

CA_MountainPass_2019_D19

Survey Report

Contract Number: G17PC00044

Task Order Number: 140G0219F0235



Government Point-of-Contact (POC)

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Overview

Digital Aerial Solutions, LLC (DAS) with contract number G17PC00044 was contracted by the United States Geological Survey under task order number 140G0219F0235 collect a high-resolution LiDAR data set covering 2,279 square miles affecting San Bernardino, CA and Clark, NV. Each of these categories was spread out as evenly as possible throughout the Area of Interest (AOI). The survey was completed using the Global Positioning System (GPS). Each observation was identified in the field and surveyed utilizing GPS receivers, collecting GNSS and GLONASS information and utilizing a Leica Smart-Net RTK network. In accordance with section C.2.e.ii of the task order, the spatial reference system used was:

Spatial Reference System:

Coordinate System: Albers Equal Area

Horizontal Datum: North American Datum 1983 (2011)

Vertical Datum: North American Vertical Datum of 1988

Units: Meters

Geoid Model: Geoid12B

Section C.1. b.(viii) of the task order outlines the ground control minimum requirements and specifications for this LiDAR project. 145 Supplemental ground control points were collected and used to support the airborne GPS solution and positional accuracy. DAS also collected more than the required number of Non-Vegetated Vertical Accuracy (NVA) and Vegetated Vertical Accuracy (VVA) Quality Checkpoints as stated in the task order. These checkpoints serve as an independent delivery to the client and were not incorporated into the vertical solution.

Glossary of Terms

Term - Definition

ATTN	- Attention
BE	- Bare Earth Checkpoint (see NVA)
CTRL	- Control
DAS	- Digital Aerial Solutions, LLC
Ellip	- Ellipsoid Height
FIPS	- Federal Information Processing Standard
GPS	- Global Positioning Systems
UT	- Urban Terrain (see NVA)
HV	- High Vegetation (see VVA)
ID	- Identification
LV	- Low Vegetation (see VVA)
LiDAR	- Light Detection and Ranging
MV	- Medium Vegetation (see VVA)
NAD83	- North American Datum of 1983
NAVD88	- North American Vertical Datum of 1988
NGS	- National Geodetic Survey
NGTOC	- National Geospatial Technical Operations Center
NVA	- Non-Vegetated Vertical Accuracy
Ortho	- Orthometric Height
POC	- Point of Contact
RTK	- Real Time Kinematics
USGS	- United States Geological Survey
VP	- Vice President
VVA	- Vegetated Vertical Accuracy

Supplemental Ground Control

The Map shows the overall distribution of the Supplemental Ground Control throughout the AOI. The following tables contain a list of the control using Easting, Northing, and Orthometric height. The coordinate system displayed is Albers Equal Area, North American Datum 1983 (2011), North American Vertical Datum of 1988, Geoid12B and using Meters for measurement.

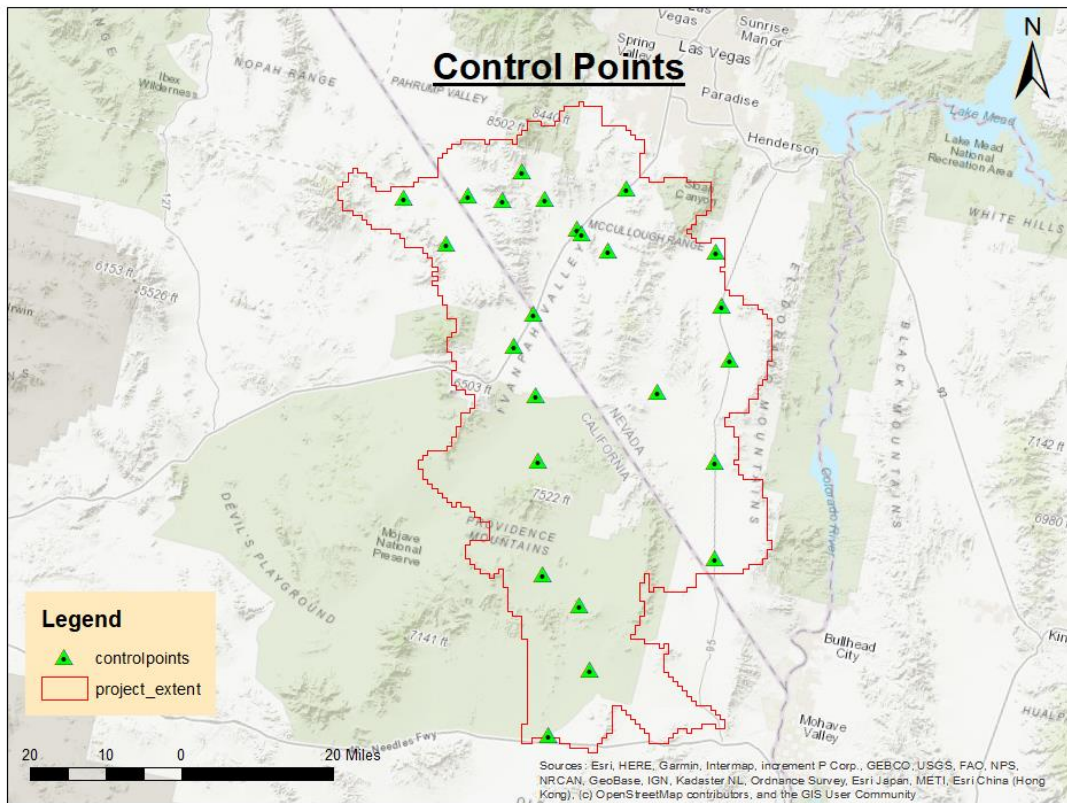


TABLE: Ground Control Points

Point ID	Easting	Northing	Ortho
2_GS0017	-1703118.849	1555338.412	1298.457784
2_GS0030	-1726285.702	1482597.634	662.1520465
2_GS0047	-1719595.693	1510057.085	1156.378088
2_GS0053	-1727607.065	1516656.605	1340.519037
3_GS0001	-1728953.83	1554615.218	801.1134813
3_GS0015	-1713536.898	1585437.112	882.1264634
3_GS0034	-1687701.835	1562329.298	939.4833132
3_GS0054	-1709716.947	1598531.548	958.0773765
3_GS0070	-1719299.29	1589044.63	866.9315033
3_GS0076	-1735896.301	1595986.789	1110.554259
3_GS0088	-1756908.066	1596600.402	914.0022572
3_GS0095	-1747975.375	1586858.104	798.7032814
3_GS0101	-1727125.879	1596441.345	1091.244731
3_GS0110	-1731827.975	1602139.92	1375.550514
2_GS0001	-1690977.294	1520226.158	781.1699877
2_GS0010	-1690901.995	1540517.131	933.6515286
2_GS0039	-1717401.067	1496458.344	871.1857515
2_GS0061	-1728558.673	1540911.929	1071.753293
3_GS0025	-1733627.094	1565111.01	807.3308658
3_GS0041	-1689466.723	1573763.139	755.3708694
3_GS0046	-1690770.944	1585126.839	550.5734527
3_GS0059	-1720131.596	1589988.413	880.7445884
3_GS0080	-1743270.219	1597165.541	804.6841314
3_GS0115	-1729368.506	1571900.226	795.3028971

