GPS MONUMENT AS DESCRIBED

TOWN OF VAIL CONTROL NETWORK 2022\* EAGLE COUNTY SURVEY CONTROL\* DENVER WATER DEPARTMENT\*

NATIONAL GEODETIC SURVEY HORIZONTAL CONTROL MARK\*

U.S. GEOLOGICAL SURVEY BENCHMARK\*

U.S. COAST & GEODETIC SURVEY BENCHMARK\*

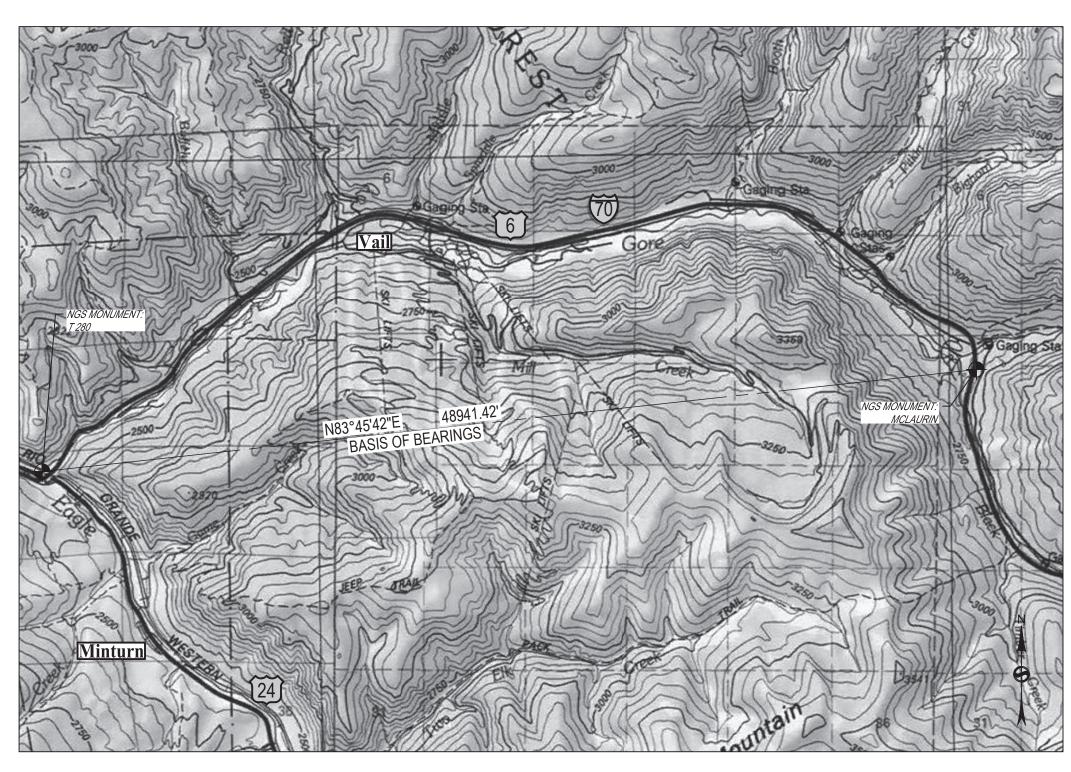
SURVEY SYSTEMS INC\* INTERSTATE HIGHWAY 70

U.S. HIGHWAY 6 U.S. HIGHWAY 24

TOWN OF VAIL LIMITS

TOWN OF MINTURN LIMITS

\* - MONUMENTS FOUND OR SET AND OBSERVED AS A PART OF THIS GPS CONTROL MAP



VICINITY MAP
SCALE: 1"=5000"

1. THIS TOWN OF VAIL GPS CONTROL MAP IS NOT A BOUNDARY SURVEY OR RIGHT-OF-WAY SURVEY AND WAS PREPARED FOR THE TOWN OF VAIL TO UPDATE THE TOWN'S CONTROL NETWORK.

- 2. <u>NOTICE:</u> ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON.
- 3. THE PROJECT COORDINATE SYSTEM UTILIZED FOR THIS TOWN OF VAIL GPS CONTROL MAP IS COLORADO STATE PLANE CENTRAL ZONE, NAD 83(2011) AT 2010.0000.
- 4. BASIS OF BEARINGS: BEARINGS ARE BASED ON THE LINE BETWEEN NGS POINT T 280 (PID KL0004) AND NGS POINT MCLAURIN (PID AB2082), AND BEARS NORTH 83°45'42" EAST.
- 5. THE LINEWORK DEPICTING HIGHWAYS, STREETS, ROADS, LAKES, RIVERS AND STREAMS ARE DERIVED FROM GIS SHAPEFILES PUBLICLY AVAILABLE FROM THE STATE OF COLORADO AND THE UNITED STATES DEPARTMENT OF AGRICULTURE GEOSPATIAL DATA GATEWAY AND HAVE BEEN SHOWN FOR REFERENCE ONLY TO THE GENERAL LOCATION OF THE POINT LOCATIONS SHOWN.
- 6. CONTROL POINTS CALLED FOR IN THIS DOCUMENT ARE BASED UPON A STATIC GPS SURVEY CONDUCTED FROM 9/11/2022 THROUGH 9/17/2022. ALL DATA WAS PROCESSED WITHIN NGS OPUS PROJECTS.
- 7. THE HISTORICAL ELEVATION FOR NGS POINT SPRADDLE (AB2083) PRIOR TO THIS MAP WAS 8287.82 AND SHOULD BE USED WHEN REFERENCING HISTORICAL DATA POST 1995 UNTIL THE DATE SHOWN ON THIS
- 8. THIS MAP IS INTENDED TO UPDATE AND SUPERSEDE ANY PREVIOUS CONTROL NETWORKS FOR ANY BUSINESS PURPOSES FOR THE TOWN OF VAIL TO INCLUDE ANY PUBLISHED VALUES BY THE NATIONAL GEODETIC

### SURVEYOR'S CERTIFICATION

I, GERALD MATT NICHOLS, A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THIS SURVEY CONTROL DIAGRAM AND THE FIELD SURVEY IT REPRESENTS HAS BEEN PERFORMED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND BASED UPON MY KNOWLEDGE, INFORMATION AND BELIEF IS IN ACCORDANCE WITH APPLICABLE STANDARDS OF PRACTICE FOR THE STATE OF COLORADO. THIS CERTIFICATION IS NOT A GUARANTY OR WARRANTY, EITHER EXPRESSED OR IMPLIED.

NAME: GERALD MATT NICHOLS TITLE: SURVEY MANAGER REGISTERED PROFESSIONAL LAND SURVEYOR REGISTRATION NO.: 38026 EMAIL: MNICHOLS@SURVEYSYSTEMS.NET

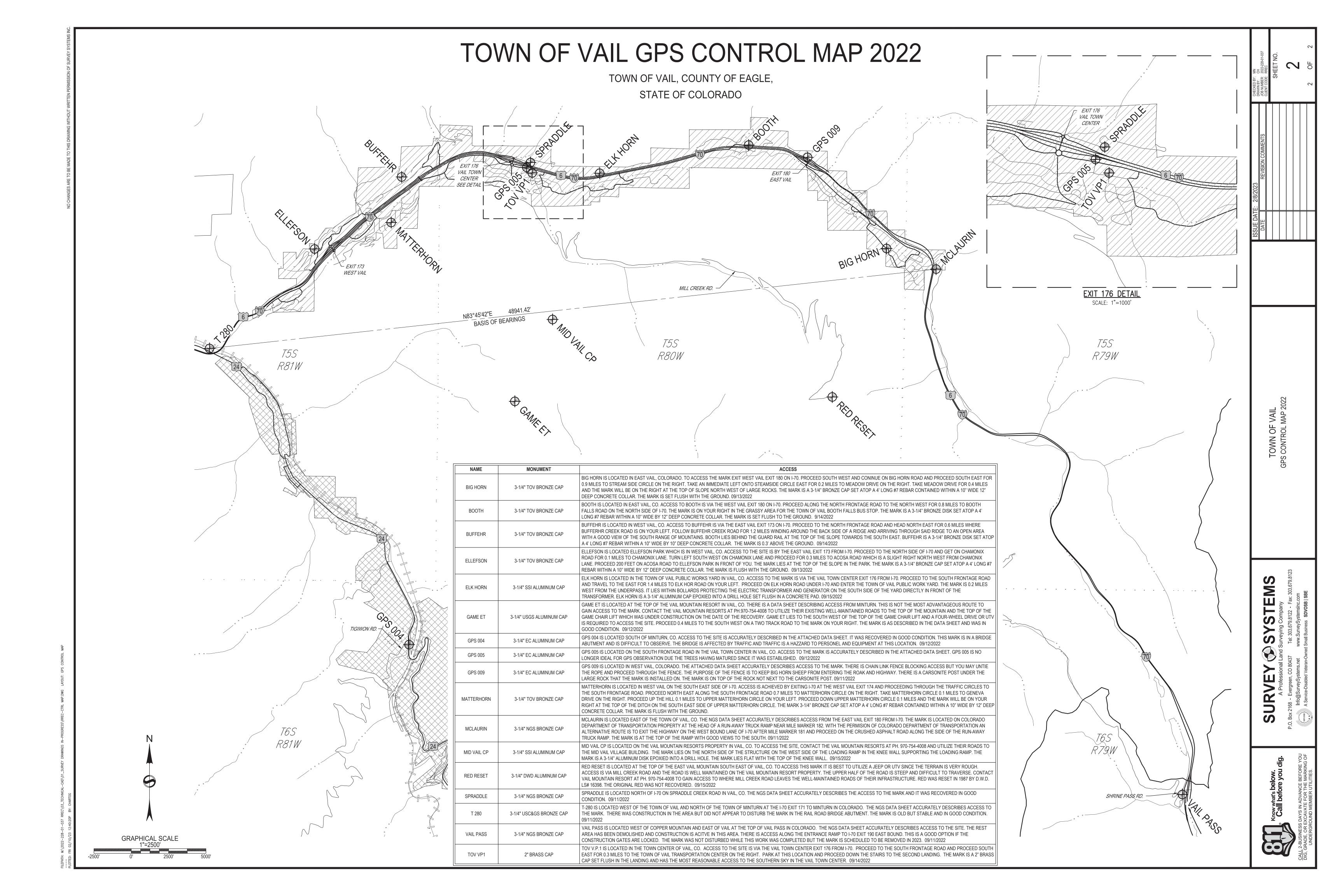
# CLERK AND RECORDER'S CERTIFICATE

THIS GPS CONTROL MAP WAS FILED FOR RECORD IN THE OFFICE OF THE CLERK AND RECORDER AT \_\_\_\_\_ O'CLOCK \_\_\_\_\_, ON THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_\_.

