

HORIZONTAL CONTROL, RECOVERY & RETRACEMENT SURVEY VERNOMIA NCL - SUNSET HWY.

NARRATIVE

PURPOSE

THIS IS A RECOVERY SURVEY TO REFERENCE FOUND MONUMENTS, LOCATE CERTAIN RIGHT-OF-WAY LINES, AND IDENTIFY PERMANENT HORIZONTAL CONTROL ESTABLISHED FOR A PROPOSED OREGON DEPARTMENT OF TRANSPORTATION (ODOT) PROJECT. SAID PROJECT HAS BEEN ASSIGNED ODOT KEY NUMBER 11131. THIS SURVEY MEETS THE REQUIREMENTS OF ORS 209J55(1b)(5).

BASIS OF BEARING, COORDINATES, AND ELEVATION

HELD BEARING OF S 60°23'31" W BETWEEN GPS STATIONS COLO2 AND MILE 65. SAID BEARING IS BASED ON THE INVERSE OF THE RECORD NAD 83(1991) STATE PLANE COORDINATES LISTED IN THE COLUMBIA COUNTY GPS NETWORK BOOK.

HELD RECORD NAD 83(1991) STATE PLANE COORDINATES OF COLO2 CONVERTED TO LOCAL DATUM PLANE (LDP) USING THE CONVERSION FACTOR 0.999934371. SEE NOTE ON SHEET 2.

ALIGNMENT RECOVERY

THE 'MR4' ALIGNMENT WAS RECOVERED BY HOLDING THE RECORD ALIGNMENT AND THE TIE TO THE CENTER OF SECTION 4 AS SHOWN ON THE COLUMBIA COUNTY MARKET ROAD NO. 4 MAP. THE TANGENT BETWEEN STATIONS 0+000.000 AND 0+358.932 PC (11°76.6) IS THE SAME BEARING AS THE SOUTH BOUNDARY OF WEST ADDITION TO VERNOMIA. THE SUBDIVISION OF WEST ADDITION TO VERNOMIA WAS ESTABLISHED BY HOLDING FOUND MONUMENT 1070 AS THE SOUTHWEST CORNER OF BLOCK 3 AND ROTATING THE RECORD PLAT TO FOUND MONUMENT 1058.

THE 'NW' AND 'SW' ALIGNMENTS WERE RECOVERED BY HOLDING THE RECORD ALIGNMENTS AND THEIR RELATIONSHIPS TO THE NORTHEAST CORNER OF LOT 6, BLOCK 10, FIRST ADDITION TO RIVERVIEW LOTS AS SHOWN ON ODOT R/W MAP 5B-10-16. THE SUBDIVISION OF FIRST ADDITION TO RIVERVIEW LOTS WAS ESTABLISHED BY HOLDING THE LINE BETWEEN FOUND MONUMENTS 1055 AND 1033 AND SPLITTING THE DIFFERENCE IN DISTANCE.

RIGHT OF WAY BOUNDARIES

THE RIGHT OF WAY LINES ARE AS SHOWN ON THE ABOVE MENTIONED DOCUMENTS, EXCEPT THE RIGHT OF WAY WIDTH BETWEEN WASHINGTON AVE. AND COLUMBIA AVE. THE COLUMBIA COUNTY MARKET ROAD NO. 4 MAP SHOWS THIS WIDTH TO BE 75'. NO OTHER DOCUMENTATION WAS FOUND TO SUPPORT SAID WIDTH. 60' WAS USED INSTEAD. 60' FITS EXISTING MONUMENTATION IN THE AREA.

REFERENCE DOCUMENTS

COLUMBIA COUNTY GPS NETWORK BOOK
SN 1022 SN 3523
SN 1042 SN 3868
SN 3413

FIRST ADDITION TO RIVERVIEW LOTS
WEST ADDITION TO VERNOMIA
EAST SIDE ADDITION TO VERNOMIA
OREGON AMERICAN SUBDIVISION
COLUMBIA COUNTY MARKET ROAD NO. 4 MAP
ODOT R/W MAP 5B-10-16

INDEX

SHEET 1 - NARRATIVE, QUALITY CONTROL
SHEET 2 - PROJECT CONTROL SHEET
SHEET 3 - PROJECT CONTROL ADJUSTMENT DATA
SHEETS 4 - 10 PROJECT RECOVERY SHEETS

PROJECT TEAM

FIELD LEADER	:	D. FISK
DRAWN BY	:	S. MUMA
CALCULATED BY	:	S. MUMA
PROJECT SURVEYOR	:	J. BRUMBAUGH
STANDARDS	:	F. OBIJIOFOR
SENIOR SURVEYOR	:	R. HAMILTON
SURVEY MANAGER	:	B. TANDY

QUALITY CONTROL

HORIZONTAL CONTROL WAS ESTABLISHED BY EXECUTING A NETWORK USING FORCED CENTERING METHODS. TWO SETS OF HORIZONTAL ANGLES WERE TURNED AT EACH STATION. THE LENGTH OF EACH LEG OF THE NETWORK WAS DETERMINED BY MEASURING TWO SETS OF SLOPE DISTANCES AND TURNING TWO SETS OF ZENITH (VERTICAL) ANGLES BOTH IN THE AHEAD AND BACK DIRECTION. THE MEAN VALUES OF THE HORIZONTAL ANGLES AND DISTANCES WERE RECORDED AND USED FOR NETWORK COMPUTATIONS.

THE NETWORK WAS ADJUSTED USING THE LEAST SQUARES METHOD. SEE SHEET 2 FOR THE RESULTS OF THE NETWORK COMPUTATIONS.

INSTRUMENT USED:

LEICA TCA 1800 TOTAL STATION (SER. #416518)

THE TOTAL STATION WAS CHECKED FOR CALIBRATION AND COLLIMATION PRIOR TO EXECUTING THE NETWORK. BASELINE RECORDS AND DETAILS REGARDING NETWORK 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.

ALL PIPE SIZES ARE INSIDE DIAMETER.

