



## California Excavation Law



## Table of Contents

- **California Gov. Code 4216 - Page 3**
  
- **CalOSHA Title 8, Section 1541 - Page 23**

# California Government Code 4216



**4216.** As used in this article the following definitions apply:

(a) "Approximate location of subsurface installations" means a strip of land not more than 24 inches on either side of the exterior surface of the subsurface installation.

"Approximate location" does not mean depth.

(b) "Excavation" means any operation in which earth, rock, or other material in the ground is moved, removed, or otherwise displaced by means of tools, equipment, or explosives in any of the following ways: grading, trenching, digging, ditching, drilling, augering, tunneling, scraping, cable or pipe plowing and driving, or any other way.

(c) Except as provided in Section 4216.8, "excavator" means any person, firm, contractor or subcontractor, owner, operator, utility, association, corporation, partnership, business trust, public agency, or other entity that, with their, or his or her, own employees or equipment performs any excavation.

(d) "Emergency" means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health,

property, or essential public services. "Unexpected occurrence" includes, but is not limited to, fires, floods, earthquakes or other soil or geologic movements, riots, accidents, damage to a subsurface installation requiring immediate repair, or sabotage.

(e) "High priority subsurface installation" means high-pressure natural gas pipelines with normal operating pressures greater than 415kPA gauge (60psig), petroleum pipelines, pressurized sewage pipelines, high-voltage electric supply lines, conductors, or cables that have a potential to ground of greater than or equal to 60kv, or hazardous materials pipelines that are potentially hazardous to workers or the public if damaged.

(f) "Inquiry identification number" means the number that is provided by a regional notification center to every person who contacts the center pursuant to Section 4216.2. The inquiry identification number shall remain valid for not more than 28 calendar days from the date of issuance, and after that date shall require regional notification center revalidation.

(g) "Local agency" means a city, county, city and county, school district, or special district.



(h) "Operator" means any person, corporation, partnership, business trust, public agency, or other entity that owns, operates, or maintains a subsurface installation. For purposes of Section 4216.1, an "operator" does not include an owner of real property where subsurface facilities are exclusively located if they are used exclusively to furnish services on that property and the subsurface facilities are under the operation and control of that owner.

(i) "Qualified person" means a person who completes a training program in accordance with the requirements of Title 8, California Code of Regulations, Section 1509, Injury Prevention Program, that meets the minimum training guidelines and practices of Common Ground Alliance current Best Practices.

(j) "Regional notification center" means a nonprofit association or other organization of operators of subsurface installations that provides advance warning of excavations or other work close to existing subsurface installations, for the purpose of protecting those installations from damage, removal, relocation, or repair.

(k) "State agency" means every state agency, department, division, bureau, board, or commission.

(l) "Subsurface installation" means any underground pipeline, conduit, duct, wire, or other structure, except nonpressurized sewer lines, nonpressurized storm drains, or other nonpressurized drain lines.

**4216.1.** Every operator of a subsurface installation, except the Department of Transportation, shall become a member of, participate in, and share in the costs of, a regional notification center. Operators of subsurface installations who are members of, participate in, and share in, the costs of a regional notification center, including, but not limited to, the South Shore Utility Coordinating Council, the Underground Service Alert--Northern California or the Underground Service Alert--Southern California are in compliance with this section and Section 4216.9.

**4216.2.** (a) (1) Except in an emergency, any person planning to conduct any excavation shall contact the appropriate regional notification center, at least two working days, but not more than 14

calendar days, prior to commencing that excavation, if the excavation will be conducted in an area that is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the excavator and, if practical, the excavator shall delineate with white paint or other suitable markings the area to be excavated.

(2) When the excavation is proposed within 10 feet of a high priority subsurface installation, the operator of the high priority subsurface installation shall notify the excavator of the existence of the high priority subsurface installation prior to the legal excavation start date and time, as such date and time are authorized pursuant to paragraph (1) of subdivision (a) of Section 4216.2. The excavator and operator or its representative shall conduct an onsite meeting at a mutually-agreed-on time to determine actions or activities required to verify the location of the high priority subsurface installations prior to start time.

(b) Except in an emergency, every excavator covered by Section 4216.8 planning to conduct an excavation on private property may contact the appropriate regional notification center

if the private property is known, or reasonably should be known, to contain a subsurface installation other than the underground facility owned or operated by the excavator and, if practical, the excavator shall delineate with white paint or other suitable markings the area to be excavated.

(c) The regional notification center shall provide an inquiry identification number to the person who contacts the center pursuant to this section and shall notify any member, if known, who has a subsurface installation in the area of the proposed excavation. An inquiry identification number may be validated for more than 28 days when mutually agreed between the excavator and any member operator so notified that has a subsurface installation in the area of the proposed excavation; and, it may be revalidated by notification to the regional notification center by the excavator prior to the time of its expiration.

(d) A record of all notifications by excavators and operators to the regional notification center shall be maintained for a period of not less than three years. The record shall be available for

inspection by the excavator and any member, or their representative, during normal working hours and according to guidelines for inspection as may be established by the regional notification centers.

(e) As used in this section, the delineation is practical when any of the following conditions exist:

(1) When delineating a prospective excavation site with white paint could not be misleading to those persons using affected streets and highways.

(2) When the delineation could not be misinterpreted as a traffic or pedestrian control.

(3) Where an excavator can determine the exact location of an excavation prior to the time an area has been field marked pursuant to Section 4216.3.

(4) Where delineation could not be construed as duplicative.

(f) Where an excavator makes a determination that it is not practical to delineate the area to be excavated, the excavator shall contact the regional notification center to advise the operators that the excavator shall identify the area to be excavated in another manner sufficient to enable the operator to determine the area of the

excavation to be field marked pursuant to Section 4216.3.

**4216.3.** (a) (1) Any operator of a subsurface installation who receives timely notification of any proposed excavation work in accordance with Section 4216.2 shall, within two working days of that notification, excluding weekends and holidays, or before the start of the excavation work, whichever is later, or at a later time mutually agreeable to the operator and the excavator, locate and field mark the approximate location and, if known, the number of subsurface installations that may be affected by the excavation to the extent and degree of accuracy that the information is available either in the records of the operator or as determined through the use of standard locating techniques other than excavating, otherwise advise the person who contacted the center of the location of the operator's subsurface installations that may be affected by the excavation, or advise the person that the operator does not operate any subsurface installations that would be affected by the proposed excavation.

(2) Only a qualified person shall perform subsurface installation

locating activities.

(3) A qualified person performing subsurface installation locating activities on behalf of a subsurface installation operator shall use a minimum of a single-frequency utility locating device and shall have access to alternative sources for verification, if necessary.

(4) Operators of high priority subsurface installations shall maintain and preserve all plans and records for its subsurface installations.

(b) Every operator of a subsurface installation who field marks the location of a subsurface installation shall make a reasonable effort to make field markings in conformance with the uniform color code of the American Public Works Association.

