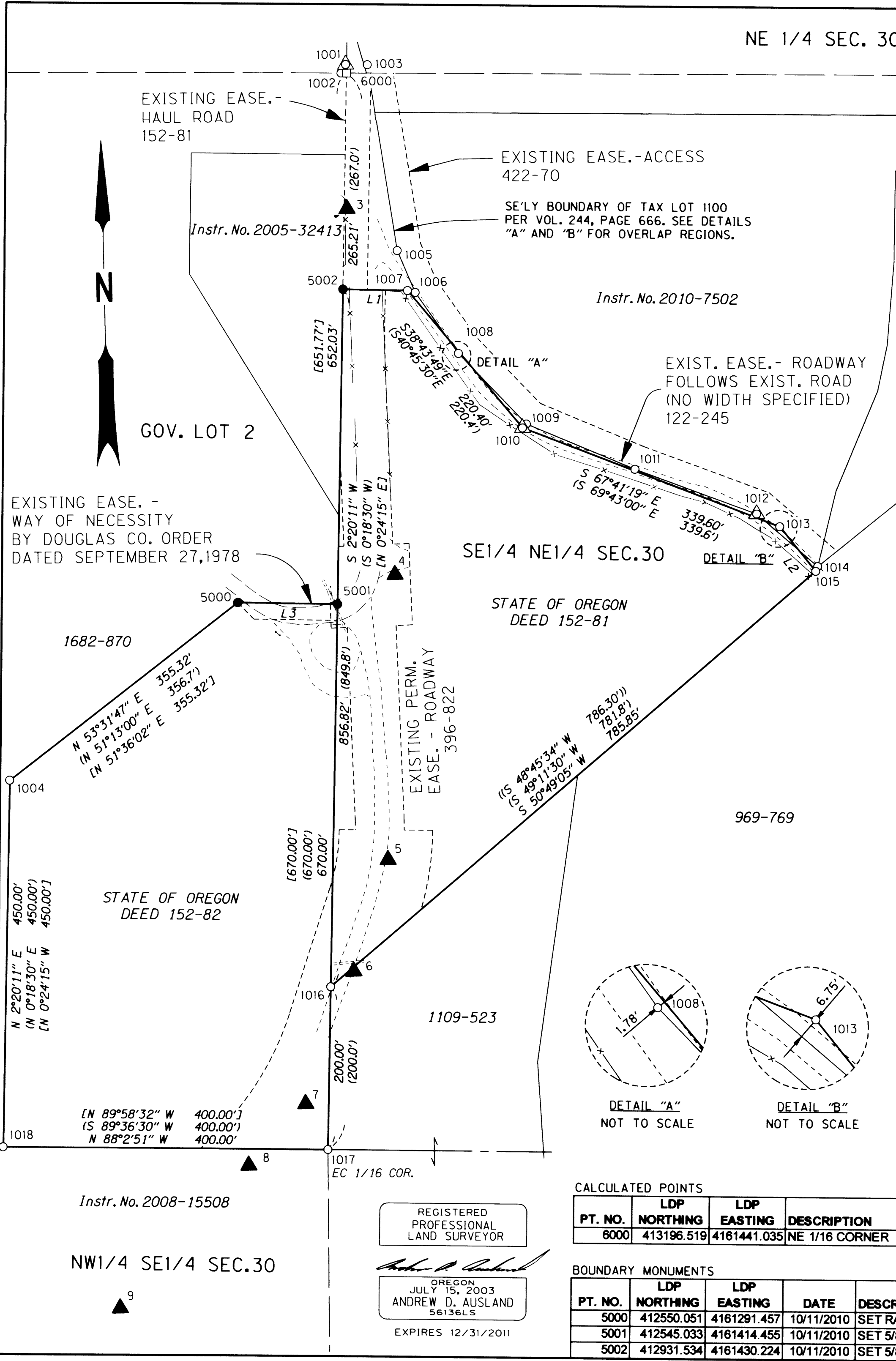


FILED
 Date: 10-25-2010 by J.C.
 This survey consists of:
 Map: M161-39A+B
 Narrative:
 Corner Rpt:
 DOUGLAS COUNTY SURVEYOR



PURPOSE
 THE PURPOSE OF THIS SURVEY WAS TO RESOLVE THE BOUNDARIES FOR A ROCK QUARRY SITE AND STOCKPILE SITE OWNED BY THE OREGON DEPARTMENT OF TRANSPORTATION (ODOT). THIS PROJECT IS CALLED BARTON PARK QUARRY AND CONSISTS OF TWO PARCELS OF LAND AT THE SOUTH END OF BARTON ROAD IN DOUGLAS COUNTY, OREGON. SURVEY FIELD WORK WAS PERFORMED INTERMITTENTLY BETWEEN DECEMBER 21, 2009 AND FEBRUARY 9, 2010. THE ORIGINAL FIELD NOTES FOR THE PROJECT ARE ARCHIVED IN SALEM IN FIELD BOOK NUMBER 4472. ALL MONUMENTS SHOWN TO BE SET ON THIS SURVEY WERE SET BY RADIAL STAKEOUT METHODS FROM A TOTAL STATION AND CHECKED FROM AN INDEPENDENT INSTRUMENT SET-UP.

