



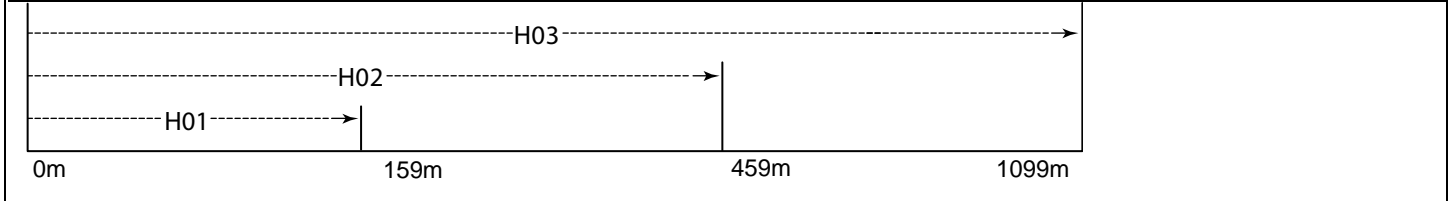
MISSOURI DEPARTMENT OF AGRICULTURE
 DIVISION OF WEIGHTS, MEASURES AND CONSUMER PROTECTION
 LAND SURVEY PROGRAM
EDM CALIBRATION REPORT – CEDAR CITY EDM BASELINE (HORIZONTAL)

DATE	COMPANY	REFLECTOR SETUP <input type="checkbox"/> Tripod with tribrach <input type="checkbox"/> Prism pole <input type="checkbox"/> Bipod pole
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INSTRUMENT TYPE, MODEL AND SERIAL NUMBER

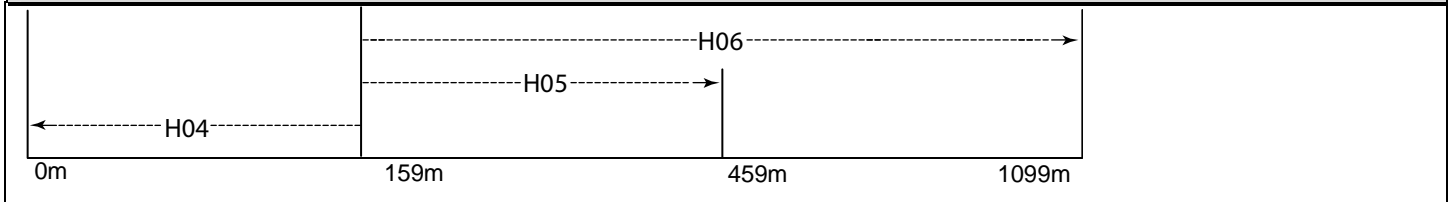
NOTE: ALL DISTANCES SUBMITTED SHALL BE HORIZONTAL.

E.D.M. AT 0m



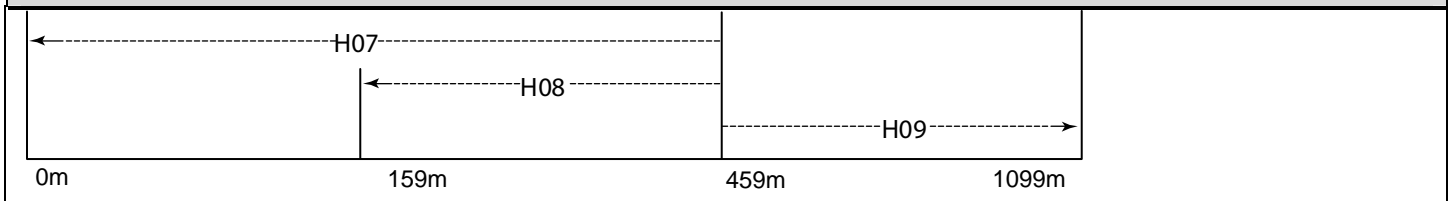
H01 =	H02 =	H03 =	TEMP
H01 = (159.3363m)	H02 = (459.1739m)	H03 = (1099.9332m)	❖ PRESS