(c) If, at any time during an excavation for which there is a valid inquiry identification number, an operator's field markings are no longer reasonably visible, the excavator shall contact the appropriate regional notification center. The regional notification center shall contact any member, if known, who has a subsurface installation in the area of the excavation. Upon receiving timely

notification or renotification pursuant to this subdivision, the operator shall re-locate and re-mark, within two working days, those subsurface installations that may be affected by the excavation to the extent necessary, in conformance with this section.

(d) The excavator shall notify the appropriate regional notification center of the failure of an operator to comply with this section. The notification shall include the inquiry identification number issued by the regional notification center. A record of all notifications received pursuant to this subdivision shall be maintained by the regional notification center for a period of not less than three years. The record shall be available for inspection pursuant to subdivision (d) of Section 4216.2.

**4216.4.** (a) When the excavation is within the approximate location of subsurface installation, the excavator shall determine the exact location of subsurface installations in conflict with the excavation by excavating with hand tools within the area of the approximate location of subsurface installations as provided by the operators in accordance with Section

4216.3 before using any power-operated or power-driven excavating or boring equipment within the approximate location of the subsurface installation, except that power-operated or power-driven excavating or boring equipment may be used for the removal of any existing pavement if there are no subsurface installations contained in the pavement. If documented notice of the intent to use vacuum excavation devices, or power-operated or power-driven excavating or boring equipment, has been provided to the subsurface installation operator or operators and it is mutually agreeable with the operator or operators and the excavator, the excavator may utilize vacuum excavation devices, or power-operated or power-driven excavating or boring equipment within the approximate location of a subsurface installation and to any depth.

(b) If the exact location of the subsurface installation cannot be determined by hand excavating in accordance with subdivision (a), the excavator shall request the operator to provide additional information to the excavator, to the extent that information is available to the operator, to enable the excavator to

determine the exact location of the installation. The regional notification center shall provide the excavator with the contact phone number of the subsurface installation operator.

(c) An excavator discovering or causing damage to a subsurface installation, including all breaks, leaks, nicks, dents, gouges, grooves, or other damage to subsurface installation lines, conduits, coatings, or cathodic protection, shall immediately notify the subsurface installation operator. The excavator may contact the regional notification center to obtain the contact information of the subsurface installation operator. If high priority subsurface installations are damaged and the operator cannot be contacted, the excavator shall call 911 emergency services.

**4216.5.** The requirements of this article apply to state agencies and to local agencies which own or operate subsurface installations, except as otherwise provided in Section 4216.1. A local agency which is required to provide the services described in Section 4216.3 may charge a fee in an amount sufficient to cover the cost of providing that service.

**4216.6.** (a) (1) Any operator or excavator who negligently violates this article is subject to a civil penalty in an amount not to exceed ten thousand dollars (\$10,000).

(2) Any operator or excavator who knowingly and willfully violates any of the provisions of this article is subject to a civil penalty in an amount not to exceed fifty thousand dollars (\$50,000).

(3) Except as otherwise specifically provided in this article, this section is not intended to affect any civil remedies otherwise provided by law for personal injury or for property damage, including any damage to subsurface installations, nor is this section intended to create any new civil remedies for those injuries or that damage.

(4) This article shall not be construed to limit any other provision of law granting governmental immunity to state or local agencies or to impose any liability or duty of care not otherwise imposed by law upon any state or local agency.

(b) An action may be brought by the Attorney General, the district attorney, or the local or state agency which

issued the permit to excavate, for the enforcement of the civil penalty pursuant to this section. If penalties are collected as a result of a civil suit brought by a state or local agency for collection of those civil penalties, the penalties imposed shall be paid to the general fund of the agency. If more than one agency is involved in enforcement, the penalties imposed shall be apportioned among them by the court in a manner that will fairly offset the relative costs incurred by the state or local agencies, or both, in collecting these fees.

(c) Statewide information provided by operators and excavators regarding facility events shall be compiled and made available in an annual report by regional notification centers and posted on the Internet Web sites of the regional notification centers.

(d) For purposes of subdivision (c), the following terms have the following meanings:

(1) "Facility event" means the occurrence of excavator downtime, damages, near misses, and violations.

(2) "Statewide information" means information submitted by operators and excavators using the California Regional

Common Ground Alliance's Virtual Private Damage Information Reporting Tool. Supplied data shall comply with the Damage Information Reporting Tool's minimum essential information as listed in the Common Ground Alliance's most recent Best Practices Handbook.

**4216.7.** (a) If a subsurface installation is damaged by an excavator as a result of failing to comply with Section 4216.2 or 4216.4, or as a result of failing to comply with the operator's requests to protect the subsurface installation as specified by the operator prior to the start of excavation, the excavator shall be liable to the operator of the subsurface installation for resulting damages, costs, and expenses to the extent the damages, costs, and expenses were proximately caused by the excavator's failure to comply.

(b) If the operator of a subsurface installation has failed to comply with the regional notification center system requirements of Section 4216.1, that operator shall forfeit his or her claim for damages to his or her subsurface installation, arising from the excavation, against an excavator who has complied with the requirements of

Section 4216.2 to the extent damages were proximately caused by the operator's failure to comply.

(c) If an operator of a subsurface installation has failed to comply with the provisions of Section 4216.3, has failed to comply with paragraph (2) of subdivision (a) of Section 4216.2, or has failed to comply with subdivision (b) of Section 4216.4, the operator shall be liable to the excavator who has complied with Sections 4216.2 and 4216.4 for damages, costs, and expenses resulting from the operator's failure to comply with these specified requirements to the extent the damages, costs, and expenses were proximately caused by the operator's failure to comply.

(d) Nothing in this section shall be construed to do any of the following:

(1) Affect claims including, but not limited to, third-party claims brought against the excavator or operator by other parties for damages arising from the excavation.

(2) Exempt the excavator or operator from his or her duty to mitigate any damages as required by common or other applicable law.

(3) Exempt the excavator or operator from liability to each other

or third parties based on equitable indemnity or comparative or contributory negligence.

**4216.8.** This article does not apply to any of the following persons:

(a) An owner of real property who contracts for an excavation project on the property, not requiring a permit issued by a state or local agency, with a contractor or subcontractor licensed pursuant to Article 5 (commencing with Section 7065) of Chapter 9 of Division 3 of the Business and Professions Code.

(b) An owner of residential real property, not engaged as a contractor or subcontractor licensed pursuant to Article 5 (commencing with Section 7065) of Chapter 9 of Division 3 of the Business and Professions Code, who as part of improving his or her principal residence or appurtenances thereto is performing or having performed excavation work not requiring a permit issued by a state or local agency.

(c) Any person or private entity that leases or rents power operated or power-driven excavating or boring equipment, regardless of whether an equipment operator is provided for that piece of equipment or not, to a contractor or subcontractor licensed pursuant

to Article 5 (commencing with Section 7065) of Chapter 9 of Division 3 of the Business and Professions Code, if the signed rental agreement between the person or private entity and the contractor or subcontractor contains the following provision:

"It is the sole responsibility of the lessee or renter to follow the requirements of the regional notification center law pursuant to Article 2 (commencing with Section 4216) of Chapter 3.1 of Division 5 of Title 1 of the Government Code. By signing this contract, the lessee or renter accepts all liabilities and responsibilities contained in the regional notification center law."

