SP 837

ORIGINAL

BENTON COUNTY CONTROL
CCR # 19
FILE DATE 1-30-2002
FILE SIZE 8½x11
VERTICAL ☒
HORIZONTAL ☒
SURVEYOR'S OFFICE REPORT

GPS CONTROL
SURVEY
FOR
E.D.HUGHES EXCAVATING

Located in the City of Corvallis
Benton County, Oregon

STATION CO-OP

NARRATIVE

In the course of construction at the First Alternative Inc. Retail Grocery on South 3rd Street in Corvallis, Oregon. The GPS monument "Chapman" was destroyed. The objective of our survey was to establish a new GPS monument in the vicinity of the old one.

The GPS field observations took place in October, 2001 using Trimble Model 4800 GPS receivers. Differential levels were performed using a Sokia Automatic Level B21. However, the published elevation I am showing is a result of the GPS observation.

Post processing of the GPS field data was accomplished using Trimble-Geomatics Office version 1.50 software, and NGS On-Line Positioning User Service (OPUS)

OPUS allows users to submit their GPS data files in RINEX format to NGS, where the data will be processed to determine a position using NGS computers and software. Each RINEX file that is submitted will be processed with respect to 3 National CORS sites.

Resultant data was the average of the mean OPUS results and mean processed results.

The OPUS position was constrained horizontally and vertically using the Redmond, Corvallis, and Newport CORS stations. The processed position was held using the HPGN station J54. The horizontal constraints were NAD 83/91 and the vertical constraints were to the NGVD 88 ellipsoid. Geoid. 99 was used to determine the orthometric elevation.

CLIENT: E.D. Hughes Excavating
JOB No: 01171

Expires 12/31/2002

NORTHSTAR SURVEYING, INC.
720 NW 4th St. • Corvallis, OR 97330

HORIZONTAL & VERTICAL CONTROL DATA

State Plane in U.S. Survey Feet, Elevations in U.S. Survey Feet

Station Name: CO-OP

Section: 2 Township: 12S Range: 5W
¼ Section: SW County: Benton
Date Set: Sept 20th 2001 State: OR
Firm: Northstar Surveying

Addr: 720 NW 4th Street
Corvallis, OR 97330

GEODETIC DATUM: NAD 83 (1998)
LAT. : 44°33'13.07592"N
LONG: 123°15'53.18593"W

SPCS DATUM: ORN 3601
Northing: 335695.492 +/- 0.026
Easting: 7481526.615 +/- 0.039

VERTICAL DATUM: NAVD 88
GEOID MODEL: GEOID 99
Ellipsoid Elev.: 149.923
Orthometric Elev.: 224.638 +/- 0.06
Separation: -74.715

GPS: YES **Type:**FAST STATIC
Group: **Order:** Second **Convergence:** -1°57'38.660285"
PPM: **Scale Factor:** 0.999951803586

Statement per ORS 209.250 (6) (g)
This work was performed in October 2001 using Trimble 4800 GPS receivers. Three CORS Stations were held as Horizontal and Ellipsoidal constraints (10-04-01 and 10-26-01) A check of the results was made on "J 54" determining the accuracy of the project.

The result of the differential levels from GPS Station "Lilly" (ELEV. 220.81')
is: 221.06 ft (NGVD 29/47) +/- 0.01

Directions to the Monument:
From the bridge over Mary's river (Northbound 99w) in Corvallis, Oregon, go south 1049 ft +/- to the centerline of new driveway south of "First Alternative" Grocery Store. Station is on the left and then back North 29 ft from said centerline driveway. (In the sidewalk running east to the entrance of said store)

1 meter = 3.28083333... U.S. Feet = 39.37 inches exactly
1 meter = 3.280839895 Intl. Feet or 1 inch = 2.54 cm. Exactly
To calculate Elevation Factor (in the North American Continent)
Divide 20,906,000 + Ellipsoid Elevation in feet

GPS STATION DATA SHEET

Station Name: CO-OP Station Number:

T.12 S., R. 5W, Section 2, Corner SW

Elevation: 224.64 NAVD 88 Road Location: HWY 99(W) / SOUTH 3RD

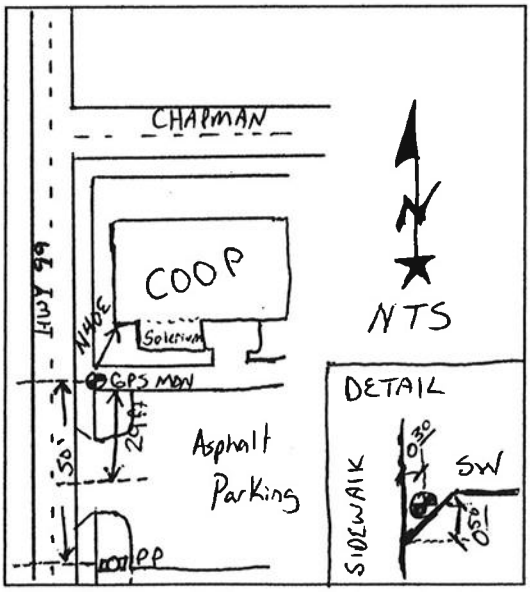
Date: September 20, 2001 By: David Schlosser (Northstar Surveying)

