NORFOLK COUNTY ENGINEERING DEPARTMENT

MEDFIELD E. D. M. BASE LINE

In keeping with the concept of having an E.D.M. baseline available to the public and private sector, the department has established a base line on Route 27 (North Meadows Road) in the town of Medfield. Using the forms provided it is hoped the user of the baseline will forward the results of their measurements to the department at:

Norfolk County Engineering Department
Registry of Deeds Building
649 High Street
Dedham, MA 02026
Tel: 781-461-6128
Fax: 781-461-6148

Over a period of time comparative measurements will yield a mean value of the base line length.

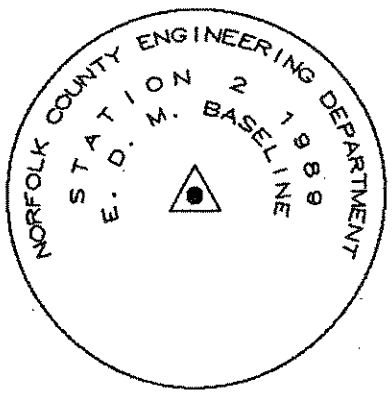
To reach the baseline from Routes 27 & 109:
Proceed north on Route 27 approximately 2.2 miles through the intersection at Dale Street and through the intersection at West Street to the 0 mark which is on the west side of the roadway in the grass shoulder between the guardrail and the edge of pavement.

To reach the baseline from the Sherborn town line at the Charles River:
Proceed south on Route 27 approximately 0.6 miles to the 0 mark which is on the west side of the roadway in the grass shoulder between the guardrail and the edge of pavement.

Description of the Medfield Base Line

The base line consists of four monuments set in a seven foot wide grass strip on the west side of Route 27 in Medfield. Each monument consists of a 3-1/4" aluminum disk set in concrete in a hand-dug hole approximately three and one half foot deep. The top three inches of the monument is formed to a diameter of twelve inches. The disk was firmly imbedded in the concrete, which was slightly mounded at the top. The top surface of the disk is approximately two inches below the surrounding ground surface. Reinforcing bars were also added to the concrete as an aid in locating the monuments with a metal detector. Numbered witness posts (orange in color) were placed behind the guard rail fence opposite each monument. The base line is approximately 3000 feet in length with monuments at the 0, at approximately the 150 meter mark, at approximately the 430 meter mark an at the terminus of the baseline.

Station 0 1989	0 mark
Station 1 1989	approximately 150 meters
Station 2 1989	approximately 430 meter
Station 3 1989	terminus of base line



Norfolk County Engineering Department

Medfield Baseline

MHD Point Station ID	NAVD 88*	Instrument At	Reflector At	Distance*	US Survey Feet
		0+0	150+	150.0386	492.251
7043	39.6222	0+0	430+	430.0565	1410.944
		0+0	914+	914.8286	3001.400
		150+	0+0	150.0386	492.251
7042	38.7620	150+	430+	280.0216	918.704
		150+	914+	764.7930	2509.158
		430+	0+0	430.0565	1410.944
7041	37.3828	430+	150+	280.0216	918.704
		430+	914+	484.7736	1590.461
		914+	0+0	914.8286	3001.400
7040	38.0301	914+	150+	764.7930	2509.158
		914+	430+	484.7736	1590.461

Each distance shown is the result of an average of 20 measurements taken with two different EDMs by the Mass Highway's Geodetic Survey Section on October 31, 2001.

* Meters

COUNTY OF NORFOLK
MEDFIELD BASELINE OBSERVATIONS

Date: _____

Crew: _____

Instrument: _____
(Manufacturer) (Model) (Serial Number)

Prism Constant: _____ IR/RL_____
(All Instruments) (Leica Only)

Weather: _____
(Atmospheric Pressure) (Temperature)

Distances in METERS

Instrument	Reflector	Published Distance	**Horizontal Distance**
0+0	150+	150.0386	_____
0+0	430+	430.0565	_____
0+0	914+	914.8286	_____
914+	0+0	914.8286	_____
914+	150+	764.7930	_____
914+	430+	484.7736	_____

MEDFIELD BASELINE OBSERVATIONS PROCEDURE

A. Switch instrument to meters. Record the prism constant set in the instrument.

B. Set up instrument at one end of the baseline with prisms set up at three other stations.

C. Have only one prism facing the instrument when measuring each station.

D. Set up instrument at other end of baseline and repeat B and C. Unlock tribrachs and move only instruments and rotating adapters.