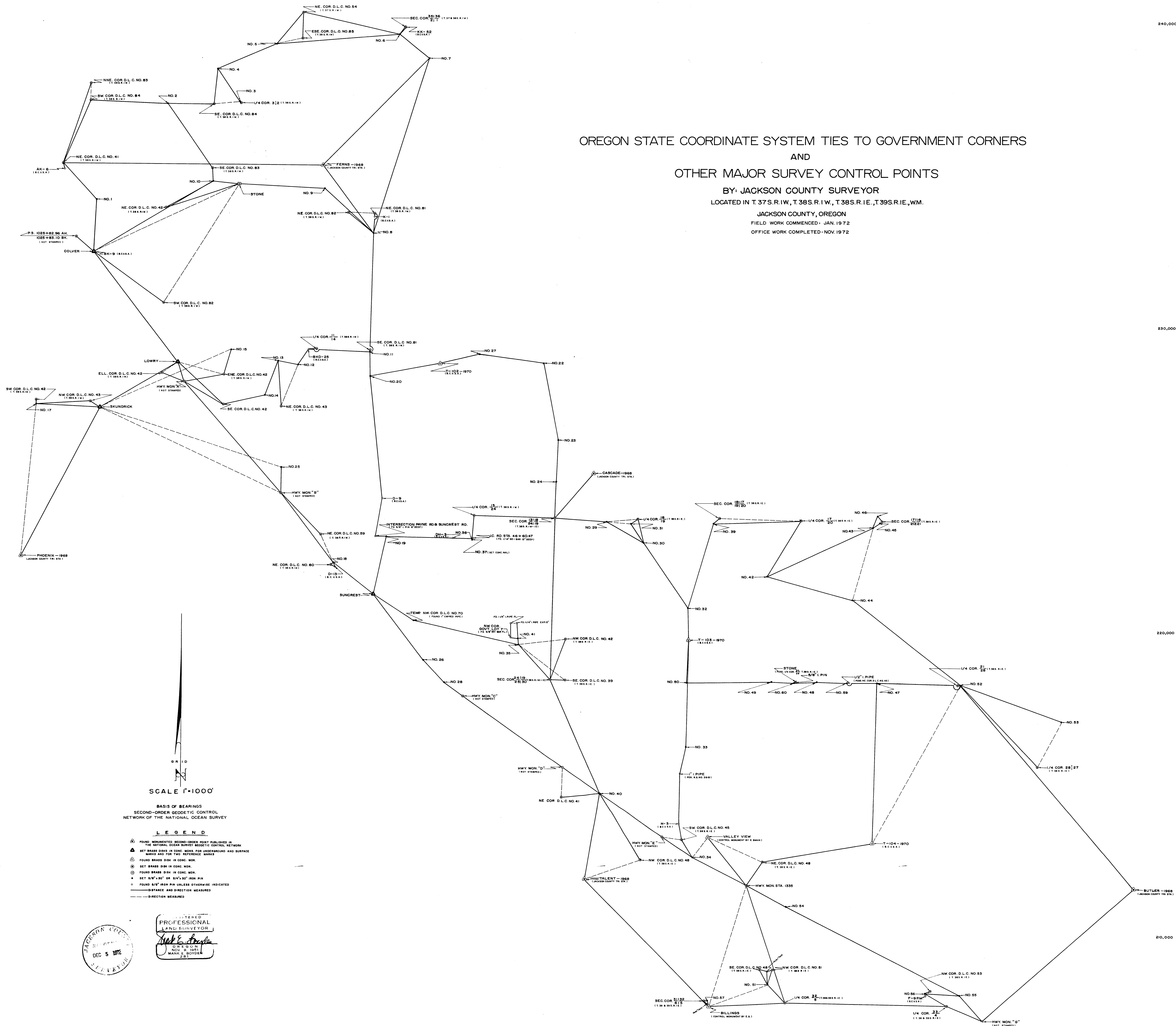


OREGON STATE COORDINATE SYSTEM TIES TO GOVERNMENT CORNERS
AND
OTHER MAJOR SURVEY CONTROL POINTS

BY: JACKSON COUNTY SURVEYOR
LOCATED IN T. 37 S. R. 1 W., T. 38 S. R. 1 W., T. 38 S. R. 1 E., T. 39 S. R. 1 E., WM.
JACKSON COUNTY, OREGON
FIELD WORK COMMENCED: JAN. 1972
OFFICE WORK COMPLETED: NOV. 1972

