

Underground Utility Damage Case Studies



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Division of Utility and Railroad Safety

Underground Utility Damage Case Studies

- "You must learn from your past mistakes, but not lean on your past successes" - Denis Waitley

Damage: Electric Secondary

- Background: Contractor was replacing gas services at an apartment complex and struck an electric secondary. The contractor had a valid ticket and was crossing the secondary for the fourth time when it was struck. The secondary was not marked and the ticket response for power was a code 30.

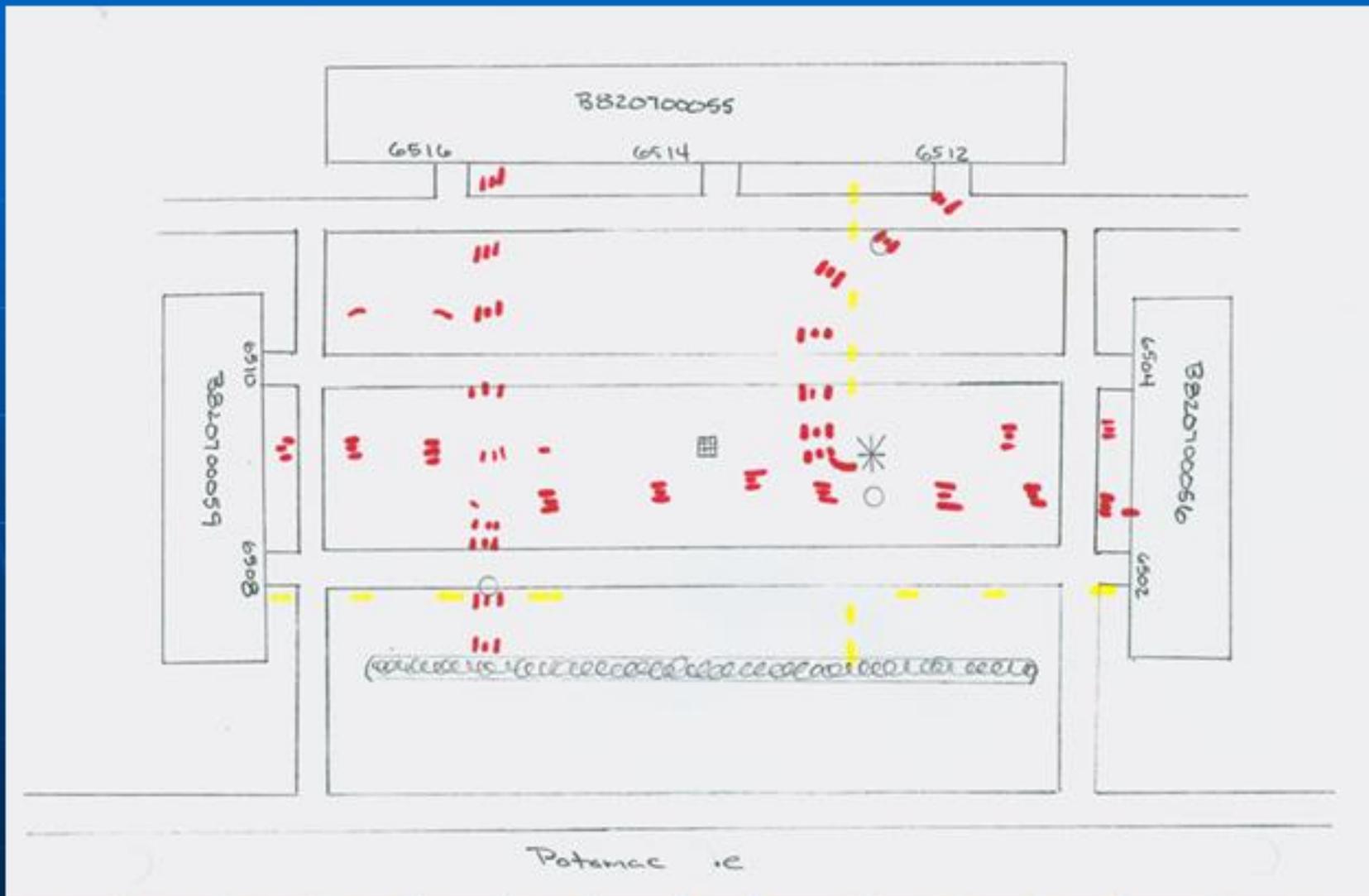


2008/08/12





Damage Site Overview



Issues.....

