



HORIZONTAL CONTROL AND RECOVERY MAP

LOCATED IN THE NW 1/4 & NE 1/4 OF SECTION 32, AND
THE SW 1/4 OF SECTION 29, T. 24 S., R. 5 W., W.M.
DOUGLAS COUNTY

FILED
Date: 1-27-1999 By: J.P.
This survey consists of: 5 SHEETS
Map: M129-32 A
Narrative:
Corner Ppt:
DOUGLAS COUNTY
SURVEYOR C3

SURVEY NARRATIVE

THE PURPOSE OF THIS SURVEY WAS TO ESTABLISH HORIZONTAL CONTROL FOR A PROJECT CALLED "NORTH OAKLAND INTERCHANGE - RICE HILL" ON THE PACIFIC HIGHWAY. THE BASIS OF BEARING FOR THIS PROJECT WAS ESTABLISHED BY OCCUPYING POINT #2 A FOUND 3/8" (16 MM) IRON ROD, AT STATE HWY. R/W STATION 1484+00 (125.0 FT. RT.) AND BACKSIGHTING POINT #1 A FOUND 3/8" (16 MM) IRON ROD, AT STATE HWY. R/W STATION 1490+00 (125.0 FT. RT.). THE RECORD DISTANCE IS 600 FT. AND THE MEASURED DISTANCE WAS 599.925 FT. (182.857 M). (REFER TO ODOT RIGHT OF WAY DRAWING NO. 78-10-20) ASSUMED METRIC COORDINATES WERE USED. NETWORK POINTS 2 TO 67 WERE OCCUPIED ONCE AND FORESIGHTED AT LEAST TWICE. ALL NETWORK POINTS EXCEPT FOR POINTS 1, 2, AND 47 HAVE AN ORANGE CARSONITE POST SET NEARBY. POINT 47 WAS A FOUND 3" (75 MM) BRASS CAP SET IN CONCRETE, STAMPED "DOUGLAS COUNTY SURVEYORS OFFICE TURKEY HILL".

THE SURVEY WORK WAS COMPLETED ON JUNE 24, 1996. IN ADDITION AN AUXILIARY LEVEL CIRCUIT WAS RUN ON NOVEMBER 12, 1996.

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 6 SECONDS; AND,

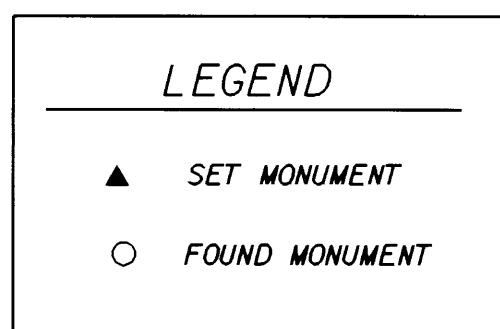
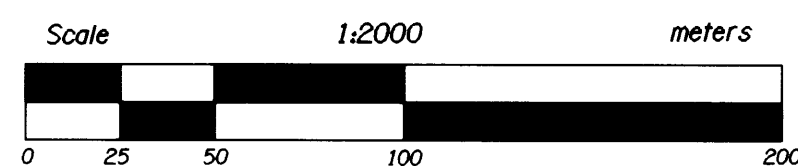
DISTANCE RESIDUALS (THE AMOUNTS THE FIELD OBSERVED DISTANCES WERE CHANGED DUE TO THE ADJUSTMENT) OF NO GREATER THAN 3 MM.

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 WILD T1610 TOTAL STATION WAS USED FOR THE SURVEY. THE WILD T1610 TOTAL STATION HAS A STANDARD ANGULAR ERROR OF +/- 1.5 SECONDS, AND A STANDARD DISTANCE ERROR OF +/- 3 MM, +/- 2 PPM.

