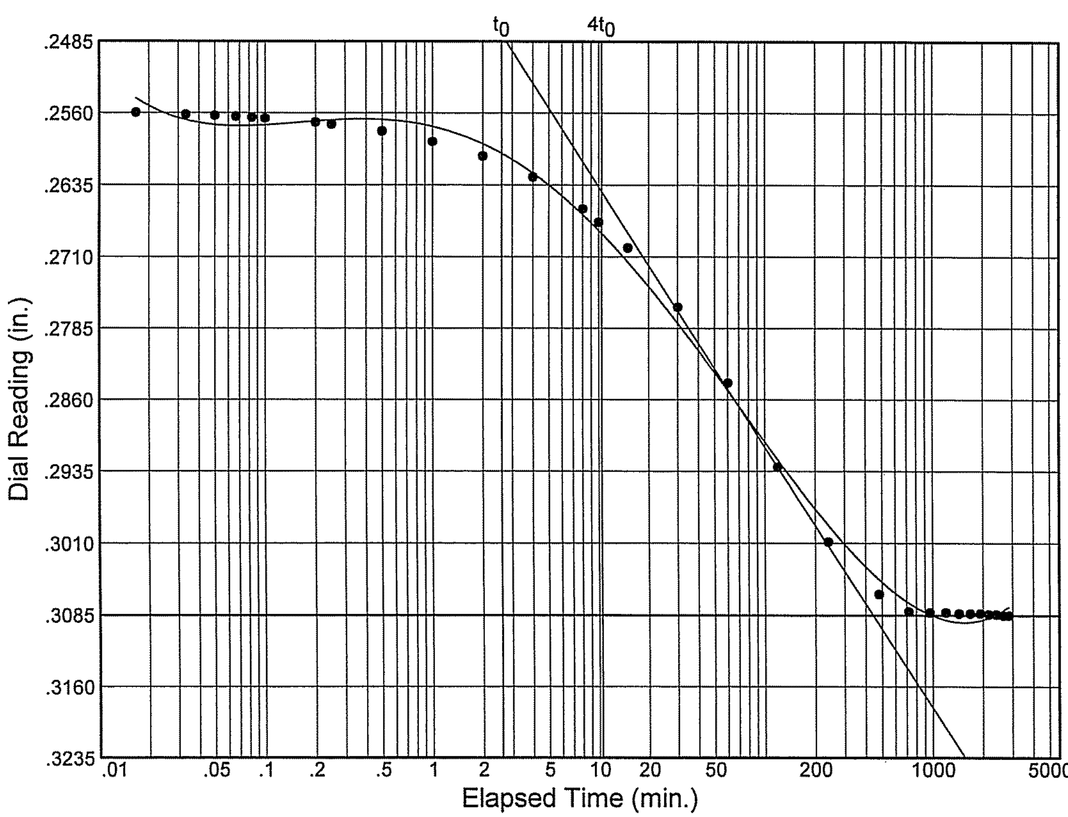
Source: BR-5 Sample No.: 2 Elev./Depth: 4.0'



Load No.= 5
Load= 0.97 tsf
D_0 = 0.18011
D_{50} = 0.21204
D_{100} = 0.24397
T_{50} = 35.02 min.

C_v @ T_{50}
0.00 ft.^{2}/day

C_α = 0.016



Load No.= 6
Load= 1.93 tsf
D_0 = 0.25187
D_{50} = 0.28023
D_{100} = 0.30860
T_{50} = 37.60 min.

C_v @ T_{50}
0.00 ft.^{2}/day

C_α = 0.000

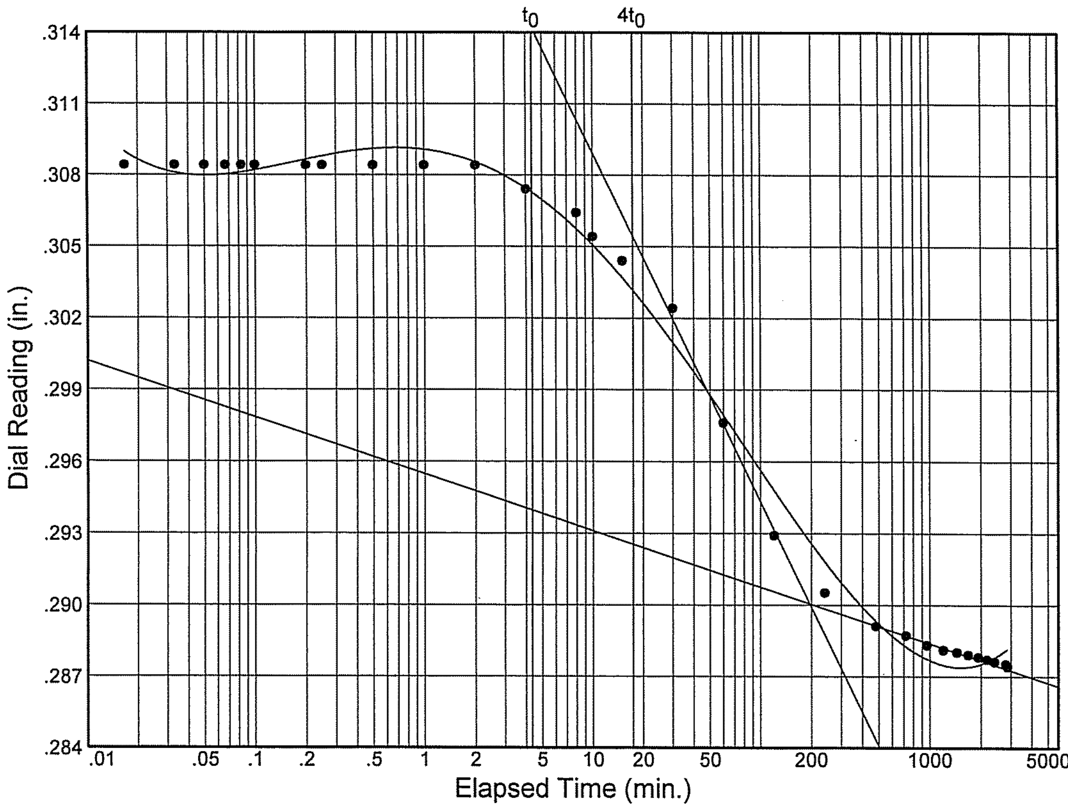
Figure

EUSTIS ENGINEERING COMPANY, INC.

Dial Reading vs. Time

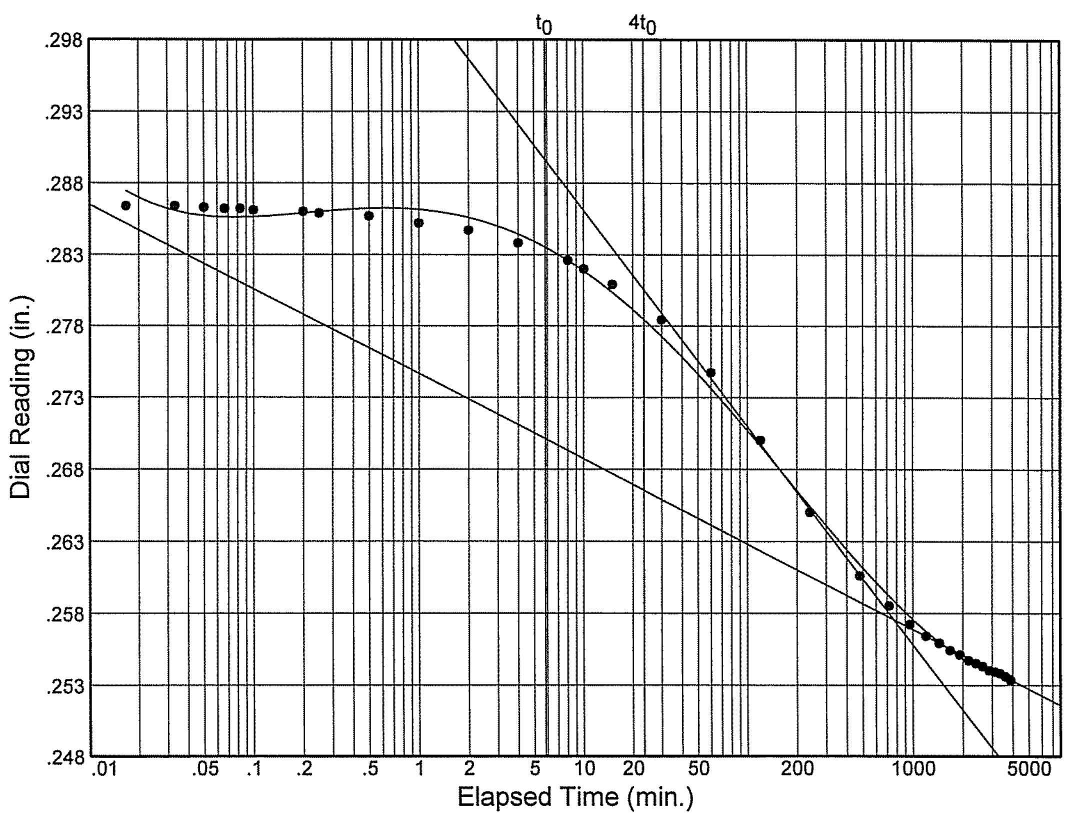
Project No.: 19292
Project: LOUISIANA, STATE OF - RIVERINE SAND MINING/SCOFIELD ISLAND RESTORATION (BA-

Source: BR-5 Sample No.: 2 Elev./Depth: 4.0'



Load No.= 7
Load= 0.49 tsf
D_0 = 0.31139
D_{50} = 0.30072
D_{100} = 0.29005
T_{50} = 31.94 min.

C_v @ T_{50}
0.00 ft.^{2}/day



Load No.= 8
Load= 0.12 tsf
D_0 = 0.28861
D_{50} = 0.27308
D_{100} = 0.25754
T_{50} = 66.06 min.

C_v @ T_{50}
0.00 ft.^{2}/day

Figure

EUSTIS ENGINEERING COMPANY, INC.

ANNEX K2

SLOPE STABILITY ANALYSIS

EUSTIS ENGINEERING COMPANY, INC.
Geotechnical Engineers
Lafayette, Louisiana

Page ______

Date 3-16-09

Job 19292

Project Scofield Island

By SRS

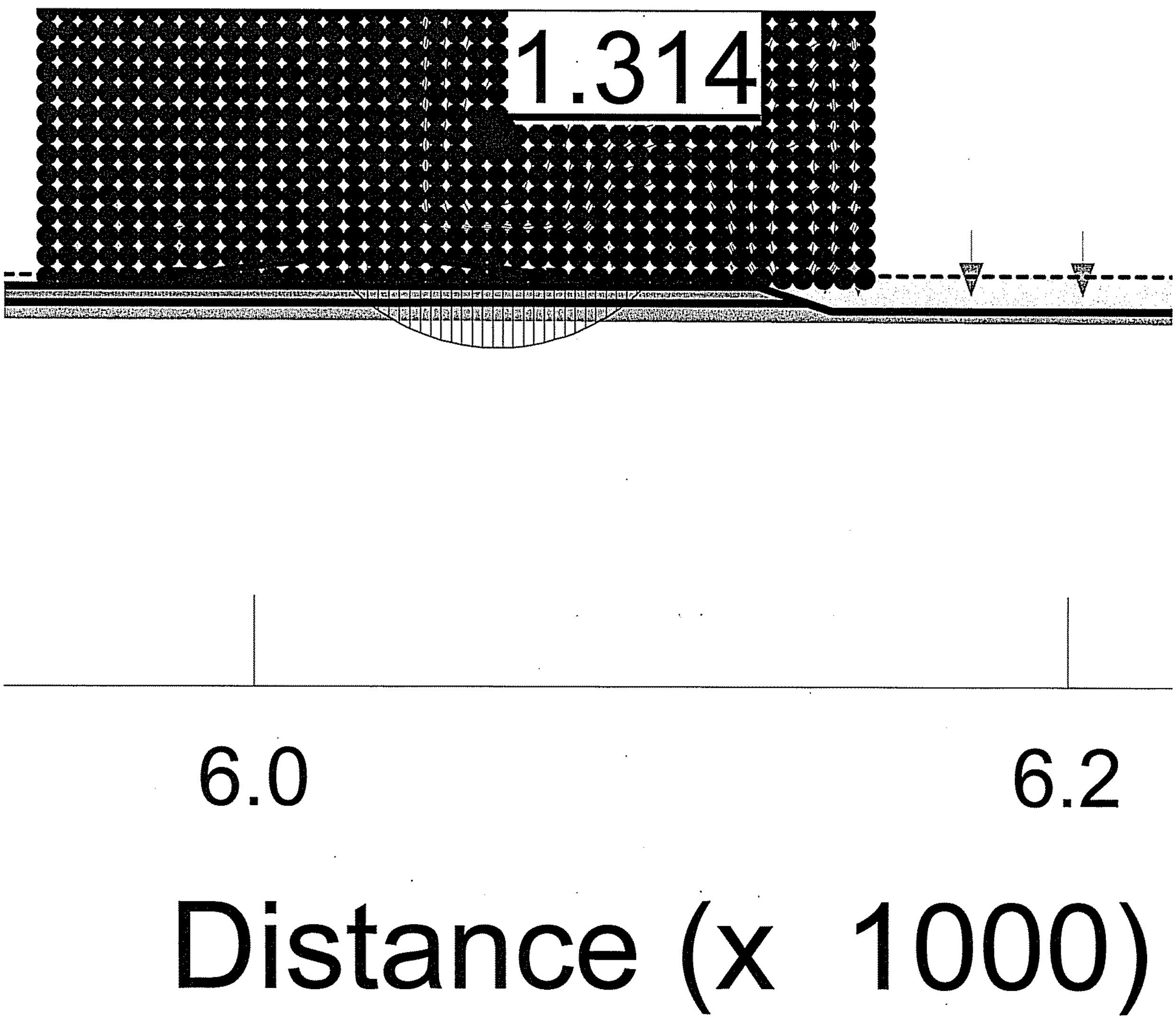
Subject Reach 2 - Insitu Containment Dike - Summary of Slope/W Runs.

Checked By ______

Reach 2

Mudline	Crown EL	Borrow Cut	Borrow Setback	Borrow Side Slopes		Factor of Safety	Slip #	Filename
-2	+6	-8	30'	1V:3H		1.171 (Dike)	(C)	reach2insitudikecrown6c.gsz
						1.297 (into Borrow)	22099	"
						1.409 (Borrow sideslopes)	8129	"
-2	+5	-8	30'	1V:3H	✓	1.314 (Dike)	30854 (C)	reach2insitudikecrown5c.gsz
					✓	1.412 (into Borrow)	20499	"
-2	+4	-8	30	1V:3H		1.525 (Dike)	29293	reach2insitudikecrown4c.gsz
						1.553 (into Borrow)	18939	"
0	+6	-6	30	1V:3H	✓	1.328 (Dike)	27615	reach2insitudikecrown6d.gsz
						1.188 (into Borrow)	18979	"
0	+6	-6	35	1V:3H		1.251 (into Borrow)	17259	reach2insitudikecrown6e.gsz
0	+6	-6	40	1V:3H	✓	1.313 (into Borrow)	17219	reach2insitudikecrown6f.gsz
0	+5	-6	30	1V:3H		1.514 (Dike)	26013	reach2insitudikecrown5d.gsz.
						1.269 (into Borrow)	17419	"
0	+5	-6	35	1V:3H		1.338 (into Borrow)	15659	reach2insitudikecrown5e.gsz
0	+4	-6	30	1V:3H		1.793 (Dike)	26053	reach2insitudikecrown4d.gsz
						1.364 (into Borrow)	15819	"

reach 2 insitudike crown 5c .gsz
Mudline EL -2
Crown +5
slip # 30854



SLOPE/W Analysis

File Information

Created By: Gwen Sanders
Revision Number: 53
Last Edited By: Shaun Simon
Date: 3/16/2009
Time: 16:57:27
File Name: reach2insitudikecrown5c.gsz
Directory: U:\sys\WPDATA\Projects\9292\Slope Stability\Reach 2 - Thin Barrier Beach\mudline el-2\
Last Solved Date: 3/16/2009
Last Solved Time: 4:59:28 PM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

SLOPE/W Analysis

Description: EE 19292 Scofield Island - Beach and Dune Features - Marsh Reach
Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Left to Right
- Use Passive Mode: No
- Slip Surface Option: Grid and Radius
- Critical slip surfaces saved: 1
- Optimize Critical Slip Surface Location: No
- Tension Crack
  - Tension Crack Option: (none)

FOS Distribution
FOS Calculation Option: Constant
Advanced
Number of Slices: 30
Optimization Tolerance: 0.01
Minimum Slip Surface Depth: 0.1 ft
Optimization Maximum Iterations: 2000
Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

In situ Containment Dike
Model: Undrained (Phi=0)
Unit Weight: 88 pcf
Cohesion: 100 psf
Pore Water Pressure
Piezometric Line: 1

Existing Barrier Beach
Model: Mohr-Coulomb
Unit Weight: 120 pcf
Cohesion: 0 psf
Phi: 25 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Humus/Clay - Marsh (-6 to -22)
Model: S=f(depth)
Unit Weight: 88 pcf
C-Top of Layer: 50 psf
C-Rate of Increase: 4.375
Limiting C: 120 psf
Pore Water Pressure
Piezometric Line: 1

Silt - Intradelta (-22 to -31)
Model: Mohr-Coulomb
Unit Weight: 116 pcf
Cohesion: 200 psf
Phi: 15 °

Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Clay 1 - Interdistributary (-31 to -42)

Model: Mohr-Coulomb
Unit Weight: 106 pcf
Cohesion: 220 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Clay 2 - Interdistributary (-42 to -52)

Model: Mohr-Coulomb
Unit Weight: 106 pcf
Cohesion: 300 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Grid

Upper Left: (5949.04, 200) ft
Lower Left: (6149.99, 200) ft
Lower Right: (6149.99, 0) ft
Grid Horizontal Increment: 40
Grid Vertical Increment: 40
Left Projection Angle: 0 °
Right Projection Angle: 0 °

Slip Surface Radius

Upper Left Coordinate: (5900, -4) ft
Upper Right Coordinate: (6400, -4) ft
Lower Left Coordinate: (5900, -43) ft
Lower Right Coordinate: (6400, -43) ft
Number of Increments: 39
Left Projection: No
Left Projection Angle: 135 °
Right Projection: No
Right Projection Angle: 45 °
UsePoints: 0

Slip Surface Limits

Left Coordinate: (4800, -6.5) ft
Right Coordinate: (7400, -8) ft

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	4800	0.55
	5982.4	0.55
	6073.6	0.55
	7400	0.55

Regions

	Material	Points	Area (ft^2)
Region 1	Existing Barrier Beach	1,2,14,21,22,23	2655
Region 2	Humus/Clay - Marsh (-6 to -22)	1,23,24,25,7,6	38744
Region 3	Silt - Intradelta (-22 to -31)	6,7,9,8	23400
Region 4	Clay 1 - Interdistributary (-31 to -42)	8,9,11,10	28600
Region 5	Clay 2 - Interdistributary (-42 to -52)	10,11,13,12	26000
Region 6	In situ Containment Dike	14,15,16,17,19,21	532

Points

	X (ft)	Y (ft)
Point 1	4800	-6.5
Point 2	5100	-6
Point 3	7400	-2
Point 4	4800	-6
Point 5	7400	-6
Point 6	4800	-22
Point 7	7400	-22
Point 8	4800	-31
Point 9	7400	-31

Point 10	4800	-42
Point 11	7400	-42
Point 12	4800	-52
Point 13	7400	-52
Point 14	5962	-2
Point 15	5982.4	0.55
Point 16	6018	5
Point 17	6038	5
Point 18	4800	0.55
Point 19	6073.6	0.55
Point 20	7400	0.55
Point 21	6094	-2
Point 22	6124	-2
Point 23	6136	-6
Point 24	6142	-8
Point 25	7400	-8

Critical Slip Surfaces

	Number	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	30854	1.314	(6059.56, 35)	52	(6017.16, 4.89538)	(6096.1, -2)

Slices of Slip Surface: 30854

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	30854	6017.5815	4.322723	-235.42026	-45.762964	0	100
2	30854	6019.3055	2.1500315	-99.840761	154.79833	0	100
3	30854	6021.818	-0.725	79.559158	414.62813	0	100
4	30854	6024.1765	-3.0701685	225.89714	607.99497	178.17515	0
5	30854	6026.479	-5.0904475	351.9695	833.39865	224.4941	0
6	30854	6028.9265	-6.986372	470.27047	1134.9497	0	54.14
7	30854	6031.519	-8.7628205	581.11835	1291.2695	0	61.916

8	30854	6034.1115	-10.321378	678.37882	1429.9095	0	68.739
9	30854	6036.704	-11.683995	763.40294	1552.4767	0	74.705
10	30854	6039.2715	-12.85776	836.64769	1645.453	0	79.844
11	30854	6041.8145	-13.858685	899.11737	1709.9678	0	84.228
12	30854	6044.3575	-14.70945	952.18075	1761.6848	0	87.954
13	30854	6046.9	-15.41768	996.36551	1801.2235	0	91.056
14	30854	6049.4425	-15.989335	1032.0727	1829.0399	0	93.562
15	30854	6051.9855	-16.428985	1059.4852	1845.3841	0	95.489
16	30854	6054.5285	-16.74	1078.8833	1850.5486	0	96.854
17	30854	6057.0715	-16.924695	1090.4312	1844.6591	0	97.666
18	30854	6059.6145	-16.984425	1094.1626	1827.7466	0	97.932
19	30854	6062.1575	-16.91962	1090.0893	1799.7824	0	97.652
20	30854	6064.7	-16.72981	1078.2796	1760.7647	0	96.826
21	30854	6067.2425	-16.41361	1058.5464	1710.3754	0	95.447
22	30854	6069.7855	-15.96866	1030.7672	1648.4256	0	93.504
23	30854	6072.3285	-15.39154	994.7438	1574.5345	0	90.984
24	30854	6074.8805	-14.67461	950.00478	1497.8864	0	87.851
25	30854	6077.4415	-13.81079	896.13108	1417.8444	0	84.076
26	30854	6080.002	-12.794235	832.67119	1323.7788	0	79.633
27	30854	6082.5625	-11.61491	759.08532	1214.5855	0	74.478
28	30854	6085.1235	-10.260033	674.54256	1088.9656	0	68.554

29	30854	6087.684 5	-8.713204	578.00867	945.17555	0	61.791
30	30854	6090.245 5	-6.953069	468.20086	780.91264	0	54.095
31	30854	6092.763	-4.989458	345.664	616.98396	126.51858	0
32	30854	6095.05	-2.9811355	220.34144	316.88586	45.019402	0

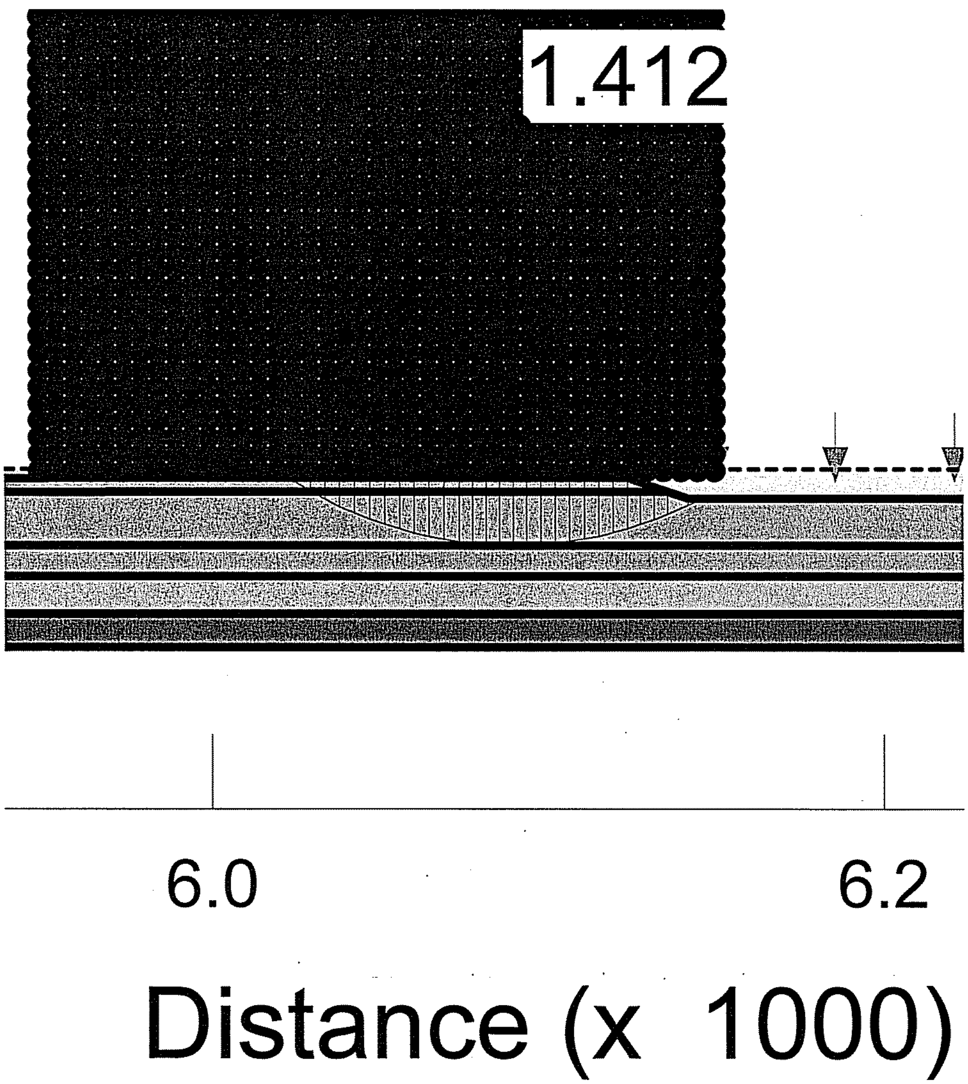
reach2 insitu dike crown 5c.gsz

Mudline EL -2

Crown +5

Borrow Cut to EL -8 w/1V:3H s/s

Slip # 20499



SLOPE/W Analysis

File Information

Created By: Gwen Sanders
Revision Number: 54
Last Edited By: Rebecca Scherer
Date: 3/23/2009
Time: 12:43:35 PM
File Name: reach2insitudikecrown5c.gsz
Directory: U:\sys\WPDATA\Projects\9292\Slope Stability\Reach 2 - Thin Barrier Beach\mudline el-2\
Last Solved Date: 3/23/2009
Last Solved Time: 12:43:50 PM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

SLOPE/W Analysis-Reported FS(into borrow)

Description: EE 19292 Scofield Island - Beach and Dune Features - Marsh Reach
Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Left to Right
- Use Passive Mode: No
- Slip Surface Option: Grid and Radius
- Critical slip surfaces saved: 1
- Optimize Critical Slip Surface Location: No
- Tension Crack
  - Tension Crack Option: (none)

FOS Distribution
FOS Calculation Option: Constant
Advanced
Number of Slices: 30
Optimization Tolerance: 0.01
Minimum Slip Surface Depth: 0.1 ft
Optimization Maximum Iterations: 2000
Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

In situ Containment Dike

Model: Undrained (Phi=0)
Unit Weight: 88 pcf
Cohesion: 100 psf
Pore Water Pressure
Piezometric Line: 1

Existing Barrier Beach

Model: Mohr-Coulomb
Unit Weight: 120 pcf
Cohesion: 0 psf
Phi: 25 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Humus/Clay - Marsh (-6 to -22)

Model: S=f(depth)
Unit Weight: 88 pcf
C-Top of Layer: 50 psf
C-Rate of Increase: 4.375
Limiting C: 120 psf
Pore Water Pressure
Piezometric Line: 1

Silt - Intradelta (-22 to -31)

Model: Mohr-Coulomb
Unit Weight: 116 pcf
Cohesion: 200 psf
Phi: 15 °

Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Clay 1 - Interdistributary (-31 to -42)

Model: Mohr-Coulomb
Unit Weight: 106 pcf
Cohesion: 220 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Clay 2 - Interdistributary (-42 to -52)

Model: Mohr-Coulomb
Unit Weight: 106 pcf
Cohesion: 300 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Grid

Upper Left: (6089.7, 100) ft
Lower Left: (6089.7, 100) ft
Lower Right: (6089.7, 100) ft
Grid Horizontal Increment: 0
Grid Vertical Increment: 0
Left Projection Angle: 0 °
Right Projection Angle: 0 °

Slip Surface Radius

Upper Left Coordinate: (5900, -22) ft
Upper Right Coordinate: (6400, -22) ft
Lower Left Coordinate: (5900, -22) ft
Lower Right Coordinate: (6400, -22) ft
Number of Increments: 0
Left Projection: No
Left Projection Angle: 135 °
Right Projection: No
Right Projection Angle: 45 °
UsePoints: 0

Slip Surface Limits

Left Coordinate: (4800, -6.5) ft
Right Coordinate: (7400, -8) ft

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	4800	0.55
	5982.4	0.55
	6073.6	0.55
	7400	0.55

Regions

	Material	Points	Area (ft^2)
Region 1	Existing Barrier Beach	1,2,14,21,22,23	2655
Region 2	Humus/Clay - Marsh (-6 to -22)	1,23,24,25,7,6	38744
Region 3	Silt - Intradelta (-22 to -31)	6,7,9,8	23400
Region 4	Clay 1 - Interdistributary (-31 to -42)	8,9,11,10	28600
Region 5	Clay 2 - Interdistributary (-42 to -52)	10,11,13,12	26000
Region 6	In situ Containment Dike	14,15,16,17,19,21	532

Points

	X (ft)	Y (ft)
Point 1	4800	-6.5
Point 2	5100	-6
Point 3	7400	-2
Point 4	4800	-6
Point 5	7400	-6
Point 6	4800	-22
Point 7	7400	-22
Point 8	4800	-31
Point 9	7400	-31

Point 10	4800	-42
Point 11	7400	-42
Point 12	4800	-52
Point 13	7400	-52
Point 14	5962	-2
Point 15	5982.4	0.55
Point 16	6018	5
Point 17	6038	5
Point 18	4800	0.55
Point 19	6073.6	0.55
Point 20	7400	0.55
Point 21	6094	-2
Point 22	6124	-2
Point 23	6136	-6
Point 24	6142	-8
Point 25	7400	-8

Critical Slip Surfaces

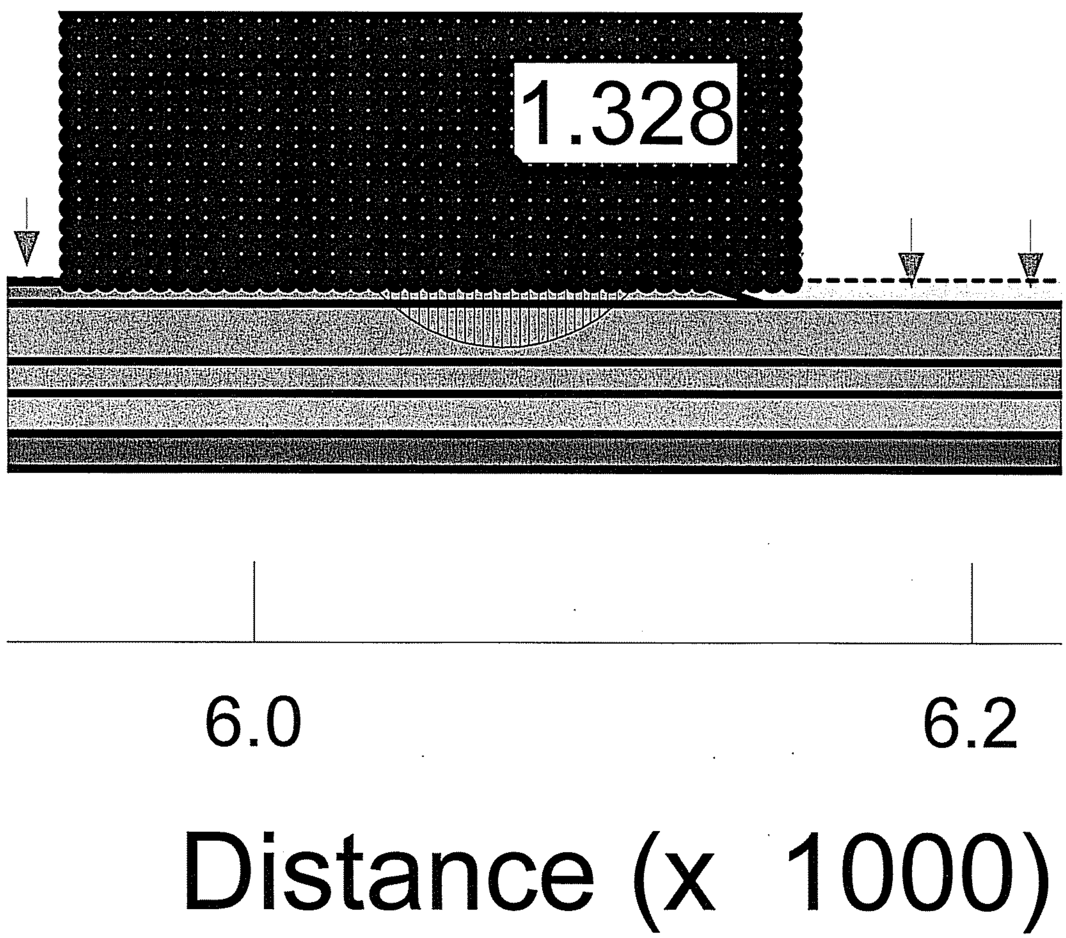
	Number	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	1	1.412	(6089.7, 100)	122	(6013.81, 4.47631)	(6146.44, -8)

Slices of Slip Surface: 1

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	1	6015.905	2.8845565	-145.67707	108.89338	0	100
2	1	6018.517	0.9214035	-23.175419	302.84202	0	100
3	1	6020.9005	-0.725	79.560953	447.10734	0	100
4	1	6026.069	-4.019953	285.16377	753.03541	218.17213	0
5	1	6031.5285	-7.2103555	484.24596	1161.6076	0	55.124
6	1	6035.843	-9.4423475	623.51419	1355.4846	0	64.896
7	1	6040.225	-11.49125	751.36526	1510.7618	0	73.867
8	1	6044.675	-13.36233	868.12289	1627.6025	0	82.061
9	1	6049.125	-15.030875	972.25519	1727.6931	0	89.368

10	1	6053.575	-16.50561	1064.26	1811.6073	0	95.827
11	1	6058.025	-17.793825	1144.6638	1879.8076	0	101.47
12	1	6062.475	-18.90159	1213.7798	1932.7248	0	106.32
13	1	6066.925	-19.833925	1271.9509	1970.6795	0	110.41
14	1	6071.375	-20.5949	1319.438	1993.8757	0	113.75
15	1	6075.6125	-21.16698	1355.1495	2018.4847	0	116.26
16	1	6079.6375	-21.56754	1380.1296	2045.9543	0	118.02
17	1	6083.6625	-21.83385	1396.7506	2061.7505	0	119.19
18	1	6087.6875	-21.96679	1405.0412	2065.8791	0	119.78
19	1	6091.85	-21.9621	1404.7536	2057.6141	0	119.76
20	1	6096.143	-21.81086	1395.3196	2042.242	0	119.11
21	1	6100.4285	-21.508315	1376.4449	2020.9474	0	117.79
22	1	6104.714	-21.05333	1348.0441	1986.0124	0	115.81
23	1	6109	-20.44418	1310.0442	1937.2231	0	113.15
24	1	6113.286	-19.678505	1262.2512	1874.2955	0	109.81
25	1	6117.5715	-18.75327	1204.5196	1796.8184	0	105.77
26	1	6121.857	-17.66471	1136.6046	1704.3892	0	101.01
27	1	6126	-16.455665	1061.1439	1564.1491	0	95.727
28	1	6130	-15.132185	978.55882	1372.5921	0	89.943
29	1	6134	-13.65255	886.2311	1166.1671	0	83.477
30	1	6139	-11.547085	754.86148	914.8187	0	69.893
31	1	6144.2225	-9.110595	602.82388	663.82069	0	54.859

reach2insidedike crown 6d.gsz
Mudline EL 0
Crown +6
Slip# 27615



SLOPE/W Analysis

File Information

Created By: Gwen Sanders
Revision Number: 55
Last Edited By: Rebecca Scherer
Date: 3/23/2009
Time: 12:36:26 PM
File Name: reach2insitudikecrown6d.gsz
Directory: U:\sys\WPDATA\Projects\9292\Slope Stability\Reach 2 - Thin Barrier Beach\mudline el0\
Last Solved Date: 3/23/2009
Last Solved Time: 12:36:39 PM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

SLOPE/W Analysis-Reported FS(dike)

Description: EE 19292 Scofield Island - Beach and Dune Features - Marsh Reach
Kind: SLOPE/W
Method: Spencer
Settings
- **Apply Phreatic Correction:** No
- **PWP Conditions Source:** Piezometric Line
- **Use Staged Rapid Drawdown:** No

SlipSurface
- **Direction of movement:** Left to Right
- **Use Passive Mode:** No
- **Slip Surface Option:** Grid and Radius
- **Critical slip surfaces saved:** 1
- **Optimize Critical Slip Surface Location:** No
- Tension Crack
  - **Tension Crack Option:** (none)

FOS Distribution
FOS Calculation Option: Constant
Advanced
Number of Slices: 30
Optimization Tolerance: 0.01
Minimum Slip Surface Depth: 0.1 ft
Optimization Maximum Iterations: 2000
Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

In situ Containment Dike
Model: Undrained (Phi=0)
Unit Weight: 88 pcf
Cohesion: 100 psf
Pore Water Pressure
Piezometric Line: 1

Existing Barrier Beach
Model: Mohr-Coulomb
Unit Weight: 120 pcf
Cohesion: 0 psf
Phi: 25 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Humus/Clay - Marsh (-6 to -22)
Model: S=f(depth)
Unit Weight: 88 pcf
C-Top of Layer: 50 psf
C-Rate of Increase: 4.375
Limiting C: 120 psf
Pore Water Pressure
Piezometric Line: 1

Silt - Intradelta (-22 to -31)
Model: Mohr-Coulomb
Unit Weight: 116 pcf
Cohesion: 0 psf
Phi: 15 °

Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Clay 1 - Interdistributary (-31 to -42)

Model: Mohr-Coulomb
Unit Weight: 106 pcf
Cohesion: 220 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Clay 2 - Interdistributary (-42 to -52)

Model: Mohr-Coulomb
Unit Weight: 106 pcf
Cohesion: 300 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Grid

Upper Left: (6069.61, 30) ft
Lower Left: (6069.61, 30) ft
Lower Right: (6069.61, 30) ft
Grid Horizontal Increment: 0
Grid Vertical Increment: 0
Left Projection Angle: 0 °
Right Projection Angle: 0 °

Slip Surface Radius

Upper Left Coordinate: (5900, -18) ft
Upper Right Coordinate: (6400, -18) ft
Lower Left Coordinate: (5900, -18) ft
Lower Right Coordinate: (6400, -18) ft
Number of Increments: 0
Left Projection: No
Left Projection Angle: 135 °
Right Projection: No
Right Projection Angle: 45 °
UsePoints: 0

Slip Surface Limits

Left Coordinate: (4800, -6.5) ft
Right Coordinate: (7400, -6) ft

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	4800	0.55
	5982.4	0.55
	6089.6	0.55
	7400	0.55

Regions

	Material	Points	Area (ft^2)
Region 1	Existing Barrier Beach	1,2,14,21,22,23	3824.5
Region 2	Humus/Clay - Marsh (-6 to -22)	1,23,5,7,6	41264.5
Region 3	Silt - Intradelta (-22 to -31)	6,7,9,8	23400
Region 4	Clay 1 - Interdistributary (-31 to -42)	8,9,11,10	28600
Region 5	Clay 2 - Interdistributary (-42 to -52)	10,11,13,12	26000
Region 6	In situ Containment Dike	14,15,16,17,19,21	408

Points

	X (ft)	Y (ft)
Point 1	4800	-6.5
Point 2	5100	-6
Point 3	7400	-2
Point 4	4800	-6
Point 5	7400	-6
Point 6	4800	-22
Point 7	7400	-22
Point 8	4800	-31
Point 9	7400	-31

Point 10	4800	-42
Point 11	7400	-42
Point 12	4800	-52
Point 13	7400	-52
Point 14	5978	0
Point 15	5982.4	0.55
Point 16	6026	6
Point 17	6046	6
Point 18	4800	0.55
Point 19	6089.6	0.55
Point 20	7400	0.55
Point 21	6094	0
Point 22	6124	0
Point 23	6142	-6

Critical Slip Surfaces

	Number	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	1	1.328	(6069.61, 30)	48	(6028.04, 6)	(6107.08, 0)

Slices of Slip Surface: 1

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	1	6029.8735	3.275	-170.03807	125.74869	0	100
2	1	6031.923	0.275	17.159412	400.31966	0	100
3	1	6033.5815	-1.641107	136.72473	550.53882	192.96468	0
4	1	6036.464	-4.660499	325.14137	886.64205	261.83207	0
5	1	6039.254	-7.1414595	479.95597	1297.0806	0	54.826
6	1	6041.9525	-9.1961275	608.15529	1478.1468	0	63.82
7	1	6044.651	-10.97004	718.85318	1636.2431	0	71.585

8	1	6047.2825	-12.46619	812.22559	1757.113	0	78.135
9	1	6049.847	-13.720085	890.43987	1843.4472	0	83.625
10	1	6052.4115	-14.79212	957.35492	1914.3458	0	88.319
11	1	6054.9765	-15.69515	1013.6988	1970.8438	0	92.274
12	1	6057.5415	-16.439075	1060.1151	2013.6601	0	95.533
13	1	6060.106	-17.03148	1097.0943	2043.3793	0	98.129
14	1	6062.6705	-17.47805	1124.9419	2060.4516	0	100.09
15	1	6065.2355	-17.782885	1143.9634	2065.1681	0	101.42
16	1	6067.8	-17.948695	1154.3199	2057.6786	0	102.15
17	1	6070.3645	-17.97693	1156.091	2038.0714	0	102.28
18	1	6072.9295	-17.86783	1149.263	2006.2897	0	101.81
19	1	6075.494	-17.62045	1133.8475	1962.2244	0	100.73
20	1	6078.0585	-17.23262	1109.6509	1905.6472	0	99.038
21	1	6080.6235	-16.70082	1076.4457	1836.0865	0	96.716
22	1	6083.1885	-16.02004	1033.952	1753.1335	0	93.742
23	1	6085.753	-15.183525	981.75935	1656.0075	0	90.086
24	1	6088.3175	-14.1824	919.30846	1543.8379	0	85.711

25	1	6090.7	-13.101185	851.85226	1434.3977	0	80.984
26	1	6092.9	-11.95227	780.15929	1328.7467	0	75.961
27	1	6095.2235	-10.569045	693.83019	1205.2626	0	69.913
28	1	6097.671	-8.9141255	590.54968	1060.3578	0	62.677
29	1	6100.1185	-7.023455	472.58005	893.03312	0	54.409
30	1	6102.7765	-4.6417035	323.96541	751.02674	199.14197	0
31	1	6105.6455	-1.6341295	136.28892	305.77686	79.033524	0

reach2insitudike crown6f.gsz

Mudline EL 0

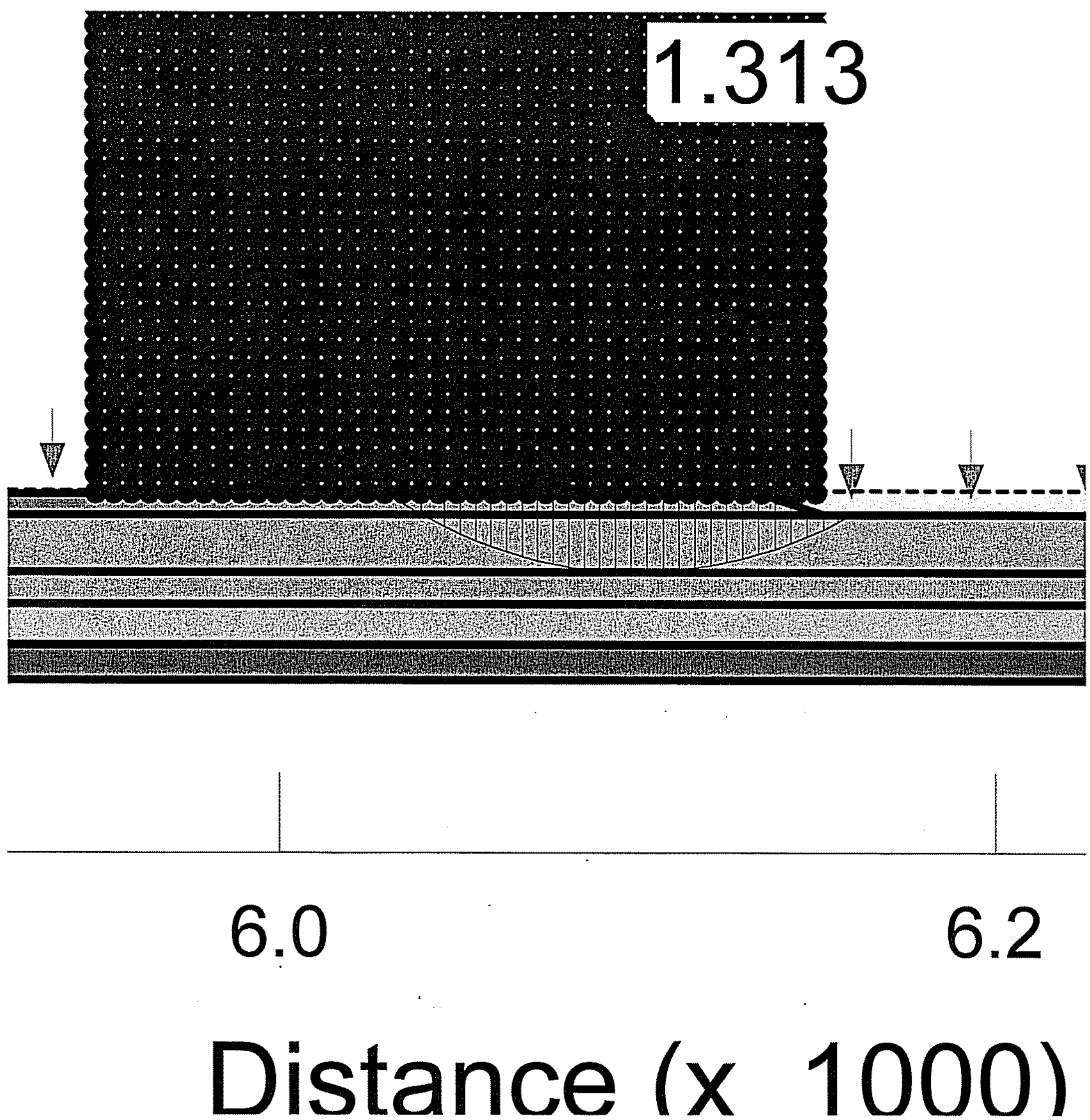
Crown +6

Borrow Cut to EL -6

w/1V:3H S/S

40' setback

Slip # 17219



SLOPE/W Analysis

File Information

Created By: Gwen Sanders
Revision Number: 59
Last Edited By: Rebecca Scherer
Date: 3/23/2009
Time: 12:39:42 PM
File Name: reach2insitudikecrown6f.gsz
Directory: U:\sys\WPDATA\Projects\9292\Slope Stability\Reach 2 - Thin Barrier Beach\mudline el0\
Last Solved Date: 3/23/2009
Last Solved Time: 12:39:54 PM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

SLOPE/W Analysis-Reported FS(into borrow)

Description: EE 19292 Scofield Island - Beach and Dune Features - Marsh Reach
Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Left to Right
- Use Passive Mode: No
- Slip Surface Option: Grid and Radius
- Critical slip surfaces saved: 1
- Optimize Critical Slip Surface Location: No
- Tension Crack
  - Tension Crack Option: (none)

FOS Distribution
FOS Calculation Option: Constant
Advanced
Number of Slices: 30
Optimization Tolerance: 0.01
Minimum Slip Surface Depth: 0.1 ft
Optimization Maximum Iterations: 2000
Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

In situ Containment Dike
Model: Undrained (Phi=0)
Unit Weight: 88 pcf
Cohesion: 100 psf
Pore Water Pressure
Piezometric Line: 1

Existing Barrier Beach
Model: Mohr-Coulomb
Unit Weight: 120 pcf
Cohesion: 0 psf
Phi: 25 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Humus/Clay - Marsh (-6 to -22)
Model: S=f(depth)
Unit Weight: 88 pcf
C-Top of Layer: 50 psf
C-Rate of Increase: 4.375
Limiting C: 120 psf
Pore Water Pressure
Piezometric Line: 1

Silt - Intradelta (-22 to -31)
Model: Mohr-Coulomb
Unit Weight: 116 pcf
Cohesion: 0 psf
Phi: 15 °

Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Clay 1 - Interdistributary (-31 to -42)
Model: Mohr-Coulomb
Unit Weight: 106 pcf
Cohesion: 220 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Clay 2 - Interdistributary (-42 to -52)
Model: Mohr-Coulomb
Unit Weight: 106 pcf
Cohesion: 300 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Grid
Upper Left: (6099.75, 100) ft
Lower Left: (6099.75, 100) ft
Lower Right: (6099.75, 100) ft
Grid Horizontal Increment: 0
Grid Vertical Increment: 0
Left Projection Angle: 0 °
Right Projection Angle: 0 °

Slip Surface Radius
Upper Left Coordinate: (5900, -22) ft
Upper Right Coordinate: (6400, -22) ft
Lower Left Coordinate: (5900, -22) ft
Lower Right Coordinate: (6400, -22) ft
Number of Increments: 0
Left Projection: No
Left Projection Angle: 135 °
Right Projection: No
Right Projection Angle: 45 °
UsePoints: 0

Slip Surface Limits

Left Coordinate: (4800, -6.5) ft
Right Coordinate: (7400, -6) ft

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	4800	0.55
	5982.4	0.55
	6089.6	0.55
	7400	0.55

