DESHUTES COUNTY
SECTION CORNER SURVEY

NORTHWEST BEND

BY

DESHUTES COUNTY
SURVEYOR'S OFFICE

DGMC
NORTHWEST BEND
G.P.S. CONTROL SURVEY

GENERAL:

The purpose of this survey was to establish high precision mapping coordinates on government land corners, section and quarter section corners, with G.P.S. by directly occupying the corners or a secondary monument when not possible to receive adequate gps signals. From the secondary monument a side tie was made by conventional survey methods. The work was performed in of 1992 and 1993 by various personal with 3 Trimble 4000 ST G.P.S. receivers from the Deschutes County Public Works Department. The County Surveyors Office reduced the baseline measurements and computed geodetic coordinates on the NAD 83-91 (North American Datum of 1983, readjusted in 1991) and NAD 83-91 Deschutes County Plane Coordinates in international feet.

MEASUREMENTS:

I used Trim 640 & Trim MBP single baseline processor for the reduction of GPS measurements to produce fix solution base lines and holding to Trimble's guideline to high confidence limits for the ratio and rms. criteria.

Level loops run with a Wild Ni 2 level and standard rod from N.G.S. bench mark T-418 RESET to control point 17120500 and from county BM A-11-3 & A-11-4 to 17112540 & 17112304 to check the geoid modeling in the adjustment, the differences was less than 0.09 of a foot.

CLOSURES:

I ran numerous loop closures on the base lines to check for HI errors and isolation of bad lines for remeasure. In the most part loop closures were 1 to 2 ppm for lines with 3 or more independent sessions.
ADJUSTMENT:

HORIZONTAL

A minimal constrained adjustment was accomplished by holding GIS 13 fix with excellent result and many partial constrained adjustments using combinations of two to five fix points, all showing excellent internal consistency. For completion I added (GIS 01,16,34,36,63,68,), (B001,02,04,05,14 ), 16123400, 17120300, 17120340 17120904 & 17122200 to the system for the fully constrained adjustment of the network. Datum for all adjustments was NAD 83 (1991) in latitude, longitude and ellipsoidal height.

ORTHOMETRIC

First we used NGS GEOID 90 program to compute geoid heights at each control point to make a geoid model of the control area. By fixing orthometric heights of three reliable points in a constrained adjustment, we can cause the geoid model transformation (deflection in latitude and longitude plus a height constant) onto the same orthometric datum. Here we can analyze the record elevation at our control points by using different combinations of fixed height to find errors in data entry, movement of bench marks and bad elevations.

MARK DATA SHEET:

The mark data sheet shows information about each control station in the network, such as name, number, horizontal & vertical datum, coordinates, scale factor, convergence, general information and sketch.

NOTE: ALL VALUES ARE NAD 83 (1991) GPS

DESCHUTES COUNTY COORDINATE SYSTEM:

The County Surveyors Office and the County GIS Section agreed on a conformal mapping projection for the best fit of the 80 % population area of Deschutes
County, for a grid to ground distances, being no worse than 1 part in 50,000. This system is the best for the integration maps, deeds, etc., into the County GIS and should be of assistance to local surveyors. The County Surveyor in the process of establishing coordinates at section and 1/4 section corners on the Deschutes County Plane Coordinate System.

**SYSTEM DATA:**

DATUM = NAD 83(1991)

PROJECTION = TRANSVERSE MERCATOR

ZONE = DESCHUTES COUNTY

CENTRAL MERIDIAN = W 121° 17' 00.0000"

LATITUDE OF ORIGIN = N 43° 00' 00.0000"

ORIGIN NORTING = 0.00000

ORIGIN EASTING = 3,300,000.00

SCALE ALONG MERIDIAN = 1.00016000

LINEAR UNITS = INTERNATIONAL FOOT

**ACKNOWLEDGMENT:**

A project of this magnitude and complexity could not be accomplished without the help and cooperation of many people.

To the people who worked in the field on this project, Ken Grantham and Don Sweet, Deschutes Co. Surveyor’s Office and Pete Manley, Deschutes Co. Public Works.

A special recognition goes to the author-programmer of Trimnet-Plus, Mike Potterfield of Trimble Navigation, for the opportunity to beta test this very extraordinary gps survey adjustment program. Also his guidance and technical advice helped set the direction of this project.
GENERAL INFORMATION
ON
DATA SHEET
AND
CORNER NUMBERING
GENERAL INFORMATION
ABOUT
CONTROL MARK DATA SHEET

BOX 1

MARK NAME: Is a name that may be stamped on the monument (FIRST) or a point identifier (17122604).

MARK SET BY: Best information obtainable of who may have set mark.

DATE OF MARK: Best information obtainable of date that mark was set.

LOCATION: What section, township and range that mark is located.

REFERENCE NUMBER The reference document and number that has important information about mark at the time the G.P.S. survey was performed. (CS = COUNTY SURVEY NUMBER) (OCRR # = OREGON CORNER RESTORATION RECORD NUMBER) (DGMC # = DESCHUTES GEOETIC MAPPING CONTROL NUMBER) These records are on file in the County Surveyor's Office.

BOX 2

MARK SKETCH: A quick free hand sketch of mark to show general location and brief description.

BOX 3

PART 1 Self-explanatory

PART 2 All the needed information about the datum's and coordinate system to use for transformations.

PART 3 Latitude and longitude of the horizontal datum used.

Northing, easting, convergence and scale factor of the coordinate system used.

Ellipsoid height: height of mark above the reference ellipsoid

Orthometric height: height of mark on the vertical datum (elevation).

Geoid height: the difference between the reference ellipsoid and zero elevation of the vertical datum.

One sigma error: the estimated error of uncertainty at the 68% confidence region. (FGCC Standard)
MARK NAME: 17 12 23 4 0 A

17 Township 17 South of the Willamette Base Line
12 Range 12 East of the Willamette Principal Meridian
23 Section 23
4 4 X 10 chains North from SW. Cor. of Section 23.
0 0 X 10 chains East from SW. Cor. of Section 23.
A More than one important corner in proximity.

Note: The 10 chains is more a fractional part than a distance.
DESCHUTES
COUNTY
PRIME
CONTROL
POINTS
HELD
FIX
**CONTROL MARK DATA**

**NAME OF MARK:** 16123400  
**COUNTY:** DESCHUTES  
**MARK SET BY:** DESCHUTES CO. SURVEYOR  
**STATE:** OREGON  
**DATE OF MARK:** 1992  
**COUNTRY:** U.S.A.  
**LOCATION:** SECTION 34  
**TOWNSHIP:** 16 S.  
**RANGE:** 12 E.  
**MERIDIAN:** WILLAMETTE  
**REFERENCE NUMBER:** OCRR 1188

**MARK SKETCH:**

3" RESS CAP ON 
IRON PIPE UP 0.12 
1 FT. EAST OF RD EDGE

**MARK SKETCH:**

12' DIET RD

**DATA COMPUTED BY:** DESCHUTES COUNTY SURVEYOR'S OFFICE  
**DATE:** 1992-1993  
**FIELD METHOD:** GPS  
**FIELD EQUIPMENT:** TRIMBLE 4000ST  
**ADJUSTED WITH:** TRIMNET PLUS

**DATUM:** HOIONTAL= NAD (83-91)  
**CENTRAL MERIDIAN:** W 121°17'00.000000"  
**VERCTAL= NGVD 29**  
**LATTITUDE OF ORIGIN:** N 43°00'00.000000"  
**COORDINATE SYSTEM:** TRANSVERSE MERCATOR  
**ORIGIN NORTING:** 0.0000 F  
**ZONE:** DESCHUTES COUNTY  
**ORIGIN EASTING:** 3,300,000.000 F  
**LINEAR UNITS:** INTERNATIONAL FOOT  
**SCALE ALONG MERIDIAN:** 1.000160000000

**GEODETIC AND MAPPING COORDINATES**

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<thead>
<tr>
<th>MARK</th>
<th>HORIZONTAL ORDER: FIRST</th>
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</table>
CONTROL MARK DATA

NAME OF MARK: 17120300
COUNTY: DESCHUTES

MARK SET BY: LS 1020 GEORGE COLVIN
STATE: OREGON

DATE OF MARK: 3/20/87
COUNTRY: U.S.A.

LOCATION: SECTION 3 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 128

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIIZNTAL = NAD (83-91)
VERTICAL = NGVD 29
COORDINATE SYSTEM = TRANSVERSE MERCATOR
ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN = W 121°17'00.000000"
LATITUDE OF ORIGIN = N 43°00'00.000000"
ORIGIN NORTHING = 0.0000 F
ORIGIN EASTING = 3,300,000.0000 F
SCALE ALONG MERIDIAN = 1.000160000000

GEODISTIC AND MAPPING COORDINATES

MARK: 17120300
HORIZONTAL ORDER: FIRST

Latitude: 44°07'25.326270"
Longitude: 121°17'01.463160"
Northing: 409669.91
Easting: 3299893.255
Convergence: -0°00'01.0187"
Scale Factor: 1.000160000013
Ellipsoid Height: 3311.4293
Orthometric Height: 3376.2953
Geoid Height: -64.866
CONTROL MARK DATA

NAME OF MARK: 17120340
COUNTY: DESCHUTES

MARK SET BY: LS 1020 GEORGE COLVIN
STATE: OREGON

DATE OF MARK: 3/20/87
COUNTRY: U.S.A.

LOCATION: SECTION 3 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCCR 120

MARK SKETCH:

3/4" ALUM CAP ON
5/8" 12 IN GROUND
LEVEL 0.5' NORTH FENCE

12' DIET RD

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOZIONTAL = NAD (83-91)
VERTICAL = NGVD 29

COORDINATE SYSTEM: TRANSVERSE MERCATOR
ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000"
LATITUDE OF ORIGIN: N 43°00'00.000000"
ORIGIN NORTHING: 0.0000 F
ORIGIN EASTING: 3,300,000.0000 F
SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17120340 HORIZONTAL ORDER: FIRST

Latitude: 44°07'51.427460"
Longitude: 121°17'01.427270"
Northing: 412313.4382
Easting: 3299895.8861
Convergence: -0°00'00.9938"
Scale Factor: 1.000160000012
Ellipsoid Height: 3311.0826
Orthometric Height: 3376.0182
Geoid Height: -64.9356
**CONTROL MARK DATA**

**NAME OF MARK:** 17120904  
**COUNTY:** DESCHUTES  
**MARK SET BY:** DESCHUTES CO. SURVEYOR  
**STATE:** OREGON  
**DATE OF MARK:** 1992  
**COUNTRY:** U.S.A.  
**LOCATION:** SECTION 9  
**TOWNSHIP 17 S. RANGE 12 E.**  
**MERIDIAN:** WILLAMETTE  
**REFERENCE NUMBER:** OCRR 1196  