**4216.9.** (a) No permit to excavate issued by any local agency, as defined in Section 4216, or any state agency, shall be valid unless the applicant has been provided an initial inquiry identification number by a regional notification center pursuant to Section 4216.2. For purposes of this section, "state agency" means every state agency, department, division, bureau, board, or commission, including the Department of Transportation.

(b) This article does not exempt any person or corporation from Sections 7951, 7952, and 7953 of the Public Utilities Code.

# CalOSHA Title 8

## Construction Safety Orders

### Chapter 4, Subchapter 4, Article 6,

### Section 1541



**§1541. General Requirements.**

(a) Surface encumbrances. All surface encumbrances that are located so as to create a hazard to employees shall be removed or supported, as necessary, to safeguard employees.

(b) Subsurface installations.

(1) The approximate location of subsurface installations, such as sewer, telephone, fuel, electric, water lines, or any other subsurface installations that reasonably may be expected to be encountered during excavation work, shall be determined by the excavator prior to opening an excavation.

(A) Excavation shall not commence until:

1. The excavation area has been marked as specified in Government Code Section 4216.2 by the excavator; and

2. The excavator has received a positive response from all known owner/operators of subsurface installations within the boundaries of

the proposed project; those responses confirm that the owner/operators have located their installations, and those responses either advise the excavator of those locations or advise the excavator that the owner/operator does not operate a subsurface installation that would be affected by the proposed excavation.

(B) When the excavation is proposed within 10 feet of a high priority subsurface installation, the excavator shall be notified by the facility owner/operator of the existence of the high priority subsurface installation before the legal excavation start date and time in accordance with Government Code Section 4216.2(a), and an onsite meeting involving the excavator and the subsurface installation owner / operator's representative shall be scheduled by the excavator and the owner / operator at a mutually agreed on time to determine the action or activities required to verify the location of such installations. High priority subsurface installations are high pressure natural gas pipelines with normal operating

pressures greater than 415 kPA gauge (60 p.s.i.g.), petroleum pipelines, pressurized sewage pipelines, conductors or cables that have a potential to ground of 60,000 volts or more, or hazardous materials pipelines that are potentially hazardous to employees, or the public, if damaged.

(C) Only qualified persons shall perform subsurface installation locating activities, and all such activities shall be performed in accordance with this section and Government Code Sections 4216 through 4216.9. Persons who complete a training program in accordance with the requirements of Section 1509, Injury and Illness Prevention Program (IIPP), that meets the minimum training guidelines and practices of the Common Ground Alliance (CGA) Best Practices, Version 3.0, published March 2006, or the standards of the National Utility Locating Contractors Association (NULCA), Standard 101: Professional Competence Standards for Locating Technicians, 2001, First Edition, which are

incorporated by reference, shall be deemed qualified for the purpose of this section.

(D) Employees who are involved in the excavation operation and exposed to excavation operation hazards shall be trained in the excavator notification and excavation practices required by this section and Government Code Sections 4216 through 4216.9.

(2) All Regional Notification Centers as defined by Government Code Section 4216(j) in the area involved and all known owners of subsurface facilities in the area who are not members of a Notification Center shall be advised of the proposed work at least 2 working days prior to the start of any digging or excavation work. EXCEPTION: Repair work to subsurface facilities done in response to an emergency as defined in Government Code Section 4216(d).

(3) When excavation or boring operations approach the approximate location of subsurface installations, the exact location of the installations

shall be determined by safe and acceptable means that will prevent damage to the subsurface installation, as provided by Government Code Section 4216.4.

(4) While the excavation is open, subsurface installations shall be protected, supported, or removed as necessary to safeguard employees.

(5) An excavator discovering or causing damages to a subsurface installation shall immediately notify the facility owner/operator or contact the Regional Notification Center to obtain subsurface installation operator contact information immediately after which the excavator shall notify the facility operator. All breaks, leaks, nicks, dents, gouges, grooves, or other damages to an installation's lines, conduits, coatings or cathodic protection shall be reported to the subsurface installation operator. If damage to a high priority subsurface installation results in the escape of any flammable, toxic, or corrosive gas or liquid or endangers life, health or property, the excavator

responsible shall immediately notify 911, or if 911 is unavailable, the appropriate emergency response personnel having jurisdiction. The facility owner/operator shall also be contacted.

Note: The terms excavator and operator as used in Section 1541(b) shall be as defined in Government Code Section 4216(c) and (h) respectively. The term "owner / operator" means an operator as the term "operator" is defined in Government Code Section 4216(h).



## Excavator Handbook

# Table of Contents

- **USA North 811 Overview - Page 3**
- **General Information – Page 4**
- **5 Steps to a SAFE Excavation - Page 7**
- **No Response Info – Page 9**
- **Damage/Exposed Info – Page 11**
- **Emergency Notification Info – Page 12**
- **Excerpt from California Contractors License Law & Reference Book, Section IV Chapter 8 – Page 13**
- **CGA Best Practices Appendix B - Marking Guidelines – Page 23**

## **USA NORTH 811 OVERVIEW**

USA North 811 provides a free and effective Damage Prevention Service that protects our citizens, our communities, our environment, our essential public services, and our underground facilities in Central / Northern California and all of Nevada. USA North 811 began operation in May of 1975 and incorporated as a Non-Profit Mutual Benefit Corporation in 1986. Our purpose is to receive planned excavation reports that will begin within the next 14 calendar days from homeowners, excavators or professional contractors and transmit those planned excavation reports to all participating members of USA North 811 who may have facilities at that excavation site. Our members will 1) mark or stake the horizontal path of their facility, 2) provide information about the location of their facility, or 3) advise the excavator of clearance, for facilities that they own, operate or maintain.

Calling hours are from 6 a.m. to 7 p.m. Monday thru Friday except weekends and holidays.



## **Be knowledgeable of all Federal, State, County, City or Local Requirements:**

- Construction Code
- Contractor License Code
- Safety Code
- Franchise Code
- OSHA
- Federal, State, County, City or Local Ordinances
- Others that apply

## **General Excavation Information:**

- Prior to starting an excavation, examine the excavation site for physical evidence (manholes, valve covers, water meters, fire hydrants, sewer cleanouts, storm drains, vaults, utility maintenance boxes, pole risers, etc) that would indicate the existence of underground facilities. Always excavate, as cautiously and prudently as possible.
- USA North 811 accepts calls for excavation work on public or private property, on Military Bases, on Indigenous People's Reservations and even on waterways within our coverage area.
- Our members will mark or stake the horizontal path, provide information about the location, or provide clearance to the excavator for facilities

that they own, operate or maintain. Excavators should be aware there could be other facilities of the same type at the excavation site owned by the property owner or another company who is not a member of USA North.

