



DESCRIPTION	LAMBERT COORDINATES NORTH	EAST
Control Station EC-30	384905.910	1402927.480
Control Station EC-31	384192.440	1402507.640
Sec cor 10, 11, 14, 15	387371.791	1415157.834
Sec cor 15, 17, 20, 21	382428.077	1404245.026
Sec cor 15, 16, 21, 22	382226.792	1409635.587
Sec cor 9, 10, 15, 16	387446.567	1409755.971
Sec cor 8, 9, 16, 17	387691.763	1404337.979
1/4 cor Sec 16/15	384836.679	1409695.779
1/4 cor Sec 17/15	385059.920	1404252.003
1/4 cor Sec 16/21	382326.956	1406941.501
1/4 cor Sec 9/16	387569.165	1407046.975
1/4 cor Sec 9/10	390056.460	1409937.274
C 1/4 Sec cor	384948.285	1405994.243
W 1/16 Sec 9/16	387630.464	1405692.477
S 1/16 Sec 17/16	383743.998	1404269.014
N 1/16 Sec 17/16	385375.841	1404314.991
W 1/16 Sec 16/21	382377.516	1405553.764
SW 1/16	383690.809	1405518.443
CS 1/16	383637.620	1405967.872
CW 1/16	385004.102	1405643.123
NW 1/16	386317.283	1405667.800
CN 1/16	386258.725	1407020.609
S-S 1/64 Sec 17/16	383066.037	1404257.520
C-S-SW 1/64	383034.163	1405606.103

PROJECT BOUNDARY

DESCRIPTION	LAMBERT COORDINATES NORTH	EAST
Sec cor 15, 17, 20, 21	382428.077	1404245.026
16-21-01-L	382420.577	1404445.925
16-01-L	382602.260	1404449.099
16-02-L	383078.348	1404457.416
16-03-L	383068.352	1404717.281
16-04-L	383457.657	1404724.082
16-05-L	383725.877	1404728.768
16-06-L	383709.699	1405139.194
SW 1/16	383690.809	1405518.443
16-07-L	384069.417	1405625.558
16-08-L	384182.365	1405627.680
16-09-L	384463.945	1405632.972
CW 1/16	385004.102	1405643.123
16-10-L	385418.397	1405650.908
16-11-L	385858.636	1405659.181
16-12-L	386103.547	1405663.783
16-13-L	386242.669	1405666.398
NW 1/16	386317.283	1405667.800
16-14-L	386301.491	1406032.636
16-15-L	386282.342	1406475.012
CN 1/16	386258.725	1407020.609
16-16-L	386722.552	1407029.941
16-17-L	386837.245	1407032.249
16-18-L	386928.221	1406711.323
16-19-L	386952.723	1406157.881
C-N-NW 1/64	386973.873	1405680.138
16-20-L	387262.870	1405685.569
16-21-L	387458.738	1405689.250
W 1/16 Sec 9/16	387630.464	1405692.477
9/16-01-L	387603.374	1406291.071
9/16-02-L	387588.980	1406609.119
9/16-03-L	387585.202	1406692.610
1/4 Sec 9/16	387569.165	1407046.975

Grid factor = 0.9998224

Scale: 1" = 500'

Grid North True North

Grid factor = 0.9998224

**** RECEIVED ****
 Date 9-9-88 by RR
 This survey consists of
 - 2 sheet(s) Map
 - 0 page(s) Narrative
 JACKSON COUNTY SURVEYOR

U.S. ARMY ENGINEER DISTRICT, PORTLAND

**ROGUE RIVER BASIN
 ELK CREEK LAKE
 PROJECT BOUNDARY MONUMENTATION
 SECTION 16, TOWNSHIP 33 SOUTH, RANGE 1 EAST, W.M.
 JACKSON COUNTY, OREGON**

SUPERVISED: RR	DRAWN: H-P CAM	Ref: Real Estate Segment Map 2
DATE: JUNE, 1988	SHEET: 1 of 2	PREPARED BY: HOFFBUHR & ASSOCIATES, INC. MEDFORD, OREGON

SURVEY NARRATIVE TO COMPLY WITH PARAGRAPH 209.250
OREGON REVISED STATUTES

LOCATION: Section 16, Township 33 South, Range 1 East of the Willamette Meridian, Jackson County, Oregon.

