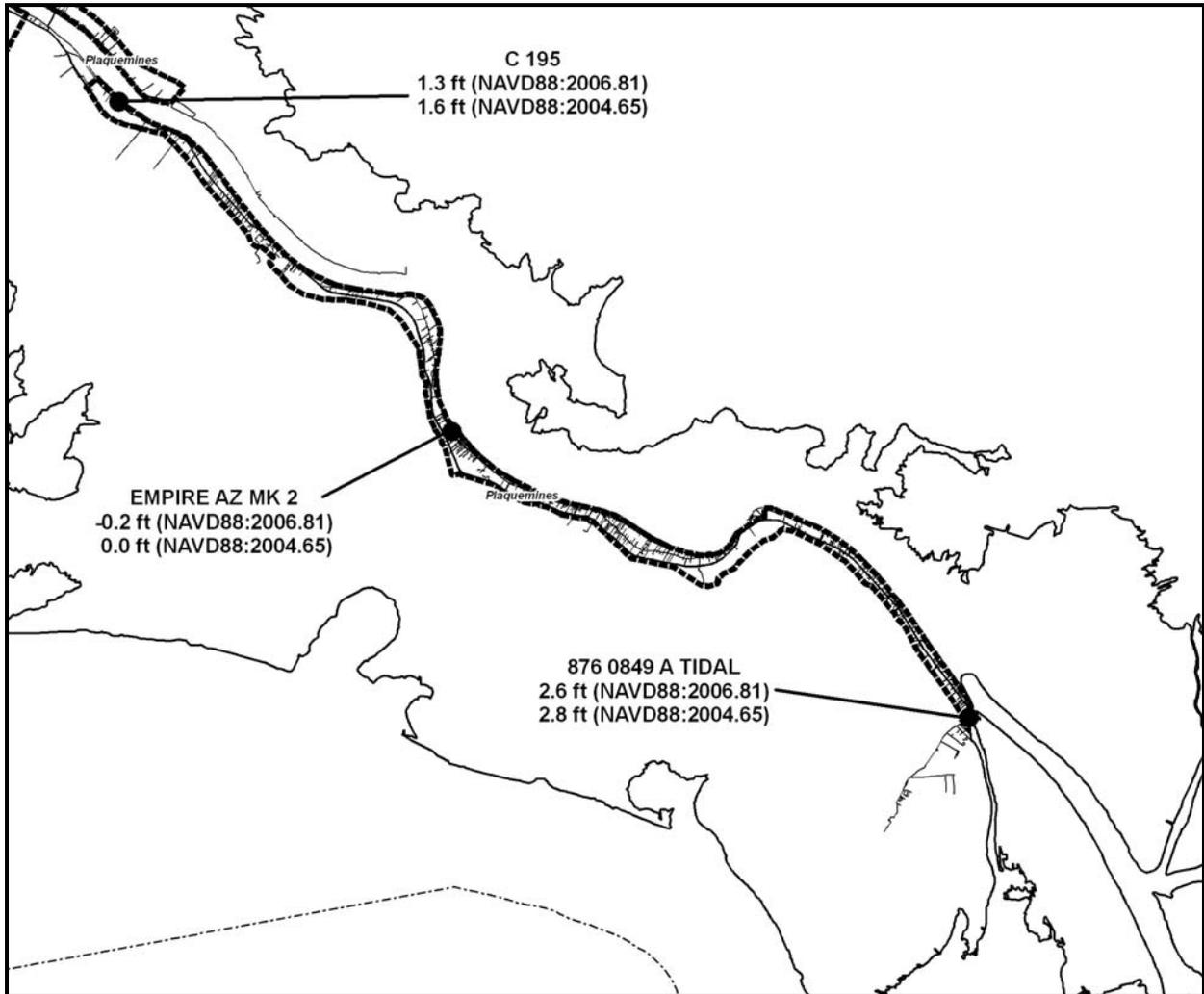


St. Jude to Venice Polder Vertical Datum Report



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: St. Jude to Venice, 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: C 195
PID: AT0458

