

POST-CONSTRUCTION RIGHT OF WAY MONUMENTATION SURVEY
HOOD RIVER HIGHWAY AT ODELL HIGHWAY

MP 5.09 ON HIGHWAY #281
SE 1/4 SECTION 15, T 2 N, R 10 E, WM
HOOD RIVER COUNTY, OREGON
DECEMBER, 2004

NARRATIVE

PURPOSE

THIS IS A MONUMENTATION SURVEY TO SHOW THE HORIZONTAL CONTROL NETWORK AND ITS RELATIONSHIP TO THE NEW RIGHT OF WAY AND CONTROLLING CENTERLINE FOR AN OREGON DEPARTMENT OF TRANSPORTATION (ODOT) PROJECT. THIS SURVEY MEETS THE REQUIREMENTS OF ORS 209.155(2b).

KEY #: 03407

PROJECT NAME: HOOD RIVER HIGHWAY AT ODELL HIGHWAY
CONTRACT #: 12992
CONTRACT DATE: APRIL 2004
CONSTRUCTION PLANS: 37V-068

BASIS OF BEARING AND COORDINATES

BEARINGS AND COORDINATES ARE PER HOOD RIVER COUNTY SN (SURVEY NUMBER) 93007.

BEARINGS ARE TRUE. A COMPASS BEARING OF S 86°00'00" W WAS SIGHTED BETWEEN CONTROL STATIONS 2 AND 1. THE DECLINATION WAS SET AT 19°30'00" EAST.

ASSUMED COORDINATES (N 3048.000, E 6096.000) WERE ASSIGNED TO THE EAST QUARTER CORNER OF SECTION 15, T 2 N, R 10 E, WM (CONTROL STATION 2).

ALIGNMENT DESCRIPTION

THE HOOD RIVER HIGHWAY RIGHT-OF-WAY CENTERLINE IS AS SHOWN ON ODOT RIGHT-OF-WAY DRAWING 10B-5-13 AND IN FILM *20040892 OF HOOD RIVER COUNTY RECORD OF DEEDS.

REFERENCE DOCUMENTS

93007
FILM *20040892
FILM *20040289

INDEX

SHEET 1 - NARRATIVE, QUALITY CONTROL
SHEET 2 - PROJECT CONTROL SHEET
SHEET 3 - PROJECT MONUMENTATION SHEET

PROJECT TEAM

FIELD LEADER : B. GIGSTAD
DRAWN BY : T. TAYLOR
CALCULATED BY : S. MUMA
SENIOR SURVEYOR : R. HAMILTON
SURVEY MANAGER : S. MUMA

SPECIAL NOTES

THIS SURVEY WAS PERFORMED USING METRIC MEASURE. TO CONVERT FROM METRIC TO INTERNATIONAL FEET, DIVIDE BY THE FOLLOWING CONVERSION FACTORS:

25.40 MILLIMETERS (mm)/INCH
0.3048 METERS (m)/FOOT

ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.

THIS SURVEY WAS PREPARED USING HEWLETT-PACKARD PRODUCT NO. 51645A ON CONTINENTAL JPC4M2 POLYESTER FILM.

QUALITY CONTROL

THE EXISTING CONTROL SHOWN IN HOOD RIVER COUNTY SN 93007 WAS USED FOR THIS SURVEY. FORCED CENTERING METHODS WERE USED TO PERFORM TRAVERSE OPERATIONS. TWO SETS OF HORIZONTAL ANGLES WERE TURNED AT EACH STATION. TWO SETS OF DISTANCES WERE MEASURED FORWARD AND BACK. THE TRAVERSE WAS ADJUSTED BY COMPASS RULE.

SEE SHEET 2 FOR TRAVERSE CLOSURE INFORMATION.

