MAP FILE M129-14

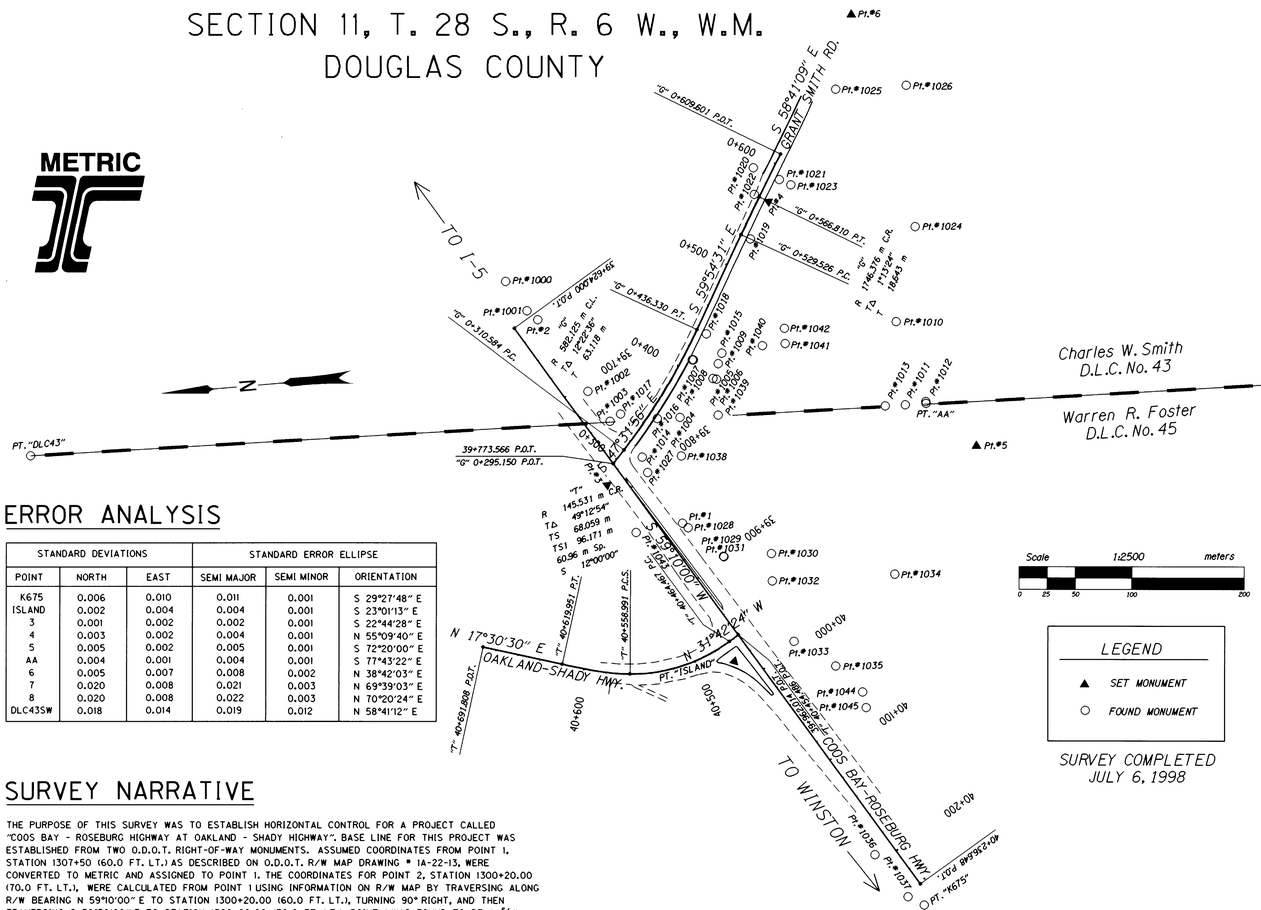
HORIZONTAL CONTROL, RECOVERY, AND RETRACEMENT MAP

LOCATED IN THE NE 1/4 & SE 1/4 OF SECTION 11, T. 28 S., R. 6 W., W.M. DOUGLAS COUNTY

COUNTY SURVEYORS FILE DATA DO NOT REMOVE FROM OFFICE

FILED
Date: 9-24-1998 By: JP
This survey consists of:
Map: M129-14
Narrative:
Corner Rpt:
DOUGLAS COUNTY SURVEYOR

