



Pacific Gas and Electric Company

Electric Rule 20 Guidebook

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Links

CPUC Electric Rule 20

https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_RULES_20.pdf

CPUC Decision 26-01-013

<https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M387/K099/387099230.PDF>

CPUC Undergrounding Programs Description

<https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/infrastructure/electric-reliability/undergrounding-program-description>

PG&E Undergrounding Website

<https://www.pge.com/Undergrounding>

1911 Street Improvement Act

https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200920100AB44

CPUC Decision E-4971

<https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M275/K318/275318522.PDF>

PG&E's Online Application Portal

[pge.com/cco](https://www.pge.com/cco)

CPUC Resolution E-4001

https://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_RESOLUTION/59265.PDF

CPUC Phase 1 Decision 21-06-013

<https://docs.cpuc.ca.gov/SearchRes.aspx?docformat=ALL&docid=387099230>

CPUC Phase 2 Decision 23-06-008

<https://docs.cpuc.ca.gov/SearchRes.aspx?docformat=ALL&docid=511130681>



Introduction

In response to local government interest in enhancing the aesthetics of their communities, the California Public Utilities Commission (CPUC) in 1967 established Electric Tariff Rule 20 (Electric Rule 20). It contains three separate programs that provide for the undergrounding of existing overhead utility lines.

Electric Rule 20 itself uses language that may be foreign to those unfamiliar with the utility world. PG&E has prepared this planning guide as an educational tool for cities and counties¹ that may be considering the conversion of existing overhead utility lines to underground. This included coordination with local governments, the California State Association of Counties, the League of California Cities, and other stakeholder groups.

This guidebook explains how undergrounding is funded pursuant to each of the three programs of Electric Rule 20. It will also identify and illustrate models used for planning a conversion program, and suggest how utilities, city and county governments, developers, residents, and businesses can work together to implement undergrounding of overhead utility lines.

We hope this will help cities and counties understand not only the language and procedures of Electric Rule 20, but also the operational complexities of implementation. This is not intended to serve as legal advice, however, and local governments should rely upon their own counsel. They should also feel free to consult with the CPUC's Energy Division as they proceed. The CPUC places limits on the amount of money electric utilities may spend on utility ratepayer-funded underground conversion through the General Rate Case (GRC). The CPUC has taken steps to ensure that the utility companies' Rules include provisions for communities to expand their conversion programs through use of other funding sources. Many of those sources are identified in this guidebook. For more information on how Electric Rule 20 pertains to the General GRC, please see the Rule 20A Work Credits section of this guidebook.

PG&E will accept feedback on the usability of the guidebook and incorporate changes into future iterations where appropriate. The CPUC has sunset the Rule 20A Program in Decision 23-06-008. This Rule 20 Guidebook includes modifications made to the Rule 20A Program to comply with this CPUC Decision.

¹ In this document the term "city or county" is used because it is the language in the CPUC tariff. It is understood to include "town" as well.



Components of Electric Rule 20

The rules established by the CPUC for electric utility companies are collectively known as Electric Rule 20. These include Rules 20A, 20B and 20C. Each category of Electric Rule 20 addresses different funding mechanisms and qualifications for undergrounding existing overhead utility lines.

Rules	Description of Funding
Electric Rule 20A	Conversion projects under this section of the rules are funded by ratepayers throughout the service territory, but only for projects deemed to create a general public benefit by satisfying at least one qualifying criterion.
Electric Rule 20B	Conversion projects under these rules are funded by both ratepayers and property owners. This program provides limited ratepayer subsidies for undergrounding utility lines in areas that do not qualify under Rule 20A.
Electric Rule 20C	Conversion projects under these rules are funded almost entirely by those requesting the underground conversion. This program enables property owners to pay for the cost of undergrounding utility lines which do not qualify under Rule 20A or 20B.

Additional information about responsible parties and payment due dates for Electric Rule 20A, 20B, and 20C projects can be found in the table on the following page.



Category	Responsible Party	Payment(s) Due
Rule 20A	<p>Ratepayers are responsible for the full project cost.</p> <p>OR</p> <p>The city/county can elect to cost share the project for costs exceeding available work credits</p>	<p>Work credits are deducted from the community's balance when the project is closed and the final cost of the project is known. If a project is cancelled prior to completion, work credits equal to the actual expenditures are deducted from the community work credit balance.</p>
Rule 20B	<p>Applicants are responsible for the pads and vaults for transformers and associated equipment, conduits, ducts, boxes, pole bases and performing other work related to structures and substructures including breaking of pavement, trenching, backfilling, and repaving required in connection with the installation of the underground system, all in accordance with PG&E's specifications, or, in lieu thereof, pay PG&E to do so.</p> <p>Ratepayers are responsible for the estimated project cost equal to building a new equivalent overhead system.</p> <p>Applicants are responsible for the estimated project costs that exceed the estimated cost of a new equivalent overhead system.</p> <p>PG&E is responsible for the costs of removal of the overhead poles, lines, and facilities.</p>	<p>An engineering advance is due prior to the beginning of the Engineering and Design phase.</p> <p>Payments to underground facilities are due prior to construction.</p>
Rule 20C	<p>Applicants requesting the change are responsible for the estimated project cost to remove the overhead facilities and replace with underground facilities, less the estimated net salvage value and depreciation of the replaced overhead facilities. Underground services will be installed and maintained as provided in PG&E's rules applicable thereto.</p>	<p>An engineering advance is due prior to the beginning of the Engineering and Design phase.</p> <p>Payments to underground facilities are due prior to construction.</p>



Undergrounding Other Utility Lines

Rule 20 is a tariff that governs the state of California’s CPUC jurisdictional electric utilities. The CPUC jurisdictional communications providers have their own tariffs governing undergrounding. The communications tariff rules generally set out the same criteria for undergrounding as do the electric Tariff. In practice, the communications providers “follow the electric utility into the trench.” Cable television providers on the other hand do not have such a CPUC-approved tariff. Cable television providers are also required to comply with the Underground Utility District and Resolution to remove overhead facilities and generally do so according to the terms of their franchise or other agreements with the cities and counties in which they provide service.

Annual Reports

PG&E’s annual reports are released on April 1 every year per CPUC order.

Making Data Requests

PG&E is obligated to share information with anyone who requests it as described in the CPUC-issued [Decision 21-06-013](#). There is a non-disclosure agreement (NDA) that must be filled out by an agency when requesting information. A sample NDA is included as an appendix to this document. PG&E charges overhead costs across all capital investment projects, which includes Rule 20 projects. If communities would like more detailed information, including overhead costs, they can do so by utilizing the nondisclosure agreement (NDA) process included as an appendix to this guidebook.



Paying for Rule 20A Projects

Rule 20A Work Credits

Work credits are not monies, but are credits as described in the Electric Rule 20 tariff. As the name implies, the credit discounts the cost of a Rule 20A undergrounding project. One work credit is equivalent to one U.S. dollar. Municipalities can utilize work credits to pay for the full or partial cost of the project. If a municipality elects to move forward with a Rule 20A project without having sufficient work credits to cover the full cost of the project, community funds must be pre-arranged to cover the work credit shortfall. CPUC Decision 23-06-008 has reaffirmed the option for communities to contribute financially to any Rule 20A project that has insufficient work credits for completion.

Municipalities historically accrued work credits by receiving an annual allocation. Work credits were distributed to municipalities within PG&E's service territory, in which PG&E provided the distribution of electricity through PG&E's facilities. This includes cities and counties who have elected to purchase their own energy through Community Choice Aggregation (CCA). The amount allocated each year to each community was based on the total number of work credits authorized through the General Rate Case and the allocation formula, sometimes referred to as the 50/50 rule, provided by the Electric Rule 20 Tariff:

Fifty percent of the total authorized amount shall be allocated in the same ratio that the number of overhead meters in any city or unincorporated area of any county bears to the total system overhead meters; and b. Fifty percent of the total authorized amount shall be allocated in the same ratio that the total number of meters in any city or unincorporated area of any county bears to the total system meters.

Work credits are deducted from the community's balance when the project is closed and the final cost of the project is known. If a project is cancelled prior to completion, work credits equal to the actual expenditures are deducted from the community work credit balance.

Project Cost Information

Project cost information will be included in PG&E's annual report, which is available on PG&E's website. The annual report provides community level data, including total value of projects completed to date per community, and project level data, including total project cost at its current stage.

[CPUC Decision 21-06-013](#) has discontinued authorization of new Rule 20A work credits for allocation after December 31, 2022. Additionally, municipalities are not permitted to borrow future work credits beyond 2022 work credit allocations. Unauthorized work credit trading is not permitted, except for intra-county donations of work credits from a county government to cities and towns within the county or from a city or town to its county government, and pooling of work credits amongst two or more adjoining municipalities for a project with community benefit for the adjoining municipalities. Any city or the unincorporated area of any county may continue to use existing work credits allocated on or before December 31, 2022 for projects that qualify.

[CPUC Decision 23-06-008](#) has set the date for all community's work credit balance that has not been deducted to expire on December 31, 2033. Additionally, the CPUC has clarified that PG&E may deduct Rule 20A work credits from a community's work credit balance prior to the actualization of the associated project cost.

Additional Funding Sources

Some cities and counties use Rule 20A work credits in conjunction with non-utility funding and various combinations of Rules 20B and 20C. Cities and counties can generate local, non-utility funding for Rule 20A, Rule 20B, or 20C projects with many of the same tools used to fund other local improvements.

Assessment Districts

Pursuant to the [1911 Street Improvement Act](#), assessment districts may be created by the city or county to pay for city or county costs, such as a city or county-owned street lighting system to be installed in conjunction with a Rule 20A project.

Customer-funded Conversions of Service Laterals

The Electric Rule 20 Tariff provides the ability for municipalities to determine how much, if any, of the conversion costs should be paid for by Rule 20A work credits:

The governing body may establish a smaller footage allowance, or may limit the amount of money to be expended on a single customer's electric service, or the total amount to be expended on all electric service installations in a particular project.

If a municipality chooses to not use Rule 20A work credits for customer service laterals and service conversions, it is the municipality's responsibility for the administration of collecting payment from impacted property owners.

Rule 20A/B Combination Projects

There are times when it is possible to complete a project as a Rule 20A/B combination project, which can be coordinated by contacting your Rule 20A liaison. These are handled as separate, interconnected projects. A boundary map clearly delineating the 20A and 20B Utility Underground District is required. Each project must meet the minimum distance requirement of one block or 600 feet, whichever is the lesser.

Reallocation of Work Credits

When a Rule 20A project requires additional work credits, work credits from communities that are considered “inactive” can be reallocated to those communities who have projects with insufficient work credits to proceed. This process is commonly referred to as reallocation.

Section A.1.c of the Electric Rule 20 Tariff states:

When amounts are not expended or carried over for the community to which they are initially allocated they shall be assigned when additional participation on a project is warranted or be reallocated to communities with active undergrounding programs.”

The CPUC further defined the definition of an “active” community in [CPUC Resolution E-4971](#).

1. “Formally adopts an undergrounding district ordinance which expires at completion of work within the district boundaries; or
2. Has started or completed construction of an undergrounding conversion project within the last 8 years, defined as 2011 or later²; or
3. Has received Rule 20A allocations from the utility for only 5 years or fewer due to recent incorporation.”

Communities who do not meet this definition of “active” are considered inactive, and with the approval of the CPUC, their work credits may be reallocated to those communities who have projects that require additional work credits.

Cities and counties wishing to avoid any reallocation of their Rule 20A allocations should maintain an active undergrounding program and, ideally, a current Utilities Conversion Plan. If the allocation amounts are not sufficient to fund projects, the city or county should nevertheless identify and document project candidate areas.

If your community is currently inactive and wishes to become active, you must have adopted an ordinance or ordinances creating an underground district and/or districts as set forth in Section A.1.b. of this Rule. Please contact your Rule 20A Liaison so that PG&E can be made aware of your intention and support you appropriately.

² PG&E adjusts the year as needed to appropriately reflect a minimum of 8 years.

The CPUC has directed PG&E to file one Tier 2 advice letter by December 8, 2024, to propose a comprehensive reallocation proposal of Rule 20A work credits. Once this Tier 2 advice letter is approved, we will reallocate work credits by June 8, 2025. Any Rule 20A work credit that has not been allocated to a community with an Active Rule 20A Project³ by June 8, 2025, shall be deemed expired and not available for any further reallocation.

The CPUC has directed PG&E to prioritize this reallocation to either: (1) Active Rule 20A Projects located in a city, unincorporated county, or tribal jurisdiction that has not completed a Rule 20A project since 2004, or (2) Active Rule 20A Projects where at least 50 percent of the main line trench distance will be located within Environmental and Social Justice Community census tract(s).

An Environmental and Social Justice Community census tract shall be defined as a census tract that meets one of the following criteria: (i) scores in the top 25 percent of CalEnviroScreen 4.0, along with those that score within the highest 5 percent of CalEnviroScreen 4.0's Pollution Burden but do not receive an overall CalEnviroScreen score; (ii) located in any federally recognized tribal lands, or (iii) where aggregated household incomes are less than 80 percent of area or state median income.

³ CPUC Decision D.23-06-0008, Ordering Paragraph 4(a) states “an active Rule 20A Project shall be defined as a project with a signed resolution that the utility has designated as either “active” or on “hold.” Ordering Paragraph 4(b) further explains, “A Rule 20A project that a utility has designated as on “hold” is a project that was initiated but has stopped for an indeterminate amount of time due to the community possessing insufficient work credits to fund the entire project.”







Rule 20A Projects

Introduction

As shown in the graphic below, every project has four phases:



- 
Planning: The project boundary is identified, consultation with the affected utility companies is held, the resolution or ordinance is created and other aspects of the job are prepared in readiness for the next phase.
- 
Engineering/design: The lead trenching agent will design the trench and prepare the composite drawings and the Form B. Each participating utility will design its own system. This phase also includes staging or pre-construction activities, which includes securing contracting, easements, permits, land rights and internal PG&E approval.
- 
Construction: Involves setting the new riser poles, excavating the trench, installing the substructure and equipment; cable pulling and splicing; energizing the new underground system; and removal of overhead lines and utility poles.
- 
Close-out: Involves internal utility activities such as mapping the new underground system and reconciliation of all project costs.

PG&E provides the following planning, engineering and design services for a Rule 20A project unless previously agreed upon with involved parties.



Roles & Responsibilities

Rule 20A Liaisons

The Rule 20A Liaison is the first point of contact for cities and counties who are interested in undergrounding overhead poles and wires. The Liaison is responsible for successfully guiding cities/counties in developing an underground district which satisfies the Rule 20A tariff.

Specifically, Rule 20A Liaisons are responsible for:

- Contact and/or meet with each governmental body on a regular basis as assigned and/or required.
- Meet with public works officials (city engineers, directors of public works) to assist in the qualification and planning phases, prior to adoption of a formal resolution for Rule 20A projects. Conduct informational presentations and attend Community Meetings to disseminate information for Rule 20A projects.
- Help create an accurate resolution and boundary map.
- Walk project, measuring length of Underground Utility District and service laterals; walk with governmental body and estimator to ensure boundary is correct.
- Develop a budgetary estimate of project costs using PG&E calculating tools and input from Estimating and assess whether the community has sufficient Rule 20A allocations.
- Determine a reasonable customer commitment date with the governmental body, with input from estimating and project services.
- Communicate issues and risks promptly to supervisor.
- Be the Rule 20A expert and advocate for the community, fostering goodwill and trust between the customer and PG&E. Has the most current information regarding the Rule 20A Program, as provided by company management. Answer questions accurately and consistently. Provide a resource for communities to have questions regarding the Program answered quickly.
- Prepare project information file for Estimating and Project Manager. Provides information regarding specific Rule 20A projects and/or communities to various PG&E personnel, such as Contract Management, Land, Estimating, Environmental, Construction, Governmental Relations, Work Requested by Others (WRO), etc.
- Remain a continuous program and project-specific resource for the community, project manager and Estimating as needed after project is moved into project management and Estimating phase
- Ensure CPUC and SEC mandates are followed by providing accurate quarterly data.
- Act as an interface with other utilities regarding the Rule 20A Program. Answer questions dealing with the Program and PG&E internal processes to help facilitate the projects.
- Monitor all phases of active Rule 20A projects to identify and mitigate risks/delays to ensure commitment to community is on track.



Trench Lead

Cities or counties contemplating establishing an undergrounding program, even one limited to Rule 20A electric projects where the costs of the utilities' work are ultimately borne by ratepayers, should understand that this is ultimately a city or county project. It will require the support of public works and other city or county staff to manage these projects.

It is important to establish who will serve as the lead agency. The lead agency is responsible for trench design, including the composite drawings and the Form B, which delineates the costs for each trench participant. The lead agency is also responsible for the construction of the project; however, the lead agency responsibilities may be separated, with one agency responsible for design and another responsible for construction.

The electric utility is typically the lead agency. In some cases, the lead agency may be one of the other project participants (e.g., telephone company, city or county, another utility) taking into account such factors as:

- Extent and nature of other street improvements, such as street widening or storm drain upgrades being done by the city or county
- Amount of utility conversion work being required of a private developer
- Experience and resource capabilities of the other project participants

The selection of the trench lead is agreed upon by the city or county and the utilities. PG&E or the local government can serve as the trench lead, which the local government can do through their public works staff or through a designated contractor. They may also have a joint trench participant (such as AT&T) serve as the trench lead. PG&E serves as the default trench lead if the local agency or other utility choose not to. If another utility serves as the trench lead, it is because they were asked to by the local agency. PG&E's construction design standards need to be followed by the trench lead (e.g. adhering to the number of bends in conduit).

The trench lead also has the responsibility for the oversight of activities performed by project participants working in the same area. This is necessary to ensure the safety of the general public and to provide each participant with the opportunity to complete its work with minimal disruption.

Each utility will be responsible for system design and installation of its own cables, wires, and pad-mounted fixtures for the new underground system. Each utility will complete their engineering work necessary to prepare a utility composite drawing. This process typically begins with the electric utility, which then hands off its design drawings to the telecommunications utility, which in turn hands off to the cable company.

The joint trench lead is responsible for all of the project costs, some of which are reimbursable and/or shared by all participants as described in the Form B section below. They must follow prevailing wage or use union contracts. The joint trench lead must also follow all of PG&E's safety requirements pursuant to PG&E's Standard S-5453. One example of this is following PG&E's safety guidance for pre- and post-cross bore inspections.



The joint trench lead serves as the lead for preparing the composite drawing. Each project participant will complete the engineering work necessary to prepare a composite drawing. This process typically begins with PG&E, but can be initiated by a joint trench lead who completes the process in accordance with PG&E's design standards. This means that the electric layout is completed first. Once PG&E has completed its portion of work, the design drawings are provided to the telecommunications provider(s).

The joint trench lead's additional duties include obtaining confirmations from all joint trench participants, including a joint trench intent. They must also confirm the initial and final composites and the Form B with all participants. They must also coordinate with the cable company to identify power supplies and address that in the design.

Joint trench lead expenses that can be included in the Form B includes anything that affects the joint trench and joint trench participants. Reimbursement ratios are determined by PG&E document S-5453.

Initiation & Planning Phase

The project initiation and planning phase will typically take between three and twelve months and includes the following steps.