2_GS0017



Point ID: 2_GS0017

Northing: 1555338.412 Meters

Easting: -1703118.849 Meters

Orthometric Height: 1298.457784 Meters

Latitude: 35° 30' 36.55269" N

Longitude: 115° 04' 07.81743" W

Ellipsoid Height: 1269.8358 Meters

2_GS0030



Point ID: 2_GS0030

Northing: 1482597.634 Meters

Easting: -1726285.702 Meters

Orthometric Height: 662.1520465 Meters

Latitude: 34° 49' 54.72693" N

Longitude: 115° 09' 33.39157" W

Ellipsoid Height: 631.5785 Meters

2_GS0047



Point ID: 2_GS0047

Northing: 1510057.085 Meters

Easting: -1719595.693 Meters

Orthometric Height: 1156.378088 Meters

Latitude: 35° 05' 03.50095" N

Longitude: 115° 08' 51.34906" W

Ellipsoid Height: 1126.7514 Meters

2_GS0053



Point ID: 2_GS0053

Northing: 1516656.605 Meters

Easting: -1727607.065 Meters

Orthometric Height: 1340.519037 Meters

Latitude: 35° 07' 39.78984" N

Longitude: 115° 14' 56.66122" W

Ellipsoid Height: 1311.0951 Meters

3_GS0001



Point ID: 3_GS0001

Northing: 1554615.218 Meters

Easting: -1728953.83 Meters

Orthometric Height: 801.1134813 Meters

Latitude: 35° 27' 26.96538" N

Longitude: 115° 20' 54.96012" W

Ellipsoid Height: 771.9906 Meters

3_GS0015



Point ID: 3_GS0015

Northing: 1585437.112 Meters

Easting: -1713536.898 Meters

Orthometric Height: 882.1264634 Meters

Latitude: 35° 45' 17.75080" N

Longitude: 115° 14' 58.82906" W

Ellipsoid Height: 853.725 Meters

3_GS0034



Point ID: 3_GS0034

Northing: 1562329.298 Meters

Easting: -1687701.835 Meters

Orthometric Height: 939.4833132 Meters

Latitude: 35° 35' 55.32641" N

Longitude: 114° 54' 58.09614" W

Ellipsoid Height: 910.7717 Meters

3_GS0054



Point ID: 3_GS0054

Northing: 1598531.548 Meters

Easting: -1709716.947 Meters

Orthometric Height: 958.0773765 Meters

Latitude: 35° 52' 34.86507" N

Longitude: 115° 14' 14.27091" W

Ellipsoid Height: 930.024 Meters

3_GS0070



Point ID: 3_GS0070

Northing: 1589044.63 Meters

Easting: -1719299.29 Meters

Orthometric Height: 866.9315033 Meters

Latitude: 35° 46' 34.02321" N

Longitude: 115° 19' 14.77079" W

Ellipsoid Height: 838.6165 Meters

3_GS0076



Point ID: 3_GS0076

Northing: 1595986.789 Meters

Easting: -1735896.301 Meters

Orthometric Height: 1110.554259 Meters

Latitude: 35° 48' 24.30117" N

Longitude: 115° 31' 04.46025" W

Ellipsoid Height: 1082.5554 Meters

3_GS0088



Point ID: 3_GS0088

Northing: 1596600.402 Meters

Easting: -1756908.066 Meters

Orthometric Height: 914.0022572 Meters

Latitude: 35° 46' 25.02838" N

Longitude: 115° 44' 55.91317" W

Ellipsoid Height: 885.4162 Meters

3_GS0095



Point ID: 3_GS0095

Northing: 1586858.104 Meters

Easting: -1747975.375 Meters

Orthometric Height: 798.7032814 Meters

Latitude: 35° 42' 17.55346" N

Longitude: 115° 37' 44.39193" W

Ellipsoid Height: 770.022 Meters

3_GS0101



Point ID: 3_GS0101

Northing: 1596441.345 Meters

Easting: -1727125.879 Meters

Orthometric Height: 1091.244731 Meters

Latitude: 35° 49' 35.98123" N

Longitude: 115° 25' 22.99241" W

Ellipsoid Height: 1063.3126 Meters

3_GS0110



Point ID: 3_GS0110

Northing: 1602139.92 Meters

Easting: -1731827.975 Meters

Orthometric Height: 1375.550514 Meters

Latitude: 35° 52' 04.63902" N

Longitude: 115° 29' 14.72593" W

Ellipsoid Height: 1347.9489 Meters

2_GS0001



Point ID: 2_GS0001

Northing: 1520226.158 Meters

Easting: -1690977.294 Meters

Orthometric Height: 781.1699877 Meters

Latitude: 35° 13' 25.18677" N

Longitude: 114° 51' 35.50860" W

Ellipsoid Height: 749.6755 Meters

2_GS0010



Point ID: 2_GS0010

Northing: 1540517.131 Meters

Easting: -1690901.995 Meters

Orthometric Height: 933.6515286 Meters

Latitude: 35° 24' 07.33016" N

Longitude: 114° 54' 11.07600" W

Ellipsoid Height: 904.5826 Meters

2_GS0039



Point ID: 2_GS0039

Northing: 1496458.344 Meters

Easting: -1717401.067 Meters

Orthometric Height: 871.1857515 Meters

Latitude: 34° 58' 08.90074" N

Longitude: 115° 05' 37.67420" W

Ellipsoid Height: 841.054 Meters

2_GS0061



Point ID: 2_GS0061

Northing: 1540911.929 Meters

Easting: -1728558.673 Meters

Orthometric Height: 1071.753293 Meters

Latitude: 35° 20' 17.87340" N

Longitude: 115° 18' 48.81752" W

Ellipsoid Height: 1042.5893 Meters

3_GS0025



Point ID: 3_GS0025

Northing: 1565111.01 Meters

Easting: -1733627.094 Meters

Orthometric Height: 807.3308658 Meters

Latitude: 35° 32' 27.07175" N

Longitude: 115° 25' 23.27447" W

Ellipsoid Height: 778.4848 Meters

3_GS0041



Point ID: 3_GS0041

Northing: 1573763.139 Meters

Easting: -1689466.723 Meters

Orthometric Height: 755.3708694 Meters

Latitude: 35° 41' 44.48846" N

Longitude: 114° 57' 38.27078" W

Ellipsoid Height: 726.6989 Meters

3_GS0046



Point ID: 3_GS0046

Northing: 1585126.839 Meters

Easting: -1690770.944 Meters

Orthometric Height: 550.5734527 Meters

Latitude: 35° 47' 34.29441" N

Longitude: 115° 00' 00.15057" W

Ellipsoid Height: 521.8307 Meters

3_GS0059



Point ID: 3_GS0059
Northing: 1589988.413 Meters
Easting: -1720131.596 Meters
Orthometric Height: 880.7445884 Meters
Latitude: 35° 46' 58.33859" N
Longitude: 115° 19' 55.18140" W
Ellipsoid Height: 852.4656 Meters

3_GS0080



Point ID: 3_GS0080

Northing: 1597165.541 Meters

Easting: -1743270.219 Meters

Orthometric Height: 804.6841314 Meters

Latitude: 35° 48' 12.94748" N

Longitude: 115° 36' 04.26380" W

Ellipsoid Height: 776.3473 Meters

3_GS0115



Point ID: 3_GS0115

Northing: 1571900.226 Meters

Easting: -1729368.506 Meters

Orthometric Height: 795.3028971 Meters

Latitude: 35° 36' 28.64023" N

Longitude: 115° 23' 31.34741" W

Ellipsoid Height: 766.5934 Meters

Non-Vegetated Vertical Accuracy Checkpoints Bare Earth

The Map shows the overall distribution of the Non-Vegetated Vertical Accuracy Checkpoint, Bare Earth throughout the AOI. The following tables contain a list of the control using Easting, Northing, and Orthometric height. The coordinate system displayed is Albers Equal Area, North American Datum 1983 (2011), North American Vertical Datum of 1988, Geoid12B and using Meters for measurement.

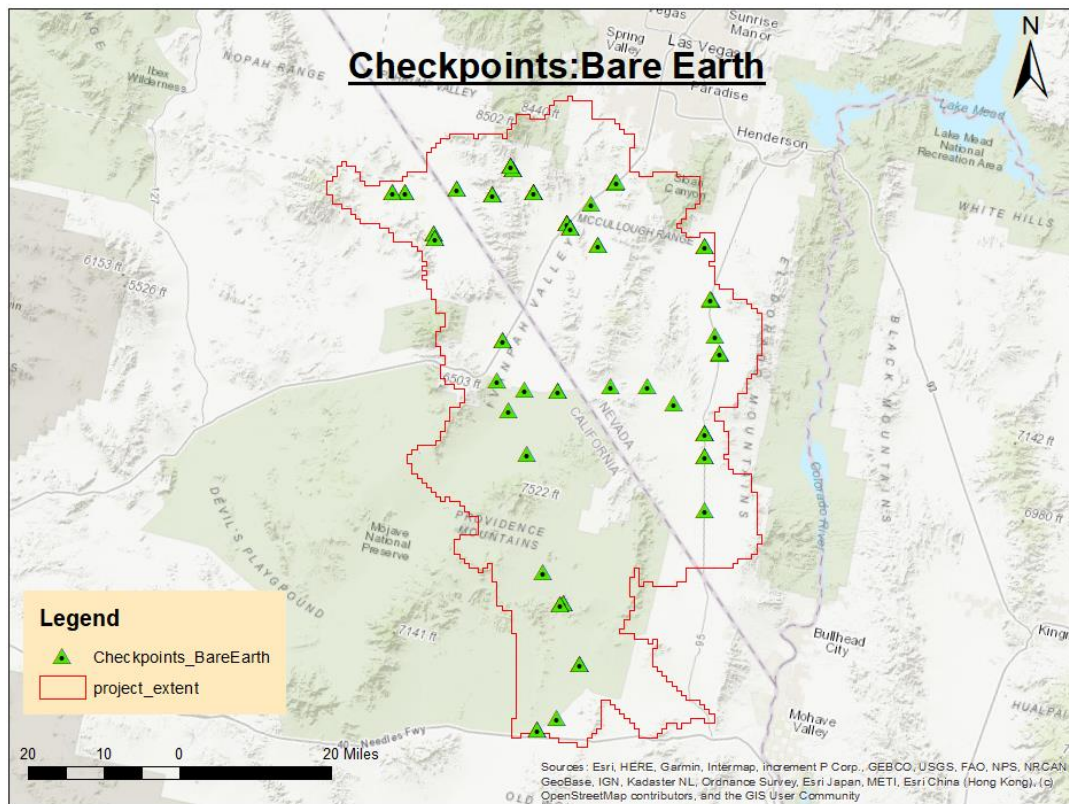


TABLE: Bare Earth

Point ID	Easting	Northing	Ortho
2_GS0006	-1690912.611	1529077.095	779.2420478
2_GS0009	-1690885.92	1540489.958	932.7683564
2_GS0014	-1690860.011	1540448.498	932.3556172
2_GS0016	-1697326.015	1551728.702	1131.854663
2_GS0020	-1703094.784	1555361.413	1297.421805
2_GS0022	-1710899.157	1555393.196	1396.002683
2_GS0024	-1722058.706	1554400.618	921.3925279
2_GS0025	-1722075.626	1554430.185	920.7175198
2_GS0031	-1726309.382	1482571.825	661.0007009
2_GS0032	-1726348.726	1482558.191	660.4916541
2_GS0035	-1722123.189	1485182.808	711.6570902
2_GS0041	-1717435.838	1496480.579	871.5954711
2_GS0043	-1717407.271	1496524.911	872.4865467
2_GS0044	-1720732.678	1509441.555	1141.374775
2_GS0046	-1720758.461	1509443.39	1141.494959
2_GS0049	-1721490.376	1509253.977	1131.680045
2_GS0050	-1721506.937	1509271.533	1131.07757
2_GS0056	-1725050.636	1516077.604	1288.276001
2_GS0065	-1728549.591	1540973.345	1069.470507
2_GS0073	-1732545.28	1550371.082	833.5323593
3_GS0002	-1728928.211	1554590.285	801.0780464
3_GS0006	-1734943.314	1556636.139	935.2642701
3_GS0016	-1713509.239	1585435.695	882.4353355
3_GS0019	-1713502.794	1585380.505	882.1410182
3_GS0020	-1714891.274	1593989.93	910.7826061
3_GS0024	-1733608.977	1565140.616	807.1006191
3_GS0026	-1733645.496	1565124.149	807.5822445
3_GS0028	-1690898.345	1545527.607	1026.497465
3_GS0030	-1690915.039	1545490.476	1025.63357
3_GS0031	-1690898.296	1545479.84	1026.33384
3_GS0035	-1687698.293	1562306.818	940.6614508
3_GS0036	-1687701.425	1562282.268	941.0567189
3_GS0038	-1687688.66	1562382.05	939.4486297
3_GS0039	-1688567.516	1566128.955	891.2300024
3_GS0042	-1689474.626	1573728.487	755.5988824
3_GS0044	-1689528.396	1573760.226	753.8208161
3_GS0045	-1689516.452	1573778.274	753.8165602
3_GS0047	-1690778.547	1585104.637	550.7876698
3_GS0049	-1690752.44	1585082.2	551.0509364
3_GS0055	-1709725.386	1598555.524	958.3126183
3_GS0056	-1709706.63	1598573.781	958.1643452
3_GS0058	-1709658.512	1598584.286	956.8166454
3_GS0060	-1720121.829	1589964.95	880.1334648
3_GS0061	-1720081.397	1589960.292	878.9328295

