Item class	GeodeticCRS	
Name	**NAD 83 (CORS96) Epoch 1997.0 - LatLonEHt**	
Item status	VALID	
Identifier	385	
Alias	North American Datum of 1983 (CORS96) Epoch 1997.0	
Information source	*Title*	NGS No Longer Updates Published CORS Coordinates in the Following Reference Frames
	Author	National Geodetic Survey
	Publisher	National Oceanic and Atmospheric Administration (NOAA) National Geodetic Survey (NGS)
	Revision date	2017-03-16
	Edition date	2017-03-16
	Series/Journal name	NGS Online listing of transformation parameters
	Other citation details	webpage
Information source	*Title*	NADCON 5.0: Geometric Transformation Tool for points in the National Spatial Reference System
	Author	D. Smith, A. Bilich
	Publisher	NOAA's National Geodetic Survey
	Publication date	2017-03-27
	Edition date	2017-03-27
	Series/Journal name	NGS Technical Report
	Other citation details	Replaces version 4.2 and all earlier. Provides gridding algorithm, datum transformations, and extents of covnversion grids.
Information source	*Title*	Continuously Operating Reference Station (CORS): History, Applications, and Future Enhancements
	Author	R.A. Snay, T. Soler
	Publisher	ASCE
	Publication date	2008-04-01
	Edition date	2008-04-01
	Series/Journal name	Journal of Surveying Engineering
	Issue identification	Volume 134, No. 4
	Page	95-104
	Other citation details	NAD83 (CORS96) Epoch 1996.0,NAD83 (CORS96) Epoch 1997.0,NAD83 (CORS96) Epoch 2002.0
Information source	*Title*	Notice to Adopt Standard Method for Horizontal Datum Transformation
	Author	US Government
	Publisher	Office of Federal Register, NARA
	Publication date	1990-08-10
	Edition date	1990-08-10
	Series/Journal name	Federal Register Notice
	Issue identification	Volume 55, No. 155, Document: 00-18809
	Page	32681.0
	Other citation details	Mandates use of NADCON for official transformations between datums
Data source	ISO Geodetic Registry	
Scope	Spatial referencing	
Datum	North American Datum of 1983 (CORS96) Epoch 1997.0	
Coordinate System	Ellipsoidal 3D CS. Axes: latitude, longitude, ellipsoidal height. Orientations: north, east, up. UoM: degree, degree, metre.	

Extent

Description	**United States and Territories - onshore and offshore: Puerto Rico. United States (USA) - Alaska, CONUS (Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming). Virgin Islands (US).**	
Geographic Bounding Box	*West-bound longitude*	167.65
	North-bound latitude	74.71
	East-bound longitude	-63.88
	South-bound latitude	14.92

Item class	GeodeticDatum
Name	**North American Datum of 1983 (CORS96) Epoch 1997.0**
Item status	VALID
Identifier	139
Alias	NAD83(CORS96)
Information source	*Title* NGS No Longer Updates Published CORS Coordinates in the Following Reference Frames
	Author National Geodetic Survey
	Publisher National Oceanic and Atmospheric Administration (NOAA) National Geodetic Survey (NGS)
	Revision date 2017-03-16
	Edition date 2017-03-16
	Series/Journal name NGS Online listing of transformation parameters
	Other citation details webpage
Information source	*Title* Continuously Operating Reference Station (CORS): History, Applications, and Future Enhancements
	Author R.A. Snay, T. Soler
	Publisher ASCE
	Publication date 2008-04-01
	Edition date 2008-04-01
	Series/Journal name Journal of Surveying Engineering
	Issue identification Volume 134, No. 4
	Page 95-104
	Other citation details NAD83 (CORS96) Epoch 1996.0,NAD83 (CORS96) Epoch 1997.0,NAD83 (CORS96) Epoch 2002.0
Data source	ISO Geodetic Registry
Remarks	Replaces NAD83(1986). Replaced by NAD83(CORS96) Epoch 2002.0.
Anchor definition	Realization of NAD83. The frame is defined by a time-dependent seven parameter transformations of ITRF96 and ITRF97 3D geocentric Cartesian coordinates and velocities at reference epoch 1997.0. The frame is kept aligned to North America at other epochs using the NNR-NUVEL-1A estimate of three Cartesian rotation rates of change representing the tectonic plate motion of North America. The origin, scale and orientation of the frame are nominally defined to be that for the BIH Terrestrial System 1984 (BTS84).
Release date	1998
Coordinate Reference Epoch	1997.0
Scope	Spatial referencing
Ellipsoid	GRS 1980
Prime Meridian	Greenwich

Extent

Description	**United States and Territories - onshore and offshore: Puerto Rico. United States (USA) - Alaska, CONUS (Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana,**

	Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming). Virgin Islands (US).	
Geographic Bounding Box	*West-bound longitude*	167.65
	North-bound latitude	74.71
	East-bound longitude	-63.88
	South-bound latitude	14.92

