



COUNTY SURVEYORS FILE DATA  
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# HORIZONTAL CONTROL, RECOVERY, AND RETRACEMENT MAP FOR THE OREGON DEPARTMENT OF TRANSPORTATION

LOCATED IN THE SW 1/4 OF THE NE 1/4  
AND THE NW 1/4 OF THE SE 1/4 OF  
SECTION 9, T22S, R8W, WILLAMETTE MERIDIAN  
DOUGLAS COUNTY

## SURVEY NARRATIVE

FILED  
Date: 11/19/1998 By: JP  
This survey consists of:  
Map: M129-22  
Narrative:  
Corner Rpt:  
S. DOUGLAS COUNTY SURVEYOR

THE PURPOSE OF THIS METRIC SURVEY NETWORK WAS TO ESTABLISH CONTROL FOR AN ODOT BRIDGE PROJECT CALLED "PARADISE CREEK BRIDGE". KEY #08941. THE SURVEY WAS CONDUCTED FROM OCTOBER 30TH TO NOVEMBER 1ST, 1998.

THE NETWORK FOR THE PARADISE CREEK BRIDGE USED ASSUMED COORDINATES. SET POINTS HAVE HAD THEIR POINT NUMBERS STAMPED ON THE CAPS IN THE FIELD. ODOT ORANGE CARSONITE POSTS WERE USED TO MARK THE LOCATIONS OF SET POINTS.

THE INITIAL BASIS OF BEARING FOR THE NETWORK WAS ASSUMED AND THE R/W MONUMENTS AND PROPERTY CORNERS WERE TIED. POINTS #1001 AND #1002 AT ENGLISH STATION "R/W 634+18.8 P.C." AND POINT #1000 AT ENGLISH STATION "R/W 618+16.9 P.T." WERE USED TO RESOLVE THE BASIS OF BEARING. THE DISTANCE BETWEEN POINTS #1001 AND #1002 WAS SPLIT TO ESTABLISH ONE POINT ON THE R/W CENTERLINE AND A DISTANCE OF 12.192M (40') WAS HELD FROM POINT #1000 TO ESTABLISH THE OTHER POINT ON THE R/W CENTERLINE. THESE TWO CALCULATED POINTS FORM THE BACK TANGENT OF A CURVE ON THE R/W CENTERLINE. THE WHOLE PROJECT WAS ROTATED ABOUT NETWORK POINT #2 UNTIL THE SAID BACK TANGENT HAD A BEARING OF S 2°48'00" E, WHICH IS THE BASIS OF BEARING TAKEN FROM R/W MAP 18-22-23 (DATED JULY 1933). STATIONING WAS PROJECTED TO CENTERLINE FROM POINTS 1005 AND 1006. THE ENGLISH STATION (641+00) FOR THE PROJECTED POINT WAS CONVERTED TO METRIC (19+537.680) BY MULTIPLYING BY 0.3048. METRIC COORDINATES MAY ALSO BE DIVIDED BY 0.3048 TO OBTAIN ENGLISH COORDINATES.

A WILD T1610 ELECTRONIC THEODOLITE AND A WILD D11600 DISTOMAT WERE USED TO MAKE THE NETWORK OBSERVATIONS. THE T1610 THEODOLITE HAS A STANDARD ANGULAR ERROR OF +/- 3 SECONDS. THE D11600 HAS A STANDARD DISTANCE ERROR OF +/- 3 MM, +/- 2PPM.

THE LEAST SQUARES ADJUSTMENT PRODUCED: ANGULAR RESIDUALS (THE AMOUNTS THE FIELD OBSERVED ANGLES WERE CHANGED DUE TO THE ADJUSTMENT) OF NO GREATER THAN 3 SECONDS; DISTANCE RESIDUALS (THE AMOUNT THE FIELD OBSERVED DISTANCES WERE CHANGED DUE TO ADJUSTMENTS) OF NO GREATER THAN 2 MM. THE ORIGINAL FIELD SURVEY NOTES ARE CONTAINED IN BOOK 3576, ARCHIVED IN THE ROADWAY ENGINEERING SECTION IN SALEM, OR.

THERE IS A 95% PROBABILITY THE FINAL POSITIONS OF THE CONTROL POINTS ARE WITHIN THE ERROR ELLIPSES AS SHOWN ON THE ERROR ANALYSIS TABLE.