COORDINATES & BASIS OF BEARING
 THE BEARINGS ARE BASED ON THE OREGON COORDINATE SYSTEM (OCS) OF 1983, (CORS96) (EPOCH: 2002), SOUTH ZONE (3602). THIS SURVEY UTILIZES A LOCAL DATUM PLANE (LDP) WHICH IS RELATIVE TO THE SAID OCS, WITH RESPECT TO THE LOCAL LATITUDE AND GROUND ELEVATION. THE LDP COORDINATES DEFINE TRUE GROUND DISTANCES. TO CONVERT LDP COORDINATES TO THE OCS, MULTIPLY THE COORDINATES BY 0.99985215. THE COORDINATE VALUES OF SHOWN CONTROL & RECOVERED MONUMENTS ARE SHOWN TO THE THIRD DECIMAL PLACE TO REDUCE ROUNDING ERRORS. IN REALITY, THE EXPECTED ACCURACY OF SHOWN COORDINATES IS PROBABLY 0.01' OR GREATER.

HORIZONTAL CONTROL
 GRID STATE PLANE COORDINATES USING OPUS-RS IN INTERNATIONAL FEET WERE ACQUIRED BY GPS ON TWO MONUMENTS SET BY THE ROSEBURG SURVEY CREW AS CONTROL FOR THIS PROJECT. THE GPS POINTS SET FOR CONTROL ARE NAMED BPQ1 AND BPQ2. THEIR LDP COORDINATES WERE FIXED WHEN HORIZONTAL LEAST SQUARES ADJUSTMENT WAS APPLIED TO THE NETWORK CONTROL. POINTS BPQ1 AND BPQ2 FORM THE BASIS OF BEARING FOR THIS PROJECT.

HORIZONTAL CONTROL EQUIPMENT
 A LEICA GX1230 DUAL FREQUENCY GPS RECEIVER WAS USED FOR GPS OBSERVATIONS. IT HAS THE FOLLOWING ACCURACY: PHASED DIFFERENTIAL STATIC METHOD HORIZONTAL ERROR OF 5 MM + 0.5 PPM, AND A VERTICAL ERROR OF 10 MM + 0.5 PPM. PHASED DIFFERENTIAL RTK METHOD HORIZONTAL ERROR OF 10 MM + 1 PPM, AND A VERTICAL ERROR OF 20 MM + 1 PPM.

A LEICA TCRP1201 TOTAL STATION WAS USED TO ESTABLISH THE HORIZONTAL CONTROL NETWORK AND TIE IN FOUND MONUMENTS. IT HAS THE FOLLOWING ACCURACY: STANDARD ANGULAR ERROR +/- 1 SECOND; STANDARD DISTANCE ERROR OF +/- 2MM, + 2 PPM.

VERTICAL CONTROL
 BENCH MARK B748 WITH NAVD 1988 DATUM WAS HELD AS FIXED FOR ALL VERTICAL CONTROL. A LEVEL CIRCUIT WAS COMPLETED TO PLACE ELEVATIONS ON POINTS 1, 3-8, 1001, AND BPQ2.

VERTICAL CONTROL EQUIPMENT
 A LEICA DNA10 DIGITAL LEVEL AND A LEICA GBNL4C ALUMINUM LEVEL ROD WAS USED TO COMPLETE THE LEVEL CIRCUITS. THIS INSTRUMENT HAS A STANDARD DEVIATION OF 1.5 MM IN A 1 KILOMETER DOUBLE-RUN LEVEL CIRCUIT.

ACCURACY OF CONTROL
 IN GENERAL THE NETWORK POINTS (USUALLY NUMBERED 1-499) ARE THE MOST ACCURATE HAVING MULTIPLE TIES BETWEEN MULTIPLE POINTS. CONTROLLED STRATEGIC POINTS OR AUXILIARY POINTS ARE DOUBLE TIED AND NUMBERED 500-999. RECOVERED MONUMENTS ARE DOUBLE TIED AND NUMBERED 1000-4999.

