

Control Point No.	ADJUSTMENT NO. 1 SEE NARRATIVE				ADJUSTMENT NO. 2 SEE NARRATIVE		RECORD ODOT LDP Northing (Int'l. Ft.)	RECORD ODOT LDP Easting (Int'l. Ft.)
	83(91) Latitude (N)	83(91) Longitude (W)	Ellipsoidal Ht. (m)	NGVD 29 Elev. (U.S. Ft.)	83(86) LDP Northing (Int'l. Ft.)	83(86) LDP Easting (Int'l. Ft.)		
N. BASE	44°26'41".106200*	118°42'13".251360*	1099.26*, **	3661	288957.463**	8673275.631**	288957.464	8673275.627
N. BASE AZ.	44°27'02".475356	118°42'21".704358	1077.7	3591	291107.804	8672614.333	291107.706	8672614.354
1	44°27'38".102832	118°43'06".625677	1060.6	3535	294643.566	8669276.267		
2	44°27'38".874755	118°42'59".508388	1062.4	3541	294733.126	8669790.725		
3	44°27'41".149575	118°42'52".742327	1061.9	3539	294974.329	8670276.341		
4	44°27'43".701379	118°42'46".651636	1061.9	3539	295242.507	8670712.347		
5	44°27'44".625542	118°42'40".224088	1061.3	3537	295346.404	8671176.425		
6	44°27'46".647428	118°42'33".761073	1062.4	3540	295561.536	8671640.603		
7	44°27'47".205103	118°42'26".580281	1065.2	3550	295629.557	8672160.117		
8	44°27'47".839810	118°42'19".083058	1068.4	3560	295705.904	8672702.402		
9	44°27'48".512497	118°42'13".088417	1069.6	3564	295783.688	8673135.628		
10	44°27'48".902302	118°42'04".478366	1067.7	3558	295837.057	8673759.161		
11	44°27'49".573769	118°41'58".111851	1068.6	3561	295915.339	8674219.352		
12	44°27'48".954955	118°41'52".300564	1069.5	3564	295862.073	8674642.190		
13	44°27'48".496252	118°41'45".270404	1070.6	3567	295827.000	8675153.063		
14	44°27'46".715193	118°41'31".842465	1071.9	3571	295668.411	8676130.910		
15	44°27'44".300459	118°41'17".121513	1076.6	3587	295447.800	8677203.984		
16	44°27'41".899164	118°41'03".523116	1081.4	3603	295226.776	8678195.639		
17	44°27'37".148426	118°40'44".124092	1086.4	3619	294777.360	8679613.365		
18	44°27'39".572058	118°40'18".008363	1109.4	3695	295065.574	8681501.846		
19	44°27'44".233495	118°40'04".462997	1112.7	3705	295559.872	8682473.501		
20	44°27'55".945279	118°39'50".374572	1115.1	3713	296769.062	8683468.266		
21	44°28'04".312166	118°39'41".833569	1126.3	3750	297630.421	8684068.360		
22	44°28'12".049397	118°39'34".306867	1141.2	3799	298426.357	8684596.307		
23	44°28'19".894481	118°39'27".441953	1152.5	3835	299232.132	8685075.978		
24	44°28'30".575516	118°39'25".741339	1155.5	3846	300316.555	8685174.613		
25	44°28'38".604116	118°39'22".119314	1158.3	3855	301135.559	8685418.673		
26	44°28'44".876529	118°39'12".804206	1165.9	3879	301786.156	8686079.527		
27	44°28'48".938438	118°39'03".299355	1177.7	3918	302213.243	8686759.220		
28	44°28'56".914969	118°38'52".777170	1192.9	3968	303038.459	8687503.549		
29	44°29'03".909407	118°38'38".502261	1212.3	4032	303770.498	8688522.153		
30	44°29'12".241383	118°38'31".736338	1229.2	4087	304625.506	8688993.235		
31	44°29'20".905681	118°38'24".406139	1247.1	4146	305515.116	8689504.405		
32	44°29'30".390249	118°38'19".865996	1266.3	4209	306483.142	8689811.381		
33	44°29'40".206307	118°38'20".694233	1283.8	4266	307475.772	8689728.446		
34	44°29'50".152318	118°38'23".078648	1304.7	4334	308478.965	8689532.426		
35	44°29'57".294686	118°38'17".571586	1318.2	4379	309211.426	8689914.894		
36	44°30'04".026570	118°38'06".636714	1337.9	4443	309911.404	8690691.663		
37	44°30'12".082591	118°37'57".691773	1356.5	4504	310742.165	8691321.068		
38	44°30'22".027528	118°37'53".307346	1376.2	4569	311756.574	8691615.512		
39	44°30'31".337347	118°37'54".147609	1390.4	4616	312697.912	8691532.817		
40	44°30'39".969998	118°37'53".742599	1396.6	4636	313572.771	8691541.943		
41	44°30'51".263802	118°37'47".809651	1397.9	4640	314726.371	8691945.369		
42	44°30'59".804705	118°37'46".107742	1401.5	4652	315594.109	8692048.654		
43	44°31'10".687595	118°37'44".070537	1419.7	4712	316699.567	8692170.726		
44	44°31'14".853002	118°37'37".472560	1429.6	4744	317132.450	8692638.968		
45	44°31'18".271369	118°37'28".217684	1440.4	4779	317494.159	8693301.427		
46	44°31'27".867912	118°37'21".730558	1458.2	4838	318476.864	8693748.806		
47	44°31'28".809022	118°37'04".133325	1478.2	4903	318601.838	8695021.383		
48	44°31'33".212194	118°36'58".347090	1489.6	4941	319057.489	8695430.156		
49	44°31'40".774825	118°36'53".347673	1506.5	4996	319831.759	8695774.443		
50	44°31'50".829126	118°36'50".631229	1506.7	4997	320854.484	8695947.450		
51	44°31'45".796305	118°36'52".646292	1504.0	4988	320341.437	8695813.383		
52	44°31'37".210106	118°36'53".573250	1506.1	4995	319470.401	8695766.529		
53	44°31'34".043973	118°36'52".392466	1518.9	5037	319151.785	8695859.551		
54	44°31'27".426260	118°37'07".557697	1476.1	4896	318456.035	8694776.573		
200	44°30'15".703907	118°38'03".379284	1377.7	4574	311099.346	8690900.428	311099.961	8690898.798
201	44°27'39".622913	118°40'32".290062	1097.0	3654	295047.300	8680465.968	295047.500	8680465.380
202	44°28'31".409847	118°39'17".757561	1196.3	3979	300414.256	8685751.553	300414.860	8685750.160
203	44°31'33".751618	118°36'50".073183	1523.4	5052	319126.103	8696028.253	319127.760	8696025.140
204	44°31'46".925312	118°36'50".115014	1504.7	4990	320460.044	8695994.072	320461.780	8695990.720
ODOT4	44°27'47".408092	118°42'24".376565	1066.5	3554	295653.653	8672319.482	295652.847	8672319.354
ODOT5	44°27'48".108848	118°42'12".438419	1069.5	3564	295743.854	8673183.679	295743.139	8673183.517
ODOT9	44°27'37".093657	118°40'45".677145	1085.8	3617	294769.274	8679500.857	294769.275	8679500.377
ODOT10	44°27'39".702407	118°40'16".469016	1111.7	3702	295081.301	8681613.187	295081.525	8681612.574
ODOT11	44°27'46".306765	118°40'00".770381	1113.7	3708	295775.898	8682736.533	295776.198	8682735.796
ODOT12	44°28'18".717260	118°39'27".871949	1152.0	3834	299112.214	8685047.517	299112.758	8685046.258
ODOT14	44°28'36".020092	118°39'24".081839	1156.4	3849	300870.648	8685282.354	300871.206	8685280.903
ODOT23	44°31'13".989613	118°37'38".035734	1428.9	4742	317044.074	8692600.194	317045.451	8692597.098
ODOT24	44°31'17".701890	118°37'28".098698	1440.1	4778	317436.693	8693311.388	317438.105	8693308.294
ODOT27	44°31'26".990964	118°37'08".580069	1472.4	4884	318410.231	8694703.535	318411.586	8694700.373
AUSTIN	44°34'25".991360*	118°30'03".843570*	1275.4	4238				
DIXIE	44°34'56".390288 (44°34'56".39260)	118°37'38".976586 (118°37'38".97679)	2295.5	7585				

