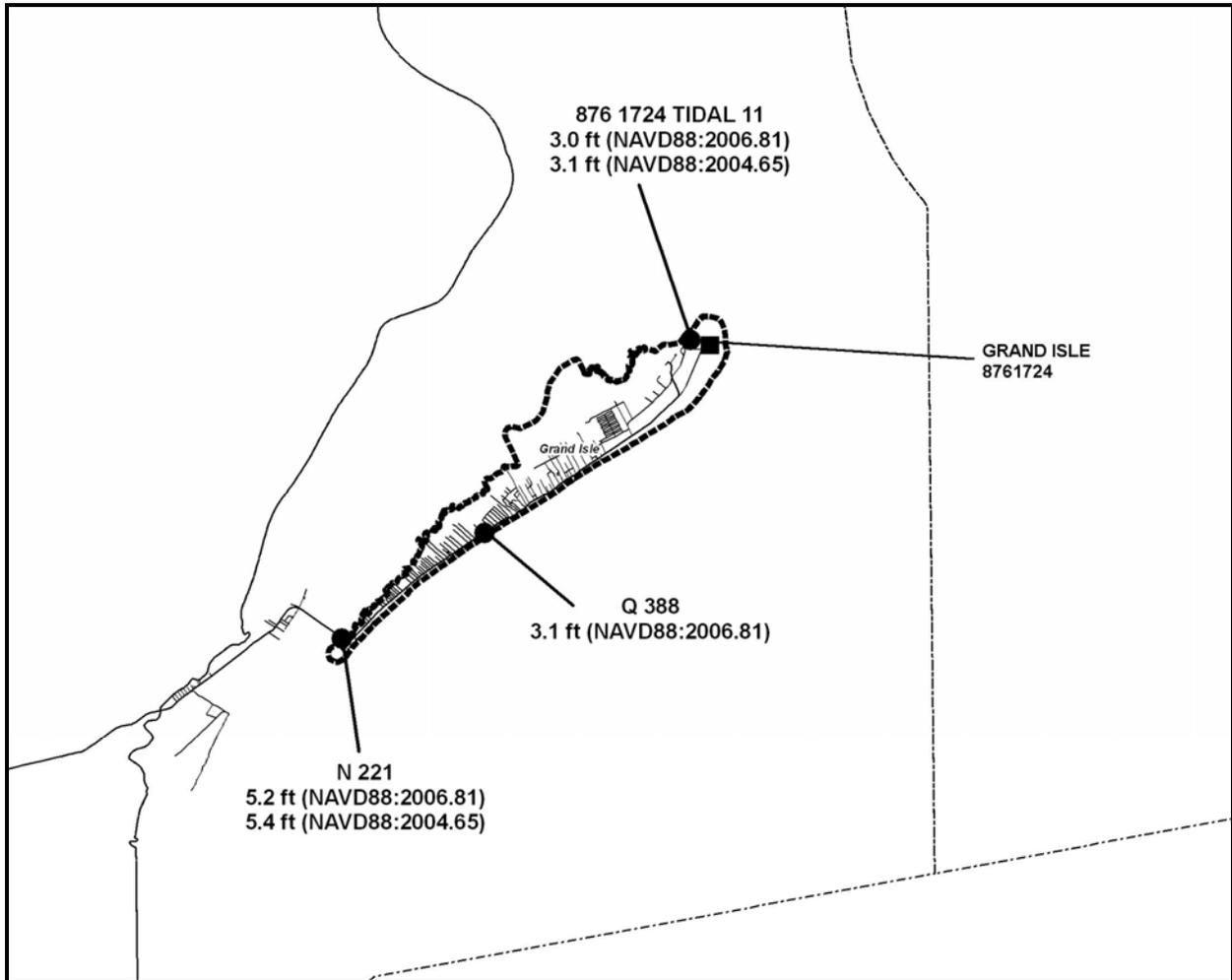


# Grande Isle Polder Vertical Datum Report



Original Date: 1 April 2010  
Expiration Date: 31 December 2010

USACE, New Orleans District  
CEMVN-ED-SS

**Purpose:**

This Polder Vertical Datum Report contains detailed information about three National Spatial Reference System (NSRS) "Permanent Bench Marks" established by the National Geodetic Survey (NGS). For USACE-MVN projects that lie within the extent of the subject polder, these "Permanent Bench Marks" are approved for use by USACE-MVN-ED as "Vertical Project Control" for all designs, plans and specifications. This report also contains information (when available) on tide gauges within or near the Polder and their associated geodetic/tidal datum relationships.