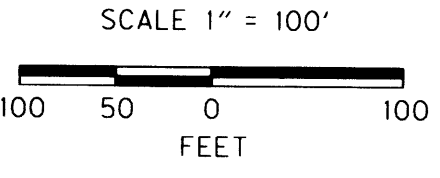
QUARRY PARCEL (32-5-30A-900)
 THE PARCEL KNOWN AS THE QUARRY SITE (TAX LOT 32-5-30A-900) WAS CALCULATED USING DEED REFERENCES FROM VOL. 152, PAGE 82 (ALSO ODOT DRAWING 1R-2-1788) AND M 54-31. THE EASTERLY BOUNDARY OF THE PARCEL WAS CONTROLLED BY THE 1/16TH LINE HELD BETWEEN POINTS 1017 (EC 1/16TH) AND CALCULATED POINT 6000 (NE 1/16TH) AND HELD THE RECORD DISTANCE. THE SOUTH LINE OF SAID PROPERTY WAS ESTABLISHED BY HOLDING THE SOUTH LINE OF THE SW 1/4 OF THE NE 1/4 AT A RECORD DISTANCE OF 400.00 FEET. THE WESTERLY BOUNDARY WAS HELD PARALLEL TO THE NORTH-SOUTH 1/16TH LINE PREVIOUSLY DESCRIBED AS THE EASTERLY BOUNDARY OF SAID PARCEL. RECORD DEED DISTANCE WAS HELD FOR THIS LINE. THE NORTHERLY BOUNDARY WAS CALCULATED BY HOLDING RECORD ANGLE RELATIONSHIP TO SAID 1/16TH LINE AND HOLDING THE RECORD DISTANCE. THE NORTHWESTERLY LINE WAS ESTABLISHED AS A RESULT OF THE WESTERLY AND NORTHERLY BOUNDARY END POINTS. THE MEASURED DISTANCE FIT CLOSE WITH POINT NO. 1004 SET ON M 54-31.

STOCKPILE PARCEL (32-5-30A-1000)
 THE SOUTHEASTERLY BOUNDARY OF THE STOCKPILE SITE WAS ESTABLISHED BY HOLDING A LINE BETWEEN POINT NUMBERS 1016 AND 1015, WHICH FOLLOWS THE OCCUPATION LINE OF A FENCE CONSTRUCTED BY THE OREGON STATE HIGHWAY DEPARTMENT (OSHD) BACK IN 1948. ONLY PORTIONS OF THIS FENCE REMAINS TODAY BUT IS SHOWN ON M 52-69A TO HAVE RUN THE ENTIRE LENGTH. POINT NUMBER 1015 FOUND AT THE EXTREME EASTERLY CORNER OF SAID PROPERTY MEASURES 4.05 FEET LONGER THAN THE RECORD; HOWEVER THE ORIGINAL RECORDS INDICATE THAT THE ORIGINAL MONUMENT SET BY OSHD IN 1948 (POINT 1015) HAS SUBSEQUENTLY BEEN ACCEPTED TO CONTROL THE LINE IN M52-69A AND M52-69AB. ALTHOUGH NOT OF RECORD, THE MONUMENTS ALONG THE NORTHEASTERLY BOUNDARY WERE DETERMINED TO BE SET BY ODOT SURVEY CREWS AROUND 1948 AND FIT WELL WITH THE THREE DEED COURSES BETWEEN POINTS 1015 AND 5002. I CONCLUDED THAT THE MONUMENTS ARE THE BEST EVIDENCE OF THE LINE AS IT WAS TYPICAL PRACTICE FOR PAST ODOT SURVEY CREWS NOT TO SHOW EVIDENCE OF MONUMENTS THAT WERE SET ALONG OWNERSHIP BOUNDARIES. FURTHERMORE, I HELD RECORD DEED BEARINGS AND DISTANCES WITH THE MONUMENTS FOUND ALONG THE COURSES FOLLOWING THE NORTHEASTERLY SIDE OF THE SAID PROPERTY.

THE DEED CALLS FOR THE PROPERTY DESCRIBED IN VOLUME 244, PAGE 666 CONFLICTS WITH THE NORTHEASTERLY LINE OF THE STOCKPILE PROPERTY. THE SAID PROPERTY WAS ORIGINALLY SOLD TO THE STATE BY ALLEN IN 1948 AND PRECEDED THE JUNIOR TAX LOT 1000, ALSO CONVEYED BY ALLEN. IT APPEARS THAT WHEN TAX LOT 1100 WAS CONVEYED IN 1955 BY ALLEN, THE LEGAL DESCRIPTION USED THE SOUTHWESTERLY LINE OF THE 30 FOOT ACCESS EASEMENT SHOWN ON M 55-164-2 TO ALSO CONVEY PROPERTY IN VOLUME 244, PAGE 666. NO ATTEMPT WAS MADE ON FILED SURVEY M52-69B TO RESOLVE THE NORTHEASTERLY LINE OF THE STOCKPILE PROPERTY IN VOLUME 152, PAGE 81. THIS SURVEY HAS DETAILED TWO BOUNDARY OVERLAP AREAS NOTED IN DETAILS 6A AND 6B OF THE SURVEY. THE RECORD DEED CALLS ALONG THE 1948 STOCKPILE LINE ARE SENIOR TO THOSE SHOWN IN VOLUME 244, PAGE 666 AND ARE DEPICTED ONLY TO CLARIFY ANY CONFUSION WITH THE DEEDS.