Regions

	Material	Points	Area (ft^2)
Region 1	Existing Barrier Beach	1,2,14,21,22,23	3887
Region 2	Humus/Clay - Marsh (-6 to -22)	1,23,5,7,6	41262
Region 3	Silt - Intradelta (-22 to -31)	6,7,9,8	23400
Region 4	Clay 1 - Interdistributary (-31 to -42)	8,9,11,10	28600
Region 5	Clay 2 - Interdistributary (-42 to -52)	10,11,13,12	26000
Region 6	In situ Containment Dike	14,15,16,17,19,21	408

Points

	X (ft)	Y (ft)
Point 1	4800	-6.5
Point 2	5100	-6
Point 3	7400	-2
Point 4	4800	-6
Point 5	7400	-6
Point 6	4800	-22
Point 7	7400	-22
Point 8	4800	-31
Point 9	7400	-31

Point 10	4800	-42
Point 11	7400	-42
Point 12	4800	-52
Point 13	7400	-52
Point 14	5978	0
Point 15	5982.4	0.55
Point 16	6026	6
Point 17	6046	6
Point 18	4800	0.55
Point 19	6089.6	0.55
Point 20	7400	0.55
Point 21	6094	0
Point 22	6134	0
Point 23	6152	-6

Critical Slip Surfaces

	Number	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	1	1.313	(6099.75, 100)	122	(6022.51, 5.56391)	(6160.15, -6)

Slices of Slip Surface: 1

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	1	6024.2555	4.189419	-227.10044	80.593978	0	100
2	1	6027.542	1.682466	-70.666677	318.35157	0	100
3	1	6029.474	0.275	17.159589	441.68347	0	100
4	1	6032.254	-1.587941	133.40712	600.06283	217.60513	0
5	1	6037.034	-4.6087575	321.91196	937.60155	287.10077	0
6	1	6042.712	-7.7815175	519.88471	1358.5528	0	57.617
7	1	6048.18	-10.538446	691.91415	1575.3627	0	69.688
8	1	6052.54	-12.470555	812.47289	1698.1821	0	78.148
9	1	6056.9	-14.20357	920.63239	1804.6517	0	85.737
10	1	6061.26	-15.746455	1016.9004	1895.3601	0	92.494
11	1	6065.62	-17.106735	1101.7762	1970.7825	0	98.452
12	1	6069.98	-18.290715	1175.6568	2031.3593	0	103.64

13	1	6074.34	-19.30366	1238.8636	2077.4172	0	108.08
14	1	6078.7	-20.1499	1291.6794	2109.2272	0	111.79
15	1	6083.06	-20.832945	1334.3045	2126.9625	0	114.78
16	1	6087.42	-21.35555	1366.9079	2130.7964	0	117.08
17	1	6091.8	-21.72073	1389.6981	2137.8994	0	118.68
18	1	6096.875	-21.93221	1402.8971	2156.2703	0	119.61
19	1	6102.196 5	-21.950925	1404.0502	2165.17	0	119.7
20	1	6107.089 5	-21.75438	1391.7921	2154.5419	0	118.85
21	1	6111.982 5	-21.36033	1367.1983	2126.423	0	117.14
22	1	6116.875	-20.76684	1330.1618	2080.4139	0	114.55
23	1	6121.767 5	-19.970945	1280.5114	2016.0516	0	111.07
24	1	6126.660 5	-18.968575	1217.9678	1932.8927	0	106.7
25	1	6131.553 5	-17.75445	1142.2067	1830.3641	0	101.39
26	1	6136.25	-16.3881	1056.9335	1670.6827	0	95.422
27	1	6140.75	-14.87947	962.8077	1453.5774	0	88.829
28	1	6145.25	-13.171855	856.23489	1217.4873	0	81.366
29	1	6149.75	-11.25608	736.69017	961.33557	0	72.992
30	1	6154.037	-9.2324515	610.42619	732.30043	0	64.142
31	1	6158.111 5	-7.1100015	477.98475	541.28357	0	54.856

ANNEX K3

SETTLEMENT ANALYSES

Project Title: Scofield Island

Subject: Summary – consolidation tests **Job No:** 19292

By: GPS **Date:** ______ **Checked By:** ______ **Date:** ______

EUSTIS
Metairie, Louisiana
Lafayette, Louisiana
Gulfport, Mississippi

Page: ______

Boring No. (Reach)	Sample No.	Est. Elev.	USC (Geology)	w%	CR	P_c (psf)	C_v (@ P_c)	(ft^2/day)
1 (Reach 2)	6	-17.4	CH (Marsh)	122	0.331	340	0.01	(3.7)
3 (Reach 2)	8	-25.6	SP (Intra Delta)	29	0.093	13,570	22	(8030)
5 (Reach 2)	10	-40.9	CH (Interdistributary)	55	0.262	980	0.04	(14.6)
5 (R-2)	2*	-6.9	CH (Marsh)	111	0.315	560	0.01	(3.7)

* poor test results, ?dist. sample

Project Title: Scofield Island

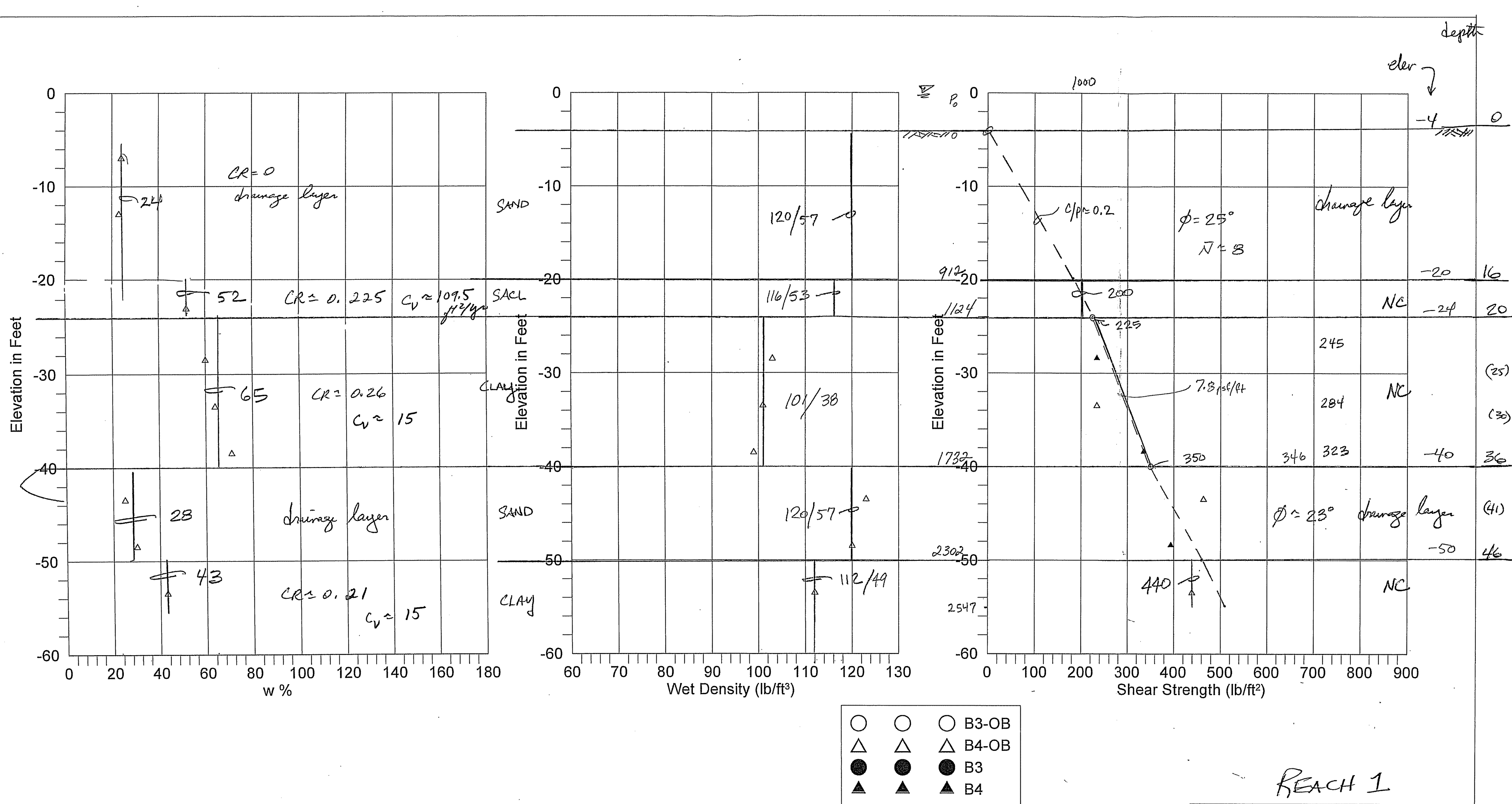
Subject: Settlement design values Job No: 19292

By: GPS Date: 3/15/09 Checked By: ______ Date: ______

EUSTIS
Metairie, Louisiana
Lafayette, Louisiana
Gulfport, Mississippi

Page: ______

GEOLOGIC UNIT	USC	c_v ft²/day	ft²/yr
Barrier Beach	SP	– drainage	layer –
Marsh	OH	0.02	7.3
	CH	0.03	11
Intra delta	ML/SP	– drainage alt 22	layer – 8030
Interdistributary	CH	0.04	15
	CL	0.3	109.5



EUSTIS ENGINEERING COMPANY, INC.
GEOTECHNICAL ENGINEERS
3011 28TH STREET METAIRIE, LOUISIANA

SOIL DESIGN PARAMETERS
B-4 (BEST BEACH)

RIVERINE SAND MINING
SCOFIELD ISLAND RESTORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

DRAWN BY: J.T.H.	5 JAN 2009	FILE: COMBINEBORING DATA.GRF
CHECKED BY: G.P.S.	JOB NO.: 19292	

	Recompression	Vigin	total	10% total
TOTAL S (ft) =	0.000	0.000	0.000	0.000
(in) =	0.000	0.000	0.000	0.000
REDUCED S (ft)	0.000	0.000	0.000	0.000
(in) =	0.000	0.000	0.000	0.000

Initial Ld	
s =	0.00
	0.00
s'=	0.00
	0.00

If you would like to compute the capacity by imposing the load 2/3 down the length of the pile place a 1 here 0.00

SETTLEMENT ANALYSIS - WESTERGAARD THEORY

Water Table Depth	0.00	
Bearing Area Width, Xb (ft) =	500.00	500.00
Bearing Area Length, Yb (ft) =	3000.00	3000.00
Abscissa for Analysis, Xa (ft) =	250.00	250.00
Ordinate for Analysis, Ya (ft) =	1500.00	1500.00
Net Applied Pressure (psf) =	0.00	0.00
Depth of Application, Da (ft) =	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00
Poisson's Ratio, u =	0.00	0.00
Recompression Factor =	0.15	0.15
Contact Pressure Multiplier =	1.00	1.00
Total Settlement Multiplier =	1.00	1.00
Applied Pressure Criteria =	0.00	0.00%

Region	dX (ft)	dY (ft)
1	250.0	1500.0
2	250.0	-1500.0
3	-250.0	1500.0
4	-250.0	-1500.0

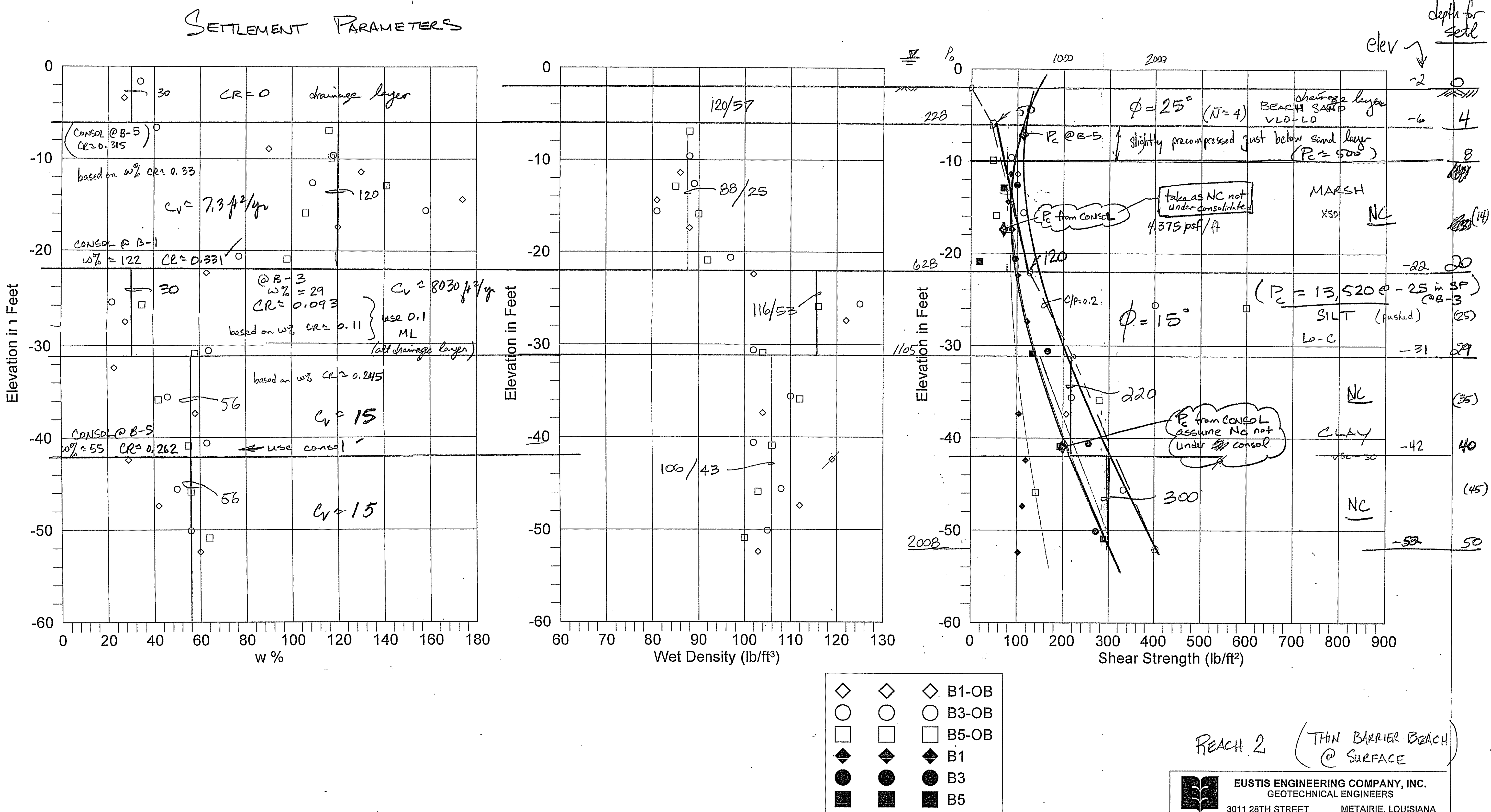
Strain Factor = 0.50

Project: 19292
Title: Scofield Island
Reach 1 - Thickest Barrier Beach @ Surface
Engineer: GPS
Borings: B-4

Date: 20-Feb-09
Time: 10:06 AM

	Depth (ft)	H (ft)	z (ft)	t' (pcf)	CR	RR	Shear Strength (psf)	Influence Values I-1	I-2	I-3	I-4	Iz	Effective Vertical Stress at Mid-Stratum: Past Maximum (psf)	Present Burden (psf)	Induced Change (psf)	Applied as % Present	Settlement: Recomp (ft)	Virgin (ft)	Total (ft)	10% (ft)	su/po	OCR	Total Profile (in)
1	0.0 8.0 16.0	16.0	8.0	57.0	0.000 (drainage layer)	0.000	0.00	0.246	0.246	0.246	0.246	0.985	456.00	456.00 912.00	0.00	0.00	0.000	0.000	0.000	0.000	0.00	1.00	0.00 0.00
2	18.0 20.0	4.0	18.0	53.0	0.225	0.034	200.00	0.242	0.242	0.242	0.242	0.967	1018.00	1018.00 1124.00	0.00	0.00	0.000	0.000	0.000	0.000	0.20	1.00	0.00
3	22.5 25.0	5.0	22.5	38.0	0.260	0.039	245.00	0.240	0.240	0.240	0.240	0.959	1219.00	1219.00 1314.00	0.00	0.00	0.000	0.000	0.000	0.000	0.20	1.00	0.00
4	27.5 30.0	5.0	27.5	38.0	0.260	0.039	284.00	0.237	0.237	0.237	0.237	0.950	1409.00	1409.00 1504.00	0.00	0.00	0.000	0.000	0.000	0.000	0.20	1.00	0.00
5	33.0 36.0	6.0	33.0	38.0	0.260	0.039	323.00	0.235	0.235	0.235	0.235	0.940	1618.00	1618.00 1732.00	0.00	0.00	0.000	0.000	0.000	0.000	0.20	1.00	0.00
6	38.5 41.0	5.0	38.5	57.0	0.000 (drainage layer)	0.000	0.00	0.232	0.232	0.232	0.232	0.930	1874.50	1874.50 2017.00	0.00	0.00	0.000	0.000	0.000	0.000	0.00	1.00	0.00
7	43.5 46.0	5.0	43.5	57.0	0.000	0.000	0.00	0.230	0.230	0.230	0.230	0.921	2159.50	2159.50 2302.00	0.00	0.00	0.000	0.000	0.000	0.000	0.00	1.00	0.00
8	48.5 51.0	5.0	48.5	49.0	0.210	0.032	440.00	0.228	0.228	0.228	0.228	0.912	2424.50	2424.50 2547.00	0.00	0.00	0.000	0.000	0.000	0.000	0.18	1.00	0.00
9	53.0 55.0	4.0	53.0	43.0	0.000	0.000	0.00	0.226	0.226	0.226	0.226	0.904	2633.00	2633.00 2719.00	0.00	0.00	0.000	0.000	0.000	0.000	0.00	1.00	0.00
10	57.5 60.0	5.0	57.5	43.0	0.000	0.000	0.00	0.224	0.224	0.224	0.224	0.896	2826.50	2826.50 2934.00	0.00	0.00	0.000	0.000	0.000	0.000	0.00	1.00	0.00
11	62.5 65.0	5.0	62.5	47.0	0.000	0.000	0.00	0.222	0.222	0.222	0.222	0.887	3051.50	3051.50 3169.00	0.00	0.00	0.000	0.000	0.000	0.000	0.00	1.00	0.00
12	67.5 70.0	5.0	67.5	47.0	0.000	0.000	0.00	0.220	0.220	0.220	0.220	0.878	3286.50	3286.50 3404.00	0.00	0.00	0.000	0.000	0.000	0.000	0.00	1.00	0.00
13	72.5 75.0	5.0	72.5	47.0	0.000	0.000	0.00	0.217	0.217	0.217	0.217	0.869	3521.50	3521.50 3639.00	0.00	0.00	0.000	0.000	0.000	0.000	0.00	1.00	0.00
14	77.5 80.0	5.0	77.5	47.0	0.000	0.000	0.00	0.215	0.215	0.215	0.215	0.861	3756.50	3756.50 3874.00	0.00	0.00	0.000	0.000	0.000	0.000	0.00	1.00	0.00

	Recomp	Virgin	Total	10%
TOTAL S (ft) =	0.000	0.000	0.000	0.000
(in) =	0.000	0.000	0.000	0.000
REDUCED S (ft) =	0.000	0.000	0.000	0.000
(in) =	0.000	0.000	0.000	0.000



REACH 2 (THIN BARRIER BEACH @ SURFACE)

EUSTIS ENGINEERING COMPANY, INC.
GEOTECHNICAL ENGINEERS
3011 28TH STREET METAIRIE, LOUISIANA

SOIL DESIGN PARAMETERS
B-1, B-3 AND B-5

RIVERINE SAND MINING
SCOFIELD ISLAND RESTORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

DRAWN BY: J.T.H.	5 JAN 2009	FILE: COMBINEBORING DATA.GRF
CHECKED BY: G.P.S.	JOB NO.: 19292	

	Recompression	Vigin	total	10% total
TOTAL S (ft) =	0.000	0.000	0.000	0.000
(in) =	0.000	0.000	0.000	0.000
REDUCED S (ft)	0.000	0.000	0.000	0.000
(in) =	0.000	0.000	0.000	0.000

Initial Ld
s = 0.00
0.00
s'= 0.00
0.00

If you would like to compute the capacity by imposing
the load 2/3 down the length of the pile place a 1 here 0.00

SETTLEMENT ANALYSIS - WESTERGAARD THEORY

Water Table Depth	0.00	
Bearing Area Width, Xb (ft) =	500.00	500.00
Bearing Area Length, Yb (ft) =	3000.00	3000.00
Abscissa for Analysis, Xa (ft) =	250.00	250.00
Ordinate for Analysis, Ya (ft) =	1500.00	1500.00
Net Applied Pressure (psf) =	0.00	0.00
Depth of Application, Da (ft) =	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00
Poisson's Ratio, u =	0.00	0.00
Recompression Factor =	0.15	0.15
Contact Pressure Multiplier =	1.00	1.00
Total Settlement Multiplier =	1.00	1.00
Applied Pressure Criteria =	0.00	0.00%

Region	dX (ft)	dY (ft)
1	250.0	1500.0
2	250.0	-1500.0
3	-250.0	1500.0
4	-250.0	-1500.0

Strain Factor = 0.50

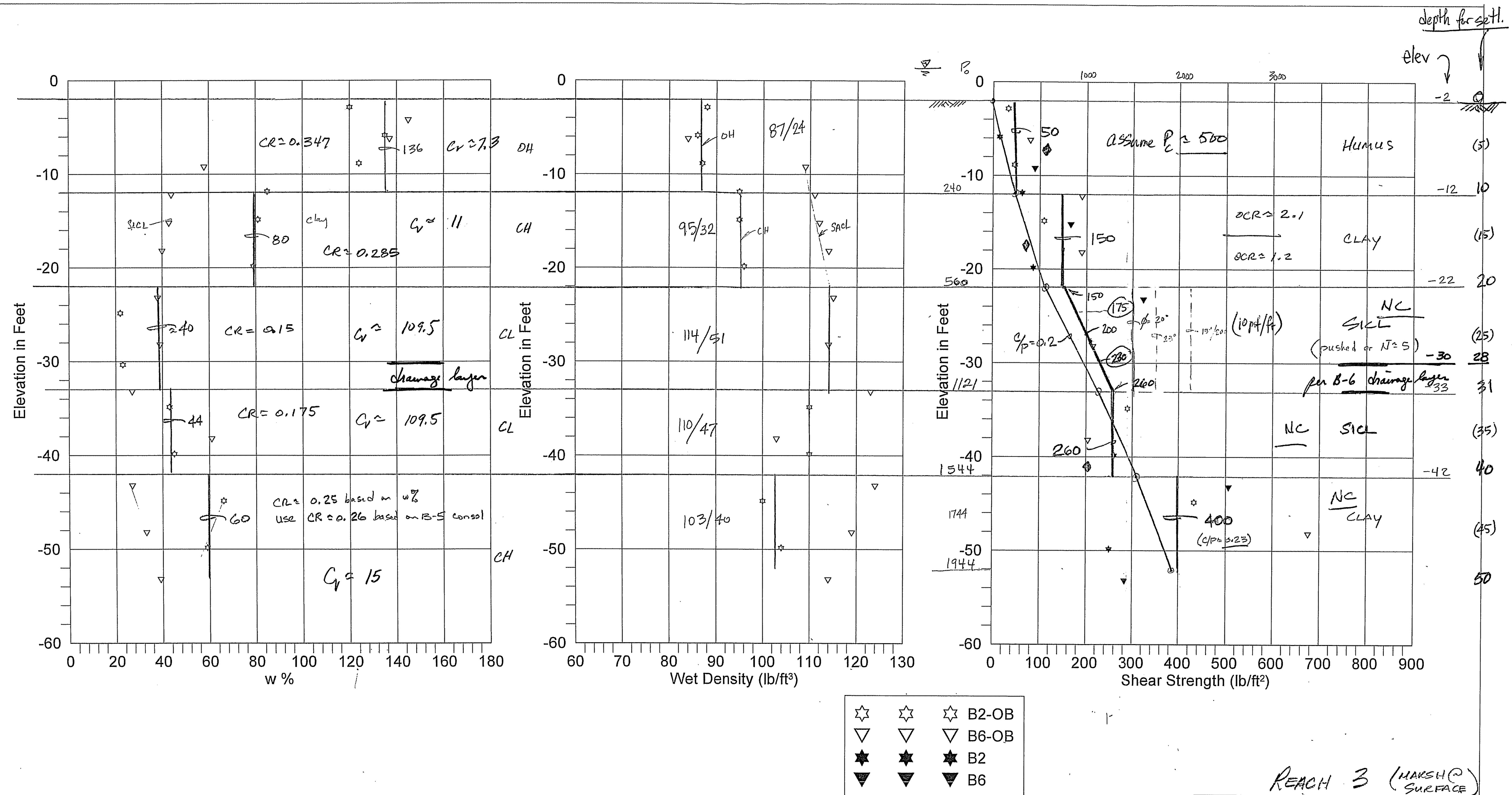
Project: 19292
Title: Scofield Island
Reach 2 - Thin Barrier Beach @ Surface
Engineer: GPS
Borings: B-1, B-3 and B-5

Date: 20-Feb-09
Time: 9:10 AM

	Depth (ft)	H (ft)	z (ft)	t' (pcf)	CR	RR	Shear Strength (psf)	I-1	I-2	I-3	I-4	Iz	Effective Vertical Stress at Mid-Stratum: Past Maximum (psf)	Present Burden (psf)	Induced Change (psf)	Applied as % Present	Settlement: Recomp (ft)	Virgin (ft)	Total (ft)	10% (ft)	su/po	OCR	Total Profile (in)
	0.0																						0.00
1	2.0	4.0	2.0	57.0	0.000	0.000	0.00	0.249	0.249	0.249	0.249	0.996	114.00	114.00	0.00	0.00	0.000	0.000	0.000	0.000	0.00	1.00	
	4.0													228.00									0.00
2	6.0	4.0	6.0	25.0	0.331	0.050	(115.00)	0.247	0.247	0.247	0.247	0.989	500.74	278.00	0.00	0.00	0.000	0.000	0.000	0.000	0.41	1.80	
	8.0													328.00									0.00
3	11.0	6.0	11.0	25.0	0.331	0.050	80.00	0.245	0.245	0.245	0.245	0.980	403.00	403.00	0.00	0.00	0.000	0.000	0.000	0.000	0.20	1.00	
	14.0													478.00									0.00
4	17.0	6.0	17.0	25.0	0.331	0.050	107.00	0.242	0.242	0.242	0.242	0.969	553.00	553.00	0.00	0.00	0.000	0.000	0.000	0.000	0.19	1.00	
	20.0													628.00									0.00
5	22.5	5.0	22.5	53.0	0.100	0.015	203.00	0.240	0.240	0.240	0.240	0.959	760.50	760.50	0.00	0.00	0.000	0.000	0.000	0.000	0.27	1.00	
	25.0													893.00									0.00
6	27.0	4.0	27.0	53.0	0.100	0.015	268.00	0.238	0.238	0.238	0.238	0.951	999.00	999.00	0.00	0.00	0.000	0.000	0.000	0.000	0.27	1.00	
	29.0													1105.00									0.00
7	32.0	6.0	32.0	43.0	0.262	0.039	220.00	0.235	0.235	0.235	0.235	0.942	1234.00	1234.00	0.00	0.00	0.000	0.000	0.000	0.000	0.18	1.00	
	35.0													1363.00									0.00
8	37.5	5.0	37.5	43.0	0.262	0.039	220.00	0.233	0.233	0.233	0.233	0.932	1470.50	1470.50	0.00	0.00	0.000	0.000	0.000	0.000	0.15	1.00	
	40.0													1578.00									0.00
9	42.5	5.0	42.5	43.0	0.262	0.039	300.00	0.231	0.231	0.231	0.231	0.923	1685.50	1685.50	0.00	0.00	0.000	0.000	0.000	0.000	0.18	1.00	
	45.0													1793.00									0.00
10	47.5	5.0	47.5	43.0	0.262	0.039	300.00	0.228	0.228	0.228	0.228	0.914	1900.50	1900.50	0.00	0.00	0.000	0.000	0.000	0.000	0.16	1.00	
	50.0													2008.00									0.00
11	52.5	5.0	52.5	47.0	0.000	0.000	0.00	0.226	0.226	0.226	0.226	0.905	2125.50	2125.50	0.00	0.00	0.000	0.000	0.000	0.000	0.00	1.00	
	55.0													2243.00									0.00
12	57.5	5.0	57.5	47.0	0.000	0.000	0.00	0.224	0.224	0.224	0.224	0.896	2360.50	2360.50	0.00	0.00	0.000	0.000	0.000	0.000	0.00	1.00	
	60.0													2478.00									0.00
13	62.5	5.0	62.5	47.0	0.000	0.000	0.00	0.222	0.222	0.222	0.222	0.887	2595.50	2595.50	0.00	0.00	0.000	0.000	0.000	0.000	0.00	1.00	
	65.0													2713.00									0.00
14	67.5	5.0	67.5	47.0	0.000	0.000	0.00	0.220	0.220	0.220	0.220	0.878	2830.50	2830.50	0.00	0.00	0.000	0.000	0.000	0.000	0.00	1.00	
	70.0													2948.00									0.00

Handwritten notes: "drainage layer" written over layer 1 (CR/RR/Shear Strength); "limits of data" line drawn below layer 10.

	Recomp	Virgin	Total	10%
TOTAL S (ft) =	0.000	0.000	0.000	0.000
(in) =	0.000	0.000	0.000	0.000
REDUCED S (ft) =	0.000	0.000	0.000	0.000
(in) =	0.000	0.000	0.000	0.000



REACH 3 (MARSH @ SURFACE)

EUSTIS ENGINEERING COMPANY, INC.
GEOTECHNICAL ENGINEERS
3011 28TH STREET METAIRIE, LOUISIANA

SOIL DESIGN PARAMETERS
B-2 AND B-6

RIVERINE SAND MINING
SCOFIELD ISLAND RESTORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

DRAWN BY: J.T.H.	5 JAN 2009	FILE: COMBINEBORING DATA.GRF
CHECKED BY: G.P.S.	JOB NO.: 19292	

	Recompression	Vigin	total	10% total
TOTAL S (ft) =	0.000	0.000	0.000	0.000
(in) =	0.000	0.000	0.000	0.000
REDUCED S (ft)	0.000	0.000	0.000	0.000
(in) =	0.000	0.000	0.000	0.000

Initial Ld
s = 0.00
0.00
s'= 0.00
0.00
0.00

If you would like to compute the capacity by imposing the load 2/3 down the length of the pile place a 1 here

SETTLEMENT ANALYSIS - WESTERGAARD THEORY

Water Table Depth	0.00	
Bearing Area Width, Xb (ft) =	500.00	500.00
Bearing Area Length, Yb (ft) =	3000.00	3000.00
Abscissa for Analysis, Xa (ft) =	250.00	250.00
Ordinate for Analysis, Ya (ft) =	1500.00	1500.00
Net Applied Pressure (psf) =	0.00	0.00
Depth of Application, Da (ft) =	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00
Poisson's Ratio, u =	0.00	0.00
Recompression Factor =	0.15	0.15
Contact Pressure Multiplier =	1.00	1.00
Total Settlement Multiplier =	1.00	1.00
Applied Pressure Criteria =	0.00	0.00%

Region	dX (ft)	dY (ft)
1	250.0	1500.0
2	250.0	-1500.0
3	-250.0	1500.0
4	-250.0	-1500.0

Strain Factor = 0.50

Project: 19292
Title: Scofield Island
Reach 3 - Marsh @ Surface
Engineer: GPS
Borings: B-2 and B-6

Date: 20-Feb-09
Time: 7:48 AM

	Depth (ft)	H (ft)	z (ft)	t' (pcf)	CR	RR	Shear Strength (psf)	Influence Values I-1	I-2	I-3	I-4	Iz	Effective Vertical Stress at Mid-Stratum: Past Maximum (psf)	Present Burden (psf)	Induced Change (psf)	Applied as % Present	Settlement: Recomp (ft)	Virgin (ft)	Total (ft)	10% (ft)	su/po	OCR	Total Profile (in)
	0.0																						0.00
1	2.5 5.0	5.0	2.5	24.0	0.347	0.052	50.00	0.249	0.249	0.249	0.249	0.995	~~283.96~~ 500	60.00 120.00	0.00	0.00	0.000	0.000	0.000	0.000	0.83	4.73	0.00
2	7.5 10.0	5.0	7.5	24.0	0.347	0.052	50.00	0.247	0.247	0.247	0.247	0.986	~~187.19~~	180.00 240.00	0.00	0.00	0.000	0.000	0.000	0.000	0.28	1.04	0.00
3	12.5 15.0	5.0	12.5	32.0	0.285	0.043	150.00	0.244	0.244	0.244	0.244	0.977	684.86	320.00 400.00	0.00	0.00	0.000	0.000	0.000	0.000	0.47	2.14	0.00
4	17.5 20.0	5.0	17.5	32.0	0.285	0.043	150.00	0.242	0.242	0.242	0.242	0.968	587.23	480.00 560.00	0.00	0.00	0.000	0.000	0.000	0.000	0.31	1.22	0.00
5	22.5 25.0	5.0	22.5	51.0	0.150	0.023	175.00	0.240	0.240	0.240	0.240	0.959	687.50	687.50 815.00	0.00	0.00	0.000	0.000	0.000	0.000	0.25	1.00	0.00
6	28.0 31.0	6.0	28.0	51.0	0.150	0.023	230.00	0.237	0.237	0.237	0.237	0.949	968.00	968.00 1121.00	0.00	0.00	0.000	0.000	0.000	0.000	0.24	1.00	0.00
7	33.0 35.0	4.0	33.0	47.0	0.175	0.026	260.00	0.235	0.235	0.235	0.235	0.940	1215.00	1215.00 1309.00	0.00	0.00	0.000	0.000	0.000	0.000	0.21	1.00	0.00
8	37.5 40.0	5.0	37.5	47.0	0.175	0.026	260.00	0.233	0.233	0.233	0.233	0.932	1426.50	1426.50 1544.00	0.00	0.00	0.000	0.000	0.000	0.000	0.18	1.00	0.00
9	42.5 45.0	5.0	42.5	40.0	0.260	0.039	400.00	0.231	0.231	0.231	0.231	0.923	1644.00	1644.00 1744.00	0.00	0.00	0.000	0.000	0.000	0.000	0.24	1.00	0.00
10	47.5 50.0	5.0	47.5	40.0	0.260	0.039	400.00	0.228	0.228	0.228	0.228	0.914	1844.00	1844.00 1944.00	0.00	0.00	0.000	0.000	0.000	0.000	0.22	1.00	0.00
limits of borings data																							
11	52.5 55.0	5.0	52.5	47.0	0.000	0.000	0.00	0.226	0.226	0.226	0.226	0.905	2061.50	2061.50 2179.00	0.00	0.00	0.000	0.000	0.000	0.000	0.00	1.00	0.00
12	57.5 60.0	5.0	57.5	47.0	0.000	0.000	0.00	0.224	0.224	0.224	0.224	0.896	2296.50	2296.50 2414.00	0.00	0.00	0.000	0.000	0.000	0.000	0.00	1.00	0.00
13	62.5 65.0	5.0	62.5	47.0	0.000	0.000	0.00	0.222	0.222	0.222	0.222	0.887	2531.50	2531.50 2649.00	0.00	0.00	0.000	0.000	0.000	0.000	0.00	1.00	0.00
14	67.5 70.0	5.0	67.5	47.0	0.000	0.000	0.00	0.220	0.220	0.220	0.220	0.878	2766.50	2766.50 2884.00	0.00	0.00	0.000	0.000	0.000	0.000	0.00	1.00	0.00

	Recomp	Virgin	Total	10%
TOTAL S (ft) =	0.000	0.000	0.000	0.000
(in) =	0.000	0.000	0.000	0.000
REDUCED S (ft) =	0.000	0.000	0.000	0.000
(in) =	0.000	0.000	0.000	0.000

Project Title: Scofield Island

Subject: Settlement models + time rate Job No: 19292

By: GPS Date: Checked By: Date:

EUSTIS
Metairie, Louisiana
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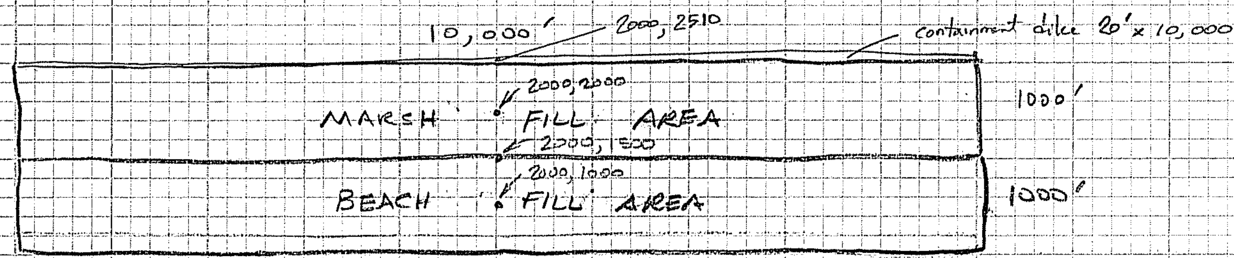
Gulfport, Mississippi

Page:



ULTIMATE BULB

assumed NC to 80' w/ no drainage layers beneath boring

Reach	Mudline	Initial (psf)	depth 10% Bulb (ft)	value (in)	adj. pressure			
1	0	268.5	51	5.32	~245	~4.4"		
	-1	305.5	60	6.92	~277	~5.5"		
	-2	342.5	65	8.19	~306	~7"		
2	0	↓	60	16.32	~207	~12"		
	-1		65	19.05	~234	~14"		
	-2		75	22.27	~260	~16"		
3	0		60	12.98	1.5(37) + 1.5(100) ≃ 205.5 ⇒ 9.54"		216	10"
	-1		70	15.54	2.75(37) + 1.25(100) ≃ 226.8 ⇒ 10.75"		245	12"
	-2		80	17.92	4(37) + 1(100) ≃ 248 ⇒ 12"		~273	~14" (circled)

↑ for fill to +3 (3 to 5' fill)

EST TIME RATE

IND % ULTIMATE (using mudline @ el -2)

avg assumed for Reaches 3+4

MONTHS	YRS.	R-1 (ult / bulb)	R-2	R-3	R-2 (d)	R-3 (d)
1	0.08	14/18	~4	13/14	7	
3	0.25	22/28	~4	" "	10.5/12	
6	0.5	29.5/38	~4	" "	17.6	
	1	39/50	6/7	13/15	27	
	3	59/76	14.5/16	16/18	~~24/27~~ 51	
	5	66/86	21/23	19/21	65	
	10	72/92	31/35	25/28	71/80	
	20	74/95	42/47	33/36	87	

R-1: ↳ 6.5/9" ↳ 6.5/7"

↑ w/ML not drainage layer

↑ w/ drainage layer

need to run alt case w/ thin drainage layer

weight induced settlement only
does not include geologic subsidence
does not include self-weight consolidation

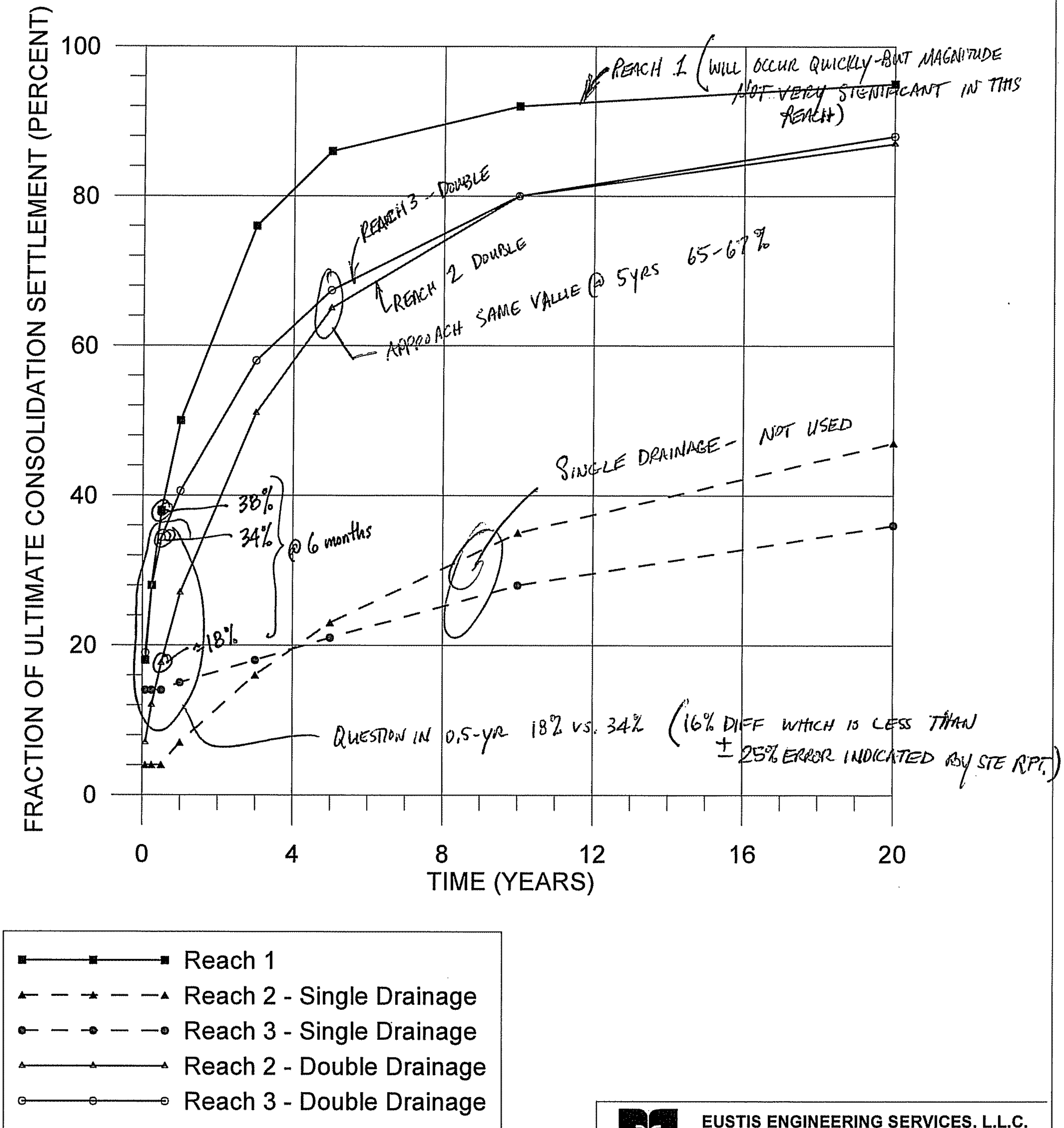
Reach 3 w/ added drainage layer : % bulb ind / % bulb ult

time	Mud 0	Mud -2
0.08	20.4	19
.25	30.4	28
.5	37.3	34.4
1	44.4	40.6
3	61.4	58
5	72	67.4
10	85	80
20	93	88

vs. 18% w/out drainage layer

↑ use these values

ESTIMATES OF SETTLEMENT TIME RATE



NOTES:

- WEIGHT INDUCED SETTLEMENT ONLY ASSUMING SOIL PROPERTIES BETWEEN 50 AND 80 FEET SETTLEMENT INDUCED BELOW 80 FEET NOT CONSIDERED
- GEOLOGIC SUBSIDENCE NOT INCLUDED
- SELF-WEIGHT CONSOLIDATION NOT INCLUDED
- VARIATION IN SUBMERGENCE NOT INCLUDED (ASSUMES WATER SURFACE AT MLW= 0.5)

EUSTIS ENGINEERING SERVICES, L.L.C.
GEOTECHNICAL ENGINEERS
3011 28TH STREET METAIRIE, LOUISIANA

ESTIMATED TIME-RATE OF SETTLEMENT

RIVERINE SAND MINING
SCOFIELD ISLAND RETORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

DRAWN BY: G.P.S.	MARCH 2009	FILE: SETL_TIME_RATE.GRF
CHECKED BY: W.W.G.	JOB NO.: 19292	FIGURE 4

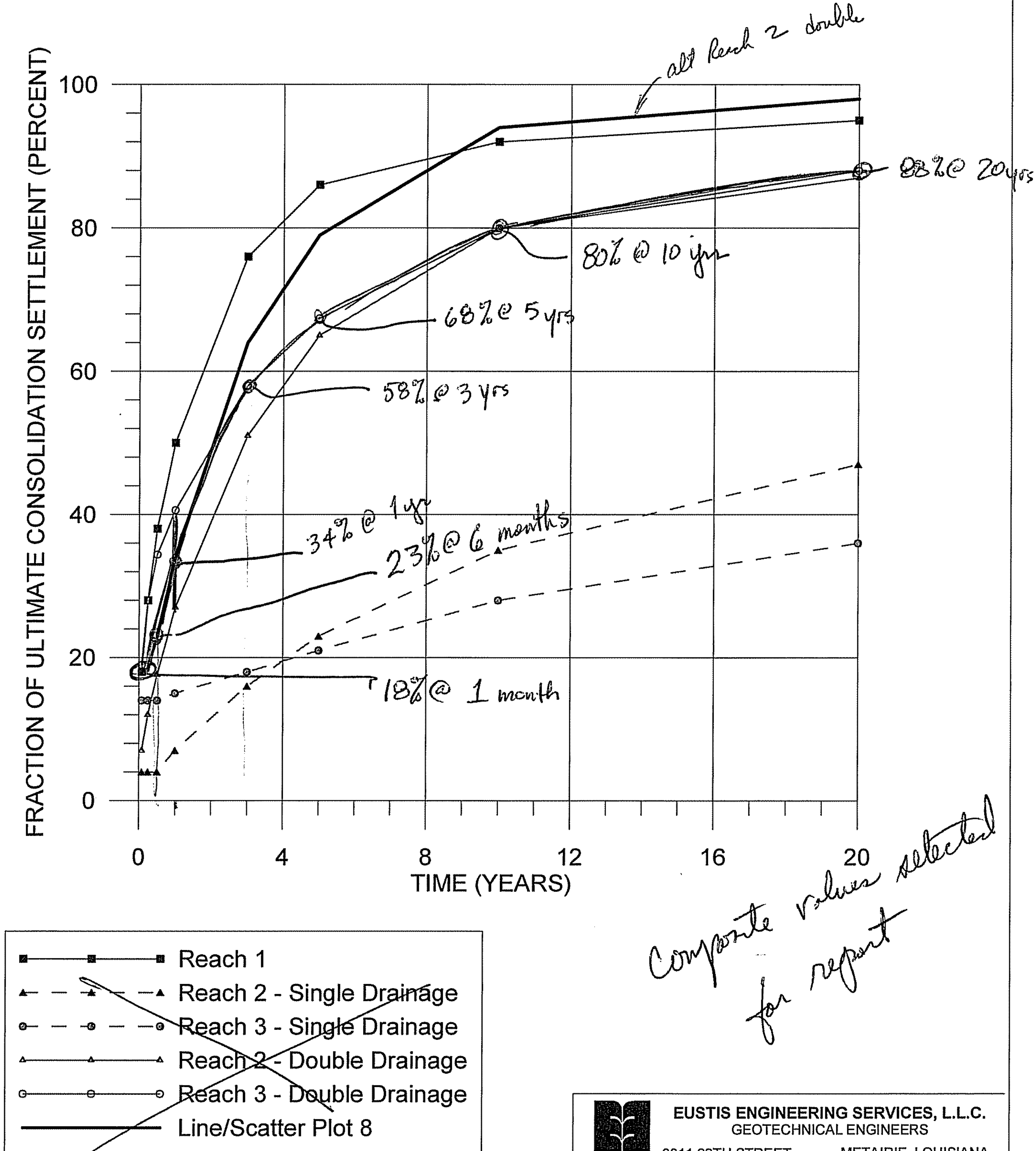
Project Title: Scofield Island		**EUSTIS** Metairie, Louisiana; Lafayette, Louisiana; Gulfport, Mississippi
Subject: time-rate of settlement (subsoils)	**Job No:** 19292	
By: GPS **Date:** 3/21/09	**Checked By:** **Date:**	**Page:**

based on Reach 2 (double drainage)

% INDUCED

TIME (YRS)	WATER MUDLINE MARSH	0.5 -2 +3 (ONLY)	0.5 -2 +3 & BEACH	0.5 0 +3 (all)	+1 0 +3 (all)	0.5 0 +2	(Single)	REACH 3
0.5		18	18	20	20	23		34
1		27	27	31	31	34		41
3		51		59	59	64		58
5		65		76	74	79	31	67
10		80		92		94		80
20		87		97		98	59	88

ESTIMATES OF SETTLEMENT TIME RATE



EUSTIS ENGINEERING SERVICES, L.L.C.
GEOTECHNICAL ENGINEERS
3011 28TH STREET METAIRIE, LOUISIANA

ESTIMATED TIME-RATE OF SETTLEMENT

RIVERINE SAND MINING
SCOFIELD ISLAND RETORATION (BA-40)
PLAQUEMINES PARISH, LOUISIANA

DRAWN BY: G.P.S.	16 MARCH 2009	FILE: SETL_TIME_RATE.GRF
CHECKED BY: W.W.G.	JOB NO.: 19292	~~FIGURE 7~~ FIG 5 Sheet 1

Project Title: Scofield Island	**EUSTIS** Metairie, Louisiana Lafayette, Louisiana Gulfport, Mississippi
Subject: Geologic Subsidence **Job No:** 19292	
By: GPS **Date:** 3/20/09 **Checked By:** **Date:**	**Page:**

0.025 ft/yr

TIME (YR)	GEOLOGIC SUBSIDENCE (Ft)	(in)
0.5	0.0125	0.15
1	0.025	0.3
3	0.075	0.9
5	0.125	1.5
10	0.25	3
20	0.5	6

Project Title: Scofield Island
Subject: "self weight settlement" Job No: 19292
By: GPS Date: 3/21/09 Checked By: ____ Date: ____
Page: ____

EUSTIS
Metairie, Louisiana
Lafayette, Louisiana
Gulfport, Mississippi

MARSH AREA FILL (DREDGED FILL)

PLATFORM ELEV	FILL HEIGHT Mudline 0	-1	-2	30% HT			50%		
3	3	4	5	0.9	1.25	1.56	0.45 (5.6)	0.63 (7.5)	0.78 (9)
2.5	2.5	3.5	4.5	0.78	1.1	1.41	0.39 (4.6)	0.55 (6.5)	0.7 (8.5)
2	2	3	4	0.6	0.9	1.25	0.3 (3.6)	0.45 (5.6)	0.63 (7.5)

CONTAINMENT DIKE → ASSUME PLACED BY MECHANICAL METHODS W/ MUCH LESS SELF-WEIGHT CONSOL POTENTIAL THAN PUMPED SEDIMENTS

assume half as much consol.

