
ATTACHMENT 2
HSC PIPELINE RELOCATION
EVALUATION

Houston Ship Channel Expansion Channel Improvement Project
(HSC ECIP) Pipeline Evaluation

Study Segment Description	HSC Station (approx)	Study Index	Pipeline Descriptor	Size (in)	Minimum Depth ¹	Prop Channel Depth (MLLW)	Minimum Cover (feet)	Sufficient Cover?	Relocation Cost
1a. Bollivar Roads to Redfish	135+000	A.1	Cameron Highway Oil Pipeline	24	-80	-46	34	Yes	
1a. Bollivar Roads to Redfish	122+000	B.1	Williams Pipeline (Black Marlin)	16	-75.26	-46	29.26	Yes	
1a. Bollivar Roads to Redfish	117+000	C.1	Denbury (Kinder Morgan)	18	-82	-46	36	Yes	
1b. Redfish to Bayport	90+000	D.1	Florida Gas	24	-78	-46	32	Yes	
1b. Redfish to Bayport	71+500	E.1	Layton Products	10.75	-74.42	-46	28.42	Yes	
1c. Bayport to Barbours Cut	21+000	F.1	Davis Petroleum (abandoned in place)	10	-66	-46	20	No	\$4,392,500
Total:									\$ 4,392,500.00

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2. Bayport Channel	N/A ⁶	N/A	Davis Petroleum (abandoned in place)	10	-5	N/A	N/A	N/A	
Total:									\$ -

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3. Barbours Cut Channel	N/A ⁷	N/A	HSC 24" NGL Pipeline	24	-100.66	-46.5	54.16	Yes	
Total:									\$ -

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4. Boggy Bayou to Greens	687+75.06	1.1	Enterprise Houston Ship Channel, L.P.	16	-130	-46	84	Yes	
4. Boggy Bayou to Greens	687+75.06	1.1	Enterprise Houston Ship Channel, L.P.	12	-130	-46	84	Yes	
4. Boggy Bayou to Greens	687+75.06	1.1	Enterprise Houston Ship Channel, L.P.	Fiber	-130	-46	84	Yes	
4. Boggy Bayou to Greens	687+75	1.2.11.2.2	HFOTCO LLC	24	-125	-46	79	Yes	
4. Boggy Bayou to Greens	690+01.85	1.3.1	Shell Oil Company	16	-105	-46	59	Yes	
4. Boggy Bayou to Greens	687+75	1.4.11.4.2	Enterprise Houston Ship Channel, L.P.	30	-195	-46	149	Yes	
4. Boggy Bayou to Greens	705+81	2.1	Kinder Morgan Texas Pipeline LP	2-12	-50	-46	4	No	\$2,384,500
4. Boggy Bayou to Greens	705+81	2.2	Howell	6	-60	-46	14	No	\$1,380,500
4. Boggy Bayou to Greens	705+81	2.2	Natural Gas Pipeline Company	6	-60	-46	14	No	
4. Boggy Bayou to Greens	705+81	2.3	Olin Corporation	3-10	-50	-46	4	No	\$2,196,250
4. Boggy Bayou to Greens	705+81	2.3	Olin Corporation	10	-50	-46	4	No	\$2,196,250
4. Boggy Bayou to Greens	705+81	2.3	Olin Corporation	10	-50	-46	4	No	\$2,196,250
4. Boggy Bayou to Greens	705+81	2.4.1 2.4.2	HSC Pipeline Partnership, LLC	12	-82	-46	36	Yes	
4. Boggy Bayou to Greens	705+81	2.5.1	Enterprise Houston Ship	24	-100.5	-46	54.5	Yes	
4. Boggy Bayou to Greens	705+81	2.6.1 2.6.2 2.6.3	HSC Pipeline Partnership, LLC	8	-80	-46	34	Yes	
4. Boggy Bayou to Greens	722+00	3.1	Air Products LLC	6	-72 ¹	-46	26	Yes	
4. Boggy Bayou to Greens	722+00	3.1	Air Products LLC	6	-72 ¹	-46	26	Yes	
4. Boggy Bayou to Greens	722+00	3.2	Kinder Morgan Crude and Condensate LLC	24	-108.9	-46	62.9	Yes	
4. Boggy Bayou to Greens	779+98	4.1	HSC Pipeline Partnership, LLC	8	-60 ²	-46	14	No	\$1,601,380

