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Monument Guidelines.odt

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Based on information provided by Carl Anderson as to the requirements of the various jurisdictions that he has worked in and conversations at the chapter level, I have been asked to draw up a suggested guideline for presentation to County and City Engineers.

The importance of monuments is well documented in the ORC as described in the attachments and as required by many County conveyance standards and minimum boundary standards as set forth by the State Board of Registration for Engineers and Surveyors. However, that importance has not transferred to the construction process. As a result, many monuments are lost, some that are very important. Dean Ringle, Franklin County Engineer, has experience with a contractor destroying an original State Boundary Marker in his retracement project. Either monuments are important and need to be preserved or monuments are not important and this conversation is pointless.

At this time, with the apparent death of Senate Bill 152, Call before you Dig legislation, I am suggesting that each chapter discuss 'My Opinion' as well as the requirements of the ORC. Modify the requirements and details as you see fit and present to the County and City Engineers as a chapter.

My Opinion

As a condition of issuing a permit to work within or adjacent to the right of way, all boundary monuments, right of way/center line monuments, USGS monuments should be located prior to start of construction. Every monument discovered should be located by one or more of the following methods:

1. Tied to a recognized monumented center line.
2. Reference by a minimum of three distinct points outside the work area. (old school, kind of weak given the CORS stations and GPS)
3. Raw GPS coordinates.

This information should be delivered to the jurisdiction in charge prior to allowing construction to start. A check of the monuments should be performed at the completion of construction. Any monuments found to be missing, bent over, or disturbed should be replaced and noted as such on a the drawing, perhaps a separate plat to be recorded at the tax map office. Replacement monuments need to be addressed by the State Board, the point being I do not want my name on a replacement monument without a full boundary being run, which is not

the point of this conversation. Let us recognize that a certain few of the "monuments" will in fact be junk iron not related to a boundary or right of way. Again, I am replacing what was found, not guaranteeing a point on/in a boundary/right of way line.

Underground installations should require x, y, z as built locations either tied to a monumented center line and benchmark which have locally published/recorded GPS coordinates or by direct raw GPS coordinates. These coordinates would be input into the GIS systems that so many counties have started. I would presume that the utility companies would keep track of the data which in turn would allow them to email a set of coordinates to a contractor or surveyor thereby pushing the cost of location off to the end client. Let us also understand that locations will be much closer than +/- 2.5 feet and unknown depth/elevation.

All work to be done by a Registered Surveyor.

Typical work included but not limited to;

1. Sidewalk replacement/installations
2. Power/Utility pole placements, single or multiple
3. Milling and Paving (many of the monuments at intersections and deflection points are railroad spikes or similar type monuments)
4. Underground utility installations
 1. Telephone
 2. Electric
 3. Water
 4. Sewer
 5. Gas/Oil pipelines (cross country and right of way)

I have made much of GPS coordinates in the above opinion. In particular, raw GPS coordinates. Raw coordinates can be replicated by anyone having a GPS unit. GPS/State Plane Coordinates is a common universal system applicable state wide. No scaling factor required. GPS is also complementary to the GIS systems that many counties have started or are contemplating. No more local 10,000, 10,000 coordinate systems dependent on monuments that may or may not be readily identifiable or preserved.

Let us take into consideration all of the various pieces of technology currently available, how they interface, how they can eventually reduce costs and provide better results for the designer, contractor and the utility.

Respectfully Submitted
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