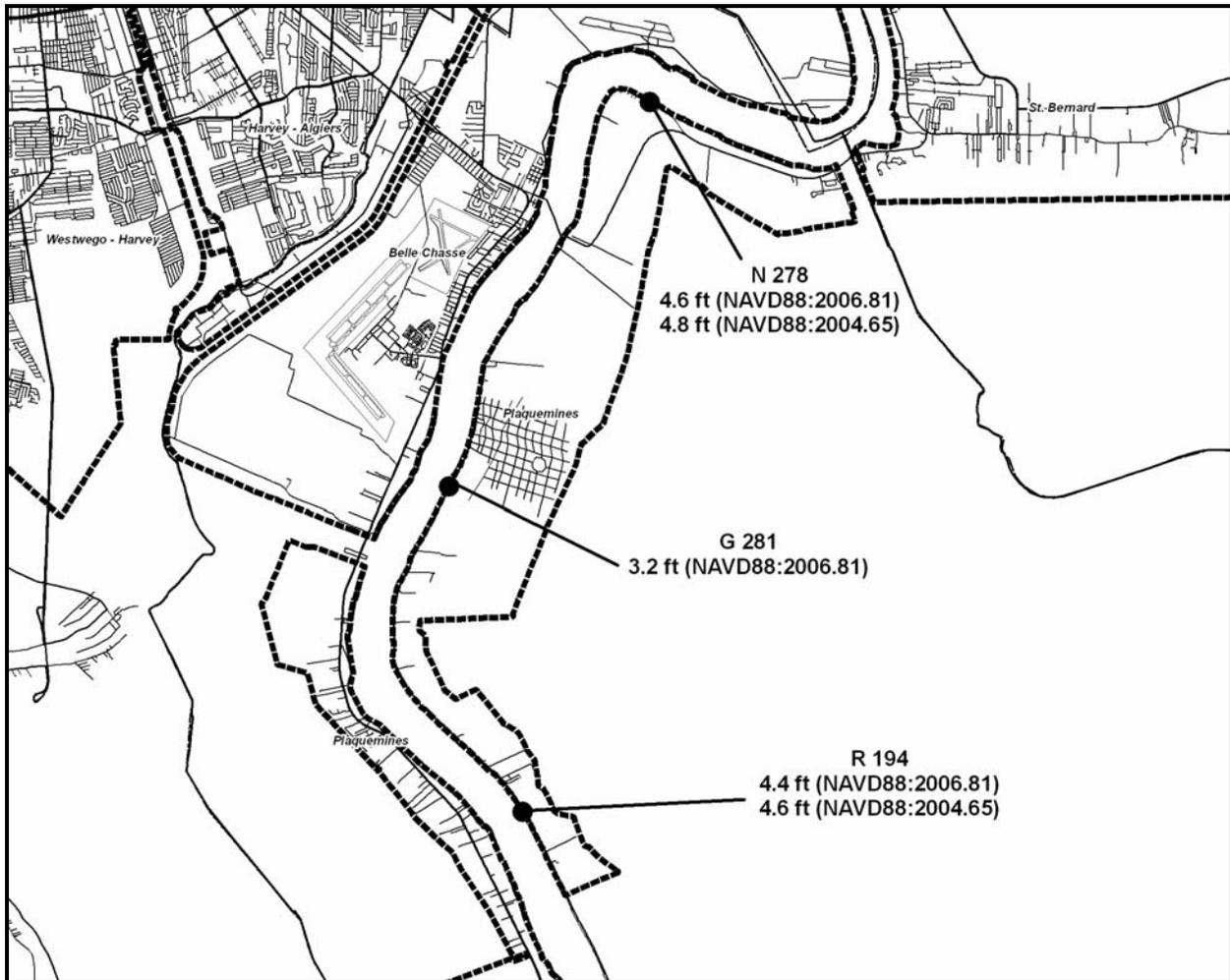


Caernarvon to Phoenix Polder Vertical Datum Report



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: Caernarvon to Phoenix, 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 278
PID: AT0351

STATE/COUNTY: LA/PLAQUEMINES
USGS QUAD: BELLE CHASSE (1994)
LAT/LON: N 29°52'30.59446" W 089°57'22.21215" NAD83(2007)
NORTH/EAST: N 502,717.90' E 3,717,284.54' SPC LA S (US feet)
ELEVATION: 4.6 feet NAVD88(2006.81)
ELEVATION: 4.8 feet NAVD88(2004.65)
MARKER: BENCH MARK DISK
STAMPING: N 278 1970

DESCRIPTION: AT BRAITHWAITE, 23.3 FEET NORTHEAST OF THE NORTH CORNER OF THE POST OFFICE AND STORE, 38 1/2 FEET SOUTH OF THE CENTER LINE OF A PAVED ROAD (OLD STATE HIGHWAY 39), 17 FEET SOUTHWEST OF A POWER POLE WHICH BEARS A TRANSFORMER AND STREET LIGHT, 14.0 FEET SOUTHWEST OF A CORNER FENCE POST, 1 FOOT NORTHWEST OF THE FENCE, ABOUT 1 1/2 FEET BELOW THE LEVEL OF THE HIGHWAY, AND SET IN THE TOP OF A CONCRETE POST WHICH IS 1 INCH BELOW THE SURFACE OF THE GROUND. SECTION 4, T 14S, R 12E. RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2004 (KLF) AT BRAITHWAITE, 38.5 FT S OF THE CENTERLINE OF PAVED ROAD (OLD STATE HWY 39), 37 FT SW OF A POWER POLE NO. 114 WITH A TRANSFORMER AND STREET LIGHT, 1 FT NORTHWEST OF A FENCE, A WITNESS POST NW OF AND ADJACENT TO THE MARK. THE POST OFFICE HAS MOVED APPROX 100 YDS TO THE SW OF THE STATION. THE OLD PO IS IN DISREPAIR AND OVERGROWN.