- Limit your excavation location description to a site that can be completed within a 28 calendar day period from the date of your call to USA North 811 in California or Nevada and so that our members can reasonably locate within 2 working days.
- USA North 811 limits excavation work to areas no longer in length than 1½ miles in a metropolitan area and 3 miles in a rural area.
- Dividing larger excavation areas into smaller manageable sites helps our members respond to your excavation site more promptly.
- As work in one excavation site nears completion, call in your next excavation site to USA North 811 and continue this process until your entire excavation area is complete.
- When working on private property the excavator should determine what facilities belong to the property owner, (water, well, sewer, septic tanks, gas, propane lines, electrical, etc.) and what easement(s) may exist on the property, if any. In general, responsibility of underground facilities transfers to the property owner behind the curb, behind

the sidewalk, clean out, at the meter or point of demarcation. USA North 811 notifies only its utility members of your excavation work. For your safety you should notify any non-member directly.

## Five Steps to a Safe Excavation:

**1. Survey and Mark:** Survey your proposed excavation site. Make a list of affected operators of underground facilities (utility operators) at your job site, their needs and requirements. Mark the excavation site on paved surfaces with white spray chalk, water base, UV paint, or equivalent less permanent type marking; use white flags, stakes, whiskers, etc. on unpaved surfaces, (Homeowners can use flour).

**2. Call 811 Before You Dig:** Call USA North 811 2 working days to 14 calendar days before you dig. Only operators who are members of the USA North 811 program will be notified. Compare your list of affected operators determined in Step 1, with the list of operators notified by USA North 811. For your safety contact any operator at your job site that is not a member of USA North 811. USA North 811 accepts design inquiry requests through its internet application only. For more information visit our website [www.usanorth811.org](http://www.usanorth811.org)

**3. Wait the Required Time:** The legal 2 working days to 14 calendar days notice allows USA North 811 members to examine their underground facility records and respond to you.



Excavators are required by law to wait until all operator(s) of subsurface installations have provided a positive response to their excavation site. The positive response includes operator's marking, or staking the horizontal path of their facility with the appropriate color code, providing information about the location of their facility, or advising the excavator of clearance. Depending on our member's workload, they may contact you to try to negotiate a new start time for your excavation.

**4. Respect the Marks:** Preserve facility marks for the duration of the job. If any of the operator markings are not reasonably visible, you must call USA North 811 and request re-marking by the affected operator(s). A re-mark request requires a 2 working day notice. When you request an operator(s) to re-mark their facilities, you will be asked if your excavation site is still outlined in white, so the USA North 811 members can respond to your request.

**Note:** A USA North 811 ticket is active for 28 calendar days in California and Nevada from the date of its issuance. You must have an active USA North 811 ticket for the entire duration of your excavation.



**5. Dig With Care:** Hand excavate within 24" of the outside diameter of the facility. Facilities that are in conflict with your excavation are to be located with hand tools and protected before power equipment is used. Notify the affected operator(s) of any contact, scrape, dent, nick or damage to their facility.

### **No Response Follow-Up:**

This process starts when the excavator notifies USA North 811 that:

- A 2 working day; to 14 calendar day (legal) notice and,
- The start date/time has passed and,
- A member(s) failed to respond to the excavation site by the legal start date & time of the ticket.

When a member successfully negotiates a new start date/time with an excavator, the negotiated start date/time becomes the legal start date/time for that excavation notice.

Once the start date/time has passed, the excavator should determine if all USA North 811 members have responded. The members will: mark or stake the horizontal path of their facilities, provide information about the location of their

facilities, or advise the excavator of clearance. If the excavator determines that a member(s) of USA North 811 has failed to respond in one of these manners the following steps are to be taken.

**1) First No Response Follow-up:** Call USA North 811 after the original or agreed upon legal start date/time, that the work was to begin, and request USA North 811 to send a “First No Response Follow-up” to the member(s) (name the particular member(s)) that failed to respond to your notice. Request the member(s) to call and respond ASAP or call and provide clearance.

**2) Second No Response Follow-up:** Wait at least an hour or more, from your last call, to provide our member(s) an opportunity to call and respond to your first request. After this time has passed and the member(s) still has not contacted you, call and request USA North 811 to send a “Second No Response Follow-up” to the member(s) (name the particular member(s)) that has failed to respond to your notice. Request the member(s) to call and respond ASAP or call and provide clearance.

**3) Third No Response Follow-up:** Wait at least an hour or more, from your last call, to provide our member(s) an opportunity to call and respond to your second request. After this time has passed and the member(s) still has not

contacted you, call and request USA North 811, to send a “Third No Response Follow-up” to the member(s) (name the particular member(s)) that has failed to respond to your notice. Request the member(s) to call and respond ASAP or call and provide clearance. Note; the Center will attempt to make a call to the member(s) terminal involved and ask the member(s) to respond ASAP once the Third No Response Follow-up message has been transmitted.

**Warning:** There may be unidentified underground facilities at your job site. The excavator should review the job site for physical evidence of facilities not located, i.e. manholes, valve covers, water meters, sewer cleanouts, vaults, storm drains, fire hydrant, utility maintenance boxes, pole risers, or other facility indicators such as pavement patches etc.

### **Damage / Exposed Notification:**

- An excavator discovering or causing damage to a subsurface installation shall notify the operator of the installation and USA North 811.
- USA North 811 accepts damage / exposed notices from the excavator and transmits the notice to our members in the area of the damage. USA North 811 will also provide the excavator with the emergency telephone

number for the member whose facility was damaged.

### **Emergency Notification:**

- If the damage results in the escape of any flammable, toxic or corrosive gas or liquid or endangers life, health or property, the excavator responsible immediately notifies 911 and the facility owner/operator.

The excavator takes reasonable measures to protect themselves and those in immediate danger, public, property and the environment until the facility owner / operator or emergency responders have arrived and completed their assessment.

*Excerpt from:*

**California Contractors License Law &  
Reference Book**

**SECTION IV.**

**CONSTRUCTION STANDARDS AND  
SAFETY REGULATIONS**

**Chapter 8.**

**Regional Notification Centers: Underground  
Service Alert**

**What is a Regional Notification Center?**

A regional notification center is an association of owners and operators of subsurface installations (water, gas, electric, telephone, sewer, oil lines, etc.). Damage to underground structures may result in the disruption of essential public services and pose a threat to workers, the public, and environmental safety. The purpose of the center is to provide a single telephone number that excavators can use to give the center's members advance notification of their intent to excavate.

The operators of the underground installations are then responsible for providing information about the locations of the facility, or marking or staking the approximate location of their facility, or advising the excavator of clearance. Operators are only responsible for facilities they own; operators are not responsible for facilities they do not own.

### **Contacting a Regional Notification Center is a Requirement— Not an Option.**

California Government Code §§4216-4216.9 require anyone planning to excavate to contact the appropriate regional notification center at least two (2) working days (but not more than 14 calendar days) before beginning to excavate. The center will issue an inquiry identification number to the excavator as confirmation of the call.

NOTE: An excavation permit is not valid without this identification number.

## Who Must Comply:

- Any person or entity who plans to disturb the surface of the ground, whether by digging, drilling, boring, etc.

