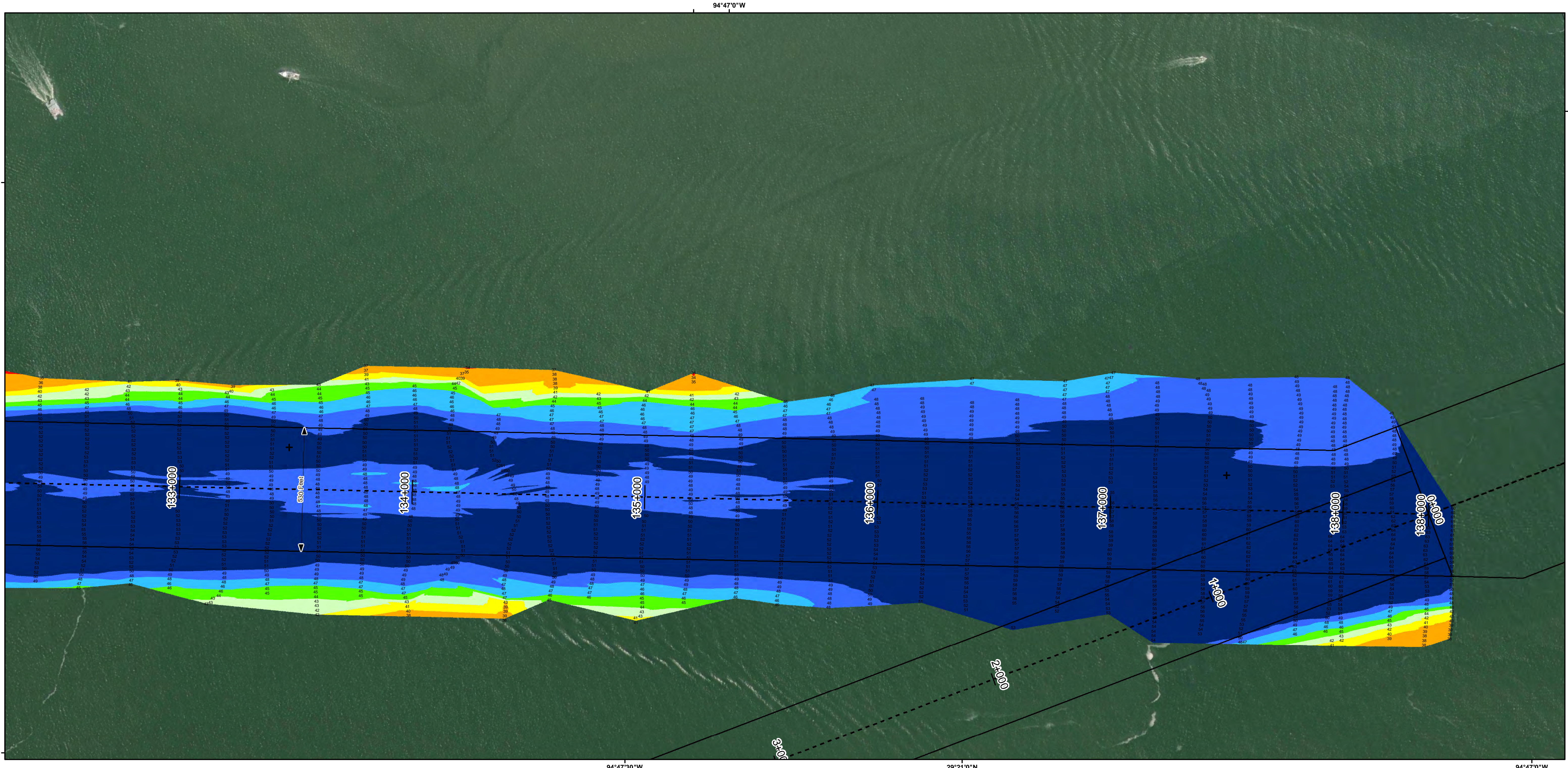
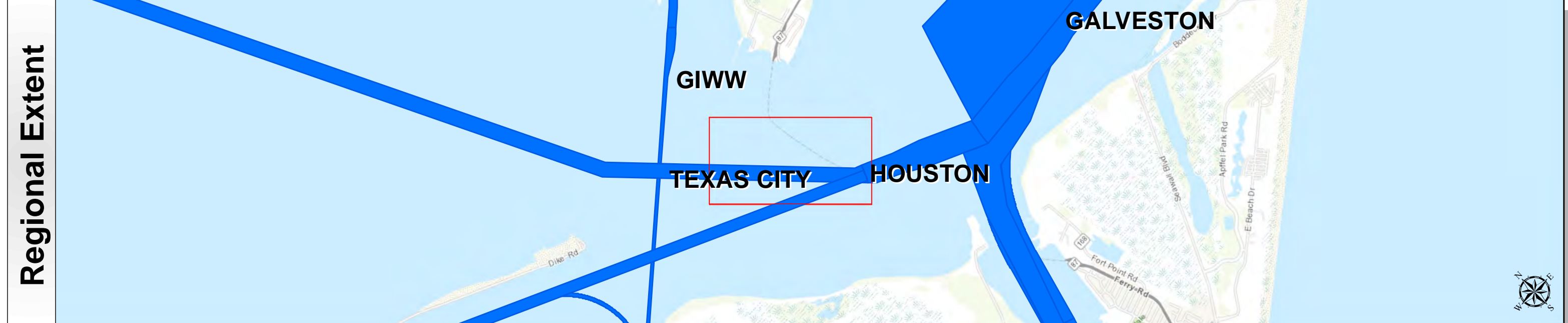


Houston Ship Channel: Bolivar Roads to Red Fish Light 1



U.S. Army Corps of Engineers
Galveston District

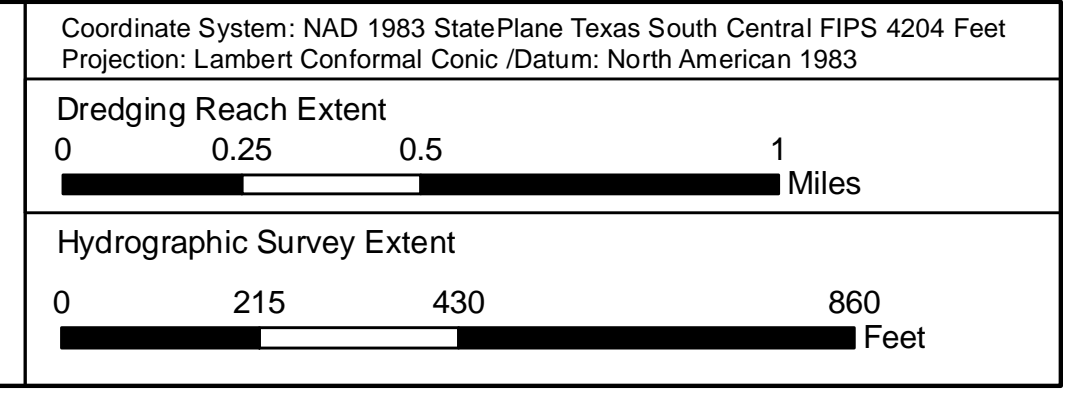


Channel Features	Aids to Navigation	MLLW
— Channel Toe	Green Side Aids	0 - 30
- - - Channel Center Line	Red Side Aids	30 - 35
— Channel Station Lines	Lights	35 - 40
↔ Channel Dimensions		40 - 42
		42 - 44
		44 - 46
		46 - 48
		48 - 50
		< 50
		NOAA Bathymetry (DREDGING REACH EXTENT)
		0 - 10
		10 - 15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

NOTES:

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Page: 1 of 61	Side Slope Ratio: (Rise : Run)
Scale: 1:2,500	Additional Imagery: © DigitalGlobe Inc.
Mapped by: M3A0XPAC	Print Date: 9/18/2019
Additional Info :	

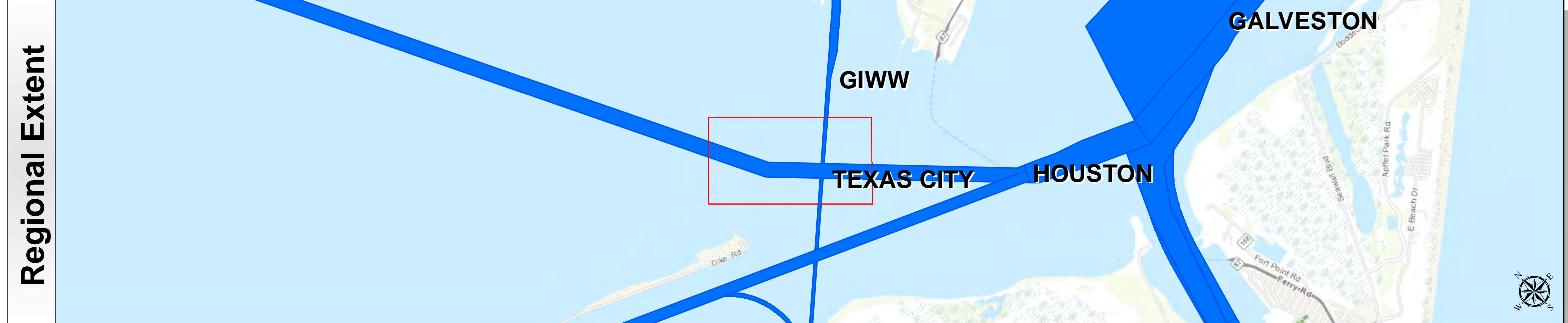
HYDROGRAPHIC SURVEY
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
GALVESTON, TEXAS

