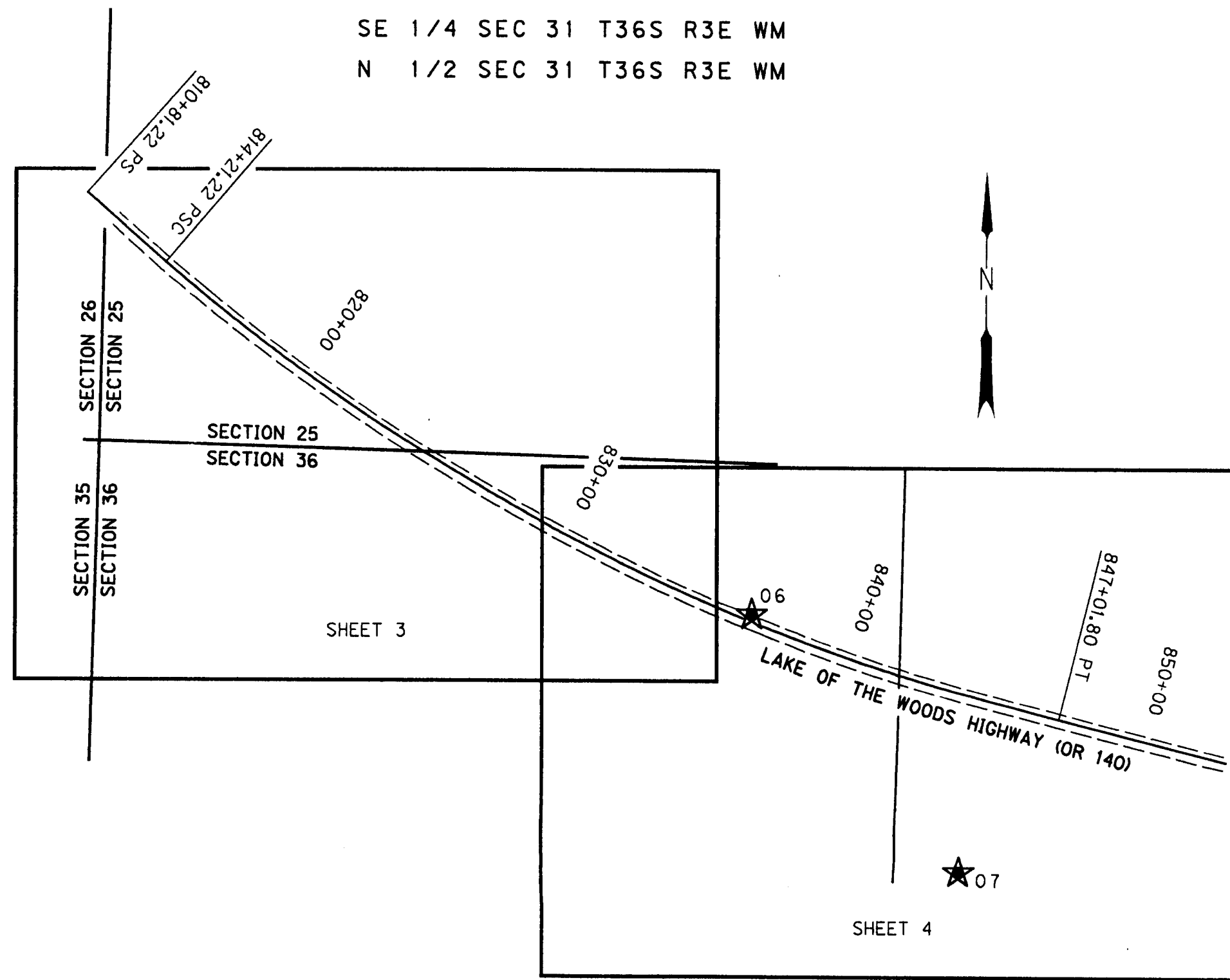


★05

SW 1/4 SEC 25 T36S R2E WM  
 SE 1/4 SEC 26 T36S R2E WM  
 N 1/2 SEC 36 T36S R2E WM  
 SE 1/4 SEC 31 T36S R3E WM  
 N 1/2 SEC 31 T36S R3E WM

**\*\* RECEIVED \*\***  
 Date 1-19-06 By BB  
 This survey consists of:  
4 sheet(s) Map  
6 page(s) Narrative  
 JACKSON COUNTY  
 SURVEYOR



