

MAINE STATE LEGISLATURE

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TRENCH & EXCAVATION SAFETY WORKGROUP REPORT

To the Joint Standing Committee on Transportation

February 2010

Introduction

During the First Session of the 124th Maine Legislative Session the Joint Standing Committee on Transportation passed a Resolve (Resolve Chapter 70, LD 1094) to Study safety measures relating to open trenches and excavations. The Resolve required the Maine Department of Transportation (MaineDOT) in conjunction with the Maine Department of Public Safety to convene a working group to study trench and excavation safety. Representatives of the following organizations, agencies and departments were specifically noted in the Resolve as part of the working group: the Maine Department of Labor, the Maine Public Utilities Commission, the Maine Turnpike Authority, the Maine Better Transportation Association, the Maine Municipal Association, and the Associated General Contractors of Maine. In addition to those organizations listed in the directive, several others also joined the working group.

In its charge, the working group was tasked with examining safety issues relating to unattended trenches and excavations on both public and private property. A study of the trench safety law recently enacted in Massachusetts was also mandated. The working group was specifically tasked to develop recommendations for improving the safety of unattended trenches and excavations for the general public. This report completes the final requirement of the Resolve which requires the submission of a report to the Joint Standing Committee on Transportation no later than the first business day in February 2010.

The working group has met three times as a full group with other efforts and meetings occurring as part of this effort. Minutes from these full group meetings, attendance rosters and the working group membership are included as appendices in this report. The attendance numbers and commitment of those involved have been very positive and focused.

As part of its efforts, the working group discussed and reviewed the recently enacted trench safety law in Massachusetts. This review involved a group discussion and review of a summary of the law. In addition, a couple members contacted various entities in Massachusetts to determine the effectiveness of the new law as well as any limitations with the same.

An internet search and some outreach were done to identify whether any trench safety laws to protect the public existed in states other than Massachusetts. Although Occupational Safety and Health Administration (OSHA) rules protect workers in excavations, no states other than Massachusetts appear to have any laws or regulations in place to protect the public from unattended trenches and excavations.

An industry-wide survey was conducted by the working group to obtain information about unattended trenches. The short survey was distributed amongst construction companies, utility companies, municipalities, state agencies and many others. Several responses were received with the results summarized in a report included as an appendix to this report. Although the report does have some limitations, the data received is useful in realizing that unattended trenches do occur, but that public protection practices are being employed.

Summary

- The working group is committed to improving the safety of unattended trenches in Maine.
- The working group was very adamant that any and all solutions to address this concern be kept simple, straightforward, reasonable and practical.
- The working group as a whole agrees that unattended trenches do occur in Maine. It also agrees that just because a trench or excavation is unattended does not mean it is unsafe.
- The working group believes the law enacted in Massachusetts may not be the best answer to address the safety concerns surrounding unattended trenches. The law is not “perfect”, it increases cost while not ensuring complete safety, it’s enforced by people who may not be well versed in trenching safety practices and it may create a sense of false protection.
- The working group focused on unattended trenches only. This kept the focus on protecting the public rather than the worker which is already overseen by OSHA rules and regulations.
- The working group agrees that public protection methods will not keep out all entities. Fences, barricades and the like will often increase the curiosity of some individuals.
- It was recognized that all contractors and entities involved with excavation and trenching have a responsibility and fiscal burden related to the safety of the work site. This responsibility and burden is often influenced by insurance carriers.
- The working group believes that a standard of practice or best practices guidance should be developed and distributed to all contractors, utilities and others of all sizes involved in trenching and excavation practices in Maine.
- The working group believes strongly that education of the industry and the public is the best way to address this issue. Education of the public is needed to help keep them away from work site dangers by explaining the potential hazards and associated risks. Industry education is needed to help minimize the number of unattended trenches and to insure that any such trenches are properly marked, identified and protected.

Recommendations

- It is recommended that education, not legislation, be the tool to address concerns related to unattended trench safety. As such it is recommended that two subgroups from the working group be created to focus on public education and industry education. The groups would involve representatives of the established working group as well as other targeted individuals or organizations that could provide positive assistance in these efforts. It is also recommended that the education not focus solely on unattended trenches, but rather on work site safety with such trenches being a component of the same. This is due to the recognition that other safety concerns may exist at worksites, which should not be overlooked. The extent of the education and outreach efforts will be limited by funding, unless otherwise dedicated.
 - The public component of the education effort should be outreach based similar to electrical safety efforts done by CMP. Other effective safety efforts will be reviewed with the intent of integrating the best and most successful components of each. The focus of this effort will likely be younger children, but the public component must also serve to educate people of all ages. The intent is to make the public more aware of safety issues within and surrounding constructions sites. As such, any such efforts will likely be focused more generally on construction site safety concerns with unattended trenches being a component of the overall message.
- The working group also recommends that a standard of practice or best practices guidance be developed and distributed to all contractors, utilities and others involved in trenching and excavation practices in Maine. This guidance would suggest methods for addressing and protecting unattended trenches through a variety of protection measures and construction practices. A variety of distribution networks would be utilized to help insure that this guidance reaches contractors of all types and sizes in the state.
 - The industry component of the education effort should be focused on the importance and need to maintain a safe worksite during times when the site will be left unattended. This too is not just limited to unattended trenches although that will be a large component of the campaign. This effort will need to reach out to construction and utility companies of all sizes and types. This will be done through a variety of networks including industry groups, municipalities, insurance companies, state agencies and several others.
- If it is the desire of the Joint Standing Committee on Transportation to pass a Resolve mandating the above activities, proposed wording for such is included as an appendix to this report.
- The focus of this workgroup were trenches and excavations associated with construction worksites. It was recognized by the workgroup that other type of excavations do occur, including those dug on beaches within our state. These too can

