

DESIGN MEMORANDUM NO. 6B-04

TO: Chief District Engineers
Design Engineers
Active Consultants

FROM: Ken Sperry, P.E.
Acting Director 
Division of Highway Design

DATE: April 15, 2005

SUBJECT: Right-of-Way Monumentation

Design Memorandum No. 6A-04 temporarily suspended Design Memorandum No. 6-04 due to some unresolved issues concerning the timing of permanent monumentation and the appropriate application for projects wherein the existing right-of-way and proposed right-of-way coincide. The below text is the new guidance.

After July 1, 2005, any project that has not submitted right-of-way plans shall establish and monument the right-of-way boundaries for the newly acquired right-of-way boundaries. We will not permanently monument existing right-of-way. Monumentation shall be placed in accordance with the **Standard Drawings** and the **Special Note for Right-of-Way Monuments** (See attached). Monumentation includes right-of-way monuments, right of way witness monuments, and witness posts. The intent is to define the right-of-way boundaries on our plans and in the field.

Right-of-way monuments and witness monuments shall be flagged on the plans sheets with station and offset, and they will be documented on the coordinate control sheets with northing, easting, station and offset. Coordinate control sheets shall be included in the right-of-way and construction plans.

All right-of-way monumentation shall be defined by the Kentucky State Plane Coordinate System, using project datum coordinates. This procedure will aid personnel in recovering the monument when necessary.

A project datum factor that relates the State Plane Coordinates and project datum coordinates for the right-of-way shall be published on the coordinate control sheets in the design plans.

All right-of-way monumentation shall be set under the direct supervision of a Kentucky Licensed Professional Land Surveyor.

DESIGN MEMORANDUM NO. 6B-04

Page 2

April 15, 2005

All right-of-way monuments shall be set on a project as determined by the Project Manager with guidance from the Project Development Team (PDT). It is preferred that the monumentation be completed before construction. Where there is a high probability that a right-of-way monument will be disturbed by construction, the PDT may choose to permanently set monuments after the project's construction is complete. In this situation, the surveyor shall set a temporary 36" stake and a temporary ½" diameter (#4 or greater) steel rebar at the location until the monument can be placed in its final location. The stake and rebar are for temporary purposes only and will not under any circumstances be considered the final monumentation. The PDT will also make consideration of placing a witness monument outside the disturbed area if needed. In extreme cases, the omission of one right-of-way monument is permissible. In no case shall two consecutive monuments be omitted.

All right-of-way monumentation (including witness monuments) shall be established from the monumented control with an accuracy of 1:15,000 or greater. No right-of-way monuments shall be permanently set until the primary or supplemental control monuments are established and meet or exceed the accuracy required for survey control monumentation.

To aid others in the field location of the right-of-way or witness monuments, a 6-foot orange witness post may be used. The Land Surveyor in charge of monumentation is encouraged to place a witness post for the right-of-way monuments where practical and feasible. If possible, a minimum of three witness posts per project should be placed. A witness post is to be set within 1 foot of the monument location and shall be set on the property of the Transportation Cabinet. A witness post shall have a label recognizing that the point is Kentucky Right-of-Way.

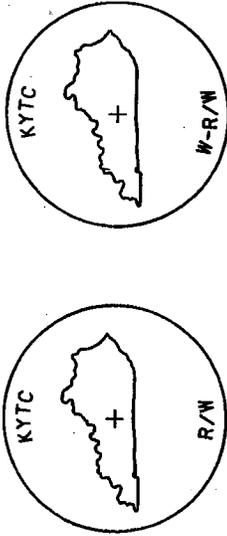
There are times when there may be several monuments at close proximity (i.e. when the right-of-way lines are making several short 90° turns) to one another possibly in someone's "front yard" that becomes unsightly to property owners of numerous witness posts. In this situation, it is recommended setting only 36" wooden stakes within 1 foot of the monument. This gives the property owner notice of where the property line is.