PURPOSE: To monument the boundary corners and post line markers along that portion of the Elk Creek Project Boundary being in Section 16, as shown on Segment 2 of the Corps of Engineers Elk Creek Lake Real Estate drawings. The survey was performed during August 1987 through May 1988.

PROCEDURE: Establishing Lambert State Plane Coordinate control:

Second order control monument Station EC-30, located in the southeast quarter-section of adjoining Section 17 and established by the Corps of Engineers in 1964, was used as a basis of Lambert State Plane Coordinates (South Zone). The 1974 adjusted coordinates were used. The line from Station EC-30 to Station EC-31, also established in 1964 and also located in the southeast quarter-section of Section 17, was used as a basis of bearing. The USCE record bearing from EC-30 to EC-31 = South 30°28'28.6" West.

All bearings and distances shown are on State Plane Coordinate grid. Coordinates and distances are shown to .xxx feet and bearings to .x seconds for mathematical consistency only and are not intended to imply accuracy of survey.

An average latitude and elevation were used to compute a single grid factor for each individual survey traverse. The grid factor at the center quarter-section corner of Section 16 is:

Scale factor (latitude N 42°42'06") = 0.9999276
Elevation factor (2200') = 0.9998948
Combined (grid) factor = 0.9998224

All horizontal control established by this survey meets requirements of 3rd Order, Class 1, National Oceanic and Atmospheric Administration specifications for geodetic control.

Establishing section subdivision control:

The project boundary within Section 16 is dependent upon the subdivisional lines of the section. A series of traverses were run, using an electronic "total station" 1 second theodolite and distance meter, to locate the controlling section monuments and establish coordinates.

Only the southwest and southeast section corners of Section 21 have been perpetuated from original evidence. The northwest corner of the section was monumented by the BLM in 1965, using a 3-way fence intersection, 50 year old unrecorded bearing trees, and the fact that the location had been used for many years as the corner. The quarter-section and sixteenth-section corners between Sections 16 and 17 were subsequently located and monumented by single proportionate measurement by the BLM at that time.

The northeast corner of Section 16 was monumented at a double proportionate position by the BLM in 1974, using the northwest and southeast corners of the section, the section corner common to Sections 10, 11, 14, and 15 to the east, and the quarter-section corner common to Sections 9 and 10 to the north. The latter two corners have been perpetuated from original evidence. The north quarter-section corner of Section 16 was then monumented by the BLM at single proportionate position. The monument at the east quarter-section corner of Section 16, set on an unrecorded survey by Elk Lumber Company in 1967, was established by single proportionate measurement, based on the same double-proportioned position for the northeast corner of the section.

As shown on the map on sheet 1, the monuments found at the northeast corner of Section 16, the north, east, and west quarter-section corners, and the two sixteenth-section corners on the west boundary of the section were not used for this survey. They were considered to be outside of the allowable "limits of closure" as outlined in the 1947 and 1973 editions of the Manual of Surveying Instructions, using a ratio of 1/1280 for latitude and departure independently. No monuments were set at the computed positions except for the north quarter-section corner, it being an angle point on the project boundary.

The south quarter-section corner was established at single proportionate position and the southwest quarter subdivided on Filed Survey No. 9635 in 1983. Since that subdivision was based on the north, east, and west quarter-section monuments which were found not acceptable, the interior monuments set on that survey could not be used.

The project boundary in the southwest quarter of the southwest quarter section was positioned by metes and bounds deed description, placing the boundary parallel with and at 200.00 and 450.00 feet (geodetic) from the west boundary of the section.

At monument 16/21-01-L on the south boundary of Section 16, the 5/8 inch diameter iron pin, set on Survey No. 9635, was found 0.11 ft. from the computed position. Since this pin was exposed 15 inches out of the ground and somewhat unstable, it was decided to set a new monument at the computed location and lay the found pin alongside.

Using the section control determined as described above, Section 21 was subdivided and monumented as shown on the plat on sheet 1. The intermediate project boundary monuments were positioned for intervisibility.