POINT NUMBERS 5000 THROUGH 5002 WERE CALCULATED AND MONUMENTS SET AT THE BOUNDARY ANGLE POINTS SHOWN ON THE FACE OF THIS SURVEY.

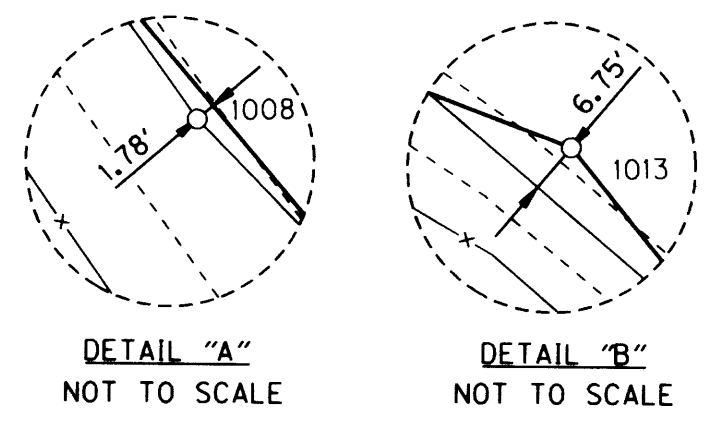
WHITE CARSONITE WITNESS POSTS MARKED "RIGHT OF WAY BOUNDARY MARKER NEARBY" WERE SET AT POINTS 1004, 1018, 1016, 1017, AND 5001-5002. ORANGE CARSONITE POSTS MARKED "ODOT SURVEY MARKER NEAR BY DO NOT DISTURB" WERE SET AT POINTS 1 THROUGH 9, BPQ1 AND BPQ2.



SEE RECOVERED MONUMENTS TABLE, CONTROL MONUMENTS TABLE, & BOUNDARY LINE LEGEND ON SHEET 1

RECORD DATA		POINT LEGEND	
()	PER ODOT DRG. 1R-2-1788	●	SET R/W MONUMENT
(())	PER M 52-69A	□	CALCULATED POINT
[]	PER M 54-31	★	SET GPS STATION *
NO BRACKET	MEASURED/RESOLVED	▲	SET NETWORK POINT *
		○	FOUND MONUMENT *
		△	FOUND MONUMENT, USED FOR NETWORK CONTROL *

LINE TABLE			
LINE	MEASURED BRG. & DIST.	RECORD BRG. & DIST	
L1	S 87°39'49" E 79.58'	(S 89°41'30" E) (79.9')	
L2	S 37°31'19" E 70.00'	(S 39°33'00" E) (70.0')	
L3	S 87°39'49" E 123.10'	(S 89°41'30" E) (123.1')	
L3	S 87°39'49" E 123.10'	(S 89°35'45" E) (123.10')	



CALCULATED POINTS			
PT. NO.	LDP NORTHING	LDP EASTING	DESCRIPTION
6000	413196.519	4161441.035	NE 1/16 CORNER

BOUNDARY MONUMENTS				
PT. NO.	LDP NORTHING	LDP EASTING	DATE	DESCRIPTION
5000	412550.051	4161291.457	10/11/2010	SET RAILROAD SPIKE W/ PUNCH MARK IN BEDROCK
5001	412545.033	4161414.455	10/11/2010	SET 5/8" x 30" IRON REBAR W/ 2" ALUMINUM CAP STAMPED "ODOT RIGHT OF WAY 5001"
5002	412931.534	4161430.224	10/11/2010	SET 5/8" x 30" IRON REBAR W/ 2" ALUMINUM CAP STAMPED "ODOT RIGHT OF WAY 5002"

REGISTERED PROFESSIONAL LAND SURVEYOR
 Andrew D. Ausland
 OREGON JULY 15, 2003
 ANDREW D. AUSLAND 56136LS
 EXPIRES 12/31/2011

SI FEET
 OREGON DEPARTMENT OF TRANSPORTATION
 RIGHT-OF-WAY BOUNDARY MONUMENTATION MAP
 BARTON PARK QUARRY
 PACIFIC HIGHWAY
 DOUGLAS COUNTY
 FILE: BRTPOrw.dgn MODEL: RWM

FOR ODOT REGION 3
 3500 NW STEWART PKWY.
 ROSEBURG, OR. 97470
 OCTOBER 20, 2010
 SCALE 1" = 100'
 SHEET 2 OF 2