**SHEET LAYOUT DIAGRAM**  
 NOT TO SCALE

**NARRATIVE**

THE PURPOSE OF THIS SURVEY IS TO RESOLVE THE FIELD LOCATION OF THE EXISTING RIGHT OF WAY FOR A PORTION OF LAKE OF THE WOODS HIGHWAY (OR 140) FROM MILEPOST 18.5 TO MILEPOST 19 FOR THE FUTURE SLOPE STABILIZATION. THIS SURVEY IS ALSO TO PERPETUATE ANY EXISTING SURVEY MONUMENTS THAT LIE NEAR THE FUTURE STABILIZATION OF SAID SLOPES. PERPETUATION OF THE MONUMENT LOCATIONS WAS ACCOMPLISHED BY TIEING THE MONUMENTS TO THE PROJECT CONTROL NETWORK. THIS SURVEY WAS MADE AT THE REQUEST OF THE OREGON DEPARTMENT OF TRANSPORTATION. THIS SURVEY MEETS THE REQUIREMENTS FOR A RECOVERY SURVEY AS OUTLINED IN THE OREGON REVISED STATUTES, CHAPTER 209.155.

THIS SURVEY WAS PERFORMED IN INTERNATIONAL FEET UNITS.

CONTROL POINTS FOR THIS SURVEY WERE NOT SET ON AND DO NOT REPRESENT PROPERTY LINES OR RIGHT OF WAY LINES AND ARE INTENDED FOR USE BY THE OREGON DEPARTMENT OF TRANSPORTATION, MURRAY SMITH & ASSOCIATES AND OBEC CONSULTING ENGINEERS IN SUPPORT OF FUTURE PROJECTS. IT IS NOT THE INTENT OF THE OREGON DEPARTMENT OF TRANSPORTATION, MURRAY SMITH & ASSOCIATES OR OBEC CONSULTING ENGINEERS TO PERPETUATE THESE CONTROL POINTS AS MONUMENTS.

THIS SURVEY WAS PERFORMED IN OCTOBER AND NOVEMBER OF 2005. THE SURVEY EQUIPMENT CONSISTED OF TWO TRIMBLE 4400 GPS RECEIVERS, A TRIMBLE 4700 GPS RECEIVER, A TRIMBLE 5700 GPS RECEIVER, TWO TRIMBLE R8 GPS RECEIVERS, FOUR TSCI DATA COLLECTORS, A TRIMBLE ACU DATA COLLECTOR, A TRIMBLE TCU DATA COLLECTOR, AND A TRIMBLE 5603 ROBOTIC TOTAL STATION.

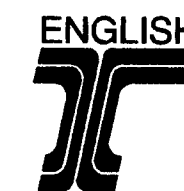
**LAKE OF THE WOODS HIGHWAY (OR 140)**

THE RESOLUTION OF THE RIGHT OF WAY OF LAKE OF THE WOODS HIGHWAY WAS COMPLETED UTILIZING THE OREGON DEPARTMENT OF TRANSPORTATION ROLL MAP 8B-17-1. THE RECORD SHAPE OF THE ALIGNMENT FROM CENTER LINE STATIONS 810+81.21 PS TO STATION 877+66.74 P.S. WAS RECREATED PER SAID ODOT DRG 8B-17-1. MONUMENTS TIED AT RECORD STATIONS 814+21.21 AND 877+66.74 WERE HELD TO ORIENTATE THIS PORTION OF THE ALIGNMENT. STATIONING WAS HELD AT POINT NO. 1020 (859+00.00). THE RESULTING CENTERLINE ALIGNMENT FOR LAKE OF THE WOODS HIGHWAY FIT WELL IN OFFSET WITH EXISTING MONUMENTATION FOUND ALONG THE RIGHT OF WAY, HOWEVER, THE CENTER LINE ALIGNMENT DID NOT FIT WELL IN STATIONING WITH MONUMENTATION FOUND ALONG THE RIGHT OF WAY OF LAKE OF THE WOODS HIGHWAY AS SHOWN IN THE STATION OFFSET REPORT IN THE RECOVERED MONUMENT LIST.

