Geodetic Control Point, 2014 - CGIA / NC Department of Transportation

File Geodatabase Feature Class

Tags

location, NSRS, geodetic, horizontal control, vertical control, ellipsoid height, benchmark, orthometric height, latitude, longitude, geodetic control

Summary

Provide a base of reference for latitude, longitude and height throughout the United States.

Description

This data contains a set of geodetic control stations maintained by the National Geodetic Survey. Each geodetic control station in this dataset has either a precise Latitude/Longitude used for horizontal control or a precise Orthometric Height used for vertical control, or both. The National Geodetic Survey (NGS) serves as the Nation's depository for geodetic data. The NGS distributes geodetic data worldwide to a variety of users. These geodetic data include the final results of geodetic surveys, software programs to format, compute, verify, and adjust original survey observations or to convert values from one geodetic datum to another, and publications that describe how to obtain and use Geodetic Data products and services.

Credits

NOAA, National Geodetic Survey and cooperating organizations

Use limitations

Not restricted; Geodetic Data, including software were developed and compiled with U.S. Government funding; no proprietary rights may be attached to them nor may they be sold to the U.S. Government as part of any procurement of ADP products or services.

Extent

West -84.434977 **East** -75.233911
North 36.610420 **South** 33.729223

Scale Range

Maximum (zoomed in) 1:5,000
Minimum (zoomed out) 1:150,000,000

ArcGIS Metadata ►

Topics and Keywords ►

THEMES OR CATEGORIES OF THE RESOURCE geoscientificInformation, transportation, location

* CONTENT TYPE Downloadable Data

EXPORT TO FGDC CSDGM XML FORMAT AS RESOURCE DESCRIPTION No

THEME KEYWORDS location, NSRS, geodetic, horizontal control, vertical control, ellipsoid height, benchmark, orthometric height, latitude, longitude, geodetic control

THESAURUS ►
TITLE User
PUBLICATION DATE 2014-02-10 00:00:00

Hide Thesaurus ▲

Hide Topics and Keywords ▲

Citation ►

TITLE Geodetic Control Point, 2014 - CGIA / NC Department of Transportation
PUBLICATION DATE 2014-02-10 00:00:00

PRESENTATION FORMATS digital map

Hide Citation ▲

Citation Contacts ►

RESPONSIBLE PARTY
ORGANIZATION'S NAME NOAA, National Geodetic Survey
CONTACT'S POSITION NGS Information Services Branch IT Specialist
CONTACT'S ROLE originator

CONTACT INFORMATION ►
PHONE
VOICE 301-713-3242
FAX 301-713-4172

ADDRESS
DELIVERY POINT SSMC2/9152 1315 East-west Highway
CITY Silver Spring
ADMINISTRATIVE AREA MD
POSTAL CODE 20910
COUNTRY US
E-MAIL ADDRESS ngs.software@noaa.gov

HOURS OF SERVICE 8:30am to 5:00pm EST
CONTACT INSTRUCTIONS
Prefer EMail

Hide Contact information ▲

Hide Citation Contacts ▲

Resource Details ►

DATASET LANGUAGES English (UNITED STATES)
DATASET CHARACTER SET utf8 - 8 bit UCS Transfer Format

SPATIAL REPRESENTATION TYPE vector

* PROCESSING ENVIRONMENT Microsoft Windows 7 Version 6.1 (Build 7601) Service Pack 1; Esri ArcGIS 10.1.0.3035

CREDITS
NOAA, National Geodetic Survey and cooperating organizations

Hide Resource Details ▲

Extents ►

EXTENT
GEOGRAPHIC EXTENT
BOUNDING RECTANGLE
WEST LONGITUDE -84.434977
EAST LONGITUDE -75.233911
SOUTH LATITUDE 33.729223
NORTH LATITUDE 36.61042
EXTENT CONTAINS THE RESOURCE Yes

EXTENT
GEOGRAPHIC EXTENT
BOUNDING RECTANGLE
EXTENT TYPE Extent used for searching
* WEST LONGITUDE -84.434977
* EAST LONGITUDE -75.233911
* NORTH LATITUDE 36.610420
* SOUTH LATITUDE 33.729223
* EXTENT CONTAINS THE RESOURCE Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM
* WEST LONGITUDE 122806.477800
* EAST LONGITUDE 946743.287600
* SOUTH LATITUDE 10579.807800
* NORTH LATITUDE 317338.866800
* EXTENT CONTAINS THE RESOURCE Yes