## Exempt Persons:

- An owner of private property who contracts with a contractor or subcontractor (contractor / subcontractor must be state-licensed) for an excavation project that does not require an excavation permit;
- An owner of private property (who is not a licensed contractor or subcontractor) who, as a part of improving his or her or subcontractor) who, as a part of improving his or her principal residence, does work which does not require an excavation permit.
- Regardless of whether an equipment operator is provided for that piece of equipment, any person or private entity that leases or rents owner-operated or power-driven excavating or boring equipment to a contractor or subcontractor licensed pursuant to the Contractors State

License Law if the signed rental agreement between the person or private entity and the contractor or subcontractor contains the following provision: “It is the sole responsibility of the lessee or renter to follow the requirements of the regional notification center law pursuant to Article 2 (commencing with Section 4216) of Chapter 3.1 of Division 5 of Title 1 of the Government Code. By signing this contract, the lessee or renter accepts all liabilities and responsibilities contained in the regional notification center law.”

### **Steps Required for Compliance:**

- Every contractor or subcontractor excavating at a job site must have his or her own Underground Service Alert (USA) identification (ticket) number for the excavation work he or she is performing.
- Excluding emergency situations, parties planning excavation activities must contact the appropriate regional notification center not less than two (2) working days, nor more than 14 calendar days, prior to the start of work.

**NOTE: THE REGIONAL NOTIFICATION CENTER CALL IS FREE: 811 / 800-227-2600.**

- Upon notification, the center will issue an identification (ticket) number. The ticket number will be valid for 28 calendar days. If work is to continue past 28 calendar days, the ticket number must be revalidated by again notifying the center before the ticket number expires.
- At the site, excavators must clearly mark the boundaries of the work area, usually with white paint.
- Within these boundary markings, operators of underground installations must then provide information about their facilities, mark or stake the location of their lines clearly using the appropriate color to show what type of installation is present, or advise of clearance.
- If, during the course of the job, the operator's markings become no longer visible, the excavator must contact the regional center and request the operator to re-mark the lines within two (2) working days.

- Using the operator's markings, an excavator must determine the exact location of underground facilities with hand tools before any power equipment may be used.

### **Helpful Hints:**

- Be prepared to provide the beginning date and time of your excavation.
- Provide your name, company's name, company's mailing address, telephone number where you can be contacted, nature of work (grading, drilling, etc.), who the work is being done for, the name of the foreman, permit name and number, whether you have outlined your excavation in white paint, and a description of your excavation site.
- When giving the description of your excavation site, be sure to give the address or description of where you will be digging (including side of street, which corner of the intersection, footage, and total distances or other tie-in measurements), nearest intersecting street, city, and county.

## **Penalties:**

- Any operator or excavator who **NEGLIGENTLY** violates any portion of Government Code sections 4216–4216.9 is subject to a fine not to exceed \$10,000.
- Any operator or excavator who **KNOWINGLY AND WILLFULLY** violates any portion of Government Code sections 4216–4216.9 is subject to a fine not to exceed \$50,000.
- An excavator also may be subject to third party claims for damages arising from the excavation work.
- Violation of Government Code sections 4216–4216.9 could result in disciplinary action and possible revocation of your contractor license by the Contractors State License Board.

## **REGIONAL NOTIFICATION CENTERS**

Underground Service Alert of Northern California and Nevada: 811 / (800) 227-2600,  
[www.usasnorth811.org](http://www.usasnorth811.org)



## **Serves the following counties in Northern California:**

Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Glenn, Humboldt, Kern, Kings, Lake, Lassen, Madera, Marin, Mariposa, Mendocino, Merced, Modoc, Mono, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Benito, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Yolo, and Yuba.

Serves the entire state of Nevada.

Service: Monday–Friday, 6 a.m.–7 p.m., excluding holidays.

Underground Service Alert of Southern  
California— 811 / (800) 227-2600,  
[www.digalert.org](http://www.digalert.org)

**Serves the following counties in Southern  
California:**

Imperial, Inyo, Los Angeles, Orange, Riverside,  
San Bernardino, San Diego, Santa Barbara, and  
Ventura

Service: Monday–Friday, 6 a.m.–7 p.m., excluding  
holidays

## Five Steps to a Safe Excavation:

- 1) Survey and mark.
- 2) Call before you dig.
- 3) Wait the required time.
- 4) Respect the marks.
- 5) Dig with care.

Whatever you do, do it safe, but **CALL AT LEAST TWO (2) WORKING DAYS TO FOURTEEN (14) CALENDAR DAYS BEFORE YOU DIG.**

# CGA Best Practices - Appendix B

## Uniform Color Code & Marking Guidelines



**NOTE: These are suggested marking guidelines by the Common Ground Alliance. Remember, California law always trumps the guidelines of the CGA. Always cross reference suggested CGA marking guidelines and information with California excavation law.**

## Uniform Color Code<sup>1/</sup>

The following APWA uniform color code (ANSI Z535.1) shall be adopted as the uniform color code for marking excavation sites and underground facilities in conflict with an excavation. This recommendation is not intended to preempt any existing state requirement that specifies other colors.

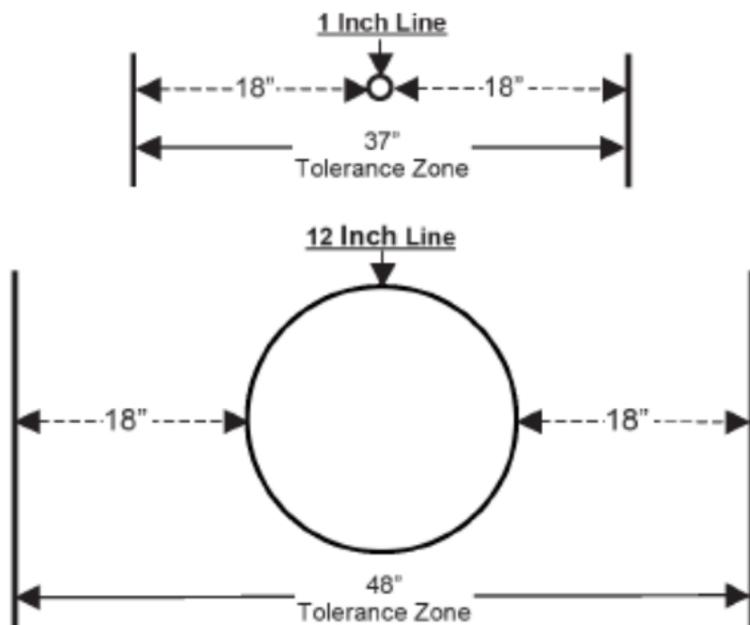
White	Proposed Excavation
Pink	Temporary Survey Markings
Red	Electric Power Lines, Cables, Conduit, and Lighting Cables
Yellow	Gas, Oil, Steam, Petroleum, or Gaseous Materials
Orange	Communication, Alarm or Signal Lines, Cables, or Conduit
Blue	Potable Water
Purple	Reclaimed Water, Irrigation, and Slurry Lines
Green	Sewers and Drain Lines

### References:

- APWA Uniform Color Code
- Existing operating practices from various states' one call centers
- Existing one call laws from various states
- ANSI Standard Z535.1 Safety Color Code