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4. Boggy Bayou to Greens	779+98	4.2	INEOS Pipeline Investment Company	16	-75	-46	29	Yes	
4. Boggy Bayou to Greens	779+35	4.3	Colonial Pipeline Company	40	-72 ¹	-46	26	Yes	
4. Boggy Bayou to Greens		4.4	HFOTCO LLC	24	-120	-46	74	Yes	
4. Boggy Bayou to Greens	779+98	4.7	Seminole Pipeline Company LLC (Colonial)	20	-55	-46	9	No	\$2,208,800
4. Boggy Bayou to Greens	777+34.63	4.5	Southtex 66 Pipeline Company Ltd	8	-90	-46	44	Yes	
4. Boggy Bayou to Greens	778+83	4.6	Explorer Pipeline Company	28	-60	-46	14	No	\$3,915,600
4. Boggy Bayou to Greens	779+98	4.7	Colonial Pipeline Company	36	-55	-46	9	No	\$5,490,625
4. Greens to Sims Deepening	940+00	5.1	Targa	6	-72	-46	26	Yes	
4. Greens to Sims Deepening	940+00	5.2	Chevron Phillips Chemical LP	8	-75	-46	29	Yes	
4. Greens to Sims Deepening	940+00	5.2	Chevron Phillips Chemical LP	8	-75	-46	29	Yes	
4. Greens to Sims Deepening	940+00	5.2	Targa Downstream LP	8	-75	-46	29	Yes	
4. Greens to Sims Deepening	940+00	5.2	Targa Downstream LP	8	-75	-46	29	Yes	
4. Greens to Sims Deepening	940+00	5.2	Targa Downstream LP	8	-75	-46	29	Yes	
4. Greens to Sims Deepening	922+70	5.3	Magellan Terminal Holdings, L.P.	36	-72.31 ³	-46	26.31	Yes	
4. Greens to Sims Deepening	922+70	5.3	Magellan Terminal Holdings, L.P.	36	-72.31 ³	-46	26.31	Yes	
4. Greens to Sims Deepening	922+70	5.3	Magellan Terminal Holdings, L.P.	14	-72.11 ³	-46	26.11	Yes	
4. Greens to Sims Deepening	922+70	5.3	Magellan Terminal Holdings, L.P.	14	-72.11 ³	-46	26.11	Yes	

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4. Greens to Sims Deepening	922+70	5.3	Magellan Terminal Holdings, L.P.	4	-72.11 ³	-46	26.11	Yes	
4. Greens to Sims Deepening	892+58.8	5.4	Praxair Inc.	12	-55	-46	9	No	\$1,807,200
4. Greens to Sims Deepening	892+58.8	5.4	Praxair Inc.	12	-55	-46	9	No	\$1,807,200
4. Greens to Sims Deepening	953+93	6.1	Kinder Morgan Liquids Terminal LLC	16	-60 ⁴	-41	19	Yes	
4. Greens to Sims Deepening	954+33.51	6.2	Explorer Pipeline Company	10	-90 ⁴	-41	49	Yes	
4. Greens to Sims Deepening	954+74.7	6.3	KM Liquids Terminals LLC	20	-68 ⁴	-41	27	Yes	
4. Greens to Sims Deepening	954+74.7	6.3	KM Liquids Terminals LLC	6	-68 ⁴	-41	27	Yes	
4. Greens to Sims Deepening	956+52.33	6.4	Phillips 66 Carrier LLC	20	-93 ⁴	-41	52	Yes	
4. Greens to Sims Deepening	957+25.5	6.5	KM Liquids Terminals LLC	16	-100 ⁴	-41	59	Yes	
4. Greens to Sims Deepening	957+25.5	6.5	KM Liquids Terminals LLC	16	-100 ⁴	-41	59	Yes	
4. Greens to Sims Deepening	958+92.8	6.6	Kinder Morgan Liquids Terminal LLC	20	-130 ⁴	-41	89	Yes	
4. Greens to Sims Deepening	958+92.8	6.6	Kinder Morgan Liquids Terminal LLC	20	-130 ⁴	-41	89	Yes	
4. Greens to Sims Deepening	958+92.8	6.7	KM Liquids Terminals LLC	16	-80 ⁴	-41	39	Yes	
4. Greens to Sims Deepening	958+92.8	6.7	Valero Refining-Texas, L.P.	16	-80 ⁴	-41	39	Yes	