CLERK AND RECORDER

	POINT IDEN	ITIFICATION	NAD_83(2011) @ 2010.0000						SPC (0502 CO C)				NAVD 88 GEOID 18		ITRF2014				
NAME	SHORT NAME	MONUMENT	LAT.	LONG.	EL. HGT. Meters	NORTHING METERS	NORTHING US SFT	EASTING METERS	EASTING US SFT	CONVERGENCE DEGREES	POINT SCALE	COMBINED SCALE FACTOR	ORTHO. HGT. METERS	ORTHO. HGT. US SFT.	LAT.	LONG.	EL. HGT. METERS	EL. HGT. US SFT.	AT EPOCH
BIG HORN	birn	3-1/4" TOV BRONZE CAP	39° 37' 43.76496'	106° 17' 19.99234"	2,588.520	504,412.159	1,654,892.22	846,674.738	2,777,798.70	-0.49754167	0.99997828	0.99957235	2,600.973	8,533.36	39° 37' 43.78199"	106° 17' 20.04599"	2,587.664	8,489.69	2022.7059
воотн	both	3-1/4" TOV BRONZE CAP	39° 38' 51.42576"	106° 19' 18.81089"	2,526.865	506,523.880	1,661,820.43	843,860.151	2,768,564.51	-0.51835833	0.99998135	0.99958509	2,539.327	8,331.11	39° 38' 51.44278"	106° 19' 18.86455"	2,526.010	8,287.42	2022.7063
BUFFEHR	buhr	3-1/4" TOV BRONZE CAP	39° 38' 28.12081"	106° 24' 15.59421"	2,560.356	505,872.404	1,659,683.05	836,777.541	2,745,327.65	-0.57035278	0.99998028	0.99957877	2,572.857	8,441.12	39° 38' 28.13779"	106° 24' 15.64795"	2,559.504	8,397.31	2022.7052
ELLEFSON	elon	3-1/4" TOV BRONZE CAP	39° 37' 39.87771"	106° 25' 29.46068"	2,434.595	504,402.378	1,654,860.14	835,001.230	2,739,499.87	-0.58329444	0.99997810	0.99959630	2,447.122	8,028.60	39° 37' 39.89469"	106° 25' 29.51442"	2,433.742	7,984.70	2022.7033
ELK HORN	elrn	3-1/4" SSI ALUMINUM CAP	39° 38' 31.84612"	106° 21' 26.10076"	2,505.192	505,948.108	1,659,931.42	840,819.795	2,758,589.61	-0.54065833	0.99998045	0.99958759	2,517.644	8,259.97	39° 38' 31.86313"	106° 21' 26.15447"	2,504.338	8,216.32	2022.7064
GAME ET	gaet	3-1/4" USGS ALUMINUM CAP	39° 36' 00.35936"	106° 22' 36.85569"	3,344.311	501,292.541	1,644,657.28	839,087.738	2,752,907.02	-0.55305556	0.99997378	0.99944940	3,356.678	11,012.70	39° 36' 00.37633"	106° 22' 36.90937"	3,343.456	10,969.32	2022.7022
GPS 004	gp04	3-1/4" EC ALUMINUM CAP	39° 33' 18.65775"	106° 24' 05.31051"	2,460.982	496,326.598	1,628,364.85	836,928.028	2,745,821.37	-0.56855000	0.99996727	0.99958134	2,473.444	8,114.96	39° 33' 18.67471"	106° 24' 05.36416"	2,460.128	8,071.27	2022.6971
GPS 005	gp05	3-1/4" EC ALUMINUM CAP	39° 38' 35.22755"	106° 22' 28.61808"	2,488.862	506,066.596	1,660,320.16	839,330.241	2,753,702.63	-0.55161111	0.99998060	0.99959030	2,501.332	8,206.45	39° 38' 35.24457"	106° 22' 28.67178"	2,488.008	8,162.74	2022.6970
GPS 009	gp09	3-1/4" EC ALUMINUM CAP	39° 38' 43.63882"	106° 18' 28.28761"	2,547.045	506,272.932	1,660,997.11	845,062.520	2,772,509.28	-0.50950833	0.99998099	0.99958156	2,559.511	8,397.33	39° 38' 43.65586"	106° 18' 28.34125"	2,546.191	8,353.63	2022.6970
MATTERHORN	marn	3-1/4" TOV BRONZE CAP	39° 37' 57.89676"	106° 24' 24.18094"	2,442.132	504,942.370	1,656,631.76	836,563.508	2,744,625.44	-0.57185556	0.99997891	0.99959593	2,454.635	8,053.25	39° 37' 57.91374"	106° 24' 24.23469"	2,441.279	8,009.43	2022.7063
MCLAURIN	mcin	3-1/4" NGS BRONZE CAP	39° 37' 30.43751"	106° 16' 37.48322"	2,657.682	503,992.414	1,653,515.11	847,684.939	2,781,113.00	-0.49009444	0.99997768	0.99956091	2,670.135	8,760.27	39° 37' 30.45455"	106° 16' 37.53685"	2,656.825	8,716.60	2022.6970
MID VAIL CP	mvcp	3-1/4" SSI ALUMINUM CAP	39° 36' 54.77058"	106° 22' 05.27535"	3,083.390	502,963.275	1,650,138.68	839,857.173	2,755,431.41	-0.54752222	0.99997612	0.99949263	3,095.768	10,156.70	39° 36' 54.78758"	106° 22' 05.32902'	3,082.535	10,113.28	2022.7037
RED RESET	redr	3-1/4" DWD ALUMINUM CAP	39° 36' 05.19655"	106° 18' 05.33725"	3,590.967	501,381.876	1,644,950.37	845,566.578	2,774,163.01	-0.50548611	0.99997399	0.99941095	3,603.304	11,821.84	39° 36' 05.21356"	106° 18' 05.39087"	3,590.111	11,778.56	2022.7026
SPRADDLE	sple	3-1/4" NGS BRONZE CAP	39° 38' 38.53735"	106° 22' 25.48755"	2,513.531	506,167.949	1,660,652.68	839,405.861	2,753,950.73	-0.55106389	0.99998076	0.99958659	2,526.000	8,287.38	39° 38' 38.55436"	106° 22' 25.54126"	2,512.678	8,243.68	2022.6983
T 280	t280	3-1/4" USC&GS BRONZE CAP	39° 36' 33.30959"	106° 26' 58.52311"	2,343.832	502,371.428	1,648,196.93	832,855.897	2,732,461.39	-0.59889722	0.99997519	0.99960762	2,356.398	7,730.95	39° 36' 33.32655"	106° 26' 58.57684"	2,342.980	7,686.93	2022.7014
VAIL PASS	vass	3-1/4" NGS BRONZE CAP	39° 31' 44.04440"	106° 13' 03.17276"	3,221.752	493,268.013	1,618,330.14	852,711.520	2,797,604.38	-0.45255000	0.99996374	0.99945856	3,234.218	10,610.93	39° 31' 44.06143"	106° 13' 03.22626"	3,220.892	10,567.21	2022.7011
TOV VP1	vp1b	2" BRASS CAP	39° 38' 31.66874"	106° 22' 23.91248"	2,482.557	505,955.766	1,659,956.54	839,441.377	2,754,067.25	-0.55078611	0.99998044	0.99959112	2,495.026	8,185.76	39° 38' 31.68575"	106° 22' 23.96620"	2,481.703	8,142.05	2022.7021





POINT IDENT	TFICATION	NAD_	83(2011) @ 2010.000	00				SPC (0502	CO C)			NAVD 88	GEOID 18		ITF	RF2014		
NAME	SHORT NAME	LAT.	LONG.	EL. HGT. Meters	NORTHING METERS	NORTHING US SFT	EASTING METERS	EASTING US SFT	CONVERGENCE DEGREES	POINT SCALE	COMBINED SCALE FACTOR	ORTHO. HGT. METERS	ORTHO. HGT. US SFT.	LAT.	LONG.	EL. HGT. METERS	EL. HGT. US SFT.	AT EPOCH
BIG HORN	birn	39° 37' 43.76496'	106° 17' 19.99234"	2,588.520	504,412.159	1,654,892.22	846,674.738	2,777,798.70	-0.49754167	0.99997828	0.99957235	2,600.973	8,533.36	39° 37' 43.78199"	106° 17' 20.04599"	2,587.664	8,489.69	2022.7059
BOOTH	both	39° 38' 51.42576"	106° 19' 18.81089"	2,526.865	506,523.880	1,661,820.43	843,860.151	2,768,564.51	-0.51835833	0.99998135	0.99958509	2,539.327	8,331.11	39° 38' 51.44278"	106° 19' 18.86455"	2,526.010	8,287.42	2022.7063
BUFFEHR	buhr	39° 38' 28.12081"	106° 24' 15.59421"	2,560.356	505,872.404	1,659,683.05	836,777.541	2,745,327.65	-0.57035278	0.99998028	0.99957877	2,572.857	8,441.12	39° 38' 28.13779"	106° 24' 15.64795"	2,559.504	8,397.31	2022.7052
ELLEFSON	elon	39° 37' 39.87771"	106° 25' 29.46068"	2,434.595	504,402.378	1,654,860.14	835,001.230	2,739,499.87	-0.58329444	0.99997810	0.99959630	2,447.122	8,028.60	39° 37' 39.89469"	106° 25' 29.51442"	2,433.742	7,984.70	2022.7033
ELK HORN	elrn	39° 38' 31.84612"	106° 21' 26.10076"	,	505,948.108	, , ,	840,819.795	2,758,589.61	-0.54065833	0.99998045	0.99958759	2,517.644	,	39° 38' 31.86313"	106° 21' 26.15447"	2,504.338	8,216.32	2022.7064
GAME ET		39° 36' 00.35936"			501,292.541		839,087.738	2,752,907.02	ļ		0.99944940	3,356.678	11,012.70	39° 36' 00.37633"	106° 22' 36.90937"	3,343.456	10,969.32	2022.7022
GPS 004	01	39° 33' 18.65775"	106° 24' 05.31051"		496,326.598		836,928.028	2,745,821.37	-0.56855000		0.99958134	2,473.444	,	39° 33' 18.67471"	106° 24' 05.36416"	2,460.128	8,071.27	2022.6971
GPS 005	01	39° 38' 35.22755"	106° 22' 28.61808"		506,066.596		839,330.241	2,753,702.63			0.99959030	2,501.332		39° 38' 35.24457"	106° 22' 28.67178"	2,488.008	8,162.74	2022.6970
GPS 009	gp09	39° 38' 43.63882"	106° 18' 28.28761"	2,547.045	506,272.932	1,660,997.11	845,062.520	2,772,509.28	-0.50950833	0.99998099	0.99958156	2,559.511	8,397.33	39° 38' 43.65586"	106° 18' 28.34125"		8,353.63	2022.6970
MATTERHORN	marn	39° 37' 57.89676"	106° 24' 24.18094"	2,442.132	504,942.370	1,656,631.76	836,563.508	2,744,625.44	-0.57185556	0.99997891	0.99959593	2,454.635		39° 37' 57.91374"	106° 24' 24.23469"	2,441.279	8,009.43	2022.7063
MCLAURIN	mcin	39° 37' 30.43751"	106° 16' 37.48322"	2,657.682	503,992.414	1,653,515.11	847,684.939	2,781,113.00	-0.49009444	0.99997768	0.99956091	2,670.135	8,760.27	39° 37' 30.45455"	106° 16' 37.53685"	2,656.825	8,716.60	2022.6970
MID VAIL CP	mvcp	39° 36' 54.77058"	106° 22' 05.27535"	3,083.390	502,963.275	1,650,138.68	839,857.173	2,755,431.41	-0.54752222	0.99997612	0.99949263	3,095.768	10,156.70	39° 36' 54.78758"	106° 22' 05.32902'	3,082.535	10,113.28	2022.7037
RED RESET	redr	39° 36' 05.19655"	106° 18' 05.33725"	3,590.967	501,381.876	1,644,950.37	845,566.578	2,774,163.01	-0.50548611	0.99997399	0.99941095	3,603.304	11,821.84	39° 36' 05.21356"	106° 18' 05.39087"	3,590.111	11,778.56	2022.7026
SPRADDLE		39° 38' 38.53735"	106° 22' 25.48755"	2,513.531	506,167.949	1,660,652.68	839,405.861	2,753,950.73	-0.55106389	0.99998076	0.99958659	2,526.000	8,287.38	39° 38' 38.55436"	106° 22' 25.54126"	2,512.678	8,243.68	2022.6983
T 280	t280	39° 36' 33.30959"	106° 26' 58.52311"	2,343.832	502,371.428	1,648,196.93	832,855.897	2,732,461.39	-0.59889722	0.99997519	0.99960762	2,356.398	7,730.95	39° 36' 33.32655"	106° 26' 58.57684"	2,342.980	7,686.93	2022.7014
VAIL PASS	vass	39° 31' 44.04440"	106° 13' 03.17276"	3,221.752	493,268.013	1,618,330.14	852,711.520	2,797,604.38	-0.45255000	0.99996374	0.99945856	3,234.218	10,610.93	39° 31' 44.06143"	106° 13' 03.22626"	3,220.892	10,567.21	2022.7011
TOV VP1	vp1b	39° 38' 31.66874"	106° 22' 23.91248"	2,482.557	505,955.766	1,659,956.54	839,441.377	2,754,067.25	-0.55078611	0.99998044	0.99959112	2,495.026	8,185.76	39° 38' 31.68575"	106° 22' 23.96620"	2,481.703	8,142.05	2022.7021