**REFERENCES**

ODOT DRG 8B-17-1 HANLEY RANCH - FOREST BOUNDARY SECTION

LEGEND	
★	SET GPS POINT



REGISTERED  
 PROFESSIONAL  
 LAND SURVEYOR

*Bret Elithorp*

OREGON  
 JAN. 14, 2003  
 BRET N. ELITHORP  
 63148

RENEWAL DATE: DEC. 31, 2007  
 SIGNED: 1-20-06

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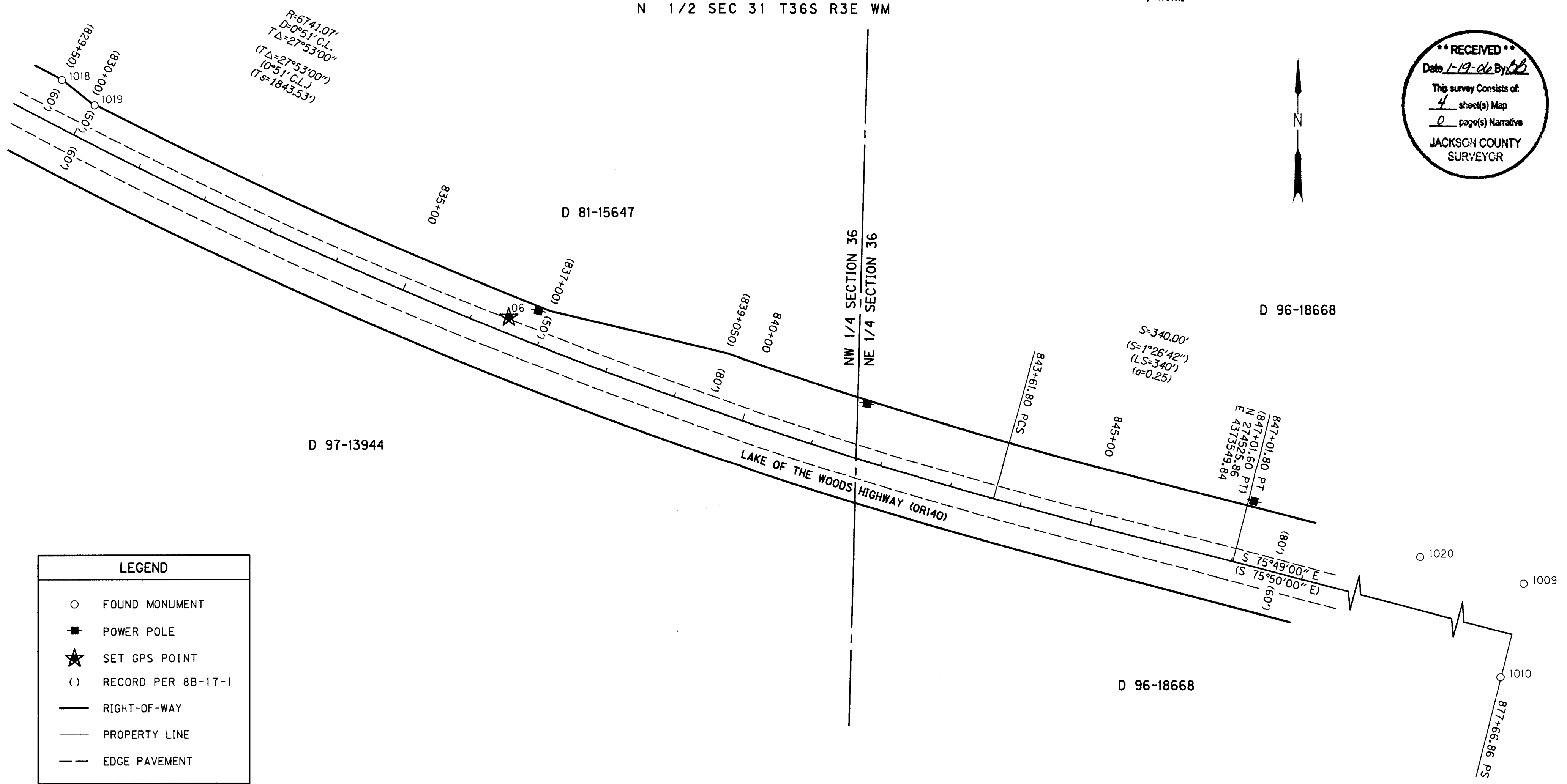
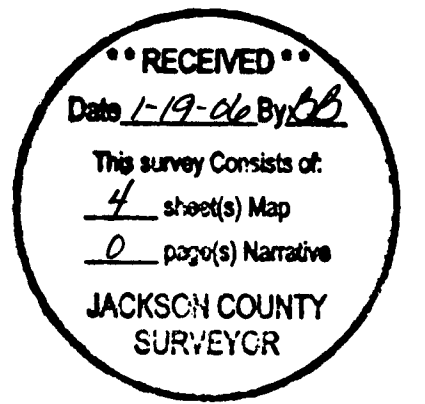
**HORIZONTAL CONTROL,  
 RECOVERY AND RETRACEMENT MAP  
 OR 140 N. FORK LITTLE BUTTE CR.-GREEN SPRINGS HWY.  
 WEST SECTION - MP 18.5 TO MP 19.0  
 JACKSON COUNTY**