THE BENCHMARK Y 246 WAS THE VERTICAL CONTROL POINT USED TO ESTABLISH THE ELEVATIONS SHOWN ON THIS MAP. IT IS AN OREGON GEODETIC SURVEY STANDARD DISK STAMPED "89 Y 246 1934" THE RECORD ELEVATION FOR THIS BENCHMARK IS 27.257 M (89.426 FEET). THIS ELEVATION IS BASED ON THE SEA-LEVEL DATUM OF 1929 THROUGH THE MEDIUM OF THE PACIFIC SUPPLEMENTARY ADJUSTMENT OF 1947. A CLOSED LEVEL CIRCUIT WAS COMPLETED FROM Y 246 THROUGH THE HORIZONTAL CONTROL POINTS USING A LEICA NA2002 LEVEL. THE STANDARD DEVIATION FOR A LEICA NA2002 LEVEL IS 0.9 MM IN A 1 KM DOUBLE RUN LEVEL CIRCUIT. THE ALLOWABLE ERROR FOR THIS LEVEL CIRCUIT FROM THE CLOSURE FORMULA IS 0.0133 M. THE ACTUAL ERROR FOR THIS LEVEL CIRCUIT IS 0.0012 M.

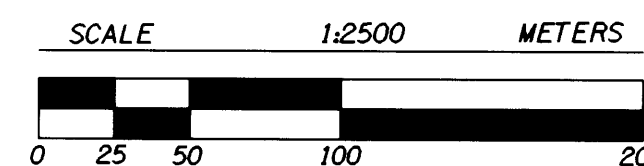
## ERROR ANALYSIS TABLE

POINT	STANDARD DEVIATIONS		ERROR ELLIPSE		
	NORTH	EAST	SEMI MAJOR	SEMI MINOR	ORIENTATION
3	0.001	0.002	0.003	0.001	N63°43'41"E
WC50	0.001	0.001	0.001	0.001	N80°43'17"E
4	0.002	0.005	0.005	0.001	N70°13'14"E
5	0.002	0.009	0.009	0.001	N77°02'53"E
6	0.002	0.015	0.015	0.001	N82°27'41"E
7	0.003	0.018	0.018	0.001	N81°53'04"E
U67	0.003	0.023	0.023	0.002	N84°12'11"E
8	0.003	0.020	0.020	0.001	N82°50'09"E
9	0.003	0.023	0.023	0.002	N83°53'03"E
10	0.002	0.026	0.026	0.002	N86°28'45"E
11	0.002	0.029	0.029	0.002	N87°08'31"E
12	0.003	0.031	0.031	0.002	N86°59'37"E

## CONTROL NETWORK AND FOUND MONUMENTS TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	SET 13 MM X 0.76 M SO 1. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 1" FLUSH WITH SURFACE.	20145.991	39887.119	*****
2	SET 13 MM X 0.76 M SO 1. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 2" FLUSH WITH SURFACE.	20000.000	40000.000	24.133
3	SET 13 MM X 0.76 M SO 1. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 3" FLUSH WITH SURFACE.	19851.424	40068.019	24.481
4	SET 13 MM X 0.76 M SO 1. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 4" FLUSH WITH SURFACE.	19708.279	40099.911	23.636
5	SET 13 MM X 0.76 M SO 1. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 5" FLUSH WITH SURFACE.	19540.098	40108.748	25.678
6	SET 13 MM X 0.76 M SO 1. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 6" FLUSH WITH SURFACE.	19279.231	40189.313	26.531
7	SET 13 MM X 0.76 M SO 1. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 7" FLUSH WITH SURFACE.	19174.068	40128.028	26.710
8	SET 13 MM X 0.76 M SO 1. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 8" FLUSH WITH SURFACE.	19075.030	40128.088	26.975
9	SET 13 MM X 0.76 M SO 1. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 9" FLUSH WITH SURFACE.	18989.052	40122.836	25.951
10	SET 13 MM X 0.76 M SO 1. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 10" FLUSH WITH SURFACE.	18864.045	40093.531	25.984
11	SET 13 MM X 0.76 M SO 1. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 11" FLUSH WITH SURFACE.	18785.142	40086.747	25.643
12	SET 13 MM X 0.76 M SO 1. ROD WITH 38 MM ALUMINUM CAP STAMPED, "ODOT HORIZ. CONTROL 12" FLUSH WITH SURFACE.	18699.584	40093.017	25.233
WC50	FOUND 2 1/2" (64 MM) BRASS CAP ON A 1 1/4" (32 MM) PIPE STAMPED "DOUGLAS COUNTY SURVEYOR, T22S R8W SOFT DUE WEST TO NW COR, DLC 50, WITNESS COR., 1978" 90MM ABOVE SURFACE. GOOD CONDITION.	19919.919	40011.061	22.869
U67	FOUND 2 1/2" (74 MM) BRASS DISK SET IN CONCRETE STAMPED, "DOUGLAS CO. SURVEYORS OFFICE, U67, 1972" FLUSH WITH SURFACE. GOOD CONDITION.	18985.401	40118.455	26.653