DESIGNATION: R 194
PID: AT0376

STATE/COUNTY: LA/PLAQUEMINES
USGS QUAD: PHOENIX (1973)
LAT/LON: N 29°43'46.41292" W 089°59'17.15056" NAD83(2007)
NORTH/EAST: N 449,651.33' E 3,707,788.18' SPC LA S (US feet)
ELEVATION: 4.4 feet NAVD88(2006.81)
ELEVATION: 4.6 feet NAVD88(2004.65)
MARKER: BENCH MARK DISK
STAMPING: R 194 1964

DESCRIPTION: THE STATION IS LOCATED ABOUT 3.0 MI SOUTH OF WOODLAWN ON STATE HIGHWAY RIGHT OF WAY. TO REACH THE STATION FROM THE PLAQUEMINES PARISH DISTRICT 1 GOVERNMENT OFFICE COMPLEX IN WOODLAWN, GO SOUTHERLY FOR 3.1 MI ALONG STATE HIGHWAY 39 TO THE STATION ON THE RIGHT IN A GRASSY AREA BETWEEN THE HIGHWAY AND THE LEVEE, AND JUST BEFORE REACHING A GRAVEL DRIVE ON LEFT LEADING TO A PRIVATE RESIDENCE NUMBER 8793. THE STATION IS LOCATED 30.1 M NORTHWEST OF THE EXTENDED CENTER OF THE GRAVEL DRIVE LEADING TO THE PRIVATE RESIDENCE, 20.7 M NORTHEAST OF THE CENTER OF THE LEVEE, 18.2 M SOUTHWEST OF THE CENTER OF THE HIGHWAY, 0.2 M SOUTHWEST OF A METAL POST WITH METAL WITNESS SIGN ATTACHED, AND ABOUT 0.8 M BELOW THE LEVEL OF THE HIGHWAY.

DESIGNATION: G 281

PID: AU1143

STATE/COUNTY: LA/PLAQUEMINES

USGS QUAD: BERTRANDVILLE (1992)

LAT/LON: N 29°47'47.91479" W 090°00'16.57668" NAD83(2007)

NORTH/EAST: N 473,983.70' E 3,702,266.43' SPC LA S (US feet)

ELEVATION: 3.2 feet NAVD88(2006.81)

MARKER: BENCH MARK DISK

STAMPING: G 281 1970

DESCRIPTION: THE STATION IS LOCATED ABOUT 22.25 MI (35.81 KM) NORTHWEST OF POINTE A LA HACHE AND 3.95 MI (6.36 KM) SOUTHWEST OF SCARSDALE. OWNERSHIP-- LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT. TO REACH THE STATION FROM THE BELLE CHASE-SCARSDALE FERRY LANDING IN SCARSDALE, GO SOUTHWEST FOR 3.95 MI (6.36 KM) ON STATE HIGHWAY 39 TO THE STATION SET ON THE LEFT. THE STATION IS 77.5 FT (23.6 M) NORTH-NORTHEAST FROM THE CENTER OF A DRIVEWAY, 24.0 FT (7.3 M) NORTHEAST FROM THE CENTER OF THE HIGHWAY, 3.0 FT (0.9 M) NORTHWEST FROM POWER POLE NUMBER 498, 3.0 FT (0.9 M) NORTHWEST FROM A FIBERGLASS WITNESS POST AND ABOUT 1.0 FT (0.3 M) BELOW THE LEVEL OF THE HIGHWAY. RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2006 (RLT) RECOVERED IN GOOD CONDITION 12 FT (3.7 M) EAST OF EAST EDGE OF PAVEMENT AND 3.0 FT NORTH OF POWERPOLE NUMBER 498.

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: Caernarvon to Phoenix, Polder Tide Gauge Network
(Complete for each tide gauge in Network)**

The Local Tidal Datum LMSL/MLLW/MHHW (_____ tidal datum epoch) has been determined at USACE/USGS/NOAA gauge _____ on _____ through a comparison of short-term data collected at this station with simultaneously observed data collected at the long-term NOAA tide gauge station _____ located _____. Documentation of the Local Tidal Datum determinations at this tide gauge stations may be found at _____.

The NAVD88:2004.65 elevation of the “gauge zero” of the above described gauge was determined on _____ with respect to permanent benchmarks _____, _____, _____. This gauge was last inspected on _____. Inspection level notes may be found in Survey Section field book _____, pages _____. The full gauge inspection reports may be found at _____.

Various geodetic datum/tidal datum relationships (e.g., the NAVD88:2004.65 and NAVD88:2006.81 elevation of LMSL) at each of the above gauges may be found in the table below.

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	

Section 3: Caernarvon to Phoenix, 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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