Station: 138+476 to 78+844
HOUSTON
HOUSTON, TEXAS

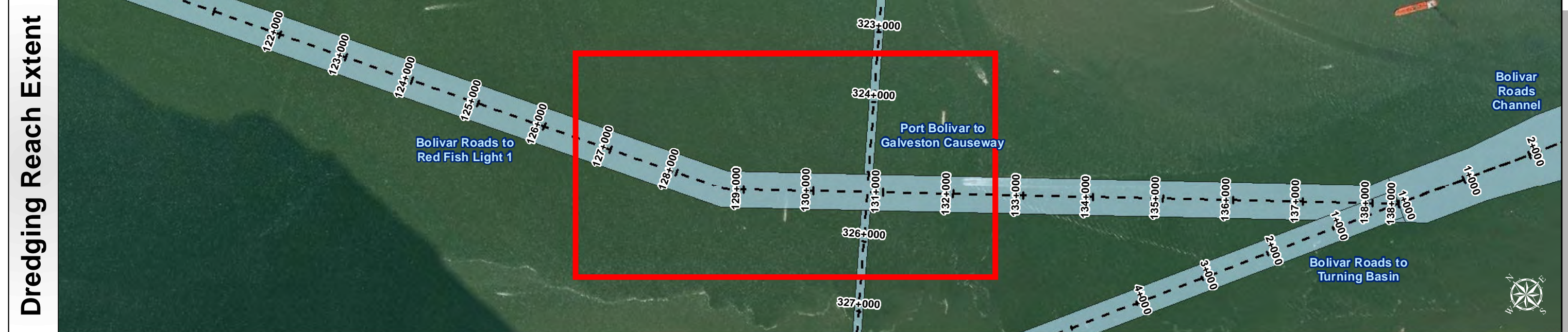
Houston Ship Channel: Bolivar Roads to Red Fish Light 1



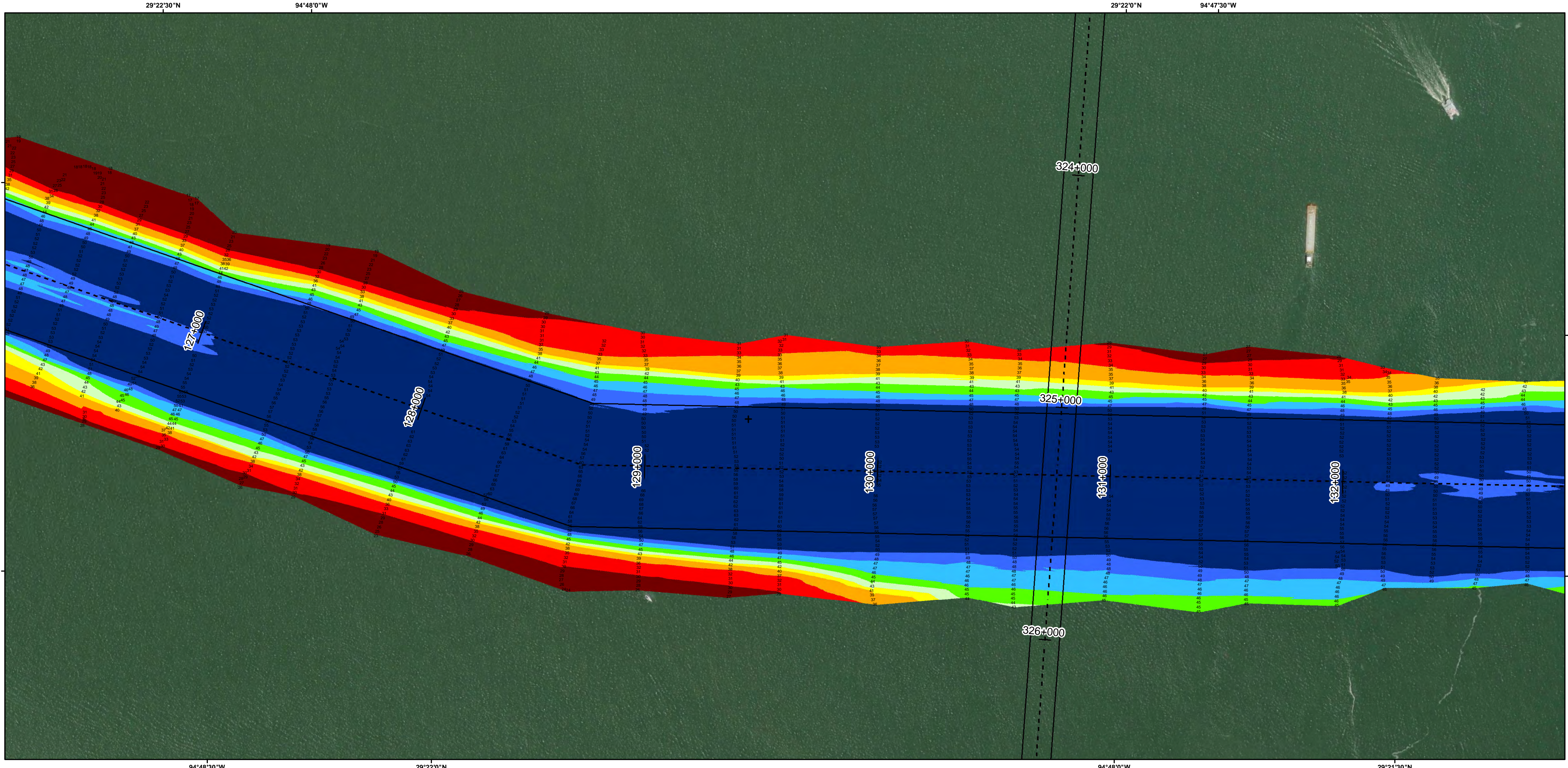
U.S. Army Corps of Engineers
Galveston District



Regional Extent



Dredging Reach Extent



Channel Features

- Channel Toe
- Channel Center Line
- Channel Station Lines
- Channel Dimensions

Aids to Navigation

- Green Side Aids
- Red Side Aids
- Lights

MLLW

0 - 30
30 - 35
35 - 40
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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Coordinate System: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
Projection: Lambert Conformal Conic /Datum: North American 1983

Dredging Reach Extent

0 0.25 0.5 1 Miles

Hydrographic Survey Extent

0 215 430 860 Feet

Survey Date(s): 20 August 2019	Authorized Depth: -46ft.
Page: 2 of 61	Side Slope Ratio: (Rise : Run)
Scale: 1:2,500	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 9/18/2019
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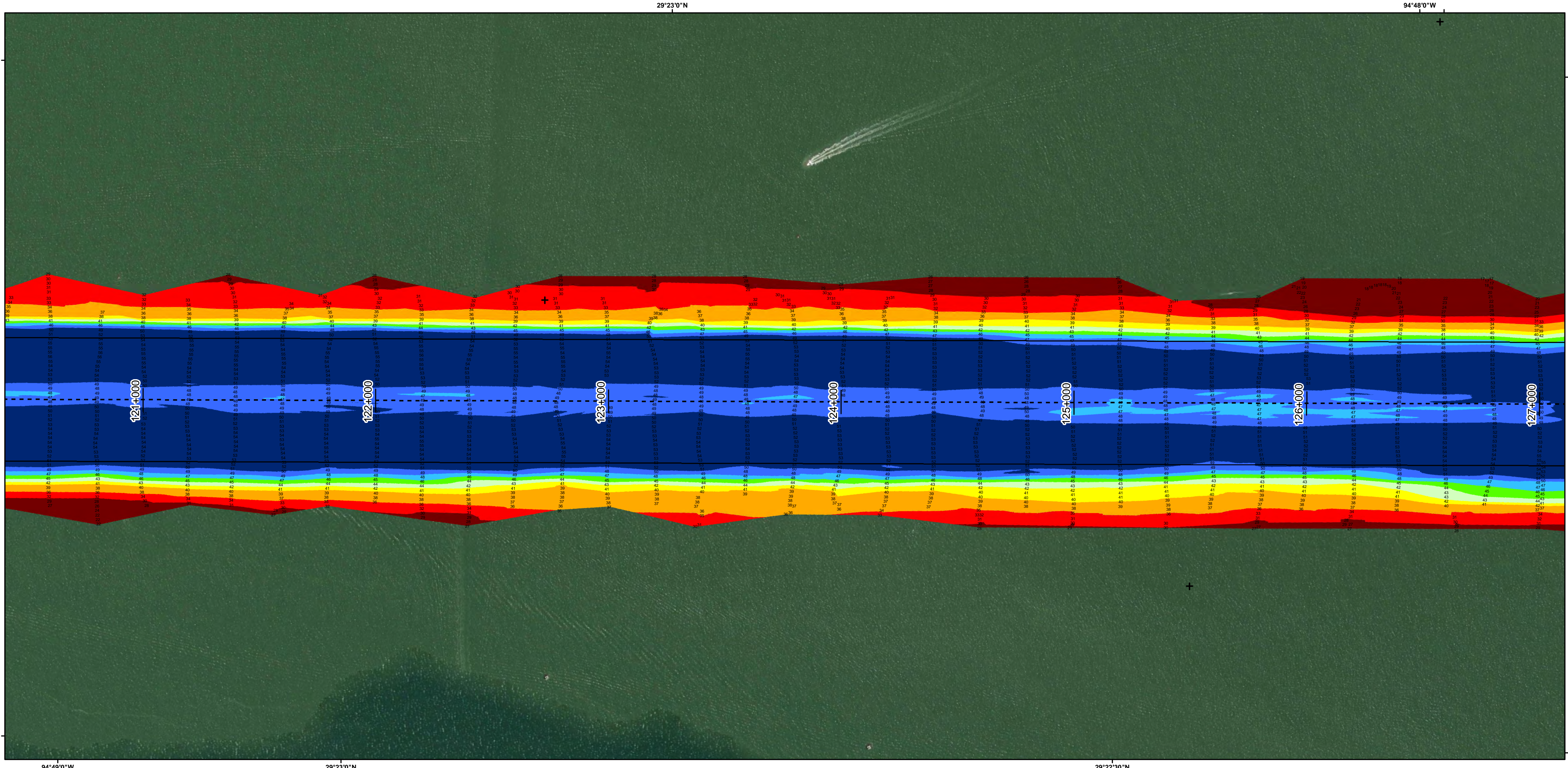
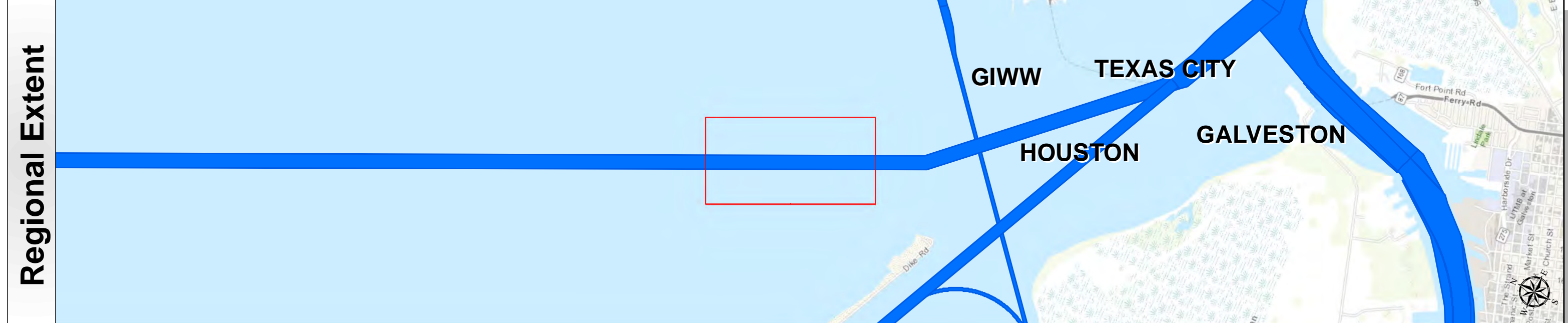
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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
GALVESTON, TEXAS