METRIC



SURVEY COMPLETED JULY 6, 1998

ERROR ANALYSIS

STANDARD DEVIATIONS			STANDARD ERROR ELLIPSE		
POINT	NORTH	EAST	SEMI MAJOR	SEMI MINOR	ORIENTATION
K675	0.006	0.010	0.011	0.001	S 29°27'48" E
ISLAND	0.002	0.004	0.004	0.001	S 23°01'13" E
3	0.001	0.002	0.002	0.001	S 22°44'28" E
4	0.003	0.002	0.004	0.001	N 55°09'40" E
5	0.005	0.002	0.005	0.001	S 72°20'00" E
AA	0.004	0.001	0.004	0.001	S 77°43'22" E
6	0.005	0.007	0.008	0.002	N 38°42'03" E
7	0.020	0.008	0.021	0.003	N 69°39'03" E
8	0.020	0.008	0.022	0.003	N 70°20'24" E
DLC43SW	0.018	0.014	0.019	0.012	N 58°41'12" E

SURVEY NARRATIVE

THE PURPOSE OF THIS SURVEY WAS TO ESTABLISH HORIZONTAL CONTROL FOR A PROJECT CALLED "COOS BAY - ROSEBURG HIGHWAY AT OAKLAND - SHADY HIGHWAY". BASE LINE FOR THIS PROJECT WAS ESTABLISHED FROM TWO O.D.O.T. RIGHT-OF-WAY MONUMENTS. ASSUMED COORDINATES FROM POINT 1, STATION 1307+50 (60.0 FT. LT.) AS DESCRIBED ON O.D.O.T. R/W MAP DRAWING # 1A-22-13, WERE CONVERTED TO METRIC AND ASSIGNED TO POINT 1. THE COORDINATES FOR POINT 2, STATION 1300+20.00 (70.0 FT. LT.), WERE CALCULATED FROM POINT 1 USING INFORMATION ON R/W MAP BY TRAVERSING ALONG R/W BEARING N 59°10'00" E TO STATION 1300+20.00 (60.0 FT. LT.), TURNING 90° RIGHT, AND THEN TRAVERSING S 30°50'00" E TO STATION 1300+20.00 (70.0 FT. LT.). POINT 1 WAS FOUND TO BE A 5/8" (16 MM) IRON ROD WITH A 1 1/2" (38 MM) ALUM. CAP STAMPED "OREGON STATE HWY. DEPT. 1307+50.00" AT (60.0 FT. LT.). IT WAS FOUND 0.10 M ABOVE SURFACE AND IN GOOD CONDITION. POINT 2 WAS FOUND TO BE A 5/8" (16 MM) IRON ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED "OSHD R/W" AT STATION 1300+20.00 (70.0 FT. LT.). IT WAS FOUND FLUSH WITH SURFACE AND IN GOOD CONDITION. ORANGE ODOT WITNESS POSTS WERE SET NEAR POINTS 3, 4, 6, 7, AND 8.

THE LEAST SQUARE 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 4 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".

IT WAS DISCOVERED THAT POINT 5 HAD BEEN DESTROYED SOMETIME DURING THE LATER STAGES OF OUR VICINITY MAPPING. IT WAS DETERMINED THAT POINT 5 WAS NOT NEEDED FOR FUTURE SURVEYING, THUS WAS NOT RESET.

A LEICA TCA1800 TOTAL STATION WAS USED FOR THE ENTIRE LOCATION SURVEY OF THIS PROJECT. THE TCA1800 TOTAL STATION HAS A STANDARD ANGULAR ERROR OF +/- 1 SECONDS, AND A STANDARD DISTANCE ERROR OF +/- 2 MM, 2 PPM.

A LEICA NA2002 DIGITAL LEVEL WAS USED TO ESTABLISH ELEVATIONS ON NETWORK POINTS.