**MARK SKETCH:**

```
<table>
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**DATA COMPUTED BY:** DESCHUTES COUNTY SURVEYOR'S OFFICE  
**DATE:** 1992-1993  
**FIELD METHOD:** GPS  
**FIELD EQUIPMENT:** TRIMBLE 4000ST  
**ADJUSTED WITH:** TRIMNET PLUS

**DATUM:** HOizontal= NAD (83-91)  
**CENTRAL MERIDIAN:** W 121°17'00.000000"  
**VERTICAL=** NGVD 29  
**LATITUDE OF ORIGIN:** N 43°00'00.000000"  
**COORDINATE SYSTEM:** TRANSVERSE MERCATOR  
**ORIGIN NORTING:** 0.0000 F  
**ZONE:** DESCHUTES COUNTY  
**ORIGIN EASTING:** 3,300,000.0000 F  
**LINEAR UNITS:** INTERNATIONAL FOOT  
**SCALE ALONG MERIDIAN:** 1.00016000000

**GEODITIC AND MAPPING COORDINATES**

**MARK:** 17120904  
**HORIZONTAL ORDER:** FIRST

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<td>Geoid Height</td>
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**ONE SIGMA ERROR**

- Ellipsoid Height: 0.021
- Orthometric Height: 0.034
- Geoid Height: 0.021
CONTROL MARK DATA

NAME OF MARK: 17122200  COUNTY: DESCHUTES
MARK SET BY: LS 2033 MICHAEL TOMPKINS  STATE: OREGON
DATE OF MARK: 12/13/88  COUNTRY: U.S.A.
LOCATION: SECTION 22 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 946

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1992-1993
FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HORIZONTAL= MAD (83-91)  CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29  LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY  ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT  SCALE ALONG MERCIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17122200  HORIZONTAL ORDER: FIRST

Latitude: 44°04'48.548620"  ONE SIGMA
Longitude: 121°17'01.275820"  ERROR
Northing: 393791.5421  0.011
Easting: 3299906.8541  0.010
Convergence: -0°00'00.8875"
Scale Factor: 1.0001600000010
Ellipsoid Height: 3463.2985  0.020
Orthometric Height: 3527.8155  0.033
Geoid Height: -64.5171
CONTROL MARK DATA

NAME OF MARK: B001
MARK SET BY: OREGON HIGHWAY DIVISION
DATE OF MARK: 1991
LOCATION: SECTION 16 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE

MARK DESCRIPTION:
TO REACH THE MARK FROM THE INTERSECTION OF HWY. 97 (3 RD STREET) & HWY. 20
(GREENWOOD AVE.) PROCEED NORTH ON HWY. 97 FOR 2.95 MILES TO THE MARK ON THE
RIGHT.

THE MARK IS A STANDARD OREGON STATE
HWY. REFERENCE BRASS CAP IN A 6 IN.
STEEL PIPE 1.0 FT. BELOW GROUND LEVEL.

3 FEET EAST OF EAST CURB.
43 FEET SOUTH OF A TELEPHONE VAULT.
232 FEET SOUTH OF ROBAL ROAD.

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1991-1992

FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HORIZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING:
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.00016000000

GEODETIC AND MAPPING COORDINATES

B001

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<td>Longitude</td>
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CONTROL MARK DATA

NAME OF MARK: B003
COUNTY: DESCHUTES

MARK SET BY: OREGON HIGHWAY DIVISION
STATE: OREGON

DATE OF MARK: 1991
COUNTRY: U.S.A.

LOCATION: SECTION 28 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: NONE

MARK DESCRIPTION:
TO REACH THE MARK FROM THE INTERSECTION OF HWY. 97 (3 RD STREET) & HWY. 20 (GREENWOOD AVE.) PROCEED NORTH ON HWY. 97 FOR 0.9 MI. TO THE MARK ON THE RIGHT

THE MARK IS A STANDARD OREGON STATE HIGHWAY REFERENCE BRASS CAP MARKED "GPS B003" 1 FT. BELOW GROUND LEVEL IN A 6" STEEL PIPE IN CONCRETE.

2.5 FT. EAST OF EAST SIDE OF SIDEWALK.
125.5 FT. SOUTHERLY FROM BRIDGE DECK.

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1991-1992

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HORIZONTAL= NAD (83-91)
CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29
LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR
ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY
ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT
SCALE ALONG MERIDIAN: 1.00016000000

GEODETIC AND MAPPING COORDINATES

LATITUDE

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<th>MARK</th>
<th>Latitude</th>
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<th>Convergence</th>
<th>Northing (y)</th>
<th>Easting (x)</th>
<th>Ellipsoid Height</th>
<th>Orthometric Height</th>
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<tr>
<td>B003</td>
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<td>-0°00′46.7223&quot;</td>
<td>391450.7581</td>
<td>3295095.4784</td>
<td>3555.8490</td>
<td>3620.3488</td>
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ONE SIGMA ERROR

Latitude: 0.010431F
Longitude: 0.010339F
Scale Factor: 0.011250F
Convergence: 0.014877F
Northing: 0.009736F
Easting: 0.009736F
Ellipsoid Height: 0.010431F
Orthometric Height: 0.010431F
Geoid Height: 0.010431F
CONTROL MARK DATA

NAME OF MARK: BO05  COUNTY: DESCHUTES
MARK SET BY: OREGON HIGHWAY DIVISION  STATE: OREGON
DATE OF MARK: 1991  COUNTRY: U.S.A.
LOCATION: SECTION 32 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: NONE

MARK DESCRIPTION:
TO REACH THE MARK FROM THE INTERSECTION
OF HWY. 97 (3RD ST) & HWY. 20
(GREENWOOD AVE.) PROCEED SOUTH ON HWY.
97 FOR 1.8 MI. TO WILSON AVE., TURN
RIGHT & PROCEED WEST FOR 0.16 MI. TO
DIVISION ST., TURN RIGHT & PROCEED NORTH
FOR 0.68 MI TO SCOTT ST., TURN RIGHT &
PROCEED EAST FOR 100 FT. TO CANAL ST.,
TURN LEFT & PROCEED NORTH FOR 300 FT. TO
THE MARK ON THE RIGHT

THE MARK IS A STANDARD OREGON STATE
HIGHWAY REFERENCE BRASS CAP MARKED "GPS
BO05" SET 1 FT. BELOW GROUND LEVEL IN A
6" STEEL PIPE IN CONCRETE.

68 FT. WEST OF MAINLINE RAILROAD TRACK.
40.5 FT. NORTH OF BOARD FENCE CORNER.

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1991-1992
FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HORIZONTAL = NAD (83-91)  CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL = NGVD 29  LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING:
ZONE: DESCHUTES COUNTY ORIGIN EASTING:
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.00016000000

GEODETIC AND MAPPING COORDINATES

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<td>Geoid Height</td>
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CONTROL MARK DATA

NAME OF MARK: B014  COUNTY: DESCHUTES
MARK SET BY: OREGON HIGHWAY DIVISION  STATE: OREGON
DATE OF MARK: 1991  COUNTRY: U.S.A.
LOCATION: SECTION 21  TOWNSHIP 17 S.  RANGE 12 E.  MERIDIAN: WILLAMETTE
REFERENCE NUMBER: NONE

MARK DESCRIPTION:
TO REACH THE MARK FROM THE INTERSECTION OF HWY. 97 (3 RD STREET) & HWY. 20 (GREENWOOD AVE.) PROCEED NORTH ON HWY. 97 FOR 0.5 MI. TO REVERSE ST. AND TURN LEFT & PROCEED 0.18 MI. TO DIVISION ST. & PROCEED NORTH FOR 0.6 MI. & TURN RIGHT ON CANAL RD. & PROCEED EASTERLY FOR 0.35 MI TO THE MARK ON THE LEFT.

THE MARK IS A 1 1/2" ALUM. CAP ON A 1/2" I.R. & MARKED "WB 9 1988" FLUSH WITH GROUND LEVEL.

16 FT. EAST OF RAILROAD.
36.6 FT. FROM FENCE CORNER.
48.7 FT. FROM TELEGRAPH POLE.

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1991-1992
FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIIZONTAL= NAD (83-91)  CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29  LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY  ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT  SCALE ALONG MERIDIAN: 1.00016000000

GEODETIC AND MAPPING COORDINATES

<table>
<thead>
<tr>
<th>Code</th>
<th>Latitude</th>
<th>Longitude</th>
<th>Scale Factor</th>
<th>Convergence</th>
<th>Northing (y)</th>
<th>Easting (x)</th>
<th>Ellipsoid Height</th>
<th>Orthometric Height</th>
<th>Geoid Height</th>
</tr>
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<tbody>
<tr>
<td>B014</td>
<td>N 44°04'49.058014&quot;</td>
<td>W 121°18'01.396639&quot;</td>
<td>1.000160022944</td>
<td>-0°00'42.7115&quot;</td>
<td>393843.5969</td>
<td>3295517.5237</td>
<td>3497.6613</td>
<td>3562.2071</td>
<td>-64.5458</td>
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ONE SIGMA ERROR

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<th>Latitude</th>
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<th>Scale Factor</th>
<th>Convergence</th>
<th>Northing</th>
<th>Easting</th>
<th>Ellipsoid Height</th>
<th>Orthometric Height</th>
<th>Geoid Height</th>
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<tbody>
<tr>
<td>B014</td>
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</tbody>
</table>

0.015181F  0.014853F  0.016416F  0.020314F  0.011965F
CONTROL MARK DATA

NAME OF MARK: GIS_01
COUNTY: DESCHUTES
MARK SET BY: DESCHUTES CO. SURVEYOR
STATE: OREGON
DATE OF MARK: 1988
COUNTRY: U.S.A.
LOCATION: SECTION 4 TOWNSHIP 18 S. RANGE 12 E. MERIDIAN: HILLAMETTE
REFERENCE NUMBER: DGNM 7

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HORIZONTAL: NAD (83-91)
VERTICAL: NGVD 29.

COORDINATE SYSTEM: TRANSVERSE MERCATOR
ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTERIAL MERIDIAN: W 121°17'00.000000"
LATITUDE OF ORIGIN: N 43°00'00.000000"
ORIGIN NORTING: 0.0000 F
ORIGIN EASTING: 3,300,000.0000 F
SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: GIS_01
HORIZONTAL ORDER: FIRST

Latitude: 44°03'04.549162"
Longitude: 121°17'01.952450"
Northing: 383258.5924
Easting: 3299857.3849
Convergence: -0°00'01.3575"
Scale Factor: 1.000160000023
Ellipsoid Height: 3594.124 (45.685)
Orthometric Height: 3658.4084
Geoid Height: -64.2844

ONE SIGMA ERROR
DESCHUTES COUNTY PRIME CONTROL NETWORK
CONTROL STATION DESCRIPTION

NAME: GIS 0013
GIS # 0013
ORDER C-1st. (GPS)

HORIZONTAL DATUM: NAD 83 (1991)
VERT. DATUM: NGVD 29 & NAVD 88

LATITUDE: 44° 02' 39.71324" N
LONGITUDE: 121° 19' 25.05079" W

--- EC CARTESIAN ---
X: -2387685.327 METERS
Y: -3923407.174 METERS
Z: +4412398.193 METERS

--- HEIGHT ---
ELLIPSOIDAL: 1095.966 METERS
NGVD 29: 1115.545 METERS
NAVD 88: 1116.715 METERS
SPC -- OREGON SOUTH
NORTH: 264457.798±.002 METERS
EAST: 1433989.701±.002 METERS

SCALE FACTOR: 1.000011578
CONVERGENCE: 0° 33' 48.53"

T. 18 S. - R. 12 E., SEC. 5

The horizontal coordinates & ellipsoidal height was determined by GPS observations constrained by Oregon High Precision Network. Adjusted by Deschutes Co. Surveyor's Office in July 1991. The orthometric height was determined by GPS.

SURFACE MARKER:
MARK IS STAMPED - GIS 0013
AGENCY INSCRIPTION - DESCHUTES COUNTY SURVEYORS OFFICE
THE STATION IS LOCATED ABOUT 1 MILE SOUTHWEST OF BEND.

TO REACH THE STATION FROM BEND, START AT THE INTERSECTION OF US HWY 20 (GREENWOOD AV.) & US HWY 97 (3RD ST.), PROCEED SOUTH ON HWY 97 0.3 MI., TURN RIGHT ON FRANKLIN AVE & PROCEED 0.6 MI., TURN LEFT ON BOND ST. & PROCEED SOUTH FOR 0.4 MI., TURN RIGHT ON COLORADO AVE. AND PROCEED WESTERLY FOR 0.75 MI. TO THE STATION ON LEFT.

THE STATION MARK IS A 3 1/2 IN. STANDARD DESCHUTES COUNTY ALUMINUM DISK IN A MASS OF CONCRETE 0.3 FT ABOVE GROUND LEVEL, 2 FT. SOUTH OF BIKE PATH, N 60 E 110 FT. FROM A 1 FT. PINE TREE, ABOUT 450 FEET EASTERNLY TO THE INTERSECTION TO COLORADO AVE. AND COLUMBIA STREET.

DESchutes County Surveyor's Office
61150 S.E. 27th St.
Bend, Oregon. 97702
(503) 383-4395
**DESCHUTES COUNTY PRIME CONTROL NETWORK**

**CONTROL STATION DESCRIPTION**

<table>
<thead>
<tr>
<th>NAME: GIS 0016</th>
</tr>
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<tbody>
<tr>
<td>GIS # 0016</td>
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<tr>
<td>ORDER C-1st. (GPS)</td>
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</table>

<table>
<thead>
<tr>
<th>HORIZONTAL DATUM: NAD 83 (1991)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VERT. DATUM: NGVD 29 &amp; NAVD 88</td>
</tr>
</tbody>
</table>

| LATITUDE: 44° 09' 39.45957" N |
| LONGITUDE: 121° 24' 13.39777" W |

<table>
<thead>
<tr>
<th>EVALUATION - EC CARTESIAN</th>
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<tbody>
<tr>
<td>X: -2338441.433 Meters</td>
</tr>
<tr>
<td>Y: -3912323.745 Meters</td>
</tr>
<tr>
<td>Z: +4421652.053 Meters</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>EVALUATION - HEIGHT</th>
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</thead>
<tbody>
<tr>
<td>ELLIPSOIDAL: 1022.753 Meters</td>
</tr>
<tr>
<td>NGVD 29 : 1042.624 Meters</td>
</tr>
<tr>
<td>NAVD 88 : 1043.792 Meters</td>
</tr>
<tr>
<td>SPC -- OREGON SOUTH ------</td>
</tr>
<tr>
<td>NORTH: 277479.1061.003 Meters</td>
</tr>
<tr>
<td>EAST: 1427710.3351.003 Meters</td>
</tr>
</tbody>
</table>

| SCALE FACTOR: 1.000044900 |
| CONVERGENCE: -0° 37' 05.80" |

The horizontal coordinates & ellipsoidal height was determined by GPS observations constrained by Oregon High Percision Network. Adjusted by Deschutes Co. Surveyor's Office in July 1991.

The orthometric height was determined by GPS.

**SURFACE MARKER:**

MARK IS STAMPED  GIS 0016

AGENCY INSCRIPTION - DESCHUTES COUNTY SURVEYORS OFFICE
THE STATION IS LOCATED ABOUT 8.4 MILE NORTHWEST OF BEND.

TO REACH THE STATION FROM BEND, START AT THE INTERSECTION OF US HWY 20 (GREENWOOD AV.) & US HWY 97 (3RD ST.), PROCEED NORTH ON HWY 97 2.5 MI., TURN LEFT (TAKE HWY 20 OVERPASS) PROCEED 2.5 MI. ON HWY 20, TURN LEFT ON COUCH MARKET RD. PROCEED WEST 1.9 MI., TURN LEFT ON COLLINS RD. PROCEED SOUTH 0.44 MI. TO THE STATION ON THE LEFT.

THE STATION MARK IS A 3 1/2 IN. STANDARD DESCHUTES COUNTY ALUMINUM DISK GROUTED IN A LARGE BOULDER.
17 FEET EAST OF THE EAST EDGE OF COLLINS ROAD.
4 FEET WEST OF A WIRE FENCE.
### DESCHUTES COUNTY PRIME CONTROL NETWORK
#### CONTROL STATION DESCRIPTION

<table>
<thead>
<tr>
<th>NAME: C-30 1921</th>
<th>HORIZONTAL DATUM: NAD 83 (1991)</th>
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<tbody>
<tr>
<td>GIS # 0034</td>
<td>VERT. DATUM: NGVD 29 &amp; NAVD 88</td>
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<td>ORDER C-1st. (GPS)</td>
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</table>

##### STATION LOCATION

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<tr>
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</table>

<table>
<thead>
<tr>
<th>LATITUDE: 44° 06' 53.97704&quot; N</th>
</tr>
</thead>
<tbody>
<tr>
<td>LONGITUDE: 121° 17' 27.31060&quot; W</td>
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</tbody>
</table>

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**EC CARTESIAN**

<table>
<thead>
<tr>
<th>X:</th>
<th>-2382584.114</th>
<th>METERS</th>
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<tbody>
<tr>
<td>Y:</td>
<td>-3920061.842</td>
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<tr>
<td>Z:</td>
<td>+4417989.709</td>
<td>METERS</td>
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**HEIGHT**

<table>
<thead>
<tr>
<th>ELLIPSOIDAL: 1028.261 METERS</th>
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</thead>
<tbody>
<tr>
<td>NGVD 29 : 1048.013 METERS</td>
</tr>
<tr>
<td>NAVD 88 : 1049.170 METERS</td>
</tr>
<tr>
<td>SPC -- OREGON SOUTH</td>
</tr>
<tr>
<td>NORTH: 272280.186±0.003 METERS</td>
</tr>
<tr>
<td>EAST: 1436684.962±0.003 METERS</td>
</tr>
</tbody>
</table>

**SCALE FACTOR:** 1.000031262

**CONVERGENCE:** - 0° 32' 27.98"

---

The horizontal coordinates & ellipsoidal height was determined by GPS observations constrained by Oregon High Precision Network. Adjusted by Deschutes Co. Surveyor's Office in July 1991. The orthometric height was determined by differential leveling.

---

**SURFACE MARKER:**

MARK IS STAMPED - C 30 1921  ELEV. 3438.349

AGENCY INSCRIPTION - US COST & GEODITIC SURVEY