Station: 138+476 to 78+844
HOUSTON
HOUSTON, TEXAS

Houston Ship Channel: Bolivar Roads to Red Fish Light 1



U.S. Army Corps of Engineers
Galveston District



Channel Features

- Channel Toe
- Channel Center Line
- Channel Station Lines
- Channel Dimensions

Aids to Navigation

- Green Side Aids
- Red Side Aids
- Lights

MLLW

0 - 30	30 - 35	35 - 40	40 - 42	42 - 44	44 - 46	46 - 48	48 - 50	< 50
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NOAA Bathymetry (DREDGING REACH EXTENT)

0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 50
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NOTES:

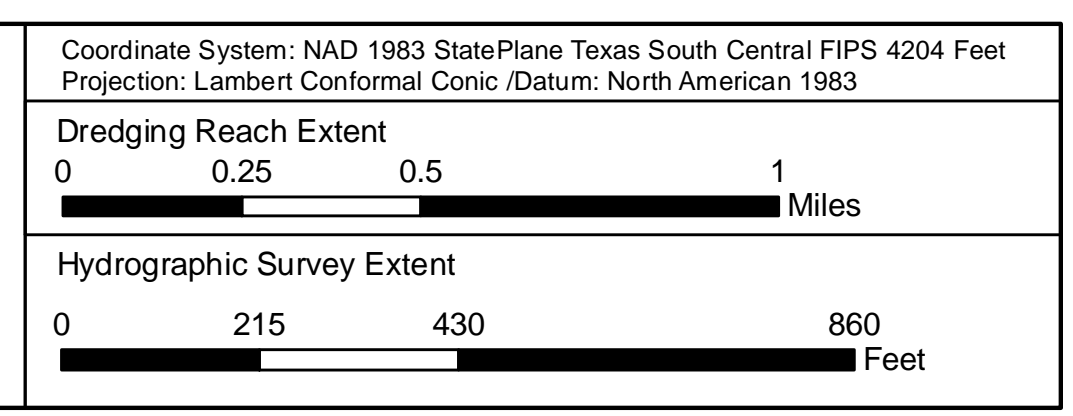
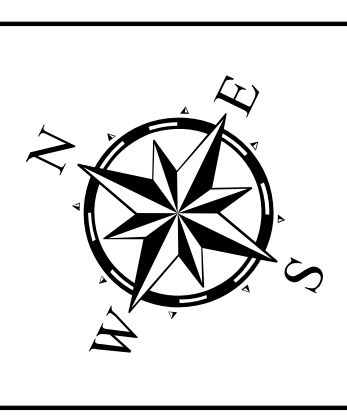
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Page: 3 of 61	Side Slope Ratio: (Rise : Run)
Scale: 1:2,500	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 9/18/2019
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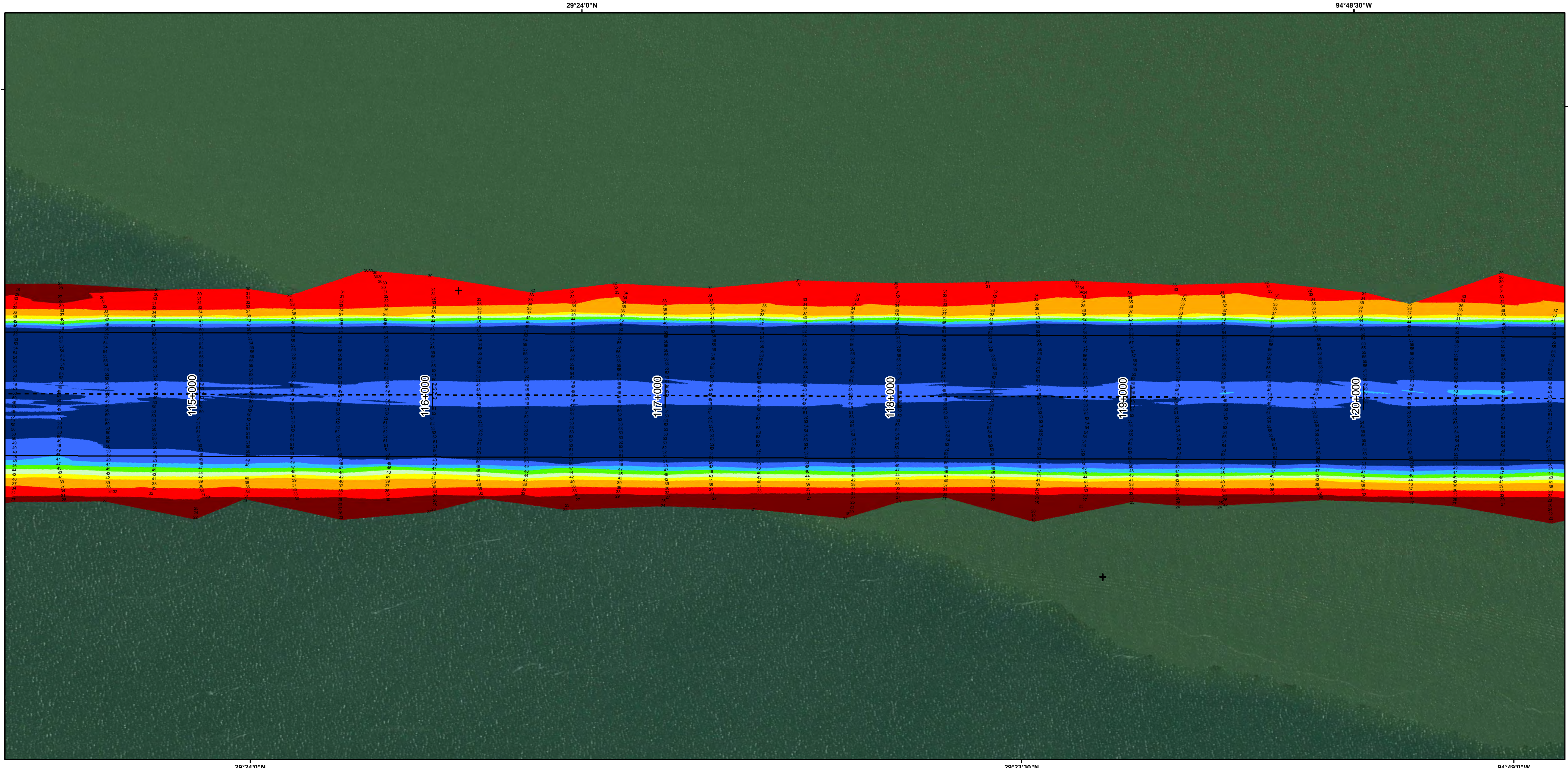
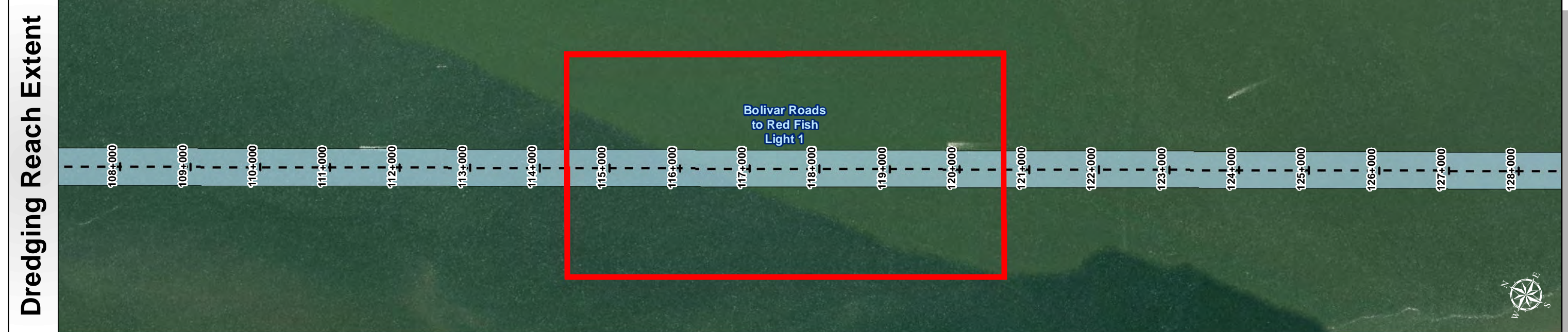
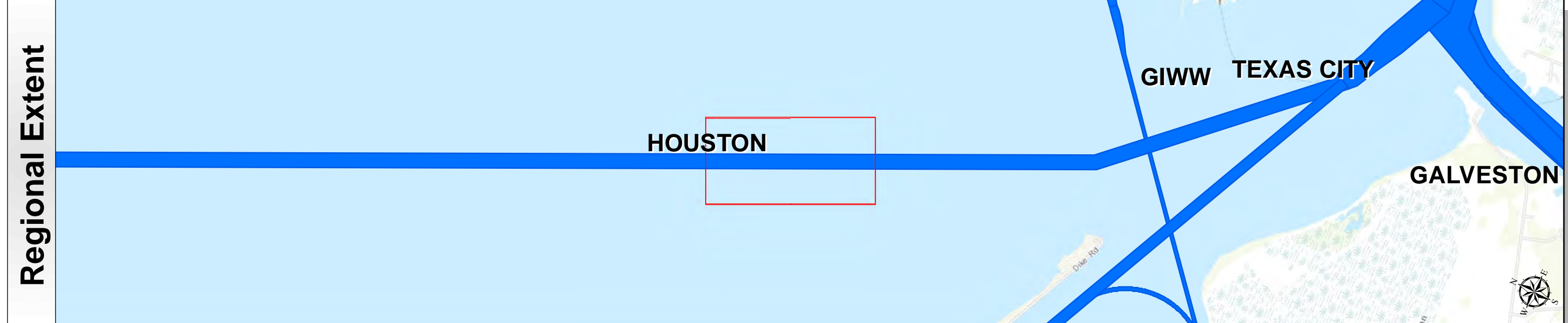
HYDROGRAPHIC SURVEY
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
GALVESTON, TEXAS

