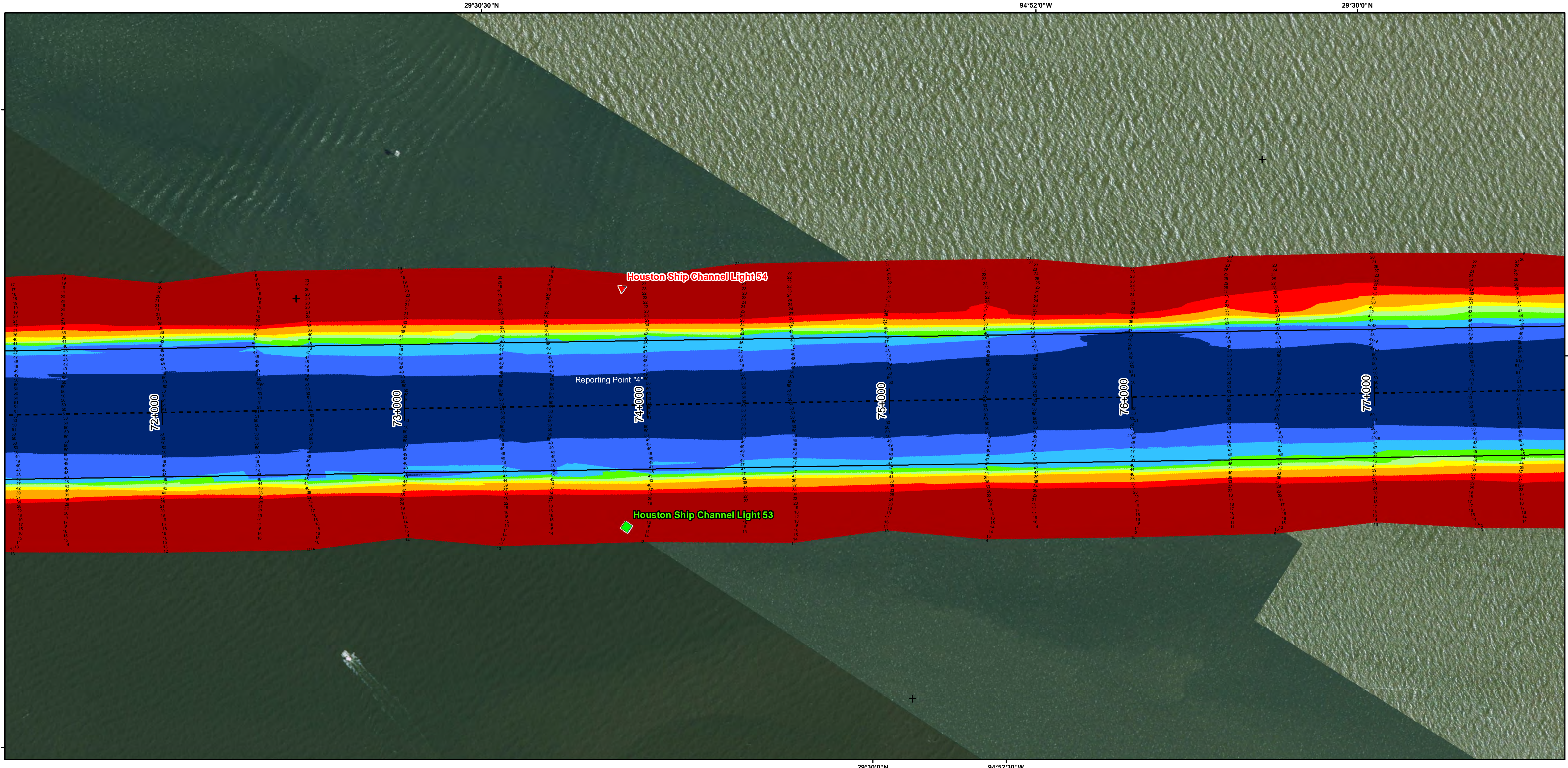
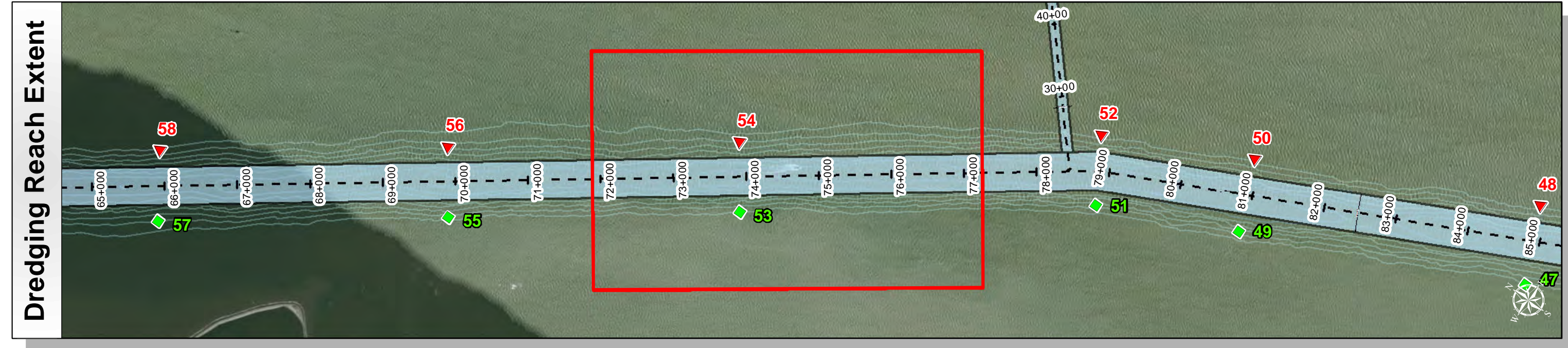
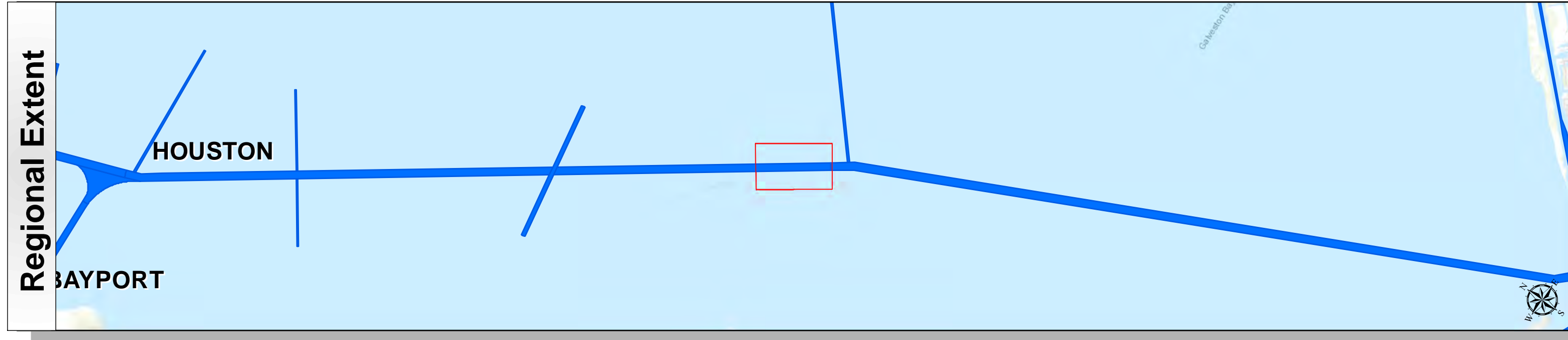


# Houston Ship Channel: Red Fish Light 1 to Beacon 76 (Turn)



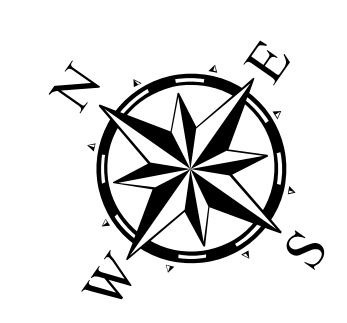
U.S. Army Corps of Engineers  
Galveston District



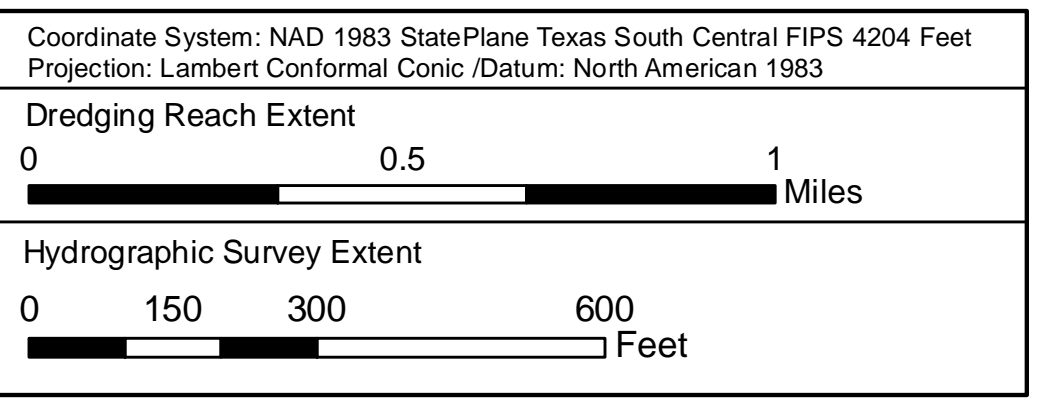
Channel Features	Aids to Navigation	MLLW
— Channel Toe	★ Lights	0 - 30
- - - Channel Center Line	▲ Red Side Aids	30 - 35
— Channel Station Lines	■ Green Side Aids	35 - 40
↔ Channel Dimensions	◆ Mooring Buoy	40 - 42
		42 - 44
		44 - 46
		46 - 48
		48 - 50
		50 >
		NOAA Bathymetry (DREDGING REACH EXTENT)
		0 - 10
		10 - 15
		15 - 20
		20 - 25
		25 - 30
		30 - 50

NOTES:  
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Survey Date(s): 01 June 2018	Authorized Depth: -46ft.
Page: 11 of 56	Side Slope Ratio: (Rise : Run)
Scale: 1:2,400	Map: Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 6/6/2018
Additional Info:	