RETRACEMENT OF THE R/W CENTERLINES FOR THE COOS BAY - ROSEBURG HIGHWAY, THE OAKLAND - SHADY HIGHWAY, AND THE GRANT SMITH ROAD WAS ACCOMPLISHED IN THE FOLLOWING MANNER. THE POINTS THAT WERE FOUND BY THE SURVEY CREW WERE COMPARED TO THE CORRESPONDING POINTS ON THE RIGHT-OF-WAY MAP #1A-22-13 DATED MAY 14, 1992. THE COMPARISON REVEALED THAT THE R/W MAP POINTS AND THE NEWLY FOUND POINTS MATCHED CLOSELY. THEREFORE THE NEWLY FOUND POINTS WERE ACCEPTED AS WERE THE ALIGNMENTS SHOWN ON THE RIGHT-OF-WAY MAP #1A-22-13. THE ENGLISH COORDINATES SHOWN ON THE R/W MAP WERE CONVERTED TO METRIC BY MULTIPLYING BY 0.3048.

VERTICAL CONTROL WAS ESTABLISHED ON THE PROJECT USING OSHD BENCHMARK V248. THIS IS A DISK STAMPED "517 V248 1937" AND LOCATED IN THE WEST END OF A LARGE BOX CULVERT IN THE TOP OF THE CONCRETE PARAPET. ELEVATION IS 157.912 METERS NGVD29. THE ALLOWABLE VERTICAL ERROR FOR THIS LEVEL CIRCUIT WAS 0.0072 M AND THE ACTUAL ERROR IS 0.0027 M.

TO CONVERT COORDINATES ON THIS MAP TO ENGLISH, DIVIDE METRIC COORDINATES BY 0.3048.

CONTROL NETWORK AND FOUND MONUMENTS

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	FD. 5/8" (16 MM) I. ROD WITH A 1 1/2" (38 MM) ALUM. CAP STAMPED, " OREG. STATE HWY DEPT." 1307+50, 60 LT.	16403.291	10535.424	159.574
2	FD. 5/8" (16 MM) I. ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED, "O.S.H.D. R/W" STA. 1300+20. 70 LT.	16514.715	10728.040	162.089
3	SET 13 MM X 0.76 M SQ. I. ROD WITH 38 MM ALUM. CAP STAMPED, "ODOT HORIZ. CONTROL 3".	16466.782	10575.514	159.653
4	SET 13 MM X 0.76 M SQ. I. ROD WITH 38 MM ALUM. CAP STAMPED, "ODOT HORIZ. CONTROL 4".	16313.229	10821.959	170.095
5	SET 13 MM X 0.76 M SQ. I. ROD WITH 38 MM ALUM. CAP STAMPED, "ODOT HORIZ. CONTROL 5"	16137.354	10580.519	
6	SET 13 MM X 0.76 M SQ. I. ROD WITH 38 MM ALUM. CAP STAMPED, "ODOT HORIZ. CONTROL 6".	16213.000	10973.718	175.643
7	SET 13 MM X 0.76 M SQ. I. ROD WITH 38 MM ALUM. CAP STAMPED, "ODOT HORIZ. CONTROL 7".	15234.178	11051.080	
8	SET 13 MM X 0.76 M SQ. I. ROD WITH 38 MM ALUM. CAP STAMPED, "ODOT HORIZ. CONTROL 8".	15193.040	11050.298	
ISLAND	SET 76 MM BRASS DISK IN CONC. ISLAND AT INTERSECTION OF COOS BAY-ROSEBURG HWY. AND OAKLAND-SHADY HWY. DISK STAMPED, "OREGON STATE HIGHWAY DIVISION, DO NOT DISTURB, ISLAND".	16368.686	10408.651	161.230
K675	FD. 3" (76 MM) BRASS DISK SET IN CONC. WALK AT N.E. CORNER OF BRIDGE OVER S.P.R.R. DISK STAMPED "OREGON STATE HIGHWAY DIV. BENCH MARK, DO NOT DISTURB, K675-1978".	16220.518	10177.369	164.934