STATE/COUNTY: LA/PLAQUEMINES
USGS QUAD: POINTE A LA HACHE (1992)
LAT/LON: N 29°32'12.40292" W 089°45'47.15630" NAD83(2007)
NORTH/EAST: N 380,461.95' E 3,780,155.30' SPC LA S (US feet)
ELEVATION: 1.3 feet NAVD88(2006.81)
ELEVATION: 1.6 feet NAVD88(2004.65)
MARKER: BENCH MARK DISK
STAMPING: C 195 1964

DESCRIPTION: THE STATION IS LOCATED IN THE COMMUNITY OF DIAMOND CENTER, ABOUT 5.5 MI NORTHWEST OF PORT SULPHUR, ON PARISH HIGHWAY RIGHT OF WAY. TO REACH THE STATION FROM THE POST OFFICE IN PORT SULPHUR GO NORTHERLY FOR 2.35 MI ON STATE HIGHWAY 23 TO PARISH HIGHWAY 11 ON THE RIGHT, TURN RIGHT AND CONTINUE NORTHERLY FOR 1.55 MI ON HIGHWAY 11 TO A DIM GRAVEL DRIVE LEFT LEADING TO A PRIVATE RESIDENCE NUMBER 24704 AND THE STATION ON THE LEFT SET IN THE TOP OF AND NEAR THE SOUTHEAST END OF THE NORTHWEST CONCRETE HEADWALL OF AN 18 INCH CULVERT PIPE RUNNING UNDERNEATH THE DRIVE. THE STATION IS LOCATED 21.8 M NORTHWEST OF A FIRE HYDRANT, 21.8 M EAST OF THE EAST CORNER OF THE FRONT PORCH OF HOUSE NUMBER 24704, 7.6 M SOUTHWEST OF THE CENTER OF THE ROAD, 2.5 M NORTHWEST OF THE CENTER OF THE DRIVE, AND ABOUT 0.1 M BELOW THE LEVEL OF THE GROUND SURFACE. NOTE--THE STAMPING HAS BEEN MARRED AND THE 5 IN THE DESIGNATION IS NO LONGER VISIBLE. NOTE--THE HEADWALL AND CULVERT ARE BENEATH THE SURFACE AND NO LONGER VISIBLE. RECOVERED AS DESCRIBED WITH THE FOLLOWING CHANGES: 7.4 M NNW OF A WATER METER, 20.3 M NNW OF A FIRE HYDRANT, AND 0.7 M NNE OF A METAL POST WITH WITNESS SIGN ATTACHED. NOTE--THE HOUSE PREVIOUSLY REFERENCED TO WAS DESTROYED DURINNG HURRICANE KATRINA.

DESIGNATION: EMPIRE AZ MK 2
PID: AT0231

STATE/COUNTY: LA/PLAQUEMINES
USGS QUAD: EMPIRE (1992)
LAT/LON: N 29°23'38.14508" W 089°36'11.36800" NAD83(2007)
NORTH/EAST: N 329,253.43' E 3,831,795.95' SPC LA S (US feet)
ELEVATION: -0.2 feet NAVD88(2006.81)
ELEVATION: 0.0 feet NAVD88(2004.65)
MARKER: AZIMUTH MARK DISK
STAMPING: EMPIRE 1934 AZI 2 1966

DESCRIPTION: THE STATION IS LOCATED IN EMPIRE ON PROPERTY BELONGING TO PLAQUEMINES PARISH. TO REACH THE STATION FROM THE DOULLOT CANAL DRAW BRIDGE IN EMPIRE TRAVEL NORTHERLY FRO 0.5 MI ON PARISH HIGHWAY 11 TO THE STATION ON THE RIGHT JUST HAVING PASSED THE GRAVEL ENTRANCE DRIVE LEADING TO A 2 STORY RED BRICK BOOSTER STATION AT 32727 ROAD PARISH ROAD 11 ON THE RIGHT. THE STATION IS LOCATED 10.9 M EAST-NORTHEAST OF THE CENTER OF THE HIGHWAY, 9.2 M NORTHWEST OF THE CENTER OF THE ENTRANCE DRIVE, 4.6 M SOUTHEAST OF A FIRE HYDRANT, 1.2 M WEST-SOUTHWEST FROM A WOODEN UTILITY POLE, AND ABOUT 0.4 M BELOW THE LEVEL OF THE ROAD. RECOVERED AS DESCRIBED WITH THE FOLLOWING CHANGES: 0.45 M WSW OF A METAL POST WITH WITNESS SIGN ATTACHED. NOTE--THE UTILITY POLE PREVIOUSLY REFERENCED TO IS LEANING SEVERLY AND WILL MOST LIKELY BE REPLACED OR REMOVED DURING HURRICANE KATRINA CLEAN UP.