The PDT is still encouraged to stake the right-of-way during the right-of-way process if deemed necessary to communicate with property owners. It may also be necessary to stake the right-of-way for construction.

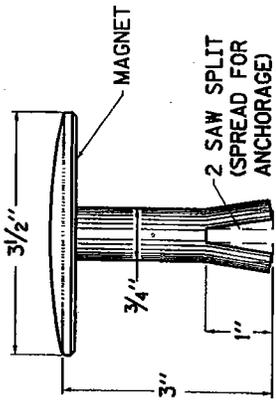
The Highway Design Manual Surveying Chapter (Section HD-306) will be updated to reflect the guidance in this Design Memo. Any questions regarding this memorandum should be directed to this office.

KRS:JDJ:CW

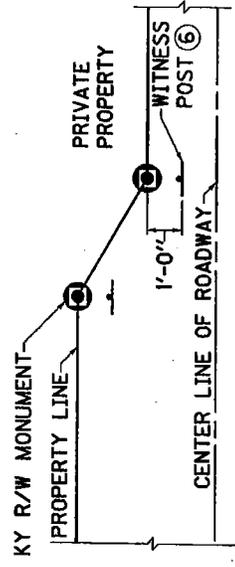
Attachments (3)



R/W MONUMENT TYPE 1 OR 1A
WITNESS R/W MONUMENT TYPE 2



ELEVATION VIEW R/W MONUMENT TYPE 1A

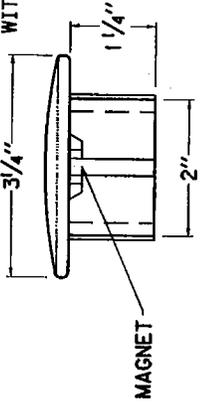


LAYOUT OF RURAL RIGHT-OF-WAY MONUMENTS

NOTES

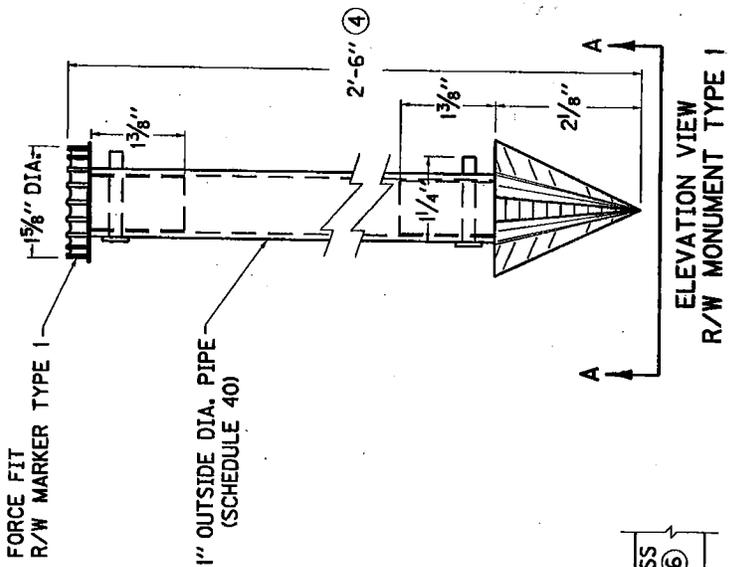
1. MANUFACTURE R/W MONUMENTS FROM ALUMINUM ALLOY.
2. TYPE 1A MARKERS SHALL BE MOUNTED FLUSH IN EXISTING PAVEMENT, DRAINAGE BOXES, ETC. DRILL A 1/8" DIAMETER HOLE AND EPOXY (COMMERCIAL GRADE) INTO EXISTING CONCRETE.
- ③ WITNESS POST SHALL BE BURIED 1'-6" TO 2'-0" IN GROUND.
- ④ WHEN ROCK IS ENCOUNTERED LENGTH MAY BE REDUCED.
5. SET ALL R/W MONUMENTS FLUSH WITH GROUND OR ADJOINING SURFACE.
- ⑥ THE LAND SURVEYOR IN CHARGE OF MONUMENTATION IS ENCOURAGED TO PLACE A WITNESS POST FOR THE RIGHT-OF-WAY MONUMENTS WHERE PRACTICAL AND FEASIBLE. IF POSSIBLE, A MINIMUM OF THREE WITNESS POSTS PER PROJECT SHOULD BE PLACED.