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

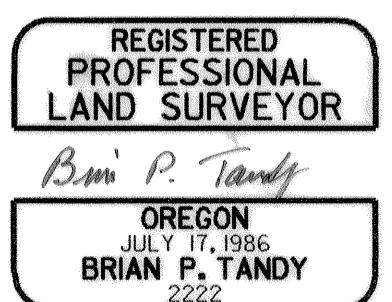
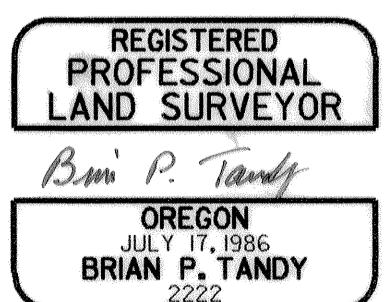
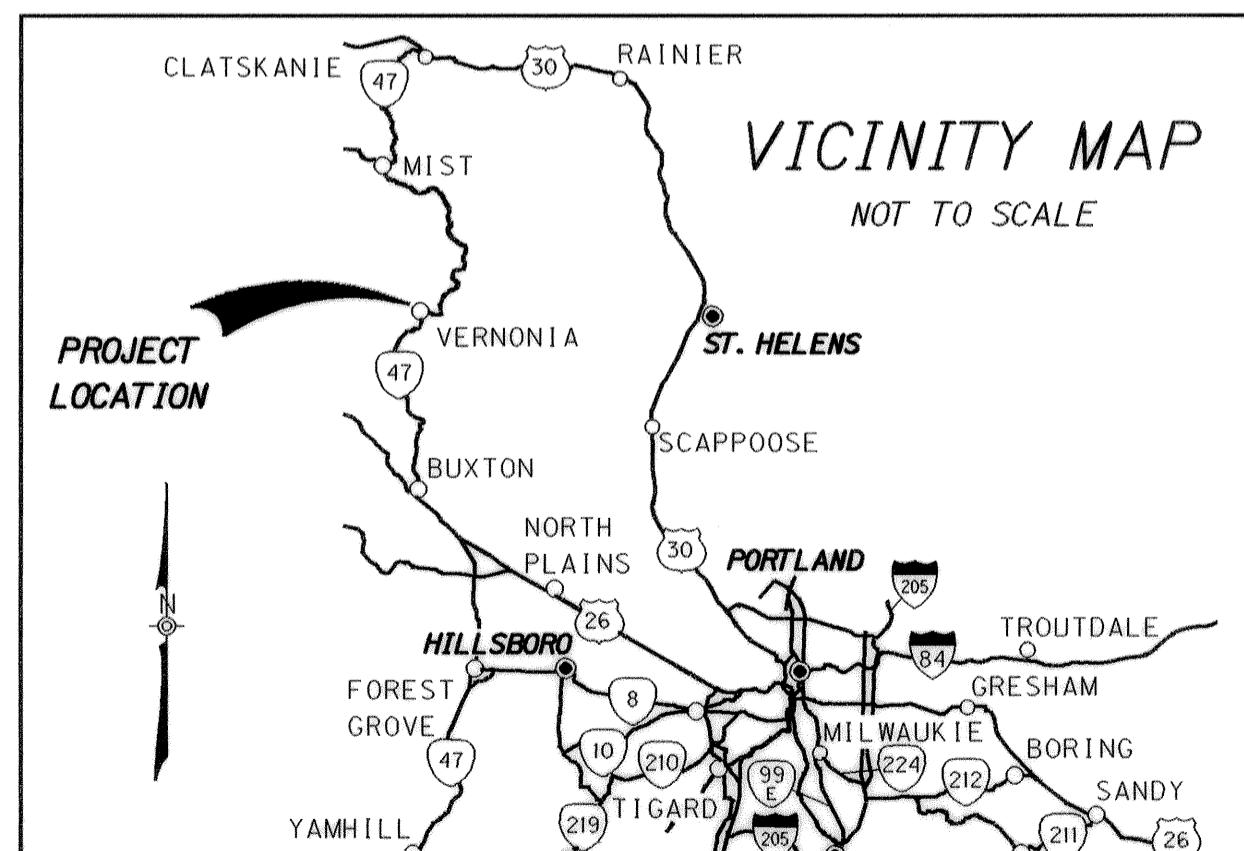
SPECIAL NOTES

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.



RENEWAL DATE 6-30-2004

REGION 1, SURVEY GROUP
123 NW FLANDERS STREET
PORTLAND, OR 97209-4012
(503) 731-3240
SHEET 1 OF 10

5024
10810

HORIZONTAL CONTROL, RECOVERY & RETRACEMENT SURVEY
VERNONIA NCL - SUNSET HWY.

M.P. #61.10 TO M.P. #62.77 ON HWY. #47 (NEHALEM HWY.)

LOCATED IN THE N.W. 1/4 SEC. 3, E. 1/2 SEC. 4, S.W. 1/4 SEC. 4

S.E. 1/4 SEC. 5, T. 4 N., R. 4 W., WILLAMETTE MERIDIAN

COLUMBIA COUNTY, OREGON

DECEMBER 17, 2001

PROJECT NETWORK CONTROL TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
1	245191.459	2289185.777	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 1"
2	245123.635	2289438.052	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 2"
3	245151.093	2289668.742	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 3"
4	245276.675	2289903.605	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 4"
5	245368.214	2290181.613	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 5"
6	245675.993	2290480.480	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 6"
7	245947.868	2290555.776	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 7"
8	246134.986	2290572.459	SET MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 8"
9	246295.270	2290611.732	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 9"
10	246398.369	2290615.458	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 10"
11	246539.676	2290648.447	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 11"
12	246611.021	2290651.023	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 12"
13	246677.690	2290662.124	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 13"
14	246729.395	2290681.312	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 14"
15	246870.354	2290684.159	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 15"
16	247092.175	2290677.514	SET 1-1/8" BRASS PLUG STAMPED "ODOT CONTROL 16" IN CONCRETE SIDEWALK
17	247106.803	2290693.598	SET BRASS SCREW WITH 1-1/4" BRASS WASHER STAMPED "ODOT CONTROL 17" IN CONCRETE SIDEWALK
18	247089.895	2290779.314	SET BRASS SCREW WITH 1-1/4" BRASS WASHER STAMPED "ODOT CONTROL 18" IN CONCRETE SIDEWALK
19	247103.200	2290877.109	SET BRASS SCREW WITH 1-1/4" BRASS WASHER STAMPED "ODOT CONTROL 19" IN CONCRETE SIDEWALK
20	247083.117	2290968.714	SET 1-1/8" BRASS PLUG STAMPED "ODOT CONTROL 20" IN CONCRETE SIDEWALK
21	247095.124	2291072.097	SET 1-1/8" BRASS PLUG STAMPED "ODOT CONTROL 21" IN CONCRETE SIDEWALK
22	247084.716	2291101.195	SET 1-1/8" BRASS PLUG STAMPED "ODOT CONTROL 22" IN CONCRETE SIDEWALK
23	247089.970	2291177.367	SET BRASS SCREW WITH 1-1/4" BRASS WASHER STAMPED "ODOT CONTROL 23" IN CONCRETE SIDEWALK
24	247100.937	2291210.904	SET 1-1/8" BRASS PLUG STAMPED "ODOT CONTROL 24" IN CONCRETE SIDEWALK
25	247081.411	2291293.684	SET 1-1/8" BRASS PLUG STAMPED "ODOT CONTROL 25" IN CONCRETE SIDEWALK
26	247093.993	2291418.772	SET MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 26"
27	247074.352	2291518.535	SET 1-1/8" BRASS PLUG STAMPED "ODOT CONTROL 27" IN CONCRETE SIDEWALK
28	247077.822	2291631.749	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 28"
29	247048.058	2291651.660	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 29"
30	246962.420	2291756.615	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 30"
31	246937.113	2291810.189	SET MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 31"
32	246926.010	2291888.697	SET MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 32"
33	246930.437	2291966.740	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 33"
34	246944.274	2292078.753	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 34"
35	246927.672	2292183.763	SET MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 35"
36	246901.043	2292278.129	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 36"
37	246884.473	2292408.641	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 37"
38	246894.308	2292486.074	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 38"
39	246938.615	2292566.680	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 39"
40	247013.952	2292689.524	FOUND 5/8" IRON ROD (NO CAP), FLUSH (UNKNOWN RECORD)
41	247033.015	2292684.588	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 41"
42	247180.363	2292642.404	SET MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 42"
43	247254.130	2292623.849	SET MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 43"
44	247317.113	2292597.583	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 44"
45	247386.881	2292593.484	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 45"
46	247582.103	2292608.877	SET MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 46"
47	247675.151	2292598.446	SET MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 47"
48	247744.695	2292578.336	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 48"
49	247857.536	2292567.845	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 49"
50	247954.407	2292587.252	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 50"
51	248104.248	2292641.630	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 51"
52	248214.472	2292691.475	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 52"
53	248408.265	2292750.193	SET WHITE PLASTIC HUB WITH MAG NAIL & 1-5/16" BRASS WASHER STAMPED "ODOT CONTROL 53"
* MILE 65	244527.372	2288464.918	FOUND 3-1/2" BRASS CAP STAMPED "DAVID EVANS AND ASSOCIATES INC. MILE 65 1991"
COLO2	246854.423	2292559.932	FOUND 2-1/2" BRASS DISK STAMPED "COLUMBIA COUNTY CONTROL COLO2 1997 LS2210"

COORDINATES SHOWN ON THIS SURVEY
ARE LDP CONVERTED FROM NAD83(91)

*NOTE:
RECORD DISTANCE FROM "COLO2" TO "MILE 65" IS 4709.964 m (AS CALCULATED FROM RECORD
COORDINATES IN COLUMBIA COUNTY GPS NETWORK BOOK) CONVERTED TO LOCAL DATUM PLANE (LDP)
USING THE CONVERSION FACTOR 0.999934371. MEASURED DISTANCE (INVERSED FROM NETWORK
TIRES) IS 4710.022 m. WE HELD THE RECORD COORDINATES FOR "COLO2", CONVERTED TO LDP, AND
THE RECORD BEARING TO "MILE 65" FOR NETWORK COMPUTATIONS. COORDINATES FOR "MILE 65" ARE
CALCULATED AT MEASURED DISTANCE AND RECORD BEARING FROM "COLO2".