3_GS0063	-1720046.341	1590011.998	879.2951874
3_GS0064	-1720066.373	1590033.468	879.7803227
3_GS0067	-1719345.804	1589056.238	865.3529394
3_GS0068	-1719321.327	1589068.017	865.4456454
3_GS0069	-1719301.25	1589066.958	866.1447591
3_GS0074	-1735889.568	1596031.681	1112.944455
3_GS0077	-1735894.495	1595960.631	1109.408624
3_GS0079	-1735847.566	1595979.096	1112.780403
3_GS0081	-1743286.638	1597186.27	804.7529324
3_GS0083	-1743331.005	1597194.79	804.5447607
3_GS0085	-1754403.419	1596480.575	856.4320652
3_GS0087	-1754381.343	1596470.035	856.0862529
3_GS0089	-1756907.335	1596626.637	913.9697769
3_GS0091	-1756954.122	1596613.835	915.3540089
3_GS0092	-1748273.17	1587797.47	791.8041429
3_GS0094	-1748249.966	1587783.533	790.9254235
3_GS0096	-1747990.893	1586840.219	799.8953421
3_GS0098	-1747951.172	1586833.87	798.7644791
3_GS0102	-1727109.584	1596421.682	1091.025737
3_GS0103	-1727130.162	1596402.567	1090.636313
3_GS0104	-1727156.426	1596404.446	1090.959941
3_GS0105	-1727163.89	1596437.832	1091.417458
3_GS0106	-1731501.631	1601277.506	1331.772698
3_GS0108	-1731520.121	1601320.086	1333.570199
3_GS0109	-1731535.569	1601297.694	1333.516133
3_GS0111	-1731845.887	1602155.337	1376.485499
3_GS0113	-1731863.081	1602134.391	1376.247634
3_GS0114	-1731846.046	1602120.974	1375.270525

2_GS0006



Point ID: 2_GS0006

Northing: 1529077.095 Meters

Easting: -1690912.611 Meters

Orthometric Height: 779.2420478 Meters

Latitude: 35° 18' 06.54101" N

Longitude: 114° 52' 41.23119" W

Ellipsoid Height: 749.8725 Meters

2_GS0009



Point ID: 2_GS0009
Northing: 1540489.958 Meters
Easting: -1690885.92 Meters
Orthometric Height: 932.7683564 Meters
Latitude: 35° 24' 06.57557" N
Longitude: 114° 54' 10.23130" W
Ellipsoid Height: 903.699 Meters

2_GS0014



Point ID: 2_GS0014

Northing: 1540448.498 Meters

Easting: -1690860.011 Meters

Orthometric Height: 932.3556172 Meters

Latitude: 35° 24' 05.43304" N

Longitude: 114° 54' 08.88836" W

Ellipsoid Height: 903.2848 Meters

2_GS0016



Point ID: 2_GS0016

Northing: 1551728.702 Meters

Easting: -1697326.015 Meters

Orthometric Height: 1131.854663 Meters

Latitude: 35° 29' 19.84611" N

Longitude: 114° 59' 51.80850" W

Ellipsoid Height: 1103.0914 Meters

2_GS0020



Point ID: 2_GS0020

Northing: 1555361.413 Meters

Easting: -1703094.784 Meters

Orthometric Height: 1297.421805 Meters

Latitude: 35° 30' 37.43182" N

Longitude: 115° 04' 07.05681" W

Ellipsoid Height: 1268.7998 Meters

2_GS0022



Point ID: 2_GS0022

Northing: 1555393.196 Meters

Easting: -1710899.157 Meters

Orthometric Height: 1396.002683 Meters

Latitude: 35° 29' 48.29822" N

Longitude: 115° 09' 13.45280" W

Ellipsoid Height: 1367.4266 Meters

2_GS0024



Point ID: 2_GS0024

Northing: 1554400.618 Meters

Easting: -1722058.706 Meters

Orthometric Height: 921.3925279 Meters

Latitude: 35° 28' 04.95764" N

Longitude: 115° 16' 23.01341" W

Ellipsoid Height: 892.3653 Meters

2_GS0025



2_GS0025_North



2_GS0025_East



2_GS0025_West



2_GS0025_South

Point ID: 2_GS0025

Northing: 1554430.185 Meters

Easting: -1722075.626 Meters

Orthometric Height: 920.7175198 Meters

Latitude: 35° 28' 05.77947" N

Longitude: 115° 16' 23.91487" W

Ellipsoid Height: 891.6901 Meters

2_GS0031



Point ID: 2_GS0031

Northing: 1482571.825 Meters

Easting: -1726309.382 Meters

Orthometric Height: 661.0007009 Meters

Latitude: 34° 49' 53.76060" N

Longitude: 115° 09' 34.10718" W

Ellipsoid Height: 630.4275 Meters

2_GS0032



Point ID: 2_GS0032

Northing: 1482558.191 Meters

Easting: -1726348.726 Meters

Orthometric Height: 660.4916541 Meters

Latitude: 34° 49' 53.07718" N

Longitude: 115° 09' 35.52855" W

Ellipsoid Height: 629.9173 Meters

2_GS0035



Point ID: 2_GS0035

Northing: 1485182.808 Meters

Easting: -1722123.189 Meters

Orthometric Height: 711.6570902 Meters

Latitude: 34° 51' 43.03440" N

Longitude: 115° 07' 12.03736" W

Ellipsoid Height: 681.1901 Meters

2_GS0041



Point ID: 2_GS0041

Northing: 1496480.579 Meters

Easting: -1717435.838 Meters

Orthometric Height: 871.5954711 Meters

Latitude: 34° 58' 09.37851" N

Longitude: 115° 05' 39.20515" W

Ellipsoid Height: 841.4643 Meters

2_GS0043



Point ID: 2_GS0043

Northing: 1496524.911 Meters

Easting: -1717407.271 Meters

Orthometric Height: 872.4865467 Meters

Latitude: 34° 58' 10.95972" N

Longitude: 115° 05' 38.44404" W

Ellipsoid Height: 842.3567 Meters

2_GS0044



Point ID: 2_GS0044

Northing: 1509441.555 Meters

Easting: -1720732.678 Meters

Orthometric Height: 1141.374775 Meters

Latitude: 35° 04' 36.77560" N

Longitude: 115° 09' 30.79422" W

Ellipsoid Height: 1111.7164 Meters

2_GS0046



Point ID: 2_GS0046

Northing: 1509443.39 Meters

Easting: -1720758.461 Meters

Orthometric Height: 1141.494959 Meters

Latitude: 35° 04' 36.66735" N

Longitude: 115° 09' 31.81449" W

Ellipsoid Height: 1111.8361 Meters

2_GS0049



Point ID: 2_GS0049
Northing: 1509253.977 Meters
Easting: -1721490.376 Meters
Orthometric Height: 1131.680045 Meters
Latitude: 35° 04' 25.98059" N
Longitude: 115° 09' 58.85180" W
Ellipsoid Height: 1102.0075 Meters

