

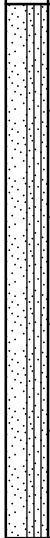


LOG OF BORING BIC-4

SHEET 1 of 1



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CLIENT: HDR
PROJECT: Bird Island Cove; Phase 2
LOCATION: Galveston, Texas
NUMBER: G120036
DATE(S) DRILLED: 2/7/2020

FIELD DATA				LABORATORY DATA								DRILLING METHOD(S): Russian Sampler		
SOIL SYMBOL	DEPTH (FT)	SAMPLE NUMBER	SAMPLES	N: BLOWS/FT P: TONS/SQ FT T: TONS/SQ FT Qc: TONS/SQ FT	MOISTURE CONTENT (%)	ATTERBERG LIMITS			DRY DENSITY POUNDS/CU.FT	COMPRESSIVE STRENGTH (TONS/SQ FT)	MINUS NO. 200 SIEVE (%)	GROUNDWATER INFORMATION: Boring was performed under 2.5 feet of water.		
						LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX				SURFACE ELEVATION: N/A		
						LL	PL	PI				DESCRIPTION OF STRATUM		
	1	AUGER S-1		Qc= 28	25						7	POORLY GRADED SAND WITH SILT , dark gray, wet, loose.		
	2													
	3													
	4	AUGER S-2		Qc= 35	28	NP	NP	NP				7	Same as above. (SP-SM)	
	5													Sampler refusal at a depth of 5 feet.
	6													
	7													
	8													
	9													
	10													
N - STANDARD PENETRATION TEST RESISTANCE Qc - STATIC CONE PENETROMETER TEST INDEX P - POCKET PENETROMETER RESISTANCE												REMARKS: Drilling operations were performed by RETL at GPS Coordinates N° 29.17745 W° 95.01931		






















LOG_OF_BORING G120036.GPJ ROCK ETL.GDT 2/26/20



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KEY TO SOIL CLASSIFICATION AND SYMBOLS

UNIFIED SOIL CLASSIFICATION SYSTEM				TERMS CHARACTERIZING SOIL STRUCTURE	
MAJOR DIVISIONS		SYMBOL	NAME		
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	GW		Well Graded Gravels or Gravel-Sand mixtures, little or no fines	SLICKENSIDED - having inclined planes of weakness that are slick and glossy in appearance FISSURED - containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical LAMINATED (VARVED) - composed of thin layers of varying color and texture, usually grading from sand or silt at the bottom to clay at the top
		GP		Poorly Graded Gravels or Gravel-Sand mixtures, little or no fines	
		GM		Silty Gravels, Gravel-Sand-Silt mixtures	
		GC		Clayey Gravels, Gravel-Sand-Clay Mixtures	
	SAND AND SANDY SOILS	SW		Well Graded Sands or Gravelly Sands, little or no fines	CRUMBLY - cohesive soils which break into small blocks or crumbs on drying CALCAREOUS - containing appreciable quantities of calcium carbonate, generally nodular WELL GRADED - having wide range in grain sizes and substantial amounts of all intermediate particle sizes POORLY GRADED - predominantly of one grain size uniformly graded) or having a range of sizes with some intermediate size missing (gap or skip graded)
		SP		Poorly Graded Sands or Gravelly Sands, little or no fines	
		SM		Silty Sands, Sand-Silt Mixtures	
		SC		Clayey Sands, Sand-Clay mixtures	
FINE GRAINED SOILS	SILTS AND CLAYS LL < 50	ML		Inorganic Silts and very fine Sands, Rock Flour, Silty or Clayey fine Sands or Clayey Silts	SYMBOLS FOR TEST DATA  — Groundwater Level (Initial Reading)  — Groundwater Level (Final Reading)  — Shelby Tube Sample  — SPT Samples  — Auger Sample  — Rock Core
		CL		Inorganic Clays of low to medium plasticity, Gravelly Clays, Sandy Clays, Silty Clays, Lean Clays	
		OL		Organic Silts and Organic Silt-Clays of low plasticity	
	SILTS AND CLAYS LL > 50	MH		Inorganic Silts, Micaceous or Diatomaceous fine Sandy or Silty soils, Elastic Silts	
		CH		Inorganic Clays of high plasticity, Fat Clays	
		OH		Organic Clays of medium to high plasticity, Organic Silts	
HIGHLY ORGANIC SOILS	PT		Peat and other Highly Organic soils		

TERMS DESCRIBING CONSISTENCY OF SOIL

COARSE GRAINED SOILS		FINE GRAINED SOILS		
DESCRIPTIVE TERM	NO. BLOWS/FT. STANDARD PEN. TEST	DESCRIPTIVE TERM	NO. BLOWS/FT. STANDARD PEN. TEST	UNCONFINED COMPRESSION TONS PER SQ. FT.
Very Loose	0 - 4	Very Soft	< 2	< 0.25
Loose	4 - 10	Soft	2 - 4	0.25 - 0.50
Medium	10 - 30	Firm	4 - 8	0.50 - 1.00
Dense	30 - 50	Stiff	8 - 15	1.00 - 2.00
Very Dense	over 50	Very Stiff	15 - 30	2.00 - 4.00
		Hard	over 30	over 4.00

Field Classification for "Consistency" is determined with a 0.25" diameter penetrometer