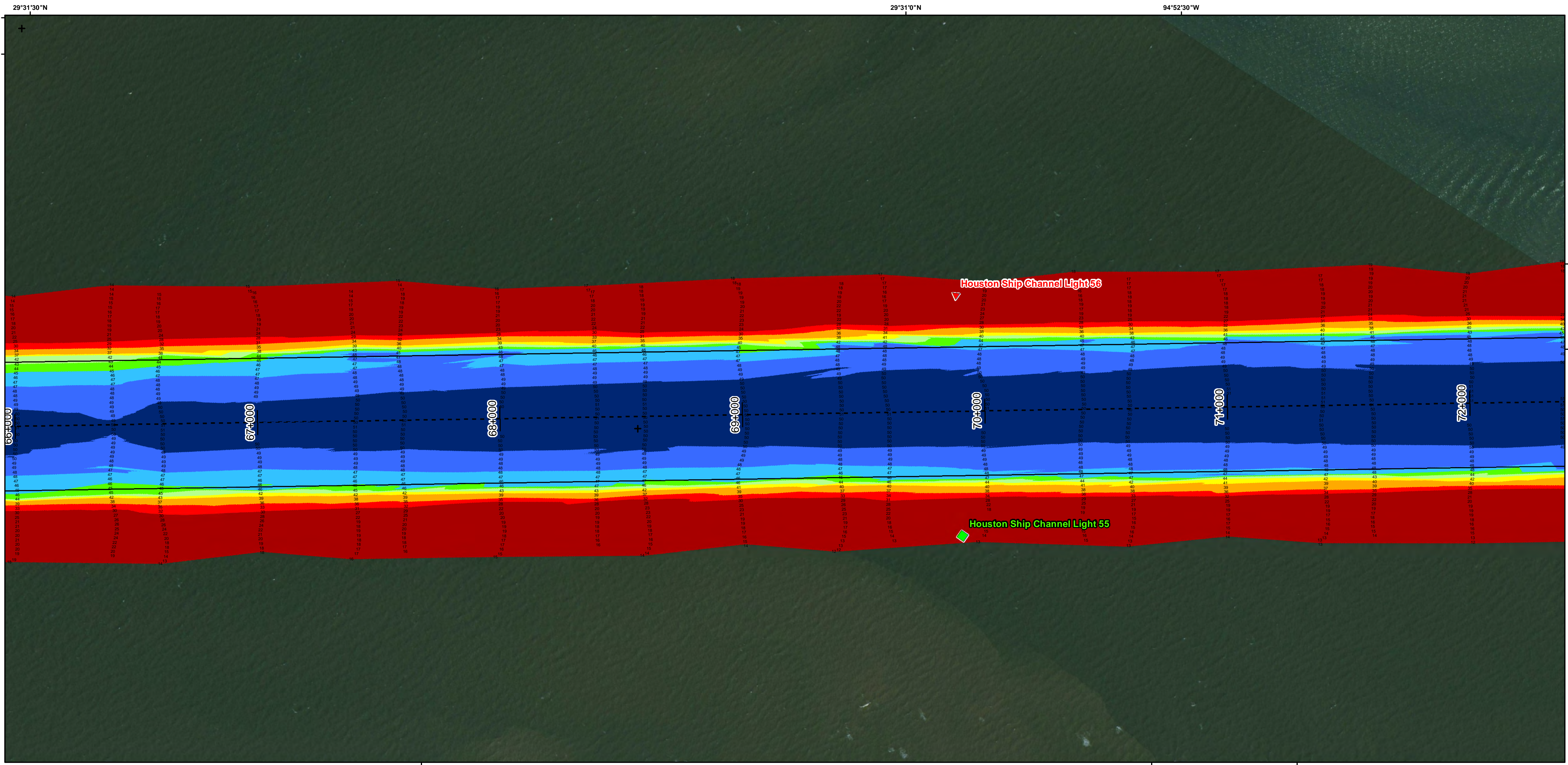
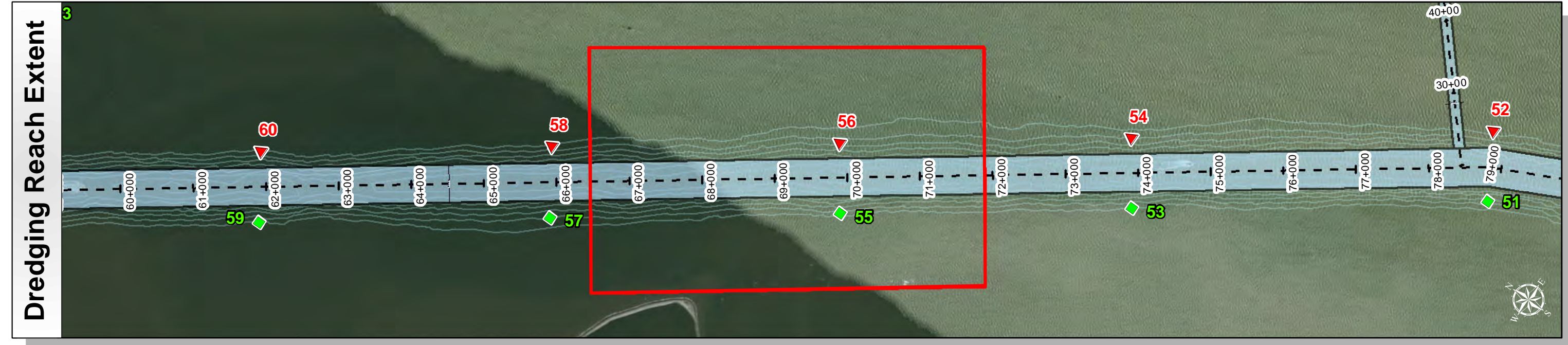
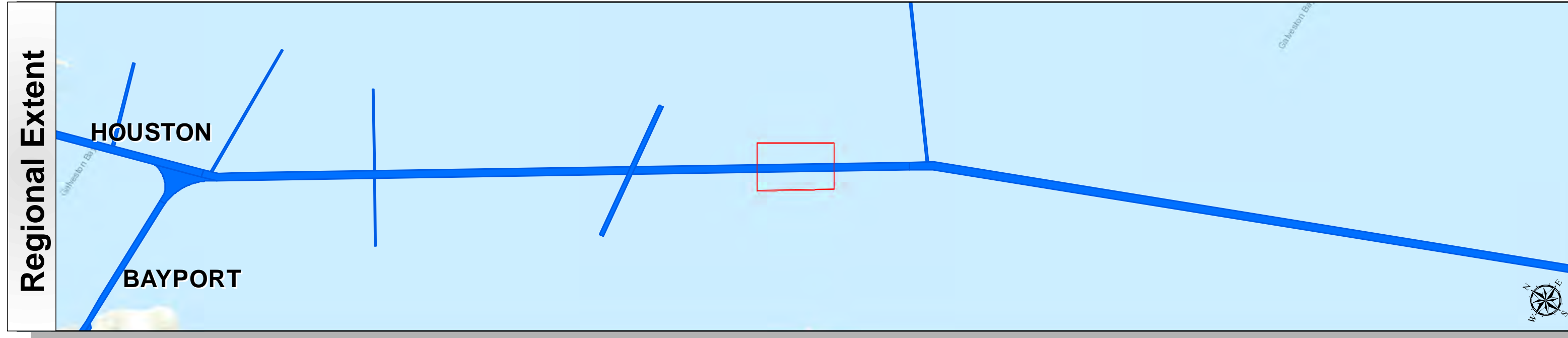
**HYDROGRAPHIC SURVEY**  
 U.S. ARMY ENGINEER DISTRICT  
 CORPS OF ENGINEERS  
 GALVESTON, TEXAS  
 Red Fish Light 1 to Beacon 76 (Turn)  
**Station : 78+844 to 28+605**  
**HOUSTON**  
 HOUSTON, TEXAS



# Houston Ship Channel: Red Fish Light 1 to Beacon 76 (Turn)



U.S. Army Corps of Engineers  
Galveston District

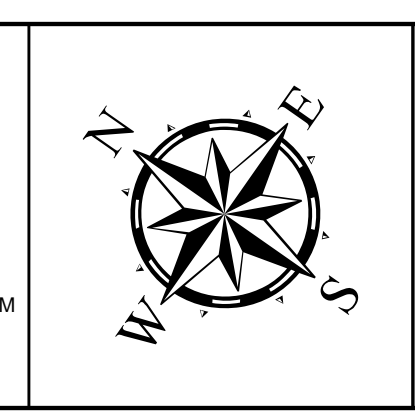


Survey Date(s): 01 June 2018	Authorized Depth: -46ft.
Page: 12 of 56	Side Slope Ratio: (Rise : Run)
Scale: 1:2,400	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 6/6/2018
Additional Info :	

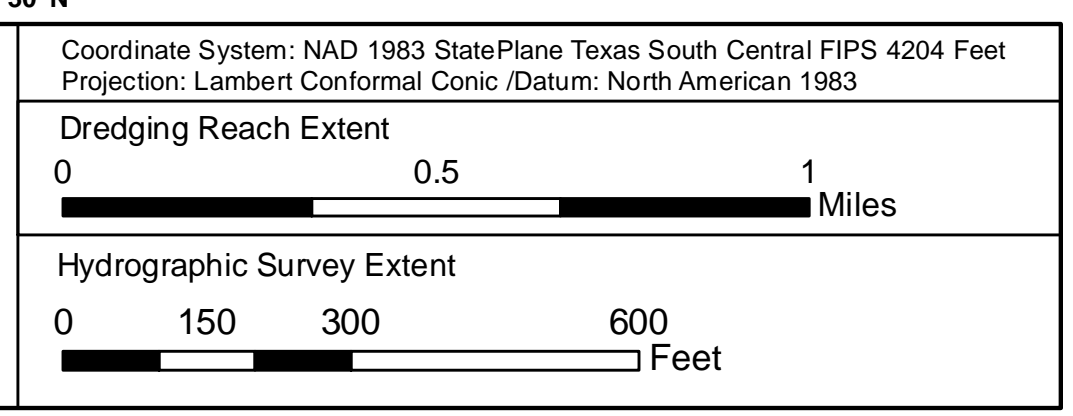
Channel Features	Aids to Navigation	MLLW
<ul style="list-style-type: none"> <li>Channel Toe</li> <li>Channel Center Line</li> <li>Channel Station Lines</li> <li>Channel Dimensions</li> </ul>	<ul style="list-style-type: none"> <li>Lights</li> <li>Red Side Aids</li> <li>Green Side Aids</li> <li>Mooring Buoy</li> </ul>	
<b>NOAA Bathymetry (DREDGING REACH EXTENT)</b> 0 - 10    10 - 15    15 - 20    20 - 25    25 - 30    30 - 50		

NOTES:

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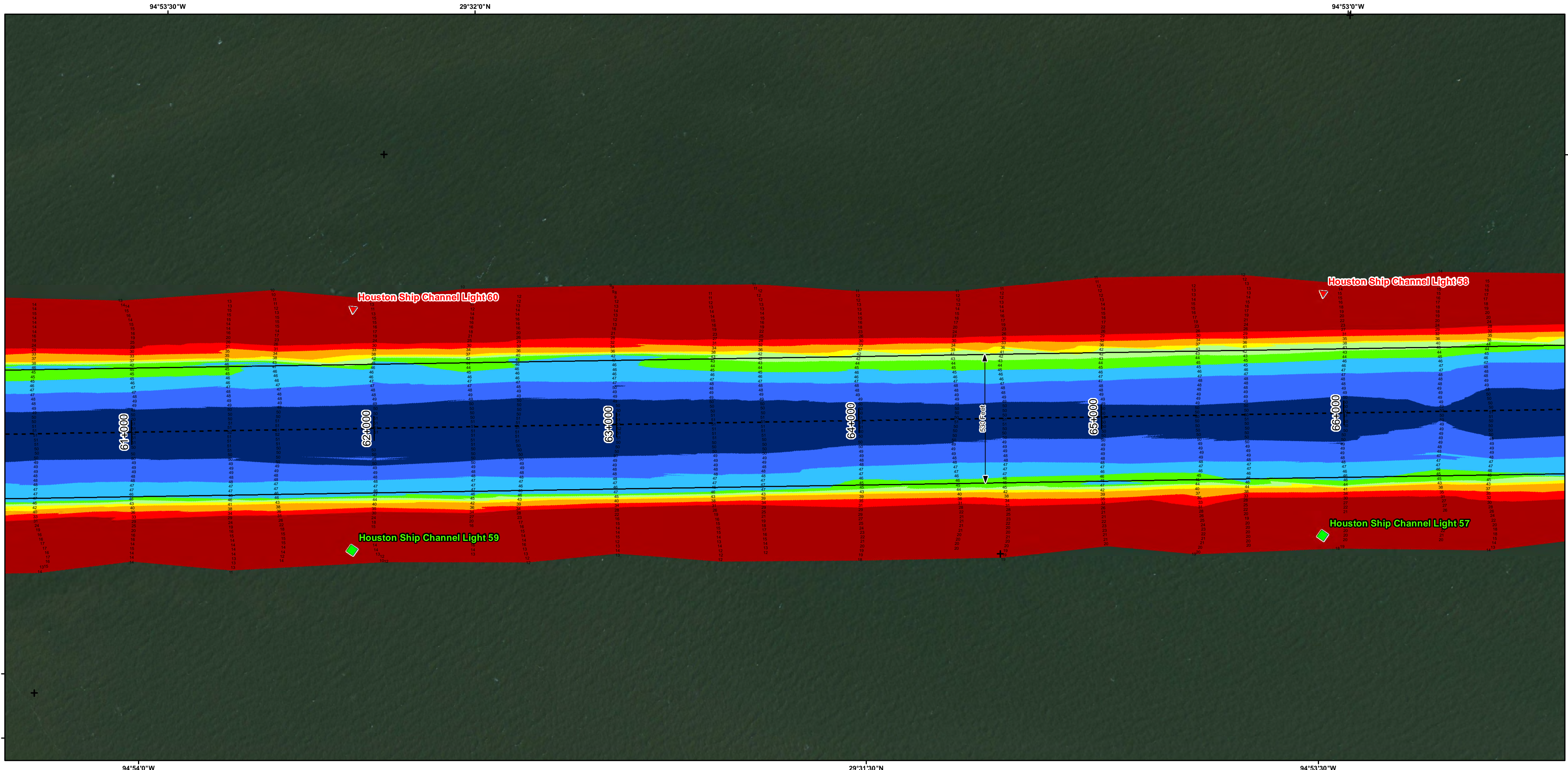
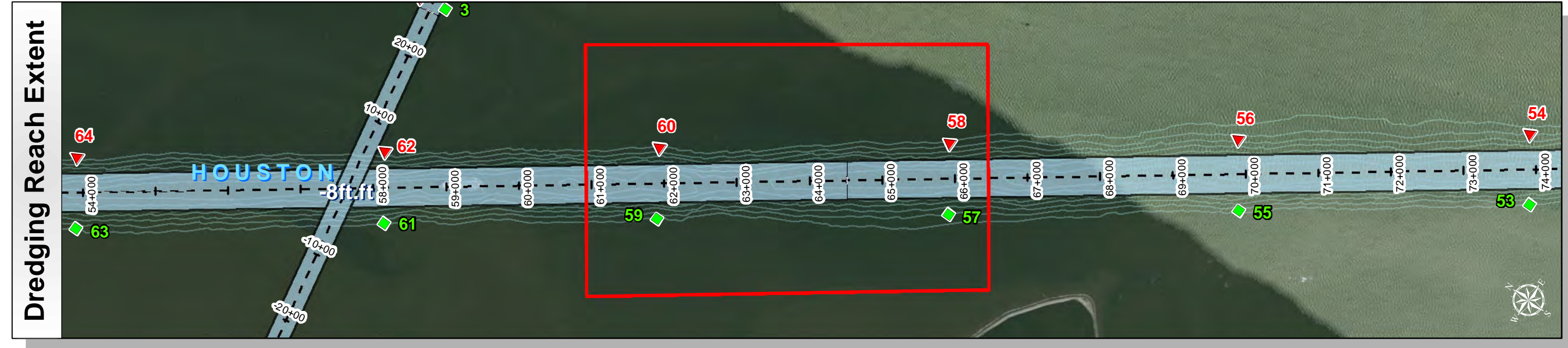
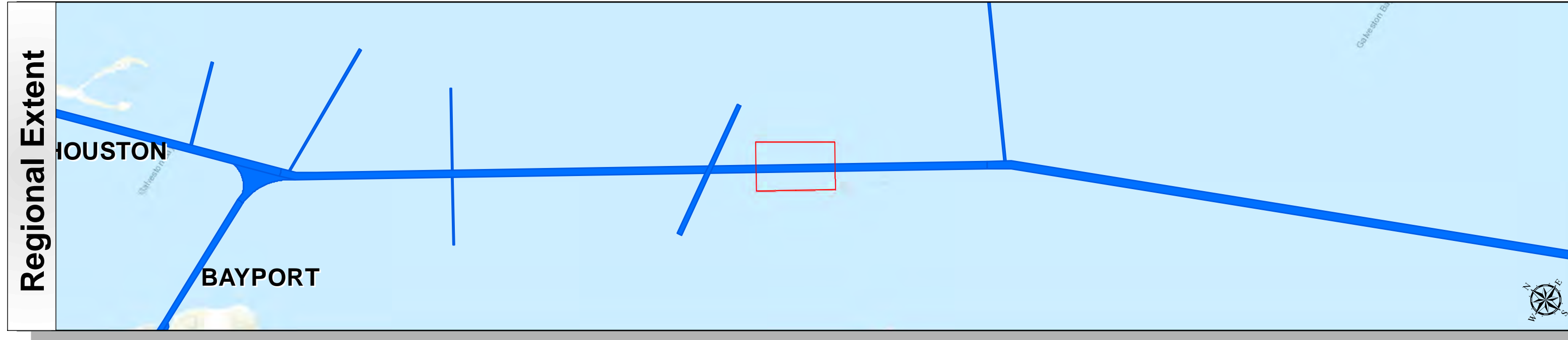
**HYDROGRAPHIC SURVEY**  
 U.S. ARMY ENGINEER DISTRICT  
 CORPS OF ENGINEERS  
 GALVESTON, TEXAS  
 Red Fish Light 1 to Beacon 76 (Turn)  
**Station : 78+844 to 28+605**  
**HOUSTON**  
 HOUSTON, TEXAS



# Houston Ship Channel: Red Fish Light 1 to Beacon 76 (Turn)

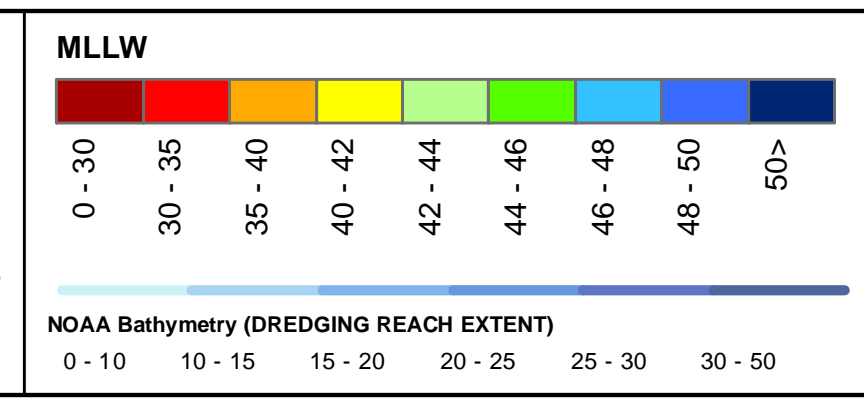


U.S. Army Corps of Engineers  
Galveston District



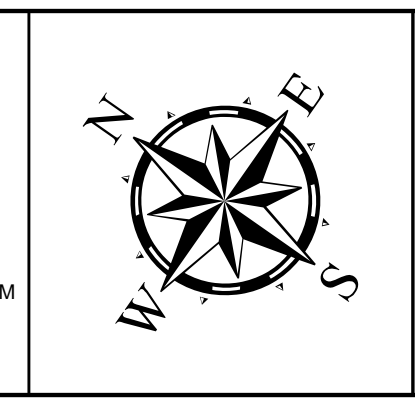
Survey Date(s): 01 June 2018	Authorized Depth: -46ft.
Page: 13 of 56	Side Slope Ratio: (Rise : Run)
Scale: 1:2,400	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 6/6/2018
Additional Info:	

Channel Features	Aids to Navigation
— Channel Toe	★ Lights
- - - Channel Center Line	▲ Red Side Aids
— Channel Station Lines	■ Green Side Aids
↔ Channel Dimensions	◆ Mooring Buoy