2_GS0050



Point ID: 2_GS0050

Northing: 1509271.533 Meters

Easting: -1721506.937 Meters

Orthometric Height: 1131.07757 Meters

Latitude: 35° 04' 26.42726" N

Longitude: 115° 09' 59.63776" W

Ellipsoid Height: 1101.4051 Meters

2_GS0056



Point ID: 2_GS0056

Northing: 1516077.604 Meters

Easting: -1725050.636 Meters

Orthometric Height: 1288.276001 Meters

Latitude: 35° 07' 38.07543" N

Longitude: 115° 13' 12.26157" W

Ellipsoid Height: 1258.8373 Meters

2_GS0065



Point ID: 2_GS0065

Northing: 1540973.345 Meters

Easting: -1728549.591 Meters

Orthometric Height: 1069.470507 Meters

Latitude: 35° 20' 19.86721" N

Longitude: 115° 18' 48.95737" W

Ellipsoid Height: 1040.3063 Meters

2_GS0073



Point ID: 2_GS0073

Northing: 1550371.082 Meters

Easting: -1732545.28 Meters

Orthometric Height: 833.5323593 Meters

Latitude: 35° 24' 49.91411" N

Longitude: 115° 22' 41.29002" W

Ellipsoid Height: 804.4036 Meters

3_GS0002



Point ID: 3_GS0002

Northing: 1554590.285 Meters

Easting: -1728928.211 Meters

Orthometric Height: 801.0780464 Meters

Latitude: 35° 27' 26.34667" N

Longitude: 115° 20' 53.75455" W

Ellipsoid Height: 771.9548 Meters

3_GS0006



Point ID: 3_GS0006

Northing: 1556636.139 Meters

Easting: -1734943.314 Meters

Orthometric Height: 935.2642701 Meters

Latitude: 35° 27' 51.59602" N

Longitude: 115° 25' 06.01847" W

Ellipsoid Height: 906.3204 Meters

3_GS0016



Point ID: 3_GS0016

Northing: 1585435.695 Meters

Easting: -1713509.239 Meters

Orthometric Height: 882.4353355 Meters

Latitude: 35° 45' 17.88510" N

Longitude: 115° 14' 57.72935" W

Ellipsoid Height: 854.0342 Meters

3_GS0019



Point ID: 3_GS0019

Northing: 1585380.505 Meters

Easting: -1713502.794 Meters

Orthometric Height: 882.1410182 Meters

Latitude: 35° 45' 16.18846" N

Longitude: 115° 14' 57.02984" W

Ellipsoid Height: 853.7392 Meters

3_GS0020



Point ID: 3_GS0020

Northing: 1593989.93 Meters

Easting: -1714891.274 Meters

Orthometric Height: 910.7826061 Meters

Latitude: 35° 49' 38.34813" N

Longitude: 115° 17' 01.34351" W

Ellipsoid Height: 882.6195 Meters

3_GS0024



Point ID: 3_GS0024

Northing: 1565140.616 Meters

Easting: -1733608.977 Meters

Orthometric Height: 807.1006191 Meters

Latitude: 35° 32' 28.12230" N

Longitude: 115° 25' 22.80457" W

Ellipsoid Height: 778.2547 Meters

3_GS0026



Point ID: 3_GS0026

Northing: 1565124.149 Meters

Easting: -1733645.496 Meters

Orthometric Height: 807.5822445 Meters

Latitude: 35° 32' 27.36538" N

Longitude: 115° 25' 24.10298" W

Ellipsoid Height: 778.7375 Meters

3_GS0028



3_GS0028_West



Point ID: 3_GS0028

Northing: 1545527.607 Meters

Easting: -1690898.345 Meters

Orthometric Height: 1026.497465 Meters

Latitude: 35° 26' 45.32500" N

Longitude: 114° 54' 50.53941" W

Ellipsoid Height: 997.5794 Meters

3_GS0030



Point ID: 3_GS0030

Northing: 1545490.476 Meters

Easting: -1690915.039 Meters

Orthometric Height: 1025.63357 Meters

Latitude: 35° 26' 44.04818" N

Longitude: 114° 54' 50.90034" W

Ellipsoid Height: 996.7144 Meters

3_GS0031



Point ID: 3_GS0031

Northing: 1545479.84 Meters

Easting: -1690898.296 Meters

Orthometric Height: 1026.33384 Meters

Latitude: 35° 26' 43.81935" N

Longitude: 114° 54' 50.15968" W

Ellipsoid Height: 997.4142 Meters

3_GS0035



Point ID: 3_GS0035

Northing: 1562306.818 Meters

Easting: -1687698.293 Meters

Orthometric Height: 940.6614508 Meters

Latitude: 35° 35' 54.64027" N

Longitude: 114° 54' 57.77879" W

Ellipsoid Height: 911.9496 Meters

3_GS0036



Point ID: 3_GS0036

Northing: 1562282.268 Meters

Easting: -1687701.425 Meters

Orthometric Height: 941.0567189 Meters

Latitude: 35° 35' 53.84646" N

Longitude: 114° 54' 57.70729" W

Ellipsoid Height: 912.3455 Meters

3_GS0038



Point ID: 3_GS0038

Northing: 1562382.05 Meters

Easting: -1687688.66 Meters

Orthometric Height: 939.4486297 Meters

Latitude: 35° 35' 57.07308" N

Longitude: 114° 54' 57.99656" W

Ellipsoid Height: 910.7379 Meters

3_GS0039



Point ID: 3_GS0039

Northing: 1566128.955 Meters

Easting: -1688567.516 Meters

Orthometric Height: 891.2300024 Meters

Latitude: 35° 37' 49.59188" N

Longitude: 114° 56' 02.25341" W

Ellipsoid Height: 862.5514 Meters

3_GS0042



Point ID: 3_GS0042

Northing: 1573728.487 Meters

Easting: -1689474.626 Meters

Orthometric Height: 755.5988824 Meters

Latitude: 35° 41' 43.34597" N

Longitude: 114° 57' 38.30601" W

Ellipsoid Height: 726.927 Meters

3_GS0044



Point ID: 3_GS0044

Northing: 1573760.226 Meters

Easting: -1689528.396 Meters

Orthometric Height: 753.8208161 Meters

Latitude: 35° 41' 44.00363" N

Longitude: 114° 57' 40.67373" W

Ellipsoid Height: 725.147 Meters

3_GS0045



Point ID: 3_GS0045

Northing: 1573778.274 Meters

Easting: -1689516.452 Meters

Orthometric Height: 753.8165602 Meters

Latitude: 35° 41' 44.64857" N

Longitude: 114° 57' 40.34745" W

Ellipsoid Height: 725.1426 Meters

3_GS0047



Point ID: 3_GS0047

Northing: 1585104.637 Meters

Easting: -1690778.547 Meters

Orthometric Height: 550.7876698 Meters

Latitude: 35° 47' 33.54620" N

Longitude: 115° 00' 00.27280" W

Ellipsoid Height: 522.0455 Meters

3_GS0049



Point ID: 3_GS0049

Northing: 1585082.2 Meters

Easting: -1690752.44 Meters

Orthometric Height: 551.0509364 Meters

Latitude: 35° 47' 33.00588" N

Longitude: 114° 59' 59.06553" W

Ellipsoid Height: 522.308 Meters

3_GS0055



Point ID: 3_GS0055

Northing: 1598555.524 Meters

Easting: -1709725.386 Meters

Orthometric Height: 958.3126183 Meters

Latitude: 35° 52' 35.56560" N

Longitude: 115° 14' 14.79737" W

Ellipsoid Height: 930.2598 Meters

3_GS0056



Point ID: 3_GS0056
Northing: 1598573.781 Meters
Easting: -1709706.63 Meters
Orthometric Height: 958.1643452 Meters
Latitude: 35° 52' 36.26184" N
Longitude: 115° 14' 14.20591" W
Ellipsoid Height: 930.112 Meters

3_GS0058



Point ID: 3_GS0058
Northing: 1598584.286 Meters
Easting: -1709658.512 Meters
Orthometric Height: 956.8166454 Meters
Latitude: 35° 52' 36.90372" N
Longitude: 115° 14' 12.39456" W
Ellipsoid Height: 928.7642 Meters

3_GS0060



Point ID: 3_GS0060

Northing: 1589964.95 Meters

Easting: -1720121.829 Meters

Orthometric Height: 880.1334648 Meters

Latitude: 35° 46' 57.66320" N

Longitude: 115° 19' 54.60663" W

Ellipsoid Height: 851.8539 Meters

3_GS0061



Point ID: 3_GS0061

Northing: 1589960.292 Meters

Easting: -1720081.397 Meters

Orthometric Height: 878.9328295 Meters

Latitude: 35° 46' 57.77913" N

Longitude: 115° 19' 52.97773" W

Ellipsoid Height: 850.6533 Meters

3_GS0063



Point ID: 3_GS0063

Northing: 1590011.998 Meters

Easting: -1720046.341 Meters

Orthometric Height: 879.2951874 Meters

Latitude: 35° 46' 59.63509" N

Longitude: 115° 19' 52.01788" W

Ellipsoid Height: 851.0174 Meters

3_GS0064



Point ID: 3_GS0064

Northing: 1590033.468 Meters

Easting: -1720066.373 Meters

Orthometric Height: 879.7803227 Meters

Latitude: 35° 47' 00.18105" N

Longitude: 115° 19' 52.98046" W

Ellipsoid Height: 851.5029 Meters

3_GS0067



Point ID: 3_GS0067

Northing: 1589056.238 Meters

Easting: -1719345.804 Meters

Orthometric Height: 865.3529394 Meters

Latitude: 35° 46' 34.08675" N

Longitude: 115° 19' 16.69526" W

Ellipsoid Height: 837.0386 Meters

3_GS0068



Point ID: 3_GS0068

Northing: 1589068.017 Meters

Easting: -1719321.327 Meters

Orthometric Height: 865.4456454 Meters

Latitude: 35° 46' 34.61661" N

Longitude: 115° 19' 15.82765" W

Ellipsoid Height: 837.1322 Meters

3_GS0069



Point ID: 3_GS0069

Northing: 1589066.958 Meters

Easting: -1719301.25 Meters

Orthometric Height: 866.1447591 Meters

Latitude: 35° 46' 34.71361" N

Longitude: 115° 19' 15.02903" W

Ellipsoid Height: 837.8308 Meters

3_GS0074



Point ID: 3_GS0074

Northing: 1596031.681 Meters

Easting: -1735889.568 Meters

Orthometric Height: 1112.944455 Meters

Latitude: 35° 48' 25.75838" N

Longitude: 115° 31' 04.56330" W

Ellipsoid Height: 1084.9476 Meters

3_GS0077



Point ID: 3_GS0077

Northing: 1595960.631 Meters

Easting: -1735894.495 Meters

Orthometric Height: 1109.408624 Meters

Latitude: 35° 48' 23.48962" N

Longitude: 115° 31' 04.17478" W

Ellipsoid Height: 1081.4084 Meters

3_GS0079



Point ID: 3_GS0079

Northing: 1595979.096 Meters

Easting: -1735847.566 Meters

Orthometric Height: 1112.780403 Meters

Latitude: 35° 48' 24.37857" N

Longitude: 115° 31' 02.47953" W

Ellipsoid Height: 1084.7834 Meters

3_GS0081



Point ID: 3_GS0081

Northing: 1597186.27 Meters

Easting: -1743286.638 Meters

Orthometric Height: 804.7529324 Meters

Latitude: 35° 48' 13.49172" N

Longitude: 115° 36' 05.08037" W

Ellipsoid Height: 776.4159 Meters

3_GS0083



Point ID: 3_GS0083

Northing: 1597194.79 Meters

Easting: -1743331.005 Meters

Orthometric Height: 804.5447607 Meters

Latitude: 35° 48' 13.46774" N

Longitude: 115° 36' 06.89592" W

Ellipsoid Height: 776.206 Meters

3_GS0085



Point ID: 3_GS0085

Northing: 1596480.575 Meters

Easting: -1754403.419 Meters

Orthometric Height: 856.4320652 Meters

Latitude: 35° 46' 37.86214" N

Longitude: 115° 43' 16.45387" W

Ellipsoid Height: 827.8436 Meters

3_GS0087



Point ID: 3_GS0087

Northing: 1596470.035 Meters

Easting: -1754381.343 Meters

Orthometric Height: 856.0862529 Meters

Latitude: 35° 46' 37.67677" N

Longitude: 115° 43' 15.49871" W

Ellipsoid Height: 827.4976 Meters

3_GS0089



Point ID: 3_GS0089

Northing: 1596626.637 Meters

Easting: -1756907.335 Meters

Orthometric Height: 913.9697769 Meters

Latitude: 35° 46' 25.85862" N

Longitude: 115° 44' 56.10190" W

Ellipsoid Height: 885.3842 Meters

3_GS0091



Point ID: 3_GS0091

Northing: 1596613.835 Meters

Easting: -1756954.122 Meters

Orthometric Height: 915.3540089 Meters

Latitude: 35° 46' 25.14545" N

Longitude: 115° 44' 57.83509" W

Ellipsoid Height: 886.7679 Meters

3_GS0092



Point ID: 3_GS0092

Northing: 1587797.47 Meters

Easting: -1748273.17 Meters

Orthometric Height: 791.8041429 Meters

Latitude: 35° 42' 45.15250" N

Longitude: 115° 38' 03.82599" W

Ellipsoid Height: 763.1288 Meters

3_GS0094



Point ID: 3_GS0094

Northing: 1587783.533 Meters

Easting: -1748249.966 Meters

Orthometric Height: 790.9254235 Meters

Latitude: 35° 42' 44.86698" N

Longitude: 115° 38' 02.79955" W

Ellipsoid Height: 762.2499 Meters

3_GS0096



Point ID: 3_GS0096

Northing: 1586840.219 Meters

Easting: -1747990.893 Meters

Orthometric Height: 799.8953421 Meters

Latitude: 35° 42' 16.88825" N

Longitude: 115° 37' 44.85432" W

Ellipsoid Height: 771.2142 Meters

3_GS0098



Point ID: 3_GS0098

Northing: 1586833.87 Meters

Easting: -1747951.172 Meters

Orthometric Height: 798.7644791 Meters

Latitude: 35° 42' 16.95036" N

Longitude: 115° 37' 43.24155" W

Ellipsoid Height: 770.0832 Meters

3_GS0102



Point ID: 3_GS0102

Northing: 1596421.682 Meters

Easting: -1727109.584 Meters

Orthometric Height: 1091.025737 Meters

Latitude: 35° 49' 35.46849" N

Longitude: 115° 25' 22.19054" W

Ellipsoid Height: 1063.0933 Meters

3_GS0103



Point ID: 3_GS0103

Northing: 1596402.567 Meters

Easting: -1727130.162 Meters

Orthometric Height: 1090.636313 Meters

Latitude: 35° 49' 34.73246" N

Longitude: 115° 25' 22.84462" W

Ellipsoid Height: 1062.703 Meters

3_GS0104



Point ID: 3_GS0104

Northing: 1596404.446 Meters

Easting: -1727156.426 Meters

Orthometric Height: 1090.959941 Meters

Latitude: 35° 49' 34.62018" N

Longitude: 115° 25' 23.89391" W

Ellipsoid Height: 1063.0266 Meters

3_GS0105



Point ID: 3_GS0105

Northing: 1596437.832 Meters

Easting: -1727163.89 Meters

Orthometric Height: 1091.417458 Meters

Latitude: 35° 49' 35.62258" N

Longitude: 115° 25' 24.46016" W

Ellipsoid Height: 1063.4861 Meters

3_GS0106



Point ID: 3_GS0106
Northing: 1601277.506 Meters
Easting: -1731501.631 Meters
Orthometric Height: 1331.772698 Meters
Latitude: 35° 51' 39.62848" N
Longitude: 115° 28' 54.81135" W
Ellipsoid Height: 1304.1231 Meters