MILE 65

SEE SHEET 3 OF 10 FOR THE LEAST SQUARES ANALYSIS OF THE NETWORK

LEGEND

- ▲ SET NETWORK STATION AS NOTED
- △ FOUND NETWORK STATION AS NOTED
- ★ FOUND G.P.S. STATION AS NOTED
- EXISTING EDGE OF PAVEMENT

(SHEET 3 OF 10)

(SHEET

HORIZONTAL CONTROL, RECOVERY & RETRACEMENT SURVEY
VERNONIA NCL - SUNSET HWY.

M.P. #61.10 TO M.P. #62.77 ON HWY. #47 (NEHALEM HWY.)
LOCATED IN THE N.W. 1/4 SEC. 3, E. 1/2 SEC. 4, S.W. 1/4 SEC. 4
S.E. 1/4 SEC. 5, T. 4 N., R. 4 W., WILLAMETTE MERIDIAN

COLUMBIA COUNTY, OREGON

DECEMBER 17, 2001

**CONFIDENCE LEVEL LIMITS
(95% PROBABILITY LEVEL)**

PT*	SEMI MAJOR	SEMI MINOR	ORIENTATION
1	0.075 m	0.011 m	137°45'43"
2	0.085 m	0.015 m	147°05'52"
3	0.095 m	0.018 m	150°32'00"
4	0.103 m	0.019 m	151°20'38"
5	0.108 m	0.022 m	152°31'44"
6	0.109 m	0.021 m	153°04'10"
7	0.107 m	0.021 m	154°43'55"
8	0.104 m	0.022 m	157°25'51"
9	0.101 m	0.022 m	160°54'33"
10	0.099 m	0.021 m	163°39'16"
11	0.096 m	0.020 m	167°26'59"
12	0.095 m	0.020 m	169°33'51"
13	0.094 m	0.020 m	171°35'53"
14	0.093 m	0.019 m	173°22'14"
16	0.093 m	0.014 m	5°58'25"
15	0.092 m	0.016 m	178°18'52"
17	0.093 m	0.014 m	6°32'05"
18	0.088 m	0.013 m	6°23'03"
19	0.083 m	0.013 m	7°20'51"
20	0.078 m	0.013 m	7°09'12"
21	0.074 m	0.012 m	8°13'07"
22	0.072 m	0.012 m	8°04'03"
23	0.069 m	0.011 m	8°50'35"
24	0.068 m	0.011 m	9°32'10"
25	0.064 m	0.010 m	9°25'44"
26	0.059 m	0.010 m	10°57'28"
27	0.054 m	0.009 m	11°03'27"
28	0.050 m	0.008 m	12°07'28"
29	0.048 m	0.008 m	11°09'12"
31	0.040 m	0.007 m	5°48'39"
30	0.043 m	0.007 m	6°56'56"
32	0.036 m	0.006 m	5°42'13"
33	0.032 m	0.006 m	6°56'21"
34	0.027 m	0.005 m	10°05'02"
35	0.021 m	0.005 m	10°31'35"
36	0.016 m	0.004 m	8°59'46"
37	0.009 m	0.003 m	11°20'44"
38	0.005 m	0.002 m	29°41'00"
39	0.005 m	0.003 m	95°55'33"
40	0.013 m	0.004 m	131°00'07"
42	0.021 m	0.005 m	105°25'23"
41	0.014 m	0.004 m	127°54'45"
44	0.030 m	0.007 m	95°06'00"
43	0.026 m	0.007 m	100°12'13"
45	0.035 m	0.008 m	93°40'34"
46	0.049 m	0.009 m	93°35'31"
47	0.056 m	0.010 m	92°16'28"
48	0.061 m	0.010 m	90°35'00"
49	0.070 m	0.011 m	89°43'20"
50	0.077 m	0.011 m	90°50'04"
51	0.090 m	0.012 m	93°33'35"
52	0.099 m	0.012 m	95°40'19"
53	0.116 m	0.012 m	97°24'52"

ORIENTATION IS FROM NORTH AZIMUTH

FIXED STATIONS NOT SUBJECT TO LEAST
SQUARES ADJUSTMENT OR CONFIDENCE
LEVEL ANALYSIS ARE MILE 65 AND COLO2

NETWORK LINES OF OBSERVATION BEARING TABLE

FROM	TO	DISTANCE	BEARING	FROM	TO	DISTANCE	BEARING
1	MILE 65	980.128 m	S 47°20'51" W	30	31	59.250 m	S 64°42'55" E
1	2	261.233 m	S 74°57'07" E	30	32	137.009 m	S 74°35'19" E
2	3	232.318 m	N 83°12'44" E	31	32	79.290 m	S 81°57'02" E
3	4	266.330 m	N 61°51'59" E	31	33	156.694 m	S 87°33'30" E
4	5	292.691 m	N 71°46'30" E	32	33	78.168 m	N 86°45'12" E
5	6	429.010 m	N 44°09'30" E	32	34	190.932 m	N 84°30'39" E
6	7	282.109 m	N 15°28'49" E	33	34	112.865 m	N 82°57'29" E
7	8	187.861 m	N 5°05'42" E	33	35	217.040 m	S 89°16'12" E
8	9	165.025 m	N 13°46'02" E	34	35	106.314 m	S 81°00'56" E
9	10	103.166 m	N 2°04'11" E	34	36	204.008 m	S 77°45'57" E
9	11	247.148 m	N 8°32'36" E	35	36	98.051 m	S 74°14'30" E
10	8	266.870 m	S 9°16'19" W	35	37	228.990 m	S 79°07'33" E
10	12	215.605 m	N 9°29'41" E	36	37	131.560 m	S 82°45'52" E
10	11	145.107 m	N 13°08'28" E	36	38	208.054 m	S 88°08'41" E
11	12	71.391 m	N 2°04'03" E	37	38	78.054 m	N 82°45'42" E
11	13	138.690 m	N 5°39'34" E	37	COLO2	154.246 m	S 78°45'57" E
12	13	67.587 m	N 9°27'14" E	38	COLO2	83.940 m	S 61°37'49" E
12	14	122.188 m	N 14°21'10" E	38	39	91.981 m	N 61°12'12" E
14	13	55.150 m	S 20°21'37" W	COLO2	39	84.462 m	N 4°34'56" E
14	15	140.988 m	N 1°09'25" E	39	37	167.055 m	S 71°05'21" W
14	16	362.800 m	N 0°35'59" W	39	40	144.106 m	N 58°28'49" E
15	13	193.920 m	S 6°31'29" W	40	38	236.023 m	S 59°32'28" W
15	16	221.921 m	N 1°42'57" W	40	41	19.692 m	N 14°31'05" W
15	17	236.637 m	N 2°17'09" E	40	42	172.953 m	N 15°48'35" W
16	17	21.740 m	N 47°42'52" E	41	39	151.042 m	S 51°19'06" W
16	18	101.825 m	S 88°43'02" E	41	38	242.173 m	S 55°03'25" W
17	19	183.546 m	S 88°52'31" E	41	42	153.267 m	N 15°58'33" W
17	18	87.368 m	S 78°50'31" E	42	43	76.065 m	N 14°07'09" W
18	19	98.696 m	N 82°15'10" E	42	44	143.908 m	N 18°08'49" W
18	20	189.521 m	S 87°57'01" E	43	41	229.305 m	S 15°21'36" E
19	21	195.155 m	S 87°37'41" E	43	44	68.241 m	N 22°38'15" W
19	20	93.781 m	S 77°38'03" E	43	45	136.179 m	N 12°53'02" W
20	21	104.078 m	N 83°22'31" E	44	45	69.888 m	N 3°21'44" W
20	22	132.491 m	N 89°18'30" E	44	46	265.230 m	N 2°26'26" E
21	22	30.904 m	S 70°19'10" E	45	46	195.828 m	N 4°30'30" E
21	23	105.397 m	S 87°11'49" E	45	47	288.313 m	N 0°59'10" E
22	24	110.901 m	N 81°35'22" E	46	47	93.631 m	N 6°23'48" W
22	23	76.353 m	N 86°03'16" E	46	48	165.436 m	N 10°38'19" W
23	24	35.284 m	N 71°53'27" E	47	48	72.393 m	N 16°07'42" W
23	25	116.631 m	S 85°47'30" E	47	49	184.933 m	N 9°31'28" W
24	26	207.984 m	S 88°05'12" E	48	49	113.327 m	N 5°18'41" W
24	25	85.052 m	S 76°43'41" E	48	50	209.902 m	N 2°26'05" E
25	26	125.719 m	N 84°15'23" E	49	50	98.797 m	N 11°19'42" E
25	27	224.961 m	S 88°12'07" E	49	51	257.509 m	N 16°39'02" E
26	28	213.590 m	S 85°39'29" E	50	51	159.402 m	N 19°56'46" E
26	27	101.677 m	S 78°51'44" E	50	52	280.172 m	N 21°50'20" E
27	28	113.268 m	N 88°14'40" E	51</td			