NOTE

- * DENOTES CONSTRAINED VALUE FOR ADJUSTMENT NO. 1
** DENOTES CONSTRAINED VALUE FOR ADJUSTMENT NO. 2
() DENOTES RECORD NGS VALUE

NARRATIVE

THE PURPOSE OF THIS SURVEY WAS TO SET AND ESTABLISH COORDINATES ON CONTROL MONUMENTS ALONG THE PRAIRIE CITY-DIXIE SUMMIT SECTION OF THE JOHN DAY HIGHWAY (U.S. HWY. NO. 26) AS SHOWN ON OREGON DEPARTMENT OF TRANSPORTATION (ODOT) DRAWING (DRG.) NO. 10B-2-33 THROUGH 10B-3-35 FOR USE BY OTHERS IN MONUMENTING THE RIGHT-OF-WAY OF SAID HIGHWAY.

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE OREGON COORDINATE SYSTEM OF 1983-NORTH ZONE BASED ON GPS OBSERVATIONS AT STATION "PRAIRIE CITY NORTH BASE RESET".

MEASUREMENTS TO THE CONTROL AND OTHER RECOVERED MONUMENTS WERE ACCOMPLISHED USING A COMBINATION OF GPS AND TERRESTRIAL EQUIPMENT AND PROCEDURES AND ARE AS SHOWN ON SHEETS 1 THROUGH 12 OF THIS SURVEY. GPS MEASUREMENTS WERE MADE USING THREE LEICA SYSTEM 300 RECEIVERS, AND TERRESTRIAL MEASUREMENTS WERE MADE USING A GEODIMETER SYSTEM 610 SERVO-DRIVEN TOTAL STATION (+/- 3" ANGULAR PRECISION, 2MM +/- 2 PPM EDM). ALL SIDESHOT POINTS WERE "DOUBLE-TIED" USING STANDARD ODOT PROCEDURES.