3_GS0108



Point ID: 3_GS0108

Northing: 1601320.086 Meters

Easting: -1731520.121 Meters

Orthometric Height: 1333.570199 Meters

Latitude: 35° 51' 40.84783" N

Longitude: 115° 28' 55.88814" W

Ellipsoid Height: 1305.9227 Meters

3_GS0109



Point ID: 3_GS0109

Northing: 1601297.694 Meters

Easting: -1731535.569 Meters

Orthometric Height: 1333.516133 Meters

Latitude: 35° 51' 40.04186" N

Longitude: 115° 28' 56.31312" W

Ellipsoid Height: 1305.8677 Meters

3_GS0111



Point ID: 3_GS0111

Northing: 1602155.337 Meters

Easting: -1731845.887 Meters

Orthometric Height: 1376.485499 Meters

Latitude: 35° 52' 04.63902" N

Longitude: 115° 29' 14.72593" W

Ellipsoid Height: 1347.9489 Meters

3_GS0113



Point ID: 3_GS0113

Northing: 1602134.391 Meters

Easting: -1731863.081 Meters

Orthometric Height: 1376.247634 Meters

Latitude: 35° 52' 04.99553" N

Longitude: 115° 29' 16.39826" W

Ellipsoid Height: 1349.7275 Meters

3_GS0114



Point ID: 3_GS0114

Northing: 1602120.974 Meters

Easting: -1731846.046 Meters

Orthometric Height: 1375.270525 Meters

Latitude: 35° 52' 04.23516" N

Longitude: 115° 29' 16.06326" W

Ellipsoid Height: 1348.6458 Meters

Non-Vegetated Vertical Accuracy Checkpoints Urban Terrain

The Map shows the overall distribution of the Non-Vegetated Vertical Accuracy Checkpoint, Urban Terrain throughout the AOI. The following tables contain a list of the control using Easting, Northing, and Orthometric height. The coordinate system displayed is Albers Equal Area, North American Datum 1983 (2011), North American Vertical Datum of 1988, Geoid12B and using Meters for measurement.

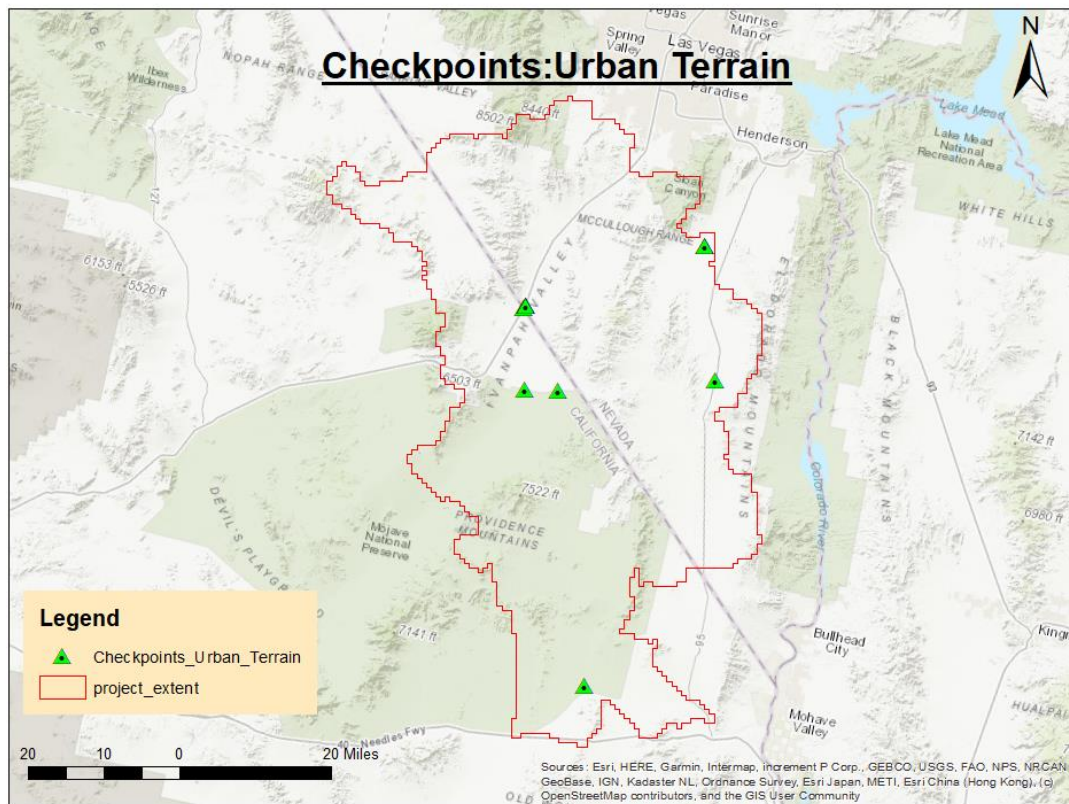


TABLE: Urban Terrain

Point ID	Easting	Northing	Ortho
2_GS0026	-1722073.765	1554461.876	921.3388608
2_GS0037	-1716307.43	1491882.478	802.897252
3_GS0004	-1728903.304	1554622.782	801.856559
3_GS0033	-1688617.72	1556585.69	1028.377179
3_GS0048	-1690780.894	1585080.147	551.1029671
3_GS0052	-1690746.958	1585146.872	550.343238
3_GS0116	-1729294.979	1571954.711	794.8234135
3_GS0118	-1728799.766	1572362.897	796.61804
3_GS0120	-1728824.255	1572324.19	796.0790155
3_GS0121	-1728830.751	1572338.786	796.108612

2_GS0026



Point ID: 2_GS0026

Northing: 1554461.876 Meters

Easting: -1722073.765 Meters

Orthometric Height: 921.3388608 Meters

Latitude: 35° 28' 06.78985" N

Longitude: 115° 16' 24.09734" W

Ellipsoid Height: 892.3122 Meters

2_GS0037



Point ID: 2_GS0037

Northing: 1491882.478 Meters

Easting: -1716307.43 Meters

Orthometric Height: 802.897252 Meters

Latitude: 34° 55' 51.63880" N

Longitude: 115° 04' 18.80523" W

Ellipsoid Height: 772.6414 Meters

3_GS0004



Point ID: 3_GS0004

Northing: 1554622.782 Meters

Easting: -1728903.304 Meters

Orthometric Height: 801.856559 Meters

Latitude: 35° 27' 27.53219" N

Longitude: 115° 20' 53.04152" W

Ellipsoid Height: 772.7339 Meters

3_GS0033



Point ID: 3_GS0033

Northing: 1556585.69 Meters

Easting: -1688617.72 Meters

Orthometric Height: 1028.377179 Meters

Latitude: 35° 32' 48.44259" N

Longitude: 114° 54' 48.56605" W

Ellipsoid Height: 999.6207 Meters

3_GS0048



Point ID: 3_GS0048

Northing: 1585080.147 Meters

Easting: -1690780.894 Meters

Orthometric Height: 551.1029671 Meters

Latitude: 35° 47' 32.75950" N

Longitude: 115° 00' 00.16981" W

Ellipsoid Height: 522.3601 Meters

3_GS0052



Point ID: 3_GS0052

Northing: 1585146.872 Meters

Easting: -1690746.958 Meters

Orthometric Height: 550.343238 Meters

Latitude: 35° 47' 35.07885" N

Longitude: 114° 59' 59.36576" W

Ellipsoid Height: 521.6011 Meters

3_GS0116



Point ID: 3_GS0116

Northing: 1571954.711 Meters

Easting: -1729294.979 Meters

Orthometric Height: 794.8234135 Meters

Latitude: 35° 52' 03.92435" N

Longitude: 115° 29' 15.28247" W

Ellipsoid Height: 1347.6677 Meters

3_GS0118



Point ID: 3_GS0118

Northing: 1572362.897 Meters

Easting: -1728799.766 Meters

Orthometric Height: 796.61804 Meters

Latitude: 35° 36' 46.91574" N

Longitude: 115° 23' 12.77782" W

Ellipsoid Height: 767.92 Meters

3_GS0120



Point ID: 3_GS0120

Northing: 1572324.19 Meters

Easting: -1728824.255 Meters

Orthometric Height: 796.0790155 Meters

Latitude: 35° 36' 45.53729" N

Longitude: 115° 23' 13.42488" W

Ellipsoid Height: 767.3796 Meters

3_GS0121



Point ID: 3_GS0121

Northing: 1572338.786 Meters

Easting: -1728830.751 Meters

Orthometric Height: 796.108612 Meters

Latitude: 35° 36' 45.95459" N

Longitude: 115° 23' 13.79849" W

Ellipsoid Height: 767.4096 Meters

Vegetated Vertical Accuracy Checkpoints Low Vegetation

The Map shows the overall distribution of the Vegetated Vertical Accuracy Checkpoint, Low Vegetation throughout the AOI. The following tables contain a list of the control using Easting, Northing, and Orthometric height. The coordinate system displayed is Albers Equal Area, North American Datum 1983 (2011), North American Vertical Datum of 1988, Geoid12B and using Meters for measurement.