ISO Geodetic Registry

Item class	Ellipsoid
Name	**GRS 1980**
Item status	VALID
Identifier	27
Alias	Geodetic Reference System 1980
Alias	GRS1980
Alias	IAG GRS80
Alias	International 1979
Alias	GRS80
Information source	*Title* Geodetic Reference System 1980 *Author* H. Moritz *Publisher* Springer International Publishing *Publication date* 2003-03 *Series/Journal name* Journal of Geodesy *Issue identification* Volume 74, No. 1 *Page* 128–162
Information source	*Title* Geodetic Reference System 1980 *Author* H. Moritz *Publisher* International Association of Geodesy *Publication date* 1984 *Series/Journal name* Bulletin Geodesique *Issue identification* Volume 58, No. 3 *Page* 395-405
Data source	ISO Geodetic Registry
Remarks	Adopted by IUGG 1979 Canberra. Inverse flattening is derived from geocentric gravitational constant GM = 3986005e8 m*m*m/s/s, dynamic form factor J2 = 108263e-8 and Earth's angular velocity = 7292115e-11 rad/s.
Semi-major axis	6378137.0 m
Inverse flattening	298.257222101 m

ISO Geodetic Registry

Item class	PrimeMeridian	
Name	**Greenwich**	
Item status	VALID	
Identifier	25	
Alias	Zero meridian	
Information source	Title	Why the Greenwich meridian moved
	Author	S. Malys, J.H. Seago, N.K. Pavlis, P.K. Seidelmann, G.H. Kaplan
	Publisher	Springer International Publishing
	Publication date	2015-12
	Series/Journal name	Journal of Geodesy
	Issue identification	Volume 89, No. 12
	Page	1263–1272
Information source	Title	IERS Conventions (2010)
	Author	G. Petit, B.J. Luzum (eds)
	Publisher	Verlag des Bundesamts fur Kartographie und Geodasie
	Publication date	2010
	Edition date	
	Series/Journal name	IERS Technical Notes
	Issue identification	36.0
	Other citation details	ISSN: 1019-4568
Data source	ISO Geodetic Registry	
Greenwich longitude	0.0 °	

ISO Geodetic Registry

Item class	EllipsoidalCS
Name	**Ellipsoidal 3D CS. Axes: latitude, longitude, ellipsoidal height. Orientations: north, east, up. UoM: degree, degree, metre.**
Item status	VALID
Identifier	46

Information source	*Title*	ISO 19111 Geographical information - Spatial referencing by coordinates
	Author	International Organization for Standardization (ISO)
	Publisher	International Organization for Standardization (ISO)
	Publication date	2007-07-01
	Edition	Second Edition
	Series/Journal name	International Standard
	Issue identification	ISO 19111:2007
Data source	ISO Geodetic Registry	
Remarks	Used in geographic 3D coordinate reference systems. Horizontal coordinates referenced to this CS are in degrees. Any degree representation (e.g. DMSH, decimal, etc.) may be used but that used must be declared for the user.	

Axes

Item class	CoordinateSystemAxis
Name	**Geodetic latitude**
Item status	VALID
Identifier	38

Information source	*Title*	ISO 19111 Geographical information - Spatial referencing by coordinates
	Author	International Organization for Standardization (ISO)
	Publisher	International Organization for Standardization (ISO)
	Publication date	2007-07-01
	Edition	Second Edition
	Series/Journal name	International Standard
	Issue identification	ISO 19111:2007
Data source	ISO Geodetic Registry	
Remarks	Used in geographic 2D and geographic 3D coordinate reference systems.	
Abbreviation	Lat	
Direction	north	
Unit	degree (supplier to define representation)	

Item class	CoordinateSystemAxis
Name	**Geodetic longitude**
Item status	VALID
Identifier	34

Information source	*Title*	ISO 19111 Geographical information - Spatial referencing by coordinates
	Author	International Organization for Standardization (ISO)

Publisher	International Organization for Standardization (ISO)
Publication date	2007-07-01
Edition	Second Edition
Series/Journal name	International Standard
Issue identification	ISO 19111:2007
Data source	ISO Geodetic Registry
Remarks	Used in geographic 2D and geographic 3D coordinate reference systems.
Abbreviation	Lon
Direction	east
Unit	degree (supplier to define representation)

Item class	CoordinateSystemAxis	
Name	**Ellipsoidal height**	
Item status	VALID	
Identifier	36	
Information source	*Title*	ISO 19111 Geographical information - Spatial referencing by coordinates
	Author	International Organization for Standardization (ISO)
	Publisher	International Organization for Standardization (ISO)
	Publication date	2007-07-01
	Edition	Second Edition
	Series/Journal name	International Standard
	Issue identification	ISO 19111:2007
Data source	ISO Geodetic Registry	
Remarks	Used only as part of an ellipsoidal 3D coordinate system in a geographic 3D coordinate reference system, never on its own.	
Abbreviation	h	
Direction	up	
Unit	metre	