Hide Extents ▲

Resource Points of Contact ►

POINT OF CONTACT
ORGANIZATION'S NAME NOAA, National Geodetic Survey
CONTACT'S POSITION NGS Information Services Branch IT Specialist
CONTACT'S ROLE point of contact

CONTACT INFORMATION ►
PHONE
VOICE 301-713-3242
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TYPE
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HOURS OF SERVICE 8:30am to 5:00pm EST

CONTACT INSTRUCTIONS
Prefer EMail

Hide Contact information ▲

Hide Resource Points of Contact ▲

Resource Maintenance ►

RESOURCE MAINTENANCE
UPDATE FREQUENCY as needed

Hide Resource Maintenance ▲

Resource Constraints ►

CONSTRAINTS
LIMITATIONS OF USE
Not restricted; Geodetic Data, including software were developed and compiled with U.S. Government funding; no proprietary rights may be attached to them nor may they be sold to the U.S. Government as part of any procurement of ADP products or services.

Hide Resource Constraints ▲

Spatial Reference ►

ARCGIS COORDINATE SYSTEM
* TYPE Projected
* GEOGRAPHIC COORDINATE REFERENCE GCS_North_American_1983_HARN
* PROJECTION NAD_1983_HARN_StatePlane_North_Carolina_FIPS_3200
* COORDINATE REFERENCE DETAILS
PROJECTED COORDINATE SYSTEM
WELL-KNOWN IDENTIFIER 3358
X ORIGIN -37137500
Y ORIGIN -28547400
XY SCALE 10000
Z ORIGIN -100000
Z SCALE 10000
M ORIGIN -100000
M SCALE 10000
XY TOLERANCE 0.001
Z TOLERANCE 0.001
M TOLERANCE 0.001
HIGH PRECISION true
LATESTWKID 3358
WELL-KNOWN TEXT
PROJCS["NAD_1983_HARN_StatePlane_North_Carolina_FIPS_3200",GEOGCS["GCS_North_American_1983_HARN",DATUM["D_North_American_1983_HARN",SPHEROID["GRS_1980",6378137.0,298.257222101]],PRIMEM["Greenwich",0.0],UNIT["Degree",0.0174532925199433]],PROJECTION["Lambert_Conformal_Conic"],PARAMETER["False_Easting",609601.2192024384],PARAMETER["False_Northing",0.0],PARAMETER["Central_Meridian",-79.0],PARAMETER["Standard_Parallel_1",34.33333333333334],PARAMETER["Standard_Parallel_2",36.16666666666666],PARAMETER["Latitude_Of_Origin",33.75],UNIT["Meter",1.0],AUTHORITY["EPSG",3358]]

REFERENCE SYSTEM IDENTIFIER
VALUE 0
* CODESPACE EPSG
* VERSION 7.9.4

Hide Spatial Reference ▲

Spatial Data Properties ►

VECTOR ►
* LEVEL OF TOPOLOGY FOR THIS DATASET geometry only

GEOMETRIC OBJECTS
FEATURE CLASS NAME GEODETIC_CONTROL_POINT
* OBJECT TYPE point
* OBJECT COUNT 38203

Hide Vector ▲

ARCGIS FEATURE CLASS PROPERTIES ►
FEATURE CLASS NAME GEODETIC_CONTROL_POINT
* FEATURE TYPE Simple
* GEOMETRY TYPE Point
* HAS TOPOLOGY FALSE
* FEATURE COUNT 38203
* SPATIAL INDEX TRUE
* LINEAR REFERENCING FALSE

Hide ArcGIS Feature Class Properties ▲

Hide Spatial Data Properties ▲

Data Quality ►

SCOPE OF QUALITY INFORMATION ►
RESOURCE LEVEL dataset

Hide Scope of quality information ▲

DATA QUALITY REPORT - COMPLETENESS OMISSION ►
MEASURE DESCRIPTION This dataset DOES NOT include destroyed marks. All other non-publishable marks are NOT included. Non-publishable criteria is available at <http://www.ngs.noaa.gov/cgi-bin/craigs_lib.prl?HELP_NONPUB=1>

Hide Data quality report - Completeness omission ▲

DATA QUALITY REPORT - CONCEPTUAL CONSISTENCY ►
MEASURE DESCRIPTION FGCS sponsored testing in cooperation with equipment manufacturers and National Institutes of Standards and Technology, Gaithersburg, MD 20850