Confirm or Establish a General Enabling Ordinance

The first step to formalizing an underground conversion program is to confirm or establish a General Enabling Ordinance. This gives the city or county the authority to:

- Call public hearings to determine whether or not the removal of poles, overhead wires, and associated overhead structures within a proposed underground utilities district is justified by the general public's interest.
- Designate individual underground utility districts.
- Make it unlawful for any utility company to maintain overhead wires and associated structures in a completed underground utility district.
- Require property owners in an underground utility district to perform the work on their premises necessary to receive underground utility service, including providing the utilities the right of entry to perform modifications to the property owners' exterior overhead service panels, and to make installations to the physical property for the underground connections.

Once a city or county has adopted a General Enabling Ordinance, it can proceed with the creation of individual underground utility districts through passage of a resolution. This generally consists of the following steps:

Develop Draft Project Boundary Map

The area to be converted is clearly defined by a boundary map, which needs to be defined at the parcel level. The proposed project must meet the following general public interest criteria:

- Such undergrounding will avoid or eliminate an unusually heavy concentration of overhead electric facilities;
- The street or road or right-of-way is extensively used by the general public and carries a heavy volume of pedestrian or vehicular traffic;
- Wheelchair access is limited or impeded in a manner that is not compliant with the Americans with Disabilities Act;
- The street or road or right-of-way adjoins or passes through a civic area or public recreation area or an area of significant scenic, cultural, and/or historic interest to the general public; or
- The street or road or right-of-way is considered an arterial street or major collector as defined by the California Department of Transportation's California Road System functional classification system.

PG&E's role is to provide both technical and regulatory guidance so that the proposed location for the undergrounding project is technically feasible and meets tariff requirements.

Inform Other Utilities (Communication, Cable and Internet)

This provides an opportunity for other utilities to concur that the proposed project meets their respective tariffs. Additionally, this will allow an opportunity to surface any potential risks and begin initial conversations about resources and schedule. At a minimum, the other utilities will need a copy of the boundary map and the resolution if a resolution has already been passed.

Hold Verification Walk

Once the draft boundary has been defined, the project team should have a verification walk to reach consensus on the areas to be converted in addition to:

- Initiating initial discussion of potential trench routes with all project team members to start evaluating project risks and challenges
- Identifying suitable utility "riser pole" locations (the points at which the new underground systems connect to the utilities' overhead systems)
- Discussing proposed and existing public improvements and their impacts
- Identifying right-of-way requirements for transformers, switches, capacitors and other facilities
- Considering the impact of using Rule 20A funds for the installation of underground service lateral conversions and electric panel conversions
- Finalizing the project boundary

Develop Initial Estimate

PG&E will also provide an initial ballpark estimate based on the proposed project boundary. It should be noted that at this early stage in the project lifecycle, there are more unknowns than knowns, so this is a rough estimate only and is considered an Association for the Advancement of Cost Engineering (AACE) Class 5 Estimate⁴ with a variability of +100% to -50%. The preliminary estimate is not a binding formal estimate, as it will continue to be refined through the project lifecycle and can increase or decrease depending upon the situation (e.g. number of joint trench participants, soil conditions, relocation of existing underground facilities, market driven change in labor and material costs, etc.).

Conduct a Public Hearing and Adopt an Ordinance

The criteria for what constitutes a public hearing as well as notification requirements for the public hearing should follow local ordinances.

The Electric Rule 20 Tariff requires that the local ordinance include at a minimum:

- That all existing overhead communication and electric distribution facilities in such district shall be removed;
- That each property served from such electric overhead facilities shall have installed in accordance with PG&E's rules for underground service, all electrical facility changes on the premises necessary to receive service from the underground facilities of PG&E as soon as it is available; and
- Authorize PG&E to discontinue its overhead service.

⁴ Additional information regarding AACE can be found in the Estimates section of this guidebook

Sign Agreements

Before work begins on a Rule 20A project, the city/county needs to sign the General Conditions Agreement. This document provides more detail on what local agency responsibilities are and what PG&E's responsibilities are for a Rule 20A project. A sample General Conditions Agreement can be found in Appendix C of this document.

- Following the passage of the local ordinance formally adopting the underground district, PG&E requires four documents to be signed.
 - General Conditions Agreement: A document outlining what the municipality's responsibilities are and what PG&E's responsibilities are on a project.
 - Streetlight Agreement: A document where the city identifies how they will handle the streetlights in the district. Often, streetlights are attached to the utility pole that will be removed as part of the project.
 - Panel Conversion Agreement: An agreement the local agency signs authorizing PG&E to handle the panel conversion work on a project.
 - Wheelchair Accessibility Agreement: An acknowledgement that wheelchair accessibility was taken into consideration when forming a Utility Underground District (UUD).

Engineering & Design Phase

Once an ordinance is adopted and agreements are signed, PG&E will determine if there are enough credits to proceed and will authorize funding for a base map, service book and engineered estimate, if appropriate. As the estimate is updated during the project lifecycle, PG&E will compare it to available work credits to make sure the proposed project continues to be financially viable. PG&E will continue to keep the agency informed and work to find solutions if the estimate exceeds available work credits.

Two estimates are provided: the engineered estimate and the bid estimate. It should be noted that this phase of the project has the highest risk for delays as it requires a significant amount of information gathering, decisions, and agreements from the city, other utilities, and property owners. Two critical documents needed for an accurate design is the base map and service book.

Develop Base Map

PG&E will be responsible for the development of the base map. A comprehensive base map is a key component to having a successful undergrounding project. The base map will be utilized to develop the location of the new underground system for all parties.



The base map is an AutoCAD file of the project area. Local governments' active engagement in base map development can help expedite the development process. It's recommended cities and counties consult with internal departments to provide the needed information for base map development.

Examples of needed information for the AutoCAD map include:

- District Boundary (Should encompass entire lot of all lots fronting project & preferably in a bold line font)
- Roads / Streets (Including names)
- Power Poles / Communication Poles
- Future Road Improvements (Including streetlight locations if apply)
- Sidewalks (Where applicable)
- Curb / Gutter (Where applicable)
- Property Lines / Parcels with Assessor's Parcel Number (APN) /Addresses
- Building Footprint
- Existing Water/Sewer/Storm Drain
- Existing Easements
 - Known Rights Of Way
 - Known Public Utility Easements (PUE)
- Other Known Obstacles
 - Underground Utilities
 - Abandoned facilities
 - Enclosures
 - Pedestals
 - Fire Hydrants
 - Streetlights
- Optional Items (These would provide great value and save design time)
 - Aerial Map
 - Topographic Map
 - Electric Meter Locations
 - Station Numbering
 - Survey Monuments

Develop Service Book

A part of an undergrounding project is to convert existing customers who are currently receiving service through an overhead connection to an underground service. To do this, PG&E will need to extend service laterals as well as conduct electric service conversions. The Service Book details those plans per property.

PG&E will be responsible for the development of the Service Book. The Service Book will detail the specific location of any equipment, such as a termination enclosure, that needs to be attached to each home/business that will be converted to receive service underground.



Additionally, the Service Conversion Book will provide the approximate location of the service trench that will be required to provide underground service to the customer.

Development of the Service Conversion Book allows for detailed information on each property to be gathered early so that all the necessary work to convert customers from overhead to underground service is documented and can be included in the scope of the project.

Information in the Service Conversion Book will also be utilized later in the project lifecycle to obtain signed permission from each property owner to allow PG&E to attach the necessary equipment to each home/business that is to be converted.

Streetlight Plan

Depending upon the election of the streetlight agreement, the municipality may need to determine if they are also going to be a joint trench participant and, if so, provide a detailed streetlight plan. PG&E's preference is to receive this information in an AutoCAD format detailing the streetlight locations, boxes and any other facilities required to energize the streetlights. We encourage municipalities to develop streetlight plans early so that they can be incorporated into the final design and minimize any risks to construction or schedule.

Joint Trench Intents

The joint trench intent is sent to potential joint trench participants along with the proposed electric trench route on a base map that identifies curbs/gutters and other known facilities. Potential joint trench participants would then indicate whether they intend to be a joint trench participant and provide information regarding the number of conduits or pieces of equipment, location, size of conduit, and technical specifications. Responses are requested within thirty days of receiving the joint trench intent request.

Composite Drawing

A composite drawing is prepared by the joint trench lead and combines all joint participants' drawings into one combined drawing. The final composite drawing must be formally approved by all joint trench participants.

Form B

The Form B details cost responsibilities of each joint trench participant by segment. The Form B is developed with the final composite drawing and must be signed off by all joint trench participants before the project can move forward. Form B may be referred to as the Joint Trench Cost Sharing Agreement.



Easements

Easements are required for PG&E facilities that will not be in the county/city's right-of-way. PG&E first needs to develop the electric design before the location of the easements can be determined. Once the locations are determined, PG&E will prepare the easement documents and attempt to secure signatures. If PG&E is not able to acquire signed easements, the municipality will be asked to assist in securing the rights.

This easement acquisition process is based on the new General Conditions Agreement.

Engineering Estimate and Electric Drawing

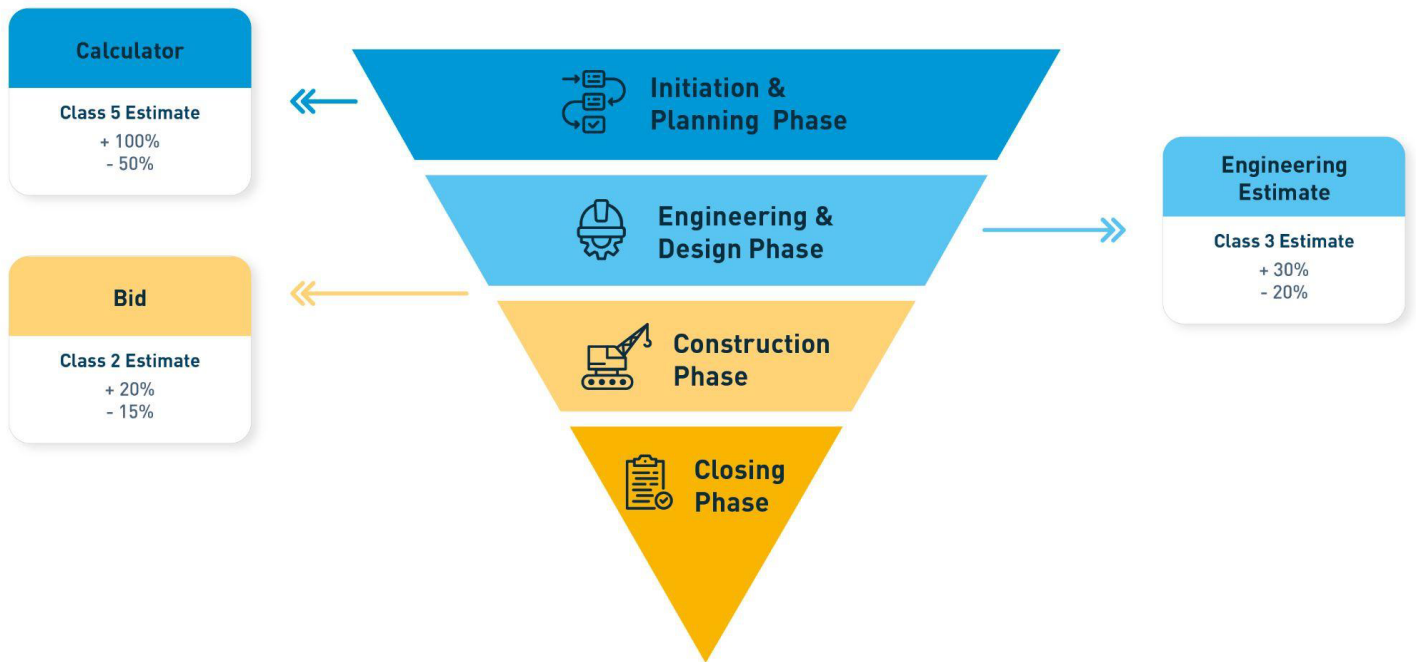
The engineering estimate and the electric drawing, detail how to convert the overhead facilities to underground facilities. It includes a breakdown of costs based on historical unit costs and PG&E's design standards. The engineering estimate may not take into account current market conditions nor may it reflect constructability challenges and mitigation measures. The engineering estimate is considered an AACE Class 3 estimate.

Once an engineering estimate is available, it will be compared against the community's available work credits to determine if the project can still move forward with the current scope. If the engineering estimate exceeds available work credits, then further discussions with the Rule 20A liaisons is required.

Estimates

The estimates are updated as more detailed, project specific information becomes known. The first estimate, the initial estimate, is conducted during the planning phase of the process. For more information on the planning phase, please visit the planning section above. It is important to note that estimates can be subject to external factors over which PG&E and the city or county have no control, such as market rates for construction labor and materials at the time an estimate is generated. An image demonstrating how estimates are refined during the lifecycle of a Rule 20A project is included below for reference.

The Refinement of Estimates During a Rule 20A Project



Initial Estimate

Sometimes referred to as a ballpark estimate, an initial estimate is based on preliminary project details and historical data. It uses general known project parameters—such as main trench length—multiplied by the anticipated cost per foot. The agency must first submit the project boundary map to PG&E before an initial estimate can be completed. The preliminary estimate is not a binding formal estimate, as it will continue to be refined through the project lifecycle and can increase or decrease depending upon the situation (e.g. number of joint trench participants, soil conditions, relocation of existing underground facilities, market driven change in labor and material costs, etc.). This estimate is +100/- 50%, meaning a project with an initial estimate of \$1,000,000 could end up costing between \$500,000 and \$2,000,000.

Once the initial estimate is developed, PG&E will determine if there are enough credits to proceed and will authorize funding for a base map, service book and engineered estimate, if appropriate. As the estimate is updated during the project lifecycle, PG&E will compare it to available work credits to make sure the proposed project continues to be financially viable. PG&E will continue to keep the agency informed and work to find solutions if the estimate exceeds available work credits.

Engineered Estimate

The engineered estimate requires extensive coordination with the local agency, the project manager, trench participants and PG&E Associate Distribution Engineer. It is made using an electric diagram, civil composite, base maps and known unit costs. This is an Association for the Advancement of Cost Engineering (AACE) Class 3 estimate. This estimate is also known as the 25 percent design or basis of design report,

There are several factors in the engineered estimate that are important to determine overall project viability and to maintain the project schedule, among them being easement acquisition. The municipality's active involvement in easement acquisition is vital as PG&E needs support from the agency to determine landowners to be contacted about easement acquisition and other details. When a local government is not as heavily involved, project delays may occur, as there are certain steps the local agency is responsible for such as making initial contact with impacted property owners, mailing prepared easement documents to PG&E and coordinating meetings to assist PG&E in the easement acquisition process. Rule 20A credits cannot be used to obtain an easement, if compensation is required it is up to the municipality to provide.

Additionally, the Form B needs to be approved and signed by all of the joint trench participants before a project can go out to bid. Other utilities' active involvement is essential for the timely completion of this work, and delays beyond PG&E and the local agency's control can sometimes occur based on when the other utilities review the designs.

Bid Estimate

The bid estimate is derived after the contract for the project is awarded before the start of construction. This is the best estimate for the total project cost, which includes market rates for both labor and material at the time of its generation. Any additional costs beyond this point would require authorized change orders. Also known as a control or bid/tender estimate, this is a 60% design or AACE Class 2 estimate.

Work credits will be deducted from the agency's balance based on the actual cost of the project at its conclusion and not based on any estimates.



Construction Phase

The construction phasing sequence for an undergrounding process is as follows:

- Trenching: This is the phase where trenching occurs, and conduit and substructures are installed.
- Restoration: The act of restoring paving and sidewalk in the areas impacted by construction. This typically starts near the end of installing conduits and substructure, and continues through the end of the construction phase.
- Electric construction: This includes pulling wire, installing electric equipment and splicing.
- Energizing electric underground system: Once the underground electric construction has been completed with facilities installed, the underground system is energized. A planned outage (clearances) can be expected.
- Service cutovers: Electric overhead service is removed, electric panels are converted to receive underground service, the underground service is connected to the panel and the service is energized.
- Overhead electric wreck out: This involves de-energizing the electric overhead system, removing the overhead electric facilities, and topping the poles above the communication cables.
- Pole removal: Removal of the pole and restoration at the base of the pole is typically done by the telecommunication company.

Customer Contact/Communication

PG&E will be in contact with the customers to notify them before property access is needed and before trench work begins. Further, we will coordinate with the customer on service interruption logistics prior to the conversion from overhead to underground. A local agency's active involvement in communicating construction details to residents, including informational signage around the job site, is extremely helpful for Rule 20A projects.

Active local government involvement is encouraged for expediting Rule 20A processes, including:

- Educating the public about the project
- Providing contact information for the property owner of a particular parcel so they can sign a private property agreement, as PG&E records include the customer of record at addresses (who could potentially be a tenant)
- Inspecting work before PG&E provides electricity from an underground source (permitting requirements vary by local agency, but while not required it is strongly recommended)



Service Laterals and Service Conversions

The undergrounding of overhead service laterals and panel conversions are handled under the provisions of the electric utilities' and telephone utilities' tariffs. If the municipality chooses to handle their own service laterals and service conversions, PG&E requests that reimbursement requests from individual property owners are consolidated by the municipality.

Service laterals extend from a service point, which is part of the utility company's distribution lines, to the service delivery point on each customer's premises.

If PG&E is the lead, PG&E typically will dig a trench for the service lateral. We will work to minimize impacts to the customer's property and will restore the property to the previous state or better upon completion.

All customers within the utility underground district must receive power service from the underground system. Some customers' panels have the ability to receive underground service directly. For those customers who are unable to receive underground service, PG&E typically installs an electric termination enclosure (also referred to as a term can) on the customer's wall near the existing electric panel, which converts underground service to overhead service. Prior to installation of the term can, PG&E will get written permission to install the facility from every property owner.

Closing Phase

The closing phase of a project typically takes between 6 and 12 months to complete. This phase is a critical step to ensure the new underground infrastructure is accurately documented to ensure the new facilities can be correctly marked and maintained. The closing phase also officially closes the order so that there can be no additional charges. Once the project is formally closed, equivalent work credits are deducted from the community's work credit balance.

Initiating Rule 20B and 20C Project

Rule 20B provides limited ratepayer funding for undergrounding utility lines in areas that do not qualify under Rule 20A or in cases where there are not sufficient allocations to cover the costs of the project.

Rule 20C projects are conversions that are funded almost entirely by those requesting the underground conversion. This program enables property owners to pay for the cost of undergrounding utility lines, which do not qualify under Rule 20A or 20B.

A Rule 20B or Rule 20C project will include the following steps:

- If available, the project applicant should work with the appropriate parties to obtain civil plans (e.g. street plans, existing utility plans, storm drain plans, etc.) for the application.
- The applicant will prepare and submit the project application through PG&E's online application portal, which can be found at pge.com/ccco.
- PG&E's service planner will review the request and will respond to the applicant within 3 business days.

Property Owner Authorization

A Rule 20B project needs "suitable legislation" or written authorization from each impacted party confirming their participation in the project in order for it to start. If a group of property owners coalesce to underground utility lines, all parties must agree to it. Alternatively, a supermajority of property owners can create an Underground Utility District pursuant to local government code.