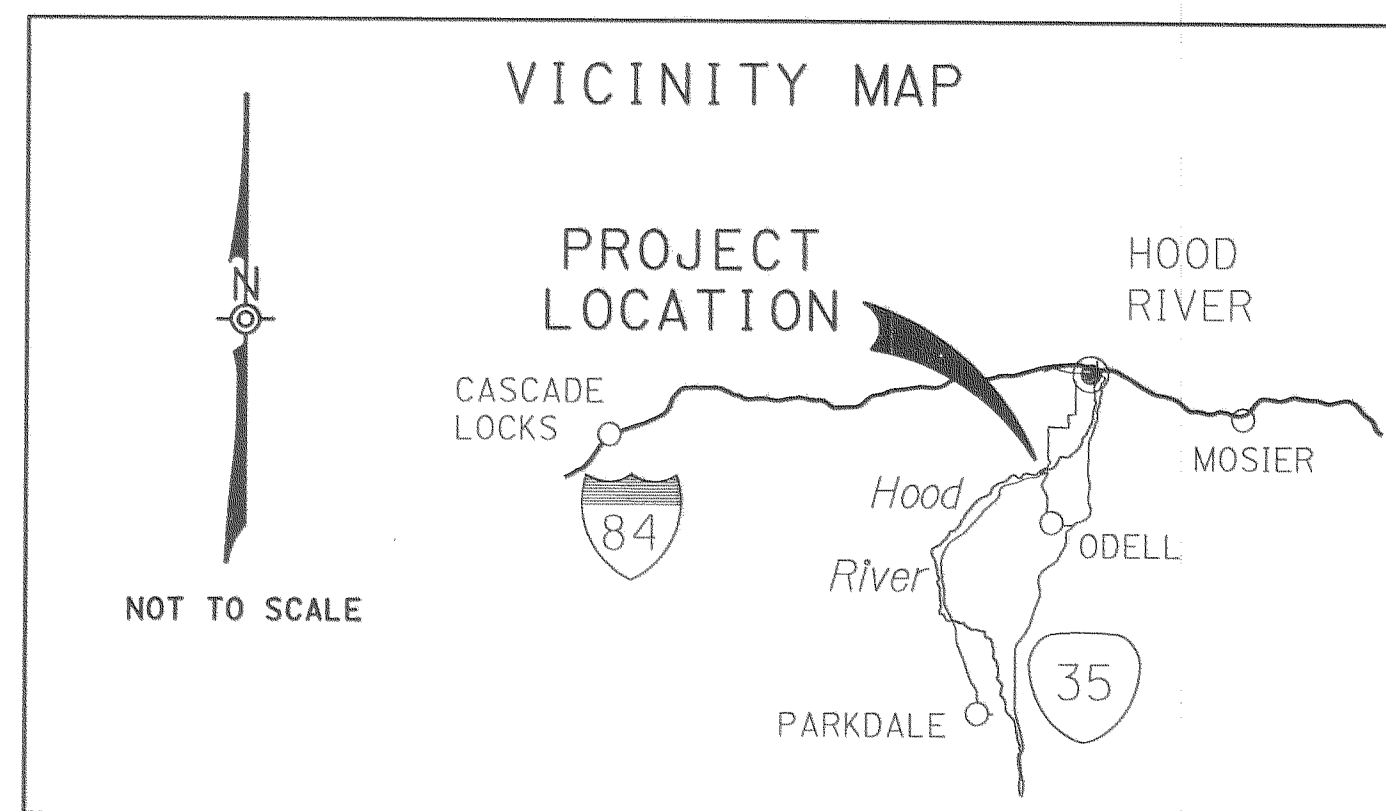
INSTRUMENTS USED:

WILD T2000 ELECTRONIC THEODOLITE: SERIAL *310980
WILD D15 ELECTRONIC DISTANCE METER: SERIAL *51006
(+/- 3mm, +/- 2ppm)

THE ELECTRONIC DISTANCE METER WAS CHECKED ON A CALIBRATED BASELINE PRIOR TO PERFORMING THE TRAVERSE AND AT THE CONCLUSION OF THE PROJECT. THE BASELINE RECORDS AND FURTHER DETAILS REGARDING THE PROCEDURES ARE ON FILE AT THE ADDRESS BELOW.