SECTION CONTROL - (Bearings oriented to true north)

FOUND:

Northwest corner of Section 16: Found, the BLM brass cap set in 1965, on a 2" diameter pipe exposed 12", and the following bearing trees:

15" black oak, blazed in 1965, bears N 73°11' E 76.1 ft.
16" fir with lower healed blaze of unknown origin, bears S 51°36' E 111.6 ft.

Southwest corner of Section 16: Found, the 1956 BLM brass cap on a 2" diameter pipe, exposed 12" above a mound of stone, from which stands the following original bearing tree:

18" oak with healed blazes bears N 64°33' E 12.0 ft.
Trees marked by the BLM in 1956 were found as follows:
16" pine with healed blazes bears N 43°17' E 52.9 ft.
6" oak with healed blazes bears S 70°46' E 52.1 ft.
13" fir with healed blazes bears S 69°54' W 47.9 ft.
9" oak with healed blazes bears N 58°06' W 42.2 ft.

Southeast corner of Section 16: Found, exposed 24" and loose in a mound of stone, the 2.5" diameter galvanized reducer, filled with lead, on a 1.5" diameter iron pipe which was set on Filed Survey No. 2338, and the following original bearing trees:

18" white oak bears N 58°39' E 11.7 ft.
29" oak stump with ax marks bears S 66°56' E 47.9 ft.
The stump hole of a dead and down 10" oak with scribing visible bears S 85°40' W 16.4 ft.
Trees marked on Survey 2338 in 1963 found as follows:
10" fir, dead, with healed blazes, bears N 17°37' E 16.0 ft.
11" oak with healed blazes bears S 21°33' E 43.4 ft.
12" fir with healed blazes bears S 62°13' W 8.4 ft.
14" fir, dead, with healed blazes bears N 7°39' W 22.8 ft.

Northeast corner of Section 16: No monument found or set at the computed double-proportionate position. The 1974 BLM brass cap intended to be set at the double-proportionate position bears S 16°58' W 26.73 ft., from which the following bearing trees, marked in 1974, bear:

11" diameter fir stump bears N 40° E 10.9 ft.
13" fir bears S 42° E 29.9 ft.
11" fir snag bears South 7.7 ft.
8" fir snag bears N 80° W 10.8 ft.

Corner common to Sections 10, 11, 14, and 15: Found, the 1956 BLM brass cap on a 2" pipe, exposed 15" and leaning southwesterly 0.15 ft., from which bears the following original bearing tree:
27" dead fir snag with healed blazes bears N 45°55' W 42.5 ft.
Trees marked in 1956 were found as follows:
16" dead fir snag with healed blazes bears N 20°48' E 33.6 ft.
6" oak with healed lower blaze bears S 24°54' W 22.4 ft.
12" oak with healed blazes bears N 55°36' W 15.3 ft.

Quarter-section corner common to Sections 9 and 10: Found, the 2.5" diameter lead-filled reducer on a 1.5" diameter pipe, exposed 13", set by Elk Lumber Company, from which bear the following original bearing trees:
8" white oak with healed blazes bears S 45° W 37.9 ft.
18" pine snag, no blaze visible, bears S 20° E 63 ft.

South quarter-section corner of Section 16: Found, the 2.5" diameter aluminum cap on a 2.5" dia. pipe, set by single proportionate measurement on Survey No. 9635 in 1983, exposed 4", and the following tree marked at that time:
18" forked madrone with scribing visible, bears S 32°56' E 37.9 ft.

East quarter-section corner of Section 16: No monument found or set at the single proportionate position. The 1967 monument, a 2.5" diameter lead-filled reducer on a 1.5" diameter pipe, exposed 15", intended to be set by Elk Lumber Company at the proportionate position, bears N 64°52' W 3.97 ft. From this monument were found the following bearing trees:
9" oak with healed blazes bears N 70°33' E 15.9 ft.
12" fir with healed blazes bears N 13°21' W 8.3 ft.

West quarter-section corner of Section 16: No monument found or set at the computed single proportionate position. The 1965 BLM brass cap monument intended to be set at the proportionate position bears N 59°21' E 3.13 ft., from which bear the following bearing trees:
16" fir with healed blazes bears S 68°04' E 42.8 ft.
19" pine with healed blazes bears N 47°50' W 22.3 ft.