The applicant is ultimately responsible for collection of signature or written authorization from each impacted party confirming their participation in the project prior to submit the project application through PG&E's online application portal.

Deposits

An applicant is required to put down an engineering advance for a project. If the municipality allows it, Rule 20A work credits can be used as an engineering advance for a Rule 20B project. If they chose not to go forward with the project, they must still pay the engineering advance. If the engineering advance remains unpaid, Rule 20A work credits would be taken as collateral via a resolution. More information on this can be found in [Electric Rule 20.B.4](#).

The engineering deposit will be for engineering efforts completed by PG&E. If the applicant chooses to have the engineering for pads, vaults, conduits, ducts, boxes, pole bases, structures and substructures completed by a third party, those contracts will not be managed by PG&E.



Contracts and Costs

Once engineering is complete, a local agency has 2 ½ years to determine whether to move forward with the project. PG&E is able to make a demand of the local agency, which must be addressed within 90 days of initiation.

PG&E presents a contract with costs, which are good for 90 days. Once we issue a design and a contract, the design is locked down for 18 months pursuant to AB 1026 (November 2020). If not contract costs are not paid within 90 days, PG&E holds the right to reevaluate the costs according to current labor and material rates.

For the project to move forward, the applicant needs to pay for the engineering advance. [Electric Rule 20.B.5.](#), has additional information about how much ratepayer contribution goes into a project, such as the removal of overhead poles and facilities.



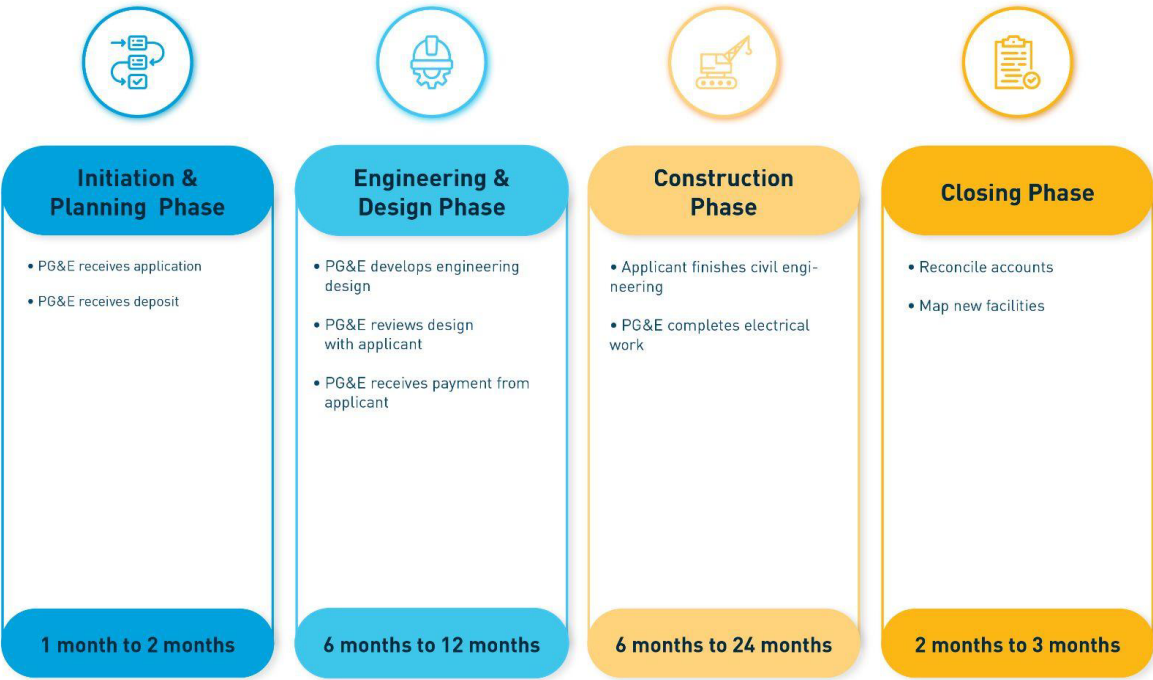
Rule 20B Projects

If Rule 20A does not apply in a specific case, Rule 20B enables ratepayers and property owners; ratepayers and cities/counties; or developers to fund underground conversion projects. Rule 20B projects require the undergrounding of the existing overhead lines up to the meter

In the case of Rule 20B projects funded by ratepayers and property owners or cities and counties, this program provides for two general ratepayer subsidies or credits:

- The first credit is for the amount of what constructing a new overhead system would cost.
- The second credit is for absorbing the cost to remove the existing overhead system.
- The maximum credit available is not to exceed the cost of the new underground system.

The affected customers must pay for the cost to underground in advance. These advances paid to PG&E are non-refundable, and if applicable, may include a tax component called the Federal Income Tax Component of Contribution (ITCC). In cases where the project is shown to be of general public benefit, this tax may be waived. The general timeline for Rule 20B and 20C project phases is below:



Qualifying Criteria

Under Rule 20B, the utility will replace its existing overhead lines with underground lines along public streets and roads or other locations mutually agreed upon when requested. However, the following conditions indicated in the Tariff must be met:

1. *The following must be met:*
 - a) *All property owners served from the overhead lines to be removed first agree, in writing, to have the wiring changes made on their premises so that service may be furnished from the underground distribution system in accordance with the utility's rules, and that the utility may discontinue its overhead service upon completion of the underground facilities; or*
 - b) *Suitable legislation is in effect requiring such necessary wiring changes to be made and authorizing the utility to discontinue its overhead service.*
2. *The applicant (city, county, property owners, developer) has:*
 - a) *Furnished and installed the pads and vaults for transformers and associated equipment, conduits, ducts, boxes, pole bases and performed other work related to structures and substructures including breaking of pavement, trenching, backfilling and repaving required in connection with the installation of the underground system, all in accordance with the utility's specifications, or, in lieu thereof, paid the utility company to do so.*
 - b) *Transferred ownership of such facilities, in good condition, to the utility.*
 - c) *Paid a nonrefundable sum equal to the amount of the estimated costs of completing the underground system minus the amount it would have cost to build a new equivalent overhead system.*
3. *The area to be undergrounded includes both sides of the street for at least one block or 600 feet, whichever is the lesser.*
4. *All existing overhead communication and electric distribution lines within the area will be removed.*

City or County-initiated and Managed Rule 20B Conversions

A city or county may wish to convert an area using a combination of Rule 20A and Rule 20B funds to apply to contiguous project areas. Rule 20B funds are normally acquired from the city or county's general fund through the formation of a local assessment district or from a developer improving property adjacent to the conversion project.

A city or county may also utilize Rule 20B to carry out undergrounding of projects that would qualify for Rule 20A funding, but where the city or county does not have sufficient allocations to pay the cost. Rule 20B is also the mechanism used by cities or counties in support of neighborhoods that do not qualify for Rule 20A funding.



These are typically residential neighborhoods. In this case, the mechanism used to pay for the project – which is not discussed in the tariff Rule itself – is an assessment district. The city or county would initiate the project with the utilities. This approach imposes administrative cost on the city or county and requires a public vote.

Neighborhood-initiated and Managed Rule 20B Conversions

Property owners along one block or more who agree to pay for an underground conversion may either form an assessment district or enter into written agreements with the involved utilities.

Rule 20B Conversion by Assessment District

In 1966, state legislation was passed that provides that the conversion of overhead electric and communication facilities can be accomplished through an assessment district under the Improvement Act of 1911 (refer to Streets and Highways Code, Sections 5896.1 through 5896.17). The formation of an assessment district involves added costs to the applicants, but may be necessary in cases where unanimous agreement of the affected property owners cannot be obtained.

The formation of an assessment district generally involves the following:

- The signing of a petition for underground conversion by the affected property owners.
- The adoption of a resolution of intention to form an assessment district by the council or board of supervisors.
- Public hearing on the resolution of intention.
- A decision and resolution by the council or board of supervisors forming the assessment district.
- The negotiation of an agreement between the assessment district and each affected utility which includes, among other things, the responsibility for the following:
 - plans and specifications
 - labor and materials
 - payment for the work performed

Conversions Required by Public Agencies

Under existing law, no town, city, county, redevelopment agency, aviation, scenic highway or coastal commission, nor any other public agency may require a regulated private utility to convert its facilities to underground contrary to a utility's tariffs on file with the CPUC.

Such agencies may, however, require applicants for building permits to arrange for undergrounding as a condition of issuance of the permits. Some cities and counties require either the undergrounding or the installation of conduit for future undergrounding use from the service entrance to the public right of way.

Developer Contributions

In most cities and counties, the development of private property triggers some form of contribution from the developer for related street improvements.

In cities and counties that experience high rates of growth, Rule 20A work credits may not be adequate to keep pace with construction activity. In this situation, some cities or counties have required the developer to contribute a substantial portion of the actual conversion costs, even when the overhead utility lines are located on the street side opposite the development. Additionally, it may be made a condition of the development.

In these cases, there is no equivalent overhead system cost subsidy and no waiver of ITCC tax.

Development Fees

Some cities and counties have adopted underground conversion fees that apply to new developments in much the same manner as park fees and street improvement fees. Keep in mind that a fee-supported plan should include:

- The manner in which conversion fees are to be collected
- The purpose for which fees may be used by the city or county

The creation of a revolving fund is generally an integral part of any conversion fee program to provide a funding pool into which fees can be deposited and conversion project costs withdrawn.

The adoption of a conversion fee program often raises sensitive issues that can only be addressed at the local level. For instance, the community will need to decide whether the collection of conversion fees is triggered solely by new construction or includes the rehabilitation or expansion of existing properties.

The [CCO Online Portal](#) has additional information on the application process, required documents and next steps.



Rule 20C Projects

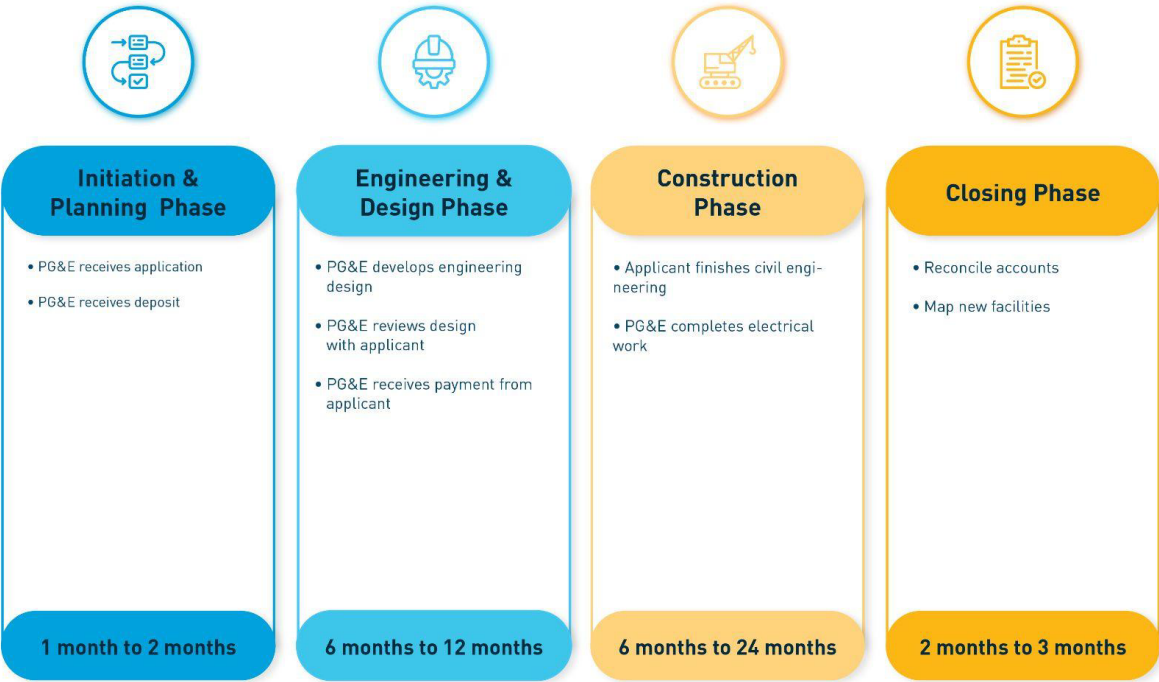
If neither Rule 20A nor Rule 20B apply to a specific case, Rule 20C enables property owners to pay for the cost of undergrounding distribution lines. This underground conversion program is almost entirely funded by those requesting the underground conversion and requires the undergrounding of the existing overhead electrical lines up to the meter.

Like Rule 20B, Rule 20C only applies if required by the municipality's code or by necessity as determined by PG&E. This includes because of sidewalks or equipment located at a street intersection that could cause a visual obstruction. If required by necessity, PG&E will cover the one-time maintenance fee for the project.

Under Rule 20C, the applicant requesting the changes pays for:

- The removal of existing overhead electrical facilities
- A nonrefundable sum in advance equal to the estimated cost of the underground facilities less the estimated net salvage value and depreciation of the replaced overhead lines and equipment.

The general timeline for Rule 20B and 20C project phases is below:



Applicant Responsibilities

For a Rule 20C project, the applicant's responsibilities include, but are not limited to:

- Trenching
- Substructures (e.g. conduit, pads and boxes)
- Civil design
- Permitting

In addition, Rule 20C has the same construction responsibilities as Rule 20B described in this guidebook. These are also included below for reference:

The applicant (property owner) has:

- Furnished and installed the pads and vaults for transformers and associated equipment, conduits, ducts, boxes, pole bases and performed other work related to structures and substructures including breaking of pavement, trenching, backfilling and repaving required in connection with the installation of the underground system, all in accordance with the utility's specifications, or, in lieu thereof, paid the utility company to do so.
 - Transferred ownership of such facilities, in good condition, to the utility.
 - Paid a nonrefundable sum equal to the amount of the estimated costs of completing the underground system minus the amount it would have cost to build a new equivalent overhead system.

As with Rule 20B, the CCO Online Portal link has additional information on the application process, required documents and next steps.

Change Record

The following table is a record of all changes made to the PG&E Rule 20 Guidebook. It describes the location of the revisions and what revisions were made:

Change Record Log

Section	Change
Initiating Rule 20B and 20C Project (p.27)	Removal: In the case of developer-driven Rule 20B projects, there is no ratepayer funding. Updated Paragraph: Rule 20B provides limited ratepayer funding for undergrounding utility lines in areas that do not qualify under Rule 20A or in cases where there are not sufficient allocations to cover the costs of the project.



APPENDIX



Appendix A: Electric Rule 20 Tariff

The document can be found [here](#) on the website pge.com/tariffs.

Appendix B: Decision 21-06-013

This document can be found [here](#) on the California Public Utilities Commission's website.

Appendix C: Decision 23-06-008

This document can be found [here](#) on the California Public Utilities Commission's website.

Appendix D: Resolution E-4001

This document can be found [here](#) on the California Public Utilities Commission's website.

Appendix E: Utility Standard 5453





UO Standard S5453

ISSUING DEPARTMENTS: **GD&TS**

EFFECTIVE DATE: **9-03**

New Customer Connections

UO SPONSOR: **VP - E&P**

REVIEW DATE: **9-08**

PAGE NO.: **1 OF 7**

TITLE: Joint Trench

Purpose

1. This standard defines the uniform process for planning, designing, scheduling, billing, coordinating, constructing, and accounting for installing the following in a joint trench:
 - Natural gas distribution and service piping.
 - Electric distribution and service conduits and cables.
 - Telephone conduits and cables.
 - Other compatible communication facilities.
2. This standard promotes installing underground facilities in a joint trench in all instances, unless circumstances make joint trench construction impractical or uneconomic.

Recision

This standard supersedes UO Standard S5453, “Joint Trench,” issued 7-01.

Safety

Refer to the requirements of 49 CFR 192, General Orders 112E and 128 for specific installation safety requirements. It is imperative to adhere to the provisions for installing gas or electric facilities near steam, propane, or other “wet” utilities.

Implementation Responsibilities

The vice president of Engineering and Planning (E&P) is responsible for approving, reviewing, and distributing this standard.

The UO Operations, Maintenance and Construction (OM&C) area directors are responsible for ensuring that employees are trained and comply with the requirements of this standard. In addition, they are responsible for providing sufficient resources to achieve the requirements of this standard.

The vice president of E&P authorizes the directors of Gas Distribution and Technical Services (GD&TS) and New Customer Connections (NCC) to update and reissue any attachments and exhibits of this standard.

- Compliance** Implementation and effectiveness are measured by OM&C and E&P directors. Periodic audits may be conducted by internal Company departments. The California Public Utilities Commission (CPUC) may conduct compliance reviews on the application of this standard.
- Procedure**
1. This standard provides for uniform application of the Company’s procedures for placing natural gas and electric distribution facilities in a common trench with municipal- or Company-owned streetlight circuits and communication circuits and/or cables. Inclusion of other types of facilities will require specific review and approval of the appropriate engineering and construction departments of the trench occupants.
 2. This standard defines responsibility for joint trench coordination when the trench is the responsibility of the Company, another utility, or an applicant.
 3. This standard does not address procedural details of job processing, engineering standards, and construction requirements. Existing documentation such as engineering standards, utility standard practices, gas standards, UO standards, and the *Tariff Application Guide* aptly details the requirements and should be used for reference as appropriate.
 4. This standard does not assign responsibilities to specific positions within OM&C. OM&C policy should determine the most effective practice to address the requirements of joint trench engineering, coordination, and construction.
- Records** Retain records per the Record Retention Schedule.
- Definition of Terms**
- Applicant:** The developer or party entering into a contract or agreement with the Company for the installation of gas and/or electric facilities or the underground conversion of the existing overhead electric facilities. For Electric Rule 20A projects or franchise relocations of Company facilities, the applicant is the requesting local government agency. For electric and gas projects initiated by the Company, i.e., electric planning or reconstruction projects, the Company is the applicant.
- Authorization:** “Authorization for Joint Trench Construction” (Form B) provides a billing breakdown for the various trench occupants by footage.
- Billing Document Number:** A number generated from NEBS used for the billing of trench occupants for work performed by the Company at the occupants’ expense.
- CATV:** Cable television company.

Change Order: The change order forms provide a description of additional work and/or authorization to perform or delete such work for other trench occupants.

Company: Pacific Gas and Electric Company.

Competent Spoil: Backfill material as defined by California Public Utilities Code, Section 787.

Detailed Cross Section: A drawing that details the size of each trench section. It shows the size, number, and placement of buried facilities for each trench occupant.

Distribution Trench: An excavation for the placement of distribution and/or feeder facilities intended to serve one or more buildings, customers, or parcels. A distribution trench will usually be located in a private utility easement, dedicated franchise area, public utility easement, or other thoroughfare.

Imported Backfill: Soils or manmade materials not native to the specific trench location for use in backfill. These materials will be competent material to ensure that required compaction is achieved. See CGT Engineering Guideline 4123, "Backfill Sand Specification," for specific material requirements.

Intent: "Notice of Intent to Install Underground Facility" is an intent form letter and trench layout, which is used to notify and advise others that trench work is proposed in a particular area. It is an invitation to other potential trench occupants to share the benefits and costs of joint trench construction.

Joint Trench: An excavation wherein more than one trench occupant installs facilities to reduce individual costs.

