

**2015 State Damage Prevention Program Grants Final Report**  
**CFDA Number: 20.720**

**Award Number:** DTPH5615GPPS01

**Project Title:** *State Damage Prevention Grant (SDP) Program Grants - 2015*

**Date Submitted:** *September 13, 2016*

**Submitted by:** *Rick Pevarski*

**Specific Objective(s) of the Agreement**

Under this grant agreement, the Virginia Utility Protection Service (VA 811) will implement a cloud and mobile-based geospatial solution with the ability to support processes to capture and store precise and pedigreed subsurface utility engineering data while incorporating a comprehensive damage prevention process, which can be displayed visually on a Geographical Information System (GIS).

**Workscope**

Under the terms of this grant agreement, the Recipient will address the following elements listed in the approved application as stated in 49 U.S.C. §60134 (b).

- **Element 1 (Effective Communications):** Participation by operators, excavators, and other stakeholders in the development and implementation of methods for establishing and maintaining effective communications between stakeholders from receipt of an excavation notification until successful completion of the excavation, as appropriate.
- **Element 2 (Comprehensive Stakeholder Support):** A process for fostering and ensuring the support and partnership of stakeholders, including excavators, operators, locators, designers, and local government in all phases of the program.
- **Element 3 (Operator Internal Performance Measurement):** A process for reviewing the adequacy of a pipeline operator's internal performance measures regarding persons performing locating services and quality assurance programs.
- **Element 8 (Technology):** A process for fostering and promoting the use, by all appropriate stakeholders, of improving technologies that may enhance communications, underground pipeline locating capability, and gathering and analyzing information about the accuracy and effectiveness of locating programs.

**Accomplishments for this period (Item 1 under Article IX, Section 9.02 Final Report: “A comparison of actual accomplishments to the objectives established for the period.”)**

This geospatial damage prevention system initiative provided the ability to:

- Access ticket information and field data from mobile devices in real-time

- Capture location based utility field work data with precision, pedigree and provenance
- Real-time data exchange between stakeholders whether in the field or in the office
- Ensure data quality with data governance best practices
- Configure damage prevention business processes including notifications to and from the field
- Collect and map the following data for periodic review and analysis
  - Public awareness efforts identified to a single point address
  - Damage and near miss information
  - Site inspections

This project provided the following business processes:

- Importing the ticket and the utility information
- Presenting ticket information to the field worker
- Capturing any information that a field worker may collect (locate data, pictures, field sketches, etc.)
- Notification to the positive response system
- Collection of all public awareness efforts identified to an unique address
- Collection of damage and near miss data
- Collection of all site inspection data

Since the mid-term report, all phases of the project were completed.



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Below you will find screen shots denoting the story line of Roanoke Gas utilizing the Prostar Transparent Earth application. The same information is available using the Point Man application within Prostar for mobile devices.

**Roanoke Gas Service Area Tickets within Transparent Earth:**

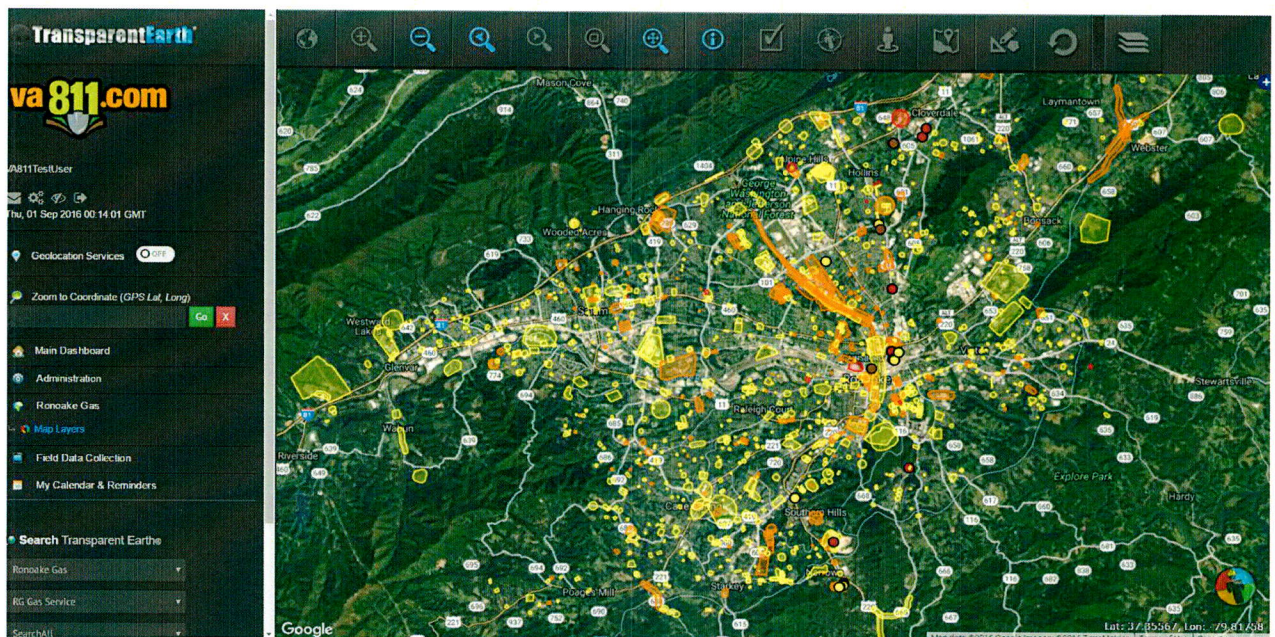
**Legend:**

**Polygons denote VA811 one-call tickets:**

<b>Red</b>	<b>3 Hour Notice of Excavation</b>
<b>Yellow</b>	<b>New Notice of Excavation</b>
<b>Orange</b>	<b>Update Notice of Excavation</b>

