

January 7, 2013

Ms. Joni Clarke City of South Padre Island 4601 Padre Boulevard South Padre Island, TX 78597

RE: SOUTH PADRE ISLAND CONVENTION CENTRE WETLAND DETERMINATION

Dear Ms Clarke:

HDR Engineering has been retained by the City of South Padre Island to conduct a wetland determination on the grounds of the South Padre Island Convention Centre on South Padre Island, Texas (see Sheet 1 of 2). The City has plans for expansion of the Convention Centre to include an addition to the exhibit hall, ballroom, lobby and administration addition. The City would like to construct the new additions in an area that does not impact jurisdictional wetlands.

On December 12, 2012 HDR Engineering conducted a wetland determination of the proposed project site according to the process described in the "Routine Onsite Determination Method in the US Army Corp of Engineers (USACE) Wetlands Delineation Manual (1987) and the "Interim Regional Supplement to the Corps of engineers Wetland Delineation Manual: Atlantic and Gulf Plain Region."

The determination revealed that there are approximately 14.5 acres of wetlands surrounding the convention centre and parking areas. The wetland boundaries are presented on sheet 2 of 2. Developable areas that would not impact existing wetlands are restricted to existing parking areas, the memorial garden area, and a narrow band of uplands along the north and west side of the Convention Centre.

Wetlands on the site consist of freshwater emergent and estuarine emergent wetlands that are likely to be considered jurisdictional and regulated by USACE. A request for verification of our wetland determination has been prepared and will be submitted to the USACE upon approval from the City of South Padre Island. A draft of this submittal is attached for your review.

We recommend that we submit the request to the USACE for verification if South Padre Island's goal is to develop adjacent to the observed wetlands. A permit application and associated mitigation plan would be required if any of the proposed works encroach on the observed wetlands. Mitigation typically requires the replacement of impacted wetlands at a 3 to 1 ratio.

Thank you for the opportunity to assist the City of South Padre Island. If you have any question please fell free to call me at (361) 696-3322 or on my cell at (361) 779-0399.

Sincerely,

HDR ENGINEERING, INC.

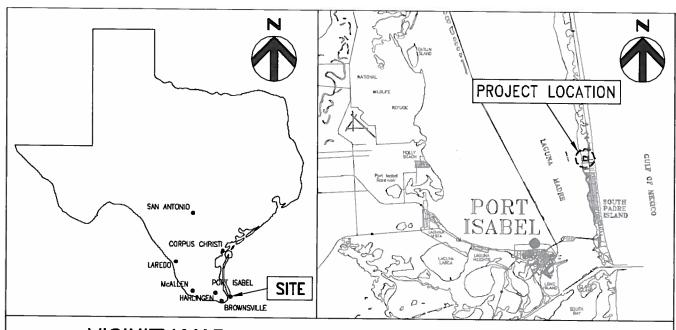
Gary McCoig Project Manager

GMM/jcm

Enclosures:

- 1) Wetland Boundary Maps (Sheets 1-2)
- 2) Draft Wetland Determination (to be sent to USACE)

Enclosure 1 Wetland Boundary Maps (Sheets 1-2)



VICINITY MAP

LOCATION MAP



	FOR COE USE ONLY
1	Permit Application No.:
	Applicant Name:
	Sheetof



ACTIVITY: WETLAND DETERMINATION

APPLICANT: CITY OF SOUTH PADRE ISLAND

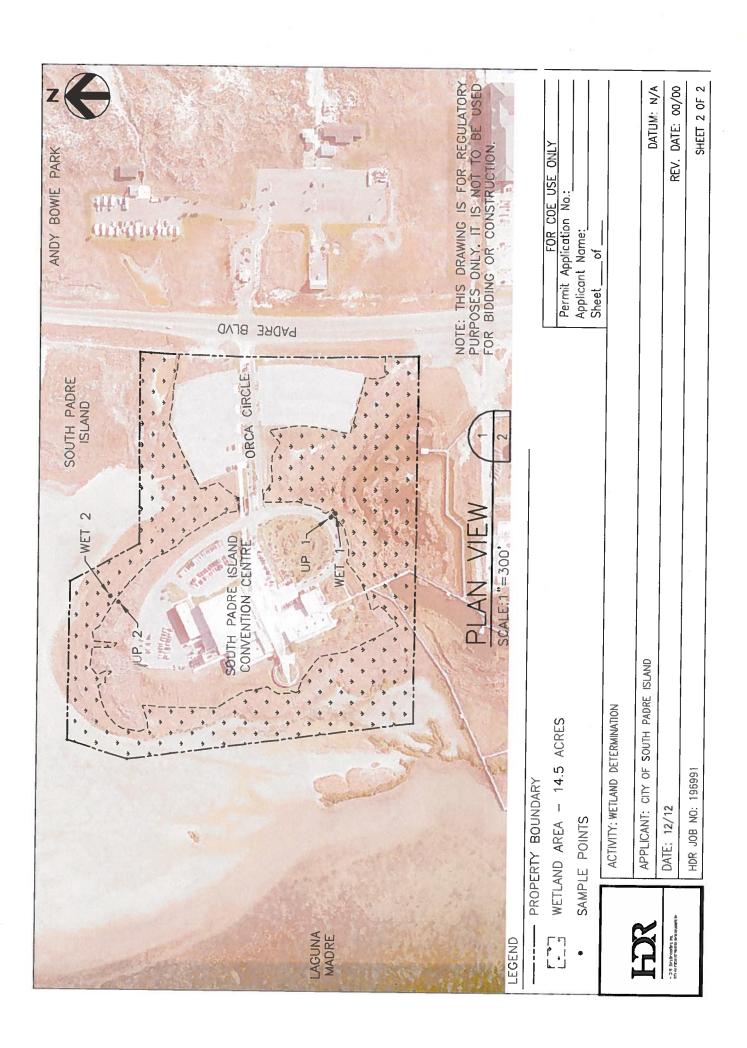
DATUM:

DATE: 12/12

REV. DATE:

HDR JOB NO: 196991

SHEET 1 OF 2



Enclosure 2 Draft Wetland Determination (to be sent to USACE)

January 4, 2013 196991

Mr. Lloyd Mullins U.S. Army Corps of Engineers 5151 Flynn Parkway, Suite 306 Corpus Christi, Texas 78411

RE: REQUEST FOR VERIFICATION OF A WETLAND DETERMINATION AT THE CITY OF SOUTH PADRE ISLAND CONVENTION CENTRE, SOUTH PADRE ISLAND, CAMERON COUNTY, TX.