THE DATA SHOWN HEREON IS INTENDED TO UPDATE AND SUPERSEDE ANY PREVIOUS CONTROL NETWORKS FOR OFFICIAL TOWN OF VAIL BUSINESS TO INCLUDE ANY PUBLISHED VALUES BY THE NGS.

MARK: BIG HORN birn

REF FRAME:	NAD_83(2011) @ 2	010.0000	ITRF2014 @ 2022.7	7059
X:	-1,380,269.813 m	0.001 m	-1,380,270.763 m	0.001 m
Y:	-4,723,555.506 m	0.002 m	-4,723,554.193 m	0.002 m
Z:	4,047,980.666 m	0.002 m	4,047,980.525 m	0.002 m
LAT:	39° 37' 43.76496"	0.001 m	39° 37' 43.78199"	0.001 m
E LON:	253° 42' 40.00766"	0.001 m	253° 42' 39.95401"	0.001 m
W LON:	106° 17' 19.99234"	0.001 m	106° 17' 20.04599"	0.001 m
EL HGT:	2,588.520 m 0.003	3 m	2,587.664 m 0.003	3 m
ORTHO HGT: NAVD88	2,600.973 m 0.019	9 m (= EL HGT12	2.453 GEOID18 HGT	)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (0502 CO C)
NORTHING (Y)	4,387,355.198 m	504,412.159 m
EASTING (X)	389,385.880 m	846,674.738 m
CONVERGENCE	-0.82215000 deg	-0.49754167 deg
POINT SCALE	0.99975064	0.99997828
COMBINED FACTOR	0.99934481	0.99957235

US NATIONAL GRID DESIGNATOR: 13SCD8938687355 (NAD 83)





BIG HORN IS LOCATED IN EAST VAIL, COLORADO. TO ACCESS THE MARK EXIT EAST VAIL EXIT 180 ON I-70. PROCEED SOUTH WEST AND CONINUE ON BIG HORN ROAD AND PROCEED SOUTH EAST FOR 0.9 MILES TO STREAMSIDE CIRCLE ON THE RIGHT. TAKE AN IMMEDIATE LEFT ONTO STREAMSIDE CIRCLE EAST FOR 0.2 MILES TO MEADOW DRIVE ON THE RIGHT. TAKE MEADOW DRIVE FOR 0.4 MILES AND THE MARK WILL BE ON THE RIGHT AT THE TOP OF SLOPE NORTH WEST OF LARGE ROCKS. THE MARK IS A 3-1/4" BRONZE CAP SET ATOP A 4' LONG #7 REBAR CONTAINED WITHIN A 10" WIDE 12" DEEP CONCRETE COLLAR. THE MARK IS SET FLUSH WITH THE GROUND. 09/13/2022

THE MARK WAS SET ON 09/13/2022
THE MARK WAS OBSERVED ON 09/14/2022

MARK:	BOOTH	both

REF FRAME:	NAD_83(2011) @ 2010.0000	ITRF2014 @ 2022.7063
X:	-1,382,602.975 m 0.001 m	-1,382,603.924 m 0.001 m
Y:	-4,721,435.987 m 0.002 m	-4,721,434.674 m 0.002 m
Z:	4,049,548.944 m 0.002 m	4,049,548.803 m 0.002 m
LAT:	39° 38' 51.42576" 0.001 m	39° 38′ 51.44278" 0.001 m
E LON:	253° 40' 41.18911" 0.000 m	253° 40' 41.13545" 0.000 m
W LON:	106° 19' 18.81089" 0.000 m	106° 19' 18.86455" 0.000 m
EL HGT:	2,526.865 m 0.003 m	2,526.010 m 0.003 m
ORTHO HGT: NAVD88	2,539.327 m 0.020 m (= EL HGT	12.462 GEOID18 HGT)
	LITM COORDINATEO	OTATE DI ANE COODDINIATE

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (0502 CO C)
NORTHING (Y)	4,389,482.366 m	506,523.880 m
EASTING (X)	386,583.944 m	843,860.151 m
CONVERGENCE	-0.84354167 deg	-0.51835833 deg
POINT SCALE	0.99975837	0.99998135
COMBINED FACTOR	0 99936220	0.99958509

US NATIONAL GRID DESIGNATOR: 13SCD8658489482 (NAD 83)





BOOTH IS LOCATED IN EAST VAIL, CO. ACCESS TO BOOTH IS VIA THE EAST VAIL EXIT 180 ON I-70. PROCEED ALONG THE NORTH FRONTAGE ROAD TO THE NORTH WEST FOR 0.8 MILES TO BOOTH FALLS ROAD ON THE NORTH SIDE OF I-70. THE MARK IS ON YOUR RIGHT IN THE GRASSY AREA FOR THE TOWN OF VAIL BOOTH FALLS BUS STOP. THE MARK IS A 3-1/4" BRONZE DISK SET ATOP A 4' LONG #7 REBAR WITHIN A 10" WIDE BY 12" DEEP CONCRETE COLLAR. THE MARK IS SET FLUSH TO THE GROUND. 9/14/2022

THE MARK WAS SET ON 09/14/2022 THE MARK WAS OBSERVED ON 09/15/2022

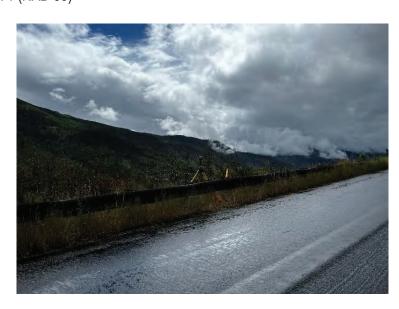
MARK: BUFFEHR buhr

REF FRAME:	NAD_83(2011) @ 2010.0000	ITRF2014 @ 2022.7052
X:	-1,389,531.805 m 0.001 m	-1,389,532.755 m 0.001 m
Y:	-4,719,906.572 m 0.002 m	-4,719,905.259 m 0.002 m
Z:	4,049,016.640 m 0.002 m	4,049,016.499 m 0.002 m
LAT:	39° 38' 28.12081" 0.001 m	39° 38' 28.13779" 0.001 m
E LON:	253° 35' 44.40579" 0.000 m	253° 35' 44.35205" 0.000 m
W LON: 1	06° 24' 15.59421" 0.000 m	106 °24' 15.64795" 0.000 m
EL HGT:	2,560.356 m 0.002 m	2,559.504 m 0.002 m
ORTHO HGT: NAVD88	2,572.857 m 0.020 m (= EL HGT12	2.501 GEOID18 HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (0502 CO C)
NORTHING (Y)	4,388,871.259 m	505,872.404 m
EASTING (X)	379,499.253 m	836,777.541 m
CONVERGENCE	-0.89603889 deg	-0.57035278 deg
POINT SCALE	0.99977877	0.99998028
COMBINED FACTOR	0.99937734	0.99957877

US NATIONAL GRID DESIGNATOR: 13SCD7949988871 (NAD 83)





BUFFEHR IS LOCATED IN WEST VAIL, CO. ACCESS TO BUFFEHR IS VIA THE WEST VAIL EXIT 173 ON I-70. PROCEED TO THE NORTH FRONTAGE ROAD AND HEAD NORTH EAST FOR 0.6 MILES WHERE BUFFERHR CREEK ROAD IS ON YOUR LEFT. FOLLOW BUFFEHR CREEK ROAD FOR 1.2 MILES WINDING AROUND THE BACK SIDE OF A RIDGE AND ARRIVING THROUGH SAID RIDGE TO AN OPEN AREA WITH A GOOD VIEW OF THE SOUTH RANGE OF MOUNTAINS. BOOTH LIES BEHIND THE GUARD RAIL AT THE TOP OF THE SLOPE TOWARDS THE SOUTH EAST. BUFFEHR IS A 3-1/4" BRONZE DISK SET ATOP A 4' LONG #7 REBAR WITHIN A 10" WIDE BY 10" DEEP CONCRETE COLLAR. THE MARK IS 0.3' ABOVE THE GROUND. 09/14/2022

THE MARK WAS SET ON 09/14/2022
THE MARK WAS OBSERVED ON 09/14/2022 AND 09/15/2022

ITRF2014 @ 2022 7064

### TOWN OF VAIL CONTROL NETWORK

#### MARK: ELK HORN elrn

REE ERAME.

