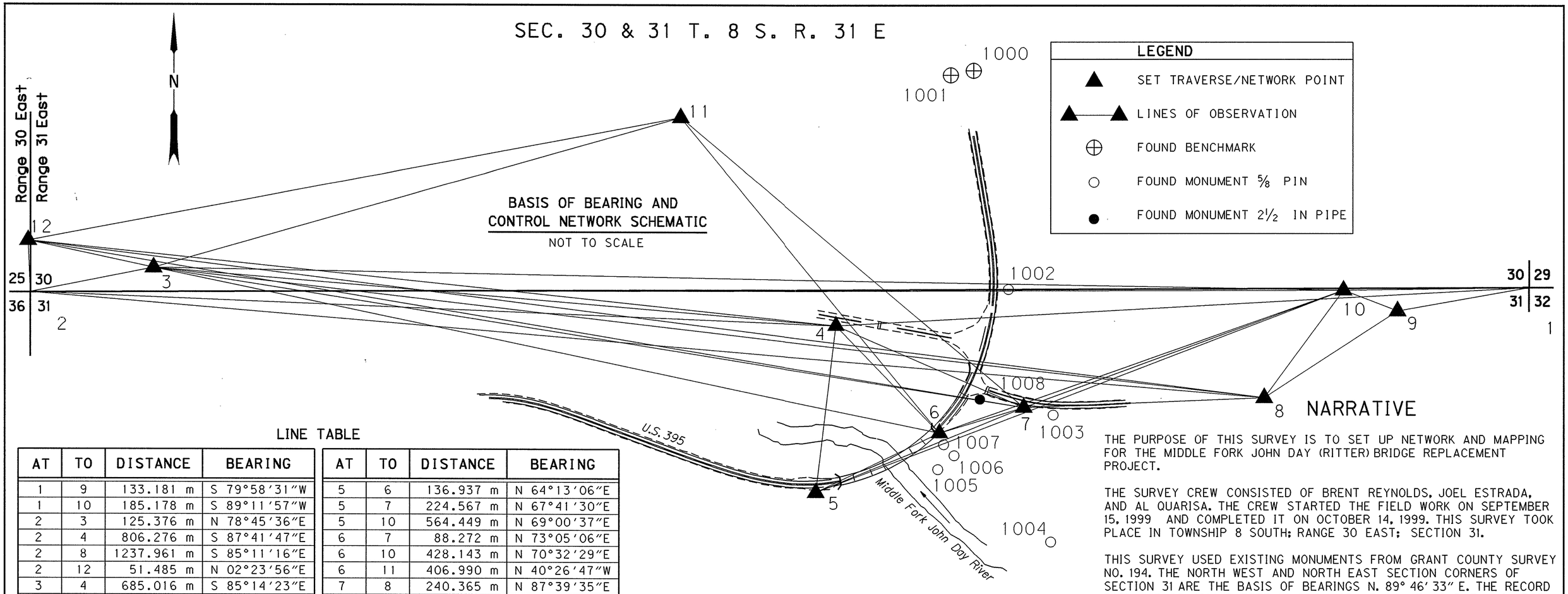
SEC. 30 & 31 T. 8 S. R. 31 E



LINE TABLE

AT	TO	DISTANCE	BEARING
1	9	133.181 m	S 79°58'31"W
1	10	185.178 m	S 89°11'57"W
2	3	125.376 m	N 78°45'36"E
2	4	806.276 m	S 87°41'47"E
2	8	1237.961 m	S 85°11'16"E
2	12	51.485 m	N 02°23'56"E
3	4	685.016 m	S 85°14'23"E
3	6	802.892 m	S 78°13'44"E
3	7	881.349 m	S 80°59'04"E
3	8	1118.011 m	S 83°24'39"E
3	10	1189.885 m	S 88°58'51"E
3	11	547.778 m	N 74°06'23"E
3	12	128.006 m	N 77°49'06"W
4	5	167.695 m	S 06°49'58"W
4	6	148.726 m	S 45°58'40"E
4	7	204.634 m	S 67°23'50"E

AT	TO	DISTANCE	BEARING
5	6	136.937 m	N 64°13'06"E
5	7	224.567 m	N 67°41'30"E
5	10	564.449 m	N 69°00'37"E
6	7	88.272 m	N 73°05'06"E
6	10	428.143 m	N 70°32'29"E
6	11	406.990 m	N 40°26'47"W
7	8	240.365 m	N 87°39'35"E
7	10	339.981 m	N 69°52'53"E
7	11	448.430 m	N 51°58'44"W
7	12	1009.185 m	N 81°24'59"W
8	9	150.742 m	N 56°58'04"E
8	10	133.148 m	N 36°25'52"E
8	12	1245.472 m	N 83°09'46"W
9	10	57.805 m	N 70°52'19"W
11	12	663.466 m	S 79°18'56"W