Mr. Mullins,

1.0 INTRODUCTION

HDR Engineering has been retained by the City of South Padre Island to assist in pursuing a verified Jurisdictional Determination (JD) from the U.S. Army Corps of Engineers (USACE) for the South Padre Island Convention Centre on South Padre Island, Texas (see Sheet 1 of 2). The City has plans for expansion of the convention centre and would like to construct the new addition in an area that does not impact jurisdictional wetlands. The wetland boundaries are presented on Sheet 2 of 2.

2.0 WETLAND DETERMINATION

2.1 Methods

HDR Engineering conducted a wetland determination of the proposed project site on December 12, 2012 according to the process described in the "Routine Onsite Determination Method" in the USACE Wetlands Delineation Manual (1987) and the "Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Plain Region." During the preliminary analysis, aerial photography was used to determine the likelihood of occurrence, and probable location, of wetlands on the site.

At each sample point, dominant plant species were identified and recorded. To determine if hydrophytic vegetation was dominant, the wetland indicator status for each of the dominant species was identified using the "National List of Plant Species That Occur in Wetlands: Texas" (Department of Interior, 2012). The presence or absence of wetland soils and hydrology were determined for each sample site. Munsell Soil Color Charts were used to identify the hue, value, and chroma of soil samples. Field indicators of hydrology were determined at each sample site. The new sample points were marked with stakes and logged using differential global positioning systems (GPS) equipment with sub-meter accuracy.

2.2 Findings

The determination revealed that the property surrounding the convention centre and parking areas contain approximately 14.5 acres of wetlands (see Sheet 2 of 2). The wetlands comprise freshwater emergent and estuarine intertidal wetlands. The freshwater wetlands on the south side of the property receive effluent discharge from a City waste water treatment plant. The freshwater wetlands flow into the Laguna Madre, transitioning from freshwater to estuarine wetlands on the southern and western portions of the property. Dominant vegetation in the freshwater wetlands includes *Spartina patens*, *Typha latifolia*, *Scirpus spp.*, and *Stenotaphrum secundatum* (see Photos 1, 3, & 5). Dominant vegetation in the estuarine wetlands consists of *Spartina spartinae*, *Spartina patens*, *Andropogon glomeratus*, and *Scirpus spp.* (see Photos 2, 4, & 6).

Rainfall runoff drains through a storm water feature (currently utilized as a memorial garden) (see Photos 7 & 8) and then to the wetlands on the south side of the property. The area is landscaped with St. Augustine grass and various exotic and native plants. Attempts to excavate pits in the area revealed a fabric landscapers cloth under the soil surface.

3.0 REQUESTED ACTION

On behalf of the City of South Padre Island we request your verification of the wetlands boundaries on the project site. Thank you very much for your time. Please contact me directly with any questions (gary.mccoig@hdrinc.com or 361/696-3322).

Sincerely,

HDR ENGINEERING, INC

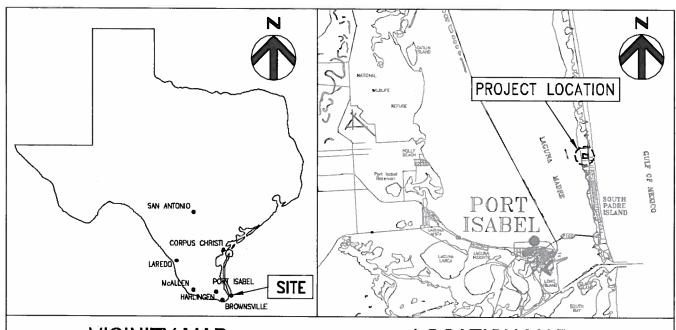
Gary McCoig Project Manager

Enclosures: Attachment 1 – Wetland Boundary Maps Sheets 1-2

Attachment 2 – Coordinate Data
Attachment 3 – Wetland Data Sheets
Attachment 4 – Study Area Photographs

Attachment 1

Wetland Boundary Maps



VICINITY MAP

LOCATION MAP



	FOR	COE	USE	ONLY	
Permit A	plication	on No).:		
Applicant	Name:				
Sheet	_of				



ACTIVITY: WETLAND DETERMINATION

APPLICANT: CITY OF SOUTH PADRE ISLAND

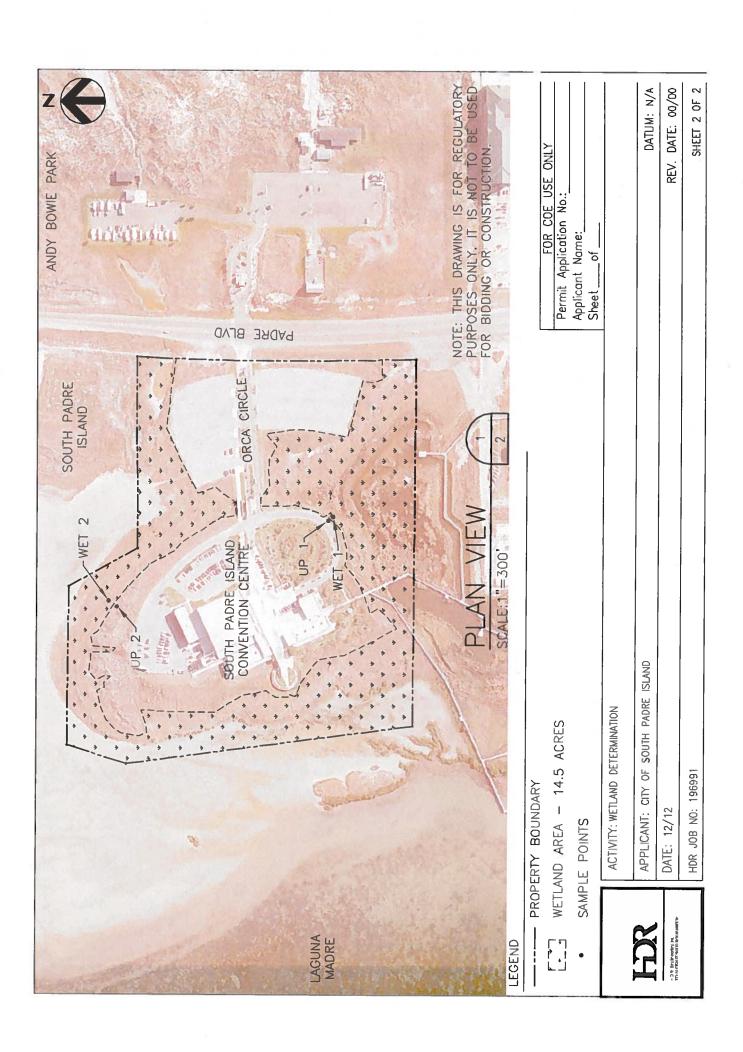
DATUM:

DATE: 12/12

REV. DATE:

HDR JOB NO: 196991

SHEET 1 OF 2



Attachment 2

Coordinate Data

South Padre Island Convention Centre Wetland Determination December 2012, Coordinate Data State Plane Texas Central (Feet)-NAD 83

POINT NUMBER	NORTHING	EASTING	TAG	PDOP	NUMBER OF SATELITES
1	16578378.09	1419729.55	b1	<4	8
2	16578377.14	1419681.68	b2	<4	8
3	16578402.06	1419671.80	b3	<4	8
4	16578441.64	1419676.14	b4	<4	8
5	16578491.81	1419489.71	b5	<4	8
6	16578551.37	1419501.02	b6	<4	8
7	16578591.49	1419507.95	b7	<4	8
8	16578632.73	1419514.55	b8	<4	8
9	16578669.66	1419513.63	b9	<4	8
10	16578711.70	1419508.18	b10	<4	8
11	16578762.49	1419499.30	b12	<4	8
12	16578750.63	1419415.23	b14	<4	8
13	16578724.47	1419458.49	b13b	<4	8
14	16578752.10	1419374.71	b15	<4	8
15	16578748.94	1419329.54	b16	<4	8
16	16578778.52	1419286.61	b17	<4	8
17	16578775.83	1419259.80	b18	<4	8
18	16578739.12	1419260.08	b19	<4	8
19	16578699.38	1419260.54	b20	<4	8
20	16578664.81	1419263.69	b21	<4	8
21	16578643.80	1419254.96	b22	<4	8
22	16578619.88	1419250.18	b23	<4	8
23	16578588.09	1419238.84	b25	<4	8
24	16578582.65	1419231.01	b26	<4	8
25	16578570.87	1419224.75	b27	<4	8
26	16578559.77	1419231.70	b28	<4	8
27	16578541.64	1419212.68	b29	<4	8
28	16578524.47	1419197.54	b30	<4	8
29	16578507.83	1419175.67	b31	<4	8
30	16578498.53	1419145.32	b32	<4	8
31	16578491.03	1419115.93	b33	<4	8
32	16578491.98	1419086.38	b34	<4	8
33	16578499.13	1419066.70	b35	<4	8
34	16578469.30	1419031.10	b36	<4	8
35	16578450.89	1419002.98	b37	<4	8
36	16578439.77	1418974.84	b38	<4	8
37	16578433.72	1418964.08	b39	<4	8
38	16578419.95	1418924.69	b40	<4	8
39	16578414.25	1418903.27	b40	<4	8
40	16578386.62	1418921.97	b41	<4	8
41	16578361.69	1418899.00	b42	<4	8
42	16578346.20	1418879.70	b43	<4	8
43	16578325.56	1418855.51	b44	<4	8

South Padre Island Convention Centre Wetland Determination December 2012, Coordinate Data State Plane Texas Central (Feet)-NAD 83

44	16578661.09	1418629.19	b69	<4	8
45	16578679.11	1418635.85	b69b	<4	8
46	16578651.33	1418651.27	b68b	<4	8
47	16578641.33	1418674.39	b67b	<4	8
48	16578599.90	1418733.82	b67b	<4	8
49	16578585.49	1418750.04	b66b	<4	8
50	16578508.70	1418764.54	b65b	<4	8
51	16578496.44	1418767.30	b64b	<4	8
52	16578680.30	1418626.79	b70	<4	8
53	16578723.39	1418625.24	b71	<4	8
54	16578756.85	1418647.19	b72	<4	8
55	16578790.06	1418639.06	b73	<4	8
56	16578834.01	1418633.04	b75	<4	8
57	16578880.79	1418605.14	b76	<4	8
58	16578925.33	1418576.89	b77	<4	8
59	16578927.92	1418574.42	b77	<4	8
60	16579001.56	1418573.97	b78	<4	8
61	16579072.80	1418575.01	b79	<4	8
62	16579115.07	1418576.66	b79	<4	8
63	16579173.59	1418581.84	b80	<4	8
64	16579157.51	1418532.30	b81	<4	8
65	16579154.26	1418506.83	b82	<4	8
66	16579181.14	1418495.64	b83	<4	8
67	16579238.41	1418503.91	b84	<4	8
68	16579265.60	1418519.88	b85	<4	8
69	16579289.02	1418548.45	b85	<4	8
70	16579307.21	1418587.19	b86	<4	8
71	16579322.16	1418645.75	b87	<4	8
72	16579295.86	1418656.93	b88	<4	8
73	16579298.38	1418672.74	b89	<4	8
74	16579278.07	1418692.80	n90	<4	8
75	16579300.58	1418693.73	b91	<4	8
76	16579323.75	1418682.43	b92	<4	8
77	16579347.49	1418709.69	b93	<4	8
78	16579342.75	1418771.62	b95	<4	8
79	16579272.80	1418772.71	b97	<4	8
80	16579260.16	1418787.22	b98	<4	8
81	16579294.92	1418789.81	b99	<4	8
82	16579337.13	1418793.63	b100	<4	8
83	16579341.60	1418825.53	b101	<4	8
84	16579318.61	1418843.30	b102	<4	8
85	16579270.39	1418932.60	b103	<4	8
86	16579215.79	1418995.84	b104	<4	8
87	16579147.30	1419066.12	b105	<4	8