Station: 138+476 to 78+844
HOUSTON
HOUSTON, TEXAS

Houston Ship Channel: Bolivar Roads to Red Fish Light 1



U.S. Army Corps of Engineers
Galveston District

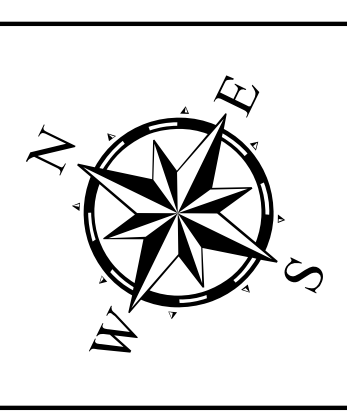


Channel Features	Aids to Navigation	MLLW
— Channel Toe	Green Side Aids	0 - 30
- - - Channel Center Line	Red Side Aids	30 - 35
— Channel Station Lines	Lights	35 - 40
↔ Channel Dimensions		40 - 42
		42 - 44
		44 - 46
		46 - 48
		48 - 50
		< 50
		NOAA Bathymetry (DREDGING REACH EXTENT)
		0 - 10 10 - 15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

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Coordinate System: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet
Projection: Lambert Conformal Conic / Datum: North American 1983

Dredging Reach Extent
0 0.25 0.5 1 Miles

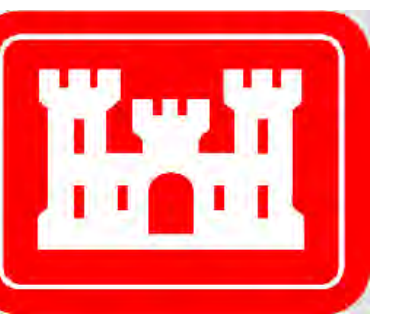
Hydrographic Survey Extent
0 215 430 860 Feet

Survey Date(s): 20 August 2019	Authorized Depth: -46ft.
Page: 4 of 61	Side Slope Ratio: (Rise : Run)
Scale: 1:2,500	Additional Imagery: © DigitalGlobe Inc.
Map:	Print Date: 9/18/2019
Mapped by: MSAOX PAC	
Additional Info :	

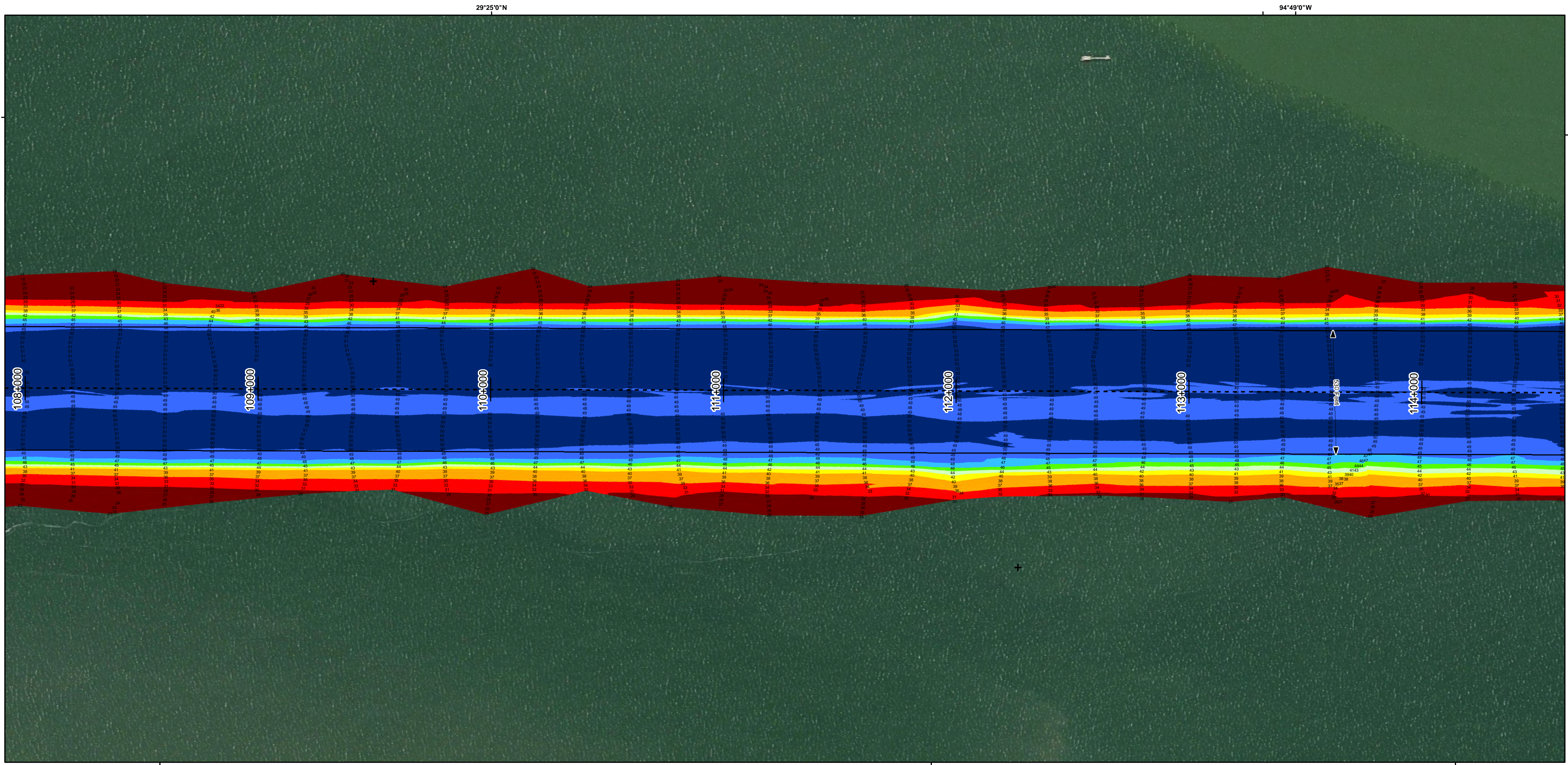
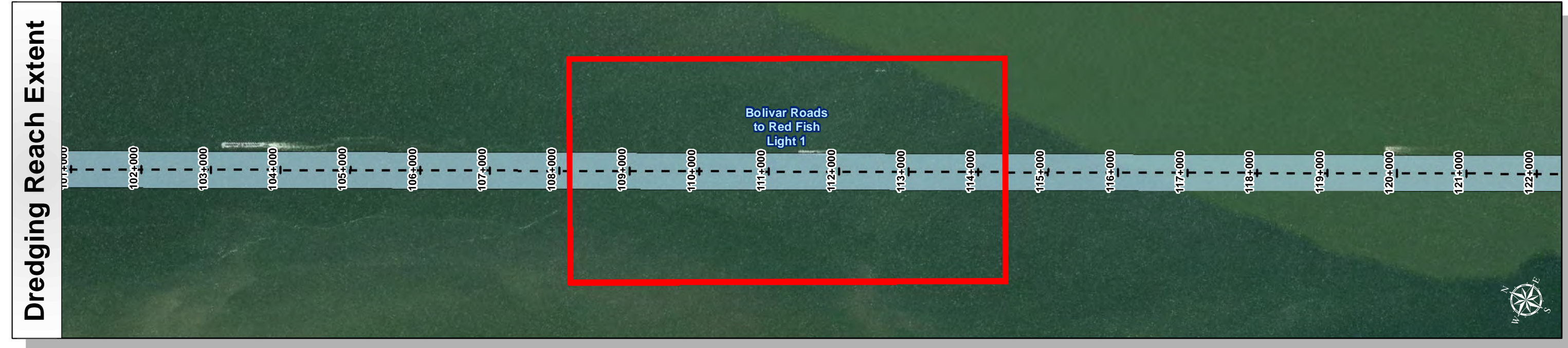
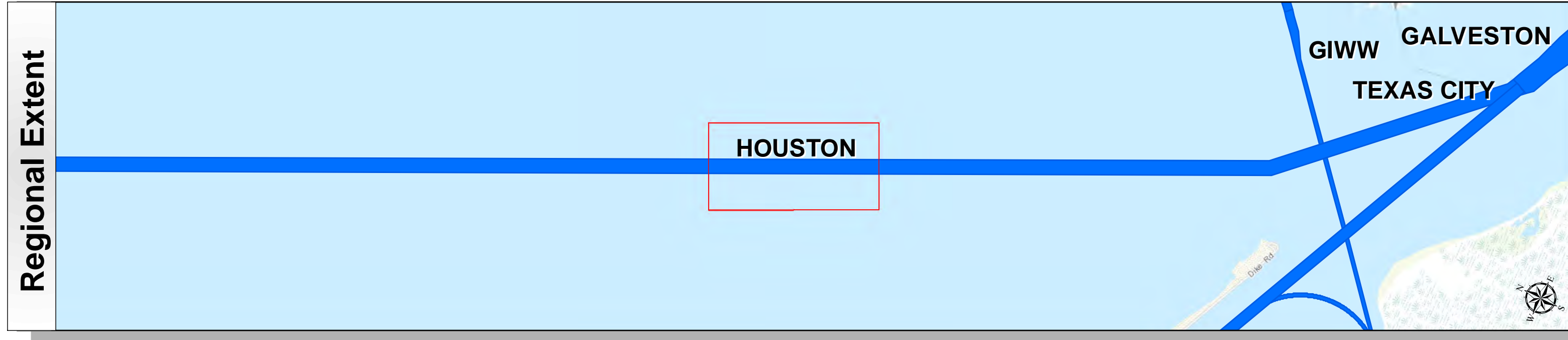
HYDROGRAPHIC SURVEY
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
GALVESTON, TEXAS