be a safety concern, but are separate in their focus than those addressed by this workgroup. It is the recommendation of this working group that the Joint Standing Committee on Transportation forward a letter to the Joint Standing Committee on Criminal Justice, to best address this concern, if that is their desire.

Resolve

124th Legislature

First Regular Session

Chapter 70

H.P. 756 - L.D. 1094

**Resolve, To Study Safety Measures Relating to Open Trenches
and Excavations**

Sec. 1 Department of Transportation to establish a working group to study safety measures relating to open trenches and excavations.

Resolved: That the Department of Transportation, in conjunction with the Department of Public Safety, shall establish a working group to study trench and excavation safety, referred to in this resolve as “the working group.” In addition to representatives of the Department of Transportation and the Department of Public Safety, the working group must include, but is not limited to, the Department of Labor, the Public Utilities Commission, the Maine Turnpike Authority, the Maine Better Transportation Association, the Maine Municipal Association, Associated General Contractors of Maine and other representatives of the construction industry in the State to examine safety issues relating to unattended trenches and excavations on both public and private property. The working group, in its deliberations, shall study the trench safety law recently enacted in Massachusetts, which is specifically designed to prevent a member of the public from falling into an unattended trench and suffering an injury or fatality. The working group shall develop recommendations for improving the safety of unattended trenches and excavations for the general public; and be it further

Sec. 2 Report. Resolved: That the working group shall submit a report to the Joint Standing Committee on Transportation no later than the first business day in February 2010. The report must include an analysis of federal and state trench and excavation safety laws, regulations and rules with recommended legislation to strengthen laws relating to trench and excavation safety. After reviewing the report, the Joint Standing Committee on Transportation may report out a bill to the Second Regular Session of the 124th Legislature concerning the subject matter of this resolve.

Trench and Excavation Safety Workgroup

The following people have contributed to the Trench and Excavation Safety Workgroup by attending at least one if not all of the working group meetings.

Jeff Austin, Maine Municipal Association

Brian Burne, MaineDOT

The Honorable Gary Connor, State Representative, District 140

Peter Coughlan, MaineDOT

Stephen Cox, Maine Water Utilities Association and Aqua Maine

Kate Dufour, Maine Municipal Association

Patrick Findlen, Sargent Corporation

Jason Frederick, Sargent Corporation

Maria Fuentes, Maine Better Transportation Association

Lt. Chris Grotton, Maine State Police

Lance Gurney, MaineDOT

Dennis Hayden, Maine Public Utilities Commission

Doug Howard, Maine Wastewater Control Association

Chip Laite, Maine Better Transportation Association

Matt Marks, Associated General Contractors of Maine

Maureen Moore, Jackie Mooore's Mother

Kevin Murphy, R.J. Grondin & Sons

Kathleen Newman, Associated Builders & Contractors

John O'Dea, Associated General Contractors of Maine

Don Partridge, Associated General Contractors of Maine

Paula Reetz, Jackie Moore Family Member

Steve Tartre, Maine Turnpike Authority

Jeff Tweedie, MaineDOT

Dave Wacker, Maine Department of Labor

Gary Williams, MaineDOT

Katharyn Zwicker, Maine Center for Disease Control

Trench & Excavation Safety Workgroup

Meeting Minutes

12/15/09

Agenda:

- Welcome & Introductions
- Background information on the Resolve – Rep. Gary Connor
- Review of Resolve and tasks for the workgroup
- Review of Massachusetts Law – “Jackie’s Law”
- Open Discussion

Attendees:

- Gary Williams, MaineDOT
- Jeff Tweedie, MaineDOT
- Stephen Cox, Maine Water Utilities Assn. & AquaMaine
- Lance Gurney, MaineDOT
- Dave Wacker, Maine DOL
- Chip Laite, MBTA
- Jason Frederick, Sargent Corp.
- Matt Marks, AGC Maine
- Don Partridge, AGC Maine
- Dennis Hayden, Public Utilities Comm.
- Steve Tartre, Maine Turnpike Authority
- Doug Howard, MWWCA
- Brian Burne, MaineDOT
- Kate Dufour, MMA
- Kathleen Newman, Associated Builders & Contractors
- Kevin Murphy, R.J. Grondin & Sons
- Rep. Gary Connor, Maine Legislature
- Patrick Findlen, Sargent Corp.
- Pete Coughlan, MaineDOT