South Padre Island Convention Centre Wetland Determination December 2012, Coordinate Data State Plane Texas Central (Feet)-NAD 83

88	16579066.19	1419109.44	106	<4	8
89	16579036.62	1419143.94	b107	<4	8
90	16578910.61	1419221.54	b108	<4	8
91	16578857.79	1419230.59	b109	<4	8
92	16578861.52	1419273.45	b110	<4	8
93	16578897.93	1419296.94	b111	<4	8
94	16578928.97	1419322.71	b112	<4	8
95	16578987.96	1419302.48	b113	<4	8
96	16579017.55	1419358.85	b114	<4	. 8
97	16579050.01	1419421.35	b115	<4	8
98	16579072.68	1419474.27	b116	<4	8
99	16579093.16	1419516.22	b117	<4	8
100	16579088.70	1419554.75	b118	<4	8
101	16579082.54	1419602.45	b119	<4	8
102	16579078.95	1419648.22	b120 survey marker	<4	8
103	16579069.63	1419693.93	b121	<4	8
104	16579064.74	1419733.60	b122	<4	8
105	16579055.48	1419792.90	b123	<4	8
106	16578538.49	1419225.41	wet 1	<4	8
107	16578548.72	1419216.99	up1	<4	8
108	16578436.90	1418796.59	b130b	<4	8
109	16578400.96	1418814.42	b131b	<4	8
110	16579283.58	1418944.26	wet 2	<4	8
111	16579267.11	1418932.53	up2	<4	8

Attachment 3 Wetland Data Sheets

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: South Padre Island Convention Centre City/County: Cameron Sampling Date: 12/12/12	
Applicant/Owner: City of South Padre Island State: Texas Sampling Point: Up 1	
Investigator(s): Gary McCoig, Jeff Pollack Section, Township, Range:	
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 5-6	
Subregion (LRR or MLRA): LLR T Lat: 26 8 24.40" N Long: 97 10 27.06" W Datum: NAD	
Soil Map Unit Name: Mustang Fine Sands NWI classification: none	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significantly disturbed?	
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, e	tc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes No No No No Remarks:	
HYDROLOGY	
Wetland Hydrology Indicators: Secondary Indicators (minimum of two require	<u></u>
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)	i
Surface Water (A1) Water-Stained Leaves (B9) Sparsely Vegetated Concave Surface (B8)	,
High Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10)	
Saturation (A3) Marl Deposits (B15) (LRR U) Moss Trim Lines (B16)	
Water Marks (B1) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2)	
Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Crayfish Burrows (C8)	
Drift Deposits (B3) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9)	
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3)	
Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5)	
Field Observations:	—
Surface Water Present? Yes No _✓ Depth (inches): none	
Water Table Present? Yes No ✓ Depth (inches): none-16	
Saturation Present? Yes No Depth (inches): none-16 Wetland Hydrology Present? Yes No	_
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	-
Remarks:	
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Sampling	Daint	11	'n	1
Samniina	LOIDI.	u	v	- 1

	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot sizes:) 1		Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant Species Across All Strata:1 (B)
4.5.			Percent of Dominant Species That Are OBL, FACW, or FAC:100 (A/B)
6			Prevalence Index worksheet:
7.			
		= Total Cover	Total % Cover of: Multiply by:
Sapling Stratum ()			OBL species x 1 =
1			FACW species x 2 =
2			FAC species x 3 =
3			FACU species x 4 =
4			UPL species x 5 =
5			Column Totals: (A) (B)
6			Prevalence Index = B/A =
7		<u> </u>	Hydrophytic Vegetation Indicators:
		= Total Cover	✓ Dominance Test is >50%
Shrub Stratum ()			— Prevalence Index is ≤3.0¹
1			
2	— —		Problematic Hydrophytic Vegetation¹ (Explain)
3			1
4			¹ Indicators of hydric soil and wetland hydrology must be present.
5			be present.
6			
7			Definitions of Vegetation Strata:
*		= Total Cover	280
Herb Stratum (30 ft.)			Tree – Woody plants, excluding woody vines,
Stenotaphrum secundatum	100	yes FAC	approximately 20 ft (6 m) or more in height and
2			3 in. (7.6 cm) or larger in diameter at breast height (DBH).
3			Height (BBH).
4.			Sapling – Woody plants, excluding woody vines,
5			approximately 20 ft (6 m) or more in height and less
6			than 3 in. (7.6 cm) DBH.
7			
8			Shrub – Woody plants, excluding woody vines,
9			approximately 3 to 20 ft (1 to 6 m) in height.
10			Herb – All herbaceous (non-woody) plants, including
11.			herbaceous vines, regardless of size. Includes
12.			woody plants, except woody vines, less than
		= Total Cover	approximately 3 ft (1 m) in height.
Woody Vine Stratum ()		,	l
1		102	Woody vine – All woody vines, regardless of height.
2			TV
3			
4			1
5			Hydrophytic Vegetation
		= Total Cover	Present? Yes No
Remarks: (If observed, list morphological adaptations	s below)		
Area is landscaped with planted grass.			