POINT	DESCRIPTION	NORTHING	EASTING
AA	FD. 5/8" (16 MM) I. ROD WITH A 2" (51 MM) ALUM. CAP STAMPED "AA SURVEYING SERVICE INC.", FLUSH WITH SURFACE IN GOOD CONDITION. (SURVEY MAP #M94-39)	16178.397	10622.393
DLC43SW	FD. 2 1/2" (64 MM) BRASS DISK ON A 1 1/4" (32 MM) O.D. GALV. PIPE STAMPED, "COUNTY SURVEYORS OFFICE 1968 T28S R6W SW COR. DLC #43". 0.30 M ABOVE SURFACE IN GOOD CONDITION.	15462.202	10597.522
DLC43	FD. 2 1/2" (64 MM) BRASS DISK, 0.20 M BELOW SURFACE IN GOOD CONDITION AT A FENCE CORNER. DISK STAMPED, "COUNTY SURVEYOR'S OFFICE T28S NW DLC 43 R6W".	16974.368	10648.516
1000	FD. 5/8" (16 MM) I. ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED, "OSHD R/W", STA. 1298+80, 60 LT. METAL WITNESS POST NEARBY.	16540.109	10764.658
1001	FD. 5/8" (16 MM) I. ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED, "OSHD R/W" STA. 1299+80, 60 LT. A METAL WITNESS POST AND PADDLE BOARD MARKED, "1299+80, 60 LT." NEARBY.	16523.579	10736.914
1002	FD. 5/8" (16 MM) I. ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED, "OSHD R/W" STA. 1302+75.08, 65 LT. 0.10 M ABOVE SURFACE IN GOOD CONDITION.	16476.156	10660.513
1003	FD. 5/8" (16 MM) I. ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED, " BENTZ SURV. INC".FLUSH WITH SURFACE IN GOOD CONDITION. (SURVEY MAP #M107-33)	16459.070	10631.927
1004	FD. 3/4" (19 MM) I. ROD, 0.10M BELOW SURFACE IN GOOD CONDITION. (SURVEY MAP #M36-79)	16396.989	10629.800
1005	FD. 3/4" (19 MM) I.ROD, 0.80 M BELOW SURFACE IN GOOD CONDITION. (SURVEY MAP #M94-39 AND CS 51/57)	16364.708	10661.944
1006	FD. 5/8" (16 MM) I. ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED, "AA SURVEY INC.". 0.06 M ABOVE SURFACE IN IN GOOD CONDITION. (SURVEY MAP #M94-39)	16361.611	10660.853
1007	FD. 5/8" (16 MM) I. ROD, 0.40 M BELOW SURFACE IN GOOD CONDITION. (SURVEY MAP #M94-39)	16381.441	10680.017
1008	FD. 5/8" (16 MM) I.ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED, "AA SURVEY". 0.40 M BELOW SURFACE IN GOOD CONDITION. (SURVEY #1990-0067)	16380.389	10679.823
1009	FD. 5/8" (16 MM) I. ROD WITH A 2" (51 MM) ALUM. CAP STAMPED, "AA SURVEYING SERVICE INC.". 0.022 M ABOVE SURFACE IN GOOD CONDITION. (SURVEY MAP #M94-39)	16358.787	10674.540
1010	FD. 5/8" (16 MM) I. REBAR, 0.40 M ABOVE SURFACE IN GOOD CONDITION. (POSSIBLY SURVEY #M94-39)	16198.222	10697.505
1011	FD. 5/8" (16 MM) I. ROD WITH A 2" (51 MM) ALUM. CAP STAMPED, "AA SURVEYING SERVICE INC.". FLUSH WITH SURFACE IN GOOD CONDITION. (SURVEY MAP #M94-39)	16196.928	10623.025
1012	FD. 3/4" (19 MM) I. ROD, 0.15 M ABOVE SURFACE IN GOOD CONDITION. (SURVEY MAP #M94-39 AND CS 51/57)	16178.348	10624.171
1013	FD. 3/4" (19 MM) I. REBAR, 0.10 M ABOVE SURFACE IN GOOD CONDITION. (SURVEY MAP #M36-79)	16214.591	10623.547
1014	FD. 5/8" (16 MM) I. ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED, "AA SURVEY INC.". FLUSH WITH SURFACE IN GOOD CONDITION. (SURVEY MAP #M124-39)	16433.577	10597.394
1015	FD. 5/8" (16 MM) I. ROD WITH A 2" (51 MM) ALUM. CAP STAMPED, "AA SURVEYING SERVICE INC." FLUSH WITH SURFACE IN GOOD CONDITION. (SURVEY MAP #M94-39)	16354.787	10683.522
1016	FD. 1 1/4" (32 MM) I. ROD, 0.10 M BELOW SURFACE IN GOOD CONDITION, STA. G11+49.32, 26.43 RT. (SURVEY MAP #M36-79)	16416.973	10630.502
1017	FD. 5/8" (16 MM) I. ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED, " OSHD R/W", STA. G11+00, 70 LT. FLUSH WITH SURFACE IN GOOD CONDITION.	16449.100	10637.609
1018	FD. 5/8" (16 MM) I. ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED, "AA SURVEY". FLUSH WITH SURFACE IN GOOD CONDITION. (SURVEY MAP #1990-0067)	16366.917	10701.921
1019	FD. 5/8" (16 MM) I. ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED, "AA SURVEY". FLUSH WITH SURFACE IN GOOD CONDITION. (SURVEY MAP #1990-0067)	16320.238	10782.581
1020	FD. 5/8" (16 MM) I. ROD FLUSH WITH SURFACE IN GOOD CONDITION. (SURVEY MAP #M107-33)	16311.966	10845.847
1021	FD. 5/8" (16 MM) I. ROD WITH A 1 1/4" (32 MM) PLASTIC CAP UNREADABLE, FLUSH WITH SURFACE IN FAIR CONDITION. (SURVEY MAP #M1990-0067)	16301.305	10814.435
1022	FD. 5/8" (16 MM) I. ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED, "AA SURVEY". FLUSH WITH SURFACE IN GOOD CONDITION. (SURVEY MAP #1990-0067)	16289.889	10833.161
1023	FD. 5/8" (16 MM) I. ROD, FLUSH WITH SURFACE IN GOOD CONDITION. (SURVEY MAP #M94-39, #1990-0067, AND CS 51/57)	16280.257	10827.476
1024	FD. 5/8" (16 MM) I. ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED, "AA SURVEY" IN GOOD CONDITION. (SURVEY MAP #1990-0067)	16173.729	10780.285
1025	FD. STEEL FENCE "L" POST AT FENCE CORNER FROM SURVEY MAP #M94-39 AND #1990-0067. (NOTE : TIED THE TOP OF THE "L" FENCE POST)	16232.949	10908.883