Discussion:

- After a welcome and introductions, Rep. Connor discussed his reasoning for submitting the original legislation and read testimony presented to the Transportation Committee by the mother of the girl killed in a trench collapse in Massachusetts
- The recently enacted Massachusetts law was reviewed in brief and discussed. A copy of the law, along with recent amendments and a summary of the legislation were provided.
 - Concerns were raised about who is doing enforcement, how is it done, potential additional burden, potential for not being enforced, need to get a permit even though may never leave a trench unattended

- MaineDOT's opening permit was discussed, but recognized that it does not apply to all locations
- Local rule & authority – allow municipalities to develop ordinances to address locally
- Question whether permitting is really necessary
- Consider law enforcement awareness, but some concern with overburdening this group resulting in non-enforcement

- **Summary of major discussion points:**
 - Group agreed to the following:
 - Can't legislate common sense (some disagreement)
 - Need to keep any proposal/solution – straightforward, reasonable, practical & simple
 - Our focus is on unattended trenches –
 - Can occur during daytime or nighttime hours
 - Agreement that part of the solution needs to be education
 - Education of contractors & excavators
 - Could be done through Safety Works
 - Education of children & parents
 - Education component through schools & media campaigns
 - Similar to fire, anti-drug, seatbelt, etc. efforts
 - Should establish a hotline that anyone can call to report an “unsafe” trench or excavation
 - Should develop a standard of care or standard of practice dealing with unattended excavations
 - Suggested that we survey contractors, builders, utilities and excavators to establish best practices
 - Should try to establish the issue as it exists in Maine today
 - Number of excavations left unattended
 - Incidents resulting from such excavations
 - Need to be considerate of construction sites with many active and/or open trenches within a designated and protected (fenced) area

- **Action items:**
 - Industry groups will work together to come up with a list of best practices
 - Stephen Cox, Chip Laite, Matt Marks, Doug Howard, Kate Dufour, Kathleen Newman
 - Will prepare a common survey that can be sent to their membership for input
 - Survey will identify & summarize
 - Frequency of unattended excavations
 - How unattended excavations are protected
 - Type of excavations necessary to protect
 - Will do a search of other state laws relating to unattended trenches & excavations

- Steve Tartre, Lance Gurney, Dave Wacker
- **Next Meeting:**
 - *January 13, 9:00 - 11:30 am at the Maine Municipal Building in Augusta*

Trench & Excavation Safety Workgroup
Meeting Minutes – Meeting #2
01/13/10

Agenda:

- Welcome & Introductions
- Review Resolve and tasks for the workgroup
- Review minutes from previous meeting
- Review action items & reports from previous meeting
 - Survey results – industry regarding unattended trench practices
 - Information from other states regarding state laws for unattended trenches
- Open Discussion

Attendees:

- Gary Williams, MaineDOT
- John O’Dea, AGC Maine
- Jeff Tweedie, MaineDOT
- Stephen Cox, Maine Water Utilities Assn. & AquaMaine
- Lance Gurney, MaineDOT
- Dave Wacker, Maine DOL
- Maria Fuentes, MBTA
- Matt Marks, AGC Maine
- Don Partridge, AGC Maine
- Dennis Hayden, Public Utilities Comm.
- Steve Tartre, Maine Turnpike Authority
- Doug Howard, MWWCA
- Brian Burne, MaineDOT
- Kate Dufour, Maine Municipal Association
- Kathleen Newman, Associated Builders & Contractors
- Kevin Murphy, R.J. Grondin & Sons
- Patrick Findlen, Sargent Corp.
- Pete Coughlan, MaineDOT
- Lt. Chris Grotton, Maine State Police
- Jeff Austin, Maine Municipal Association
- Paula Reetz, Jackie Moore Family Member

Discussion:

- After a welcome and introductions, we reviewed the Legislative Resolve and purpose for the working group
- The minutes from the last meeting were briefly reviewed without comment.
- Kate Dufour then discussed the industry survey that was completed and the resulting report. Kate reported on surveys received to date and the group recognized and welcomed the fact that additional surveys may be submitted in the coming weeks. The results of all surveys received will be included in future

