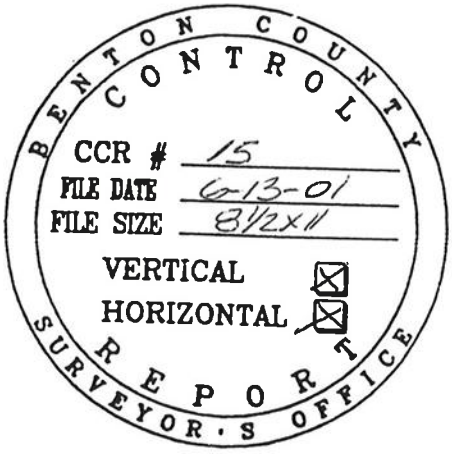
BENTON COUNTY
CONTROL
CCR # 15
FILE DATE 6-13-01
FILE SIZE 8½x11
VERTICAL ☒
HORIZONTAL ☒
REPORT
SURVEYOR'S OFFICE

NARRATIVE

The purpose of this report is to document a geodetic control survey performed in cooperation with Cole Surveying. Four new monuments were established on the campus of Oregon State University in Corvallis Oregon. These monuments are classed as primary control stations. The monuments consisted of 3" brass caps set in approximately 48" deep x 20" concrete and were set by Cole Surveying. OBEC Consulting Engineers performed a GPS survey on these 4 points on 4/30/2001 and 5/1/2001. The four stations are called NARY, WASH, FACL, and VETM.

The GPS network was comprised entirely of independent baselines. Direct connections were made to each station from two A Order HARN Stations (U727 and G728). In addition each HARN Station was tied to CORS Station CORV and OBEC. Double occupations were made of all of the stations over two days separated by more than three hours. The survey was performed in international feet. The survey was performed for horizontal positioning only. The horizontal datum is NAD 83(98) and the coordinate system is Oregon State Plane – North Zone. The Geoid99(conus) model was also used. Cole Surveying provided leveled elevations to the points in NAVD88 vertical datum. The survey goal was to provide horizontal positions to 1cm at the 95% confidence level. Rounding to hundredths place in the coordinates this objective was achieved based on the distances and worst case was .04' northing and easting.

The equipment for the survey consisted of Trimble 4400 and 4700 receivers and Trimble Micro-centered and Compact L1-L2 Antennas. All rods were fixed height and in adjustment. Post processing of the data was performed with Trimble Geomatics Office V. 1.01 Wave Baseline Processor and Adjustment Package. The precise ephemeris was used in the processing of the data.

The attached control points reports and location map provide the detail information on each point.

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www.obec.com

OREGON STATE UNIVERSITY
GPS CONTROL SURVEY REPORT FOR STATIONS
NARY, FACL, VETM, and WASH

Prepared by:
OBEC Consulting Engineers
920 Country Club Rd., Suite 100B
Eugene, Oregon 97401
1-541-683-6090

www.obec.com

OBEC CONSULTING ENGINEERS

S. 1/2, SECTION 34, T.11S., R.5W., W.M.

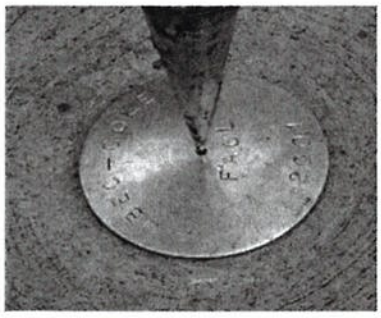
CONTROL POINT REPORT
06/18/01

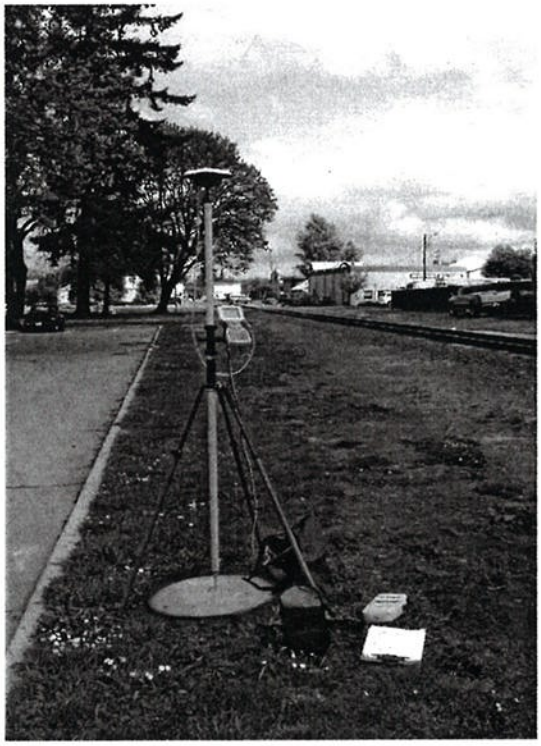
		PROJECT NAME	**OSU CONTROL**
POINT NAME	**FACL**	**PROJECT NO.**	**572001 NETWORK**
STAMPING	**OBEC-COLE FACL 2001**		
SURVEY METHOD	STATIC GPS		
EQUIPMENT	TRIMBLE		
GPS RECEIVER	4400/4700		
CREW	MSS/MLA/JLG		
DATE OCCUPIED	4/30/01-5/01/01		
SET	3" BRASS CAP IN CONCRETE BY COLE SURVEYING		
COORD. UNITS	INT. FEET		
DISTANCE UNITS	INT. FEET		
ELEVATION UNITS	INT. FEET		
SURVEY DATUMS	NAD 83(98)	NAVD 88	
PROJECTION	OR STATE PLANE N. ZONE 3601		
VERTICAL ADJ.			
GEOID	GEOID99 (CONUS)		