Joint Trench Configuration and Occupancy Guide: This guide details the standard trench dimensions, standard trench locations, minimum cover and clearance requirements, and trench occupancy matrix. This guide supports the joint trench drawing.

Joint Trench Drawing: A detailed construction drawing, prepared by the TDC, that provides the following information:

1. The measurement of the trench route and distance from adjacent property lines or fixed objects to the trench.
2. Each trench section's size (width, depth, and length).
3. The location and size of all substructures.
4. The nonstandard trench cross-sectional configurations, showing the number of buried facilities and their sizes for each trench occupant.

The size and occupancy of the trench is specified by reference to the “Joint Trench Configuration and Occupancy Guide.”

Land Rights: A legal right to use the property of others.

Native Soil: All soils specific to the existing trench location.

NEBS: Non-Energy Billing System. A computer system used to process non-energy billing payments to the Company.

New Business Job: A prepared job for extending or rearranging utility service to a customer under Rules 15 and 16.

Non-Utility Facilities: Subsurface facilities not owned by any person, corporation, partnership, business, trust, or public agency belonging to a regional one-call notification system.

Operator: Any person, corporation, partnership, business, trust, public agency, or entity that owns, operates, or maintains a subsurface installation and belongs to a regional one-call notification center.

Permit: A written warrant or license for work granted by the agency having authority.

PUE: Public Utility Easement granted by the property owner.

Reconstruction Job: A prepared job for which the applicant is not financially responsible under the new business rules.

SBC: Southwestern Bell Communications Company.

Service Trench: A trench that extends from a distribution trench to a service termination point.

Stub Service: Service tubing and conduit extended from distribution facilities to provide for a future service completion.

Trench Configuration: The cross-sectional trench design specified to provide trench occupants with the minimum facility clearance and cover as required per Exhibit B, “Joint Trench Configuration and Occupancy Guide.”

Trench Construction Coordinator (TCC): The person or entity responsible for performing and/or coordinating the overall field excavation, substructure facility installation, backfill, and surface restoration work.

Trench Design Coordinator (TDC): The person or entity responsible for designing the trench, specifying the substructure location, issuing intents, and coordinating design and location of all joint trench occupants.

Trench Layout: A sketch showing the proposed joint trench route submitted as part of the intent.

Trench Occupant: Any participating operator installing facilities in a common

trench with others.

Undisturbed Earth: In situ, hard compact soils unaffected by any manmade cut, cavity, trench, or depression in the earth's surface.

Utilities: Operators, public or private, that provide gas, electric, or telecommunications services intended for general public, municipal, or private use.

Wet Utilities: Includes but not limited to water, storm sewer, sanitary sewer, steam, liquid fuels, oil, diesel, sprinkler, irrigation, drain or leach lines, propane, or lines for other liquids or volatile, heavier-than-air gases.

Work: All labor, materials, equipment, and any other job-related requirements necessary to perform the trenching, substructure excavation, coordination of facility installation, and/or placement thereof, backfilling, spoil handling, compaction, and/or trench restoration.

WRO: Work at the Request of Others. This includes reimbursable and nonreimbursable work. Consult the *Tariff Application Guide* for guidance.

Date Issued/Updated

Effective: September 2003

Review Date: September 2008

Signed,

Shan Bhattacharya

Vice President
Engineering and Planning

- Reference Documents**
- California Public Utilities Commission, General Orders 112-E and 128
 - California Public Utilities Code, Section 787
 - Electric Rules 15, 15.1, 15.2, 16, and 20
 - Gas Rules 15 and 16
 - Gas Standard A-93.1, "Plastic Gas Distribution System Construction and Maintenance"
 - Engineering Document 038193, "Minimum Requirements for the Design and Installation of Conduit and Insulated Cable"
 - Engineering Document 062288, "Underground Conduits"
 - Engineering Document 062000, "Primary Electric Underground Equipment Enclosures"
 - Engineering Document 028028, "Boxes for Electric Underground"
 - Gas Estimator Manual*
 - Electric Estimate Manual*
 - Tariff Application Guide*
 - CGT Engineering Guideline 4123, "Backfill Sand Specification"
 - UO Guideline 11020, "Contaminated Soils Management"
 - UO Standard S4412, "Protection of Underground Infrastructure"
 - UO Standard S7433, "Tariff Compliance - Uniform Tariff Application"
 - UO Standard D-S0203, "Project Management"
 - USP 20, "Contracting Requirements and Procedures"

Service Planning Bulletin 2002-05, “New Business Project Inspection Process”

Attachments

Attachment 1, “Detailed Procedures”

Exhibits

Exhibit A, “Joint Trench Drawing”

Exhibit B, “Joint Trench Configurations and Occupancy Guide”

Exhibit C, “Agreement to Perform Tariff Schedule Related Work,” Form 62-4527

Exhibit D, “Intent Letter”

Exhibit E, “Authorization for Joint Trench Construction,” Form B

Exhibit F, “Change Order - Additional Joint Trench Work Authorization,” Form 62-3283

Exhibit G, “General Terms and Conditions for Gas and Electric Extension and Service Construction by Applicant,” Form 79-716

Exhibit H, “Distribution Service and Extension Agreement,” Form 62-0980

Exhibit I, “Change Order,” Form 62-0579

Revision Notes

Where?	What Changed?
2016 Editorial Correction	Added Records section, including record retention statement.

Attachment 1 Detailed Procedures

1. Joint Trenching Responsibilities

- A. The financial responsibility for excavating and backfilling a joint trench varies with specific Company tariffs and among utilities. Refer to the Company's Gas Rules 15 and 16 and Electric Rules 15, 16, and 20 for specific trenching responsibility.

For new business jobs, the applicant has the option of installing gas and/or electric facilities in accordance with the Company's specifications. The Company shall enter into an agreement with the applicant, incorporating the conditions of work, which shall include indemnification and insurance provisions, and terms of payment for work provided. The applicant will make designation options in the "Distribution Service and Extension Agreement," Form 62-0980 (see Exhibit H). Under the Company's rules, the applicant designates the TDC and TCC. When the applicant elects to install the gas and electric facilities, the applicant generally serves as the TCC. If there are questions concerning the application of the rules, contact the New Customer Connections department for assistance.

For Rule 20A jobs, either the Company or SBC usually acts as TDC. The Company and SBC have an informal understanding that both companies will coordinate an equivalent share of Electric Rule 20A trenching work. While the magnitude of work coordinated by the Company or SBC will vary on individual projects, over the long term each utility should have coordinated approximately the same proportion of easy and difficult jobs. The Land department of the utility that is acting as TDC will obtain all necessary land rights and permits. Each trench occupant must sign an "Agreement to Perform Tariff Schedule Related Work," Form 62-4527 (see Exhibit C), to release work for construction.

When the applicant elects to serve as the TCC, the applicant may decide on one of the following:

- (1) Perform the work.
- (2) Designate a qualified contractor to perform the work.
- (3) Request the work be performed by the Company or another utility.

The applicant may be responsible for payments or credits, depending on the applicable tariff.

The applicant is responsible for the removal of excess spoil and associated costs.

- B. The TDC is responsible for:

- (1) Preparing the layout of the trench.
- (2) Sending out intents to other utilities.
- (3) Preparing the joint trench drawing. Refer to Exhibit A for a sample joint trench drawing.
- (4) Allocating cost.

- (a) On new business and reimbursable WRO jobs, the TDC bills the applicant 100% of the cost of the trench design work. This includes preparing the joint trench drawing and determining the cost allocation. It is the applicant’s responsibility to bill the other trench occupants.
- (b) On reconstruction, nonreimbursable WRO, and Rule 20A jobs, the TDC bills the other trench occupants for their percentage share of the design costs.
- (5) Land rights: Except for Electric Rule 20 projects, the TDC is responsible for obtaining all required joint land rights and permits. For land rights required solely by one of the other trench occupants, the TDC will, upon request, furnish that trench occupant with a sketch map delineating the trench route and the names and addresses of the affected property owners.
- (6) Permits: For new business jobs, the applicant is responsible for obtaining all required permits. The applicant may request the TDC to obtain them. In some jurisdictions, each trench occupant may be required to obtain permits, even though the facilities are installed by an applicant.

C. The TCC is responsible for:

- (1) Constructing the trench.
- (2) Installing conduits, splice boxes, service pedestals, equipment and equipment pads, and enclosures.
- (3) Backfilling.
- (4) Construction scheduling and jobsite coordination.
- (5) Billing trench occupants for their share of the work on reconstruction jobs.

When the applicant elects to be the TCC, the Company’s “General Terms and Conditions for Gas and Electric Extension and Service Construction by Applicant,” Form 79-716 (see Exhibit G), provides a detailed outline of the applicant’s responsibilities.

2. Intents

A. When the Company is designated as the TDC:

- (1) Providing notification: The Company is responsible for sending out an “Intent Letter” to all potential trench occupants and collecting information from all interested parties (see Exhibit D for a sample intent letter). A list of contact names and phone numbers for this purpose can be obtained from the Underground Service Alert (USA) center. For new business jobs, intents are sent to potential trench occupants within 5 business days after a pre-engineering meeting with the applicant.
- (2) Preparing the trench layout: The trench layout is a sketch or drawings provided by the applicant or a sketch on existing gas distribution plat sheets showing the approximate location of the trench.

The following items are depicted on the trench layout:

- (a) The Company's proposed trench location and service points.
 - (b) The Company's proposed transformer and/or splice box excavation areas (if known).
 - (c) If needed, the quantity, size, and type of Company facilities to be installed.
- (3) Intent response: The potential trench occupants are responsible for responding to the intent within 10 business days for new business and reimbursable WRO jobs and 30 business days for reconstruction, Rule 20A, and nonreimbursable WRO jobs. The response includes the following:
- (a) Land rights requirements.
 - (b) An indication of whether the trench occupant's conduits will fit within the cross-sectional area of the standard trench allocated to that occupant (refer to, Table 3 on Page 14). If not, the trench occupant provides the cross-sectional area of the trench segments required to accommodate the trench occupant's conduits.
 - (c) Quantity, size, location, type, and intended use of facilities other than conduits to be installed as part of the project (e.g., splice boxes, transformer boxes, multi-duct facilities).
 - (d) Agreement for reduction of clearances, if applicable.
 - (e) Minimum trench size for facilities exceeding the facility allotment or standard joint trench.
 - (f) Special billing or cost breakdown requirements.
 - (g) Signature of an authorized representative of the interested trench occupant.
 - (h) Service, duct, and/or main duct installation to be included in the TDC's scope of work.
 - (i) Authorization number, if applicable.
- (4) If a potential trench occupant has not responded or if the applicant cannot make contact with the trench occupant, the joint trench drawing is prepared under the assumption that CATV and telephone will be participating in the trench. All re-engineering costs associated with the inclusion of any trench occupant notified by the Company who did not respond to the intent or any later change by a trench occupant shall be borne by the applicant or the trench occupant, as applicable, before inclusion into the joint trench. A written response from a potential trench occupant is construed as a commitment to participate in the joint trench design process. When the scheduling of an applicant's project does not provide sufficient time for sending and receiving written intent responses, the Company shall either contact all potential trench occupants to get a preliminary verbal response, or set up a pre-engineering

meeting and process the intents during the meeting. A written intent is sent only to those interested in the joint trench.

- (5) If a canceled or altered commitment by a trench occupant results in additional design costs, the Company bills those additional costs to the trench occupant whose decision or indecision caused the revision.
- (6) The intent process may be skipped by the Company if the trench route and occupancy required is evident (e.g., a service completion). The Company can provide job notice to other utility occupants, and the joint trench drawing can then be used to convey engineering details to the other trench occupants.

B. When the Company is not designated as the TDC:

- (1) The Company does not prepare or submit intents; that is the function of the TDC.
- (2) Regarding the intent response, the Company responds to an intent request within 10 business days for new business jobs or 30 business days for reconstruction jobs. The Company's response includes the following:
 - (a) A positive reply, unless there is a reason for not participating. The Company provides the reason for not participating to the TDC in writing.
 - (b) A list of "global" design requirements. These requirements may include any or all of the following:
 - i. Source feeds.
 - ii. Facility sizing requirements.
 - iii. Major facilities requirements.
 - iv. Tie-in design.
 - v. Necessary sectionalizing, protection, regulation, or valving requirements.
 - (c) Copies of Company plat sheets, if required.

3. Preparation and Authorization of the Joint Trench Drawing

A. If the Company has been designated as the TDC, the Company prepares a joint trench drawing.

- (1) The joint trench drawing delineates the proposed trench route, location from fixed objects and property lines, location and size of all substructures, and the type of occupants in each trench section. The size and occupancy of the trench is specified by reference to the "Joint Trench Configurations and Occupancy Guide," and the drawing shall depict any nonstandard trench dimensions. The standard trench sections and preferred locations are shown in the "Joint Trench Configurations and Occupancy Guide." The joint trench drawing does not depict profile views, or separate cross sections that illustrate sweeps into and out of substructures. It does

depict nonstandardized trench cross-sectional details. Deviation from the configurations shown in the “Joint Trench Configurations and Occupancy Guide” may be made, provided the details are shown on the “Joint Trench Drawing” and all cover and clearance requirements are met. See Section 3.B. for additional requirements. If requested by the applicant, the Company may provide, at its option, detailed cross sections, provided the applicant agrees to pay the added cost. The cost for this service will be based on the Company’s estimated cost for preparation.

- (2) The Company sends the joint trench drawing to the trench occupants and requests their review, approval, and return by a date specified in the transmittal letter. Trench occupants are responsible for promptly reviewing the joint trench drawing and advising the Company of any desired revisions. The Company makes any requested revisions and sends the revised joint trench drawing to the trench occupants for further review. This process continues until all trench occupants have approved the joint trench drawing. If a trench occupant requests a revision anytime after the response date specified in the transmittal letter, the Company bills that trench occupant for any re-engineering costs.
- (3) For reconstruction, Rule 20A, and nonreimbursable WRO jobs, the Company prepares an estimate of the cost of the trench and a proposed allocation of that cost among the trench occupants. The “Authorization for Joint Trench Construction” (Form B) is used for this purpose (see Exhibit E). The trench occupants review the cost allocation and advise the Company whether they intend to participate in the trench. If a trench occupant agrees to participate, the trench occupant is committed to paying the specified allocation of the cost of the joint trench.
- (4) For new business and reimbursable WRO jobs, the Company prepares an estimate of the cost of the trench. The Company bills the applicant for the total job cost. The “Authorization for Joint Trench Construction” (Form B) is not provided to the other trench occupants or applicant for review or approval.

B. Use of the “Joint Trench Configurations and Occupancy Guide”

- (1) The standard trench configurations shown on the “Joint Trench Configurations and Occupancy Guide” are used to design the joint trench unless a trench occupant advises the Company that it cannot fit its facilities into the standard trench configurations or if an alternative configuration, acceptable to the Company, is proposed by the applicant or TDC. In that event, the Company will design a nonstandard trench to accommodate the trench occupant provided the trench occupant or applicant, as applicable, agrees to pay all incremental costs associated with the nonstandard trench configuration. The joint trench drawing must show the location of all standard and nonstandard trench sections. Any nonstandard trench cross sections are shown on the joint trench drawing. See Exhibit A for a sample joint trench drawing.
- (2) The Company prefers to locate its facilities in the following trench locations (in order of preference):

- (a) A PUE (used wherever a PUE with adequate space to accommodate the facilities is available). If possible, the width of the PUE should be 10 feet wide.
- (b) The back edge of a proposed sidewalk nearest to the customer’s property line.
- (c) An unpaved or otherwise unimproved area that will not contain vegetation or will be used as a parking strip, which will preclude or otherwise hinder the ability of Company maintenance employees to operate, maintain, reconstruct, or rearrange Company facilities.
- (d) A paved area such as a street or within the confines of a proposed walkway, provided underground enclosures are located behind the edge of the roadway or parking strip.

Note: The “Joint Trench Configurations and Occupancy Guide” provides typical joint trench designs.

C. Separation of Company facilities from wet and non-utility facilities

- (1) The Company will not install its facilities (distribution or service) in a joint trench with wet utilities or non-utility facilities. Company facilities may, with certain restrictions, cross wet utilities and non-utility facilities at approximately right angles.

The Company does not permit the installation of wet utility or non-utility facilities in the area beneath its splice boxes, transformer pads, or similar structures. This area extends to a depth of 6 feet below the bottom and 12 inches horizontally around the splice box, transformer pad, or similar structure. This separation is required in order to maintain adequate working clearances between wet and non-utility facilities and the Company’s conduits sweeping into and out of the pad or enclosure.

Non-utility facilities are not permitted in joint trench installations with Company facilities. Non-utility facility owner installations pose an operational risk to Company facilities.

- (2) Horizontal separation from wet utilities

- (a) The maximum practicable horizontal separation shall be maintained between the outer edge of Company facilities and the outer edge of parallel “wet” utilities. The minimum allowable separation between Company facilities and “wet” facilities is 3’ with the presence of a minimum of 1’ of undisturbed earth or the installation of a suitable barrier.

In the extraordinary case that the minimum 3’ horizontal separation cannot be attained between “wet” utilities and Company dry facilities, a variance may be recommended by the local Inspection Supervisor and submitted to Service Planning Support Program Manager for approval.

The waiver procedure is described in Item D, “Waiver,” below. Note that 1’ of undisturbed earth or a suitable barrier shall be maintained between the “wet” utilities and Company dry facilities. **In no case will a separation of less than 1’ be allowed.**

- (b) The maximum practicable horizontal separation shall be maintained between the outer edge of Company service facilities and the outer edge of parallel “wet” utilities. The minimum allowable separation between Company facilities and “wet” facilities is 3’ with the presence of a minimum of 1’ of undisturbed earth or the installation of a suitable barrier.

In the extraordinary case that the minimum 3’ horizontal separation cannot be attained between “wet” utilities and Company service facilities, a variance may be recommended by the local Inspection Supervisor and submitted to Service Planning Support Program Manager for approval.

The waiver procedure is described in Item D, “Waiver,” below. Note that 1’ of undisturbed earth or a suitable barrier shall be maintained between the “wet” utilities and Company dry facilities. **In no case will a separation of less than 1’ be allowed.**

- (3) Horizontal separation from dry non-utility facilities: The Company will install its gas and electric facilities so as to maintain a minimum of 2 feet separation between the nearest outer surface of any Company facility and any parallel non-utility facilities with no less than 12 inches of undisturbed earth or other soil barrier between the adjacent sides of the individual non-utility and Company trenches.
- (4) Vertical separation: The Company will install its gas and electric facilities with a minimum vertical separation of 6 inches from wet and non-utility facilities. In certain installations, the following additional requirements may apply:
- (a) Additional Requirement No. 1: The Company will install a thermal insulating barrier between the Company’s gas or electric facilities and steam facilities or other sources of heat (except the facilities of another electric distribution utility). See Section E, below, for special considerations where Company facilities will be installed in a joint trench with another utility’s electric facilities. The barrier will extend at least 3 feet beyond the Company’s gas or electric facilities.
- (b) Additional Requirement No. 2: Where Company facilities are to be installed above propane or other volatile, heavier-than-air gas lines, the Company will request that the owner of the propane or other volatile, heavier-than-air gas lines facilities sleeve those facilities, with the ends of the sleeve extending at least 3 feet radially beyond the Company’s gas or electric facilities. The Company or applicant will reimburse the owner for the cost of this work based upon the applicable tariff.