- updates of the report. A copy of the report provided at this meeting is attached. The following were discussions surrounding the survey results and report:
- The survey is limited in that we don't know how often unattended trenches occur. Based on the question posed, if a company had 1 such excavation in 15 years, they would have likely answered yes. We would need to resurvey to determine the true extent of the issue.
 - There was discussion and surprise amongst those in attendance that 62% of respondents do leave trenches unattended. The general feeling was that this number was quite high and not truly representative.
 - Even if a trench was left unattended, it was agreed that we can not determine for certain if it was protected or not. Kate did indicate that it was very consistent that when someone indicated they had left a trench unattended that they also answered the following question indicating that they do protect the public from unattended trenches.
 - Survey was not intended to determine if there was a problem in Maine
 - A variety of protection devices are utilized
 - Group agreed that a follow-up survey is not necessary
- A quick review of other states with laws regarding unattended trenches has identified Massachusetts as the only state with such a law on the books. In the case of Massachusetts additional information was obtained by some members of the group.
 - Mass. Law may not be working as well as anticipated
 - Some “inspectors” are not knowledgeable in trench and excavation safety
 - There are some questionable “loopholes” in the law that impact the intent of the law
 - Law may provide a false sense of security regarding trenches
 - General discussion:
 - Group agrees that unattended trenches do exist, but that just because a trench or excavation is unattended does not necessarily mean it is unsafe
 - Group agrees that education of both the public and the construction industry is the best way to have a positive impact
 - Group agrees that a standard of practice or best practices guidance should be developed and distributed to all contractors, utilities and others of all size
 - It was recognized that all contractors have a responsibility and fiscal burden when it comes to the safety of the work site – which is often influenced by their insurance carriers
 - Any education efforts within the industry must get to all levels including the smallest of contractors

Action items:

- The Association of General Contractors (AGC Maine) will work on the development of materials and processes to educate both the public and the

construction industry on work site safety especially unattended trenches.
Subgroups from the working group will be established to handle this task.

- Kate Dufour will update the survey report based on surveys received after this meeting.
 - Kathleen Newman will draft a proposed Resolve that the workgroup will consider recommending to the Transportation Committee.
 - Gary Williams will develop a draft of the working group's report.
-
- **Next Meeting:**
 - *January 28, 9:00 - 11:00 am at the Maine Municipal Building in Augusta*

Trench & Excavation Safety Workgroup
Meeting Minutes – Meeting #3

01/28/10

Agenda:

- Welcome & Introductions
- Review Resolve and tasks for the workgroup
- Review minutes from previous meeting
- Review action items & reports from previous meeting
 - Updated survey results
 - Industry Best Practices Guide & Sample Company Policy
 - Proposed Resolution
 - Draft report
- Open Discussion

Attendees:

- Gary Williams, MaineDOT
- Matt Marks, AGC Maine
- Don Partridge, AGC Maine
- Steve Tartre, Maine Turnpike Authority
- Doug Howard, MWWCA
- Kate Dufour, Maine Municipal Association
- Kathleen Newman, Associated Builders & Contractors
- Kevin Murphy, R.J. Grondin & Sons
- Patrick Findlen, Sargent Corporation
- Pete Coughlan, MaineDOT
- Jason Frederick, Sargent Corporation
- Katharyn Zwicker, Maine Center for Disease Control
- Rep. Gary Connor, Maine State Legislature – by phone
- Maureen Moore, Jackie Moore’s Mother – by phone

Discussion:

- After a welcome and introductions, we reviewed the Legislative Resolve and purpose for the working group
- The minutes from the last meeting were briefly reviewed without comment.
- Kate Dufour then provided an update to the industry survey that was completed and the resulting report. Two responses were received since the previous summary. Brief discussion surrounding the idea of doing a follow-up survey to obtain more detailed information. It was suggested that such a follow-up should be done in about a year’s time to see if the efforts being put forth are having a positive impact. This suggestion will be addressed in the proposed Resolve.

- Matt Marks then discussed the outcome of two meetings hosted by AC Maine earlier in the week. One meeting was to initiate efforts in the public awareness/education campaign. The second focused on the industry education, best practices and sample company policies. It is being recommended that these two groups continue their efforts and expand the participation of other organizations and industry. It should be noted that the work of these two groups will be shared with AGC's parent organization with the hope that other states will educate both the public and industry in their respective states.
- The group then reviewed and recommended changes to the draft Resolve prepared by Kathleen Newman. Such changes will be made and the updated Resolve included with the final report.
- The group then reviewed and recommended changes to the draft report. All the changes discussed will be made and the report updated. It is anticipated that the final report will be delivered to the Joint Standing Committee on Transportation on Monday, February 1st as outlined in the original Resolve.

**Resolve, To Study Safety Measures Relating to Open Trenches and Excavations
Survey Results – January 28, 2010**

In 2009, the Legislature enacted an amended version of LD 1094. As originally proposed, the bill would have required an excavator to mark and erect a barrier around an unattended excavation to prevent a person, animal or motor vehicle from unintentionally falling into the excavation.

As amended, the resolve charged the Department of Transportation (DOT), in conjunction with the Department of Public Safety (DPS) to establish a working group to study safety measures related to open trenches and excavations. In addition to the DOT and DPS, the working group is comprised of representatives from the Department of Labor, Public Utilities Commission, Maine Turnpike Authority, Maine Better Transportation Association, Maine Municipal Association and members of the construction industry. The working group is also charged with reviewing the trench safety law recently enacted in Massachusetts and reporting its findings and recommendations to the Legislature's Transportation Committee by February 2010.

To assist in this effort, participants in the working group were asked to survey their memberships to gather information on existing "unattended trench" practices. What follows are the results of that survey.

