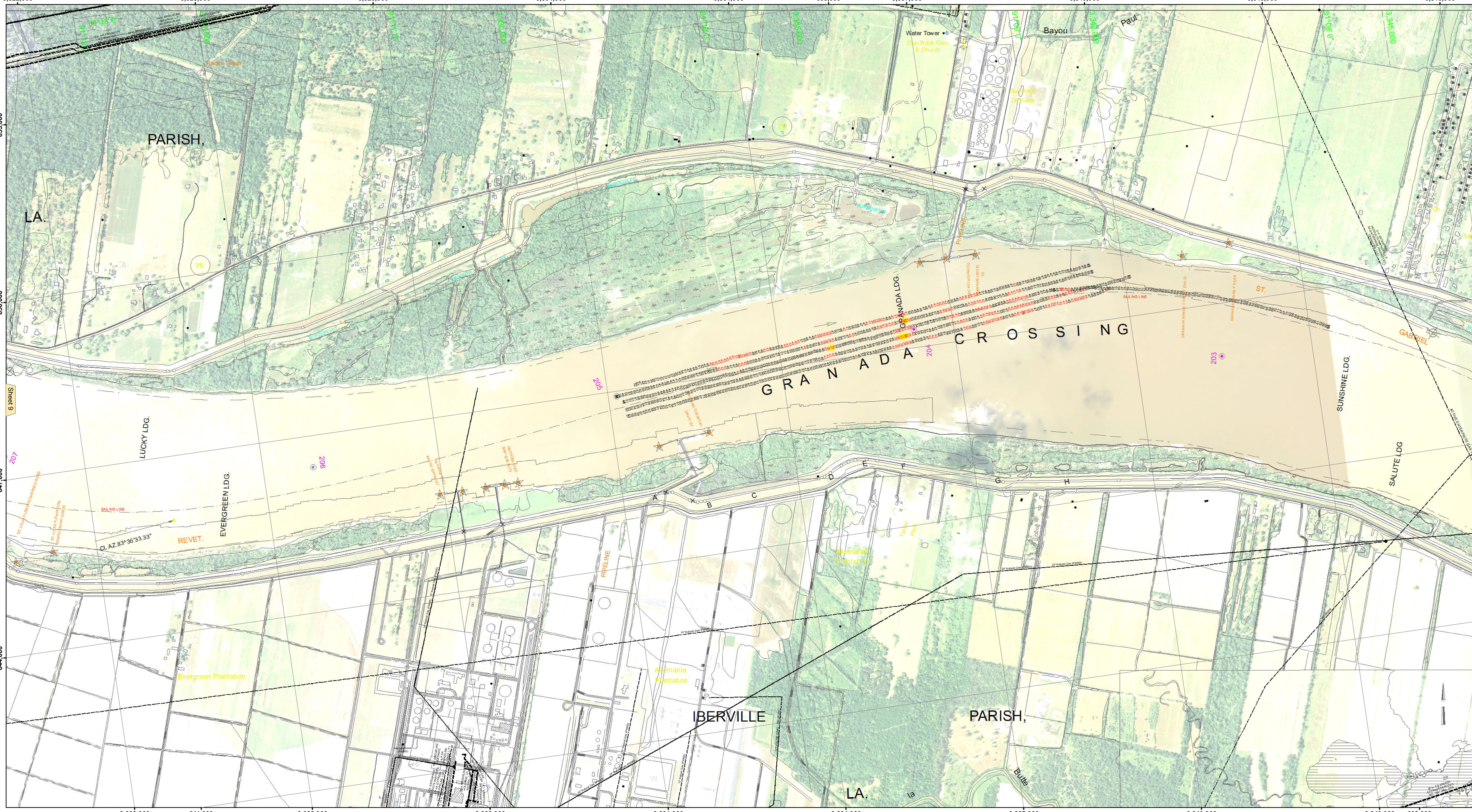

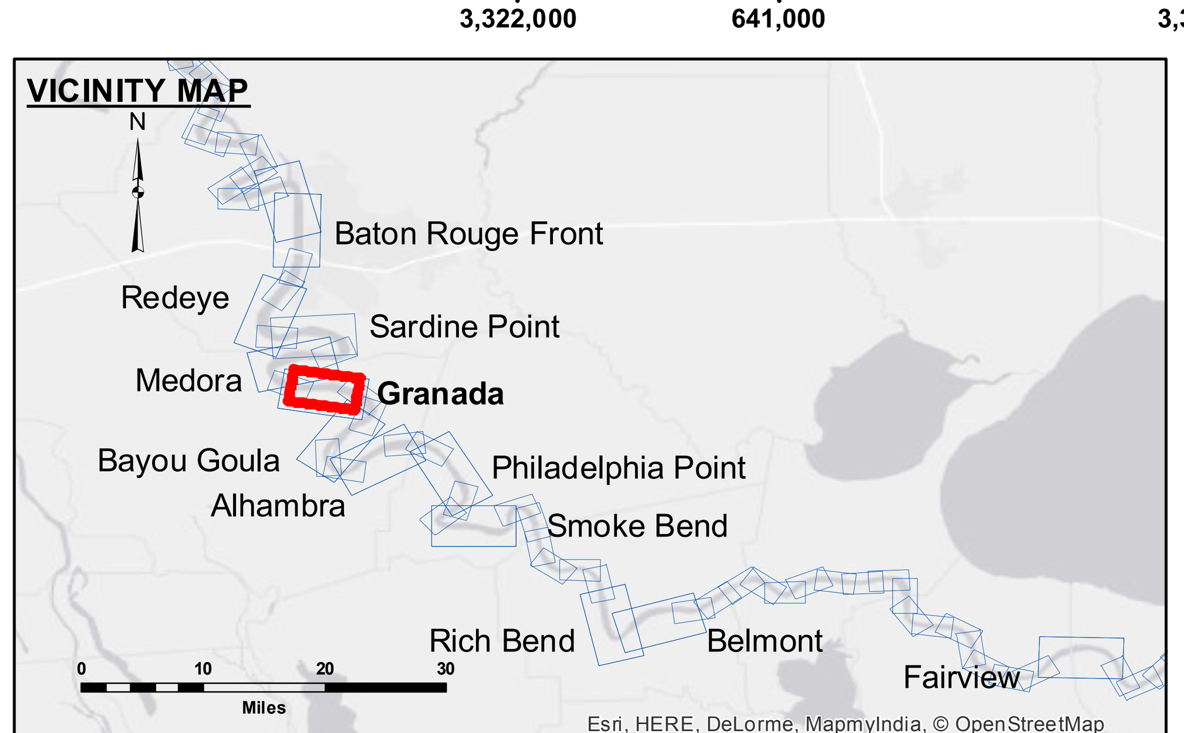

LEGEND

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

N
W
E
S

LWRP:	1.9
Gage Reading:	BR:31.7D:22.2 USED:27.4 NGVD
Sea Conditions:	CALM
Vessel Name:	OB-189
Survey Type:	RECON
Sounding Frequency***:	HIGH

Feet

0 500 1,000 1,500 2,000 2,500

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 (NGVD).

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.

2010 Aerial Photography data source: NAIP, USDA-FSA-APFO Aerial Photography Field Office.

Reference is N.O.A.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 consoldiated bottom material. Low frequency accuracies may vary depending on channel conditions and fathometer settings.

US Army Corps of Engineers District: CEMVN

U.S. ARMY COPRPS OF ENGINEERS
NEW ORLEANS DISTRICT

Submitted:	Surveyed By: DS/PS
Recommended: Chief, Survey Section	Plotted By: AO
Approved: Chief, Waterways Maintenance Section	Checked By: MK

MISSISSIPPI RIVER - B.R. TO GULF

GRANADA RECON

MR_10_GRA_20160414

14 April 2016

Revision Number:
3.8.0-20150202