

2009 State Damage Prevention Grant
For
Public Utilities Commission of Ohio
DTPH56-09-G-PHPS10

**Final Report
January 31, 2010**

The Ohio Marking Standards Committee is pleased to report that the Ohio damage prevention project involving the development of underground facility marking standards is finalizing all objectives within a few weeks of its original timeline and under budget. The intent of this report is to describe the outcome of Ohio's Universal Marking Standards project as it relates to the following:

Specific Objectives of the Agreement:

Under this grant award, the Public Utilities Commission of Ohio will work with the Ohio Utilities Protection Service to support the efforts of the Ohio Marking Standards Committee. A wide range of methods will be used to educate and encourage all stakeholders to adopt the new marking standards, including:

- A professional marketing service will develop an effective marketing strategy targeting facility owners/operators, locators, professional excavators, and homeowners.
- The Ohio Utility Protection Service will both support and promote the new marking standards through its board members, staff, newsletters, and use of its web site to educate and survey excavators and homeowners at safety events and trade shows and by conducting phone surveys to measure the campaign's success.
- Ohio's three Utility Coordinating Councils and six Common Ground Alliance Regional Partners will actively promote the new marking standards among their members.
- Statewide industry groups will promote the new marking standards at meetings, in newsletters, and on their web sites.
- Production of a training video that targets professional excavators. The video will be produced in both English and Spanish languages.
- Production of "pocket" guides that provide graphic depictions of the new marking standards and describe their meanings as well as Ohio's excavation laws and safe excavation practices. The guides will also promote Ohio's six Common Ground Alliance Regional Partners and 811.

Workscope

Under the terms of this agreement, the Grantee will address the following elements listed in 49 USC §60134 through the actions it has specified in its Application.

- Element (2): 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): A process for reviewing the adequacy of a pipeline operator's internal performance measures regarding persons performing locating services and quality assurance programs.
- Element (4): Participation by operators, excavators, and other stakeholders in the development and implementation of effective employee training programs to ensure that operators, the one call center, the enforcing agency, and the excavators have partnered to design and implement training for the employees of operators, excavators, and locators.
- Element (5): A process for fostering and ensuring active participation by all stakeholders in public education for damage prevention activities.

The Ohio Marking Standards Committee

In August of 2008, twenty-eight representatives of Ohio's gas industry (transmission and distribution), electric and telecommunications industry, professional excavators, locators, Ohio Utilities Protection Service (O.U.P.S.) notification center, and county, municipal, and state (DOT) personnel came together with this common goal:

To reduce damages to Ohio's infrastructure by establishing marking standards used to identify underground facilities; and to create effective educational materials to promote the use of the marking standards among all stakeholders and educate excavators as to their meaning.

Phase one of the project required Committee Members to create, by consensus, marking standards to be used to identify underground facilities. Meetings were typically three – four hours long and held one to two times each month from August, 2008 to May, 2009. The process of developing standards by consensus was demanding at best. Although each Committee Member is an expert in their respective field, a great deal of time was spent educating each other as to the finer points of locating, excavating, and operator standards. Undoubtedly the most time was spent creating a standard mark for identifying a single line (cable), and addressing the question of whether a pipeline's width should be indicated by marks on each side of the facility or by a number. Committee Members' efforts resulted in fifteen underground facility marks being created. In addition, related subject areas were identified and addressed such as correcting marking errors and material type abbreviations.

Phase two of the project requires the Committee Chair to collaborate with a professional marketing firm to develop an effective marketing strategy targeting facility owners/operators, locators, professional excavators, and homeowners. The following educational materials have been created:

Postcard

Design an initial postcard that will be sent out to all utility companies and municipalities to announce the program and to get their support. The postcard will act as a teaser and let them know they will be receiving their information kit in the next few weeks.