**Expiration Date:**

Due to regional subsidence and global sea-level rise, the published elevations of the referenced benchmarks and the published tidal datum values at the referenced gauges (as well as the geodetic/tidal datum relationships computed therefrom) are time-dependant and subject to change. Therefore, the information contained in this report shall be updated on a regular basis (every year) and/or as new information becomes available.

## Section 1: Grande Isle, Polder Bench Marks

The three National Spatial Reference System (NSRS) Permanent Bench Marks established by the National Geodetic Survey (NGS) and designated for use in this Polder are as follows:

**DESIGNATION:** N 221  
**PID:** AU1291

**STATE/COUNTY:** LA/JEFFERSON  
**USGS QUAD:** CAMINADA PASS (1994)  
**LAT/LON:** N 29°12'16.50777" W 090°02'24.25855" NAD83(2007)  
**NORTH/EAST:** N 258,567.42' E 3,693,447.65' SPC LA S (US feet)  
**ELEVATION:** 5.2 feet NAVD88(2006.81)  
**ELEVATION:** 5.4 feet NAVD88(2004.65)  
**MARKER:** BENCH MARK DISK  
**STAMPING:** N 221 1965

**DESCRIPTION:** THE STATION IS LOCATED ON THE SOUTHEAST CORNER OF A BRIDGE ABUTMENT CROSSING CAMINADA PASS AT THE SOUTHWEST END OF GRAND ISLE, LA. OWNERSHIP - LOUISIANA DEPT OF TRANSPORTATION. TO REACH THE STATION FROM THE POST OFFICE IN GRAND ISLE, LA, PROCEED SOUTHWESTERLY ALONG HWY. 1, FOR 3.55 MILES TO BRIDGE CROSSING CAMINADA PASS, AND THE MARK IS ON THE LEFT. THE STATION IS 1.0 FT. NORTHEAST OF THE SOUTHWEST END OF THE SOUTHEAST CONCRETE ABUTMENT OF THE HWY BRIDGE CROSSING CAMINADA PASS, 18 FT SOUTHWEST OF THE CENTERLINE OF HWY, AND 1.0 FT. BELOW THE LEVEL OF HWY.

**DESIGNATION:** 876 1724 TIDAL 11  
**PID:** AT0685

**STATE/COUNTY:** LA/JEFFERSON  
**USGS QUAD:** BARATARIA PASS (1993)  
**LAT/LON:** N 29°15'53.27904" W 089°57'27.08170" NAD83(2007)  
**NORTH/EAST:** N 280,769.59' E 3,719,520.77' SPC LA S (US feet)  
**ELEVATION:** 3.0 feet NAVD88(2006.81)  
**ELEVATION:** 3.1 feet NAVD88(2004.65)  
**MARKER:** SURVEY DISK  
**STAMPING:** 11

**DESCRIPTION:** 2.4 MI (3.9 KM) NORTHEASTERLY ALONG STATE ROAD 1 FROM THE POST OFFICE IN GRAND ISLE, THEN 0.8 MI (1.3 KM) NORTHEASTERLY ALONG A PAVED ROAD, THEN 0.05 MI (0.08 KM) ALONG SEMPER ROAD THAT LEADS TO THE US COAST GUARD BASE, THE BENCH MARK IS SET FLUSH IN TOP OF A CONCRETE BULKHEAD NEXT TO THE SMALL BOAT HOUSE, 46.63 M (152.99 FT) WEST OF THE ENTRANCE DOORS TO THE COAST GUARD ADMINISTRATION BUILDING, 18.50 M (60.70 FT) SOUTH OF THE NE CORNER OF THE CONCRETE BULKHEAD, AND 7.38 M (24.21 FT) NORTH OF THE NE PILE OF THE NOAA TIDE STATION PLATFORM.

**DESIGNATION: Q 388**

PID: AU3508

STATE/COUNTY: LA/JEFFERSON

USGS QUAD: CAMINADA PASS (1994)

LAT/LON: N 29°13'34.05389" W 090°00'23.77170" NAD83(2007)

NORTH/EAST: N 266,522.25' E 3,704,034.61' SPC LA S (US feet)

ELEVATION: 3.1 feet NAVD88(2006.81)