POINT	DESCRIPTION	NORTHING	EASTING
1026	FD. 3/4" (19 MM) I. ROD, 0.021 M ABOVE SURFACE IN GOOD CONDITION. (SURVEY MAP #1990-0067, #M94-39, AND CS 51/57)	16170.055	10906.741
1027	FD. 5/8" (16 MM) I. ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED, "OSHD R/W". 0.065 M ABOVE SURFACE IN GOOD CONDITION. A METAL POST AND PADDLE BOARD NEARBY MARKED, " SHRW 1305+70, 65 LT".	16430.015	10583.387
1028	FD. 5/8" (16 MM) I. ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED, "OSHD R/W".FLUSH WITH SURFACE IN GOOD CONDITION. A METAL POST SHRW 1307+70, 65 LT.	16398.651	10530.947
1029	FD. 5/8" (16 MM) I. ROD WITH A 1 1/2" (38 MM) ALUM. CAP STAMPED, "OREG. STATE HWY. DEPT. 1309+00 100.0". 0.05 M ABOVE SURFACE IN GOOD CONDITION, A METAL POST AND PADDLE BOARD NEARBY MARKED, "SHRW 1309+00 R/W 100".	16369.385	10502.447
1030	FD. 3/4" (19 MM) I. ROD, 0.035 M ABOVE SURFACE IN GOOD CONDITION (SURVEY MAP #M124-39, AND #M36-79)	16327.250	10501.474
1031	FD. 5/8" (16 MM) I. ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED, "AA SURVEYING". 0.03 M ABOVE SURFACE IN GOOD CONDITION. (SURVEY MAP #M124-39)	16369.725	10502.781
1032	FD. 3/4" (19 MM) I. ROD, 0.14 M ABOVE SURFACE IN GOOD CONDITION. (SURVEY MAP #M124-39, AND #M36-79)	16328.515	10477.080
1033	FD. 5/8" (16 MM) I. ROD WITH A 1 1/2"(38 MM) ALUM. CAP STAMPED, "OREG. STATE HWY DEPT. 1312+20 120.0". 0.15 M ABOVE SURFACE IN GOOD CONDITION. A METAL POST AND PADDLE BOARD NEARBY MARKED " SHRW 1312+20, R/W 120".	16314.293	10421.811
1034	FD. 3/4" (19 MM) I. ROD, 0.13 M ABOVE SURFACE IN GOOD CONDITION. (SURVEY MAP #M124-39, AND #M36-79)	16219.855	10473.348
1035	FD. 5/8" (16 MM) I. ROD WITH A 1 1/2" (38 MM) ALUM. CAP STAMPED, "OREG. STATE HWY DEPT 1313+50 175.0". 0.26 M BELOW SURFACE IN GOOD CONDITION. A METAL POST AND PADDLE BOARD NEARBY MARKED, "SHRW 1313+50 R/W 175".	16279.463	10396.371
1036	FD. 5/8" (16 MM) I. ROD WITH A 1 1/2" (38 MM) ALUM. CAP STAMPED "OREG. STATE HWY DIV." 0.12 M BELOW SURFACE IN GOOD CONDITION. A METAL WITNESS POST NEARBY.	16259.891	10226.035
1037	FD. 5/8" (16 MM) I. ROD WITH A 1 1/2" (38 MM) ALUM. CAP STAMPED, "OREG. STATE HWY DIV". 0.05 M ABOVE THE SURFACE IN FAIR CONDITION. (THE ROD IS IN GOOD CONDITION BUT THE ALUM. CAP IS LOOSE) A METAL WITNESS POST NEARBY.	16234.121	10186.046