E.D.M. AT 159m



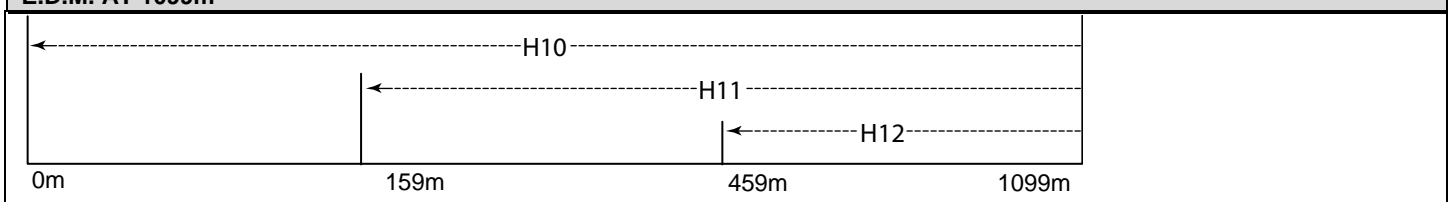
H04 =	H05 =	H06 =	TEMP
H04 = (159.3363m)	H05 = (299.8376m)	H06 = (940.5969m)	❖ PRESS

E.D.M. AT 459m



H07 =	H08 =	H09 =	TEMP
H07 = (459.1739m)	H08 = (299.8376m)	H09 = (640.7593m)	❖ PRESS

E.D.M. AT 1099m



H10 =	H11 =	H12 =	TEMP
H10 = (1099.9332m)	H11 = (940.5969m)	H12 = (640.7593m)	❖ PRESS

❖ Barometric pressure for EDM calibration **must be station pressure**. Do not use barometric pressure reduced to sea level.



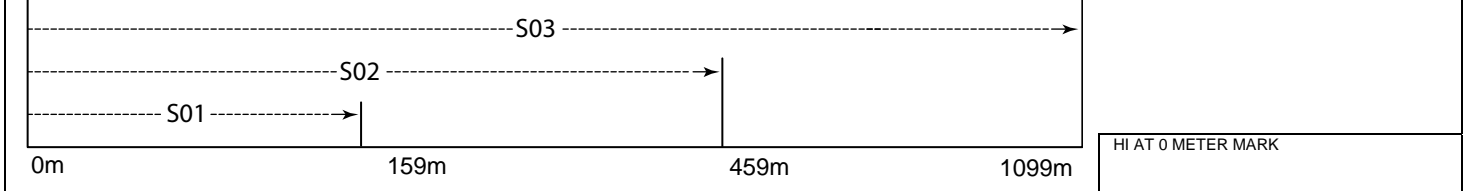
MISSOURI DEPARTMENT OF AGRICULTURE
 DIVISION OF WEIGHTS, MEASURES AND CONSUMER PROTECTION
 LAND SURVEY PROGRAM
EDM CALIBRATION REPORT – CEDAR CITY EDM BASELINE (SLOPE)

DATE	COMPANY	REFLECTOR SETUP <input type="checkbox"/> Tripod with tribrach <input type="checkbox"/> Prism pole <input type="checkbox"/> Bipod pole
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INSTRUMENT TYPE, MODEL AND SERIAL NUMBER

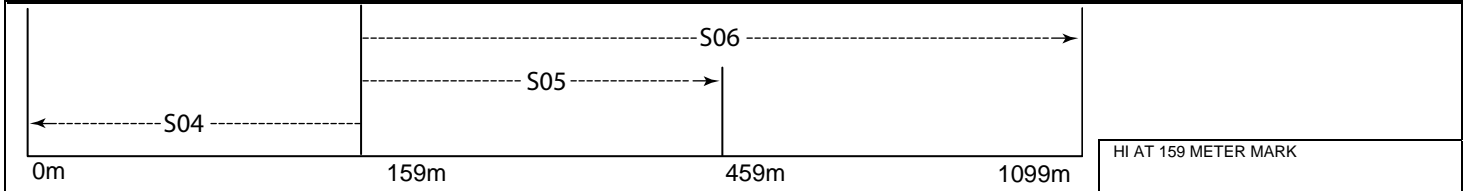
NOTE: ALL DISTANCES SUBMITTED SHALL BE SLOPE.

