Codes used in the NHDOT Geodetic Control Database
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Attribute Table

STATION: The designation or name for the control point, commonly, the information stamped on the DISK.

TOWNCODE: A numeric value which identifies which town a control point is in. Please see Table tblTownName for the accompanying town name.

SEQ: The sequence number, a numeric value assigned to the control point within the town where it is located. Every control point has a unique TOWNCODE/SEQ combination.

LATD, LATM, LATS and LOND, LONM, LONS: The latitude and longitude of each control point expressed in degrees, minutes, and seconds on the North American Datum of 1983, (NAD83). Control points with scaled coordinates are rounded to the nearest second of arc.

ORDER: An indicator of the accuracy or quality of the horizontal coordinates.

→ Primary source stations for extending horizontal control:

A or B	HARN	The National Standard	NGS or NHDOT
10	First-order	Ties to CORS	NHDOT
11	First-order	Most reliable	NGS & NHDOT
21	Second-order	Very good	NGS & NHDOT
31	Third-order	Good	NGS, NHDOT, USGS & Others

→ Stations not recommended for the extension of horizontal control, for plotting only.

35	Third-order	Values transformed with NADCON	
40	Fourth-order	Intersection Stations, i.e. Radio or Fire Towers	
41	Fourth-order	Monumented intersection or no-check stations	
45	Fourth-order	Values transformed with NADCON	
75	Mapping GPS	1 to 5 meter location from Pathfinder-type GPS	
99	Scaled coordinates	General location only	SCALED

AGENCY: Group that generated the Horizontal Coordinate Data

NGS	National Geodetic Survey
NHDOT	NHDOT Geodetic Survey Section
USGS	U.S. Geological Survey
SCALED	Scaled from a USGS Topographic Map
OTHER?	Company or Agency that observed the station

SOURCE: The source of the Horizontal Coordinate Data.

NGS	National Geodetic Survey or Coast and Geodetic Survey datasheets
NHDOT	NH Department of Transportation, the modern era
OPUS	NGS Online Users Positioning Service
NHDPWH	New Hampshire Department of Public Works and Highways, before 1980
USGS	USGS datasheets
NADCON	Transformed from NAD27 with NADCON Software (see also T10-NC)
T10-NC	Trav10 Adjustment, NADCON conversion
GPS	GPS project
??-ADJ	NHDOT Geodetic Survey or Photogrammetric Contractor (?? = State Job Code)
HH-GPS	1 to 5 meter Hand Held GPS
SCALED	Scaled from a USGS Topographic Map

NORTHINGM and EASTINGM: The New Hampshire State Plane Coordinate values of the control point, Northing (Y) and Easting (X), on NAD83, in meters. Values of points with scaled coordinates are rounded to the nearest meter.

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HorDatum: The Horizontal Datum and Adjustment Date of the control point.

NAD83/86	North American Datum of 1983, 1986 Adjustment
NAD83/92	North American Datum of 1983, 1992 Adjustment
NAD83/96	North American Datum of 1983, 1996 Adjustment
NAD83/07	North American Datum of 1983, 2007 Adjustment

CONVM and CONVS: Convergence Angle in minutes and seconds of arc, also known as the. Map Angle. The convergence angle is the difference between True (Geodetic) North and Grid North.

→ Grid Azimuth + Map Angle = Geodetic Azimuth

SCALE: The scale factor, a value which a distance must be multiplied by to place it on the State Plane Coordinate System. A sea level factor must also be applied to reduce the distance to the ellipsoid.

→ Scale Factor X Sea Level Factor = Combined Factor

→ Combined Factor X Observed Distance = Grid Distance

ELEV29: Height in meters (elevation) above the National Geodetic Vertical Datum of 1929 (NGVD29).

ELEV88: Height in meters (elevation) above the North American Vertical Datum of 1988 (NAVD88).