- Service records for the area were not available to guide the locator
- Locator did not sweep properly as per procedure

Damage: Gas Service

- Background: A paving contractor was grading for driveway paving with a skid steer loader, and scraped a coated steel gas service line. After discovering it, the contractor unearthed the line and failed to support it properly. The contractor then decided to relocate the line, and dug a trench for the relocation. Before the contractor was able to rebury the line, he damaged it in another area, resulting in a leak.

Unsupported Gas Line





Issues...

- Contractor did not contact the operator after damaging the coating on the utility line
- Contractor did not properly support or protect the exposed utility line
- Contractor did not receive authorization from the operator to relocate their facility and intended to backfill without contacting the operator.

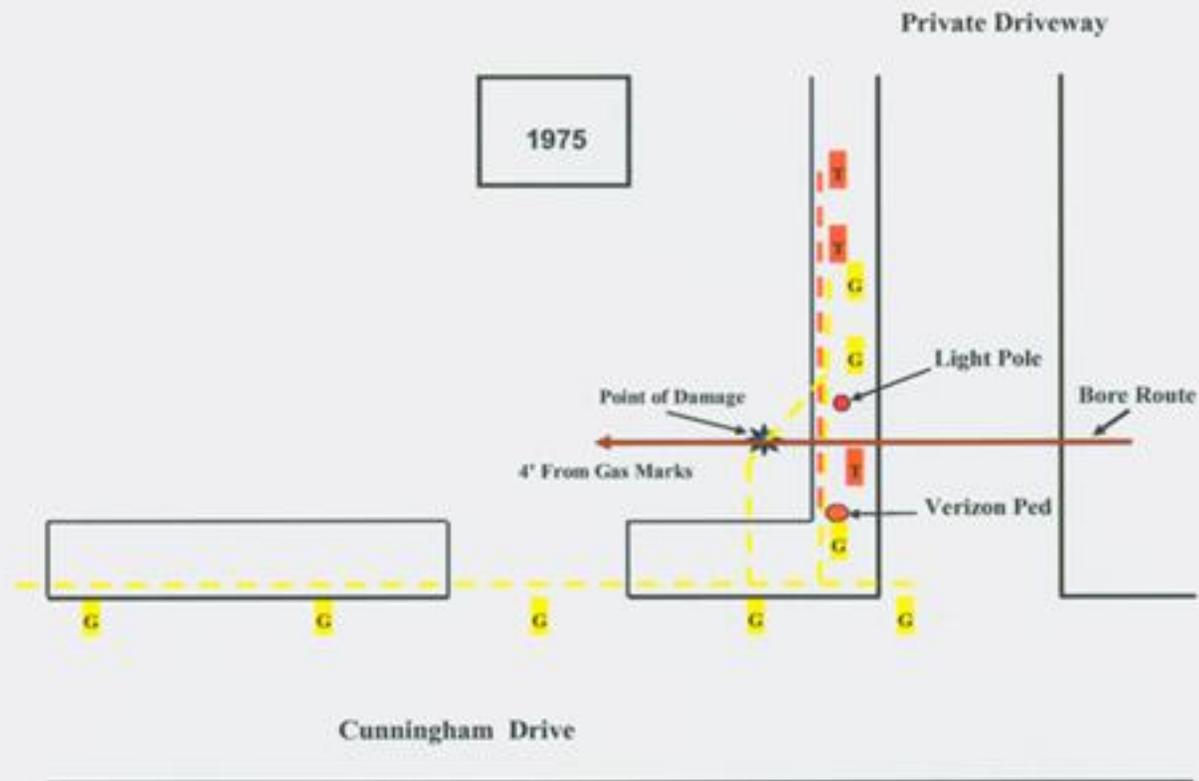
Damage: Gas Service

- Background: A contractor was boring in streetlight power lines and struck a gas service line. The line was marked in accordance with the service records and the strongest available signal, yet inaccurately.