THE STATION IS LOCATED ABOUT 4.0 MILES NORTH OF BEND.

---

TO REACH THE STATION FROM BEND, START AT THE INTERSECTION OF US HWY 20 (GREENWOOD AV.) & US HWY 97 (3RD ST.), PROCEED NORTH ON HWY 97 FOR 4.00 MI., TURN RIGHT ON A DIRT ACCESS RD. LEADS TO RAILROAD CROSSING, PROCEED EAST FOR 144 FEET, WALK SOUTH 70 FEET TO THE STATION.

---

THE STATION MARK IS A 3 1/2 IN. STANDARD US GEODETIC SURVEY BRASS DISK IN GROUT IN A ROCK LEDGE, 2 FEET ABOVE RAILROAD GRADE. 1 FOOT NORTH OF A WITNESS POST. 25 FEET WEST OF THE CENTER OF RAILROAD TRACKS.
Location and reference sketch:
Name: C-30 1921
GIS #: 34

Grandview Drive

DESCHUTES COUNTY SURVEYOR'S OFFICE
61150 S.E. 27th. St.
Bend, Oregon. 97702
(503) 383-4395
DESHUTES COUNTY PRIME CONTROL NETWORK

CONTROL STATION DESCRIPTION

NAME: GIS 0036
GIS # 0036
ORDER C-1st. (GPS)

HORIZONTAL DATUM: NAD 83 (1991)
VERT. DATUM: NGVD 29 & NAVD 88

LATITUDE: 44° 01' 12.53426" N
LONGITUDE: 121° 22' 09.96186" W

------ EC CARTESIAN ------
X: -2391820.319 METERS
Y: -3923135.440 METERS
Z: +4410510.159 METERS

------ HEIGHT ------
ELLPSOIDAL: 1163.330 METERS
NGVD 29 : 1182.830 METERS
NAVD 88 : 1184.017 METERS
----- SPC -- OREGON SOUTH ------
NORTH: 261804.279±.003 METERS
EAST: 1430290.515±.003 METERS

SCALE FACTOR: 1.000005183
CONVERGENCE: - 0° 35' 41.36 "

The horizontal coordinates & ellipsoidal height was determined by
GPS observations constrained by Oregon High Precision Network.
The orthometric height was determined by differential leveling.

SURFACE MARKER:
MARK IS STAMPED - GIS 0036
AGENCY INSCRIPTION - DESCHUTES COUNTY SURVEYORS OFFICE
THE STATION IS LOCATED ABOUT 3 MILE SOUTHWEST OF BEND.

TO REACH THE STATION FROM BEND, START AT THE INTERSECTION OF US
HWY 20 (GREENWOOD AV.) & US HWY 97 (3RD ST.), PROCEED SOUTH ON
HWY 97 0.3 MI., TURN RIGHT ON FRANKLIN AVE & PROCEED 0.6 MI.,
LEFT ON BOND ST. & PROCEED SOUTH 0.4 MI., TURN RIGHT ON COLORADO
AVE AND PROCEED 1.10 MI. TO THE INTERSECTION WITH CENTURY DRIVE
HWY., TURN LEFT AND PROCEED SOUTHERLY 2.5 MI. TO THE STATION ON
THE LEFT.

THE STATION MARK IS A 2 IN. BRASS DISK CROUTRED IN A LARGE
BOULDER 0.4 FEET ABOVE GROUND LEVEL.
155 FEET SOUTHEASTERLY FROM ROAD CUT LINE
2 FEET NORTHER FROM A WITNESS POST.

DESHUTES COUNTY SURVEYOR'S OFFICE
61150 S.E. 27th St.
Bend, Oregon. 97702
(503) 383-4395
Location and reference sketch:
Name: GIS 36
GIS #: 36

CENTURY DRIVE

FS ROAD 46

CUT BANK

MON

OPEN

(FS 4600 101 Rd) CINDER P1
NAME: FIRST 1945
GIS # 0063
ORDER C-1st. (GPS)

HORIZONTAL DATUM: NAD 83 (1991)
VERT. DATUM: NGVD 29 & NAVD 88

LATITUDE: 44° 02' 28.04986" N
LONGITUDE: 121° 27' 56.09387" W

EC CARTESIAN
X: -2397639.383 METERS
Y: -3917872.764 METERS
Z: +4412343.322 METERS

HEIGHT
ELLIPSOIDAL: 1389.332 METERS
NGVD 29: 1408.692 METERS
NAVD 88: 1409.908 METERS

SPC -- OREGON SOUTH
NORTH: 264219.363±.005 METERS
EAST: 1422608.773±.004 METERS

SCALE FACTOR: 1.000010712
CONVERGENCE: - 0° 39' 38.16"

T. 18 S. - R. 10 E., SEC. 1

The horizontal coordinates & ellipsoidal height was determined by GPS observations constrained by Oregon High Percision Network. Adjusted by Deschutes Co. Surveyor's Office in July 1991. The orthometric height was determined by GPS.

SURFACE MARKER:
MARK IS STAMPED - FIRST 1945
AGENCY INSCRIPTION - U. S. COAST AND GEODETIC SURVEY
THE STATION IS LOCATED ABOUT 8 MILES WEST OF BEND.

TO REACH THE STATION FROM BEND, START AT THE INTERSECTION OF US HWY 20 (GREENWOOD AV.) & US HWY 97 (3RD ST.), PROCEED WEST ON 3RD ST. 0.5 MI. TO INTERSECTION WITH WALL ST. (GREENWOOD CHANGES TO NEWPORT AV.), PROCEED WESTERLY ON NEWPORT AV. 1.00 MI., TURN LEFT ON W. 14TH ST & PROCEED SO. 0.40 MI., TURN RIGHT ON GALVESTON AV. & PROCEED WESTERLY (0.4 MI. CHANGES TO SKLINNER RD. (FS RD 4601)) 7.4 MI. TURN RIGHT ON DIRT RD., PROCEED NORTHERLY 0.05 MI. TURN RIGHT ON POWER & WATER LINE RD., PROCEED EASTERLY 0.2 MI PARK ON DOWN SLOPE NEAR POWER LINE CROSSES RD., PACK SOUTHEASTERLY 300 FT TO HIGH ROCK RIDGE, MARK IS ON HIGHEST PART.

THE STATION MARK IS A 3 1/2 IN. USC&GS BRASS CAP GROUTED INTO A MASS OF ROCK. ROCK RIDGE RUNS S. 70 E.
360 DEG. OF 15 DEG MASK FOR GPS
Location and reference sketch:
Name: **FIRST 1945**
GIS #: 63

DESHUTES COUNTY SURVEYOR'S OFFICE
61150 S.E. 27th. St.
Bend, Oregon. 97702
(503) 383-4395
**NAME:** GIS 0068  
**GIS #** 0068  
**ORDER** C-1st. (GPS)  

**HORIZONTAL DATUM:** NAD 83 (1991)  
**VERT. DATUM:** NGVD 29 & NAVD 88  

<table>
<thead>
<tr>
<th>LATITUDE</th>
<th>44° 06' 46.17468&quot; N</th>
</tr>
</thead>
<tbody>
<tr>
<td>LONGITUDE</td>
<td>121° 21' 44.63437&quot; W</td>
</tr>
</tbody>
</table>

**---------------------------------- EC CARTESIAN ----------------------------------**

| X | -2387568.959 METERS |
| Y | -3917244.359 METERS |
| Z | +4417833.558 METERS |

**---------------------------------- HEIGHT ----------------------------------**

| ELLIPSOIDAL | 1052.362 METERS |
| NGVD 29 | 1072.121 METERS |
| NAVD 88 | 1073.292 METERS |

| SPC -- OREGON SOUTH | NORTH: 272095.852 ± 0.004 METERS  
EAST: 1430960.622 ± 0.004 METERS |

**SCALE FACTOR:** 1.000030635  
**CONVERGENCE:** -0° 35' 24.03"

The horizontal coordinates & ellipsoidal height was determined by GPS observations constrained by Oregon High Precision Network. Adjusted by Deschutes Co. Surveyor's Office in July 1991. The orthometric height was determined by GPS.

**SURFACE MARKER:**
**MARK IS STAMPED** - GIS 68  
**AGENCY INSCRIPTION** - DESCHUTES COUNTY PUBLIC WORKS  
**THE STATION IS LOCATED ABOUT 5 MILE NORTHWEST OF BEND.**

TO REACH THE STATION FROM BEND, START AT THE INTERSECTION OF US HWY 20 (GREENWOOD AV.) & US HWY 97 (3RD ST.), PROCEED WEST ON GREENWOOD AV. FOR 0.50 MI. TO THE INTERSECTION WITH WALL ST., PROCEED WESTWELY ON NEWPORT AV. 1.30 MI. TO POINT OF ROAD NAME CHANGE TO SHEVLEN PARK ROAD, CONTINUE ON SHEVLEN PARK ROAD FOR 2.70 MI. MORE TO ENTRANCE OF SHEVLEN PARK AND BEGINNING OF JOHNSON ROAD, PROCEED NORTHERLY ON JOHNSON ROAD FOR 2.3 MI TO THE INTERSECTION WITH TUMALO CREEK ROAD; PROCEED EAST FOR 270 FEET TO THE STATION ON THE RIGHT.

THE STATION MARK IS A 2 IN. ALUMINUM CAP ON A STEEL ROD IN A MASS OF CONCRETE 0.3 FT ABOVE GROUND LEVEL  
1 FT. NORTH OF A WIRE FENCE LINE  
1 FOOT SOUTH OF A WITNESS POST.  
12 FEET SOUTH OF ROAD EDGE  
270 FEET EAST OF JOHNSON ROAD  
360 DEG. OF 15 DEG. MASK FOR GPS
ADJUSTED
SURVEY POINTS
IN
DESHUTES COUNTY
PLANE COORDINATES
CONTROL MARK DATA

NAME OF MARK: 16113500
MARK SET BY: DESCHUTES CO. SURVEYOR
DATE OF MARK: 08/18/92
LOCATION: SECTION 35 TOWNSHIP 16 S. RANGE 11 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 1143

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993
FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HORIZONTAL= NAD (83-91)
VERTICAL= NGVD 29
COORDINATE SYSTEM: TRANSVERSE MERCATOR
ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000"UTC
LATTITUDE OF ORIGIN: N 43°00'00.000000"
ORIGIN NORThING: 0.0000 F
ORIGIN EASTING: 3,300,000.0000 F
SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 16113500
HORIZONTAL ORDER: FIRST

Latitude: 44°08'17.660529"  ONE
Longitude: 121°23'00.929229"  SIGMA
Northing: 414986.3658  ERROR
Easting: 3273674.8308  0.011
Convergence: -0°04'11.3483"
Scale Factor: 1.000160791367  0.015
Ellipsoid Height: 3410.0277  0.015
Orthometric Height: 3475.0719  0.019
Geoid Height: -65.0442
CONTROL MARK DATA

NAME OF MARK: 16113600
MARK SET BY: LS 1081 JEFFERY KERN
DATE OF MARK: 7/1983
LOCATION: SECTION 36 TOWNSHIP 16 S. RANGE 11 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: CS 7434

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS
DATE: 1992-1993

DATUM: HORIZONTAL= NAD (83-91)
VERTICAL= NGVD 29
COORDINATE SYSTEM: TRANSVERSE MERCATOR
ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000"
LATITUDE OF ORIGIN: N 43°00'00.000000"
ORIGIN NORTHING: 0.0000 F
ORIGIN EASTING: 3,300,000.0000 F
SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES
MARK: 16113600 HORIZONTAL ORDER: FIRST

Latitude: 44°08'17.681910"
Longitude: 121°21'48.920929"
Northing: 414982.7697
Easting: 3278926.9171
Convergence: -0°03'21.2023"
Scale Factor: 1.000160507098
Ellipsoid Height: 3318.2868
Orthometric Height: 3383.3785
Geoid Height: -65.0917
CONTROL MARK DATA

NAME OF MARK: 16123100  COUNTY: DESCHUTES
MARK SET BY: DESCHUTES CO. PUBLIC WORKS STATE: OREGON
DATE OF MARK: 1/04/90 COUNTRY: U.S.A.
LOCATION: SECTION 31 TOWNSHIP 16S RANGE 12E MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 1015

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993
FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES
MARK: 16123100 HORIZONTAL ORDER: FIRST

Latitude: 44°08'17.602777" ONE
Longitude: 121°20'36.087586" SIGMA
Northing: 414970.2263 ERROR
Easting: 3284239.1713 0.010
Convergence: -0°02'30.4816" 0.010
Scale Factor: 1.000160283657
Ellipsoid Height: 3309.4928 0.015
Orthometric Height: 3374.5971 0.019
Geoid Height: -65.1044
CONTROL MARK DATA

NAME OF MARK: 16123104
MARK SET BY: LS 1020 GEORGE COLVIN
DATE OF MARK: 3/20/87
LOCATION: SECTION 31 TOWNSHIP 16S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 109

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993
FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 16123104 HORIZONTAL ORDER: FIRST
Latitude: 44°08'17.502343" ONE SIGMA ERROR
Longitude: 121°20'02.348104" 0.015
Northing: 414958.3992 0.013
Easting: 3286700.0292 0.022
Convergence: -0°02'06.9857"
Scale Factor: 1.000160201993
Ellipsoid Height: 3132.3386
Orthometric Height: 3197.4386
Geoid Height: -65.1
CONTROL MARK DATA

NAME OF MARK: 16123200  COUNTY: DESCHUTES
MARK SET BY: LS 1020  GEORGE COLVIN  STATE: OREGON
DATE OF MARK: 3/20/87  COUNTRY: U.S.A.
LOCATION: SECTION 32  TOWNSHIP 16S.  RANGE 12 E.  MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 110

MARK SKETCH:

3/4" Alum Cap On
5/8" 12G Pipe Inside
1/2" 12G Pipe Up
2.0 Feet 1 foot South
Fence Cap.

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1992-1993
FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HORIZONTAL= NAD (83-91)  CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29  LATITUDE OF ORIGIN: N 43°00'00.000003"
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN NORTING: 0.0000 F
ZONE: DESCHUTES COUNTY  ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT  SCALE ALONG MERIDIAN: 1.00016000000

GEODETIC AND MAPPING COORDINATES

MARK: 16123200  HORIZONTAL ORDER: FIRST

Latitude: 44°08'17.459191"  ONE
Longitude: 121°19'26.184113"  SIGMA
Northing: 414952.5659  ERROR
Easting: 3289337.7295  0.012
Convergence: -0°01'41.8013"
Scale Factor: 1.000160129818
Ellipsoid Height: 3249.6965  0.018
Orthometric Height: 3314.7733  0.022
Geoid Height: -65.0767
CONTROL MARK DATA

NAME OF MARK: 16123204  COUNTY: DESCHUTES
MARK SET BY: LS 1020 GEORGE COLVIN  STATE: OREGON
DATE OF MARK: 3/20/87  COUNTRY: U.S.A.
LOCATION: SECTION 32 TOWNSHIP 16S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: 0CRR 111

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1992-1993
FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HORIZONTAL= NAD (83-91)  CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29  LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY  ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT  SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 16123204  HORIZONTAL ORDER: FIRST

Latitude: 44°08'17.470308"  ONE
Longitude: 121°18'50.017835"  SIGMA
Northing: 414952.5509  ERROR
Easting: 3291975.5996  0.017
Convergence: -0°01'16.6155"  0.014
Scale Factor: 1.000160073529
Ellipsoid Height: 3266.4354  0.023
Orthometric Height: 3331.4954  0.026
Geoid Height: -65.06
CONTROL MARK DATA

NAME OF MARK: 16123300
MARK SET BY: LS 1020 GEORGE COLVIN
DATE OF MARK: 3/20/87
LOCATION: SECTION 33 TOWNSHIP 16S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 112

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992–1993
FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIIZONTAL= NAD (83–91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 16123300 HORIZONTAL ORDER: FIRST

Latitude: 44°08'17.481471" ONE
Longitude: 121°18'13.838507" SIGMA
Northing: 414952.8626 ERROR
Easting: 3294614.4213 0.008
Convergence: -0°00'51.4205"
Scale Factor: 1.000160033121
Ellipsoid Height: 3307.564 0.011
Orthometric Height: 3372.6037 0.015
Geoid Height: -65.0397
CONTROL MARK DATA

NAME OF MARK: 17110100
COUNTY: DESCHUTES

MARK SET BY: U.S. GOVERNMENT
STATE: OREGON

DATE OF MARK: 1915+
COUNTRY: U.S.A.

LOCATION: SECTION 1 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: NONE

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOZIONTAL= NAD (83-91)
VERTICAL= NGVD 29
COORDINATE SYSTEM: TRANSVERSE MERCATOR
ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000"
LATITUDE OF ORIGIN: N 43°00'00.000000"
ORIGIN NORTHING: 0.0000 F
ORIGIN EASTING: 3,300,000.0000 F
SCALE ALONG MERIDIAN: 1.00016000000

GEODETIC AND MAPPING COORDINATES

MARK: 17110100  HORIZONTAL ORDER: FIRST

Latitude: 44°07'25.464977"  ONE
Longitude: 121°21'48.779545"  SIGMA
Northing: 409694.2256  ERROR
Easting: 3278932.0737  0.014
Convergence: -0°03'.21.0514"  0.013
Scale Factor: 1.000160506851
Ellipsoid Height: 3382.1885  0.019
Orthometric Height: 3447.1198  0.021
Geoid Height: -64.9313

[Diagram of mark]
CONTROL MARK DATA

NAME OF MARK: 17110140
COUNTY: DESCHUTES
MARK SET BY: LS 2208 GARY DEJARNATT
STATE: OREGON
DATE OF MARK: 6/08/88
COUNTRY: U.S.A.
LOCATION: SECTION 1 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCCR 747

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993

FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH TRIMNET PLUS

DATUM: HOZONTAL= NAD (63-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17110140 HORIZONTAL ORDER: FIRST

Latitude: 44°07'51.574456" ONE
Longitude: 121°21'48.849727" SIGMA
Northing: 412338.5985 ERROR
Easting: 3278929.532 0.014
Convergence: -0°03'21.1265" 0.013
Scale Factor: 1.000160506973
Ellipsoid Height: 3290.8193 0.019
Orthometric Height: 3355.8438 0.022
Geoid Height: -65.0245
CONTROL MARK DATA

NAME OF MARK: 17110200  COUNTY: DESCHUTES
MARK SET BY: U.S. GOVERNMENT  STATE: OREGON
DATE OF MARK: 1915-  COUNTRY: U.S.A.
LOCATION: SECTION 2  TOWNSHIP 17 S.  RANGE 11 E.  MERIDIAN: WILLAMETTE
REFERENCE NUMBER: NONE

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1992-1993
FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HOZONTAL= NAD (83-91)  CENTRAL MERIDIAN: W 121°17'00.000000'
VERTICAL= NGVD 29  LATITUDE OF ORIGIN: N 43°00'00.000000'
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY  ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT  SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17110200  HORIZONTAL ORDER: FIRST

Latitude: 44°07'25.719194"  ONE
Longitude: 121°23'00.996306"  SIGMA
Northing: 409725.7502  ERROR
Easting: 3273663.5275  0.014
Convergence: -0°04'11.3298"  0.013
Scale Factor: 1.000160792049
Ellipsoid Height: 3452.4169  0.019
Orthometric Height: 3517.3144  0.022
Geoid Height: -64.8976
## CONTROL MARK DATA

- **NAME OF MARK:** 17110204  
- **COUNTY:** DESCHUTES  
- **MARK SET BY:** U.S. GOVERNMENT  
- **STATE:** OREGON  
- **DATE OF MARK:** 1915+  
- **COUNTRY:** U.S.A.  
- **LOCATION:** SECTION 2 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE  
- **REFERENCE NUMBER:** NONE  

## MARK SKETCH:

```
0.1 MI

2" BRASS CAP ON IRON PIPE
UP 0.3'
0.5' WEST CORNER OF PROPERTY
```

## DATA COMPUTED BY:

- DESCHUTES COUNTY SURVEYOR'S OFFICE  
- **DATE:** 1992-1993  

## FIELD METHOD:

- **GPS**  

## FIELD EQUIPMENT:

- TRIMBLE 4000ST  

## ADJUSTED WITH:

- TRIMNET PLUS  

## DATUM:

- **HORIZONTAL:** NAD (83-91)  
- **VERTICAL:** NGVD 29  

## COORDINATE SYSTEM:

- **TRANSVERSE MERCATOR**  
- **ZONE:** DESCHUTES COUNTY  

## LINEAR UNITS:

- INTERNATIONAL FOOT

## CENTRAL MERIDIAN:

- W 121°17'00.000000"  

## LATITUDE OF ORIGIN:

- N 43°00'00.000000"  

## ORIGIN NORTHING:

- 0.0000 F  

## ORIGIN EASTING:

- 3,300,000.0000 F  

## SCALE ALONG MERIDIAN:

- 1.000160000000

### GEODITIC AND MAPPING COORDINATES

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CONTROL MARK DATA

NAME OF MARK: 17111100
MARK SET BY: LS 0454 GENE HAWTHORNE
DATE OF MARK: 12/15/61
LOCATION: SECTION 11 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: CS 2147

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993
FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HORIZONAL= NAD (83-91)
VERTICAL= NGVD 29
COORDINATE SYSTEM: TRANSVERSE MERCATOR
ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000"
LATITUDE OF ORIGIN: N 43°00'00.000000"
ORIGIN NORTING: 0.00000 F
ORIGIN EASTING: 3,300,000.00000 F
SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17111100 HORIZONTAL ORDER: FIRST

Latitude: 44°06'33.892691"
Longitude: 121°23'01.182400"
Northing: 404476.7887
Easting: 3273643.5528
Convergence: -0°04'11.3942"
Scale Factor: 1.000160793254
Ellipsoid Height: 3555.5461
Orthometric Height: 3620.3073
Geoid Height: -64.7612
CONTROL MARK DATA

NAME OF MARK: 17111104
COUNTY: DESCHUTES

MARK SET BY: LS 2111 WALTER MILLER
STATE: OREGON

DATE OF MARK: 6/20/88
COUNTRY: U.S.A.

LOCATION: SECTION 11 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 759

MARK SKETCH:

MARK: 17111104

Latitude: 44°06'33.827792"
Longitude: 121°22'24.667767"
Northing: 404467.1324
Easting: 3276308.1163
Convergence: -0°03'45.9788"
Scale Factor: 1.000160640970
Ellipsoid Height: 3514.9768
Orthometric Height: 3579.7519
Geoid Height: -64.7751
CONTROL MARK DATA

NAME OF MARK: 17111200  COUNTY: DESCHUTES
MARK SET BY: U.S. GOVERNMENT?  STATE: OREGON
DATE OF MARK: 1915+  COUNTRY: U.S.A.
LOCATION: SECTION 12  TOWNSHIP 17S. RANGE 11E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: NONE

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1992-1993
FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HOZIONTAL= NAD (83-91)  CENTRAL MERIDIAN: W 121°17'00.000000"  LATITUDE OF ORIGIN: N 43°00'00.000000"
VERTICAL= NGVD 29  ORIGIN NORTTHING: 0.0000 F
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN EASTING: 3,300,000.0000 F
ZONE: DESCHUTES COUNTY  SCALE ALONG MERIDIAN: 1.000160000000
LINEAR UNITS: INTERNATIONAL FOOT

GEODITIC AND MAPPING COORDINATES

MARK: 17111200  HORIZONTAL ORDER: SECOND

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<td>Latitude</td>
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<td>Geoid Height</td>
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CONTROL MARK DATA

NAME OF MARK: 17111240
COUNTY: DESCHUTES

MARK SET BY: DESCHUTES CO. SURVEYOR
STATE: OREGON

DATE OF MARK: 8/19/92
COUNTRY: U.S.A.

LOCATION: SECTION 12 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 1144

MARK SKETCH:

3 1/2" BRASS CAP
1 1/2" MON. BOX
DOWN 0.3'

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993

FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17111240 HORIZONTAL ORDER: FIRST

Latitude: 44°06'59.500037" ONE
Longitude: 121°21'48.411398" SIGMA
Northing: 407064.4739 ERROR
Easting: 3278956.3721
Convergence: -0°03'20.7690"
Scale Factor: 1.000160505684
Ellipsoid Height: 3490.2897 0.016
Orthometric Height: 3555.1504 0.017
Geoid Height: -64.8607
CONTROL MARK DATA

NAME OF MARK: 17111300  COUNTY: DESCHUTES
MARK SET BY: LS 1678 GARY HICKMAN  STATE: OREGON
DATE OF MARK: 11/79  COUNTRY: U.S.A.
LOCATION: SECTION 13 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: CS 07193

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993
FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIORIZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17111300  HORIZONTAL ORDER: FIRST

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**CONTROL MARK DATA**

**NAME OF MARK:** 17111304  
**COUNTY:** DESCHUTES  
**MARK SET BY:** DESCHUTES CO. SURVEYOR  
**STATE:** OREGON  
**DATE OF MARK:** 7/09/92  
**COUNTRY:** U.S.A.  
**LOCATION:** SECTION 13  
**TOWNSHIP:** 17 S.  
**RANGE:** 11 E.  
**MERIDIAN:** WILLAMETTE  
**REFERENCE NUMBER:** OCRR 1138  

**MARK SKETCH:**

---

**DATA COMPUTED BY:** DESCHUTES COUNTY SURVEYOR'S OFFICE  
**DATE:** 1992-1993  
**FIELD METHOD:** GPS  
**FIELD EQUIPMENT:** TRIMBLE 4000ST  
**ADJUSTED WITH:** TRIMNET PLUS  

**DATUM:** HOZONITAL= NAD (83-91)  
**CENTRAL MERIDIAN:** W 121°17'00.000000"  
**VERTICAL=** NGVD 29  
**LATITUDE OF ORIGIN:** N 43°00'00.000000"  
**COORDINATE SYSTEM:** TRANSVERSE MERCATOR  
**ORIGIN NORTTHING:** 0.0000 F  
**ZONE:** DESCHUTES COUNTY  
**ORIGIN EASTING:** 3,300,000.0000 F  
**LINEAR UNITS:** INTERNATIONAL FOOT  
**SCALE ALONG MERIDIAN:** 1.000160000000  

**GEODITIC AND MAPPING COORDINATES**

**MARK:** 17111304  
**HORIZONTAL ORDER:** SECOND  

**Latitude:** 44°05'41.575622"  
**longitude:** 121°21'12.118473"  
**Northing:** 399169.9043  
**Easting:** 3281597.7326  
**Convergence:** -0°02'55.4363"  
**Scale Factor:** 1.000160386708  
**Ellipsoid Height:** 3573.9511  
**Orthometric Height:** 3638.6208  
**Geoid Height:** -64.6697
**CONTROL MARK DATA**

- **NAME OF MARK:** 17111340
- **COUNTY:** DESCHUTES
- **MARK SET BY:** DESCHUTES CO. SURVEYOR
- **STATE:** OREGON
- **DATE OF MARK:** 4/08/92
- **COUNTRY:** U.S.A.
- **LOCATION:** SECTION 13, TOWNSHIP 17 S., RANGE 11 E., MERIDIAN: WILLAMETTE
- **REFERENCE NUMBER:** OCRR 1136

**MARK SKETCH:**

3/4" Brass Cap at ground level
g'south, d/w
12' East pav ed.

Buck Drive

**DATA COMPUTED BY:** DESCHUTES COUNTY SURVEYOR'S OFFICE **DATE:** 1992-1993

- **FIELD METHOD:** GPS
- **FIELD EQUIPMENT:** TRIMBLE 4000ST
- **ADJUSTED WITH:** TRIMNET PLUS

**DATUM:** HOI ZONTAL = NAD (83-91)  
VERTICAL = NGVD 29  
COORDINATE SYSTEM: TRANSVERSE MERCATOR  
ZONE: DESCHUTES COUNTY  
LINEAR UNITS: INTERNATIONAL FOOT

**CENTRAL MERIDIAN:** W 121°17'00.000000"  
**LATITUDE OF ORIGIN:** N 43°00'00.000000"  
**ORIGIN NORTING:** 0.0000 F  
**ORIGIN EASTING:** 3,300,000.0000 F  
**SCALE ALONG MERIDIAN:** 1.00016000000

**GEODITIC AND MAPPING COORDINATES**

- **MARK:** 17111340  
  **HORIZONTAL ORDER:** FIRST

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<tbody>
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**CONTROL MARK DATA**

**NAME OF MARK:** 17111400  
**COUNTY:** DESCHUTES

**MARK SET BY:** LS 0454 GENE HAWTHORNE  
**STATE:** OREGON

**DATE OF MARK:** 12/1961  
**COUNTRY:** U.S.A.

**LOCATION:** SECTION 11 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE

**REFERENCE NUMBER:** OCRR 1153

**MARK SKETCH:**

![Mark Sketch Image]

**DATA COMPUTED BY:** DESCHUTES COUNTY SURVEYOR'S OFFICE  
**DATE:** 1992-1993

**FIELD METHOD:** GPS  
**FIELD EQUIPMENT:** TRIMBLE 4000ST  
**ADJUSTED WITH:** TRIMNET PLUS

**DATUM:** HOIZONTAL= NAD (83-91)  
**VERTICAL=** NGVD 29  
**COORDINATE SYSTEM:** TRANSVERSE MERCATOR  
**ZONE:** DESCHUTES COUNTY  
**LINEAR UNITS:** INTERNATIONAL FOOT

**CENTRAL MERIDIAN:** W 121°17'00.000000"  
**LATITUDE OF ORIGIN:** N 43°00'00.000000"

**ORIGIN NORTHING:** 0.0000 F  
**ORIGIN EASTING:** 3,300,000.0000 F  
**SCALE ALONG MERIDIAN:** 1.00016000000

**GEODITIC AND MAPPING COORDINATES**

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<td>Ellipsoid Height</td>
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</tr>
<tr>
<td>Geoid Height</td>
<td>-64.6259</td>
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CONTROL MARK DATA

NAME OF MARK: 17111404  COUNTY: DESCHUTES
MARK SET BY: LS 0454  GENE HAWTHORNE  STATE: OREGON
DATE OF MARK: 12/15/61  COUNTRY: U.S.A.
LOCATION: SECTION 14  TOWNSHIP 17 S.  RANGE 11 E.  MERIDIAN: WILLAMETTE
REFERENCE NUMBER: CS 2147

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1992-1993
FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HOZONTAL= NAD (83-91)  CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29  LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN NORTHING:
ZONE: DESCHUTES COUNTY  ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT  SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17111404  HORIZONTAL ORDER: FIRST

Latitude: 44°05'41.657515"  ONE SIGMA ERROR
Longitude: 121°22'24.740340"  0.014
Northing: 399183.3563  0.013
Easting: 3276297.0311
Convergence: -0°03'45.9703"
Scale Factor: 1.000160641572
Ellipsoid Height: 3638.3974  0.020
Orthometric Height: 3703.0344  0.023
Geoid Height: -64.637
CONTROL MARK DATA

NAME OF MARK: 17111440  COUNTY: DESCHUTES
MARK SET BY: LS 0454 GENE HAWTHORNE  STATE: OREGON
DATE OF MARK: 12/15/61  COUNTRY: U.S.A.
LOCATION: SECTION 14  TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: CS 2147

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1992-1993
FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIIZONTAL= NAD (83-91)  CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29  LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN NORTING: 0.0000 F
ZONE: DESCHUTES COUNTY  ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT  SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17111440  HORIZONTAL ORDER: FIRST

Latitude: 44°06'07.819542"  ONE
Longitude: 121°23'01.102448"  SIGMA
Northing: 401836.1033  ERROR
Easting: 3273646.1696  0.017
Convergence: -0°04'11.3058"  0.016
Scale Factor: 1.000160793098
Ellipsoid Height: 3591.5261  0.023
Orthometric Height: 3656.2195  0.026
Geoid Height: -64.6934

ONE
SIGMA
ERROR
CONTROL MARK DATA

NAME OF MARK: 17112300
MARK SET BY: LS 0454 GENE HAWTHORNE
DATE OF MARK: 12/1961
LOCATION: SECTION 23 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 1156

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993
FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HO|Z|ONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000'
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000'
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17112300 HORIZONTAL ORDER: FIRST

Latitude: 44°04'49.641790" ONE
Longitude: 121°23'01.282863" SIGMA
Northing: 393918.3271 ERROR
Easting: 3273623.353 0.016
Convergence: -0°04'11.3330" 0.015
Scale Factor: 1.000160794476
Ellipsoid Height: 3678.0335 0.022
Orthometric Height: 3742.5243 0.026
Geoid Height: -64.4908
**CONTROL MARK DATA**

- **NAME OF MARK:** 17112304
- **COUNTY:** DESCHUTES
- **MARK SET BY:** LS 0540 GEORGE COOK
- **STATE:** OREGON
- **DATE OF MARK:** 9/30/74
- **COUNTRY:** U.S.A.
- **LOCATION:** SECTION 23 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE
- **REFERENCE NUMBER:** CS 2173

**MARK SKETCH:**

![Mark Sketch]

**DATA COMPUTED BY:** DESCHUTES COUNTY SURVEYOR'S OFFICE

**DATE:** 1992-1993

**FIELD METHOD:** GPS

**FIELD EQUIPMENT:** TRIMBLE 4000ST

**ADJUSTED WITH:** TRIMNET PLUS

**DATUM:** HOIZONTAL= NAD (83-91)  
**VERTICAL=** NGVD 29

**COORDINATE SYSTEM:** TRANSVERSE MERCATOR

**ZONE:** DESCHUTES COUNTY

**LINEAR UNITS:** INTERNATIONAL FOOT

**CENTRAL MERIDIAN:** W 121°17'00.000000"  
**LATITUDE OF ORIGIN:** N 43°00'00.000000"  
**ORIGIN NORTHING:** 0.0000 F  
**ORIGIN EASTING:** 3,300,000.0000 F  
**SCALE ALONG MERIDIAN:** 1.000160000000

**GEODITIC AND MAPPING COORDINATES**

- **MARK:** 17112304  
  **HORIZONTAL ORDER:** FIRST
  
  **Latitude:** 44°04'49.607920"  
  **Longitude:** 121°22'24.790205"
  
  **Northing:** 393911.8143  
  **Easting:** 3276287.6162
  
  **Convergence:** -0°03'45.9461"  
  **Scale Factor:** 1.000160642084
  
  **Ellipsoid Height:** 3655.5715  
  **Orthometric Height:** 3720.072
  
  **Geoid Height:** -64.5005
CONTROL MARK DATA

NAME OF MARK: 17112400
COUNTY: DESCHUTES

MARK SET BY: DESCHUTES CO. SURVEYOR
STATE: OREGON

DATE OF MARK: 6/30/92
COUNTRY: U.S.A.

LOCATION: SECTION 24 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 1140

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIznZONTAL= NAD (83-91)
VERTICAL= NGVD 29

COORDINATE SYSTEM: TRANSVERSE MERCATOR
ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000"
LATITUDE OF ORIGIN: N 43°00'00.000000"
ORIGIN NORTHING: 0.0000 F
ORIGIN EASTING: 3,300,000.0000 F
SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17112400
HORIZONTAL ORDER: FIRST

Latitude: 44°04'49.570499"
Longitude: 121°21'48.296691"
Northing: 393905.2697
Easting: 3278951.9423
Convergence: -0°03'20.5587"
Scale Factor: 1.000160505901
Ellipsoid Height: 3718.5675
Orthometric Height: 3783.0884
Geoid Height: -64.5209

ONE SIGMA ERROR
0.013
0.012
0.019
0.023
CONTROL MARK DATA

NAME OF MARK: 17112404
MARK SET BY: LS 0599 JAMES BUSSARD
DATE OF MARK: 09/07/97
LOCATION: SECTION 24 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 1139

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993
FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIozontal: NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000" VERTICAL: NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTTHING: 0.0000 F ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17112404 HORIZONTAL ORDER: SECOND

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<tr>
<td>Northing</td>
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<td>Easting</td>
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<td>Convergence</td>
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<td>Ellipsoid Height</td>
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<td>Orthometric Height</td>
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<td>Geoid Height</td>
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CONTROL MARK DATA

NAME OF MARK: 17112500  COUNTY: DESCHUTES
MARK SET BY: DESCHUTES CO. SURVEYOR  STATE: OREGON
DATE OF MARK: 8/20/92  COUNTRY: U.S.A.
LOCATION: SECTION 25  TOWNSHIP 17 S.  RANGE 11 E.  MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 1146

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1992-1993
FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONITAL= NAD (83-91)  CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29  LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN NORTING: 0.0000 F
ZONE: DESCHUTES COUNTY  ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT  SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17112500  HORIZONTAL ORDER: FIRST
Latitude: 44°03'57.543782"  ONE
Longitude: 121°21'48.541233"  SIGMA
Northing: 388636.0717  ERROR
Easting: 3278928.9616  0.016
Convergence: -0°03'20.6766"  0.016
Scale Factor: 1.000160507008
Ellipsoid Height: 3699.0577  0.024
Orthometric Height: 3763.4365  0.028
Geoid Height: -64.3788
CONTROL MARK DATA

NAME OF MARK: 17112504
MARK SET BY: N/A
DATE OF MARK: N/A
LOCATION: SECTION 25 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: CS 02180

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993
FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOizontal= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000”
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000”
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17112504 HORIZONTAL ORDER: FIRST

Latitude: 44°03'57.604060”
Longitude: 121°21'12.384046”
Northing: 388639.7687
Easting: 3281569.3849
Convergence: -0°02'55.5298”
Scale Factor: 1.000160387902
Ellipsoid Height: 3683.5004
Orthometric Height: 3747.8983
Geoid Height: -64.3979

ONE SIGMA ERROR
0.017
0.016
0.027
0.030
CONTROL MARK DATA

NAME OF MARK: 17112540
MARK SET BY: LS 0702 RAYMOND OHAN
DATE OF MARK: 1988
LOCATION: SECTION 25 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 966

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000 ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOI ZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.00000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.00000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHLING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17112540 HORIZONTAL ORDER: FIRST

Latitude: 44°04'23.445304" ONE SIGMA ERROR
Longitude: 121°21'48.332706"
Northing: 391259.3363 0.015
Easting: 3278946.74 0.015
Convergence: -0°03'20.5575"
Scale Factor: 1.000160506152
Ellipsoid Height: 3671.8854 0.022
Orthometric Height: 3736.3307 0.026
Geoid Height: -64.4454
**CONTROL MARK DATA**

**NAME OF MARK:** 17112600  
**COUNTY:** DESCHUTES  
**MARK SET BY:** LS 0540 GEORGE COOK  
**STATE:** OREGON  
**DATE OF MARK:** 9/30/74  
**COUNTRY:** U.S.A.  
**LOCATION:** SECTION 26 TOWNSHIP 17 S. RANGE 11 E.  
**MERIDIAN:** WILLAMETTE  
**REFERENCE NUMBER:** CS 2173

**MARK SKETCH:**

![Sketch of the control mark](image)