**Circles with black outlines**

**indicates photo attachments, color-coded with the uniform color code of the American Public Works Association.**





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This is a screen shot of three VA811 one-call tickets within Transparent Earth. The blue outline denotes the ticket to be located.



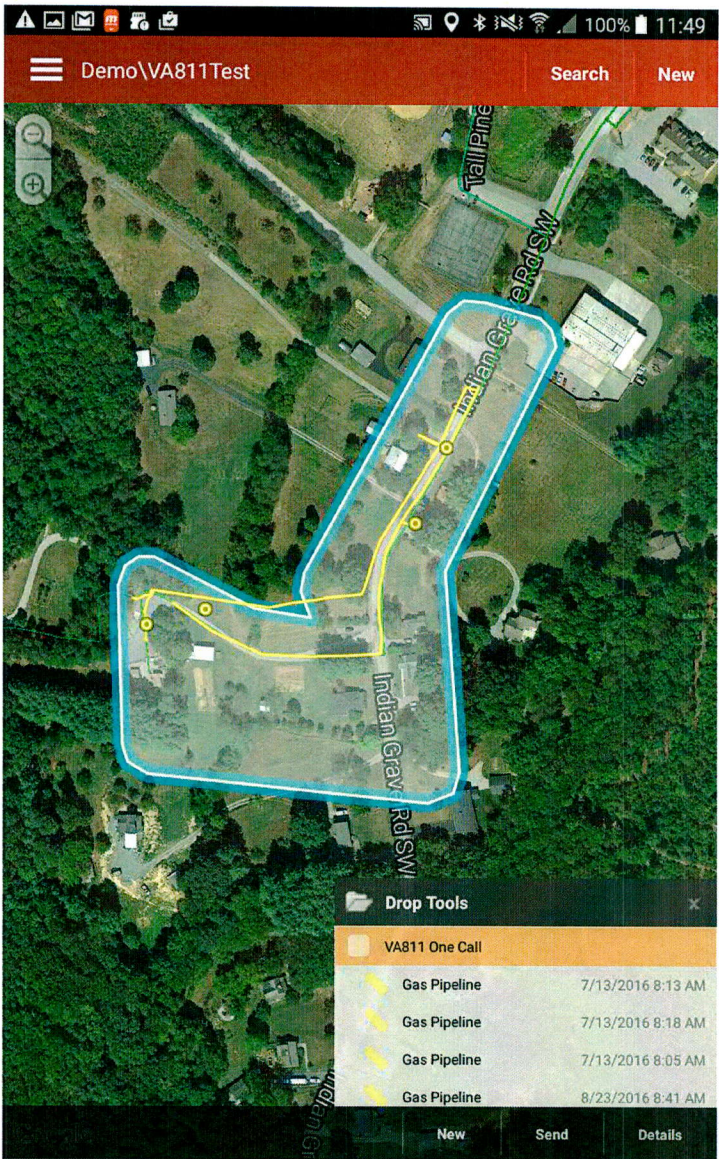


The locate begins within the area outlined in blue.