Hide Data quality report - Conceptual consistency ▲

DATA QUALITY REPORT - ABSOLUTE EXTERNAL POSITIONAL ACCURACY ►

MEASURE DESCRIPTION The description of tests are explained in "Geometric Geodetic Accuracy Standards and Specifications for Using GPS Relative Positioning Techniques," FGCS (formally FGCC) publication version 5.0, 1989, (See table 1, p6). .05 meter for highest order of accuracy

Hide Data quality report - Absolute external positional accuracy ▲

DATA QUALITY REPORT - ABSOLUTE EXTERNAL POSITIONAL ACCURACY ▶

MEASURE DESCRIPTION The description of tests are explained in "Geometric Geodetic Accuracy Standards and Specifications For Using GPS Relative Positioning Techniques," FGCS (formally FGCC) publication version 5.0, 1989. .05 meters for highest order of accuracy

Hide Data quality report - Absolute external positional accuracy ▲

DATA QUALITY REPORT - QUANTITATIVE ATTRIBUTE ACCURACY ▶

MEASURE DESCRIPTION Geodetic Data are continuously being processed; their standards and specifications are being reviewed for next publication release. "Standards and Specifications for Geodetic Control Networks", 1984 and "Geometric Geodetic Accuracy Standards and Specifications for Using GPS Relative Positioning Techniques," FGCS (formally FGCC) publication version 5.0 1989, are most current published documents.

Hide Data quality report - Quantitative attribute accuracy ▲

DATA QUALITY REPORT - NON QUANTITATIVE ATTRIBUTE ACCURACY ▶

MEASURE DESCRIPTION Horizontal control stations (those with precise Latitude, Longitude) were established in accordance with FGDC publications "Standards and Specifications for Geodetic Accuracy Standards" and "Geometric Geodetic Accuracy Standards and Specifications for Using GPS Relative Positioning Techniques" The final Latitude, Longitude of these stations were determined by a least squares adjustments of the horizontal observations. Horizontal control station have Latitude, Longitudes displayed to 5 places and are identified by attribute POS_SRCE = 'ADJUSTED' Lesser quality Latitude, Longitudes may also be preset in the dataset. These are identified by a POS_SRCE attributes HD_HELD1, HD_HELD2, or SCALED. These lesser quality positions are described at: <http://www.ngs.noaa.gov/cgi-bin/ds_lookup.prl?Item=SCALED> Vertical control stations (those with precise Orthometric Heights) were established in accordance with FGDC publications "Standards and Specifications for Geodetic Accuracy Standards" The final Orthometric Height of these stations were in most cases determined by a least squares adjustments of the vertical observations but in some cases may have been keyed from old survey documents. Vertical control stations have Orthometric Heights displayed to 2 or 3 places and are identified by attribute ELEV_SRCE of ADJUSTED, ADJ UNCH, POSTED,READJUST,N HEIGHT,RESET,COMPUTED Lesser quality Orthometric Heights may also be preset in the dataset. These are identified by a ELEV_SRCE attributes GPS_OBS, VERT_ANG, H_LEVEL, VERTCON, SCALED. These lesser quality orthometric heights are described at: <http://www.ngs.noaa.gov/cgi-bin/ds_lookup.prl?Item=SCALED> IMPORTANT - Control stations do not always have both precise Latitude, Longitude AND precise Orthometric Height. A horizontal control station may have a orthometric height associated with it which is of non geodetic quality. These types of heights are displayed to 0, 1, or 2 decimal places. Worst case being off by +/- 1 meter. LIKEWISE - A Vertical control station may have a Latitude, Longitude associated with it which is of non geodetic quality. These types of Latitude, Longitudes are displayed to 0, 1 or 2 decimal places. Worst case being off by +/- 180 meter. Refer to <http://www.ngs.noaa.gov/cgi-bin/ds_lookup.prl?Item=SCALED> for a description of the various type of methods used in determining the Latitude, Longitude, and Orthometric Height. Attribute POS_CHECK and ELEV_CHECK indicate whether or not an observational check was made to the position and/or orthometric height. Care should be taken when using "No Check" coordinates. If attribute ELEV_SRCE = 'VERTCON' then the Orthometric Height was determined by applying NGS program VERTCON to an Old NGVD 29 height. In most areas VERTCON gives results to +/- 2 cm. See <http://www.ngs.noaa.gov/TOOLS/Vertcon/vertcon.html> for a more detailed explanation of VERTCON accuracy. Ellipsoid Heights are also present in the dataset. The ellipsoid heights consist of those determined using a precise geoid model, which are displayed to 2 decimal places and are considered good to +/- .005 meters, and those displayed to 1 decimal place and are considered only good to +/- .5 meters