HORIZONTAL CONTROL, RECOVERY & RETRACEMENT SURVEY
VERNONIA NCL - SUNSET HWY.

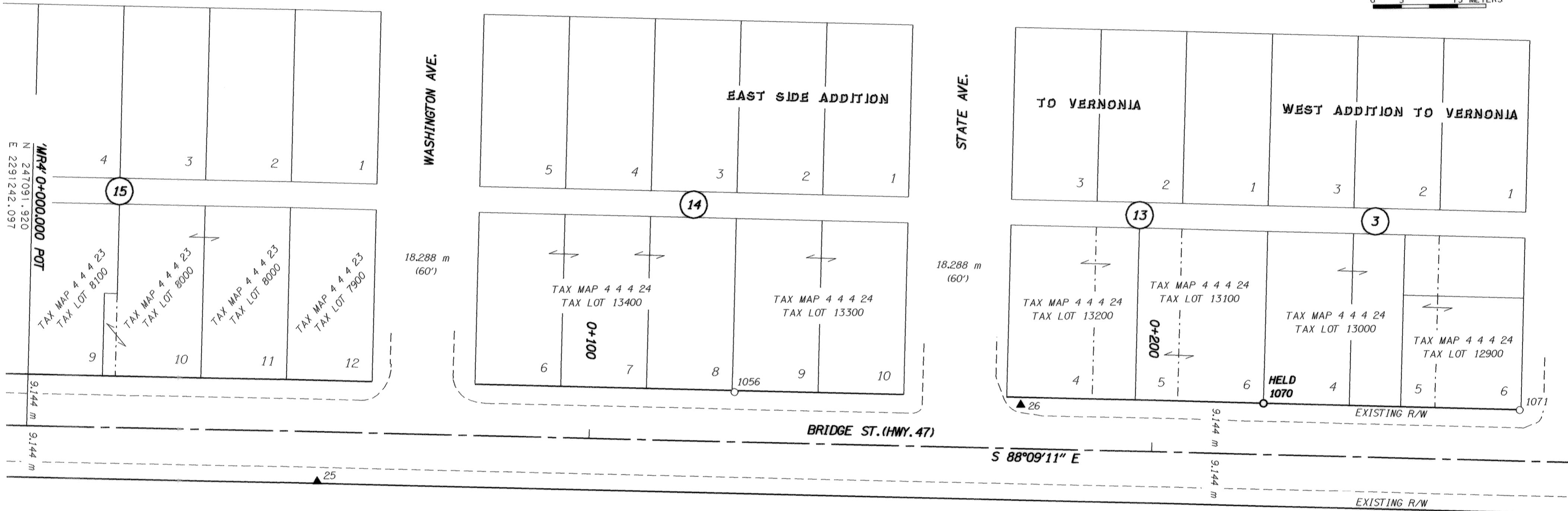
M.P. #61.10 TO M.P. #62.77 ON HWY. #47 (NEHALEM HWY.)
LOCATED IN THE N.W. 1/4 SEC. 3, E. 1/2 SEC. 4, S.W. 1/4 SEC. 4
S.E. 1/4 SEC. 5, T. 4 N., R. 4 W., WILLAMETTE MERIDIAN
COLUMBIA COUNTY, OREGON

DECEMBER 17, 2001



SCALE 1:500

0 5 15 METERS



LEGEND

- FOUND MONUMENT AS NOTED
- ▲ NETWORK CONTROL STATION AS NOTED ON SHEET 2 OF 10
- EXISTING EDGE OF PAVEMENT
- - - ORIGINAL LOT LINE

COORDINATES SHOWN ON THIS SURVEY
ARE LDP CONVERTED FROM NAD83(91)

TIED POSITIONS TO FOUND MONUMENTS

PT.*	NORTHING	EASTING	CENTERLINE STATION	CALCULATED OFFSET	DESCRIPTION
1056	247096.679	2291367.973	'MR4' 0+125.658	8.814 m LT	FOUND 1-1/2" IRON PIPE UNDER CONCRETE WALK (EAST SIDE ADDITION TO VERNONIA)
1070	247093.951	2291461.999	'MR4' 0+219.722	9.117 m LT	FOUND 3/4" IRON PIPE, DOWN 0.04 m (WEST ADDITION TO VERNONIA)
1071	247092.414	2291507.457	'MR4' 0+265.207	9.046 m LT	FOUND 1-1/2" IRON PIPE, DOWN 0.05 m (WEST ADDITION TO VERNONIA)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

Brian P. Tandy
OREGON
JULY 17, 1986
BRIAN P. TANDY
2222

RENEWAL DATE 6-30-2004

OREGON DEPARTMENT
METRIC
OF TRANSPORTATION

REGION 1, SURVEY GROUP
123 NW FLANDERS STREET
PORTLAND, OR 97209-4012
(503) 731-3240

SHEET 4 OF 10

HORIZONTAL CONTROL, RECOVERY & RETRACEMENT SURVEY VERNONIA NCL - SUNSET HWY.

M.P. #61.10 TO M.P. #62.77 ON HWY. #47 (NEHALEM HWY.)