50% ← still occurs rapidly during constr.

DIKE ELEV	FILL HT 0	-1	-2	.15 HT 0	-1	-2	50% 0	-1	-2
4	4	5	6	0.6	0.75	0.9	0.3	0.375	0.45
6	6	7	8	0.9	1.05	1.2	0.45	0.53	0.6

Project Title: Scofield Island

Subject: "Self weight" Consolidation **Job No:** 19292

By: GPS **Date:** 3/21/09 **Checked By:** ______ **Date:** ______

EUSTIS
Metairie, Louisiana
Lafayette, Louisiana
Gulfport, Mississippi

Page: ______

based on STE's report text — appears they are combining "settling" characteristics for dredged fill (results from settling column type test) w/ the consolidation of fill at low pressure (low pressure consolidation / self-weight consolidation)

check our evaluation in "Bayou Dupont" project where both tests were run:

- we reported 50% setl as self weight & 50% setl as consolidation of subsoils in July 2006 rpt.
  in Sept/Oct 2006 rpts we est 60-70% of total is self-weight & the remainder is consol.

[from STE's table self wt. is 33 to 63% of total depending on water depth & freeboard]

for marsh fill to +3 & grade @ −2 = 5' fill

note that for Bayou Dupont; single drainage was considered for subsoils which is why small contribution to overall setl.

relationship developed as $\Delta H = \frac{\Delta e}{1+e_o} H_{fill} = 0.313\, H_{fill}$ ←

[alt eq. $\Delta H = H \cdot (CR) \log\left(\frac{\sigma_{vo}' + \Delta\sigma}{\sigma_{vo}'}\right)$ } selection of σ_{vo} & σ_{vo}' not practical for dredged fill]

$C_v \simeq 0.015\ ft^2/day \simeq 5.5\ ft^2/yr$

est self weight consolidation will be essentially complete w/in 5 years for 5' fill & much less for lesser fill heights.

(Paul used 0.313H for Whiskey Island based on Bayou Dupont test results)
received comments

H	ΔH
3'	0.9'
4'	1.25'
5'	1.56'

} Approximately 50% to 70% of this ultimate settlement would be anticipated during construction (thus — fill quantities may be increased to achieve "initial" platform heights & these movements may not be directly observed.)

↓

reduce to 50% for settlement observed "after" const. ie, > 5 months after fill placement

0.45' = 5"
0.63' = 7½"
0.78' = 9"

Soil Testing Engineers, Inc.

BAY JOE WISE AREA: PROJECT BA-35
TABLE 3.2-6
POST-CONSTRUCTION AREA FILL SETTLEMENTS

Water Depth (feet)	Time After Construction (years)	1 Foot Freeboard Subgrade	1 Foot Freeboard Fill	1 Foot Freeboard Geol.	1 Foot Freeboard Total	2 Feet Freeboard Subgrade	2 Feet Freeboard Fill	2 Feet Freeboard Geol.	2 Feet Freeboard Total	3 Feet Freeboard Subgrade	3 Feet Freeboard Fill	3 Feet Freeboard Geol.	3 Feet Freeboard Total	4 Feet Freeboard Subgrade	4 Feet Freeboard Fill	4 Feet Freeboard Geol.	4 Feet Freeboard Total
0	0.5	0.11	0.08	0.01	0.20	0.20	0.14	0.01	0.35	0.26	0.21	0.01	0.48	0.31	0.27	0.01	0.59
	1.0	0.14	0.08	0.02	0.24	0.23	0.15	0.02	0.40	0.31	0.22	0.02	0.55	0.37	0.28	0.02	0.67
	2.0	0.15	0.08	0.05	0.28	0.27	0.16	0.05	0.48	0.37	0.23	0.05	0.65	0.46	0.30	0.05	0.81
	5.0	0.16	0.08	0.12	0.36	0.29	0.16	0.12	0.57	0.41	0.24	0.12	0.77	0.52	0.31	0.12	0.95
	10.0	0.17	0.08	0.25	0.50	0.31	0.16	0.25	0.72	0.46	0.24	0.25	0.95	0.57	0.32	0.25	1.14
	20.0	0.18	0.08	0.50	0.76	0.33	0.16	0.50	0.99	0.47	0.24	0.50	1.21	0.69	0.32	0.50	1.51
2	0.5	0.11	0.21	0.01	0.33	0.19	0.26	0.01	0.46	0.25	0.32	0.01	0.58	0.30	0.35	0.01	0.66
	1.0	0.14	0.21	0.02	0.37	0.23	0.27	0.02	0.52	0.31	0.33	0.02	0.66	0.37	0.38	0.02	0.77
	2.0	0.15	0.21	0.05	0.41	0.26	0.28	0.05	0.59	0.37	0.34	0.05	0.76	0.47	0.40	0.05	0.92
	5.0	0.17	0.21	0.12	0.50	0.30	0.28	0.12	0.70	0.43	0.35	0.12	0.90	0.54	0.41	0.12	1.07
	10.0	0.19	0.21	0.25	0.65	0.33	0.28	0.25	0.86	0.48	0.35	0.25	1.08	0.61	0.42	0.25	1.28
	20.0	0.20	0.21	0.50	0.91	0.35	0.28	0.50	1.13	0.51	0.35	0.50	1.36	0.64	0.42	0.50	1.56
4	0.5	0.13	0.32	0.01	0.46	0.17	0.37	0.01	0.55	0.25	0.41	0.01	0.67	0.33	0.44	0.01	0.78
	1.0	0.15	0.32	0.02	0.49	0.23	0.38	0.02	0.63	0.30	0.42	0.02	0.74	0.36	0.47	0.02	0.85
	2.0	0.16	0.32	0.05	0.53	0.25	0.39	0.05	0.69	0.35	0.44	0.05	0.84	0.45	0.49	0.05	0.99
	5.0	0.19	0.32	0.12	0.63	0.31	0.39	0.12	0.82	0.44	0.45	0.12	1.01	0.58	0.51	0.12	1.21
	10.0	0.20	0.32	0.25	0.77	0.33	0.39	0.25	0.97	0.47	0.45	0.25	1.17	0.62	0.52	0.25	1.39
	20.0	0.22	0.32	0.50	1.04	0.36	0.39	0.50	1.25	0.51	0.45	0.50	1.46	0.66	0.52	0.50	1.68
6	0.5	0.12	0.42	0.01	0.55	0.18	0.45	0.01	0.64	0.24	0.49	0.01	0.74	0.27	0.51	0.01	0.79
	1.0	0.15	0.42	0.02	0.59	0.22	0.47	0.02	0.71	0.31	0.51	0.02	0.84	0.42	0.55	0.02	0.99
	2.0	0.20	0.42	0.05	0.67	0.31	0.48	0.05	0.84	0.41	0.53	0.05	0.99	0.51	0.57	0.05	1.13
	5.0	0.22	0.42	0.12	0.76	0.35	0.48	0.12	0.95	0.48	0.54	0.12	1.14	0.60	0.59	0.12	1.31
	10.0	0.24	0.42	0.25	0.91	0.38	0.48	0.25	1.11	0.51	0.54	0.25	1.30	0.66	0.60	0.25	1.51
	20.0	0.26	0.42	0.50	1.18	0.41	0.48	0.50	1.39	0.55	0.54	0.50	1.59	0.69	0.60	0.50	1.73
8	0.5	0.13	0.50	0.01	0.64	0.16	0.51	0.01	0.68	0.25	0.55	0.01	0.81	0.35	0.56	0.01	0.92
	1.0	0.18	0.50	0.02	0.70	0.22	0.53	0.02	0.77	0.30	0.57	0.02	0.89	0.41	0.60	0.02	1.03
	2.0	0.20	0.50	0.05	0.75	0.29	0.55	0.05	0.89	0.39	0.59	0.05	1.03	0.52	0.63	0.05	1.20
	5.0	0.25	0.50	0.12	0.87	0.35	0.55	0.12	1.02	0.47	0.60	0.12	1.19	0.62	0.65	0.12	1.39
	10.0	0.29	0.50	0.25	1.04	0.42	0.55	0.25	1.22	0.54	0.60	0.25	1.39	0.67	0.66	0.25	1.58
	20.0	0.31	0.50	0.50	1.31	0.45	0.55	0.50	1.50	0.58	0.60	0.50	1.68	0.72	0.66	0.50	1.88

rate of consolidation

H (ft) = 2.5
cv (ft^2/day) = 0.015

U%	constant pore pressure Tv	t (days)	t (years)	t (months)
5	0.0017	0.71	0.00	0.0
10	0.0077	3.21	0.01	0.1
15	0.0177	7.38	0.02	0.2
20	0.0314	13.08	0.04	0.4
25	0.0491	20.46	0.06	0.7
30	0.0707	29.46	0.08	1.0
35	0.0962	40.08	0.11	1.3
40	0.126	52.50	0.14	1.7
45	0.159	66.25	0.18	2.2
50	0.196	81.67	0.22	2.7
55	0.238	99.17	0.27	3.3
60	0.286	119.17	0.33	3.9
65	0.342	142.50	0.39	4.7
70	0.403	167.92	0.46	5.5
75	0.477	198.75	0.54	6.5
80	0.567	236.25	0.65	7.8
85	0.684	285.00	0.78	9.4
90	0.848	353.33	0.97	11.6
95	1.129	470.42	1.29	15.5

rate of consolidation

H (ft) = 5
cv (ft^2/day) = 0.015

U%	constant pore pressure Tv	t (days)	t (years)	t (months)
5	0.0017	2.83	0.01	0.1
10	0.0077	12.83	0.04	0.4
15	0.0177	29.50	0.08	1.0
20	0.0314	52.33	0.14	1.7
25	0.0491	81.83	0.22	2.7
30	0.0707	117.83	0.32	3.9
35	0.0962	160.33	0.44	5.3
40	0.126	210.00	0.58	6.9
45	0.159	265.00	0.73	8.7
50	0.196	326.67	0.89	10.7
55	0.238	396.67	1.09	13.0
60	0.286	476.67	1.31	15.7
65	0.342	570.00	1.56	18.7
70	0.403	671.67	1.84	22.1
75	0.477	795.00	2.18	26.1
80	0.567	945.00	2.59	31.1
85	0.684	1140.00	3.12	37.5
90	0.848	1413.33	3.87	46.5
95	1.129	1881.67	5.16	61.9

Project Title: Scofield Island

Subject: Soil Reach 2 Job No: 19292

By: GPS Date: 3/20/09 Checked By: ______ Date: ______

EUSTIS
Metairie, Louisiana
Lafayette, Louisiana
Gulfport, Mississippi

Page: ______

PLATFORM ELEV	WATER ELEV	MUDLINE ELEV	INDUCED LOADS beach	marsh	dike +4	+6
+3	0.5	0	515	~~234~~ 207	329	503
		−1	560	234	362	536
		−2	604	260	395	569
+3	1.0	0	491	184.3	302	475
		−1	535	211	334	508
		−2	579	238	367	540.5
+3	1.5	0	467	162	273.5	450.5
		−1	510.5	189	307	480
		−2	555	215.5	339	513
+2.5	0.5	0		172		
		−1		197		
		−2		225		
	1.0	0		150		
		−1		174		
		−2		201		
	1.5	0		124		
		−1		151		
		−2		178		
+2	0.5			134.4		
				162		
				189		
	1.0	0		112		
		−1		139		
		−2		166		
	1.5			86		
				116		
				143		

12

0.5

0

CONSOLIDATION SETTLEMENT OF MARSH AREA FILL

	PLATFORM ELEVATION		3	3	3	3	3	3	3	3	3	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2	2	2	2	2	2	2	2	2
	MUDLINE ELEVATION		0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2
	WATER SURFACE ELEVATION		0.5	0.5	0.5	1	1	1	1.5	1.5	1.5	0.5	0.5	0.5	1	1	1	1.5	1.5	1.5	0.5	0.5	0.5	1	1	1	1.5	1.5	1.5
	ULTIMATE SETTLEMENT (FT)		1	1.16	1.34	0.85	1.03	1.18	0.71	0.87	1.05	0.8	0.96	1.12	0.66	0.81	0.97	0.51	0.67	0.82	0.55	0.71	0.87	0.41	0.57	0.72	0.32	0.42	0.58
		Magnitude of settlement in feet over time																											
TIME (YRS)	% ULT																												
0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.5	0.23		0.23	0.27	0.31	0.20	0.24	0.27	0.16	0.20	0.24	0.18	0.22	0.26	0.15	0.19	0.22	0.12	0.15	0.19	0.13	0.16	0.20	0.09	0.13	0.17	0.07	0.10	0.13
1	0.34		0.34	0.39	0.46	0.29	0.35	0.40	0.24	0.30	0.36	0.27	0.33	0.38	0.22	0.28	0.33	0.17	0.23	0.28	0.19	0.24	0.30	0.14	0.19	0.24	0.11	0.14	0.20
3	0.58		0.58	0.67	0.78	0.49	0.60	0.68	0.41	0.50	0.61	0.46	0.56	0.65	0.38	0.47	0.56	0.30	0.39	0.48	0.32	0.41	0.50	0.24	0.33	0.42	0.19	0.24	0.34
5	0.68		0.68	0.79	0.91	0.58	0.70	0.80	0.48	0.59	0.71	0.54	0.65	0.76	0.45	0.55	0.66	0.35	0.46	0.56	0.37	0.48	0.59	0.28	0.39	0.49	0.22	0.29	0.39
10	0.8		0.80	0.93	1.07	0.68	0.82	0.94	0.57	0.70	0.84	0.64	0.77	0.90	0.53	0.65	0.78	0.41	0.54	0.66	0.44	0.57	0.70	0.33	0.46	0.58	0.26	0.34	0.46
20	0.88		0.88	1.02	1.18	0.75	0.91	1.04	0.62	0.77	0.92	0.70	0.84	0.99	0.58	0.71	0.85	0.45	0.59	0.72	0.48	0.62	0.77	0.36	0.50	0.63	0.28	0.37	0.51
ULT	1		1.00	1.16	1.34	0.85	1.03	1.18	0.71	0.87	1.05	0.80	0.96	1.12	0.66	0.81	0.97	0.51	0.67	0.82	0.55	0.71	0.87	0.41	0.57	0.72	0.32	0.42	0.58

Elevation of fill over time

0			3	3	3	3	3	3	3	3	3	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2	2	2	2	2	2	2	2	2
0.5			2.77	2.73	2.69	2.80	2.76	2.73	2.84	2.80	2.76	2.32	2.28	2.24	2.35	2.31	2.28	2.38	2.35	2.31	1.87	1.84	1.80	1.91	1.87	1.83	1.93	1.90	1.87
1			2.66	2.61	2.54	2.71	2.65	2.60	2.76	2.70	2.64	2.23	2.17	2.12	2.28	2.22	2.17	2.33	2.27	2.22	1.81	1.76	1.70	1.86	1.81	1.76	1.89	1.86	1.80
3			2.42	2.33	2.22	2.51	2.40	2.32	2.59	2.50	2.39	2.04	1.94	1.85	2.12	2.03	1.94	2.20	2.11	2.02	1.68	1.59	1.50	1.76	1.67	1.58	1.81	1.76	1.66
5			2.32	2.21	2.09	2.42	2.30	2.20	2.52	2.41	2.29	1.96	1.85	1.74	2.05	1.95	1.84	2.15	2.04	1.94	1.63	1.52	1.41	1.72	1.61	1.51	1.78	1.71	1.61
10			2.20	2.07	1.93	2.32	2.18	2.06	2.43	2.30	2.16	1.86	1.73	1.60	1.97	1.85	1.72	2.09	1.96	1.84	1.56	1.43	1.30	1.67	1.54	1.42	1.74	1.66	1.54
20			2.12	1.98	1.82	2.25	2.09	1.96	2.38	2.23	2.08	1.80	1.66	1.51	1.92	1.79	1.65	2.05	1.91	1.78	1.52	1.38	1.23	1.64	1.50	1.37	1.72	1.63	1.49
ULT			2.00	1.84	1.66	2.15	1.97	1.82	2.29	2.13	1.95	1.70	1.54	1.38	1.84	1.69	1.53	1.99	1.83	1.68	1.45	1.29	1.13	1.59	1.43	1.28	1.68	1.58	1.42

CONSOLIDATION SETTLEMENT OF MARSH AREA FILL ADJUSTED BY ESTIMATED SELF WEIGHT CONSOLIDATION

	INITIAL	PLATFORM ELEVATION	3	3	3	3	3	3	3	3	3	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2	2	2	2	2	2	2	2	2
	PLATFORM	ELEVATION AFTER SELF WT	2.55	2.37	2.22	2.55	2.37	2.22	2.55	2.37	2.22	2.11	1.95	1.8	2.11	1.95	1.8	2.11	1.95	1.8	1.7	1.55	1.37	1.7	1.55	1.37	1.7	1.55	1.37
		MUDLINE ELEVATION	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2
		WATER SURFACE ELEVATION	0.5	0.5	0.5	1	1	1	1.5	1.5	1.5	0.5	0.5	0.5	1	1	1	1.5	1.5	1.5	0.5	0.5	0.5	1	1	1	1.5	1.5	1.5
		ULTIMATE SETTLEMENT (FT)	1	1.16	1.34	0.85	1.03	1.18	0.71	0.87	1.05	0.8	0.96	1.12	0.66	0.81	0.97	0.51	0.67	0.82	0.55	0.71	0.87	0.41	0.57	0.72	0.32	0.42	0.58
		Magnitude of settlement in feet over time (consolidation settlement)																											
TIME (YRS)	% ULT																												
0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.5	0.23		0.23	0.27	0.31	0.20	0.24	0.27	0.16	0.20	0.24	0.18	0.22	0.26	0.15	0.19	0.22	0.12	0.15	0.19	0.13	0.16	0.20	0.09	0.13	0.17	0.07	0.10	0.13
1	0.34		0.34	0.39	0.46	0.29	0.35	0.40	0.24	0.30	0.36	0.27	0.33	0.38	0.22	0.28	0.33	0.17	0.23	0.28	0.19	0.24	0.30	0.14	0.19	0.24	0.11	0.14	0.20
3	0.58		0.58	0.67	0.78	0.49	0.60	0.68	0.41	0.50	0.61	0.46	0.56	0.65	0.38	0.47	0.56	0.30	0.39	0.48	0.32	0.41	0.50	0.24	0.33	0.42	0.19	0.24	0.34
5	0.68		0.68	0.79	0.91	0.58	0.70	0.80	0.48	0.59	0.71	0.54	0.65	0.76	0.45	0.55	0.66	0.35	0.46	0.56	0.37	0.48	0.59	0.28	0.39	0.49	0.22	0.29	0.39
10	0.8		0.80	0.93	1.07	0.68	0.82	0.94	0.57	0.70	0.84	0.64	0.77	0.90	0.53	0.65	0.78	0.41	0.54	0.66	0.44	0.57	0.70	0.33	0.46	0.58	0.26	0.34	0.46
20	0.88		0.88	1.02	1.18	0.75	0.91	1.04	0.62	0.77	0.92	0.70	0.84	0.99	0.58	0.71	0.85	0.45	0.59	0.72	0.48	0.62	0.77	0.36	0.50	0.63	0.28	0.37	0.51
ULT	1		1.00	1.16	1.34	0.85	1.03	1.18	0.71	0.87	1.05	0.80	0.96	1.12	0.66	0.81	0.97	0.51	0.67	0.82	0.55	0.71	0.87	0.41	0.57	0.72	0.32	0.42	0.58

Elevation of fill over time considering self weight consolidation

TIME (YRS)																											
0		2.55	2.37	2.22	2.55	2.37	2.22	2.55	2.37	2.22	2.11	1.95	1.80	2.11	1.95	1.80	2.11	1.95	1.80	1.70	1.55	1.37	1.70	1.55	1.37	1.70	1.55	1.37
0.5		2.32	2.10	1.91	2.35	2.13	1.95	2.39	2.17	1.98	1.93	1.73	1.54	1.96	1.76	1.58	1.99	1.80	1.61	1.57	1.39	1.17	1.61	1.42	1.20	1.63	1.45	1.24
1		2.21	1.98	1.76	2.26	2.02	1.82	2.31	2.07	1.86	1.84	1.62	1.42	1.89	1.67	1.47	1.94	1.72	1.52	1.51	1.31	1.07	1.56	1.36	1.13	1.59	1.41	1.17
3		1.97	1.70	1.44	2.06	1.77	1.54	2.14	1.87	1.61	1.65	1.39	1.15	1.73	1.48	1.24	1.81	1.56	1.32	1.38	1.14	0.87	1.46	1.22	0.95	1.51	1.31	1.03
5		1.87	1.58	1.31	1.97	1.67	1.42	2.07	1.78	1.51	1.57	1.30	1.04	1.66	1.40	1.14	1.76	1.49	1.24	1.33	1.07	0.78	1.42	1.16	0.88	1.48	1.26	0.98
10		1.75	1.44	1.15	1.87	1.55	1.28	1.98	1.67	1.38	1.47	1.18	0.90	1.58	1.30	1.02	1.70	1.41	1.14	1.26	0.98	0.67	1.37	1.09	0.79	1.44	1.21	0.91
20		1.67	1.35	1.04	1.80	1.46	1.18	1.93	1.60	1.30	1.41	1.11	0.81	1.53	1.24	0.95	1.66	1.36	1.08	1.22	0.93	0.60	1.34	1.05	0.74	1.42	1.18	0.86
ULT		1.55	1.21	0.88	1.70	1.34	1.04	1.84	1.50	1.17	1.31	0.99	0.68	1.45	1.14	0.83	1.60	1.28	0.98	1.15	0.84	0.50	1.29	0.98	0.65	1.38	1.13	0.79

CONSOLIDATION SETTLEMENT OF MARSH AREA FILL ADJUSTED BY ESTIMATED SELF WEIGHT CONSOLIDATION AND GEOLOGIC SUBSIDENCE

	INITIAL	PLATFORM ELEVATION	3	3	3	3	3	3	3	3	3	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2	2	2	2	2	2	2	2	2
	PLATFORM	ELEVATION AFTER SELF WT	2.55	2.37	2.22	2.55	2.37	2.22	2.55	2.37	2.22	2.11	1.95	1.8	2.11	1.95	1.8	2.11	1.95	1.8	1.7	1.55	1.37	1.7	1.55	1.37	1.7	1.55	1.37
		MUDLINE ELEVATION	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2
		WATER SURFACE ELEVATION	0.5	0.5	0.5	1	1	1	1.5	1.5	1.5	0.5	0.5	0.5	1	1	1	1.5	1.5	1.5	0.5	0.5	0.5	1	1	1	1.5	1.5	1.5
		ULTIMATE SETTLEMENT (FT)	1	1.16	1.34	0.85	1.03	1.18	0.71	0.87	1.05	0.8	0.96	1.12	0.66	0.81	0.97	0.51	0.67	0.82	0.55	0.71	0.87	0.41	0.57	0.72	0.32	0.42	0.58
		Magnitude of settlement in feet over time (consolidation settlement)																											
TIME (YRS)	% ULT																												
0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.5	0.23		0.23	0.27	0.31	0.20	0.24	0.27	0.16	0.20	0.24	0.18	0.22	0.26	0.15	0.19	0.22	0.12	0.15	0.19	0.13	0.16	0.20	0.09	0.13	0.17	0.07	0.10	0.13
1	0.34		0.34	0.39	0.46	0.29	0.35	0.40	0.24	0.30	0.36	0.27	0.33	0.38	0.22	0.28	0.33	0.17	0.23	0.28	0.19	0.24	0.30	0.14	0.19	0.24	0.11	0.14	0.20
3	0.58		0.58	0.67	0.78	0.49	0.60	0.68	0.41	0.50	0.61	0.46	0.56	0.65	0.38	0.47	0.56	0.30	0.39	0.48	0.32	0.41	0.50	0.24	0.33	0.42	0.19	0.24	0.34
5	0.68		0.68	0.79	0.91	0.58	0.70	0.80	0.48	0.59	0.71	0.54	0.65	0.76	0.45	0.55	0.66	0.35	0.46	0.56	0.37	0.48	0.59	0.28	0.39	0.49	0.22	0.29	0.39
10	0.8		0.80	0.93	1.07	0.68	0.82	0.94	0.57	0.70	0.84	0.64	0.77	0.90	0.53	0.65	0.78	0.41	0.54	0.66	0.44	0.57	0.70	0.33	0.46	0.58	0.26	0.34	0.46
20	0.88		0.88	1.02	1.18	0.75	0.91	1.04	0.62	0.77	0.92	0.70	0.84	0.99	0.58	0.71	0.85	0.45	0.59	0.72	0.48	0.62	0.77	0.36	0.50	0.63	0.28	0.37	0.51
ULT	1		1.00	1.16	1.34	0.85	1.03	1.18	0.71	0.87	1.05	0.80	0.96	1.12	0.66	0.81	0.97	0.51	0.67	0.82	0.55	0.71	0.87	0.41	0.57	0.72	0.32	0.42	0.58

		Elevation of fill over time considering self weight consolidation and geologic subsidence																											
TIME (YRS)	sub (ft)																												
0	0		2.55	2.37	2.22	2.55	2.37	2.22	2.55	2.37	2.22	2.11	1.95	1.80	2.11	1.95	1.80	2.11	1.95	1.80	1.70	1.55	1.37	1.70	1.55	1.37	1.70	1.55	1.37
0.5	0.0125		2.31	2.09	1.90	2.34	2.12	1.94	2.37	2.16	1.97	1.91	1.72	1.53	1.95	1.75	1.56	1.98	1.78	1.60	1.56	1.37	1.16	1.59	1.41	1.19	1.61	1.44	1.22
1	0.025		2.19	1.95	1.74	2.24	1.99	1.79	2.28	2.05	1.84	1.81	1.60	1.39	1.86	1.65	1.45	1.91	1.70	1.50	1.49	1.28	1.05	1.54	1.33	1.10	1.57	1.38	1.15
3	0.075		1.90	1.62	1.37	1.98	1.70	1.46	2.06	1.79	1.54	1.57	1.32	1.08	1.65	1.41	1.16	1.74	1.49	1.25	1.31	1.06	0.79	1.39	1.14	0.88	1.44	1.23	0.96
5	0.125		1.75	1.46	1.18	1.85	1.54	1.29	1.94	1.65	1.38	1.44	1.17	0.91	1.54	1.27	1.02	1.64	1.37	1.12	1.20	0.94	0.65	1.30	1.04	0.76	1.36	1.14	0.85
10	0.25		1.50	1.19	0.90	1.62	1.30	1.03	1.73	1.42	1.13	1.22	0.93	0.65	1.33	1.05	0.77	1.45	1.16	0.89	1.01	0.73	0.42	1.12	0.84	0.54	1.19	0.96	0.66
20	0.5		1.17	0.85	0.54	1.30	0.96	0.68	1.43	1.10	0.80	0.91	0.61	0.31	1.03	0.74	0.45	1.16	0.86	0.58	0.72	0.43	0.10	0.84	0.55	0.24	0.92	0.68	0.36
ULT																													

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 — marsh to el 3 — beach to el 6 average — dike to el 4

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	207.0	615.0	329.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at le 0.5

1.00	1.50	100.00	150.46
	1.50	37.00	55.33
			205.79

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement				Induced Settlement			
		Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	1.01	13.51	14.52	11.94	0.39	0.20	0.59	0.55
	(ft)	0.08	1.13	1.21	1.00	0.03	0.02	0.05	0.05
	%Ultimate			100.0	82.3			4.1	3.8
REDUCD	(in)	0.86	11.49	12.34	10.15	0.33	0.17	0.50	0.46
	(ft)	0.07	0.96	1.03	0.85	0.03	0.01	0.04	0.04
	%Ultimate			85.0	69.9			3.5	3.2

Group	L (ft)		Region 1 0.08	Region 2 0.08	Region 3 0.08	Region 4 0.08	Region 5 0.08	Region 6 0.08	Region 7 0.08	Region 8 0.08	Region 9 0.08	Region 10 0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sf/yr)	ch (sf/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)
	0.0								0				
1	2.0 4.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	114 228	207 181.5%	321	207 181.5%	321
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	207 74.4%	485	122 43.9%	400
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	207 51.3%	610	0 0.0%	403
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	207 37.3%	760	0 0.0%	553
5	22.5 25.0	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761 893	206 27.1%	967	11 1.4%	771
6	27.0 29.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999 1105	206 20.6%	1205	12 1.2%	1011
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	206 16.7%	1440	19 1.5%	1253
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	206 14.0%	1676	8 0.5%	1478
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	206 12.2%	1891	0 0.0%	1686
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	206 10.8%	2106	0 0.0%	1901
11	51.0 52.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058 2108	205 10.0%	2263	0 0.0%	2058
12	53.5 55.0	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183 2258	205 9.4%	2388	6 0.3%	2189
13	57.5 60.0	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383 2508	205 8.6%	2588	9 0.4%	2392
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	205 7.8%	2838	0 0.0%	2633
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	205 7.1%	3088	0 0.0%	2883
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	205 6.5%	3338	6 0.2%	3139
17	77.5 80.0	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383 3508	205 6.1%	3588	4 0.1%	3387
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	205 5.6%	3838	0 0.0%	3633
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	204 5.3%	4087	0 0.0%	3883
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	204 4.9%	4337	6 0.1%	4139
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	204 4.7%	4587	0 0.0%	4383
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	204 4.4%	4837	0 0.0%	4633
23	107.5 110.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883 5008	204 4.2%	5087	2 0.0%	4885
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	204 4.0%	5337	5 0.1%	5138
25	117.5 120.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383 5508	203 3.8%	5586	0 0.0%	5383

Str No.	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz
			(14.52)	(11.94)			(0.59)	(0.55)										
1	0.00	0.00	0.00 (14.52)	0.00 (11.94)	0.00	0.00	0.00 (0.59)	0.00 (0.55)	0.998 (207)	0.001 (0)	0.000 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)
2	0.58	0.00	0.58 (13.95)	0.58 (11.37)	0.38	0.00	0.38 (0.21)	0.38 (0.17)	0.995 (206)	0.002 (1)	0.000 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)
3	0.00	4.28	4.28 (9.66)	4.28 (7.08)	0.00	0.00	0.00 (0.21)	0.00 (0.17)	0.990 (205)	0.003 (2)	0.000 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)
4	0.00	3.28	3.28 (6.38)	3.28 (3.80)	0.00	0.00	0.00 (0.21)	0.00 (0.17)	0.985 (204)	0.005 (3)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
5	0.09	0.00	0.09 (6.28)	0.09 (3.71)	0.01	0.00	0.01 (0.21)	0.01 (0.16)	0.980 (203)	0.007 (3)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
6	0.06	0.00	0.06 (6.22)	0.06 (3.65)	0.00	0.00	0.00 (0.21)	0.00 (0.16)	0.976 (202)	0.008 (4)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
7	0.00	1.27	1.27 (4.96)	1.27 (2.38)	0.00	0.12	0.12 (0.08)	0.12 (0.04)	0.971 (201)	0.009 (5)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
8	0.00	0.89	0.89 (4.06)	0.89 (1.49)	0.00	0.04	0.04 (0.05)	0.04 (0.00)	0.966 (200)	0.011 (6)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
9	0.00	0.79	0.79 (3.28)	0.79 (0.70)	0.00	0.00	0.00 (0.05)	0.00 (0.00)	0.962 (199)	0.013 (6)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
10	0.00	0.70	0.70 (2.58)	0.70 (0.00)	0.00	0.00	0.00 (0.05)	0.00 (0.00)	0.957 (198)	0.014 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
11	0.00	0.20	0.20 (2.38)	0.00 (0.00)	0.00	0.00	0.00 (0.05)	0.00 (0.00)	0.954 (197)	0.015 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
12	0.00	0.28	0.28 (2.10)	0.00 (0.00)	0.00	0.01	0.01 (0.04)	0.00 (0.00)	0.952 (197)	0.016 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
13	0.00	0.43	0.43 (1.67)	0.00 (0.00)	0.00	0.02	0.02 (0.02)	0.00 (0.00)	0.948 (196)	0.017 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
14	0.00	0.39	0.39 (1.28)	0.00 (0.00)	0.00	0.00	0.00 (0.02)	0.00 (0.00)	0.944 (195)	0.018 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
15	0.00	0.36	0.36 (0.92)	0.00 (0.00)	0.00	0.00	0.00 (0.02)	0.00 (0.00)	0.939 (194)	0.020 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
16	0.00	0.33	0.33 (0.59)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)	0.935 (193)	0.021 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
17	0.00	0.31	0.31 (0.28)	0.00 (0.00)	0.00	0.01	0.01 (0.00)	0.00 (0.00)	0.930 (193)	0.023 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
18	0.04	0.00	0.04 (0.24)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.926 (192)	0.024 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
19	0.04	0.00	0.04 (0.20)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.921 (191)	0.026 (13)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
20	0.04	0.00	0.04 (0.16)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.917 (190)	0.027 (14)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
21	0.04	0.00	0.04 (0.13)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.912 (189)	0.029 (15)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
22	0.03	0.00	0.03 (0.09)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.908 (188)	0.030 (15)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
23	0.03	0.00	0.03 (0.06)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.903 (187)	0.031 (16)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
24	0.03	0.00	0.03 (0.03)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.899 (186)	0.033 (17)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
25	0.03	0.00	0.03 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.895 (185)	0.034 (18)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)

Str No.	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.00	0.000	1.00 (207)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	3.92	0.020	0.59 (122)	0.59 (1)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)
3	5.88	0.068	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	5.88	0.127	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.15	0.157	0.05 (11)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
6	0.12	0.158	0.06 (12)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)
7	4.10	0.179	0.09 (18)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)
8	3.42	0.217	0.04 (8)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	3.42	0.251	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	3.42	0.285	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	2.00	0.312	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	3.00	0.337	0.03 (6)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
13	5.00	0.377	0.04 (9)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	5.00	0.427	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	5.00	0.476	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	5.00	0.526	0.03 (5)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
17	5.00	0.576	0.02 (3)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	5.00	0.626	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	5.00	0.676	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	5.00	0.726	0.03 (6)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	5.00	0.776	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	5.00	0.825	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	5.00	0.875	0.01 (2)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	5.00	0.925	0.02 (4)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	5.00	0.975	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

TOTAL	(in)	1.01	13.51	14.52	11.94	0.39	0.20	0.59	0.55
	(ft)	0.08	1.13	1.21	1.00	0.03	0.02	0.05	0.05
	%Ultimate			100.0	82.3			4.1	3.8
REDUCD	(in)	0.86	11.49	12.34	10.15	0.33	0.17	0.50	0.46
	(ft)	0.07	0.96	1.03	0.85	0.03	0.01	0.04	0.04
	%Ultimate			85.0	69.9			3.5	3.2

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 — marsh to — beach to el 6 — dike to el 4

Reach 2 - Thin Barrier Beach at surface — el 3 — average

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	234.0	560.0	362.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at le 0.5

1.16	2.34	100.00	233.86
	2.66	37.00	98.47
			332.33

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement				Induced Settlement			
		Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	1.09	15.20	16.29	13.94	0.43	0.23	0.66	0.62
	(ft)	0.09	1.27	1.36	1.16	0.04	0.02	0.05	0.05
	%Ultimate			100.0	85.5			4.0	3.8
REDUCD	(in)	0.93	12.92	13.85	11.85	0.37	0.19	0.56	0.52
	(ft)	0.08	1.08	1.15	0.99	0.03	0.02	0.05	0.04
	%Ultimate			85.0	72.7			3.4	3.2

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
1	0.0 2.0 4.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	0 114 228	234 205.2%	348	234 205.2%	348	0.00	0.00	(16.29) 0.00 (16.29)	(13.94) 0.00 (13.94)	0.00	0.00	(0.66) 0.00 (0.66)	(0.62) 0.00 (0.62)
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	234 84.1%	512	138 49.6%	416	0.61	0.16	0.77 (15.52)	0.77 (13.17)	0.42	0.00	0.42 (0.24)	0.42 (0.20)
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	234 58.0%	637	0 0.0%	403	0.00	4.73	4.73 (10.79)	4.73 (8.44)	0.00	0.00	0.00 (0.24)	0.00 (0.20)
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	233 42.2%	786	0 0.0%	553	0.00	3.64	3.64 (7.15)	3.64 (4.79)	0.00	0.00	0.00 (0.24)	0.00 (0.20)
5	22.5 25.0	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761 893	233 30.7%	994	12 1.6%	773	0.10	0.00	0.10 (7.05)	0.10 (4.69)	0.01	0.00	0.01 (0.24)	0.01 (0.19)
6	27.0 29.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999 1105	233 23.3%	1232	13 1.3%	1012	0.07	0.00	0.07 (6.98)	0.07 (4.62)	0.00	0.00	0.00 (0.23)	0.00 (0.19)
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	233 18.9%	1467	21 1.7%	1255	0.00	1.42	1.42 (5.56)	1.42 (3.21)	0.00	0.14	0.14 (0.09)	0.14 (0.05)
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	233 15.8%	1703	9 0.6%	1479	0.00	1.00	1.00 (4.56)	1.00 (2.21)	0.00	0.04	0.04 (0.05)	0.04 (0.01)
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	232 13.8%	1918	0 0.0%	1686	0.00	0.88	0.88 (3.68)	0.88 (1.32)	0.00	0.00	0.00 (0.05)	0.00 (0.01)
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	232 12.2%	2133	0 0.0%	1901	0.00	0.79	0.79 (2.89)	0.79 (0.54)	0.00	0.00	0.00 (0.05)	0.00 (0.01)
11	51.0 52.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058 2108	232 11.3%	2290	0 0.0%	2058	0.00	0.22	0.22 (2.67)	0.22 (0.32)	0.00	0.00	0.00 (0.05)	0.00 (0.01)
12	53.5 55.0	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183 2258	232 10.6%	2415	7 0.3%	2190	0.00	0.32	0.32 (2.36)	0.32 (0.00)	0.00	0.01	0.01 (0.04)	0.01 (0.00)
13	57.5 60.0	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383 2508	232 9.7%	2615	10 0.4%	2393	0.00	0.48	0.48 (1.87)	0.00 (0.00)	0.00	0.02	0.02 (0.02)	0.00 (0.00)
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	231 8.8%	2864	0 0.0%	2633	0.00	0.44	0.44 (1.43)	0.00 (0.00)	0.00	0.00	0.00 (0.02)	0.00 (0.00)
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	231 8.0%	3114	0 0.0%	2883	0.00	0.40	0.40 (1.03)	0.00 (0.00)	0.00	0.00	0.00 (0.02)	0.00 (0.00)
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	231 7.4%	3364	6 0.2%	3139	0.00	0.37	0.37 (0.66)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)
17	77.5 80.0	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383 3508	231 6.8%	3614	4 0.1%	3387	0.00	0.34	0.34 (0.32)	0.00 (0.00)	0.00	0.01	0.01 (0.00)	0.00 (0.00)
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	231 6.3%	3864	0 0.0%	3633	0.05	0.00	0.05 (0.27)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	230 5.9%	4113	0 0.0%	3883	0.05	0.00	0.05 (0.22)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	230 5.6%	4363	7 0.2%	4140	0.04	0.00	0.04 (0.18)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	230 5.2%	4613	0 0.0%	4383	0.04	0.00	0.04 (0.14)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	230 5.0%	4863	0 0.0%	4633	0.04	0.00	0.04 (0.10)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
23	107.5 110.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883 5008	230 4.7%	5113	2 0.0%	4885	0.04	0.00	0.04 (0.07)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	229 4.5%	5362	5 0.1%	5138	0.03	0.00	0.03 (0.03)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
25	117.5 120.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383 5508	229 4.3%	5612	0 0.0%	5383	0.03	0.00	0.03 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)

Str No.	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.998 (234)	0.001 (0)	0.000 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.00	0.000	1.00 (234)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	0.995 (233)	0.002 (1)	0.000 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	3.92	0.020	0.59 (137)	0.59 (1)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)
3	0.990 (232)	0.003 (2)	0.000 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	5.88	0.068	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	0.985 (230)	0.005 (3)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	5.88	0.127	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.980 (229)	0.007 (4)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.15	0.157	0.05 (12)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
6	0.976 (228)	0.008 (4)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.12	0.158	0.06 (13)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)
7	0.971 (227)	0.009 (5)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	4.10	0.179	0.09 (21)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)
8	0.966 (226)	0.011 (6)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.217	0.04 (9)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	0.962 (225)	0.013 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.251	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	0.957 (224)	0.014 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.285	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	0.954 (223)	0.015 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	2.00	0.312	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	0.952 (223)	0.016 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.00	0.337	0.03 (6)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
13	0.948 (222)	0.017 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.377	0.04 (10)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	0.944 (221)	0.018 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.427	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	0.939 (220)	0.020 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.476	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	0.935 (219)	0.021 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.526	0.03 (6)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
17	0.930 (218)	0.023 (13)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.576	0.02 (4)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	0.926 (217)	0.024 (14)	0.001 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.626	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	0.921 (216)	0.026 (14)	0.001 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.676	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	0.917 (215)	0.027 (15)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.726	0.03 (6)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	0.912 (213)	0.029 (16)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.776	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	0.908 (212)	0.030 (17)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.825	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	0.903 (211)	0.031 (18)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.875	0.01 (2)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	0.899 (210)	0.033 (18)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.925	0.02 (5)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	0.895 (209)	0.034 (19)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.975	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

TOTAL	(in)	1.09	15.20	16.29	13.94	0.43	0.23	0.66	0.62
	(ft)	0.09	1.27	1.36	1.16	0.04	0.02	0.05	0.05
	%Ultimate			100.0	85.5			4.0	3.8
REDUCD	(in)	0.93	12.92	13.85	11.85	0.37	0.19	0.56	0.52
	(ft)	0.08	1.08	1.15	0.99	0.03	0.02	0.05	0.04
	%Ultimate			85.0	72.7			3.4	3.2

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 — marsh to el 3 — beach to el 6 average — dike to el 4

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	260.0	604.0	395.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at le 0.5

1.34	2.16	100.00	216.27
	3.84	37.00	141.98
			358.25

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.25
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement				Induced Settlement			
		Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	1.14	16.97	18.12	16.05	0.48	0.22	0.70	0.68
	(ft)	0.10	1.41	1.51	1.34	0.04	0.02	0.06	0.06
	%Ultimate			100.0	88.6			3.9	3.8
REDUCD	(in)	0.97	14.43	15.40	13.64	0.41	0.19	0.59	0.58
	(ft)	0.08	1.20	1.28	1.14	0.03	0.02	0.05	0.05
	%Ultimate			85.0	75.3			3.3	3.2

4.24

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
	0.0								0							(18.12)	(16.05)			(0.70)	(0.68)
1	2.0 4.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	114 228	260 228.0%	374	260 228.0%	374	0.00	0.00	0.00 (18.12)	0.00 (16.05)	0.00	0.00	0.00 (0.70)	0.00 (0.68)
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	260 93.4%	538	158 56.8%	436	0.61	0.50	1.11 (17.01)	1.11 (14.94)	0.47	0.00	0.47 (0.23)	0.47 (0.21)
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	259 64.4%	662	0 0.0%	403	0.00	5.14	5.14 (11.86)	5.14 (9.79)	0.00	0.00	0.00 (0.23)	0.00 (0.21)
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	259 46.9%	812	0 0.0%	553	0.00	3.98	3.98 (7.89)	3.98 (5.82)	0.00	0.00	0.00 (0.23)	0.00 (0.21)
5	22.5 25.0	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761 893	259 34.0%	1019	11 1.4%	771	0.11	0.00	0.11 (7.77)	0.11 (5.70)	0.01	0.00	0.01 (0.23)	0.01 (0.21)
6	27.0 29.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999 1105	259 25.9%	1258	12 1.2%	1011	0.07	0.00	0.07 (7.70)	0.07 (5.63)	0.00	0.00	0.00 (0.22)	0.00 (0.21)
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	258 20.9%	1492	20 1.6%	1254	0.00	1.56	1.56 (6.14)	1.56 (4.07)	0.00	0.13	0.13 (0.09)	0.13 (0.07)
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	258 17.6%	1729	9 0.6%	1480	0.00	1.10	1.10 (5.04)	1.10 (2.97)	0.00	0.04	0.04 (0.05)	0.04 (0.03)
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	258 15.3%	1943	0 0.0%	1686	0.00	0.97	0.97 (4.07)	0.97 (2.00)	0.00	0.00	0.00 (0.05)	0.00 (0.03)
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	258 13.6%	2158	0 0.0%	1901	0.00	0.87	0.87 (3.20)	0.87 (1.13)	0.00	0.00	0.00 (0.05)	0.00 (0.03)
11	51.0 52.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058 2108	257 12.5%	2315	0 0.0%	2058	0.00	0.25	0.25 (2.95)	0.25 (0.88)	0.00	0.00	0.00 (0.05)	0.00 (0.03)
12	53.5 55.0	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183 2258	257 11.8%	2440	6 0.3%	2189	0.00	0.35	0.35 (2.60)	0.35 (0.53)	0.00	0.01	0.01 (0.04)	0.01 (0.02)
13	57.5 60.0	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383 2508	257 10.8%	2640	10 0.4%	2393	0.00	0.53	0.53 (2.07)	0.53 (0.00)	0.00	0.02	0.02 (0.02)	0.02 (0.00)
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	257 9.8%	2890	0 0.0%	2633	0.00	0.49	0.49 (1.58)	0.00 (0.00)	0.00	0.00	0.00 (0.02)	0.00 (0.00)
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	257 8.9%	3140	0 0.0%	2883	0.00	0.44	0.44 (1.14)	0.00 (0.00)	0.00	0.00	0.00 (0.02)	0.00 (0.00)
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	256 8.2%	3389	6 0.2%	3139	0.00	0.41	0.41 (0.73)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)
17	77.5 80.0	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383 3508	256 7.6%	3639	4 0.1%	3387	0.00	0.38	0.38 (0.35)	0.00 (0.00)	0.00	0.01	0.01 (0.00)	0.00 (0.00)
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	256 7.0%	3889	0 0.0%	3633	0.05	0.00	0.05 (0.30)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	256 6.6%	4139	0 0.0%	3883	0.05	0.00	0.05 (0.25)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	255 6.2%	4388	7 0.2%	4140	0.05	0.00	0.05 (0.20)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	255 5.8%	4638	0 0.0%	4383	0.04	0.00	0.04 (0.16)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	255 5.5%	4888	0 0.0%	4633	0.04	0.00	0.04 (0.11)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
23	107.5 110.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883 5008	255 5.2%	5138	2 0.0%	4885	0.04	0.00	0.04 (0.07)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	254 5.0%	5387	5 0.1%	5138	0.04	0.00	0.04 (0.04)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
25	117.5 120.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383 5508	254 4.7%	5637	0 0.0%	5383	0.04	0.00	0.04 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)

Str No.	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.998 (260)	0.001 (0)	0.000 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.00	0.000	1.00 (260)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	0.995 (259)	0.002 (1)	0.000 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	3.92	0.020	0.61 (157)	0.61 (1)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)
3	0.990 (257)	0.003 (2)	0.000 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	5.88	0.068	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	0.985 (256)	0.005 (3)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	5.88	0.127	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.980 (255)	0.007 (4)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.15	0.157	0.04 (11)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
6	0.976 (254)	0.008 (5)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.12	0.158	0.05 (12)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
7	0.971 (252)	0.009 (6)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	4.10	0.179	0.08 (20)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)
8	0.966 (251)	0.011 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.217	0.04 (9)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	0.962 (250)	0.013 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.251	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	0.957 (249)	0.014 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.285	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	0.954 (248)	0.015 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	2.00	0.312	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	0.952 (247)	0.016 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.00	0.337	0.02 (6)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
13	0.948 (247)	0.017 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.377	0.04 (10)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	0.944 (245)	0.018 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.427	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	0.939 (244)	0.020 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.476	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	0.935 (243)	0.021 (13)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.526	0.02 (6)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
17	0.930 (242)	0.023 (14)	0.001 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.576	0.02 (4)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	0.926 (241)	0.024 (15)	0.001 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.626	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	0.921 (240)	0.026 (16)	0.001 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.676	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	0.917 (238)	0.027 (16)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.726	0.03 (6)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	0.912 (237)	0.029 (17)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.776	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	0.908 (236)	0.030 (18)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.825	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	0.903 (235)	0.031 (19)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.875	0.01 (2)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	0.899 (234)	0.033 (20)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.925	0.02 (5)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	0.895 (233)	0.034 (21)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.975	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

TOTAL	(in)	1.14	16.97	18.12	16.05	0.48	0.22	0.70	0.68
	(ft)	0.10	1.41	1.51	1.34	0.04	0.02	0.06	0.06
	%Ultimate			100.0	88.6			3.9	3.8
REDUCD	(in)	0.97	14.43	15.40	13.64	0.41	0.19	0.59	0.58
	(ft)	0.08	1.20	1.28	1.14	0.03	0.02	0.05	0.05
	%Ultimate			85.0	75.3			3.3	3.2

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 — marsh to el 3 — beach to el 6 average — dike to el 4