A SEARCH FOR SURVEY MONUMENTS WAS MADE WITHIN THE PROJECT LIMITS. THE HORIZONTAL POSITIONS OF THE FOUND MONUMENTS WERE ESTABLISHED BY TYING THE MONUMENTS FROM THE HORIZONTAL CONTROL. TWO INDEPENDENT MEASUREMENTS WERE MADE TO MONUMENTS THAT FELL WITHIN THE PROJECT LIMITS. THE EXTRA MEASUREMENTS WERE PERFORMED TO INCREASE THE CONFIDENCE AND CREDIBILITY OF PRESERVING THE MONUMENT LOCATIONS. MONUMENTS OUTSIDE THE LIMITS OF THE PROJECT WERE TIED AS SUPPORTING EVIDENCE TO ESTABLISH BOUNDARY LINES AND DETERMINE CENTERLINE RECOVERY.

A COPY OF THE ORIGINAL FIELD NOTES IS ON FILE AT THE ADDRESS BELOW.



FILED

MAY 10 2005
Randy Jordan
CLERK

REGISTERED
PROFESSIONAL
LAND SURVEYOR

Steven L. Muma
OREGON
JANUARY 16, 1996
STEVEN L. MUMA
2747

RENEWAL DATE 12-31-2006



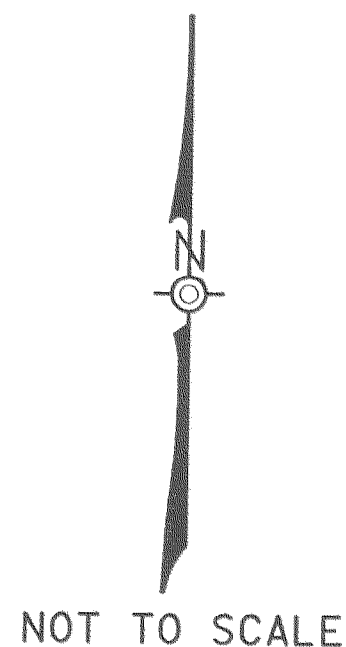
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SHEET 1 OF 3

CS 2005 036-1

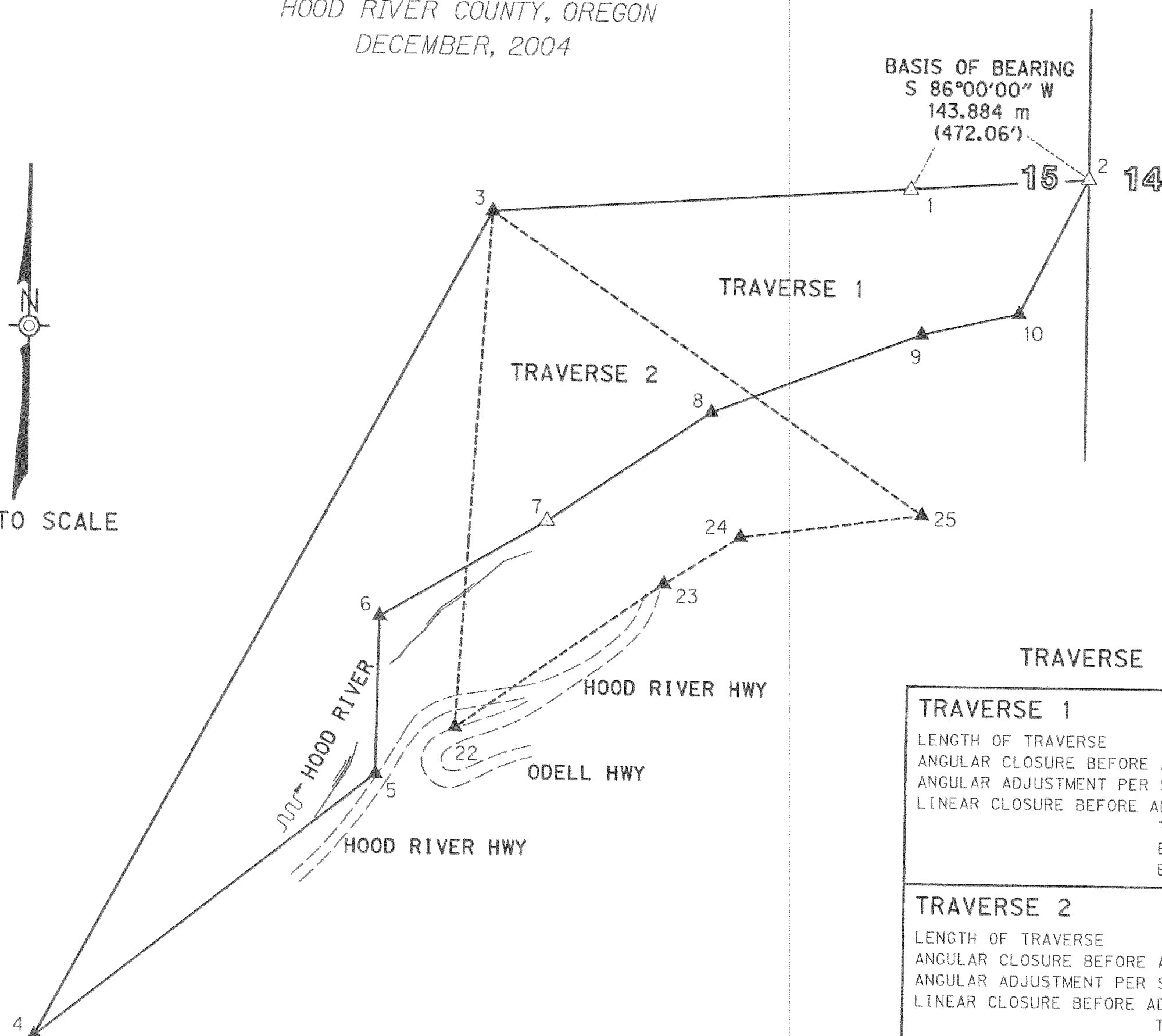
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HOOD RIVER COUNTY, OREGON
DECEMBER, 2004