THE VERTICAL DATUM USED WAS THE NORTH AMERICAN VERTICAL DATUM OF 1988. ELEVATIONS WERE ESTABLISHED ON THE HORIZONTAL CONTROL POINTS USING THE FOLLOWING BENCH MARKS: T739, G666, H666, V739, P555, C749, S739, R739, O739, C666, P739, E666, K555, AND N739, LOCATED THROUGHOUT THE PROJECT. ALL LEVEL CIRCUITS CLOSED WITHIN ODOT TOLERANCES. A WILD NA2002 DIGITAL LEVEL WAS USED FOR THIS WORK AND IT HAS A STANDARD DEVIATION OF 0.9 MM IN A 1 KM DOUBLE-RUN LEVEL CIRCUIT.

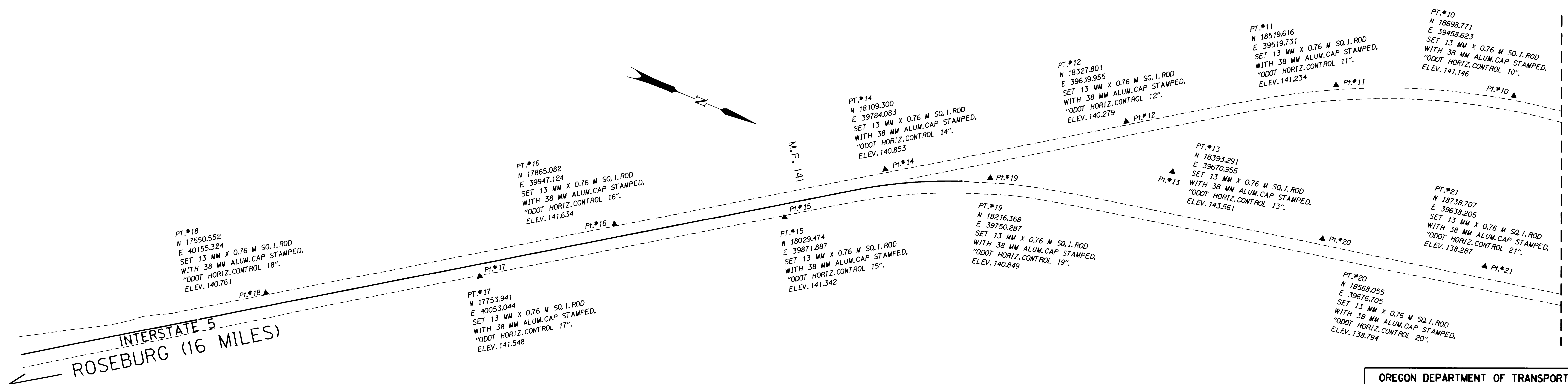
TO CONVERT COORDINATES ON THIS MAP TO ENGLISH, DIVIDE METRIC COORDINATES BY 0.3048.