Hide Data quality report - Non quantitative attribute accuracy ▲

Hide Data Quality ▲

Lineage ►

PROCESS STEP ►

DESCRIPTION The National Geodetic Survey produces geodetic data. Geodetic data comprise the results of geodetic surveys to determine, among other things, latitude, longitude, height, scale, and orientation control. The National Geodetic Survey original field survey project observations and final reports are accessioned into records system of the National Archives and Records Administration of the U.S.A. These surveys provide information valuable for a variety of uses in the mapping, charting and surveying community. The NGS' final product is the geodetic data sheet. Geodetic data sheets are comprehensive summaries of all published information for a given geodetic reference point, including: the geographic position and/or height based on the current reference datum, condition of the survey mark when it was last visited, a description of where the point is located and how to reach it, and an explanation of the terms used in the data sheet. In support of these geodetic data, the NGS provides software, publications, and various user services, including geodetic advisor program, instrument calibration, surveying standards, and technical workshops. This dataset contains certain information extracted from the above mentioned data sheet.

PROCESS CONTACT

ORGANIZATION'S NAME NOAA, National Geodetic Survey

CONTACT'S POSITION NGS Information Services Branch IT Specialist

CONTACT'S ROLE point of contact

CONTACT INFORMATION ►

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COUNTRY US

E-MAIL ADDRESS ngs.software@noaa.gov

HOURS OF SERVICE 8:30am to 5:00pm EST

CONTACT INSTRUCTIONS

Prefer EMail

Hide Contact information ▲

Hide Process step ▲

SOURCE DATA ►

DESCRIPTION The geodetic data must be submitted in the digital formats specified in the FGCS (formally FGCC) publication "Input Formats and Specifications of the National Geodetic Survey Data Base" which describes the formats and procedures for submission of data for adjustment and assimilation into the National Geodetic Survey Data Base. Separate volumes of this publication refer to horizontal (volume 1), vertical (volume 2), and gravity (volume 3) control, and are available from NOAA, National Geodetic Survey, 1315 East-West Hwy, Code N/CGS1, Silver Spring, MD, 20910 (1-301-713-3242). Note guidelines for submission of three-dimensional Global Positioning System (GPS) relative positioning data are contained in annex L to volume 1.

Hide Source data ▲

Hide Lineage ▲

Distribution ▶

DISTRIBUTOR ▶
CONTACT INFORMATION
ORGANIZATION'S NAME Center for Geographic Information and Analysis
CONTACT'S POSITION NC OneMap Database Administrator
CONTACT'S ROLE distributor

CONTACT INFORMATION ▶
PHONE
VOICE 919-754-6585

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ADMINISTRATIVE AREA NC
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E-MAIL ADDRESS nconemap@its.nc.gov

HOURS OF SERVICE 8:30-5:00
CONTACT INSTRUCTIONS
email preferred

Hide Contact information ▲

Hide Distributor ▲

DISTRIBUTOR ▶
CONTACT INFORMATION
ORGANIZATION'S NAME NOAA, National Geodetic Survey
CONTACT'S POSITION NGS Information Services Branch IT Specialist
CONTACT'S ROLE originator

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CITY Silver Spring
ADMINISTRATIVE AREA MD
POSTAL CODE 20910
COUNTRY US
E-MAIL ADDRESS ngs.software@noaa.gov

HOURS OF SERVICE 8:30am to 5:00pm EST
CONTACT INSTRUCTIONS
Prefer EMail

Hide Contact information ▲

AVAILABLE FORMAT
NAME File Geodatabase Feature Class
VERSION sp1

Hide Distributor ▲

DISTRIBUTOR ▶
CONTACT INFORMATION
ORGANIZATION'S NAME North Carolina Department of Transportation Geographic Information Systems Unit
CONTACT'S POSITION GIS Help Desk
CONTACT'S ROLE owner

CONTACT INFORMATION ▶
PHONE
VOICE 919.707.2326
FAX 919.707.2214

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ADMINISTRATIVE AREA North Carolina
POSTAL CODE 27604
COUNTRY US
E-MAIL ADDRESS gishelp@ncdot.gov

HOURS OF SERVICE 8am to 5pm, M-F
CONTACT INSTRUCTIONS
Phone or e-mail.