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	184.3	491.0	302.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 1

0.85	4.15	120.00	498.22
	1.85	57.00	105.35
			603.56

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement				Induced Settlement			
		Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.92	12.20	13.12	10.18	0.35	0.18	0.53	0.49
	(ft)	0.08	1.02	1.09	0.85	0.03	0.02	0.04	0.04
	%Ultimate			100.0	77.6			4.1	3.8
REDUCD	(in)	0.78	10.37	11.15	8.65	0.30	0.15	0.45	0.42
	(ft)	0.06	0.86	0.93	0.72	0.02	0.01	0.04	0.03
	%Ultimate			85.0	65.9			3.5	3.2

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
	0.0								0							(13.12)	(10.18)			(0.53)	(0.49)
1	2.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	114	184	298	184	298	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4.0								228	161.6%		161.6%				(13.12)	(10.18)			(0.53)	(0.49)
2	6.0	25.0	0.331	0.050	7.3	11.0	4.0	500	276	184	462	109	387	0.53	0.00	0.53	0.53	0.34	0.00	0.34	0.34
	8.0								328	66.3%		39.1%				(12.59)	(9.65)			(0.19)	(0.15)
3	11.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403	184	587	0	403	0.00	3.89	3.89	3.89	0.00	0.00	0.00	0.00
	14.0								478	45.7%		0.0%				(8.70)	(5.76)			(0.19)	(0.15)
4	17.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553	184	737	0	553	0.00	2.97	2.97	2.97	0.00	0.00	0.00	0.00
	20.0								628	33.3%		0.0%				(5.72)	(2.78)			(0.19)	(0.15)
5	22.5	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761	184	944	10	770	0.08	0.00	0.08	0.08	0.01	0.00	0.01	0.01
	25.0								893	24.2%		1.3%				(5.64)	(2.70)			(0.19)	(0.15)
6	27.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999	184	1183	11	1010	0.05	0.00	0.05	0.05	0.00	0.00	0.00	0.00
	29.0								1105	18.4%		1.1%				(5.59)	(2.65)			(0.18)	(0.14)
7	32.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234	184	1418	17	1251	0.00	1.14	1.14	1.14	0.00	0.11	0.11	0.11
	35.0								1363	14.9%		1.4%				(4.45)	(1.51)			(0.07)	(0.03)
8	37.5	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471	184	1654	7	1477	0.00	0.80	0.80	0.80	0.00	0.03	0.03	0.03
	40.0								1578	12.5%		0.5%				(3.65)	(0.71)			(0.04)	(0.00)
9	42.5	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686	184	1869	0	1686	0.00	0.71	0.71	0.71	0.00	0.00	0.00	0.00
	45.0								1793	10.9%		0.0%				(2.94)	(0.00)			(0.04)	(0.00)
10	47.5	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901	184	2084	0	1901	0.00	0.63	0.63	0.00	0.00	0.00	0.00	0.00
	50.0								2008	9.7%		0.0%				(2.31)	(0.00)			(0.04)	(0.00)
11	51.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058	183	2241	0	2058	0.00	0.18	0.18	0.00	0.00	0.00	0.00	0.00
	52.0								2108	8.9%		0.0%				(2.13)	(0.00)			(0.04)	(0.00)
12	53.5	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183	183	2366	5	2188	0.00	0.25	0.25	0.00	0.00	0.01	0.01	0.00
	55.0								2258	8.4%		0.2%				(1.88)	(0.00)			(0.03)	(0.00)
13	57.5	50.0	0.200	0.030	7.0	10.6	5.0	2383	2383	183	2566	8	2391	0.00	0.39	0.39	0.00	0.00	0.02	0.02	0.00
	60.0								2508	7.7%		0.3%				(1.49)	(0.00)			(0.02)	(0.00)
14	62.5	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633	183	2816	0	2633	0.00	0.35	0.35	0.00	0.00	0.00	0.00	0.00
	65.0								2758	7.0%		0.0%				(1.14)	(0.00)			(0.02)	(0.00)
15	67.5	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883	183	3066	0	2883	0.00	0.32	0.32	0.00	0.00	0.00	0.00	0.00
	70.0								3008	6.4%		0.0%				(0.82)	(0.00)			(0.02)	(0.00)
16	72.5	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133	183	3316	5	3138	0.00	0.30	0.30	0.00	0.00	0.01	0.01	0.00
	75.0								3258	5.8%		0.2%				(0.53)	(0.00)			(0.01)	(0.00)
17	77.5	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383	183	3566	3	3386	0.00	0.27	0.27	0.00	0.00	0.01	0.01	0.00
	80.0								3508	5.4%		0.1%				(0.25)	(0.00)			(0.00)	(0.00)
18	82.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633	183	3816	0	3633	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00
	85.0								3758	5.0%		0.0%				(0.21)	(0.00)			(0.00)	(0.00)
19	87.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883	183	4066	0	3883	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00
	90.0								4008	4.7%		0.0%				(0.18)	(0.00)			(0.00)	(0.00)
20	92.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133	183	4316	5	4138	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	95.0								4258	4.4%		0.1%				(0.14)	(0.00)			(0.00)	(0.00)
21	97.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383	183	4566	0	4383	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	100.0								4508	4.2%		0.0%				(0.11)	(0.00)			(0.00)	(0.00)
22	102.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633	183	4816	0	4633	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	105.0								4758	3.9%		0.0%				(0.08)	(0.00)			(0.00)	(0.00)
23	107.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883	182	5065	2	4885	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	110.0								5008	3.7%		0.0%				(0.05)	(0.00)			(0.00)	(0.00)
24	112.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133	182	5315	4	5137	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	115.0								5258	3.6%		0.1%				(0.03)	(0.00)			(0.00)	(0.00)
25	117.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383	182	5565	0	5383	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	120.0								5508	3.4%		0.0%				(0.00)	(0.00)			(0.00)	(0.00)

Str No.	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.998	0.001	0.000	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.00	0.000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	(184)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(184)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2	0.995	0.002	0.000	0.009	0.009	0.009	0.009	0.009	0.009	0.009	3.92	0.020	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
	(183)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(108)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
3	0.990	0.003	0.000	0.003	0.003	0.003	0.003	0.003	0.003	0.003	5.88	0.068	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(182)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
4	0.985	0.005	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5.88	0.127	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(181)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
5	0.980	0.007	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.15	0.157	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	(181)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6	0.976	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.12	0.158	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
	(180)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
7	0.971	0.009	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.10	0.179	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
	(179)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(16)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
8	0.966	0.011	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.42	0.217	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
	(178)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
9	0.962	0.013	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.42	0.251	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(177)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
10	0.957	0.014	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.42	0.285	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(176)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
11	0.954	0.015	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.00	0.312	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(176)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
12	0.952	0.016	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.00	0.337	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	(175)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
13	0.948	0.017	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.377	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
	(175)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14	0.944	0.018	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.427	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(174)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
15	0.939	0.020	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.476	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(173)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16	0.935	0.021	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.526	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	(172)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
17	0.930	0.023	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.576	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	(171)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18	0.926	0.024	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.626	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(171)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
19	0.921	0.026	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.676	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(170)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20	0.917	0.027	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.726	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	(169)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
21	0.912	0.029	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.776	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(168)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22	0.908	0.030	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.825	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(167)	(15)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
23	0.903	0.031	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.875	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	(167)	(15)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
24	0.899	0.033	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.925	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	(166)	(16)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
25	0.895	0.034	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.975	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(165)	(17)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

TOTAL	(in)	0.92	12.20	13.12	10.18	0.35	0.18	0.53	0.49
	(ft)	0.08	1.02	1.09	0.85	0.03	0.02	0.04	0.04
	%Ultimate			100.0	77.6			4.1	3.8
REDUCD	(in)	0.78	10.37	11.15	8.65	0.30	0.15	0.45	0.42
	(ft)	0.06	0.86	0.93	0.72	0.02	0.01	0.04	0.03
	%Ultimate			85.0	65.9			3.5	3.2

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 marsh to el 3 beach to el 6 dike to el 4
Reach 2 - Thin Barrier Beach at surface average

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	211.0	635.0	334.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 1

1.03	2.97	120.00	356.51
	3.03	57.00	172.66
			529.17

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement				Induced Settlement			
		Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	1.03	13.75	14.77	12.35	0.39	0.21	0.60	0.56
	(ft)	0.09	1.15	1.23	1.03	0.03	0.02	0.05	0.05
	%Ultimate			100.0	83.6			4.1	3.8
REDUCD	(in)	0.87	11.69	12.56	10.50	0.34	0.18	0.51	0.47
	(ft)	0.07	0.97	1.05	0.87	0.03	0.01	0.04	0.04
	%Ultimate			85.0	71.0			3.5	3.2

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
	0.0								0							(14.77)	(12.35)			(0.60)	(0.56)
1	2.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	114	211	325	211	325	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4.0								228	185.0%		185.0%				(14.77)	(12.35)			(0.60)	(0.56)
2	6.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278	211	489	124	402	0.58	0.00	0.58	0.58	0.38	0.00	0.38	0.38
	8.0								328	75.8%		44.8%				(14.19)	(11.76)			(0.22)	(0.17)
3	11.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403	211	614	0	403	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00
	14.0								478	52.3%		0.0%				(9.84)	(7.41)			(0.22)	(0.17)
4	17.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553	211	764	0	553	0.00	3.34	3.34	3.34	0.00	0.00	0.00	0.00
	20.0								628	38.1%		0.0%				(6.50)	(4.07)			(0.22)	(0.17)
5	22.5	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761	210	971	11	772	0.10	0.00	0.10	0.10	0.01	0.00	0.01	0.01
	25.0								893	27.7%		1.5%				(6.40)	(3.98)			(0.21)	(0.17)
6	27.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999	210	1209	12	1011	0.06	0.00	0.06	0.06	0.00	0.00	0.00	0.00
	29.0								1105	21.0%		1.2%				(6.34)	(3.92)			(0.21)	(0.16)
7	32.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234	210	1444	19	1253	0.00	1.29	1.29	1.29	0.00	0.13	0.13	0.13
	35.0								1363	17.0%		1.6%				(5.05)	(2.63)			(0.08)	(0.04)
8	37.5	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471	210	1680	8	1478	0.00	0.91	0.91	0.91	0.00	0.04	0.04	0.04
	40.0								1578	14.3%		0.5%				(4.14)	(1.72)			(0.05)	(0.00)
9	42.5	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686	210	1895	0	1686	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00
	45.0								1793	12.5%		0.0%				(3.34)	(0.92)			(0.05)	(0.00)
10	47.5	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901	210	2110	0	1901	0.00	0.71	0.71	0.71	0.00	0.00	0.00	0.00
	50.0								2008	11.0%		0.0%				(2.63)	(0.20)			(0.05)	(0.00)
11	51.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058	210	2268	0	2058	0.00	0.20	0.20	0.20	0.00	0.00	0.00	0.00
	52.0								2108	10.2%		0.0%				(2.43)	(0.00)			(0.05)	(0.00)
12	53.5	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183	210	2393	6	2189	0.00	0.29	0.29	0.00	0.00	0.01	0.01	0.00
	55.0								2258	9.6%		0.3%				(2.14)	(0.00)			(0.04)	(0.00)
13	57.5	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383	209	2592	9	2392	0.00	0.44	0.44	0.00	0.00	0.02	0.02	0.00
	60.0								2508	8.8%		0.4%				(1.70)	(0.00)			(0.02)	(0.00)
14	62.5	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633	209	2842	0	2633	0.00	0.40	0.40	0.00	0.00	0.00	0.00	0.00
	65.0								2758	7.9%		0.0%				(1.30)	(0.00)			(0.02)	(0.00)
15	67.5	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883	209	3092	0	2883	0.00	0.37	0.37	0.00	0.00	0.00	0.00	0.00
	70.0								3008	7.3%		0.0%				(0.94)	(0.00)			(0.02)	(0.00)
16	72.5	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133	209	3342	6	3139	0.00	0.34	0.34	0.00	0.00	0.01	0.01	0.00
	75.0								3258	6.7%		0.2%				(0.60)	(0.00)			(0.01)	(0.00)
17	77.5	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383	209	3592	4	3387	0.00	0.31	0.31	0.00	0.00	0.01	0.01	0.00
	80.0								3508	6.2%		0.1%				(0.29)	(0.00)			(0.00)	(0.00)
18	82.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633	209	3842	0	3633	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00
	85.0								3758	5.7%		0.0%				(0.24)	(0.00)			(0.00)	(0.00)
19	87.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883	209	4092	0	3883	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00
	90.0								4008	5.4%		0.0%				(0.20)	(0.00)			(0.00)	(0.00)
20	92.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133	208	4341	6	4139	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00
	95.0								4258	5.0%		0.1%				(0.16)	(0.00)			(0.00)	(0.00)
21	97.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383	208	4591	0	4383	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00
	100.0								4508	4.8%		0.0%				(0.13)	(0.00)			(0.00)	(0.00)
22	102.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633	208	4841	0	4633	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	105.0								4758	4.5%		0.0%				(0.09)	(0.00)			(0.00)	(0.00)
23	107.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883	208	5091	2	4885	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	110.0								5008	4.3%		0.0%				(0.06)	(0.00)			(0.00)	(0.00)
24	112.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133	208	5341	5	5138	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	115.0								5258	4.1%		0.1%				(0.03)	(0.00)			(0.00)	(0.00)
25	117.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383	208	5591	0	5383	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	120.0								5508	3.9%		0.0%				(0.00)	(0.00)			(0.00)	(0.00)

Str No.	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.998	0.001	0.000	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.00	0.000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	(211)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(211)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2	0.995	0.002	0.000	0.009	0.009	0.009	0.009	0.009	0.009	0.009	3.92	0.020	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
	(210)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(124)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
3	0.990	0.003	0.000	0.003	0.003	0.003	0.003	0.003	0.003	0.003	5.88	0.068	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(209)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
4	0.985	0.005	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5.88	0.127	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(208)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
5	0.980	0.007	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.15	0.157	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	(207)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6	0.976	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.12	0.158	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
	(206)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
7	0.971	0.009	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.10	0.179	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
	(205)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(19)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
8	0.966	0.011	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.42	0.217	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
	(204)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
9	0.962	0.013	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.42	0.251	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(203)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
10	0.957	0.014	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.42	0.285	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(202)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
11	0.954	0.015	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.00	0.312	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(201)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
12	0.952	0.016	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.00	0.337	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	(201)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
13	0.948	0.017	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.377	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
	(200)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14	0.944	0.018	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.427	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(199)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
15	0.939	0.020	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.476	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(198)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16	0.935	0.021	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.526	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	(197)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
17	0.930	0.023	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.576	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	(196)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18	0.926	0.024	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.626	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(195)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
19	0.921	0.026	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.676	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(194)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20	0.917	0.027	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.726	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	(193)	(15)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
21	0.912	0.029	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.776	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(193)	(15)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22	0.908	0.030	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.825	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(192)	(16)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
23	0.903	0.031	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.875	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	(191)	(17)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
24	0.899	0.033	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.925	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	(190)	(18)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
25	0.895	0.034	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.975	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(189)	(18)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

TOTAL	(in)	1.03	13.75	14.77	12.35	0.39	0.21	0.60	0.56
	(ft)	0.09	1.15	1.23	1.03	0.03	0.02	0.05	0.05
	%Ultimate			100.0	83.6			4.1	3.8
REDUCD	(in)	0.87	11.69	12.56	10.50	0.34	0.18	0.51	0.47
	(ft)	0.07	0.97	1.05	0.87	0.03	0.01	0.04	0.04
	%Ultimate			85.0	71.0			3.5	3.2

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 — marsh to el 3 — beach to el 6 average — dike to el 4

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	238.0	579.0	367.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 1

1.18	1.82	120.00	218.13
	4.18	57.00	238.39
			456.52

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.25
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement				Induced Settlement			
		Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	1.10	15.48	16.58	14.19	0.44	0.20	0.65	0.61
	(ft)	0.09	1.29	1.38	1.18	0.04	0.02	0.05	0.05
	%Ultimate			100.0	85.5			3.9	3.7
REDUCD	(in)	0.94	13.16	14.10	12.06	0.38	0.17	0.55	0.52
	(ft)	0.08	1.10	1.17	1.00	0.03	0.01	0.05	0.04
	%Ultimate			85.0	72.7			3.3	3.1

4.30

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)
	0.0								0				
1	2.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	114	238	352	238	352
	4.0								228	208.7%		208.7%	
2	6.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278	238	516	145	423
	8.0								328	85.5%		52.0%	
3	11.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403	238	641	0	403
	14.0								478	59.0%		0.0%	
4	17.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553	237	790	0	553
	20.0								628	42.9%		0.0%	
5	22.5	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761	237	998	10	771
	25.0								893	31.2%		1.3%	
6	27.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999	237	1236	11	1010
	29.0								1105	23.7%		1.1%	
7	32.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234	237	1471	19	1253
	35.0								1363	19.2%		1.5%	
8	37.5	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471	237	1707	8	1479
	40.0								1578	16.1%		0.6%	
9	42.5	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686	236	1922	0	1686
	45.0								1793	14.0%		0.0%	
10	47.5	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901	236	2137	0	1901
	50.0								2008	12.4%		0.0%	
11	51.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058	236	2294	0	2058
	52.0								2108	11.5%		0.0%	
12	53.5	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183	236	2419	6	2189
	55.0								2258	10.8%		0.3%	
13	57.5	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383	236	2619	9	2392
	60.0								2508	9.9%		0.4%	
14	62.5	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633	236	2869	0	2633
	65.0								2758	8.9%		0.0%	
15	67.5	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883	235	3118	0	2883
	70.0								3008	8.2%		0.0%	
16	72.5	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133	235	3368	6	3139
	75.0								3258	7.5%		0.2%	
17	77.5	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383	235	3618	4	3387
	80.0								3508	6.9%		0.1%	
18	82.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633	235	3868	0	3633
	85.0								3758	6.5%		0.0%	
19	87.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883	235	4118	0	3883
	90.0								4008	6.0%		0.0%	
20	92.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133	234	4367	6	4139
	95.0								4258	5.7%		0.1%	
21	97.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383	234	4617	0	4383
	100.0								4508	5.3%		0.0%	
22	102.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633	234	4867	0	4633
	105.0								4758	5.1%		0.0%	
23	107.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883	234	5117	2	4885
	110.0								5008	4.8%		0.0%	
24	112.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133	234	5367	5	5138
	115.0								5258	4.6%		0.1%	
25	117.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383	234	5617	0	5383
	120.0								5508	4.3%		0.0%	

Str No.	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
			(16.58)	(14.19)			(0.65)	(0.61)
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(16.58)	(14.19)			(0.65)	(0.61)
2	0.61	0.21	0.82	0.82	0.43	0.00	0.43	0.43
			(15.76)	(13.37)			(0.21)	(0.18)
3	0.00	4.80	4.80	4.80	0.00	0.00	0.00	0.00
			(10.97)	(8.57)			(0.21)	(0.18)
4	0.00	3.70	3.70	3.70	0.00	0.00	0.00	0.00
			(7.27)	(4.87)			(0.21)	(0.18)
5	0.11	0.00	0.11	0.11	0.01	0.00	0.01	0.01
			(7.16)	(4.77)			(0.21)	(0.17)
6	0.07	0.00	0.07	0.07	0.00	0.00	0.00	0.00
			(7.10)	(4.70)			(0.21)	(0.17)
7	0.00	1.44	1.44	1.44	0.00	0.12	0.12	0.12
			(5.66)	(3.26)			(0.08)	(0.05)
8	0.00	1.02	1.02	1.02	0.00	0.04	0.04	0.04
			(4.64)	(2.24)			(0.05)	(0.01)
9	0.00	0.90	0.90	0.90	0.00	0.00	0.00	0.00
			(3.74)	(1.35)			(0.05)	(0.01)
10	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00
			(2.94)	(0.55)			(0.05)	(0.01)
11	0.00	0.23	0.23	0.23	0.00	0.00	0.00	0.00
			(2.72)	(0.32)			(0.05)	(0.01)
12	0.00	0.32	0.32	0.32	0.00	0.01	0.01	0.01
			(2.40)	(0.00)			(0.04)	(0.00)
13	0.00	0.49	0.49	0.00	0.00	0.02	0.02	0.00
			(1.90)	(0.00)			(0.02)	(0.00)
14	0.00	0.45	0.45	0.00	0.00	0.00	0.00	0.00
			(1.46)	(0.00)			(0.02)	(0.00)
15	0.00	0.41	0.41	0.00	0.00	0.00	0.00	0.00
			(1.05)	(0.00)			(0.02)	(0.00)
16	0.00	0.38	0.38	0.00	0.00	0.01	0.01	0.00
			(0.67)	(0.00)			(0.01)	(0.00)
17	0.00	0.35	0.35	0.00	0.00	0.01	0.01	0.00
			(0.32)	(0.00)			(0.00)	(0.00)
18	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00
			(0.27)	(0.00)			(0.00)	(0.00)
19	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00
			(0.23)	(0.00)			(0.00)	(0.00)
20	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00
			(0.18)	(0.00)			(0.00)	(0.00)
21	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00
			(0.14)	(0.00)			(0.00)	(0.00)
22	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00
			(0.10)	(0.00)			(0.00)	(0.00)
23	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00
			(0.07)	(0.00)			(0.00)	(0.00)
24	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
			(0.03)	(0.00)			(0.00)	(0.00)
25	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
			(0.00)	(0.00)			(0.00)	(0.00)

Influence Factors (Ultimate Induced Stresses in Parentheses)

Str No.	Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz
1	0.998	0.001	0.000	0.071	0.071	0.071	0.071	0.071	0.071	0.071
	(238)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2	0.995	0.002	0.000	0.009	0.009	0.009	0.009	0.009	0.009	0.009
	(237)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
3	0.990	0.003	0.000	0.003	0.003	0.003	0.003	0.003	0.003	0.003
	(236)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
4	0.985	0.005	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	(234)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
5	0.980	0.007	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	(233)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6	0.976	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(232)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
7	0.971	0.009	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(231)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
8	0.966	0.011	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(230)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
9	0.962	0.013	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(229)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
10	0.957	0.014	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(228)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
11	0.954	0.015	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(227)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
12	0.952	0.016	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(227)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
13	0.948	0.017	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(226)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14	0.944	0.018	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(225)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
15	0.939	0.020	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(224)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16	0.935	0.021	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(222)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
17	0.930	0.023	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(221)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18	0.926	0.024	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(220)	(14)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
19	0.921	0.026	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(219)	(15)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20	0.917	0.027	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(218)	(16)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
21	0.912	0.029	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(217)	(17)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22	0.908	0.030	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(216)	(17)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
23	0.903	0.031	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(215)	(18)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
24	0.899	0.033	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(214)	(19)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
25	0.895	0.034	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(213)	(20)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Rate Parameters / Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses)

Str No.	Effective H* (ft)	Position (z*/L) (N/D)	Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.00	0.000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
			(238)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2	3.92	0.020	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61
			(144)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
3	5.88	0.068	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
4	5.88	0.127	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
5	0.15	0.147	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
			(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6	0.12	0.158	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
			(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
7	4.10	0.179	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
			(18)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
8	3.42	0.217	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
9	3.42	0.251	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
10	3.42	0.285	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
11	2.00	0.312	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
12	3.00	0.337	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
			(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
13	5.00	0.377	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
			(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14	5.00	0.427	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
15	5.00	0.476	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16	5.00	0.526	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
			(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
17	5.00	0.576	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18	5.00	0.626	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
19	5.00	0.676	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20	5.00	0.726	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
			(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
21	5.00	0.776	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22	5.00	0.825	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
23	5.00	0.875	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
24	5.00	0.925	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
25	5.00	0.975	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

TOTAL	(in)	1.10	15.48	16.58	14.19	0.44	0.20	0.65	0.61
	(ft)	0.09	1.29	1.38	1.18	0.04	0.02	0.05	0.05
	%Ultimate			100.0	85.5			3.9	3.7
REDUCD	(in)	0.94	13.16	14.10	12.06	0.38	0.17	0.55	0.52
	(ft)	0.08	1.10	1.17	1.00	0.03	0.01	0.05	0.04
	%Ultimate			85.0	72.7			3.3	3.1

U:\sys\WPDATA\PROJECTS\9292\Settlement\Marsh Platform at El 3\Water at El 1.5\EESett_Reach 2_all.xlsMud 0

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 marsh to el 3 beach to el 6 average dike to el 4

Reach 2 - Thin Barrier Beach at surface

water at 1.5

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	162.0	467.0	273.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement				Induced Settlement			
		Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.82	10.89	11.71	8.48	0.31	0.16	0.47	0.44
	(ft)	0.07	0.91	0.98	0.71	0.03	0.01	0.04	0.04
	%Ultimate			100.0	72.4			4.1	3.7
REDUCD	(in)	0.70	9.25	9.95	7.20	0.27	0.14	0.40	0.37
	(ft)	0.06	0.77	0.83	0.60	0.02	0.01	0.03	0.03
	%Ultimate			85.0	61.5			3.4	3.2

Group	L (ft)		Region 1 0.08	Region 2 0.08	Region 3 0.08	Region 4 0.08	Region 5 0.08	Region 6 0.08	Region 7 0.08	Region 8 0.08	Region 9 0.08	Region 10 0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

								Eff Vert Stress at Mid-Stratum						Ultimate Settlement				Induced Settlement			
										Ultimate		Induced									
Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Past Maximum (psf)	Zero Burden (psf)	Change (psf)	Value (psf)	Change (psf)	Value (psf)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
	0.0								0							(11.71)	(8.48)			(0.47)	(0.44)
1	2.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	114	162	276	162	276	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4.0								228	142.1%		142.1%				(11.71)	(8.48)			(0.47)	(0.44)
2	6.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278	162	440	96	374	0.48	0.00	0.48	0.48	0.31	0.00	0.31	0.31
	8.0								328	58.3%		34.4%				(11.23)	(8.00)			(0.17)	(0.13)
3	11.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403	162	565	0	403	0.00	3.50	3.50	3.50	0.00	0.00	0.00	0.00
	14.0								478	40.2%		0.0%				(7.74)	(4.50)			(0.17)	(0.13)
4	17.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553	162	715	0	553	0.00	2.66	2.66	2.66	0.00	0.00	0.00	0.00
	20.0								628	29.3%		0.0%				(5.08)	(1.65)			(0.17)	(0.13)
5	22.5	53.0	0.100	0.015	8030.0	12046.0	5.0	13520	761	162	922	9	769	0.08	0.00	0.08	0.08	0.00	0.00	0.00	0.00
	25.0								893	21.3%		1.1%				(5.00)	(1.77)			(0.16)	(0.13)
6	27.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999	162	1161	9	1008	0.05	0.00	0.05	0.05	0.00	0.00	0.00	0.00
	29.0								1105	16.2%		0.9%				(4.95)	(1.72)			(0.16)	(0.13)
7	32.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234	162	1396	15	1249	0.00	1.01	1.01	1.01	0.00	0.10	0.10	0.10
	35.0								1363	13.1%		1.2%				(3.94)	(0.71)			(0.06)	(0.03)
8	37.5	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471	162	1632	6	1477	0.00	0.71	0.71	0.71	0.00	0.03	0.03	0.03
	40.0								1578	11.0%		0.4%				(3.23)	(0.00)			(0.04)	(0.00)
9	42.5	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686	162	1847	0	1686	0.00	0.63	0.63	0.00	0.00	0.00	0.00	0.00
	45.0								1793	9.6%		0.0%				(2.61)	(0.00)			(0.04)	(0.00)
10	47.5	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901	162	2062	0	1901	0.00	0.56	0.56	0.00	0.00	0.00	0.00	0.00
	50.0								2008	8.5%		0.0%				(2.05)	(0.00)			(0.04)	(0.00)
11	51.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058	162	2220	0	2058	0.00	0.16	0.16	0.00	0.00	0.00	0.00	0.00
	52.0								2108	7.9%		0.0%				(1.89)	(0.00)			(0.04)	(0.00)
12	53.5	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183	162	2345	5	2188	0.00	0.22	0.22	0.00	0.00	0.01	0.01	0.00
	55.0								2258	7.4%		0.2%				(1.67)	(0.00)			(0.03)	(0.00)
13	57.5	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383	162	2545	7	2390	0.00	0.34	0.34	0.00	0.00	0.02	0.02	0.00
	60.0								2508	6.8%		0.3%				(1.32)	(0.00)			(0.01)	(0.00)
14	62.5	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633	162	2795	0	2633	0.00	0.31	0.31	0.00	0.00	0.00	0.00	0.00
	65.0								2758	6.1%		0.0%				(1.01)	(0.00)			(0.01)	(0.00)
15	67.5	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883	162	3045	0	2883	0.00	0.28	0.28	0.00	0.00	0.00	0.00	0.00
	70.0								3008	5.6%		0.0%				(0.73)	(0.00)			(0.01)	(0.00)
16	72.5	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133	162	3295	4	3137	0.00	0.26	0.26	0.00	0.00	0.01	0.01	0.00
	75.0								3258	5.2%		0.1%				(0.47)	(0.00)			(0.01)	(0.00)
17	77.5	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383	162	3545	3	3386	0.00	0.24	0.24	0.00	0.00	0.00	0.00	0.00
	80.0								3508	4.8%		0.1%				(0.22)	(0.00)			(0.00)	(0.00)
18	82.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633	162	3795	0	3633	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	85.0								3758	4.4%		0.0%				(0.19)	(0.00)			(0.00)	(0.00)
19	87.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883	162	4045	0	3883	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	90.0								4008	4.2%		0.0%				(0.16)	(0.00)			(0.00)	(0.00)
20	92.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133	162	4295	5	4138	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	95.0								4258	3.9%		0.1%				(0.13)	(0.00)			(0.00)	(0.00)
21	97.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383	162	4545	0	4383	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	100.0								4508	3.7%		0.0%				(0.10)	(0.00)			(0.00)	(0.00)
22	102.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633	162	4795	0	4633	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	105.0								4758	3.5%		0.0%				(0.07)	(0.00)			(0.00)	(0.00)
23	107.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883	162	5045	2	4885	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	110.0								5008	3.3%		0.0%				(0.05)	(0.00)			(0.00)	(0.00)
24	112.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133	162	5295	4	5137	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00
	115.0								5258	3.1%		0.1%				(0.02)	(0.00)			(0.00)	(0.00)
25	117.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383	161	5544	0	5383	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00
	120.0								5508	3.0%		0.0%				(0.00)	(0.00)			(0.00)	(0.00)

	Influence Factors (Ultimate Induced Stresses in Parentheses)										Rate Parameters		Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses)									
Str No.	Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz	Effective H* (ft)	Position (z*/L) (N/D)	Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.998	0.001	0.000	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.00	0.000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	(162)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(162)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2	0.995	0.002	0.000	0.009	0.009	0.009	0.009	0.009	0.009	0.009	3.92	0.020	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
	(161)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(95)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
3	0.990	0.003	0.000	0.003	0.003	0.003	0.003	0.003	0.003	0.003	5.88	0.068	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(160)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
4	0.985	0.005	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5.88	0.127	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(160)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
5	0.980	0.007	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.15	0.157	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	(159)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6	0.976	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.12	0.158	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
	(158)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
7	0.971	0.009	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.10	0.179	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
	(157)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
8	0.966	0.011	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.42	0.217	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
	(157)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
9	0.962	0.013	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.42	0.251	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(156)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
10	0.957	0.014	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.42	0.285	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(155)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
11	0.954	0.015	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.00	0.312	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(155)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
12	0.952	0.016	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.00	0.337	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	(154)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
13	0.948	0.017	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.377	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
	(154)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14	0.944	0.018	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.427	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(153)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
15	0.939	0.020	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.476	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(152)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16	0.935	0.021	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.526	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	(151)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
17	0.930	0.023	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.576	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	(151)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18	0.926	0.024	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.626	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(150)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
19	0.921	0.026	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.676	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(149)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20	0.917	0.027	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.726	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	(149)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
21	0.912	0.029	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.776	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(148)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22	0.908	0.030	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.825	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(147)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
23	0.903	0.031	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.875	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	(146)	(15)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
24	0.899	0.033	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.925	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	(146)	(15)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
25	0.895	0.034	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.975	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(145)	(16)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

TOTAL	(in)	0.82	10.89	11.71	8.48	0.31	0.16	0.47	0.44
	(ft)	0.07	0.91	0.98	0.71	0.03	0.01	0.04	0.04
	%Ultimate			100.0	72.4			4.1	3.7
REDUCD	(in)	0.70	9.25	9.95	7.20	0.27	0.14	0.40	0.37
	(ft)	0.06	0.77	0.83	0.60	0.02	0.01	0.03	0.03
	%Ultimate			85.0	61.5			3.4	3.2

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 | marsh to el 3 | beach to el 6 average | dike to el 4

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	189.0	510.5	307.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 1.5

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.050
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.94	12.48	13.42	10.41	0.36	0.19	0.55	0.50
	(ft)	0.08	1.04	1.12	0.87	0.03	0.02	0.05	0.04
	%Ultimate			100.0	77.5			4.1	3.8
REDUCD	(in)	0.80	10.61	11.41	8.84	0.31	0.16	0.46	0.43
	(ft)	0.07	0.88	0.95	0.74	0.03	0.01	0.04	0.04
	%Ultimate			85.0	65.9			3.5	3.2

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)
	0.0								0				
1	2.0 4.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	114 228	189 165.8%	303	189 165.8%	303
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	189 66.0%	467	112 40.1%	390
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	189 46.9%	592	0 0.0%	403
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	189 34.1%	742	0 0.0%	553
5	22.5 25.0	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761 893	189 24.8%	949	10 1.3%	771
6	27.0 29.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999 1105	189 18.9%	1188	11 1.1%	1010
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	189 15.3%	1423	17 1.4%	1251
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	188 12.8%	1659	7 0.5%	1478
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	188 11.2%	1874	0 0.0%	1686
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	188 9.9%	2089	0 0.0%	1901
11	51.0 52.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058 2108	188 9.1%	2246	0 0.0%	2058
12	53.5 55.0	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183 2258	188 8.6%	2371	5 0.2%	2188
13	57.5 60.0	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383 2508	188 7.9%	2571	8 0.4%	2391
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	188 7.1%	2821	0 0.0%	2633
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	188 6.5%	3071	0 0.0%	2883
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	188 6.0%	3321	5 0.2%	3138
17	77.5 80.0	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383 3508	188 5.6%	3571	3 0.1%	3386
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	188 5.2%	3821	0 0.0%	3633
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	188 4.8%	4071	0 0.0%	3883
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	188 4.5%	4321	6 0.1%	4139
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	188 4.3%	4571	0 0.0%	4383
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	187 4.0%	4820	0 0.0%	4633
23	107.5 110.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883 5008	187 3.8%	5070	2 0.0%	4885
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	187 3.6%	5320	4 0.1%	5137
25	117.5 120.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383 5508	187 3.5%	5570	0 0.0%	5383

Str No.	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
			(13.42)	(10.41)			(0.55)	(0.50)
1	0.00	0.00	0.00 (13.42)	0.00 (10.41)	0.00	0.00	0.00 (0.55)	0.00 (0.50)
2	0.54	0.00	0.54 (12.88)	0.54 (9.87)	0.35	0.00	0.35 (0.20)	0.35 (0.15)
3	0.00	3.98	3.98 (8.91)	3.98 (5.89)	0.00	0.00	0.00 (0.20)	0.00 (0.15)
4	0.00	3.04	3.04 (5.87)	3.04 (2.85)	0.00	0.00	0.00 (0.20)	0.00 (0.15)
5	0.09	0.00	0.09 (5.78)	0.09 (2.77)	0.01	0.00	0.01 (0.19)	0.01 (0.15)
6	0.05	0.00	0.05 (5.73)	0.05 (2.71)	0.00	0.00	0.00 (0.19)	0.00 (0.15)
7	0.00	1.16	1.16 (4.56)	1.16 (1.55)	0.00	0.11	0.11 (0.07)	0.11 (0.03)
8	0.00	0.82	0.82 (3.74)	0.82 (0.72)	0.00	0.03	0.03 (0.04)	0.03 (0.00)
9	0.00	0.72	0.72 (3.01)	0.72 (0.00)	0.00	0.00	0.00 (0.04)	0.00 (0.00)
10	0.00	0.64	0.64 (2.37)	0.00 (0.00)	0.00	0.00	0.00 (0.04)	0.00 (0.00)
11	0.00	0.18	0.18 (2.19)	0.00 (0.00)	0.00	0.00	0.00 (0.04)	0.00 (0.00)
12	0.00	0.26	0.26 (1.93)	0.00 (0.00)	0.00	0.01	0.01 (0.03)	0.00 (0.00)
13	0.00	0.40	0.40 (1.53)	0.00 (0.00)	0.00	0.02	0.02 (0.02)	0.00 (0.00)
14	0.00	0.36	0.36 (1.17)	0.00 (0.00)	0.00	0.00	0.00 (0.02)	0.00 (0.00)
15	0.00	0.33	0.33 (0.84)	0.00 (0.00)	0.00	0.00	0.00 (0.02)	0.00 (0.00)
16	0.00	0.30	0.30 (0.54)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)
17	0.00	0.28	0.28 (0.26)	0.00 (0.00)	0.00	0.01	0.01 (0.00)	0.00 (0.00)
18	0.04	0.00	0.04 (0.22)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
19	0.04	0.00	0.04 (0.18)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
20	0.03	0.00	0.03 (0.15)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
21	0.03	0.00	0.03 (0.12)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
22	0.03	0.00	0.03 (0.08)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
23	0.03	0.00	0.03 (0.05)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
24	0.03	0.00	0.03 (0.03)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
25	0.03	0.00	0.03 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)

Str No.	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz
1	0.998 (189)	0.001 (0)	0.000 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)
2	0.995 (188)	0.002 (1)	0.000 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)
3	0.990 (187)	0.003 (2)	0.000 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)
4	0.985 (186)	0.005 (3)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
5	0.980 (185)	0.007 (3)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
6	0.976 (184)	0.008 (4)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
7	0.971 (184)	0.009 (5)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
8	0.966 (183)	0.011 (6)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
9	0.962 (182)	0.013 (6)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
10	0.957 (181)	0.014 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
11	0.954 (180)	0.015 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
12	0.952 (180)	0.016 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
13	0.948 (179)	0.017 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
14	0.944 (178)	0.018 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
15	0.939 (177)	0.020 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
16	0.935 (177)	0.021 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
17	0.930 (176)	0.023 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
18	0.926 (175)	0.024 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
19	0.921 (174)	0.026 (13)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
20	0.917 (173)	0.027 (14)	0.002 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
21	0.912 (172)	0.029 (15)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
22	0.908 (172)	0.030 (15)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
23	0.903 (171)	0.031 (16)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
24	0.899 (170)	0.033 (17)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
25	0.895 (169)	0.034 (18)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)

Str No.	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.00	0.000	1.00 (189)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	3.92	0.020	0.59 (111)	0.59 (1)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)
3	5.88	0.068	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	5.88	0.127	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.15	0.157	0.05 (10)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
6	0.12	0.158	0.06 (11)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)
7	4.10	0.179	0.09 (17)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)
8	3.42	0.217	0.04 (7)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	3.42	0.251	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	3.42	0.285	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	2.00	0.312	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	3.00	0.337	0.03 (5)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
13	5.00	0.377	0.04 (8)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	5.00	0.427	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	5.00	0.476	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	5.00	0.526	0.03 (5)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
17	5.00	0.576	0.02 (3)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	5.00	0.626	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	5.00	0.676	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	5.00	0.726	0.03 (5)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	5.00	0.776	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	5.00	0.825	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	5.00	0.875	0.01 (2)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	5.00	0.925	0.02 (4)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	5.00	0.975	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

TOTAL	(in)	0.94	12.48	13.42	10.41	0.36	0.19	0.55	0.50
	(ft)	0.08	1.04	1.12	0.87	0.03	0.02	0.05	0.04
	%Ultimate			100.0	77.5			4.1	3.8
REDUCD	(in)	0.80	10.61	11.41	8.84	0.31	0.16	0.46	0.43
	(ft)	0.07	0.88	0.95	0.74	0.03	0.01	0.04	0.04
	%Ultimate			85.0	65.9			3.5	3.2

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 — marsh to el 3 — beach to el 6 average — dike to el 4

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	216.5	555.0	339.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 1.5

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.25
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement				Induced Settlement			
		Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	1.05	14.01	15.06	12.58	0.41	0.18	0.59	0.55
	(ft)	0.09	1.17	1.25	1.05	0.03	0.02	0.05	0.05
	%Ultimate			100.0	83.5			3.9	3.7
REDUCD	(in)	0.89	11.91	12.80	10.69	0.35	0.16	0.50	0.47
	(ft)	0.07	0.99	1.07	0.89	0.03	0.01	0.04	0.04
	%Ultimate			85.0	71.0			3.4	3.1

4.39

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)
	0.0								0				
1	2.0	67.0	0.000	0.000	99999.0	99999.0	4.0	1000	114	215	329	215	329
	4.0								228	189.0%		189.0%	
2	6.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278	215	493	131	409
	8.0								328	77.5%		47.1%	
3	11.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403	215	618	0	403
	14.0								478	53.4%		0.0%	
4	17.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553	215	768	0	553
	20.0								628	38.9%		0.0%	
5	22.5	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761	215	975	9	770
	25.0								893	28.3%		1.2%	
6	27.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999	215	1214	10	1009
	29.0								1105	21.5%		1.0%	
7	32.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234	215	1449	17	1251
	35.0								1363	17.4%		1.4%	
8	37.5	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471	215	1685	8	1478
	40.0								1578	14.6%		0.5%	
9	42.5	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686	214	1900	0	1686
	45.0								1793	12.7%		0.0%	
10	47.5	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901	214	2115	0	1901
	50.0								2008	11.3%		0.0%	
11	51.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058	214	2272	0	2058
	52.0								2108	10.4%		0.0%	
12	53.5	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183	214	2397	5	2188
	55.0								2258	9.8%		0.2%	
13	57.5	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383	214	2597	8	2391
	60.0								2508	9.0%		0.4%	
14	62.5	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633	214	2847	0	2633
	65.0								2758	8.1%		0.0%	
15	67.5	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883	214	3097	0	2883
	70.0								3008	7.4%		0.0%	
16	72.5	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133	214	3347	5	3138
	75.0								3258	6.8%		0.2%	
17	77.5	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383	214	3597	3	3386
	80.0								3508	6.3%		0.1%	
18	82.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633	213	3846	0	3633
	85.0								3758	5.9%		0.0%	
19	87.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883	213	4096	0	3883
	90.0								4008	5.5%		0.0%	
20	92.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133	213	4346	5	4138
	95.0								4258	5.2%		0.1%	
21	97.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383	213	4596	0	4383
	100.0								4508	4.9%		0.0%	
22	102.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633	213	4846	0	4633
	105.0								4758	4.6%		0.0%	
23	107.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883	213	5096	2	4885
	110.0								5008	4.4%		0.0%	
24	112.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133	213	5346	4	5137
	115.0								5258	4.1%		0.1%	
25	117.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383	212	5595	0	5383
	120.0								5508	3.9%		0.0%	

Str No.	Ultimate Recomp Sett (in.)	Ultimate Virgin Sett (in.)	Ultimate Total Sett (in.)	Ultimate Bulb Sett (in.)	Induced Recomp Sett (in.)	Induced Virgin Sett (in.)	Induced Total Sett (in.)	Induced Bulb Sett (in.)	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz
			(15.06)	(12.58)			(0.59)	(0.55)										
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.998	0.001	0.000	0.071	0.071	0.071	0.071	0.071	0.071	0.071
			(15.06)	(12.58)			(0.59)	(0.55)	(215)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2	0.59	0.00	0.59	0.59	0.40	0.00	0.40	0.40	0.995	0.002	0.000	0.009	0.009	0.009	0.009	0.009	0.009	0.009
			(14.46)	(11.98)			(0.19)	(0.15)	(214)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
3	0.00	4.43	4.43	4.43	0.00	0.00	0.00	0.00	0.990	0.003	0.000	0.003	0.003	0.003	0.003	0.003	0.003	0.003
			(10.03)	(7.56)			(0.19)	(0.15)	(213)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
4	0.00	3.40	3.40	3.40	0.00	0.00	0.00	0.00	0.985	0.005	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001
			(6.63)	(4.16)			(0.19)	(0.15)	(212)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
5	0.10	0.00	0.10	0.10	0.00	0.00	0.00	0.00	0.980	0.007	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001
			(6.54)	(4.06)			(0.19)	(0.15)	(211)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6	0.06	0.00	0.06	0.06	0.00	0.00	0.00	0.00	0.976	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(6.47)	(4.00)			(0.19)	(0.15)	(210)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
7	0.00	1.31	1.31	1.31	0.00	0.11	0.11	0.11	0.971	0.009	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(5.16)	(2.68)			(0.08)	(0.03)	(209)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
8	0.00	0.93	0.93	0.93	0.00	0.03	0.03	0.03	0.966	0.011	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(4.23)	(1.75)			(0.04)	(0.00)	(208)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
9	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.962	0.013	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(3.41)	(0.94)			(0.04)	(0.00)	(207)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
10	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.957	0.014	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(2.68)	(0.21)			(0.04)	(0.00)	(206)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
11	0.00	0.21	0.21	0.21	0.00	0.00	0.00	0.00	0.954	0.015	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(2.48)	(0.00)			(0.04)	(0.00)	(206)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
12	0.00	0.29	0.29	0.00	0.00	0.01	0.01	0.00	0.952	0.016	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(2.18)	(0.00)			(0.03)	(0.00)	(205)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
13	0.00	0.45	0.45	0.00	0.00	0.02	0.02	0.00	0.948	0.017	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(1.74)	(0.00)			(0.02)	(0.00)	(204)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14	0.00	0.41	0.41	0.00	0.00	0.00	0.00	0.00	0.944	0.018	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(1.33)	(0.00)			(0.02)	(0.00)	(203)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
15	0.00	0.37	0.37	0.00	0.00	0.00	0.00	0.00	0.939	0.020	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.96)	(0.00)			(0.02)	(0.00)	(202)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16	0.00	0.34	0.34	0.00	0.00	0.01	0.01	0.00	0.935	0.021	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.61)	(0.00)			(0.01)	(0.00)	(201)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
17	0.00	0.32	0.32	0.00	0.00	0.01	0.01	0.00	0.930	0.023	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.29)	(0.00)			(0.00)	(0.00)	(200)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.926	0.024	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.25)	(0.00)			(0.00)	(0.00)	(199)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
19	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.921	0.026	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.21)	(0.00)			(0.00)	(0.00)	(199)	(14)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.917	0.027	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.17)	(0.00)			(0.00)	(0.00)	(198)	(15)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
21	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.912	0.029	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.13)	(0.00)			(0.00)	(0.00)	(197)	(16)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.908	0.030	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.10)	(0.00)			(0.00)	(0.00)	(196)	(17)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
23	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.903	0.031	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.06)	(0.00)			(0.00)	(0.00)	(195)	(17)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
24	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.899	0.033	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.03)	(0.00)			(0.00)	(0.00)	(194)	(18)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
25	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.895	0.034	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.00)	(0.00)			(0.00)	(0.00)	(193)	(19)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Str No.	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.00	0.000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
			(215)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2	3.92	0.020	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61
			(130)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
3	5.88	0.068	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
4	5.88	0.127	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
5	0.15	0.157	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
			(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6	0.12	0.158	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
			(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
7	4.10	0.179	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
			(16)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
8	3.42	0.217	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
			(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
9	3.42	0.251	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
10	3.42	0.285	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
11	2.00	0.312	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
12	3.00	0.337	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
			(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
13	5.00	0.377	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14	5.00	0.427	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
15	5.00	0.476	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16	5.00	0.526	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
			(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
17	5.00	0.576	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18	5.00	0.626	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
19	5.00	0.676	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20	5.00	0.726	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
			(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
21	5.00	0.776	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22	5.00	0.825	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
23	5.00	0.875	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
24	5.00	0.925	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
25	5.00	0.975	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

TOTAL	(in)	1.05	14.01	15.06	12.58	0.41	0.18	0.59	0.55
	(ft)	0.09	1.17	1.25	1.05	0.03	0.02	0.05	0.05
	%Ultimate			100.0	83.5			3.9	3.7
REDUCD	(in)	0.89	11.91	12.80	10.69	0.35	0.16	0.50	0.47
	(ft)	0.07	0.99	1.07	0.89	0.03	0.01	0.04	0.04
	%Ultimate			85.0	71.0			3.4	3.1

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 marsh to beach to el 6 dike to el 4

Reach 2 - Thin Barrier Beach at surface el 2.5 average

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	172.0	515.0	329.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 0.5

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement Recomp Sett (in.)	Ultimate Settlement Virgin Sett (in.)	Ultimate Settlement Total Sett (in.)	Ultimate Settlement Bulb Sett (in.)	Induced Settlement Recomp Sett (in.)	Induced Settlement Virgin Sett (in.)	Induced Settlement Total Sett (in.)	Induced Settlement Bulb Sett (in.)
TOTAL	(in)	0.87	11.50	12.37	9.60	0.33	0.17	0.50	0.46
	(ft)	0.07	0.96	1.03	0.80	0.03	0.01	0.04	0.04
	%Ultimate			100.0	77.6			4.1	3.7
REDUCD	(in)	0.74	9.78	10.51	8.16	0.28	0.14	0.43	0.39
	(ft)	0.06	0.81	0.88	0.68	0.02	0.01	0.04	0.03
	%Ultimate			85.0	66.0			3.4	3.2