ERROR ANALYSIS

POINT	STANDARD DEVIATIONS		STANDARD ERROR ELLIPSE		
	NORTH	EAST	SEMI MAJOR	SEMI MINOR	ORIENTATION
24	0.004	0.004	0.005	0.001	S 46°01'58" E
3	0.001	0.001	0.001	0.001	S 75°28'29" E
4	0.003	0.005	0.006	0.001	S 58°46'23" E
5	0.004	0.009	0.010	0.002	S 65°10'46" E
6	0.008	0.013	0.015	0.002	S 59°03'54" E
7	0.012	0.020	0.023	0.002	S 59°10'32" E
8	0.016	0.027	0.031	0.002	S 59°53'36" E
23	0.012	0.027	0.029	0.003	S 66°42'14" E
9	0.017	0.035	0.039	0.003	S 63°33'30" E
10	0.017	0.044	0.047	0.004	S 69°03'42" E
11	0.015	0.052	0.053	0.005	S 75°04'22" E
12	0.011	0.060	0.061	0.007	S 82°18'07" E
13	0.010	0.057	0.058	0.007	S 83°11'38" E
14	0.009	0.070	0.070	0.009	S 89°04'38" E
19	0.009	0.065	0.065	0.008	S 87°27'07" E
20	0.010	0.050	0.050	0.007	S 82°04'33" E
15	0.010	0.074	0.074	0.010	N 87°30'54" E
21	0.011	0.042	0.043	0.006	S 77°58'20" E
16	0.013	0.082	0.082	0.011	N 84°55'07" E
17	0.018	0.088	0.089	0.013	N 81°31'57" E
18	0.024	0.098	0.100	0.014	N 78°58'04" E
22	0.011	0.034	0.035	0.005	S 72°49'12" E
25	0.007	0.010	0.012	0.001	S 54°57'05" E
26	0.009	0.018	0.020	0.002	S 64°29'20" E
27	0.008	0.028	0.029	0.003	S 74°31'15" E
28	0.007	0.035	0.036	0.005	S 82°10'50" E
29	0.008	0.045	0.045	0.008	N 85°44'08" E
30	0.015	0.055	0.056	0.010	N 78°40'47" E
31	0.022	0.067	0.069	0.011	N 73°59'05" E
32	0.022	0.073	0.076	0.011	N 75°04'34" E
33	0.027	0.085	0.088	0.011	N 73°52'58" E
34	0.034	0.097	0.102	0.012	N 71°49'31" E
35	0.039	0.108	0.115	0.012	N 70°47'04" E

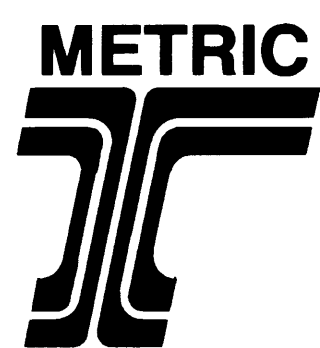
POINT	STANDARD DEVIATIONS		STANDARD ERROR ELLIPSE		
	NORTH	EAST	SEMI MAJOR	SEMI MINOR	ORIENTATION
36	0.047	0.119	0.127	0.013	N 69°10'45" E
37	0.055	0.125	0.136	0.014	N 67°06'15" E
38	0.056	0.135	0.145	0.014	N 67°47'36" E
39	0.055	0.143	0.153	0.013	N 69°29'41" E
40	0.058	0.149	0.160	0.013	N 69°01'44" E
41	0.056	0.155	0.165	0.013	N 70°32'17" E
42	0.048	0.165	0.171	0.015	N 74°19'39" E
43	0.043	0.173	0.177	0.019	N 77°29'14" E
44	0.039	0.182	0.185	0.023	N 80°10'41" E
47	0.043	0.226	0.226	0.042	S 87°40'54" E
45	0.035	0.195	0.196	0.032	N 85°23'01" E
46	0.037	0.211	0.211	0.037	N 88°44'57" E
48	0.050	0.246	0.246	0.046	S 85°07'36" E
49	0.060	0.264	0.266	0.050	S 82°38'57" E
50	0.060	0.273	0.275	0.049	S 82°49'34" E
51	0.071	0.291	0.295	0.053	S 80°28'01" E
52	0.073	0.304	0.308	0.053	S 80°23'40" E
53	0.082	0.324	0.329	0.055	S 79°08'16" E
54	0.091	0.338	0.345	0.057	S 77°55'59" E
55	0.082	0.344	0.350	0.054	S 79°36'03" E
56	0.085	0.361	0.367	0.054	S 79°28'58" E
57	0.079	0.365	0.370	0.052	S 80°31'28" E
58	0.095	0.383	0.391	0.055	S 78°26'27" E
59	0.101	0.408	0.416	0.055	S 78°08'44" E
60	0.107	0.437	0.446	0.055	S 78°06'45" E
61	0.115	0.461	0.472	0.056	S 77°35'42" E
62	0.123	0.474	0.487	0.057	S 77°00'34" E
63	0.136	0.484	0.499	0.060	S 75°40'29" E
64	0.154	0.489	0.508	0.064	S 73°55'29" E
65	0.176	0.489	0.515	0.071	S 71°36'07" E
66	0.185	0.493	0.521	0.073	S 70°46'35" E
67	0.211	0.516	0.552	0.079	S 69°00'15" E