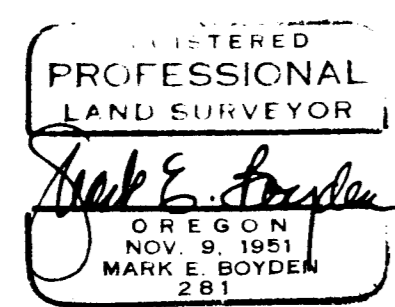
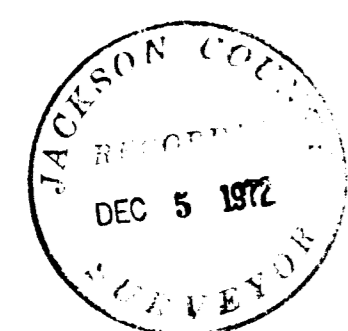


SCALE 1"=1000'

BASIS OF BEARINGS
SECOND-ORDER GEODETIC CONTROL
NETWORK OF THE NATIONAL OCEAN SURVEY

LEGEND

- ① FOUND MONUMENTED SECOND-ORDER POINT PUBLISHED IN THE NATIONAL OCEAN SURVEY GEODETIC CONTROL NETWORK
- ▲ SET BRASS DISK IN CONC. MON. FOR UNDERGROUND AND SURFACE MARKS AND FOR TWO REFERENCE MARKS
- ⊙ FOUND BRASS DISK IN CONC. MON.
- ⊙ SET BRASS DISK IN CONC. MON.
- ⊙ FOUND BRASS DISK IN CONC. MON.
- SET 3/8" x .30" OR 3/4" x .30" IRON PIN
- FOUND 3/8" IRON PIN UNLESS OTHERWISE INDICATED
- DISTANCE AND DIRECTION MEASURED
- DIRECTION MEASURED



SURVEY NARRATIVE TO COMPLY WITH O.R.S. 209.250

FOR: Jackson County

PURPOSE: To locate government corners and other random points on the Oregon Coordinate System (south zone), with accuracy at least equivalent to National Geodetic Survey second-order standards.

AREA: Points were located in T37S, R1W; T38S, R1W; T38S, R1E; and T39S, R1E; W.M.

PROCEDURE: Horizontal control for this traverse project was provided by the following second-order triangulation stations of the national network:

FERNS (JCS) 1968
PHOENIX (JCS) 1968
CASCADE (JCS) 1968
TALENT (JCS) 1968
BUTLER (JCS) 1968

Positions of these points were held fixed in all computations and adjustments, and in determining all closing errors.

All major horizontal directions were measured with a Wild second-order theodolite, using two positions of the horizontal circle, with each position consisting of a direct and reverse pointing. Two sets were measured for each zenith distance, with each set consisting of a circle left and a circle right pointing. Considerable care was exercised to confine angle measurements to overcast, dull days, when refraction would be near minimum.

Except for a few short distances under 300 feet, all distance measurements were by Hewlett Packard Model 3800A Distance Meter or by Model 6A Geodimeter. These electronic distance measurements were contracted to local surveyors. A few short distances under 300 feet were double chained with a steel tape.

In no case did the azimuth closure at azimuth check points exceed 3.0 sec. per station, the standard for second-order traverse. After azimuth adjustment, the maximum closing error in position was 1:27,200, slightly better than the 1:25,000 standard for first-order traverse. All such closures were adjusted by the compass rule.

Vertical control was taken from station AK-6 (BCVSA), whose elevation in turn was derived from a third-order connection to the National Ocean Survey first-order bench mark "J7", located along the Southern Pacific Railroad at 6th Street in Medford. This mark is stamped "ELEV. 1375.001 FT. J7 1920". This stamped elevation, which also corresponds to the City of Medford elevation datum, was used in making the above third-order connection. Because of additional leveling by National Ocean Survey in 1954 and a supplementary adjustment in 1956, the elevation of bench mark "J7" has been changed to 1375.598 feet. Thus, elevations determined on this survey correspond to the City of Medford datum, but need to be corrected by adding 0.597 feet to make them consistent with the national datum.

Elevations throughout this project were determined by trigonometric leveling, using reciprocal zenith distances. Loops were balanced using the compass rule. In a few instances involving taped distances, no elevations were determined for supplemental points. The largest loop closure ratio, 0.39 ft. over a distance of 17,134 ft., amounts to 1 part in 44,000

Appendix A to this report is a listing of Oregon State Coordinates (south zone) for all marked points, together with elevations.

Appendix B is a listing of field records and computations which are on file in the County Surveyor's Office.