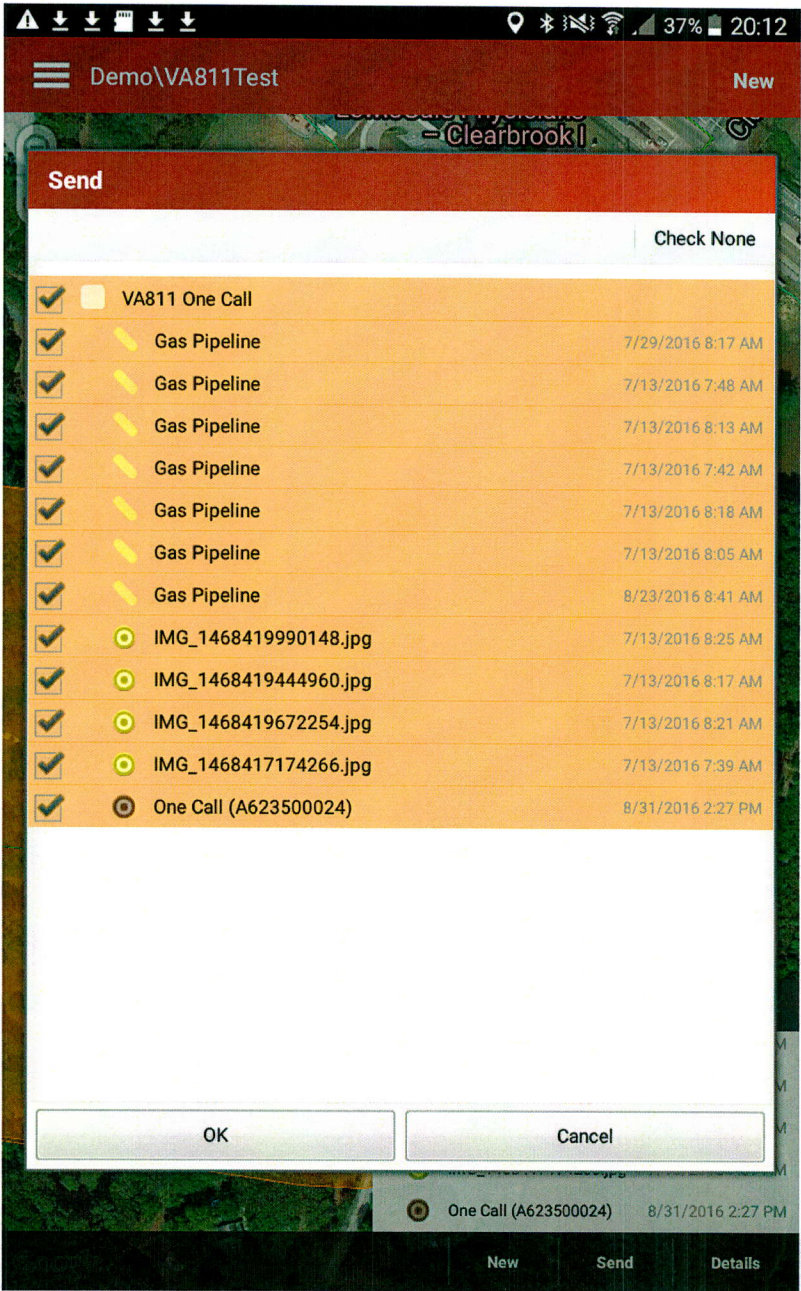


This screen shot denotes the ticket showing the located underground infrastructure (yellow lines) with photographs attached (yellow circles) within Transparent Earth:

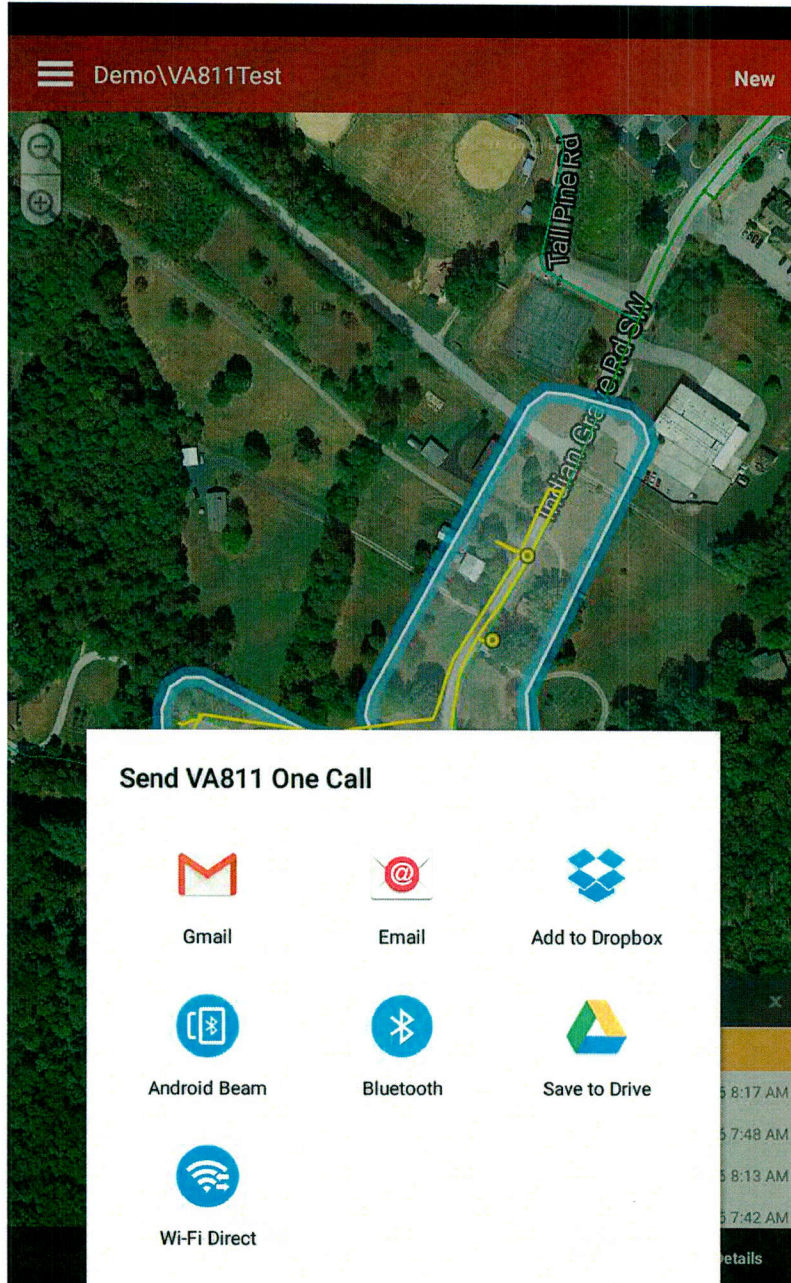




Once the underground utility is located and phototgraphs are captured in Transparent Earth, selections of items to send to excavators and operators are done through the drop box tool within the application:

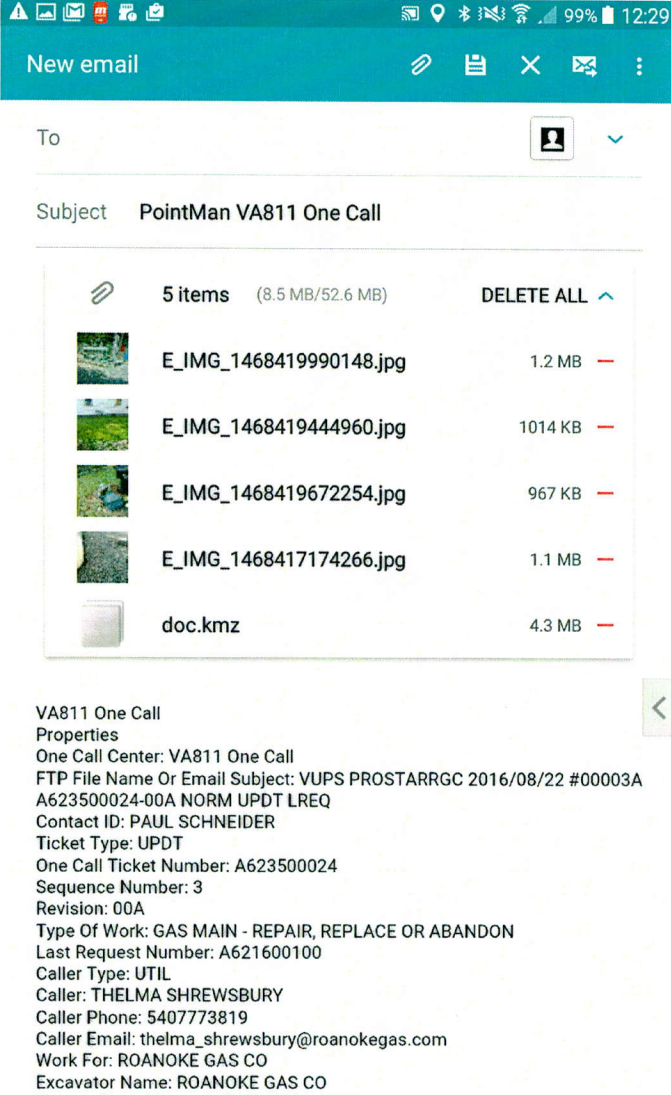


The Transparent Earth application provides multiple formats to send collected information on the one-call ticket depicting the located underground infrastructure and attached images.





**Example of ticket locate and attachments within Gmail:**



The screenshot shows a Gmail email interface on a mobile device. At the top, there's a status bar with various icons and a battery level of 99% at 12:29. Below that is a teal header with 'New email' and icons for attachments, a calendar, a close button, a mail icon, and a menu. The email header shows 'To' with a contact icon and a dropdown arrow, and 'Subject' as 'PointMan VA811 One Call'. A list of attachments is displayed, including four JPEG images and one KMZ file. Below the attachments, there's a section titled 'VA811 One Call' with a back arrow, containing detailed ticket information.

**To**

**Subject** PointMan VA811 One Call

5 items (8.5 MB/52.6 MB) DELETE ALL ^

Attachment	Size
E_IMG_1468419990148.jpg	1.2 MB
E_IMG_1468419444960.jpg	1014 KB
E_IMG_1468419672254.jpg	967 KB
E_IMG_1468417174266.jpg	1.1 MB
doc.kmz	4.3 MB