		ELEVATION		
NORTHING	**EASTING**	**DIFFERENTIAL LEVELS**		
338,782.19	**7,479,406.57**	**231.15 Cole Surveying**		

		H	N		
LATITUDE	**LONGITUDE**	**HEIGHT**	**SEPARATION**	**SCALE FACTOR**	**COMBINED FACTOR**
44°33'42.80981" N	123°16'24.11672" W	156.83	-74.6	0.99995028	0.999939224
					CONVERGENCE
					-1°58'00.59597"

LOCATION: BENTON COUNTY - CORVALLIS OREGON
STATION "FACL" IS LOCATED ON THE CAMPUS OF OSU. STATION IS APPROX. 150' EAST OF 15TH STREET AND NORTH OF THE RR TRACKS AND 3' SOUTH OF THE CURB OF A CONCRETE PARKING LOT.





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PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 17, 1981
MARK L. ARMSTRONG
1937

EXPIRES: 12/31/01

SIGNED: 6/18/01

OBEC CONSULTING ENGINEERS *920 COUNTRY CLUB RD., SUITE 100B, EUGENE, OR 97401*
541-683-6090 *541-683-6576 FAX*

OBEC CONSULTING ENGINEERS

S. 1/2, SECTION 34, T.11S., R.5W., W.M.

CONTROL POINT REPORT
06/18/01

		PROJECT NAME	**OSU CONTROL**
POINT NAME	**NARY**	**PROJECT NO.**	**572001 NETWORK**
STAMPING	**OBEC-COLE NARY 2001**		
SURVEY METHOD	STATIC GPS		
EQUIPMENT	TRIMBLE		
GPS RECEIVER	4400/4700		
CREW	MSS/MLA/JLG		
DATE OCCUPIED	4/30/01-5/01/01		
SET	3" BRASS CAP IN CONCRETE BY COLE SURVEYING		
COORD. UNITS	INT. FEET		
DISTANCE UNITS	INT. FEET		
ELEVATION UNITS	INT. FEET		
SURVEY DATUMS	NAD 83(98) NAVD 88		
PROJECTION	OR STATE PLANE N. ZONE 3601		
VERTICAL ADJ.			
GEOID	GEOID99 (CONUS)		

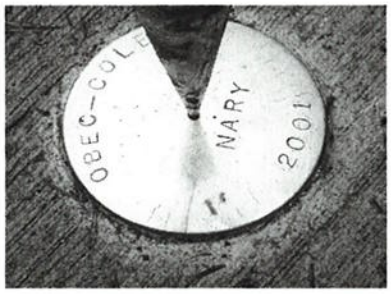
		ELEVATION		
NORTHING	**EASTING**	**DIFFERENTIAL LEVELS**		
339,985.29	**7,479,909.99**	**229.53 Cole Surveying**		

		H	N		
LATITUDE	**LONGITUDE**	**HEIGHT**	**SEPARATION**	**SCALE FACTOR**	**COMBINED FACTOR**
44°33'54.85396" N	123°16'17.73731" W	155.25	-74.6	0.999949668	0.99993869

CONVERGENCE
-1°57'56.07178"

LOCATION: BENTON COUNTY - CORVALLIS OREGON

STATION "NARY" IS LOCATED ON THE CAMPUS OF OSU. STATION IS IN THE MIDDLE OF AN ASPHALT SIDEWALK ON THE NORTH SIDE OF MCNARY DORM IN THE SIDEWALK CROSSING THE GRASSY OPEN SPACE.



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S. 1/2, SECTION 34, T.11S., R.5W., W.M.