Participation. 90 private and public construction industry officials responded to the survey (*Appendix A*).

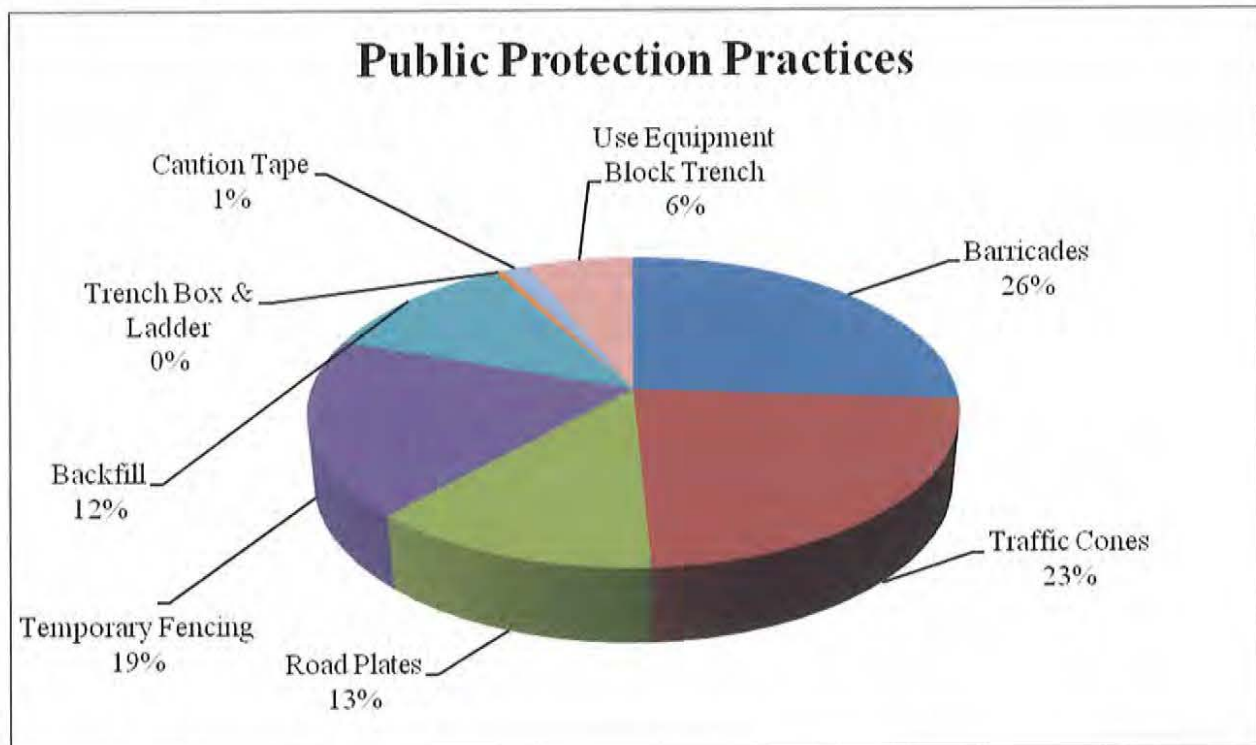
Unattended Trenches. 38% of the respondents indicated that they do not leave trenches unattended, while 62% do leave trenches unattended. That being said, we did not pose a question regarding frequency. Therefore, it is impossible to determine how many times in a twelve month period, for example, projects are undertaken that result in unattended trenches.

When Trenches are Left Unattended. 30% of the survey participants reported leaving trenches unattended overnight, during breaks and when retrieving project materials.

When Trenches Are Unattended

	#	%
Overnight, Breaks & Materials	17	30%
Overnight Only	17	30%
Overnight & Breaks	9	16%
Breaks Only	5	9%
Breaks & Materials	4	7%
Extenuating Circumstances Only	2	4%
Materials Only	2	4%
Overnight & Materials	1	2%
Total	57	100%

Public Protection Measures. Respondents indicated that they use several different mechanisms to ensure public safety in areas where unattended trenches are located. The most common of which was the use of barricades. All of the survey respondents indicated that they use more than one of the listed public protection measures. That being said, it is impossible to determine whether all of the measures are used at each construction site, or if the type of project determines the combination of protections used.



Adopted Standards. 11% of the respondents have adopted written standards governing the standards that must be employed when leaving trenches unattended.

General Comments

- I think it is important that any discussion of unattended trenches be limited to work in a public way. The vast majority of our work occurs in trenches that are within project sites where access to the entire property is controlled. Many excavations we work in would meet the definition of a trench but are quite large and would be virtually impossible to cover. I think it is also relevant to consider that in 25 years in the business, I don't recall a single incident in Maine of an individual being harmed as the result of an unattended trench. It has also been my experience that no amount of temporary protective measures will deter someone intent on trespassing. It seems reasonable to review protective measures for a trench in front of someone's house for a new water main but it would be absurd to require the same standards for a trench for a building foundation within fenced private property.
- We should be aware that overall construction site safety has significantly increased in the last ten years due to education and it is continuing to improve.