POINT SCALE

COMBINED FACTOR

REF FRAIVIE.	NAD_03(2011) @ 20	10.0000	11KF2014 @ 2022.71	004
X:	-1,385,620.245 m	0.001 m	-1,385,621.195 m	0.001 m
Y:	-4,720,935.674 m	0.002 m	-4,720,934.361 m	0.002 m
Z:	4,049,069.954 m	0.002 m	4,049,069.813 m	0.002 m
LAT:	39° 38' 31.84612"	0.001 m	39° 38' 31.86313"	0.001 m
E LON:	253° 38' 33.89924"	0.000 m	253° 38' 33.84553"	0.000 m
W LON:	106° 21' 26.10076"	0.000 m	106° 21' 26.15447"	0.000 m
EL HGT:	2,505.192 m 0.003	m	2,504.338 m 0.003	m
ORTHO HGT: NAVD88	2,517.644 m 0.020	m (= EL HGT12	.452 GEOID18 HGT)	
	UTM COORDINATES	S	STATE PLANE COO	RDINATES
	UTM (Zone 13)		SPC (0502 CO C)	
NORTHING (Y)	4,388,923.985 m		505,948.108 m	
EASTING (X)	383,541.032 m		840,819.795 m	
CONVERGENCE	-0.86601111 deg		-0.54065833 deg	

NAD 83(2011) @ 2010 0000

US NATIONAL GRID DESIGNATOR: 13SCD8354188924 (NAD 83)

0.99976698

0.99937420





0.99998045

0.99958759

ELK HORN IS LOCATED IN THE TOWN OF VAIL PUBLIC WORKS YARD IN VAIL, CO. ACCESS TO THE MARK IS VIA THE VAIL TOWN CENTER EXIT 176 FROM I-70. PROCEED TO THE SOUTH FRONTAGE ROAD AND TRAVEL TO THE EAST FOR 1.4 MILES TO ELK HOR ROAD ON YOUR LEFT. PROCEED ON ELK HORN ROAD UNDER I-70 AND ENTER THE TOWN OF VAIL PUBLIC WORKS YARD. THE MARK IS 0.2 MILES WEST FROM THE UNDERPASS. IT LIES WITHIN BOLLARDS PROTECTING THE ELECTRIC TRANSFORMER AND GENERATOR ON THE SOUTH SIDE OF THE YARD DIRECTLY IN FRONT OF THE TRANSFORMER. ELK HORN IS A 3-1/4" ALUMINUM CAP EPOXIED INTO A DRILL HOLE SET FLUSH IN A CONCRETE PAD. 09/15/2022

THE MARK WAS SET ON 09/14/2022 THE MARK WAS OBSERVED ON 09/15/2022

MARK:	ELLEFSON	elor	1			
REF FRAME:		NAD_83(2011	1) @ 2	2010.0000	ITRF2014 @ 2022.	7033
X:		-1,391,463.06	6 m	0.001 m	-1,391,464.016 m	0.001 m
Y:		-4,720,226.47	'4 m	0.003 m	-4,720,225.161 m	0.003 m
Z:		4,047,790.119	9 m	0.002 m	4,047,789.979 m	0.002 m
LAT:		39° 37' 39.87	771"	0.001 m	39° 37' 39.89469"	0.001 m
E LON:		253° 34' 30.5	3932"	0.001 m	253° 34' 30.48558"	0.001 m
W LON:		106° 25' 29.4	6068"	0.001 m	106 °25' 29.51442"	0.001 m
EL HGT:		2,434.595 m	0.00	4 m	2,433.742 m 0.00	4 m
ORTHO HGT:	NAVD88	2,447.122 m	0.02	0 m (= EL HGT12	2.527 GEOID18 HGT	)
		UTM COORD	INATE	ES	STATE PLANE CO	ORDINATES
		UTM (Zone 13	3)		SPC (0502 CO C)	
NORTHING (Y	)	4,387,411.64	1 m		504,402.378 m	
EASTING (X)		377,714.969 r	m		835,001.230 m	
CONVERGEN	CE	-0.90887778	deg		-0.58329444 deg	
POINT SCALE		0.99978410			0.99997810	
COMBINED FA	ACTOR	0.99940238			0.99959630	

#### US NATIONAL GRID DESIGNATOR: 13SCD7771587412 (NAD 83)





ELLEFSON IS LOCATED IN ELLEFSON PARK WHICH IS IN WEST VAIL, CO. ACCESS TO THE SITE IS BY THE WEST VAIL EXIT 173 FROM I-70. PROCEED TO THE NORTH SIDE OF I-70 AND GET ON CHAMONIX ROAD FOR 0.1 MILES TO CHAMONIX LANE. TURN LEFT SOUTH WEST ON CHAMONIX LANE AND PROCEED FOR 0.3 MILES TO ACOSA ROAD WHICH IS A SLIGHT RIGHT, NORTH WEST FROM CHAMONIX LANE. PROCEED 200 FEET ON ACOSA ROAD TO ELLEFSON PARK IN FRONT OF YOU. THE MARK LIES AT THE TOP OF THE SLOPE IN THE PARK. THE MARK IS A 3-1/4" BRONZE CAP SET ATOP A 4' LONG #7 REBAR WITHIN A 10" WIDE BY 12" DEEP CONCRETE COLLAR. THE MARK IS FLUSH WITH THE GROUND. 09/13/2022

THE MARK WAS SET ON 09/13/2022
THE MARK WAS OBSERVED ON 09/14/2022 AND 09/15/2022

MARK: GAME ET ga	et
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REF FRAME:	NAD_83(2011) @ 2010.0000	ITRF2014 @ 2022.7022
X:	-1,388,262.260 m 0.001 m	-1,388,263.210 m 0.001 m
Y:	-4,723,940.021 m 0.002 m	-4,723,938.707 m 0.002 m
Z:	4,046,004.679 m 0.001 m	4,046,004.538 m 0.001 m
LAT:	39° 36' 00.35936" 0.001 m	39° 36' 00.37633" 0.001 m
E LON:	253° 37' 23.14431" 0.000 m	253° 37' 23.09063" 0.000 m
W LON:	106° 22' 36.85569" 0.000 m	106° 2'2 36.90937" 0.000 m
EL HGT:	3,344.311 m 0.002 m	3,343.456 m 0.002 m
ORTHO HGT: NAVD88	3,356.678 m 0.020 m (= EL HGT12	2.367 GEOID18 HGT)
	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (0502 CO C)
NORTHING (Y)	4,384,279.283 m	501,292.541 m
EASTING (X)	381,782.958 m	839,087.738 m
CONVERGENCE	-0.87777500 deg	-0.55305556 deg
POINT SCALE	0.99977206	0.99997378
COMBINED FACTOR	0.99924778	0.99944940

US NATIONAL GRID DESIGNATOR: 13SCD8178384279 (NAD 83)





GAME ET IS LOCATED AT THE TOP OF THE VAIL MOUNTAIN RESORT IN VAIL, CO. THERE IS A DATA SHEET ATTACHED DESCRIBING ACCESS FROM MINTURN. THIS IS NOT THE MOST ADVANTAGEOUS ROUTE TO GAIN ACCESS TO THE MARK. CONTACT THE VAIL MOUNTAIN RESORTS AT PH.970-754-4008 TO UTILIZE THEIR EXISTING WELL-MAINTAINED ROADS TO THE TOP OF THE MOUNTAIN AND THE TOP OF THE GAME CHAIR LIFT WHICH WAS UNDER CONSTRUCTION ON THE DATE OF THE RECOVERY. GAME ET LIES TO THE SOUTH WEST OF THE TOP OF THE GAME CHAIR LIFT AND A FOUR-WHEEL DRIVE OR UTV IS REQUIRED TO ACCESS THE SITE. PROCEED 0.4 MILES TO THE SOUTH WEST ON A TWO TRACK ROAD TO THE MARK ON YOUR RIGHT. THE MARK IS AS DESCRIBED IN THE DATA SHEET AND WAS IN GOOD CONDITION. 09/12/2022

THE MARK WAS RECOVERED ON 09/12/2022
THE MARK WAS OBSERVED ON 09/13/2022 AND 09/14/2022

KL0616 STATION DESCRIPTION

KL0616

KL0616'DESCRIBED BY US GEOLOGICAL SURVEY 1970

KL0616'THE STATION LOCATED IN EAGLE COUNTY, COLORADO, ON THE HIGHEST POINT KL0616'OF A PROMINENT ROUNDED TOP, WHICH LIES ABOUT 3 MI. E. AND 1 MI. N. OF KL0616'THE TOWN OF MINTURN AND AT THE HEAD OF GAME CREEK. REACHED BY KL0616'HELICOPTER. THE STATION MAY BE REACHED BY JEEP FROM MINTURN BY KL0616'TAKING THE TRAIL RD. UP GAME CREEK ABOUT 0.2 MI., THENCE FOLLOWING KL0616'THE MAIN TRAVELED RD. GENERALLY S. TO THE LIONSHEAD, THENCE FOLLOWING KL0616'THE TRAIL RD. E. ALONG THE DIVIDE ABOUT 2.5 MI. TO THE STATION.

KL0616'

KL0616'STATION MARK--STANDARD USGS ALUMINUM TABLET CEMENTED IN A DRILL HOLE, KL0616'IN SOLID ROCK, AND STAMPED ---GAME-ET, 1964---.

KL0616

KL0616 STATION RECOVERY (2007)

KL0616

**KL0616'RECOVERY NOTE BY GEOCACHING 2007 (WD)** 

KL0616'THE STATION IS ABOUT 60 FEET SOUTH OF A TALL, ALUMINUM WEATHER STATION KL0616'POLE, ABOUT 30 FEET EAST OF THE WESTERN LIMIT OF THE PTARMIGAN LOOP KL0616'TRAIL, AND ABOUT FIVE FEET ABOVE THE LEVEL OF THE TRAIL.

MARK:	GPS 004	gp04
141/ 71 41 41	O1	MPUT

REF FRAME:	NAD_83(2011) @ 2010.0000	ITRF2014 @ 2022.6971
X:	-1,390,993.286 m 0.001 m	-1,390,994.235 m 0.001 m
Y:	-4,725,740.535 m 0.002 m	-4,725,739.222 m 0.002 m
Z:	4,041,596.353 m 0.001 m	4,041,596.212 m 0.001 m
LAT:	39° 33' 18.65775" 0.001 m	39° 33' 18.67471" 0.001 m
E LON:	253° 35' 54.68949" 0.000 m	253° 35' 54.63584" 0.000 m
W LON:	106° 24' 05.31051" 0.000 m	106° 24' 05.36416" 0.000 m
EL HGT:	2,460.982 m 0.002 m	2,460.128 m 0.002 m
ORTHO HGT: NAVD88	2,473.444 m 0.021 m (= EL HGT12.4	62 GEOID18 HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (0502 CO C)
NORTHING (Y)	4,379,326.614 m	496,326.598 m
EASTING (X)	379,595.595 m	836,928.028 m
CONVERGENCE	-0.89259722 deg	-0.56855000 deg
POINT SCALE	0.99977849	0.99996727
COMBINED FACTOR	0.99939263	0.99958134

US NATIONAL GRID DESIGNATOR: 13SCD7959679327 (NAD 83)





GPS 004 IS LOCATED SOUTH OF MINTURN, CO. ACCESS TO THE SITE IS ACCURATELY DESCRIBED IN THE ATTACHED DATA SHEET. IT WAS RECOVERED IN GOOD CONDITION. THIS MARK IS IN A BRIDGE ABUTMENT AND IS DIFFICULT TO OBSERVE. THE BRIDGE IS AFFECTED BY TRAFFIC AND TRAFFIC IS A HAZZARD TO PERSONEL AND EQUIPMENT AT THIS LOCATION. 09/12/2022

