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JUNE 17, 1998

**NARRATIVE:**

THE PURPOSE OF THIS SURVEY WAS TO ESTABLISH AERIAL CONTROL FOR THE CITY OF MILTON-FREEWATER AND AT THE SAME TIME TO DEVELOP POSITIONS ON KNOWN MONUMENTS IN AND AROUND MILTON-FREEWATER.

A FULLY CONSTRAINED STATIC GPS NETWORK WAS RUN FROM HPGN STATION "PENDLETON" TO HPGN STATION "WALAIR 2", THROUGH STATION "ATHENA". HORIZONTAL CONTROL FOR THE PROJECT WAS THEN ESTABLISHED ON POINTS NO. 900, 908, 912, 923, 924 AND 925 BY RUNNING A FULLY CONSTRAINED STATIC GPS NETWORK FROM STATION "WALAIR 2" TO STATION "ATHENA", ALL HORIZONTAL POSITIONS ARE NAD 83(91). DIFFERENTIAL LEVEL LOOPS WERE RUN FROM BENCH MARK M-80 TO POINT NO. 900 AND FROM BENCH MARK N-12 TO POINT NO. 925. USGS ELEVATIONS ON POINT NO. 912 WAS OBTAINED. ALL ELEVATIONS ARE BASED ON THE NAVD 1988 DATUM.

POSITIONS AND ELEVATIONS FOR THE POINTS NOT INCLUDED IN THE STATIC NETWORK WERE DETERMINED BY USING TRIMBLE 4400 RTK GPS RECEIVERS. OBSERVATIONS WERE TAKEN ON EACH POINT WITH THE BASE RECEIVER SET UP ON POINT NO. 900 AND WERE RE-OBSERVED WITH THE BASE RECEIVER SET UP ON POINT NO. 912 ANY POINT WITH AN ELEVATION DIFFERENCE GREATER THAT 0.05' WAS RE-OBSERVED, DIFFERENCES LESS THAT 0.05' WERE AVERAGED, THE SAME CRITERIA WAS HELD FOR THE HORIZONTAL POSITIONS. ELEVATIONS ARE TO THE TOP OF THE MONUMENT UNLESS OTHERWISE NOTED. THE ACCURACY OF THE SURVEY WAS CHECKED BY TAKING PERIODIC OBSERVATIONS ON CONTROL POINTS AND BENCH MARKS AND COMPARING THE POSITIONS AND OR ELEVATIONS OF THE OBSERVATION WITH THE KNOWN DATA.

REGISTERED  
PROFESSIONAL  
LAND SURVEYOR

*Greg E. Flowers*

OREGON  
JUNE 30, 1997  
GREG E. FLOWERS  
02820LS

RENEWS 12/31/98

6/17/98