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4. Greens to Sims Deepening	979+22.6	7.1	Enterprise Houston Ship Channel, L.P.	24	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	980+00	---	Precint 2 Washburn Tunnel	---	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1020+00	7.2	City of Houston	60	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1020+00	7.2	City of Houston	60	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1020+00	7.2	City of Houston	60	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1018+39	7.3	Shell Pipeline Company LP	12	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1018+39	7.3	Shell Pipeline Company LP	12	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1089+00	7.3	Magellan Pipeline Company LP	24	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1089+00	7.5	Enterprise TE Products Pipeline Company LLC	18	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1089+00	7.6	BridgeTex Pipeline Company LLC	24	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1089+00	7.7	KM Liquids Terminals LLC	20	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1089+00	7.7	KM Liquids Terminals LLC	20	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1089+00	7.7	KM Liquids Terminals LLC	3	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.1	Williams Tunnel with multiple pipelines	96	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.2.3	Enterprise Texas Pipeline LLC	12	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.2.1	KM Liquids Terminals LLC	16	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.2.2	Cowboy Pipeline Service Company	10	No Changes to the Federal Channel Proposed				

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4. Greens to Sims Deepening	1043+00	8.5	DL Propylene LLC	4	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.4	Enterprise Texas Pipeline LLC	12	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.6	Seaway Crude Pipeline Company LLC	30	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.7	Magellan Pipeline Company, LP	8	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.1	Kinder Morgan Liquid Terminals	3	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.1	Kinder Morgan Liquid Terminals	24	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.1	Kinder Morgan Liquid Terminals	24	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.1	Equistar Chemicals, LP	4	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.1	Equistar Chemicals, LP	6	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.1	Equistar Chemicals, LP	6	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.1	Equistar Chemicals, LP	6	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.1	Equistar Chemicals, LP	6	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.1	Equistar Chemicals, LP	6	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.1	Equistar Chemicals, LP	6	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.1	Equistar Chemicals, LP	6	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.1	Equistar Chemicals, LP	8	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.1	Equistar Chemicals, LP	16	No Changes to the Federal Channel Proposed				
4. Greens to Sims Deepening	1043+00	8.1	Magellan Pipeline Holdings, LP	20	No Changes to the Federal Channel Proposed				
Total:									\$ 27,184,555.00

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5. Sims to Turning Basin	1099+50	9.01	Valero Refining-Texas, L.P.		No Changes to the Federal Channel Proposed				
5. Sims to Turning Basin	1099+50	9.01	Valero Refining-Texas, L.P.		No Changes to the Federal Channel Proposed				
5. Sims to Turning Basin	1099+50	9.01	Valero Refining-Texas, L.P.		No Changes to the Federal Channel Proposed				
5. Sims to Turning Basin	1099+50	9.01	Valero Refining-Texas, L.P.		No Changes to the Federal Channel Proposed				
5. Sims to Turning Basin	1099+50	9.01	Valero Refining-Texas, L.P.		No Changes to the Federal Channel Proposed				
5. Sims to Turning Basin	1099+50	9.01	Valero Refining-Texas, L.P.		No Changes to the Federal Channel Proposed				
5. Sims to Turning Basin	1099+50	9.01	Valero Refining-Texas, L.P.		No Changes to the Federal Channel Proposed				
5. Sims to Turning Basin	1099+50	9.01	Valero Refining-Texas, L.P.		No Changes to the Federal Channel Proposed				
5. Sims to Turning Basin	1099+50	9.01	Valero Refining-Texas, L.P.		No Changes to the Federal Channel Proposed				
Total:									\$ -

¹ Minimum depth, unless otherwise indicated is in MLT per record drawing. Depth of pipeline is established at a horizontal offset of 50-feet from the new toe of slope when widening the channel (Basis of evaluation: Regional General Permit SWG-1998-02413 (Installation of Pipelines by Directional Drilling)).

² Recommend additional investigation. At this time, assumed widening of channel. Final design may be deepening only, with sufficient depth (90-feet).

³ Elevation with least cover at the edge of usable channel and potential Turning Basin extension. As of 7 Feb 2019, Turning Basin not in NED.

⁴ No proposed deepening. Minimal deepening may be required to minimize hydraulic impacts in the channel. No impact to pipelines.

⁵ No proposed deepening. Minimal deepening may be required to minimize hydraulic impacts in the channel. No impact to pipelines.

⁶ Pipeline runs parallel to BSC in defined 50-foot easement. Top of bank of BSC does not encroach easement, but is less than 50-feet horizontal of pipeline (abandoned in place)

⁷ Pipeline runs parallel to BCSC and crosses BCSC in Turning Basin. No planned work in Turning Basin.