THE MARK WAS RECOVERED ON 09/11/2022
THE MARK WAS OBSERVED ON 09/11/2022 AND 09/12/2022

AH7730 STATION DESCRIPTION

AH7730

AH7730'DESCRIBED BY MEASUREMENT SCIENCE INCORPORATED 1998 (PD)
AH7730'THE STATION IS LOCATED ABOUT 3.0 MI (4.8 KM) SOUTH OF THE TOWN OF
AH7730'MINTURN JUST NORTH OF A BRIDGE CROSSING EAGLE RIVER, OWNERSHIP--WHITE
AH7730'RIVER NATIONAL FOREST TO REACH THE STATION FROM DOWNTOWN MINTURN AT
AH7730'THE RESTAURANT - CHILLY WILLYS - PROCEED SOUTH ON US HIGHWAY 24 FOR
AH7730'2.7 MI (4.3 KM) TO MILE MARKER 148, PROCEED AN ADDITIONAL 0.3 MI (0.5
AH7730'KM) TO THE STATION ON THE LEFT ON THE NORTH EAST CORNER OF A BRIDGE
AH7730'CROSSING EAGLE RIVER THE STATION IS THE CENTER OF AN EAGLE COUNTY
AH7730'SURVEY DISK SET FLUSH IN A RETAINING WALL ON THE NORTH EAST CORNER OF
AH7730'A BRIDGE. THE STATION IS 19.9 FT (6.1 M) EAST OF CENTERLINE OF US
AH7730'HIGHWAY 24, 77 FT (23.5 M) SOUTH OF THE NORTH END OF A GUARDRAIL, 1.7
AH7730'FT (0.5 M) NORTH OF THE SOUTH END OF ABUTTMENT, AND 5.5 FT (1.7 M)
AH7730'NORTH EAST OF A WITNESS POST. THE STATION IS 2.4 FT (0.7 M) ABOVE THE
AH7730'ROAD

AH7730

AH7730 STATION RECOVERY (2007)

AH7730

AH7730'RECOVERY NOTE BY METROPOLITAN STATE COLLEGE OF DENVER 2007 (DJR) AH7730'RECOVERED IN GOOD CONDITION.

AH7730

AH7730 STATION RECOVERY (2011)

AH7730

AH7730'RECOVERY NOTE BY METROPOLITAN STATE COLLEGE OF DENVER 2011 AH7730'RECOVERED IN GOOD CONDITION.

AH7730

AH7730 STATION RECOVERY (2015)

AH7730

AH7730'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2015 (CHR)
AH7730'3.25 INCH BRASS DISK, STAMPED EAGLE COUNTY SURVEY CONTROL, 004 1998,
AH7730'ON TOP OF CONCRETE WALL AT N.E. END OF HWY. 24 BRIDGE OVER THE EAGLE
AH7730'RIVER

MARK:	GPS 005	gp05				
REF FRAME:		NAD_83(2011) @ 2010.0000		ITRF2014 @ 2022.6	ITRF2014 @ 2022.6970	
X:		-1,387,028.752 m	0.001 m	-1,387,029.701 m	0.001 m	
Y:		-4,720,439.560 m	0.002 m	-4,720,438.247 m	0.002 m	
Z:		4,049,139.872 m	0.001 m	4,049,139.732 m	0.001 m	
LAT:		39° 38' 35.22755"	0.001 m	39° 38' 35.24457"	0.001 m	
E LON:		253° 37' 31.38192"	0.000 m	253° 37' 31.32822"	0.000 m	
W LON:		106° 22' 28.61808"	0.000 m	106° 22' 28.67178"	0.000 m	
EL HGT:		2,488.862 m 0.002	? m	2,488.008 m 0.002	2 m	
ORTHO HGT	: NAVD88	2,501.332 m 0.020	m (= EL HGT12	2.470 GEOID18 HGT)	1	
		UTM COORDINATE	S	STATE PLANE COO	ORDINATES	
		UTM (Zone 13)		SPC (0502 CO C)		
NORTHING (	Y)	4,389,050.904 m		506,066.596 m		
EASTING (X)		382,052.490 m		839,330.241 m		
CONVERGEN	NCE	-0.87711111 deg		-0.55161111 deg		
POINT SCAL	E	0.99977127		0.99998060		
COMBINED F	ACTOR	0.99938105 0.99959030		0.99959030		

US NATIONAL GRID DESIGNATOR: 13SCD8205289051 (NAD 83)





GPS 005 IS LOCATED ON THE SOUTH FRONTAGE ROAD IN THE VAIL TOWN CENTER IN VAIL, CO. ACCESS TO THE MARK IS ACCURATELY DESCRIBED IN THE ATTACHED DATA SHEET. GPS 005 IS NO LONGER IDEAL FOR GPS OBSERVATION DUE THE TREES HAVING MATURED SINCE IT WAS ESTABLISHED. 09/12/2022

THE MARK WAS RECOVERED ON 09/11/2022
THE MARK WAS OBSERVED ON 09/11/2022 AND 09/12/2022

AH7731 STATION DESCRIPTION

AH7731

AH7731'DESCRIBED BY MEASUREMENT SCIENCE INCORPORATED 1998 (PD)
AH7731'THE STATION IS LOCATED IN DOWNTOWN VAIL JUST SOUTH OF INTERSTATE 70
AH7731'AND EAST OF EXIT 176, OWNERSHIP -- CITY OF VAIL TO REACH THE STATION
AH7731'FROM EXIT 176 OFF OF EASTBOUND INTERSTATE 70, PROCEED EAST ON THE
AH7731'SOUTH FRONTAGE ROAD FOR 0.25 MI (0.40 KM) TO STATION ON THE LEFT ON
AH7731'THE NORTH SIDE OF FRONTAGE ROAD AND SOUTH OF THE INTERSTATE ON THE TOP

AH7731'OF A LARGE BOULDER THE STATION IS THE CENTER OF AN EAGLE COUNTY AH7731'SURVEY DISK SET FLUSH IN A LARGE BOULDER. THE STATION IS 24.8 FT AH7731'(7.6 M) NORTH FROM THE EDGE OF THE CURB, 17.4 FT (5.3 M) NORTH WEST AH7731'FROM THE CENTER OF A SMALL PINE TREE, AND 9.5 FT (2.9 M) NORTH OF A

AH7731'CARSONITE WITNESS POST. THE STATION IS 9.8 FT (3.0 M) ABOVE THE ROAD

AH7731

AH7731 STATION RECOVERY (2006)

AH7731

AH7731'RECOVERY NOTE BY US POWER SQUADRON 2006 (EDS)

AH7731'RECOVERED IN GOOD CONDITION.

AH7731

AH7731 STATION RECOVERY (2009)

AH7731

AH7731'RECOVERY NOTE BY GEOCACHING 2009 (WS)

AH7731'RECOVERED IN GOOD CONDITION.

AH7731

AH7731 STATION RECOVERY (2013)

AH7731

AH7731'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2013 (PR)

AH7731'RECOVERED IN GOOD CONDITION.

AH7731

AH7731 STATION RECOVERY (2017)

AH7731

AH7731'RECOVERY NOTE BY GEOCACHING 2017 (RLM)

AH7731'RECOVERED IN GOOD CONDITION.

MARK:	GPS 009	gp09
IVIAINI.	GF 3 009	ypuə

REF FRAME:	NAD_83(2011) @ 2010.0000	ITRF2014 @ 2022.6970	
X:	-1,381,493.855 m 0.001 m	-1,381,494.804 m 0.001 m	
Y:	-4,721,936.545 m 0.002 m	-4,721,935.232 m 0.002 m	
Z:	4,049,376.826 m 0.001 m	4,049,376.686 m 0.001 m	
LAT:	39° 38' 43.63882" 0.001 m	39° 38' 43.65586" 0.001 m	
E LON:	253° 41' 31.71239" 0.000 m	253° 41' 31.65875" 0.000 m	
W LON:	106° 18' 28.28761: 0.000 m	106° 18' 28.34125" 0.000 m	
EL HGT:	2,547.045 m 0.002 m	2,546.191 m 0.002 m	
ORTHO HGT: NAVD88	2,559.511 m 0.019 m (= EL HGT12	2.466 GEOID18 HGT)	
	UTM COORDINATES	STATE PLANE COORDINATES	
	UTM (Zone 13)	SPC (0502 CO C)	
NORTHING (Y)	4,389,224.657 m	506,272.932 m	
EASTING (X)	387,784.600 m	845,062.520 m	
CONVERGENCE	-0.83454722 deg	-0.50950833 deg	
POINT SCALE	0.99975503	0.99998099	
COMBINED FACTOR	0.99935570	0.99958156	

#### US NATIONAL GRID DESIGNATOR: 13SCD8778589225 (NAD 83)





GPS 009 IS LOCATED IN WEST VAIL, COLORADO. THE ATTACHED DATA SHEET ACCURATELY DESCRIBES ACCESS TO THE MARK. THERE IS CHAIN LINK FENCE BLOCKING ACCESS BUT YOU MAY UNTIE THE ROPE AND PROCEED THROUGH THE FENCE. THE PURPOSE OF THE FENCE IS TO KEEP BIG HORN SHEEP FROM ENTERING THE ROAD AND HIGHWAY. THERE IS A CARSONITE POST UNDER THE LARGE ROCK THAT THE MARK IS INSTALLED ON. THE MARK IS ON TOP OF THE ROCK NOT NEXT TO THE CARSONITE POST. 09/11/2022

THE MARK WAS RECOVERED ON 09/11/2022
THE MARK WAS OBSERVED ON 09/11/2022 AND 09/12/2022

AH7735 STATION DESCRIPTION

AH7735

AH7735'DESCRIBED BY MEASUREMENT SCIENCE INCORPORATED 1998 (PD)
AH7735'THE STATION IS LOCATED APPROXIMATELY 3.0 MI (4.8 KM) EAST OF THE TOWN AH7735'OF VAIL, JUST NORTH OF INTERSTATE 70 WESTBOUND, OWNERSHIP -- TOWN OF AH7735'VAIL TO REACH THE STATION FROM INTERSTATE 70 WESTBOUND, TAKE EXIT 180 AH7735'(EAST VAIL) ON PROCEED NORTH FOR 0.1 MI (0.2 KM) TO THE INTERSECTION AH7735'WITH THE NORTH SERVICE ROAD, TURN LEFT AND PROCEED WEST ON THE NORTH AH7735'FRONTAGE ROAD FOR 0.15 MI (0.24 KM) TO THE STATION ON THE RIGHT THE AH7735'STATION IS THE CENTER OF AN EAGLE COUNTY SURVEY DISK SET FLUSH IN A AH7735'LARGE ROCK OUTCROP. THE STATION IS 36 FT (11.0 M) NORTH OF THE AH7735'NORTHERN EDGE OF PAVEMENT OF THE NORTH FRONTAGE ROAD, 16.5 FT (5.0 M) AH7735'EAST OF THE WEST EDGE OF THE ROCK OUTCROP, 12.2 FT (3.7 M) SOUTH WEST AH7735'OF A SMALL FIR TREE, AND 16 FT (4.9 M) EAST FROM A CARSONITE WITNESS AH7735'POST. THE STATION IS 12 FT (3.7 M) ABOVE THE ROAD

AH7735

AH7735 STATION RECOVERY (2006)

AH7735

AH7735'RECOVERY NOTE BY US POWER SQUADRON 2006 (EDS) AH7735'RECOVERED IN GOOD CONDITION.