<i>Information Kit</i>	Design the actual kit that will house the information outlined below: <ul style="list-style-type: none"> • Brochure-7 page, color • Flip chart- quick reference guide for use by excavators) in a pocket • Video Placed on O.U.P.S. website, English and Spanish speaking versions • Vinyl windshield cling with examples of new marks • Kit will also include a copy of the video/DVD.
<i>Brochure</i>	Developed a format using information provided by the Ohio Marking Standards Committee. All markings standards graphics are included in the brochure.
<i>Quick Reference Guide</i>	The “at a glance” reference guide for excavators to carry with them. The guide will include drawings of all the different markings as a quick reference.
<i>Landing Page</i>	The landing page will allow us to track the success of the marketing programs as well as give us the opportunity to obtain pertinent information for future marketing and education activities.
<i>Training Video</i>	The video will be produced in English and Spanish languages. In addition to identifying the new marking standards, the video will incorporate several safety messages including: Call before you dig, 811, coming in contact with a gas pipeline/blowing gas, APWA color code, safe excavation guideline resources.

Phase three of this project included systematically promoting new standards among Ohio's facility owners and locators, and aggressively market new standards to Ohio's professional excavators. The Committee will then measure its impact by surveying stakeholders through the use of Ohio Utilities Protection Service's web site.

Specific Program Objectives Met:

- *A professional marketing service will develop an effective marketing strategy targeting facility owners/operators, locators, professional excavators, and homeowners.*

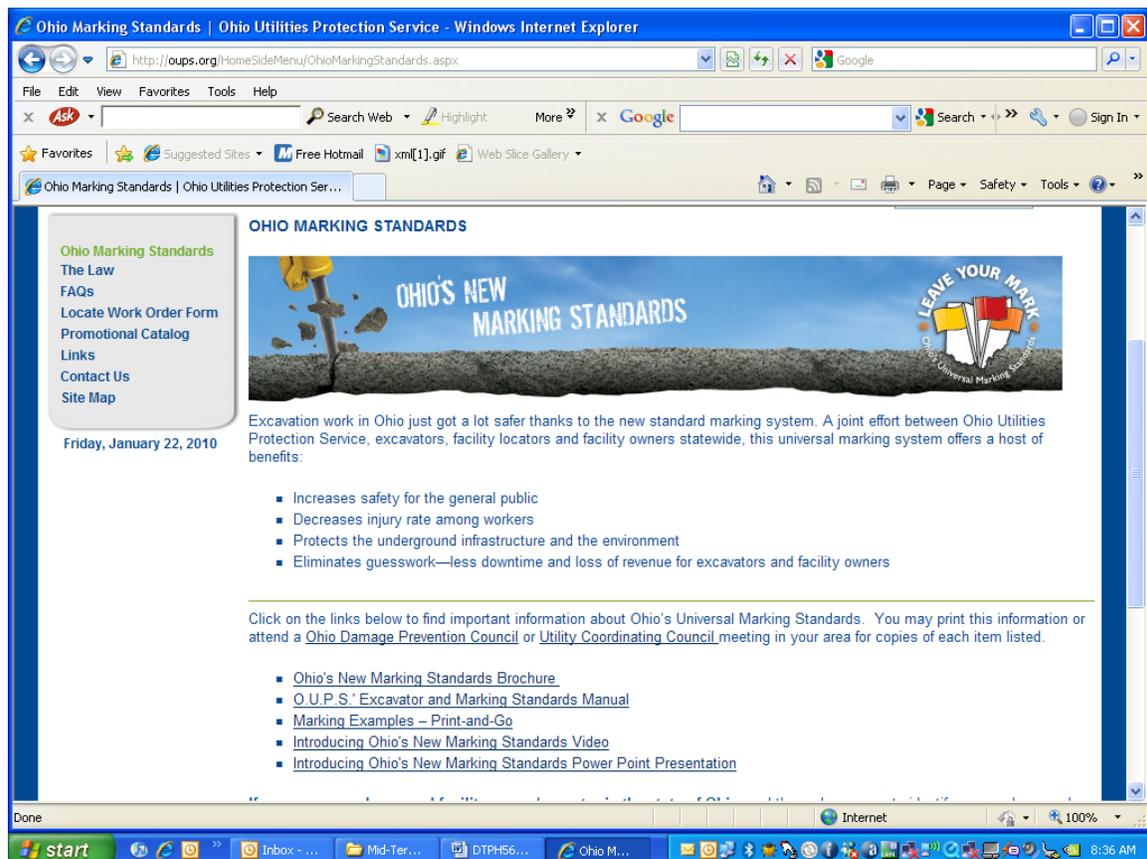
An effective marketing campaign was developed by the firm Shamrock Companies; educational pieces included an initial (8"x 5.5") postcard directed at Ohio's facility owners and operators. This postcard was developed to serve as a “teaser” in order to create interest. Initially it was scheduled to be mailed in December. However, at the marketing firm's suggestion, the mailing was postponed until after the holidays and mailed in January, 2010. Two weeks after the mailing of the postcard an informational kit will be sent to the same individuals. This kit will include:

- One seven page brochure outlining safe excavation practices, the new marking system, the use of 811, and recommended action if an underground facility is damaged.
- One DVD containing a five minute Ohio's Universal Marking Standards Video in both English and Spanish speaking versions.
- One 27 page Excavator Manual (or flip chart) containing all the information included in the brochure, but in much more detail.
- One vinyl windshield "stick-on" that can be applied to the excavators' windshield and used as a "cheat sheet" to identify the marks at a job site.

Each hands-on item and the video direct those involved in the excavation industry to visit www.oups.org for more information.

Following the mailing of the information kits to the facility owners, Ohio's excavators will receive an oversize postcard making them aware of changes coming to their worksite. These postcards have a perforation at one end allowing a section of the card to be removed and placed in the pocket – a quick reference piece containing examples of the Marking Standards, the APWA color code, the One-Call Center's phone number, and 811. The card will also direct them to the landing page on the web where they will find more information and access to all of the above noted hands-on items.

In addition to the above items that are mailed to facility owners and excavators, a landing page on O.U.P.S.' web site has been created and can be viewed by anyone, including homeowners, at www.oups.org.



This site features:

- **Ohio's New Marking Standards Brochure** – *Adobe Reader*
- **Excavator Manual and Marking Standards** – *Adobe Reader*
- **Marking Examples – Print-and-Go** – *Two, one-sided 8.5"x11" pages may be printed and copied to one page, two-sided, for distribution.*
- **Introducing Ohio's New Marking Standards Video** – *Choose English or Spanish speaking version.*
- **Introducing Ohio's New Marking Standards Power Point Presentation** – *May be downloaded and used by anyone wishing to share this information.*
- **Facility Owners' Identification Codes** – *Facility owners/operators are invited to provide their codes for addition to this list. Excavators are encouraged to print this list for use in the field.*
- **Facility Material Type Abbreviations List** - *Excavators are encouraged to print this list for use in the field.*
- **Facility Type Definitions List** - *Excavators are encouraged to print this list for use in the field.*

In order to encourage attendance at Ohio's six Damage Prevention Councils (and CGA Regional Partners) and its three Utility Coordinating Councils the following verbiage is used on the web page:

*Click on the links below to find important information about Ohio's Universal Marking Standards. **You may print this information or attend an Ohio Damage Prevention Council or Utility Coordinating Council meeting in your area for copies of each item listed.***

Each Ohio Utilities Protection Service Liaison will have a supply of Marking Standards materials at the monthly Damage Prevention Council and quarterly Utility Coordinating Council meetings. This method of distribution will cut down on postage costs and encourage participation within these safety councils.

Additionally, after the information is disseminated there will be a survey added to this web page. It will measure the effectiveness of the marketing campaign by asking questions pertaining to the message, its clarity, and usefulness of the materials provided. To encourage web site visitors to respond to the survey Ohio Utilities Protection Service is providing a free t-shirt for each participant. The shirts will display the new Marking Standards' logo on the back and O.U.P.S.' logo on the front. The shirts, the printing, and mailing are contributed by O.U.P.S.

In addition to the hands-on materials, video, and web site landing page created by the professional marketing firm many other forms of promotion have been used within this project including:

- An article about the development of Ohio's Universal Marking Standards is being distributed to organizations involved in excavation activities for inclusion in their newsletters:

Committee Releases Ohio's Universal Marking Standards Information

Ohio's Universal Marking Standards Committee will begin releasing educational information and guidelines regarding new marking standards to be used in the state of Ohio.