## Tolerance Zone<sup>1/</sup>

The following examples are of tolerance zones for a 1 in. and 12 in. line:



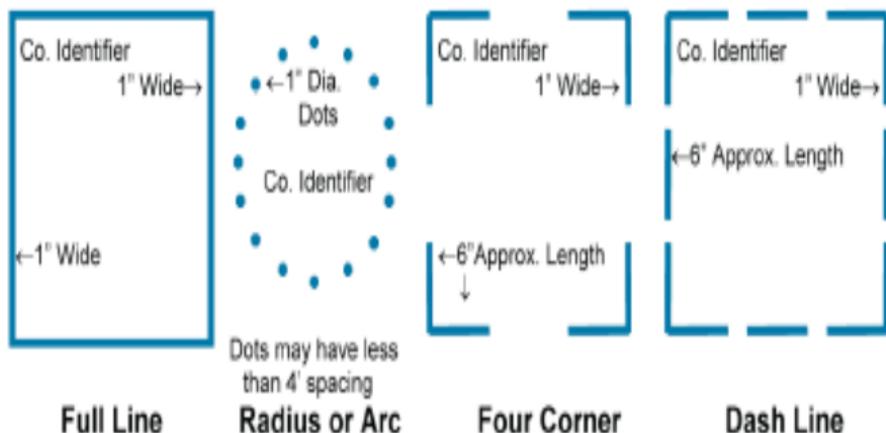
<sup>1/</sup>TR-2010-01A: Amendment approved by the CGA Board on September 10, 2010

\*\*\*California law requires 24" on either side of the outside diameter of the facility\*\*\*

## Guidelines for Excavation Delineation<sup>1/</sup>

The following marking illustrations are examples of how excavators may choose to mark their area of proposed excavation. The use of white marking products (e.g., paint, flags, stakes, whiskers, or a combination of these) may be used to identify the excavation site.

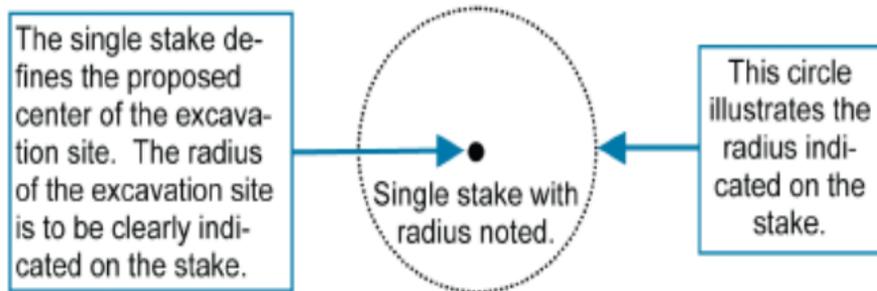
### *Single Point Excavations Markings*



Delineate in white paint the proposed area of excavation using a continuous line, dots marking the radius or arcs, dashes marking the four corners of the project, or dashes outlining the excavation project. Limit the size of each dash to approximately 6 in. to 12 in. long and 1 in. wide with interval spacing approximately 4 ft to 50 ft apart. Reduce the separation of excavation marks

to a length that can reasonably be seen by the operator's locators when the terrain at an excavation site warrants. Dots of approximately 1 in. diameter typically are used to define arcs or radii and may be placed at closer intervals in lieu of dashes.

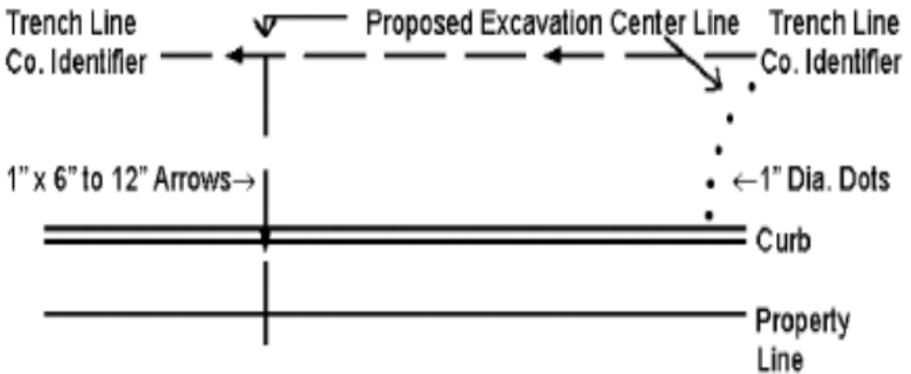
### ***Single Stake Marking Center Point of Excavation Site***



When an excavation site is contained within a 50 ft maximum radius or less, it can be delineated with a single stake that is positioned at the proposed center of the excavation. If the excavator chooses this type of delineation, they must convey that they have delineated the excavation site with a single stake at the center of the excavation and include the radius of the site in the notification to the one call center. This single stake is white in color and displays the excavator's company identifier (name,

abbreviations, or initials) and the radius of the excavation site in black letters on the stake or with a notice attached to the stake.

### ***Trenching, Boring, or Other Continuous-Type Excavations***



### ***Continuous Excavation Marking***

Mark in white paint the proposed centerline of planned excavation using 6 in. to 12 in. x 1 in. arrows approximately 4 ft to 50 ft apart to show direction of excavation. Reduce the separation of excavation marks to a length that can reasonably be seen by the operator's locators when the terrain at an excavation site warrants. Mark lateral excavations with occasional arrows showing excavation direction from centerline with marks at curb or property line if crossed. Dots may be used for curves and closer interval marking.

## ***Stake, Flag, or Whisker Excavation Markers***



Delineate the proposed area of excavation using stakes, flags, or whiskers instead of spray paint to mark radius or arcs; the four corners of the project; or when outlining the excavation project. Limit the interval spacing to approximately 4 ft to 50 ft. Reduce the separation of excavation marks to a length that can reasonably be seen by the operator's locators when the terrain at an excavation site warrants. Stakes, flags, or whiskers provided to illustrate arcs or radii may be placed at closer intervals to define the arc or radius. Stakes, flags, or whiskers are white in color and display the excavator's company identifier (name, abbreviations, or initials).

<sup>1/</sup>TR-2001-05: Amendment approved by the CGA Board on September 24, 2004

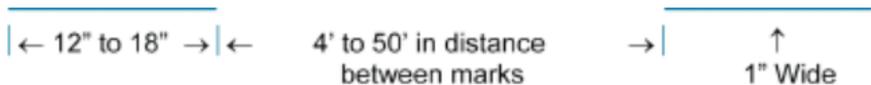
## Guidelines for Operator Facility Field Delineation<sup>1/</sup>

Operator markings of facilities include the following:

- The appropriate color for their facility type
- Their company identifier (name, initials, or abbreviation) when other companies are using the same color
- The total number of facilities and the width of each facility
- A description of the facility (HP, FO, STL, etc).

Use paint, flags, stakes, whiskers, or a combination to identify the operator's facility(s) at or near an excavation site.

