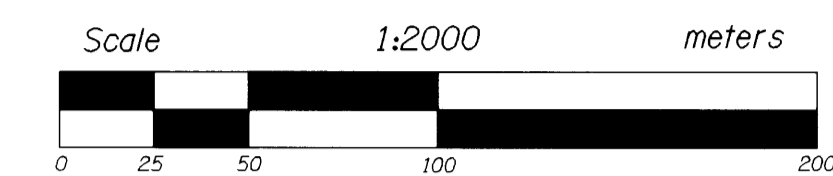




HORIZONTAL CONTROL, RECOVERY, AND RETRACEMENT MAP

IN THE NE 1/4 OF SECTION 24, T. 25 S., R. 6 W., W.M., AND THE NW 1/4 OF SECTION 19, T. 25 S., R. 5 W., W.M. DOUGLAS COUNTY

FILED
 Date: 7-7-1998, By: JC
 This survey consists of:
 Map: M129-7
 Narrative:
 Corner Rpt.:
 DOUGLAS COUNTY SURVEYOR



LEGEND	
▲	SET MONUMENT
○	FOUND MONUMENT

ERROR ANALYSIS

POINT	STANDARD DEVIATIONS			STANDARD ERROR ELLIPSE		ORIENTATION
	NORTH	EAST	SEMI MAJOR	SEMI MINOR		
3	0.003	0.002	0.003	0.001	N 28°20'26" E	
4	0.004	0.002	0.005	0.001	N 21°10' 50" E	
5	0.004	0.002	0.005	0.001	N 18°18' 38" E	
6	0.006	0.002	0.007	0.001	N 13°52'25" E	
7	0.006	0.002	0.007	0.001	N 15°40'11" E	
9	0.007	0.002	0.008	0.001	N 14°07'20" E	
8	0.008	0.002	0.008	0.001	N 11°38'48" E	
10	0.008	0.002	0.009	0.001	N 11°13'47" E	

CONTROL NETWORK AND FOUND MONUMENTS

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	SET 13 MM X 0.76 M SQ. I. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 1".	10145.686	19791.325	
2	SET 13 MM X 0.76 M SQ. I. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 2".	10000.000	20000.000	129.259
3	SET 13 MM X 0.76 M SQ. I. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 3".	9815.046	20341.953	133.702
4	FOUND 2 3/4" (70 MM) BRASS DISK SET IN CONCRETE IN GOOD CONDITION, STAMPED, "STATE HIGHWAY DEPARTMENT ELEVATION BM NO. FEET", STATION 1258+27.58 PT, 50 RT. FLUSH WITH SURFACE.	9782.496	20557.713	137.821
5	FOUND 2 3/4" (70 MM) BRASS DISK SET IN CONCRETE IN GOOD CONDITION, STAMPED "STATE HIGHWAY DEPARTMENT ELEVATION BM NO. FEET", STATION 1258+27.58 PT, 50 LT. FLUSH WITH SURFACE.	9812.925	20559.322	137.481
6	SET 13 MM X 0.76 M SQ. I. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 6".	9801.700	20782.261	146.557
7	SET 13 MM X 0.76 M SQ. I. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 7".	9771.227	20793.845	144.717
8	SET 13 MM X 0.76 M SQ. I. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 8", FLUSH WITH SURFACE.	9801.192	20923.302	148.704
9	SET 13 MM X 0.76 M SQ. I. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 9", FLUSH WITH SURFACE.	9762.279	20921.352	149.060
10	SET 13 MM X 0.76 M SQ. I. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 10", FLUSH WITH SURFACE.	9787.047	21021.549	153.749
1000	FOUND 3/8" (16 MM) I. ROD, 0.09 M ABOVE SURFACE. O.D.O.T. R/W STATION 1230+00, 50 RT. GOOD CONDITION.	10124.939	19776.855	
1001	FOUND 3/8" (16 MM) I. ROD, 0.17 M ABOVE SURFACE. O.D.O.T. R/W STATION 1-5 1230+00, 50 LT. GOOD CONDITION.	10149.937	19794.285	
1002	FOUND 3/8" (16 MM) I. ROD, 0.10 M ABOVE SURFACE. O.D.O.T. R/W STATION 1238+35.08 PS, 50 LT. GOOD CONDITION.	10004.217	20002.942	
1003	FOUND 3/8" (16 MM) I. ROD, 0.09 M ABOVE SURFACE. O.D.O.T. R/W STATION 1242+35.08 PCS, 50 LT. GOOD CONDITION.	9937.447	20103.595	
1004	FOUND 3/8" (16 MM) I. ROD, 0.06 M BELOW SURFACE. O.D.O.T. R/W STATION 1242+35.08 PCS, 50 RT. GOOD CONDITION.	9911.300	20088.025	