- (c) Additional Requirement No. 3: Where the Company installs splice boxes, transformer pads, or similar structures over the facilities of wet utilities, the Company will request that the owner of these facilities install protective barriers or sleeves as specified in Additional Requirement No. 1 and 2.
- D. Waiver: The Company may agree to waive the minimum 3' separation requirement at the request of an applicant if warranted and the need is clearly demonstrated. The request for a waiver must:
- Be made in writing and submitted to the Company ADE during the planning and design phase of the project,
 - Clearly describe the conditions necessitating the waiver,
 - Include a proposed design,
 - And, include a mitigation proposal to provide a barrier between the “wet” utilities and Company dry facilities in the event 1' of undisturbed earth cannot be maintained.

The Company ADE will review the proposal and with their Supervisor's concurrence, the Company Project Manager will forward the waiver request to the Service Planning Support Program Manager for approval. In the event that further engineering review and approval is needed, review and concurrency will be obtained from Supervising Engineer, Gas Transmission and Distribution Section of Standards and Compatible Units.

Approved waivers will be returned to the division and be retained with the trench inspection record logs.

Under no circumstances will the Company grant a waiver for reduced separation for pipes containing propane or other volatile, heavier-than-air gases.

- E. Special considerations for joint trenches occupied by another electric utility
- (1) The Company will install Company electric facilities in a joint trench with another electric utility, provided that all the following criteria are met:
- (a) The other electric utility is a member of a regional one-call notification center as defined by California Government Code Section 4216.
 - (b) The other electric utility provides the Company with the other utility's maximum ultimate load information (based on conduit size and number) so that the Company can size its electric facilities to accommodate any necessary de-rating caused by the close proximity of the other electric utility's facilities. The Company will provide the other electric utility with its maximum ultimate load information so that the other electric utility may size its facilities appropriately. The full cost of the consequential de-rating will be borne by the other utility.

- (c) The other electric utility agrees to put permanent 3-inch red plastic identification tape, acceptable to the Company, on its conduits so that they can be identified by Company field crews working on the facilities in the future. The Company will put identifying markings on its conduits for the benefit of the other utility's field crews. All identification tape will be installed in direct contact with the conduit and run in a continuous length from junction or termination points.
 - (d) A distance of 85 feet shall be maintained between each utility's electric grounds, enclosures, or system equipment to prevent potential ground fault current interference.
 - (e) The trench configurations for a second electric utility depicted in the "Joint Trench Configurations and Occupancy Guide" are used.
- (2) Except as provided in Section 3.E.(1)(b) above, the additional costs incurred by the Company or other electric utility in order to comply with these criteria shall be allocated in accordance with the applicable rules and tariffs.

F. Cost allocation

- (1) The following costs shall be equally shared among the trench occupants:
 - (a) Permits.
 - (b) Inspection fees of local government agencies.
 - (c) Compaction tests.
 - (d) Pavement or sidewalk cutting and replacement.
 - (e) Bore pit excavations.
 - (f) Land rights for the joint trench.
 - (g) Preparation of the joint trench drawing and cost allocation.
- (2) The following costs shall be shared proportionally by the trench occupants, based upon Tables 1 and 2 on Pages 10 and 12.
 - (a) Import select backfill material, if required.
 - (b) Spoil removal (reconstruction and Rule 20A only), if required.
 - (c) Financial trenching costs.
 - (d) Financial engineering costs.
 - (e) Administrative costs.

- (3) The following costs will be paid by the individual trench occupants to which they apply:
- (a) Individual bores.
 - (b) Trench space required beyond the standard trench configuration.
 - (c) Excess bore pit excavation required.
 - (d) Import select backfill material and soil removal that is not required for all the occupants.
 - (e) Separate land rights for an individual trench occupant.
 - (f) Other excess costs caused by an individual trench occupant.
- (4) Use the following tables and associated “Joint Trench Configurations and Occupancy Guide” to determine the standard cost allocation percentages among the trench occupants. An occupant can install a number of different facilities, for example, streetlights, traffic signals, and telecommunications. However, each facility installed is treated as a separate occupancy, and will be billed accordingly. If a trench occupant or applicant requires more space in the trench or if there is a nonstandard trench configuration, that occupant, or the applicant, as applicable, is financially liable for **all** incremental costs. Refer to Sections 3.F. (5) and (6) for nonstandard, nonreimbursable work and oversized trench calculations. If there are **more** than five trench occupants, contact the New Customer Connections department for assistance.

**Table 1
Distribution Trench
Cost Allocation Percentages**

Occupant	Two-Party Trench														
Gas	50%	50%	50%	44%	34%	52%									
Telephone	50%						50%	50%	44%	34%	52%				
CATV		50%					50%					50%	44%	34%	52%
Secondary			50%					50%				50%			
Primary				56%					56%				56%		
Secondary and Primary					66%					66%				66%	
Streetlight						48%					48%				48%

Two-Party Trench			
Secondary	52%		
Primary		58%	
Secondary and Primary			67%
Streetlight	48%	42%	33%

Occupant	Three-Party Trench														
Gas	34%	33%	31%	26%	34%	33%	31%	26%	34%	34%	31%	26%			
Telephone	33%	33%	31%	26%	34%								26%	31%	33%
CATV	33%					33%	31%	26%	34%				26%	31%	33%
Secondary		34%				34%				34%					34%
Primary			38%				38%				40%			38%	
Secondary and Primary				48%				48%				50%	48%		
Streetlight					32%				32%	32%	29%	24%			

Occupant	Three-Party Trench						
Telephone	34%	34%	31%	26%			
CATV	34%				34%	31%	26%
Secondary		34%			34%		
Primary			40%			40%	
Secondary and Primary				50%			50%
Streetlight	32%	32%	29%	24%	32%	29%	24%

Occupant	Four-Party Trench												
Gas	25%	23%	20%	26%				25%	24%	21%	24%	25%	21%
Telephone	25%	23%	20%	25%	25%	24%	21%	25%	24%	21%			
CATV	25%	23%	20%	25%	25%	24%	21%				24%	25%	21%
Secondary	25%				26%			26%				26%	
Primary		31%				30%			30%		30%		
Secondary and Primary			40%				39%			39%			39%
Streetlight				24%	24%	22%	19%	24%	22%	19%	22%	24%	19%

Occupant	Five-Party Trench		
Gas	20%	19%	17%
Telephone	20%	19%	17%
CATV	20%	19%	17%
Secondary	21%		
Primary		25%	
Secondary and Primary			33%
Streetlight	19%	18%	16%

**Table 2
Service Trench
Cost Allocation Percentages**

Occupant	Two-Party Trench													
Gas	50%	50%	49%	28%	50%									
Telephone	50%					50%	49%	28%	50%					
CATV		50%				50%				49%	28%	50%		
Secondary			51%				51%			51%			51%	
Primary				72%				72%			72%			72%
Streetlight					50%				50%			50%	49%	28%

Occupant	Three-Party Trench													
Gas	34%	33%	22%	34%	33%	22%	34%	22%	33%					
Telephone	33%	33%	22%	33%						33%	22%	34%	33%	22%
CATV	33%				33%	22%	33%			33%	22%	33%		
Secondary		34%			34%					34%	34%			34%
Primary			56%			56%		56%			56%			56%
Streetlight				33%			33%	22%	33%			33%	33%	22%

Occupant	Three-Party Trench	
CATV	33%	22%
Secondary	34%	
Primary		56%
Streetlight	33%	22%

Occupant	Four-Party Trench									
Gas	25%	18%	25%	25%	18%	25%	18%			
Telephone	25%	18%	25%			25%	18%	25%	18%	
CATV	25%	18%	25%	25%	18%			25%	18%	
Secondary	25%			25%		25%		25%		
Primary		46%				46%		46%		46%
Streetlight			25%	25%	18%	25%	18%	25%	18%	

Occupant	Five-Party Trench	
	20%	15%
Gas	20%	15%
Telephone	20%	15%
CATV	20%	15%
Secondary	20%	
Primary		40%
Streetlight	20%	15%

(5) Nonstandard, nonreimbursable, and oversize facility space allotment: Table 3 depicts the facility space and minimum trench size allotment for nonstandard, nonreimbursable, and oversize facility trenches.

Table 3
Facility Space and Minimum Trench Size Allotment

Occupant	Distribution Trench		Service Trench	
	Facility Space Allotment	Minimum Trench Required	Facility Space Allotment	Minimum Trench Required
Gas (G)	5" x 5"	29" x 12"	3" x 3"	27" x 6"
Telephone (T)	5" x 7"	29" x 12"	3" x 3"	27" x 6"
Cable TV (C)	5" x 7"	29" x 12"	3" x 3"	27" x 6"
Electric (S)	5" x 5"	29" x 12"	4" x 4"	28" x 6"
Electric (P)	7" x 7"	37" x 12"	5" x 5"	35" x 12"
Electric (SP) (See item (c))	7" x 17"	37" x 18"	–	–
Streetlight (SL)	3" x 3"	27" x 12"	3" x 3"	27" x 6"

- (a) An occupant can install a number of different facilities. However, each facility installed is treated as a separate occupancy, and will be billed accordingly. If each trench occupant requires more space in the trench or if there is a nonstandard trench configuration, that occupant is financially liable for all incremental costs.
- (b) The depth shown is the depth of trench required from finished, final, or future gutter grade.
- (c) Electric facilities may be any combination of primary (P), secondary (S), or Company-owned streetlighting systems.
- (d) The percentage allocation is intended to provide a fair and equitable allocation of costs to each occupant.

(6) Nonstandard, nonreimbursable, and oversize facility trench cost allocation: Use the following formulas to determine the cost allocation percentages among the trench occupants for nonstandard, nonreimbursable (non-new business) projects, and oversize facility trenches. An occupant can install a number of different facilities, for example, streetlights, traffic signals, and telecommunications. However, each facility installed is treated as a separate occupancy, and will be billed accordingly. When a new business job estimate is prepared, Tables 1 and 2 should be used for typical joint trench cost allocation percentages.

$$G = \frac{A_g}{A_t + A_c + A_e + A_g + A_o} \times J$$

$$T = \frac{A_t}{A_t + A_c + A_e + A_g + A_o} \times J$$

$$C = \frac{A_c}{A_t + A_c + A_e + A_g + A_o} \times J$$

$$E = \frac{A_e}{A_t + A_c + A_e + A_g + A_o} \times J$$

$$O = \frac{A_o}{A_t + A_c + A_e + A_g + A_o} \times J$$

Note: The individual minimum trench requirements (At, Ac, Ae, etc.) for the participants listed in Table 3 shall be used whenever that occupant will be installing facilities that do **not** exceed their facility space allotment.

G = Gas share of the estimated trench cost.

T = Telephone share of the estimated trench cost

C = Cable TV share of the estimated trench cost

E = Electric share of the estimated trench cost

O = Other occupants' share of the estimated trench cost, e.g., city-owned streetlight or fire alarm systems. (In **all** cases involving other occupants, the size of the trench they require or normally dig for the installation of said facilities, must be determined before any billing authorization preparation.)

Ax = Cross-sectional trench area of the specified "Minimum Trench Size Allotment" shown in Table 1 for an individual occupant (x = g, t, c, e, or o).

J = The **total** estimated cost of the joint trench.

If an occupant requires facilities **exceeding** their facility space allotment as shown in Table 3 or the applicant requests additional allotment for a specific utility, and subsequently causes an increase in trench width and/or depth, then that utility cross-sectional trench area, A_x , as used in the above formula shall be increased by that number of inches in width and/or depth.

4. Processing and Billing

- A. When the Company is the TCC for reconstruction, Rule 20A, and nonreimbursable WRO jobs, the Company bills each trench occupant for its share of the joint service or distribution trench costs. The Company does not interpret the tariffs or procedures of other utilities. The Company shall bill the applicant 100% of the cost of the work on new business and reimbursable WRO jobs. However, the Company will not collect ITCC tax on the value of non-Company-owned trench.
- B. Guarantees and equipment warranty: Refer to Exhibit G, “General Terms and Conditions for Gas and Electric Extension and Service Construction by Applicant,” Form 79-716.

5. Trenching Inspection

- A. On all new business jobs an inspection fee advance is collected before construction. For procedures and accounting, refer to Service Planning Bulletin 2002-05, “New Business Project Inspection Process,” contained in the *Tariff Application Guide*. The Company will refund or bill the applicant the difference between the advance fees and the actual inspection costs (including individual residential services) when the job is completed.
- B. A Company inspector oversees the work related to trenching, substructure excavation, shading, separation, backfilling, and compaction for the joint trench.
- C. The Company inspectors document the inspections using the Company-approved inspection logs referenced in Service Planning Bulletin 2002-05. Whenever possible, the inspector has the developer or his or her agent sign and date the inspection logs the day the inspection is made.
- D. The TCC notifies the Company at least 2 working days (48 hours) in advance of commencing any joint trench-related work. Before dispatching a Company field crew to install facilities in an applicant-provided trench, a Company representative verifies that the TCC has achieved proper trench design, that adequate and suitable backfill material is available at the site, and that a precise service installation date is established and mutually agreed to by all of the intended trench occupants.
- E. Inspection fees for Rule 20A conversion work are included with other charges against the governmental agency’s Rule 20A allocation funds. Inspection fees for Rule 20B and 20C work are deducted from any applicant credit or payment. The fees will be billed through NEBS and collected at the same time as other applicant payments.

6. Construction and Job Completion

- A. The TCC coordinates all work with each trench occupant in a manner that will permit the installation of all facilities without delay and in an efficient, continuous manner throughout the period of construction, including the installation of either distribution or service facilities in whatever sequence they will occur.
- (1) Provided sufficient advance notice is given by the applicant and/or otherwise stipulated and agreed to by all trench occupants, the TCC will give a minimum of 2 weeks' (10 working days) notice to each trench occupant for excavation or facility installation in both distribution and service trenches. It is recommended that the TCC conduct a preconstruction meeting at the jobsite to finalize detailed scheduling requirements and to clarify the scope of work.
 - (2) After the preconstruction meeting, if any changes to the construction schedule are needed, TCC gives each trench occupant at least 10 working days' notice. The TDC is notified as well.
- B. If an occupant requires the installation of facilities not indicated on the joint trench drawing, Form 62-3283, "Change Order - Additional Joint Trench Work Authorization," is issued (see Exhibit F). A change order authorization from the trench occupant is obtained before the additional work is performed.
- C. If an applicant requires the installation of facilities not indicated on the joint trench drawing, Form 62-0579, "Change Order" is issued (see Exhibit I). A change order authorization from the applicant is obtained before the additional work is performed.
- D. Delays
- (1) After construction has commenced, if any trench occupant fails to meet, or is unable to meet, the mutually established construction schedule for placement of facilities, that trench occupant will be responsible for paying all costs associated with the delay or the job shall proceed without that trench occupant.
 - (2) Should construction proceed without one of the intended trench occupants for the foregoing reason, that trench occupant is still responsible for paying its share of the trenching costs, unless all other trench occupants and the applicant agree to adjust or prorate the revised trenching costs. In either case, that trench occupant will be responsible for paying all re-engineering, land rights, or other costs incurred.
 - (3) It is the TCC's responsibility to follow up with the applicant to ensure the applicant's readiness and to inform all occupants and affected parties of any anticipated problems or delays.

- E. The applicant accepts responsibility for maintenance of the trench (e.g., compaction, paving, etc.) for a period of 2 years or as specified in the permit, whichever is longer. If trench damages are determined to have resulted from causes not attributable to construction negligence on the part of the TCC (e.g., landslides, floods, earthquakes, sabotage, etc.), each trench occupant with buried facilities in the affected trench section will participate financially in the restoration of the trench at a cost equal to its initial trench allocation percentage.

Appendix F: Planning Tips for Cities and Counties

This Appendix defines recommended means for cities and counties to plan ahead for underground conversion projects. This includes a Conversion Master Plan, Conversion Planning Committee, and a Utilities Conversion Plan.

The undergrounding of all the overhead lines in a city or county will take many years to complete. During this time, the utility companies need to be active partners with the city or county.

Utilities can sometimes take steps to reduce future conversion costs by making alternative arrangements for the reinforcement of overhead lines in areas earmarked for underground conversion or by performing the undergrounding work in conjunction with some other city or county infrastructure project. To take maximum advantage of these opportunities, each city or county should consider establishing a Conversion Planning Committee.

Conversion Master Plan

The Conversion Master Plan is used as a means of laying out a long-term vision and building consensus among city or county leaders, business owners and citizens. A local government can create a Conversion Master Plan as a standalone document or it can be a part of the agency's General Plan.

Many cities and counties use a developer fee program to support underground conversion activities. (See Government Code Sections 66000, et seq.)

In such cases a Conversion Master Plan would normally be considered a prerequisite to the adoption of such a program.

A Conversion Master Plan should include:

- A statement of objectives
- The manner in which priorities are to be set for conversion projects
- A map showing all currently proposed conversion projects (updated regularly)
- A ranking of project priorities
- Basic information about each project, including the purpose of each project

Project-specific information should include such basics as:

- The measured length of the project
- The approximate project costs based on periodically updated unit costs for a similar, recently completed project
- The extent to which the project would include portions of intersecting streets



The Master Plan will not be realistic if it attempts to precisely define the timetable for each conversion project. This should be included in the “Utilities Conversion Plan” detailed later in this section. However, sharing the city or county’s basic project information with the utility companies will help facilitate the exchange of critical planning information between the utilities and city or county planners.

Conversion Planning Committee

A Conversion Planning Committee could be useful if a municipality wants to underground multiple locations. This Committee is comprised of representatives from the city or county and the utility companies. Its primary function is to identify and prioritize projects in the Utilities Conversion Plan (next section). The Committee also plays an important role in identifying projects that qualify for funding under the utility companies’ tariffs.

The Committee’s first task would be to develop the Conversion Master Plan which identifies and prioritizes potential projects for underground conversion. These conversion projects would be within a program that incorporates the availability of funds and the utility companies’ capability to perform their necessary tasks. A well-rounded conversion planning committee should include:

- City or county staff (e.g. planners, engineers, finance department, economic development representatives)
- Elected and/or appointed officials (e.g. council members, planning commissioners, design review)
- Utility representatives, including electric, telephone, and cable company representatives

The utility representative on the Conversion Planning Committee can play an important role in helping to identify projects that qualify for utility funding and the current status of such funding. Moreover, the utility companies periodically revise their labor and material costs, and the utility representatives would play an important role in helping the committee update the Conversion Master Plan.

Utilities Conversion Plan

To begin a Electric Rule 20 conversion process, every city or county is encouraged to develop a “Utilities Conversion Plan” covering at least five projects.

This is a short-range plan for use in assigning conversion priorities, cost estimates, and project schedules on the basis of a city’s or county’s current planning assumptions.

The Conversion Planning Committee should be tasked with directing a city or county’s Utilities Conversion Plan and recommending flexible project timetables. Over time, a well-functioning



Committee will help to assure the logical progression of conversion projects and be instrumental in minimizing construction delays and maximize the use of conversion funds.