Sampling Point: 1	Jp	0	1	
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Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth Matrix Redox Features	·						
(inches) Color (moist) % Color (moist) % Type ¹ Loc ²	Texture Remarks						
0-16 10 Y\R 4/3 100	Sandy clay						
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Gr	ains. ² Location: PL=Pore Lining, M=Matrix.						
Hydric Soll Indicators:	Indicators for Problematic Hydric Soils ³ :						
Histosol (A1) Polyvalue Below Surface (S8) (LRR S, T, U							
Histic Epipedon (A2) Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S)						
	· · · · ·						
<u> </u>	Reduced Vertic (F18) (outside MLRA 150A,B)						
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Matrix (F3)	Piedmont Floodplain Soils (F19) (LRR P, S, T)						
<u> </u>	Anomalous Bright Loamy Soils (F20)						
Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6)	(MLRA 153B)						
5 cm Mucky Mineral (A7) (LRR P, T, U) Depleted Dark Surface (F7)	Red Parent Material (TF2)						
Muck Presence (A8) (LRR U) Redox Depressions (F8)	Very Shallow Dark Surface (TF12) (LRR T, U)						
1 cm Muck (A9) (LRR P, T) Marl (F10) (LRR U)	Other (Explain in Remarks)						
Depleted Below Dark Surface (A11) Depleted Ochric (F11) (MLRA 151)	_						
Thick Dark Surface (A12) Iron-Manganese Masses (F12) (LRR O, P,	 Indicators of hydrophytic vegetation and 						
Coast Prairie Redox (A16) (MLRA 150A) Umbric Surface (F13) (LRR P, T, U)	wetland hydrology must be present.						
Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151)							
Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B)	<u> </u>						
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 14							
Stripped Matrix (S6) Anomalous Bright Loamy Soils (F20) (MLR	A 149A, 153C, 153D)						
Dark Surface (S7) (LRR P, S, T, U)							
Restrictive Layer (if observed):							
Type:	<u>.</u>						
Depth (inches):	Hydric Soil Present? Yes No						
Remarks:							
	1997						
Top soils has been used as fill in this area. The area has a sprinkler system	and is maintained as a lawn.						
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WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: South Padre Island Convention Centre	City/County: Cameron	Sampling	Date: 12/12/12				
Applicant/Owner: City of South Padre Island		State: Texas Sampling					
Investigator(s): Gary McCoig, Jeff Pollack	Section, Township, Range:						
Landform (hillslope, terrace, etc.); Coastal Dune	Local relief (concave, conve	c none): Concave	Slone (%): 5-6				
Subregion (LRR or MLRA): LLR T Lat: 26°8	31.54" N Long:	97 ² 10' 30.10" W	Datum: NAD 83				
Soil Map Unit Name: Mustang Fine Sands		NWI classification: NO					
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes <u>√</u> No	(If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Norm	al Circumstances" present?	res √ No				
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	explain any answers in Rema	nrks.)				
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							
Hydrophytic Vegetation Present? Yes No ✓ Hydric Soil Present? Yes No ✓ Wetland Hydrology Present? Yes No ✓ Remarks:	is the Sampled Area within a Wetland?	Yes No _	✓				
			-				
HYDROLOGY							
Wetland Hydrology Indicators:		Secondary Indicators (minin	num of two required)				
Primary Indicators (minimum of one is required; check all that apply)		Surface Soil Cracks (B6	3)				
Surface Water (A1) Water-Stained	, ,	Sparsely Vegetated Co					
High Water Table (A2) Aquatic Fauna		Drainage Patterns (B10)				
Saturation (A3) Marl Deposits	•	Moss Trim Lines (B16)					
Water Marks (B1) Hydrogen Sulfi		Dry-Season Water Table (C2)					
	spheres on Living Roots (C3)						
Drift Deposits (B3) Presence of Re Alga! Mat or Crust (B4) Recent Iron Re	duction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)					
Iron Deposits (B5) Recent from Recent fro		Geomorphic Position (D Shallow Aquitard (D3)	12)				
Inundation Visible on Aerial Imagery (B7) Other (Explain		FAC-Neutral Test (D5)					
Field Observations:							
Surface Water Present? Yes No _✓_ Depth (inches	: none						
Water Table Present? Yes No ✓ Depth (inches							
Saturation Present? Yes No Depth (inches	· · · · · · · · · · · · · · · · · · ·	Hydrology Present? Yes _	No_ <u>√</u>				
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photo							
Describe Recorded Data (stream gauge, monitoring well, aerial prior	s, previous inspections), if a	allable:					
Remarks:							
Ti .							
*							

VEGETATION -	l Ise	scientific	names	of	niants
VEGETATION -	USE	20161111110	Hallies	U	บเลแเจ

	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot sizes:)		Species? Status	' i Number di Dominani Species
1			That Are OBL, FACW, or FAC: 2 (A)
2.			Total Number of Dominant
3			Species Across All Strata: 1 (B)
4.			Percent of Dominant Species
5			That Are OBL, FACW, or FAC: 50 (A/B)
6			Prevalence Index worksheet:
7			Total % Cover of: Multiply by:
Oralina Otastana (= Total Cover	OBL species40 x 1 = _40
Sapling Stratum ()			· · · · · · · · · · · · · · · · · · ·
1			FACW species x 2 =
2.			FAC species x 3 =
3			FACU species 60 x4 = 240
4			UPL species x 5 =
5			Column Totals: <u>100</u> (A) <u>280</u> (B)
6.			Prevalence Index = B/A =2.8
7			Hydrophytic Vegetation Indicators:
Charle Charles and		= Total Cover	Dominance Test is >50%
Shrub Stratum ()			Prevalence Index is ≤3.0¹
1			· I —
2			Problematic Hydrophytic Vegetation ¹ (Explain)
3			-
4.			¹ Indicators of hydric soil and wetland hydrology must be present.
5			- Land Control
6			-
7			Definitions of Vegetation Strata:
		= Total Cover	_
Herb Stratum (30 ft.)		54011	Tree – Woody plants, excluding woody vines,
Schizachyrium scoparium		ves FACU	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast
2. Spartina spartinae	<u>40</u>	<u>yes</u> OBL	height (DBH).
3.			-
4.			Sapling – Woody plants, excluding woody vines,
5			approximately 20 ft (6 m) or more in height and less
6			than 3 in. (7.6 cm) DBH.
7			Objects and a second second
8			Shrub – Woody plants, excluding woody vines,
9			approximately 3 to 20 ft (1 to 6 m) in height.
10			Herb – All herbaceous (non-woody) plants, including
11			herbaceous vines, regardless of size. Includes
12			woody plants, except woody vines, less than
		= Total Cover	approximately 3 ft (1 m) in height.
Woody Vine Stratum ()			Manda di a
1			Woody vine – All woody vines, regardless of height.
2.			.
3			
4			Hydrophytic
5			Vegetation
		= Total Cover	Present? Yes No
Remarks: (If observed, list morphological adaptations	helow)		
Tremente. (ii observed, list morphological adaptations	JOIUW).		
			12