**VA811 One Call**

Properties

One Call Center: VA811 One Call

FTP File Name Or Email Subject: VUPS PROSTARRGC 2016/08/22 #00003A

A623500024-00A NORM UPDT LREQ

Contact ID: PAUL SCHNEIDER

Ticket Type: UPDT

One Call Ticket Number: A623500024

Sequence Number: 3

Revision: 00A

Type Of Work: GAS MAIN - REPAIR, REPLACE OR ABANDON

Last Request Number: A621600100

Caller Type: UTIL

Caller: THELMA SHREWSBURY

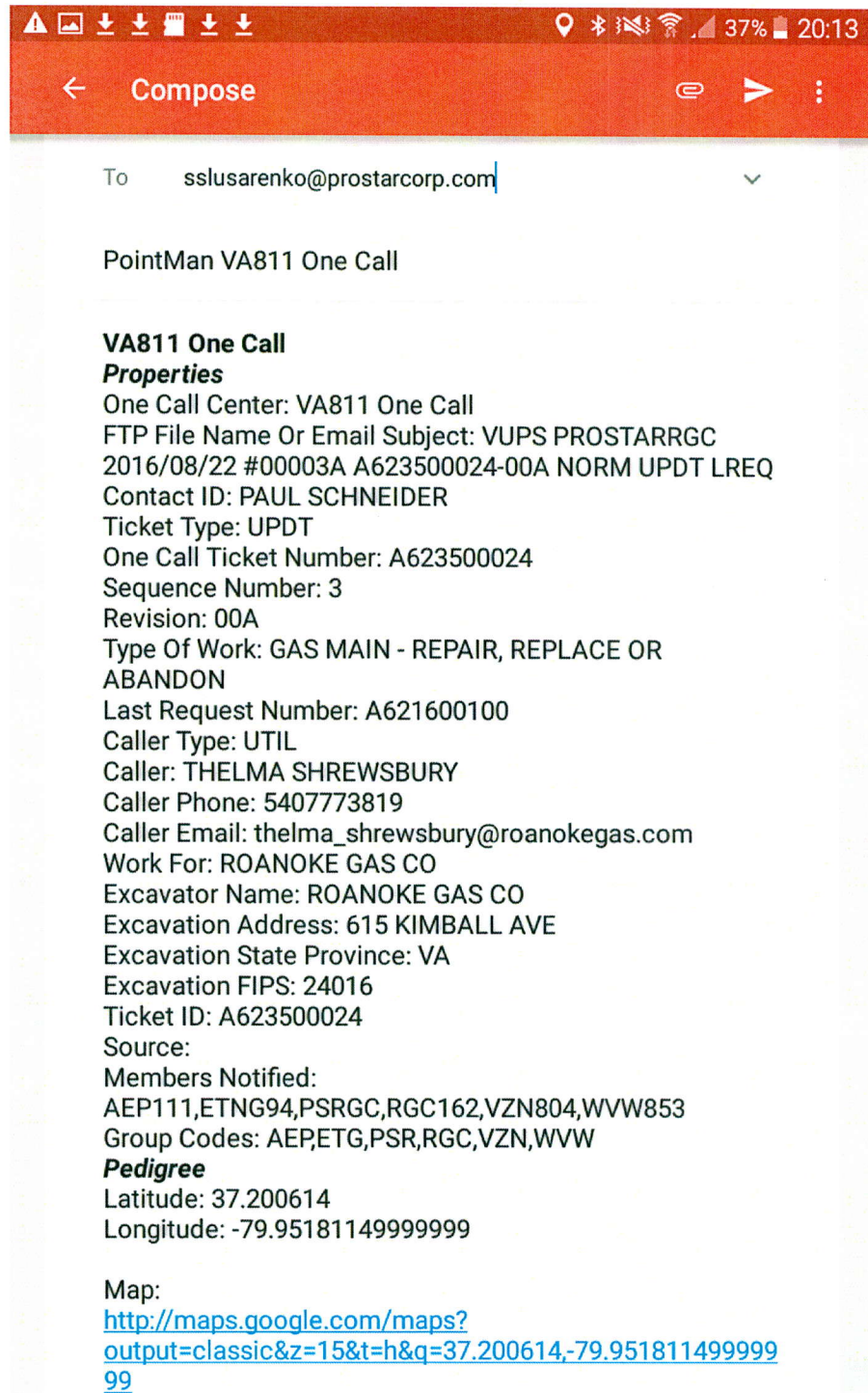
Caller Phone: 5407773819

Caller Email: thelma\_shrewsbury@roanokegas.com

Work For: ROANOKE GAS CO

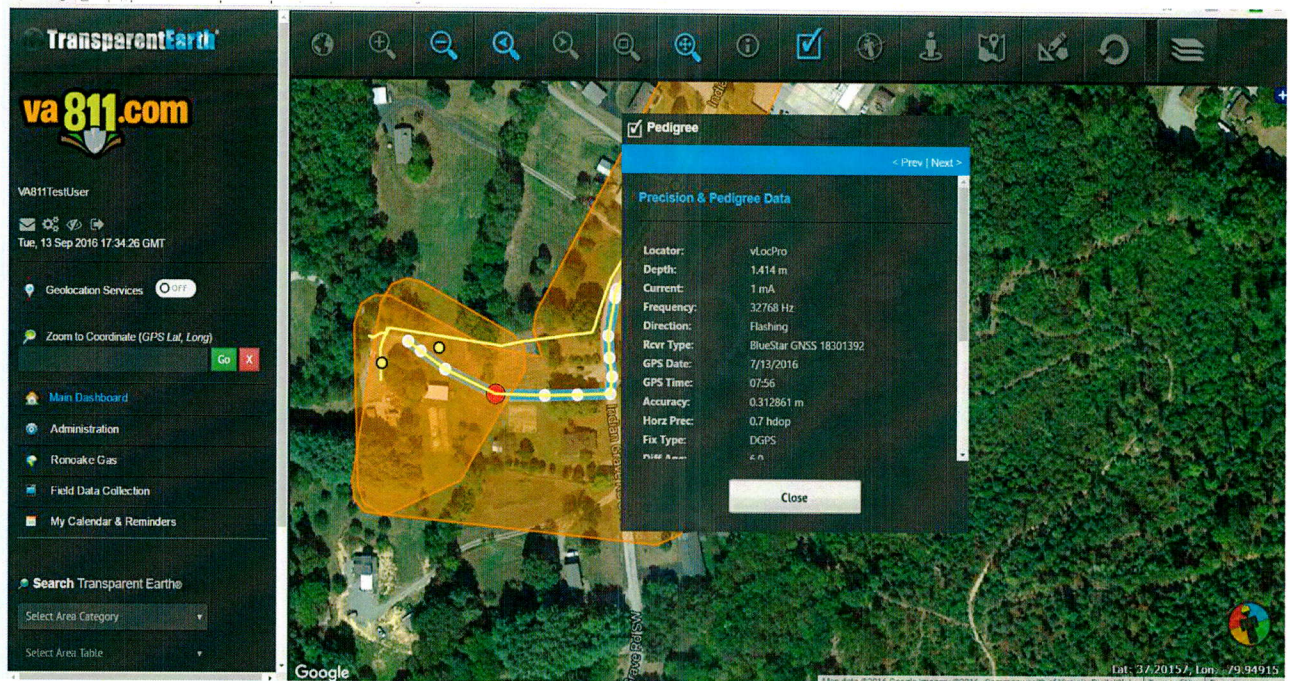
Excavator Name: ROANOKE GAS CO

Example of ticket locate within Outlook (link to map to depict locate and attachments):

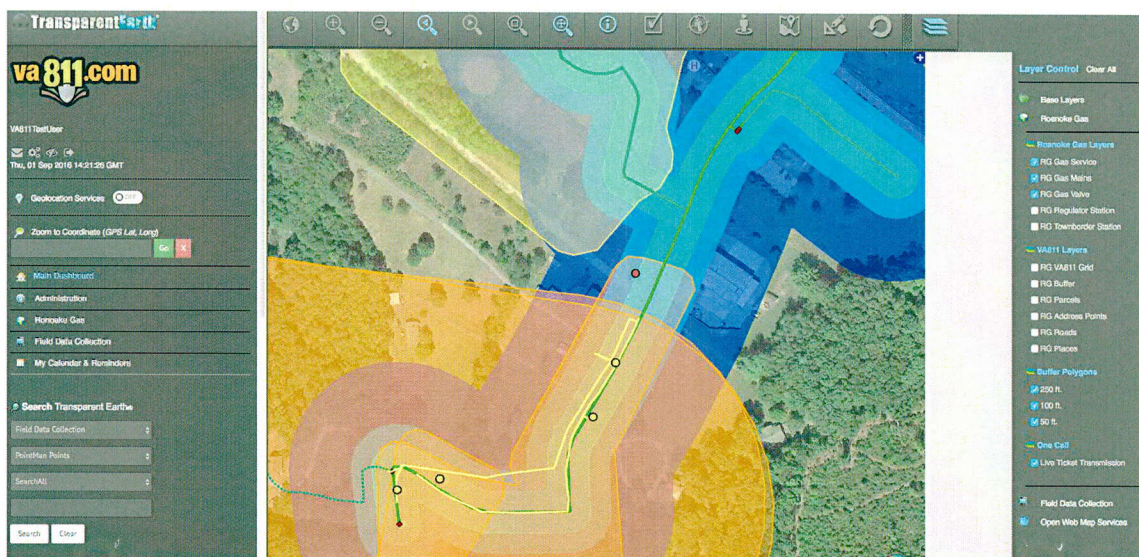




The following screen shot denotes the precision and pedigree of the locate information.



The following screen shot denotes the layer control portion of Transparent Earth. This provides capabilities to create any type of reports based on the layers. One example is a report of any tickets within 50 feet of the underground facility verses number of tickets within 250 feet.





The following screen shot denotes the Roanoke Gas customized Public Awareness Form within Transparent Earth:

FORM\_1473789143194.pdf Close

### Public Awareness Form

Project Name:	2016 Public Awareness Program
AFE:	12343
Date:	9/3/2016
Contractor:	
Inspector:	


#### Details

Location:	098.01-01-06.00-0000