Hide Contact information ▲

Hide Distributor ▲

DISTRIBUTION FORMAT
* NAME File Geodatabase Feature Class
VERSION Sp1

Hide Distribution ▲

Fields ▶

DETAILS FOR OBJECT GEODETIC_CONTROL_POINT ▶
* TYPE Feature Class
* ROW COUNT 38203

FIELD POS_ORDER ▶
* ALIAS POS_ORDER
* DATA TYPE String
* WIDTH 1
* PRECISION 0
* SCALE 0

Hide Field POS_ORDER ▲

FIELD ELLIP_HT ▶
* ALIAS ELLIP_HT
* DATA TYPE String
* WIDTH 9
* PRECISION 0
* SCALE 0

Hide Field ELLIP_HT ▲

FIELD ELEV_SRCE ▶
* ALIAS ELEV_SRCE
* DATA TYPE String
* WIDTH 12
* PRECISION 0
* SCALE 0

Hide Field ELEV_SRCE ▲

FIELD ELEV_DATUM ▶
* ALIAS ELEV_DATUM
* DATA TYPE String
* WIDTH 12
* PRECISION 0
* SCALE 0

Hide Field ELEV_DATUM ▲

FIELD ELEV_CHECK ▶
* ALIAS ELEV_CHECK
* DATA TYPE String
* WIDTH 1
* PRECISION 0
* SCALE 0

Hide Field ELEV_CHECK ▲

FIELD GEOD_NAME ▶
* ALIAS GEOD_NAME
* DATA TYPE String
* WIDTH 40
* PRECISION 0
* SCALE 0

Hide Field GEOD_NAME ▲

FIELD SAT_DATE ▶
* ALIAS SAT_DATE
* DATA TYPE String

* WIDTH 8
* PRECISION 0
* SCALE 0

Hide Field SAT_DATE ▲

FIELD LAST_RECBY ►
* ALIAS LAST_RECBY
* DATA TYPE String
* WIDTH 6
* PRECISION 0
* SCALE 0

Hide Field LAST_RECBY ▲

FIELD POS_DATUM ►
* ALIAS POS_DATUM
* DATA TYPE String
* WIDTH 6
* PRECISION 0
* SCALE 0

Hide Field POS_DATUM ▲

FIELD LONGITUDE ►
* ALIAS LONGITUDE
* DATA TYPE String
* WIDTH 18
* PRECISION 0
* SCALE 0

Hide Field LONGITUDE ▲

FIELD ELLIP_SRCE ►
* ALIAS ELLIP_SRCE
* DATA TYPE String
* WIDTH 12
* PRECISION 0
* SCALE 0

Hide Field ELLIP_SRCE ▲

FIELD ELEVATION ►
* ALIAS ELEVATION
* DATA TYPE String
* WIDTH 9
* PRECISION 0
* SCALE 0

Hide Field ELEVATION ▲

FIELD DATUM_TAG ▶
* ALIAS DATUM_TAG
* DATA TYPE String
* WIDTH 6
* PRECISION 0
* SCALE 0

Hide Field DATUM_TAG ▲

FIELD FIRST_RECV ▶
* ALIAS FIRST_RECV
* DATA TYPE String
* WIDTH 8
* PRECISION 0
* SCALE 0

Hide Field FIRST_RECV ▲

FIELD ELLP_CLASS ▶
* ALIAS ELLP_CLASS
* DATA TYPE String
* WIDTH 1
* PRECISION 0
* SCALE 0

Hide Field ELLP_CLASS ▲

FIELD ELLP_ORDER ▶
* ALIAS ELLP_ORDER
* DATA TYPE String
* WIDTH 1
* PRECISION 0
* SCALE 0

Hide Field ELLP_ORDER ▲

FIELD ELEV_CLASS ▶
* ALIAS ELEV_CLASS
* DATA TYPE String
* WIDTH 1
* PRECISION 0
* SCALE 0

Hide Field ELEV_CLASS ▲

FIELD ELEV_ORDER ▶
* ALIAS ELEV_ORDER
* DATA TYPE String

* WIDTH 1
* PRECISION 0
* SCALE 0

Hide Field ELEV_ORDER ▲

FIELD STABILITY ▶
* ALIAS STABILITY
* DATA TYPE String
* WIDTH 1
* PRECISION 0
* SCALE 0

Hide Field STABILITY ▲

FIELD SAT_USE ▶
* ALIAS SAT_USE
* DATA TYPE String
* WIDTH 1
* PRECISION 0
* SCALE 0

Hide Field SAT_USE ▲

FIELD LAST_RECV ▶
* ALIAS LAST_RECV
* DATA TYPE String
* WIDTH 8
* PRECISION 0
* SCALE 0

Hide Field LAST_RECV ▲

FIELD STATE ▶
* ALIAS STATE
* DATA TYPE String
* WIDTH 2
* PRECISION 0
* SCALE 0

Hide Field STATE ▲

FIELD PID ▶
* ALIAS PID
* DATA TYPE String
* WIDTH 6
* PRECISION 0
* SCALE 0

Hide Field PID ▲

FIELD DEC_LAT ▶
* ALIAS DEC_LAT
* DATA TYPE String
* WIDTH 13
* PRECISION 0
* SCALE 0

Hide Field DEC_LAT ▲

FIELD DEC_LONG ▶
* ALIAS DEC_LONG
* DATA TYPE String
* WIDTH 15
* PRECISION 0
* SCALE 0

Hide Field DEC_LONG ▲

FIELD OBJECTID ▶
* ALIAS OBJECTID
* DATA TYPE OID
* WIDTH 4
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
Internal feature number.

DESCRIPTION SOURCE
ESRI

DESCRIPTION OF VALUES Sequential unique whole numbers that are automatically generated.

Hide Field OBJECTID ▲

FIELD DATA_DATE ▶
* ALIAS DATA_DATE
* DATA TYPE String
* WIDTH 8
* PRECISION 0
* SCALE 0

Hide Field DATA_DATE ▲

FIELD Shape ▶
* ALIAS Shape
* DATA TYPE Geometry
* WIDTH 0
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
Feature geometry.

DESCRIPTION SOURCE
ESRI

DESCRIPTION OF VALUES Coordinates defining the features.

Hide Field Shape ▲

FIELD COUNTY ▶
* ALIAS COUNTY
* DATA TYPE String
* WIDTH 26
* PRECISION 0
* SCALE 0

Hide Field COUNTY ▲

FIELD DATA_SRCE ▶
* ALIAS DATA_SRCE
* DATA TYPE String
* WIDTH 57
* PRECISION 0
* SCALE 0

Hide Field DATA_SRCE ▲

FIELD FeatureId ▶
* ALIAS FeatureId
* DATA TYPE Integer
* WIDTH 4
* PRECISION 0
* SCALE 0