Station: 138+476 to 78+844
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Houston Ship Channel: Bolivar Roads to Red Fish Light 1



U.S. Army Corps of Engineers
Galveston District



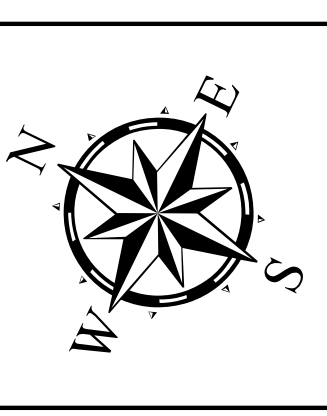
Channel Features	Aids to Navigation	MLLW
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		46 - 48
		48 - 50
		< 50
		NOAA Bathymetry (DREDGING REACH EXTENT)
		0 - 10
		10 - 15
		15 - 20
		20 - 25
		25 - 30
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Projection: Lambert Conformal Conic /Datum: North American 1983

Dredging Reach Extent
0 0.25 0.5 1 Miles

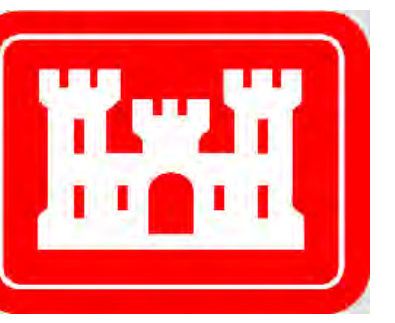
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Page: 5 of 61	Side Slope Ratio: (Rise : Run)
Scale: 1:2,500	Additional Imagery: © DigitalGlobe Inc.
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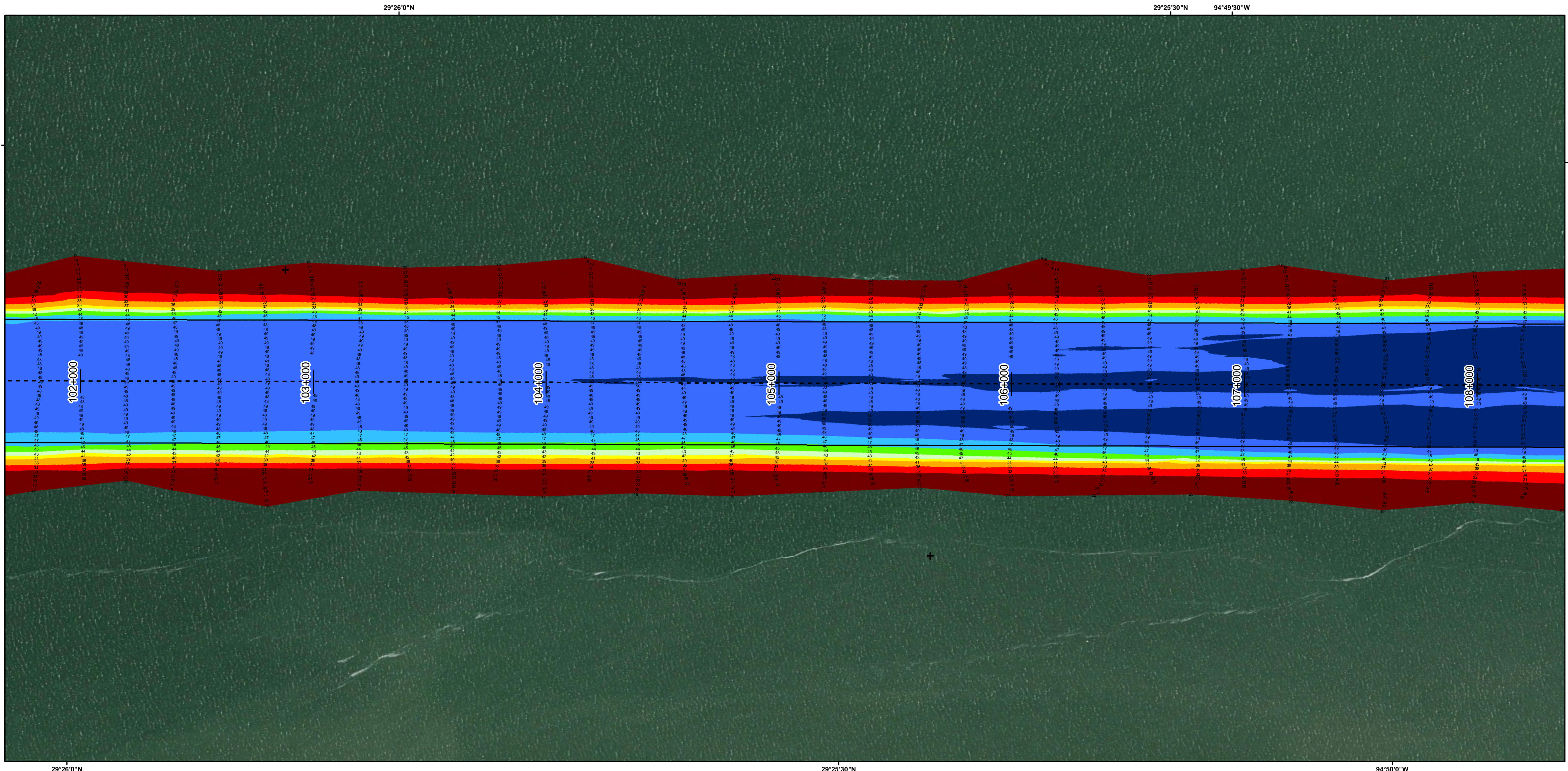
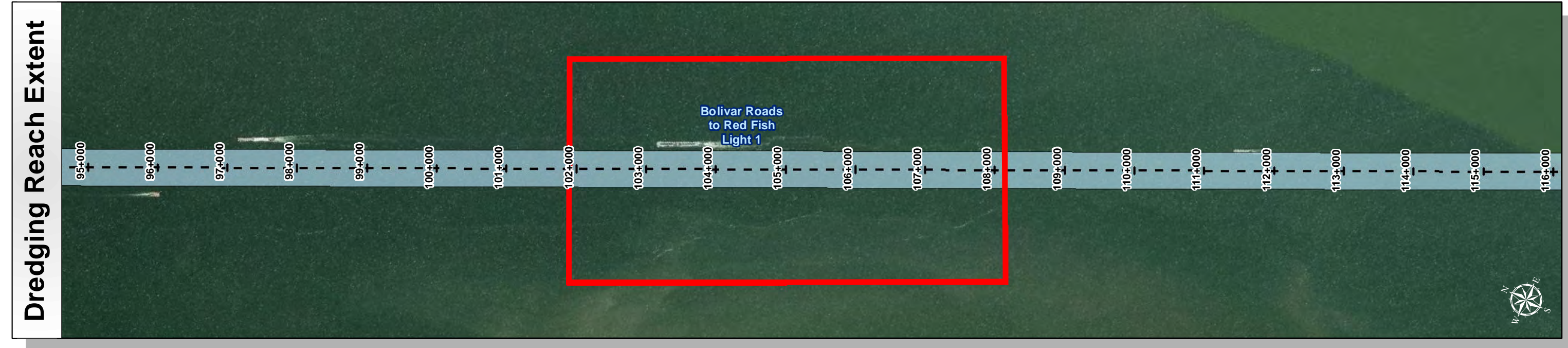
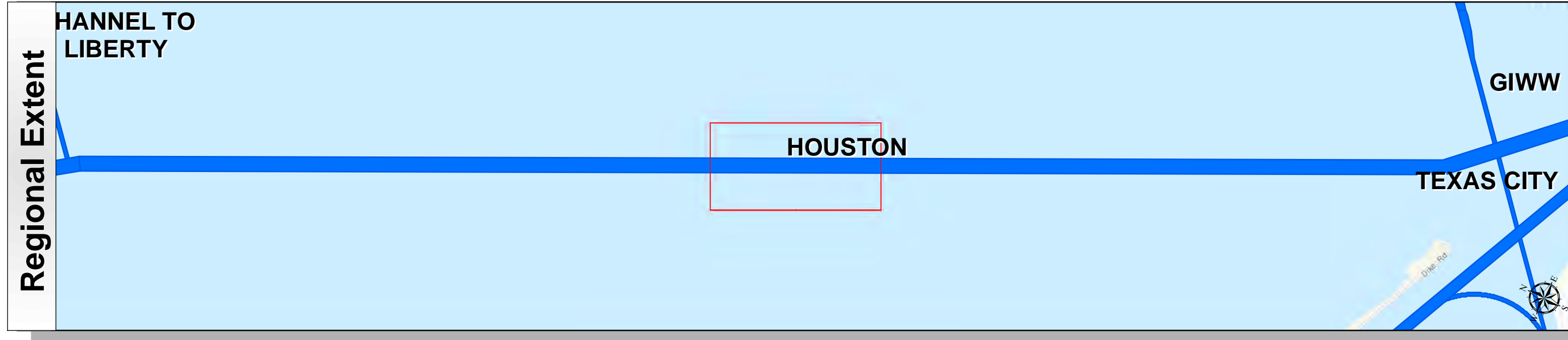
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U.S. Army Corps of Engineers
Galveston District



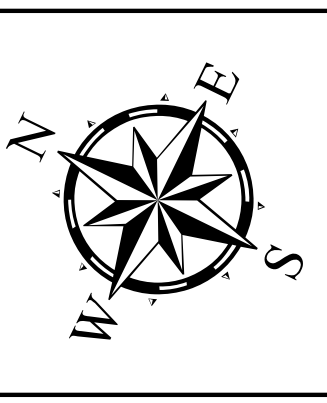
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Dredging Reach Extent
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Page: 6 of 61	Side Slope Ratio: (Rise : Run)
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Additional Info :	