POINT	DESCRIPTION	NORTHING	EASTING
1005	FOUND 3/8" (16 MM) I. ROD, 0.09 M ABOVE SURFACE. O.D.O.T. R/W STATION 1238+35.08 PS, 50 RT. GOOD CONDITION.	9979.280	19985.504
1006	FOUND 3/8" (16 MM) I. ROD, 0.08 M ABOVE SURFACE. O.D.O.T. R/W STATION 1-5 FREEWAY 1785+00 PS, 125 RT. GOOD CONDITION.	10135.189	20846.088
1007	FOUND 3/8" (16 MM) I. ROD, 0.08 M ABOVE SURFACE. O.D.O.T. R/W STATION 1254+27.58 PCS, 50 LT. GOOD CONDITION.	9822.133	20438.877
1008	FOUND 3/8" (16 MM) I. ROD, 0.06 M BELOW SURFACE. S.H.R.W. STATION 1258+27.58 PT, 40 LT. GOOD CONDITION.	9785.552	20557.866
1009	FOUND 3/8" (16 MM) I. ROD WITH A 1/4" (32 MM) PLASTIC CAP STAMPED "LS 1076", 0.07 M ABOVE SURFACE. GOOD CONDITION. (SURVEY #M111-52)	9783.820	20593.282
1010	FOUND 3/8" (16 MM) I. ROD, FLUSH WITH SURFACE. S.H.R.W. STATION 1254+27.58 PCS, 50 RT. GOOD CONDITION.	9791.907	20435.160
1011	FOUND 3/8" (16 MM) I. ROD, 0.06 M ABOVE SURFACE. S.H.R.W. STATION 1795+00, 125 RT. GOOD CONDITION.	9832.811	20808.338
1012	FOUND 3/8" (16 MM) I. ROD, 0.10 M BELOW SURFACE. S.H.R.W. STATION 1804+00, 325 RT. GOOD CONDITION.	9568.084	20714.017
1013	FOUND PK NAIL, POSSIBLY CENTERLINE AT STATION 1258+27.58 PT.	9797.714	20558.516
1014	FOUND PK NAIL, POSSIBLY AT STATION 1270+82.31 PS.	9777.168	20940.237
1015	FOUND 3/8" (16 MM) I. ROD WITH 1/4" (32 MM) YELLOW PLASTIC CAP STAMPED "REG. PLS 1880".	9766.006	20923.226
1016	FOUND 3/8" (16 MM) I. ROD WITH 1/4" (32 MM) YELLOW PLASTIC CAP STAMPED "REG. PLS 1880", APPEARS TO BE STATION 1270+82.31 PS, 40 RT.	9765.121	20939.715
1017	FOUND PK NAIL.	9788.291	20948.184
1018	FOUND 3/8" (16 MM) I. ROD, POOR CONDITION	9785.481	21018.910
1019	FOUND 1 3/4" (44 MM) PIPE OUTSIDE DIAMETER WITH 19 MM I. ROD DRIVEN INSIDE OF PIPE, 0.13 M ABOVE SURFACE. GOOD CONDITION. (REF. SURVEY #M1-39)	9762.376	21007.052
1020	FOUND 3/8" (16 MM) I. ROD WITH 1/4" (32 MM) PLASTIC CAP STAMPED "REG. PLS 1880", 0.03 M ABOVE SURFACE. GOOD CONDITION.	9763.456	20973.054