Hide Field FeatureId ▲

FIELD POS_SRCE ▶
* ALIAS POS_SRCE
* DATA TYPE String
* WIDTH 12
* PRECISION 0
* SCALE 0

Hide Field POS_SRCE ▲

FIELD DIST_RATE ▶
* ALIAS DIST_RATE
* DATA TYPE String
* WIDTH 1
* PRECISION 0
* SCALE 0

Hide Field DIST_RATE ▲

FIELD POS_CHECK ▶
* ALIAS POS_CHECK
* DATA TYPE String
* WIDTH 1
* PRECISION 0
* SCALE 0

Hide Field POS_CHECK ▲

FIELD QUAD ▶
* ALIAS QUAD
* DATA TYPE String
* WIDTH 40
* PRECISION 0
* SCALE 0

Hide Field QUAD ▲

FIELD LAST_COND ▶
* ALIAS LAST_COND
* DATA TYPE String
* WIDTH 16
* PRECISION 0
* SCALE 0

Hide Field LAST_COND ▲

FIELD LATITUDE ▶
* ALIAS LATITUDE
* DATA TYPE String
* WIDTH 17
* PRECISION 0
* SCALE 0

Hide Field LATITUDE ▲

Hide Details for object GEODETIC_CONTROL_POINT ▲

OVERVIEW DESCRIPTION ▶

ENTITY AND ATTRIBUTE OVERVIEW The current attributes and their meaning are shown below. #FeatureId Temporary unique ID assigned to this station. DATA_DATE- The date when this information was retrieved from the NGS database. DATA_SRCE- Data Source where the information for the mark came from. You should use this link to obtain a full datasheet for the mark or obtain the datasheets from <http://www.ngs.noaa.gov/cgi-bin/datasheet.prl> if you intend to use the data for survey control. DEC_LONG- Decimal equivalent of the LONGITUDE Always displayed to 10 decimal places, but you should see POS_SRCE and POS_ORDER to determine the true accuracy. DEC_LAT- Decimal equivalent of the LATITUDE PID- Permanent Identifier assigned by NGS to each mark NAME- Station Name (a.k.a. Designation) STATE- State Code COUNTY- County Name QUAD- USGS Topographic Quad Map Name LATITUDE- Latitude in Deg-Min-Sec format LONGITUDE- Longitude in Deg-Min-Sec format POS_DATUM-

Datum of the LATITUDE,LONGITUDE Should always be NAD83 DATUM_TAG- Datum Tag of the LATITUDE,LONGITUDE NAD83 (1986) indicates positions on the NAD83 datum for the North American Adjustment, completed in 1986. NAD83 (nnnn) indicates positions on the NAD83 datum for the North American Adjustment, but readjusted to a State High Accuracy Reference Network (HARN) on the date shown in (nnnn). NAD83 (CORS) indicates positions which are part of the CORS network. POS_SRCE- Position Source for the LATITUDE,LONGITUDE ADJUSTED = Least squares adjustment. (Lat,Lon Rounded to 5 decimal places.) HD_HELD1 = Differentially corrected hand held GPS observations. (Lat,Lon Rounded to 2 decimal places.) HD_HELD2 = Autonomous hand held GPS observations. (Lat,Lon Rounded to 1 decimal places.) SCALED = Scaled from a topographic map. (Lat,Lon Rounded to 0 decimal places.) ELEVATION- Present if available. The Orthometric Height in METERS indicating the height above the Geoid. ELEV_DATUM- Datum of the ELEVATION ELEV_SRCE- Elevation Source for the ELEVATION ADJUSTED = Direct Digital Output from Least Squares Adjustment of Precise Leveling. (Rounded to 3 decimal places.) ADJ UNCH = Manually Entered (and NOT verified) Output of Least Squares Adjustment of Precise Leveling. (Rounded to 3 decimal places.) POSTED = Pre-1991 Precise Leveling Adjusted to the NAVD 88 Network After Completion of the NAVD 88 General Adjustment of 1991. (Rounded to 3 decimal places.) READJUST = Precise Leveling Readjusted as Required by Crustal Motion or Other Cause. (Rounded to 2 decimal places.) N HEIGHT = Computed from Precise Leveling Connected at Only One Published Bench Mark. (Rounded to 2 decimal places.) RESET = Reset Computation of Precise Leveling. (Rounded to 2 decimal places.) COMPUTED = Computed from Precise Leveling Using Non-rigorous Adjustment Technique. (Rounded to 2 decimal places.) LEVELING = Precise Leveling Performed by Horizontal Field Party. (Rounded to 2 decimal places.) H LEVEL = Level between control points not connected to bench mark. (Rounded to 1 decimal places.) GPS OBS = Computed from GPS Observations. (Rounded to 1 decimal places.) VERT ANG = Computed from Vertical Angle Observations. (Rounded to 1 decimal