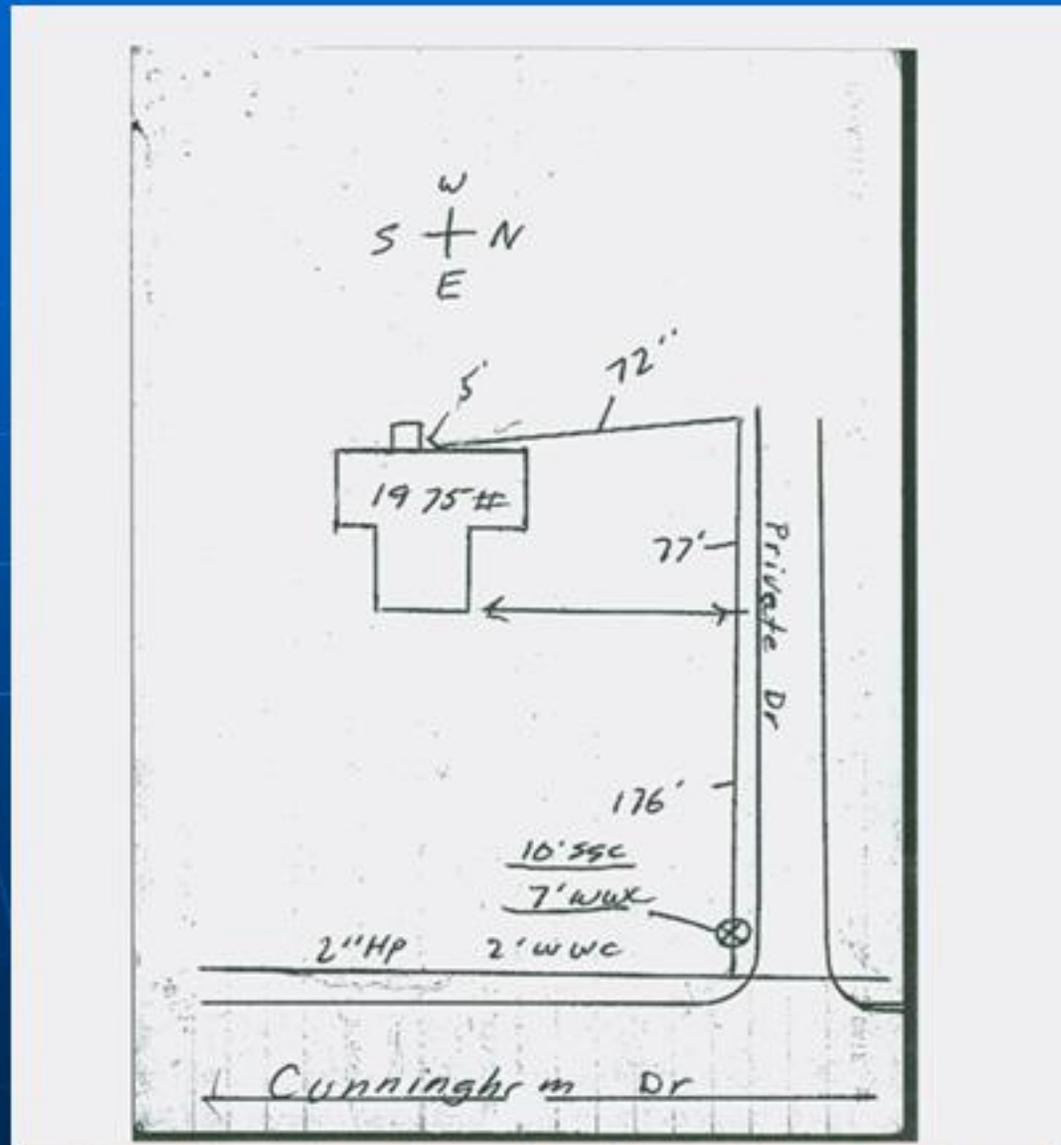
Sketch of Damage Area

Address:

1975 Cunningham Dr. Hampton Va. 23669



Operator's Service Card







Issues...