LINES OF OBSERVATION
BEARING TABLE

FROM	TO	DISTANCE (m)	BEARING
TRAVERSE 1			
2	3	483.108	S 86°13'06" W
3	4	764.583	S 28°19'23" W
4	5	348.519	N 51°46'06" E
5	6	128.306	N 0°39'16" E
6	7	156.140	N 59°41'40" E
7	8	159.659	N 55°48'25" E
8	9	181.513	N 68°52'30" E
9	10	80.625	N 77°17'31" E
10	2	122.215	N 26°36'38" E
TRAVERSE 2			
3	22	419.232	S 3°22'38" W
22	23	205.242	N 54°42'12" E
23	24	72.590	N 57°55'05" E
24	25	147.971	N 82°15'02" E
25	3	425.954	N 55°28'36" W



LEGEND	
▲	SET NETWORK STATION AS NOTED
△	FOUND NETWORK STATION AS NOTED
---	EXISTING EDGE OF PAVEMENT
—	LINES OF OBSERVATION, TRAVERSE 1
- - -	LINES OF OBSERVATION, TRAVERSE 2

TRAVERSE CLOSURE INFORMATION

TRAVERSE 1	
LENGTH OF TRAVERSE	: 2423.5898 m
ANGULAR CLOSURE BEFORE ANGULAR ADJUSTMENT	: 10.8 SECONDS
ANGULAR ADJUSTMENT PER STATION	: 01.1 SECONDS
LINEAR CLOSURE BEFORE ADJUSTMENT	TOTAL LINEAR ERROR : 0.018 m (1:133000)
	ERROR IN NORTHING : -0.018 m
	ERROR IN EASTING : 0.000 m
TRAVERSE 2	
LENGTH OF TRAVERSE	: 1270.5886 m
ANGULAR CLOSURE BEFORE ANGULAR ADJUSTMENT	: 18.1 SECONDS
ANGULAR ADJUSTMENT PER STATION	: 03.0 SECONDS
LINEAR CLOSURE BEFORE ADJUSTMENT	TOTAL LINEAR ERROR : 0.035 m (1:37000)
	ERROR IN NORTHING : 0.016 m
	ERROR IN EASTING : 0.030 m

NOTE: THIS INFORMATION TAKEN FROM SN 93007,
AN ODOT RECOVERY SURVEY, FILED 1992.