**DATA COMPUTED BY:** DESCHUTES COUNTY SURVEYOR'S OFFICE  
**DATE:** 1992-1993

**FIELD METHOD:** GPS  
**FIELD EQUIPMENT:** TRIMBLE 4000ST  
**ADJUSTED WITH:** TRIMNET PLUS

**DATUM:** HOIIZONTAL= NAD (83-91)  
**CENTRAL MERIDIAN:** W 121°17'.00".00000"  
**VERTICAL=** NGVD 29  
**LATITUDE OF ORIGIN:** N 43°00'.00".00000"  
**COORDINATE SYSTEM:** TRANSVERSE MERCATOR  
**ORIGIN NORTHING:** 0.0000 F  
**ZONE:** DESCHUTES COUNTY  
**ORIGIN EASTING:** 3,300,000.0000 F  
**LINEAR UNITS:** INTERNATIONAL FOOT  
**SCALE ALONG MERIDIAN:** 1.000160000000

**GEODITIC AND MAPPING COORDINATES**

**MARK:** 17112600  
**HORIZONTAL ORDER:** FIRST  

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<td>Longitude</td>
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<tr>
<td>Northing</td>
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<tr>
<td>Easting</td>
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<td>Convergence</td>
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<td>Ellipsoid Height</td>
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<td>Orthometric Height</td>
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<td>Geoid Height</td>
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CONTROL MARK DATA

NAME OF MARK: 17112604
COUNTY: DESCHUTES

MARK SET BY: DESCHUTES CO. SURVEYOR
STATE: OREGON

DATE OF MARK: 8/19/92
COUNTRY: U.S.A.

LOCATION: SECTION 26 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE

REFERENCE NUMBER: OCRR 1149

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993

FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17112604 HORIZONTAL ORDER: FIRST

Latitude: 44°03'57.555815" ONE
Longitude: 121°22'24.772793" SIGMA
Northing: 388640.0262 ERROR
Easting: 3276283.1136 0.016
Convergence: -0°03'45.8751" 0.014
Scale Factor: 1.000160642330
Ellipsoid Height: 3832.8929 0.022
Orthometric Height: 3897.249 0.026
Geoid Height: -64.356
**CONTROL MARK DATA**

**NAME OF MARK:** 17112640  
**COUNTY:** DESCHUTES

**MARK SET BY:** LS 0540 GEORGE COOK  
**STATE:** OREGON

**DATE OF MARK:** 9/30/74  
**COUNTRY:** U.S.A.

**LOCATION:** SECTION 26  
**TOWNSHIP:** 17 S.  
**RANGE:** 11 E.  
**MERIDIAN:** WILLAMETTE

**REFERENCE NUMBER:** CS 2173

**MARK SKETCH:**

![Sketch of control mark with annotations](image-url)

---

**DATA COMPUTED BY:** DESCHUTES COUNTY SURVEYOR'S OFFICE  
**DATE:** 1992-1993

**FIELD METHOD:** GPS  
**FIELD EQUIPMENT:** TRIMBLE 4000 ST  
**ADJUSTED WITH:** TRIMNET PLUS

**DATUM:** HOIATONTAL = NAD (83-91)  
**VERTICAL = NGVD 29**  
**COORDINATE SYSTEM:** TRANSVERSE MERCATOR  
**ZONE:** DESCHUTES COUNTY  
**LINEAR UNITS:** INTERNATIONAL FOOT

**CENTRAL MERIDIAN:** W 121°17'00.000000"  
**LATITUDE OF ORIGIN:** N 43°00'00.000000"  
**ORIGIN NORTHING:** 0.0000 F  
**ORIGIN EASTING:** 3,300,000.0000 F  
**SCALE ALONG MERIDIAN:** 1.000160000000

**GEODITIC AND MAPPING COORDINATES**

**MARK:** 17112640  
**HORIZONTAL ORDER:** FIRST

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<tr>
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<td>ONE SIGMA</td>
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<td>Longitude</td>
<td>121°23'01.327652&quot;</td>
<td>ERROR</td>
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<tr>
<td>Northing</td>
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<tr>
<td>Easting</td>
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<td>Convergence</td>
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<tr>
<td>Scale Factor</td>
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<td>Ellipsoid Height</td>
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<td>Orthometric Height</td>
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<td>Geoid Height</td>
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CONTROL MARK DATA

NAME OF MARK: 17113500
COUNTY: DESCHUTES
MARK SET BY: LS 1068 DAVID BATEMAN
STATE: OREGON
DATE OF MARK: 2/21/90
COUNTRY: U.S.A.
LOCATION: SECTION 35 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 1034

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993
FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOZINTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17113500 HORIZONTAL ORDER: FIRST

Latitude: 44°03'05.891707" ONE
Longitude: 121°23'00.499609" SIGMA ERROR
Northing: 383410.5628 0.036
Easting: 3273667.7645 0.023
Convergence: -0°04'10.6578"
Scale Factor: 1.000160791808
Ellipsoid Height: 3801.5468 0.040
Orthometric Height: 3865.7648 0.042
Geoid Height: -64.2181
CONTROL MARK DATA

NAME OF MARK: 17113504  COUNTY: DESCHUTES
MARK SET BY: LS 1678  GARY HICKMAN  STATE: OREGON
DATE OF MARK: 12/04/90  COUNTRY: U.S.A.
LOCATION: SECTION 35  TOWNSHIP 17 S.  RANGE 11 E.  MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 2178

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1992-1993
FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91)  CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29  LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN NORTING:
ZONE: DESCHUTES COUNTY  0.0000 F
LINEAR UNITS: INTERNATIONAL FOOT  ORIGIN EASTING: 3,300,000.0000 F
SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17113504  HORIZONTAL ORDER: FIRST
Latitude: 44°03'05.533787"  ONE SIGMA ERROR
Longitude: 121°22'25.178717"  0.020
Northing: 383371.3316  0.017
Easting: 3276247.6945
Convergence: -0°03'46.0985"
Scale Factor: 1.000160644252
Ellipsoid Height: 3785.9334  0.028
Orthometric Height: 3850.1586  0.031
Geoid Height: -64.2252
CONTROL MARK DATA

NAME OF MARK: 17113540  COUNTY: DESCHUTES
MARK SET BY: N/A  STATE: OREGON
DATE OF MARK: N/A  COUNTRY: U.S.A.
LOCATION: SECTION 35  TOWNSHIP 17 S.  RANGE 11 E.  MERIDIAN: WILLAMETTE
REFERENCE NUMBER: CS 02177

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1992-1993
FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HORZONTAL= NAD (83-91)  CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29  LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN NORTHERN:
ZONE: DESCHUTES COUNTY  ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT  SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17113540  HORIZONTAL ORDER: SECOND

Latitude: 44°03'31.530872"  ONE
Longitude: 121°23'01.407178"  SIGMA
Northing: 386007.3451  ERROR
Easting: 3273604.636  0.029
Convergence: -0°04'11.3211"  0.028
Scale Factor: 1.000160795608
Ellipsoid Height: 3870.6986  0.034
Orthometric Height: 3934.9792  0.037
Geoid Height: -64.2806
CONTROL MARK DATA

NAME OF MARK: 17113600
MARK SET BY: LS 1068 DAVID BATEMAN
DATE OF MARK: 2/21/90
LOCATION: SECTION 36 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCCR 1033

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993
FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOizontal= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTING:
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17113600 HORIZONTAL ORDER: FIRST

Latitude: 44°03'05.643087"
Longitude: 121°21'48.764521"
Northing: 383379.6489 0.017
Easting: 3278907.5384 0.015
Convergence: -0°03'20.7796"
Scale Factor: 1.000160508041
Ellipsoid Height: 3728.8591 0.025
Orthometric Height: 3793.1077 0.028
Geoid Height: -64.2485
CONTROL MARK DATA

NAME OF MARK: 17113604  
MARK SET BY: LS 1068 DAVID BATEMAN  
DATE OF MARK: 3/06/90  
LOCATION: SECTION 36 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE  
REFERENCE NUMBER: OCCR 1035

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  
DATE: 1992-1993

FIELD METHOD: GPS  
FIELD EQUIPMENT: TRIMBLE 4000ST  
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIIZONTAL= NAD (83-91)  
VERTICAL= NGVD 29  
COORDINATE SYSTEM: TRANSVERSE MERCATOR  
ZONE: DESCHUTES COUNTY  
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000"  
LATITUDE OF ORIGIN: N 43°00'00.000000"  
ORIGIN NORTHING: 0.0000 F  
ORIGIN EASTING: 3,300,000.0000 F  
SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17113604  
HORIZONTAL ORDER: FIRST

Latitude: 44°03'05.544836"  
Longitude: 121°21'12.581047"  
Northing: 363367.2867  
Easting: 3261550.5089  
Convergence: -0°02'55.6210"  
Scale Factor: 1.000160388699

Ellipsoid Height: 3683.6381  
Orthometric Height: 3747.9059  
Geoid Height: -64.2678
**CONTROL MARK DATA**

NAME OF MARK: 17113640  
COUNTY: DESCHUTES  
MARK SET BY: LS 1228 JOHN JOYCE  
STATE: OREGON  
DATE OF MARK: 7/80  
COUNTRY: U.S.A.  
LOCATION: SECTION 36 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE  
REFERENCE NUMBER: CS 02177

MARK SKETCH:

![Sketch of a control mark](image)

**DATA COMPUTED BY:** DESCHUTES COUNTY SURVEYOR'S OFFICE  
**DATE:** 1992-1993  
**FIELD METHOD:** GPS  
**FIELD EQUIPMENT:** TRIMBLE 4000ST  
**ADJUSTED WITH:** TRIMNET PLUS

**DATUM:** HORIZONTAL= NAD (83-91)  
VERTICAL= NGVD 29  
COORDINATE SYSTEM: TRANSVERSE MERCATOR  
ZONE: DESCHUTES COUNTY  
LINEAR UNITS: INTERNATIONAL FOOT

**CENTRAL MERIDIAN:** W 121°17'00.000000"  
**LATITUDE OF ORIGIN:** N 43°00'00.000000"  
**ORIGIN NORTHING:** 0.0000 F  
**ORIGIN EASTING:** 3,300,000.0000 F  
**SCALE ALONG MERIDIAN:** 1.000160000000

**GEODETIC AND MAPPING COORDINATES**

MARK: 17113640  
**HORIZONTAL ORDER:** FIRST  

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MARK SKETCH:

3" ALUM CAP IN ROAD SURFACE

POGERS ROAD

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993

FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.0001600000

GEODITIC AND MAPPING COORDINATES

MARK: 17120400 HORIZONTAL ORDER: FIRST

Latitude: 44°07'25.314970" ONE
Longitude: 121°18'13.385390" SIGMA
Northing: 409669.4283 ERROR
Easting: 3294646.1615 0.009
Convergence: -0°00'51.0916" 0.008
Scale Factor: 1.000160032732
Ellipsoid Height: 3356.6575 0.012
Orthometric Height: 3421.5602 0.015
Geoid Height: -64.9027
CONTROL MARK DATA

NAME OF MARK: 17120404  COUNTY: DESCHUTES
MARK SET BY: LS 1020 GEORGE COLVIN  STATE: OREGON
DATE OF MARK: 3/2087  COUNTRY: U.S.A.
LOCATION: SECTION 4 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 127

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1992-1993
FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIONTAL= NAD (83-91)  CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29  LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY  ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT  SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17120404  HORIZONTAL ORDER: FIRST

Latitude: 44°07'25.322209"  ONE
Longitude: 121°17'37.571059"  SIGMA
Northing: 409669.6722  ERROR
Easting: 3297258.9997  0.017
Convergence: 0°00'26.1573"
Scale Factor: 1.000160008579
Ellipsoid Height: 3347.0622  0.027
Orthometric Height: 3411.9458  0.028
Geoid Height: -64.8836
CONTROL MARK DATA

NAME OF MARK: 17120500  COUNTY: DESCHUTES
MARK SET BY: LS 0344 CHARLES REYNOLDS  STATE: OREGON
DATE OF MARK: 6/15/65  COUNTRY: U.S.A.
LOCATION: SECTION 5  TOWNSHIP 17 S.  RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRRC 4899

MARK SKETCH:

1" BRASS CAP IN CENTER RD AT GROUND LEVEL
3' SOUTH POWERLINE

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1992-1993
FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91)  CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29  LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY  ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT  SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17120500  HORIZONTAL ORDER: FIRST

Latitude: 44°07'25.204790"  ONE
Longitude: 121°19'25.806481."  SIGMA ERROR
Northing: 409660.2237  0.010
Easting: 3289362.668  0.010
Convergence: -0°01'41.5118"
Scale Factor: 1.000160129212
Ellipsoid Height: 3357.6694  0.014
Orthometric Height: 3422.5998  0.018
Geoid Height: -64.9304
CONTROL MARK DATA

NAME OF MARK: 17120504
COUNTY: DESCHUTES

MARK SET BY: LS 1020 GEORGE COLVIN
STATE: OREGON

DATE OF MARK: 3/20/87
COUNTRY: U.S.A.

LOCATION: SECTION 5 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE

REFERENCE NUMBER: OCRR 125

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993

FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.00016000000

GEODETIC AND MAPPING COORDINATES

MARK: 17120504 HORIZONTAL ORDER: FIRST

Latitude: 44°07'25.251383" ONE
Longitude: 121°18'49.671619," SIGMA
Northing: 409663.806 ERROR
Easting: 3291998.8936 0.012
Convergence: -0°01'16.3544" 0.011
Scale Factor: 1.0001600073103
Ellipsoid Height: 3356.1462 0.016
Orthometric Height: 3421.0647 0.019
Geoid Height: -64.9184
MARK SKETCH:

3/4" Alum Cap on
Iron Rod in 1/4"
Iron Pipe up 1.5'

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993

FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOZIONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17120540 HORIZONTAL ORDER: FIRST

Latitude: 44°07'51.453984" ONE SIGMA ERROR
Longitude: 121°19'25.433354" 0.013
Northing: 412318.7285
Easting: 3289391.1946 0.012
Convergence: -0°01'41.2654"
Scale Factor: 1.000160128520
Ellipsoid Height: 3291.4345 0.017
Orthometric Height: 3356.449 0.021
Geoid Height: -65.0145
**CONTROL MARK DATA**

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<td>LOCATION:</td>
<td>SECTION: 6 TOWNSHIP: 17 S. RANGE: 12 E. MERIDIAN: WILLAMETTE</td>
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<td>REFERENCE NUMBER:</td>
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**MARK SKETCH:**

- 2" brass cap on iron pipe in mound up 10 ft.
- Johnson road

---

**DATA COMPUTED BY:** DESCHUTES COUNTY SURVEYOR'S OFFICE      **DATE:** 1992-1993

**FIELD METHOD:** GPS **FIELD EQUIPMENT:** TRIMBLE 4000ST **ADJUSTED WITH:** TRIMNET PLUS

**DATUM:** HOZONTAL= NAD (83-91) **CENTRAL MERIDIAN:** W 121°17'00.000000"

**VERTICAL= NGVD 29** **LATITUDE OF ORIGIN:** N 43°00'00.000000"

**COORDINATE SYSTEM:** TRANSVERSE MERCATOR **ORIGIN NORTHING:** 0.0006 F

**ZONE:** DESCHUTES COUNTY **ORIGIN EASTING:** 3,300,000.0000 F

**LINEAR UNITS:** INTERNATIONAL FOOT **SCALE ALONG MERIDIAN:** 1.000160000000

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**GEODITIC AND MAPPING COORDINATES**

**MARK:** 17120600 **HORIZONTAL ORDER:** FIRST

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<td>Orthometric Height: 3346.1811</td>
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CONTROL MARK DATA

NAME OF MARK: 17120604
MARK SET BY: LS 1020 GEORGE COLVIN
DATE OF MARK: 3/20/87
LOCATION: SECTION 6 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 124

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993
FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121° 17' 00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43° 00' 00.000000" ORIGIN NORTHHING:

COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN EASTING: 3,300,000.0000 F
ZONE: DESCHUTES COUNTY SCALE ALONG MERIDIAN: 1.00016000000
LINEAR UNITS: INTERNATIONAL FOOT

GEODITIC AND MAPPING COORDINATES

MARK: 17120604 HORIZONTAL ORDER: FIRST

Latitude: 44° 07' 25.368638" ONE
Longitude: 121° 20' 01.879002" SIGMA
Northing: 409678.2737 ERROR
Easting: 3286731.0024 0.013
Convergence: -0° 02' 06.6260" 0.013
Scale Factor: 1.000160201054
Ellipsoid Height: 3194.0027 0.018
Orthometric Height: 3258.9477 0.021
Geoid Height: -64.945

DESHUTES RIVER
OLD ROCK PIT
CONTROL MARK DATA

NAME OF MARK: 17120640
MARK SET BY: LS 1678 GARY HICKMAN
DATE OF MARK: N/A
LOCATION: SECTION 6 TOWNSHIP 17S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 094

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993
FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIIZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING:
ZONE: DESCHUTES COUNTY ORIGIN EASTING:
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.000160000000

GEODETIC AND MAPPING COORDINATES
MARK: 17120640 HORIZONTAL ORDER: FIRST

Latitude: 44°07'51.537769" ONE SIGMA
Longitude: 121°20'36.099675"
Northing: 412330.3598 ERROR
Easting: 3284236.3637
Convergence: -0°02'30.4705"
Scale Factor: 1.000160283759
Ellipsoid Height: 3275.2576
Orthometric Height: 3340.297
Geoid Height: -65.0394
CONTROL MARK DATA

NAME OF MARK: 17120700
COUNTY: DESCHUTES
MARK SET BY: LS 1020 GEORGE COLVIN
STATE: OREGON
DATE OF MARK: 3/20/87
COUNTRY: U.S.A.
LOCATION: SECTION 7 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 138

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993
FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOZIONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121° 17' 00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43° 00' 00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17120700 HORIZONTAL ORDER: SECOND

Latitude: 44° 06' 33.514317" ONE
Longitude: 121° 20' 36.185469" SIGMA
Northing: 404428.1599 ERROR
Easting: 3284224.3395 0.026
Convergence: -0° 02' 30.4715" 0.025
Scale Factor: 1.000160284193
Ellipsoid Height: 3402.9617 0.028
Orthometric Height: 3467.7724 0.029
Geoid Height: -64.8107
### CONTROL MARK DATA

**NAME OF MARK:** 17120800  
**COUNTY:** DESCHUTES  
**MARK SET BY:** LS 1020 GEORGE COLVIN  
**STATE:** OREGON  
**DATE OF MARK:** 3/20/87  
**COUNTRY:** U.S.A.  
**LOCATION:** SECTION 8  
**TOWNSHIP 17 S.**  
**RANGE 12 E.**  
**MERIDIAN:** WILLAMETTE  
**REFERENCE NUMBER:** OCRR 139

**MARK SKETCH:**