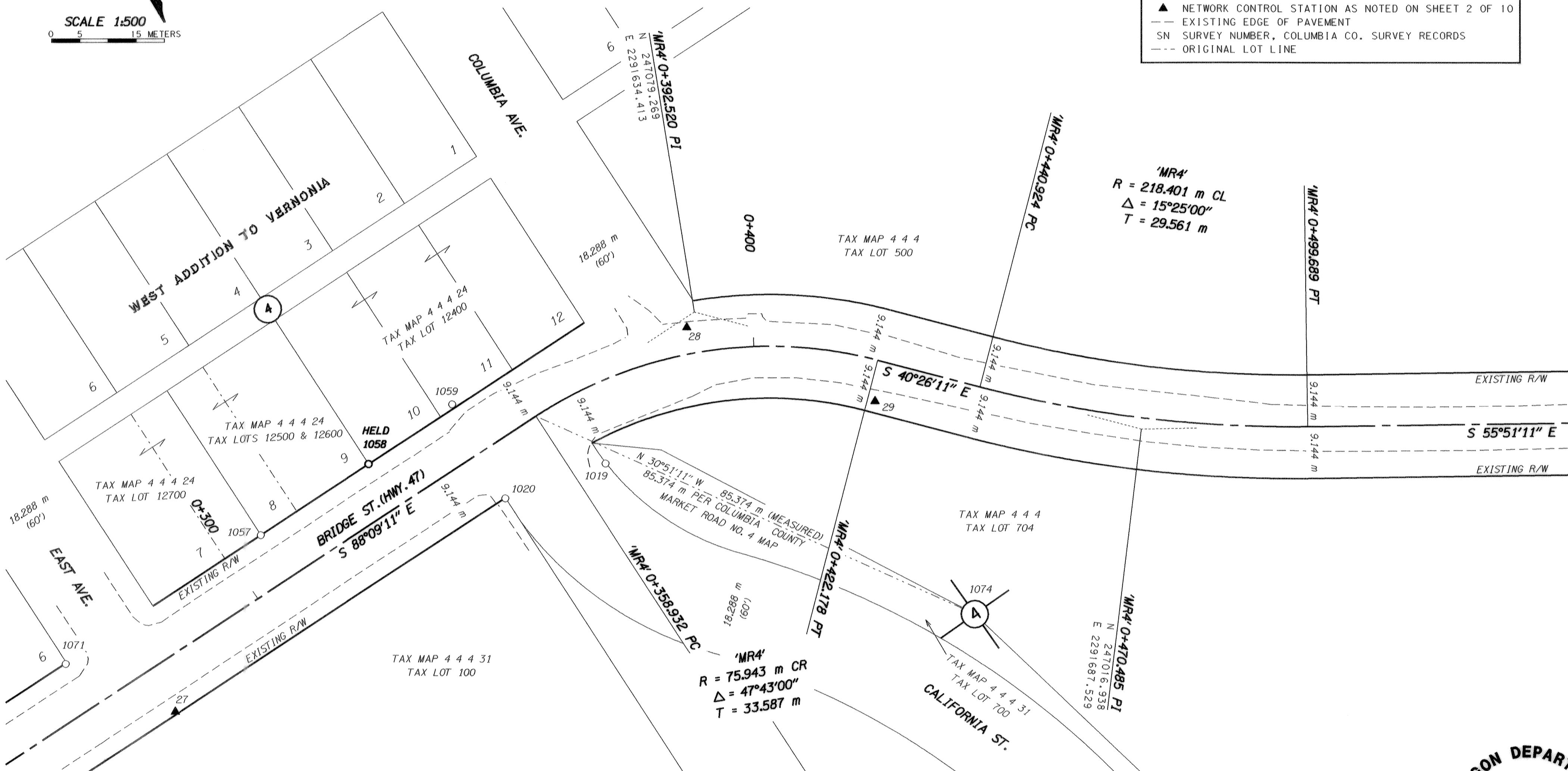
LOCATED IN THE N.W. 1/4 SEC. 3, E. 1/2 SEC. 4, S.W. 1/4 SEC. 4

S.E. 1/4 SEC. 5, T. 4 N., R. 4 W., WILLAMETTE MERIDIAN

COLUMBIA COUNTY, OREGON

DECEMBER 17, 2001

SCALE 1:500
0 5 15 METERS



LEGEND

- FOUND MONUMENT AS NOTED
- ▲ NETWORK CONTROL STATION AS NOTED ON SHEET 2 OF 10
- EXISTING EDGE OF PAVEMENT
- SURVEY NUMBER, COLUMBIA CO. SURVEY RECORDS
- ORIGINAL LOT LINE



REGISTERED
PROFESSIONAL
LAND SURVEYOR

Brian P. Tandy

OREGON
JULY 17, 1986
BRIAN P. TANDY
2222

RENEWAL DATE 6-30-2004

REGION 1, SURVEY GROUP
123 NW FLANDERS STREET
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(503) 731-3240

SHEET 5 OF 10

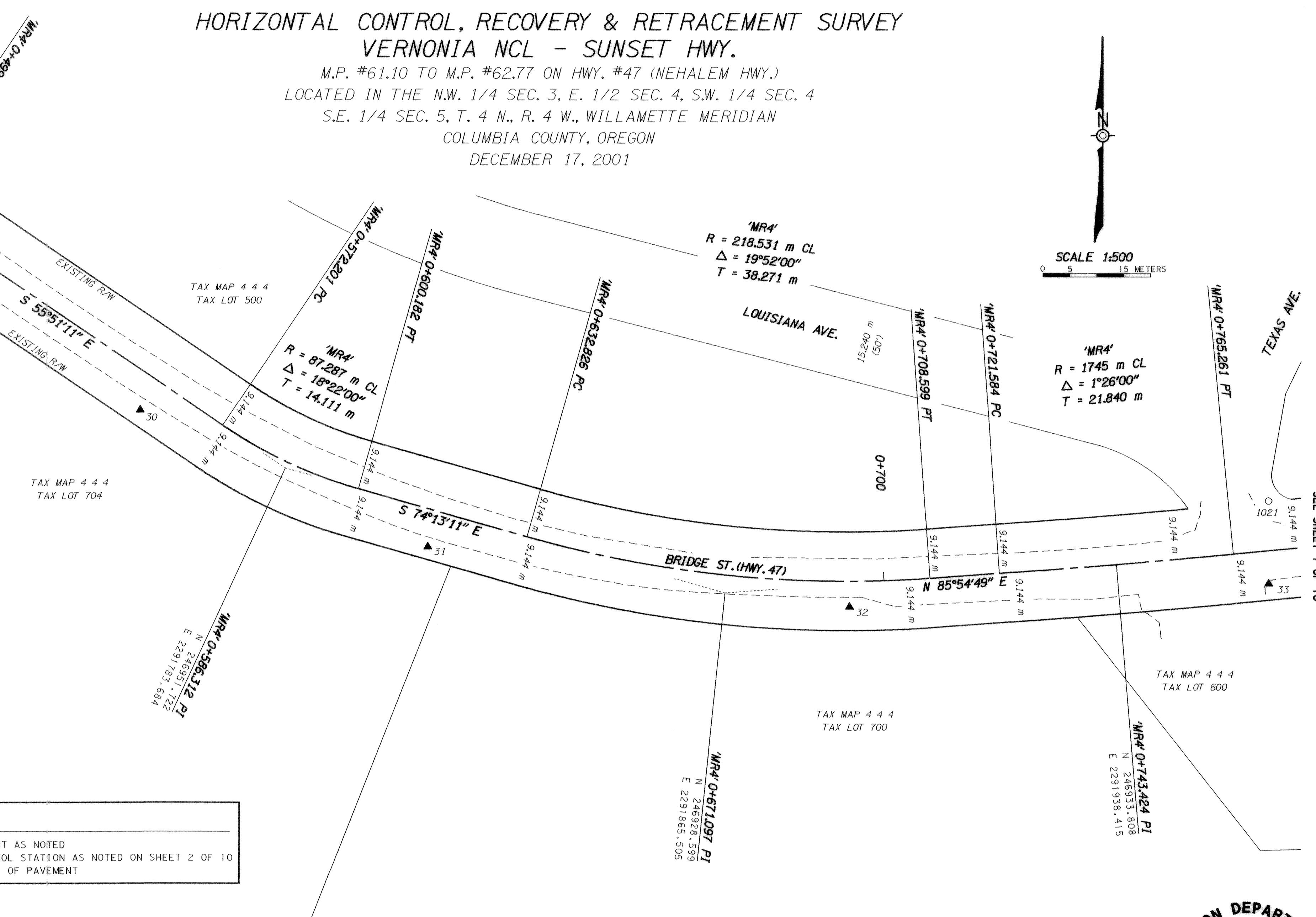
HORIZONTAL CONTROL, RECOVERY & RETRACEMENT SURVEY
VERNONIA NCL - SUNSET HWY.