ODOT KEY NO. 14211  
 JANUARY 18, 2005  
 NO SCALE

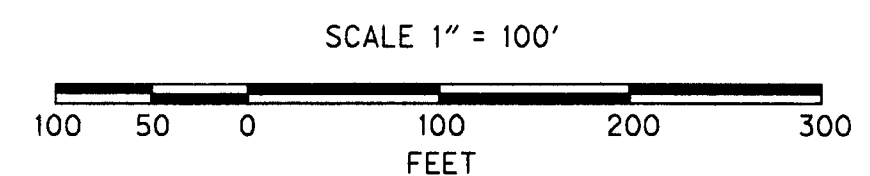
APPROVED BY: <i>[Signature]</i> OBEC SURVEY GROUP MANAGER TITLE	DESIGNED: B. ELITHORP	PROJ. NO. 590-10	SHT. 1 OF 4
	DRAWN: R. ODEAR	CHK'D: J. PARIANI	FILE NO. 15940S

SW 1/4 SEC 25 T36S R2E WM  
 SE 1/4 SEC 26 T36S R2E WM  
 N 1/2 SEC 36 T36S R2E WM  
 SE 1/4 SEC 31 T36S R3E WM  
 N 1/2 SEC 31 T36S R3E WM

SEC. 25, T.36S., R.2E., W.M.  
 SEC. 36, T.36S., R.2E., W.M.

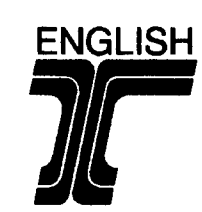


LEGEND	
○	FOUND MONUMENT
■	POWER POLE
★	SET GPS POINT
( )	RECORD PER 8B-17-1
—	RIGHT-OF-WAY
—	PROPERTY LINE
- - -	EDGE PAVEMENT



RECOVERED MONUMENT LIST

PT. ID.	LDP NORTHING	LDP EASTING	STATION	OFFSET	DATE	DESCRIPTION & REFERENCE DOCUMENTS
1009	273842.94	4376537.80	877+65.90	70.02' LT	10-21-2005	FND 1/2" IRON ROD - FLUSH, ODOT DRG. NO. 8B-17-1
1010	273716.81	4376506.15	877+66.12	60.02' RT	10-21-2005	FND 1/2" IRON ROD - FLUSH, ODOT DRG. NO. 8B-17-1
1018	275183.66	4371939.17	829+50.66	59.46' LT	11-14-2005	FND 1/2" IRON ROD - DOWN 4", ODOT DRG. NO. 8B-17-1
1019	275148.90	4371983.93	830+06.85	49.18' LT	11-14-2005	FND 1/2" IRON ROD - DOWN 3", ODOT DRG. NO. 8B-17-1
1020	274300.17	4374728.79	859+00.00	70.06' LT	11-14-2005	FND 1/2" IRON ROD - FLUSH, ODOT DRG. NO. 8B-17-1



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*Bret N. Elithorp*  
 OREGON  
 JAN. 14, 2003  
 BRET N. ELITHORP  
 63148