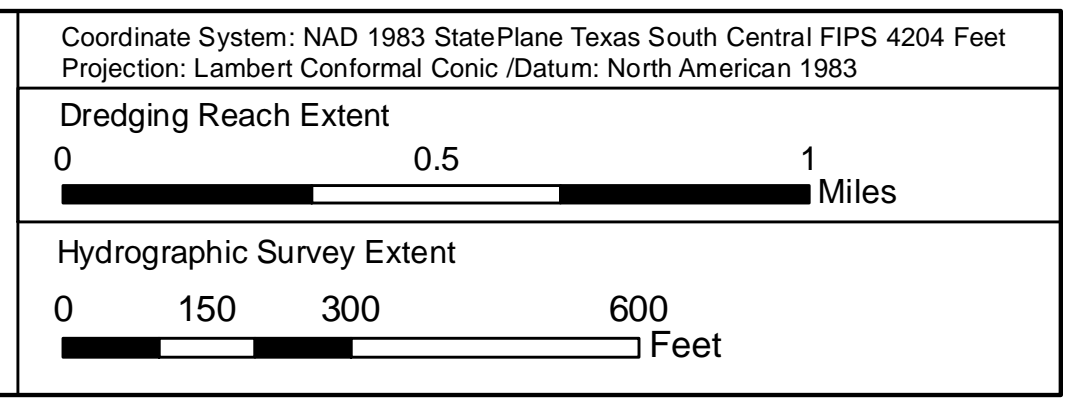


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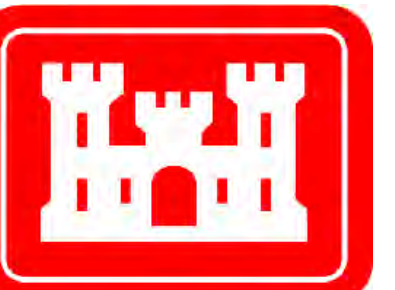
Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community  
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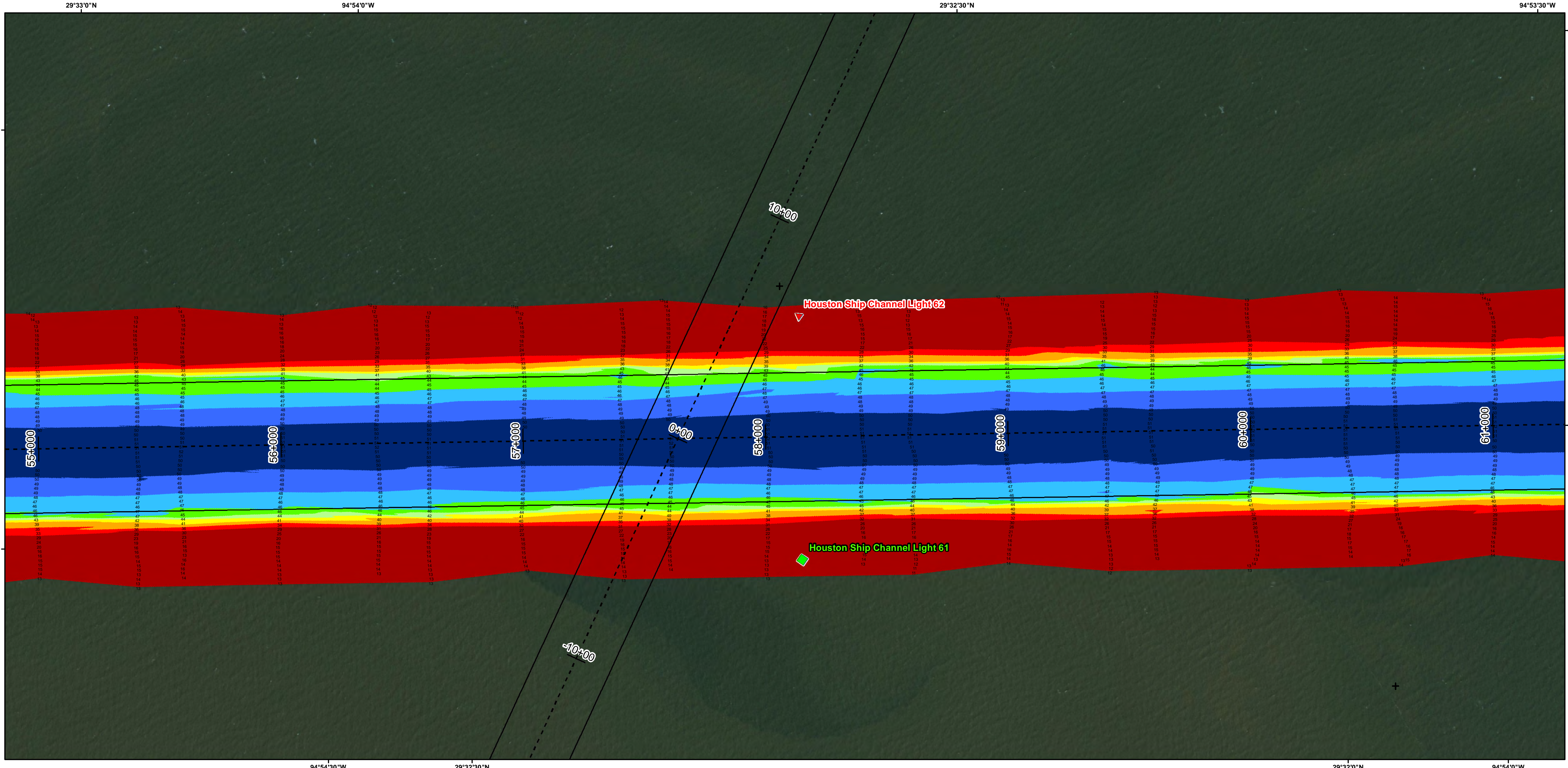
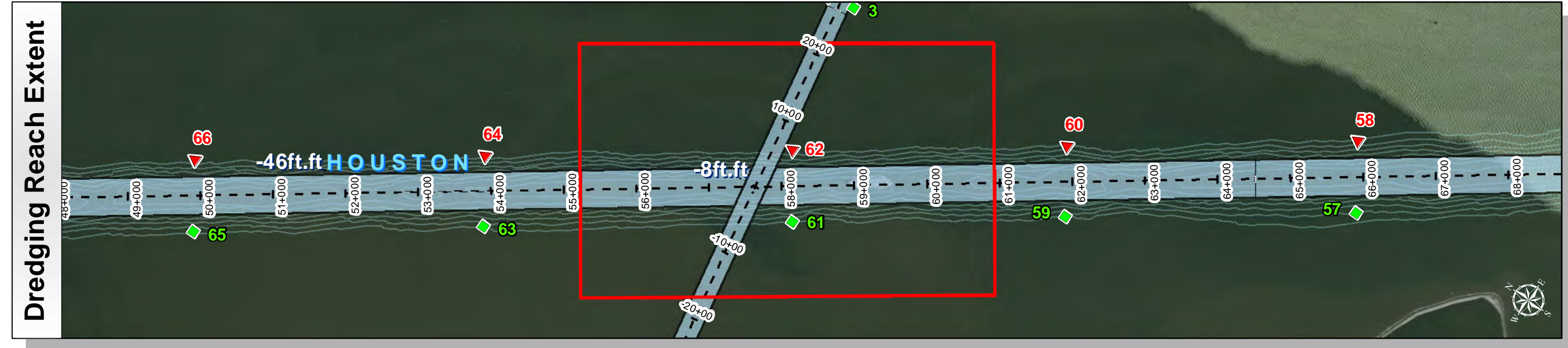
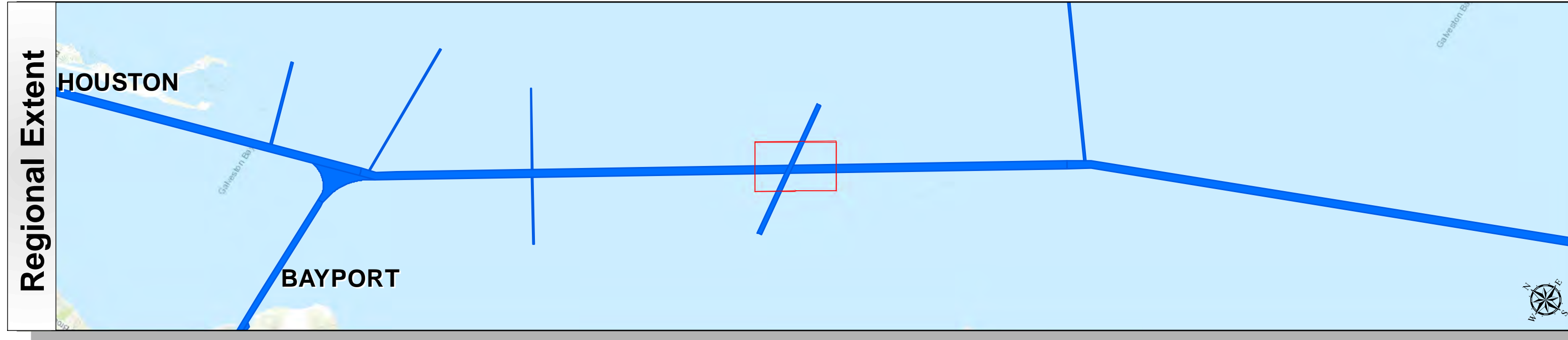
**HYDROGRAPHIC SURVEY**  
 U.S. ARMY ENGINEER DISTRICT  
 CORPS OF ENGINEERS  
 GALVESTON, TEXAS  
 Red Fish Light 1 to Beacon 76 (Turn)  
**Station : 78+844 to 28+605**  
**HOUSTON**  
 HOUSTON, TEXAS



# Houston Ship Channel: Red Fish Light 1 to Beacon 76 (Turn)



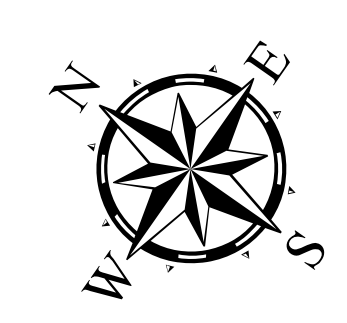
U.S. Army Corps of Engineers  
Galveston District



Channel Features	Aids to Navigation	MLLW
— Channel Toe	★ Lights	0 - 30
- - - Channel Center Line	▲ Red Side Aids	30 - 35
— Channel Station Lines	■ Green Side Aids	35 - 40
↔ Channel Dimensions	◆ Mooring Buoy	40 - 42
		42 - 44
		44 - 46
		46 - 48
		48 - 50
		50 >
		NOAA Bathymetry (DREDGING REACH EXTENT)
		0 - 10 10 - 15 15 - 20 20 - 25 25 - 30 30 - 50

NOTES:

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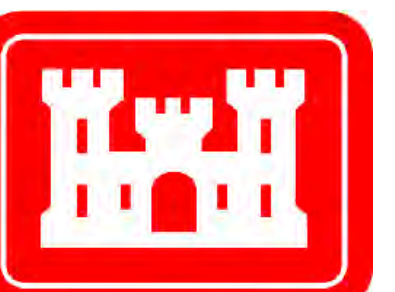
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Hydrographic Survey Extent 0 150 300 600 Feet

Survey Date(s): 01 June 2018	Authorized Depth: -46ft.
Page: 14 of 56	Side Slope Ratio: (Rise : Run)
Scale: 1:2,400	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 6/6/2018
Additional Info :	

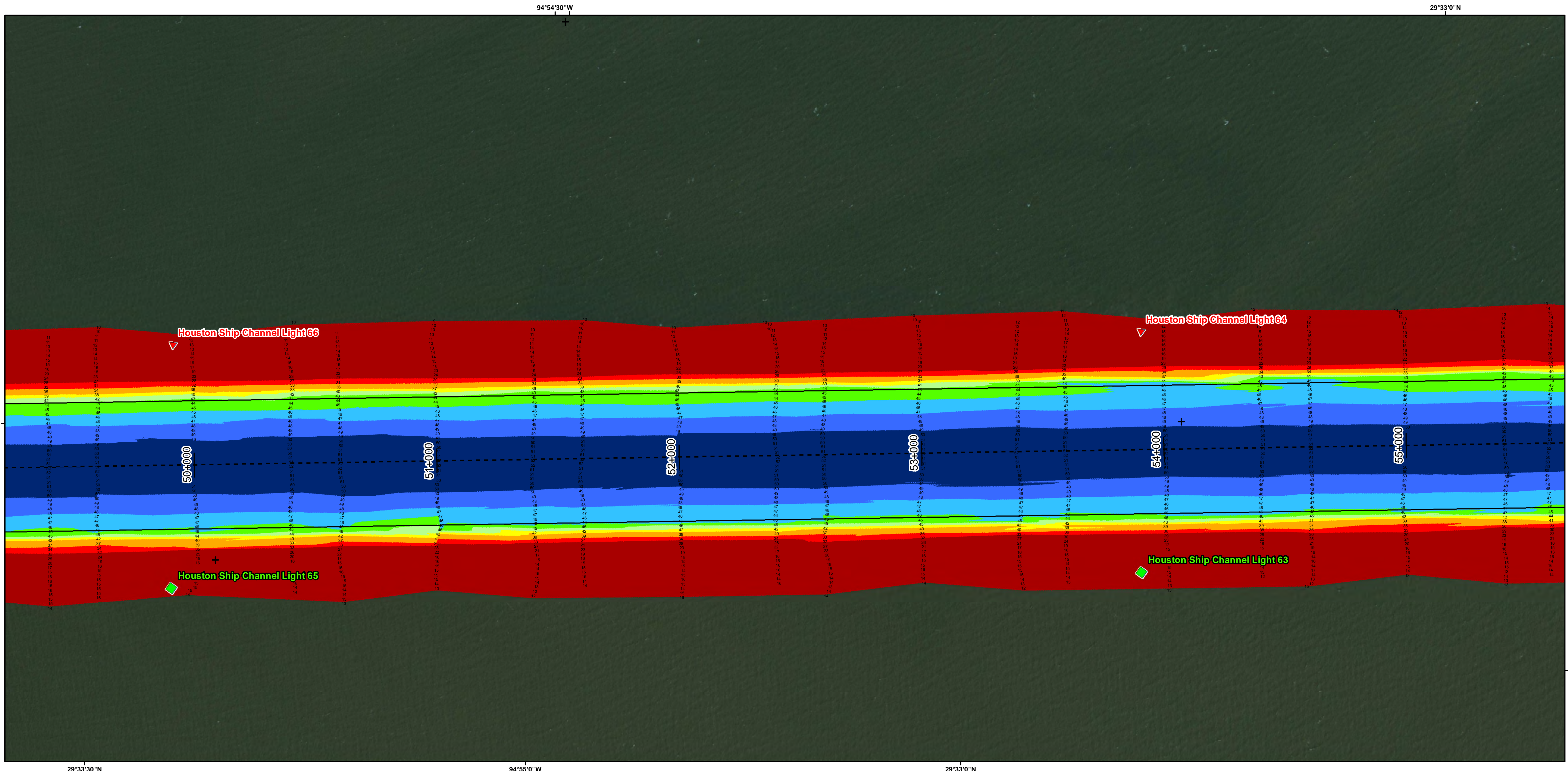
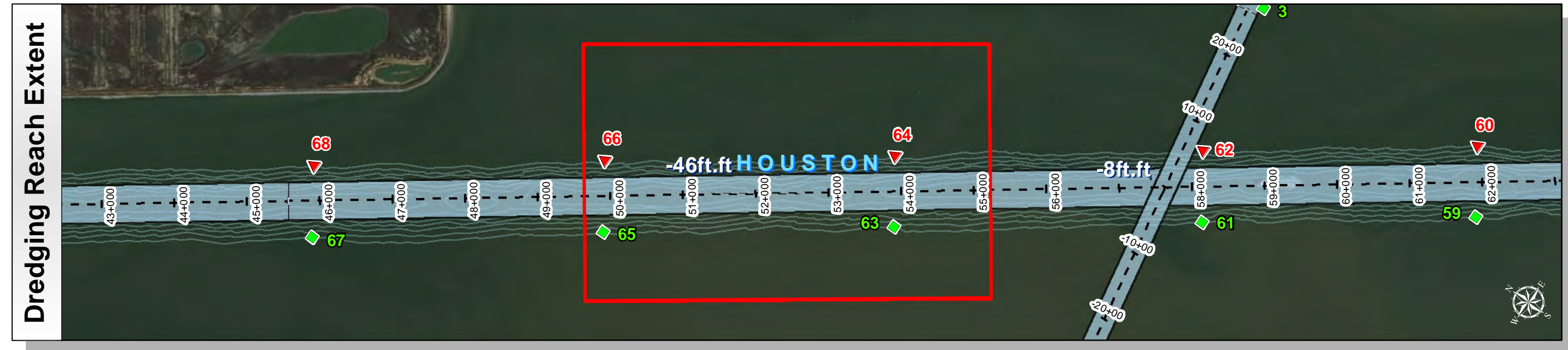
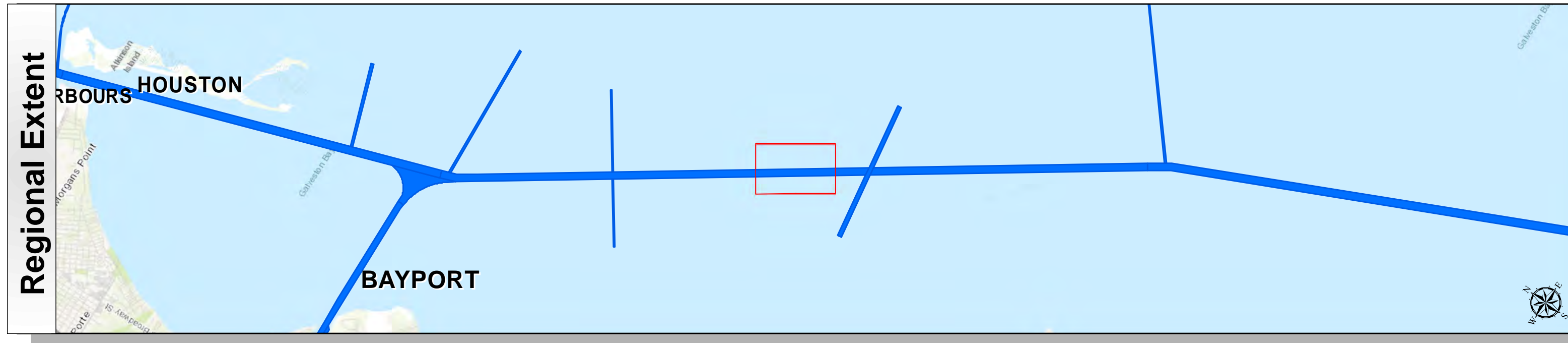
**HYDROGRAPHIC SURVEY**  
U.S. ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
GALVESTON, TEXAS  
Red Fish Light 1 to Beacon 76 (Turn)  
**Station : 78+844 to 28+605**  
**HOUSTON**  
HOUSTON, TEXAS