North sixteenth-section corner on the west boundary of Section 16: No monument found or set at the computed position. The 1965 BLM brass cap monument intended to be set at the corner position bears S 60°06' E 4.36 ft., from which bear the following bearing trees:
12" fir with healed blazes bears N 38° E 43.4 ft.
20" pine with healed blazes bears S 71°35' W 43.4 ft.

South sixteenth-section corner on the west boundary of Section 16: No monument found or set at the computed position. The 1965 BLM brass cap monument intended to be set at the corner position bears S 32°45' E 1.62 ft., from which bear the following bearing trees:
9" fir with healed blazes bears S 67°43' E 30.8 ft.
16" fir with healed blazes bears N 69°33' W 26.7 ft.

Center-south sixteenth-section corner of Section 16: No monument found or set at the computed position. The monument set on Filed Survey No. 9635 bears N 63°17' W 1.70 ft., from which bear the following bearing trees:
8" dead oak, scribing visible, bears S 40°34' E 65.5 ft.
22" oak with scribing visible bears S 80°37' W 41.4 ft.

SET:

North quarter-section corner of Section 16: Set a 30" long Berntsen aluminum monument, exposed 3", at single proportionate position, stamped as shown here, from which the 1974 BLM brass cap monument intended to be set at the corner position bears N 75° W 4.50 ft. T 33 S R 1 E
From the new monument, the trees marked by the BLM bear as follows: 1/4 + S 9
16" fir with healed blazes bears S 16°19'00" W 24.4 ft. LS 1656
12" fir, dead snag, with scribing visible, bears S 34°39' W 82.2 ft. 1988
A new tree was marked to replace the dead fir: 10" fir marked "1/4 S 16 BT" bears S 86° W 95.8 ft.

West sixteenth-section corner between Sections 9 and 16: Set a 30" long Berntsen aluminum monument, stamped as shown here, and marked the following bearing trees: 1988
6" pine marked "W 1/16 S 9 BT" W 1/16 + S 9
bears N 46° W 39.3 ft. LS 1656
10" white oak marked "W 1/16 S 16 BT" bears S 45° W 27.3 ft. LS 1656
The monument falls in a deep cut through the earthen dam of a dry stock pond.

Southwest sixteenth-section corner of Section 16: Set a 30" long Berntsen aluminum monument, stamped as shown here, and marked the following bearing trees: 1988
7" fir bears N 19° E 14.7 ft. SW 1/16 + S 16
7" fir bears N 62° W 8.7 ft. LS 1656
Both trees are marked "SW 1/16 S 16 BT"

Center-west sixteenth-section corner of Section 16: Set a 30" long Berntsen aluminum monument, stamped as shown here, and marked the following bearing trees: 1988
6" fir bears N 87° W 14.2 ft. CW 1/16 + S 16
7" fir bears S 22° E 23.2 ft. LS 1656
Both trees are marked "CW 1/16 S 16 BT"

Northwest sixteenth-section corner of Section 16: Set a 30" long Berntsen aluminum monument, stamped as shown here, and marked the following bearing trees: 1988
12" fir bears N 42° E 21.0 ft. NW 1/16 + S 16
11" fir bears N 58° W 18.9 ft. LS 1656
Both trees are marked "NW 1/16 S 16 BT"

Center-north sixteenth-section corner of Section 16: Set an 18" long Berntsen aluminum monument, stamped as shown here, and marked the following bearing trees: 1988
11" white oak bears N 8° W 61.3 ft. CN 1/16 + S 16
8" white oak bears S 64° W 40.0 ft. LS 1656
Both trees are marked "CN 1/16 S 16 BT"

REGISTERED
PROFESSIONAL
LAND SURVEYOR

Roger R. Roberts

OREGON
JULY 14, 1978
ROGER R. ROBERTS
1656

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROGUE RIVER BASIN
ELK CREEK LAKE
PROJECT BOUNDARY MONUMENTATION
SECTION 16, TOWNSHIP 33 SOUTH, RANGE 1 EAST, W.M.
JACKSON COUNTY, OREGON

SUPERVISED: <i>RRR</i>	DRAWN: H-P CAM	Ref: Real Estate Segment Map 2 NPPEN-SY-86-50
DATE: June, 1988	SHEET: 2 of 2	PREPARED BY: HOFFBUHR & ASSOCIATES, INC. MEDFORD, OREGON