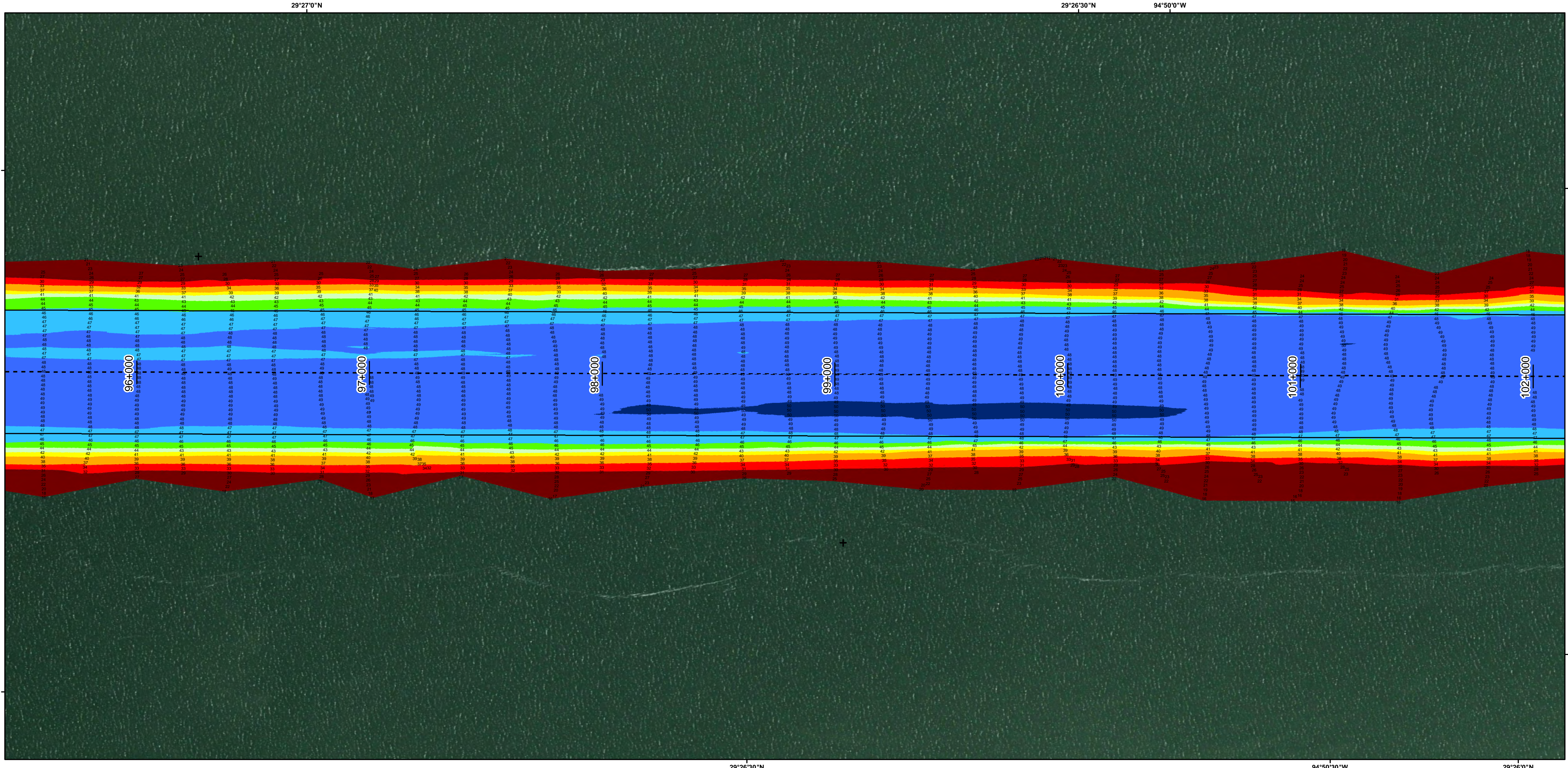
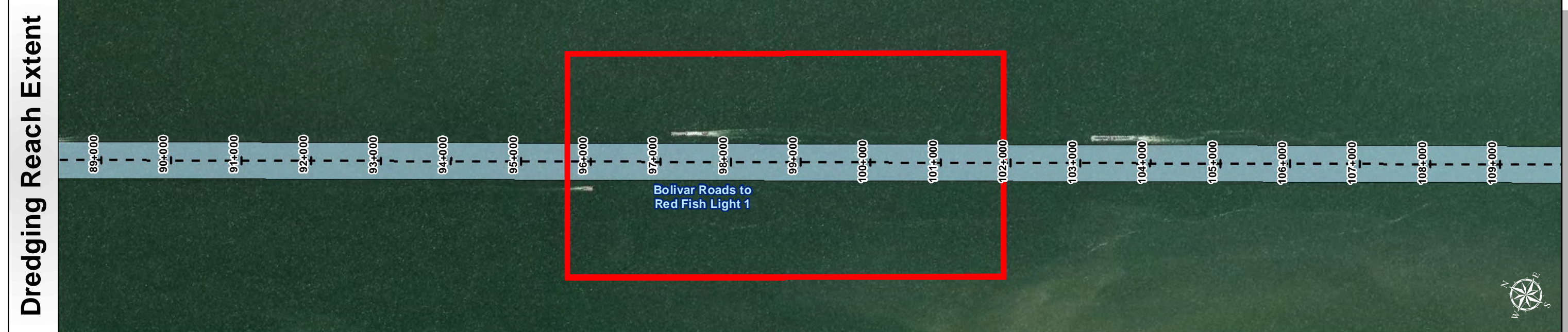
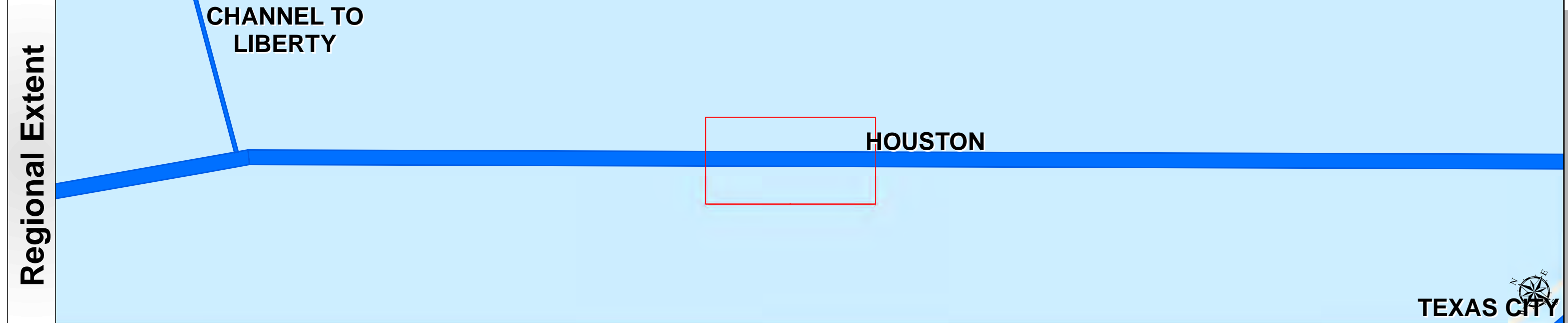
HYDROGRAPHIC SURVEY
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
GALVESTON, TEXAS

Station: 138+476 to 78+844
HOUSTON
HOUSTON, TEXAS

Houston Ship Channel: Bolivar Roads to Red Fish Light 1



U.S. Army Corps of Engineers
Galveston District

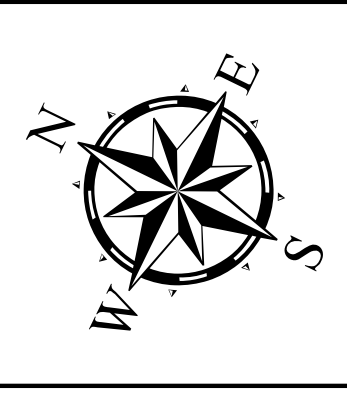


Channel Features	Aids to Navigation	MLLW
— Channel Toe	Green Side Aids	0 - 30
- - - Channel Center Line	Red Side Aids	30 - 35
— Channel Station Lines	Lights	35 - 40
↔ Channel Dimensions		40 - 42
		42 - 44
		44 - 46
		46 - 48
		48 - 50
		< 50
		NOAA Bathymetry (DREDGING REACH EXTENT)
		0 - 10 10 - 15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

NOTES:
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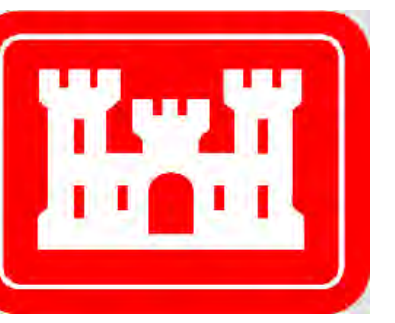
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Dredging Reach Extent 0 0.25 0.5 1 Miles
Hydrographic Survey Extent 0 215 430 860 Feet

Survey Date(s): 20 August 2019	Authorized Depth: -46ft.
Page: 7 of 61	Side Slope Ratio: (Rise : Run)
Scale: 1:2,500	Additional Imagery: © DigitalGlobe Inc.
Mapped by: MSAOX PAC	Print Date: 9/18/2019
Additional Info :	