RENEWAL DATE: DEC. 31, 2007  
 SIGNED: *B. N. Elithorp*

APPROVED BY: *Bret N. Elithorp* OBEC  
 SURVEY GROUP MANAGER TITLE

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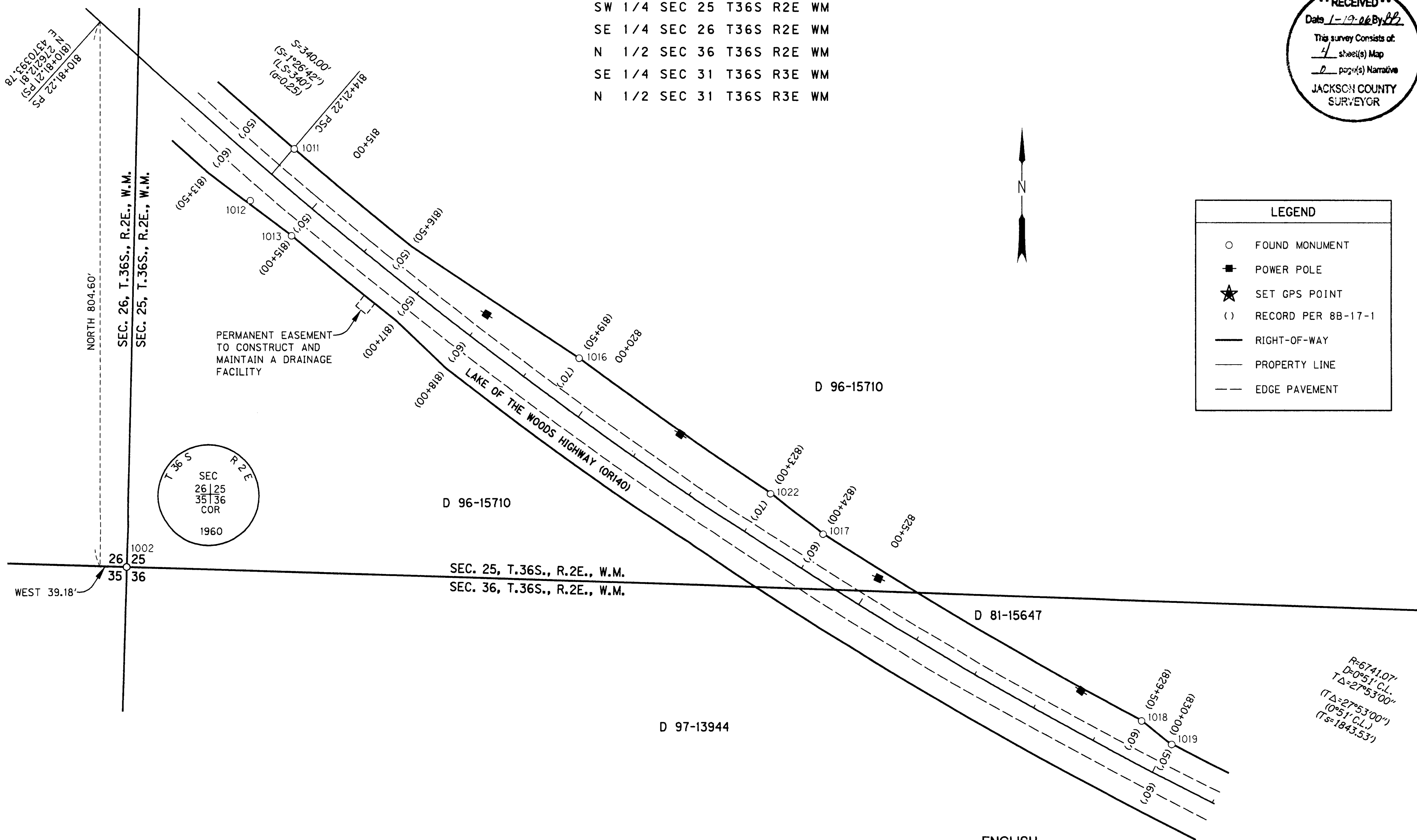
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 JACKSON COUNTY

ODOT KEY NO. 14211  
 JANUARY 18, 2005  
 SCALE 1"=100'  
 DESIGNED: B. ELITHORP  
 PROJ. NO. 590-10 SHT. 4 OF 4  
 DRAWN: R. ODEAR  
 CHK'D: J. PARIANI  
 FILE NO. 15943S

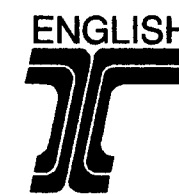
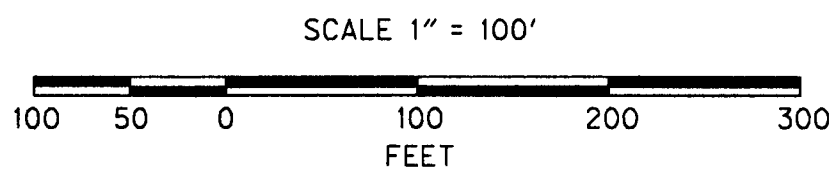
SW 1/4 SEC 25 T36S R2E WM  
 SE 1/4 SEC 26 T36S R2E WM  
 N 1/2 SEC 36 T36S R2E WM  
 SE 1/4 SEC 31 T36S R3E WM  
 N 1/2 SEC 31 T36S R3E WM