M.P. #61.10 TO M.P. #62.77 ON HWY. #47 (NEHALEM HWY.)
LOCATED IN THE N.W. 1/4 SEC. 3, E. 1/2 SEC. 4, S.W. 1/4 SEC. 4
S.E. 1/4 SEC. 5, T. 4 N., R. 4 W., WILLAMETTE MERIDIAN
COLUMBIA COUNTY, OREGON
DECEMBER 17, 2001

SEE SHEET 5 OF 10



SCALE 1:500
0 5 15 METERS



LEGEND

- FOUND MONUMENT AS NOTED
- ▲ NETWORK CONTROL STATION AS NOTED ON SHEET 2 OF 10
- EXISTING EDGE OF PAVEMENT

COORDINATES SHOWN ON THIS SURVEY
ARE LDP CONVERTED FROM NAD83(91)

TIED POSITIONS TO FOUND MONUMENTS

PT.#	NORTHING	EASTING	CENTERLINE STATION	CALCULATED OFFSET	DESCRIPTION
1021	246945.797	2291966.713	'MR4' 0+772.742	9.211 m LT	FOUND 1/2" IRON PIPE, DOWN 0.20 m (OREGON AMERICAN SUBDIVISION)

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SHEET 6 OF 10

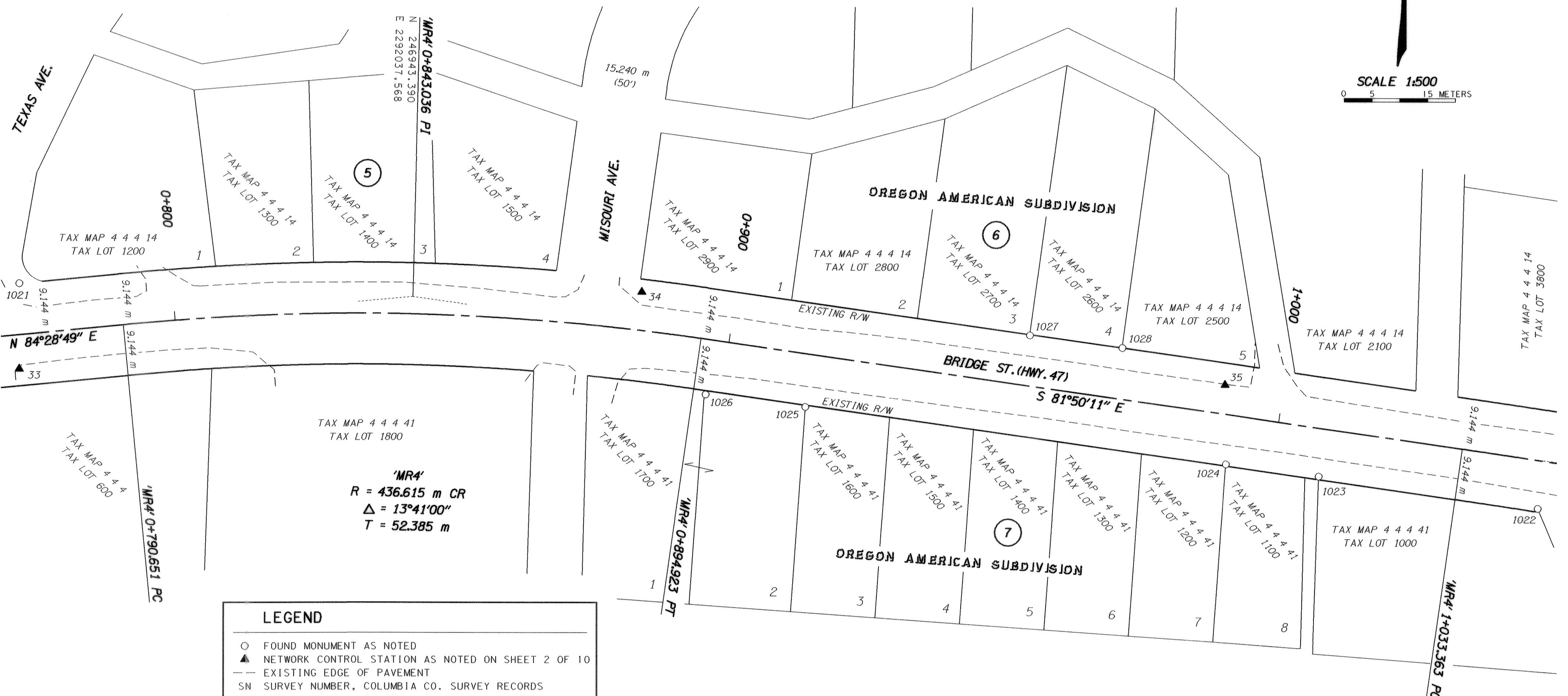
HORIZONTAL CONTROL, RECOVERY & RETRACEMENT SURVEY
VERNONIA NCL - SUNSET HWY.

M.P. #61.10 TO M.P. #62.77 ON HWY. #47 (NEHALEM HWY.)
LOCATED IN THE N.W. 1/4 SEC. 3, E. 1/2 SEC. 4, S.W. 1/4 SEC. 4
S.E. 1/4 SEC. 5, T. 4 N., R. 4 W., WILLAMETTE MERIDIAN
COLUMBIA COUNTY, OREGON

DECEMBER 17, 2001

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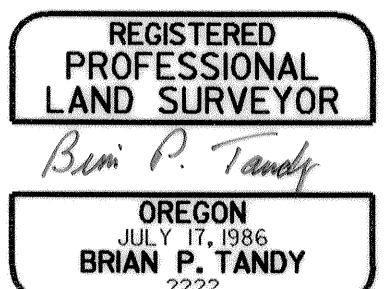
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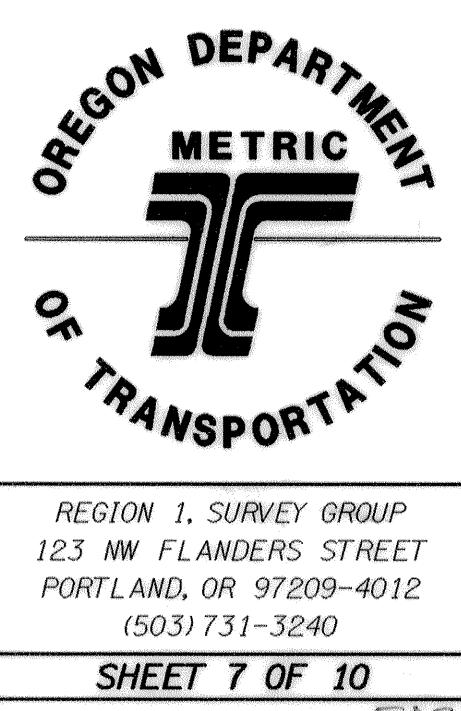
COORDINATES SHOWN ON THIS SURVEY
ARE LDP CONVERTED FROM NAD83(91)

TIED POSITIONS TO FOUND MONUMENTS

PT. #	NORTHING	EASTING	CENTERLINE STATION	CALCULATED OFFSET	DESCRIPTION
1021	246945.797	2291966.713	'MR4' 0+772.742	9.211 m LT	FOUND 1/2" IRON PIPE, DOWN 0.20 m (OREGON AMERICAN SUBDIVISION)
1022	246905.616	2292240.054	'MR4' 1+048.410	8.574 m RT	FOUND 5/8" IRON ROD WITH YELLOW PLASTIC CAP STAMPED "RUSSELL PLS 707", FLUSH (SN 3413)
1023	246911.328	2292200.630	'MR4' 1+008.500	8.583 m RT	FOUND 5/8" IRON ROD WITH YELLOW PLASTIC CAP STAMPED "RUSSELL PLS 707", DOWN 0.15 m (SN 3413)
1024	246913.443	2292183.927	'MR4' 0+991.666	8.861 m RT	FOUND 3/4" IRON PIPE, FLUSH (OREGON AMERICAN SUBDIVISION)
1025	246923.697	2292108.214	'MR4' 0+915.264	9.462 m RT	FOUND 3/4" IRON PIPE, FLUSH (OREGON AMERICAN SUBDIVISION)
1026	246925.880	2292090.251	'MR4' 0+897.173	9.852 m RT	FOUND 1/2" IRON PIPE, DOWN 0.10 m (OREGON AMERICAN SUBDIVISION)
1027	246936.565	2292148.606	'MR4' 0+953.420	9.011 m LT	FOUND 1/2" IRON PIPE, DOWN 0.20 m (OREGON AMERICAN SUBDIVISION)
1028	246934.334	2292165.252	'MR4' 0+970.214	9.166 m LT	FOUND 1/2" IRON PIPE, DOWN 0.15 m (OREGON AMERICAN SUBDIVISION)