APPENDIX A Page 3.
 OREGON STATE COORDINATES (south zone) AND ELEVATIONS
 LOOP 1

<u>STATION</u>	<u>Y (NORTH)</u>	<u>X (EAST)</u>	<u>ELEVATION</u>
FERNS (JCS) 1968	235 350.80	1 381 645.44	2111.9
NE Cor. DLC 41 (T38S,R1W)	235 441.64	1 373 184.98	1536.6
No. 1	234 242.71	1 374 254.03	1539.2
COLVER	232 536.20	1 374 152.29	1495.7
LOWRY	228 911.32	1 376 894.44	1644.4
SKUNDRICK	227 421.46	1 374 328.09	1660.4
PHOENIX (JCS) 1968	222 552.09	1 371 741.42	1839.0
No. 17	227 541.70	1 372 250.97	1559.0
SW Cor. DLC 42 (T38S,R1W)	227 680.28	1 372 257.77	
SW Cor. DLC 84 (T38S,R1W)	237 500.77	1 374 078.17	1497.8
No. 2	237 392.58	1 376 589.46	1571.5
SE Cor. DLC 83 (T38S,R1W)	235 284.58	1 378 036.86	1685.4
No. 10	234 820.26	1 378 050.94	1658.6
No. 8	233 113.13	1 383 291.19	1798.2
No. 9	234 596.97	1 381 702.25	1896.6
STONE	234 762.96	1 378 903.14	1678.4
No. 7	238 858.56	1 385 138.39	2226.6
No. 6	239 641.12	1 384 168.66	2167.4
No. 5	239 327.18	1 380 154.00	1825.3
No. 4	238 524.41	1 378 212.77	1646.8
SE Cor DLC 84 (T38S,R1W)	237 366.41	1 378 097.63	1619.4
NE Cor DLC 42 (T38S,R1W)	233 977.26	1 376 510.18	1546.6
NW Cor DLC 43 (T38S,R1W)	227 633.77	1 374 028.31	1598.5
AK6 (BCVSA)	235 269.66	1 373 208.76	1535.0
NNE Cor. DLC 83 (T38S,R1W)	238 064.92	1 374 094.45	1511.1
No. 3	237 444.11	1 378 957.86	1726.9
1/4 Cor 3/2 (T38S,R1W)	237 415.26	1 378 977.76	1730.6
NE Cor DLC 54 (T37S,R1W)	240 386.79	1 381 037.16	1827.1
Sec. Cor 35,36,2&1,T37&38S,R1W	239 896.42	1 384 355.14	2159.8
KK-52 (BCVSA)	239 879.43	1 384 364.32	2160.0
NE Cor DLC 81 (T38S,R1W)	233 764.40	1 383 323.41	1785.4
K1 (BCVSA)	233 666.92	1 383 309.70	
NE Cor DLC 82 (T38S,R1W)	233 798.44	1 382 463.56	1769.9
ESE Cor DLC 85 (T38S,R1W)	239 525.94	1 381 011.14	1798.3
BK9 (BCVSA)	232 531.93	1 374 182.88	
P.S.1025+82.96 AH=1025+83.10 BK	233 037.03	1 373 596.14	1463.5
SW Cor DLC 82 (T38S,R1W)	230 856.14	1 376 417.59	1593.0

LOOP 2

No. 11	229 240.75	1 383 168.63	1718.9
No. 20	228 429.32	1 383 157.61	1789.1
D9 (BCVSA)	224 433.40	1 383 545.55	1737.6
Intersection Payne & Suncrest	223 192.41	1 383 318.27	1641.4
No. 19	223 180.47	1 383 695.05	1653.6
Suncrest	221 287.36	1 383 260.62	1603.6
No. 18	222 311.45	1 381 977.57	1588.2
Hwy. Mon. "B"	224 601.22	1 380 231.68	1535.9
Hwy. Mon. "A"	228 277.83	1 377 093.62	1503.3
BKD 25 (BCVSA)	229 316.41	1 381 146.75	1669.9
No. 12	228 828.44	1 380 798.70	1692.6
No. 13	228 949.64	1 380 162.10	1753.4
No. 14	227 812.84	1 379 710.87	1702.2
SE Cor DLC 42 (T38S,R1W)	227 519.20	1 378 363.55	1512.7
ENE Cor DLC 42 (T38S,R1W)	228 500.57	1 378 392.79	1609.6
No. 15	229 316.80	1 378 633.49	1729.0
E11 Cor DLC 42 (T38S,R1W)	228 561.70	1 376 349.38	1494.7
NE Cor DLC 43 (T38S,R1W)	227 469.10	1 380 252.63	1607.3