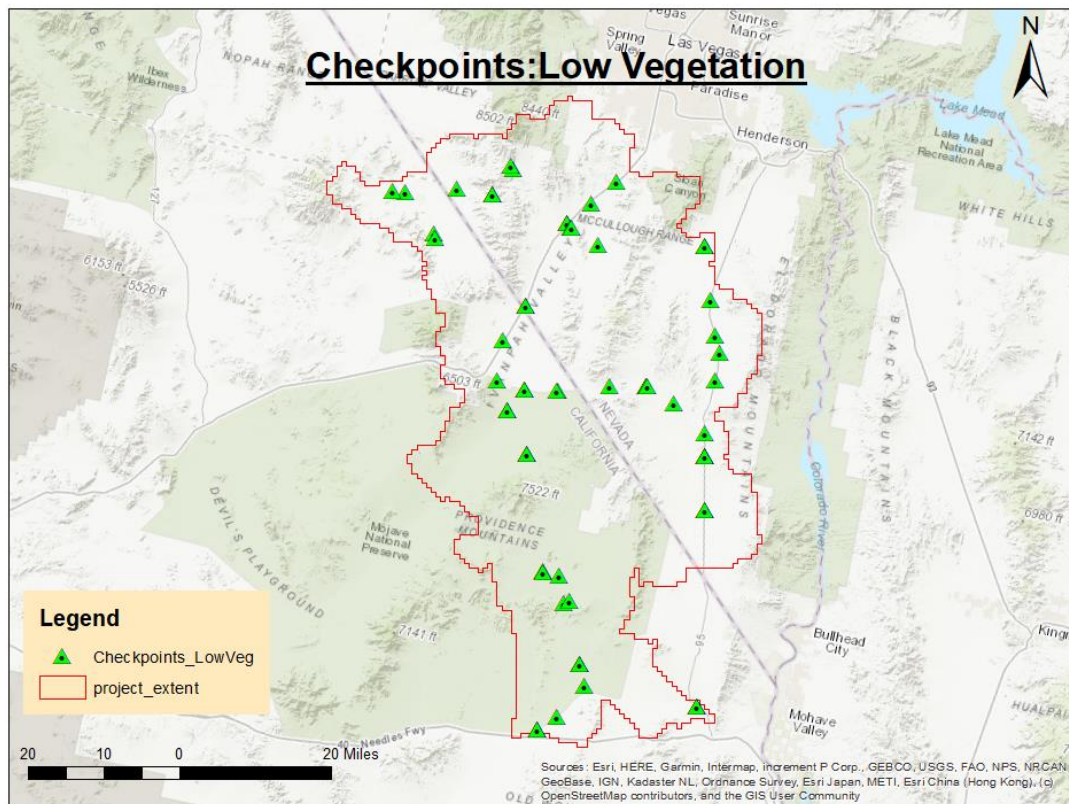


TABLE: Low Vegetation

Point ID	Easting	Northing	Ortho
1_GS0007	-1692541.875	1487589.462	472.0700465
1_GS0008	-1692565.405	1487605.658	472.7487174
2_GS0007	-1690908.809	1529099.819	779.2885587
2_GS0008	-1690887.548	1529082.125	779.1437483
2_GS0011	-1690874.137	1540529.337	933.720099
2_GS0012	-1690861.157	1540507.265	933.4137715
2_GS0013	-1690857.018	1540477.743	932.7186929
2_GS0015	-1697344.092	1551709.916	1130.81486
2_GS0018	-1703141.283	1555366.135	1299.469982
2_GS0019	-1703129.165	1555377.606	1298.918994
2_GS0021	-1703079.398	1555313.2	1296.650821
2_GS0023	-1710925.386	1555402.705	1394.940986
2_GS0027	-1722052.468	1554481.293	921.9788026
2_GS0028	-1722097.207	1554495.485	920.5789868
2_GS0033	-1726354.479	1482582.884	661.4286634
2_GS0034	-1726317.449	1482610.43	662.168697
2_GS0036	-1722106.995	1485225.335	711.927466
2_GS0038	-1716334.052	1491899.834	802.9653033
2_GS0040	-1717427.761	1496460.148	871.2330621
2_GS0042	-1717422.38	1496504.658	871.9454541
2_GS0045	-1720749.558	1509417.655	1140.884804
2_GS0048	-1719586.794	1510028.501	1154.979922
2_GS0052	-1721805.851	1515360.713	1232.879154
2_GS0055	-1725053.299	1516110.472	1289.020659
2_GS0057	-1725069.236	1516067.478	1287.813484
2_GS0063	-1728515.524	1540940.012	1071.250438
2_GS0064	-1728534.166	1540962.806	1070.184055
2_GS0071	-1732589.528	1550326.44	834.452014
2_GS0072	-1732575.115	1550357.706	834.0458395
3_GS0003	-1728912.358	1554604.857	801.1708481
3_GS0005	-1728960.624	1554652.719	800.567769
3_GS0007	-1734917.604	1556633.897	933.8301887
3_GS0017	-1713487.307	1585415.842	882.5574773
3_GS0021	-1714865.313	1593991.304	911.1007601
3_GS0027	-1733667.017	1565136.094	807.9405875
3_GS0029	-1690913.631	1545511.463	1026.073962
3_GS0032	-1688611.357	1556559.291	1027.851214
3_GS0037	-1687692.548	1562356.791	939.6599162
3_GS0040	-1688556.862	1566105.558	891.711112
3_GS0043	-1689505.297	1573737.653	755.5579234
3_GS0050	-1690738.408	1585110.375	551.0566102
3_GS0051	-1690717.437	1585126.432	550.6544011
3_GS0057	-1709680.792	1598578.597	957.6765281
3_GS0062	-1720046.072	1589981.156	878.3282728

3_GS0065	-1720103.324	1590056.15	880.5263165
3_GS0066	-1719347.393	1589033.87	865.3836729
3_GS0071	-1719004.568	1588968.114	875.5311637
3_GS0075	-1735902.954	1596007.358	1111.70143
3_GS0078	-1735865.628	1595958.1	1111.648411
3_GS0084	-1743348.638	1597166.195	804.1600735
3_GS0086	-1754403.852	1596456.09	856.3475279
3_GS0090	-1756932.817	1596636.314	914.6025985
3_GS0093	-1748277.581	1587771.487	791.8862564
3_GS0097	-1747972.76	1586821.476	799.6404937
3_GS0107	-1731497.943	1601301.848	1332.388485
3_GS0112	-1731866.42	1602159.241	1377.328147
3_GS0117	-1728828.201	1572378.348	796.2305613
3_GS0119	-1728799.579	1572334.275	796.0578019

1_GS0007



Point ID: 1_GS0007

Northing: 1487589.462 Meters

Easting: -1692541.875 Meters

Orthometric Height: 472.0700465 Meters

Latitude: 34° 56' 07.62374" N

Longitude: 114° 48' 19.35310" W

Ellipsoid Height: 441.7991 Meters

1_GS0008



Point ID: 1_GS0008

Northing: 1487605.658 Meters

Easting: -1692565.405 Meters

Orthometric Height: 472.7487174 Meters

Latitude: 34° 56' 07.98588" N

Longitude: 114° 48' 20.39640" W

Ellipsoid Height: 442.478 Meters

2_GS0007



Point ID: 2_GS0007

Northing: 1529099.819 Meters

Easting: -1690908.809 Meters

Orthometric Height: 779.2885587 Meters

Latitude: 35° 18' 07.28174" N

Longitude: 114° 52' 41.26142" W

Ellipsoid Height: 749.9192 Meters

2_GS0008



Point ID: 2_GS0008

Northing: 1529082.125 Meters

Easting: -1690887.548 Meters

Orthometric Height: 779.1437483 Meters

Latitude: 35° 18' 06.85873" N

Longitude: 114° 52' 40.28977" W

Ellipsoid Height: 749.7737 Meters

2_GS0011



Point ID: 2_GS0011

Northing: 1540529.337 Meters

Easting: -1690874.137 Meters

Orthometric Height: 933.720099 Meters

Latitude: 35° 24' 07.89205" N

Longitude: 114° 54' 10.08060" W

Ellipsoid Height: 904.6519 Meters

2_GS0012



Point ID: 2_GS0012

Northing: 1540507.265 Meters

Easting: -1690861.157 Meters

Orthometric Height: 933.4137715 Meters

Latitude: 35° 24' 07.27864" N

Longitude: 114° 54' 09.39754" W

Ellipsoid Height: 904.345 Meters

2_GS0013



Point ID: 2_GS0013

Northing: 1540477.743 Meters

Easting: -1690857.018 Meters

Orthometric Height: 932.7186929 Meters

Latitude: 35° 24' 06.37413" N

Longitude: 114° 54' 09.00210" W

Ellipsoid Height: 903.6495 Meters

2_GS0015



Point ID: 2_GS0015

Northing: 1551709.916 Meters

Easting: -1697344.092 Meters

Orthometric Height: 1130.81486 Meters

Latitude: 35° 29' 19.13854" N

Longitude: 114° 59' 52.36832" W

Ellipsoid Height: 1102.0508 Meters

2_GS0018



Point ID: 2_GS0018

Northing: 1555366.135 Meters

Easting: -1703141.283 Meters

Orthometric Height: 1299.469982 Meters

Latitude: 35° 30' 37.28260" N

Longitude: 115° 04' 08.91885" W

Ellipsoid Height: 1270.8495 Meters

2_GS0019



Point ID: 2_GS0019

Northing: 1555377.606 Meters

Easting: -1703129.165 Meters

Orthometric Height: 1298.918994 Meters

Latitude: 35° 30' 37.72178" N

Longitude: 115° 04' 08.53496" W

Ellipsoid Height: 1270.2984 Meters

2_GS0021



Point ID: 2_GS0021

Northing: 1555313.2 Meters

Easting: -1703079.398 Meters

Orthometric Height: 1296.650821 Meters

Latitude: 35° 30' 36.01102" N

Longitude: 115° 04' 06.06843" W

Ellipsoid Height: 1268.0284 Meters

2_GS0023



Point ID: 2_GS0023

Northing: 1555402.705 Meters

Easting: -1710925.386 Meters

Orthometric Height: 1394.940986 Meters

Latitude: 35° 29' 48.42897" N

Longitude: 115° 09' 14.55767" W

Ellipsoid Height: 1366.3654 Meters

2_GS0027



Point ID: 2_GS0027

Northing: 1554481.293 Meters

Easting: -1722052.468 Meters

Orthometric Height: 921.9788026 Meters

Latitude: 35° 28' 07.53950" N

Longitude: 115° 16' 23.41911" W

Ellipsoid Height: 892.9533 Meters

2_GS0028



Point ID: 2_GS0028

Northing: 1554495.485 Meters

Easting: -1722097.207 Meters

Orthometric Height: 920.5789868 Meters

Latitude: 35° 28' 07.69678" N

Longitude: 115° 16' 25.28709" W

Ellipsoid Height: 891.5524 Meters

2_GS0033



Point ID: 2_GS0033

Northing: 1482582.884 Meters

Easting: -1726354.479 Meters

Orthometric Height: 661.4286634 Meters

Latitude: 34° 49' 53.81866" N

Longitude: 115° 09' 35.94846" W

Ellipsoid Height: 630.8545 Meters

2_GS0034



Point ID: 2_GS0034
Northing: 1482610.43 Meters
Easting: -1726317.449 Meters
Orthometric Height: 662.168697 Meters
Latitude: 34° 49' 54.92581" N
Longitude: 115° 09' 34.72759" W
Ellipsoid Height: 631.5948 Meters