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)
	0.0								0				
1	2.0	67.0	0.000	0.000	99999.0	99999.0	4.0	1000	114	172	286	172	286
	4.0								228	150.9%		150.9%	
2	6.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278	172	450	102	380
	8.0								328	61.9%		36.5%	
3	11.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403	172	575	0	403
	14.0								478	42.7%		0.0%	
4	17.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553	172	725	0	553
	20.0								628	31.1%		0.0%	
5	22.5	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761	172	933	9	770
	25.0								893	22.6%		1.2%	
6	27.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999	172	1171	10	1009
	29.0								1105	17.2%		1.0%	
7	32.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234	172	1406	16	1250
	35.0								1363	13.9%		1.3%	
8	37.5	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471	172	1643	7	1477
	40.0								1578	11.7%		0.4%	
9	42.5	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686	172	1858	0	1686
	45.0								1793	10.2%		0.0%	
10	47.5	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901	172	2073	0	1901
	50.0								2008	9.1%		0.0%	
11	51.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058	172	2230	0	2058
	52.0								2108	8.4%		0.0%	
12	53.5	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183	172	2355	5	2188
	55.0								2258	7.9%		0.2%	
13	57.5	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383	172	2555	8	2391
	60.0								2508	7.2%		0.3%	
14	62.5	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633	172	2805	0	2633
	65.0								2758	6.5%		0.0%	
15	67.5	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883	172	3055	0	2883
	70.0								3008	6.0%		0.0%	
16	72.5	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133	172	3305	5	3138
	75.0								3258	5.5%		0.2%	
17	77.5	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383	172	3555	3	3386
	80.0								3508	5.1%		0.1%	
18	82.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633	172	3805	0	3633
	85.0								3758	4.7%		0.0%	
19	87.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883	172	4055	0	3883
	90.0								4008	4.4%		0.0%	
20	92.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133	172	4305	5	4138
	95.0								4258	4.2%		0.1%	
21	97.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383	172	4555	0	4383
	100.0								4508	3.9%		0.0%	
22	102.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633	172	4805	0	4633
	105.0								4758	3.7%		0.0%	
23	107.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883	172	5055	2	4885
	110.0								5008	3.5%		0.0%	
24	112.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133	172	5305	4	5137
	115.0								5258	3.4%		0.1%	
25	117.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383	172	5555	0	5383
	120.0								5508	3.2%		0.0%	

Str No.	Ultimate Recomp Sett (in.)	Ultimate Virgin Sett (in.)	Ultimate Total Sett (in.)	Ultimate Bulb Sett (in.)	Induced Recomp Sett (in.)	Induced Virgin Sett (in.)	Induced Total Sett (in.)	Induced Bulb Sett (in.)	Influence Factors (Ultimate Induced Stresses in Parentheses) Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz
			(12.37)	(9.60)			(0.50)	(0.46)										
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.998	0.001	0.000	0.071	0.071	0.071	0.071	0.071	0.071	0.071
			(12.37)	(9.60)			(0.50)	(0.46)	(172)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2	0.50	0.00	0.50	0.50	0.32	0.00	0.32	0.32	0.995	0.002	0.000	0.009	0.009	0.009	0.009	0.009	0.009	0.009
			(11.87)	(9.10)			(0.18)	(0.14)	(171)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
3	0.00	3.68	3.68	3.68	0.00	0.00	0.00	0.00	0.990	0.003	0.000	0.003	0.003	0.003	0.003	0.003	0.003	0.003
			(8.19)	(5.42)			(0.18)	(0.14)	(170)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
4	0.00	2.80	2.80	2.80	0.00	0.00	0.00	0.00	0.985	0.005	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001
			(5.39)	(2.62)			(0.18)	(0.14)	(169)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
5	0.08	0.00	0.08	0.08	0.00	0.00	0.00	0.00	0.980	0.007	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001
			(5.31)	(2.54)			(0.17)	(0.14)	(168)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6	0.05	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.976	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(5.26)	(2.49)			(0.17)	(0.13)	(168)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
7	0.00	1.07	1.07	1.07	0.00	0.10	0.10	0.10	0.971	0.009	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(4.19)	(1.42)			(0.07)	(0.03)	(167)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
8	0.00	0.76	0.76	0.76	0.00	0.03	0.03	0.03	0.966	0.011	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(3.43)	(0.66)			(0.04)	(0.00)	(166)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
9	0.00	0.66	0.66	0.66	0.00	0.00	0.00	0.00	0.962	0.013	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(2.77)	(0.00)			(0.04)	(0.00)	(165)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
10	0.00	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.957	0.014	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(2.18)	(0.00)			(0.04)	(0.00)	(165)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
11	0.00	0.17	0.17	0.00	0.00	0.00	0.00	0.00	0.954	0.015	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(2.01)	(0.00)			(0.04)	(0.00)	(164)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
12	0.00	0.24	0.24	0.00	0.00	0.01	0.01	0.00	0.952	0.016	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(1.77)	(0.00)			(0.03)	(0.00)	(164)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
13	0.00	0.36	0.36	0.00	0.00	0.02	0.02	0.00	0.948	0.017	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(1.41)	(0.00)			(0.01)	(0.00)	(163)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14	0.00	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.944	0.018	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(1.08)	(0.00)			(0.01)	(0.00)	(162)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
15	0.00	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.939	0.020	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.78)	(0.00)			(0.01)	(0.00)	(162)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16	0.00	0.28	0.28	0.00	0.00	0.01	0.01	0.00	0.935	0.021	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.50)	(0.00)			(0.01)	(0.00)	(161)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
17	0.00	0.26	0.26	0.00	0.00	0.00	0.00	0.00	0.930	0.023	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.24)	(0.00)			(0.00)	(0.00)	(160)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.926	0.024	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.20)	(0.00)			(0.00)	(0.00)	(159)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
19	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.921	0.026	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.17)	(0.00)			(0.00)	(0.00)	(158)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.917	0.027	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.14)	(0.00)			(0.00)	(0.00)	(158)	(14)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
21	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.912	0.029	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.11)	(0.00)			(0.00)	(0.00)	(157)	(15)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.908	0.030	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.08)	(0.00)			(0.00)	(0.00)	(156)	(15)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
23	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.903	0.031	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.05)	(0.00)			(0.00)	(0.00)	(155)	(16)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
24	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.899	0.033	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.02)	(0.00)			(0.00)	(0.00)	(155)	(17)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
25	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.895	0.034	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.00)	(0.00)			(0.00)	(0.00)	(154)	(18)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Str No.	Rate Parameters Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses) Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.00	0.000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
			(172)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2	3.92	0.020	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
			(101)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
3	5.88	0.068	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
4	5.88	0.127	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
5	0.15	0.157	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
			(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6	0.12	0.158	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
			(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
7	4.10	0.179	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
			(15)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
8	3.42	0.217	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
			(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
9	3.42	0.251	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
10	3.42	0.285	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
11	2.00	0.312	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
12	3.00	0.337	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
			(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
13	5.00	0.377	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
			(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14	5.00	0.427	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
15	5.00	0.476	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16	5.00	0.526	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
17	5.00	0.576	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18	5.00	0.626	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
19	5.00	0.676	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20	5.00	0.726	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
			(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
21	5.00	0.776	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22	5.00	0.825	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
23	5.00	0.875	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
24	5.00	0.925	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
25	5.00	0.975	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

		Ultimate Recomp	Ultimate Virgin	Ultimate Total	Ultimate Bulb	Induced Recomp	Induced Virgin	Induced Total	Induced Bulb
TOTAL	(in)	0.87	11.50	12.37	9.60	0.33	0.17	0.50	0.46
	(ft)	0.07	0.96	1.03	0.80	0.03	0.01	0.04	0.04
	%Ultimate			100.0	77.6			4.1	3.7
REDUCD	(in)	0.74	9.78	10.51	8.16	0.28	0.14	0.43	0.39
	(ft)	0.06	0.81	0.88	0.68	0.02	0.01	0.04	0.03
	%Ultimate			85.0	66.0			3.4	3.2

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 marsh to el 2.5 beach to el 6 average dike to el 4

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	197.0	560.0	362.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 0.5

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement				Induced Settlement			
		Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.97	12.97	13.94	11.47	0.37	0.19	0.57	0.52
	(ft)	0.08	1.08	1.16	0.96	0.03	0.02	0.05	0.04
	%Ultimate			100.0	82.3			4.1	3.8
REDUCD	(in)	0.83	11.02	11.85	9.75	0.32	0.17	0.48	0.44
	(ft)	0.07	0.92	0.99	0.81	0.03	0.01	0.04	0.04
	%Ultimate			85.0	69.9			3.5	3.2

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sf/yr)	ch (sf/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
	0.0								0							(13.94)	(11.47)			(0.57)	(0.52)
1	2.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	114	197	311	197	311	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4.0								228	172.8%		172.8%				(13.94)	(11.47)			(0.57)	(0.52)
2	6.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278	197	475	116	394	0.55	0.00	0.55	0.55	0.36	0.00	0.36	0.36
	8.0								328	70.6%		41.8%				(13.39)	(10.91)			(0.21)	(0.16)
3	11.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403	197	600	0	403	0.00	4.12	4.12	4.12	0.00	0.00	0.00	0.00
	14.0								478	48.9%		0.0%				(9.27)	(6.79)			(0.21)	(0.16)
4	17.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553	197	750	0	553	0.00	3.15	3.15	3.15	0.00	0.00	0.00	0.00
	20.0								628	35.6%		0.0%				(6.12)	(3.64)			(0.21)	(0.16)
5	22.5	63.0	0.100	0.016	8030.0	12045.0	5.0	13520	761	197	957	10	771	0.09	0.00	0.09	0.09	0.01	0.00	0.00	0.00
	25.0								893	25.9%		1.4%				(6.03)	(3.55)			(0.20)	(0.16)
6	27.0	63.0	0.100	0.015	8030.0	12045.0	4.0	13520	999	197	1196	11	1010	0.06	0.00	0.06	0.06	0.00	0.00	0.00	0.00
	29.0								1105	19.7%		1.1%				(5.97)	(3.50)			(0.20)	(0.15)
7	32.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234	197	1431	18	1252	0.00	1.21	1.21	1.21	0.00	0.12	0.12	0.12
	35.0								1363	15.9%		1.5%				(4.76)	(2.28)			(0.08)	(0.03)
8	37.5	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471	197	1667	7	1478	0.00	0.86	0.86	0.86	0.00	0.03	0.03	0.03
	40.0								1578	13.4%		0.5%				(3.90)	(1.43)			(0.04)	(0.00)
9	42.5	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686	197	1882	0	1686	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00
	45.0								1793	11.7%		0.0%				(3.15)	(0.67)			(0.04)	(0.00)
10	47.5	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901	197	2097	0	1901	0.00	0.67	0.67	0.67	0.00	0.00	0.00	0.00
	50.0								2008	10.3%		0.0%				(2.47)	(0.00)			(0.04)	(0.00)
11	51.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058	197	2255	0	2058	0.00	0.19	0.19	0.00	0.00	0.00	0.00	0.00
	52.0								2108	9.6%		0.0%				(2.28)	(0.00)			(0.04)	(0.00)
12	53.5	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183	197	2380	6	2189	0.00	0.27	0.27	0.00	0.00	0.01	0.01	0.00
	55.0								2258	9.0%		0.3%				(2.01)	(0.00)			(0.04)	(0.00)
13	57.5	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383	197	2580	9	2392	0.00	0.41	0.41	0.00	0.00	0.02	0.02	0.00
	60.0								2508	8.3%		0.4%				(1.60)	(0.00)			(0.02)	(0.00)
14	62.5	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633	197	2830	0	2633	0.00	0.38	0.38	0.00	0.00	0.00	0.00	0.00
	65.0								2758	7.5%		0.0%				(1.23)	(0.00)			(0.02)	(0.00)
15	67.5	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883	197	3080	0	2883	0.00	0.34	0.34	0.00	0.00	0.00	0.00	0.00
	70.0								3008	6.8%		0.0%				(0.88)	(0.00)			(0.02)	(0.00)
16	72.5	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133	197	3330	5	3138	0.00	0.32	0.32	0.00	0.00	0.01	0.01	0.00
	75.0								3258	6.3%		0.2%				(0.57)	(0.00)			(0.01)	(0.00)
17	77.5	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383	196	3579	4	3387	0.00	0.29	0.29	0.00	0.00	0.01	0.01	0.00
	80.0								3508	5.8%		0.1%				(0.27)	(0.00)			(0.00)	(0.00)
18	82.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633	196	3829	0	3633	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00
	85.0								3758	5.4%		0.0%				(0.23)	(0.00)			(0.00)	(0.00)
19	87.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883	196	4079	0	3883	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00
	90.0								4008	5.1%		0.0%				(0.19)	(0.00)			(0.00)	(0.00)
20	92.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133	196	4329	6	4139	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00
	95.0								4258	4.8%		0.1%				(0.15)	(0.00)			(0.00)	(0.00)
21	97.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383	196	4579	0	4383	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	100.0								4508	4.5%		0.0%				(0.12)	(0.00)			(0.00)	(0.00)
22	102.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633	196	4829	0	4633	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	105.0								4758	4.2%		0.0%				(0.09)	(0.00)			(0.00)	(0.00)
23	107.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883	196	5079	2	4885	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	110.0								5008	4.0%		0.0%				(0.06)	(0.00)			(0.00)	(0.00)
24	112.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133	196	5329	5	5138	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	115.0								5258	3.8%		0.1%				(0.03)	(0.00)			(0.00)	(0.00)
25	117.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383	196	5579	0	5383	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	120.0								5508	3.6%		0.0%				(0.00)	(0.00)			(0.00)	(0.00)

Str No.	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.998	0.001	0.000	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.00	0.000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	(197)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(197)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2	0.995	0.002	0.000	0.009	0.009	0.009	0.009	0.009	0.009	0.009	3.92	0.020	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
	(196)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(116)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
3	0.990	0.003	0.000	0.003	0.003	0.003	0.003	0.003	0.003	0.003	5.88	0.068	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(195)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
4	0.985	0.005	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5.88	0.127	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(194)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
5	0.980	0.007	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.15	0.157	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	(193)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6	0.976	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.12	0.158	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
	(192)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
7	0.971	0.009	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.10	0.179	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
	(191)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(17)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
8	0.966	0.011	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.42	0.217	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
	(190)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
9	0.962	0.013	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.42	0.251	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(189)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
10	0.957	0.014	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.42	0.285	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(189)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
11	0.954	0.015	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.00	0.312	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(188)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
12	0.952	0.016	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.00	0.337	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	(187)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
13	0.948	0.017	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.377	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
	(187)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14	0.944	0.018	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.427	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(186)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
15	0.939	0.020	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.476	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(185)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16	0.935	0.021	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.526	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	(184)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
17	0.930	0.023	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.576	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	(183)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18	0.926	0.024	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.626	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(182)	(14)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
19	0.921	0.026	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.676	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(181)	(14)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20	0.917	0.027	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.726	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	(181)	(15)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
21	0.912	0.029	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.776	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(180)	(16)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22	0.908	0.030	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.825	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(179)	(17)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
23	0.903	0.031	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.875	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	(178)	(18)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
24	0.899	0.033	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.925	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	(177)	(18)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
25	0.895	0.034	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.975	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(176)	(19)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

TOTAL	(in)	0.97	12.97	13.94	11.47	0.37	0.19	0.57	0.52
	(ft)	0.08	1.08	1.16	0.96	0.03	0.02	0.05	0.04
	%Ultimate			100.0	82.3			4.1	3.8
REDUCD	(in)	0.83	11.02	11.85	9.75	0.32	0.17	0.48	0.44
	(ft)	0.07	0.92	0.99	0.81	0.03	0.01	0.04	0.04
	%Ultimate			85.0	69.9			3.5	3.2

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1 (marsh to el 2.5)	Region 2 (beach to el 6 average)	Region 3 (dike to el 4)	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	225.0	504.0	395.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 0.5

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Parameter	Value
Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.25
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement				Induced Settlement			
		Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	1.08	14.61	15.68	13.40	0.42	0.19	0.62	0.58
	(ft)	0.09	1.22	1.31	1.12	0.04	0.02	0.05	0.05
	%Ultimate			100.0	85.4			3.9	3.7
REDUCD	(in)	0.92	12.41	13.33	11.39	0.36	0.16	0.52	0.49
	(ft)	0.08	1.03	1.11	0.95	0.03	0.01	0.04	0.04
	%Ultimate			85.0	72.6			3.3	3.2

4.34

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)
	0.0								0				
1	2.0 4.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	114 228	225 197.3%	339	225 197.3%	339
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	225 80.9%	503	137 49.2%	415
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	225 55.8%	628	0 0.0%	403
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	225 40.6%	778	0 0.0%	553
5	22.5 25.0	53.0	0.100	0.015	8030.0	12045.0	5.0	13620	761 893	225 29.5%	985	9 1.2%	770
6	27.0 29.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13620	999 1105	225 22.5%	1224	10 1.0%	1009
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	224 18.2%	1458	18 1.4%	1252
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	224 15.3%	1695	8 0.5%	1478
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	224 13.3%	1910	0 0.0%	1686
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	224 11.8%	2125	0 0.0%	1901
11	51.0 52.0	50.0	0.200	0.030	7.0	10.6	2.0	2058	2058 2108	224 10.9%	2282	0 0.0%	2058
12	53.5 55.0	50.0	0.200	0.030	7.0	10.6	3.0	2183	2183 2258	224 10.3%	2407	5 0.2%	2188
13	57.5 60.0	50.0	0.200	0.030	7.0	10.6	5.0	2383	2383 2508	224 9.4%	2607	9 0.4%	2392
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	224 8.5%	2857	0 0.0%	2633
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	224 7.8%	3107	0 0.0%	2883
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	224 7.1%	3357	5 0.2%	3138
17	77.5 80.0	50.0	0.200	0.030	7.0	10.6	5.0	3383	3383 3508	224 6.6%	3607	4 0.1%	3387
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	223 6.2%	3856	0 0.0%	3633
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	223 5.6%	4106	0 0.0%	3883
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	223 5.4%	4356	6 0.1%	4139
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	223 5.1%	4606	0 0.0%	4383
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	223 4.8%	4856	0 0.0%	4633
23	107.5 110.0	50.0	0.200	0.030	7.0	10.6	5.0	16000	4883 5008	223 4.6%	5106	2 0.0%	4885
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	223 4.3%	5356	4 0.1%	5137
25	117.5 120.0	50.0	0.200	0.030	7.0	10.6	5.0	16000	5383 5508	223 4.1%	5606	0 0.0%	5383

Str No.	Ultimate Recomp Sett (in.)	Ultimate Virgin Sett (in.)	Ultimate Total Sett (in.)	Ultimate Bulb Sett (in.)	Induced Recomp Sett (in.)	Induced Virgin Sett (in.)	Induced Total Sett (in.)	Induced Bulb Sett (in.)	Influence Factors (Ultimate Induced Stresses in Parentheses) Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz
			(15.68)	(13.40)			(0.62)	(0.58)										
1	0.00	0.00	0.00 (15.68)	0.00 (13.40)	0.00	0.00	0.00 (0.62)	0.00 (0.58)	0.998 (225)	0.001 (0)	0.000 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)
2	0.61	0.04	0.65 (15.04)	0.65 (12.75)	0.41	0.00	0.41 (0.20)	0.41 (0.17)	0.995 (224)	0.002 (1)	0.000 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)
3	0.00	4.59	4.59 (10.45)	4.59 (8.17)	0.00	0.00	0.00 (0.20)	0.00 (0.17)	0.990 (223)	0.003 (2)	0.000 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)
4	0.00	3.53	3.53 (6.92)	3.53 (4.64)	0.00	0.00	0.00 (0.20)	0.00 (0.17)	0.985 (222)	0.005 (3)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
5	0.10	0.00	0.10 (6.82)	0.10 (4.54)	0.00	0.00	0.00 (0.20)	0.00 (0.16)	0.980 (220)	0.007 (4)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
6	0.06	0.00	0.06 (6.76)	0.06 (4.47)	0.00	0.00	0.00 (0.20)	0.00 (0.16)	0.976 (220)	0.008 (5)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
7	0.00	1.37	1.37 (5.39)	1.37 (3.10)	0.00	0.12	0.12 (0.08)	0.12 (0.04)	0.971 (218)	0.009 (6)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
8	0.00	0.97	0.97 (4.42)	0.97 (2.13)	0.00	0.04	0.04 (0.04)	0.04 (0.01)	0.966 (217)	0.011 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
9	0.00	0.85	0.85 (3.56)	0.85 (1.28)	0.00	0.00	0.00 (0.04)	0.00 (0.01)	0.962 (216)	0.013 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
10	0.00	0.76	0.76 (2.80)	0.76 (0.52)	0.00	0.00	0.00 (0.04)	0.00 (0.01)	0.957 (215)	0.014 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
11	0.00	0.22	0.22 (2.59)	0.22 (0.31)	0.00	0.00	0.00 (0.04)	0.00 (0.01)	0.954 (215)	0.015 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
12	0.00	0.31	0.31 (2.28)	0.31 (0.00)	0.00	0.01	0.01 (0.04)	0.01 (0.00)	0.952 (214)	0.016 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
13	0.00	0.47	0.47 (1.81)	0.00 (0.00)	0.00	0.02	0.02 (0.02)	0.00 (0.00)	0.948 (213)	0.017 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
14	0.00	0.43	0.43 (1.39)	0.00 (0.00)	0.00	0.00	0.00 (0.02)	0.00 (0.00)	0.944 (212)	0.018 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
15	0.00	0.39	0.39 (1.00)	0.00 (0.00)	0.00	0.00	0.00 (0.02)	0.00 (0.00)	0.939 (211)	0.020 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
16	0.00	0.36	0.36 (0.64)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)	0.935 (210)	0.021 (13)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
17	0.00	0.33	0.33 (0.31)	0.00 (0.00)	0.00	0.01	0.01 (0.00)	0.00 (0.00)	0.930 (209)	0.023 (14)	0.001 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
18	0.05	0.00	0.05 (0.26)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.926 (208)	0.024 (15)	0.001 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
19	0.04	0.00	0.04 (0.22)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.921 (207)	0.026 (16)	0.001 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
20	0.04	0.00	0.04 (0.18)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.917 (206)	0.027 (16)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
21	0.04	0.00	0.04 (0.14)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.912 (205)	0.029 (17)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
22	0.04	0.00	0.04 (0.10)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.908 (204)	0.030 (18)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
23	0.03	0.00	0.03 (0.06)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.903 (203)	0.031 (19)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
24	0.03	0.00	0.03 (0.03)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.899 (202)	0.033 (20)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
25	0.03	0.00	0.03 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.895 (201)	0.034 (21)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)

Str No.	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses) Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.00	0.000	1.00 (225)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	3.92	0.020	0.61 (136)	0.61 (1)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)
3	5.88	0.068	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	5.88	0.127	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.15	0.157	0.04 (9)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
6	0.12	0.158	0.05 (10)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
7	4.10	0.179	0.08 (17)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)
8	3.42	0.217	0.04 (8)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	3.42	0.251	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	3.42	0.285	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	2.00	0.312	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	3.00	0.337	0.02 (5)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
13	5.00	0.377	0.04 (8)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	5.00	0.427	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	5.00	0.476	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	5.00	0.526	0.02 (5)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
17	5.00	0.576	0.02 (3)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	5.00	0.626	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	5.00	0.676	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	5.00	0.726	0.03 (5)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	5.00	0.776	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	5.00	0.825	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	5.00	0.875	0.01 (2)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	5.00	0.925	0.02 (4)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	5.00	0.975	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

TOTAL	(in)	1.08	14.61	15.68	13.40	0.42	0.19	0.62	0.58
	(ft)	0.09	1.22	1.31	1.12	0.04	0.02	0.05	0.05
	%Ultimate			100.0	85.4			3.9	3.7
REDUCD	(in)	0.92	12.41	13.33	11.39	0.36	0.16	0.52	0.49
	(ft)	0.08	1.03	1.11	0.95	0.03	0.01	0.04	0.04
	%Ultimate			85.0	72.6			3.3	3.2

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1 (marsh to el 2.5)	Region 2 (beach to el 6 average)	Region 3 (dike to el 4)	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	150.0	491.0	302.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 1

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.77	10.18	10.96	7.93	0.29	0.15	0.44	0.41
	(ft)	0.06	0.85	0.91	0.66	0.02	0.01	0.04	0.03
	%Ultimate			100.0	72.4			4.0	3.7
REDUCD	(in)	0.66	8.66	9.31	6.74	0.25	0.13	0.38	0.35
	(ft)	0.05	0.72	0.78	0.56	0.02	0.01	0.03	0.03
	%Ultimate			85.0	61.6			3.4	3.2

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
	0.0								0							(10.96)	(7.93)			(0.44)	(0.41)
1	2.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	114	150	264	150	264	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4.0								228	131.6%		131.6%				(10.96)	(7.93)			(0.44)	(0.41)
2	6.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278	150	428	89	367	0.45	0.00	0.45	0.45	0.29	0.00	0.29	0.29
	8.0								328	54.0%		31.9%				(10.51)	(7.49)			(0.16)	(0.12)
3	11.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403	150	553	0	403	0.00	3.28	3.28	3.28	0.00	0.00	0.00	0.00
	14.0								478	37.3%		0.0%				(7.23)	(4.21)			(0.16)	(0.12)
4	17.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553	150	703	0	553	0.00	2.49	2.49	2.49	0.00	0.00	0.00	0.00
	20.0								628	27.2%		0.0%				(4.74)	(1.72)			(0.16)	(0.12)
5	22.5	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761	150	911	8	769	0.07	0.00	0.07	0.07	0.00	0.00	0.00	0.00
	25.0								893	19.8%		1.1%				(4.67)	(1.65)			(0.15)	(0.12)
6	27.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999	150	1149	9	1008	0.04	0.00	0.04	0.04	0.00	0.00	0.00	0.00
	29.0								1105	15.1%		0.9%				(4.63)	(1.61)			(0.15)	(0.12)
7	32.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234	150	1384	14	1248	0.00	0.94	0.94	0.94	0.00	0.09	0.09	0.09
	35.0								1363	12.2%		1.1%				(3.69)	(0.67)			(0.06)	(0.03)
8	37.5	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471	151	1621	6	1476	0.00	0.67	0.67	0.67	0.00	0.03	0.03	0.03
	40.0								1578	10.2%		0.4%				(3.02)	(0.00)			(0.03)	(0.00)
9	42.5	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686	151	1836	0	1686	0.00	0.58	0.58	0.00	0.00	0.00	0.00	0.00
	45.0								1793	8.9%		0.0%				(2.44)	(0.00)			(0.03)	(0.00)
10	47.5	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901	151	2051	0	1901	0.00	0.52	0.52	0.00	0.00	0.00	0.00	0.00
	50.0								2008	7.9%		0.0%				(1.92)	(0.00)			(0.03)	(0.00)
11	51.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058	151	2209	0	2058	0.00	0.15	0.15	0.00	0.00	0.00	0.00	0.00
	52.0								2108	7.3%		0.0%				(1.77)	(0.00)			(0.03)	(0.00)
12	53.5	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183	151	2334	4	2187	0.00	0.21	0.21	0.00	0.00	0.01	0.01	0.00
	55.0								2258	6.9%		0.2%				(1.56)	(0.00)			(0.03)	(0.00)
13	57.5	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383	151	2534	7	2390	0.00	0.32	0.32	0.00	0.00	0.01	0.01	0.00
	60.0								2508	6.3%		0.3%				(1.24)	(0.00)			(0.01)	(0.00)
14	62.5	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633	151	2784	0	2633	0.00	0.29	0.29	0.00	0.00	0.00	0.00	0.00
	65.0								2758	5.7%		0.0%				(0.95)	(0.00)			(0.01)	(0.00)
15	67.5	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883	151	3034	0	2883	0.00	0.27	0.27	0.00	0.00	0.00	0.00	0.00
	70.0								3008	5.2%		0.0%				(0.68)	(0.00)			(0.01)	(0.00)
16	72.5	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133	151	3284	4	3137	0.00	0.25	0.25	0.00	0.00	0.01	0.01	0.00
	75.0								3258	4.8%		0.1%				(0.44)	(0.00)			(0.01)	(0.00)
17	77.5	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383	151	3534	3	3386	0.00	0.23	0.23	0.00	0.00	0.00	0.00	0.00
	80.0								3508	4.5%		0.1%				(0.21)	(0.00)			(0.00)	(0.00)
18	82.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633	151	3784	0	3633	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	85.0								3758	4.2%		0.0%				(0.18)	(0.00)			(0.00)	(0.00)
19	87.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883	151	4034	0	3883	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	90.0								4008	3.9%		0.0%				(0.15)	(0.00)			(0.00)	(0.00)
20	92.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133	151	4284	4	4137	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	95.0								4258	3.7%		0.1%				(0.12)	(0.00)			(0.00)	(0.00)
21	97.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383	151	4534	0	4383	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	100.0								4508	3.5%		0.0%				(0.09)	(0.00)			(0.00)	(0.00)
22	102.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633	151	4784	0	4633	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	105.0								4758	3.3%		0.0%				(0.07)	(0.00)			(0.00)	(0.00)
23	107.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883	152	5035	2	4885	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00
	110.0								5008	3.1%		0.0%				(0.04)	(0.00)			(0.00)	(0.00)
24	112.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133	152	5285	4	5137	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00
	115.0								5258	3.0%		0.1%				(0.02)	(0.00)			(0.00)	(0.00)
25	117.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383	152	5535	0	5383	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00
	120.0								5508	2.8%		0.0%				(0.00)	(0.00)			(0.00)	(0.00)

Str No.	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz
1	0.998	0.001	0.000	0.071	0.071	0.071	0.071	0.071	0.071	0.071
	(150)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2	0.995	0.002	0.000	0.009	0.009	0.009	0.009	0.009	0.009	0.009
	(149)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
3	0.990	0.003	0.000	0.003	0.003	0.003	0.003	0.003	0.003	0.003
	(149)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
4	0.985	0.005	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	(148)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
5	0.980	0.007	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	(147)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6	0.976	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(146)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
7	0.971	0.009	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(146)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
8	0.966	0.011	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(145)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
9	0.962	0.013	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(144)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
10	0.957	0.014	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(144)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
11	0.954	0.015	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(143)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
12	0.952	0.016	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(143)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
13	0.948	0.017	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(142)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14	0.944	0.018	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(142)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
15	0.939	0.020	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(141)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16	0.935	0.021	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(140)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
17	0.930	0.023	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(140)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18	0.926	0.024	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(139)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
19	0.921	0.026	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(138)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20	0.917	0.027	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(138)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
21	0.912	0.029	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(137)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22	0.908	0.030	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(136)	(15)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
23	0.903	0.031	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(136)	(15)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
24	0.899	0.033	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(135)	(16)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
25	0.895	0.034	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(134)	(17)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Str No.	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.00	0.000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
			(150)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2	3.92	0.020	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
			(88)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
3	5.86	0.068	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
4	5.88	0.127	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
5	0.15	0.157	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6	0.12	0.158	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
7	4.10	0.179	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
			(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
8	3.42	0.217	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
			(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
9	3.42	0.251	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
10	3.42	0.285	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
11	2.00	0.312	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
12	3.00	0.337	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
13	5.00	0.377	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
			(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14	5.00	0.427	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
15	5.00	0.476	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16	5.00	0.526	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
17	5.00	0.576	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18	5.00	0.626	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
19	5.00	0.676	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20	5.00	0.726	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
21	5.00	0.776	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22	5.00	0.825	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
23	5.00	0.875	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
			(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
24	5.00	0.925	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
25	5.00	0.975	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

		Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.77	10.18	10.96	7.93	0.29	0.15	0.44	0.41
	(ft)	0.06	0.85	0.91	0.66	0.02	0.01	0.04	0.03
	%Ultimate			100.0	72.4			4.0	3.7
REDUCD	(in)	0.66	8.66	9.31	6.74	0.25	0.13	0.38	0.35
	(ft)	0.05	0.72	0.78	0.56	0.02	0.01	0.03	0.03
	%Ultimate			85.0	61.6			3.4	3.2

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 — marsh to el 2.5 — beach to el 6 average — dike to el 4

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	174.0	535.0	334.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 1

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.050
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement				Induced Settlement			
		Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.88	11.63	12.50	9.70	0.34	0.17	0.51	0.47
	(ft)	0.07	0.97	1.04	0.81	0.03	0.01	0.04	0.04
	%Ultimate			100.0	77.6			4.1	3.7
REDUCD	(in)	0.74	9.88	10.63	8.25	0.28	0.15	0.43	0.40
	(ft)	0.06	0.82	0.89	0.69	0.02	0.01	0.04	0.03
	%Ultimate			85.0	65.9			3.4	3.2

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sf/yr)	ch (sf/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
	0.0								0							(12.50)	(9.70)			(0.51)	(0.47)
1	2.0 4.0	67.0	0.000	0.000	99999.0	99999.0	4.0	1000	114 228	174 152.6%	288	174 152.6%	288	0.00	0.00	0.00 (12.50)	0.00 (9.70)	0.00	0.00	0.00 (0.51)	0.00 (0.47)
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	174 62.6%	452	103 37.0%	381	0.50	0.00	0.50 (12.00)	0.50 (9.20)	0.33	0.00	0.33 (0.18)	0.33 (0.14)
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	174 43.2%	577	0 0.0%	403	0.00	3.72	3.72 (8.29)	3.72 (5.48)	0.00	0.00	0.00 (0.18)	0.00 (0.14)
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	174 31.5%	727	0 0.0%	553	0.00	2.83	2.83 (5.45)	2.83 (2.65)	0.00	0.00	0.00 (0.18)	0.00 (0.14)
5	22.5 25.0	53.0	0.100	0.015	8930.0	12045.0	5.0	13520	761 893	174 22.9%	935	9 1.2%	770	0.08	0.00	0.08 (5.37)	0.08 (2.57)	0.00	0.00	0.00 (0.18)	0.00 (0.14)
6	27.0 29.0	53.0	0.100	0.015	8930.0	12045.0	4.0	13520	999 1105	174 17.4%	1173	10 1.0%	1009	0.05	0.00	0.05 (5.32)	0.05 (2.52)	0.00	0.00	0.00 (0.17)	0.00 (0.14)
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	174 14.1%	1408	16 1.3%	1250	0.00	1.08	1.08 (4.24)	1.08 (1.44)	0.00	0.10	0.10 (0.07)	0.10 (0.03)
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	174 11.8%	1645	7 0.4%	1477	0.00	0.76	0.76 (3.47)	0.76 (0.67)	0.00	0.03	0.03 (0.04)	0.03 (0.00)
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	174 10.3%	1860	0 0.0%	1686	0.00	0.67	0.67 (2.80)	0.67 (0.00)	0.00	0.00	0.00 (0.04)	0.00 (0.00)
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	174 9.2%	2075	0 0.0%	1901	0.00	0.60	0.60 (2.20)	0.00 (0.00)	0.00	0.00	0.00 (0.04)	0.00 (0.00)
11	51.0 52.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058 2108	174 8.5%	2232	0 0.0%	2058	0.00	0.17	0.17 (2.03)	0.00 (0.00)	0.00	0.00	0.00 (0.04)	0.00 (0.00)
12	53.5 55.0	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183 2258	174 8.0%	2357	5 0.2%	2188	0.00	0.24	0.24 (1.79)	0.00 (0.00)	0.00	0.01	0.01 (0.03)	0.00 (0.00)
13	57.5 60.0	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383 2508	174 7.3%	2557	8 0.3%	2391	0.00	0.37	0.37 (1.43)	0.00 (0.00)	0.00	0.02	0.02 (0.01)	0.00 (0.00)
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	174 6.6%	2807	0 0.0%	2633	0.00	0.33	0.33 (1.09)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	174 6.1%	3057	0 0.0%	2883	0.00	0.31	0.31 (0.79)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	174 5.6%	3307	5 0.2%	3138	0.00	0.28	0.28 (0.50)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)
17	77.5 80.0	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383 3508	174 5.2%	3557	3 0.1%	3386	0.00	0.26	0.26 (0.24)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	175 4.8%	3808	0 0.0%	3633	0.04	0.00	0.04 (0.20)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	175 4.5%	4058	0 0.0%	3883	0.03	0.00	0.03 (0.17)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	175 4.2%	4308	5 0.1%	4138	0.03	0.00	0.03 (0.14)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	175 4.0%	4558	0 0.0%	4383	0.03	0.00	0.03 (0.11)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	175 3.8%	4808	0 0.0%	4633	0.03	0.00	0.03 (0.08)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
23	107.5 110.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883 5008	175 3.6%	5058	2 0.0%	4885	0.03	0.00	0.03 (0.05)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	175 3.4%	5308	4 0.1%	5137	0.03	0.00	0.03 (0.02)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
25	117.5 120.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383 5508	175 3.2%	5558	0 0.0%	5383	0.02	0.00	0.02 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)

Str No.	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.998 (174)	0.001 (0)	0.000 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.00	0.000	1.00 (174)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	0.995 (173)	0.002 (1)	0.000 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	3.92	0.020	0.59 (102)	0.59 (1)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)
3	0.990 (172)	0.003 (2)	0.000 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	5.88	0.068	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	0.985 (171)	0.005 (3)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	5.88	0.127	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.980 (170)	0.007 (4)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.15	0.157	0.05 (9)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
6	0.976 (170)	0.008 (4)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.12	0.158	0.06 (10)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)
7	0.971 (169)	0.009 (5)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	4.10	0.179	0.09 (15)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)
8	0.966 (168)	0.011 (6)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.217	0.04 (6)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	0.962 (167)	0.013 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.251	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	0.957 (167)	0.014 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.285	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	0.954 (166)	0.015 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	2.00	0.312	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	0.952 (166)	0.016 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.00	0.337	0.03 (5)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
13	0.948 (165)	0.017 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.377	0.04 (7)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	0.944 (164)	0.018 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.427	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	0.939 (163)	0.020 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.476	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	0.935 (163)	0.021 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.526	0.03 (5)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
17	0.930 (162)	0.023 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.576	0.02 (3)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	0.926 (161)	0.024 (13)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.626	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	0.921 (160)	0.026 (14)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.676	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	0.917 (160)	0.027 (15)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.726	0.03 (5)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	0.912 (159)	0.029 (15)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.776	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	0.908 (158)	0.030 (16)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.825	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	0.903 (157)	0.031 (17)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.875	0.01 (2)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	0.899 (156)	0.033 (18)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.925	0.02 (4)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	0.895 (156)	0.034 (18)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.975	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

TOTAL	(in)	0.88	11.63	12.50	9.70	0.34	0.17	0.51	0.47
	(ft)	0.07	0.97	1.04	0.81	0.03	0.01	0.04	0.04
	%Ultimate			100.0	77.6			4.1	3.7
REDUCD	(in)	0.74	9.88	10.63	8.25	0.28	0.15	0.43	0.40
	(ft)	0.06	0.82	0.89	0.69	0.02	0.01	0.04	0.03
	%Ultimate			85.0	65.9			3.4	3.2

U:\sys\WPDATA\PROJECTS\9292\Settlement\Marsh Platform at El 2.5\Water at El 1\EESett_Reach 2_all.xls\Mud -2

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292	marsh to	beach to el 6	dike to el 4
Reach 2 - Thin Barrier Beach at surface	el 2.5	average	

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	201.0	579.0	367.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 1

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.25
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement Recomp Sett (in.)	Ultimate Settlement Virgin Sett (in.)	Ultimate Settlement Total Sett (in.)	Ultimate Settlement Bulb Sett (in.)	Induced Settlement Recomp Sett (in.)	Induced Settlement Virgin Sett (in.)	Induced Settlement Total Sett (in.)	Induced Settlement Bulb Sett (in.)
TOTAL	(in)	0.99	13.21	14.20	11.67	0.39	0.17	0.56	0.52
	(ft)	0.08	1.10	1.18	0.97	0.03	0.01	0.05	0.04
	%Ultimate			100.0	82.2			3.9	3.7
REDUCD	(in)	0.84	11.23	12.07	9.92	0.33	0.15	0.48	0.44
	(ft)	0.07	0.94	1.01	0.83	0.03	0.01	0.04	0.04
	%Ultimate			85.0	69.9			3.3	3.1

4.46

Group	L (ft)		Region 1 0.25	Region 2 0.25	Region 3 0.25	Region 4 0.25	Region 5 0.25	Region 6 0.25	Region 7 0.25	Region 8 0.25	Region 9 0.25	Region 10 0.25
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
	0.0								0							(14.20)	(11.67)			(0.56)	(0.52)
1	2.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	114	201	315	201	315	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4.0								228	176.3%		176.3%				(14.20)	(11.67)			(0.56)	(0.52)
2	6.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278	201	479	122	400	0.56	0.00	0.56	0.56	0.38	0.00	0.38	0.38
	8.0								328	72.3%		43.9%				(13.63)	(11.11)			(0.18)	(0.14)
3	11.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403	201	604	0	403	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00
	14.0								478	49.9%		0.0%				(9.44)	(6.92)			(0.18)	(0.14)
4	17.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553	201	754	0	553	0.00	3.21	3.21	3.21	0.00	0.00	0.00	0.00
	20.0								628	36.3%		0.0%				(6.24)	(3.71)			(0.18)	(0.14)
5	22.5	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761	201	961	8	769	0.09	0.00	0.09	0.09	0.00	0.00	0.00	0.00
	25.0								893	26.4%		1.1%				(6.15)	(3.62)			(0.18)	(0.14)
6	27.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999	201	1200	9	1008	0.06	0.00	0.06	0.06	0.00	0.00	0.00	0.00
	29.0								1105	20.1%		0.9%				(6.09)	(3.56)			(0.17)	(0.14)
7	32.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234	201	1435	16	1250	0.00	1.24	1.24	1.24	0.00	0.10	0.10	0.10
	35.0								1363	16.3%		1.3%				(4.85)	(2.33)			(0.07)	(0.03)
8	37.5	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471	201	1671	7	1478	0.00	0.87	0.87	0.87	0.00	0.03	0.03	0.03
	40.0								1578	13.7%		0.5%				(3.98)	(1.45)			(0.04)	(0.00)
9	42.5	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686	201	1886	0	1686	0.00	0.77	0.77	0.77	0.00	0.00	0.00	0.00
	45.0								1793	11.9%		0.0%				(3.21)	(0.69)			(0.04)	(0.00)
10	47.5	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901	201	2101	0	1901	0.00	0.69	0.69	0.69	0.00	0.00	0.00	0.00
	50.0								2008	10.6%		0.0%				(2.52)	(0.00)			(0.04)	(0.00)
11	51.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058	201	2259	0	2058	0.00	0.19	0.19	0.00	0.00	0.00	0.00	0.00
	52.0								2108	9.8%		0.0%				(2.33)	(0.00)			(0.04)	(0.00)
12	53.5	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183	201	2384	5	2188	0.00	0.28	0.28	0.00	0.00	0.01	0.01	0.00
	56.0								2258	9.2%		0.2%				(2.06)	(0.00)			(0.03)	(0.00)
13	57.5	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383	201	2584	8	2391	0.00	0.42	0.42	0.00	0.00	0.02	0.02	0.00
	60.0								2508	8.4%		0.3%				(1.63)	(0.00)			(0.01)	(0.00)
14	62.5	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633	201	2834	0	2633	0.00	0.38	0.38	0.00	0.00	0.00	0.00	0.00
	65.0								2758	7.6%		0.0%				(1.25)	(0.00)			(0.01)	(0.00)
15	67.5	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883	201	3084	0	2883	0.00	0.35	0.35	0.00	0.00	0.00	0.00	0.00
	70.0								3008	7.0%		0.0%				(0.90)	(0.00)			(0.01)	(0.00)
16	72.5	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133	201	3334	5	3138	0.00	0.32	0.32	0.00	0.00	0.01	0.01	0.00
	75.0								3258	6.4%		0.2%				(0.58)	(0.00)			(0.01)	(0.00)
17	77.5	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383	201	3584	3	3386	0.00	0.30	0.30	0.00	0.00	0.00	0.00	0.00
	80.0								3508	5.9%		0.1%				(0.28)	(0.00)			(0.00)	(0.00)
18	82.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633	201	3834	0	3633	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00
	85.0								3758	5.5%		0.0%				(0.23)	(0.00)			(0.00)	(0.00)
19	87.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883	201	4084	0	3883	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00
	90.0								4008	5.2%		0.0%				(0.20)	(0.00)			(0.00)	(0.00)
20	92.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133	201	4334	5	4138	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00
	95.0								4258	4.9%		0.1%				(0.16)	(0.00)			(0.00)	(0.00)
21	97.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383	201	4584	0	4383	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	100.0								4508	4.6%		0.0%				(0.12)	(0.00)			(0.00)	(0.00)
22	102.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633	200	4833	0	4633	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	105.0								4758	4.3%		0.0%				(0.09)	(0.00)			(0.00)	(0.00)
23	107.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883	200	5083	2	4885	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	110.0								5008	4.1%		0.0%				(0.06)	(0.00)			(0.00)	(0.00)
24	112.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133	200	5333	4	5137	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	115.0								5258	3.9%		0.1%				(0.03)	(0.00)			(0.00)	(0.00)
25	117.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383	200	5583	0	5383	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	120.0								5508	3.7%		0.0%				(0.00)	(0.00)			(0.00)	(0.00)

Str No.	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.998	0.001	0.000	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.00	0.000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	(201)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(201)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2	0.995	0.002	0.000	0.009	0.009	0.009	0.009	0.009	0.009	0.009	3.92	0.020	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61
	(200)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(121)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
3	0.990	0.003	0.000	0.003	0.003	0.003	0.003	0.003	0.003	0.003	5.88	0.068	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(199)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
4	0.985	0.005	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5.88	0.127	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(198)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
5	0.980	0.007	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.15	0.157	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
	(197)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6	0.976	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.12	0.158	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	(196)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
7	0.971	0.009	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.10	0.179	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
	(195)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(15)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
8	0.966	0.011	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.42	0.217	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
	(194)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
9	0.962	0.013	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.42	0.251	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(193)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
10	0.957	0.014	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.42	0.285	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(192)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
11	0.954	0.015	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.00	0.312	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(192)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
12	0.952	0.016	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.00	0.337	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	(191)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
13	0.948	0.017	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.377	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
	(191)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14	0.944	0.018	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.427	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(190)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
15	0.939	0.020	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.476	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(189)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16	0.935	0.021	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.526	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	(188)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
17	0.930	0.023	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.576	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	(187)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18	0.926	0.024	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.626	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(186)	(14)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
19	0.921	0.026	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.676	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(185)	(15)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20	0.917	0.027	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.726	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	(184)	(16)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
21	0.912	0.029	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.776	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(183)	(17)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22	0.908	0.030	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.825	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(182)	(17)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
23	0.903	0.031	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.875	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	(182)	(18)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
24	0.899	0.033	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.925	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	(181)	(19)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
25	0.895	0.034	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.975	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(180)	(20)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

TOTAL	(in)	0.99	13.21	14.20	11.67	0.39	0.17	0.56	0.52
	(ft)	0.08	1.10	1.18	0.97	0.03	0.01	0.05	0.04
	%Ultimate			100.0	82.2			3.9	3.7
REDUCD	(in)	0.84	11.23	12.07	9.92	0.33	0.15	0.48	0.44
	(ft)	0.07	0.94	1.01	0.83	0.03	0.01	0.04	0.04
	%Ultimate			85.0	69.9			3.3	3.1

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 — marsh to el 2.5 — beach to el 6 average — dike to el 4

Reach 2 - Thin Barrier Beach at surface

water at 1.5

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	124.0	467.0	273.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.670
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement Recomp Sett (in.)	Ultimate Virgin Sett (in.)	Ultimate Total Sett (in.)	Ultimate Bulb Sett (in.)	Induced Settlement Recomp Sett (in.)	Induced Virgin Sett (in.)	Induced Total Sett (in.)	Induced Bulb Sett (in.)
TOTAL	(in)	0.65	8.59	9.24	6.15	0.25	0.12	0.37	0.32
	(ft)	0.05	0.72	0.77	0.51	0.02	0.01	0.03	0.03
	%Ultimate			100.0	66.6			4.0	3.5
REDUCD	(in)	0.56	7.30	7.86	5.23	0.21	0.11	0.32	0.27
	(ft)	0.05	0.61	0.65	0.44	0.02	0.01	0.03	0.02
	%Ultimate			85.0	56.6			3.4	3.0

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
1	0.0 2.0 4.0	67.0	0.000	0.000	99999.0	99999.0	4.0	1000	0 114 228	124 108.8%	238	124 108.8%	238	0.00	0.00	(9.24) 0.00 (9.24)	(6.15) 0.00 (6.15)	0.00	0.00	(0.37) 0.00 (0.37)	(0.32) 0.00 (0.32)
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	124 44.7%	402	73 26.4%	351	0.38	0.00	0.38 (8.86)	0.38 (5.77)	0.24	0.00	0.24 (0.13)	0.24 (0.08)
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	124 30.9%	527	0 0.0%	403	0.00	2.78	2.78 (6.08)	2.78 (2.99)	0.00	0.00	0.00 (0.13)	0.00 (0.08)
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	125 22.5%	678	0 0.0%	553	0.00	2.10	2.10 (3.98)	2.10 (0.89)	0.00	0.00	0.00 (0.13)	0.00 (0.08)
5	22.5 25.0	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761 893	125 16.4%	885	7 0.9%	767	0.06	0.00	0.06 (3.92)	0.06 (0.83)	0.00	0.00	0.00 (0.13)	0.00 (0.08)
6	27.0 29.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999 1105	125 12.5%	1124	7 0.7%	1006	0.04	0.00	0.04 (3.88)	0.04 (0.79)	0.00	0.00	0.00 (0.13)	0.00 (0.08)
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	125 10.1%	1359	11 0.9%	1245	0.00	0.79	0.79 (3.09)	0.79 (0.00)	0.00	0.08	0.08 (0.05)	0.08 (0.00)
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	125 8.5%	1596	5 0.3%	1475	0.00	0.56	0.56 (2.53)	0.00 (0.00)	0.00	0.02	0.02 (0.03)	0.00 (0.00)
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	125 7.4%	1811	0 0.0%	1686	0.00	0.49	0.49 (2.04)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	125 6.6%	2026	0 0.0%	1901	0.00	0.44	0.44 (1.61)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)
11	51.0 52.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058 2108	126 6.1%	2184	0 0.0%	2058	0.00	0.12	0.12 (1.48)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)
12	53.5 55.0	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183 2258	126 5.8%	2309	4 0.2%	2187	0.00	0.17	0.17 (1.31)	0.00 (0.00)	0.00	0.01	0.01 (0.02)	0.00 (0.00)
13	57.5 60.0	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383 2508	126 5.3%	2509	6 0.2%	2389	0.00	0.27	0.27 (1.04)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	126 4.8%	2759	0 0.0%	2633	0.00	0.24	0.24 (0.80)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	126 4.4%	3009	0 0.0%	2883	0.00	0.22	0.22 (0.57)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	126 4.0%	3259	4 0.1%	3137	0.00	0.21	0.21 (0.37)	0.00 (0.00)	0.00	0.01	0.01 (0.00)	0.00 (0.00)
17	77.5 80.0	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383 3508	126 3.7%	3509	2 0.1%	3385	0.00	0.19	0.19 (0.18)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	126 3.5%	3759	0 0.0%	3633	0.03	0.00	0.03 (0.15)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	127 3.3%	4010	0 0.0%	3883	0.03	0.00	0.03 (0.12)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	127 3.1%	4260	4 0.1%	4137	0.02	0.00	0.02 (0.10)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	127 2.9%	4510	0 0.0%	4383	0.02	0.00	0.02 (0.08)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	127 2.7%	4760	0 0.0%	4633	0.02	0.00	0.02 (0.06)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
23	107.5 110.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883 5008	127 2.6%	5010	1 0.0%	4884	0.02	0.00	0.02 (0.04)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	127 2.5%	5260	3 0.1%	5136	0.02	0.00	0.02 (0.02)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
25	117.5 120.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383 5508	127 2.4%	5510	0 0.0%	5383	0.02	0.00	0.02 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)