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
AND RECOVERY MAP**
N. OAKLAND INTCH. - RICE HILL SECTION
INTERSTATE 5
DOUGLAS COUNTY
ODOT
3500 Stewart Parkway, Suite 140
Roseburg, Oregon 97470
PROJECT KEY #08711 SHEET 1 OF 5

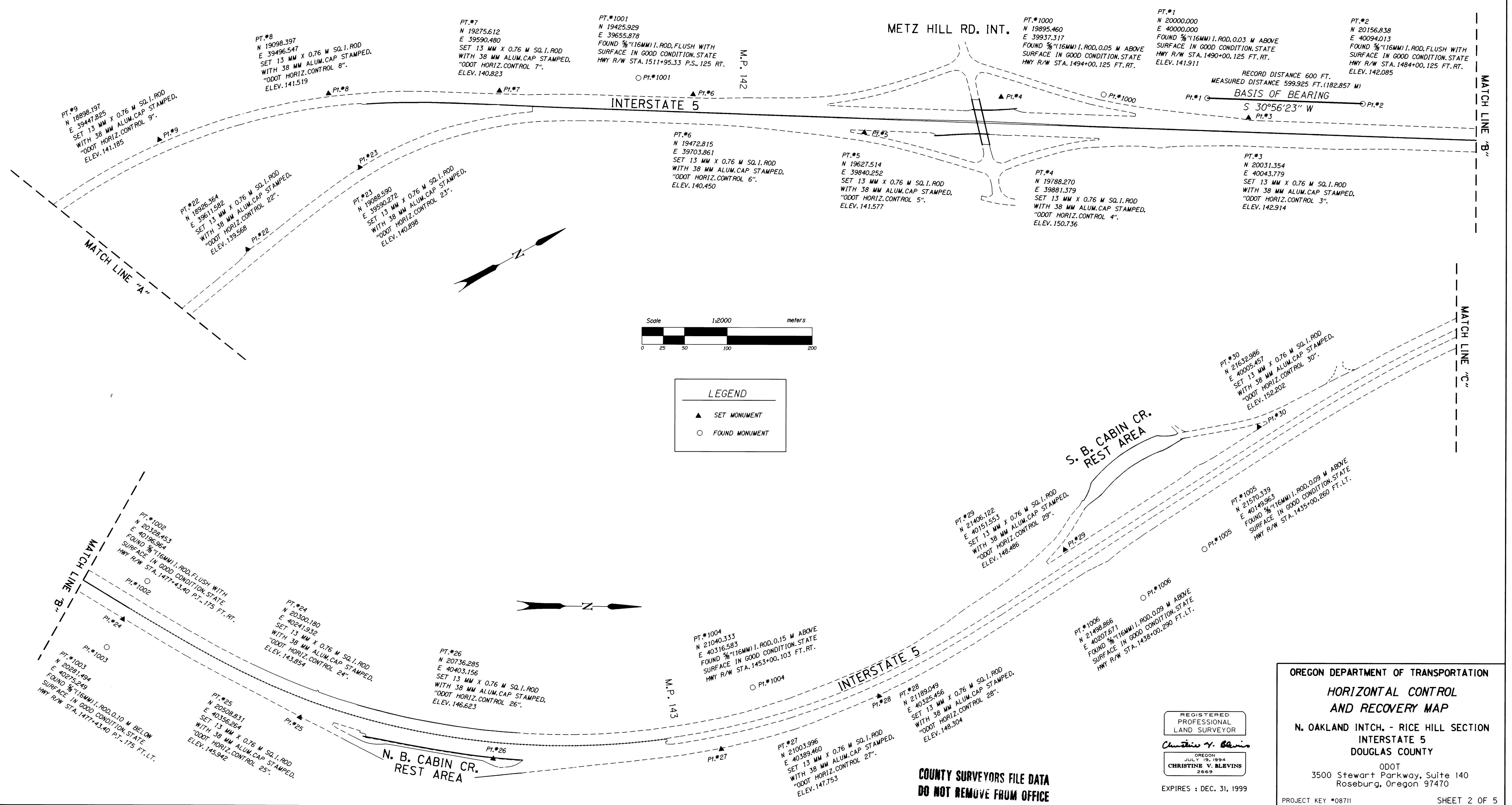
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DO NOT REMOVE FROM OFFICE