The project was a collaborative effort between Ohio Utilities Protection Service, facility owners, facility locators and excavators. It began when members of Ohio's damage prevention councils recognized the need for clear, consistent communication in order to reduce damages and injuries and increase work efficiency, thus saving time and money. Committee member Mike Princic of Cook Paving and Construction said that the new standards will make it easier for excavators to understand what's underground, thus making it easier to identify location and prevent damage and injury. "The main goal is to prevent injury and having a clearer understanding of the marks and their meaning will reduce the frequency of injuries and damage."

A committee was formed in the fall of 2008 and elected Alice Miller, O.U.P.S., as chairman and Jennifer Reams, Crestline Paving & Excavation, secretary. The committee included 24 representatives from facility owners, facility locators, excavators and other members of underground utility damage prevention organizations and stakeholders. The committee and its endeavor received support from O.U.P.S., Ohio's six damage prevention councils, participating organizations, Public Utilities Commission of Ohio and a 2009 State Damage Prevention Program Grant from Pipeline Hazardous Materials Safety Administration (PHMSA).

By-laws were established and the group agreed to use the consensus process as a way of making final decisions and recommendations. Though the consensus process ensures that all constituents agree, it can be time consuming and difficult to come to a conclusion upon which all members of the group agree.

Using Virginia's underground utility marking standards, American Public Works Association (APWA) Marking Standards, Common Ground Alliance (CGA) Best Practices, and marking guidelines from other states, the committee addressed situations such as proposed excavation marks, multiple duct banks and pipeline material indication. It used input from members and other resources to develop the standards for marking.

The new marks address white lining, single and multiple facilities, owner/operator identification, pipelines, plastic inserts, duct/duct banks, termination points and deviation in direction, offset marks and valve boxes and manholes. While the new marking standards do not address all possible scenarios and are not written into proposed Senate Bill 152, it is expected that they will result in safer excavation in Ohio.

New educational material will include in-depth descriptions of the marks as well as definitions and materials abbreviations explanations. A training video in English and Spanish and new excavator manuals will also be released.

Information will be sent to facility owners in January. Additional information and in-depth descriptions of the marks will follow. The website, which includes a video, power point, manuals, etc., is currently live as well. Excavators will begin receiving educational information in February. It is important that facility owners and locators begin using the new marking standards by spring of 2010. Information will be available at www.oups.org.

- *The Ohio Utility Protection Service will both support and promote the new marking standards through its board members, staff, newsletters, and use of its web site to educate and survey excavators and homeowners at safety events and trade shows and by conducting phone surveys to measure the campaign's success.*

The Ohio Utilities protection Service has contributed countless hours providing support for this important damage prevention program. It has contributed staff from its Accounting, Public Education and Outreach, and Information Technology Departments. Examples of Ohio Utilities Protection Service's promotional activities include:

- O.U.P.S.' staff member serves as the Project Coordinator/Committee Chair and promotes Ohio's Universal Marking Standards throughout the state by providing presentations at Damage Prevention and Utility Coordinating Council meeting, the Public Utilities Commission of Ohio's Technical Seminar, and organizational meetings like the Ohio Gas Association's Annual Meeting.
- The Public Education and Outreach Team Members at Ohio Utilities Protection Service promote Ohio's Universal Marking Standards during safety presentations and trade shows throughout the State, and during their presentations at the Emergency Responder Training sessions.
- Ohio's Universal Marking Standards safety initiative will be showcased at the Ohio Utilities Protection Service's 2010 Legislative Reception at the Ohio Statehouse on February 16, 2010.
- State agencies and organizations with links to O.U.P.S.' web site will as you might expect be promoting Ohio's Universal Marking Standards – by way of O.U.P.S.' marking standards' landing page.
- Marking Standards Committee Members and Ohio Utilities Protection Service Board Members have, and will continue to, play a major role in supporting and promoting this initiative.

One change that was made within this objective was the method in which the survey is conducted. It was decided to post a survey on the web site and offer a free t-shirt for participation, rather than conduct a phone survey. We felt this method will be more economical, provide better input from a specific target, and by placing the markings logo on the t-shirts it will help promote the program. As stated above, O.U.P.S. is contributing the cost of the t-shirts, printing, and postage.