DESIGNATION: 876 0849 A TIDAL

PID: AT1390

STATE/COUNTY: LA/PLAQUEMINES

USGS QUAD: VENICE (1993)

LAT/LON: N 29°16'00.52781" W 089°21'10.35558" NAD83(2007)

NORTH/EAST: N 284,325.13' E 3,912,287.76' SPC LA S (US feet)

ELEVATION: 2.6 feet NAVD88(2006.81)

ELEVATION: 2.8 feet NAVD88(2004.65)

MARKER: BENCH MARK DISK

STAMPING: 0849 A 1985

DESCRIPTION: RECOVERY NOTE BY 3001, INC 2002 (KC). THE STATION IS LOCATED IN VENICE, 8 MILES SOUTH SOUTHEAST OF BURAS, AT THE END OF HWY. 23 ON A GRAVEL ROAD LEADING TO NEW CONSTRUCTION AT THE TIME OF RECON AND A RED AND WHITE TOWER. (LOCATION OF NEW BUILDING WILL BE A WILDLIFE AND FISHERIES HEADQUARTER). TO REACH THE STATION FROM THE INTERSECTION OF THE POST OFFICE AND HWY. 23 GO SOUTHEAST ON HWY. 23 FOR .9 MILES TO A CURVE TO THE RIGHT, GO AROUND CURVE TO A CROSS ROAD (JUMP BASIN RD.), TURN LEFT FOR .05 MILES TO A SHELL ROAS TO RIGHT (OFFSHORE SHIPYARD RD.) TURN RIGHT AND GO SOUTHEAST FOR .15 MILES TO A MARK ON THE LEFT ALONG A FENCE LINE JUST BEFORE ENTERING INTO A GATE. THE STATION IS 45' EAST NORTHEAST OF A FIRE HYDRANT, 83' NORTH OF A POWER POLE NEXT TO A POWER POLE WITH 2 TRANSFORMERS, 31' NORTHEAST FROM THE CENTERLINE OF A SHELL RD., STATION IS A TIDAL DISK ON A STEEL ROD DRIVEN 20 METERS INTO THE GROUND SURROUNDED BY A MASS OF CONCRETE 40 CM. IN DIAMETER, STAMPED 0849A 1985. RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2004 (KLF) RECOVERED AS DESCRIBED WITH THE FOLLOWING CHANGES. THE MARK IS 1.6 FT NORTHEAST OF THE CYCLONE FENCE WHICH HAS BEEN PUSHED OVER. THE CORPS OF ENGINEERS BUILDING IS NOW OCCUPIED BY THE DEPARTMENT OF THE INTERIORS US FISH AND WILDLIFE SERVICE. NOTE--A LOT OF CLEARING IS EVIDENT AT THIS TIME BUT THE STABILITY OF THE MARK HAS NOT BEEN AFFECTED. RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2005. RECOVERED AS DESCRIBED WITH NEW REFERENCES. 23.7 M NORTH FROM THE NORTH 1 OF 2 YELLOW KEYPAD SUPPORT POSTS, 13.7 M EAST FROM A RED FIRE HYDRANT, 8.0 M NORTHEAST FROM THE CENTER OF A GRAVEL ROAD, 1.0 M NORTHEAST FROM A METAL POST WITH WITNESS SIGN ATTACHED, 0.5 M FROM A CARSONITE WITNESS POST, AND 0.3 M BELOW THE LEVEL OF THE GROUND.

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: St. Jude to Venice, 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: St. Jude to Venice, 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.

Joshua T. Hardy
MVN- District Datum Coordinator
Joshua.T.Hardy@usace.army.mil
504-862-1852