3.0 Underground Service Alert (USA) Procedures
(Updated 8/16/2007)

3.1 Stanford’s Responsibility

3.1.1 General Overview
Facilities Operations, Maps and Records is responsible for marking all Stanford-owned utilities for the University in support of construction at Stanford in coordination with Utility owners in the Utilities Division, COGEN, Communications Services, Stanford Hospital and the Stanford Shopping Center. The following utility types are marked: communications, chilled water, gas*, high voltage electric, sanitary sewer, steam, street lights, storm drain, domestic water, lake water and recycled water.

*Maps and Records does not mark gas lines operated by PG&E, only gas lines owned by Stanford between meters and buildings.

Maps and Records also does not mark for SLAC and most off-site locations. AT&T and Point to Point (and other telecom/fiber and cable companies) also mark their locations on campus. Maps and Records is occasionally requested to assist with specific owned properties in the Research Park or off-site locations, and home owners in the Faculty Staff subdivision.

USA North is the area coordinator for Underground Service Alert in Central/Northern California and Nevada (http://www.usanorth.org). Excavators make requests for subsurface installation marking by calling 8-1-1, or 9-8-1-1 on campus. USA North administrates tickets through a web-based system called Irthnet that is configured to send email notice to Stanford and auto-responses to excavators.

3.1.2 Legal Responsibility
Marking guidelines and response times are established in the California Excavation Manual as developed by USA North in coordination with the Common Ground Alliance and the California Public Utilities Code. Response times are required by law to be within two working days of Stanford's receipt of the notification: the deadline of which is noted on each ticket; for emergencies, markers should respond as soon as possible within 1 hour.

CalOSHA Standards Board Title 8, Chapter 4, Section 1541 became law 3/31/07. Members are required to positively respond back to the excavator; excavator can bill for downtime if work is delayed due to no response from member. At Stanford, this is done on the ground (for on-campus locations) and also through the Irthnet system.

Per Senate Bill 1359 that became law 1/08/07, Stanford is responsible for calling a field meeting when the location is within 10 feet of a High Priority Subsurface Installations, and coordinating Conditional Consent for Mutual Agreement with utility operators when excavators request to use power or vacuum equipment within 24 inches on either side of a subsurface installation.
Maps and Records issues a High Priority Notification ((Section 4216.a).2)) or a Conditional Consent for Mutual Agreement form (Section 4216.4(a)) to the excavator by FAX and US Mail, and to internal distribution lists. The Irthnet system is also configured to send an auto-response to the Excavator to inform them of additional time that is required. A High priority response is also sent manually through Irthnet.

3.2 USA Coordination

3.2.1 General Instructions

Stanford receives notice of marking requests through an email sent by USA North to Stanford’s internal distribution list: usa-incoming@mailman.stanford.edu. This list is managed through http://mailman.Stanford.edu. [NOTE: Should the email system be down, this service can be switched to FAX service by calling (925) 798-9504 x8. A record of all tickets can be sent by email later.

Ticket administration is performed in the office by the USA Coordinator who receives, organizes and assigns tickets to markers, coordinates responses to excavators, coordinates required notifications to utility operators, receives back information from utility markers, closes tickets and ensures filing of backup documents. Special notifications are also made to management for requests in the Faculty Staff Housing area. Depending upon workload, marking duties may be contracted.

For excavations within 10 feet of High Priority subsurface installations, the USA Coordinator coordinates a field meeting with the Project Manager and appropriate utility operators, and ensures a response through Irthnet, and FAX/US Mail copies of the Notification of High Priority Subsurface installation are sent. An email notification to usa-high-priority@bonair.stanford.edu is sent to notify an internal distribution list.

For excavations where power/vacuum equipment are indicated by the excavator, the Irthnet system will automatically trigger an email to mutual-agreement@mailman.stanford.edu that is sent to an internal distribution list. This distribution includes all utility operators. An auto-response will notify the excavator that the coordination of mutual agreement will take an additional 2 working days. The USA Coordinator ensures that the Conditional Consent to Use Excavation Equipment forms are sent by FAX/US Mail. This alerts the Excavators that signatures from each utility operator are required. The USA Coordinator also ensures signatures with the appropriate utility are obtained and delivered back to the Excavator.

3.2.2 Detailed Instructions

1) Receive Ticket by Email
   a) Organize tickets
      i) Marking required
      ii) Marking not required (remark no, external to Stanford lands)
2) Give ticket/map to utility marker. (See USA Utility Marker)
3) Get utility ticket/map from utility marker.
4) **Ensure Conditional Consent Agreements are initiated:**
   a) Irthnet autoresponse to Excavator of need for 2 additional working days
b) Fax and US Mail notice to Excavator

c) Email to mutual-agreement@mailman.stanford.edu (automatically from Irthnet)

d) Coordinate Mutual Agreement response with Utility Operators/Excavator

e) Email to usa-notify-all@bonair.stanford.edu the distribution of utilities that are being marked (all projects)

5) Ensure High Priority Subsurface Installation Notice is sent:

   a) Irthnet manual response to Excavator

   b) Fax and US Mail notice to Excavator

   c) Email to usa-high-priority@mailman.stanford.edu

   d) Coordinate Field Meeting with appropriate Utility Operator and Excavator

   e) Email to usa-notify-all@bonair.stanford.edu the distribution of utilities that are being marked (all projects)

6) Ensure FacOps management is informed of Faculty Staff Housing requests.