```
\[\text{MARK SKETCH GRAPHIC}\]
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**DATA COMPUTED BY:** DESCHUTES COUNTY SURVEYOR'S OFFICE  
**DATE:** 1992-1993

**FIELD METHOD:** GPS  
**FIELD EQUIPMENT:** TRIMBLE 4000ST  
**ADJUSTED WITH:** TRIMNET PLUS

**DATUM:** HOIZONTAL= NAD (83-91)  
**CENTRAL MERIDIAN:** W 121°17'00.000000"  
**VERTICAL=** NGVD 29  
**LATITUDE OF ORIGIN:** N 43°00'00.000000"  
**COORDINATE SYSTEM:** TRANSVERSE MERCATOR  
**ORIGIN NORTHING:** 0.0000 F  
**ZONE:** DESCHUTES COUNTY  
**ORIGIN EASTING:** 3,300,000.0000 F  
**LINEAR UNITS:** INTERNATIONAL FOOT  
**SCALE ALONG MERIDIAN:** 1.00016000000

### GEODITIC AND MAPPING COORDINATES

**MARK:** 17120800  
**HORIZONTAL ORDER:** FIRST

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CONTROL MARK DATA

NAME OF MARK: 17120804
MARK SET BY: LS 1020 GEORGE COLVIN
DATE OF MARK: 3/20/87
LOCATION: SECTION 8 TOWNSHIP 17S RANGE 12E MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCCR 140

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993
FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"^
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"^
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.000160000000

GEODETIC AND MAPPING COORDINATES

MARK: 17120804 HORIZONTAL ORDER: FIRST

Latitude: 44°06'33.086683" ONE SIGMA ERROR
Longitude: 121°18'49.622567" ORIGIN NORTHING: 0.012
Northing: 404380.5746 ORIGIN EASTING: 0.011
Easting: 3292000.5176 Convergence: -0°01'16.3004"
Scale Factor: 1.000160073074

Ellipsoid Height: 3419.6491 ONE SIGMA ERROR
Orthometric Height: 3484.4416 ORIGIN NORTHING: 0.015
Geoid Height: -64.7925 ORIGIN EASTING: 0.018
NAME OF MARK: 17120840
MARK SET BY: LS 0344 CHARLES REYNOLDS
DATE OF MARK: 6/15/65
LOCATION: SECTION 8 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR CS 4899
MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993
FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOZIONTAL= NAD (83-91)
VERTICAL= NGVD 29
COORDINATE SYSTEM: TRANSVERSE MERCATOR
ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000"  
LATITUDE OF ORIGIN: N 43°00'00.000000"  
ORIGIN NORTING: 0.0000 F  
ORIGIN EASTING: 3,300,000.0000 F  
SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17120840  HORIZONTAL ORDER: FIRST
Latitude: 44°06'59.148271"  ONE SIGMA ERROR
Longitude: 121°19'25.873490"  0.011
Northing: 407021.2256  0.011
Easting: 3289356.4801
Convergence: -0°01'41.5453"  
Scale Factor: 1.000160129362
Ellipsoid Height: 3405.659  0.015
Orthometric Height: 3470.5246  0.019
Geoid Height: -64.8656
CONTROL MARK DATA

NAME OF MARK: 17120900
COUNTY: DESCHUTES
MARK SET BY: DESCHUTES CO. SURVEYOR
STATE: OREGON
DATE OF MARK: 9/21/91
COUNTRY: U.S.A.
LOCATION: SECTION 9
TOWNSHIP 17 S.
RANGE 12 E.
MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 1112

MARK SKETCH:

3/4" Brass Cap
in Conc.
10' N, 15' E, F

Cousley Road

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HORIZONTAL = NAD (83-91)
VERTICAL = NGVD 29
COORDINATE SYSTEM: TRANSVERSE MERCATOR
ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000'
LATITUDE OF ORIGIN: N 43°00'00.000000'
ORIGIN NORTHING: 0.0000 F
ORIGIN EASTING: 3,300,000.0000 F
SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17120900
HORIZONTAL ORDER: FIRST

Latitude: 44°06'33.100282"
Longitude: 121°16'13.427649"
Northing: 404381.1361
Easting: 3294641.768
Convergence: -0°00'51.1077"
Scale Factor: 1.000160032785
Ellipsoid Height: 3423.8169
Orthometric Height: 3488.5968
Geoid Height: -64.7799
CONTROL MARK DATA

NAME OF MARK: 17121600
MARK SET BY: OREGON STATE HIGHWAY
DATE OF MARK: N/A
LOCATION: SECTION 16, TOWNSHIP 17 S, RANGE 12 E, MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCR 55, 1054

MARK SKETCH:

2" Brass Cap in concrete
in metal box down 1.25 ft.
3' East of E.P.

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993
FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOZINTAL= NAD (83-91)       CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29       LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR
ORIGIN NORTHING: 0.0000 F
ORIGIN EASTING: 3,300,000.0000 F
ZONE: DESCHUTES COUNTY
SCALE ALONG MERIDIAN: 1.000160000000
LINEAR UNITS: INTERNATIONAL FOOT

GEODETIC AND MAPPING COORDINATES

MARK: 17121600
HORIZONTAL ORDER: FIRST

Latitude: 44°05'40.934751"
Longitude: 121°18'13.523249"
Northing: 399097.837
Easting: 3294633.4811
Convergence: -0°00'51.1609"
Scale Factor: 1.000160032887
Ellipsoid Height: 3459.7858
Orthometric Height: 3524.4469
Geoid Height: -64.6611

ONE SIGMA ERROR

0.012 0.011

0.027 0.028
CONTROL MARK DATA

NAME OF MARK: 17121640
MARK SET BY: LS 1020 GEORGE COLVIN
DATE OF MARK: 3/20/87
LOCATION: SECTION 16 TOWNSHIP 17S RANGE 12E MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCCR 149

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993
FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOZINTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17121640 HORIZONTAL ORDER: FIRST
Latitude: 44°06'07.041504" ONE
Longitude: 121°18'13.403471" SIGMA ERROR
Northing: 401741.913 0.014
Easting: 3294642.8787 0.013
Convergence: -0°00'51.0842"
Scale Factor: 1.0001600032772
Ellipsoid Height: 3439.244 0.025
Orthometric Height: 3503.9626 0.025
Geoid Height: -64.7186
CONTROL MARK DATA

NAME OF MARK: 17121740
MARK SET BY: PE 0632 R. B. GOULD
DATE OF MARK: 1930+
LOCATION: SECTION 17 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: ORCR 103

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993
FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17121740 HORIZONTAL ORDER: FIRST

Latitude: 44°06'07.102645" ONE
Longitude: 121°19'25.929889" SIGMA
Northing: 401750.0638 ERROR
Easting: 3289349.7693 0.014
Convergence: -0°01'41.5581"
Scale Factor: 1.000160129526 0.013
Ellipsoid Height: 3451.0902 0.021
Orthometric Height: 3515.829 0.023
Geoid Height: -64.7388
**CONTROL MARK DATA**

**NAME OF MARK:** 17121800  
**COUNTY:** DESCHUTES

**MARK SET BY:** LS 0599 JAMES BUSSARD  
**STATE:** OREGON

**DATE OF MARK:** 1972  
**COUNTRY:** U.S.A.

**LOCATION:** SECTION 18  
**TOWNSHIP:** 17 S.  
**RANGE 12 E. MERIDIAN:** WILLAMETTE

**REFERENCE NUMBER:** CS 4901

**MARK SKETCH:**

---

**DATA COMPUTED BY:** DESCHUTES COUNTY SURVEYOR'S OFFICE  
**DATE:** 1992-1993

**FIELD METHOD:** GPS  
**FIELD EQUIPMENT:** TRIMBLE 4000ST  
**ADJUSTED WITH:** TRIMNET PLUS

**DATUM:** HORIZONTAL = NAD (83-91)  
**CENTRAL MERIDIAN:** W 121°17'00.000000"  
**VERTICAL = NGVD 29**  
**LATITUDE OF ORIGIN:** N 43°00'00.000000"  
**COORDINATE SYSTEM:** TRANSVERSE MERCATOR  
**ORIGIN NORTHING:** 0.0000 F  
**ZONE:** DESCHUTES COUNTY  
**ORIGIN EASTING:** 3,300,000.0000 F  
**LINEAR UNITS:** INTERNATIONAL FOOT  
**SCALE ALONG MERIDIAN:** 1.00016000000

---

**GEODITIC AND MAPPING COORDINATES**

**MARK:** 17121800  
**HORIZONTAL ORDER:** FIRST

- **Latitude:** 44°05'41.599031"  
  **ONE SIGMA ERROR:**
- **Longitude:** 121°20'36.836981"  
  **0.013**
- **Northing:** 399170.2382  
  **0.013**
- **Easting:** 3284172.95  
  **0.012**
- **Convergence:** -0°02'30.8858"  
- **Scale Factor:** 1.000160286049

- **Ellipsoid Height:** 3351.5295  
  **0.018**
- **Orthometric Height:** 3416.2083  
  **0.021**
- **Geoid Height:** -64.6787
CONTROL MARK DATA

NAME OF MARK: 17121840
MARK SET BY: LS 1020  GEORGE COLVIN
DATE OF MARK: 3/20/87
LOCATION: SECTION 18  TOWNSHIP 17 S.  RANGE 12 E.  MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 148

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1992-1993
FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91)  CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29  LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN NORTING: 0.0000 F
ZONE: DESCHUTES COUNTY  ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT  SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17121840  HORIZONTAL ORDER: FIRST

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Sigma Error</th>
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<tr>
<td>Latitude</td>
<td>44°06'07.559472&quot;</td>
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<tr>
<td>Longitude</td>
<td>121°20'36.507841&quot;</td>
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<tr>
<td>Northing</td>
<td>401799.4805</td>
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<tr>
<td>Easting</td>
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<tr>
<td>Convergence</td>
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<td>Scale Factor</td>
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<tr>
<td>Ellipsoid Height</td>
<td>3436.148</td>
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<tr>
<td>Orthometric Height</td>
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<td>0.022</td>
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<tr>
<td>Geoid Height</td>
<td>-64.7443</td>
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CONTROL MARK DATA

NAME OF MARK: 17121900  COUNTY: DESCHUTES
MARK SET BY: DESCHUTES CO. SURVEYOR  STATE: OREGON
DATE OF MARK: 3/02/92  COUNTRY: U.S.A.
LOCATION: SECTION 19 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 1122

MARK SKETCH:

17121900
3 1/4" BERE CAP
OD 4" IRON PIPE
LID 0.1

C3 23
2 7/16" PLUM CAP
ON IRON ROD
UP 0.1' FF

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1992-1993

FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91).  CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29  LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN NORTING: 0.0000 F
ZONE: DESCHUTES COUNTY  ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT  SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17121900  HORIZONTAL ORDER: SECOND

Latitude: 44°04'49.607155"  ONE
Longitude: 121°20'36.088373"  SIGMA
Northing: 393904.4983  ERROR
Easting: 3284223.7532  0.027
Convergence: -0°02'30.3257"  0.026
Scale Factor: 1.000160284216  0.031
Ellipsoid Height: 3831.4647  0.033
Orthometric Height: 3896.0132
Geoid Height: -64.5485
CONTROL MARK DATA

NAME OF MARK: 17121904
COUNTY: DESCHUTES
MARK SET BY: LS 0599 JAMES BUSSARD
STATE: OREGON
DATE OF MARK: 7/9/72
COUNTRY: U.S.A.
LOCATION: SECTION 19 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: CS 4901

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIIZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000''
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000''
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTING: 0.0000 0
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17121904 HORIZONTAL ORDER: SECOND

Latitude: 44°04'49.254450'' ONE
Longitude: 121°20'02.350092'' SIGMA
Northing: 393867.1215 ERROR
Easting: 3286686.9062
Convergence: -0°02'06.8549''
Scale Factor: 1.000160202395
Ellipsoid Height: 4055.2505
Orthometric Height: 4119.805
Geoid Height: -64.5544

ONE SIGMA ERROR
CONTROL MARK DATA

NAME OF MARK: 17121940  
MARK SET BY: LS 0599 JAMES BUSSARD  
DATE OF MARK: 9/7/72  
LOCATION: SECTION 19 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE  
REFERENCE NUMBER: CS 4901  

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  
DATE: 1992-1993  
FIELD METHOD: GPS  
FIELD EQUIPMENT: TRIMBLE 4000ST  
ADJUSTED WITH: TRIMNET PLUS  

DATUM: HOIZONTAL= NAD (83-91)  
VERTICAL= NGVD 29  
COORDINATE SYSTEM: TRANSVERSE MERCATOR  
ZONE: DESCHUTES COUNTY  
LINEAR UNITS: INTERNATIONAL FOOT  
CENTRAL MERIDIAN: W 121°17'00.000000"  
LATITUDE OF ORIGIN: N 43°00'00.000000"  
ORIGIN NORTHING: 0.0000 F  
ORIGIN EASTING: 3,300,000.0000 F  
SCALE ALONG MERIDIAN: 1.0001600000000  

GEODITIC AND MAPPING COORDINATES  
MARK: 17121940  
HORIZONTAL ORDER: FIRST

Latitude: 44°05'15.638107"  
Longitude: 121°20'36.328731"  
Northing: 396540.9056  
Easting: 3284208.1287  
Convergence: -0°02'30.5125"  
Scale Factor: 1.000160284779  
Ellipsoid Height: 3691.8836  
Orthometric Height: 3756.4973  
Geoid Height: -64.6137
**CONTROL MARK DATA**

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<tr>
<th>NAME OF MARK:</th>
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<td>COUNTY:</td>
<td>DESCHUTES</td>
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<tr>
<td>MARK SET BY:</td>
<td>DESCHUTES CO. SURVEYOR</td>
</tr>
<tr>
<td>STATE:</td>
<td>OREGON</td>
</tr>
<tr>
<td>DATE OF MARK:</td>
<td>8/21/91</td>
</tr>
<tr>
<td>COUNTRY:</td>
<td>U.S.A.</td>
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<tr>
<td>LOCATION:</td>
<td>SECTION 20, TOWNSHIP 17 S, RANGE 12 E, MERIDIAN: WILLAMETTE</td>
</tr>
<tr>
<td>REFERENCE NUMBER:</td>
<td>OCRR 1087</td>
</tr>
</tbody>
</table>

**MARK SKETCH:**

![MARK SKETCH](image)

**DATA COMPUTED BY:** DESCHUTES COUNTY SURVEYOR'S OFFICE

**DATE:** 1992-1993

**FIELD METHOD:** GPS

**FIELD EQUIPMENT:** TRIMBLE 4000ST

**ADJUSTED WITH:** TRIMNET PLUS

**DATUM:** HOIZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"

**VERTICAL=** NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"

**COORDINATE SYSTEM:** TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F

**ZONE:** DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F

**LINEAR UNITS:** INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.00016000000

**GEODITIC AND MAPPING COORDINATES**

<table>
<thead>
<tr>
<th>MARK: 17122000</th>
<th>HORIZONTAL ORDER: FIRST</th>
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<tbody>
<tr>
<td>Latitude:</td>
<td>44°04'49.213222&quot;</td>
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<tr>
<td>Longitude:</td>
<td>121°19'26.232453&quot;</td>
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<tr>
<td>Northing:</td>
<td>393861.4849</td>
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<tr>
<td>Easting:</td>
<td>3289323.7962</td>
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<tr>
<td>Convergence:</td>
<td>-0°01'41.7290&quot;</td>
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<td>Scale Factor:</td>
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<td>Ellipsoid Height:</td>
<td>3937.7953</td>
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<td>Orthometric Height:</td>
<td>4002.3495</td>
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<tr>
<td>Geoid Height:</td>
<td>-64.5542</td>
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</tbody>
</table>
CONTROL MARK DATA

NAME OF MARK: 17122004
MARK SET BY: LS 0702 RAYMOND OMAN
DATE OF MARK: 11/14/88
LOCATION: SECTION 20 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 891

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993
FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91)
VERTICAL= NGVD 29
COORDINATE SYSTEM: TRANSVERSE MERCATOR
ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000"
LATITUDE OF ORIGIN: N 43°00'00.000000"
ORIGIN NORTHING: 0.0000 F
ORIGIN EASTING: 3,300,000.0000 F
SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17122004
HORIZONTAL ORDER: FIRST

Latitude: 44°04'49.153121"
Longitude: 121°18'50.268662"
Northing: 393854.2621
Easting: 3291949.4544
Convergence: -0°01'.16.7102"
Scale Factor: 1.000160074010
Ellipsoid Height: 3621.5668
Orthometric Height: 3686.1204
Geoid Height: -64.5536
CONTROL MARK DATA

NAME OF MARK: 17122040  
COUNTY: DESCHUTES

MARK SET BY: LS 1031 W. C. KAUFFMAN  
STATE: OREGON

DATE OF MARK: 6/76  
COUNTRY: U.S.A.