# Houston Ship Channel: Red Fish Light 1 to Beacon 76 (Turn)



U.S. Army Corps of Engineers  
Galveston District

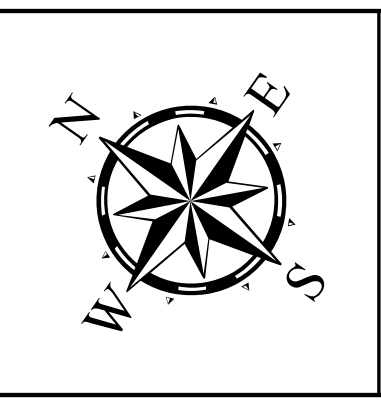


Survey Date(s): 01 June 2018	Authorized Depth: -46ft.
Page: 15 of 56	Side Slope Ratio: (Rise : Run)
Scale: 1:2,400	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 6/6/2018
Additional Info :	

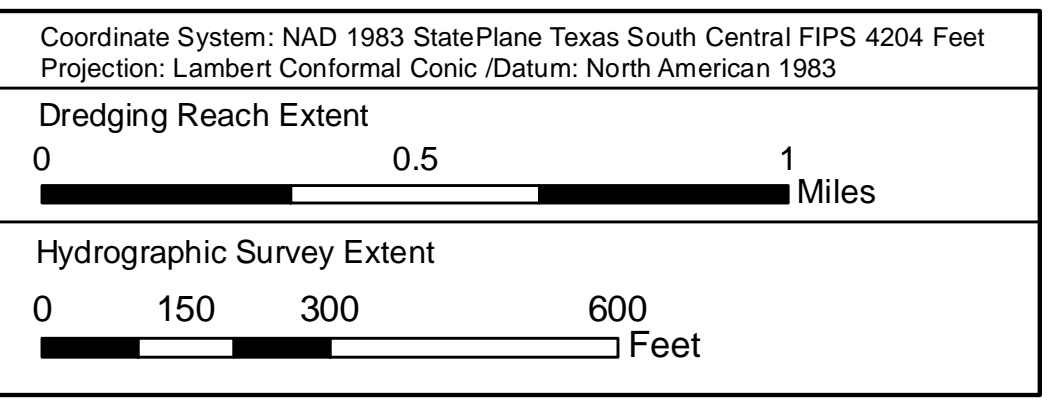
Channel Features	Aids to Navigation	MLLW
— Channel Toe	★ Lights	0 - 30
- - - Channel Center Line	▲ Red Side Aids	30 - 35
— Channel Station Lines	■ Green Side Aids	35 - 40
↔ Channel Dimensions	◆ Mooring Buoy	40 - 42
		42 - 44
		44 - 46
		46 - 48
		48 - 50
		50 >
		NOAA Bathymetry (DREDGING REACH EXTENT)
		0 - 10 10 - 15 15 - 20 20 - 25 25 - 30 30 - 50

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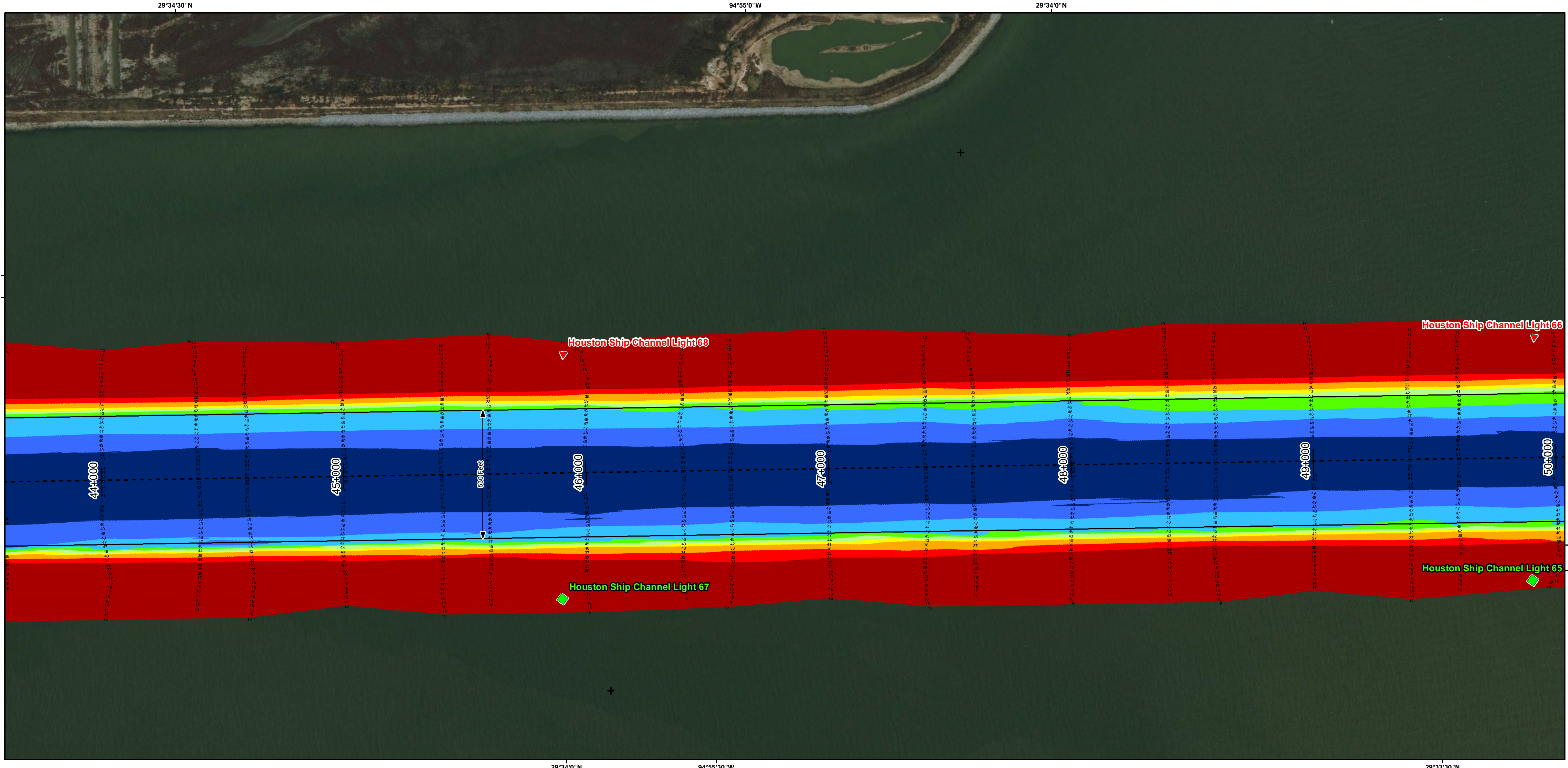
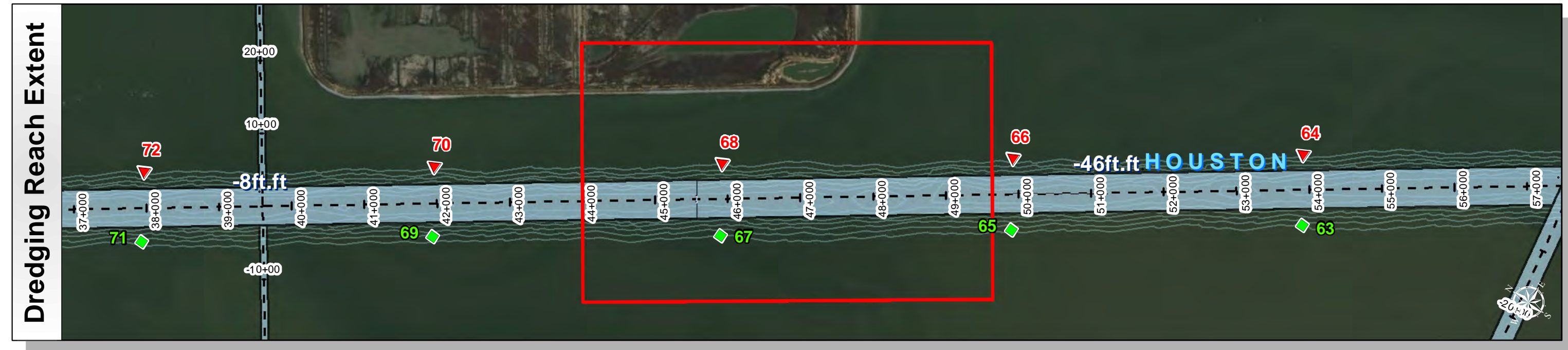
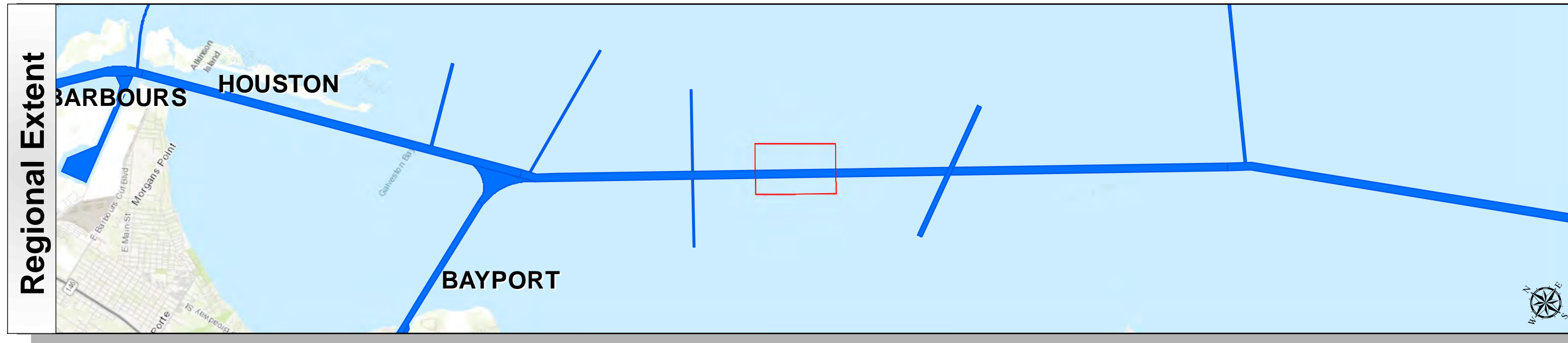
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U.S. ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
GALVESTON, TEXAS  
Red Fish Light 1 to Beacon 76 (Turn)  
**Station : 78+844 to 28+605**  
**HOUSTON**  
HOUSTON, TEXAS