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 Date 1-19-06 By BEL  
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2 page(s) Narrative  
 JACKSON COUNTY  
 SURVEYOR



RECOVERED MONUMENT LIST

PT. ID.	LDP NORTHING	LDP EASTING	STATION	OFFSET	DATE	DESCRIPTION & REFERENCE DOCUMENTS
1002	275408.21	4370432.96	N/A	N/A	10-20-2005	FND 2 1/2" BRASS DISK SET IN 1" O.D. IRON PIPE - EXPOSED 12"
1011	276024.26	4370681.62	814+22.41	50.00' LT	10-26-2005	FND 1/2" IRON ROD - FLUSH, BENT NORTH, ODOT DRG. NO. 8B-17-1
1012	275948.31	4370616.48	814+22.40	50.05' RT	10-26-2005	FND 1/2" IRON ROD - DOWN 4", BENT EAST, ODOT DRG. NO. 8B-17-1
1013	275896.24	4370677.79	815+02.24	50.5' RT	10-26-2005	FND 5/8" IRON ROD - DOWN 6", ODOT DRG. NO. 8B-17-1
1016	275715.07	4371104.46	819+50.69	70.05' LT	11-14-2005	FND 1/2" IRON ROD - FLUSH, ODOT DRG. NO. 8B-17-1
1017	275456.03	4371466.89	824+00.46	59.58' LT	11-14-2005	FND 1/2" IRON ROD - DOWN 1", ODOT DRG. NO. 8B-17-1
1018	275183.66	4371939.17	829+50.66	59.46' LT	11-14-2005	FND 1/2" IRON ROD - DOWN 4", ODOT DRG. NO. 8B-17-1
1019	275148.90	4371983.93	830+06.85	49.18' LT	11-14-2005	FND 1/2" IRON ROD - DOWN 3", ODOT DRG. NO. 8B-17-1
1022	275517.37	4371388.93	823+00.76	69.05' LT	11-15-2005	FND 1/2" IRON ROD - EXPOSED 1", ODOT DRG. NO. 8B-17-1



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 OREGON  
 JAN. 14, 2003  
 BRET N. ELITHORP  
 63148

RENEWAL DATE: DEC. 31, 2007  
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APPROVED BY: *[Signature]* OBEC  
 SURVEY GROUP MANAGER TITLE