ORANGE FIBERGLASS WITNESS POST

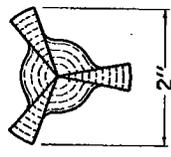


MAGNET

ELEVATION VIEW R/W MONUMENT TYPE 1

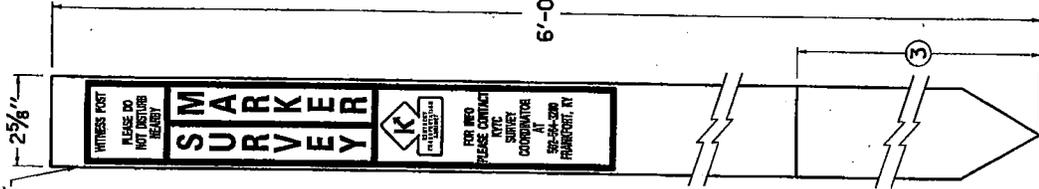


ELEVATION VIEW R/W MONUMENT TYPE 1



SECTION A-A

ELEVATION WITNESS POST



WITNESS POST DECAL

KENTUCKY DEPARTMENT OF HIGHWAYS

RIGHT-OF-WAY MONUMENTS

SUBMITTED: *[Signature]* 4-15-05 DATE

SPECIAL NOTE FOR RIGHT-OF-WAY MONUMENTS

This Special Note will apply when indicated on the plans or in the proposal.

1.0 DESCRIPTION. Furnish and install right-of-way monuments at the location and with the type shown on the plans.

2.0 MATERIALS. Furnish Aluminum Alloy monuments specified on the Standard Drawing.

3.0 CONSTRUCTION. Install right-of-way monuments at the earliest opportunity on a project as determined by the project manager. Install right-of-way monuments under the direct supervision of a Kentucky Licensed Professional Land Surveyor.

Establish right-of-way monuments from existing Primary or Supplemental control monuments with an accuracy of 1:15,000 or greater.

Place right-of-way monument information on a Control Monument Information Sheet (Exhibit 300-04 of the Highway Design Manual) provided by the Department. Place the completed Control Monument Information Sheet in a final survey report. Completely fill out the Control Monument Information Sheet, including the signature and registration number of the Kentucky Licensed Professional Land Surveyor in charge of the monumentation. Submit the Final Survey Report to the KYTC Survey Coordinator in the Division of Highway Design and the Engineer.

Reset all monuments disturbed or destroyed during or prior to construction, with the same accuracy as stated previously. Update the Control Monument Information Sheet with any new data and include in the Final Survey Report. Ensure the Kentucky Licensed Professional Land Surveyor in charge of the re-monumentation signs and places his registration number on the updated Control Monument Information Sheet. Submit the updated Final Survey Report to the KYTC Survey Coordinator in the Division of Highway Design, the Engineer, and the Kentucky Licensed Professional Land Surveyor who set the original monuments.

Right-of-way monuments that cannot be established at the planned location due to inaccessibility should be witnessed by a witness right-of-way monument on both lines and labeled as such (see Standard Drawing).

Use a 6-foot long orange witness post to aid in locating right-of-way monuments. Set the witness post within the public right-of-way and within one foot of the monument location. Label the witness post to denote that the point is KYTC right-of-way (See Standard Drawing).

4.0 MEASUREMENT AND PAYMENT. The Department will measure the quantity by each individual unit.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
2429	Right-of-Way Monument, Type 1	Each
2430	Right-of-Way Monument, Type 1A	Each
2431	Witness R/W Monument Type 2	Each
2432	Witness Post	Each