1. Marks in the appropriate color are approximately 12 in. to 18 in. long and 1 in. wide, spaced approximately 4 ft to 50 ft apart. When marking facilities, the operator considers the type of facility being located, the terrain of the land, the type of excavation being done, and the method required to adequately mark the facilities for the excavator.

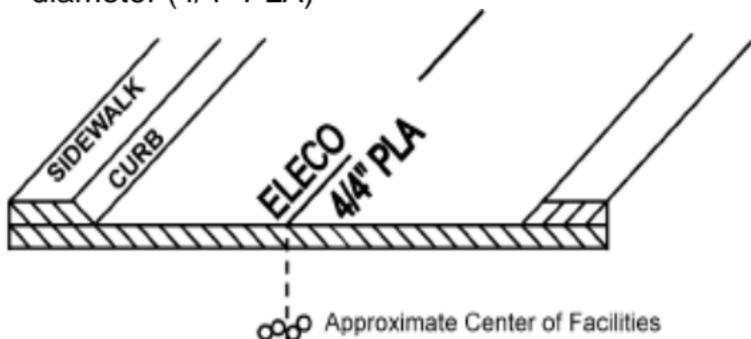


2. The following marking examples illustrate how an operator may choose to mark their subsurface installations:



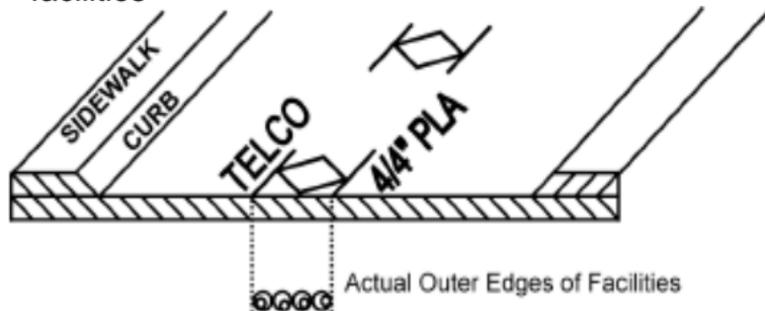
separation does not allow for a separate tone for each facility, but the number and width of the facilities is known. Marks are placed over the approximate center of the facilities and indicate the number and width of the facilities.

**Example:** four plastic facilities that are 4 in. in diameter (4/4" PLA)



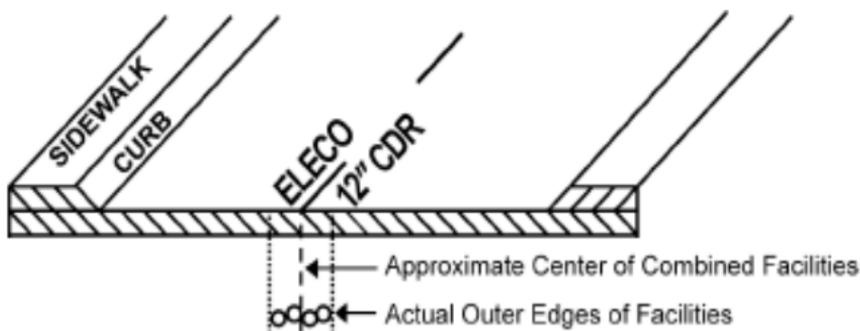
- c. **Conduit Marking:** Used for any locatable facility being carried inside conduits or ducts. The marks indicating the outer extremities denote the actual located edges of the facilities being represented.

**Example:** four plastic conduits that are 4 in. in diameter (4/4" PLA), and the marks are 16 in. apart, indicating the actual left and right edges of the facilities



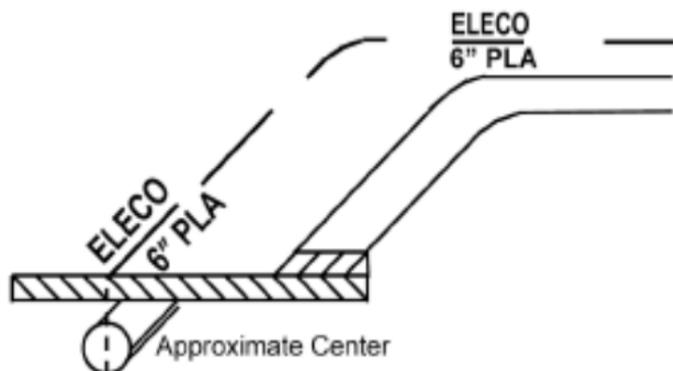
- d. **Corridor Marking:** Used to mark multiple facilities of the same type (e.g., electric), bundled or intertwined in the same trench, where the total number of facilities is not readily known (operator has no record on file for the number of facilities). Marks are placed over the approximate center of the facilities and indicate the width of the corridor. The width of the corridor is the distance between the actual located outside edges of the combined facilities.

**Example:** a 12 in. corridor (12" CDR)

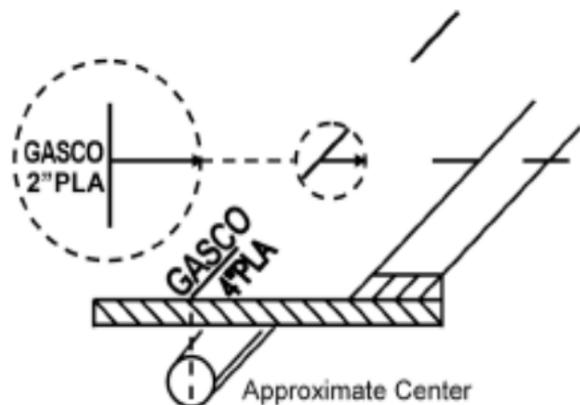


3. Changes in direction and lateral connections are clearly indicated at the point where the change in direction or connection occurs, with an arrow indicating the path of the facility. A radius is indicated with marks describing the arc. When providing offset markings (paint or stakes), show the direction of the facility and distance to the facility from the markings.

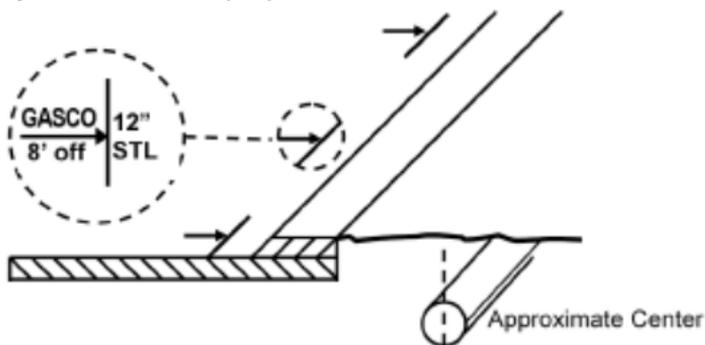
**Example:** radius



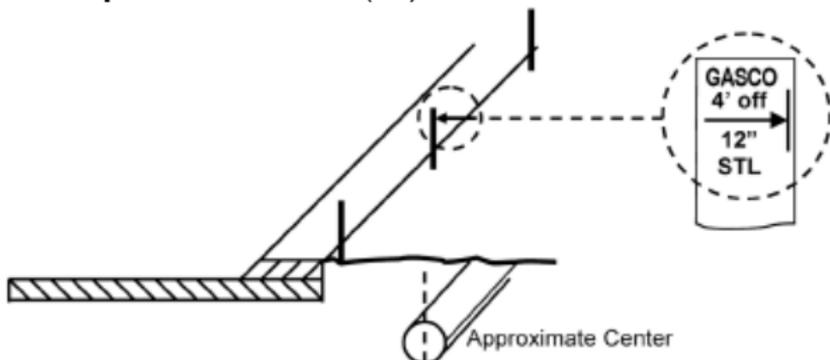
**Example:** lateral connection



**Example:** painted offset (off)



**Example:** staked offset (off)



- An operator's identifier (name, abbreviation, or initials) is placed at the beginning and at the end of the proposed work. In addition, subsequent operators using the same color mark their company identifier at all points where their facility crosses another operator's facility using the same color. Reduce the separation of excavation marks to a length that can reasonably be seen by the operator's locators when the terrain at an excavation site warrants.