- *Ohio's three Utility Coordinating Councils and six Common Ground Alliance Regional Partners will actively promote the new marking standards among their members.*

Ohio's three Utility Coordinating Councils and six Damage Prevention Councils/Common Ground Alliance Regional Partners members are the hub of this entire project. The idea of creating new marking standards was conceived at a Damage Prevention Council meeting. Most of the Marking Standards Committee Members are also members of the Utility Coordinating and Damage Prevention Councils. All Councils have had an Ohio's Universal Marking Standards presentation made by the Project Coordinator/ Committee Chair at their meetings.

Visitors to the markings landing page may download and print the educational materials created for this project. However, in order to direct more people to the Utility Coordinating and Damage Prevention Council meetings visitors are being directed to a meeting in their area in order to receive the hands-on materials produced for this project. O.U.P.S. Liaisons will have the materials available at the meetings.

- *Statewide industry groups will promote the new marking standards at meetings, in newsletters, and on their web sites.*

Industry groups are making their members aware of this program by inviting the Committee Chair to their meetings in order to present information pertaining to Ohio's Universal Marking Standards, they are placing the article (above) in their newsletters, and their web site links to O.U.P.S.' web site make available all the information on the marking standards' landing page.

- *Production of a training video that targets professional excavators. The video will be produced in both English and Spanish languages.*

A five minute training video targeting professional excavators was produced in both English and Spanish languages. Both versions may be viewed on the web site at www.oups.org. Also, both language versions are placed on a DVD and is being distributed along with all other educational materials.

- *Production of "pocket" guides that provide graphic depictions of the new marking standards and describe their meanings as well as Ohio's excavation laws and safe excavation practices. The guides will also promote Ohio's six Common Ground Alliance Regional Partners and 811.*

The 27-page Excavator Manual and Universal Marking Standards is the pocket guide that incorporates safe excavation practices, the marking standards, 811, and recommended action to be taken if a facility is damaged. Ten thousand of these manuals will be distributed throughout Ohio.

In Conclusion:

In addition to elements two, three, four, and five that were outlined in the original workscope of this project, element one was impacted as well, and that impact is addressed within this document.

Element 1: Enhanced Communication between Operators and Excavators

Effective communications among Ohio's stakeholders begins at the state level with legislators, state agencies such as the Public Utilities Commission of Ohio, Ohio Utilities Protection Service, industry groups, and the six CGA Regional Partners present in the state. These individuals, public and private entities, and organizations work together to continually improve communications before, during, and after excavation activities. In addition, pending legislation requires enhance communications among stakeholders by requiring, for example, pre-marking with white paint and positive response.

Facility owners/operators and facility locate companies are being encourage to take the necessary steps, such as contractual changes and personnel training, in order to start using the marks that have been developed. The Committee hopes to have widespread use of the marks by spring 2010. The larger companies; AT&T, FirstEnergy, American Electric Power, Columbia Gas, BP Pipeline, and Dominion Gas Company have been involved in this initiative from the start and should be utilizing the new marking standards in early spring. It will take longer for some of the smaller companies and municipalities to convert to the new standards. It is expected that within a few years Ohio's Universal Marking Standards will be the industry standard, and eventually be referenced within Ohio law.

With support from PHMSA and a large cross-section of Ohio's stakeholders: facility owners/operators, facility locators, municipalities, professional excavators, State agencies such as the Public Utilities Commission of Ohio, safety organizations like the Ohio Gas Association, and the Ohio Utilities Protection Service this important safety initiative was made possible. The Committee' Purpose was: *To reduce damages to Ohio's infrastructure by establishing marking standards used to identify underground facilities; and to create effective educational materials to promote the use of the marking standards among all stakeholders and educate excavators as to their meaning.*

While it is too early to say whether the development of marking standards reduces damages in Ohio, this program has certainly opened lines of communication among Ohio's excavation industry stakeholders, and provided an opportunity to educate Ohioans about, not only Ohio's Universal Marking Standards, but also potentially life-saving excavation practices in general.

All Financial information accompanies this report as attachments, and includes Standard Form 269 and expenditures by each object class category as required. The awarded amount of \$99, 462.00 was not spent in its entirety. The costs incurred by this project totaled \$98,167.96. Therefore this project was completed under budget by \$1,294.04.

Final Progress Report and Financial Forms are Respectfully Submitted By,

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