Sampling Point: Up 2

Sampling Point:	Uр	2
-----------------	----	---

Profile Desc	ription: (Describe	to the depth	needed to docu	nent the i	ndicator	or confirm	the absence of	Indicators.)
Depth	Matrix			x Features				
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	10 Y\R 7/4	<u> 100 </u>		. ——			Sand	
l ——								
ļ								
l ———								
l 								
¹Type: C=C	oncentration, D=De	pletion, RM=R	educed Matrix, C	S=Covered	or Coate	d Sand Gr	rains. ² Locat	ion: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators for	Problematic Hydrlc Soils ³ :
Histosol	(A1)		Polyvalue Be				J) 1 cm Muc	k (A9) (LRR O)
	oipedon (A2)		Thin Dark Su				2 cm Muc	k (A10) (LRR S)
1	stic (A3)		Loamy Muck			(O)		Vertic (F18) (outside MLRA 150A,B)
. —	n Sulfide (A4)		Loamy Gleye	•	- 2)			Floodplain Soils (F19) (LRR P, S, T)
_	d Layers (A5)		Depleted Ma					s Bright Loamy Soils (F20)
-	Bodies (A6) (LRR I		Redox Dark	•	•		(MLRA	•
	ıcky Mineral (A7) (L		Depleted Da Redox Depre					nt Material (TF2)
I —	esence (A8) (LRR I ıck (A9) (LRR P, T)	J)	Mari (F10) (L	•)			low Dark Surface (TF12) (LRR T, U)
	d Below Dark Surface	ce (Δ11)	Depleted Oc	•	MI PA 1	51)	Other (Ex	plain in Remarks)
	ark Surface (A12)	JC (A11)	Iron-Mangan		-	-	T) 31-41-44-	
_	rairie Redox (A16) (MLRA 150A)	_				, indicator	rs of hydrophytic vegetation and
	fucky Mineral (S1)		Delta Ochric			, -,	wettan	d hydrology must be present.
	Bleyed Matrix (S4)		Reduced Ve		•	0A, 150B)		
-	Redox (S5)		Piedmont Flo					
Stripped	Matrix (S6)						A 149A, 153C, 15	53D)
Dark Su	rface (S7) (LRR P,	S, T, U)						
Restrictive	Layer (if observed)	:			,			
Type:			_					
Depth (in	ches):						Hydric Soil Pro	esent? Yes No
Remarks:							1	
Ton poils	han hann wand	aa fill in thia	ores The err		ماداما			inad as a laws
TOP SOIIS	nas been used	as im in tris	area. The are	ea nas a	sprinkle	er system	i and is mainta	ined as a lawn.
ļ								
								_
								ļ
								6
!								

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: South Padre Island Convention Centre City/Count	y: Cameron Sampling Date: 12/12/12
Applicant/Owner: City of South Padre Island	State: Texas Sampling Point: Wet 1
0 110: 150 11:	ownship, Range:
	f (concave, convex, none): Concave Slope (%): 0-1
Soil Map Unit Name: Mustang Fine Sands	NWI classification: Palustrine
Are climatic / hydrologic conditions on the site typical for this time of year? Yes _	No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling	ng point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes _ ✓ No ts.t	
Hydric Soil Present? Yes \(\sqrt{No} \)	he Sampled Area
Wetland Hydrology Present? Yes ✓ No	hin a Wetland? Yes No
Remarks:	
Area is inundated. Hydric soils are assumed.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
✓ Surface Water (A1) Water-Stained Leaves (B9	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) — Aquatic Fauna (B13)	Drainage Patterns (B10)
Saturation (A3) Marl Deposits (B15) (LRR	
Water Marks (B1) Hydrogen Sulfide Odor (C	
Sediment Deposits (B2) Oxidized Rhizospheres on	
Drift Deposits (B3) Presence of Reduced Iron	
Algal Mat or Crust (B4) Recent Iron Reduction in T	
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks Field Observations:	FAC-Neutral Test (D5)
Surface Water Present? Yes ✓ No Depth (inches): 4-6	
Water Table Present? Yes ✓ No Depth (inches): +4	—
Saturation Present? Yes ✓ No Depth (inches): 0-16	Wetland Hydrology Present? Yes <u>√</u> No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous	inspections), if available:
Remarks:	p.

EGETATION – Use scientific names of plants	5.			Sampling Point: Wet 1
		Dominant		Dominance Test worksheet:
Tree Stratum (Plot sizes:) 1)		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
3.				Total Number of Dominant Species Across All Strata: 1 (B)
5.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B
S				Prevalence Index worksheet:
				Total % Cover of: Multiply by:
Sapling Stratum ()		= Total Co	over	OBL species x1 =
				FACW species x 2 =
•				FAC species x 3 =
				FACU species x 4 =
•				UPL species x 5 =
•				Column Totals: (A) (B)
				*
*				Prevalence Index = B/A =
		= Total Co	over	Hydrophytic Vegetation Indicators:
Shrub Stratum ()				✓ Dominance Test is >50%
				Prevalence Index is ≤3.0¹
				Problematic Hydrophytic Vegetation ¹ (Explain)
				1
·				¹ Indicators of hydric soil and wetland hydrology must be present.
				30 p. 600.11.
S				
7				Definitions of Vegetation Strata:
Herb Stratum (_30 ft)		= Total Co	over	Troe Weeds plants evaluating seconds since
I. Spartina patens	90	Ves	FACW	Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and
Borrichia frutescens			OBL	3 in. (7.6 cm) or larger in diameter at breast
. Stenotaphrum secundatum			FAC	height (DBH).
Scipus spp.	-		OBL	Canting to the control of
				Sapling – Woody plants, excluding woody vines,
				approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
				Shrub – Woody plants, excluding woody vines,
				approximately 3 to 20 ft (1 to 6 m) in height.
0				Horb All back and the state of
1				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes
2				woody plants, except woody vines, less than
	100	= Total Co	ver	approximately 3 ft (1 m) in height.
Voody Vine Stratum ()				NATIONAL CONTRACTOR OF THE CON
•				Woody vine – All woody vines, regardless of height
•				
•				5
•				Hydrophytic
·				Vegetation
		= Total Co	ver	Present? Yes No No
Remarks: (If observed, list morphological adaptations bel	ow).			1,
	·			

Sampling	Point:	Wet 1

•	1	
	റ	OI

Profile Desc	ription: (Describe t	o the depth n	eeded to docur	nent the i	ndicator	or confirm	the absence of i	indicators.)
Depth	Matrix			x Features			_	_
(inches)	Color (moist)		Color (moist)	· <u> </u>	Type'	<u>Loc²</u>	Texture	Remarks
								