Appendix

UNATTENDED TRENCHES SURVEY

Massachusetts has recently passed legislation regarding "unattended trenches" due the dangers they pose to the general public.

Maine is now considering similar legislation. A working group has been formed to assist in working out the details of the legislation. The purpose of the group is to make recommendations that will work for all parties concerned and help educate and safeguard the general public from the dangers that "unattended trenches" might pose.

Completing this short survey will greatly assist the group in making recommendations.

Definitions by Massachusetts Regulation:

- **Trench:** An excavation which is narrow in relation to its length, made below the surface ground in excess of three feet below grade and the depth of which is, in general, greater than the width, but the width of the trench, as measured at the bottom, is no greater than 15 feet.
- **Unattended Trench:** A trench where neither the excavator nor any of the people who are engaged in construction activities at the trench are present.

1. Do you ever leave trenches unattended? (Please circle all that apply)
 - a. YES
 - i. Overnight
 - ii. During Breaks
 - iii. Leaving for materials

- iv. Other: Please be specific _____
 - b. NO
 - c. NOT SURE
- 2. How do you protect the public from unattended trenches
 - a. Do not allow unattended trenches
 - b. Barricades
 - c. Traffic Cones
 - d. Road Plates
 - e. Temporary Fencing
 - f. Backfill
 - g. Other: (Please be specific) _____
- 3. Do you have written standards governing unattended trenches?
 - a. YES
 - b. NO
- 4. If you have written standards, is there a dedicated person or department that inspects trenches left unattended?
 - a. YES (Please list responsible party) _____
 - b. NO
- 5. If you have written standards would you be willing to share them with the working group?
 - a. YES (Please list contact info)
 - i. Name _____
 - _____
 - ii. Phone Number _____
 - _____
 - iii. E mail address _____
 - _____
 - b. NO

Thank you for taking the time to complete this survey. Completed surveys should be sent to

MMA

Attn. Kate Dufour

60 Community Drive

Augusta, ME 04330

E Mail: kdufour@memun.org

Please returned surveys no later than January 8, 2010.

Resolve, To Create a Working Group to Develop a Construction Site Public Safety Education Plan

Sec. 1 Working group. Resolved: That the Commissioner of the Department of Transportation, in conjunction with the Department of Public Safety, shall establish a working group to develop a safety education plan to raise awareness about construction site safety for the general public, referred to in this resolve as "the working group." In addition to representatives of the Department of Transportation and the Department of Public Safety, the working group must include, but is not limited to, the Department of Health and Human Services, Maine Chiefs of Police Association, the Public Utilities Commission, the Maine Turnpike Authority, the Maine Better Transportation Association, the Maine Municipal Association, Associated General Contractors of Maine and other representatives of the construction industry in the State and other stakeholders and interested parties; and be it further

Sec. 2. Duties. Resolved: That the working group, in addition to developing a safety education plan to raise awareness about construction site safety for the general public, will perform a survey of construction contractors, utilities and public works departments to gather information on construction industry practices to protect the public from construction site dangers, with particular focus on unattended trenches.

Sec. 3 Report. Resolved: That the Department of Transportation shall report the working group's public safety education plan and survey results to the Joint Standing Committee on Transportation by no later than January 5, 2011; and be it further

Sec. 4 Legislation. Resolved: That the Joint Standing Committee on Transportation may report out legislation to the First Regular Session of the 125th Legislature regarding the report.

Unattended Trenches

Best Practice Guide

&

Sample Company Policy

BEST PRACTICE GUIDE

Unattended Trenches

For the purpose of this section of the policy the following definitions are true unless otherwise indicated:

- **Trench** An excavation which is narrow in relation to its length, made below the surface of the ground in excess of three feet below grade and the depth of which is, in general, greater than the width, but the width of the trench, as measured at the bottom, is no greater than 15 feet
- **Unattended Trench** refers to a trench where neither the, excavator, or any of the people who are engaged in construction activities are present to manage access
- **General Public** is all natural persons not engaged in construction activities at the trench site
- **Site Specific Plan** refers to the packet including this policy containing all of the documentation regarding this issue
- **Excavator** refers to any entity including, but not limited to, a person, partnership, joint venture, trust, corporation, association, public utility, company or state or local government body or public agency which performs excavation operations including the excavation of trenches
- **Competent Person** is defined by OSHA in 29 CFR 1926.32(f) as “one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.”
- **Supervisor** refers to the individual assigned to make sure the policy is followed
- **Barricade** is a device(s) used, but not limited to, fencing, signs, cones, jersey barriers for the purpose of preventing access or warn the general public and excavators of a potential hazards

Guide

Summary

In 1999, a young girl was buried when she entered an unattended trench in her Massachusetts neighborhood. Tragically, the trench collapsed and she died. Ten years later, Massachusetts enacted a law regulating unattended trenches. The law stipulates that local authorities may collect a fee for each trench (meeting the standards) and inspect the site (although not required) to ensure compliance.