Influence Factors (Ultimate Induced Stresses in Parentheses)

Str No.	Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz
1	0.998 (124)	0.001 (0)	0.000 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)
2	0.995 (123)	0.002 (1)	0.000 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)
3	0.990 (123)	0.003 (2)	0.000 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)
4	0.985 (122)	0.005 (2)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
5	0.980 (121)	0.007 (3)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
6	0.976 (121)	0.008 (4)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
7	0.971 (120)	0.009 (4)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
8	0.966 (120)	0.011 (5)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
9	0.962 (119)	0.013 (6)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
10	0.957 (119)	0.014 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
11	0.954 (118)	0.015 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
12	0.952 (118)	0.016 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
13	0.948 (118)	0.017 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
14	0.944 (117)	0.018 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
15	0.939 (116)	0.020 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
16	0.935 (116)	0.021 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
17	0.930 (115)	0.023 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
18	0.926 (115)	0.024 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
19	0.921 (114)	0.026 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
20	0.917 (114)	0.027 (13)	0.002 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
21	0.912 (113)	0.029 (13)	0.002 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
22	0.908 (113)	0.030 (14)	0.002 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
23	0.903 (112)	0.031 (15)	0.002 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
24	0.899 (111)	0.033 (15)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
25	0.895 (111)	0.034 (16)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)

Rate Parameters / Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses)

Str No.	Effective H* (ft)	Position (z*/L) (N/D)	Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.00	0.000	1.00 (124)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	3.92	0.020	0.59 (73)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)
3	5.88	0.068	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	5.88	0.127	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.15	0.157	0.05 (6)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
6	0.12	0.158	0.06 (7)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)
7	4.10	0.179	0.09 (11)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)
8	3.42	0.217	0.04 (5)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	3.42	0.251	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	3.42	0.285	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	2.00	0.312	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	3.00	0.337	0.03 (3)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
13	5.00	0.377	0.04 (5)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	5.00	0.427	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	5.00	0.476	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	5.00	0.526	0.03 (3)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
17	5.00	0.576	0.02 (2)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	5.00	0.626	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	5.00	0.676	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	5.00	0.726	0.03 (3)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	5.00	0.776	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	5.00	0.825	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	5.00	0.875	0.01 (1)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	5.00	0.925	0.02 (3)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	5.00	0.975	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

		Recomp	Virgin	Total	Bulb	Recomp	Virgin	Total	Bulb
TOTAL	(in)	0.65	8.59	9.24	6.15	0.25	0.12	0.37	0.32
	(ft)	0.05	0.72	0.77	0.51	0.02	0.01	0.03	0.03
	%Ultimate			100.0	66.6			4.0	3.5
REDUCD	(in)	0.56	7.30	7.86	5.23	0.21	0.11	0.32	0.27
	(ft)	0.05	0.61	0.65	0.44	0.02	0.01	0.03	0.02
	%Ultimate			85.0	56.6			3.4	3.0

U:\sys\WPDATA\PROJECTS\9292\Settlement\Marsh Platform at El 2.5\Water at El 1.5\EESett_Reach 2_all.xlsMud -1

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 | marsh to el 2.5 | beach to el 6 average | dike to el 4

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	151.0	510.5	307.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 1.5

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement Recomp Sett (in.)	Ultimate Virgin Sett (in.)	Ultimate Total Sett (in.)	Ultimate Bulb Sett (in.)	Induced Settlement Recomp Sett (in.)	Induced Virgin Sett (in.)	Induced Total Sett (in.)	Induced Bulb Sett (in.)
TOTAL	(in)	0.78	10.26	11.03	7.99	0.30	0.15	0.45	0.41
	(ft)	0.06	0.85	0.92	0.67	0.02	0.01	0.04	0.03
	%Ultimate			100.0	72.4			4.0	3.7
REDUCD	(in)	0.66	8.72	9.38	6.79	0.25	0.13	0.38	0.35
	(ft)	0.05	0.73	0.78	0.57	0.02	0.01	0.03	0.03
	%Ultimate			85.0	61.5			3.4	3.2

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sf/yr)	ch (sf/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)
	0.0								0				
1	2.0	67.0	0.000	0.000	99999.0	99999.0	4.0	1000	114	151	265	151	265
	4.0								228	132.5%		132.5%	
2	6.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278	151	429	89	367
	8.0								328	54.4%		32.1%	
3	11.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403	151	554	0	403
	14.0								478	37.5%		0.0%	
4	17.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553	151	704	0	553
	20.0								628	27.4%		0.0%	
5	22.5	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761	151	912	8	769
	25.0								893	19.9%		1.1%	
6	27.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999	152	1151	9	1008
	29.0								1105	15.2%		0.9%	
7	32.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234	152	1386	14	1248
	35.0								1363	12.3%		1.1%	
8	37.5	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471	152	1622	6	1476
	40.0								1578	10.3%		0.4%	
9	42.5	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686	152	1837	0	1686
	45.0								1793	9.0%		0.0%	
10	47.5	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901	152	2052	0	1901
	50.0								2008	8.0%		0.0%	
11	51.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058	152	2210	0	2058
	52.0								2108	7.4%		0.0%	
12	53.5	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183	152	2335	4	2187
	55.0								2258	7.0%		0.2%	
13	57.5	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383	152	2535	7	2390
	60.0								2508	6.4%		0.3%	
14	62.5	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633	152	2785	0	2633
	65.0								2758	5.8%		0.0%	
15	67.5	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883	152	3035	0	2883
	70.0								3008	5.3%		0.0%	
16	72.5	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133	152	3285	4	3137
	75.0								3258	4.9%		0.1%	
17	77.5	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383	152	3535	3	3386
	80.0								3508	4.5%		0.1%	
18	82.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633	153	3786	0	3633
	85.0								3758	4.2%		0.0%	
19	87.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883	153	4036	0	3883
	90.0								4008	3.9%		0.0%	
20	92.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133	153	4286	5	4138
	95.0								4258	3.7%		0.1%	
21	97.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383	153	4536	0	4383
	100.0								4508	3.5%		0.0%	
22	102.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633	153	4786	0	4633
	105.0								4758	3.3%		0.0%	
23	107.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883	153	5036	2	4885
	110.0								5008	3.1%		0.0%	
24	112.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133	153	5286	4	5137
	115.0								5258	3.0%		0.1%	
25	117.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383	153	5536	0	5383
	120.0								5508	2.8%		0.0%	

Str No.	Ultimate Recomp Sett (in.)	Ultimate Virgin Sett (in.)	Ultimate Total Sett (in.)	Ultimate Bulb Sett (in.)	Induced Recomp Sett (in.)	Induced Virgin Sett (in.)	Induced Total Sett (in.)	Induced Bulb Sett (in.)	Influence Factors Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz
			(11.03)	(7.99)			(0.45)	(0.41)										
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.998	0.001	0.000	0.071	0.071	0.071	0.071	0.071	0.071	0.071
			(11.03)	(7.99)			(0.45)	(0.41)	(151)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2	0.45	0.00	0.45	0.45	0.29	0.00	0.29	0.29	0.995	0.002	0.000	0.009	0.009	0.009	0.009	0.009	0.009	0.009
			(10.58)	(7.54)			(0.16)	(0.12)	(150)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
3	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.990	0.003	0.000	0.003	0.003	0.003	0.003	0.003	0.003	0.003
			(7.28)	(4.24)			(0.16)	(0.12)	(149)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
4	0.00	2.50	2.50	2.50	0.00	0.00	0.00	0.00	0.985	0.005	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001
			(4.78)	(1.74)			(0.16)	(0.12)	(149)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
5	0.07	0.00	0.07	0.07	0.00	0.00	0.00	0.00	0.980	0.007	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001
			(4.71)	(1.66)			(0.15)	(0.12)	(148)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6	0.04	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.976	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(4.67)	(1.62)			(0.15)	(0.12)	(147)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
7	0.00	0.95	0.95	0.95	0.00	0.09	0.09	0.09	0.971	0.009	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(3.72)	(0.67)			(0.06)	(0.03)	(147)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
8	0.00	0.67	0.67	0.67	0.00	0.03	0.03	0.03	0.966	0.011	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(3.05)	(0.00)			(0.03)	(0.00)	(146)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
9	0.00	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.962	0.013	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(2.46)	(0.00)			(0.03)	(0.00)	(145)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
10	0.00	0.53	0.53	0.00	0.00	0.00	0.00	0.00	0.957	0.014	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(1.93)	(0.00)			(0.03)	(0.00)	(145)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
11	0.00	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.954	0.015	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(1.78)	(0.00)			(0.03)	(0.00)	(144)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
12	0.00	0.21	0.21	0.00	0.00	0.01	0.01	0.00	0.952	0.016	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(1.57)	(0.00)			(0.03)	(0.00)	(144)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
13	0.00	0.32	0.32	0.00	0.00	0.01	0.01	0.00	0.948	0.017	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(1.25)	(0.00)			(0.01)	(0.00)	(143)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14	0.00	0.29	0.29	0.00	0.00	0.00	0.00	0.00	0.944	0.018	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.96)	(0.00)			(0.01)	(0.00)	(142)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
15	0.00	0.27	0.27	0.00	0.00	0.00	0.00	0.00	0.939	0.020	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.69)	(0.00)			(0.01)	(0.00)	(142)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16	0.00	0.25	0.25	0.00	0.00	0.01	0.01	0.00	0.935	0.021	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.44)	(0.00)			(0.01)	(0.00)	(141)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
17	0.00	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.930	0.023	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.21)	(0.00)			(0.00)	(0.00)	(140)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.926	0.024	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.18)	(0.00)			(0.00)	(0.00)	(140)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
19	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.921	0.026	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.15)	(0.00)			(0.00)	(0.00)	(139)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.917	0.027	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.12)	(0.00)			(0.00)	(0.00)	(138)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
21	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.912	0.029	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.09)	(0.00)			(0.00)	(0.00)	(138)	(15)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.908	0.030	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.07)	(0.00)			(0.00)	(0.00)	(137)	(15)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
23	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.903	0.031	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.04)	(0.00)			(0.00)	(0.00)	(136)	(16)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
24	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.899	0.033	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.02)	(0.00)			(0.00)	(0.00)	(136)	(17)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
25	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.895	0.034	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			(0.00)	(0.00)			(0.00)	(0.00)	(135)	(18)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Str No.	Rate Parameters Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.00	0.000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
			(151)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2	3.92	0.020	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
			(89)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
3	5.88	0.068	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
4	5.88	0.127	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
5	0.15	0.157	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6	0.12	0.158	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
7	4.10	0.179	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
			(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
8	3.42	0.217	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
			(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
9	3.42	0.251	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
10	3.42	0.285	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
11	2.00	0.312	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
12	3.00	0.337	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
13	5.00	0.377	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
			(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14	5.00	0.427	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
15	5.00	0.476	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16	5.00	0.526	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
17	5.00	0.576	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18	5.00	0.626	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
19	5.00	0.676	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20	5.00	0.726	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
21	5.00	0.776	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22	5.00	0.825	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
23	5.00	0.875	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
			(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
24	5.00	0.925	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
25	5.00	0.975	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

		Ultimate Recomp	Ultimate Virgin	Ultimate Total	Ultimate Bulb	Induced Recomp	Induced Virgin	Induced Total	Induced Bulb
TOTAL	(in)	0.78	10.26	11.03	7.99	0.30	0.15	0.45	0.41
	(ft)	0.06	0.85	0.92	0.67	0.02	0.01	0.04	0.03
	%Ultimate			100.0	72.4			4.0	3.7
REDUCD	(in)	0.66	8.72	9.38	6.79	0.25	0.13	0.38	0.35
	(ft)	0.05	0.73	0.78	0.57	0.02	0.01	0.03	0.03
	%Ultimate			85.0	61.5			3.4	3.2

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 — marsh to el 2.5 — beach to el 6 average — dike to el 4

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	178.0	555.0	339.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 1.5

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.25
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.050
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement				Induced Settlement			
		Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.89	11.87	12.77	9.90	0.35	0.15	0.50	0.47
	(ft)	0.07	0.99	1.06	0.82	0.03	0.01	0.04	0.04
	%Ultimate			100.0	77.5			3.9	3.7
REDUCD	(in)	0.76	10.09	10.85	8.41	0.30	0.13	0.43	0.40
	(ft)	0.06	0.84	0.90	0.70	0.02	0.01	0.04	0.03
	%Ultimate			85.0	65.9			3.3	3.1

4.73

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
1	0.0 2.0 4.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	0 114 228	178 156.2%	292	178 156.2%	292	0.00	0.00	(12.77) 0.00 (12.77)	(9.90) 0.00 (9.90)	0.00	0.00	(0.50) 0.00 (0.50)	(0.47) 0.00 (0.47)
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	178 64.0%	456	108 38.9%	386	0.51	0.00	0.51 (12.25)	0.51 (9.39)	0.34	0.00	0.34 (0.16)	0.34 (0.13)
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	178 44.2%	581	0 0.0%	403	0.00	3.79	3.79 (8.47)	3.79 (5.60)	0.00	0.00	0.00 (0.16)	0.00 (0.13)
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	178 32.2%	731	0 0.0%	553	0.00	2.89	2.89 (5.57)	2.89 (2.71)	0.00	0.00	0.00 (0.16)	0.00 (0.13)
5	22.5 25.0	53.0	0.100	0.016	8030.0	12045.0	5.0	13520	761 893	178 23.4%	939	8 1.0%	768	0.08	0.00	0.08 (5.49)	0.08 (2.63)	0.00	0.00	0.00 (0.16)	0.00 (0.12)
6	27.0 29.0	53.0	0.100	0.016	8030.0	12045.0	4.0	13520	999 1105	178 17.8%	1177	8 0.8%	1007	0.05	0.00	0.05 (5.44)	0.05 (2.57)	0.00	0.00	0.00 (0.16)	0.00 (0.12)
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	178 14.4%	1412	14 1.1%	1248	0.00	1.11	1.11 (4.34)	1.11 (1.47)	0.00	0.09	0.09 (0.06)	0.09 (0.03)
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	178 12.1%	1649	6 0.4%	1477	0.00	0.78	0.78 (3.55)	0.78 (0.69)	0.00	0.03	0.03 (0.03)	0.03 (0.00)
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	178 10.6%	1864	0 0.0%	1686	0.00	0.69	0.69 (2.87)	0.69 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	178 9.4%	2079	0 0.0%	1901	0.00	0.61	0.61 (2.25)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)
11	51.0 52.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058 2108	178 8.7%	2236	0 0.0%	2058	0.00	0.17	0.17 (2.08)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)
12	53.5 55.0	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183 2258	178 8.2%	2361	4 0.2%	2187	0.00	0.25	0.25 (1.84)	0.00 (0.00)	0.00	0.01	0.01 (0.03)	0.00 (0.00)
13	57.5 60.0	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383 2508	179 7.5%	2562	7 0.3%	2390	0.00	0.38	0.38 (1.46)	0.00 (0.00)	0.00	0.02	0.02 (0.01)	0.00 (0.00)
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	179 6.8%	2812	0 0.0%	2633	0.00	0.34	0.34 (1.12)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	179 6.2%	3062	0 0.0%	2883	0.00	0.31	0.31 (0.80)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	179 5.7%	3312	4 0.1%	3137	0.00	0.29	0.29 (0.52)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)
17	77.5 80.0	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383 3508	179 5.3%	3562	3 0.1%	3386	0.00	0.27	0.27 (0.25)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	179 4.9%	3812	0 0.0%	3633	0.04	0.00	0.04 (0.21)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	179 4.6%	4062	0 0.0%	3883	0.04	0.00	0.04 (0.17)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	179 4.3%	4312	5 0.1%	4138	0.03	0.00	0.03 (0.14)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	179 4.1%	4562	0 0.0%	4383	0.03	0.00	0.03 (0.11)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	179 3.9%	4812	0 0.0%	4633	0.03	0.00	0.03 (0.08)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
23	107.5 110.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883 5008	179 3.7%	5062	2 0.0%	4885	0.03	0.00	0.03 (0.05)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	179 3.5%	5312	4 0.1%	5137	0.03	0.00	0.03 (0.03)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
25	117.5 120.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383 5508	179 3.3%	5562	0 0.0%	5383	0.03	0.00	0.03 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)

Str No.	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.998 (178)	0.001 (0)	0.000 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.00	0.000	1.00 (178)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	0.995 (177)	0.002 (1)	0.000 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	3.92	0.020	0.61 (108)	0.61 (1)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)
3	0.990 (176)	0.003 (2)	0.000 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	5.88	0.068	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	0.985 (175)	0.005 (3)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	5.88	0.127	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.980 (174)	0.007 (4)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.15	0.157	0.04 (7)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
6	0.976 (174)	0.008 (4)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.12	0.158	0.05 (8)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
7	0.971 (173)	0.009 (5)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	4.10	0.179	0.08 (14)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)
8	0.966 (172)	0.011 (6)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.217	0.04 (6)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	0.962 (171)	0.013 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.251	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	0.957 (170)	0.014 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.285	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	0.954 (170)	0.015 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	2.00	0.312	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	0.952 (169)	0.016 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.00	0.337	0.02 (4)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
13	0.948 (169)	0.017 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.377	0.04 (7)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	0.944 (168)	0.018 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.427	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	0.939 (167)	0.020 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.476	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	0.935 (166)	0.021 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.526	0.02 (4)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
17	0.930 (166)	0.023 (13)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.576	0.02 (3)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	0.926 (165)	0.024 (13)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.626	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	0.921 (164)	0.026 (14)	0.001 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.676	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	0.917 (163)	0.027 (15)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.726	0.03 (4)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	0.912 (162)	0.029 (16)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.776	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	0.908 (162)	0.030 (17)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.825	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	0.903 (161)	0.031 (17)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.875	0.01 (1)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	0.899 (160)	0.033 (18)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.925	0.02 (3)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	0.895 (159)	0.034 (19)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.975	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

TOTAL	(in)	0.89	11.87	12.77	9.90	0.35	0.15	0.50	0.47
	(ft)	0.07	0.99	1.06	0.82	0.03	0.01	0.04	0.04
	%Ultimate			100.0	77.5			3.9	3.7
REDUCD	(in)	0.76	10.09	10.85	8.41	0.30	0.13	0.43	0.40
	(ft)	0.06	0.84	0.90	0.70	0.02	0.01	0.04	0.03
	%Ultimate			85.0	65.9			3.3	3.1

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 marsh to beach to el 6 dike to el 4

Reach 2 - Thin Barrier Beach at surface el 2 average

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	134.4	515.0	329.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 0.5

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, υ (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.70	9.26	9.96	6.61	0.27	0.13	0.40	0.35
	(ft)	0.06	0.77	0.83	0.55	0.02	0.01	0.03	0.03
	%Ultimate			100.0	66.4			4.0	3.5
REDUCD	(in)	0.60	7.87	8.47	5.62	0.23	0.11	0.34	0.30
	(ft)	0.05	0.66	0.71	0.47	0.02	0.01	0.03	0.02
	%Ultimate			85.0	56.5			3.4	3.0

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
	0.0								0							(9.96)	(6.61)			(0.40)	(0.35)
1	2.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	114	134	248	134	248	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4.0								228	118.0%		118.0%				(9.96)	(6.61)			(0.40)	(0.35)
2	6.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278	135	413	79	357	0.41	0.00	0.41	0.41	0.26	0.00	0.26	0.26
	8.0								328	48.4%		28.6%				(9.55)	(6.21)			(0.14)	(0.09)
3	11.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403	135	538	0	403	0.00	2.99	2.99	2.99	0.00	0.00	0.00	0.00
	14.0								478	33.4%		0.0%				(6.56)	(3.22)			(0.14)	(0.09)
4	17.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553	135	688	0	553	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00
	20.0								628	24.4%		0.0%				(4.30)	(0.96)			(0.14)	(0.09)
5	22.5	53.0	0.100	0.015	8030.0	12045.0	5.0	13620	761	135	896	7	768	0.06	0.00	0.06	0.06	0.00	0.00	0.00	0.00
	25.0								893	17.8%		0.9%				(4.24)	(0.89)			(0.14)	(0.08)
6	27.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13620	999	135	1134	8	1007	0.04	0.00	0.04	0.04	0.00	0.00	0.00	0.00
	29.0								1105	13.6%		0.8%				(4.20)	(0.85)			(0.14)	(0.08)
7	32.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234	136	1370	12	1246	0.00	0.85	0.85	0.85	0.00	0.08	0.08	0.08
	35.0								1363	11.0%		1.0%				(3.35)	(0.00)			(0.05)	(0.00)
8	37.5	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471	136	1606	5	1476	0.00	0.60	0.60	0.00	0.00	0.02	0.02	0.00
	40.0								1578	9.2%		0.3%				(2.74)	(0.00)			(0.03)	(0.00)
9	42.5	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686	136	1821	0	1686	0.00	0.53	0.53	0.00	0.00	0.00	0.00	0.00
	45.0								1793	8.1%		0.0%				(2.21)	(0.00)			(0.03)	(0.00)
10	47.5	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901	136	2037	0	1901	0.00	0.47	0.47	0.00	0.00	0.00	0.00	0.00
	50.0								2008	7.2%		0.0%				(1.74)	(0.00)			(0.03)	(0.00)
11	51.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058	136	2194	0	2058	0.00	0.13	0.13	0.00	0.00	0.00	0.00	0.00
	52.0								2108	6.6%		0.0%				(1.61)	(0.00)			(0.03)	(0.00)
12	53.5	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183	136	2319	4	2187	0.00	0.19	0.19	0.00	0.00	0.01	0.01	0.00
	55.0								2258	6.2%		0.2%				(1.42)	(0.00)			(0.02)	(0.00)
13	57.5	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383	136	2519	6	2389	0.00	0.29	0.29	0.00	0.00	0.01	0.01	0.00
	60.0								2508	5.7%		0.3%				(1.13)	(0.00)			(0.01)	(0.00)
14	62.5	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633	137	2770	0	2633	0.00	0.26	0.26	0.00	0.00	0.00	0.00	0.00
	65.0								2758	5.2%		0.0%				(0.86)	(0.00)			(0.01)	(0.00)
15	67.5	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883	137	3020	0	2883	0.00	0.24	0.24	0.00	0.00	0.00	0.00	0.00
	70.0								3008	4.7%		0.0%				(0.62)	(0.00)			(0.01)	(0.00)
16	72.5	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133	137	3270	4	3137	0.00	0.22	0.22	0.00	0.00	0.01	0.01	0.00
	75.0								3258	4.4%		0.1%				(0.40)	(0.00)			(0.01)	(0.00)
17	77.5	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383	137	3520	2	3385	0.00	0.21	0.21	0.00	0.00	0.00	0.00	0.00
	80.0								3508	4.1%		0.1%				(0.19)	(0.00)			(0.00)	(0.00)
18	82.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633	137	3770	0	3633	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	85.0								3758	3.8%		0.0%				(0.16)	(0.00)			(0.00)	(0.00)
19	87.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883	138	4021	0	3883	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	90.0								4008	3.5%		0.0%				(0.14)	(0.00)			(0.00)	(0.00)
20	92.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133	138	4271	4	4137	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
	95.0								4258	3.3%		0.1%				(0.11)	(0.00)			(0.00)	(0.00)
21	97.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383	138	4521	0	4383	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00
	100.0								4508	3.1%		0.0%				(0.09)	(0.00)			(0.00)	(0.00)
22	102.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633	138	4771	0	4633	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00
	105.0								4758	3.0%		0.0%				(0.06)	(0.00)			(0.00)	(0.00)
23	107.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883	138	5021	1	4884	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00
	110.0								5008	2.8%		0.0%				(0.04)	(0.00)			(0.00)	(0.00)
24	112.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133	138	5271	3	5136	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00
	115.0								5258	2.7%		0.1%				(0.02)	(0.00)			(0.00)	(0.00)
25	117.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383	139	5522	0	5383	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00
	120.0								5508	2.6%		0.0%				(0.00)	(0.00)			(0.00)	(0.00)

Str No.	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.998	0.001	0.000	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.00	0.000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	(134)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(134)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2	0.995	0.002	0.000	0.009	0.009	0.009	0.009	0.009	0.009	0.009	3.92	0.020	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
	(134)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(79)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
3	0.990	0.003	0.000	0.003	0.003	0.003	0.003	0.003	0.003	0.003	5.88	0.068	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(133)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
4	0.985	0.005	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5.88	0.127	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(132)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
5	0.980	0.007	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.15	0.157	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	(132)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6	0.976	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.12	0.158	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
	(131)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
7	0.971	0.009	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.10	0.179	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
	(131)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
8	0.966	0.011	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.42	0.217	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
	(130)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
9	0.962	0.013	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.42	0.251	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(129)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
10	0.957	0.014	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.42	0.285	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(129)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
11	0.954	0.015	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.00	0.312	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(128)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
12	0.952	0.016	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.00	0.337	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	(128)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
13	0.948	0.017	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.377	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
	(127)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14	0.944	0.018	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.427	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(127)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
15	0.939	0.020	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.476	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(126)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16	0.935	0.021	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.526	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	(126)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
17	0.930	0.023	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.576	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	(125)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18	0.926	0.024	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.626	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(124)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
19	0.921	0.026	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.676	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(124)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20	0.917	0.027	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.726	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	(123)	(14)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
21	0.912	0.029	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.776	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(123)	(15)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22	0.908	0.030	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.825	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(122)	(15)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
23	0.903	0.031	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.875	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	(121)	(16)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
24	0.899	0.033	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.925	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	(121)	(17)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
25	0.895	0.034	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.00	0.975	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(120)	(18)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

TOTAL	(in)	0.70	9.26	9.96	6.61	0.27	0.13	0.40	0.35
	(ft)	0.06	0.77	0.83	0.55	0.02	0.01	0.03	0.03
	%Ultimate			100.0	66.4			4.0	3.5
REDUCD	(in)	0.60	7.87	8.47	5.62	0.23	0.11	0.34	0.30
	(ft)	0.05	0.66	0.71	0.47	0.02	0.01	0.03	0.02
	%Ultimate			85.0	56.5			3.4	3.0

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1 (marsh to el 2)	Region 2 (beach to el 6 average)	Region 3 (dike to el 4)	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	162.0	560.0	362.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at el 0.5

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.83	10.94	11.76	8.50	0.32	0.16	0.48	0.44
	(ft)	0.07	0.91	0.98	0.71	0.03	0.01	0.04	0.04
	%Ultimate			100.0	72.2			4.0	3.7
REDUCD	(in)	0.70	9.30	10.00	7.22	0.27	0.14	0.40	0.37
	(ft)	0.06	0.77	0.83	0.60	0.02	0.01	0.03	0.03
	%Ultimate			85.0	61.4			3.4	3.2

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Stratum properties and Eff Vert Stress at Mid-Stratum

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)
1	0.0 2.0 4.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	0 114 228	162 142.1%	276	162 142.1%	276
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	162 58.3%	440	96 34.4%	374
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	162 40.3%	565	0 0.0%	403
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	162 29.4%	715	0 0.0%	553
5	22.5 25.0	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761 893	163 21.4%	923	9 1.1%	769
6	27.0 29.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999 1105	163 16.3%	1162	9 0.9%	1008
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	163 13.2%	1397	15 1.2%	1249
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	163 11.1%	1633	6 0.4%	1477
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	163 9.7%	1849	0 0.0%	1686
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	163 8.6%	2064	0 0.0%	1901
11	51.0 52.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058 2108	163 7.9%	2221	0 0.0%	2058
12	53.5 55.0	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183 2258	163 7.5%	2346	5 0.2%	2188
13	57.5 60.0	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383 2508	163 6.9%	2546	7 0.3%	2390
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	164 6.2%	2797	0 0.0%	2633
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	164 5.7%	3047	0 0.0%	2883
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	164 5.2%	3297	5 0.1%	3138
17	77.5 80.0	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383 3508	164 4.8%	3547	3 0.1%	3386
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	164 4.5%	3797	0 0.0%	3633
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	164 4.2%	4047	0 0.0%	3883
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	164 4.0%	4297	5 0.1%	4138
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	164 3.6%	4547	0 0.0%	4383
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	165 3.6%	4798	0 0.0%	4633
23	107.5 110.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883 5008	165 3.4%	5048	2 0.0%	4885
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	165 3.2%	5298	4 0.1%	5137
25	117.5 120.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383 5508	165 3.1%	5548	0 0.0%	5383

Ultimate Settlement / Induced Settlement

Str No.	Ult. Recomp Sett (in.)	Ult. Virgin Sett (in.)	Ult. Total Sett (in.)	Ult. Bulb Sett (in.)	Ind. Recomp Sett (in.)	Ind. Virgin Sett (in.)	Ind. Total Sett (in.)	Ind. Bulb Sett (in.)
1	0.00	0.00	(11.76) 0.00 (11.76)	(8.50) 0.00 (8.50)	0.00	0.00	(0.48) 0.00 (0.48)	(0.44) 0.00 (0.44)
2	0.48	0.00	0.48 (11.29)	0.48 (8.02)	0.31	0.00	0.31 (0.17)	0.31 (0.13)
3	0.00	3.50	3.50 (7.79)	3.50 (4.52)	0.00	0.00	0.00 (0.17)	0.00 (0.13)
4	0.00	2.67	2.67 (5.12)	2.67 (1.86)	0.00	0.00	0.00 (0.17)	0.00 (0.13)
5	0.08	0.00	0.08 (5.04)	0.08 (1.78)	0.00	0.00	0.00 (0.17)	0.00 (0.13)
6	0.05	0.00	0.05 (5.00)	0.05 (1.73)	0.00	0.00	0.00 (0.16)	0.00 (0.13)
7	0.00	1.02	1.02 (3.98)	1.02 (0.72)	0.00	0.10	0.10 (0.06)	0.10 (0.03)
8	0.00	0.72	0.72 (3.27)	0.72 (0.00)	0.00	0.03	0.03 (0.04)	0.03 (0.00)
9	0.00	0.63	0.63 (2.63)	0.00 (0.00)	0.00	0.00	0.00 (0.04)	0.00 (0.00)
10	0.00	0.56	0.56 (2.07)	0.00 (0.00)	0.00	0.00	0.00 (0.04)	0.00 (0.00)
11	0.00	0.16	0.16 (1.91)	0.00 (0.00)	0.00	0.00	0.00 (0.04)	0.00 (0.00)
12	0.00	0.23	0.23 (1.69)	0.00 (0.00)	0.00	0.01	0.01 (0.03)	0.00 (0.00)
13	0.00	0.35	0.35 (1.34)	0.00 (0.00)	0.00	0.02	0.02 (0.01)	0.00 (0.00)
14	0.00	0.31	0.31 (1.03)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)
15	0.00	0.29	0.29 (0.74)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)
16	0.00	0.27	0.27 (0.47)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)
17	0.00	0.25	0.25 (0.23)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
18	0.03	0.00	0.03 (0.19)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
19	0.03	0.00	0.03 (0.16)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
20	0.03	0.00	0.03 (0.13)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
21	0.03	0.00	0.03 (0.10)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
22	0.03	0.00	0.03 (0.07)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
23	0.03	0.00	0.03 (0.05)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
24	0.02	0.00	0.02 (0.02)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
25	0.02	0.00	0.02 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)

Influence Factors (Ultimate Induced Stresses in Parentheses)

Str No.	Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz
1	0.998 (162)	0.001 (0)	0.000 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)
2	0.995 (161)	0.002 (1)	0.000 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)
3	0.990 (160)	0.003 (2)	0.000 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)
4	0.985 (160)	0.005 (3)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
5	0.980 (159)	0.007 (4)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
6	0.976 (158)	0.008 (4)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
7	0.971 (157)	0.009 (5)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
8	0.966 (157)	0.011 (6)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
9	0.962 (156)	0.013 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
10	0.957 (155)	0.014 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
11	0.954 (155)	0.015 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
12	0.952 (154)	0.016 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
13	0.948 (154)	0.017 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
14	0.944 (153)	0.018 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
15	0.939 (152)	0.020 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
16	0.935 (151)	0.021 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
17	0.930 (151)	0.023 (13)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
18	0.926 (150)	0.024 (14)	0.001 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
19	0.921 (149)	0.026 (14)	0.001 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
20	0.917 (149)	0.027 (15)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
21	0.912 (148)	0.029 (16)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
22	0.908 (147)	0.030 (17)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
23	0.903 (146)	0.031 (18)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
24	0.899 (146)	0.033 (18)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
25	0.895 (145)	0.034 (19)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)

Rate Parameters / Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses)

Str No.	Effective H* (ft)	Position (z*/L) (N/D)	Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.00	0.000	1.00 (162)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	3.92	0.020	0.59 (95)	0.59 (1)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)
3	5.88	0.068	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	5.88	0.127	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.15	0.157	0.05 (8)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
6	0.12	0.158	0.06 (9)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)
7	4.10	0.179	0.09 (14)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)
8	3.42	0.217	0.04 (6)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	3.42	0.251	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	3.42	0.285	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	2.00	0.312	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	3.00	0.337	0.03 (4)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
13	5.00	0.377	0.04 (7)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	5.00	0.427	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	5.00	0.476	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	5.00	0.526	0.03 (4)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
17	5.00	0.576	0.02 (3)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	5.00	0.626	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	5.00	0.676	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	5.00	0.726	0.03 (4)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	5.00	0.776	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	5.00	0.825	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	5.00	0.875	0.01 (2)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	5.00	0.925	0.02 (3)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	5.00	0.975	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

		Ult. Recomp	Ult. Virgin	Ult. Total	Ult. Bulb	Ind. Recomp	Ind. Virgin	Ind. Total	Ind. Bulb
TOTAL	(in)	0.83	10.94	11.76	8.50	0.32	0.16	0.48	0.44
	(ft)	0.07	0.91	0.98	0.71	0.03	0.01	0.04	0.04
	%Ultimate			100.0	72.2			4.0	3.7
REDUCD	(in)	0.70	9.30	10.00	7.22	0.27	0.14	0.40	0.37
	(ft)	0.06	0.77	0.83	0.60	0.02	0.01	0.03	0.03
	%Ultimate			85.0	61.4			3.4	3.2

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 — marsh to el 2 — beach to el 6 — dike to el 4 — average

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	189.0	604.0	395.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 0.5

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.25
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.670
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.94	12.54	13.48	10.43	0.37	0.16	0.53	0.49
	(ft)	0.08	1.04	1.12	0.87	0.03	0.01	0.04	0.04
	%Ultimate			100.0	77.4			3.9	3.7
REDUCD	(in)	0.80	10.66	11.46	8.87	0.31	0.14	0.45	0.42
	(ft)	0.07	0.89	0.95	0.74	0.03	0.01	0.04	0.03
	%Ultimate			85.0	65.8			3.3	3.1

4.73

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)
1	0.0 2.0 4.0	67.0	0.000	0.000	99999.0	99999.0	4.0	1000	0 114 228	189 165.8%	303	189 165.8%	303
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	189 68.0%	467	115 41.3%	393
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	189 46.9%	592	0 0.0%	403
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	189 34.2%	742	0 0.0%	553
5	22.5 25.0	53.0	0.100	0.016	8030.0	12045.0	5.0	13520	761 893	189 24.9%	950	8 1.1%	768
6	27.0 29.0	53.0	0.100	0.016	8030.0	12045.0	4.0	13520	999 1105	189 19.0%	1188	9 0.9%	1008
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	189 15.4%	1423	15 1.2%	1249
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	190 12.9%	1660	7 0.5%	1477
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	190 11.2%	1875	0 0.0%	1686
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	190 10.0%	2090	0 0.0%	1901
11	51.0 52.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058 2108	190 9.2%	2248	0 0.0%	2058
12	53.5 55.0	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183 2258	190 8.7%	2373	4 0.2%	2187
13	57.5 60.0	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383 2508	190 8.0%	2573	7 0.3%	2390
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	190 7.2%	2823	0 0.0%	2633
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	190 6.6%	3073	0 0.0%	2883
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	190 6.1%	3323	5 0.1%	3138
17	77.5 80.0	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383 3508	190 5.6%	3573	3 0.1%	3386
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	190 5.2%	3823	0 0.0%	3633
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	190 4.9%	4073	0 0.0%	3883
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	190 4.6%	4323	5 0.1%	4138
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	190 4.3%	4573	0 0.0%	4383
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	190 4.1%	4823	0 0.0%	4633
23	107.5 110.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883 5008	190 3.9%	5073	2 0.0%	4885
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	191 3.7%	5324	4 0.1%	5137
25	117.5 120.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383 5508	191 3.5%	5574	0 0.0%	5383

Str No.	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
1	0.00	0.00	(13.48) 0.00 (13.48)	(10.43) 0.00 (10.43)	0.00	0.00	(0.53) 0.00 (0.53)	(0.49) 0.00 (0.49)
2	0.54	0.00	0.54 (12.94)	0.54 (9.90)	0.36	0.00	0.36 (0.17)	0.36 (0.14)
3	0.00	3.98	3.98 (8.96)	3.98 (5.91)	0.00	0.00	0.00 (0.17)	0.00 (0.14)
4	0.00	3.05	3.05 (5.91)	3.05 (2.87)	0.00	0.00	0.00 (0.17)	0.00 (0.14)
5	0.09	0.00	0.09 (5.82)	0.09 (2.78)	0.00	0.00	0.00 (0.17)	0.00 (0.13)
6	0.05	0.00	0.05 (5.77)	0.05 (2.73)	0.00	0.00	0.00 (0.17)	0.00 (0.13)
7	0.00	1.17	1.17 (4.60)	1.17 (1.56)	0.00	0.10	0.10 (0.07)	0.10 (0.03)
8	0.00	0.83	0.83 (3.77)	0.83 (0.73)	0.00	0.03	0.03 (0.04)	0.03 (0.00)
9	0.00	0.73	0.73 (3.04)	0.73 (0.00)	0.00	0.00	0.00 (0.04)	0.00 (0.00)
10	0.00	0.65	0.65 (2.39)	0.00 (0.00)	0.00	0.00	0.00 (0.04)	0.00 (0.00)
11	0.00	0.18	0.18 (2.21)	0.00 (0.00)	0.00	0.00	0.00 (0.04)	0.00 (0.00)
12	0.00	0.26	0.26 (1.95)	0.00 (0.00)	0.00	0.01	0.01 (0.03)	0.00 (0.00)
13	0.00	0.40	0.40 (1.55)	0.00 (0.00)	0.00	0.02	0.02 (0.01)	0.00 (0.00)
14	0.00	0.36	0.36 (1.19)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)
15	0.00	0.33	0.33 (0.85)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)
16	0.00	0.31	0.31 (0.55)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)
17	0.00	0.28	0.28 (0.26)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
18	0.04	0.00	0.04 (0.22)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
19	0.04	0.00	0.04 (0.19)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
20	0.04	0.00	0.04 (0.15)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
21	0.03	0.00	0.03 (0.12)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
22	0.03	0.00	0.03 (0.09)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
23	0.03	0.00	0.03 (0.06)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
24	0.03	0.00	0.03 (0.03)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
25	0.03	0.00	0.03 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)

Str No.	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)
1	0.998 (189)	0.001 (0)	0.000 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.00	0.000
2	0.995 (188)	0.002 (1)	0.000 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	3.92	0.020
3	0.990 (187)	0.003 (2)	0.000 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	5.88	0.068
4	0.985 (186)	0.005 (3)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	5.88	0.127
5	0.980 (185)	0.007 (4)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.15	0.157
6	0.976 (184)	0.008 (5)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.12	0.158
7	0.971 (184)	0.009 (6)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	4.10	0.179
8	0.966 (183)	0.011 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.217
9	0.962 (182)	0.013 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.251
10	0.957 (181)	0.014 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.285
11	0.954 (180)	0.015 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	2.00	0.312
12	0.952 (180)	0.016 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.00	0.337
13	0.948 (179)	0.017 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.377
14	0.944 (178)	0.018 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.427
15	0.939 (177)	0.020 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.476
16	0.935 (177)	0.021 (13)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.526
17	0.930 (176)	0.023 (14)	0.001 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.576
18	0.926 (175)	0.024 (15)	0.001 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.626
19	0.921 (174)	0.026 (16)	0.001 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.676
20	0.917 (173)	0.027 (16)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.726
21	0.912 (172)	0.029 (17)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.776
22	0.908 (172)	0.030 (18)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.825
23	0.903 (171)	0.031 (19)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.875
24	0.899 (170)	0.033 (20)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.925
25	0.895 (169)	0.034 (21)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.975

Str No.	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	1.00 (189)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	0.61 (114)	0.61 (1)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)
3	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.04 (8)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
6	0.05 (8)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
7	0.08 (14)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)
8	0.04 (6)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	0.02 (4)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
13	0.04 (7)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	0.02 (4)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
17	0.02 (3)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	0.03 (4)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	0.01 (2)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	0.02 (3)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

TOTAL	(in)	0.94	12.54	13.48	10.43	0.37	0.16	0.53	0.49
	(ft)	0.08	1.04	1.12	0.87	0.03	0.01	0.04	0.04
	%Ultimate			100.0	77.4			3.9	3.7
REDUCD	(in)	0.80	10.66	11.46	8.87	0.31	0.14	0.45	0.42
	(ft)	0.07	0.89	0.95	0.74	0.03	0.01	0.04	0.03
	%Ultimate			85.0	65.8			3.3	3.1

U:\sys\WPDATA\PROJECTS\9292\Settlement\Marsh Platform at El 2\Water at El 1\EESett_Reach 2_all.xlsMud 0

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292
Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1 (marsh to el 2)	Region 2 (beach to el 6)	Region 3 (dike to el 4 average)	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	112.0	491.0	302.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 1

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.860
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.60	7.86	8.46	4.91	0.23	0.11	0.34	0.23
	(ft)	0.05	0.65	0.70	0.41	0.02	0.01	0.03	0.02
	%Ultimate			100.0	58.0			4.0	2.7
REDUCD	(in)	0.51	6.68	7.19	4.17	0.19	0.10	0.29	0.19
	(ft)	0.04	0.56	0.60	0.35	0.02	0.01	0.02	0.02
	%Ultimate			85.0	49.3			3.4	2.3

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)
	0.0								0				
1	2.0 4.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	114 228	112 98.3%	226	112 98.3%	226
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	112 40.4%	390	66 23.8%	344
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	113 27.9%	516	0 0.0%	403
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	113 20.4%	666	0 0.0%	553
5	22.5 25.0	63.0	0.100	0.015	8030.0	12045.0	5.0	13520	761 893	113 14.9%	874	6 0.8%	767
6	27.0 29.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999 1105	113 11.3%	1112	6 0.6%	1005
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	114 9.2%	1348	10 0.8%	1244
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	114 7.7%	1584	4 0.3%	1475
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	114 6.8%	1800	0 0.0%	1686
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	114 6.0%	2015	0 0.0%	1901
11	51.0 52.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058 2108	114 5.6%	2172	0 0.0%	2058
12	53.5 55.0	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183 2258	115 5.3%	2298	3 0.1%	2186
13	57.5 60.0	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383 2508	115 4.8%	2498	5 0.2%	2388
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	115 4.4%	2748	0 0.0%	2633
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	115 4.0%	2998	0 0.0%	2883
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	116 3.7%	3249	3 0.1%	3136
17	77.5 80.0	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383 3508	116 3.4%	3499	2 0.1%	3385
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	116 3.2%	3749	0 0.0%	3633
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	116 3.0%	3999	0 0.0%	3883
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	116 2.8%	4249	3 0.1%	4136
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	117 2.7%	4500	0 0.0%	4383
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	117 2.5%	4750	0 0.0%	4633
23	107.5 110.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883 5008	117 2.4%	5000	1 0.0%	4884
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	117 2.3%	5250	3 0.1%	5136
25	117.5 120.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383 5508	118 2.2%	5501	0 0.0%	5383

Str No.	Ultimate Settlement Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Influence Factors (Ultimate Induced Stresses in Parentheses) Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz
			(8.46)	(4.91)			(0.34)	(0.23)										
1	0.00	0.00	0.00 (8.46)	0.00 (4.91)	0.00	0.00	0.00 (0.34)	0.00 (0.23)	0.998 (112)	0.001 (0)	0.000 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)
2	0.35	0.00	0.35 (8.11)	0.35 (4.56)	0.22	0.00	0.22 (0.12)	0.22 (0.01)	0.995 (111)	0.002 (1)	0.000 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)
3	0.00	2.55	2.55 (5.56)	2.55 (2.01)	0.00	0.00	0.00 (0.12)	0.00 (0.01)	0.990 (111)	0.003 (2)	0.000 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)
4	0.00	1.92	1.92 (3.64)	1.92 (0.09)	0.00	0.00	0.00 (0.12)	0.00 (0.01)	0.985 (110)	0.005 (2)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
5	0.05	0.00	0.05 (3.58)	0.05 (0.03)	0.00	0.00	0.00 (0.12)	0.00 (0.00)	0.980 (110)	0.007 (3)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
6	0.03	0.00	0.03 (3.55)	0.03 (0.00)	0.00	0.00	0.00 (0.11)	0.00 (0.00)	0.976 (109)	0.008 (4)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
7	0.00	0.72	0.72 (2.83)	0.00 (0.00)	0.00	0.07	0.07 (0.05)	0.00 (0.00)	0.971 (109)	0.009 (5)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
8	0.00	0.51	0.51 (2.32)	0.00 (0.00)	0.00	0.02	0.02 (0.03)	0.00 (0.00)	0.966 (108)	0.011 (5)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
9	0.00	0.45	0.45 (1.87)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)	0.962 (108)	0.013 (6)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
10	0.00	0.40	0.40 (1.47)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)	0.957 (107)	0.014 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
11	0.00	0.11	0.11 (1.36)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)	0.954 (107)	0.015 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
12	0.00	0.16	0.16 (1.20)	0.00 (0.00)	0.00	0.00	0.00 (0.02)	0.00 (0.00)	0.952 (107)	0.016 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
13	0.00	0.25	0.25 (0.95)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)	0.948 (106)	0.017 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
14	0.00	0.22	0.22 (0.73)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)	0.944 (106)	0.018 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
15	0.00	0.20	0.20 (0.53)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)	0.939 (105)	0.020 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
16	0.00	0.19	0.19 (0.34)	0.00 (0.00)	0.00	0.01	0.01 (0.00)	0.00 (0.00)	0.935 (105)	0.021 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
17	0.00	0.18	0.18 (0.16)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.930 (104)	0.023 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
18	0.02	0.00	0.02 (0.14)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.926 (104)	0.024 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
19	0.02	0.00	0.02 (0.11)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.921 (103)	0.026 (13)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
20	0.02	0.00	0.02 (0.09)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.917 (103)	0.027 (13)	0.002 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
21	0.02	0.00	0.02 (0.07)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.912 (102)	0.029 (14)	0.002 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
22	0.02	0.00	0.02 (0.05)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.908 (102)	0.030 (15)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
23	0.02	0.00	0.02 (0.03)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.903 (101)	0.031 (15)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
24	0.02	0.00	0.02 (0.02)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.899 (101)	0.033 (16)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
25	0.02	0.00	0.02 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.895 (100)	0.034 (17)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)

Str No.	Rate Parameters Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses) Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.00	0.000	1.00 (112)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	3.92	0.020	0.59 (66)	0.59 (1)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)
3	5.88	0.068	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	5.88	0.127	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.15	0.157	0.05 (6)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
6	0.12	0.158	0.06 (6)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)
7	4.10	0.179	0.09 (10)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)
8	3.42	0.217	0.04 (4)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	3.42	0.251	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	3.42	0.285	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	2.00	0.312	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	3.00	0.337	0.03 (3)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
13	5.00	0.377	0.04 (5)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	5.00	0.427	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	5.00	0.476	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	5.00	0.526	0.03 (3)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
17	5.00	0.576	0.02 (2)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	5.00	0.626	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	5.00	0.676	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	5.00	0.726	0.03 (3)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	5.00	0.776	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	5.00	0.825	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	5.00	0.875	0.01 (1)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	5.00	0.925	0.02 (2)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	5.00	0.975	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

		Recomp Sett	Virgin Sett	Total Sett	Bulb Sett	Recomp Sett	Virgin Sett	Total Sett	Bulb Sett
TOTAL	(in)	0.60	7.86	8.46	4.91	0.23	0.11	0.34	0.23
	(ft)	0.05	0.65	0.70	0.41	0.02	0.01	0.03	0.02
	%Ultimate			100.0	58.0			4.0	2.7
REDUCD	(in)	0.51	6.68	7.19	4.17	0.19	0.10	0.29	0.19
	(ft)	0.04	0.56	0.60	0.35	0.02	0.01	0.02	0.02
	%Ultimate			85.0	49.3			3.4	2.3