LOCATION: SECTION 20  
TOWNSHIP 17 S.  
RANGE 12 E.  
MERIDIAN: WILLAMETTE

REFERENCE NUMBER: OCRR 1057

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  
DATE: 1992-1993

FIELD METHOD: GPS  
FIELD EQUIPMENT: TRIMBLE 4000ST  
ADJUSTED WITH: TRIMNET PLUS

DATUM: HORIZONTAL= NAD (83-91)  
VERTICAL= NGVD 29  
COORDINATE SYSTEM: TRANSVERSE MERCATOR  
ZONE: DESCHUTES COUNTY  
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000"  
LATITUDE OF ORIGIN: N 43°00'00.000000"  
ORIGIN NORTHING: 0.0000 F  
ORIGIN EASTING: 3,300,000.0000 F  
SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17122040  
HORIZONTAL ORDER: FIRST

Latitude: 44°05'15.227457"  
Longitude: 121°19'26.083682"  
Northing: 396496.1809  
Easting: 3289335.9559  
Convergence: -0°01'41.6387"  
Scale Factor: 1.000160129863  
Ellipsoid Height: 3730.0638  
Orthometric Height: 3794.6798  
Geoid Height: -64.616

ONE SIGMA ERROR
0.018
0.017
0.025
0.027
CONTROL MARK DATA

NAME OF MARK: 17122100
MARK SET BY: CENTURY WEST ENG. CORP.
DATE OF MARK: 1979/198
LOCATION: SECTION 21 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: NONE

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
DATUM: HOIIZONTAL= NAD (83-91) VERTICAL= NGVD 29
COORDINATE SYSTEM: TRANSVERSE MERCATOR ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

MARK: 17122100 HORIZONTAL ORDER: FIRST

Latitude: 44°04'48.737167" ONE
Longitude: 121°18'13.889621" SIGMA
Northing: 393811.3099 ERROR
Easting: 3294605.4218
Convergence: -0°00'51.4024" 0.011
Scale Factor: 1.000160033232

Ellipsoid Height: 3477.8992 0.017
Orthometric Height: 3542.4477 0.017
Geoid Height: -64.5484
CONTROL MARK DATA

NAME OF MARK: 17122104
COUNTY: DESCHUTES

MARK SET BY: N/A
STATE: OREGON

DATE OF MARK: N/A
COUNTRY: U.S.A.

LOCATION: SECTION 21 TOWNSHIP 17S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: NONE

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91)
CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29
LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR
ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY
ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT
SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17122104
HORIZONTAL ORDER: FIRST

Latitude: 44°04'48.683595"
Longitude: 121°17'37.498836"
Northing: 393805.3851
Easting: 3297262.2616
Convergence: -0°00'26.0866"
Scale Factor: 1.000160008559
Ellipsoid Height: 3499.7246
Orthometric Height: 3564.2602
Geoid Height: -64.5356
CONTROL MARK DATA

NAME OF MARK: 17122140  COUNTY: DESCHUTES
MARK SET BY: DESCHUTES CO. PUBLIC WORKS  STATE: OREGON
DATE OF MARK: 9/1985  COUNTRY: U.S.A.
LOCATION: SECTION 21  TOWNSHIP 17S.  RANGE 12 E.  MERIDIAN: WILLAMETTE
REFERENCE NUMBER: CS 2669

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1992-1993

FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HOZITAL= NAD (83-91)  CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29  LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY  ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT  SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17122140  HORIZONTAL ORDER: FIRST

Latitude: 44°05'14.852136"
Longitude: 121°18'13.677330"
Northing: 396456.2096
Easting: 3294621.5781
Convergence: -0°00'51.2614"
Scale Factor: 1.000160033033
Ellipsoid Height: 3481.6617
Orthometric Height: 3546.2664
Geoid Height: -64.6047
CONTROL MARK DATA

NAME OF MARK: 17122800
MARK SET BY: DESCHUTES CO. SURVEYOR
DATE OF MARK: 3/02/92
LOCATION: SECTION 28 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 1117

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91) VERTICAL= NGVD 29
COORDINATE SYSTEM: TRANSVERSE MERCATOR ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000"
LATITUDE OF ORIGIN: N 43°00'00.000000"
ORIGIN NORTHING: 0.0000 F
ORIGIN EASTING: 3,300,000.0000 F
SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17122800 HORIZONTAL ORDER: FIRST

Latitude: 44°03'57.294227"
Longitude: 121°18'14.428042"
Northing: 388601.229
Easting: 3294564.8047
Convergence: -0°00'51.7636"
Scale Factor: 1.000160033734
Ellipsoid Height: 3542.9344
Orthometric Height: 3607.3608
Geoid Height: -64.4264

ONE SIGMA ERROR:
Latitude: 0.010
Longitude: 0.010
Northing: 0.010
Easting: 0.010
Convergence: 0.010
Scale Factor: 0.016
Ellipsoid Height: 0.016
Orthometric Height: 0.016
Geoid Height: 0.016
CONTROL MARK DATA

NAME OF MARK: 17122840
COUNTY: DESCHUTES
MARK SET BY: DESCHUTES CO. SURVEYOR
STATE: OREGON
DATE OF MARK: 7/11/91
COUNTRY: U.S.A.
LOCATION: SECTION 28 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 1086

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993
FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIIZONTA L= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17122840 HORIZONTAL ORDER: FIRST

Latitude: 44°04'23.342473" ONE
Longitude: 121°18'14.095951" SIGMA
Northing: 391239.3622 ERROR
Easting: 3294589.7152 0.009
Convergence: -0°00'51.5394"
Scale Factor: 1.000160033426
Ellipsoid Height: 3522.1286 0.012
Orthometric Height: 3586.6218 0.013
Geoid Height: -64.4932
CONTROL MARK DATA

NAME OF MARK: 17122900
MARK SET BY: LS 0706 BRUCE ROGERS
DATE OF MARK: 7/9/1977
LOCATION: SECTION 29 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: CS 02947

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993
FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HORIZONTAL= NAD (83-91)\nVERTICAL= NGVD 29
COORDINATE SYSTEM: TRANSVERSE MERCATOR
ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000"
LATITUDE OF ORIGIN: N 43°00'00.000000"
ORIGIN NORTING: 0.0000 F
ORIGIN EASTING: 3,300,000.0000 F
SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17122900
HORIZONTAL ORDER: FIRST

Latitude: 44°03'57.258947"
Longitude: 121°19'25.933789"
Northing: 388599.5958
Easting: 3289343.0117
Convergence: -0°01'41.4948"
Scale Factor: 1.000160129692
Ellipsoid Height: 3626.7087
Orthometric Height: 3691.136
Geoid Height: -64.4273
CONTROL MARK DATA

NAME OF MARK: 17122904
MARK SET BY: N/A
DATE OF MARK: N/A
LOCATION: SECTION 29 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: NONE

MARK SKETCH:

DATA COMPUTED BY: DESCUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91) VERTICAL= NGVD 29
COORDINATE SYSTEM: TRANSVERSE MERCATOR ZONE: DESCUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000" LATITUDE OF ORIGIN: N 43°00'00.000000" ORIGIN NORTING: 0.0000 F ORIGIN EASTING: 3,300,000.0000 F SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17122904 HORIZONTAL ORDER: FIRST

Latitude: 44°03'57.303420" ONE SIGMA
Longitude: 121°18'49.969472" ERROR
Northing: 386602.9669 0.012
Easting: 3291969.3504 0.012
Convergence: -0°01'16.4822" Scale Factor: 1.000160073645
Ellipsoid Height: 3529.4807 0.018
Orthometric Height: 3593.9098 0.019
Geoid Height: -64.4291
**CONTROL MARK DATA**

- **NAME OF MARK:** 17122940
- **COUNTY:** DESCHUTES
- **MARK SET BY:** LS 0599 JAMES BUSSARD
- **STATE:** OREGON
- **DATE OF MARK:** 1972
- **COUNTRY:** U.S.A.
- **LOCATION:** SECTION 29 TOWNSHIP 17S. RANGE 12E. MERIDIAN: WILLAMETTE
- **REFERENCE NUMBER:** OCRR 1082

**MARK SKETCH:**

```
3" Brass Cap
At Ground Level

Hillside Park DB
```

**DATA COMPUTED BY:** DESCHUTES COUNTY SURVEYOR'S OFFICE  **DATE:** 1992-1993

**FIELD METHOD:** GPS  **FIELD EQUIPMENT:** TRIMBLE 4000ST  **ADJUSTED WITH:** TRIMNET PLUS

- **DATUM:** HOIZONTAL= NAD (83-91)  **CENTRAL MERIDIAN:** W 121°17'00.000000"
- **VERTICAL= NGVD 29**  **LATITUDE OF ORIGIN:** N 43°00'00.000000"
- **COORDINATE SYSTEM:** TRANSVERSE MERCATOR  **ORIGIN NORTHING:** 0.0000 F
- **ZONE:** DESCHUTES COUNTY  **ORIGIN EASTING:** 3,300,000.0000 F
- **LINEAR UNITS:** INTERNATIONAL FOOT  **SCALE ALONG MERIDIAN:** 1.00016000000

**GEODITIC AND MAPPING COORDINATES**

- **MARK:** 17122940  **HORIZONTAL ORDER:** FIRST
  - **Latitude:** 44°04'23.171286"  **ONE SIGMA ERROR**
  - **Longitude:** 121°19'26.130135"  **0.013**
  - **Northing:** 391223.9777  **0.012**
  - **Easting:** 3289329.9665  **-0.0141.6446"**
  - **Convergence:**  **Scale Factor:** 1.000160130009
  - **Ellipsoid Height:** 3917.1973  **0.018**
  - **Orthometric Height:** 3981.6882  **0.021**
  - **Geoid Height:** -64.4909
CONTROL MARK DATA

NAME OF MARK: 17123000
MARK SET BY: DESCHUTES CO. PUBLIC WORKS
DATE OF MARK: 1960+
LOCATION: SECTION 30 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: NONE

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993
FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIIZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17123000 HORIZONTAL ORDER: FIRST

Latitude: 44°03'57.485021" ONE
Longitude: 121°20'36.213178" SIGMA
Northing: 388625.6258 ERROR
Easting: 3284210.7924 0.017
Convergence: -0°02'30.3733" 0.017
Scale Factor: 1.000160284684
Ellipsoid Height: 3692.1706 0.027
Orthometric Height: 3756.5832 0.029
Geoid Height: -64.4126
CONTROL MARK DATA

NAME OF MARK: 17123004
COUNTY: DESCHUTES
MARK SET BY: DESCHUTES CO. SURVEYOR
STATE: OREGON
DATE OF MARK: 1993
COUNTRY: U.S.A.
LOCATION: SECTION 30 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 1211

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIIZON1AL= NAD (83-91)
VERTICAL= NGVD 29
COORDINATE SYSTEM: TRANSVERSE MERCATOR
ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000"
LATITUDE OF ORIGIN: N 43°00'00.000000"
ORIGIN NORTING: 0.0000 F
ORIGIN EASTING: 3,300,000.0000 F
SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17123004
HORIZONTAL ORDER: FIRST

Latitude: 44°03'57.273039"
Longitude: 121°20'02.139168"
Northing: 388602.4854
Easting: 3286699.0717
Convergence: -0°02'06.6751"
Scale Factor: 1.000160202026
Ellipsoid Height: 3712.1184
Orthometric Height: 3776.5408
Geoid Height: -64.4224
CONTROL MARK DATA

NAME OF MARK: 17123040  COUNTY: DESCHUTES
MARK SET BY: LS 0599 JAMES BUSSARD  STATE: OREGON
DATE OF MARK: 9/07/72  COUNTRY: U.S.A.
LOCATION: SECTION 1  TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: CS 4901

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993

FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91)  CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29  LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY  ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT  SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17123040  HORIZONTAL ORDER: FIRST

Latitude: 44°04'23.547181"  ONE
Longitude: 121°20'36.152985"  SIGMA
Northing: 39125.1711  ERROR
Easting: 3284217.112  0.018
Convergence: -0°02'30.3511"  0.017
Scale Factor: 1.000160284456
Ellipsoid Height: 3936.7515  0.027
Orthometric Height: 4001.2295  0.030
Geoid Height: -64.478
CONTROL MARK DATA

NAME OF MARK: 17123100
MARK SET BY: LS 1046 MICHAEL TYE
DATE OF MARK: 3/10/78
LOCATION: SECTION 31 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCCR 359

MARK SKETCH:

3" BRASS CAD
HD. 0.21
STEEL FENCE
Post ± ½ 12 IN CONC.

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993
FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17123100 HORIZONTAL ORDER: FIRST

Latitude: 44°03'05.488468" ONE
Longitude: 121°20'36.333985" SIGMA ERROR
Northing: 383359.4853 0.012
Easting: 3284198.1295 0.011
Convergence: -0°02'30.4181"
Scale Factor: 1.000160285142
Ellipsoid Height: 3756.0684 0.020
Orthometric Height: 3820.3519 0.023
Geoid Height: -64.2835
CONTROL MARK DATA

NAME OF MARK: 17123104  
COUNTY: DESCHUTES

MARK SET BY: DESCHUTES CO. SURVEYOR  
STATE: OREGON

DATE OF MARK: 7/12/91  
COUNTRY: U.S.A.

LOCATION: SECTION 31  
TOWNSHIP 17 S.  
RANGE 12 E.  
MERIDIAN: WILLAMETTE

REFERENCE NUMBER: OCRR 1081

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  
DATE: 1992-1993

FIELD METHOD: GPS  
FIELD EQUIPMENT: TRIMBLE 4000ST  
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIIZONTAL= NAD (83-91)  
CENTRAL MERIDIAN: W 121°17'00.000000"

VERTICAL= NGVD 29  
LATITUDE OF ORIGIN: N 43°00'00.000000"

COORDINATE SYSTEM: TRANSVERSE MERCATOR  
ORIGIN NORTHING: 0.0000 F

ZONE: DESCHUTES COUNTY  
ORIGIN EASTING: 3,300,000.0000 F

LINEAR UNITS: INTERNATIONAL FOOT  
SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17123104  
HORIZONTAL ORDER: FIRST

Latitude: 44°03'05.291730"  
ONE SIGMA ERROR

Longitude: 121°20'02.058537"  
0.015

Northing: 383337.8788  
0.014

Easting: 3286701.7285  

Convergence: -0°02'06.5861"  

Scale Factor: 1.000160201946  

Ellipsoid Height: 3584.9348  
0.022

Orthometric Height: 3649.2292  
0.024

Geoid Height: -64.2944
CONTROL MARK DATA

NAME OF MARK: 17123140
COUNTY: DESCHUTES

MARK SET BY: DESCHUTES CO. SURVEYOR
STATE: OREGON

DATE OF MARK: 7/10/91
COUNTRY: U.S.A.