HORIZONTAL CONTROL AND RECOVERY MAP

LOCATED IN THE NW 1/4 & SW 1/4 OF SECTION 29 AND THE SE 1/4, SW 1/4, NE 1/4, & NW 1/4 OF SECTION 20, T. 24 S., R. 5 W., W.M. DOUGLAS COUNTY

FILED
Date: 1-27-1999 By: J.P.
This survey consists of: 5 SHEETS
Map: M 129-32 B
Narrative:
Corner Rpt:
DOUGLAS COUNTY SURVEYOR



LEGEND

- ▲ SET MONUMENT
- FOUND MONUMENT

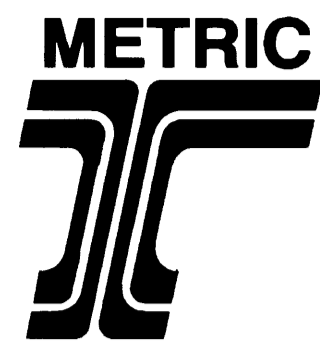
OREGON DEPARTMENT OF TRANSPORTATION
HORIZONTAL CONTROL AND RECOVERY MAP
N. OAKLAND INTCH. - RICE HILL SECTION
INTERSTATE 5
DOUGLAS COUNTY

ODOT
3500 Stewart Parkway, Suite 140