PROJECT CONTROL TABLE (ASSUMED COORDINATES)

PT.	NORTHING	EASTING	DESCRIPTION
1	3037.963	5952.467	FOUND P.K. NAIL, 10-13-92
2	3048.000	6096.000	FOUND BRASS CAP IN MONUMENT BOX STAMPED, "HOOD RIVER COUNTY, T 2 N, R 10 E, WM S 15 & S 14 1991" ON 10-13-92
3	3016.137	5613.944	SET 5/8" X 30" IRON ROD WITH RED PLASTIC CAP STAMPED, "ODOT TRAVERSE" ON 10-13-92
4	2343.084	5251.194	SET 5/8" X 30" IRON ROD WITH RED PLASTIC CAP STAMPED, "ODOT TRAVERSE" ON 10-14-92
5	2558.763	5524.961	SET 5/8" X 30" IRON ROD WITH RED PLASTIC CAP STAMPED, "ODOT TRAVERSE" ON 10-14-92
6	2687.061	5526.427	SET 5/8" X 30" IRON ROD WITH RED PLASTIC CAP STAMPED, "ODOT TRAVERSE" ON 10-13-92
7	2765.851	5661.230	FOUND "X" CHISLED IN ROCK OUTCROP ON 10-14-92
8	2855.577	5793.292	SET 5/8" X 30" IRON ROD WITH RED PLASTIC CAP STAMPED, "ODOT TRAVERSE" ON 10-14-92
9	2920.995	5962.607	SET 5/8" X 30" IRON ROD WITH RED PLASTIC CAP STAMPED, "ODOT TRAVERSE" ON 10-14-92
10	2938.731	6041.257	SET 5/8" X 30" IRON ROD WITH RED PLASTIC CAP STAMPED, "ODOT TRAVERSE" ON 10-14-92
22	2597.633	5589.248	SET 5/8" X 30" IRON ROD WITH RED PLASTIC CAP STAMPED, "ODOT TRAVERSE" ON 10-19-92
23	2716.224	5756.761	SET 5/8" X 30" IRON ROD WITH RED PLASTIC CAP STAMPED, "ODOT TRAVERSE" ON 10-19-92
24	2754.779	5818.266	SET 5/8" X 30" IRON ROD WITH RED PLASTIC CAP STAMPED, "ODOT TRAVERSE" ON 10-19-92
25	2774.732	5964.886	SET 5/8" X 30" IRON ROD WITH RED PLASTIC CAP STAMPED, "ODOT TRAVERSE" ON 10-19-92

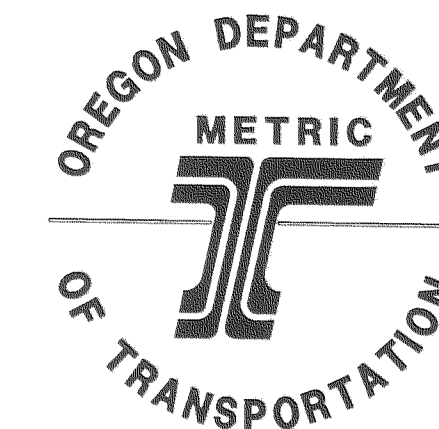
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MAY 10 2005
Barry Flato
COUNTY CLERK