2_GS0036



Point ID: 2_GS0036

Northing: 1485225.335 Meters

Easting: -1722106.995 Meters

Orthometric Height: 711.927466 Meters

Latitude: 34° 51' 44.47950" N

Longitude: 115° 07' 11.74480" W

Ellipsoid Height: 681.4613 Meters

2_GS0038



Point ID: 2_GS0038

Northing: 1491899.834 Meters

Easting: -1716334.052 Meters

Orthometric Height: 802.9653033 Meters

Latitude: 34° 55' 52.01529" N

Longitude: 115° 04' 19.97931" W

Ellipsoid Height: 772.7091 Meters

2_GS0040



Point ID: 2_GS0040

Northing: 1496460.148 Meters

Easting: -1717427.761 Meters

Orthometric Height: 871.2330621 Meters

Latitude: 34° 58' 08.78621" N

Longitude: 115° 05' 38.72842" W

Ellipsoid Height: 841.1012 Meters

2_GS0042



Point ID: 2_GS0042

Northing: 1496504.658 Meters

Easting: -1717422.38 Meters

Orthometric Height: 871.9454541 Meters

Latitude: 34° 58' 10.22412" N

Longitude: 115° 05' 38.87194" W

Ellipsoid Height: 841.8153 Meters

2_GS0045



Point ID: 2_GS0045

Northing: 1509417.655 Meters

Easting: -1720749.558 Meters

Orthometric Height: 1140.884804 Meters

Latitude: 35° 04' 35.91347" N

Longitude: 115° 09' 31.26206" W

Ellipsoid Height: 1111.2254 Meters

2_GS0048



Point ID: 2_GS0048

Northing: 1510028.501 Meters

Easting: -1719586.794 Meters

Orthometric Height: 1154.979922 Meters

Latitude: 35° 05' 02.65722" N

Longitude: 115° 08' 50.77413" W

Ellipsoid Height: 1125.3521 Meters

2_GS0052



Point ID: 2_GS0052

Northing: 1515360.713 Meters

Easting: -1721805.851 Meters

Orthometric Height: 1232.879154 Meters

Latitude: 35° 07' 36.43011" N

Longitude: 115° 10' 59.89657" W

Ellipsoid Height: 1203.4172 Meters

2_GS0055



Point ID: 2_GS0055
Northing: 1516110.472 Meters
Easting: -1725053.299 Meters
Orthometric Height: 1289.020659 Meters
Latitude: 35° 07' 39.09407" N
Longitude: 115° 13' 12.62857" W
Ellipsoid Height: 1259.5831 Meters

2_GS0057



Point ID: 2_GS0057

Northing: 1516067.478 Meters

Easting: -1725069.236 Meters

Orthometric Height: 1287.813484 Meters

Latitude: 35° 07' 37.63608" N

Longitude: 115° 13' 12.90644" W

Ellipsoid Height: 1258.3736 Meters

2_GS0063



Point ID: 2_GS0063

Northing: 1540940.012 Meters

Easting: -1728515.524 Meters

Orthometric Height: 1071.250438 Meters

Latitude: 35° 20' 19.03824" N

Longitude: 115° 18' 47.35578" W

Ellipsoid Height: 1042.0866 Meters

2_GS0064



Point ID: 2_GS0064

Northing: 1540962.806 Meters

Easting: -1728534.166 Meters

Orthometric Height: 1070.184055 Meters

Latitude: 35° 20' 19.63530" N

Longitude: 115° 18' 48.26892" W

Ellipsoid Height: 1041.0196 Meters

2_GS0071



Point ID: 2_GS0071

Northing: 1550326.44 Meters

Easting: -1732589.528 Meters

Orthometric Height: 834.452014 Meters

Latitude: 35° 24' 48.21986" N

Longitude: 115° 22' 42.66121" W

Ellipsoid Height: 805.3239 Meters

2_GS0072



Point ID: 2_GS0072

Northing: 1550357.706 Meters

Easting: -1732575.115 Meters

Orthometric Height: 834.0458395 Meters

Latitude: 35° 24' 49.29852" N

Longitude: 115° 22' 42.34998" W

Ellipsoid Height: 804.9177 Meters

3_GS0003



Point ID: 3_GS0003

Northing: 1554604.857 Meters

Easting: -1728912.358 Meters

Orthometric Height: 801.1708481 Meters

Latitude: 35° 27' 26.90873" N

Longitude: 115° 20' 53.25126" W

Ellipsoid Height: 772.0475 Meters

3_GS0005



Point ID: 3_GS0005

Northing: 1554652.719 Meters

Easting: -1728960.624 Meters

Orthometric Height: 800.567769 Meters

Latitude: 35° 27' 28.10241" N

Longitude: 115° 20' 55.52966" W

Ellipsoid Height: 771.4462 Meters

3_GS0007



Point ID: 3_GS0007

Northing: 1556633.897 Meters

Easting: -1734917.604 Meters

Orthometric Height: 933.8301887 Meters

Latitude: 35° 27' 51.69320" N

Longitude: 115° 25' 04.99293" W

Ellipsoid Height: 904.885 Meters

3_GS0017



Point ID: 3_GS0017

Northing: 1585415.842 Meters

Easting: -1713487.307 Meters

Orthometric Height: 882.5574773 Meters

Latitude: 35° 45' 17.40166" N

Longitude: 115° 14' 56.70603" W

Ellipsoid Height: 854.1559 Meters

3_GS0021

3_GS0021_North



3_GS0021_East



3_GS0021_West



3_GS0021_South

Point ID: 3_GS0021

Northing: 1593991.304 Meters

Easting: -1714865.313 Meters

Orthometric Height: 911.1007601 Meters

Latitude: 35° 49' 38.55965" N

Longitude: 115° 17' 00.33230" W

Ellipsoid Height: 882.937 Meters

3_GS0027



Point ID: 3_GS0027

Northing: 1565136.094 Meters

Easting: -1733667.017 Meters

Orthometric Height: 807.9405875 Meters

Latitude: 35° 32' 27.60108" N

Longitude: 115° 25' 25.04413" W

Ellipsoid Height: 779.0958 Meters

3_GS0029



Point ID: 3_GS0029

Northing: 1545511.463 Meters

Easting: -1690913.631 Meters

Orthometric Height: 1026.073962 Meters

Latitude: 35° 26' 44.71882" N

Longitude: 114° 54' 51.01117" W

Ellipsoid Height: 997.1555 Meters

3_GS0032



Point ID: 3_GS0032

Northing: 1556559.291 Meters

Easting: -1688611.357 Meters

Orthometric Height: 1027.851214 Meters

Latitude: 35° 32' 47.65083" N

Longitude: 114° 54' 48.10715" W

Ellipsoid Height: 999.0946 Meters

3_GS0037



3_GS0037_East



Point ID: 3_GS0037

Northing: 1562356.791 Meters

Easting: -1687692.548 Meters

Orthometric Height: 939.6599162 Meters

Latitude: 35° 35' 56.25210" N

Longitude: 114° 54' 57.94916" W

Ellipsoid Height: 910.949 Meters

3_GS0040



Point ID: 3_GS0040

Northing: 1566105.558 Meters

Easting: -1688556.862 Meters

Orthometric Height: 891.711112 Meters

Latitude: 35° 37' 48.92219" N

Longitude: 114° 56' 01.64895" W

Ellipsoid Height: 863.0321 Meters

3_GS0043



3_GS0043_North



3_GS0043_East



3_GS0043_West



3_GS0043_South

Point ID: 3_GS0043

Northing: 1573737.653 Meters

Easting: -1689505.297 Meters

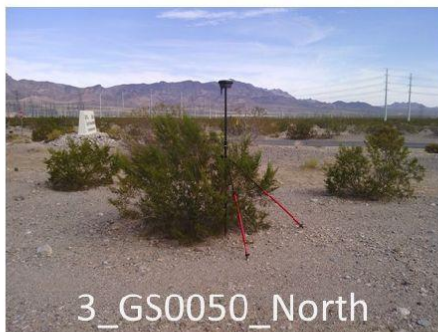
Orthometric Height: 755.5579234 Meters

Latitude: 35° 41' 43.43940" N

Longitude: 114° 57' 39.58548" W

Ellipsoid Height: 726.8846 Meters

3_GS0050



Point ID: 3_GS0050

Northing: 1585110.375 Meters

Easting: -1690738.408 Meters

Orthometric Height: 551.0566102 Meters

Latitude: 35° 47' 33.98333" N

Longitude: 114° 59' 58.73776" W

Ellipsoid Height: 522.3136 Meters

3_GS0051



Point ID: 3_GS0051

Northing: 1585126.432 Meters

Easting: -1690717.437 Meters

Orthometric Height: 550.6544011 Meters

Latitude: 35° 47' 34.62326" N

Longitude: 114° 59' 58.03995" W

Ellipsoid Height: 521.9119 Meters

3_GS0057



Point ID: 3_GS0057
Northing: 1598578.597 Meters
Easting: -1709680.792 Meters
Orthometric Height: 957.6765281 Meters
Latitude: 35° 52' 36.58053" N
Longitude: 115° 14' 13.22659" W
Ellipsoid Height: 929.6237 Meters