# Houston Ship Channel: Red Fish Light 1 to Beacon 76 (Turn)



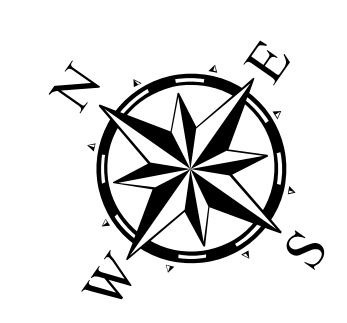
U.S. Army Corps of Engineers  
Galveston District



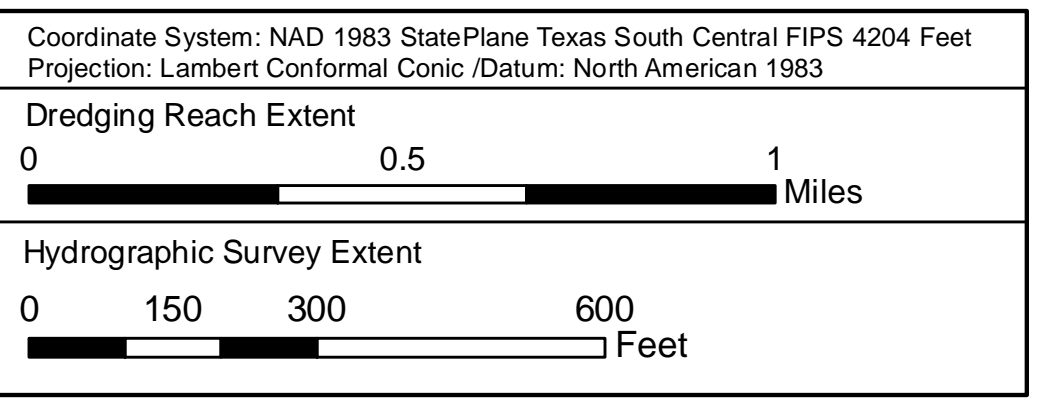
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 6. NOAA BATHYMETRY CONTOURS PRODUCED FROM HISTORIC BATHYMETRIC (HYDROGRAPHIC) SURVEYS CONDUCTED BY THE NOAA NATIONAL OCEAN SERVICE COAST SURVEY, AVAILABLE FROM THE NATIONAL GEOPHYSICAL DATA CENTER. SURVEYS VARY AS TO SOUNDING DENSITY, ACCURACY OF DEPTH, ACCURACY OF NAVIGATION, ZERO DATUM, DATE OF SURVEY AND TYPE OF INSTRUMENTATION.



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Page: 16 of 56	Side Slope Ratio: (Rise : Run)
Scale: 1:2,400	Additional Imagery: © DigitalGlobe Inc.
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Additional Info:	

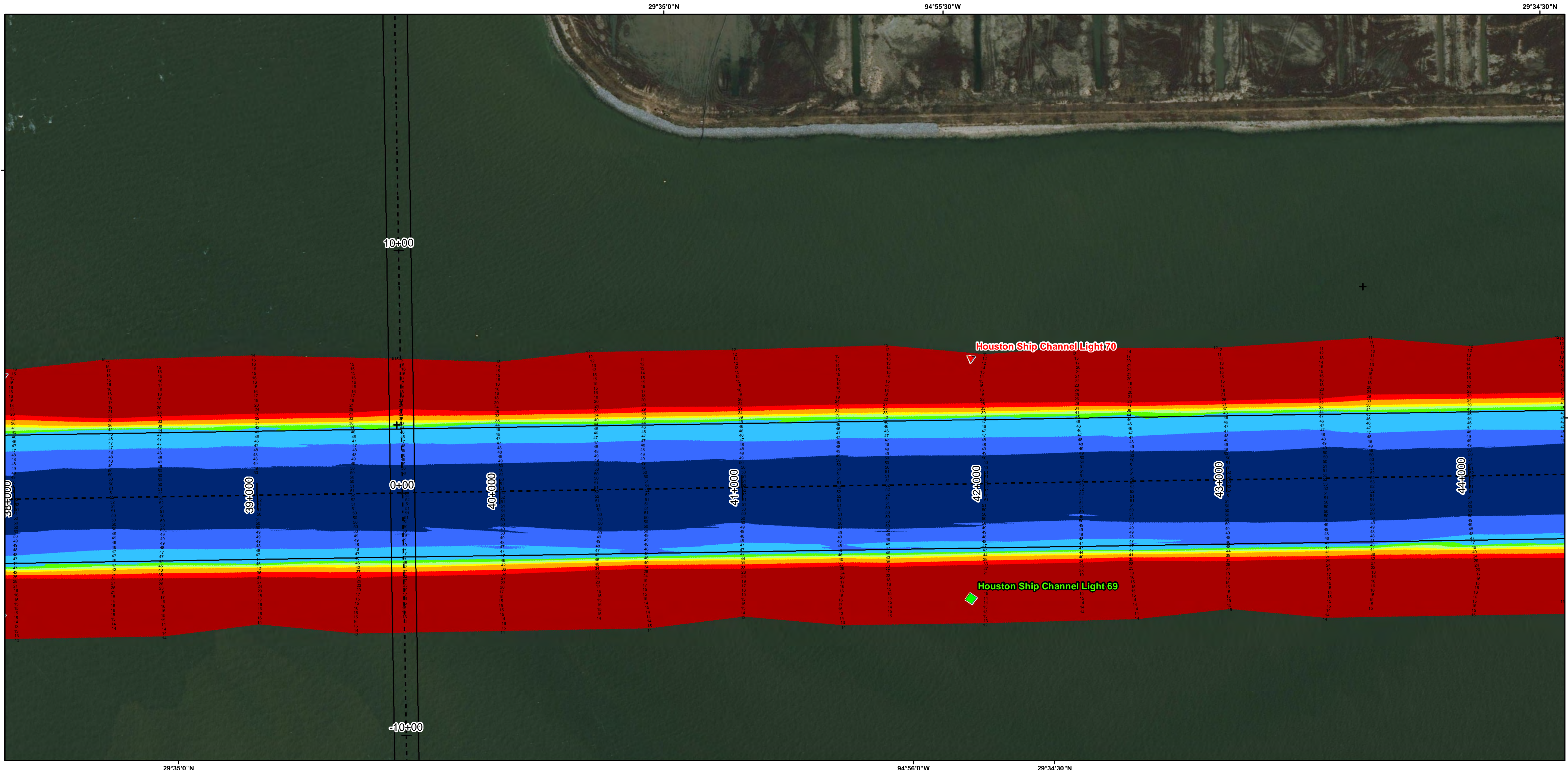
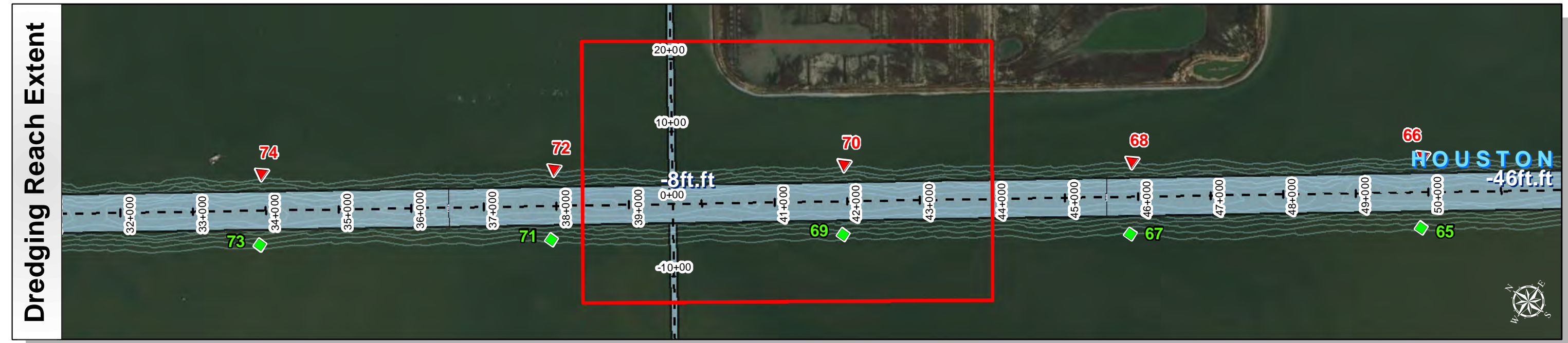
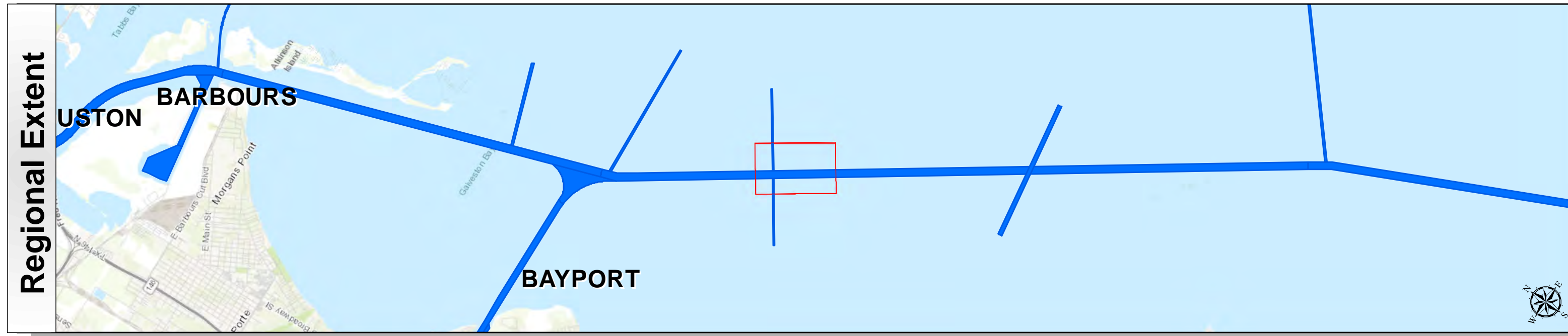
**HYDROGRAPHIC SURVEY**  
 U.S. ARMY ENGINEER DISTRICT  
 CORPS OF ENGINEERS  
 GALVESTON, TEXAS  
 Red Fish Light 1 to Beacon 76 (Turn)  
**Station : 78+844 to 28+605**  
**HOUSTON**  
 HOUSTON, TEXAS