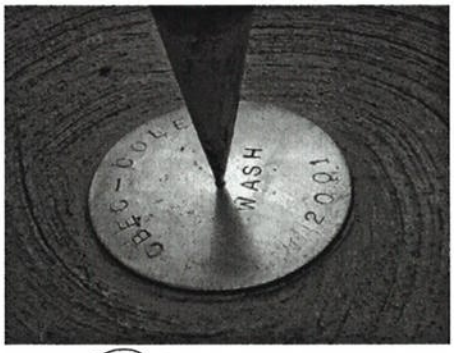
CONTROL POINT REPORT
06/18/01

		PROJECT NAME	**OSU CONTROL**
POINT NAME	**WASH**	**PROJECT NO.**	**572001 NETWORK**
STAMPING	**OBEC-COLE WASH 2001**		
SURVEY METHOD	STATIC GPS		
EQUIPMENT	TRIMBLE		
GPS RECEIVER	4400/4700		
CREW	MSS/MLA/JLG		
DATE OCCUPIED	4/30/01-5/01/01		
SET	3" BRASS CAP IN CONCRETE BY COLE SURVEYING		
COORD. UNITS	INT. FEET		
DISTANCE UNITS	INT. FEET		
ELEVATION UNITS	INT. FEET		
SURVEY DATUMS	NAD 83(98) NAVD 88		
PROJECTION	OR STATE PLANE N. ZONE 3601		
VERTICAL ADJ.			
GEOID	GEOID99 (CONUS)		

		ELEVATION		
NORTHING	**EASTING**	**DIFFERENTIAL LEVELS**		
339,023.92	**7,475,223.09**	**240.22 Cole Surveying**		

		H	N		
LATITUDE	**LONGITUDE**	**HEIGHT**	**SEPARATION**	**SCALE FACTOR**	**COMBINED FACTOR**
44°33'43.77352" N	123°17'21.98163" W	166.04	-74.5	0.999950231	0.999938741
					CONVERGENCE
					-1°58'41.63295"

LOCATION: BENTON COUNTY - CORVALLIS OREGON
STATION "WASH" IS LOCATED ON THE CAMPUS OF OSU. STATION IS LOCATED AT THE N.E. CORNER OF 35TH STREET AND WASHINTON WAY IN THE GRASS OF THE NORTH SIDE R/W.



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CONTROL POINT REPORT
06/18/01

		PROJECT NAME	**OSU CONTROL**
POINT NAME	**VETM**	**PROJECT NO.**	**572001 NETWORK**
STAMPING	**OBEC-COLE VETM 2001**		
SURVEY METHOD	STATIC GPS		
EQUIPMENT	TRIMBLE		
GPS RECEIVER	4400/4700		
CREW	MSS/MLA/JLG		
DATE OCCUPIED	4/30/01-5/01/01		
SET	3" BRASS CAP IN CONCRETE BY COLE SURVEYING		
COORD. UNITS	INT. FEET		
DISTANCE UNITS	INT. FEET		
ELEVATION UNITS	INT. FEET		
SURVEY DATUMS	NAD 83(98) NAVD 88		
PROJECTION	OR STATE PLANE N. ZONE 3601		
VERTICAL ADJ.			
GEOID	GEOID99 (CONUS)		

		ELEVATION		
NORTHING	**EASTING**	**DIFFERENTIAL LEVELS**		
338,069.99	**7,476,433.37**	~~-234.21~~ **Cole Surveying**		

233.87 FEET = 71.284 METERS (NAVD 88)
SEE FORM CCR 17 VETMED RESET

		H	N		
LATITUDE	**LONGITUDE**	**HEIGHT**	**SEPARATION**	**SCALE FACTOR**	**COMBINED FACTOR**
44°33'34.77132" N	123°17'04.82054" W	160.00	-74.2	0.99995069	0.999939487
					CONVERGENCE
					-1°58'29.46255"

LOCATION: BENTON COUNTY - CORVALLIS OREGON
STATION "VETM" IS LOCATED ON THE CAMPUS OF OSU. STATION IS APPROX. 25' WEST OF THE CENTER LINE OF 30TH STREET AND S.E. OF THE VETERINARY SCHOOL BUILDING. RESER STADIUM IS DIRECTLY TO THE EAST.