MARKER: FLANGE-ENCASED ROD

STAMPING: Q 388 1993

DESCRIPTION: IN GRAND ISLE, AT THE INTERSECTION OF STATE HIGHWAY 1 AND HERWIG LANE, 56.0 M (183.7 FT) SOUTHWEST OF THE CENTER OF THE LANE, 11.3 M (37.1 FT) SOUTHWEST OF THE CENTER OF THE SOUTHWEST DRIVEWAY LEADING TO A TEXACO SERVICE STATION, 8.7 M (28.5 FT) NORTHWEST OF THE CENTERLINE OF THE HIGHWAY, 2.4 M (7.9 FT) SOUTHWEST OF AN UNDERGROUND CABLE JUNCTION BOX, 0.4 M (1.3 FT) SOUTHWEST OF A WITNESS POST, AND 0.3 M (1.0 FT) ABOVE THE LEVEL OF THE HIGHWAY. NOTE--ACCESS TO THE DATUM POINT IS THROUGH A 5-INCH LOGO CAP. RECOVERED IN GOOD CONDITION 4.3 M (14.1 FT) SOUTHEAST OF A FLAG POLE, 3.9 M (12.8 FT) SOUTH OF THE SOUTHEAST LEG FOR A WELCOME TO GRAND ISLE SIGN, AND 1.5 M (4.9 FT) SOUTHWEST OF A UTILITY POLE AND WITNESS POST.

Use of the above benchmarks for all USACE MVN funded survey field work and in all plans and specifications shall be in accordance with: USACE MVN Engineering Division Datum Policy Memo #3, "Requirements for Use of Benchmarks for USACE Projects," dated March 23, 2009; the USACE New Orleans District Guide for Minimum Survey Standards for performing Topographic, Hydrographic, and Static GPS Control Surveys, Edition 2, dated September 2009 (ref: <http://www.mvn.usace.army.mil/ed/edss/surveyingguidelines.asp>); and a Survey Plan approved by the MVN District Datum Coordinator.

**Section 2: Grande Isle, Polder Tide Gauge Network  
(Complete for each tide gauge in Network)**

**2.1 Current Data**

2.1.1 NOAA Gauge 8761724, Grand Isle, LA

The Local Tidal Datums (LMSL, MLLW, MHHW) for the 2001-2005 National Tidal Datum Epoch (NTDE) have been determined at NOAA Gauge 8761724, Grand Isle, LA. Documentation of the Local Tidal Datum determinations at this tide gauge station may be obtained from <http://www.co-ops.nos.noaa.gov/>.

The NAVD88:2004.65 geodetic elevation of Local Mean Sea Level (LMSL:2001-2005 NTDE) at the above described gauge was determined to be **0.29 feet** as per tie to NGS Station "876 1724 TIDAL 11" (PID AT0685). Documentation of this geodetic/tidal datum relationship may be found in the IPET Study (Volume II - Geodetic Vertical and Water Level Datums) dated 26 March 2007.

**2.2 Superseded Data**

2.2.1 NOAA Gauge 8761724, Grand Isle, LA

The Local Tidal Datums (LMSL, MLLW, MHHW) for the 1983-2001 National Tidal Datum Epoch (NTDE) have been determined at NOAA Gauge 8761724, Grand Isle, LA. Documentation of the Local Tidal Datum determinations at this tide gauge station may be obtained from <http://www.co-ops.nos.noaa.gov/>.

The NAVD88:2004.65 geodetic elevation of Local Mean Sea Level (LMSL:1983-2001 NTDE) at the above described gauge was determined to be **0.20 feet** as per tie to NGS Station "876 1724 TIDAL 11" (PID AT0685). Documentation of this geodetic/tidal datum relationship may be found in the IPET Study (Volume II - Geodetic Vertical and Water Level Datums) dated 26 March 2007.

**2.3 Summary Tabulation of Geodetic/Tidal Datum Relationships**

Gauge ID	Agency	Tidal Datums with respect to Gauge Zero or Station Datum (in feet)			National Tidal Datum Epoch	Geodetic Elev. of Gauge Zero	Geodetic Elevation of Tidal Datums (in feet)			Reference: PBM/TBM, Geodetic Datum/Epoch
		LMSL	MLLW	MHHW			LMSL	MLLW	MHHW	
8761724	NOAA				2001-2005		0.29			876 1724 TIDAL 11 NAVD88:2004.65
8761724	NOAA				1983-2001		0.20			876 1724 TIDAL 11 NAVD88:2004.65

### **Section 3: Grande Isle, Polder Vertical Datum/Control Deficiencies**

Local Tidal Datums at tide gauges \_\_\_\_\_ need to be determined with respect to the current tidal datum epoch (2002-2006).

The “gauge zero” elevations of tide gauges \_\_\_\_\_ need to be determined with respect to the NAVD88:2004.65/2006.81.

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