

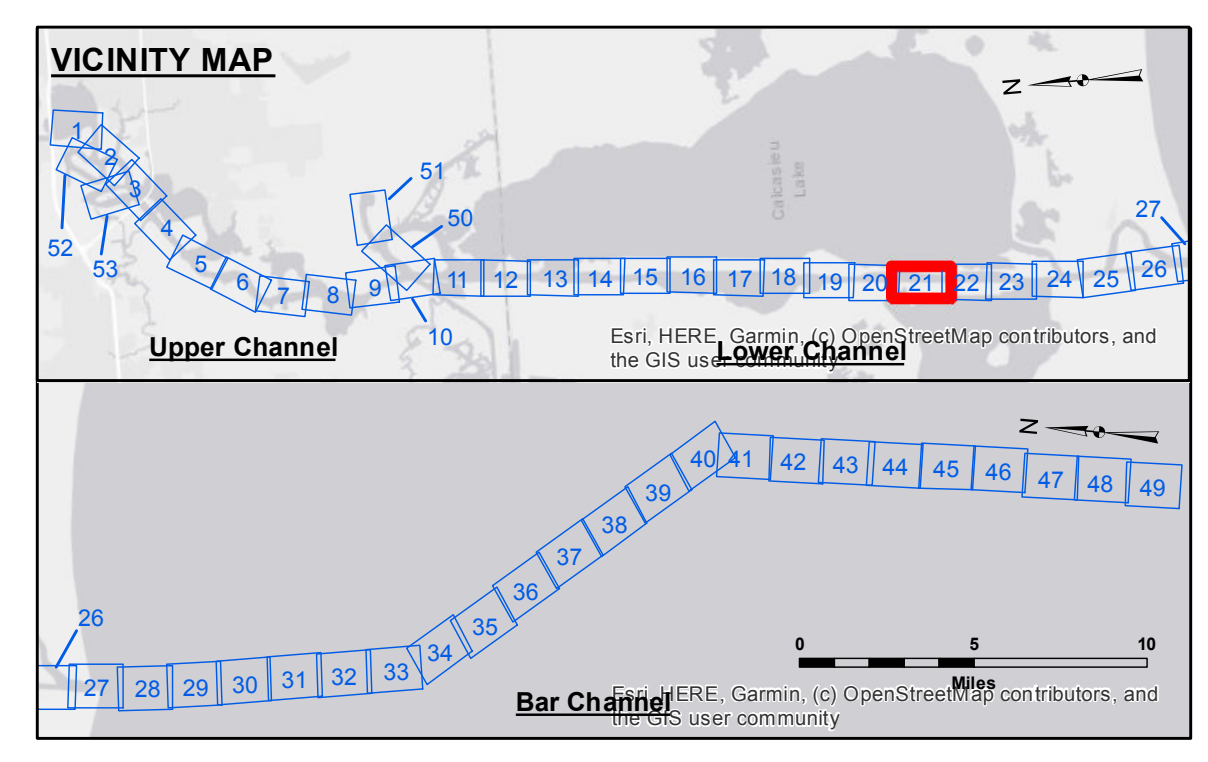
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Submitted:	Surveyed By: S.P.M.
Recommended:	Plotted By: B.D.
Approved:	Checked By: A.C.

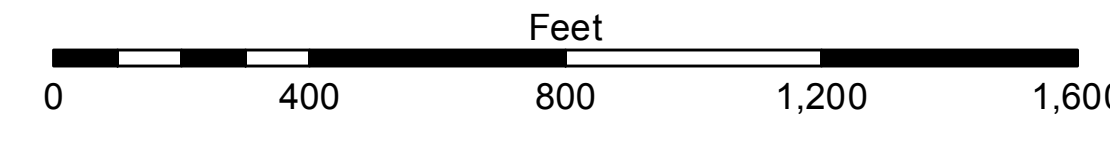
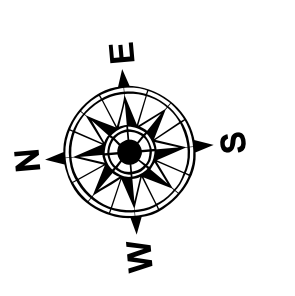
U.S. ARMY CORPS OF ENGINEERS
 NEW ORLEANS DISTRICT
 Chief, Waterways Maintenance Section

**CALCASIEU SHIP CHANNEL
 LOWER SHEET 21
 CR_21_LWR_20210930_CS
 30 September 2021**

**Sheet Reference Number
 21 of 53**



LEGEND	
--- Federal Navigation Channel	○ Cable Area
— Federal Navigation Center Line	□ Placement Area
— As-built Pipeline/Cable	⊗ Anchorage Area
..... Unconfirmed Pipeline/Cable	⊙ Obstruction Point
— Project Depth Contour	⚓ Wrecks-Submerged
3 Fluff Thickness (feet)*	★ Beacon, General
● Shoalest Sounding**	◆ Red Navigation Buoy
○ Green Navigation Buoy	◆ Green Navigation Buoy



Gage Reading: DM 57: 1.9 MLLW
 Sea Conditions: CALM
 Vessel Name: OB-167
 Survey Type: CONDITION
 Sounding Frequency***: LOW

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 Mean Lower Low Water Datum (MLLW).
 Datum Relationships for gage 73625 as of December 2013:
 0.0' NAVD83 (2009.55) = 1.2' MLLW = 2.2' MLG or 0.0' MLLW = 1.0' MLG
 Distances on the Calcasieu River are shown at 1 mile intervals.
 The location of navigation aids are base on and provided by the U.S. Coast Guard
 and USACE survey crews.
 2015 Aerial Photography data source: NAIP
 Reference is N.O.A.A. Navigation Chart No. 11339.
 * Difference between high and low frequency elevations where greater than 1.0'.
 ** 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.