Maine State Representative Gary Connor of Kennebunk submitted a bill {[LD 1094](#)} at request of the girl's family to protect people in Maine. The workgroup developed a plan which includes;

- Informing parents of potential hazard on construction sites with specific reference to unattended trenches through a public information campaign
- Training excavators on the hazards of unattended trenches and suggested mitigation measures
- Sample policy available for adoption by excavators

Excavators may order free stickers (*see sample right*) from www.jackiemoorefund.org to place on equipment to remind operators to protect the site during breaks and after hours.



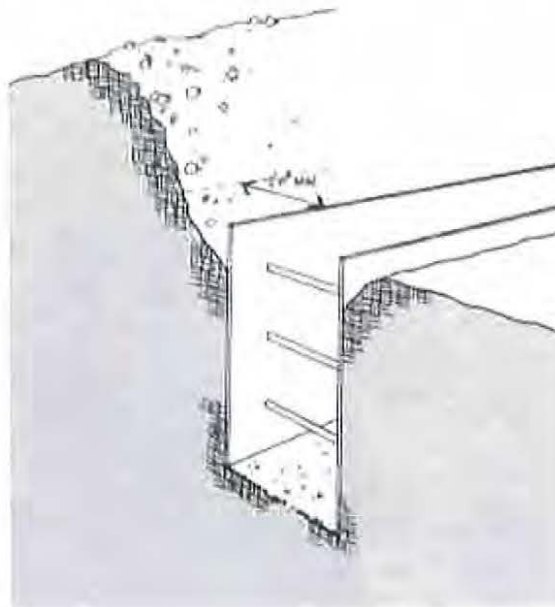
More information on jobsite safety is available online at www.cautionkids.com

Jobsite Planning

Prior to the start of each job, a survey will be completed by supervisor to determine if work requires trenching operations and could possibly result in unattended trenches. If a determination finds possible locations the excavator will determine the correct measure to mitigate the hazard prior to trenching whenever possible.

The excavator will inform employees and subcontractors who perform daily operations involved with trenching of the potential hazard and methods of mitigation on each individual trench.

If the jobsite pre planning survey determines excavations may include unattended trenches the following should occur:



1. Supervisor will complete the company form "Unattended Trench Plan"
2. Prevention methods
In preplanning the supervisor should decide the necessary materials needed to mitigate the hazard
3. Training
Employee(s) and or necessary subcontractors on the jobsite will receive training on execution of the site specific plan.
4. Surroundings
Supervisor should examine area in immediate vicinity of the possible unattended trench to assist in consideration of mitigation methods
5. Contractual Obligations
Contracts may require or specify methods to protect unattended trenches. Requirements should be reviewed in pre-planning, communicated on the jobsite and executed.

Understanding the Hazard:

As defined, an unattended trench, creates a possible hazard for the general public. The specific concerns are:

- Children
- Vehicles
- Disabled or impaired individuals

Children

Children may be attracted to the construction site specifically in areas where population density places the site near homes, schools or play areas. Limiting access to the site or any construction site will increase the awareness for parents and children.

Vehicles

Motorists add another potential hazard for unattended trenches. Protection in high traffic areas should be designed to allow vehicles to safely pass the work area if possible and without entering the trench.

Disabled or impaired individuals

Individuals who may not have the ability to recognize hazards in general due to physical or mental limitations are a higher risk.

Reducing the access to unattended trenches by the general public will reduce the risk assumed by the excavator or injury or death causes by fall or collapse.

Recommended action to mitigate the risk:

Excavators should design the mitigating methods by assessing the following:

- **Relationship of unattended trench to potential hazards**
 - Vehicles
 - Children
 - Population centers such as parks, shopping centers, schools, churches, elder care facilities
- **Available methods for mitigating the risk and does the site permit those measures** (i.e.; availability of space)
- **Time and or duration of the unattended trench**
 - Coffee/Lunch Break
 - Overnight
 - During School vacations/breaks/recess
 - Long periods of time
 - Could the weather conditions change impacting materials
- **Will the surrounding conditions change throughout the day effecting the possible hazard by**
 - Increased traffic
 - Increase in general public
 - Use of the area (special events, etc)
- **Access Points**
 - Can the general public access the unattended trench
 - Is the site enclosed with secure or limited entry points

Selecting the Barricade:

The excavator should design the barricade depending on the risk assessment. In some cases the risk might include multiple methods of barricade devices while others might include limited design.

Supervisors should consider the time, duration, locations when making decisions on the best practice for reducing the risk to the general public. The excavator may also eliminate the unattended trench by appointing a competent person to observe the site and or backfilling the trench.