A Utilities Conversion Plan should include a set of objectives, project priorities, and rough cost estimate provided by PG&E, flexible for each project and based on sound planning assumptions. Since utility conversions are often triggered by other improvement activities (such as street widening or storm drain replacement), a Utilities Conversion Plan will be extremely useful to a city or county when trying to accurately budget the total costs of an improvement project which includes underground conversion. Such a plan is best developed through the collaborative efforts of a Conversion Planning Committee.



Appendix G: Project Prioritization and Coordination

This section describes the management and coordination of a specific conversion project. Well managed conversion projects reflect a high degree of interaction and involvement among the key participants. Because project delays are costly, participants should be able to quickly address issues as they arise.

Early Contact with Property Owners

The importance of establishing an early dialogue with property owners and tenants affected by a proposed conversion project cannot be overstated. Some challenges may include:

- Providing easements
- Construction related disruptions
- Coordination of planned power outage for customers with medical needs
- Paying for any share of the costs of converting overhead service facilities to underground
- Disturbances to landscaping or other private property due to the installation of underground utilities
- Temporary disruption of utility service during project construction
- Granting rights-of-way or having property encumbered by pad-mounted transformers or other equipment

Therefore, to lay a foundation for a conversion project, it is important to make certain that the city or county's General Plan includes provisions for the underground conversion of overhead lines.

It's also important that the project be identified in the city or county's Utilities Conversion Plan (and the Conversion Master Plan if one exists) and that elected and appointed officials are represented on the Conversion Planning Committee. This will help to ensure that the city or county's governing body understands the underground conversion policy, the proposed project, and any possible neighborhood or business objections.

Neighborhood Meetings

Neighborhood information meetings, held by members of the project team, will help inform property owners and address their concerns. This should be done well in advance of the city or county being requested to formally create an underground utilities district. At a neighborhood information meeting, representatives of the participating utility companies and city or county officials can provide information and answer questions regarding:



- The scope and benefits of the proposed project
- The anticipated construction schedule
- The roles of the utility companies and the city or county
- Property owner impacts, including a range of costs
- City or county policy and regulations regarding conversion projects

The meeting should be held at a convenient time and location. Sufficient notice should be given to encourage attendance.

Prior to holding the neighborhood meeting, the committee should determine the extent to which the city or county proposes to designate the use of Rule 20A funds for the installation of underground service and be prepared to share this information with the property owners.



Appendix H: General Conditions Agreement





GENERAL CONDITIONS AGREEMENT TO PERFORM WORK PURSUANT TO PG&E ELECTRIC RULE 20A – REPLACEMENT OF OVERHEAD WITH UNDERGROUND ELECTRIC FACILITIES

PG&E Contract: _____
Contact #: _____

PROJECT NAME: _____

LOCATION: _____, CALIFORNIA

City/County of _____ (Governmental Body) has requested, and PACIFIC GAS AND ELECTRIC COMPANY (PG&E) has agreed to perform the replacement of overhead with underground electric facilities pursuant to Section A of PG&E's Electric Rule 20 Tariff (Electric Rule 20A), subject to the following General Conditions Agreement.

Rule 20A Tariff:

PG&E will, at its expense, replace its existing overhead electric facilities with underground electric facilities along public streets and roads, and on public lands and private property across which rights-of-way satisfactory to PG&E have been obtained by PG&E, consistent with Electric Rule 20A.

To ensure the success of this Electric Rule 20A project, Governmental Body and PG&E agree to the following terms. Any exceptions to these terms will require an advice filing with the California Public Utilities Commission (CPUC), with notice to the Governmental Body in accordance with General Order 96-B or any successor orders.

Responsibilities of the Governmental Body:

PG&E's Electric Rule 20A sets forth a program for replacing existing overhead electric facilities with underground electric facilities subject to certain requirements. In order to implement the Electric Rule 20A program as requested by the Governmental Body, the Governmental Body hereby agrees to:

- 1) Consult with PG&E to confirm the requirements of an Electric Rule 20A project and the location of the specific Electric Rule 20A project.
- 2) Hold public hearing(s) on the proposed Electric Rule 20A project in order to determine that the specific Electric Rule 20A project is in the general public interest.
- 3) Provide PG&E with a duly-adopted ordinance or resolution, as appropriate, creating an underground district in the area in which both the existing and new facilities are and will be located, requiring, among other things:
 - a) That all existing overhead communication and electric distribution facilities in such district shall be removed;
 - b) That each property served from such electric overhead facilities shall have installed in accordance with PG&E's rules for underground service, all electrical facility changes on the premises necessary to receive service from the underground facilities of PG&E as soon as it is available; and
 - c) Authorizing PG&E to discontinue its overhead electric service upon completion of the underground distribution system.
- 4) Acknowledge that wheelchair access is in the public interest and will be considered as a basis for defining the boundaries of projects that otherwise meet the criteria set forth in PG&E's Electric Rule 20A, Subsection 1(a).
- 5) Provide PG&E with a project boundary map and available drawings showing all known Governmental Body-owned facilities and known road improvements.
- 6) Identify property owners/persons responsible for the properties identified by PG&E as requiring easements. Make initial contact with the property owners/responsible persons, mail PG&E prepared easement documents, and coordinate meetings for the purpose of assisting PG&E with acquisition of necessary easements.

GENERAL CONDITIONS AGREEMENT TO PERFORM WORK PURSUANT TO PG&E ELECTRIC RULE 20A – REPLACEMENT OF OVERHEAD WITH UNDERGROUND ELECTRIC FACILITIES

- 7) Provide PG&E with the Governmental Body's published standard for trench restoration and backfill requirements prior to start of engineering for the project, and require joint trench participants to replace paving, landscaping, sidewalk, etc., in accordance with the Governmental Body's published standard for trench restoration and backfill requirements that is removed or damaged during construction.
- 8) Work cooperatively with PG&E to schedule undergrounding projects prior to paving projects or after the paving moratorium period. If the Governmental Body elects to construct the undergrounding project prior to the end of the paving moratorium period, restoration and backfill requirements shall not exceed the standards for non-moratorium streets, described in Section 7 above.
- 9) Prior to the start of the project design, elect how to address streetlights impacted within the project scope.
- 10) Prior to the start of the project design, provide a list of all recorded property owners (including APNs and addresses based on current tax assessor records).
- 11) By the end of the project design, disclose all intended permit conditions, fees, and cost details. If the Governmental Body is a joint trench participant, the Governmental Body will pay its share of the associated permit costs.
- 12) Provide PG&E with recent pot holing/core samplings and soils/paving information from other projects, if available.
- 13) Work cooperatively with PG&E to establish work hour restrictions for construction, including holiday and/or special construction limitations.
- 14) Survey, stake, and provide drawings to PG&E for any future known Governmental Body road improvement, grade changes, or viaduct projects known or planned within the project limits.
- 15) Work cooperatively with PG&E to identify a suitable construction yard for the Rule 20A project. If the Governmental Body is a joint trench participant, will pay its share of the associated construction yard costs.
- 16) Work cooperatively with PG&E concerning contaminated soils and cultural resources.
 - a) **Contaminated Soils.** In the circumstance where contamination may be a concern, PG&E's Electric Rule 20A funds will be used for core samples to design a project to avoid environmental issues. In the event contamination is encountered that triggers federal, state, and/or local laws and regulations which restrict or prohibit further work in the trench, PG&E will suspend work in the affected area until all measures required by law have been completed by the Governmental Body or other party responsible for such contamination.
 - b) **Cultural Resources.** In the circumstance where cultural resources are encountered that trigger federal, state, and/or local laws and regulations which restrict or prohibit further work in the trench, PG&E will suspend work and comply with the appropriate notification requirements.
- 17) **Electric Service Panel Conversion:** Governmental Body may choose to be the lead in the conversion of electric service panels to accept underground service. If so and stated in the ordinance or resolution, PG&E shall pay the Governmental Body up to the maximum amount allowed by the Electric Rule 20A Tariff per service entrance, excluding permit fees. If the panel conversions are performed by the property owner, the Governmental Body will coordinate the reimbursement of PG&E funds, to the property owner / responsible party, up to the maximum amount allowed by the Electric Rule 20A Tariff per service entrance, excluding permit fees.
- 18) **Subsurface Equipment:** Governmental Body may request that PG&E install electrical equipment subsurface. If PG&E agrees, then, the Governmental Body's Electric Rule 20A allocation shall be used for the additional costs necessary to complete the subsurface installation. The Governmental Body shall be responsible for paying the appropriate one-time maintenance charge. However, in the event that pad-mounted equipment cannot be installed due to field conditions, the Governmental Body will not be charged the one-time maintenance fee.

The one-time maintenance charge is calculated by multiplying the Estimated Special Facility Cost by a one-time Cost-of-Ownership factor which represents the present worth of estimated operations and maintenance expenses per dollar of facility cost. The Estimated Special Facility Cost will vary

GENERAL CONDITIONS AGREEMENT TO PERFORM WORK PURSUANT TO PG&E ELECTRIC RULE 20A – REPLACEMENT OF OVERHEAD WITH UNDERGROUND ELECTRIC FACILITIES

depending on the transformer size. The Estimated Special Facility Cost equals the Estimated Non-Standard Special Facility Cost minus the Estimated Standard Facility Cost. The one-time Cost-of-Ownership factor is: ((current monthly Cost-of-Ownership factor x 12 months) x (current Present Worth Factor)). The monthly Cost-of-Ownership factor is stated in Rule 2 of PG&E's tariff. For example, based on the monthly Cost-of-Ownership factor as of January 1, 2018, the one-time maintenance charge would be (((0.53% x 12) x (14.2)) x (Estimated Special Facility Cost)). This is for example purposes only and the formula factors may change over time.

Responsibilities of PG&E:

PG&E's Electric Rule 20A sets forth a program for replacing existing overhead electric facilities with underground electric facilities subject to certain requirements. In order to implement the Electric Rule 20A program as requested by the Governmental Body, PG&E hereby agrees to:

- 1) Consult with the Governmental Body to confirm the requirements of Electric Rule 20A, including but not limited to holding public hearings, adoption of an ordinance or resolution, and creation of a project boundary map.
- 2) Prepare a base map showing the following: boundary, roads, sidewalks, curbs, property lines, buildings, existing water and sewer, easements, and any other known utilities or obstacles.
- 3) Upon request of the Governmental Body, initiate project design sufficient to identify trench routes and obtain any necessary easements with the express understanding that if the underground district is subsequently delayed or cancelled, PG&E shall deduct all project-related expenses, including overheads, from the Governmental Body's Electric Rule 20A allocation. If the necessary easement(s) cannot be obtained, the Governmental Body may elect to change the project scope, request redesign of the project to avoid the need for the easement(s), or request that the project be postponed.
- 4) If PG&E is designated as the design/trench lead, PG&E shall prepare the intent drawings, composite drawings and joint trench cost agreement for joint trench construction (costs will be shared by all joint trench participants). If an entity other than PG&E is designated as the design/trench lead, PG&E shall provide electric design to the design/trench lead agency.
- 5) Disclose project impacts to the existing streetlight system.
- 6) If PG&E is designated as the joint trench lead, provide Governmental Body with traffic control plan for PG&E construction pursuant to the California Manual on Uniform Traffic Control Devices (MUTCD) as part of the permit process.
- 7) Identify all locations that require an easement(s) for PG&E, prepare all necessary easement related documents, and with the cooperation of the Governmental Body (as described in item 6 of "Responsibilities of Governmental Body" above), secure easements to the satisfaction of PG&E.
- 8) Once the design process begins, provide a project schedule and cost updates on a quarterly basis to the Governmental Body.
- 9) Provide proper notification to all affected customers when electrical outages are necessary to complete project conversion to the new underground system.
- 10) Remove poles, portions of poles, or tenant poles from the underground district as required by the Joint Pole Utility Agreement.
- 11) Provide inspection services for the installation of PG&E facilities.
- 12) Work cooperatively with the Governmental Body concerning contaminated soils and cultural resources.
 - a) Contaminated Soils. In the circumstance where contamination may be a concern, PG&E's Electric Rule 20A funds will be used for core samples to design a project to avoid environmental issues. In the event contamination is encountered that triggers federal, state, and/or local laws and regulations which restrict or prohibit further work in the trench, PG&E will suspend work in the affected area until all measures required by law have been completed by the Governmental Body or other party responsible for such contamination.



GENERAL CONDITIONS AGREEMENT TO PERFORM WORK PURSUANT TO PG&E ELECTRIC RULE 20A – REPLACEMENT OF OVERHEAD WITH UNDERGROUND ELECTRIC FACILITIES

I have read the above information and understand and agree with the provisions and responsibilities as described above. I understand that this agreement at all times shall be subject to such modifications as the California Public Utilities Commission may direct from time to time in the exercise of its jurisdiction. I hereby attest, under penalty of perjury, that I am authorized to enter into this agreement on behalf of the entity indicated below.

Executed this _____ day of _____ 20____

City/County of:

PACIFIC GAS AND ELECTRIC COMPANY

Governmental Body

Authorized by (Signature)

Authorized by (Signature)

Print Name

Print Name

Title

Title

Mailing Address

Appendix I: Streetlight Agreement



Letter of Streetlight Agreement

Dear valued customer,

As we approach the beginning of your Rule 20A project, one issue that you will need to address is your choice of the available streetlight options. The streetlights located within the Rule 20A project are currently (PG&E or community owned) and on Rate Schedule (LS1, LS2, LS3, streetlights OL1 outdoor lighting, TC1 traffic signals).

Rule 20A funding covers the costs of converting existing PG&E owned streetlight services on a one-for-one basis, but does not provide for the upgrading of facilities. Therefore, if the existing streetlights are on wood poles, the Rule 20A funding will cover the cost of providing an underground service and riser up the existing wood pole to the existing streetlight and the topping of the wood pole just above the streetlight.

You have the option under Rate Schedule LS1 (PG&E owned streetlights); to install new-galvanized steel streetlights that meet PG&E's standards or have PG&E install these new streetlights for you at your cost, in place of leaving the existing wood pole mounted streetlights. If you choose to have PG&E install these new streetlights standards the costs which you will be responsible for will include the installation and purchase of the new streetlight, replacement of any necessary landscaping, pavement and/or concrete and ITCC tax at a current rate of 34%. If you choose to install new streetlights that do not meet PG&E's standards, you may do so but PG&E will no longer own and maintain them.

If the existing streetlights are customer owned (rate schedule LS2 or LS3), you as the streetlight owner will be responsible for the cost to underground the streetlights. A portion of your streetlight undergrounding cost will include a share of the joint trenching costs (based on the conduit occupancy of the joint trench) and streetlight conduit installation costs should you choose to participate in the joint trench. When estimating begins we will provide you with an estimate of the approximate cost of this portion of your streetlight conversion costs for your budgeting purposes. You will also be responsible for any connection and removal costs associated with your customer owned streetlights. All of the provisions of customer owned streetlights also apply to traffic signals (rate schedule TC1) and outdoor lighting (rate schedule OL1).

Please note that the existing streetlights and supporting overhead electrical system cannot be removed prior to the new streetlights being installed and energized. If you are the streetlight owner or they are PG&E owned and you choose to perform the streetlight work yourself, then the new streetlights should be installed and ready to be energized prior to the completion of trenching. Streetlight standard leads times can be three to four months, so please coordinate your work to ensure the streetlights do not delay removal of the overhead system.



Please check the boxes below that represent how your community would like to proceed regarding streetlights.

- Streetlights will remain on existing wood poles.
- Install new galvanized steel streetlight poles at our expense.
- We choose to purchase and install our own new streetlights poles.
- We choose to participate in the joint trench installing our own streetlight conduit.
- We choose to participate in the joint trench, but would like PG&E to install our streetlight conduit.
- We choose not to participate in the joint trench, and instead will do our own trenching for streetlights.
- The current streetlights are in conflict with our road improvements and we would like PG&E to replace them on a one-for-one basis.

NOTE: LS1 = Owned & maintained by PG&E; LS2 = Customer owned & maintained or PG&E maintained; LS3 = Customer owned metered; OL1= Outdoor lighting private property; TC1 = Government owned metered traffic signals or signal lighting systems.

I request PG&E to proceed with the design of this project based on the above marked choices and understand I will have a chance to review the estimate prior to agreeing on any associated cost. If applicable, contracts will be executed based on the above decisions and associated cost.

City/County of: _____
Applicant
By: _____

PACIFIC GAS AND ELECTRIC COMPANY
By: _____

(Print or Type Name)

(Print or Type Name)

Title:

Title:

Mailing Address:

City/County of:

Date: _____

Project Description: _____

Appendix J: Wheelchair Agreement





**Wheelchair Access Consideration
Rule 20A**

PROJECT NAME: _____

LOCATION: _____, CALIFORNIA

Applicant: _____

Electric Rule 20, Section A(1)(c) of the tariff reads as follows:

Acknowledged that wheelchair access is in the public interest and will be considered as a basis for defining the boundaries of projects that otherwise qualify for Rule 20A under the existing criteria set forth in Section A(1)(a) of the tariff.

This agreement is to document the communication regarding this section of the tariff and note the outcome.

Based on the information above:

- Decided to leave the boundary the same.
- Allocations do not allow expansion of the boundary.
- The wheelchair access will be part of the road improvement project.
- Other/Comments

Comments: _____

- Project boundary was expanded to accommodate wheelchair access.

Comments: _____

Applicant:

PACIFIC GAS AND ELECTRIC COMPANY

By: _____

By: _____

(Print or Type Name)

(Print or Type Name)

Title:

Rule 20A Program Liaison

Title:

Date

Date

Appendix K: Service Panel Agreement





DISTRIBUTION

- ... Applicant (Original)
- ... Division (Original)
- ... Acctg. Services

REFERENCES

- MLX#: _____
- PM#: _____
- Project Mgr.: _____

AGREEMENT TO PERFORM TARIFF SCHEDULE RELATED WORK - RULE 20A ELECTRIC PANEL SERVICE CONVERSION

City/County of _____, (Applicant) has requested PACIFIC GAS AND ELECTRIC COMPANY, a California corporation (PG&E) to perform the tariff scheduled related work as located and described herein.

Electric Panel Service Conversion Program:

In order to expedite the completion of Rule 20A Projects, PG&E has offered to manage the electric service conversions, and pay for this work from the Applicant's allocation funds. The underground electric feed that replaces the existing overhead service will be installed in the most economical manner possible, as determined by PG&E. To ensure the success of this program, the Applicant agrees to support the Electric Panel Service Conversion Program as follows:

Responsibilities of the Applicant:

1. Provide accurate list of owner, parcel #, address, phone number.
2. Mail informational letters to all residents describing the program and their responsibilities.
 - a. PG&E will provide templates for these letters.
3. Obtain Right of Entry agreements from property owners prior to scheduling construction.
 - a. PG&E will provide the document for each property owner to complete and sign.
4. Provide a liaison for residents and property owners to contact with questions.
5. Waive permit fees.
6. Waive Inspection fees.
7. Facilitate a preliminary job walk with the liaison, building inspector and others.
 - a. Review PG&E's intended placement of new equipment required for conversions.
 - b. Clarify the inspection and permit requirements and timing, if necessary.
8. Provide information enabling the field crews to determine the location of property lines.
9. Disclose all special circumstances
 - a. For example: historic buildings, hazardous materials, environmental issues, burial grounds and other items that may affect the overhead-to-underground conversion.
10. Communicate with the property owners if additional work beyond the conversion will be required.
 - a. PG&E will pay for the work required to replace the existing overhead electric feed with a new underground feed only. The cost of any additional work required to bring the property up to current codes will be borne by others (property owner or Applicant).
 - b. The Applicant will communicate to the property owner all items that must be brought up to code in a timely manner, and all code issues will be managed by the Applicant.
11. Disclose work hours and days.