THE GPS AND TERRESTRIAL MEASUREMENT DATA WERE SIMULTANEOUSLY ADJUSTED USING "STAR*NET" BRAND LEAST SQUARES ADJUSTMENT SOFTWARE. TWO SEPARATE ADJUSTMENTS WERE PERFORMED AND ARE DESCRIBED BELOW.

ADJUSTMENT NO. 1
(1983(91) COORDINATE VALUES)

THIS NETWORK IS AS SHOWN ON SHEET 1 OF THIS SURVEY. THE NETWORK INCLUDED MEASUREMENTS TO STATIONS "PRAIRIE CITY NORTH BASE RESET", "PRAIRIE CITY NORTH BASE AZIMUTH MARK", "DIXIE", AND "AUSTIN", AND WAS CONSTRAINED TO THE PUBLISHED 1983(91) COORDINATE VALUES OF STATIONS "PRAIRIE CITY NORTH BASE RESET" AND "AUSTIN". THE MAXIMUM 95% CONFIDENCE REGION ERRORS WERE +/-0.025 METERS IN LATITUDE, AND +/-0.021 METERS IN LONGITUDE WITH RESPECT TO THE CONSTRAINED POINTS. THE ADJUSTED 1983(91) GEOGRAPHIC COORDINATES ARE SHOWN ON THIS SHEET.

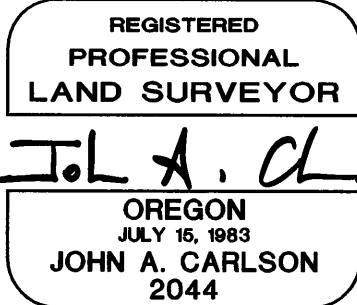
ADJUSTMENT NO. 2
(1983(86) COORDINATE VALUES)

THE ORIGINAL ODOT CADASTRAL WORK FOR THE PRAIRIE CITY-DIXIE SUMMIT PROJECT WAS BASED ON THE 1983(86) STATE PLANE COORDINATES OF STATIONS "PRAIRIE CITY NORTH BASE RESET" AND "PRAIRIE CITY NORTH BASE AZIMUTH MARK". THIS ADJUSTMENT WAS PERFORMED IN ORDER TO DEVELOP COORDINATES WHICH ARE ON THE ORIGINAL PROJECT BASIS, AND IS AS SHOWN ON SHEET 2 OF THIS SURVEY. THE NETWORK WAS CONSTRAINED TO THE 1983(86) VALUES OF STATION "PRAIRIE CITY NORTH BASE RESET", AND THE MAXIMUM 95% CONFIDENCE REGION ERRORS WERE +/- 0.018 METERS IN LATITUDE, AND +/- 0.018 METERS IN LONGITUDE WITH RESPECT TO THE CONSTRAINED POINTS.

AFTER THE ADJUSTED 1983(86) LATITUDE AND LONGITUDE VALUES WERE CONVERTED TO OREGON STATE PLANE-NORTH ZONE COORDINATES IN UNITS OF INTERNATIONAL FEET, THE COORDINATES WERE FURTHER SCALED FROM THE PLANE GRID TO GROUND SURFACE VALUES USING THE PROJECT LOCAL DATUM PLANE (LDP) SCALE FACTOR OF 0.999759985 AS SHOWN ON DRGS. 10B-2-33 THROUGH 10B-2-35.

WE MEASURED TO ALL REMAINING ORIGINAL ODOT PROJECT CONTROL POINTS AND TO THE REMAINING GOVERNMENT CORNERS AS SHOWN ON THE ODOT DRAWINGS. OUR MEASURED LDP AND THE RECORD ODOT LDP COORDINATES ARE SHOWN ON THIS SHEET.

8/1999
Field Date
JAC 8/1999
Calculations
MEM 11/1999
Drawn
JAC 11/1999
Checked By Date



RENEWS 12-31-1999

HORIZONTAL CONTROL NETWORK SURVEY

PRAIRIE CITY - DIXIE SUMMIT SECTION
JOHN DAY HIGHWAY
- SW 1/4 SEC. 28, T.11S., R.34E.
- NE 1/4 SEC. 33, T.11S., R.35E.
- NE, SE, SW 1/4 SEC. 16, NW, SW 1/4 SEC. 21, NW 1/4 SEC. 28, NE, SE 1/4 SEC. 29, SE 1/4 SEC. 31, NE, NW, SW 1/4 SEC. 32, T.12 S., R.34E.
- SE, SW 1/4 SEC. 1, SE, SW 1/4 SEC. 2, NE 1/4 SEC. 10, SW 1/4 SEC. 11, NE 1/4 SEC. 12, NE 1/4 SEC. 14, T.13S., R.33E.
- NE, SE, SW 1/4 SEC. 6, NW 1/4 SEC. 7, T.13S., R.34E.
GRANT COUNTY, OREGON

FOR: OREGON DEPARTMENT OF TRANSPORTATION REGION 5



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09356-004-004
Project No.
S356S003
File No.
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Sheet No.