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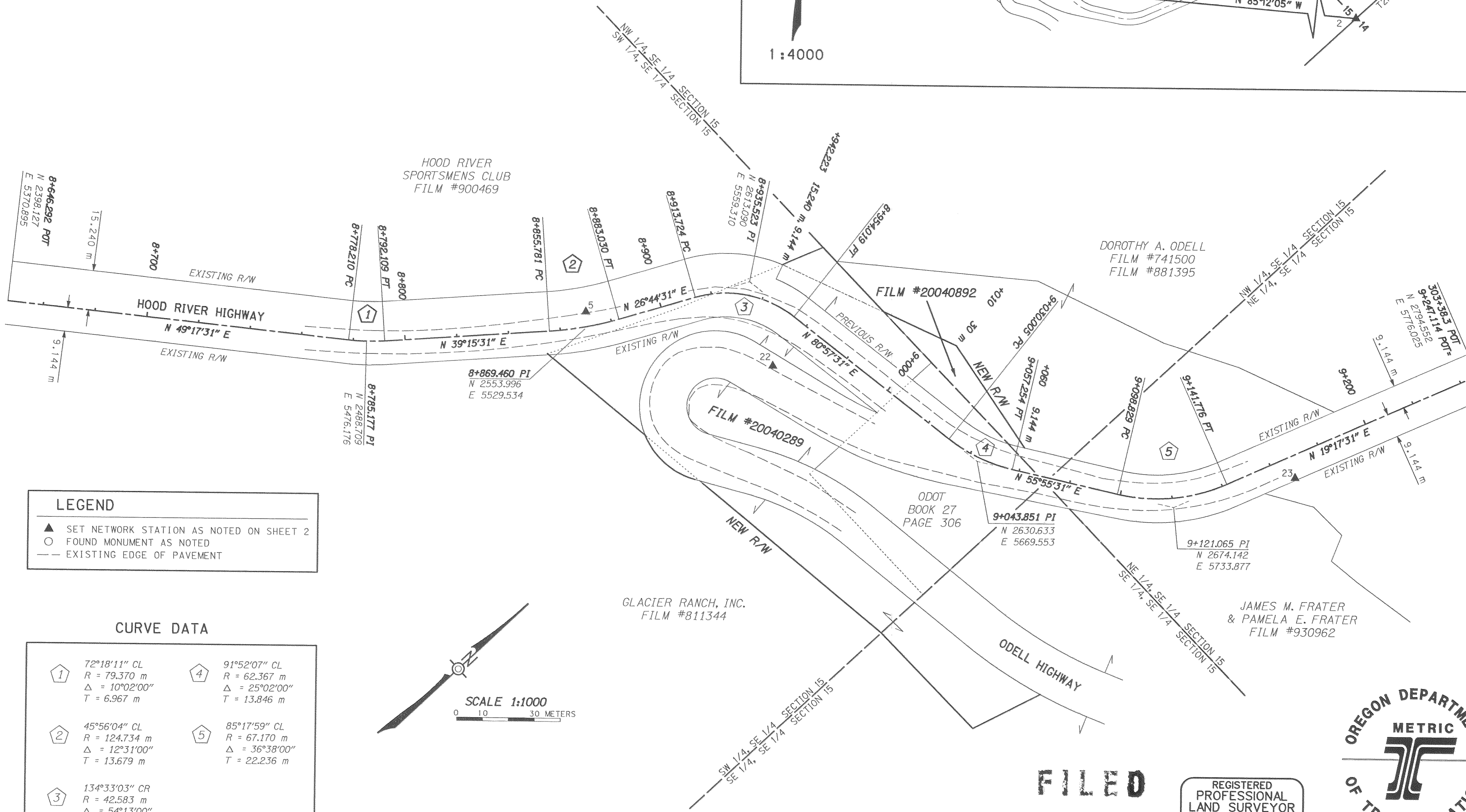
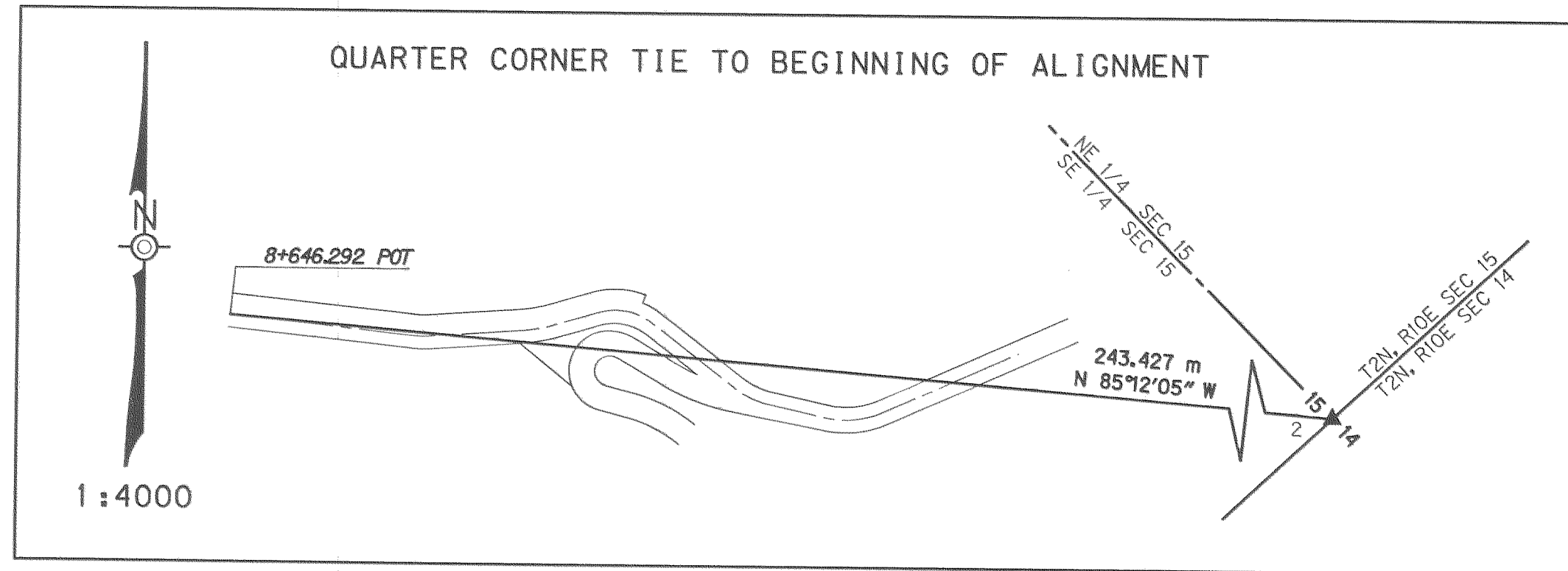
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SHEET 2 OF 3