Mile Post:	
Person Contacted:	James Smith
Address:	5344 Indian Grave Rd
Phone Number:	(540) 123-4567
Category:	Resident Landowner

#### Information Provided

- ☒ Handed out educational material
- ☒ Discussed responsibility and resources available of response agency and acquainted official with our ability in responding to an emergency release and means of communication
- ☒ Handed out Emergency Telephone number memento

#### Confirmation

Employee:	Steve James
Signature:	



**Quantifiable Metrics/Measures of Effectiveness (Item 2 under Article IX, Section 9.01 Final Report: “Where the output of the project can be quantified, a computation of the cost per unit of output.”)**

Below denotes the statistics from Roanoke Gas utilizing the Transparent Earth and Point Man applications from June 21, 2016 – August 31, 2016:

- Average of 1,330 locate tickets per month captured
- 46 lines located
  - 46 Gas
  - 1 Telecom
  - 1 Drainage
- 54 Points Created
  - 13 Photos captured
  - 31 form documents
  - 3 file documents
  - 5 gas valves
  - 1 cathodic protection
  - 1 gas, other

The proof of concept was successful as denoted by the statistics. There is a potential for the participant to continue with this technology. If Roanoke Gas chooses to continue utilizing the application, it will be the first local distribution company with transmission lines in the United States to adopt this technology.