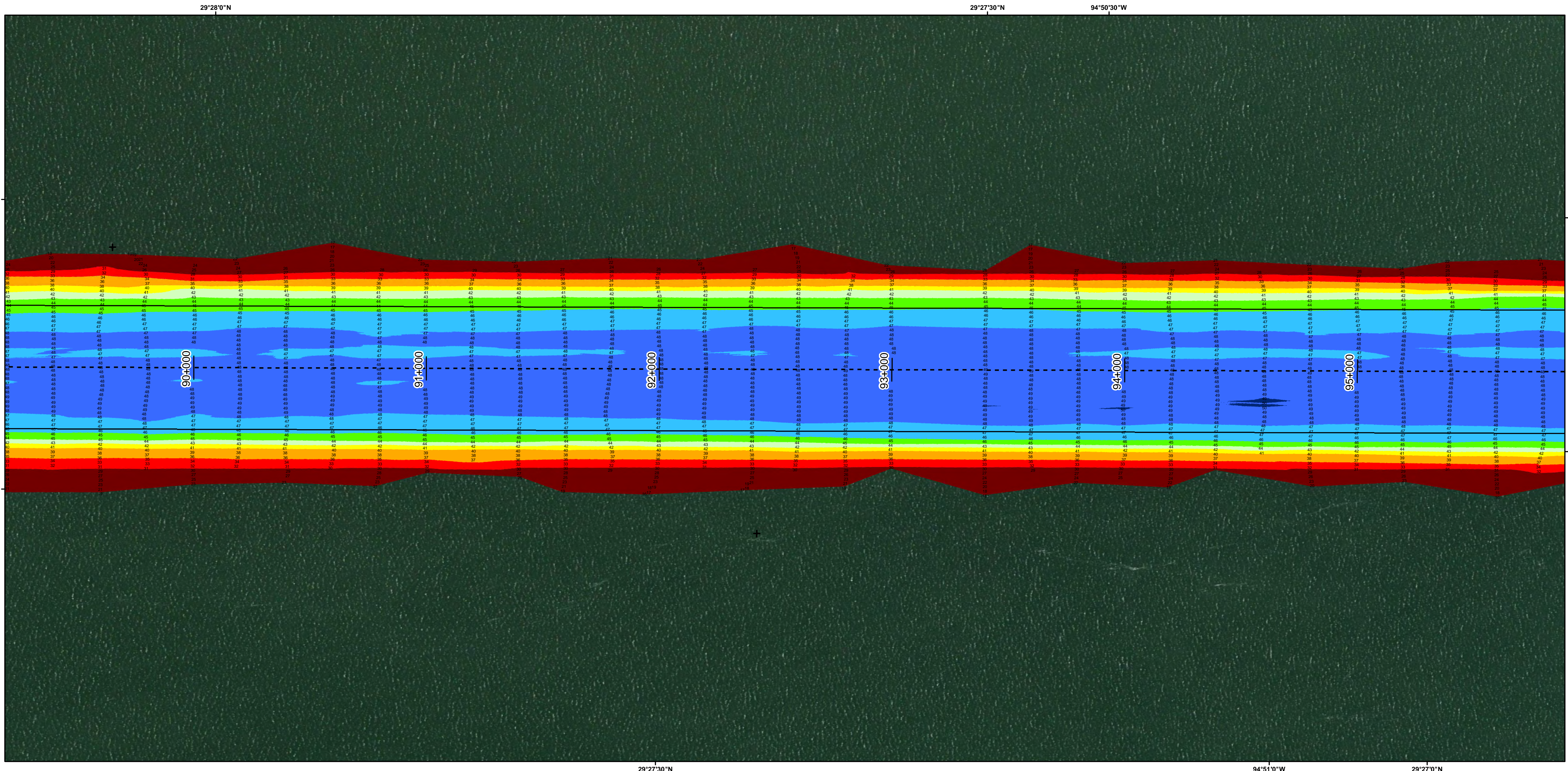
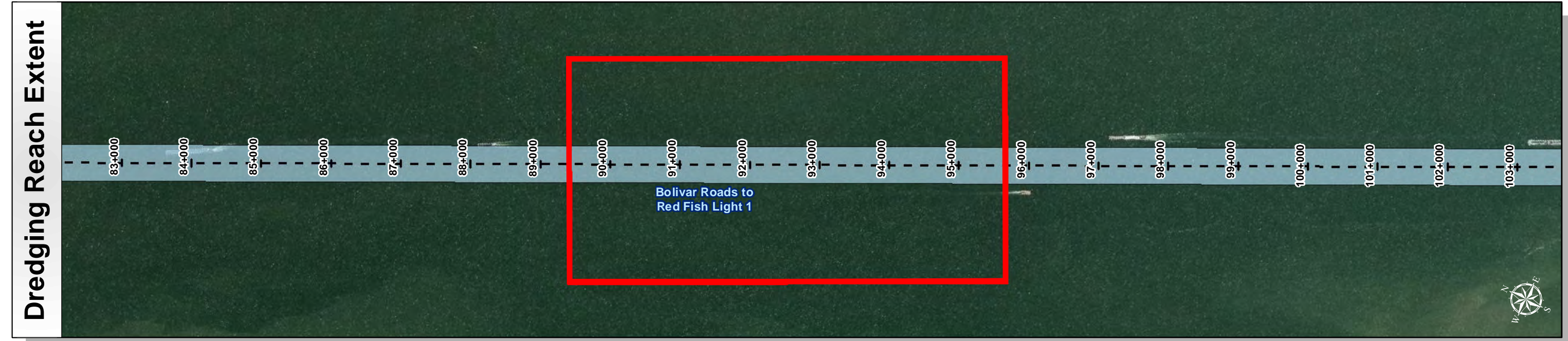
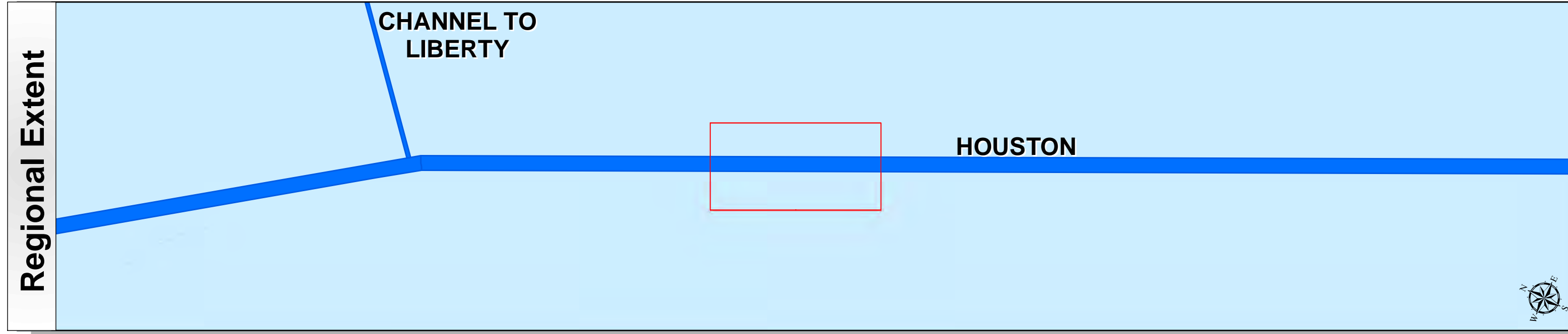
HYDROGRAPHIC SURVEY
 U.S. ARMY ENGINEER DISTRICT
 CORPS OF ENGINEERS
 GALVESTON, TEXAS

Station: 138+476 to 78+844
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Houston Ship Channel: Bolivar Roads to Red Fish Light 1



U.S. Army Corps of Engineers
Galveston District



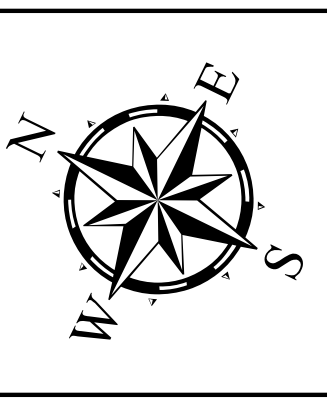
Channel Features	Aids to Navigation	MLLW															
<ul style="list-style-type: none"> Channel Toe Channel Center Line Channel Station Lines Channel Dimensions 	<ul style="list-style-type: none"> Green Side Aids Red Side Aids Lights 	<table border="1"> <tr> <td>0 - 30</td> <td>30 - 35</td> <td>35 - 40</td> <td>40 - 42</td> <td>42 - 44</td> <td>44 - 46</td> <td>46 - 48</td> <td>48 - 50</td> <td>< 50</td> </tr> </table> <p>NOAA Bathymetry (DREDGING REACH EXTENT)</p> <table border="1"> <tr> <td>0 - 10</td> <td>10 - 15</td> <td>15 - 20</td> <td>20 - 25</td> <td>25 - 30</td> <td>30 - 50</td> </tr> </table>	0 - 30	30 - 35	35 - 40	40 - 42	42 - 44	44 - 46	46 - 48	48 - 50	< 50	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 50
0 - 30	30 - 35	35 - 40	40 - 42	42 - 44	44 - 46	46 - 48	48 - 50	< 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 0.25 0.5 1 Miles
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Survey Date(s): 20 August 2019	Authorized Depth: -46ft.
Page: 8 of 61	Side Slope Ratio: (Rise : Run)
Scale: 1:2,500	Additional Imagery: © DigitalGlobe Inc.
Map:	Print Date: 9/18/2019
Maped by: MSAOX PAC	
Additional Info:	