1038	FD. 3/4" (19 MM) I. ROD, 0.13 M ABOVE SURFACE IN GOOD CONDITION. (SURVEY MAP #124-39, AND #36-79) NOTE : A WOOD FENCE POST LEANS OUT OVER THE I. ROD MAKING IT IMPOSSIBLE TO SIGHT THE I. ROD. WE FOUND A HUB AND TACK SET IN TOP OF THE WOOD FENCE POST THAT WE ASSUME WAS OVER THE I. ROD AND THAT IS WHAT WE TIED.	16398.873	10595.336
1039	FD. 5/8" (16 MM) I. ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED, "AA SURVEYING SERVICE INC". 0.075 M ABOVE SERVICE IN GOOD CONDITION. (SURVEY MAP #M124-39, AND #M94-39)	16362.982	10628.662
1040	FD. 5/8" (16 MM) I. ROD WITH A 2" (51 MM) ALUM. CAP STAMPED, "AA SURVEYING SERVICE INC". 0.020 M ABOVE SURFACE IN GOOD CONDITION. (SURVEY MAP #M94-39, AND #1990-0067)	16318.315	10686.934
1041	FD. 5/8" (16 MM) I. ROD WITH A 2" (51 MM) ALUM. CAP STAMPED "AA SURVEYING SERVICE INC". 0.04 M ABOVE SURFACE IN GOOD CONDITION. (SURVEY MAP #M94-39, AND 1990-0067)	16298.113	10686.909
1042	FD. 5/8" (16 MM) I. ROD WITH A 2" (51 MM) ALUM. CAP STAMPED "AA SURVEYING SERVICE INC". FLUSH WITH SURFACE IN GOOD CONDITION. (SURVEY MAP #M94-39, AND #1990-0067)	16297.494	10700.576
1043	FD. 5/8" (16 MM) I. ROD WITH A 1 1/2" (38 MM) ALUM. CAP STAMPED "OREG. STATE HWY DIV. 65". 0.02 M BELOW SURFACE IN POOR CONDITION. ROD IS VERY LOOSE AND APPEARS TO HAVE BEEN DISTURBED. A METAL WITNESS POST NEARBY.	16444.999	10531.072
1044	FD. 5/8" (16 MM) I. ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED "BTS ENG. USRV". 0.14 M ABOVE SURFACE IN GOOD CONDITION. (SURVEY MAP #M126-17)	16257.909	10371.218
1045	FD. 5/8" (16 MM) I. ROD WITH A 1 1/4" (32 MM) PLASTIC CAP STAMPED "BTS ENG. USRV". 0.08 M ABOVE SURFACE IN GOOD CONDITION. (SURVEY MAP #M126-17)	16255.990	10357.140

REGISTERED PROFESSIONAL LAND SURVEYOR
Christine V. Blevins
OREGON JULY 19, 1994 CHRISTINE V. BLEVINS 2669
Expires: Dec. 31, 1999

OREGON DEPARTMENT OF TRANSPORTATION
HORIZONTAL CONTROL, RECOVERY, AND RETRACEMENT MAP
COOS BAY - ROSEBURG HIGHWAY
DOUGLAS COUNTY
ODOT
3500 Stewart Parkway, Suite 140
Roseburg, Oregon 97470
CADD File: 08935hcm.dgn

ST. HWY. 42-002

MAP FILE M129-14