1								
	oncentration, D=Depl	etion, RM=Red	duced Matrix, CS	S=Covered	or Coate	d Sand Gra		on: PL=Pore Lining, M=Matrix.
Hydric Soil								Problematic Hydric Soils ³ :
Histosol	• •	_	Polyvalue Be					k (A9) (LRR O)
	oipedon (A2)	_	Thin Dark Sι Loamy Muck					k (A10) (LRR S)
	stic (A3) en Sulfide (A4)	-	Loamy Muck Loamy Gleye			. 0)		Vertic (F18) (outside MLRA 150A,B)
	d Layers (A5)	_	Depleted Ma		r <i>2)</i>			Floodplain Soils (F19) (LRR P, S, T) s Bright Loamy Soils (F20)
l —	Bodies (A6) (LRR P,	T. U)	Redox Dark		6)		(MLRA	• • • • • • • • • • • • • • • • • • • •
	ucky Mineral (A7) (LR		Depleted Da				•	nt Material (TF2)
	esence (A8) (LRR U		Redox Depre				_	low Dark Surface (TF12) (LRR T, U)
I .	ıck (A9) (LRR P, T)		Marl (F10) (L	.RR U)	•			plain in Remarks)
Deplete	d Below Dark Surface	(A11) _	Depleted Oc	hric (F11)	(MLRA 1	51)		,
· —	ark Surface (A12)	_	Iron-Mangan	ese Mass	es (F12) (I	LRR O, P,	T) ³ Indicator	s of hydrophytic vegetation and
1	rairie Redox (A16) (N					, U)		d hydrology must be present.
1	lucky Mineral (S1) (L		Delta Ochric					
1	Sleyed Matrix (S4)	_	Reduced Ve					
1	Redox (S5)	_	Piedmont Flo			-	•	
, —	Matrix (S6)	T	Anomalous E	Bright Loar	ny Solis (i	-20) (MLRA	A 149A, 153C, 15	(3D)
	rface (S7) (LRR P, S Layer (if observed):	, 1, 0)					<u> </u>	
Type:	cayor (ii observea).							=
1	-h-a).		-			13	Unidate Cell Due	
Depth (in	cnes):		-				Hydric Soil Pre	esent? Yes No
Remarks:								
Hydric so	ils assumed beca	ause of 4 to	6 inches of s	tanding	water			
İ								
								l
								İ
								-
						. 		

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: South Padre Island Convention Centre City/C	ounty: Cameron	Sampling Date: 12/12/12			
Applicant/Owner: City of South Padre Island	State: Texas				
Investigator(s): Gary McCoig, Jeff Pollack Section	on, Township, Range:				
	relief (concave, convex, none): Conv				
	0" N Long: 97 10' 29.97				
Soil Map Unit Name: _Mustang Fine Sands					
	_	ification: Esturine/Marine			
Are climatic / hydrologic conditions on the site typical for this time of year? Y Are Vegetation, Soil, or Hydrology significantly distur	·	n Remarks.) s" present? Yes <u> √ </u> No <u> </u>			
Are Vegetation, Soil, or Hydrology naturally problems		· · · · · · · · · · · · · · · · · · ·			
SUMMARY OF FINDINGS – Attach site map showing sam	•	•			
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes ✓ No No No No	is the Sampled Area within a Wetland? Yes	✓ No			
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Inc	licators (minimum of two required)			
Primary Indicators (minimum of one is required; check all that apply)		oil Cracks (B6)			
Surface Water (A1) Water-Stained Leave		Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2) Aquatic Fauna (B13)		Drainage Patterns (B10)			
Saturation (A3) Marl Deposits (B15) ((LRR U) Moss Trin	Moss Trim Lines (B16)			
Water Marks (B1) Hydrogen Sulfide Ode	or (C1) Dry-Seaso	Dry-Season Water Table (C2)			
Sediment Deposits (B2) Oxidized Rhizosphere	es on Living Roots (C3) Crayfish E				
Drift Deposits (B3) Presence of Reduced	I Iron (C4) Saturation	Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4) Recent Iron Reductio	n in Tilled Soils (C6) Geomorph	Geomorphic Position (D2)			
Iron Deposits (B5) Thin Muck Surface (C	C7) Shallow A	Shallow Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7) Other (Explain in Ren	narks) FAC-Neut	ral Test (D5)			
Field Observations:					
Surface Water Present? Yes No Depth (inches): No					
Water Table Present? Yes <u>√</u> No Depth (inches): <u>14-</u>					
Saturation Present? Yes ✓ No Depth (inches): 14-	-16 Wetland Hydrology Pres	ent? Yes No			
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre					
gange, memoring trein, action, pro-	riode mopestioney, il diamane.				
Remarks:					
		**			
· .					
		A1			
2					
I .					

VEGETATION-	- Use	scientific	names	of pl	ants
* LULIATION	030	301011LIII	Hallics	OI DI	anto.

GETATION – Use scientific names of plan				
ree Stratum (Plot sizes:)	Absolute <u>% Cover</u>	Dominant Species?		Dominance Test worksheet:
				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
				Total Number of Dominant Species Across All Strata: 2 (B)
				(5)
				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/I
				Prevalence Index worksheet:
outlines Objections (= Total Co	ver	Total % Cover of: Multiply by:
ppling Stratum ()				OBL species x 1 = FACW species x 2 =
				FAC species x 3 =
				FACU species x 4 =
				UPL species x 5 =
				Column Totals: (A) (E
				Provolence Index = B/A =
				Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
hrub Stratum()		= Total Co	over	✓ Dominance Test is >50%
inub Stratum ()				— Prevalence Index is ≤3.0¹
				Problematic Hydrophytic Vegetation ¹ (Explain)
				¹ Indicators of hydric soil and wetland hydrology must
				be present.
				Definitions of Vegetation Strata:
erb Stratum (30 ft.)		= Total Co	over	Tree – Woody plants, excluding woody vines,
Spartina spartinae	40	ves	OBL	approximately 20 ft (6 m) or more in height and
Spartina patens	30	ves	FACW	3 in. (7.6 cm) or larger in diameter at breast
Scirpus spp.	15	_no	OBL	height (DBH).
Andropogan glomeratus	<u>15</u>	<u>_no</u>	<u>FACW</u>	Sapling – Woody plants, excluding woody vines,
-				approximately 20 ft (6 m) or more in height and less
				than 3 in. (7.6 cm) DBH.
				Shrub – Woody plants, excluding woody vines,
				approximately 3 to 20 ft (1 to 6 m) in height.
0				
i				Herb – All herbaceous (non-woody) plants, includin
2.		-		herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than
	100	= Total Co	ver	approximately 3 ft (1 m) in height.
Voody Vine Stratum ()				Woody vino
				Woody vine – All woody vines, regardless of heigh
				
				Hydrophytic
			ver	Vegetation Present? Yes No
omada (Mahamad Bakesanta ta ta ta ta ta				
emarks: (If observed, list morphological adaptations	pelow).			