MARK:	ΜΔΤ	TERHORN	marn
			IIIaiii

REF FRAME:	NAD_83(2011) @ 2010.0000	ITRF2014 @ 2022.7063
X:	-1,389,870.598 m 0.001 m	-1,389,871.548 m 0.001 m
Y:	-4,720,332.028 m 0.002 m	-4,720,330.715 m 0.002 m
Z:	4,048,223.097 m 0.002 m	4,048,222.956 m 0.002 m
LAT:	39° 37' 57.89676" 0.001 m	39° 37' 57.91374" 0.001 m
E LON:	253° 35' 35.81906" 0.000 m	253° 35' 35.76531" 0.000 m
W LON:	106° 24' 24.18094" 0.000 m	106° 24' 24.23469" 0.000 m
EL HGT:	2,442.132 m 0.002 m	2,441.279 m 0.002 m
ORTHO HGT: NAVD88	2,454.635 m 0.020 m (= EL HGT12	2.503 GEOID18 HGT)
	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (0502 CO C)
NORTHING (Y)	4,387,942.643 m	504,942.370 m
EASTING (X)	379,279.982 m	836,563.508 m
CONVERGENCE	-0.89740278 deg	-0.57185556 deg
POINT SCALE	0.99977942	0.99997891
COMBINED FACTOR	0.99939652	0.99959593

#### US NATIONAL GRID DESIGNATOR: 13SCD7928087943 (NAD 83)





MATTERHORN IS LOCATED IN WEST VAIL ON THE SOUTH EAST SIDE OF I-70. ACCESS IS ACHIEVED BY EXITING I-70 AT THE WEST VAIL EXIT 174 AND PROCEEDING THROUGH THE TRAFFIC CIRCLES TO THE SOUTH FRONTAGE ROAD. PROCEED NORTH EAST ALONG THE SOUTH FRONTAGE ROAD 0.7 MILES TO MATTERHORN CIRCLE ON THE RIGHT. TAKE MATTERHORN CIRCLE 0.1 MILES TO GENEVA DRIVE ON THE RIGHT. PROCEED UP THE HILL 0.1 MILES TO UPPER MATTERHORN CIRCLE ON YOUR LEFT. PROCEED DOWN UPPER MATTERHORN CIRCLE 0.1 MILES AND THE MARK WILL BE ON YOUR RIGHT AT THE TOP OF THE DITCH ON THE SOUTH EAST SIDE OF UPPER MATTERHORN CIRCLE. THE MARK 3-1/4" BRONZE CAP SET ATOP A 4' LONG #7 REBAR CONTAINED WITHIN A 10" WIDE BY 12" DEEP CONCRETE COLLAR. THE MARK IS FLUSH WITH THE GROUND. 09/14/2022

THE MARK WAS SET ON 09/14/2022 THE MARK WAS OBSERVED ON 09/15/2022

MARK:	MCLAURIN	l mcin				
REF FRAME:		NAD_83(2011)	@ 20	10.0000	ITRF2014 @ 2022.6	6970
X:		-1,379,384.743	m	0.001 m	-1,379,385.692 m	0.001 m
Y:		-4,724,142.746	m	0.001 m	-4,724,141.433 m	0.001 m
Z:		4,047,708.064 r	n	0.001 m	4,047,707.923 m	0.001 m
LAT:		39° 37' 30.4375	51"	0.001 m	39° 37' 30.45455"	0.001 m
E LON:		253° 43' 22.516	78"	0.000 m	253° 43' 22.46315"	0.000 m
W LON:		106° 16' 37.483	22"	0.000 m	106° 16' 37.53685"	0.000 m
EL HGT:		2,657.682 m	0.002	m	2,656.825 m 0.002	2 m
ORTHO HGT:	NAVD88	2,670.135 m	0.019	m (= EL HGT12	2.453 GEOID18 HGT	)
		UTM COORDIN	IATES	S	STATE PLANE CO	ORDINATES
		UTM (Zone 13)			SPC (0502 CO C)	
NORTHING (Y	<b>'</b> )	4,386,929.836 r	n		503,992.414 m	
EASTING (X)		390,393.457 m			847,684.939 m	
CONVERGEN	CE	-0.81455278 de	g		-0.49009444 deg	
POINT SCALE		0.99974791			0.99997768	
COMBINED FA	ACTOR	0.99933124			0.99956091	

US NATIONAL GRID DESIGNATOR: 13SCD9039386930 (NAD 83)





MCLAURIN IS LOCATED EAST OF THE TOWN OF VAIL, CO. THE ATTACHED DATA SHEET ACCURATELY DESCRIBES ACCESS FROM THE EAST VAIL EXIT 180 FROM I-70. THE MARK IS LOCATED ON COLORADO DEPARTMENT OF TRANSPORTATION PROPERTY AT THE HEAD OF A RUN-AWAY TRUCK RAMP NEAR MILE MARKER 182. WITH THE PERMISION OF COLORADO DEPARTMENT OF TRANSPORTATION AN ALTERNATIVE ROUTE IS TO EXIT THE HIGHWAY ON THE WEST BOUND LANE OF I-70 AFTER MILE MARKER 181 AND PROCEED ON THE CRUSHED ASPHALT ROAD ALONG THE SIDE OF THE RUN-AWAY TRUCK RAMP. THE MARK IS AT THE TOP OF THE RAMP WITH GOOD VIEWS TO THE SOUTH. 09/11/2022

THE MARK WAS RECOVERED ON 09/11/2022
THE MARK WAS OBSERVED ON 9/11/2022 AND 09/12/2022

AB2082 STATION DESCRIPTION

AB2082'TRANSPORTATION RIGHT-OF-WAY.

AB2082

AB2082'DESCRIBED BY NATIONAL GEODETIC SURVEY 1994 (RSC)
AB2082'THE STATION IS LOCATED ABOUT 8.2 MI (13.2 KM) NORTHEAST OF RED CLIFF,
AB2082'6.0 MI (9.7 KM) EAST-SOUTHEAST OF VAIL, 6.0 MI (9.7 KM) NORTHWEST OF
AB2082'VAIL PASS, IN THE NORTHWEST 1/4 OF SECTION 18, T 5 S, R 79 W, AT
AB2082'INTERSTATE 70 MILEPOST 181.95. OWNERSHIP--COLORADO DEPT. OF

AB2082'

AB2082'TO REACH THE STATION FROM INTERSTATE 70 EXIT 180 AND THE OLD U. S. AB2082'HIGHWAY 6 UNDERPASS, GO SOUTH AND THEN EAST FROM THE UNDERPASS ON OLD AB2082'U. S. HIGHWAY 6 FOR 2.15 MI (3.46 KM) TO AN UNDERPASS FOR THE AB2082'INTERSTATE. CONTINUE AHEAD ON OLD U. S. HIGHWAY 6, NORTHEASTERLY, FOR AB2082'0.4 MI (0.6 KM) TO A GATE ON THE RIGHT. TURN RIGHT, SOUTHWEST, FOR AB2082'0.1 MI (0.2 KM) TO THE STATION ON THE WEST SIDE OF THE TRUCK ESCAPE AB2082'RAMP ON THE TOP OF A SMALL HILL.

AB2082'

AB2082'THE MARK IS A STANDARD DISK SET IN A DRILL HOLE IN A 3.0 M (9.8 FT) BY AB2082'3.0 M (9.8 FT) RED SANDSTONE BOULDER. IT IS 152 M (498.7 FT) AB2082'SOUTH-SOUTHWEST OF A LOCKED GATE, 52.6 M (172.6 FT) WEST OF THE TOP OF AB2082'THE TRUCK ESCAPE RAMP, 1.25 M (4.10 FT) SOUTH-SOUTHWEST OF A WITNESS AB2082'POST, ABOUT 150 M (492.1 FT) NORTH OF THE WESTBOUND LANES, ABOUT 150 M AB2082'(492.1 FT) ABOVE THE INTERSTATE AND ABOUT 100 M (328.1 FT) SOUTHEAST AB2082'OF BIG HORN CREEK.

AB2082

AB2082 STATION RECOVERY (1998)

AB2082

AB2082'RECOVERY NOTE BY MEASUREMENT SCIENCE INCORPORATED 1998 (PD) AB2082'RECOVERED AS DESCRIBED.

MARK:	MID VAIL	mvcp				
REF FRAME:		NAD_83(2011) @ 20	NAD_83(2011) @ 2010.0000		ITRF2014 @ 2022.7037	
X:		-1,387,180.694 m	0.001 m	-1,387,181.643 m	0.001 m	
Y:		-4,722,932.657 m	0.002 m	-4,722,931.343 m	0.002 m	
Z:		4,047,131.835 m	0.002 m	4,047,131.694 m	0.002 m	
LAT:		39° 36' 54.77058"	0.001 m	39° 36' 54.78758"	0.001 m	
E LON:		253° 37' 54.72465"	0.000 m	253° 37' 54.67098"	0.000 m	
W LON:		106° 22' 05.27535"	0.000 m	106 °22' 05.32902"	0.000 m	
EL HGT:		3,083.390 m 0.003 m 3,082.535 m 0.003 m		3 m		
ORTHO HGT:	NAVD88	3,095.768 m 0.020	m (= EL HGT1	2.378 GEOID18 HGT)	)	
		UTM COORDINATE	S	STATE PLANE CO	ORDINATES	
		UTM (Zone 13)		SPC (0502 CO C)		
NORTHING (\	<b>(</b> )	4,385,945.288 m		502,963.275 m		
EASTING (X)		382,561.693 m		839,857.173 m		
CONVERGEN	ICE	-0.87245833 deg		-0.54752222 deg		
POINT SCALE	<b>.</b>	0.99976980		0.99997612		
COMBINED F	ACTOR	0.99928641		0.99949263		

US NATIONAL GRID DESIGNATOR: 13SCD8256285945 (NAD 83)





MID VAIL CP IS LOCATED ON THE VAIL MOUNTAIN RESORTS PROPERTY IN VAIL, CO. TO ACCESS THE SITE, CONTACT THE VAIL MOUNTAIN RESORTS AT PH. 970-754-4008 AND UTILIZE THEIR ROADS TO THE MID VAIL VILLAGE BUILDING. THE MARK LIES ON THE NORTH SIDE OF THE STRUCTURE ON THE WEST SIDE OF THE LOADING RAMP IN THE KNEE WALL SUPPORTING THE LOADING RAMP. THE MARK IS A 3-1/4" ALUMINUM DISK EPOXIED INTO A DRILL HOLE. THE MARK LIES FLAT WITH THE TOP OF THE KNEE WALL. 09/15/2022

THE MARK WAS SET ON 09/14/2022 THE MARK WAS OBSERVED ON 09/14/2022 AND 09/15/2022

MARK:	RED RESET	redr
WARN.	KED KESET	reur

REF FRAME:	NAD_83(2011) @ 2010.0000	ITRF2014 @ 2022.7026
X:	-1,382,069.299 m 0.001 m	-1,382,070.248 m 0.001 m
Y:	-4,725,854.467 m 0.002 m	-4,725,853.153 m 0.002 m
Z:	4,046,276.915 m 0.001 m	4,046,276.774 m 0.001 m
LAT:	39° 36' 05.19655" 0.001 m	39° 36' 05.21356" 0.001 m
E LON:	253° 41' 54.66275" 0.000 m	253° 41' 54.60913" 0.000 m
W LON:	106° 18' 05.33725" 0.000 m	106° 18' 05.39087" 0.000 m
EL HGT:	3,590.967 m 0.002 m	3,590.111 m 0.002 m
ORTHO HGT: NAVD88	3,603.304 m 0.019 m (= EL HGT12	2.337 GEOID18 HGT)
	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (0502 CO C)
NORTHING (Y)	4,384,331.916 m	501,381.876 m
EASTING (V)	388 260 832 m	845 566 578 m