Roseburg, Oregon 97470

PROJECT KEY #08711 SHEET 2 OF 5

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

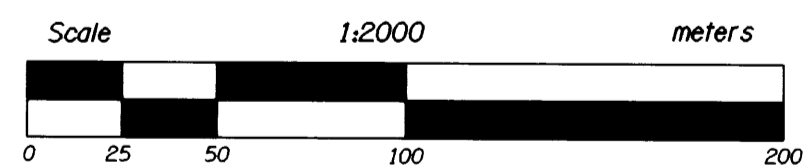
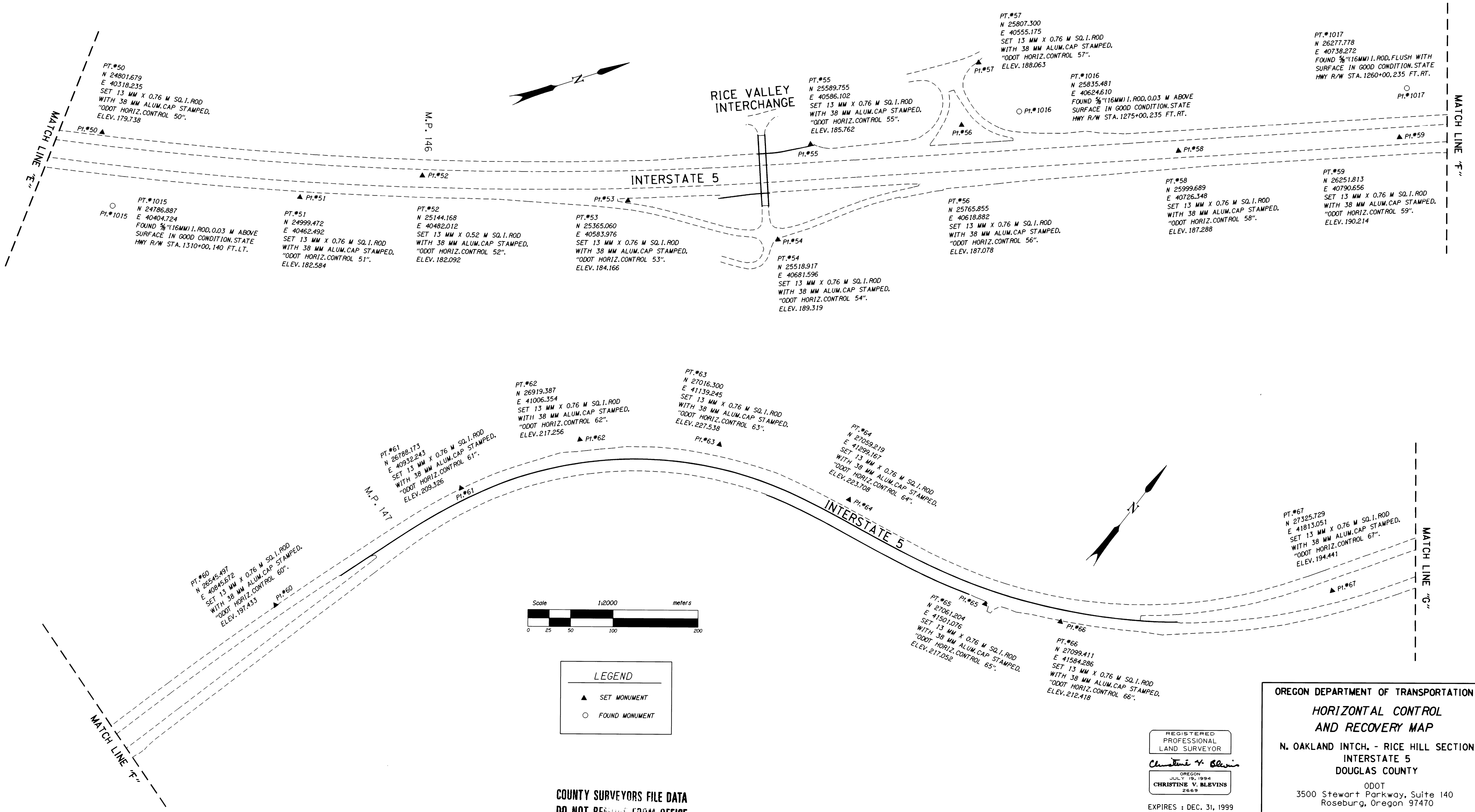
COUNTY SURVEYORS FILE DATA
DO NOT REMOVE FROM OFFICE



HORIZONTAL CONTROL AND RECOVERY MAP

LOCATED IN THE SW 1/4, SE 1/4, & NE 1/4 OF SECTION 5, T. 24 S., R. 5 W. AND THE SE 1/4 & NE 1/4 OF SECTION 32 & THE NW 1/4 OF SECTION 33, T. 23 S., R. 5 W., W.M. DOUGLAS COUNTY

FILED
Date: 1-27-1999, By: J.P.
This survey consists of:
Map: M/129-32 D
Narrative:
Corner Pp:
DOUGLAS COUNTY SURVEYOR, c.s.