- Operator's service card inaccurate
- Locator bled over onto a communications line that ran in close proximity to the gas line and in accordance with service card
- Excavator attempted to expose the line and could not find it. Excavator assumed it was deeper than they needed to bore and chose not to call in a three hour notice to confirm marks.

Damage: Gas Main

- Background: A contractor was excavating to install a concrete storm drain at Reagan National Airport, and punctured a 3" gas main. The damage required that 60 people be evacuated from the area and caused flights to be delayed. The gas main was located accurately by a private utility locator. The excavator did not call Miss Utility prior to the excavation, and was using a large excavator to break through asphalt and cement aggregate when the damage occurred.

Damage Prevention Case Studies



Issues...

- Excavator hired a private locator that was not qualified by the gas operator, instead of calling Miss Utility as the law requires
- Excavator used a large tracked excavator to aggressively break through asphalt and concrete reinforced aggregate

Damage: None

- Background: A municipal water operator had to re-route a water main installation, at an approximate cost of \$100,000, due to an alleged unmarked communications line. The operator's installation designer called in a regular ticket for the initial survey and geotechnical boring, and did not utilize a designer ticket. A year later, when the water main installation commenced, the installation subcontractor had a conflict with marked communications lines that weren't marked on the ticket for the initial survey.

Ticket B718602487-00B

VUPS/VUPS B

2/25/2009 11:53 AM by scwa

Page 1

MBRCOD 00001 VUPsb 07/05/07 16:20:38 B718602487-00B

NORMAL

Ticket No: B718602487-00B NEW GRID NORM LREQ
Transmit Date: 07/05/07 Time: 04:20 PM Op: 1HEJ
Call Date: 07/05/07 Time: 04:13 PM
Due By Date: 07/10/07 Time: 07:00 AM
Update By Date: 07/24/07 Time: 11:59 PM
Expires Date: 07/27/07 Time: 07:00 AM
Old Tkt No: B718602487
Original Call Date: 07/05/07 Time: 04:13 PM Op: 1HEJ

City/Co: _____ Place: _____ State:VA
Address: 0 Street: OWENSVILLE ROAD
Cross 1: TURNING LANE
Cross 2: MEADOW VISTA DRIVE

Type of Work: OTHER EXCAVATION WORK - SEE DETAILS BELOW
Work Done For: _____ COUNTY SERVICE AUTHORITY

Excavation area: GEOTECHNICAL BORINGS;
MARK ALL UTILITIES WITHIN A 50 FOOT RADIUS OF THE GRADE STAKES
LOCATED ON OWENSVILLE ROAD BETWEEN TURNING LANE AND MEADOW
VISTA DRIVE AS WELL AS THOSE LOCATED WITHIN APPROXIMATELY 300
FEET SOUTH OF TURNING LANE ON OWENSVILLE ROAD.

Instructions: CALLER MAP REF: NONE
SITE IS PRE-MARKED WITH GRADE STAKES WITH YELLOW FLAGS ON THE
END.