Directions: From the bridge over Mary's river (Northbound 99w) in Corvallis, Oregon, go south 1049 ft +/- to the centerline of new driveway south of "First Alternative" Grocery Store. Station is on the left and then back North 29 ft from said centerline driveway. (In the sidewalk running east to the entrance of said store)

MONUMENT

Description: 3" brass cap set in the Concrete sidewalk
Date Set: Sept. 20, 2001

LOCATION SKETCH



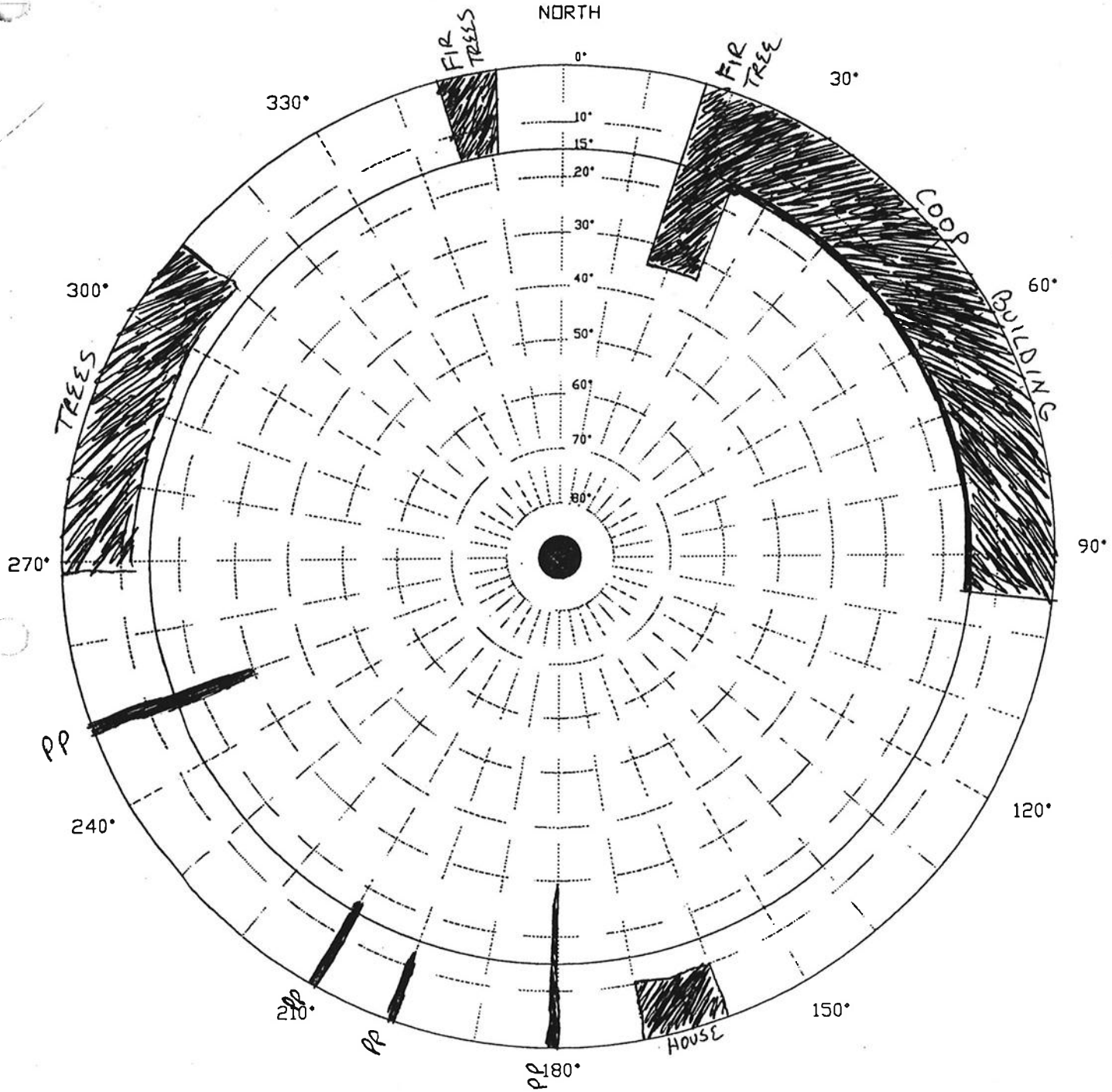
Location, References: Station is located 0.30' east of the north /south sidewalk on the east side of Hwy (99). In the concrete of the new sidewalk running east to the (south) entrance of the "First Alternative" grocery store. 29' north of the centerline driveway for the parking lot of said store, and 50' north of the power pole No. 023301 located at the southwest corner of said parking lot. Also S40W 18.75' from the southwest corner of the main building.

Misc. / Contact: This station was set with the visibility relatively free of interference. However, they have planted a tree in the planter located to the southeast of said monument that in due time will interfere with the visibility of monument with potential satellites.

STATION VISIBILITY DIAGRAM

station name CO-OP station number NONE

date OCT 4, 2001 by Northstar Surveying



REMARKS PP = Power Pole - see comment on Data sheet for possible future interference, because of a plantings new tree in planter to Southeast.