7) Close completed tickets in Irthnet online system/positive response.

3.3 Utility Marker Responsibility

3.3.1 General Instructions

Once a ticket is assigned, the marker is responsible for checking that areas are within the Stanford University lands boundary, where Stanford operates utilities. The marker contacts excavators to confirm their work location and informs projects of planned response schedules; and renegotiates the start/date and time of excavation if necessary.

The marker should support the USA Coordinator in the need to comply with all laws.

SB 1359 section 4216.a).2: For High Priority Subsurface Installations, the marker may assist the USA Coordinator in this process.

SB 1359 section 4216.4(a): For Mutual Agreements, the Irthnet system sends an auto-response that requires a conditional consent form to by signed that will require an additional two days to process. The marker may assist the USA Coordinator in this process.

CalOSHA Standards Board Title 8, Chapter 4, Section 1541 became law 3/31/07. When marking is completed, Stanford positively responds to the excavator by marking the ground “S OK.” Stanford also notifies the Excavator through the Irthnet system when utilities are marked as each ticket is closed-out. If Stanford has no utilities in the area, Stanford notifies the excavator on the ground (on-campus) by marking the ground “NO S” and through the Irthnet system (for on and off-campus/non-Stanford locations).

To support the marking request, the marker collects the necessary as-built record information (plots of Maps and Records CAD maps) to take to the field during the marking process. In the field, the marker checks the “area marked in white paint” and the surrounding area for additional utility above-ground features that may not be included in CAD maps. Historical Linen Utility Maps, As-Built/record drawings at Maps and Records, and shop personnel responsible for operating the systems are also a good resource for information.

The marker is responsible for marking the ground with paint, following USA Marking standards (using minimum of single frequency to mark) and paint colors as defined in the California
Excavation Manual in coordination with the Common Ground Alliance (CGA). Alternate methods of marking (i.e. tape, whiskers, etc.) are to be used on decorative pavers and similar surface finishes to avoid complaints from the community. All lines on maps will be marked, including abandoned lines as best as can be determined from maps as well as field conditions (empty above-ground structures, for example). USA North recommends marking as if the lines are live. The code ABD shall be omitted from the field marks. The contractor is to confirm ABD lines with the Project Manager and Utilities Division.

Should the marker observe excavation commencing prior to the “legal start date”, and before all utilities have been marked (including PG&E), the USA marker should notify the excavator to contact USA North to request a followup request, and notify the USA Coordinator, who in turn will contact the Project Manager.

After marking is completed, a Ticket Closeout form is completed that captures the date the marking was completed, who marked it, the utilities that were marked, contact information and job details/notes. An email is then sent to: usa-notify-owners@bonair.stanford.edu, clarifying the utility types that have been marked.

Marking is to be completed only for the areas where digging will actually commence on or after the legal start date defined by the USA ticket. All excavation areas should be thoroughly researched in advance. If the marker notices that USA is being used for design, this must be reported to the USA Coordinator.

If Ground Penetrating Radar is requested of marking staff or contractors by the excavator, the cost will be covered by, coordinated and contracted directly by the Project. Should the project utilize a Maps and Records USA marking contractor for this service, this must be communicated to the Excavator and the USA Coordinator prior to the start of this work.

Tickets are time sensitive and locations should be researched immediately. Start dates may need to be renegotiated if required due to workload.

3.3.2 Detailed Instructions for Managing Tickets
1. Receive ticket from office support.
2. For each ticket, create a USA CAD Map.
3. Make contact with the excavator regarding the construction start date for scheduling purposes, field meeting, and special instructions.
4. Notify Office support if High Priority facility and coordinate field meeting, notifying utility operators through 3-2281 and inform office to ensure appropriate communication to the excavator in a timely manner.
5. Research map information
   a. References utility maps, construction plans (Plans Review), project schedules, logistics plans.
6. Field work
   a. Mark utilities following CGA guidelines
   b. Mark up map as utilities are marked (line through marked utilities)
   c. Make note of map discrepancies and mark on map in field (flag for CAD Team follow-up)
d. Mark or stake ground “S OK” or “NO S” as appropriate.

7. After marking all utilities as required.
   a. Fill out “Ticket Closeout” form to include field notes, contacts and any job details.
   b. Return ticket, map, and form to office support.

3.3.3 Additional Instructions for Contracted support

If work is contracted, keep field crew informed of the status/quantity of tickets twice-daily. Due to adjacency of projects and varying time involved in marking, field crew should be involved in helping to prioritize, and can be a resource when researching the maps, or know the area better due to recent marking experience.

Notify the USA Coordinator if:
- There is any question if the construction start date is too soon to complete marking
- The location is not clear/not marked.
- The area to mark seems too large and they should be more specific

Contact Maps and Records staff with questions (USA Coordinator: 650-725-0746). This is time sensitive. Use our department contact list provided until someone is reached.