SURVEY NARRATIVE

THE PURPOSE OF THIS SURVEY WAS TO ESTABLISH HORIZONTAL AND VERTICAL CONTROL FOR AN OREGON DEPARTMENT OF TRANSPORTATION HIGHWAY PROJECT CALLED "ELKTON-SUTHERLIN HIGHWAY AT PACIFIC HIGHWAY". THE BASIS OF BEARING OF S 55°04'45" E FOR THE HORIZONTAL CONTROL NETWORK WAS ESTABLISHED FROM RIGHT OF WAY MONUMENTS FOUND ON ODOT'S RIGHT OF WAY DRAWING NO. 78-12-4. SEE INSERT FOR FURTHER DETAILS. CONTROL NETWORK POINTS WERE SET, AND FOUND MONUMENTS WERE TIED FROM THESE NETWORK POINTS USING ODOT'S STANDARD DOUBLE-TIE PROCEDURE. ASSUMED METRIC COORDINATES ON A LOCAL DATUM PLANE WERE USED, WHICH REPRESENTS TRUE GROUND DISTANCES. TO CONVERT COORDINATES TO ENGLISH UNITS, DIVIDE COORDINATE BY 0.3048.

THE SURVEY WORK BEGAN ON FEBRUARY 15, 1996 AND WAS COMPLETED ON MARCH 1, 1996.

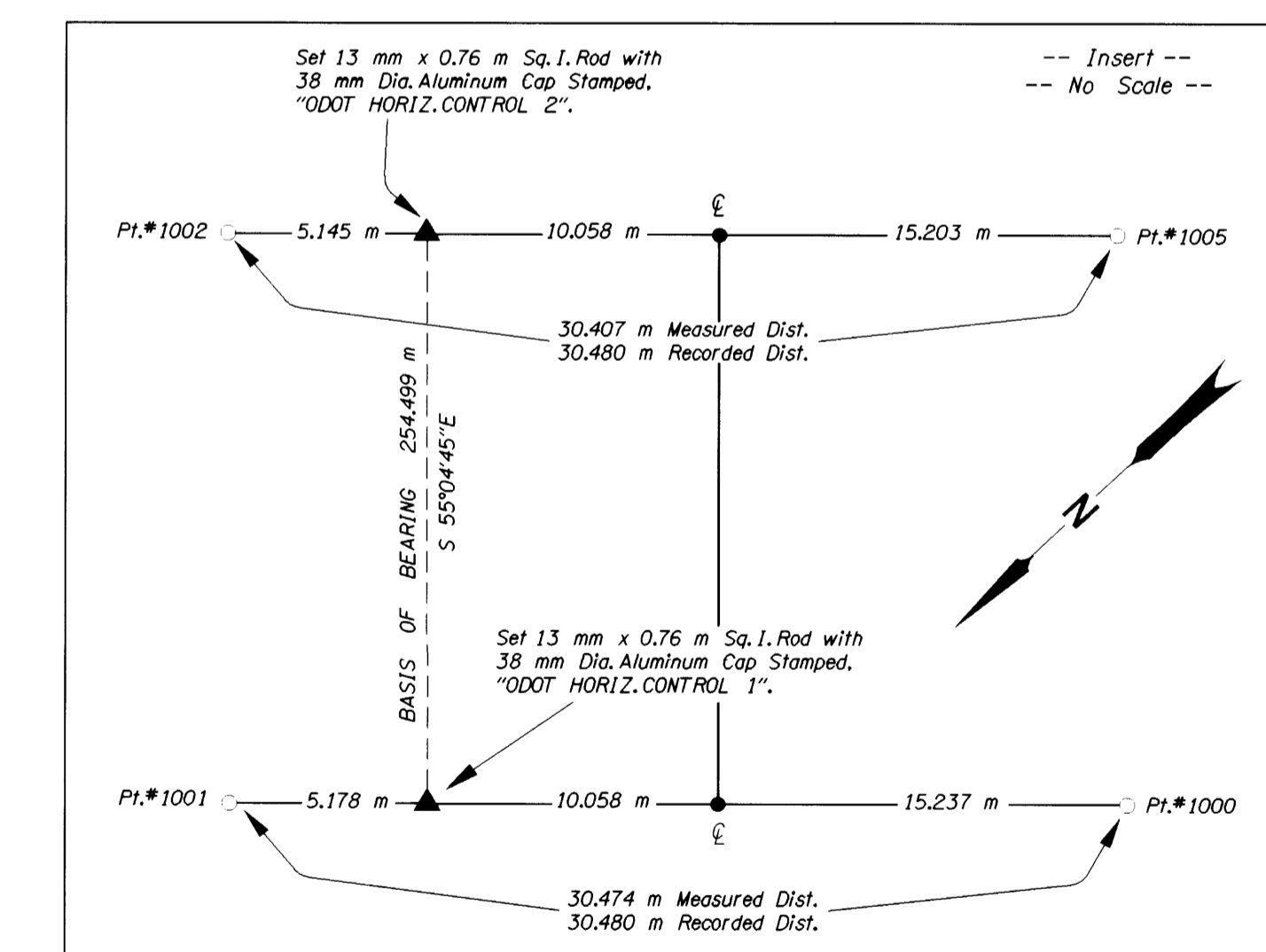
A WILD T1610 ELECTRONIC THEODOLITE AND DI1600 DISTOMAT DISTANCE METER WERE USED TO MAKE ALL OBSERVATIONS. THE T1610 THEODOLITE HAS A STANDARD ANGULAR ERROR OF +/- 1.5 SECONDS, AND DI1600 HAS A STANDARD DISTANCE ERROR OF +/- 3 MM, 2 PPM.