NETWORK POINT COORDINATE TABLE

PT ID	NORTHING	EASTING	DESCRIPTION
1	10005.860	11497.828	FND 2 1/2 IN GALV IRON PIPE WITH BRASS CAP N E CORNER SECTION 31
2	10000.000	10000.000	FND 1 IN GALV IRON PIPE WITH BRASS CAP N W CORNER SECTION 31
3	10024.438	10122.971	SET 15 mm X 760 mm REBAR WITH ALUM CAP MARKED OSHD N3
4	9967.591	10805.624	SET 15 mm X 760 mm REBAR WITH ALUM CAP MARKED OSHD N4
5	9801.087	10785.673	SET 15 mm X 760 mm REBAR WITH ALUM CAP MARKED OSHD N5
6	9860.647	10908.979	SET 15 mm X 760 mm REBAR WITH ALUM CAP MARKED OSHD N6
7	9886.330	10993.432	SET 15 mm X 760 mm REBAR WITH ALUM CAP MARKED OSHD N7
8	9896.145	11233.597	SET 15 mm X 760 mm REBAR WITH ALUM CAP MARKED OSHD N8
9	9982.677	11366.680	SET 10mm X 30mm NAIL WITH ALUM CAP MARKED OSHD N9
10	10003.272	11312.668	SET RAILROAD SPIKE MARKED "."
11	10174.448	10649.808	SET HUB AND TACK
12	10051.440	9997.845	SET HUB AND PK NAIL
1000	10221.559	10943.021	FND OSHD BRASS DISK IN CONCRETE MARKED RPPOT 39.00 RT 712+00.0 2922 N 11-39
1001	10217.100	10920.021	FND OSHD BRASS DISK IN CONCRETE MARKED RPPOT 39.00 LT 712+00.0 2907 N 11-38
1002	10003.958	10977.896	FND 5/8 IN REBAR AT PROPERTY CORNER
1003	9878.940	11022.749	FND 5/8 IN PIN AT PROPERTY CORNER FOR GRANT COUNTY COUNTRY ESTATES
1004	9751.612	11020.185	FND 5/8 IN PIN AT PROPERTY CORNER FOR GRANT COUNTY COUNTRY ESTATES
1005	9824.037	10907.502	FND 5/8 IN PIN AT PROPERTY CORNER FOR GRANT COUNTY COUNTRY ESTATES
1006	9838.050	10923.789	FND 5/8 IN PIN AT PROP CORNER GRANT CNTY COUNTRY ESTATES HWY STA 699+50 90 FT RT
1007	9849.162	10913.373	FND 5/8 IN PIN AT PROP CORNER GRANT CNTY COUNTRY ESTATES HWY STA 699+50 40 FT RT
1008	9894.457	10949.527	FND 2 1/2 IN PIPE AT INITIAL PROPERTY CORNER FOR GRANT COUNTY COUNTRY ESTATES

NARRATIVE

THE PURPOSE OF THIS SURVEY IS TO SET UP NETWORK AND MAPPING FOR THE MIDDLE FORK JOHN DAY (RITTER) BRIDGE REPLACEMENT PROJECT.

THE SURVEY CREW CONSISTED OF BRENT REYNOLDS, JOEL ESTRADA, AND AL QUARISA. THE CREW STARTED THE FIELD WORK ON SEPTEMBER 15, 1999 AND COMPLETED IT ON OCTOBER 14, 1999. THIS SURVEY TOOK PLACE IN TOWNSHIP 8 SOUTH; RANGE 30 EAST; SECTION 31.

THIS SURVEY USED EXISTING MONUMENTS FROM GRANT COUNTY SURVEY NO. 194. THE NORTH WEST AND NORTH EAST SECTION CORNERS OF SECTION 31 ARE THE BASIS OF BEARINGS N. 89° 46' 33" E. THE RECORD DISTANCE OF 4914.17 FEET IS FROM GRANT COUNTY SURVEY NO. 1503 (MORE RECENT SURVEY) WAS CONVERTED TO METRIC 1497.839 METERS.

NET POINT 2, THE N. W. CORNER OF SECTION 31, WAS ASSIGNED LOCAL COORDINATES (NORTH 10,000.000, EAST 10,000.000). NET POINT 1, THE N. E. CORNER OF SECTION 31, COORDINATES WERE CALCULATED FROM BASIS OF BEARING AND RECORD DISTANCE.

HORIZONTAL LEAST SQUARES ADJUSTMENT WAS THEN CALCULATED IN LISCAD TO ESTABLISH COORDINATES FOR OTHER NETWORK POINTS. THE LEAST SQUARES ADJUSTMENT METHOD PRODUCED ANGULAR AND DISTANCE RESIDUALS (THE AMOUNT THE FIELD OBSERVED MEASUREMENTS WERE CHANGED DUE TO THE ADJUSTMENT). THE ANGULAR RESIDUALS AVERAGED 4.0 SECONDS, WITH THE GREATEST RESIDUAL BEING 13 SECONDS. THE DISTANCE RESIDUALS AVERAGED 6.8 mm THE GREATEST BEING 22 mm. THE NETWORK MEETS ODOT STANDARD.

THE VERTICAL DATA FOR THIS PROJECT WAS OBTAINED FROM OSHD BENCH MARK N 11-39, ELEVATION 2921.563 FEET, CONVERTED TO METRIC 890.492 METERS.

THE DATA WAS OBTAINED, EDITED AND CONVERTED TO A TERRAIN MODEL BY LISCAD (4.1). THE EQUIPMENT USED ON THIS PROJECT WAS A TCA 1810 (98-TS10), AND A LIETZ LEVEL B1.

RECORD WIDTHS HELD UNLESS OTHERWISE NOTED.

RECEIVED AND FILED
MAR 14, 2000
OFFICE OF COUNTY SURVEYOR
GRANT COUNTY, OREGON

METRIC SURVEY

REGISTERED PROFESSIONAL LAND SURVEYOR
K W Eddy
OREGON
FEBRUARY 14, 1985
KEN W. EDDY
2129
EXPIRES 12/31/01

OREGON DEPARTMENT OF TRANSPORTATION

CONTROL SURVEY

MIDDLE FORK JOHN DAY (RITTER) BRIDGE #1922

PENDLETON JOHN DAY HIGHWAY

GRANT COUNTY

FOR O.D.O.T. REGION 5 — 80788 KIK RD., HERMISTON, OR 97838

SEPTEMBER 15, 1999 — SHEET 1 OF 1

MAP OF SURVEY No. 1547