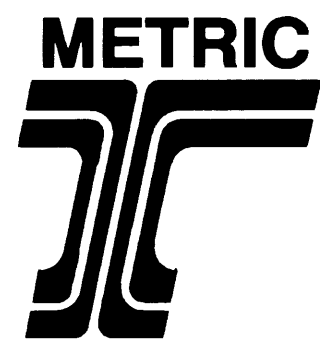


LEGEND	
▲	SET MONUMENT
○	FOUND MONUMENT

COUNTY SURVEYORS FILE DATA
DO NOT REMOVE FROM OFFICE

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

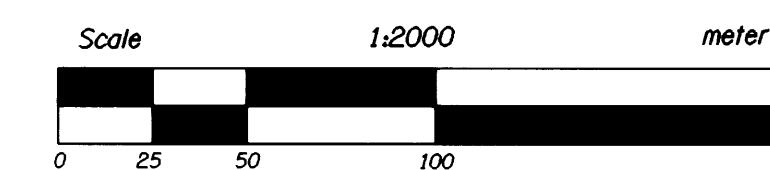
OREGON DEPARTMENT OF TRANSPORTATION
HORIZONTAL CONTROL AND RECOVERY MAP
N. OAKLAND INTCH. - RICE HILL SECTION
INTERSTATE 5
DOUGLAS COUNTY
ODOT
3500 Stewart Parkway, Suite 140
Roseburg, Oregon 97470
PROJECT KEY #08711 SHEET 4 OF 5



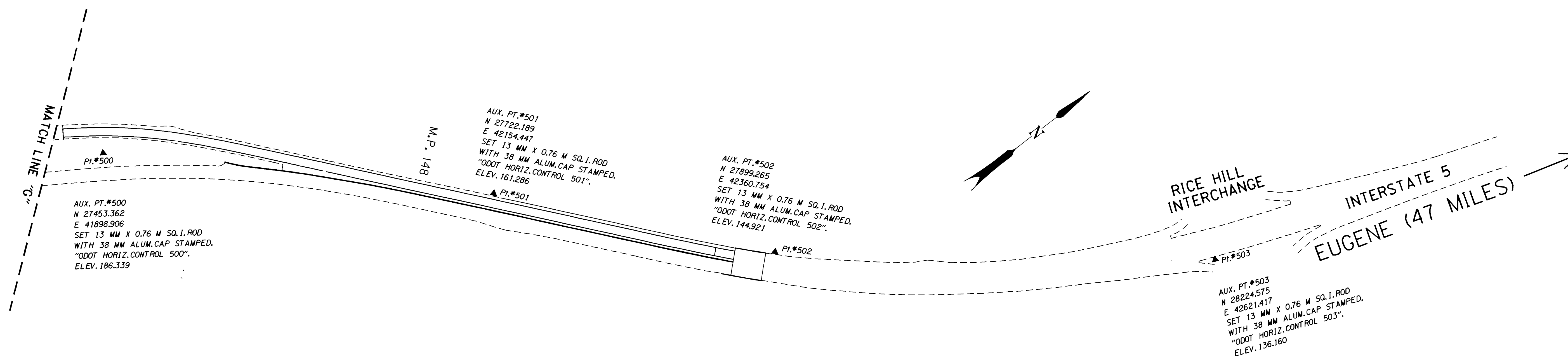
HORIZONTAL CONTROL AND RECOVERY MAP

LOCATED IN THE SE 1/4 OF SECTION 28 AND THE
NW 1/4 & NE 1/4 OF SECTION 33, T. 23 S., R. 5 W., W.M.
DOUGLAS COUNTY

FILED
Date: 1-27-1999 By: J.P.
This survey consists of:
Map: M129-32 E
Narrative:
Corner Rpt:
J.C. DOUGLAS COUNTY
SURVEYOR, C.S.



LEGEND	
▲	SET MONUMENT
○	FOUND MONUMENT



COUNTY SURVEYORS FILE DATA
DO NOT REMOVE FROM OFFICE

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
AND RECOVERY MAP
N. OAKLAND INTCH. - RICE HILL SECTION
INTERSTATE 5
DOUGLAS COUNTY
ODOT
3500 Stewart Parkway, Suite 140
Roseburg, Oregon 97470

PROJECT KEY #08711

SHEET 5 OF 5