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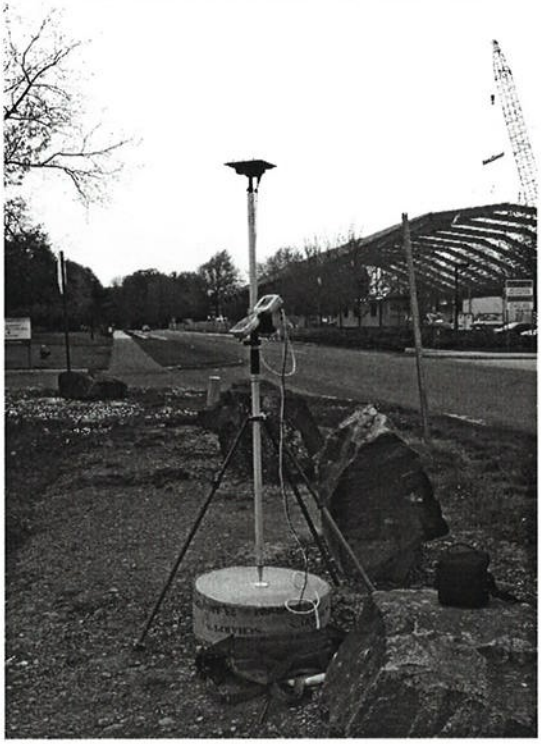

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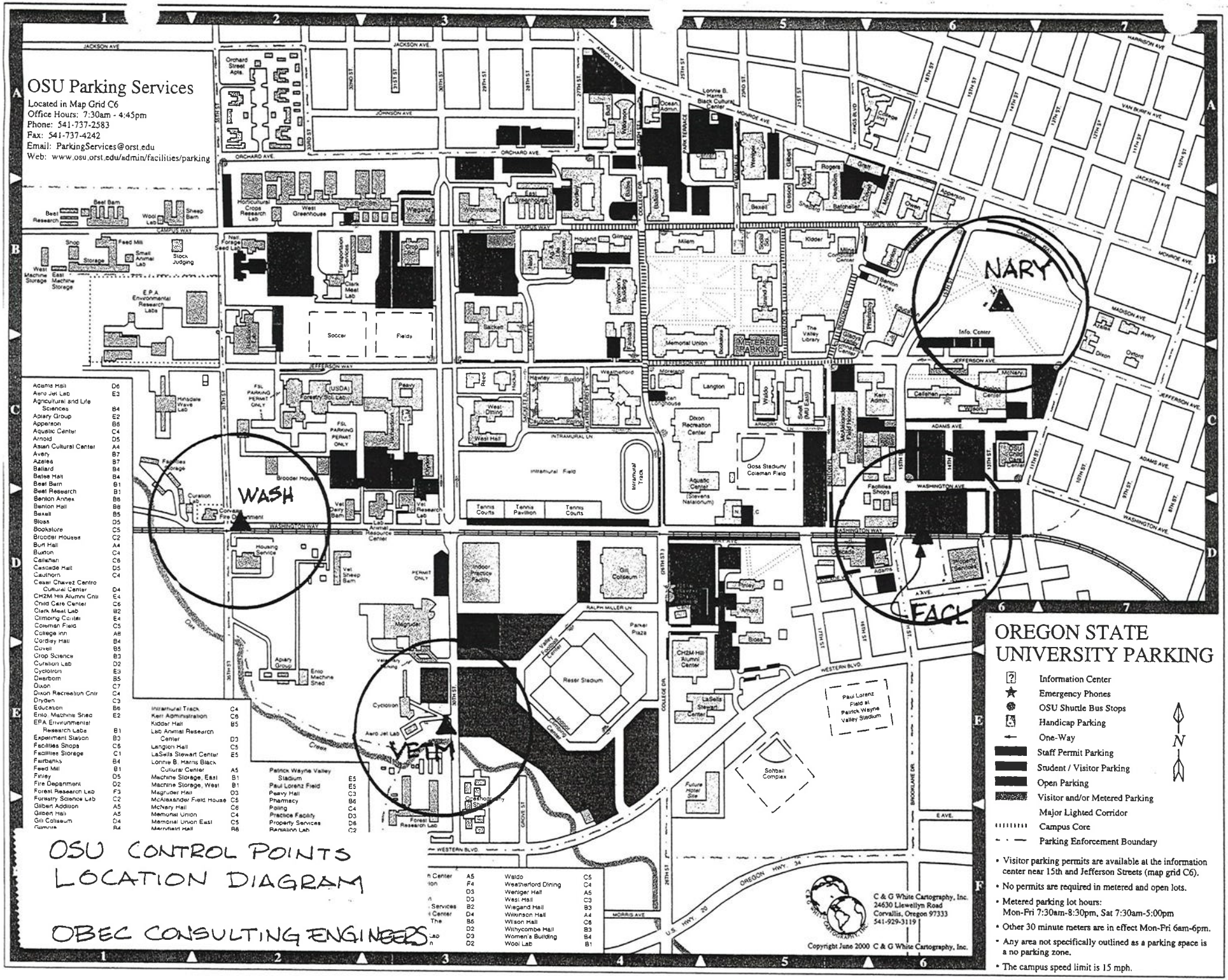

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