<u>STATION</u>	<u>Y (NORTH)</u>	<u>X (EAST)</u>	<u>ELEVATION</u>
1/4 Cor 11 & 14 (T38S,R1W)	229 334.57	1 381 410.65	
SE Cor. DLC 81 (T38S,R1W)	229 280.74	1 383 169.90	
NE Cor. DLC 59 (T38S,R1W)	223 247.78	1 381 557.58	1558.3
D13 (BCVSA)	222 189.42	1 382 010.17	
NE Cor. DLC 60 (T38S,R1W)	222 244.34	1 381 889.63	
No. 25	225 468.79	1 380 261.47	1538.3

LOOP 3

DHS (BCVSA)	223 111.58	1 385 872.47	1718.2
No. 36	223 098.72	1 386 483.94	1701.4
1/4 Cor 13 & 24 (T38S,R1W)	223 871.05	1 386 545.66	1724.7
Sec. Cor. 13, 18, 24, 19 (T38S,R1W-1E)	223 788.64	1 389 187.37	1872.8
Sec. Cor. 24, 19, 25, 30 (T38S,R1W-1E)	218 486.09	1 389 040.39	1727.8
No. 40	214 702.96	1 390 670.83	1661.1
T102 (BCVSA)	228 856.59	1 385 438.26	1825.4
No. 27	229 150.22	1 386 721.26	1911.3
No. 22	228 852.19	1 388 833.15	2241.6
No. 23	226 327.22	1 389 291.53	1987.7
No. 24	224 962.18	1 389 228.12	1935.0
CASCADE (JCS) 1968	225 244.94	1 390 464.24	2335.4
NW Cor DLC 70 (T38S,R1W)	220 415.22	1 384 585.68	1609.3
No. 35	219 633.88	1 388 010.48	1803.9
No. 26	219 125.31	1 384 894.89	1575.2
No. 28	218 392.40	1 385 580.09	1582.4
Hwy. Mon "C"	217 936.94	1 386 194.93	1588.4
Hwy. Mon "D"	215 581.02	1 389 455.73	1631.8
No. 29	223 641.55	1 390 898.44	2091.1
No. 30	222 970.52	1 392 094.51	2026.2
No. 32	220 823.11	1 393 556.63	1936.3
T103 (BCVSA)	219 764.78	1 393 578.19	1885.0
No. 33	216 242.15	1 393 489.53	1828.2
1" I. Pipe (per R.S. 3918)	215 341.78	1 393 290.59	1739.7
H3 (BCVSA)	213 680.48	1 393 270.45	1770.6
SW Cor DLC 45 (T38S,R1E)	213 148.52	1 393 360.86	1762.1
No. 34	212 551.34	1 393 705.12	1739.1
Hwy Mon. "E"	213 234.98	1 392 702.56	1714.4
1/4 Cor. 18 & 19 (T38S,R1E)	223 759.43	1 391 926.42	2016.3
No. 31	223 585.82	1 391 685.46	1993.4
NW Cor DLC 48 (T38S,R1E)	212 491.08	1 392 026.30	1698.8
NE Cor DLC 41 (T38S,R1E)	214 588.34	1 389 409.99	1630.4
NW Cor DLC 42 (T38S,R1E)	219 794.36	1 389 548.84	1760.0
No. 41	219 814.85	1 387 994.58	1794.1
NW Cor Govt Lot 7	219 849.95	1 387 748.83	1764.3
Fd. 1 1/4" I. Pipe flush	220 322.77	1 387 763.96	1719.2
Fd. 1 1/4" I. Pipe Exp. 15"	220 317.75	1 387 950.40	1735.9
J.C. Rd. Sta. 46+60.47	223 098.27	1 386 505.86	
No. 37	223 070.95	1 386 481.73	
SE Cor DLC 39 (T38S,R1E)	218 473.00	1 389 513.35	1767.7

LOOP 4

BUTLER (JCS) 1968	211 552.61	1 408 142.42	2665.0
Hwy. Mon. "G"	207 171.33	1 403 259.86	1808.6
1/4 Cor. 33 & 4 (T38 & 39S,R1E)	207 655.75	1 402 086.21	1793.5
1/4 Cor. 32 & 5 (T38 & 39S,R1E)	207 766.34	1 396 781.40	1758.5
BILLINGS	207 647.73	1 394 290.91	1963.8
TALENT (JCS) 1968	211 833.13	1 390 189.24	1926.7
No. 55	208 004.18	1 402 472.61	1826.1
No. 54	210 926.56	1 396 794.41	1759.6