place; If No Check, to 0 decimal places.) SCALED = Scaled from a Topographic Map. (Rounded to 0 decimal places.) U HEIGHT = Unvalidated height from precise leveling connected at only one NSRS point. (Rounded to 2 decimal places.) VERTCON = The NAVD 88 height was computed by applying the VERTCON shift value to the NGVD 29 height. (Rounded to 0 decimal places.) ELLIP_HT- Present if available. The ellipsoid height in METERS referenced to GRS80 ellipsoid. ELLIP_SRCE- Ellipsoid Ht Source for the ELLIP_HT Should always be GPS_OBS when present. POS_ORDER- Order of accuracy for the LATITUDE,LONGITUDE Should be one of the following- A,B,1,2,3 Order and class for Orders 1, 2, and 3 are defined in the Federal Geodetic Control Committee publication "Standards and Specifications for Geodetic Control Networks". In addition- Order A stations have a relative accuracy of 5 mm +/- 1-10,000,000 relative to other A-order stations. Order B stations have a relative accuracy of 8 mm +/- 1- 1,000,000 relative to other A- and B-order stations. POS_CHECK- Y=Observational Check was made for the position, N=NO Observational Check was made for the positions ELEV_ORDER- Order of accuracy for the ELEVATION Should be 1,2, or 3 for Vertical Control Stations. Will be blank for stations used for Horizontal Control only. Also see attribute DIST_RATE which is used for some vertical control stations. Elevation order and class for 1, 2, and 3 are defined in the Federal Geodetic Control Committee publication "Standards and Specifications for Geodetic Control Networks". In addition- Vertical control which were determined only for the purpose of supplying a height for Horizontal Distance Reductions are assigned an order of 3. Class 0 is used for special cases of orthometric vertical control as follows- Vertical Order/Class Tolerance Factor ---------- ---------- 1 class 0 2.0 mm or less 2 class 0 8.4 mm or less 3 class 0 12.0 mm or less ELEV_CLASS- Should be 0, 1, or 2 See details under ELEV_ORDER ELEV_CHECK- Y=Observational Check was made for the orthometric height, N=NO Observational Check was made for the orthometric heights VERTCONED- Y=Orthometric Height was determined by applying VERTCON to an old NGVD 29 height. N=Orthometric Height determined by observations. DIST_RATE- Distribution rate for POSTED and READJUSTED benchmarks which do not have an Order and Class are as follows "Posted bench marks" are vertical control points in the NGS data base which were excluded from the NAVD 88 general adjustment. Some of the bench marks were excluded due to large adjustment residuals, possibly caused by vertical movement of the bench marks during the time interval between different leveling epochs. Adjusted NAVD 88 are computed for posted bench marks by supplemental adjustments. A range of mean distribution rate corrections is listed for each posted bench mark in the data portion of the publication. A summary table of the mean distribution rates and their codes is listed below. The mean distribution rate corrections which were applied to the original leveling observations is a good indication of the usefulness of the posted bench marks' adjusted NAVD 88 heights. Distribution Distribution Rate Code Rate Correction ------------ ---------- "a" 0.0 thru 1.0 mm/km "b" 1.1 thru 2.0 " "c" 2.1 thru 3.0 " "d" 3.1 thru 4.0 " "e" 4.1 thru 8.0 " "f" greater than 8.0 mm/km POSTED BENCH MARKS SHOULD BE USED WITH CAUTION. As is the case for all leveling projects, the mandatory FGCS check leveling two-mark or three-mark tie procedure will usually detect any isolated movement (or other problem) at an individual bench mark. Of course, regional movement affecting all the marks equally is not detected by the two- or three-mark tie procedure. ELLP_ORDER- Order of accuracy for the ELLIP_HT Should be 1,2,3,4, or 5 if present. The following ellipsoid height order and class relative accuracy standards have not yet been adopted by the Federal