RENEWAL DATE 6-30-2004



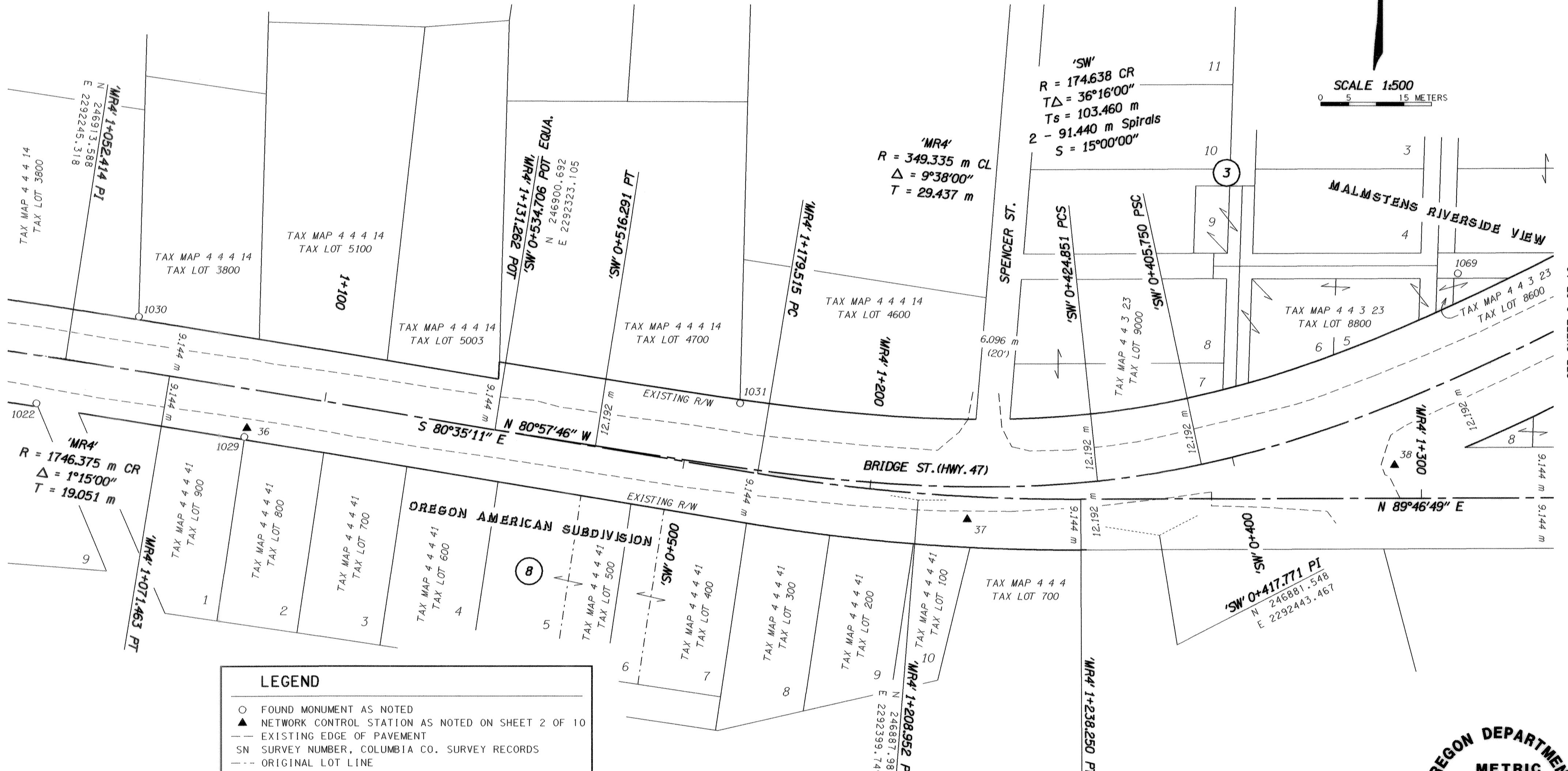
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HORIZONTAL CONTROL, RECOVERY & RETRACEMENT SURVEY
VERNONIA NCL - SUNSET HWY.

M.P. #61.10 TO M.P. #62.77 ON HWY. #47 (NEHALEM HWY.)
LOCATED IN THE N.W. 1/4 SEC. 3, E. 1/2 SEC. 4, S.W. 1/4 SEC. 4
S.E. 1/4 SEC. 5, T. 4 N., R. 4 W., WILLAMETTE MERIDIAN
COLUMBIA COUNTY, OREGON
DECEMBER 17, 2001

SEE SHEET 7 OF 10



COORDINATES SHOWN ON THIS SURVEY
ARE LDP CONVERTED FROM NAD83(91)

TIED POSITIONS TO FOUND MONUMENTS

PT. #	NORTHING	EASTING	CENTERLINE STATION	CALCULATED OFFSET	DESCRIPTION
1022	246905.616	2292240.054	'MR4' 1+048.410	8.574 m RT	FOUND 5/8" IRON ROD WITH YELLOW PLASTIC CAP STAMPED "RUSSELL PLS 707", FLUSH (SN 3413)
1029	246899.462	2292277.688	'MR4' 1+086.658	8.642 m RT	FOUND 5/8" IRON ROD WITH YELLOW PLASTIC CAP STAMPED "L. JERRY KEENON PLS 1080", FLUSH (UNKNOWN RECORD)
1030	246921.188	2292258.568	'MR4' 1+064.282	9.679 m LT	FOUND 5/8" IRON ROD (NO CAP), FLUSH (SN 1022)
1031	246905.491	2292367.506	'SW' 0+491.384	11.555 m RT	FOUND 5/8" IRON ROD WITH YELLOW PLASTIC CAP STAMPED "KEENON LAND SERVICES INC", FLUSH (SN 3868)
1069	246928.934	2292497.543	'SW' 0+348.637	16.982 m RT	FOUND 5/8" IRON ROD WITH YELLOW PLASTIC CAP STAMPED "L. JERRY KEENON PLS 1080", FLUSH (SN 3523)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

Brian P. Tandy

OREGON
JULY 17, 1986
BRIAN P. TANDY
2222

RENEWAL DATE 6-30-2004



REGION 1, SURVEY GROUP
123 NW FLANDERS STREET
PORTLAND, OR 97209-4012
(503) 731-3240

SHEET 8 OF 10

5024
80F10

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9517

LEGEND

- O FOUND MONUMENT AS NOTED
 - ★ G.P.S. MONUMENT AS NOTED ON SHEET 2 OF 10
 - ▲ NETWORK CONTROL STATION AS NOTED ON SHEET 2 OF 1
 - △ NETWORK CONTROL STATION AS NOTED ON SHEET 2 OF 1
 - EXISTING EDGE OF PAVEMENT
 - SN SURVEY NUMBER, COLUMBIA CO. SURVEY RECORDS