AGREEMENT TO PERFORM TARIFF SCHEDULED RELATED WORK - RULE 20A ELECTRIC PANEL SERVICE CONVERSION

- 12. Agree prior to construction regarding the required notifications to residents and property owners.
- 13. Failure to complete the above requirements may result in construction delays.

PROJECT NAME: _____

LOCATION _____, CALIFORNIA

City: _____

Executed this _____ day of _____, 20__

This agreement is effective when accepted and executed by PG&E.

PACIFIC GAS AND ELECTRIC COMPANY

Customer/Company

PACIFIC GAS AND ELECTRIC COMPANY

Authorized by (Print)

Authorized by (Print)

Signature

Signature

Title

Title

Date

Date

Mailing Address: _____

City/County of : _____

Appendix L: Non Disclosure Agreement



{IOU Note (to be deleted prior to Agreement execution): if Documents associated with a Rule 20 Project includes personally identifiable information, NERC CIP data, critical energy infrastructure information or other highly sensitive information, as determined by IOU, Recipient must be processed through IOU's cyber and information governance review prior submitting its Rule 20 Project Request, and IOU's Rule 20 Nondisclosure Agreement will be revised to include the appropriate terms and conditions}

RULE 20 NONDISCLOSURE AGREEMENT

This Rule 20 Nondisclosure Agreement (“Agreement”) dated as of [REDACTED], (the “Effective Date”) is entered into between Pacific Gas and Electric Company, (“PG&E”), and [REDACTED], a [REDACTED] (“Recipient”). PG&E and Recipient are sometimes referred to herein individually as a “Party” and collectively as the “Parties.”

RECITALS

- A. PG&E Tariff Rule 20, Replacement of Overhead with Underground Electric Facilities (“Rule 20”), sets forth requirements for certain projects (“Rule 20 Projects”).
- B. California Public Utilities Commission (“Commission” or “CPUC”) D.21-06-013, Ordering Paragraph (“OP”) 16, requires PG&E to provide any local government or ratepayer advocate, within thirty (30) days of a written request that encloses a signed Rule 20 Nondisclosure Agreement, the Documents related to such Rule 20 Project(s) identified by such entity in its written request.
- C. Pursuant to D.21-06-013, OP 16, Recipient would like to obtain Documents from PG&E regarding the following Rule 20 Project(s), located at [REDACTED] (“Rule 20 Project Request”).
- D. PG&E desires that any Confidential Information (as defined below) that may be provided by it or on its behalf to Recipient or its respective Authorized Parties (as defined below) will be kept confidential by Recipient and its Authorized Parties.

NOW, THEREFORE, in consideration of these recitals and the agreements contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, agree as follows:

ARTICLE 1 DEFINITIONS

Section 1.1 Certain Defined Terms. For purposes of this Agreement, the following terms shall have the following meanings:

- a) “Authorized Parties” means the officers, directors, employees, legal counsel, or accountants, of Recipient.

b) “Confidential Information” means all Documents associated with a Rule 20 Project, all written or recorded or oral information, data, analyses, documents, and materials furnished or made available by PG&E or its Representatives to the Recipient or its Authorized Parties in connection with this Agreement, and any and all analyses, compilations, studies, documents, or other material prepared by the Recipient or its Authorized Parties to the extent containing or based upon PG&E’s Confidential Information. Confidential Information does not include information, data, analyses, documents, or materials that (i) are when furnished, or thereafter become, available to the public other than as a result of a disclosure by Recipient or its Authorized Parties, or (ii) are already in the possession of or become available to Recipient or its Authorized Parties on a nonconfidential basis from a source other than the PG&E or its Representatives, provided that, to the best knowledge of Recipient or its Authorized Parties, as the case may be, such source is not and was not bound by an obligation of confidentiality to PG&E or its Authorized Parties, or (iii) Recipient or its Authorized Parties can demonstrate has been independently developed without a violation of this Agreement.

c) “Documents” mean, with respect to a Rule 20 Project, only the following information: (1) project bids, (2) purchase orders, (3) contracts, (4) invoices, (5) payments, and (6) calculations of overhead costs and any other charges for PG&E’s work on such Rule 20 Project by line item.

d) “Representatives” means the officers, directors, employees, legal counsel, accountants, advisors, or other agents of a Party, or any of a Party’s affiliates.

ARTICLE 2 CONFIDENTIALITY

Section 2.1 Confidentiality Obligations. Except as otherwise expressly agreed in writing by PG&E, and except as otherwise agreed in Section 2.2 below, Recipient shall, and shall cause its Authorized Parties to, for a period of five (5) years from receipt of the Confidential Information, (A) keep strictly confidential and take necessary precautions and implement all requisite procedures and practices to protect against the disclosure of all Confidential Information, and (B) use all Confidential Information solely for the purposes of evaluating the Project and not for any other purpose. Notwithstanding anything contained herein to the contrary, Recipient may disclose Confidential Information to those of its Authorized Parties who have a strict need to know the information for the purposes of directly evaluating the Rule 20 Project if, prior to being given access to Confidential Information, those Authorized Parties are informed of the information’s confidential nature and the requirements of this Agreement, and are directed to comply with the requirements of this Agreement, and Recipient uses reasonable efforts to prevent or limit the disclosure of Confidential Information by such Authorized Representative. Recipient and its Authorized Representatives who receive Confidential Information in accordance with this Section (Recipient together with such Authorized Representative, the “Receiving Party”) shall each hold Confidential Information in confidence with at least the same degree of care with which it protects its own confidential and proprietary information. Recipient will be responsible for any breach of the Agreement by its Authorized Parties.

Section 2.2 Legal Compulsion; Duty to Seek Protection. If the Receiving Party is required by law or regulatory authority or otherwise becomes legally compelled (by oral questions, interrogatories, discovery or data requests, subpoena, or similar legal process) to disclose Confidential Information, the Receiving Party will provide PG&E with prompt notice so that PG&E may seek (with the Receiving Party's reasonable cooperation, if requested by PG&E) a protective order or other appropriate remedy. In the event that a protective order or other remedy is not obtained, or that PG&E waives compliance with the provisions of this Section 2.2, the Receiving Party will furnish only that portion of the Confidential Information which is legally required and will exercise its reasonable efforts to obtain assurance that Confidential Information will be treated as confidential. Notwithstanding the foregoing, if Recipient is a public entity subject to the California Public Records Act (California Government Code Section 6250 et seq.) ("CPRA"), Recipient acknowledges that PG&E may submit information to Recipient that PG&E considers confidential, proprietary, or trade secret information pursuant the Uniform Trade Secrets Act (Cal. Civ. Code section 3426 et seq.), or otherwise protected from disclosure pursuant to an exemption to the CPRA, and: (1) Recipient shall provide Notice to PG&E of any disclosures required in accordance with the CPRA, (2) Recipient shall redact all Confidential Information, that is protected from disclosure pursuant to an exemption to the CPRA, contained within any disclosed documents prior to any such disclosure, and (3) Recipient shall afford PG&E a reasonable opportunity to review such redactions and propose additional redactions.

Section 2.3 Ownership and Return of Information. All Confidential Information shall be and remain the property of PG&E. Nothing in this Agreement shall be construed as granting any rights in or to Confidential Information to the Receiving Party, except the right of review and use in accordance with the terms of this Agreement. Upon written request by PG&E, the Receiving Party shall destroy or return to PG&E all of PG&E's Confidential Information; except the Receiving Party shall be entitled to keep anything that may be stored in back up media or other electronic data storage systems, latent data and metadata. The return, destruction or permitted retention of any Confidential Information shall not release the Receiving Party from its obligations under this Agreement.

Section 2.4 No Representation or Warranty. PG&E makes no representation nor any warranty as to the accuracy or completeness of any Confidential Information in connection with this Agreement, except as otherwise agreed to in writing. PG&E nor its Representatives shall have any liability relating to or arising from the Receiving Party's use of or reliance upon Confidential Information in connection with this Agreement.

ARTICLE 3 MISCELLANEOUS

Section 3.1 Enforcement. The Parties agree that irreparable damage would occur if this Agreement were not performed in accordance with its terms or were otherwise breached. Accordingly, PG&E may be entitled to seek an injunction or injunctions to prevent breaches, potential breaches, or threatened breaches of this Agreement and to enforce specifically its provisions in any court of competent jurisdiction, in addition to any other remedy to which PG&E may be entitled by law or equity, without posting of bond or other security and without proof of damages. The failure of PG&E to enforce at any time any of the provisions of the Agreement or to require at any time performance by Recipient of any of such provisions, shall in no way be

construed as a waiver of such provision or a relinquishment of the right thereafter to enforce such provision.

Section 3.2 Entire Agreement. This Agreement constitutes the entire understanding of the Parties with respect to the subject matter hereof.

Section 3.3 Severability. If any provision of this Agreement is held by a court of competent jurisdiction to be unenforceable, the remaining provisions shall remain in full force and effect so long as the economic and legal substance of this Agreement are not affected in a manner materially adverse to either Party.

Section 3.4 Headings and Interpretation. Descriptive headings are for convenience only and will not control or affect the meaning or construction of any provision of this Agreement. This Agreement shall be interpreted in accordance with the plain meaning of its terms and not strictly for or against any of the Parties hereto. This Agreement shall be construed as if each Party was its author and each Party hereby adopts the language of this Agreement as if it were its own.

Section 3.5 Counterparts and Electronic Signatures. This Agreement may be executed in one (1) or more counterparts, each such executed counterpart being an original instrument but together constituting one (1) agreement. The exchange of copies of this Agreement and of signature pages by facsimile transmission or by other electronic means shall constitute effective execution and delivery of this Agreement as to the Parties and may be used in lieu of the original Agreement for all purposes. Signatures of the parties transmitted by facsimile or by other electronic means shall be deemed to be their original signatures for all purposes.

Section 3.6 Notices. Any communications required or permitted pursuant to this Agreement shall be deemed to have been given (a) on the second business day after being deposited in the U.S. mail, registered or certified and with proper postage prepaid, (b) on the first business day after being deposited with FedEx or other recognized overnight courier service with proper fees prepaid, or (c) on the business day on which it is sent by confirmed facsimile or electronic mail with a copy sent by another means specified in this Section:

if to PG&E:

Pacific Gas and Electric Company
111 Almaden Blvd.
San Jose, CA 95113
Attention: Tamon Norimoto, Rule 20 Program
Email: Tamon.Norimoto@pge.com

if to Recipient:

[Recipient INFORMATION FOR NOTICES]

or to such other address or fax number as either Party may, from time to time, designate in a written notice given in a like manner.

Section 3.7 Successors and Assigns. This Agreement shall be binding upon, and inure to the benefit of, the Parties and their respective successors and assigns. Rights and obligations under this Agreement shall not be assignable by either Party or their successors or assigns without the prior written consent of the other Party. This Agreement is not intended to confer any rights or remedies upon any other Persons other than the Parties.

Section 3.8 Governing Law and Venue. This Agreement will be governed by and construed and enforced in accordance with the internal laws of the State of California, without giving effect to the conflict of law principles thereof. The Parties agree to submit all disputes arising out of or relating to this Agreement to the state or federal courts located in Oakland, California, and waive any and all objections to the right of such courts to grant such relief, including without limitation objections of improper jurisdiction or venue or forum non conveniens.

Section 3.9 Amendment and Waiver. This Agreement may only be amended by a writing signed by both Parties. Any waiver of the requirements and provisions of this Agreement must be in a writing signed by the Party waiving its rights hereunder. The failure of either Party to enforce at any time any of the provisions of this Agreement or to require at any time performance by the other Party of any of such provisions shall in no way be construed as a waiver of such provision or a relinquishment of the right to enforce such provision thereafter.

Section 3.10 No Waiver of Privileges. Nothing in this Agreement is intended to waive any attorney-client, work-product, or other privilege applicable to any statement, document, communication or other material of a Party or the Parties.

Section 3.11 Term. This Agreement is effective as of the Effective Date. Either Party may terminate this Agreement for any reason or no reason, with or without cause, by providing thirty (30) days prior written notice to the other of its intention to terminate; provided, however, that the terms of this Agreement remain applicable to any Confidential Information for the term set forth in Section 2.1 and, notwithstanding expiration of the term set forth in Section 2.1, neither Party may use the other Party's name for marketing purposes without the other Party's prior written consent.

Section 3.12 No Agency. Nothing in this Agreement shall be construed to render either Party an agent, employee, representative, joint venturer or partner of the other Party.

Section 3.13 Complete Agreement. This Agreement fully expresses the Parties' agreement concerning the subject matter hereof and supersedes any prior agreements or understandings regarding the same subject matter.

Section 3.14 Authority. The signatories hereto represent that they have been duly authorized to enter into this Agreement on behalf of the Party for whom they sign.

[Signature page to follow]

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their respective duly authorized representative as of the Effective Date.

[RECIPIENT NAME],
a [formation]

**PACIFIC GAS AND ELECTRIC
COMPANY,**

By:

By:

Name:

Name:

Title:

Title:

Date:

Date:

Appendix M: Work Credit Example



From: [Horder, Louise](#)
To: [Stanback, Alicia](#)
Subject: TEST - Rule 20A Work Credit Statement Period: 6/1/2020 through 2/28/2021
Date: Monday, March 22, 2021 2:15:35 PM

Rule 20A Work Credit Statement Period: 6/1/2020 through 2/28/2021

Dear Sir or Madam:

The purpose of this email is to provide you with your Rule 20A work credit statement. This statement reflects activities from June 1, 2020 through February 28, 2021 and includes your 2021 work credit allocation and if applicable, reallocation, work credit transfer(s), and project(s) deducted from your account balance including any cancelled projects.

- Work Credit Statement for County of Nevada	
Work Credit Balance as of 6/1/2020	9,374,902
2021 Work Credit Allocation	343,711
Total Reallocation	0
Total Work Credit Transfer	0
Total Completed/Cancelled Project Deduction	0
Work Credit Balance as of 2/28/2021	9,718,613

Reallocation Details	
<u>Description</u>	<u>Amount</u>
Reallocation for Live Oak	0
-	
-	
Work Credit Transfer Details	
<u>Description</u>	<u>Amount</u>
None	N/A
-	
Completed/Cancelled Project Deduction Details	
<u>Description</u>	<u>Amount</u>
None	N/A

-
-

The following table provides information regarding any projects not yet deducted from your account balance.

-	
Project(s) Not Yet Deducted from Account Balance	
Description	Amount *
31144652 - Combie Rd Ph 3A, Auburn	-2,222,394
Total Estimate	-2,222,394
<p>* Amount for project(s) not yet deducted from account balance is the estimated cost at completion (as of March 5, 2021) and will be refined through the project lifecycle.</p>	

2021 Work Credit Allocation by Community

Community	Total Overhead Meters	Underground Meters	Total Meters	2021 Allocation (see Note 1)
ALAMEDA COUNTY	41,586	14,010	55,596	506,071
ALBANY	5,979	1,514	7,493	70,902
ALPINE COUNTY	52	611	663	2,837
AMADOR CITY	107	62	169	1,399
AMADOR COUNTY	11,883	2,043	13,926	137,326
AMERICAN CANYON	1,092	5,331	6,423	31,723
ANDERSON	2,628	3,114	5,742	40,259
ANGELS CAMP	1,161	1,081	2,242	16,691
ANTIOCH	8,799	31,415	40,214	212,751
ARCATA	5,616	3,217	8,833	73,264
ARROYO GRANDE	3,988	4,597	8,585	60,615
ARVIN	2,106	3,130	5,236	34,619
ATASCADERO	8,876	5,059	13,935	115,698
ATHERTON	2,132	627	2,759	25,606

ATWATER	4,543	5,300	9,843	69,286
AUBURN	3,791	4,139	7,930	56,763
AVENAL	1,847	992	2,839	23,850
BAKERSFIELD	38,121	110,439	148,560	826,403
BELMONT	8,438	3,580	12,018	105,423
BELVEDERE	160	887	1,047	5,041
BENICIA	3,793	9,430	13,223	76,437
BERKELEY	44,985	10,935	55,920	531,760
BIGGS	17	2	19	193
BLUE LAKE	573	103	676	6,639
BRENTWOOD	1,537	21,713	23,250	97,429
BRISBANE	1,422	1,124	2,546	19,700
BUELLTON	449	1,834	2,283	11,714
BURLINGAME	11,162	4,378	15,540	138,127
BUTTE COUNTY	32,857	6,774	39,631	383,892
CALAVERAS COUNTY	23,532	5,986	29,518	279,155
CALISTOGA	1,582	735	2,317	20,002
CAMPBELL	11,696	9,342	21,038	162,395
CAPITOLA	3,245	2,908	6,153	46,230
CARMEL	2,944	976	3,920	35,768
CHICO	17,530	29,627	47,157	301,434
CHOWCHILLA	2,259	2,861	5,120	35,290
CLAYTON	600	3,770	4,370	20,554
CLEARLAKE	7,357	1,313	8,670	85,200
CLOVERDALE	1,468	2,419	3,887	25,012
CLOVIS	5,926	40,787	46,713	216,193
COALINGA	2,483	2,645	5,128	36,934
COLFAX	713	425	1,138	9,363
COLMA	163	642	805	4,164
COLUSA	1,787	1,082	2,869	23,529
COLUSA COUNTY	6,363	932	7,295	72,933
CONCORD	26,397	25,610	52,007	383,324
CONTRA COSTA COUNTY	37,068	33,326	70,394	528,488
CORCORAN	2,966	1,811	4,777	39,109
CORNING	2,227	1,294	3,521	29,121
CORTE MADERA	3,133	1,849	4,982	41,074
COTATI	894	2,968	3,862	20,785
CUPERTINO	11,227	12,396	23,623	168,618
DALY CITY	19,418	14,951	34,369	267,537
DANVILLE	4,037	13,769	17,806	95,217
DAVIS	6,434	23,226	29,660	156,514
DEL REY OAKS	602	228	830	7,419
DINUBA	3,772	3,935	7,707	55,798
DIXON	1,887	5,779	7,666	42,067
DOS PALOS	1,319	785	2,104	17,316