Below are recommended methods to consider:

- **Backfilling**

In ideal situations the risk may be eliminated or reduced by backfilling the trench especially during overnight breaks
- **Fence**

Depending on the site location and hazard assessment the use of a fence could vary from portable chain link fence, permanent fence around sites with long term

construction or in conjunction with other security efforts, plastic safety "snow" fence

- **Jersey Barricade**
Common for sites where vehicle hazards are the primary concern
- **Signs**
Use of warning signs which may or may not include photos depicting hazards, trespassing notices, multiple languages
- **Traffic Cones**
Used to warn drivers & pedestrians
- **Steel Plate**
Setup to be level on the site and at least $\frac{3}{4}$ " thick

Communication & Inspection

Supervisor should communicate the plan with employees and subcontractors involved the operation of trenching activities and assign competent person, preferably a jobsite foreman, to ensure the trench has a plan and is followed.

Supervisor should also plan to inspect sites during times where trenches may typically be unattended to check compliance with company standards in the interest of the general public.

Included at the conclusion of this guide is a one page notice which may be adopted for areas with high population densities or large amount of children and placed at residences or common areas.

Also included is a sample PowerPoint™ which most public access stations can place on their broadcasts informing parents and residents of potential hazards associated with construction. Contractors must consider the area and specific hazards to determine use of materials. The file can be downloaded online at www.cautionkids.com

“Insert Company Name” Unattended Trenches Policy

I. Policy:

“Company” respects the community for which it works and values the integrity of human life. “Company” therefore adopts this policy to protect the general public from injury or death as a result of incident associated with an unattended trench. It is also the policy of “company” for employees to be familiar and adhere to regulations set forth by the Occupational Safety & Health Administration.

II. Purpose:

Establish standard practice to be applied in situations where a trench may become unattended by definition.

III. Definitions:

- **Trench** An excavation which is narrow in relation to its length, made below the surface of the ground in excess of three feet below grade and the depth of which is, in general, greater than the width, but the width of the trench, as measured at the bottom, is no greater than 15 feet
- **Unattended Trench** refers to a trench where neither the, excavator, or any of the people who are engaged in construction activities are present
- **General Public** is all natural persons not engaged in construction activities at the trench site
- **Site Specific Plan** refers to the packet including this policy containing all of the documentation regarding this issue
- **Excavator** refers to any entity including, but not limited to, a person, partnership, joint venture, trust, corporation, association, public utility, company or state or local government body or public agency which performs excavation operations including the excavation of trenches
- **Competent Person** is defined by OSHA in 29 CFR 1926.32(f) as “one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.”
- **Supervisor** refers to the individual assigned to make sure the policy is followed
- **Barricade** is a device(s) used, but no limited to, fencing, signs, cones, jersey barriers for the purpose of preventing access or warn the general public and excavators of a potential hazards

IV. Procedures:

Employees of “company” should use the following methods to protect an unattended trench. Each unattended trench may require specific methods to protect the general public and employees should consider the potential hazards associated with the location of the trench in relation to the surroundings. Urban environments will most likely require different procedures from rural or highway environments.

A. Assess the Hazard

- i. Supervisor should inspect the hazard including the surrounding area looking for potential risks such as schools, elder living, playgrounds, dense residential population
- ii. Fill out the General Information Form listing the basic information about the job and post in a central location accessible to all employees
- iii. Use the Emergency Contact form to update local emergency and post in a central location accessible to all employees
- iv. Fill out the Project Task & Hazards worksheet outlining the potential unattended trenches and post in a central location accessible to all employees

B. Select the method for protection

- i. Determine the best possible protection including backfilling, fencing, barricades, cones, caution tape, steel plate or other method suited to provide protection

C. Place signs outside the perimeter

- i. Use “company” approved signs notifying the public of the potential hazard including contact phone number

D. Inform Public

- i. Decide if signs will suffice as public information or additional methods required including leaflet at nearby homes, schools or public access television

V. Training:

Train employees on jobsite hazards and remedies for protecting the general public when an unattended trench may exist. Indicate the location of forms used and record training sessions.

General Information

Job # _____ **Job Title** _____

Start Date: _____ **End Date:** _____

Project Location: _____

Project Owner(s): _____

Project Contacts

General Contractor				
Job Title	Name	Cell Phone	Email	
<u>Project Manager</u>				
<u>Foreman</u>				
<u>Safety Officer</u>				

Subcontractor Contacts:

Subcontractor				
Type	Company	Office Phone	Contact	Cell Phone

Emergency Contacts

Agency Type	Agency Name	Address	Contact	Local Phone
Rescue/Fire/Police				
Utility				
Non-threatening Medical				
OSHA				

Please check if Emergency Contact Numbers are clearly posted in a pre-designated/visible location. Also note, 911 calls are routed to the Maine State Police and could delay response. Using the local emergency phone number may increase response time.

Project Tasks & Hazards

The following analysis provides a guide for addressing hazards associated with Unattended Trenches.

Location Code/#	Location (specific)	Solution(s)	Warning Signs Req	Material Required	Date Opened	Cost	Responsible Party

Unattended Trench Training Records

Select Topic

Pre-planning Site Specific Plan Toolbox Talks Other _____

Date of Training:

Conducted By:

Employee Name	Signature	Date