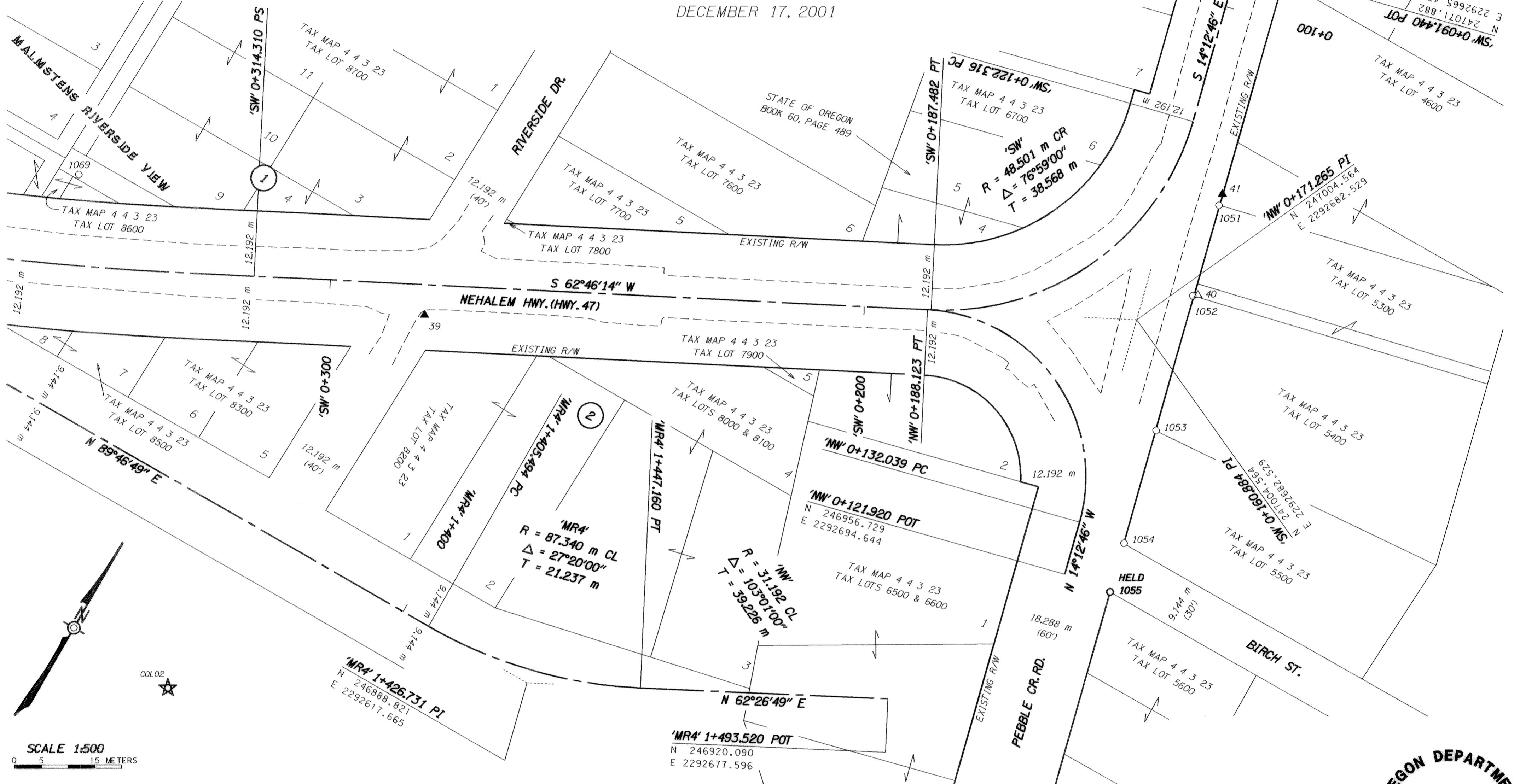
HORIZONTAL CONTROL, RECOVERY & RETRACEMENT SURVEY
VERNONIA NCL - SUNSET HWY.

M.P. #61.10 TO M.P. #62.77 ON HWY. #47 (NEHALEM HWY.)
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S.E. 1/4 SEC. 5, T. 4 N., R. 4 W., WILLAMETTE MERIDIAN

COLUMBIA COUNTY, OREGON

DECEMBER 17, 200

SSEE SHEET 8 OF 10



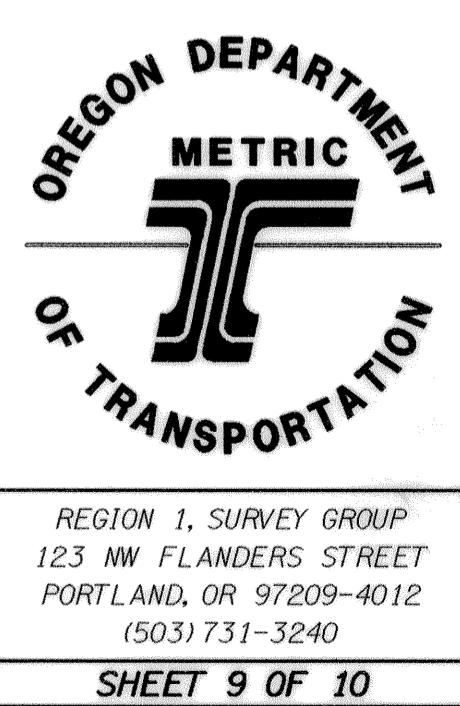
COORDINATES SHOWN ON THIS SURVEY
ARE LDP CONVERTED FROM NAD83(91)

TIED POSITIONS TO FOUND MONUMENTS

PT. *	NORTHING	EASTING	CENTERLINE	CALCULATED		DESCRIPTION
			STATION	OFFSET		
1051	247030.881	2292685.112				FOUND 5/8" IRON ROD WITH YELLOW PLASTIC CAP STAMPED "KEENON LAND SERVICES INC", FLUSH (UNKNOWN RECORD)
1052	247013.800	2292689.304				FOUND 5/8" IRON ROD WITH YELLOW PLASTIC CAP (UNREADABLE), BENT NORTH, FLUSH (UNKNOWN RECORD)
1053	246988.565	2292695.973				FOUND 3/4" IRON PIPE, DOWN 0.12 m (UNKNOWN RECORD)
1054	246967.309	2292701.328	'NW' 0+130.535	9.077 m RT		FOUND 3/4" IRON PIPE, DOWN 0.06 m (FIRST ADDITION TO RIVER VIEW LOTS)
1055	246958.104	2292703.652	'NW' 0+121.041	9.069 m RT		FOUND 3/4" IRON PIPE, BENT SOUTH, DOWN 0.04 m (FIRST ADDITION TO RIVER VIEW LOTS)
1069	246928.934	2292497.543				FOUND 5/8" IRON ROD WITH YELLOW PLASTIC CAP STAMPED "L. JERRY KEENON PLS 1080", FLUSH (SN 3523)



RENEWAL DATE 6-30-2024



REGION 1, SURVEY GROUP
123 NW FLANDERS STREET
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SHEET 9 OF 10

HORIZONTAL CONTROL, RECOVERY & RETRACEMENT SURVEY
VERNONIA NCL - SUNSET HWY.

M.P. #61.10 TO M.P. #62.77 ON HWY. #47 (NEHALEM HWY.)

LOCATED IN THE N.W. 1/4 SEC. 3, E. 1/2 SEC. 4, S.W. 1/4 SEC. 4

S.E. 1/4 SEC. 5, T. 4 N., R. 4 W., WILLAMETTE MERIDIAN

COLUMBIA COUNTY, OREGON

DECEMBER 17, 2001

SCALE 1:500

0 5 15 METERS



LEGEND

- FOUND MONUMENT AS NOTED
- ▲ NETWORK CONTROL STATION AS NOTED ON SHEET 2 OF 10
- - EXISTING EDGE OF PAVEMENT

COORDINATES SHOWN ON THIS SURVEY
ARE LDP CONVERTED FROM NAD83(91)

TIED POSITIONS TO FOUND MONUMENTS

PT. #	NORTHING	EASTING	DESCRIPTION
1032	247282.911	2292621.517	FOUND 5/8" IRON ROD WITH YELLOW PLASTIC CAP STAMPED "KEENON LAND SERVICES INC", DOWN 0.10 m (UNKNOWN RECORD)
1033	247252.503	2292629.179	FOUND 1/2" IRON PIPE, DOWN 0.20 m (FIRST ADDITION TO RIVER VIEW LOTS)
1050	247298.110	2292617.724	FOUND 5/8" IRON ROD WITH YELLOW PLASTIC CAP STAMPED "KEENON LAND SERVICES INC", FLUSH (UNKNOWN RECORD)

REGISTERED
PROFESSIONAL
LAND SURVEYOR

Brian P. Tandy
OREGON
JULY 17, 1986
BRIAN P. TANDY
2222

RENEWAL DATE 6-30-2004

REGION 1, SURVEY GROUP
123 NW FLANDERS STREET
PORTLAND, OR 97209-4012
(503) 731-3240

SHEET 10 OF 10



SEE SHEET 9 OF 10

SD24
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