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 — marsh to el 2 — beach to el 6 — dike to el 4 — average

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	139.0	536.0	334.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 1

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement				Induced Settlement			
		Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.73	9.55	10.27	6.81	0.28	0.14	0.41	0.36
	(ft)	0.06	0.80	0.86	0.57	0.02	0.01	0.03	0.03
	%Ultimate			100.0	66.3			4.0	3.5
REDUCD	(in)	0.62	8.11	8.73	5.79	0.23	0.12	0.35	0.30
	(ft)	0.05	0.68	0.73	0.48	0.02	0.01	0.03	0.03
	%Ultimate			85.0	56.4			3.4	3.0

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)
1	0.0 2.0 4.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	0 114 228	139 122.0%	253	139 122.0%	253
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	139 50.1%	417	82 29.6%	360
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	139 34.6%	542	0 0.0%	403
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	140 25.3%	693	0 0.0%	553
5	22.5 25.0	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761 893	140 18.4%	900	7 1.0%	768
6	27.0 29.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999 1105	140 14.0%	1139	8 0.8%	1007
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	140 11.4%	1374	13 1.0%	1247
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	140 9.5%	1611	5 0.4%	1476
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	141 8.3%	1826	0 0.0%	1686
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	141 7.4%	2041	0 0.0%	1901
11	51.0 52.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058 2108	141 6.8%	2199	0 0.0%	2058
12	53.5 55.0	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183 2258	141 6.5%	2324	4 0.2%	2187
13	57.5 60.0	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383 2508	141 5.9%	2524	6 0.3%	2389
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	141 5.4%	2774	0 0.0%	2633
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	142 4.9%	3025	0 0.0%	2883
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	142 4.5%	3275	4 0.1%	3137
17	77.5 80.0	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383 3508	142 4.2%	3525	3 0.1%	3386
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	142 3.9%	3775	0 0.0%	3633
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	142 3.7%	4025	0 0.0%	3883
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	142 3.4%	4275	4 0.1%	4137
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	143 3.3%	4526	0 0.0%	4383
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	143 3.1%	4776	0 0.0%	4633
23	107.5 110.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883 5008	143 2.9%	5026	2 0.0%	4885
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	143 2.6%	5276	3 0.1%	5136
25	117.5 120.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383 5508	143 2.7%	5526	0 0.0%	5383

Str No.	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz
1	0.00	0.00	(10.27) 0.00 (10.27)	(6.81) 0.00 (6.81)	0.00	0.00	(0.41) 0.00 (0.41)	(0.36) 0.00 (0.36)	0.998 (139)	0.001 (0)	0.000 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)
2	0.42	0.00	0.42 (9.85)	0.42 (6.39)	0.27	0.00	0.27 (0.15)	0.27 (0.09)	0.995 (138)	0.002 (1)	0.000 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)
3	0.00	3.08	3.08 (6.78)	3.08 (3.32)	0.00	0.00	0.00 (0.15)	0.00 (0.09)	0.990 (138)	0.003 (2)	0.000 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)
4	0.00	2.33	2.33 (4.45)	2.33 (0.99)	0.00	0.00	0.00 (0.15)	0.00 (0.09)	0.985 (137)	0.005 (3)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
5	0.07	0.00	0.07 (4.38)	0.07 (0.92)	0.00	0.00	0.00 (0.14)	0.00 (0.09)	0.980 (136)	0.007 (4)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
6	0.04	0.00	0.04 (4.34)	0.04 (0.88)	0.00	0.00	0.00 (0.14)	0.00 (0.08)	0.976 (136)	0.008 (4)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
7	0.00	0.88	0.88 (3.46)	0.88 (0.00)	0.00	0.08	0.08 (0.06)	0.08 (0.00)	0.971 (135)	0.009 (5)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
8	0.00	0.62	0.62 (2.83)	0.00 (0.00)	0.00	0.02	0.02 (0.03)	0.00 (0.00)	0.966 (134)	0.011 (6)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
9	0.00	0.55	0.55 (2.29)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)	0.962 (134)	0.013 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
10	0.00	0.49	0.49 (1.80)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)	0.957 (133)	0.014 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
11	0.00	0.14	0.14 (1.66)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)	0.954 (133)	0.015 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
12	0.00	0.20	0.20 (1.47)	0.00 (0.00)	0.00	0.01	0.01 (0.03)	0.00 (0.00)	0.952 (132)	0.016 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
13	0.00	0.30	0.30 (1.17)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)	0.948 (132)	0.017 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
14	0.00	0.27	0.27 (0.89)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)	0.944 (131)	0.018 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
15	0.00	0.25	0.25 (0.64)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)	0.939 (131)	0.020 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
16	0.00	0.23	0.23 (0.41)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)	0.935 (130)	0.021 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
17	0.00	0.21	0.21 (0.20)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.930 (129)	0.023 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
18	0.03	0.00	0.03 (0.17)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.926 (129)	0.024 (13)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
19	0.03	0.00	0.03 (0.14)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.921 (128)	0.026 (14)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
20	0.03	0.00	0.03 (0.11)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.917 (127)	0.027 (15)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
21	0.03	0.00	0.03 (0.09)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.912 (127)	0.029 (15)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
22	0.02	0.00	0.02 (0.06)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.908 (126)	0.030 (16)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
23	0.02	0.00	0.02 (0.04)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.903 (126)	0.031 (17)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
24	0.02	0.00	0.02 (0.02)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.899 (125)	0.033 (18)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
25	0.02	0.00	0.02 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.895 (124)	0.034 (18)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)

Str No.	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.00	0.000	1.00 (139)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	3.92	0.020	0.59 (82)	0.59 (1)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)
3	5.88	0.068	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	5.88	0.127	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.15	0.157	0.05 (7)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
6	0.12	0.158	0.06 (8)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)
7	4.10	0.179	0.09 (12)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)
8	3.42	0.217	0.04 (5)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	3.42	0.251	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	3.42	0.285	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	2.00	0.312	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	3.00	0.337	0.03 (4)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
13	5.00	0.377	0.04 (6)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	5.00	0.427	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	5.00	0.476	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	5.00	0.526	0.03 (4)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
17	5.00	0.576	0.02 (2)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	5.00	0.626	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	5.00	0.676	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	5.00	0.726	0.03 (4)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	5.00	0.776	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	5.00	0.825	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	5.00	0.875	0.01 (1)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	5.00	0.925	0.02 (3)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	5.00	0.975	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

		Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.73	9.55	10.27	6.81	0.28	0.14	0.41	0.36
	(ft)	0.06	0.80	0.86	0.57	0.02	0.01	0.03	0.03
	%Ultimate			100.0	66.3			4.0	3.5
REDUCD	(in)	0.62	8.11	8.73	5.79	0.23	0.12	0.35	0.30
	(ft)	0.05	0.68	0.73	0.48	0.02	0.01	0.03	0.03
	%Ultimate			85.0	56.4			3.4	3.0

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 — marsh to el 2 — beach to el 6 average — dike to el 4

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	166.0	579.0	367.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 1

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.25
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement				Induced Settlement			
		Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.84	11.18	12.03	8.68	0.33	0.14	0.47	0.44
	(ft)	0.07	0.93	1.00	0.72	0.03	0.01	0.04	0.04
	%Ultimate			100.0	72.2			3.9	3.7
REDUCD	(in)	0.72	9.51	10.22	7.38	0.28	0.12	0.40	0.37
	(ft)	0.06	0.79	0.85	0.62	0.02	0.01	0.03	0.03
	%Ultimate			85.0	61.4			3.3	3.1

5.07

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)
- 1	0.0 2.0 4.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	0 114 228	166 145.7%	280	166 145.7%	280
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	166 59.8%	444	101 36.3%	379
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	166 41.3%	569	0 0.0%	403
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	166 30.1%	719	0 0.0%	553
5	22.5 25.0	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761 893	167 21.9%	927	7 0.9%	768
6	27.0 29.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999 1105	167 16.7%	1166	8 0.8%	1007
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	167 13.5%	1401	13 1.1%	1247
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	167 11.4%	1638	6 0.4%	1476
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	167 9.9%	1853	0 0.0%	1686
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	167 8.8%	2068	0 0.0%	1901
11	51.0 52.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058 2108	167 8.1%	2225	0 0.0%	2058
12	53.5 55.0	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183 2258	167 7.7%	2350	4 0.2%	2187
13	57.5 60.0	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383 2508	168 7.0%	2551	7 0.3%	2390
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	168 6.4%	2801	0 0.0%	2633
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	168 5.8%	3051	0 0.0%	2883
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	168 5.4%	3301	4 0.1%	3137
17	77.5 80.0	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383 3508	168 5.0%	3551	3 0.1%	3386
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	168 4.6%	3801	0 0.0%	3633
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	168 4.3%	4051	0 0.0%	3883
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	168 4.1%	4301	4 0.1%	4137
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	169 3.8%	4552	0 0.0%	4383
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	169 3.6%	4802	0 0.0%	4633
23	107.5 110.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883 5008	169 3.5%	5052	2 0.0%	4885
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	169 3.3%	5302	3 0.1%	5136
25	117.5 120.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383 5508	169 3.1%	5552	0 0.0%	5383

Str No.	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
1	0.00	0.00	(12.03) 0.00 (12.03)	(8.68) 0.00 (8.68)	0.00	0.00	(0.47) 0.00 (0.47)	(0.44) 0.00 (0.44)
2	0.48	0.00	0.48 (11.54)	0.48 (8.20)	0.32	0.00	0.32 (0.15)	0.32 (0.12)
3	0.00	3.58	3.58 (7.97)	3.58 (4.62)	0.00	0.00	0.00 (0.15)	0.00 (0.12)
4	0.00	2.72	2.72 (5.24)	2.72 (1.90)	0.00	0.00	0.00 (0.15)	0.00 (0.12)
5	0.08	0.00	0.08 (5.17)	0.08 (1.82)	0.00	0.00	0.00 (0.15)	0.00 (0.12)
6	0.05	0.00	0.05 (5.12)	0.05 (1.77)	0.00	0.00	0.00 (0.15)	0.00 (0.11)
7	0.00	1.04	1.04 (4.08)	1.04 (0.73)	0.00	0.09	0.09 (0.06)	0.09 (0.03)
8	0.00	0.73	0.73 (3.34)	0.73 (0.00)	0.00	0.03	0.03 (0.03)	0.03 (0.00)
9	0.00	0.65	0.65 (2.70)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)
10	0.00	0.58	0.58 (2.12)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)
11	0.00	0.16	0.16 (1.96)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)
12	0.00	0.23	0.23 (1.73)	0.00 (0.00)	0.00	0.01	0.01 (0.03)	0.00 (0.00)
13	0.00	0.35	0.35 (1.37)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)
14	0.00	0.32	0.32 (1.05)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)
15	0.00	0.29	0.29 (0.76)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)
16	0.00	0.27	0.27 (0.49)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)
17	0.00	0.25	0.25 (0.23)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
18	0.04	0.00	0.04 (0.20)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
19	0.03	0.00	0.03 (0.16)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
20	0.03	0.00	0.03 (0.13)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
21	0.03	0.00	0.03 (0.10)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
22	0.03	0.00	0.03 (0.08)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
23	0.03	0.00	0.03 (0.05)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
24	0.03	0.00	0.03 (0.02)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
25	0.02	0.00	0.02 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)

Influence Factors (Ultimate Induced Stresses in Parentheses)

Str No.	Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz
1	0.998 (166)	0.001 (0)	0.000 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)
2	0.995 (165)	0.002 (1)	0.000 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)
3	0.990 (164)	0.003 (2)	0.000 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)
4	0.985 (163)	0.005 (3)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
5	0.980 (163)	0.007 (4)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
6	0.976 (162)	0.008 (5)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
7	0.971 (161)	0.009 (5)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
8	0.966 (160)	0.011 (6)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
9	0.962 (160)	0.013 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
10	0.957 (159)	0.014 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
11	0.954 (158)	0.015 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
12	0.952 (158)	0.016 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
13	0.948 (157)	0.017 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
14	0.944 (157)	0.018 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
15	0.939 (156)	0.020 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
16	0.935 (155)	0.021 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
17	0.930 (154)	0.023 (13)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
18	0.926 (154)	0.024 (14)	0.001 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
19	0.921 (153)	0.026 (15)	0.001 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
20	0.917 (152)	0.027 (16)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
21	0.912 (151)	0.029 (17)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
22	0.908 (151)	0.030 (17)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
23	0.903 (150)	0.031 (18)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
24	0.899 (149)	0.033 (19)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
25	0.895 (149)	0.034 (20)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)

Rate Parameters / Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses)

Str No.	Effective H* (ft)	Position (z*/L) (N/D)	Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.00	0.000	1.00 (166)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	3.92	0.020	0.61 (100)	0.61 (1)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)
3	5.88	0.068	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	5.88	0.127	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.15	0.157	0.04 (7)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
6	0.12	0.158	0.05 (7)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
7	4.10	0.179	0.08 (13)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)
8	3.42	0.217	0.04 (6)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	3.42	0.251	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	3.42	0.285	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	2.00	0.312	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	3.00	0.337	0.02 (4)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
13	5.00	0.377	0.04 (6)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	5.00	0.427	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	5.00	0.476	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	5.00	0.526	0.02 (4)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
17	5.00	0.576	0.02 (2)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	5.00	0.626	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	5.00	0.676	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	5.00	0.726	0.03 (4)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	5.00	0.776	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	5.00	0.825	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	5.00	0.875	0.01 (1)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	5.00	0.925	0.02 (3)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	5.00	0.975	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

TOTAL	(in)	0.84	11.18	12.03	8.68	0.33	0.14	0.47	0.44
	(ft)	0.07	0.93	1.00	0.72	0.03	0.01	0.04	0.04
	%Ultimate			100.0	72.2			3.9	3.7
REDUCD	(in)	0.72	9.51	10.22	7.38	0.28	0.12	0.40	0.37
	(ft)	0.06	0.79	0.85	0.62	0.02	0.01	0.03	0.03
	%Ultimate			85.0	61.4			3.3	3.1

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292

Reach 2 - Thin Barrier Beach at surface

	marsh to el 2	beach to el 6 average	dike to el 4							
Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	86.0	467.0	273.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 1.5

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement				Induced Settlement			
		Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.48	6.19	6.67	3.85	0.18	0.09	0.27	0.18
	(ft)	0.04	0.52	0.56	0.32	0.01	0.01	0.02	0.01
	%Ultimate			100.0	57.8			4.0	2.7
REDUCD	(in)	0.41	5.26	5.67	3.28	0.15	0.07	0.23	0.15
	(ft)	0.03	0.44	0.47	0.27	0.01	0.01	0.02	0.01
	%Ultimate			85.0	49.1			3.4	2.3

Group	L (ft)		Region 1 0.08	Region 2 0.08	Region 3 0.08	Region 4 0.08	Region 5 0.08	Region 6 0.08	Region 7 0.08	Region 8 0.08	Region 9 0.08	Region 10 0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)
1	0.0 2.0 4.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	0 114 228	86 75.6%	200	86 75.6%	200
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	86 31.1%	364	51 18.3%	329
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	87 21.5%	490	0 0.0%	403
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	87 15.8%	640	0 0.0%	553
5	22.5 25.0	53.0	0.100	0.016	8030.0	12045.0	5.0	13520	761 893	87 11.5%	848	5 0.6%	765
6	27.0 29.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999 1105	88 8.8%	1087	5 0.5%	1004
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	88 7.1%	1322	8 0.7%	1242
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	88 6.0%	1559	3 0.2%	1474
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	89 5.3%	1774	0 0.0%	1686
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	89 4.7%	1990	0 0.0%	1901
11	51.0 52.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058 2108	89 4.3%	2147	0 0.0%	2058
12	53.5 55.0	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183 2258	89 4.1%	2272	3 0.1%	2186
13	57.5 60.0	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383 2508	90 3.8%	2473	4 0.2%	2387
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	90 3.4%	2723	0 0.0%	2633
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	90 3.1%	2973	0 0.0%	2883
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	91 2.9%	3224	3 0.1%	3136
17	77.5 80.0	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383 3508	91 2.7%	3474	2 0.0%	3385
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	91 2.5%	3724	0 0.0%	3633
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	92 2.4%	3975	0 0.0%	3883
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	92 2.2%	4225	3 0.1%	4136
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	92 2.1%	4475	0 0.0%	4383
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	93 2.0%	4726	0 0.0%	4633
23	107.5 110.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883 5008	93 1.9%	4976	1 0.0%	4884
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	93 1.8%	5226	2 0.0%	5135
25	117.5 120.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383 5508	93 1.7%	5476	0 0.0%	5383

Str No.	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz
1	0.00	0.00	(6.67) 0.00 (6.67)	(3.85) 0.00 (3.85)	0.00	0.00	(0.27) 0.00 (0.27)	(0.18) 0.00 (0.18)	0.998 (86)	0.001 (0)	0.000 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)
2	0.28	0.00	0.28 (6.39)	0.28 (3.57)	0.17	0.00	0.17 (0.09)	0.17 (0.00)	0.995 (86)	0.002 (1)	0.000 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)
3	0.00	2.02	2.02 (4.37)	2.02 (1.56)	0.00	0.00	0.00 (0.09)	0.00 (0.00)	0.990 (85)	0.003 (2)	0.000 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)
4	0.00	1.51	1.51 (2.85)	1.51 (0.04)	0.00	0.00	0.00 (0.09)	0.00 (0.00)	0.985 (85)	0.005 (2)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
5	0.04	0.00	0.04 (2.81)	0.04 (0.00)	0.00	0.00	0.00 (0.09)	0.00 (0.00)	0.980 (84)	0.007 (3)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
6	0.03	0.00	0.03 (2.79)	0.00 (0.00)	0.00	0.00	0.00 (0.09)	0.00 (0.00)	0.976 (84)	0.008 (4)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
7	0.00	0.56	0.56 (2.22)	0.00 (0.00)	0.00	0.05	0.05 (0.04)	0.00 (0.00)	0.971 (84)	0.009 (4)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
8	0.00	0.40	0.40 (1.82)	0.00 (0.00)	0.00	0.02	0.02 (0.02)	0.00 (0.00)	0.966 (83)	0.011 (5)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
9	0.00	0.35	0.35 (1.47)	0.00 (0.00)	0.00	0.00	0.00 (0.02)	0.00 (0.00)	0.962 (83)	0.013 (6)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
10	0.00	0.31	0.31 (1.16)	0.00 (0.00)	0.00	0.00	0.00 (0.02)	0.00 (0.00)	0.957 (82)	0.014 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
11	0.00	0.09	0.09 (1.07)	0.00 (0.00)	0.00	0.00	0.00 (0.02)	0.00 (0.00)	0.954 (82)	0.015 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
12	0.00	0.13	0.13 (0.94)	0.00 (0.00)	0.00	0.00	0.00 (0.02)	0.00 (0.00)	0.952 (82)	0.016 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
13	0.00	0.19	0.19 (0.75)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)	0.948 (82)	0.017 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
14	0.00	0.18	0.18 (0.58)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)	0.944 (81)	0.018 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
15	0.00	0.16	0.16 (0.42)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)	0.939 (81)	0.020 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
16	0.00	0.15	0.15 (0.27)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.935 (80)	0.021 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
17	0.00	0.14	0.14 (0.13)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.930 (80)	0.023 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
18	0.02	0.00	0.02 (0.11)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.926 (80)	0.024 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
19	0.02	0.00	0.02 (0.09)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.921 (79)	0.026 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
20	0.02	0.00	0.02 (0.07)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.917 (79)	0.027 (13)	0.002 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
21	0.02	0.00	0.02 (0.06)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.912 (78)	0.029 (13)	0.002 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
22	0.02	0.00	0.02 (0.04)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.908 (78)	0.030 (14)	0.002 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
23	0.01	0.00	0.01 (0.03)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.903 (78)	0.031 (15)	0.002 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
24	0.01	0.00	0.01 (0.01)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.899 (77)	0.033 (15)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
25	0.01	0.00	0.01 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.895 (77)	0.034 (16)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)

Str No.	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.00	0.000	1.00 (86)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	3.92	0.020	0.59 (50)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)
3	5.88	0.068	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	5.88	0.127	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.15	0.157	0.05 (4)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
6	0.12	0.158	0.06 (5)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)
7	4.10	0.179	0.09 (8)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)
8	3.42	0.217	0.04 (3)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	3.42	0.251	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	3.42	0.285	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	2.00	0.312	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	3.00	0.337	0.03 (2)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
13	5.00	0.377	0.04 (4)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	5.00	0.427	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	5.00	0.476	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	5.00	0.526	0.03 (2)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
17	5.00	0.576	0.02 (1)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	5.00	0.626	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	5.00	0.676	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	5.00	0.726	0.03 (2)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	5.00	0.776	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	5.00	0.825	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	5.00	0.875	0.01 (1)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	5.00	0.925	0.02 (2)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	5.00	0.975	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

		Recomp Sett	Virgin Sett	Total Sett	Bulb Sett	Recomp Sett	Virgin Sett	Total Sett	Bulb Sett
TOTAL	(in)	0.48	6.19	6.67	3.85	0.18	0.09	0.27	0.18
	(ft)	0.04	0.52	0.56	0.32	0.01	0.01	0.02	0.01
	%Ultimate			100.0	57.8			4.0	2.7
REDUCD	(in)	0.41	5.26	5.67	3.28	0.15	0.07	0.23	0.15
	(ft)	0.03	0.44	0.47	0.27	0.01	0.01	0.02	0.01
	%Ultimate			85.0	49.1			3.4	2.3

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 — marsh to el 2 — beach to el 6 average — dike to el 4

Reach 2 - Thin Barrier Beach at surface

water at 1.5

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	116.0	510.5	307.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

			Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX		5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY		500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX		5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY		-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX		-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY		500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX		-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY		-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement				Induced Settlement			
		Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.62	8.12	8.74	5.07	0.24	0.12	0.35	0.23
	(ft)	0.05	0.68	0.73	0.42	0.02	0.01	0.03	0.02
	%Ultimate			100.0	58.0			4.0	2.7
REDUCD	(in)	0.53	6.90	7.43	4.31	0.20	0.10	0.30	0.20
	(ft)	0.04	0.57	0.62	0.36	0.02	0.01	0.02	0.02
	%Ultimate			85.0	49.3			3.4	2.3

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
1	0.0 2.0 4.0	67.0	0.000	0.000	99999.0	99999.0	4.0	1000	0 114 228	116 101.8%	230	116 101.8%	230	0.00	0.00	(8.74) 0.00 (8.74)	(5.07) 0.00 (5.07)	0.00	0.00	(0.35) 0.00 (0.35)	(0.23) 0.00 (0.23)
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	116 41.8%	394	69 24.7%	347	0.36	0.00	0.36 (8.38)	0.36 (4.70)	0.23	0.00	0.23 (0.12)	0.23 (0.01)
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	117 28.9%	520	0 0.0%	403	0.00	2.63	2.63 (5.75)	2.63 (2.08)	0.00	0.00	0.00 (0.12)	0.00 (0.01)
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	117 21.1%	670	0 0.0%	553	0.00	1.98	1.98 (3.76)	1.98 (0.09)	0.00	0.00	0.00 (0.12)	0.00 (0.01)
5	22.5 25.0	53.0	0.100	0.016	8030.0	12045.0	5.0	13520	761 893	117 15.4%	878	6 0.8%	767	0.06	0.00	0.06 (3.71)	0.06 (0.03)	0.00	0.00	0.00 (0.12)	0.00 (0.00)
6	27.0 29.0	53.0	0.100	0.016	8030.0	12045.0	4.0	13520	999 1105	117 11.8%	1116	7 0.7%	1006	0.03	0.00	0.03 (3.67)	0.03 (0.00)	0.00	0.00	0.00 (0.12)	0.00 (0.00)
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	118 9.5%	1352	11 0.9%	1245	0.00	0.75	0.75 (2.93)	0.00 (0.00)	0.00	0.07	0.07 (0.05)	0.00 (0.00)
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	118 8.0%	1588	4 0.3%	1475	0.00	0.53	0.53 (2.40)	0.00 (0.00)	0.00	0.02	0.02 (0.03)	0.00 (0.00)
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	118 7.0%	1804	0 0.0%	1686	0.00	0.46	0.46 (1.94)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	118 6.2%	2019	0 0.0%	1901	0.00	0.41	0.41 (1.52)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)
11	51.0 52.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058 2108	119 5.8%	2177	0 0.0%	2058	0.00	0.12	0.12 (1.41)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)
12	53.5 55.0	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183 2258	119 5.4%	2302	3 0.2%	2186	0.00	0.17	0.17 (1.24)	0.00 (0.00)	0.00	0.00	0.00 (0.02)	0.00 (0.00)
13	57.5 60.0	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383 2508	119 5.0%	2502	5 0.2%	2388	0.00	0.25	0.25 (0.99)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	119 4.5%	2752	0 0.0%	2633	0.00	0.23	0.23 (0.76)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	119 4.1%	3002	0 0.0%	2883	0.00	0.21	0.21 (0.55)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	120 3.8%	3253	3 0.1%	3136	0.00	0.20	0.20 (0.35)	0.00 (0.00)	0.00	0.01	0.01 (0.00)	0.00 (0.00)
17	77.5 80.0	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383 3508	120 3.5%	3503	2 0.1%	3385	0.00	0.18	0.18 (0.17)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	120 3.3%	3753	0 0.0%	3633	0.03	0.00	0.03 (0.14)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	120 3.1%	4003	0 0.0%	3883	0.02	0.00	0.02 (0.12)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	121 2.9%	4254	4 0.1%	4137	0.02	0.00	0.02 (0.10)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	121 2.8%	4504	0 0.0%	4383	0.02	0.00	0.02 (0.08)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	121 2.6%	4754	0 0.0%	4633	0.02	0.00	0.02 (0.06)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
23	107.5 110.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883 5008	121 2.5%	5004	1 0.0%	4884	0.02	0.00	0.02 (0.04)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	122 2.4%	5255	3 0.1%	5136	0.02	0.00	0.02 (0.02)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
25	117.5 120.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383 5508	122 2.3%	5505	0 0.0%	5383	0.02	0.00	0.02 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)

Str No.	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.998 (116)	0.001 (0)	0.000 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.00	0.000	1.00 (116)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	0.995 (115)	0.002 (1)	0.000 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	3.92	0.020	0.59 (68)	0.59 (1)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)
3	0.990 (115)	0.003 (2)	0.000 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	5.88	0.068	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	0.985 (114)	0.005 (3)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	5.88	0.127	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.980 (114)	0.007 (3)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.15	0.157	0.05 (6)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
6	0.976 (113)	0.008 (4)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.12	0.158	0.06 (6)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)
7	0.971 (113)	0.009 (5)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	4.10	0.179	0.09 (10)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)
8	0.966 (112)	0.011 (6)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.217	0.04 (4)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	0.962 (112)	0.013 (6)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.251	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	0.957 (111)	0.014 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.285	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	0.954 (111)	0.015 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	2.00	0.312	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	0.952 (110)	0.016 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.00	0.337	0.03 (3)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
13	0.948 (110)	0.017 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.377	0.04 (5)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	0.944 (109)	0.018 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.427	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	0.939 (109)	0.020 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.476	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	0.935 (108)	0.021 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.526	0.03 (3)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
17	0.930 (108)	0.023 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.576	0.02 (2)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	0.926 (107)	0.024 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.626	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	0.921 (107)	0.026 (13)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.676	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	0.917 (106)	0.027 (14)	0.002 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.726	0.03 (3)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	0.912 (106)	0.029 (15)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.776	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	0.908 (105)	0.030 (15)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.825	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	0.903 (105)	0.031 (16)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.875	0.01 (1)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	0.899 (104)	0.033 (17)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.925	0.02 (2)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	0.895 (104)	0.034 (18)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.975	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

TOTAL	(in)	0.62	8.12	8.74	5.07	0.24	0.12	0.35	0.23
	(ft)	0.05	0.68	0.73	0.42	0.02	0.01	0.03	0.02
	%Ultimate			100.0	58.0			4.0	2.7
REDUCD	(in)	0.53	6.90	7.43	4.31	0.20	0.10	0.30	0.20
	(ft)	0.04	0.57	0.62	0.36	0.02	0.01	0.02	0.02
	%Ultimate			85.0	49.3			3.4	2.3

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292
Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1 (marsh to el 2)	Region 2 (beach to el 6 average)	Region 3 (dike to el 4)	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	143.0	555.0	339.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at 1.5

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	500.0	1500.0	-500.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	-500.0	500.0	-520.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2000.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.25
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement Recomp Sett (in.)	Ultimate Virgin Sett (in.)	Ultimate Total Sett (in.)	Ultimate Bulb Sett (in.)	Induced Settlement Recomp Sett (in.)	Induced Virgin Sett (in.)	Induced Total Sett (in.)	Induced Bulb Sett (in.)
TOTAL	(in)	0.74	9.80	10.54	6.99	0.29	0.12	0.41	0.36
	(ft)	0.06	0.82	0.88	0.58	0.02	0.01	0.03	0.03
	%Ultimate			100.0	66.3			3.9	3.4
REDUCD	(in)	0.63	8.33	8.96	5.94	0.25	0.11	0.35	0.31
	(ft)	0.05	0.69	0.75	0.50	0.02	0.01	0.03	0.03
	%Ultimate			85.0	56.3			3.3	2.9

5.18

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sf/yr)	ch (sf/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)
	0.0								0				
1	2.0 4.0	67.0	0.000	0.000	99999.0	99999.0	4.0	1000	114 228	143 125.5%	257	143 125.5%	257
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	143 51.5%	421	87 31.3%	365
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	143 35.6%	546	0 0.0%	403
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	144 26.0%	697	0 0.0%	553
5	22.5 25.0	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761 893	144 18.9%	904	6 0.8%	767
6	27.0 29.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999 1105	144 14.4%	1143	7 0.7%	1006
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	144 11.7%	1378	11 0.9%	1245
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	145 9.8%	1615	5 0.3%	1476
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	145 8.6%	1830	0 0.0%	1686
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	145 7.6%	2045	0 0.0%	1901
11	51.0 52.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058 2108	145 7.0%	2203	0 0.0%	2058
12	53.5 55.0	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183 2258	145 6.6%	2328	3 0.2%	2186
13	57.5 60.0	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383 2508	145 6.1%	2528	6 0.2%	2389
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	146 5.5%	2779	0 0.0%	2633
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	146 5.1%	3029	0 0.0%	2883
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	146 4.7%	3279	3 0.1%	3136
17	77.5 80.0	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383 3508	146 4.3%	3529	2 0.1%	3385
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	146 4.0%	3779	0 0.0%	3633
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	146 3.8%	4029	0 0.0%	3883
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	147 3.5%	4280	4 0.1%	4137
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	147 3.4%	4530	0 0.0%	4383
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	147 3.2%	4780	0 0.0%	4633
23	107.5 110.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883 5008	147 3.0%	5030	1 0.0%	4884
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	147 2.9%	5280	3 0.1%	5136
25	117.5 120.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383 5508	148 2.7%	5531	0 0.0%	5383

Str No.	Ultimate Recomp Sett (in.)	Ultimate Virgin Sett (in.)	Ultimate Total Sett (in.)	Ultimate Bulb Sett (in.)	Induced Recomp Sett (in.)	Induced Virgin Sett (in.)	Induced Total Sett (in.)	Induced Bulb Sett (in.)	Influence Factors (Ultimate Induced Stresses in Parentheses) Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz
			(10.54)	(6.99)			(0.41)	(0.36)										
1	0.00	0.00	0.00 (10.54)	0.00 (6.99)	0.00	0.00	0.00 (0.41)	0.00 (0.36)	0.998 (143)	0.001 (0)	0.000 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)	0.071 (0)
2	0.43	0.00	0.43 (10.11)	0.43 (6.56)	0.28	0.00	0.28 (0.13)	0.28 (0.08)	0.995 (142)	0.002 (1)	0.000 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)	0.009 (0)
3	0.00	3.15	3.15 (6.96)	3.15 (3.41)	0.00	0.00	0.00 (0.13)	0.00 (0.08)	0.990 (142)	0.003 (2)	0.000 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)	0.003 (0)
4	0.00	2.39	2.39 (4.57)	2.39 (1.02)	0.00	0.00	0.00 (0.13)	0.00 (0.08)	0.985 (141)	0.005 (3)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
5	0.07	0.00	0.07 (4.50)	0.07 (0.95)	0.00	0.00	0.00 (0.13)	0.00 (0.08)	0.980 (140)	0.007 (4)	0.000 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)	0.001 (0)
6	0.04	0.00	0.04 (4.46)	0.04 (0.91)	0.00	0.00	0.00 (0.13)	0.00 (0.07)	0.976 (140)	0.008 (4)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
7	0.00	0.91	0.91 (3.55)	0.91 (0.00)	0.00	0.07	0.07 (0.05)	0.07 (0.00)	0.971 (139)	0.009 (5)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
8	0.00	0.64	0.64 (2.91)	0.00 (0.00)	0.00	0.02	0.02 (0.03)	0.00 (0.00)	0.966 (138)	0.011 (6)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
9	0.00	0.56	0.56 (2.35)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)	0.962 (138)	0.013 (7)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
10	0.00	0.50	0.50 (1.85)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)	0.957 (137)	0.014 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
11	0.00	0.14	0.14 (1.71)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)	0.954 (136)	0.015 (8)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
12	0.00	0.20	0.20 (1.51)	0.00 (0.00)	0.00	0.00	0.00 (0.02)	0.00 (0.00)	0.952 (136)	0.016 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
13	0.00	0.31	0.31 (1.20)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)	0.948 (136)	0.017 (9)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
14	0.00	0.28	0.28 (0.92)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)	0.944 (135)	0.018 (10)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
15	0.00	0.26	0.26 (0.66)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)	0.939 (134)	0.020 (11)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
16	0.00	0.24	0.24 (0.42)	0.00 (0.00)	0.00	0.01	0.01 (0.00)	0.00 (0.00)	0.935 (134)	0.021 (12)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
17	0.00	0.22	0.22 (0.20)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.930 (133)	0.023 (13)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
18	0.03	0.00	0.03 (0.17)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.926 (132)	0.024 (13)	0.001 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
19	0.03	0.00	0.03 (0.14)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.921 (132)	0.026 (14)	0.001 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
20	0.03	0.00	0.03 (0.12)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.917 (131)	0.027 (15)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
21	0.03	0.00	0.03 (0.09)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.912 (130)	0.029 (16)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
22	0.02	0.00	0.02 (0.07)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.908 (130)	0.030 (17)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
23	0.02	0.00	0.02 (0.04)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.903 (129)	0.031 (17)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
24	0.02	0.00	0.02 (0.02)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.899 (129)	0.033 (18)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
25	0.02	0.00	0.02 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.895 (128)	0.034 (19)	0.002 (1)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)

Str No.	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses) Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.00	0.000	1.00 (143)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	3.92	0.020	0.61 (86)	0.61 (1)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)	0.61 (0)
3	5.88	0.068	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	5.88	0.127	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.15	0.157	0.04 (6)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
6	0.12	0.158	0.05 (6)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
7	4.10	0.179	0.08 (11)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)	0.08 (0)
8	3.42	0.217	0.04 (5)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	3.42	0.251	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	3.42	0.285	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	2.00	0.312	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	3.00	0.337	0.02 (3)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
13	5.00	0.377	0.04 (5)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	5.00	0.427	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	5.00	0.476	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	5.00	0.526	0.02 (3)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
17	5.00	0.576	0.02 (2)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	5.00	0.626	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	5.00	0.676	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	5.00	0.726	0.03 (3)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	5.00	0.776	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	5.00	0.825	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	5.00	0.875	0.01 (1)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	5.00	0.925	0.02 (3)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	5.00	0.975	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

TOTAL	(in)	0.74	9.80	10.54	6.99	0.29	0.12	0.41	0.36
	(ft)	0.06	0.82	0.88	0.58	0.02	0.01	0.03	0.03
	%Ultimate			100.0	66.3			3.9	3.4
REDUCD	(in)	0.63	8.33	8.96	5.94	0.25	0.11	0.35	0.31
	(ft)	0.05	0.69	0.75	0.50	0.02	0.01	0.03	0.03
	%Ultimate			85.0	56.3			3.3	2.9

CONSOLIDATION SETTLEMENT OF DIKE CONTAINMENT - ASSUMING NO INFLUENCE FROM AREA FILL

	DIKE CREST ELEVATION		4	4	4	4	4	4	4	4	4	6	6	6	6	6	6	6	6	6
	MUDLINE ELEVATION		0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2
	WATER SURFACE ELEVATION		0.5	0.5	0.5	1	1	1	1.5	1.5	1.5	0.5	0.5	0.5	1	1	1	1.5	1.5	1.5
	ULTIMATE SETTLEMENT (FT)		0.62	0.69	0.76	0.56	0.63	0.7	0.51	0.57	0.64	1.04	1.11	1.17	0.84	1.05	1.12	0.87	1	1.06
		Magnitude of settlement in feet over time																		
TIME (YRS)	% ULT																			
0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.5	0.23		0.14	0.16	0.17	0.13	0.14	0.16	0.12	0.13	0.15	0.24	0.26	0.27	0.19	0.24	0.26	0.20	0.23	0.24
1	0.34		0.21	0.23	0.26	0.19	0.21	0.24	0.17	0.19	0.22	0.35	0.38	0.40	0.29	0.36	0.38	0.30	0.34	0.36
3	0.58		0.36	0.40	0.44	0.32	0.37	0.41	0.30	0.33	0.37	0.60	0.64	0.68	0.49	0.61	0.65	0.50	0.58	0.61
5	0.68		0.42	0.47	0.52	0.38	0.43	0.48	0.35	0.39	0.44	0.71	0.75	0.80	0.57	0.71	0.76	0.59	0.68	0.72
10	0.8		0.50	0.55	0.61	0.45	0.50	0.56	0.41	0.46	0.51	0.83	0.89	0.94	0.67	0.84	0.90	0.70	0.80	0.85
20	0.88		0.55	0.61	0.67	0.49	0.55	0.62	0.45	0.50	0.56	0.92	0.98	1.03	0.74	0.92	0.99	0.77	0.88	0.93
ULT	1		0.62	0.69	0.76	0.56	0.63	0.70	0.51	0.57	0.64	1.04	1.11	1.17	0.84	1.05	1.12	0.87	1.00	1.06

Elevation of fill over time

0			4	4	4	4	4	4	4	4	4	6	6	6	6	6	6	6	6	6
0.5			3.86	3.84	3.83	3.87	3.86	3.84	3.88	3.87	3.85	5.76	5.74	5.73	5.81	5.76	5.74	5.80	5.77	5.76
1			3.79	3.77	3.74	3.81	3.79	3.76	3.83	3.81	3.78	5.65	5.62	5.60	5.71	5.64	5.62	5.70	5.66	5.64
3			3.64	3.60	3.56	3.68	3.63	3.59	3.70	3.67	3.63	5.40	5.36	5.32	5.51	5.39	5.35	5.50	5.42	5.39
5			3.58	3.53	3.48	3.62	3.57	3.52	3.65	3.61	3.56	5.29	5.25	5.20	5.43	5.29	5.24	5.41	5.32	5.28
10			3.50	3.45	3.39	3.55	3.50	3.44	3.59	3.54	3.49	5.17	5.11	5.06	5.33	5.16	5.10	5.30	5.20	5.15
20			3.45	3.39	3.33	3.51	3.45	3.38	3.55	3.50	3.44	5.08	5.02	4.97	5.26	5.08	5.01	5.23	5.12	5.07
ULT			3.38	3.31	3.24	3.44	3.37	3.30	3.49	3.43	3.36	4.96	4.89	4.83	5.16	4.95	4.88	5.13	5.00	4.94

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 — marsh to el 3 — beach to el 6 average — dike to el 4

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	0.0	0.0	362.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at le 0.5

0.69	2.81	100.00	280.89
	2.19	37.00	81.07
			361.96

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	1010.0	2010.0	10.0	510.5	510.5	510.5	510.5	510.5	510.5	510.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	10.0	1010.0	-10.0	509.5	509.5	509.5	509.5	509.5	509.5	509.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	1010.0	2010.0	10.0	510.5	510.5	510.5	510.5	510.5	510.5	510.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	10.0	1010.0	-10.0	509.5	509.5	509.5	509.5	509.5	509.5	509.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2510.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.050
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.75	9.70	10.45	8.29	0.47	0.08	0.56	0.47
	(ft)	0.06	0.81	0.87	0.69	0.04	0.01	0.05	0.04
	%Ultimate			100.0	79.4			5.3	4.5
REDUCD	(in)	0.64	8.24	8.88	7.05	0.40	0.07	0.47	0.40
	(ft)	0.05	0.69	0.74	0.59	0.03	0.01	0.04	0.03
	%Ultimate			85.0	67.5			4.5	3.9

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Past Maximum (psf)	Zero Burden (psf)	Eff Vert Stress at Mid-Stratum: Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)
	0.0								0				
1	2.0 4.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	114 228	330 289.1%	444	330 289.1%	444
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	270 97.0%	548	159 57.2%	437
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	210 52.0%	613	0 0.0%	403
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	160 28.9%	713	0 0.0%	553
5	22.5 25.0	63.0	0.100	0.015	8030.0	12045.0	5.0	13520	761 893	129 17.0%	890	7 0.9%	767
6	27.0 29.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999 1105	111 11.1%	1110	6 0.6%	1005
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	96 7.8%	1330	9 0.7%	1243
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	83 5.7%	1554	3 0.2%	1474
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	74 4.4%	1760	0 0.0%	1686
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	67 3.5%	1967	0 0.0%	1901
11	51.0 52.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058 2108	62 3.0%	2120	0 0.0%	2058
12	53.5 55.0	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183 2258	60 2.7%	2243	2 0.1%	2185
13	57.5 60.0	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383 2508	56 2.3%	2439	2 0.1%	2385
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	51 1.9%	2684	0 0.0%	2633
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	48 1.7%	2931	0 0.0%	2883
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	44 1.4%	3177	1 0.0%	3134
17	77.5 80.0	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383 3508	42 1.2%	3425	1 0.0%	3384
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	39 1.1%	3672	0 0.0%	3633
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	37 1.0%	3920	0 0.0%	3883
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	35 0.8%	4168	1 0.0%	4134
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	33 0.8%	4416	0 0.0%	4383
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	32 0.7%	4665	0 0.0%	4633
23	107.5 110.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883 5008	30 0.6%	4913	0 0.0%	4883
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	29 0.6%	5162	1 0.0%	5134
25	117.5 120.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383 5508	28 0.5%	5411	0 0.0%	5383

Str No.	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz
			(10.45)	(8.29)			(0.56)	(0.47)										
1	0.00	0.00	0.00 (10.45)	0.00 (8.29)	0.00	0.00	0.00 (0.56)	0.00 (0.47)	0.044 (0)	0.000 (0)	0.911 (330)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
2	0.61	0.63	1.23 (9.21)	1.23 (7.06)	0.47	0.00	0.47 (0.09)	0.47 (0.01)	0.126 (0)	0.001 (0)	0.745 (270)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
3	0.00	4.34	4.34 (4.88)	4.34 (2.72)	0.00	0.00	0.00 (0.09)	0.00 (0.01)	0.208 (0)	0.001 (0)	0.579 (210)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
4	0.00	2.63	2.63 (2.25)	2.63 (0.09)	0.00	0.00	0.00 (0.09)	0.00 (0.01)	0.275 (0)	0.002 (0)	0.442 (160)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
5	0.06	0.00	0.06 (2.19)	0.06 (0.03)	0.00	0.00	0.00 (0.09)	0.00 (0.00)	0.316 (0)	0.002 (0)	0.357 (129)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
6	0.03	0.00	0.03 (2.15)	0.03 (0.00)	0.00	0.00	0.00 (0.08)	0.00 (0.00)	0.340 (0)	0.003 (0)	0.307 (111)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
7	0.00	0.61	0.61 (1.54)	0.00 (0.00)	0.00	0.06	0.06 (0.03)	0.00 (0.00)	0.360 (0)	0.003 (0)	0.265 (96)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
8	0.00	0.38	0.38 (1.17)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)	0.377 (0)	0.004 (0)	0.230 (83)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
9	0.00	0.29	0.29 (0.87)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)	0.388 (0)	0.005 (0)	0.204 (74)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
10	0.00	0.24	0.24 (0.64)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)	0.397 (0)	0.005 (0)	0.184 (67)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
11	0.00	0.06	0.06 (0.57)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)	0.402 (0)	0.005 (0)	0.172 (62)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
12	0.00	0.08	0.08 (0.49)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)	0.406 (0)	0.006 (0)	0.165 (60)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
13	0.00	0.12	0.12 (0.37)	0.00 (0.00)	0.00	0.01	0.01 (0.00)	0.00 (0.00)	0.410 (0)	0.006 (0)	0.154 (56)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
14	0.00	0.10	0.10 (0.27)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.415 (0)	0.007 (0)	0.142 (51)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
15	0.00	0.09	0.09 (0.18)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.419 (0)	0.007 (0)	0.131 (48)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
16	0.00	0.07	0.07 (0.11)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.422 (0)	0.008 (0)	0.123 (44)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
17	0.00	0.06	0.06 (0.05)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.425 (0)	0.008 (0)	0.115 (42)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
18	0.01	0.00	0.01 (0.04)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.427 (0)	0.009 (0)	0.108 (39)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
19	0.01	0.00	0.01 (0.03)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.429 (0)	0.009 (0)	0.102 (37)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
20	0.01	0.00	0.01 (0.02)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.431 (0)	0.010 (0)	0.097 (35)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
21	0.01	0.00	0.01 (0.02)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.432 (0)	0.010 (0)	0.092 (33)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
22	0.01	0.00	0.01 (0.01)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.433 (0)	0.011 (0)	0.087 (32)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
23	0.00	0.00	0.00 (0.01)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.434 (0)	0.011 (0)	0.083 (30)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
24	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.435 (0)	0.012 (0)	0.080 (29)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
25	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.435 (0)	0.012 (0)	0.076 (28)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)

Str No.	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.00	0.000	1.00 (0)	1.00 (0)	1.00 (330)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	3.92	0.020	0.59 (0)	0.59 (0)	0.59 (159)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)
3	5.88	0.068	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	5.88	0.127	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.15	0.157	0.05 (0)	0.05 (0)	0.05 (7)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
6	0.12	0.158	0.06 (0)	0.06 (0)	0.06 (6)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)
7	4.10	0.179	0.09 (0)	0.09 (0)	0.09 (9)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)
8	3.42	0.217	0.04 (0)	0.04 (0)	0.04 (3)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	3.42	0.251	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	3.42	0.285	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	2.00	0.312	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	3.00	0.337	0.03 (0)	0.03 (0)	0.03 (2)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
13	5.00	0.377	0.04 (0)	0.04 (0)	0.04 (2)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	5.00	0.427	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	5.00	0.476	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	5.00	0.526	0.03 (0)	0.03 (0)	0.03 (1)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
17	5.00	0.576	0.02 (0)	0.02 (0)	0.02 (1)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	5.00	0.626	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	5.00	0.676	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	5.00	0.726	0.03 (0)	0.03 (0)	0.03 (1)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	5.00	0.776	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	5.00	0.825	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	5.00	0.875	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	5.00	0.925	0.02 (0)	0.02 (0)	0.02 (1)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	5.00	0.975	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

TOTAL	(in)	0.75	9.70	10.45	8.29	0.47	0.08	0.56	0.47
	(ft)	0.06	0.81	0.87	0.69	0.04	0.01	0.05	0.04
	%Ultimate			100.0	79.4			5.3	4.5
REDUCD	(in)	0.64	8.24	8.88	7.05	0.40	0.07	0.47	0.40
	(ft)	0.05	0.69	0.74	0.59	0.03	0.01	0.04	0.03
	%Ultimate			85.0	67.5			4.5	3.9

CONSOLIDATION SETTLEMENT OF DIKE CONTAINMENT - CONSIDERING ADJACENT MARSH PLATFORM AND BEACH FILL (PLATFORM AT 3)

	DIKE CREST ELEVATION		4	4	4	4	4	4	4	4	4	6	6	6	6	6	6	6	6	6
	MUDLINE ELEVATION		0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2
	WATER SURFACE ELEVATION		0.5	0.5	0.5	1	1	1	1.5	1.5	1.5	0.5	0.5	0.5	1	1	1	1.5	1.5	1.5
	ULTIMATE SETTLEMENT (FT)		0.92	1.03	1.18	0.78	0.94	1.1	0.7	0.8	0.96	1.35	1.5	1.62	1.27	1.37	1.52	1.14	1.29	1.38
			✓	✓								✓	✓							
		Magnitude of settlement in feet over time																		
TIME (YRS)	% ULT																			
0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.5	0.23		0.21	0.24	0.27	0.18	0.22	0.25	0.16	0.18	0.22	0.31	0.35	0.37	0.29	0.32	0.35	0.26	0.30	0.32
1	0.34		0.31	0.35	0.40	0.27	0.32	0.37	0.24	0.27	0.33	0.46	0.51	0.55	0.43	0.47	0.52	0.39	0.44	0.47
3	0.58		0.53	0.60	0.68	0.45	0.55	0.64	0.41	0.46	0.56	0.78	0.87	0.94	0.74	0.79	0.88	0.66	0.75	0.80
5	0.68		0.63	0.70	0.80	0.53	0.64	0.75	0.48	0.54	0.65	0.92	1.02	1.10	0.86	0.93	1.03	0.78	0.88	0.94
10	0.8		0.74	0.82	0.94	0.62	0.75	0.88	0.56	0.64	0.77	1.08	1.20	1.30	1.02	1.10	1.22	0.91	1.03	1.10
20	0.88		0.81	0.91	1.04	0.69	0.83	0.97	0.62	0.70	0.84	1.19	1.32	1.43	1.12	1.21	1.34	1.00	1.14	1.21
ULT	1		0.92	1.03	1.18	0.78	0.94	1.10	0.70	0.80	0.96	1.35	1.50	1.62	1.27	1.37	1.52	1.14	1.29	1.38