LOCATION: SECTION 31 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 1083

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91)
VERTICAL= NGVD 29
COORDINATE SYSTEM: TRANSVERSE MERCATOR
ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000"
LATITUDE OF ORIGIN: N 43°00'00.000000"
ORIGIN NORTING: 0.0000 F
ORIGIN EASTING: 3,300,000.0000 F
SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17123140
HORIZONTAL ORDER: FIRST

Latitude: 44°03'31.497192"
Longitude: 121°20'36.227810"
Northing: 385993.6095
Easting: 3284207.8051
Convergence: -0°02'30.3639"
Scale Factor: 1.000160284793

Ellipsoid Height: 3609.7919
Orthometric Height: 3674.1398
Geoid Height: -64.3479

ONE SIGMA ERROR
0.015
0.014
0.024
0.027

MARK SKETCH:

3/4" BRASS CAP
DOWN 0.2'
1/4 FENCE LINE

SKYLINERS PD
CONTROL MARK DATA

NAME OF MARK: 17123204  COUNTY: DESCHUTES
MARK SET BY: DESCHUTES CO. PUBLIC WORKS  STATE: OREGON
DATE OF MARK: 1/12/1998  COUNTRY: U.S.A.
LOCATION: SECTION 32  TOWNSHIP 17S.  RANGE 12 E.  MERIDIAN: WILLAMETTE
REFERENCE NUMBER: CS 03743

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1992-1993

FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HORIZONTAL= NAD (83-91)  CENTRAL MERIDIAN: W 121°17’00.000000”
VERTICAL= NGVD 29  LATITUDE OF ORIGIN: N 43°00’00.000000”
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY  ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT  SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: 17123204  HORIZONTAL ORDER: FIRST

Latitude: 44°03’05.133138”  ONE
Longitude: 121°18’49.902317”  SIGMA
Northing: 383319.2232  ERROR
Easting: 3291972.2967  0.014
Convergence: -0°01’16.4155”
Scale Factor: 1.000160073591
Ellipsoid Height: 3559.7508  0.020
Orthometric Height: 3624.0529  0.020
Geoid Height: -64.302
CONTROL MARK DATA

NAME OF MARK: 17123300  COUNTY: DESCHUTES
MARK SET BY: PE 0632 R. B. GOULD  STATE: OREGON
DATE OF MARK: N/A  COUNTRY: U.S.A.
LOCATION: SECTION 33 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: NONE

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1992-1993

FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91)  CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29  LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY  ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT  SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17123300  HORIZONTAL ORDER: FIRST

Latitude: 44°03'05.063070"  ONE
Longitude: 121°18'13.768897"  SIGMA
Northing: 383311.3098  ERROR
Easting: 3294611.624  0.009
Convergence: -0°00'51.2918"
Scale Factor: 1.0001600033156
Ellipsoid Height: 3589.7296  0.013
Orthometric Height: 3654.0304  0.014
Geoid Height: -64.3008
CONTROL MARK DATA

NAME OF MARK: 17123304
COUNTY: DESCHUTES

MARK SET BY: DESCHUTES CO. SURVEYOR
STATE: OREGON

DATE OF MARK: 7/08/92
COUNTRY: U.S.A.

LOCATION: SECTION 33 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: OCRR 1137

MARK SKETCH:

3/4" BRASS CAP
0.1" LIFE AT COR
CONC. CURB

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOZONTAL = NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL = NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17123304 HORIZONTAL ORDER: FIRST

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<th>Description</th>
<th>Value</th>
<th>Error</th>
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<tr>
<td>Latitude</td>
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<td>0.0013</td>
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<td>Longitude</td>
<td>121°17'37.627663&quot;</td>
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<td>Ellipsoid Height</td>
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<td>Orthometric Height</td>
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<td>Geoid Height</td>
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CONTROL MARK DATA

NAME OF MARK: 17123340
MARK SET BY: N/A
DATE OF MARK: N/A
LOCATION: SECTION 33 TOWNSHIP 17S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: NONE

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: 17123340 HORIZONTAL ORDER: FIRST

Latitude: 44°03'31.350952"
Longitude: 121°18'14.078954"
Northing: 385973.718
Easting: 3294589.641
Convergence: -0°00'51.5141"
Scale Factor: 1.0001600033427
Ellipsoid Height: 3558.5975
Orthometric Height: 3622.9623
Geoid Height: -64.3648
CONTROL MARK DATA

NAME OF MARK: CB20
MARK SET BY: DESCHUTES CO. SURVEYOR
DATE OF MARK: 1992
LOCATION: SECTION 24 TOWNSHIP 17 S. RANGE 6 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: DGHC 6

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993
FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000''
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000''
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES
MARK: CB20 HORIZONTAL ORDER: FIRST
Latitude: 44°05'40.410113'' ONE SIGMA ERROR
Longitude: 121°21'12.181668''
Northing: 399051.8662 0.014
Easting: 3281593.0195 0.013
Convergence: -0°02'55.4793''
Scale Factor: 1.00016036906
Ellipsoid Height: 3584.7769 0.021
Orthometric Height: 3649.4436 0.024
Geoid Height: -64.6667
CONTROL MARK DATA

NAME OF MARK: CB21  COUNTY: DESCHUTES
MARK SET BY: DESCHUTES CO. SURVEYOR  STATE: OREGON
DATE OF MARK: 1992  COUNTRY: U.S.A.
LOCATION: SECTION 18  TOWNSHIP 17 S.  RANGE 12 E.  MERIDIAN: WILLAMETTE
REFERENCE NUMBER: DGMC 8

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE  DATE: 1992-1993
FIELD METHOD: GPS  FIELD EQUIPMENT: TRIMBLE 4000ST  ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIIZONTAL= NAD (83-91)  CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29  LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR  ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY  ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT  SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: CB21  HORIZONTAL ORDER: FIRST

Latitude: 44°06'32.822188"  ONE SIGMA ERROR
Longitude: 121°20'37.266341"
Northing: 404358.1189  0.011
Easting: 3284145.4138  0.010
Convergence: -0°02'31.2233"
Scale Factor: 1.000160287044
Ellipsoid Height: 3416.3033  0.015
Orthometric Height: 3461.1121  0.018
Geoid Height: -64.8088
CONTROL MARK DATA

NAME OF MARK: CB22
MARK SET BY: DESCHUTES CO. SURVEYOR
DATE OF MARK: 1992
LOCATION: SECTION 12 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: DGM 8

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993
FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS
DATUM: HOIIZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000" VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTING: 0.0000 F ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: CB22 HORIZONTAL ORDER: FIRST

Latitude: 44°06'35.329529" ONE
Longitude: 121°21'48.047955" SIGMA
Northing: 404616.4653 ERROR
Easting: 3278980.5107
Convergence: -0°03'20.4918"
Scale Factor: 1.000160504525
Ellipsoid Height: 3468.3367 0.015
Orthometric Height: 3533.1329 0.016
Geoid Height: -64.7962
CONTROL MARK DATA

NAME OF MARK: CB23
MARK SET BY: DESCHUTES CO. SURVEYOR
DATE OF MARK: 1992
LOCATION: SECTION 30 TOWNSHIP 17S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: DGMC 8

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIONTAL= NAD (83-91)
VERTICAL= NGVD 29
COORDINATE SYSTEM: TRANSVERSE MERCATOR
ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000"
LATITUDE OF ORIGIN: N 43°00'00.000000"
ORIGIN NORTHING: 0.0000 F
ORIGIN EASTING: 3,300,000.0000 F
SCALE ALONG MERIDIAN: 1.00016000000

GEODETIC AND MAPPING COORDINATES

MARK: CB23
HORIZONTAL ORDER: FIRST

Latitude: 44°04'47.563232"
Longitude: 121°20'34.963937"
Northing: 393697.4318
Easting: 3284305.6963
Convergence: -0°02'29.5420"
Scale Factor: 1.000160281271
Ellipsoid Height: 3858.8971
Orthometric Height: 3923.4407
Geoid Height: -64.5437
CONTROL MARK DATA

NAME OF MARK: CB25
COUNTY: DESCHUTES

MARK SET BY: DESCHUTES CO. SURVEYOR
STATE: OREGON

DATE OF MARK: 1992
COUNTRY: U.S.A.

LOCATION: SECTION 14 TOWNSHIP 17S. RANGE 11E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: DGHC 8

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOZINTCAL= NAD (83-91)
VERTICAL= NGVD 29

COORDINATE SYSTEM: TRANSVERSE MERCATOR
ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000''
LATITUDE OF ORIGIN: N 43°00'00.000000''
ORIGIN NORTING: 0.0000 F
ORIGIN EASTING: 3,300,000.000 F
SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: CB25
HORIZONTAL ORDER: FIRST

Latitude: 44°06'33.412257"
Longitude: 121°22'24.501913"
Northing: 404425.0339
Easting: 3276320.173
Convergence: -0°03'45.8629"
Scale Factor: 1.000160640318
Ellipsoid Height: 3512.6784
Orthometric Height: 3577.4524
Geoid Height: -64.774
NAME OF MARK: CB26
COUNTY: DESCHUTES
MARK SET BY: DESCHUTES CO. SURVEYOR
STATE: OREGON
DATE OF MARK: 1992
COUNTRY: U.S.A.
LOCATION: SECTION 30 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: DGMC 8

MARK SKETCH:

CB 27
3" ALUM CAP
TOP CURB
16 N. D/W

Sylvan
Park

Three Sisters

Pine Reptus Tower

Aubrey Butte

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993
FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRINNET PLUS

DATUM: HOZINTAL= NAD (83-91)
VERTICAL= NGVD 29
COORDINATE SYSTEM: TRANSVERSE MERCATOR
ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000"
LATITUDE OF ORIGIN: N 43°00'00.000000"
ORIGIN NORTING: 0.0000 F
ORIGIN EASTING: 3,300,000.0000 F
SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES
MARK: CB26
HORIZONTAL ORDER: FIRST

Latitude: 44°04'44.796562"
Longitude: 121°19'58.978600"
Northing: 393415.4804
Easting: 3286932.7809
Convergence: -0°02'04.5066"
Scale Factor: 1.000160194988
Ellipsoid Height: 4090.7806
Orthometric Height: 4155.3242
Geoid Height: -64.5437
CONTROL MARK DATA

NAME OF MARK: CB27
COUNTY: DESCHUTES
MARK SET BY: DESCHUTES CO. SURVEYOR
STATE: OREGON
DATE OF MARK: 1992
COUNTRY: U.S.A.
LOCATION: SECTION 19 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: DGC 8

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIIZONTAL= NAD (83-91)
CENTRAL MERIDIAN: W 121°17'00.000000"
VERTICAL= NGVD 29
LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR
ORIGIN NORTING: 0.0000 F
ZONE: DESCHUTES COUNTY
ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT
SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: CB27
HORIZONTAL ORDER: FIRST

Latitude: 44°04'47.789330"
Longitude: 121°20'06.310774"
Northing: 393718.9152
Easting: 3286397.6497
Convergence: -0°02'09.6092"
Scale Factor: 1.000160211285
Ellipsoid Height: 4060.4689
Orthometric Height: 4125.0192
Geoid Height: -64.5503
CONTROL MARK DATA

NAME OF MARK: CB28
COUNTY: DESCHUTES

MARK SET BY: DESCHUTES CO. SURVEYOR
STATE: OREGON

DATE OF MARK: 1992
COUNTRY: U.S.A.

LOCATION: SECTION 35 TOWNSHIP 17 S. RANGE 11 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: DGMC 8

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE DATE: 1992-1993

FIELD METHOD: GPS FIELD EQUIPMENT: TRIMBLE 4000ST ADJUSTED WITH: TRIMNET PLUS

DATUM: HOIZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17'00.000000" VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00'00.000000"
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.00016000000

GEODITIC AND MAPPING COORDINATES

MARK: CB28 HORIZONTAL ORDER: FIRST

Latitude: 44°03′31.543025″ ONE
Longitude: 121°22′57.451586″ SIGMA
Northing: 386008.2258 ERROR
Easting: 3273893.534 0.018
Convergence: -0°04′08.5704″ 0.016
Scale Factor: 1.000160778287
Ellipsoid Height: 3872.6754 0.025
Orthometric Height: 3936.9597 0.028
Geoid Height: -64.2843
CONTROL MARK DATA

NAME OF MARK: P.B.S. TV TOWER
COUNTY: DESCHUTES
MARK SET BY: OREGON PUBLIC BROADCASTING
STATE: OREGON
DATE OF MARK: 1985-
COUNTRY: U.S.A.
LOCATION: SECTION 1 TOWNSHIP 17 S. RANGE 12 E. MERIDIAN: WILLAMETTE
REFERENCE NUMBER: DQMC 8

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HORIZONTAL= NAD (83-91) CENTRAL MERIDIAN: W 121°17′00″000000″
VERTICAL= NGVD 29 LATITUDE OF ORIGIN: N 43°00′00″000000″
COORDINATE SYSTEM: TRANSVERSE MERCATOR ORIGIN NORTHING: 0.0000 F
ZONE: DESCHUTES COUNTY ORIGIN EASTING: 3,300,000.0000 F
LINEAR UNITS: INTERNATIONAL FOOT SCALE ALONG MERIDIAN: 1.00016000000

GEODETIC AND MAPPING COORDINATES

MARK: P.B.S. TV TOWER
HORIZONTAL ORDER: SECOND

Latitude: 44°04′39.901477″
Longitude: 121°20′00″249426″
Northing: 392919.7668
Easting: 3286839.6966
Convergence: -0°02′05″3876″
Scale Factor: 1.000160197776
Ellipsoid Height: 0
Orthometric Height: 0
Geoid Height: -64

ONE SIGMA ERROR
0.076
0.031

NOT-K
NOT-K
CONTROL MARK DATA

NAME OF MARK: USCE
MARK SET BY: DAVID EVANS & ASSOCIATES
DATE OF MARK: 1984
LOCATION: SECTION 32, TOWNSHIP 17 S, RANGE 12 E.
REFERENCE NUMBER: DGMc 9

MARK SKETCH:

DATA COMPUTED BY: DESCHUTES COUNTY SURVEYOR'S OFFICE
DATE: 1992-1993

FIELD METHOD: GPS
FIELD EQUIPMENT: TRIMBLE 4000ST
ADJUSTED WITH: TRIMNET PLUS

DATUM: HORIZONTAL= NAD (83-91)
VERTICAL= NGVD 29
COORDINATE SYSTEM: TRANSVERSE MERCATOR
ZONE: DESCHUTES COUNTY
LINEAR UNITS: INTERNATIONAL FOOT

CENTRAL MERIDIAN: W 121°17'00.000000" 
LATITUDE OF ORIGIN: N 43°00'00.000000"
ORIGIN NORthing: 0.0000 F
ORIGIN EASTING: 3,300,000.000 F
SCALE ALONG MERIDIAN: 1.000160000000

GEODITIC AND MAPPING COORDINATES

MARK: USCE
HORIZONTAL ORDER: FIRST

Latitude: 44°03'06.007082"
Longitude: 121°19'19.426446"
Northing: 383408.6414
Easting: 3289815.7782
Convergence: -0°01'36.9442"
Scale Factor: 1.000160118440

Ellipsoid Height: 3534.1231
Orthometric Height: 3598.425
Geoid Height: -64.3019

ONE SIGMA ERROR

0.011
0.011
0.016
0.018
**CONTROL MARK DATA**

**NAME OF MARK:** WCCW  
**COUNTY:** DESCHUTES  
**MARK SET BY:** LS 0599 JAMES BUSSARD  
**STATE:** OREGON  
**DATE OF MARK:** 1979  
**COUNTRY:** U.S.A.  
**LOCATION:** SECTION 31  
**TOWNSHIP:** 17 S.  
**RANGE:** 12 E.  
**MERIDIAN:** WILLAMETTE  
**REFERENCE NUMBER:** NONE

**MARK SKETCH:**

```
[Sketch of the control mark with a house marked on N.W. Commerce Ave.]
```

**DATA COMPUTED BY:** DESCHUTES COUNTY SURVEYOR'S OFFICE  
**DATE:** 1992-1993

**FIELD METHOD:** GPS  
**FIELD EQUIPMENT:** TRIMBLE 4000ST  
**ADJUSTED WITH:** TRIMNET PLUS

**DATUM:** HOIONTAL = NAD (83-91)  
**CENTRAL MERIDIAN:** W 121°17'00.00000"  
**VERTICAL:** NGVD 29  
**LATITUDE OF ORIGIN:** N 43°00'00.00000"  
**COORDINATE SYSTEM:** TRANSVERSE MERCATOR  
**ORIGIN NORTHING:** 0.0000 F  
**ZONE:** DESCHUTES COUNTY  
**ORIGIN EASTING:** 3,300,000.0000 F  
**LINEAR UNITS:** INTERNATIONAL FOOT  
**SCALE ALONG MERIDIAN:** 1.000160132891

**GEODITIC AND MAPPING COORDINATES**

**MARK:** WCCW  
**HORIZONTAL ORDER:** FIRST

| Latitude: 44°03'04.828211" | ONE  |
| Longitude: 121°19'27.686543" | SIGMA ERROR |
| Northing: 383289.5389 | 0.020 |
| Easting: 3289212.3708 | 0.018 |
| Convergence: -0°01'42.6869" |  |
| Scale Factor: 1.000160132891 | |
| Ellipsoid Height: 3552.8805 | 0.030 |
| Orthometric Height: 3617.1784 | 0.031 |
| Geoid Height: -64.2979 | |