E.D.M. AT 0m



0m	159m	459m	1099m	HI AT 0 METER MARK
S01 =	S02 =	S03 =	TEMP	
H0 =	H0 =	H0 =	❖ PRESS	

E.D.M. AT 159m



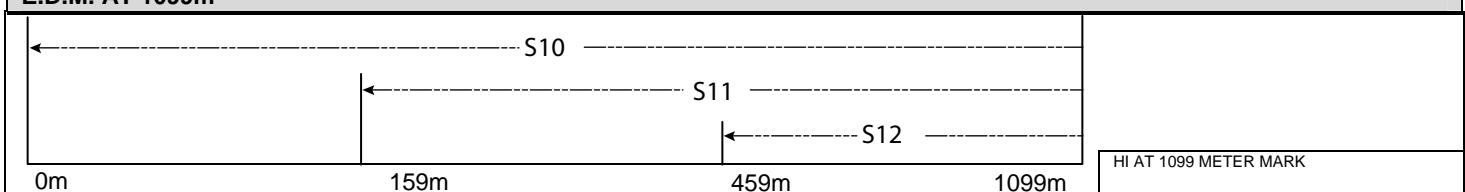
0m	159m	459m	1099m	HI AT 159 METER MARK
S04 =	S05 =	S06 =	TEMP	
H0 =	H0 =	H0 =	❖ PRESS	

E.D.M. AT 459m



0m	159m	459m	1099m	HI AT 459 METER MARK
S07 =	S08 =	S09 =	TEMP	
H0 =	H0 =	H0 =	❖ PRESS	

E.D.M. AT 1099m

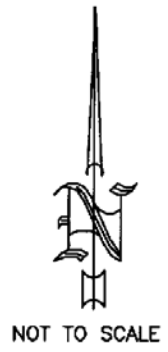
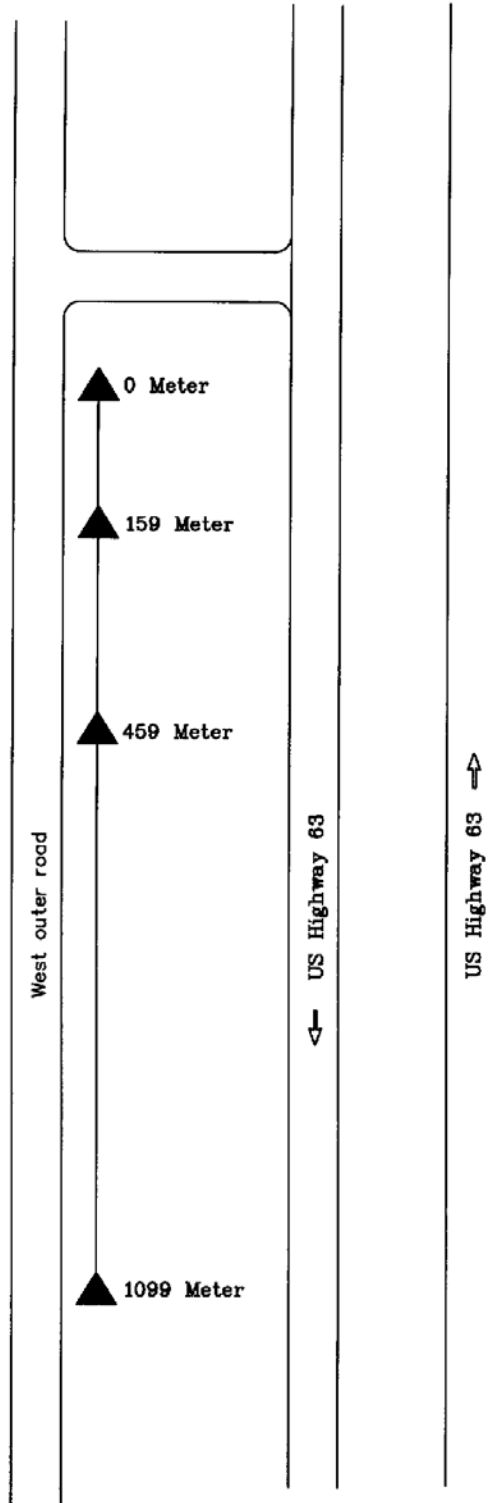


0m	159m	459m	1099m	HI AT 1099 METER MARK
S10 =	S11 =	S12 =	TEMP	
H0 =	H0 =	H0 =	❖ PRESS	

Heights or delta elevations between monuments. Elevations by the Missouri Department of Transportation.
 0m = 168.03m 159m = 167.89m 459m = 167.39m 1099m = 167.19m

❖ Barometric pressure for EDM calibration **must be station pressure**. Do not use barometric pressure reduced to sea level.