Elevation of fill over time

0			4	4	4	4	4	4	4	4	4	6	6	6	6	6	6	6	6	6
0.5			3.79	3.76	3.73	3.82	3.78	3.75	3.84	3.82	3.78	5.69	5.66	5.63	5.71	5.68	5.65	5.74	5.70	5.68
1			3.69	3.65	3.60	3.73	3.68	3.63	3.76	3.73	3.67	5.54	5.49	5.45	5.57	5.53	5.48	5.61	5.56	5.53
3			3.47	3.40	3.32	3.55	3.45	3.36	3.59	3.54	3.44	5.22	5.13	5.06	5.26	5.21	5.12	5.34	5.25	5.20
5			3.37	3.30	3.20	3.47	3.36	3.25	3.52	3.46	3.35	5.08	4.98	4.90	5.14	5.07	4.97	5.22	5.12	5.06
10			3.26	3.18	3.06	3.38	3.25	3.12	3.44	3.36	3.23	4.92	4.80	4.70	4.98	4.90	4.78	5.09	4.97	4.90
20			3.19	3.09	2.96	3.31	3.17	3.03	3.38	3.30	3.16	4.81	4.68	4.57	4.88	4.79	4.66	5.00	4.86	4.79
ULT			3.08	2.97	2.82	3.22	3.06	2.90	3.30	3.20	3.04	4.65	4.50	4.38	4.73	4.63	4.48	4.86	4.71	4.62

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 — marsh to el 3 — beach to el 6 average — dike to el 4

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	207.0	515.0	329.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at le 0.5

0.92	1.58	100.00	157.67
	1.42	37.00	52.66
			210.33

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	1010.0	2010.0	10.0	510.5	510.5	510.5	510.5	510.5	510.5	510.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	10.0	1010.0	-10.0	509.5	509.5	509.5	509.5	509.5	509.5	509.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	1010.0	2010.0	10.0	510.5	510.5	510.5	510.5	510.5	510.5	510.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	10.0	1010.0	-10.0	509.5	509.5	509.5	509.5	509.5	509.5	509.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2510.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement				Induced Settlement			
		Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.92	12.96	13.88	11.08	0.48	0.15	0.63	0.60
	(ft)	0.08	1.08	1.16	0.92	0.04	0.01	0.05	0.05
	%Ultimate			100.0	79.8			4.6	4.4
REDUCD	(in)	0.78	11.02	11.80	9.42	0.41	0.13	0.54	0.51
	(ft)	0.06	0.92	0.98	0.78	0.03	0.01	0.04	0.04
	%Ultimate			85.0	67.9			3.9	3.7

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Main table — strata properties and effective vertical stress at mid-stratum

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)
	0.0								0				
1	2.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	114	309	423	309	423
	4.0								228	270.9%		270.9%	
2	6.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278	271	549	160	438
	8.0								328	97.6%		57.6%	
3	11.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403	234	637	0	403
	14.0								478	58.1%		0.0%	
4	17.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553	203	756	0	553
	20.0								628	36.8%		0.0%	
5	22.5	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761	184	945	10	770
	25.0								893	24.2%		1.3%	
6	27.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999	173	1172	10	1009
	29.0								1105	17.3%		1.0%	
7	32.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234	163	1397	15	1249
	35.0								1363	13.2%		1.2%	
8	37.5	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471	156	1626	6	1476
	40.0								1578	10.6%		0.4%	
9	42.5	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686	150	1835	0	1686
	45.0								1793	8.9%		0.0%	
10	47.5	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901	145	2046	0	1901
	50.0								2008	7.7%		0.0%	
11	51.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058	143	2201	0	2058
	52.0								2108	6.9%		0.0%	
12	53.5	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183	141	2324	4	2187
	55.0								2258	6.5%		0.2%	
13	57.5	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383	139	2522	6	2389
	60.0								2508	5.8%		0.3%	
14	62.5	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633	136	2769	0	2633
	65.0								2758	5.2%		0.0%	
15	67.5	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883	134	3017	0	2883
	70.0								3008	4.6%		0.0%	
16	72.5	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133	132	3265	4	3137
	75.0								3258	4.2%		0.1%	
17	77.5	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383	130	3513	2	3385
	80.0								3508	3.8%		0.1%	
18	82.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633	129	3762	0	3633
	85.0								3758	3.5%		0.0%	
19	87.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883	127	4010	0	3883
	90.0								4008	3.3%		0.0%	
20	92.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133	126	4259	4	4137
	95.0								4258	3.0%		0.1%	
21	97.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383	125	4508	0	4383
	100.0								4508	2.9%		0.0%	
22	102.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633	124	4757	0	4633
	105.0								4758	2.7%		0.0%	
23	107.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883	123	5006	1	4884
	110.0								5008	2.5%		0.0%	
24	112.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133	122	5255	3	5136
	115.0								5258	2.4%		0.1%	
25	117.5	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383	122	5505	0	5383
	120.0								5508	2.3%		0.0%	

Main table — ultimate and induced settlement

Str No.	Ultimate Recomp Sett (in.)	Ultimate Virgin Sett (in.)	Ultimate Total Sett (in.)	Ultimate Bulb Sett (in.)	Induced Recomp Sett (in.)	Induced Virgin Sett (in.)	Induced Total Sett (in.)	Induced Bulb Sett (in.)
			(13.88)	(11.08)			(0.63)	(0.60)
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(13.88)	(11.08)			(0.63)	(0.60)
2	0.61	0.65	1.26	1.26	0.47	0.00	0.47	0.47
			(12.62)	(9.82)			(0.16)	(0.13)
3	0.00	4.74	4.74	4.74	0.00	0.00	0.00	0.00
			(7.88)	(5.08)			(0.16)	(0.13)
4	0.00	3.24	3.24	3.24	0.00	0.00	0.00	0.00
			(4.64)	(1.84)			(0.16)	(0.13)
5	0.08	0.00	0.08	0.08	0.01	0.00	0.00	0.00
			(4.55)	(1.76)			(0.16)	(0.13)
6	0.05	0.00	0.05	0.05	0.00	0.00	0.00	0.00
			(4.50)	(1.71)			(0.16)	(0.13)
7	0.00	1.02	1.02	1.02	0.00	0.10	0.10	0.10
			(3.49)	(0.69)			(0.06)	(0.03)
8	0.00	0.69	0.69	0.69	0.00	0.03	0.03	0.03
			(2.80)	(0.00)			(0.03)	(0.00)
9	0.00	0.58	0.58	0.00	0.00	0.00	0.00	0.00
			(2.22)	(0.00)			(0.03)	(0.00)
10	0.00	0.50	0.50	0.00	0.00	0.00	0.00	0.00
			(1.71)	(0.00)			(0.03)	(0.00)
11	0.00	0.14	0.14	0.00	0.00	0.00	0.00	0.00
			(1.57)	(0.00)			(0.03)	(0.00)
12	0.00	0.20	0.20	0.00	0.00	0.01	0.01	0.00
			(1.38)	(0.00)			(0.02)	(0.00)
13	0.00	0.29	0.29	0.00	0.00	0.01	0.01	0.00
			(1.08)	(0.00)			(0.01)	(0.00)
14	0.00	0.26	0.26	0.00	0.00	0.00	0.00	0.00
			(0.82)	(0.00)			(0.01)	(0.00)
15	0.00	0.24	0.24	0.00	0.00	0.00	0.00	0.00
			(0.58)	(0.00)			(0.01)	(0.00)
16	0.00	0.21	0.21	0.00	0.00	0.01	0.01	0.00
			(0.37)	(0.00)			(0.00)	(0.00)
17	0.00	0.20	0.20	0.00	0.00	0.00	0.00	0.00
			(0.17)	(0.00)			(0.00)	(0.00)
18	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
			(0.15)	(0.00)			(0.00)	(0.00)
19	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00
			(0.12)	(0.00)			(0.00)	(0.00)
20	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00
			(0.10)	(0.00)			(0.00)	(0.00)
21	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00
			(0.08)	(0.00)			(0.00)	(0.00)
22	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00
			(0.06)	(0.00)			(0.00)	(0.00)
23	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00
			(0.04)	(0.00)			(0.00)	(0.00)
24	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00
			(0.02)	(0.00)			(0.00)	(0.00)
25	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00
			(0.00)	(0.00)			(0.00)	(0.00)

Main table — Influence Factors (Ultimate Induced Stresses in Parentheses)

Str No.	Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz
1	0.044	0.000	0.911	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(9)	(0)	(300)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2	0.126	0.001	0.745	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(26)	(0)	(245)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
3	0.208	0.001	0.579	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(43)	(1)	(191)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
4	0.275	0.002	0.442	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(57)	(1)	(145)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
5	0.316	0.002	0.357	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(65)	(1)	(118)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6	0.340	0.003	0.307	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(70)	(1)	(101)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
7	0.360	0.003	0.265	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(75)	(2)	(87)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
8	0.377	0.004	0.230	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(78)	(2)	(76)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
9	0.388	0.005	0.204	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(80)	(2)	(67)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
10	0.397	0.005	0.184	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(82)	(3)	(61)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
11	0.402	0.005	0.172	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(83)	(3)	(57)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
12	0.406	0.006	0.165	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(84)	(3)	(54)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
13	0.410	0.006	0.154	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(85)	(3)	(51)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14	0.415	0.007	0.142	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(86)	(3)	(47)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
15	0.419	0.007	0.131	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(87)	(4)	(43)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16	0.422	0.008	0.123	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(87)	(4)	(40)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
17	0.425	0.008	0.115	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(88)	(4)	(38)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18	0.427	0.009	0.108	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(88)	(5)	(36)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
19	0.429	0.009	0.102	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(89)	(5)	(34)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20	0.431	0.010	0.097	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(89)	(5)	(32)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
21	0.432	0.010	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(89)	(5)	(30)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22	0.433	0.011	0.087	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(90)	(6)	(29)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
23	0.434	0.011	0.083	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(90)	(6)	(27)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
24	0.435	0.012	0.080	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(90)	(6)	(26)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
25	0.435	0.012	0.076	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(90)	(6)	(25)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Main table — Rate Parameters and Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses)

Str No.	Effective H* (ft)	Position (z*/L) (N/D)	Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.00	0.000	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
			(9)	(0)	(300)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2	3.92	0.020	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
			(15)	(0)	(145)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
3	5.88	0.058	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
4	5.88	0.127	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
5	0.15	0.157	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
6	0.12	0.158	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
			(4)	(0)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
7	4.10	0.179	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
			(7)	(0)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
8	3.42	0.217	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
			(3)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
9	3.42	0.251	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
10	3.42	0.285	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
11	2.00	0.312	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
12	3.00	0.337	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
			(2)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
13	5.00	0.377	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
			(4)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
14	5.00	0.427	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
15	5.00	0.476	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
16	5.00	0.526	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
			(2)	(0)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
17	5.00	0.576	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
			(2)	(0)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
18	5.00	0.626	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
19	5.00	0.676	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
20	5.00	0.726	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
			(3)	(0)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
21	5.00	0.776	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
22	5.00	0.825	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
23	5.00	0.875	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
			(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
24	5.00	0.925	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
			(2)	(0)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
25	5.00	0.975	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

		Ult. Recomp	Ult. Virgin	Ult. Total	Ult. Bulb	Ind. Recomp	Ind. Virgin	Ind. Total	Ind. Bulb
TOTAL	(in)	0.92	12.96	13.88	11.08	0.48	0.15	0.63	0.60
	(ft)	0.08	1.08	1.16	0.92	0.04	0.01	0.05	0.05
	%Ultimate			100.0	79.8			4.6	4.4
REDUCD	(in)	0.78	11.02	11.80	9.42	0.41	0.13	0.54	0.51
	(ft)	0.06	0.92	0.98	0.78	0.03	0.01	0.04	0.04
	%Ultimate			85.0	67.9			3.9	3.7

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 — marsh to el 3 — beach to el 6 average — dike to el 4

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	234.0	560.0	362.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at le 0.5

1.03	2.47	100.00	247.39
	2.53	37.00	93.46
			340.86

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	1010.0	2010.0	10.0	510.5	510.5	510.5	510.5	510.5	510.5	510.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	10.0	1010.0	-10.0	509.5	509.5	509.5	509.5	509.5	509.5	509.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	1010.0	2010.0	10.0	510.5	510.5	510.5	510.5	510.5	510.5	510.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	10.0	1010.0	-10.0	509.5	509.5	509.5	509.5	509.5	509.5	509.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2510.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.95	14.48	15.43	12.31	0.52	0.17	0.69	0.66
	(ft)	0.08	1.21	1.29	1.03	0.04	0.01	0.06	0.05
	%Ultimate			100.0	79.8			4.5	4.3
REDUCD	(in)	0.81	12.31	13.12	10.47	0.44	0.15	0.59	0.56
	(ft)	0.07	1.03	1.09	0.87	0.04	0.01	0.05	0.05
	%Ultimate			85.0	67.8			3.8	3.6

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)
1	0.0 2.0 4.0	67.0	0.000	0.000	99999.0	99999.0	4.0	1000	0 114 228	340 298.3%	454	340 298.3%	454
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	299 107.7%	577	177 63.6%	455
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	259 64.3%	662	0 0.0%	403
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	225 40.7%	778	0 0.0%	553
5	22.5 25.0	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761 893	205 26.9%	965	11 1.4%	771
6	27.0 29.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999 1105	192 19.3%	1191	11 1.1%	1010
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	182 14.8%	1416	17 1.3%	1251
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	173 11.8%	1644	7 0.4%	1477
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	167 9.9%	1853	0 0.0%	1686
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	162 8.5%	2063	0 0.0%	1901
11	51.0 52.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058 2108	160 7.8%	2218	0 0.0%	2058
12	53.5 55.0	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183 2258	158 7.2%	2341	4 0.2%	2187
13	57.5 60.0	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383 2508	155 6.5%	2538	7 0.3%	2390
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	152 5.8%	2785	0 0.0%	2633
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	150 5.2%	3033	0 0.0%	2883
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	148 4.7%	3281	4 0.1%	3137
17	77.5 80.0	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383 3508	146 4.3%	3529	3 0.1%	3386
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	144 4.0%	3777	0 0.0%	3633
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	143 3.7%	4026	0 0.0%	3883
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	141 3.4%	4274	4 0.1%	4137
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	140 3.2%	4523	0 0.0%	4383
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	139 3.0%	4772	0 0.0%	4633
23	107.5 110.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883 5008	138 2.8%	5021	1 0.0%	4884
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	137 2.7%	5270	3 0.1%	5136
25	117.5 120.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383 5508	136 2.5%	5519	0 0.0%	5383

Str No.	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz
1	0.00	0.00	(15.43) 0.00 (15.43)	(12.31) 0.00 (12.31)	0.00	0.00	(0.69) 0.00 (0.69)	(0.66) 0.00 (0.66)	0.044 (10)	0.000 (0)	0.911 (330)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
2	0.61	0.99	1.60 (13.83)	1.60 (10.71)	0.51	0.00	0.51 (0.18)	0.51 (0.15)	0.126 (30)	0.001 (0)	0.745 (270)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
3	0.00	5.14	5.14 (8.69)	5.14 (5.58)	0.00	0.00	0.00 (0.18)	0.00 (0.15)	0.208 (49)	0.001 (1)	0.579 (210)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
4	0.00	3.54	3.54 (5.16)	3.54 (2.04)	0.00	0.00	0.00 (0.18)	0.00 (0.15)	0.275 (64)	0.002 (1)	0.442 (160)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
5	0.09	0.00	0.09 (5.06)	0.09 (1.94)	0.01	0.00	0.01 (0.18)	0.01 (0.14)	0.316 (74)	0.002 (1)	0.357 (129)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
6	0.06	0.00	0.06 (5.01)	0.06 (1.89)	0.00	0.00	0.00 (0.17)	0.00 (0.14)	0.340 (80)	0.003 (2)	0.307 (111)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
7	0.00	1.13	1.13 (3.88)	1.13 (0.76)	0.00	0.11	0.11 (0.06)	0.11 (0.03)	0.360 (84)	0.003 (2)	0.265 (96)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
8	0.00	0.76	0.76 (3.12)	0.76 (0.00)	0.00	0.03	0.03 (0.03)	0.03 (0.00)	0.377 (88)	0.004 (2)	0.230 (83)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
9	0.00	0.65	0.65 (2.47)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)	0.388 (91)	0.005 (3)	0.204 (74)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
10	0.00	0.56	0.56 (1.91)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)	0.397 (93)	0.005 (3)	0.184 (67)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
11	0.00	0.16	0.16 (1.76)	0.00 (0.00)	0.00	0.00	0.00 (0.03)	0.00 (0.00)	0.402 (94)	0.005 (3)	0.172 (62)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
12	0.00	0.22	0.22 (1.54)	0.00 (0.00)	0.00	0.01	0.01 (0.03)	0.00 (0.00)	0.406 (95)	0.006 (3)	0.165 (60)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
13	0.00	0.33	0.33 (1.21)	0.00 (0.00)	0.00	0.02	0.02 (0.01)	0.00 (0.00)	0.410 (96)	0.006 (3)	0.154 (56)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
14	0.00	0.29	0.29 (0.92)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)	0.415 (97)	0.007 (4)	0.142 (51)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
15	0.00	0.26	0.26 (0.65)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)	0.419 (98)	0.007 (4)	0.131 (48)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
16	0.00	0.24	0.24 (0.41)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)	0.422 (99)	0.008 (4)	0.123 (44)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
17	0.00	0.22	0.22 (0.19)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.425 (99)	0.008 (5)	0.115 (42)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
18	0.03	0.00	0.03 (0.16)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.427 (100)	0.009 (5)	0.108 (39)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
19	0.03	0.00	0.03 (0.14)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.429 (100)	0.009 (5)	0.102 (37)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
20	0.03	0.00	0.03 (0.11)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.431 (101)	0.010 (6)	0.097 (35)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
21	0.02	0.00	0.02 (0.09)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.432 (101)	0.010 (6)	0.092 (33)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
22	0.02	0.00	0.02 (0.06)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.433 (101)	0.011 (6)	0.087 (32)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
23	0.02	0.00	0.02 (0.04)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.434 (102)	0.011 (6)	0.083 (30)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
24	0.02	0.00	0.02 (0.02)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.435 (102)	0.012 (7)	0.080 (29)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
25	0.02	0.00	0.02 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)	0.435 (102)	0.012 (7)	0.076 (28)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)

Str No.	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.00	0.000	1.00 (10)	1.00 (0)	1.00 (330)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	3.92	0.020	0.59 (17)	0.59 (0)	0.59 (159)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)
3	5.88	0.068	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	5.88	0.127	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.15	0.157	0.05 (4)	0.05 (0)	0.05 (7)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
6	0.12	0.158	0.06 (5)	0.06 (0)	0.06 (6)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)
7	4.10	0.179	0.09 (8)	0.09 (0)	0.09 (9)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)
8	3.42	0.217	0.04 (3)	0.04 (0)	0.04 (3)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	3.42	0.251	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	3.42	0.285	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	2.00	0.312	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	3.00	0.337	0.03 (3)	0.03 (0)	0.03 (2)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
13	5.00	0.377	0.04 (4)	0.04 (0)	0.04 (2)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	5.00	0.427	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	5.00	0.476	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	5.00	0.526	0.03 (3)	0.03 (0)	0.03 (1)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
17	5.00	0.576	0.02 (2)	0.02 (0)	0.02 (1)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	5.00	0.626	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	5.00	0.676	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	5.00	0.726	0.03 (3)	0.03 (0)	0.03 (1)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	5.00	0.776	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	5.00	0.825	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	5.00	0.875	0.01 (1)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	5.00	0.925	0.02 (2)	0.02 (0)	0.02 (1)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	5.00	0.975	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

TOTAL	(in)	0.95	14.48	15.43	12.31	0.52	0.17	0.69	0.66
	(ft)	0.08	1.21	1.29	1.03	0.04	0.01	0.06	0.05
	%Ultimate			100.0	79.8			4.5	4.3
REDUCD	(in)	0.81	12.31	13.12	10.47	0.44	0.15	0.59	0.56
	(ft)	0.07	1.03	1.09	0.87	0.04	0.01	0.05	0.05
	%Ultimate			85.0	67.8			3.8	3.6

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 — marsh to el 3 — beach to el 6 average — dike to el 6

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	207.0	515.0	503.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at le 0.5

1.35	4.15	100.00	414.62
1.65	37.00		68.59
			483.21

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	1010.0	2010.0	10.0	510.5	510.5	510.5	510.5	510.5	510.5	510.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	10.0	1010.0	-10.0	509.5	509.5	509.5	509.5	509.5	509.5	509.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	1010.0	2010.0	10.0	510.5	510.5	510.5	510.5	510.5	510.5	510.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	10.0	1010.0	-10.0	509.5	509.5	509.5	509.5	509.5	509.5	509.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2510.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement				Induced Settlement			
		Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	0.98	17.88	18.86	16.25	0.62	0.39	1.01	0.98
	(ft)	0.08	1.49	1.57	1.35	0.05	0.03	0.08	0.08
	%Ultimate			100.0	86.1			5.4	5.2
REDUCD	(in)	0.83	15.20	16.03	13.81	0.53	0.34	0.86	0.83
	(ft)	0.07	1.27	1.34	1.15	0.04	0.03	0.07	0.07
	%Ultimate			85.0	73.2			4.6	4.4

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
	0.0								0							(18.86)	(16.25)			(1.01)	(0.98)
1	2.0 4.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	114 228	467 409.9%	581	467 409.9%	581	0.00	0.00	0.00 (18.86)	0.00 (16.25)	0.00	0.00	0.00 (1.01)	0.00 (0.98)
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	401 144.2%	679	237 85.1%	515	0.61	2.11	2.72 (16.14)	2.72 (13.53)	0.61	0.20	0.81 (0.21)	0.81 (0.17)
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	335 83.1%	738	0 0.0%	403	0.00	6.26	6.26 (9.88)	6.26 (7.27)	0.00	0.00	0.00 (0.21)	0.00 (0.17)
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	280 50.7%	833	0 0.0%	553	0.00	4.24	4.24 (5.64)	4.24 (3.02)	0.00	0.00	0.00 (0.21)	0.00 (0.17)
5	22.5 25.0	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761 893	246 32.4%	1007	13 1.7%	774	0.11	0.00	0.11 (5.53)	0.11 (2.91)	0.01	0.00	0.01 (0.20)	0.01 (0.16)
6	27.0 29.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999 1105	226 22.7%	1225	13 1.3%	1012	0.06	0.00	0.06 (5.47)	0.06 (2.85)	0.00	0.00	0.00 (0.20)	0.00 (0.16)
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	210 17.0%	1444	19 1.5%	1253	0.00	1.29	1.29 (4.18)	1.29 (1.57)	0.00	0.13	0.13 (0.07)	0.13 (0.03)
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	196 13.3%	1666	7 0.5%	1478	0.00	0.85	0.85 (3.33)	0.85 (0.71)	0.00	0.03	0.03 (0.04)	0.03 (0.00)
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	186 11.0%	1871	0 0.0%	1686	0.00	0.71	0.71 (2.62)	0.71 (0.00)	0.00	0.00	0.00 (0.04)	0.00 (0.00)
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	177 9.3%	2078	0 0.0%	1901	0.00	0.61	0.61 (2.01)	0.00 (0.00)	0.00	0.00	0.00 (0.04)	0.00 (0.00)
11	51.0 52.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058 2108	173 8.4%	2231	0 0.0%	2058	0.00	0.17	0.17 (1.84)	0.00 (0.00)	0.00	0.00	0.00 (0.04)	0.00 (0.00)
12	53.5 55.0	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183 2258	170 7.6%	2353	5 0.2%	2188	0.00	0.23	0.23 (1.60)	0.00 (0.00)	0.00	0.01	0.01 (0.03)	0.00 (0.00)
13	57.5 60.0	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383 2508	165 6.9%	2548	7 0.3%	2390	0.00	0.35	0.35 (1.25)	0.00 (0.00)	0.00	0.02	0.02 (0.01)	0.00 (0.00)
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	161 6.1%	2794	0 0.0%	2633	0.00	0.31	0.31 (0.95)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	157 5.4%	3040	0 0.0%	2883	0.00	0.28	0.28 (0.67)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	153 4.9%	3286	4 0.1%	3137	0.00	0.25	0.25 (0.42)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)
17	77.5 80.0	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383 3508	150 4.4%	3533	3 0.1%	3386	0.00	0.23	0.23 (0.20)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	147 4.1%	3780	0 0.0%	3633	0.03	0.00	0.03 (0.16)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	145 3.7%	4028	0 0.0%	3883	0.03	0.00	0.03 (0.14)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	143 3.5%	4276	4 0.1%	4137	0.03	0.00	0.03 (0.11)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	141 3.2%	4524	0 0.0%	4383	0.02	0.00	0.02 (0.08)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	139 3.0%	4772	0 0.0%	4633	0.02	0.00	0.02 (0.06)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
23	107.5 110.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883 5008	138 2.8%	5021	1 0.0%	4884	0.02	0.00	0.02 (0.04)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	136 2.7%	5269	3 0.1%	5136	0.02	0.00	0.02 (0.02)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
25	117.5 120.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383 5508	135 2.5%	5518	0 0.0%	5383	0.02	0.00	0.02 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)

Str No.	Influence Factors (Ultimate Induced Stresses in Parentheses): Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz	Rate Parameters: Effective H* (ft)	Position (z*/L) (N/D)	Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses): Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.044 (9)	0.000 (0)	0.911 (458)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.00	0.000	1.00 (9)	1.00 (0)	1.00 (458)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	0.126 (26)	0.001 (0)	0.745 (375)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.92	0.020	0.59 (15)	0.59 (0)	0.59 (221)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)
3	0.208 (43)	0.001 (1)	0.579 (291)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.88	0.068	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	0.275 (57)	0.002 (1)	0.442 (222)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.88	0.127	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.316 (65)	0.002 (1)	0.357 (180)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.15	0.157	0.05 (3)	0.05 (0)	0.05 (10)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
6	0.340 (70)	0.003 (1)	0.307 (155)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.12	0.158	0.06 (4)	0.06 (0)	0.06 (9)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)
7	0.360 (75)	0.003 (2)	0.265 (133)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	4.10	0.179	0.09 (7)	0.09 (0)	0.09 (12)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)
8	0.377 (78)	0.004 (2)	0.230 (115)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.217	0.04 (3)	0.04 (0)	0.04 (4)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	0.388 (80)	0.005 (2)	0.204 (103)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.251	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	0.397 (82)	0.005 (3)	0.184 (93)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.42	0.285	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	0.402 (83)	0.005 (3)	0.172 (87)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	2.00	0.312	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	0.406 (84)	0.006 (3)	0.165 (83)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	3.00	0.337	0.03 (2)	0.03 (0)	0.03 (2)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
13	0.410 (85)	0.006 (3)	0.154 (77)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.377	0.04 (4)	0.04 (0)	0.04 (3)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	0.415 (86)	0.007 (3)	0.142 (71)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.427	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	0.419 (87)	0.007 (4)	0.131 (66)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.476	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	0.422 (87)	0.008 (4)	0.123 (62)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.526	0.03 (2)	0.03 (0)	0.03 (2)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
17	0.425 (88)	0.008 (4)	0.115 (58)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.576	0.02 (2)	0.02 (0)	0.02 (1)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	0.427 (88)	0.009 (5)	0.108 (54)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.626	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	0.429 (89)	0.009 (5)	0.102 (51)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.676	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	0.431 (89)	0.010 (5)	0.097 (49)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.726	0.03 (3)	0.03 (0)	0.03 (1)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	0.432 (89)	0.010 (5)	0.092 (46)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.776	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	0.433 (90)	0.011 (6)	0.087 (44)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.825	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	0.434 (90)	0.011 (6)	0.083 (42)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.875	0.01 (1)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	0.435 (90)	0.012 (6)	0.080 (40)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.925	0.02 (2)	0.02 (0)	0.02 (1)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	0.435 (90)	0.012 (6)	0.076 (38)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	5.00	0.975	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

TOTAL	(in)	0.98	17.88	18.86	16.25	0.62	0.39	1.01	0.98
	(ft)	0.08	1.49	1.57	1.35	0.05	0.03	0.08	0.08
	%Ultimate			100.0	86.1			5.4	5.2
REDUCD	(in)	0.83	15.20	16.03	13.81	0.53	0.34	0.86	0.83
	(ft)	0.07	1.27	1.34	1.15	0.04	0.03	0.07	0.07
	%Ultimate			85.0	73.2			4.6	4.4

SETTLEMENT ANALYSIS - STRESS DISTRIBUTION BY WESTERGAARD THEORY, MAGNITUDE AND RATE OF CONSOLIDATION BY TERZAGHI THEORY

EE 19292 — marsh to el 3 — beach to el 6 average — dike to el 6

Reach 2 - Thin Barrier Beach at surface

Load Region Parameter	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Bearing Area Center, Xc (ft) =	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Center, Yc (ft) =	2000.00	1000.00	2510.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00	2000.00
Bearing Area Width in X-direction, B (ft) =	10000.00	10000.00	10000.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bearing Area Length in Y-direction, L (ft) =	1000.00	1000.00	20.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Net Applied Pressure (psf) =	234.0	560.0	536.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth of Application, Da (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depth of Foundation, Df (ft) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contact Pressure Multiplier (N/D) =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Time of Application (yrs) =	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

water at le 0.5

1.50	4.00	100.00	399.53
	3.00	37.00	111.17
			510.70

		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Sub 1	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	1010.0	2010.0	10.0	510.5	510.5	510.5	510.5	510.5	510.5	510.5
Sub 2	dX	5000.0	5000.0	5000.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	dY	10.0	1010.0	-10.0	509.5	509.5	509.5	509.5	509.5	509.5	509.5
Sub 3	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	1010.0	2010.0	10.0	510.5	510.5	510.5	510.5	510.5	510.5	510.5
Sub 4	dX	-5000.0	-5000.0	-5000.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	dY	10.0	1010.0	-10.0	509.5	509.5	509.5	509.5	509.5	509.5	509.5

Strain Factor = 0.50

Abscissa for Analysis, Xa (ft) =	2000.00
Ordinate for Analysis, Ya (ft) =	2510.00
Poisson's Ratio, u (N/D) =	0.00
Recompression Factor (N/D) =	0.15
Total Settlement Multiplier (N/D) =	0.85
Stress Bulb Criterion (%) =	10.00%
Current Time (yrs) =	0.08
Depth of Wick Drains (ft) =	0.00
Wick Drain Triangular Grid Spacing (ft) =	4.00
Equivalent Drain Diameter, dw (in) =	2.060
Equivalent Mandrel Diameter, dm (in) =	3.570
Diameter of Smear Zone, ds (in) =	9.850
Drain Capacity Ratio (sqft) =	4300.0

		Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
TOTAL	(in)	1.01	19.25	20.26	18.06	0.62	0.63	1.25	1.21
	(ft)	0.08	1.60	1.69	1.50	0.05	0.05	0.10	0.10
	%Ultimate			100.0	89.1			6.2	6.0
REDUCD	(in)	0.86	16.36	17.22	15.35	0.53	0.54	1.06	1.03
	(ft)	0.07	1.36	1.44	1.28	0.04	0.04	0.09	0.09
	%Ultimate			85.0	75.8			5.2	5.1

Group	L (ft)		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
			0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
I	100.28	Tv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Uv	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
II	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
III	0.00	Tv	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Uv	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Str No.	Depth (ft)	g' (pcf)	CR (N/D)	RR (N/D)	cv (sft/yr)	ch (sft/yr)	Total H (ft)	Eff Vert Stress at Mid-Stratum: Past Maximum (psf)	Zero Burden (psf)	Ultimate Change (psf)	Ultimate Value (psf)	Induced Change (psf)	Induced Value (psf)
1	0.0 2.0 4.0	57.0	0.000	0.000	99999.0	99999.0	4.0	1000	0 114 228	499 437.3%	613	499 437.3%	613
2	6.0 8.0	25.0	0.331	0.050	7.3	11.0	4.0	500	278 328	429 154.3%	707	253 91.1%	531
3	11.0 14.0	25.0	0.331	0.050	7.3	11.0	6.0	403	403 478	360 89.3%	763	0 0.0%	403
4	17.0 20.0	25.0	0.331	0.050	7.3	11.0	6.0	553	553 628	302 54.6%	855	0 0.0%	553
5	22.5 25.0	53.0	0.100	0.015	8030.0	12045.0	5.0	13520	761 893	267 35.1%	1027	14 1.9%	775
6	27.0 29.0	53.0	0.100	0.015	8030.0	12045.0	4.0	13520	999 1105	246 24.6%	1245	14 1.4%	1013
7	32.0 35.0	43.0	0.262	0.039	15.0	22.5	6.0	1234	1234 1363	228 18.5%	1462	21 1.7%	1255
8	37.5 40.0	43.0	0.262	0.039	15.0	22.5	5.0	1471	1471 1578	213 14.5%	1684	8 0.5%	1479
9	42.5 45.0	43.0	0.262	0.039	15.0	22.5	5.0	1686	1686 1793	203 12.0%	1888	0 0.0%	1686
10	47.5 50.0	43.0	0.262	0.039	15.0	22.5	5.0	1901	1901 2008	194 10.2%	2095	0 0.0%	1901
11	51.0 52.0	50.0	0.200	0.030	7.0	10.5	2.0	2058	2058 2108	189 9.2%	2247	0 0.0%	2058
12	53.5 55.0	50.0	0.200	0.030	7.0	10.5	3.0	2183	2183 2258	186 8.5%	2369	5 0.2%	2188
13	57.5 60.0	50.0	0.200	0.030	7.0	10.5	5.0	2383	2383 2508	182 7.6%	2565	8 0.3%	2391
14	62.5 65.0	50.0	0.200	0.030	7.0	10.5	5.0	2633	2633 2758	177 6.7%	2810	0 0.0%	2633
15	67.5 70.0	50.0	0.200	0.030	7.0	10.5	5.0	2883	2883 3008	173 6.0%	3056	0 0.0%	2883
16	72.5 75.0	50.0	0.200	0.030	7.0	10.5	5.0	3133	3133 3258	169 5.4%	3302	5 0.1%	3138
17	77.5 80.0	50.0	0.200	0.030	7.0	10.5	5.0	3383	3383 3508	166 4.9%	3549	3 0.1%	3386
18	82.5 85.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3633 3758	163 4.5%	3796	0 0.0%	3633
19	87.5 90.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	3883 4008	160 4.1%	4043	0 0.0%	3883
20	92.5 95.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4133 4258	158 3.8%	4291	5 0.1%	4138
21	97.5 100.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4383 4508	156 3.6%	4539	0 0.0%	4383
22	102.5 105.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4633 4758	154 3.3%	4787	0 0.0%	4633
23	107.5 110.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	4883 5008	153 3.1%	5036	2 0.0%	4885
24	112.5 115.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5133 5258	151 2.9%	5284	3 0.1%	5136
25	117.5 120.0	50.0	0.200	0.030	7.0	10.5	5.0	16000	5383 5508	150 2.8%	5533	0 0.0%	5383

Str No.	Ultimate Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)	Induced Settlement: Recomp Sett (in.)	Virgin Sett (in.)	Total Sett (in.)	Bulb Sett (in.)
1	0.00	0.00	(20.26) 0.00 (20.26)	(18.06) 0.00 (18.06)	0.00	0.00	(1.25) 0.00 (1.25)	(1.21) 0.00 (1.21)
2	0.61	2.39	3.00 (17.26)	3.00 (15.06)	0.61	0.42	1.03 (0.23)	1.03 (0.19)
3	0.00	6.60	6.60 (10.66)	6.60 (8.46)	0.00	0.00	0.00 (0.23)	0.00 (0.19)
4	0.00	4.51	4.51 (6.15)	4.51 (3.94)	0.00	0.00	0.00 (0.23)	0.00 (0.19)
5	0.12	0.00	0.12 (6.03)	0.12 (3.83)	0.01	0.00	0.01 (0.22)	0.01 (0.18)
6	0.07	0.00	0.07 (5.96)	0.07 (3.76)	0.00	0.00	0.00 (0.21)	0.00 (0.17)
7	0.00	1.39	1.39 (4.57)	1.39 (2.37)	0.00	0.14	0.14 (0.08)	0.14 (0.04)
8	0.00	0.93	0.93 (3.64)	0.93 (1.44)	0.00	0.04	0.04 (0.04)	0.04 (0.00)
9	0.00	0.78	0.78 (2.87)	0.78 (0.67)	0.00	0.00	0.00 (0.04)	0.00 (0.00)
10	0.00	0.67	0.67 (2.20)	0.67 (0.00)	0.00	0.00	0.00 (0.04)	0.00 (0.00)
11	0.00	0.18	0.18 (2.02)	0.00 (0.00)	0.00	0.00	0.00 (0.04)	0.00 (0.00)
12	0.00	0.26	0.26 (1.76)	0.00 (0.00)	0.00	0.01	0.01 (0.03)	0.00 (0.00)
13	0.00	0.38	0.38 (1.38)	0.00 (0.00)	0.00	0.02	0.02 (0.01)	0.00 (0.00)
14	0.00	0.34	0.34 (1.04)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)
15	0.00	0.30	0.30 (0.74)	0.00 (0.00)	0.00	0.00	0.00 (0.01)	0.00 (0.00)
16	0.00	0.27	0.27 (0.47)	0.00 (0.00)	0.00	0.01	0.01 (0.01)	0.00 (0.00)
17	0.00	0.25	0.25 (0.22)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
18	0.03	0.00	0.03 (0.18)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
19	0.03	0.00	0.03 (0.15)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
20	0.03	0.00	0.03 (0.12)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
21	0.03	0.00	0.03 (0.09)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
22	0.03	0.00	0.03 (0.07)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
23	0.02	0.00	0.02 (0.04)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
24	0.02	0.00	0.02 (0.02)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)
25	0.02	0.00	0.02 (0.00)	0.00 (0.00)	0.00	0.00	0.00 (0.00)	0.00 (0.00)

Influence Factors (Ultimate Induced Stresses in Parentheses)

Str No.	Region 1 Iz	Region 2 Iz	Region 3 Iz	Region 4 Iz	Region 5 Iz	Region 6 Iz	Region 7 Iz	Region 8 Iz	Region 9 Iz	Region 10 Iz
1	0.044 (10)	0.000 (0)	0.911 (488)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
2	0.126 (30)	0.001 (0)	0.745 (399)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
3	0.208 (49)	0.001 (1)	0.579 (310)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
4	0.275 (64)	0.002 (1)	0.442 (237)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
5	0.316 (74)	0.002 (1)	0.357 (191)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
6	0.340 (80)	0.003 (2)	0.307 (165)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
7	0.360 (84)	0.003 (2)	0.265 (142)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
8	0.377 (88)	0.004 (2)	0.230 (123)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
9	0.388 (91)	0.005 (3)	0.204 (110)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
10	0.397 (93)	0.005 (3)	0.184 (99)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
11	0.402 (94)	0.005 (3)	0.172 (92)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
12	0.406 (95)	0.006 (3)	0.165 (88)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
13	0.410 (96)	0.006 (3)	0.154 (82)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
14	0.415 (97)	0.007 (4)	0.142 (76)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
15	0.419 (98)	0.007 (4)	0.131 (70)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
16	0.422 (99)	0.008 (4)	0.123 (66)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
17	0.425 (99)	0.008 (5)	0.115 (62)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
18	0.427 (100)	0.009 (5)	0.108 (58)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
19	0.429 (100)	0.009 (5)	0.102 (55)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
20	0.431 (101)	0.010 (6)	0.097 (52)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
21	0.432 (101)	0.010 (6)	0.092 (49)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
22	0.433 (101)	0.011 (6)	0.087 (47)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
23	0.434 (102)	0.011 (6)	0.083 (45)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
24	0.435 (102)	0.012 (7)	0.080 (43)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)
25	0.435 (102)	0.012 (7)	0.076 (41)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)	0.000 (0)

Rate Parameters / Percent Consolidation for Combined Drainage (Current Induced Stresses in Parentheses)

Str No.	Effective H* (ft)	Position (z*/L) (N/D)	Region 1 (N/D)	Region 2 (N/D)	Region 3 (N/D)	Region 4 (N/D)	Region 5 (N/D)	Region 6 (N/D)	Region 7 (N/D)	Region 8 (N/D)	Region 9 (N/D)	Region 10 (N/D)
1	0.00	0.000	1.00 (10)	1.00 (0)	1.00 (488)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)	1.00 (0)
2	3.92	0.020	0.59 (17)	0.59 (0)	0.59 (236)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)	0.59 (0)
3	5.88	0.068	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
4	5.88	0.127	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
5	0.15	0.157	0.05 (4)	0.05 (0)	0.05 (10)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)	0.05 (0)
6	0.12	0.158	0.06 (5)	0.06 (0)	0.06 (9)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)	0.06 (0)
7	4.10	0.179	0.09 (8)	0.09 (0)	0.09 (13)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)	0.09 (0)
8	3.42	0.217	0.04 (3)	0.04 (0)	0.04 (5)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
9	3.42	0.251	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
10	3.42	0.285	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
11	2.00	0.312	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
12	3.00	0.337	0.03 (3)	0.03 (0)	0.03 (2)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
13	5.00	0.377	0.04 (4)	0.04 (0)	0.04 (4)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)	0.04 (0)
14	5.00	0.427	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
15	5.00	0.476	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
16	5.00	0.526	0.03 (3)	0.03 (0)	0.03 (2)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
17	5.00	0.576	0.02 (2)	0.02 (0)	0.02 (1)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
18	5.00	0.626	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
19	5.00	0.676	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
20	5.00	0.726	0.03 (3)	0.03 (0)	0.03 (2)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)	0.03 (0)
21	5.00	0.776	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
22	5.00	0.825	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)
23	5.00	0.875	0.01 (1)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)	0.01 (0)
24	5.00	0.925	0.02 (2)	0.02 (0)	0.02 (1)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)	0.02 (0)
25	5.00	0.975	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)	0.00 (0)

TOTAL	(in)	1.01	19.25	20.26	18.06	0.62	0.63	1.25	1.21
	(ft)	0.08	1.60	1.69	1.50	0.05	0.05	0.10	0.10
	%Ultimate			100.0	89.1			6.2	6.0
REDUCD	(in)	0.86	16.36	17.22	15.35	0.53	0.54	1.06	1.03
	(ft)	0.07	1.36	1.44	1.28	0.04	0.04	0.09	0.09
	%Ultimate			85.0	75.8			5.2	5.1

CONSOLIDATION SETTLEMENT OF DIKE CONTAINMENT - CONSIDERING ADJACENT MARSH PLATFORM AND BEACH FILL (PLATFORM AT 3)
AND ESTIMATE OF SELF WEIGHT CONSOLIDATION

	INITIAL DIKE CREST ELEVATION		4	4	4	4	4	4	4	4	4	6	6	6	6	6	6	6	6	6
	CREST AFTER SELF WEIGHT CONSOL		3.7	3.625	3.55	3.7	3.625	3.55	3.7	3.625	3.55	5.55	5.47	5.4	5.55	5.47	5.4	5.55	5.47	5.4
		MUDLINE ELEVATION	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2
		WATER SURFACE ELEVATION	0.5	0.5	0.5	1	1	1	1.5	1.5	1.5	0.5	0.5	0.5	1	1	1	1.5	1.5	1.5
		ULTIMATE SETTLEMENT (FT)																		
		Magnitude of settlement in feet over time (consolidation settlement)																		
TIME (YRS)	% ULT																			
0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.5	0.23		0.21	0.24	0.27	0.18	0.22	0.25	0.16	0.18	0.22	0.31	0.35	0.37	0.29	0.32	0.35	0.26	0.30	0.32
1	0.34		0.31	0.35	0.40	0.27	0.32	0.37	0.24	0.27	0.33	0.46	0.51	0.55	0.43	0.47	0.52	0.39	0.44	0.47
3	0.58		0.53	0.60	0.68	0.45	0.55	0.64	0.41	0.46	0.56	0.78	0.87	0.94	0.74	0.79	0.88	0.66	0.75	0.80
5	0.68		0.63	0.70	0.80	0.53	0.64	0.75	0.48	0.54	0.65	0.92	1.02	1.10	0.86	0.93	1.03	0.78	0.88	0.94
10	0.8		0.74	0.82	0.94	0.62	0.75	0.88	0.56	0.64	0.77	1.08	1.20	1.30	1.02	1.10	1.22	0.91	1.03	1.10
20	0.88		0.81	0.91	1.04	0.69	0.83	0.97	0.62	0.70	0.84	1.19	1.32	1.43	1.12	1.21	1.34	1.00	1.14	1.21
ULT	1		0.92	1.03	1.18	0.78	0.94	1.10	0.70	0.80	0.96	1.35	1.50	1.62	1.27	1.37	1.52	1.14	1.29	1.38

Elevation of fill over time considering self weight consolidation

TIME (YRS)																				
0			3.7	3.63	3.55	3.70	3.63	3.55	3.70	3.63	3.55	5.55	5.47	5.40	5.55	5.47	5.40	5.55	5.47	5.40
0.5			3.488	3.39	3.28	3.52	3.41	3.30	3.54	3.44	3.33	5.24	5.13	5.03	5.26	5.15	5.05	5.29	5.17	5.08
1			3.387	3.27	3.15	3.43	3.31	3.18	3.46	3.35	3.22	5.09	4.96	4.85	5.12	5.00	4.88	5.16	5.03	4.93
3			3.166	3.03	2.87	3.25	3.08	2.91	3.29	3.16	2.99	4.77	4.60	4.46	4.81	4.68	4.52	4.89	4.72	4.60
5			3.074	2.92	2.75	3.17	2.99	2.80	3.22	3.08	2.90	4.63	4.45	4.30	4.69	4.54	4.37	4.77	4.59	4.46
10			2.964	2.80	2.61	3.08	2.87	2.67	3.14	2.99	2.78	4.47	4.27	4.10	4.53	4.37	4.18	4.64	4.44	4.30
20			2.89	2.72	2.51	3.01	2.80	2.58	3.08	2.92	2.71	4.36	4.15	3.97	4.43	4.26	4.06	4.55	4.33	4.19
ULT			2.78	2.60	2.37	2.92	2.69	2.45	3.00	2.83	2.59	4.20	3.97	3.78	4.28	4.10	3.88	4.41	4.18	4.02

CONSOLIDATION SETTLEMENT OF DIKE CONTAINMENT - CONSIDERING ADJACENT MARSH PLATFORM AND BEACH FILL (PLATFORM AT 3)
AND ESTIMATE OF SELF WEIGHT CONSOLIDATION AND GEOLOGIC SUBSIDENCE

	INITIAL DIKE CREST ELEVATION		4	4	4	4	4	4	4	4	4	6	6	6	6	6	6	6	6	6
	CREST AFTER SELF WEIGHT CONSOL		3.7	3.625	3.55	3.7	3.625	3.55	3.7	3.625	3.55	5.55	5.47	5.4	5.55	5.47	5.4	5.55	5.47	5.4
		MUDLINE ELEVATION	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2	0	-1	-2
		WATER SURFACE ELEVATION	0.5	0.5	0.5	1	1	1	1.5	1.5	1.5	0.5	0.5	0.5	1	1	1	1.5	1.5	1.5
		ULTIMATE SETTLEMENT (FT)																		
		Magnitude of settlement in feet over time (consolidation settlement)																		
TIME (YRS)	% ULT																			
0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.5	0.23		0.21	0.24	0.27	0.18	0.22	0.25	0.16	0.18	0.22	0.31	0.35	0.37	0.29	0.32	0.35	0.26	0.30	0.32
1	0.34		0.31	0.35	0.40	0.27	0.32	0.37	0.24	0.27	0.33	0.46	0.51	0.55	0.43	0.47	0.52	0.39	0.44	0.47
3	0.58		0.53	0.60	0.68	0.45	0.55	0.64	0.41	0.46	0.56	0.78	0.87	0.94	0.74	0.79	0.88	0.66	0.75	0.80
5	0.68		0.63	0.70	0.80	0.53	0.64	0.75	0.48	0.54	0.65	0.92	1.02	1.10	0.86	0.93	1.03	0.78	0.88	0.94
10	0.8		0.74	0.82	0.94	0.62	0.75	0.88	0.56	0.64	0.77	1.08	1.20	1.30	1.02	1.10	1.22	0.91	1.03	1.10
20	0.88		0.81	0.91	1.04	0.69	0.83	0.97	0.62	0.70	0.84	1.19	1.32	1.43	1.12	1.21	1.34	1.00	1.14	1.21
ULT	1		0.92	1.03	1.18	0.78	0.94	1.10	0.70	0.80	0.96	1.35	1.50	1.62	1.27	1.37	1.52	1.14	1.29	1.38

Elevation of fill over time considering self weight consolidation and geologic subsidence

TIME (YRS)	sub (ft)																			
0	0		3.7	3.63	3.55	3.70	3.63	3.55	3.70	3.63	3.55	5.55	5.47	5.40	5.55	5.47	5.40	5.55	5.47	5.40
0.5	0.0125		3.48	3.38	3.27	3.51	3.40	3.28	3.53	3.43	3.32	5.23	5.11	5.01	5.25	5.14	5.04	5.28	5.16	5.07
1	0.025		3.36	3.25	3.12	3.41	3.28	3.15	3.44	3.33	3.20	5.07	4.94	4.82	5.09	4.98	4.86	5.14	5.01	4.91
3	0.075		3.09	2.95	2.79	3.17	3.00	2.84	3.22	3.09	2.92	4.69	4.53	4.39	4.74	4.60	4.44	4.81	4.65	4.52
5	0.125		2.95	2.80	2.62	3.04	2.86	2.68	3.10	2.96	2.77	4.51	4.33	4.17	4.56	4.41	4.24	4.65	4.47	4.34
10	0.25		2.71	2.55	2.36	2.83	2.62	2.42	2.89	2.74	2.53	4.22	4.02	3.85	4.28	4.12	3.93	4.39	4.19	4.05
20	0.5		2.39	2.22	2.01	2.51	2.30	2.08	2.58	2.42	2.21	3.86	3.65	3.47	3.93	3.76	3.56	4.05	3.83	3.69
ULT																				