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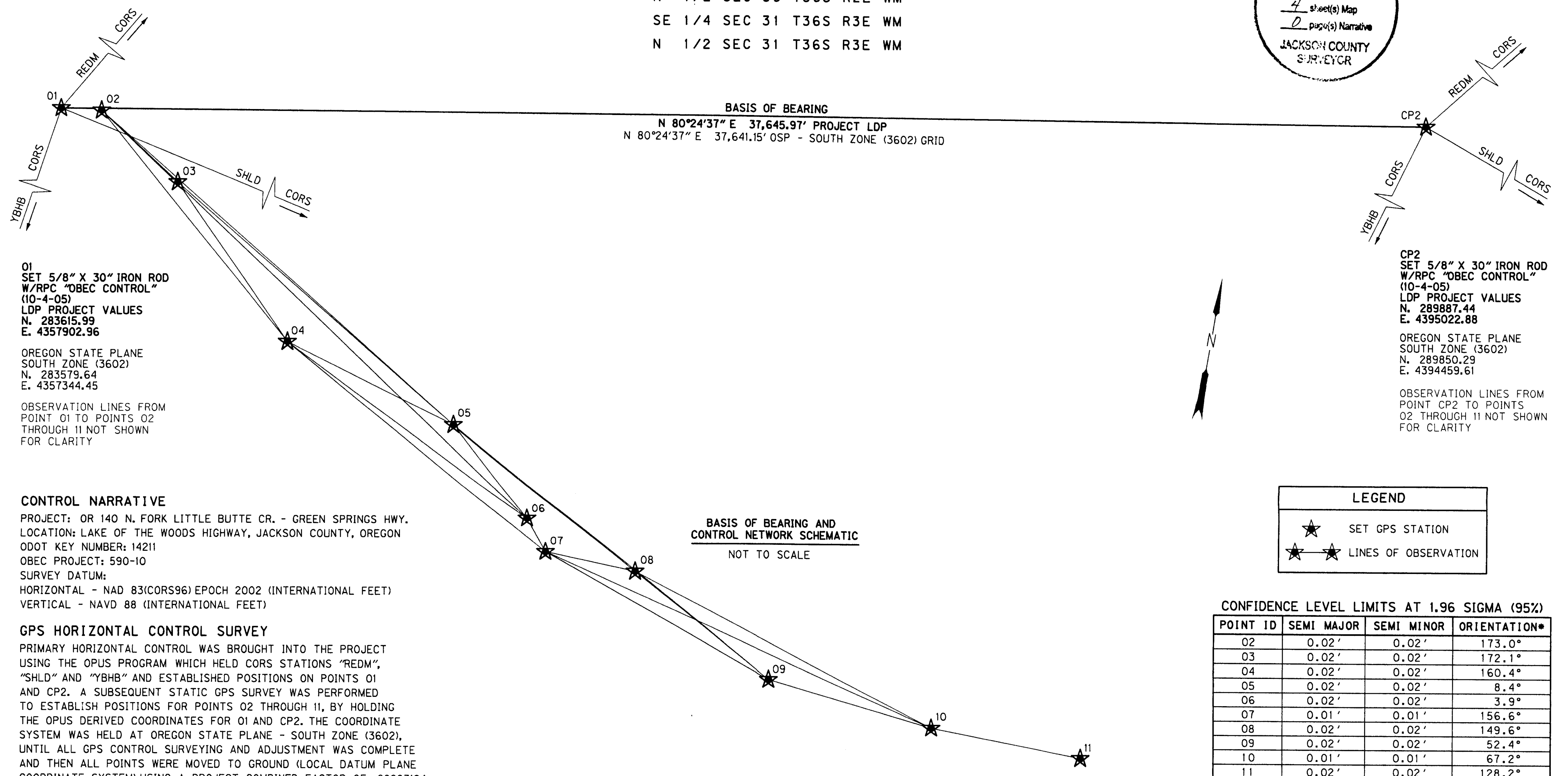
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HORIZONTAL CONTROL,  
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 JACKSON COUNTY

ODOT KEY NO. 14211  
 JANUARY 18, 2005  
 SCALE 1"=100'  
 DESIGNED: B. ELITHORP  
 PROJ. NO. 590-10 SHT. 3 OF 4  
 DRAWN: R. ODEAR  
 CHK'D: J. PARIANI  
 FILE NO. 15942S

SW 1/4 SEC 25 T36S R2E WM  
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 JACKSON COUNTY  
 SURVEYOR



01  
 SET 5/8" X 30" IRON ROD  
 W/RPC "OBEC CONTROL"  
 (10-4-05)  
 LDP PROJECT VALUES  
 N. 283615.99  
 E. 4357902.96  
 OREGON STATE PLANE  
 SOUTH ZONE (3602)  
 N. 283579.64  
 E. 4357344.45

CP2  
 SET 5/8" X 30" IRON ROD  
 W/RPC "OBEC CONTROL"  
 (10-4-05)  
 LDP PROJECT VALUES  
 N. 289887.44  
 E. 4395022.88  
 OREGON STATE PLANE  
 SOUTH ZONE (3602)  
 N. 289850.29  
 E. 4394459.61

OBSERVATION LINES FROM  
 POINT 01 TO POINTS 02  
 THROUGH 11 NOT SHOWN  
 FOR CLARITY

OBSERVATION LINES FROM  
 POINT CP2 TO POINTS  
 02 THROUGH 11 NOT SHOWN  
 FOR CLARITY

**CONTROL NARRATIVE**

PROJECT: OR 140 N. FORK LITTLE BUTTE CR. - GREEN SPRINGS HWY.  
 LOCATION: LAKE OF THE WOODS HIGHWAY, JACKSON COUNTY, OREGON  
 ODOT KEY NUMBER: 14211  
 OBEC PROJECT: 590-10  
 SURVEY DATUM:  
 HORIZONTAL - NAD 83(CORS96) EPOCH 2002 (INTERNATIONAL FEET)  
 VERTICAL - NAVD 88 (INTERNATIONAL FEET)