NORTHING (Y) 4,384,331.916 m 501,381.876 m

EASTING (X) 388,260.832 m 845,566.578 m

CONVERGENCE -0.82970833 deg -0.50548611 deg

POINT SCALE 0.99975372 0.99997399

COMBINED FACTOR 0.99919081 0.99941095

US NATIONAL GRID DESIGNATOR: 13SCD8826184332 (NAD 83)





RED RESET IS LOCATED AT THE TOP OF THE EAST VAIL MOUNTAIN SOUTH EAST OF VAIL, CO. TO ACCESS THIS MARK IT IS BEST TO UTILIZE A JEEP OR UTV SINCE THE TERRAIN IS VERY ROUGH. ACCESS IS VIA MILL CREEK ROAD AND THE ROAD IS WELL MAINTAINED ON THE VAIL MOUNTAIN RESORT PROPERTY. THE UPPER HALF OF THE ROAD IS STEEP AND DIFFICULT TO TRAVERSE. CONTACT VAIL MOUNTAIN RESORT AT PH. 970-754-4008 TO GAIN ACCESS TO WHERE MILL CREEK ROAD LEAVES THE WELL-MAINTAINED ROADS OF THEIR INFRASTRUCTURE. RED WAS RESET IN 1987 BY D.W.D. LS# 16398. THE ORIGINAL RED WAS NOT RECOVERED. 09/13/2022

THE MARK WAS RECOVERED ON 09/13/2022
THE MARK WAS OBSERVED ON 09/13/2022 AND 09/14/2022

### MARK: SPRADDLE sple

REF FRAME:	NAD_83(2011) @ 2010.	.0000	ITRF2014 @ 2022	.6983
X:	-1,386,944.097 m 0.00	01 m	-1,386,945.047 m	0.001 m
Y:	-4,720,416.327 m 0.00	01 m	-4,720,415.014 m	0.001 m
Z:	4,049,234.245 m 0.00	01 m	4,049,234.105 m	0.001 m
LAT:	39° 38' 38.53735" 0.00	01 m	39° 38' 38.55436"	0.001 m
E LON:	253° 37′ 34.51245″ 0.00	00 m	253° 37' 34.45874	' 0.000 m
W LON:	106° 22' 25.48755" 0.00	00 m	106° 22' 25.54126	' 0.000 m
EL HGT:	2,513.531 m 0.002 m		2,512.678 m 0.00	)2 m
ORTHO HGT: NAVD88	2,526.000 m 0.020 m	(= EL HGT12	.469 GEOID18 HG	<b>-</b> )

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (0502 CO C)
NORTHING (Y)	4,389,151.805 m	506,167.949 m
EASTING (X)	382,128.669 m	839,405.861 m
CONVERGENCE	-0.87657222 deg	-0.55106389 deg
POINT SCALE	0.99977105	0.99998076
COMBINED FACTOR	0.99937696	0.99958659

### US NATIONAL GRID DESIGNATOR: 13SCD8212989152 (NAD 83)





SPRADDLE IS LOCATED NORTH OF I-70 ON SPRADDLE CREEK ROAD IN VAIL, CO. THE ATTACHED DATA SHEET ACCURATELY DESCRIBES THE ACCESS TO THE MARK AND IT WAS RECOVERED IN GOOD CONDITION. 09/11/2022

THE MARK WAS RECOVERED ON 09/11/2022
THE MARK WAS OBSERVED ON 09/11/2022, 09/12/2022 AND 09/13/2022

AB2083 STATION DESCRIPTION

AB2083

AB2083'DESCRIBED BY NATIONAL GEODETIC SURVEY 1994 (RSC)

AB2083'THE STATION IS LOCATED ABOUT 8.8 MI (14.2 KM) NORTH OF RED CLIFF, 0.2 AB2083'MI (0.3 KM) NORTH OF VAIL AND 0.1 MI (0.2 KM) NORTH OF INTERSTATE 70, AB2083'IN THE SOUTHWEST 1/4 OF SECTION 5, T 5 S, R 80 W. OWNERSHIP--UNKNOWN AB2083'

AB2083'TO REACH THE STATION FROM THE UNDERPASS OF INTERSTATE 70 EXIT 176, THE AB2083'MIDDLE VAIL EXIT, GO NORTH 0.05 MI (0.08 KM) TO SPRADDLE CREEK ROAD. AB2083'TURN RIGHT, EASTERLY, FOR 0.2 MI (0.3 KM) TO THE STATION ON THE LEFT AB2083'IN THE FIRST HAIR PIN TURN INSIDE THE CURVE.

AB2083'

AB2083'THE MARK IS A STANDARD DISK SET IN A DRILL HOLE IN A 3.0 M (9.8 FT) BY AB2083'1.4 M (4.6 FT) PURPLE METAMORPHIC ROCK. IT IS 34.5 M (113.2 FT) AB2083'EAST-NORTHEAST OF THE WESTERN, LOWEST END OF THE GUARD RAIL, 21.5 M AB2083'(70.5 FT) SOUTH-SOUTHEAST OF THE EAST END OF THE GUARD RAIL OF THE AB2083'DOWNHILL SIDE OF THE SECOND SWITCHBACK, 20.5 M (67.3 FT) SOUTHWEST OF AB2083'THE CENTER OF THE FIRST SWITCHBACK, 0.75 M (2.46 FT) EAST OF THE AB2083'WESTERN END OF THE ROCK, 0.7 M (2.3 FT) NORTH OF THE SOUTHERN END OF AB2083'THE ROCK, 0.7 M (2.3 FT) SOUTH OF A WITNESS POST AND ABOUT 1.2 M (3.9 AB2083'FT) ABOVE THE ROAD TO THE SOUTH.

AB2083

AB2083 STATION RECOVERY (1998)

**AB2083** 

AB2083'RECOVERY NOTE BY MEASUREMENT SCIENCE INCORPORATED 1998 (PD)

AB2083'RECOVERED AS DESCRIBED

AB2083

AB2083 STATION RECOVERY (2006)

AB2083

AB2083'RECOVERY NOTE BY US POWER SQUADRON 2006 (EDS)

AB2083'RECOVERED IN GOOD CONDITION.

AB2083

AB2083 STATION RECOVERY (2009)

AB2083

AB2083'RECOVERY NOTE BY GEOCACHING 2009 (WS)

AB2083'RECOVERED IN GOOD CONDITION.

AB2083

AB2083 STATION RECOVERY (2013)

AB2083

AB2083'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2013 (PR)

AB2083'RECOVERED IN GOOD CONDITION.

AB2083

AB2083 STATION RECOVERY (2017)

AB2083

AB2083'RECOVERY NOTE BY GEOCACHING 2017 (RLM)

AB2083'RECOVERED IN GOOD CONDITION.

T 280

MARK:

t280

REF FRAME:	NAD_83(2011) @ 2010.0000	ITRF2014 @ 2022.7014
X:	-1,393,852.125 m 0.001 m	-1,393,853.074 m 0.001 m
Y:	-4,720,814.208 m 0.001 m	-4,720,812.895 m 0.001 m
Z:	4,046,150.190 m 0.001 m	4,046,150.049 m 0.001 m
LAT:	39° 36' 33.30959" 0.001 m	39° 36′ 33.32655″ 0.001 m
E LON:	253° 33' 01.47689" 0.000 m	253° 33' 01.42316" 0.000 m
W LON:	106° 26' 58.52311" 0.000 m	106° 26' 58.57684" 0.000 m
EL HGT:	2,343.832 m 0.002 m	2,342.980 m 0.002 m
ORTHO HGT: NAVD88	2,356.398 m 0.021 m (= EL HGT1	2.566 GEOID18 HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (0502 CO C)
NORTHING (Y)	4385393.293 m	502371.428 m
EASTING (X)	375558.541 m	832855.897 m
CONVERGENCE	-0.92430278 deg	-0.59889722 deg
POINT SCALE	0.99979066	0.99997519
COMBINED FACTOR	0.99942316	0.99960762

US NATIONAL GRID DESIGNATOR: 13SCD7555985393 (NAD 83)





T-280 IS LOCATED WEST OF THE TOWN OF VAIL AND NORTH OF THE TOWN OF MINTURN AT THE I-70 EXIT 171 TO MINTURN IN COLORADO. THE ATTACHED DATA SHEET ACCURATELY DESCRIBES ACCESS TO THE MARK. THERE WAS CONSTRUCTION IN THE AREA BUT DID NOT APPEAR TO DISTURB THE MARK IN THE RAIL ROAD BRIDGE ABUTMENT. THE MARK IS OLD BUT STABLE AND IN GOOD CONDITION. 09/11/2022

THE MARK WAS RECOVERED ON 09/11/2022
THE MARK WAS OBSERVED ON 09/11/2022, 09/12/2022, 09/13/2022, 09/14/2022 AND 09/15/2022