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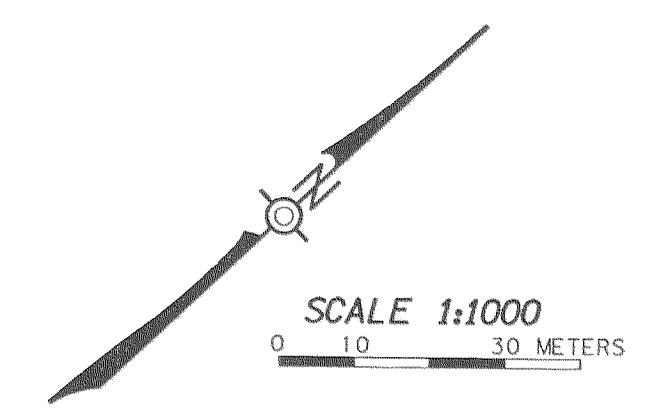


LEGEND

- ▲ SET NETWORK STATION AS NOTED ON SHEET 2
- FOUND MONUMENT AS NOTED
- EXISTING EDGE OF PAVEMENT

CURVE DATA

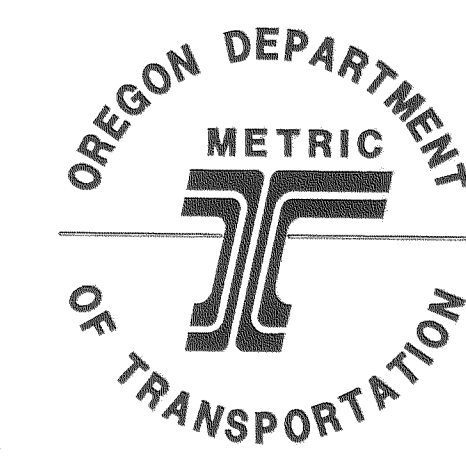
<p>① 72°18'11" CL R = 79.370 m Δ = 10°02'00" T = 6.967 m</p>	<p>④ 91°52'07" CL R = 62.367 m Δ = 25°02'00" T = 13.846 m</p>
<p>② 45°56'04" CL R = 124.734 m Δ = 12°31'00" T = 13.679 m</p>	<p>⑤ 85°17'59" CL R = 67.170 m Δ = 36°38'00" T = 22.236 m</p>
<p>③ 134°33'03" CR R = 42.583 m Δ = 5°13'00" T = 21.799 m</p>	



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MAY 10 2006
Ronald Tolito
COUNTY CLERK

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