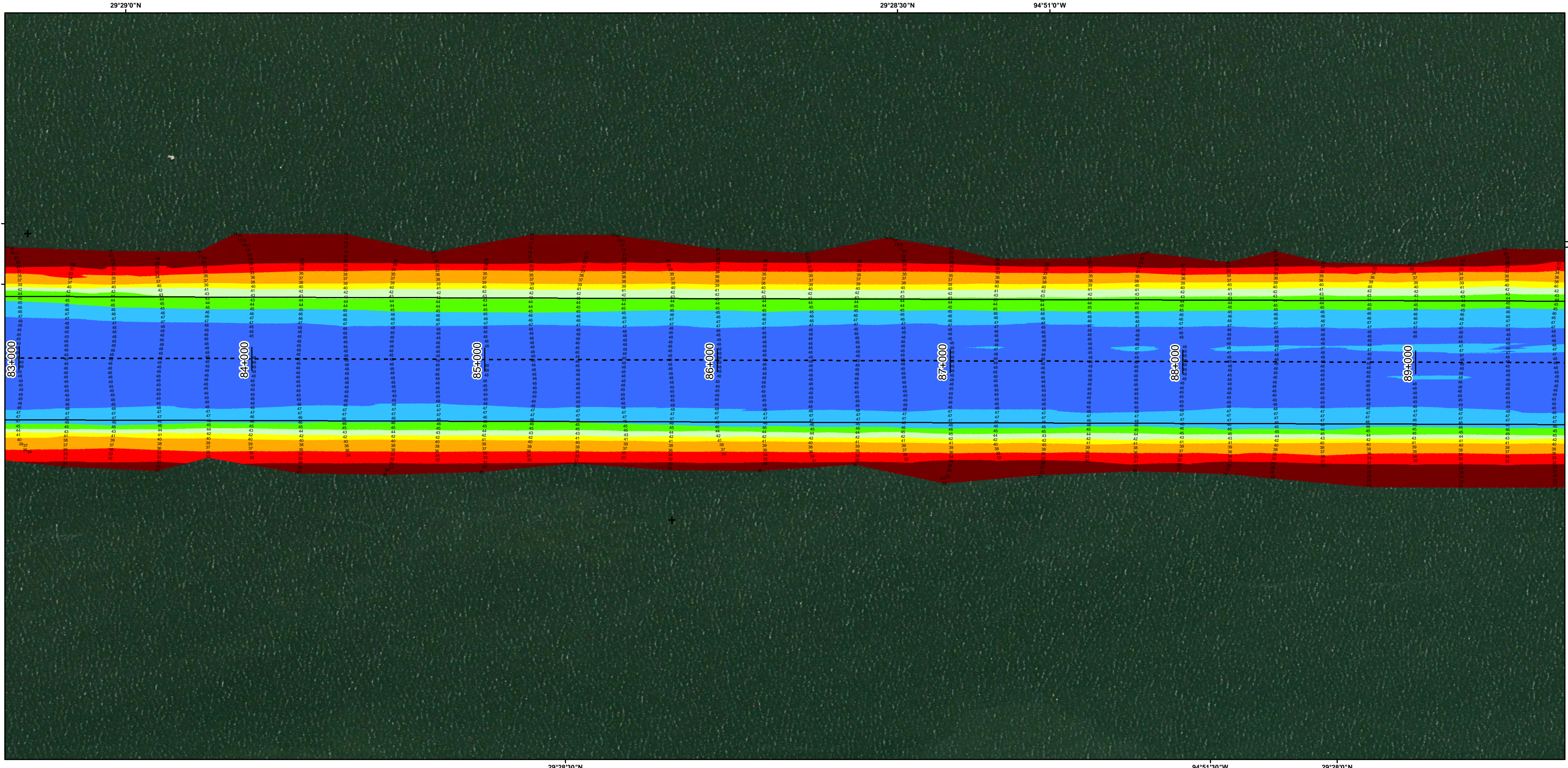
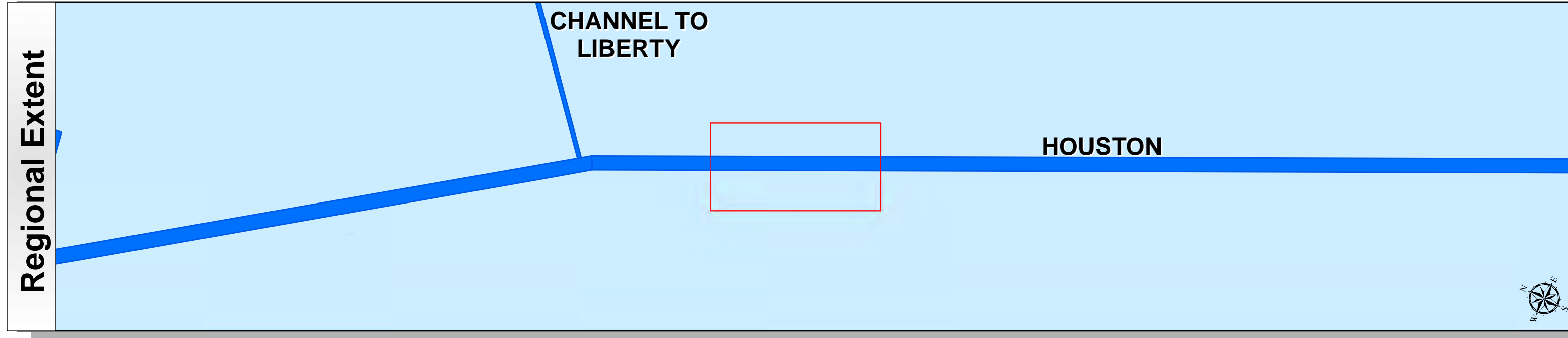
HYDROGRAPHIC SURVEY
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Houston Ship Channel: Bolivar Roads to Red Fish Light 1



U.S. Army Corps of Engineers
Galveston District



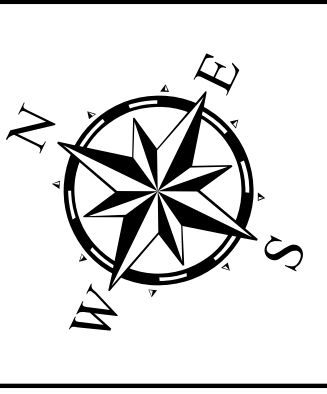
Channel Features	Aids to Navigation	MLLW															
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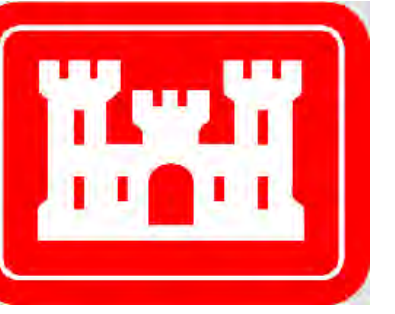
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Page: 9 of 61	Side Slope Ratio: (Rise : Run)
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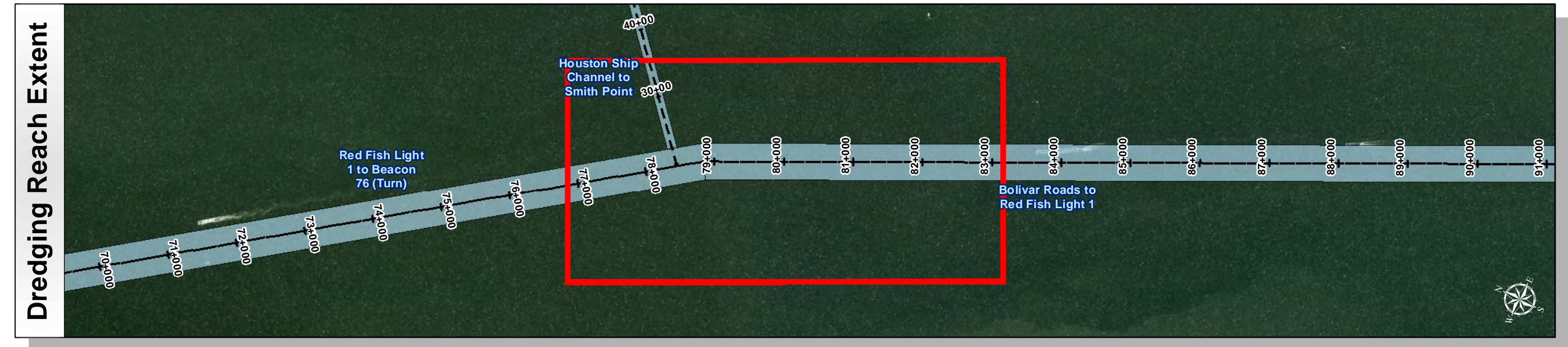
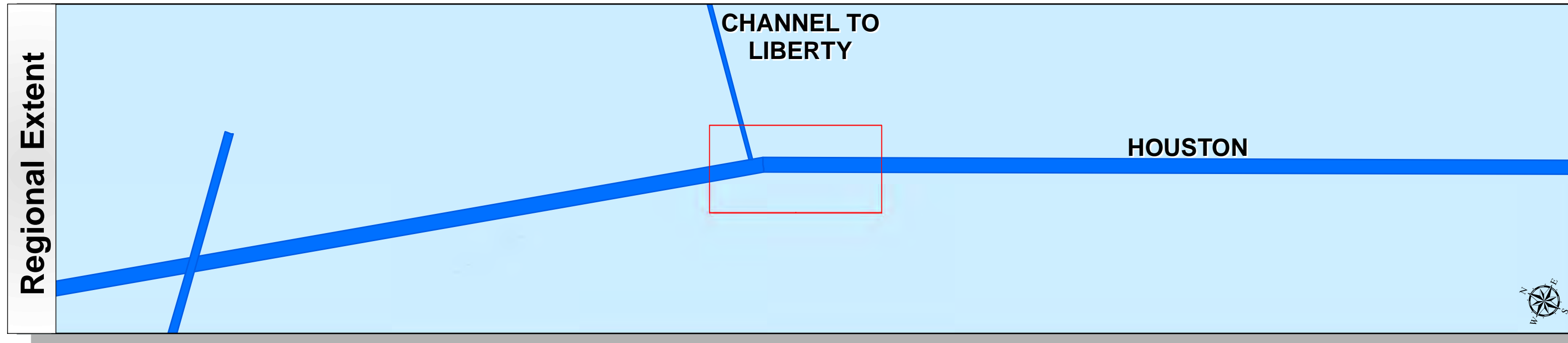
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CORPS OF ENGINEERS
GALVESTON, TEXAS

Station: 138+476 to 78+844
HOUSTON
HOUSTON, TEXAS

Houston Ship Channel: Bolivar Roads to Red Fish Light 1



U.S. Army Corps of Engineers
Galveston District



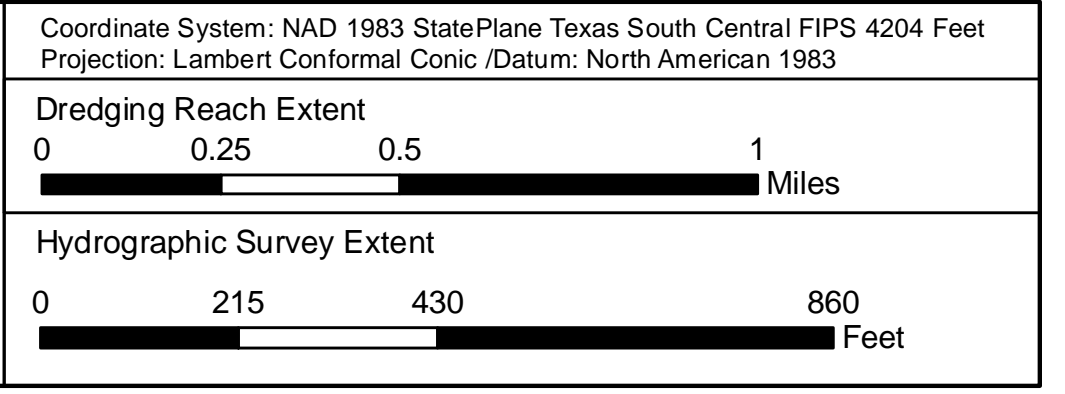
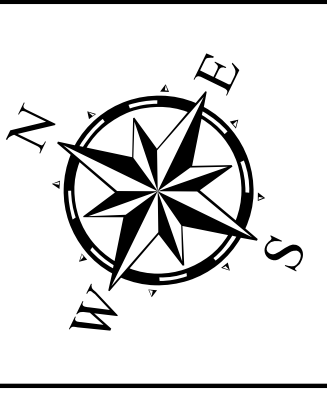
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