**Issues, Problems or Challenges (Item 3 under Article IX, Section 9.02 Final Report: “The reasons for slippage if established objectives were not met. “)**

There are no issues, problems or challenges to report.

# **Attachment A**



(Follow form instructions)

## Paperwork Burden Statement

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is 0348-0061. Public reporting burden for this collection of information is estimated to average 1.5 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0061), Washington, DC 20503.

# **Attachment B**





ProStar GeoCorp, Inc.

760 Horizon Drive, Suite 200  
Grand Junction, CO 81506

## INVOICE

### BILL TO

Virginia Utility Protection  
Service, Inc.  
1829 Blue Hills Circle, NE  
Roanoke, VA 24012

INVOICE # 1136

DATE 01/14/2016

TERMS Due on receipt

DESCRIPTION	AMOUNT
	USD
Phase I: Execution of the Professional Services Agreement	25,000.00

Bank information for direct/electronic depositing:

ProStar GeoCorp, Inc.  
routing #107002448  
account #2600715166  
(Bank of Colorado, 200 Grand Ave, Grand Junction, CO 81501)

BALANCE DUE

**\$25,000.00**

Acct #	1201	Dept.	IT
Descr	VA811/Prostar PILOT		
Project	- Payment 1 of 4		
Amt	25,000.00	Apprv	J. Hofbauer
Accounting Use:			
Check #	12825	Date	1/26/16



Virginia Utility Protection Service, Inc.  
1829 Burg Hill Circle N.E.  
Roanoke, VA 24012

WELLS FARGO BANK, N.A.  
www.wellsfargo.com  
68-54/514

12825

1/26/2016

\$ \*\*25,000.00

DOLLARS

PAY TO THE ORDER OF ProStar GeoCorp, Inc.

Twenty-Five Thousand and 00/100\*\*\*\*\*

ProStar GeoCorp, Inc.  
760 Horizon Drive, Suite 200  
Grand Junction, CO 81506

MEMO

Inv #1136; Pmt 1 of 4 for Prostar pilot project

AUTHORIZED SIGNATURE

⑈0000012825⑈ ⑆051400549⑆ 2000015276458⑈

12825

VIRGINIA UTILITY PROTECTION SERVICE, INC.

ProStar GeoCorp, Inc.

Date 1/26/2016  
Type Reference  
Bill 1136

1/26/2016  
Discount  
Check Amount

Payment  
25,000.00  
25,000.00

Original Amt.  
25,000.00

Balance Due  
25,000.00

Wells Fargo Checking Inv #1136; Pmt 1 of 4 for Prostar pilot project

25,000.00





**ProStar GeoCorp, Inc.**  
760 Horizon Drive, Suite 200  
Grand Junction, CO 81506

## INVOICE

**BILL TO**

Virginia Utility Protection  
Service, Inc.  
1829 Blue Hills Circle, NE  
Roanoke, VA 24012

**INVOICE #** 1155**DATE** 02/25/2016**TERMS** Due on receipt**DESCRIPTION****AMOUNT  
USD**

Phase 2: Completion and Sign-Off of Statement of Work

25,000.00

Bank information for direct/electronic depositing:

ProStar GeoCorp, Inc.

routing #107002448

account #2600715166

(Bank of Colorado, 200 Grand Ave, Grand Junction, CO 81501)

**BALANCE DUE****\$25,000.00**

VIRGINIA UTILITY PROTECTION SERVICE, INC.

ProStar GeoCorp, Inc.  
Date 2/29/2016 Type Bill Reference

Original Amt.  
25,000.00

Balance Due  
25,000.00

2/29/2016  
Discount

Check Amount

12922

Payment  
25,000.00  
25,000.00

Wells Fargo Checking Payment 2 of 4 Prostar grant

25,000.00



1829 Blue Hills Circle, NE  
Roanoke, VA 24012  
[www.VA811.com](http://www.VA811.com)



Save details to address book

On Jan 25, 2016, at 6:14 PM, Jim Allen <[jallen@va811.com](mailto:jallen@va811.com)> wrote:

Rick,  
I recommend approval.