# Houston Ship Channel: Red Fish Light 1 to Beacon 76 (Turn)



U.S. Army Corps of Engineers  
Galveston District

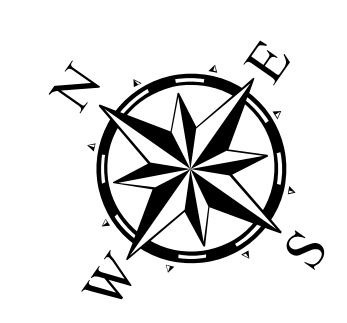


Channel Features	Aids to Navigation	MLLW
Channel Toe	★ Lights	0 - 30
Channel Center Line	▲ Red Side Aids	30 - 35
Channel Station Lines	■ Green Side Aids	35 - 40
Channel Dimensions	◆ Mooring Buoy	40 - 42
		42 - 44
		44 - 46
		46 - 48
		48 - 50
		50 >
NOAA Bathymetry (DREDGING REACH EXTENT)		
		0 - 10
		10 - 15
		15 - 20
		20 - 25
		25 - 30
		30 - 50

NOTES:

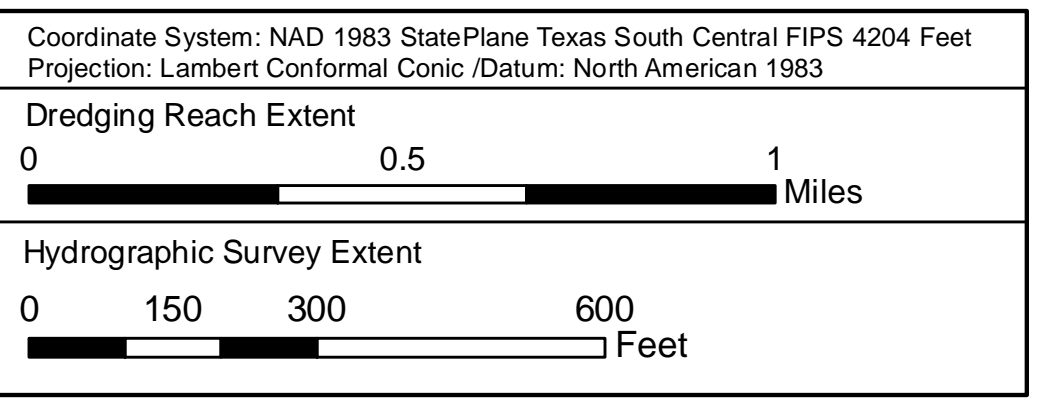
- HORIZONTAL COORDINATES ARE REFERENCED TO TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE NAD83 US SURVEY FEET.
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Page: 17 of 56	Side Slope Ratio: (Rise : Run)
Scale: 1:2,400	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 6/6/2018
Additional Info:	

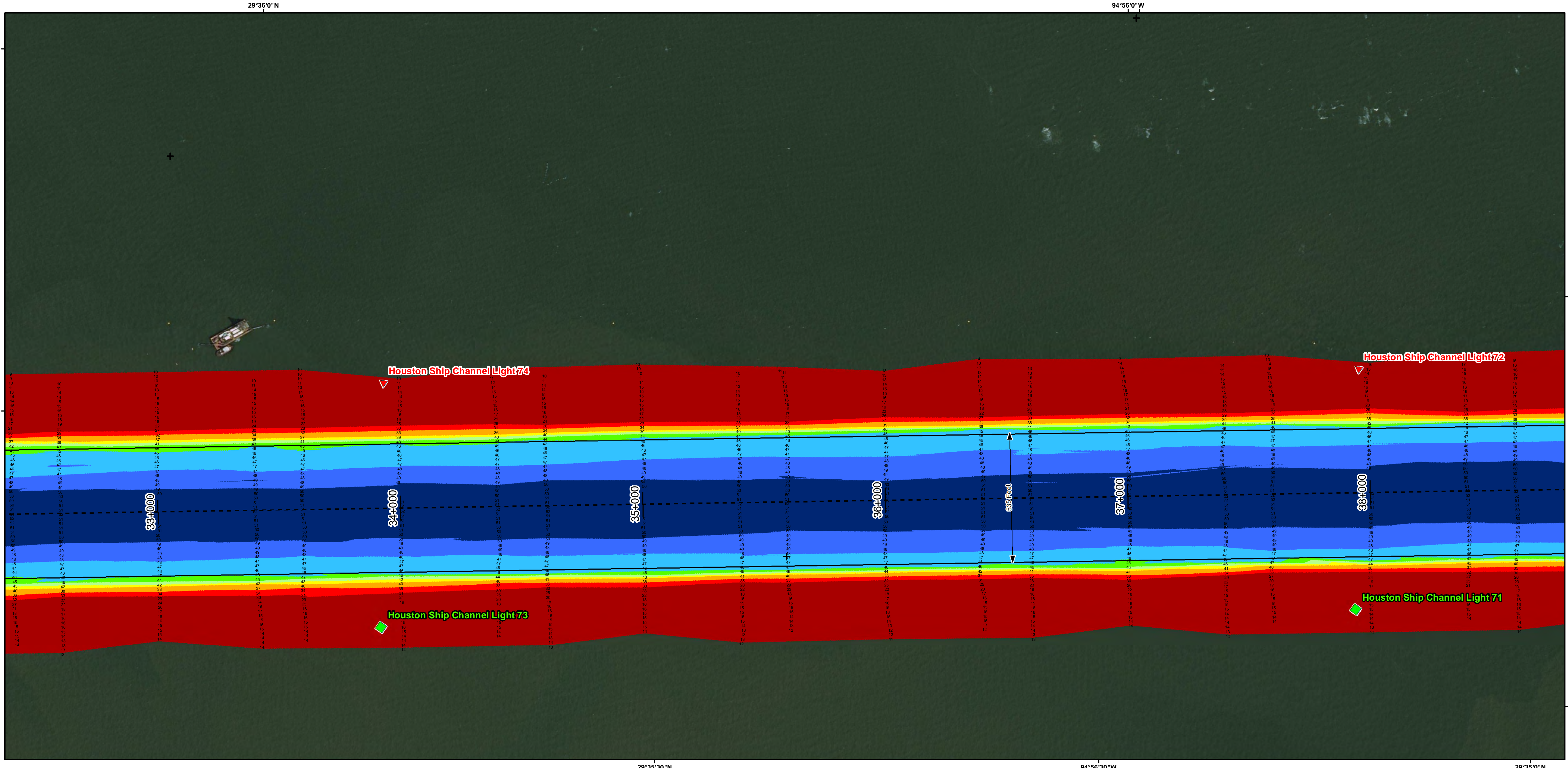
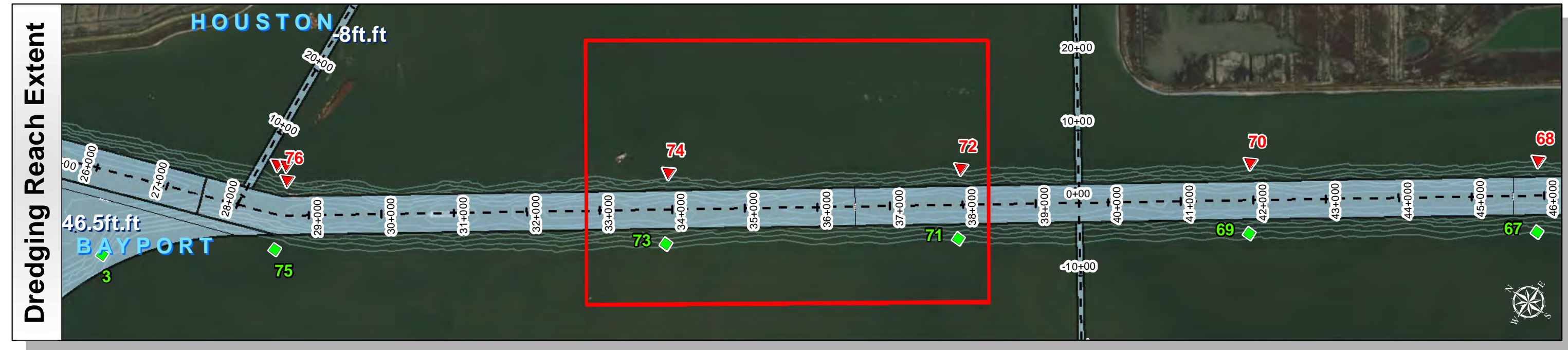
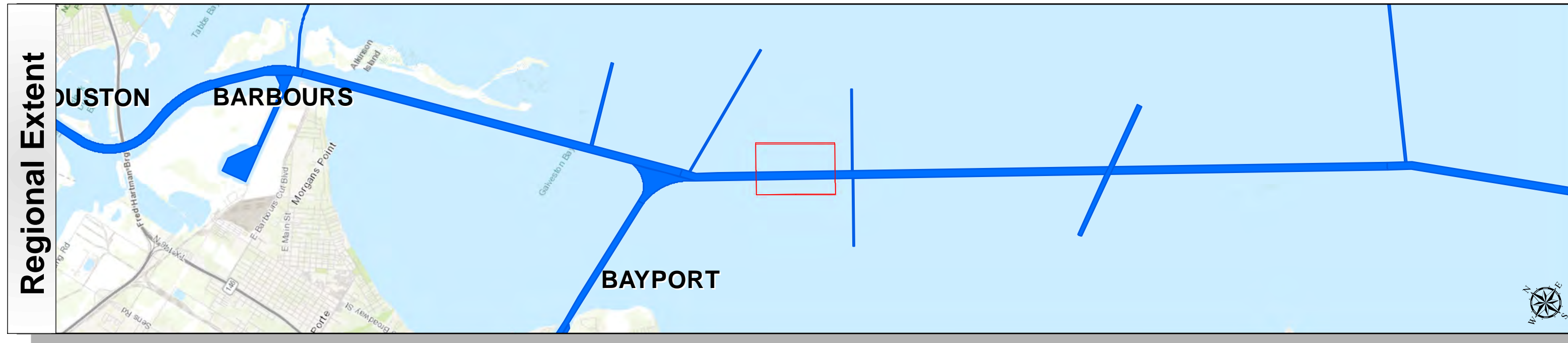
**HYDROGRAPHIC SURVEY**  
U.S. ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
GALVESTON, TEXAS  
Red Fish Light 1 to Beacon 76 (Turn)  
**Station : 78+844 to 28+605**  
**HOUSTON**  
HOUSTON, TEXAS