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KL0004
KL0004
                                STATION DESCRIPTION
KL0004
KL0004'DESCRIBED BY COAST AND GEODETIC SURVEY 1951
KL0004'1.9 MI NW FROM MINTURN.
KL0004'1.9 MILES NORTHWEST ALONG U.S. HIGHWAYS 6 AND 24 FROM THE POST OFFICE
KL0004'AT MINTURN, 5 RAILS SOUTHEAST OF AN OVERPASS, 8 FEET NORTHEAST OF THE
KL0004'NORTHEAST RAIL OF THE NORTHEAST TRACK OF THE DENVER AND RIO GRANDE
KL0004'WESTERN RAILROAD, SET IN THE TOP OF THE NORTHEAST END OF THE NORTHWEST
KL0004'CONCRETE ABUTMENT OF A RAILROAD BRIDGE OVER GORE CREEK. NOTE-- THE
KL0004'MARK IS 230 FEET EAST-SOUTHEAST OF THE CENTERLINE OF THE RAILROAD
KL0004'TRACK UNDER THE SOUTH EDGE OF THE HIGHWAY OVERPASS AND 2.2 FEET
KL0004'HIGHER, 17 FEET NORTHEAST OF THE CENTERLINE OF THE RAILROAD BRIDGE AND
KL0004'1.0 FOOT LOWER. IT IS 33 FEET FROM THE RAILROAD SURFACE TO THE
KL0004'OVERPASS SURFACE AT THE SOUTH EDGE.
KL0004
KL0004
                                STATION RECOVERY (1959)
KL0004
KL0004'RECOVERY NOTE BY US DEPARTMENT OF DEFENSE 1959
KL0004'RECOVERED IN GOOD CONDITION.
KL0004
KI 0004
                                STATION RECOVERY (1998)
KL0004
KL0004'RECOVERY NOTE BY MEASUREMENT SCIENCE INCORPORATED 1998 (PD)
KL0004'RECOVERED AS DESCRIBED REVISED TO REACH AS FOLLOWS - TO REACH THE
KL0004'STATION FROM EXIT 171 (MINTURN) OFF OF INTERSTATE 70 EASTBOUND,
KL0004'PROCEEN WEST ON US HIGHWAY 6 FOR 0.25 MI (0.40 KM) TO A BIKE PATH ON
KL0004'THE RIGHT (NORTH) . PARK AND WALK ON BIKE PATH SOUTH THEN EAST OVER
KL0004'EAGLE RIVER APPROXIMATELY 450 FT (137.2 M) TO A TRAIL GOING SOUTH DOWN
KL0004'A HILL TO THE RAILROAD. PROCEED SOUTH DOWN HILL APPROXIMATELY 200 FT
KL0004'(61.0 M) TO THE NORTHWEST CORNER OF THE BRIDGE CROSSING THE EAGLE
KL0004'RIVER. THE STATION IS ON THE NORTHWEST CORNER OF THE BRIDGE THE
KL0004'STATION IS LOCATED 2.2 FT (0.7 M) SOUTH OF A CARSONITE WITNESS POST,
KL0004'24.2 FT (7.4 M) NORTH OF THE CENTERLINE OF THE RAILROAD, AND 34 FT
KL0004'(10.4 M) EAST OF THE SUPPORT FOR OVERHEAD UTILITY
KL0004
KL0004
                                STATION RECOVERY (2006)
KL0004'RECOVERY NOTE BY US POWER SQUADRON 2006 (EDS)
KL0004'RECOVERED IN GOOD CONDITION.
KL0004
                                STATION RECOVERY (2007)
KL0004
KL0004
KL0004'RECOVERY NOTE BY METROPOLITAN STATE COLLEGE OF DENVER 2007 (DJR)
KL0004'AREA IS COVERED BY SNOW AND ICE. MARK IS PRESUMED TO BE IN GOOD
KL0004'CONDITION.
KL0004
KL0004
                                STATION RECOVERY (2011)
KL0004'RECOVERY NOTE BY METROPOLITAN STATE COLLEGE OF DENVER 2011
KL0004'MARK NOT FOUND.
KL0004
KL0004
                                STATION RECOVERY (2013)
KL0004
KL0004'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2013 (FD)
KL0004'RECOVERED IN GOOD CONDITION.
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\*\*\* retrieval complete.

Elapsed Time = 00:00:04

### MARK: V.P. 1 vp1b

REF FRAME:	NAD_83(2011) @ 2	2010.0000	ITRF2014 @ 2022.7	7021
X:	-1,386,939.441 m	0.001 m	-1,386,940.391 m	0.001 m
Y:	-4,720,533.755 m	0.002 m	-4,720,532.442 m	0.002 m
Z:	4,049,051.299 m	0.002 m	4,049,051.158 m	0.002 m
LAT:	39° 38' 31.66874"	0.001 m	39° 38' 31.68575"	0.001 m
E LON:	253° 37' 36.08752"	0.000 m	253° 37' 36.03380"	0.000 m
W LON:	106° 22' 23.91248"	0.000 m	106° 22' 23.96620"	0.000 m
EL HGT:	2,482.557 m 0.00	2 m	2,481.703 m 0.002	2 m
ORTHO HGT: NAVD88	2,495.026 m 0.02	0 m (= EL HGT12	2.469 GEOID18 HGT	)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (0502 CO C)
NORTHING (Y)	4,388,939.469 m	505,955.766 m
EASTING (X)	382,162.972 m	839,441.377 m
CONVERGENCE	-0.87625833 deg	-0.55078611 deg
POINT SCALE	0.99977095	0.99998044
COMBINED FACTOR	0.99938172	0.99959112

US NATIONAL GRID DESIGNATOR: 13SCD8216388939 (NAD 83)





TOV V.P.1 IS LOCATED IN THE TOWN CENTER OF VAIL, CO. ACCESS TO THE SITE IS VIA THE VAIL TOWN CENTER EXIT 176 FROM I-70. PROCEED TO THE SOUTH FRONTAGE ROAD AND PROCEED SOUTH EAST FOR 0.3 MILES TO THE TOWN OF VAIL TRANSPORTATION CENTER ON THE RIGHT. PARK AT THIS LOCATION AND PROCEED DOWN THE STAIRS TO THE SECOND LANDING. THE MARK IS A 2" BRASS CAP SET FLUSH IN THE LANDING AND HAS ACCESS TO THE SOUTHERN SKY IN THE VAIL TOWN CENTER. THE MARK HAS MULTIPATH ISSUES AND WAS ESTABLISHED AT THE REQUEST OF THE TOWN OF VAIL. 09/14/2022.

THE MARK WAS RECOVERED ON 09/14/2022
THE MARK WAS OBSERVED ON 09/14/2022 AND 09/15/2022

### MARK: VAIL PASS vass

REF FRAME:	NAD_83(2011) @ 2010.0000	ITRF2014 @ 2022.7011
X:	-1,376,498.786 m 0.001 m	-1,376,499.735 m 0.001 m
Y:	-4,732,529.338 m 0.001 m	-4,732,528.023 m 0.001 m
Z:	4,039,829.508 m 0.001 m	4039829.366 m 0.001 m
LAT:	39° 31' 44.04440" 0.001 m	39° 31′ 44.06143″ 0.001 m
E LON:	253° 46' 56.82724" 0.000 m	253° 46' 56.77374" 0.000 m
W LON:	106° 13' 03.17276" 0.000 m	106° 13' 03.22626" 0.000 m
EL HGT:	3,221.752 m 0.001 m	3,220.892 m 0.001 m
ORTHO HGT:NAVD88	3.234.218 m 0.017 m (= EL HGT12.	466 GEOID18 HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (0502 CO C)
NORTHING (Y)	4,376,179.694 m	1,618,330.139 ft US
EASTING (X)	395,358.280 m	2,797,604.379 ft US
CONVERGENCE	-0.77500000 deg	-0.45255000 deg
POINT SCALE	0.99973481	0.99996374
COMBINED FACTOR	0.99922975	0.99945856

### US NATIONAL GRID DESIGNATOR: 13SCD9535876180 (NAD 83)





VAIL PASS IS LOCATED WEST OF COPPER MOUNTAIN AND EAST OF VAIL AT THE TOP OF VAIL PASS IN COLORADO. THE ATTACHED DATA SHEET ACCURATELY DESCRIBES ACCESS TO THE SITE. THE REST AREA HAS BEEN DEMOLISHED AND CONSTRUCTION IS ACITVE IN THIS AREA ON THE DATE OF THIS DESCRIPTION. THERE IS ACCESS ALONG THE ENTRANCE RAMP TO I-70 EXIT 190 EAST BOUND. THIS IS A GOOD OPTION IF THE CONSTRUCTION GATES ARE LOCKED. THE MARK WAS NOT DISTURBED WHILE THIS WORK WAS COMPLETED BUT THE MARK IS SCHEDULED TO BE REMOVED IN 2023. 09/11/2022

THE MARK WAS RECOVERED ON 09/11/2022 THE MARK WAS OBSERVED ON 09/11/2022, 09/12/2022, 09/13/2022, 09/14/2022 AND 09/15/2022 AB2084 STATION DESCRIPTION

AB2084

AB2084'DESCRIBED BY NATIONAL GEODETIC SURVEY 1994 (RSC)

AB2084'THE STATION IS LOCATED ABOUT 8 MI (12.9 KM) SOUTHEAST OF VAIL, 4.0 MI AB2084'(6.4 KM) NORTHWEST OF COPPER MOUNTAIN, 1.8 MI (2.9 KM) SOUTHEAST OF AB2084'SHRINE PASS AND 0.2 MI (0.3 KM) SOUTHWEST OF VAIL PASS.

AB2084'OWNERSHIP--COLORADO DEPT. OF TRANSPORTATION RIGHT-OF-WAY.

AB2084'

AB2084'TO REACH THE STATION FROM INTERSTATE 70 EXIT 190, VAIL PASS EXIT, GO AB2084'WEST ON THE OVERPASS ROAD FOR 0.05 MI (0.08 KM) TO THE EAST BOUND ON AB2084'RAMP OF INTERSTATE 70 AND THE STATION ON THE LEFT. IT IS ON THE WEST AB2084'SIDE OF THE ON RAMP, BUT TO DRIVE TO THE STATION, IT MAY BE BETTER TO AB2084'GO INTO THE REST AREA.

AB2084'

AB2084'THE MARK IS A STANDARD DISK SET IN A DRILL HOLE IN A 1.1 M (3.6 FT) BY AB2084'0.9 M (3.0 FT) RED CONGLOMERATE SANDSTONE BOULDER PROJECTING 0.5 M AB2084'(1.6 FT) ABOVE THE GROUND, ON THE SOUTHEAST SIDE OF A HILL NORTH OF AB2084'THE REST STOP. IT IS 106.05 M (347.93 FT) SOUTH-SOUTHWEST OF THE AB2084'SOUTHEAST CORNER OF INTERSTATE 70 TO THE REST AREA, 72.4 M (237.5 FT) AB2084'SOUTH OF A LIGHT POST WITH A REMOTE WEATHER STATION ON IT, 37.35 M AB2084'(122.54 FT) SOUTH OF THE END OF A CONCRETE WALL OF THE UPPER REST AB2084'AREA, 32.5 M (106.6 FT) WEST-SOUTHWEST OF THE EDGE OF PAVEMENT TO THE AB2084'EAST BOUND ON RAMP AND 1.2 M (3.9 FT) WEST-SOUTHWEST OF A WITNESS AB2084'POST.

AB2084

AB2084 STATION RECOVERY (2001)

AB2084

AB2084'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2001 (RSC)

AB2084'RECOVERED AS DESCRIBED.

AB2084' AB2084

AB2084 STATION RECOVERY (2003)

AB2084

AB2084'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2003 (DW)

AB2084'RECOVERED IN GOOD CONDITION.

**AB2084** 

AB2084 STATION RECOVERY (2004)

AB2084

AB2084'RECOVERY NOTE BY MOUNTAIN SURVEYING AND MAPPING INC 2004 (KCH)
AB2084'RECOVERY NOTE BY MOUNTAIN SURVEYING AND MAPPING, INC. 2004 (BAJ)

AB2084'RECOVERED AS DESCRIBED

AB2084

AB2084 STATION RECOVERY (2009)

AB2084

AB2084'RECOVERY NOTE BY GEOCACHING 2009 (WS)

AB2084'RECOVERED IN GOOD CONDITION.

AB2084

AB2084 STATION RECOVERY (2010)

AB2084

AB2084'RECOVERY NOTE BY GEOCACHING 2010 (TFW)

AB2084'RECOVERED IN GOOD CONDITION.

AB2084

AB2084 STATION RECOVERY (2013)

AB2084

AB2084'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2013 (PR)

AB2084'RECOVERED IN GOOD CONDITION.

AB2084

AB2084 STATION RECOVERY (2019)

AB2084

AB2084'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2019 (DW)

AB2084'RECOVERED IN GOOD CONDITION.