THE LEAST SQUARES ADJUSTMENT WAS USED ON THE HORIZONTAL CONTROL NETWORK AND IT PRODUCED THE FOLLOWING:

ANGULAR RESIDUALS (THE AMOUNTS THE FIELD OBSERVED ANGLES WERE CHANGED DUE TO THE ADJUSTMENT) OF NO GREATER THAN 2 SECONDS; AND, DISTANCE RESIDUALS (THE AMOUNTS THE FIELD OBSERVED DISTANCES WERE CHANGED DUE TO THE ADJUSTMENT) OF NO GREATER THAN 3 MM. THERE IS A 95% PROBABILITY THAT THE FINAL POSITIONS OF THE CONTROL POINTS ARE WITHIN THE ERROR ELLIPSES AS SHOWN IN THE TABLE "ERROR ANALYSIS".

A LEVEL CIRCUIT THROUGH THE HORIZONTAL CONTROL POINTS WAS MADE USING A WILD NA2002 LEVEL, STARTING FROM BM A-335, A BRASS DISK STAMPED "516 A 335 1934" SET IN THE TOP OF A CONCRETE POST; RECORD ELEVATION IS 516.167 FEET (157.328 METERS).

THE EXISTING RIGHT OF WAY CENTERLINE WAS RETRACED USING THE SAME BASIS OF BEARING AS THE BEGINNING TANGENT AND USING CURVE DATA PER THE RIGHT OF WAY DRAWING NO. 78-12-4. NO NEW RIGHT OF WAY WAS ACQUIRED FOR THIS PROJECT.



REGISTERED PROFESSIONAL LAND SURVEYOR
 Christine V. Blevins
 OREGON JULY 18, 1994
 CHRISTINE V. BLEVINS 2669

Expires : Dec. 31, 1999

OREGON DEPARTMENT OF TRANSPORTATION
HORIZONTAL CONTROL, RECOVERY, AND RETRACEMENT MAP
 ELKTON-SUTHERLIN HIGHWAY
 DOUGLAS COUNTY

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CADD File: 08146hcm.dgn