# Houston Ship Channel: Red Fish Light 1 to Beacon 76 (Turn)



U.S. Army Corps of Engineers  
Galveston District

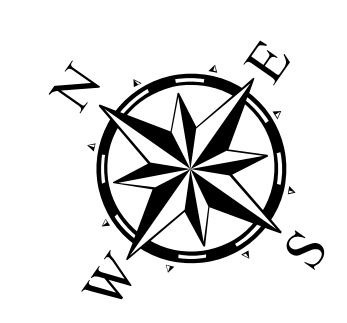


Channel Features	Aids to Navigation	MLLW
Channel Toe	★ Lights	0 - 30
Channel Center Line	▲ Red Side Aids	30 - 35
Channel Station Lines	■ Green Side Aids	35 - 40
Channel Dimensions	◆ Mooring Buoy	40 - 42
		42 - 44
		44 - 46
		46 - 48
		48 - 50
		50 >
<b>NOAA Bathymetry (DREDGING REACH EXTENT)</b>		
		0 - 10
		10 - 15
		15 - 20
		20 - 25
		25 - 30
		30 - 50

**NOTES:**

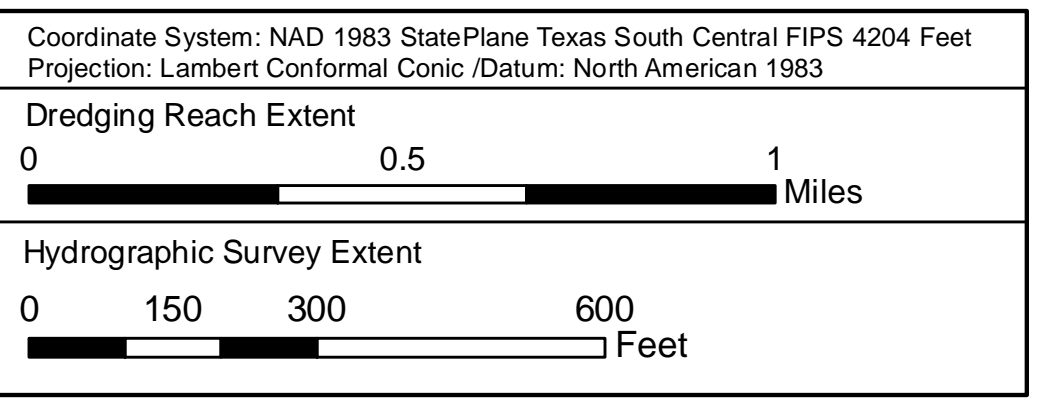
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Page: 18 of 56	Side Slope Ratio: (Rise : Run)
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Additional Info :	

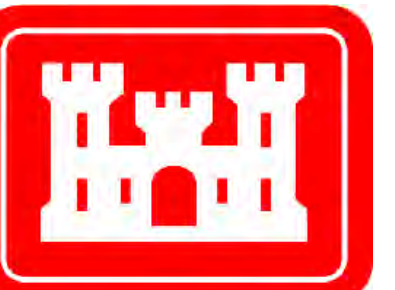
**HYDROGRAPHIC SURVEY**  
U.S. ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
GALVESTON, TEXAS

Red Fish Light 1 to Beacon 76 (Turn)

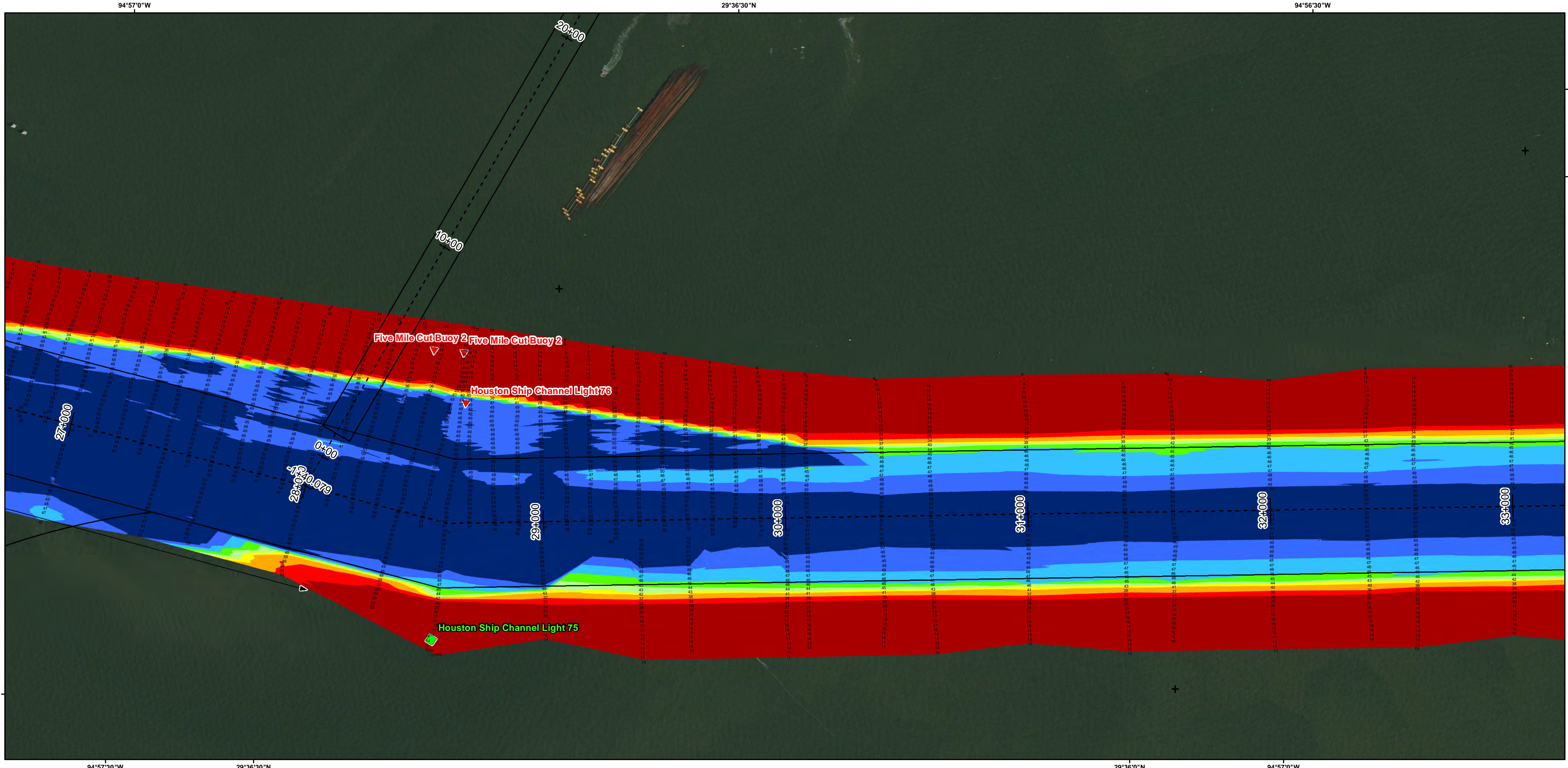
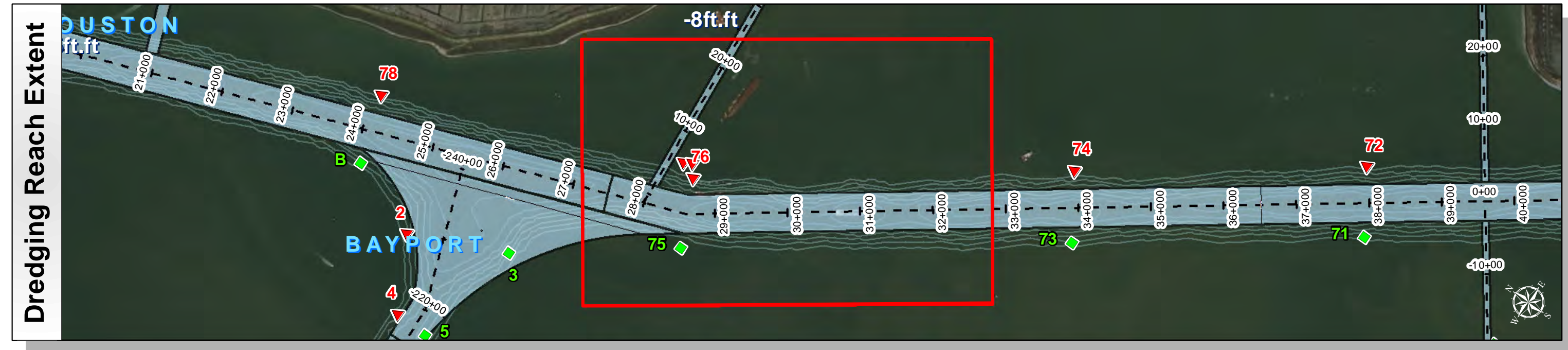
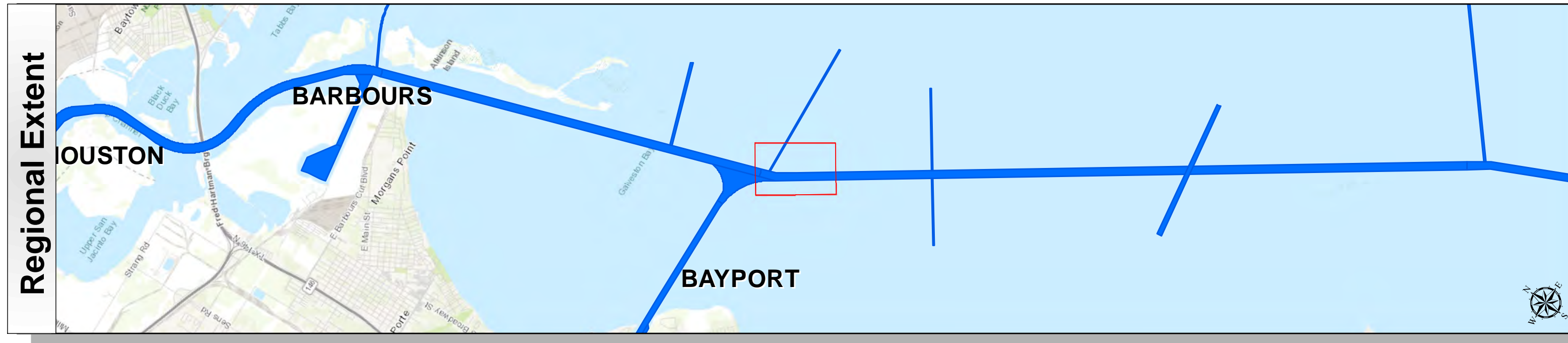
**Station : 78+844 to 28+605**  
**HOUSTON**  
HOUSTON, TEXAS



# Houston Ship Channel: Red Fish Light 1 to Beacon 76 (Turn)



U.S. Army Corps of Engineers  
Galveston District

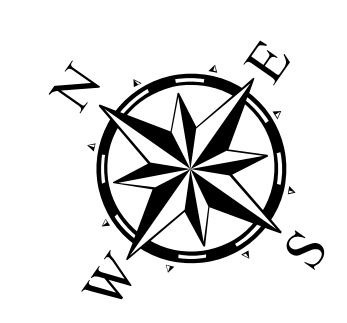


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		44 - 46
		46 - 48
		48 - 50
		50 >
<b>NOAA Bathymetry (DREDGING REACH EXTENT)</b>		
		0 - 10
		10 - 15
		15 - 20
		20 - 25
		25 - 30
		30 - 50

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Coordinate System: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet Projection: Lambert Conformal Conic / Datum: North American 1983
Dredging Reach Extent
0 0.5 1 Miles
Hydrographic Survey Extent
0 150 300 600 Feet

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Page: 19 of 56	Side Slope Ratio: (Rise : Run)
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