<image002.jpg>

From: Debbie Hofbauer  
Sent: Monday, January 25, 2016 4:18 PM  
To: Jim Allen <[jallen@va811.com](mailto:jallen@va811.com)>  
Subject: Purchase Requisition #dh012516-01 Prostar Project

<image004.png>

**Deb Hofbauer**  
Director, Information Technology  
VA811  
1829 Blue Hills Circle, NE  
Roanoke, VA 24012

Acct #	1201	Dept.	IT
Descr	2nd Payment of 4 for Prostar Grant		
Amt	25,000.00	Apprv	[Signature]
Accounting Use:		Check #	12922
		Date	2/29/16



va811.com

Dig With CARE

Virginia Utility Protection Service, Inc.  
1829 Blue Hills Circle N.E.  
Roanoke, VA 24012

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www.wellsfargo.com  
68-54/514

12922

2/29/2016

PAY TO THE ORDER OF ProStar GeoCorp, Inc.

\$ \*\*25,000.00

Twenty-Five Thousand and 00/100\*\*\*\*\*

DOLLARS

ProStar GeoCorp, Inc.  
760 Horizon Drive, Suite 200  
Grand Junction, CO 81506

MEMO

Payment 2 of 4 Prostar grant

  
AUTHORIZED SIGNATURE

⑈0000012922⑈ ⑆051400549⑆ 2000015276458⑈

VIRGINIA UTILITY PROTECTION SERVICE, INC.

12922

ProStar GeoCorp, Inc.  
Date 2/29/2016 Type Reference Bill

Original Amt.  
25,000.00

Balance Due  
25,000.00

2/29/2016  
Discount  
Check Amount

Payment  
25,000.00  
25,000.00

Wells Fargo Checking Payment 2 of 4 Prostar grant

25,000.00



ProStar GeoCorp, Inc.  
760 Horizon Drive, Suite 200  
Grand Junction, CO 81506

## INVOICE

### BILL TO

Virginia Utility Protection  
Service, Inc.  
1829 Blue Hills Circle, NE  
Roanoke, VA 24012

INVOICE # 1189

DATE 05/26/2016

TERMS Due on receipt

### DESCRIPTION

AMOUNT  
USD

Phase III: \$25,000 payable upon completion of development

25,000.00

Bank information for direct/electronic depositing:

ProStar GeoCorp. Inc.  
routing #107002448  
account #2600715166  
(Bank of Colorado, 200 Grand Ave, Grand Junction, CO 81501)

BALANCE DUE

**\$25,000.00**

Acct # 1201 Dept. IT  
Descr PAYMENT 3 of 4 - PROSTAR  
Proof of PILOT/CONCEPT. PHMSA GRANT  
Amt 25,000 Apprv. [Signature]  
Accounting Use: # 13224  
Check # 6/3/2016 Date



VIRGINIA UTILITY PROTECTION SERVICE, INC.

ProStar GeoCorp, Inc.

13224

Date      Type   Reference  
5/26/2016   Bill   1189

Original Amt.  
25,000.00

Balance Due  
25,000.00

6/3/2016  
Discount

Check Amount

Payment  
25,000.00  
25,000.00

Wells Fargo Checking   Inv #1189; Pmt 3 of 4 for Proof of Pilot grant

25,000.00



ProStar GeoCorp, Inc.  
760 Horizon Drive, Suite 200  
Grand Junction, CO 81506

## INVOICE

### BILL TO

Virginia Utility Protection  
Service, Inc.  
1829 Blue Hills Circle, NE  
Roanoke, VA 24012

INVOICE # 1212

DATE 08/15/2016

TERMS Due on receipt

### DESCRIPTION

AMOUNT  
USD

Phase IV: \$25,000 payable upon successful completion and sign-off of the user acceptance test (UAT) 25,000.00

Bank information for direct/electronic depositing:

ProStar GeoCorp. Inc.  
routing #107002448  
account #2600715166  
(Bank of Colorado, 200 Grand Ave, Grand Junction, CO 81501)

BALANCE DUE

\$25,000.00

Acct #	201	Dept.	IT
Descr	VA 811 / PROSTAR - Proof of Concept Project Payment 4 of 4		
Amt	25,000.00	Apprv	[Signature]
Accounting Use:			
Accounting Use:	Date 8/25/16		
Check #	13489	Date	8/25/16





Virginia Utility Protection Service, Inc.  
1829 Blue Hills Circle N.E.  
Roanoke, VA 24012

WELLS FARGO BANK, N.A.  
www.wellsfargo.com  
68-54/514

13489

8/25/2016

PAY TO THE ORDER OF ProStar GeoCorp, Inc.

\$\*\*25,000.00

Twenty-Five Thousand and 00/100\*\*\*\*\* DOLLARS

ProStar GeoCorp, Inc.  
760 Horizon Drive, Suite 200  
Grand Junction, CO 81506

*Rich Leonard*  
AUTHORIZED SIGNATURE

MEMO

Inv #1212; Pmt 4 of 4 for Proof of Pilot grant

⑈0000013489⑈ ⑆051400549⑆ 2000015276458⑈

VIRGINIA UTILITY PROTECTION SERVICE, INC.

13489

ProStar GeoCorp, Inc.

Date 8/15/2016  
Type Bill  
Reference 1212

8/25/2016

Original Amt. 25,000.00  
Balance Due 25,000.00

Discount

Check Amount

Payment 25,000.00

Wells Fargo Checking Inv #1212; Pmt 4 of 4 for Proof of Pilot grant

25,000.00