Geodetic Control Subcommittee, but are currently in use by NGS- Ellipsoid Height Maximum Height Classification Difference Accuracy ---------- ---------- 1 class 1 0.5 (mm)/sqrt(km) 1 class 2 0.7 2 class 1 1.0 2 class 2 1.3 3 class 1 2.0 3 class 2 3.0 4 class 1 6.0 4 class 2 15.0 5 class 1 30.0 5 class 2 60.0 The ellipsoid height difference accuracy (b) is computed from a a minimally constrained correctly weighted least squares adjustment by- b = s / sqrt(d) where b = height difference accuracy s = propagated standard deviation of ellipsoid height difference in millimeters between control points obtained from the least squares adjustment. d = horizontal distance between control points in kilometers ELLP_class- Class of accuracy for ELLIP_HT Should be 1 or 2 See details under ELLP_ORDER FIRST_RECV- Date when the station was first monumented or in the case of landmarks, first observed. LAST_RECV- Date when the station was last recovered. LAST_COND- Last recovered condition of the mark. Should be one of the following- MONUMENTED FIRST OBSERVED GOOD POOR MARK NOT FOUND SEE DESCRIPTION DESTROYED LAST_RECBY- Agency who reported the last condition of the mark. STABILITY- The stability of the mark may have 1 of 4 codes as indicated below- A = MOST RELIABLE AND EXPECTED TO HOLD POSITION/ELEVATION WELL B = PROBABLY HOLD POSITION/ELEVATION WELL C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO SURFACE MOTION - E.G. FROST HEAVE, ETC D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY

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SCOPE NAME * dataset

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