### Examples:

CITYCO

ELECO

TELCO

5. Information regarding the size and composition of the facility is marked at an appropriate frequency.

**Examples:** the number of ducts in a multi-duct structure, width of a pipeline, and whether it is steel, plastic, cable, etc.

TELCO

GASCO

WATERCO

9/4" CAB

4" PLA

12" STL

6. Facilities installed in a casing are identified as such.

**Examples:** 6 in. plastic in 12 in. steel and fiber optic in 4 in. steel

GASCO

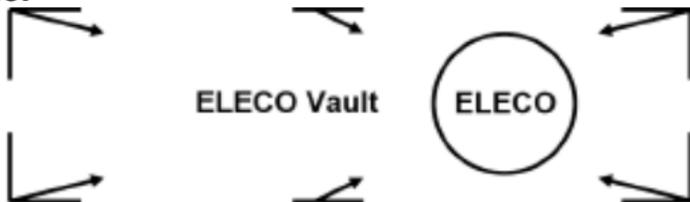
TELCO

6" PLA/12" STL

FO (4" STL)

7. Structures such as vaults, inlets, and lift stations that are physically larger than obvious surface indications are marked so as to define the parameters of the structure.

### Example:



8. Termination points or dead ends are indicated as such.

**Example:**



9. When there is “No Conflict” with the excavation, complete one or more of the following:
- Operators of a single type of facility (e.g., TELCO) mark the area “NO” followed by the appropriate company identifier in the matching APWA color code for that facility.

**Example:** NO TELCO

- Operators of multiple facilities mark the area “NO” followed by the appropriate company identifier in the matching APWA color code for that facility with a slash and the abbreviation for the type of facility for which there is “No Conflict.”

**Example:** NO GASCO/G/D illustrates that GASCO has no gas distribution facilities at this excavation site. The following abbreviations are used when appropriate: /G/D (gas distribution); /G/T (gas transmission); /E/D (electric distribution); /E/T (electric transmission).

- Place a clear plastic (translucent) flag that states “No Conflict” in lettering matching the APWA color code of the facility that is not in conflict. Include on the flag the operator’s

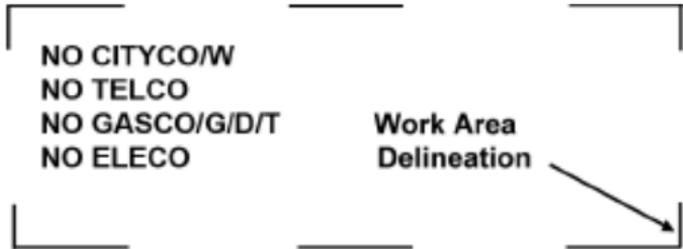
identifier, phone number, a place to write the locate ticket number, and date. Operators of multiple facilities indicate on the flag which facilities are in “No Conflict” with the excavation (see the previous example).

- If it can be determined through maps or records that the proposed excavation is obviously not in conflict with their facility, the locator or operator of the facility may notify the excavator of “No Conflict” by phone, fax, or e-mail, or through the one call center, where electronic positive response is used. Operators of multiple facilities indicate a “No Conflict” for each facility (see the previous examples).
- Place “No Conflict” markings or flags in a location that can be observed by the excavator and/or notify the excavator by phone, fax, or e-mail that there is “No Conflict” with your facilities. When the excavation is delineated by the use of white markings, place “No Conflict” markings or flags in or as near as practicable to the delineated area.

Caution: Allow adequate space for all facility mark-outs.

“No Conflict” indicates that the operator verifying the “No Conflict” has no facilities within the scope of the delineation; or when there is no delineation, there are no facilities within the work area as described on the locate ticket.

**Example:**



<sup>1/</sup>TR-2001-05: Amendment approved by the CGA Board on September 24, 2004

<sup>2/</sup>TR-2010-01B: Amendment approved by the CGA Board on September 10, 2010

## Common Abbreviations

## Facility Identifier

CH	Chemical
E	Electric
FO	Fiber Optic
G	Gas
LPG	Liquefied Petroleum Gas
PP	Petroleum Products
RR	Railroad Signal
S	Sewer
SD	Storm Drain
SS	Storm Sewer
SL	Street Lighting
STM	Steam
SP	Slurry System
TEL	Telephone
TS	Traffic Signal
TV	Television
W	Water
W	Reclaimed Water "Purple"

## Underground Construction Descriptions

C	Conduit
CDR	Corridor
D	Distribution Facility
DB	Direct Buried
DE	Dead End
JT	Joint Trench
HP	High Pressure
HH	Hand Hole
MH	Manhole
PB	Pull Box
R	Radius
STR	Structure (vaults, junction boxes, inlets, lift stations)
T	Transmission Facility

## Infrastructure Material

ABS	Acrylonitrile - Butadiene - Styrene
ACP	Asbestos Cement Pipe
CI	Cast Iron
CMC	Cement Mortar Coated
CML	Cement Mortar Lined
CPP	Corrugated Plastic Pipe
CMP	Corrugated Metal Pipe
CU	Copper
CWD	Creosote Wood Duct
HDPE	High Density Polyethylene
MTD	Multiple Tile Duct
PLA	Plastic (conduit or pipe)
RCB	Reinforced Concrete Box
RCP	Reinforced Concrete Pipe
RF	Reinforced Fiberglass
SCCP	Steel Cylinder Concrete Pipe
STL	Steel
VCP	Vertrified Clay Pipe

## Guide for Abbreviation Use

Follow these guidelines when placing abbreviations in the field:

- Place the Company Identifier at the top or at the left of the abbreviations.
- Place the abbreviations in the following order: Company Identifier / Facility Identifier / Underground Construction Descriptions / Infrastructure Material

**Example:** TELCO/TEL/FO/PLA indicates that TELCO has a telecommunication fiber optic line in a single plastic conduit. The use of the abbreviation /TEL is not necessary, because the orange marking would indicate that the facility was a communication line; but its use is optional.

- To omit one or more of the abbreviation types, use the order described above but omit the slash and abbreviation that does not apply.

**Example:** to omit /TEL), the result would be TELCO/FO/PLA.