**GPS HORIZONTAL CONTROL SURVEY**

PRIMARY HORIZONTAL CONTROL WAS BROUGHT INTO THE PROJECT USING THE OPUS PROGRAM WHICH HELD CORS STATIONS "REDM", "SHLD" AND "YBHB" AND ESTABLISHED POSITIONS ON POINTS 01 AND CP2. A SUBSEQUENT STATIC GPS SURVEY WAS PERFORMED TO ESTABLISH POSITIONS FOR POINTS 02 THROUGH 11, BY HOLDING THE OPUS DERIVED COORDINATES FOR 01 AND CP2. THE COORDINATE SYSTEM WAS HELD AT OREGON STATE PLANE - SOUTH ZONE (3602), UNTIL ALL GPS CONTROL SURVEYING AND ADJUSTMENT WAS COMPLETE AND THEN ALL POINTS WERE MOVED TO GROUND (LOCAL DATUM PLANE COORDINATE SYSTEM) USING A PROJECT COMBINED FACTOR OF .99987184. TO CONVERT THE PROJECT LDP COORDINATES TO THE OREGON COORDINATE SYSTEM - SOUTH ZONE NAD 83 (CORS96) EPOCH 2002, MULTIPLY THE COORDINATE VALUES BY A COMBINED FACTOR OF 0.99987184.

**BASIS OF BEARING AND CONTROL NETWORK SCHEMATIC**  
 NOT TO SCALE

**LEGEND**

- ★ SET GPS STATION
- ★-★ LINES OF OBSERVATION

**CONFIDENCE LEVEL LIMITS AT 1.96 SIGMA (95%)**

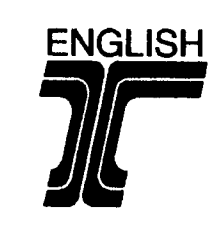
POINT ID	SEMI MAJOR	SEMI MINOR	ORIENTATION*
02	0.02'	0.02'	173.0°
03	0.02'	0.02'	172.1°
04	0.02'	0.02'	160.4°
05	0.02'	0.02'	8.4°
06	0.02'	0.02'	3.9°
07	0.01'	0.01'	156.6°
08	0.02'	0.02'	149.6°
09	0.02'	0.02'	52.4°
10	0.01'	0.01'	67.2°
11	0.02'	0.02'	128.2°

\* NORTH AZIMUTH  
 FIXED POINTS NOT SUBJECT TO LEAST SQUARES  
 ADJUSTMENT OR CONFIDENCE LEVEL ANALYSIS: 01, CP2

**NETWORK POINT COORDINATE TABLE**

RPC= RED PLASTIC CAP

PT. ID.	LDP NORTHING	LDP EASTING	DATE	DESCRIPTION
01	283615.99	4357902.96	10/04/05	SET 5/8" X 30" IRON ROD W/RPC MARKED "OBEC CONTROL"
02	283748.61	4359009.14	10/04/05	SET 5/8" X 30" IRON ROD W/RPC MARKED "OBEC CONTROL"
03	282202.31	4361420.58	10/04/05	SET 5/8" X 30" IRON ROD W/RPC MARKED "OBEC CONTROL"
04	278447.18	4365175.85	10/04/05	SET 5/8" X 30" IRON ROD W/RPC MARKED "OBEC CONTROL"
05	277034.42	4370095.02	10/04/05	SET MAGNAIL & WASHER MARKED "OBEC CONTROL"
06	274859.52	4372553.74	10/04/05	SET MAGNAIL & WASHER MARKED "OBEC CONTROL"
07	274026.81	4373226.07	10/04/05	SET 5/8" X 30" IRON ROD W/RPC MARKED "OBEC CONTROL"
08	273939.10	4375749.30	10/05/05	SET 5/8" X 30" IRON ROD W/RPC MARKED "OBEC CONTROL"
09	271730.91	4379900.01	10/05/05	SET 5/8" X 30" IRON ROD W/RPC MARKED "OBEC CONTROL"
10	271235.20	4384535.05	10/05/05	SET MAGNAIL & WASHER MARKED "OBEC CONTROL"
11	271168.29	4388738.67	10/05/05	SET 5/8" X 30" IRON ROD W/RPC MARKED "OBEC CONTROL"
CP2	289887.44	4395022.88	10/04/05	SET 5/8" X 30" IRON ROD W/RPC MARKED "OBEC CONTROL"



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DESIGNED: B. ELITHORP PROJ. NO. 590-10 SHT. 2 OF 4  
 DRAWN: R. ODEAR CHK'D: J. PARIANI FILE NO. 15941S