Whitelined: Y Blasting: N Boring: N

Company: _____ RD AND ASSOC Type: ENGR
Co. Address: _____ POINT PKWY STE 220 First Time: N
City: RICHMOND State:VA Zip:23235
Company Phone: 804-272-_____
Contact Name: CHRIS _____ Contact Phone:804-272-_____
Email: _____
Field Contact: CHARLES _____
Fld. Contact Phone:804-272-8700 Ext: _____ Pager: _____ Ext: _____

Mapbook: 2603
Grids: 3803B7835A-03 3803B7835A-12 3803B7835A-13 3803B7835A-22
Grids: 3803B7835A-23 3803B7835A-32 3803B7835A-33 3803B7835A-43
Grids: 3803B7835A-44 3803C7835A-03 3803C7835A-04 3803C7835A-14
Grids: 3803C7835B-10

Members:
ACSA26 = ALBE. CO. SERV. AUTH. (ACS) CMC141 = COMCAST (CMC)
DOM810 = DOMINION VIRGINIA POWER (DOM) EMB054 = EMBARQ CORPORATION (EMB)
RWS099 = RIVANNA WATER/SEWER AUTH (RWS)

Ticket B825301367-00B

VUPS/VUPS B

2/20/2009 4:08 PM by socwa

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MBRCOD 00001 VUPsb 09/09/08 19:36:21 B825301367-00B

NORMAL

Ticket No: B825301367-00B NEW GRID NORM LREQ
Transmit Date: 09/09/08 Time: 01:36 PM Op: WKCARTER
Call Date: 09/09/08 Time: 01:30 PM
Due By Date: 09/12/08 Time: 07:00 AM
Update By Date: 09/26/08 Time: 11:59 PM
Expires Date: 10/01/08 Time: 07:00 AM
Old Tkt No: B825301367
Original Call Date: 09/09/08 Time: 01:30 PM Op: WKCARTER

City/Co: Place: State:VA
Address: 0 Street: OWENSVILLE ROAD
Cross 1: MEADOW VISTA DRIVE

Type of Work: WATER MAIN - INSTALL
Work Done For: COUNTY SERVICE AUTHORITY
Excavation area: WORK AREA IS NORTH ON OWENSVILLE ROAD FROM INTERSECTION WITH ROUTE 250 INCLUDING FROM THE CENTERLINE OF OWENSVILLE ROAD LEFT TO INCLUDE 15' OUTSIDE THE EDGE OF PAVEMENT AND CONTINUING FROM ROUTE 250 TO MEADOW VISTA DRIVE. ADDITIONALLY, THE WORK AREA CONSISTS OF ALL AREAS WITHIN THE ASPHALT SURFACE ON NEVES LANE AND THE TRIANGLE AREA BETWEEN NEVES LANE AND OWENSVILLE ROAD.