ELORDER or ELO88 Quality of the Height (elevation)

10 to 19	First-order	Most reliable	10	NGS
			11	NHDOT
			12	Other
20 to 29	Second-order	Very good	20	NGS
			21	NHDOT
			22	Other
30 to 39	Third-order	Good	30	NGS
			31	NHDOT/USGS
			32	Other (GPS w/Geoid99, 03 or 09)
40 to 49	Pre-2000 GPS	Good to nearest 1/2 foot		
50 to 59	Trigonometric	Good to nearest foot		
90 to 99	Scaled height from USGS map		98	USGS/NHDOT

Note: Orders 40 and larger should not be used for precise elevation transfers

ELSOURCE or ELS88: Source of Elevation Data.

NGS	National Geodetic Survey
USGS	United State Geological Survey
NHDOT	NH Department of Transportation or Department of Public Works and Highways
??	NHDOT Geodetic Survey Section, Differential Levels (?? = State Job Code)
??-ADJ	NHDOT Geodetic Survey Section, Trigonometric Levels (?? = State Job Code)
NHGS	New Hampshire Geodetic Survey (Public Works Administration, Circa 1930s)
MON	Photogrammetric Contractor
VTCON	Transformed to/from NAVD88 with Vertcon
SCALED	Scaled from a USGS Topographic Map

ELTYPE: Method used to determine elevation or height

DIFF	Differential leveling (most precise)
TRIG	Trigonometric leveling (vertical angle observations)
GPS	3-D Satellite Positioning (GPS vectors)
SCALED	Scaled from a USGS Topographic Map

DELTA8829: Difference in meters between NGVD29 and NAVD88

→ NAVD88 - NGVD29 = DELTA8829

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GEOID09: Geoid height, the separation in meters from the ellipsoid to the geoid.

PID: The point's Permanent Identifying number (PID) as assigned by the National Geodetic survey in the NGS data base.

ADJDATE Date of Horizontal Adjustment if known.

ELDATE Date of Vertical Adjustment if known.

NORTH_83_86 or NORTH_83_8
Superceded coordinates on the NAD83, 1986 Adjustment – for historical reference only.

EAST_83_86 Superceded coordinates on the NAD83, 1986 Adjustment – for historical reference only.

SOURCE_86 Source of the NAD83, 1986 Adjustment coordinates.

TownID numeric NH DOT Town code. See appendix at https://www.nh.gov/dot/org/projectdevelopment/planning/gis-data-catalog/documents/2018RDIUserGuide_Oct30.pdf

Sequence numeric Marker sequence within town

StationDescription or StationDes
text Description of station and navigation directions

GPSAble coded Y=yes, N=no

MonumentingAgency or Monumentin
text Monumenting Agency

YearSet YYYY Year Set

RecoveryCondition or RecoveryCo
coded

G	Good
N	Not Recoverd, Not Found
O	Other
P	Poor, Disturbed, Mutilated, Requires Maintenance
X	Destroyed

RecoveringAgency or Recovering
text Recovering Agency

DateRecovered or DateRecove
text Date Recovered

Monumentation or Monumentat
text Type of monument

MarkerType coded

B	Bolt
DB	Bench Mark/Vertical Control Disk
DD	Survey Disk
DH	Horizontal Control Disk
DJ	Tidal Station Disk
DQ	Calibration Base Line Disk

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DR	Reference Mark Disk
DZ	Azimuth Mark Disk
H	Drill Hole
I	Metal Rod/Rebar
L	Landmark
N	Nail
O	Other
Q	Chiseled Square/Triangle/Circle
R	Rivet
TW	Tower

Stamping	text	Monument stamping
Sketch	coded	Yes/y = sketch available, No = No sketch
TOWNNAME	text	Town Name
COUNTYCODE	numeric	FIPS County Code
STATE	coded	NH = New Hampshire
MarkerDescription or MarkerDesc	text	Marker description
RecoveryConditionDesc or Recovery_1	text	Recovery condition

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