Sampling Point: wet 2

	ription: (Describe	to the depth	needed to docum	nent the i	ndicator	or confirm	the absence of in	dicators.)	
Depth (inches)	Matrix Color (moist)			x Feature:		1.5-2	Tav	D	
(inches) 0-6	Color (moist)	 _	Color (moist)	%	Type ¹	_Loc²	Texture	Remarks	
	10 Y\R 3/3			· ——			Sand		
6-16	10 Y/R 5/3	100	-	·			Sand		-
				<u> </u>				-11.	

15			\				2, 2,	DI D	
Hydric Soil	oncentration, D=Dep	letion, RM=R	reduced Mainx, CS	S=Covered	or Coate	a Sana Gr		n: PL=Pore Lining, M Problematic Hydric \$	
Histosol			Polyvalue Be	low Surfa	ce (S8) (I	PPSTI		(A9) (LRR O)	Jones .
	oipedon (A2)		Thin Dark Su					(A10) (LRR S)	
ı —	stic (A3)		Loamy Muck					ertic (F18) (outside N	ILRA 150A,B)
	n Sulfide (A4)		Loamy Gleye		F2)			loodplain Soils (F19)	
	d Layers (A5)	T 115	Depleted Ma		-0)			Bright Loamy Soils (I	- 20)
	Bodies (A6) (LRR P ucky Mineral (A7) (LF		Redox Dark S	•	•		(MLRA 15 Red Parent	Material (TF2)	
	esence (A8) (LRR U		Redox Depre					w Dark Surface (TF1)	2) (LRR T. U)
	ick (A9) (LRR P, T)	•	Marl (F10) (L		•			ain in Remarks)	-, (, - ,
	d Below Dark Surfac	e (A11)	Depleted Ocl		-			•	
I —	ark Surface (A12)	#1 DA 450A)	Iron-Mangan				, indicators	of hydrophytic vegeta	
	rairie Redox (A16) (i fucky Mineral (S1) (l		Umbric Surfa Delta Ochric			, u)	wetland l	hydrology must be pr	esent.
	Sleyed Matrix (S4)	0, 0,	Reduced Ver			OA, 150B)			
	Redox (S5)		Piedmont Flo						
✓ Stripped	• •		Anomalous E	Bright Loar	ny Soils (l	F20) (MLR	A 149A, 153C, 153	D)	
	rface (S7) (LRR P, S						1		
Type:	Layer (if observed):								
Depth (in	ches).						Hydric Soil Pres	ent? Yes ✓	No
Remarks:				·			Tiyana con Fies	103	
	layer of organics	on ton							
IIIIIII	layer or organics	s on top.							
(1)									
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11									1
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Attachment 4

Study Area Photographs

South Padre Island Convention Centre Photo Log



Photo 1: Upland and wetland sample point 1. View to southeast



Photo 2: Upland and wetland sample point 2. View to north

South Padre Island Convention Centre Photo Log



Photo 3 Wetland area on south side of property

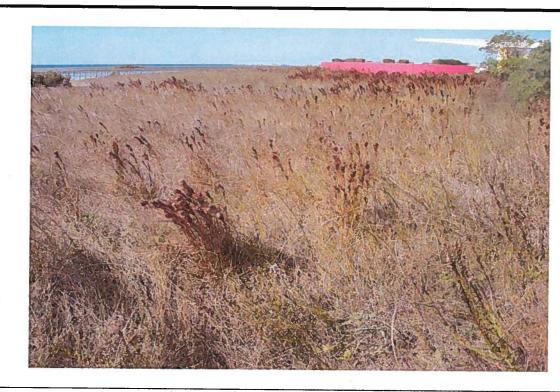


Photo 4: Wetland area on west side of property



Photo 5: Wetland area on south side of property

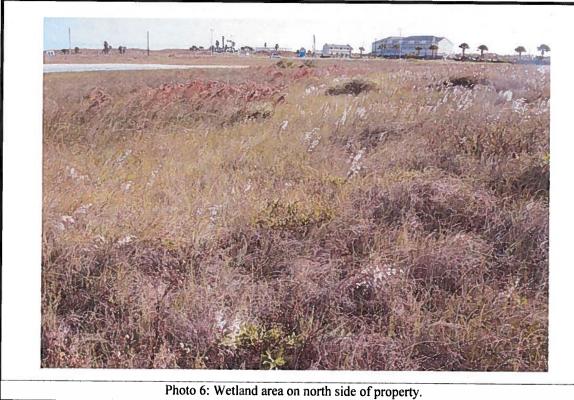




Photo 7: Memorial garden area. Note drainage pipe at bottom of wall

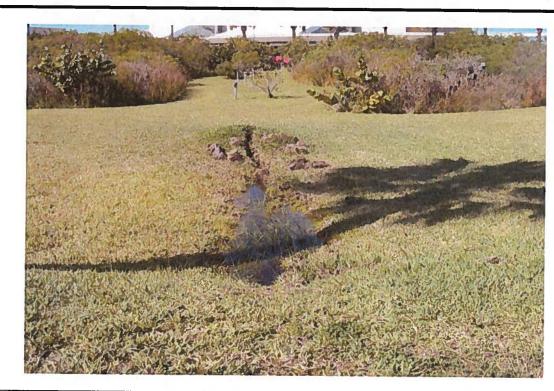


Photo 8: Memorial garden drainage culvert. View to northwest.

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