3_GS0062



Point ID: 3_GS0062

Northing: 1589981.156 Meters

Easting: -1720046.072 Meters

Orthometric Height: 878.3282728 Meters

Latitude: 35° 46' 58.66557" N

Longitude: 115° 19' 51.75696" W

Ellipsoid Height: 850.0486 Meters

3_GS0065



Point ID: 3_GS0065

Northing: 1590056.15 Meters

Easting: -1720103.324 Meters

Orthometric Height: 880.5263165 Meters

Latitude: 35° 47' 00.65527" N

Longitude: 115° 19' 54.61873" W

Ellipsoid Height: 852.25 Meters

3_GS0066



Point ID: 3_GS0066

Northing: 1589033.87 Meters

Easting: -1719347.393 Meters

Orthometric Height: 865.3836729 Meters

Latitude: 35° 46' 33.37208" N

Longitude: 115° 19' 16.57632" W

Ellipsoid Height: 837.0692 Meters

3_GS0071



Point ID: 3_GS0071

Northing: 1588968.114 Meters

Easting: -1719004.568 Meters

Orthometric Height: 875.5311637 Meters

Latitude: 35° 46' 33.52677" N

Longitude: 115° 19' 02.55289" W

Ellipsoid Height: 847.2132 Meters

3_GS0075



Point ID: 3_GS0075

Northing: 1596007.358 Meters

Easting: -1735902.954 Meters

Orthometric Height: 1111.70143 Meters

Latitude: 35° 48' 24.90498" N

Longitude: 115° 31' 04.89065" W

Ellipsoid Height: 1083.703 Meters

3_GS0078



Point ID: 3_GS0078

Northing: 1595958.1 Meters

Easting: -1735865.628 Meters

Orthometric Height: 1111.648411 Meters

Latitude: 35° 48' 23.59925" N

Longitude: 115° 31' 03.01816" W

Ellipsoid Height: 1083.6493 Meters

3_GS0084



Point ID: 3_GS0084

Northing: 1597166.195 Meters

Easting: -1743348.638 Meters

Orthometric Height: 804.1600735 Meters

Latitude: 35° 48' 12.45169" N

Longitude: 115° 36' 07.35419" W

Ellipsoid Height: 775.8189 Meters

3_GS0086



Point ID: 3_GS0086

Northing: 1596456.09 Meters

Easting: -1754403.852 Meters

Orthometric Height: 856.3475279 Meters

Latitude: 35° 46' 37.08893" N

Longitude: 115° 43' 16.26825" W

Ellipsoid Height: 827.7586 Meters

3_GS0090



Point ID: 3_GS0090

Northing: 1596636.314 Meters

Easting: -1756932.817 Meters

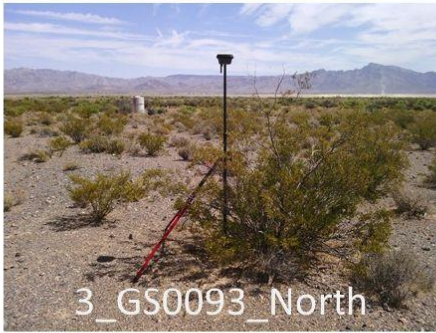
Orthometric Height: 914.6025985 Meters

Latitude: 35° 46' 25.99402" N

Longitude: 115° 44' 57.18386" W

Ellipsoid Height: 886.0166 Meters

3_GS0093



Point ID: 3_GS0093

Northing: 1587771.487 Meters

Easting: -1748277.581 Meters

Orthometric Height: 791.8862564 Meters

Latitude: 35° 42' 44.30570" N

Longitude: 115° 38' 03.78531" W

Ellipsoid Height: 763.2107 Meters

3_GS0097



Point ID: 3_GS0097

Northing: 1586821.476 Meters

Easting: -1747972.76 Meters

Orthometric Height: 799.6404937 Meters

Latitude: 35° 42' 16.41796" N

Longitude: 115° 37' 43.98769" W

Ellipsoid Height: 770.9591 Meters

3_GS0107



Point ID: 3_GS0107

Northing: 1601301.848 Meters

Easting: -1731497.943 Meters

Orthometric Height: 1332.388485 Meters

Latitude: 35° 51' 40.41884" N

Longitude: 115° 28' 54.86547" W

Ellipsoid Height: 1304.7396 Meters

3_GS0112



Point ID: 3_GS0112

Northing: 1602159.241 Meters

Easting: -1731866.42 Meters

Orthometric Height: 1377.328147 Meters

Latitude: 35° 52' 05.00705" N

Longitude: 115° 29' 15.55766" W

Ellipsoid Height: 1348.885 Meters

3_GS0117



Point ID: 3_GS0117

Northing: 1572378.348 Meters

Easting: -1728828.201 Meters

Orthometric Height: 796.2305613 Meters

Latitude: 35° 36' 47.21707" N

Longitude: 115° 23' 14.01969" W

Ellipsoid Height: 767.5334 Meters

3_GS0119



Point ID: 3_GS0119

Northing: 1572334.275 Meters

Easting: -1728799.579 Meters

Orthometric Height: 796.0578019 Meters

Latitude: 35° 36' 46.01562" N

Longitude: 115° 23' 12.53802" W

Ellipsoid Height: 767.3585 Meters

Vegetated Vertical Accuracy Checkpoints Medium Vegetation

The Map shows the overall distribution of the Vegetated Vertical Accuracy Checkpoint, Medium Vegetation throughout the AOI. The following tables contain a list of the control using Easting, Northing, and Orthometric height. The coordinate system displayed is Albers Equal Area, North American Datum 1983 (2011), North American Vertical Datum of 1988, Geoid12B and using Meters for measurement.

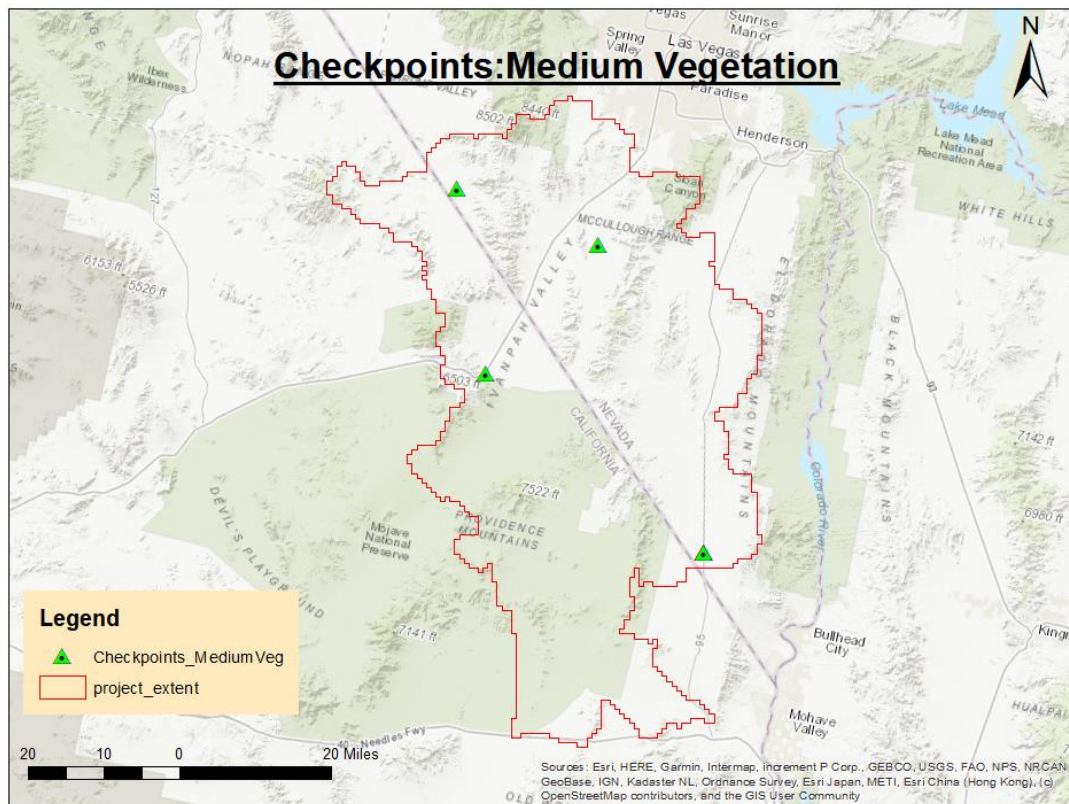
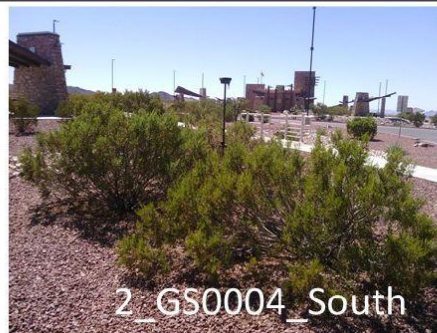
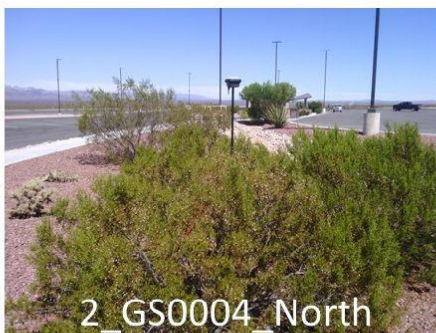


TABLE: Medium Vegetation

Point ID	Easting	Northing	Ortho
2_GS0004	-1691001.022	1520105.448	780.1213942
2_GS0005	-1690998.034	1520066.482	780.0612567
3_GS0009	-1737329.626	1557996.943	1053.165159
3_GS0018	-1713486.274	1585387.325	882.8368415
3_GS0082	-1743307.727	1597204.35	805.1661043

2_GS0004



Point ID: 2_GS0004

Northing: 1520105.448 Meters

Easting: -1691001.022 Meters

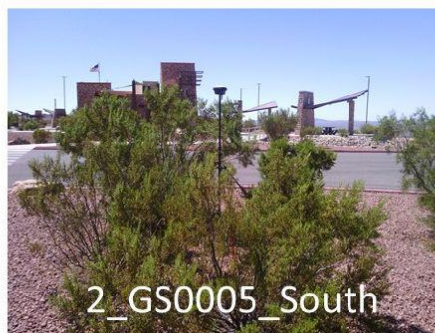
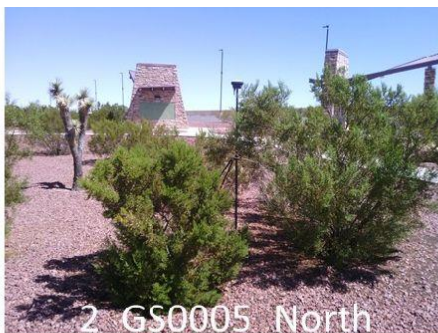
Orthometric Height: 780.1213942 Meters

Latitude: 35° 13' 23.05399" N

Longitude: 114° 51' 34.06808" W

Ellipsoid Height: 750.571 Meters

2_GS0005



Point ID: 2_GS0005

Northing: 1520066.482 Meters

Easting: -1690998.034 Meters

Orthometric Height: 780.0612567 Meters

Latitude: 35° 13' 21.84410" N

Longitude: 114° 51' 33.64482" W

Ellipsoid Height: 750.5102 Meters

3_GS0009



Point ID: 3_GS0009

Northing: 1557996.943 Meters

Easting: -1737329.626 Meters

Orthometric Height: 1053.165159 Meters

Latitude: 35° 28' 18.86518" N

Longitude: 115° 26' 50.57498" W

Ellipsoid Height: 1024.3159 Meters

3_GS0018



3_GS0018_East



Point ID: 3_GS0018

Northing: 1585387.325 Meters

Easting: -1713486.274 Meters

Orthometric Height: 882.8368415 Meters

Latitude: 35° 45' 16.51016" N

Longitude: 115° 14' 56.43496" W

Ellipsoid Height: 854.4348 Meters

3_GS0082



Point ID: 3_GS0082

Northing: 1597204.35 Meters

Easting: -1743307.727 Meters

Orthometric Height: 805.1661043 Meters

Latitude: 35° 48' 13.92187" N

Longitude: 115° 36' 06.05882" W

Ellipsoid Height: 776.8288 Meters