CALL MARK AT 540-569 IF YOU HAVE QUESTIONS
Instructions: CALLER MAP REF: NONE

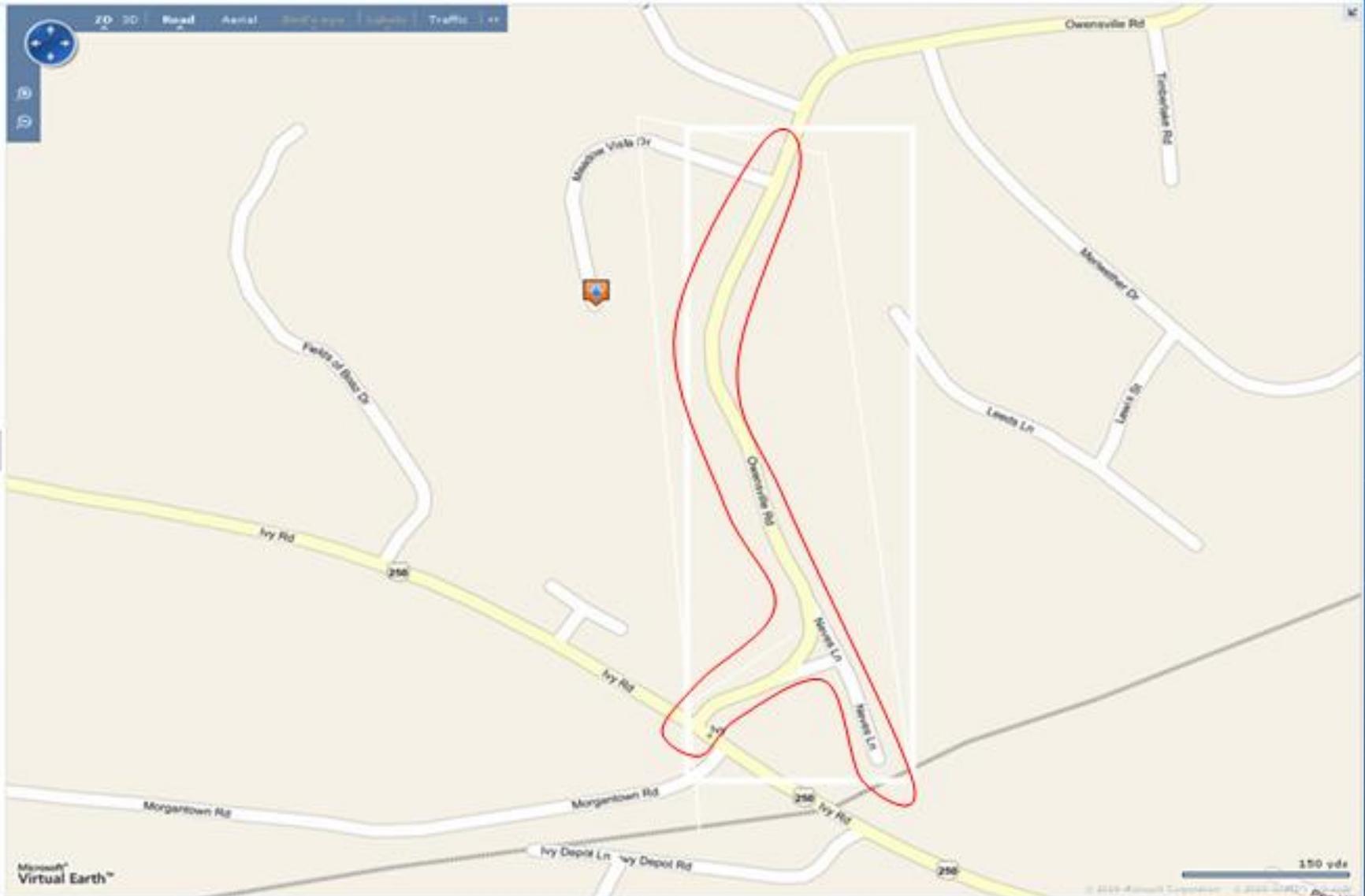
Whitelined: N Blasting: N Boring: Y

Company: CO INC Type: CONT
Co. Address: PO BOX 12 First Time: N
City: ROANOKE State:VA Zip:240
Company Phone: 540-343
Contact Name: KATHY Contact Phone:540-343
Contact Fax: 540-343
Field Contact: MARK
Fld. Contact Phone:540-569 Ext: Pager: Ext:

Mapbook: 2603
Grids: 3803B7835A-02 3803B7835A-03 3803B7835A-04 3803B7835A-12
Grids: 3803B7835A-13 3803B7835A-14 3803B7835A-22 3803B7835A-23
Grids: 3803B7835A-32 3803B7835A-33 3803B7835A-34 3803B7835A-43
Grids: 3803B7835A-44 3803C7835A-01 3803C7835A-02 3803C7835A-03
Grids: 3803C7835A-04 3803C7835A-11 3803C7835A-12 3803C7835A-13
Grids: 3803C7835A-14 3803C7835B-00

Members:
ACSA26 = ALBEMARLE COUNTY-WATER & CMC141 = COMCAST (CMC)
DOM810 = DOMINION VIRGINIA POWER (DOM) EMB054 = EMBARQ CORPORATION (EMB)
RMS099 = RIVANNA WATER-WATER & SEW

2D 3D Road Aerial Street View Traffic



Issues...

- Design Contractor did not utilize a designer ticket for purposes of installation design. Instead they relied on a normal ticket for geotechnical boring to do the initial site survey
- The scope of the initial ticket was different from that of the ticket for installation, and did not encompass the communications line that was marked on the installation ticket.

THE END