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1000	FOUND 1/2" (13 MM) I. ROD 100 MM ABOVE SURFACE. RUSTED, BUT IN GOOD CONDITION WITH WITNESS POST MARKED S.H.R.W. 618+16.9 PT. 40 LT.	19669.359	40107.203	*****
1001	FOUND 1/2" (13 MM) I. ROD 50 MM ABOVE SURFACE. IN GOOD CONDITION, WITH WITNESS POST MARKED S.H.R.W. 634+18.8 PC. 40 RT.	19180.708	40106.724	*****
1002	FOUND 1/2" (13 MM) I. ROD FLUSH WITH SURFACE. IN GOOD CONDITION, WITH WITNESS POST MARKED S.H.R.W. 634+18.8 PC. 40 LT.	19181.896	40131.009	*****
1003	FOUND 1/2" (13 MM) I. ROD FLUSH WITH SURFACE. IN GOOD CONDITION, WITH WITNESS POST MARKED S.H.R.W. 638+00, 40 RT.	19066.280	40104.663	*****
1004	FOUND 1/2" (13 MM) I. ROD 50 MM ABOVE SURFACE. IN GOOD CONDITION, WITH WITNESS POST MARKED S.H.R.W. 638+00, 60 RT.	19066.796	40098.493	24.405
1005	FOUND 1/2" (13 MM) I. ROD 60 MM BELOW SURFACE. IN GOOD CONDITION, WITH WITNESS POST MARKED S.H.R.W. 641+00, 40 RT.	18975.253	40097.208	*****
1006	FOUND 1/2" (13 MM) I. ROD 90 MM ABOVE SURFACE. IN GOOD CONDITION, WITH WITNESS POST MARKED S.H.R.W. 641+00, 50 LT.	18972.970	40124.566	*****
1007	FOUND 3/4" (16 MM) I. ROD REBAR 100 MM BELOW SURFACE. IN GOOD CONDITION. (DCSO MAP # M47-6)	18887.865	40114.204	*****
1008	FOUND 3/4" (16 MM) I. ROD REBAR 30 MM ABOVE SURFACE. IN GOOD CONDITION. (DCSO MAP # M47-6)	18780.883	40105.030	*****
1009	FOUND 1/2" (13 MM) I. ROD 200 MM ABOVE SURFACE. IN POOR CONDITION, TIED WHERE ROD ENTERS GROUND, WITH WITNESS POST MARKED S.H.R.W. 650+00, 40 LT.	18777.832	40080.968	*****
1010	FOUND 1/2" (13 MM) I. ROD 60 MM ABOVE SURFACE. IN GOOD CONDITION, WITH WITNESS POST MARKED S.H.R.W. 650+00, 40 LT.	18699.835	40098.820	*****
1011	FOUND 1/2" (13 MM) I. ROD 100MM ABOVE SURFACE. IN GOOD CONDITION, WITH WITNESS POST MARKED S.H.R.W. 650+00, 60 LT.	18699.386	40104.852	*****



**LEGEND**

- ▲ SET MONUMENT
- FOUND MONUMENT

REGISTERED PROFESSIONAL LAND SURVEYOR  
JANUARY 28, 1991  
ROBERT C. PAPPE  
2483

EXPIRES: DEC. 31, 1998

OREGON DEPARTMENT OF TRANSPORTATION  
HORIZONTAL CONTROL, RECOVERY,  
AND RETRACEMENT MAP  
DOUGLAS COUNTY UMOPOA HIGHWAY  
ADDRESS - 3500 STEWART PARKWAY, SUITE 140  
ROSEBURG, OREGON 97470

GAOD FILE: P8941HCM.DGN