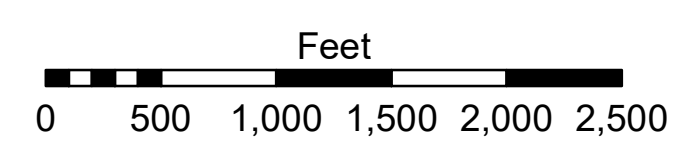
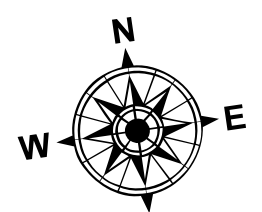


LEGEND

--- Federal Navigation Channel	○ Cable Area	□ Borrow Area	■ 0' and above
— Federal Navigation Center Line	■ Placement Area	● Shoalest Sounding**	■ 0' to -5'
— As-built Pipeline/Cable	□ Anchorage Area	★ Beacon, General	■ -5' to -10'
..... Unconfirmed Pipeline/Cable	⊗ Obstruction Point	◆ Red Navigation Buoy	■ -10' to -20'
— Project Depth Contour	⚓ Wrecks-Submerged	◆ Green Navigation Buoy	■ -20' to -30'
			■ -30' to -35'
			■ -35' to -40'
			■ -40' to -45'
			■ -45' and below



LWRP: 1.9
 Gage Reading: BR:27.0 DON:18.6 USED: 23.20 NAVD
 Sea Conditions: SMOOTH
 Vessel Name: OB189
 Survey Type: CS
 Sounding Frequency***: HIGH

NOTES:

Horizontal Coordinate System: North American Datum of 1983 (NAD83), projected to the State Plane Coordinate System (SPCS), Louisiana South Zone. Distance units in U.S. Survey Feet.

Vertical Datum: Soundings are shown in feet and indicate depths below Low Water Reference Plane 2007 (NAVD). Distances on the Mississippi River, above and below Head of Passes are shown at 1 mile intervals.

The location of navigation aids are base on and provided by the U.S. Coast Guard and USACE crew. 2015 Aerial Photography data source: NAIP, USDA-FSA-APFO Aerial Photography Field Office.

Reference is N.O.A. Navigation Chart No. 11370.

** Shoalest Sounding per Quarter per Reach.

*** High frequency (200 kHz) survey data represents the first signal return at a sounding location and will include suspended solids, known as "fluff", if present. Low frequency (20 kHz) survey data normally penetrates through this "fluff" layer to depict elevations of consolidated bottom material. Low frequency accuracies may vary depending on channel conditions and fathometer settings.



DISTRIBUTION LIABILITY: The data represents the results of data collection/processing for a specific US Army Corps of Engineers project. It is only valid for its intended use, content, time and accuracy specifications. The user is responsible for the results of their use. The application of the data for other than its intended purpose is at the user's risk. Data Constants: Hydrographic survey data is subject to change rapidly due to several factors including but not limited to changing bathymetry, sedimentation, and other factors. The user is responsible for the data. The information depicted on this map represents the results of a survey conducted on the date shown. It is not intended to represent the general condition existing at that time.

U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT	
Submitted: RYLAND/RHODEN	Surveyed By: RYLAND/RHODEN
Recommended: Chief, Survey Section	Plotted By: JH
Approved: Chief, Waterways Maintenance Section	Checked By: JH

**MISSISSIPPI RIVER - B.R. TO GULF
 GRANADA CROSSING
 MD_10_GRA_20220120_CS
 20 January 2022**

**Sheet Reference Number
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