<u>STATION</u>	<u>Y (NORTH)</u>	<u>X (EAST)</u>	<u>ELEVATION</u>
Hwy. Mon. Sta. 1335	211 631.84	1 395 471.37	1754.4
NE Cor. DLC 48 (T38S,R1E)	212 398.06	1 396 002.07	1773.8
T104 (BCVSA)	213 036.30	1 399 588.80	2000.2
No. 47	218 327.40	1 399 736.07	2044.3
No. 52	218 282.53	1 402 454.70	2398.0
No. 39	223 593.03	1 394 385.74	2115.3
1/4 Cor. 17 & 20 (T38S,R1E)	223 687.93	1 397 233.59	2305.0
No. 42	221 847.33	1 396 126.04	2346.7
No. 44	221 064.34	1 398 926.14	2305.0
No. 59	218 344.19	1 398 756.10	1985.0
No. 48	218 370.38	1 397 772.55	2001.2
No. 60	218 344.76	1 397 034.69	1985.2
No. 49	218 383.84	1 396 286.60	1982.5
No. 50	218 362.13	1 393 508.52	1841.0
Sec. Cor. 18, 17, 19 & 20 (T38S, R1E)	223 743.75	1 394 583.72	2082.5
No. 43	223 441.51	1 399 593.67	2483.9
No. 45	223 590.52	1 399 826.20	2490.7
No. 46	223 814.58	1 399 746.77	2507.8
Sec. Cor. 17, 16, 20 & 21 (T38S, R1E)	223 636.54	1 399 897.99	2475.9
No. 53	217 060.87	1 405 771.00	2361.4
1/4 Cor. 28 & 27 (T38S, R1E)	215 582.22	1 404 982.11	2268.2
1/4 Cor. 21 & 28 (T38S, R1E)	218 285.31	1 402 385.81	2378.8
1/2" I. Pipe (Poss. NE Cor. DLC 45)	218 345.89	1 398 827.99	1983.0
Stone (Poss. 1/4 Cor. 20 & 29)	218 387.16	1 397 090.02	
5/8" I. Pin	218 377.25	1 397 089.75	
Valley View	213 227.08	1 394 207.86	1813.3
No. 51	208 375.42	1 396 200.98	1764.2
SE Cor. DLC 48 (T38S, R1E)	208 861.73	1 395 916.15	1717.1
Hub & Tack	208 798.51	1 396 174.29	1752.8
NW Cor. DLC 51 (T38S, R1E)	208 852.79	1 396 349.81	1744.9
No. 56	208 078.08	1 401 352.12	1757.5
NW Cor. DLC 53 (T38S, R1E)	208 144.45	1 401 524.64	1759.5
F-9 PM (BCVSA)	207 988.44	1 401 370.99	1732.1
Hub & Tack	207 730.83	1 394 209.26	
Sec. Cor. 31, 32, 6 & 5 (T38 & 39S, R1E)	207 821.29	1 394 120.37	
No. 57	207 823.84	1 394 218.33	

APPENDIX B.

FIELD RECORDS AND COMPUTATIONS

1. 6 Field books, labeled Book A, B, C, D, E & F
2. 1 Loose-leaf binder containing:
 - 47 pages - List of Directions
 - 40 pages - Abstract of Zenith Distances
 - 11 pages - Elevations for Measured lines
 - 6 pages - Elevations for Supplemental stations
 - 17 pages - Reductions of distance measurements
 - 5 pages - Reduction of distances to grid and sea level

- 2 pages - Second term computations
 - 6 pages - Adjustment by compass rule
 - 10 pages - Computation of tirangles
 - 1 page - Azimuth checks to second-order stations
 - 6 pages - Final coordinates and elevations
3. 1 Manila envelope marked "Loop No. 1 - North Fern Valley Area" containing:
- 34 sheets - Hewlett Packard Distance Meter measurements
 - 18 sheets - Coordinate computations
4. 1 manila envelope marked "Loop No. 2 - Payne Road Area" containing:
- 29 sheets - Model 6A Geodimeter measurements
 - 5 sheets - Coordinate Computations
5. 1 Manila envelope marked "Loop No. 3 -Valley View Area" containing:
- 38 sheets - Hewlett Packard Distance Meter measurements
 - 10 sheets - Coordinate computations
6. 1 manila envelope marked "Loop No. 4 - Butler Creek Area" containing:
- 36 sheets - Hewlett Packard Distance Meter measurements
 - 9 sheets - Coordinate computations
7. 5 - Photo-mosaics showing stations locations

November 29, 1972