Cedar City Baseline



DATE OF SKETCH 2003

CEDAR CITY BASELINE

Electronic Distance Measurement (EDM) Calibration Baseline Callaway County, Missouri

**Established by the
Missouri Department of Agriculture
Division of Weights, Measures & Consumer Protection
Land Survey Program**

**in cooperation with the
Missouri Department of Transportation**

1987

The baseline is located north of Jefferson City, Mo., in Callaway County. It is between U.S. Highway 63 and the west outer road.

To reach the baseline from the intersection of U.S. Highway 63 and state Route W, on the north side of the Missouri River Bridge, go northwest along the outer road approximately one mile to the access to U.S. Highway 63 and the 0 meter station.

The baseline consists of six points numbered EDM 1 through EDM 6. The monuments are copperweld rods in concrete. The mark is a center-punched hole in the copperweld rod.

For EDM baseline calibration, only Points One, Two, Three, and Six are used. Points Four and Five need not be occupied or observed. Point One is the 0 meter station and is located about 60 feet south of the paved crossover in the grass median between the southbound lane of U.S. Highway 63 and the west service road. Point Two is at 159 meters, Point Three is at 459 meters, and Point Six is at 1099 meters.

The baseline station elevations are as follows:

0 meter – 168.03 meters
159 meter – 167.89 meters
459 meter – 167.39 meters
1,099 meter – 167.19 meters

Elevation information provided by the Missouri Department of Transportation

ELECTRONIC DISTANCE MEASUREMENT (EDM) CALIBRATION BASELINES IN MISSOURI

The Missouri Department of Agriculture has established 12 Electronic Distance Measurement (EDM) calibration baselines in Missouri. Modern equipment provides the user a multitude of options in the art of measurement. Inability, inexperience and incompetence using these systems can cause serious blunders. The EDM baseline will allow the operator to verify the instrument is in calibration, affirm the instrument is being operated properly and substantiate all the equipment utilized in measurement is properly adjusted and used correctly.

Each EDM baseline consists of four monumented stations. The monuments are nominally spaced at 0 meters, 159 meters, 459 meters and 1099 meters. Each station will be occupied by the EDM instrument and a measurement made to the other three stations for a total of 12 measurements. The results will determine the scale factor, the system constant and the standard deviation of the measurement in parts per million.

The EDM should be tested using the same procedures as in every day fieldwork. This will not only confirm the EDM is in good working order, but will ensure the entire system is properly adjusted. The measuring system includes, but is not limited to, the instrument, the tripods, bipods, tribrachs, prisms, prism poles, thermometers and barometers/altimeters.

WHEN TO CALIBRATE YOUR INSTRUMENT?

- After taking delivery of a new or used instrument
- Immediately after service
- Anytime the operator feels the instrument is not working properly
- Before and after the Missouri Department of Agriculture or other government agency contracts

BEFORE RUNNING THE BASELINE, PERFORM THE FOLLOWING:

- Check and adjust optical plummets, bull's-eye bubbles and plumbing poles
- Check thermometers and barometers/altimeters
- Make sure all tripods are rigid and stable
- Clean prisms
- Fully charge all batteries
- Have an EDM Calibration Report form for the baseline you are running

When filling out the EDM Calibration Report form, fill in all lines that apply and add additional information if needed.

IMPORTANT NOTE: Before each measurement, enter the temperature and station pressure or absolute pressure into the instrument. The barometric pressure given over the radio and at airports has been reduced to sea level. **DO NOT ENTER SEA LEVEL PRESSURE INTO THE EDM.** One method used to find station pressure or absolute pressure is by elevation. The barometric pressure is reduced 0.1 inches of mercury for every 90 feet of elevation. So, to correct the sea level pressure obtained from the radio or airport, pick an average elevation for your area and divide by 90. Example: if the elevation is 1,000 feet, dividing 1,000 by 90 equals 11.11. Therefore, subtract 1.11 inches from the sea level pressure to obtain station pressure or absolute pressure.