DUBLIN	3,982	23,022	27,004	128,985
EAST PALO ALTO	5,250	2,715	7,965	67,403
EL CERRITO	9,943	1,772	11,715	115,139
EL DORADO COUNTY	40,827	29,520	70,347	555,392
EMERYVILLE	1,630	6,723	8,353	42,767
ESCALON	1,115	1,562	2,677	17,975
EUREKA	12,902	1,369	14,271	145,948
FAIRFAX	3,133	580	3,713	36,360
FAIRFIELD	9,109	33,548	42,657	224,058
FERNDALE	787	162	949	9,194
FIREBAUGH	1,131	1,404	2,535	17,563
FORT BRAGG	3,028	1,071	4,099	37,038
FORTUNA	3,674	2,102	5,776	47,920
FOSTER CITY	-	14,805	14,805	54,990
FOWLER	1,050	1,381	2,431	16,593
FREMONT	24,353	62,993	87,346	499,858
FRESNO	76,226	129,828	206,054	1,314,448
FRESNO COUNTY	76,628	10,572	87,200	875,888
GILROY	5,021	14,664	19,685	109,285
GLENN COUNTY	8,562	812	9,374	96,496
GONZALES	981	1,387	2,368	15,862
GRASS VALLEY	3,573	4,496	8,069	55,709
GREENFIELD	1,459	2,955	4,414	26,905
GROVER BEACH	4,848	1,717	6,565	59,308
GUADALUPE	1,103	1,255	2,358	16,704
GUSTINE	1,535	815	2,350	19,786
HALF MOON BAY	2,175	2,818	4,993	34,213
HAYWARD	31,678	25,948	57,626	442,237
HEALDSBURG	154	16	170	1,741
HERCULES	26	9,599	9,625	35,937
HILLSBOROUGH	1,777	2,321	4,098	28,022
HOLLISTER	3,252	10,181	13,433	73,320
HUMBOLDT COUNTY	30,021	6,726	36,747	352,750
HURON	691	1,035	1,726	11,389
IONE	897	1,373	2,270	14,893
ISLETON	396	146	542	4,866
JACKSON	1,398	1,611	3,009	21,247
KERMAN	1,338	3,675	5,013	28,258
KERN COUNTY	65,190	24,411	89,601	802,410
KING CITY	1,837	2,096	3,933	27,841
KINGS COUNTY	9,118	695	9,813	102,131
KINGSBURG	2,144	2,960	5,104	34,402
LAFAYETTE	8,728	2,423	11,151	104,292
LAKE COUNTY	24,918	2,633	27,551	281,833
LAKEPORT	2,197	1,005	3,202	27,720
LARKSPUR	2,954	4,065	7,019	47,350
LASSEN COUNTY	909	74	983	10,199

LATHROP	1,009	5,469	6,478	31,330
LEMOORE	3,243	7,102	10,345	61,786
LINCOLN	1,570	19,079	20,649	88,006
LIVE OAK	1,033	1,997	3,030	18,696
LIVERMORE	10,836	25,875	36,711	214,414
LIVINGSTON	1,159	1,567	2,726	18,474
LOOMIS	1,685	1,550	3,235	24,154
LOS ALTOS	9,868	2,908	12,776	118,539
LOS ALTOS HILLS	2,146	1,100	3,246	27,516
LOS BANOS	4,533	9,841	14,374	86,043
LOS GATOS	9,408	5,994	15,402	124,979
MADERA	7,684	12,938	20,622	131,949
MADERA COUNTY	35,866	4,684	40,550	408,981
MANTECA	6,533	23,557	30,090	158,824
MARICOPA	519	1	520	5,670
MARIN COUNTY	21,722	8,787	30,509	269,797
MARINA	3,883	4,741	8,624	60,004
MARIPOSA COUNTY	10,830	1,071	11,901	122,219
MARTINEZ	6,602	10,198	16,800	109,958
MARYSVILLE	4,196	1,995	6,191	53,222
MCFARLAND	950	1,613	2,563	16,363
MENDOCINO COUNTY	27,938	4,318	32,256	321,064
MENDOTA	1,281	1,857	3,138	20,883
MENLO PARK	10,690	5,259	15,949	136,246
MERCED	11,461	15,589	27,050	183,032
MERCED COUNTY	25,208	6,125	31,333	297,970
MILL VALLEY	5,065	1,821	6,886	62,063
MILLBRAE	6,023	3,401	9,424	78,391
MILPITAS	5,944	22,736	28,680	149,344
MONTE SERENO	971	304	1,275	11,730
MONTEREY	10,417	5,218	15,635	133,113
MONTEREY COUNTY	33,225	16,536	49,761	424,168
MORAGA	2,707	3,755	6,462	43,502
MORGAN HILL	2,510	14,320	16,830	80,592
MORRO BAY	5,970	809	6,779	68,185
MOUNTAIN VIEW	18,669	21,067	39,736	282,076
NAPA	16,438	17,185	33,623	243,299
NAPA COUNTY	12,789	3,245	16,034	151,683
NEVADA CITY	1,468	821	2,289	19,077
NEVADA COUNTY	30,428	3,096	33,524	343,711
NEWARK	6,873	10,298	17,171	113,289
NEWMAN	1,230	2,837	4,067	23,966
NOVATO	9,321	14,685	24,006	156,310
OAKDALE	3,569	4,722	8,291	56,505
OAKLAND	138,441	50,447	188,888	1,698,866
OAKLEY	2,164	12,036	14,200	68,331
ORANGE COVE	1,484	1,271	2,755	20,923
ORINDA	6,057	1,591	7,648	72,039
ORLAND	2,098	1,541	3,639	28,630
OROVILLE	6,106	3,316	9,422	78,982
PACIFIC GROVE	7,308	1,412	8,720	85,033

PACIFICA	11,209	4,311	15,520	138,392
PARADISE	1,753	1,084	2,837	23,165
PARLIER	1,384	2,519	3,903	24,467
PASO ROBLES	4,204	10,801	15,005	86,017
PETALUMA	8,623	18,333	26,956	162,239
PIEDMONT	3,035	977	4,012	36,765
PINOLE	3,640	4,290	7,930	55,676
PISMO BEACH	2,584	3,290	5,874	40,432
PITTSBURG	5,037	20,134	25,171	129,777
PLACER COUNTY	30,364	13,319	43,683	380,983
PLACERVILLE	3,447	2,388	5,835	46,504
PLEASANT HILL	7,470	8,554	16,024	113,329
PLEASANTON	3,911	28,283	32,194	147,751
PLUMAS COUNTY	8,150	3,422	11,572	101,692
PLYMOUTH	338	231	569	4,548
POINT ARENA	240	115	355	3,047
PORTOLA VALLEY	1,213	518	1,731	15,167
RED BLUFF	3,872	3,789	7,661	56,348
REDWOOD CITY	21,529	13,764	35,293	286,176
REEDLEY	3,580	4,867	8,447	57,164
RICHMOND	27,724	16,256	43,980	363,068
RIO DELL	1,330	280	1,610	15,561
RIO VISTA	1,565	4,080	5,645	32,241
RIPON	1,460	2,880	4,340	26,637
RIVERBANK	2,110	3,289	5,399	35,253
ROCKLIN	2,949	25,467	28,416	126,788
ROHNERT PARK	1,762	16,546	18,308	80,694
ROSEVILLE	18	2	20	204
ROSS	864	112	976	9,849
SACRAMENTO COUNTY	1,765	202	1,967	20,020
SALINAS	21,702	26,430	48,132	335,109
SAN ANSELMO	5,365	684	6,049	61,115
SAN BENITO COUNTY	6,493	3,086	9,579	82,353
SAN BRUNO	12,336	4,355	16,691	150,860
SAN CARLOS	11,145	3,716	14,861	135,483
SAN FRANCISCO	202,837	204,686	407,523	2,974,820
SAN JOAQUIN	490	586	1,076	7,526
SAN JOAQUIN COUNTY	54,306	7,895	62,201	622,235
SAN JOSE	134,119	227,485	361,604	2,309,245
SAN JUAN BAUTISTA	597	431	1,028	8,119
SAN LEANDRO	24,882	11,137	36,019	313,026
SAN LUIS OBISPO	12,630	11,329	23,959	179,973
SAN LUIS OBISPO COUNTY	40,189	20,567	60,756	515,173
SAN MATEO	29,787	14,742	44,529	379,969
SAN MATEO COUNTY	21,569	3,293	24,862	247,720
SAN PABLO	7,287	3,399	10,686	92,184
SAN RAFAEL	17,173	10,813	27,986	227,656
SAN RAMON	1,662	30,141	31,803	130,097

SAND CITY	333	111	444	4,048
SANGER	3,673	5,126	8,799	59,141
SANTA BARBARA COUNTY	16,738	11,175	27,913	224,252
SANTA CLARA COUNTY	22,454	4,366	26,820	261,368
SANTA CRUZ	16,674	7,476	24,150	209,814
SANTA CRUZ COUNTY	45,189	12,151	57,340	538,504
SANTA MARIA	12,993	19,388	32,381	213,869
SANTA ROSA	27,784	48,261	76,045	482,599
SARATOGA	7,082	4,843	11,925	95,309
SAUSALITO	3,440	1,806	5,246	44,266
SCOTTS VALLEY	2,047	3,247	5,294	34,409
SEASIDE	7,230	4,326	11,556	95,005
SEBASTOPOL	2,243	2,173	4,416	32,560
SELMA	3,671	4,695	8,366	57,518
SHAFTER	3,091	3,158	6,249	45,477
SHASTA COUNTY	27,821	5,895	33,716	325,644
SHASTA LAKE	48	-	48	524
SIERRA COUNTY	1,097	101	1,198	12,352
SISKIYOU COUNTY	33	32	65	479
SOLANO COUNTY	10,225	828	11,053	114,712
SOLEDAD	1,331	3,363	4,694	27,023
SOLVANG	1,212	1,912	3,124	20,334
SONOMA	2,543	3,889	6,432	42,209
SONOMA COUNTY	60,690	14,303	74,993	715,736
SONORA	2,386	999	3,385	29,761
SOUTH SAN FRANCISCO	15,222	10,238	25,460	204,220
ST HELENA	2,066	1,435	3,501	27,886
STANISLAUS COUNTY	7,389	1,469	8,858	86,129
STOCKTON	39,580	73,025	112,605	703,367
SUISUN CITY	755	9,374	10,129	43,061
SUNNYVALE	29,578	33,259	62,837	446,464
SUTTER COUNTY	12,134	1,116	13,250	136,624
SUTTER CREEK	1,117	649	1,766	14,606
TAFT	2,272	1,029	3,301	28,628
TEHAMA	209	21	230	2,360
TEHAMA COUNTY	20,753	1,618	22,371	232,590
TIBURON	1,728	2,865	4,593	29,508
TRACY	6,354	24,633	30,987	160,866
TRINIDAD	120	162	282	1,912
TRINITY COUNTY	1,785	23	1,808	19,574
TULARE COUNTY	14,574	2,013	16,587	166,595
TUOLUMNE COUNTY	26,876	5,066	31,942	312,247
UNION CITY	3,232	20,778	24,010	112,462
VACAVILLE	6,254	33,186	39,440	191,542
VALLEJO	23,074	25,237	48,311	345,658
WALNUT CREEK	11,579	25,970	37,549	222,878
WASCO	3,171	3,892	7,063	49,077
WATSONVILLE	7,609	8,123	15,732	113,246

WEST SACRAMENTO	8,730	13,537	22,267	145,594
WHEATLAND	662	895	1,557	10,552
WILLIAMS	918	1,112	2,030	14,153
WILLITS	1,724	1,081	2,805	22,838
WILLOWS	2,016	1,064	3,080	25,963
WINDSOR	1,036	8,870	9,906	44,257
WINTERS	1,033	1,625	2,658	17,314
WOODLAND	8,122	16,031	24,153	148,219
WOODSIDE	1,906	423	2,329	22,381
YOLO COUNTY	9,806	3,471	13,277	119,954
YOUNTVILLE	399	780	1,179	7,253
YUBA CITY	9,422	18,164	27,586	170,335
YUBA COUNTY	16,148	9,784	25,932	212,644

Note 1: Per Rule 20 Tariff, "PG&E's total annual amount of work credits for undergrounding, as authorized by the California Public Utilities Commission, shall be allocated to cities or the unincorporated area of any county as follows:

- a) Fifty percent of the total authorized amount shall be allocated in the same ratio that the number of overhead meters in any city or unincorporated area of any county bears to the total system overhead meters; and
- b) Fifty percent of the total authorized amount shall be allocated in the same ratio that the total number of meters in any city or unincorporated area of any county bears to the total system meters."

Note 2: The native format to calculate the 2021 allocation can be accessed using this [link](#).

PG&E values its partnership with your community and we look forward to working with you. If you have any questions regarding this statement or would like to speak to someone regarding Rule 20A matters, please contact Alicia Stanback, your Rule 20A Program Liaison, at Alicia.Stanback@pge.com or 5303681800.

If you would like to contact the California Public Utilities Commission (CPUC) about the Rule 20A Program, please send an email to Anne Kim, CPUC Analyst, at Anne.Kim@cpuc.ca.gov.

Best regards,

Tamon Norimoto | Manager, Rule 20A
Pacific Gas and Electric Company
408.282.7294 office | 282.7294 internal | 408.693.9083 cell | tamon.norimoto@pge.com

Appendix N: PG&E Electric Rule 20 Contact List

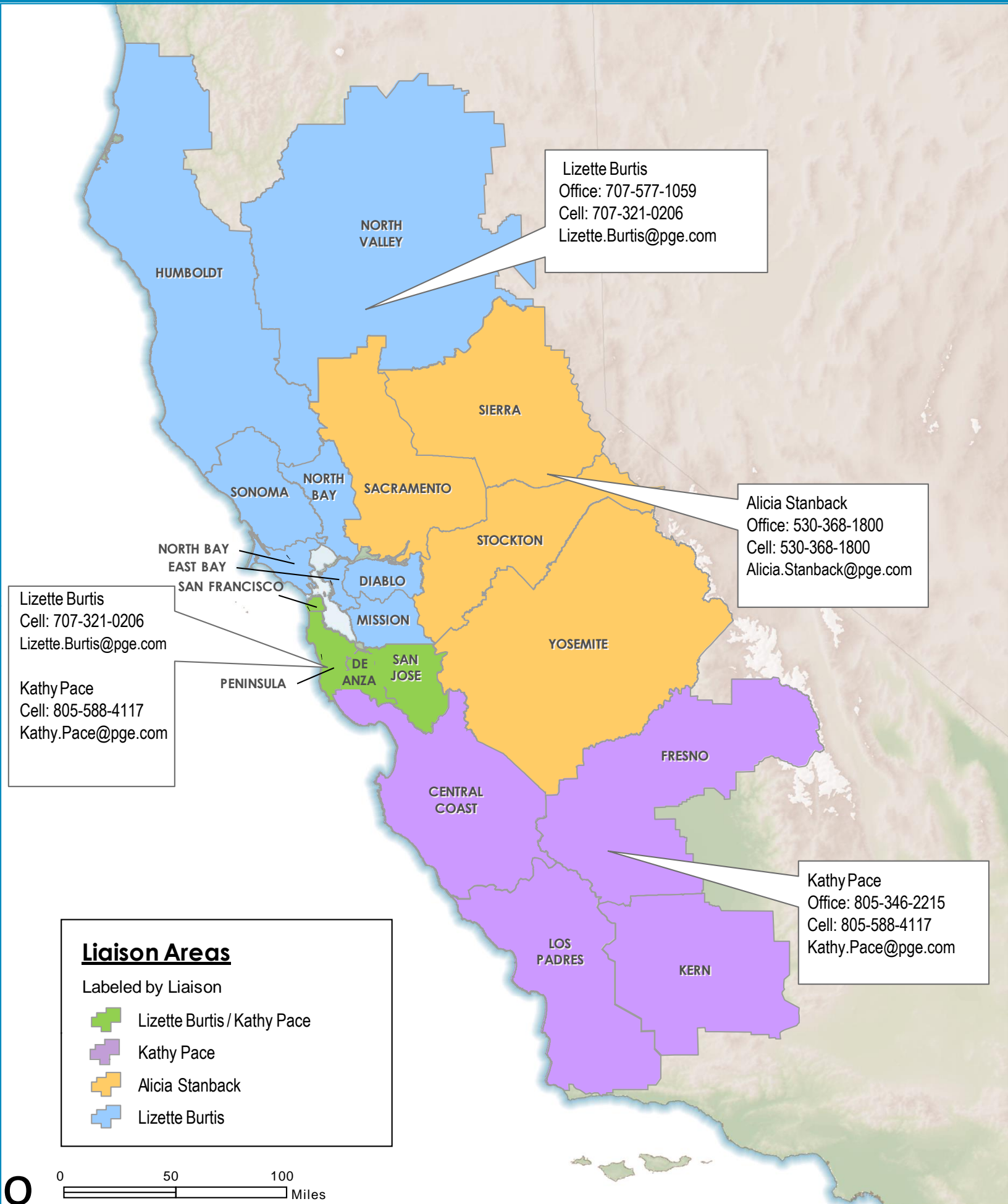


Rule 20A

Please refer to the Rule 20A Liaison Map below for information on PG&E's Rule 20A contacts in your jurisdiction.



Rule 20A Program Liaison Areas



Lizette Burtis
Office: 707-577-1059
Cell: 707-321-0206
Lizette.Burtis@pge.com

Alicia Stanback
Office: 530-368-1800
Cell: 530-368-1800
Alicia.Stanback@pge.com

Lizette Burtis
Cell: 707-321-0206
Lizette.Burtis@pge.com

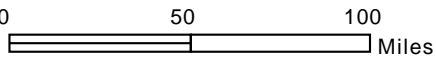
Kathy Pace
Cell: 805-588-4117
Kathy.Pace@pge.com

Kathy Pace
Office: 805-346-2215
Cell: 805-588-4117
Kathy.Pace@pge.com

Liaison Areas

Labeled by Liaison

- Lizette Burtis / Kathy Pace
- Kathy Pace
- Alicia Stanback
- Lizette Burtis



Rule 20B and Rule 20C

When you are ready to apply for a Rule 20B or Rule 20C project, please visit the online portal at pge.com/cco. Applications can also be submitted by phone via the Business Renovation Service Center at (877) 743-7782. For questions, please contact your local service planning office on the following page.



Service Planning Office Contact Information

PG&E Area	Local HQs	Address	Zip Code	External Phone Number	Inspection Desk	
					Phone	Email Address
5	Angels Camp	1108 Murphy's Grade Rd	95222	(209) 272-8643	(209) 272-8643	stocktondivisioninspectionrequest@pge.com
2	Antioch	2111 Hillcrest Ave	94509	(925) 779-7757	(925) 779-7757 (925) 779-7750	EDLHCCDAntioch@pge.com
6	Auburn	12840 Bill Clark Way	95603	(530) 889-3271	(530) 889-3271	AubumInspectionRequests@pge.com
4	Bakersfield	4101 Wible Rd	93313	(661) 398-5711	(661) 398-5711	kerninspections@pge.com
6	Chico	460 Rio Lindo Ave	95926	(530) 894-4749	(530) 894-4707	EDLHCCDChico@pge.com
2	Concord	1030 Detroit Ave	94518	(925) 674-6409	(925) 779-7716 (925) 779-7750	EDLHCCDAntioch@pge.com
3	Cupertino	10900 N Blaney	95014	(408) 725-3325	(408) 725-2202 (408) 725-7773	DASPInspection@pge.com
4	Dinuba	8058 Union St	93618	(559) 263-7312	(559) 263-7312	fresnodivisioninspectionrequest@pge.com
7	Eureka	2555 Myrtle Ave	95501	(707) 445-5533	(707) 445-5533	LHCCDEureka@pge.com
2	Fremont	41800 Boscell Rd	94538	(510) 784-3210	(510) 784-3317	MissionInspections@pge.com
4	Fresno	3580 E California Ave	93760	(559) 263-7312	(559) 263-7312	fresnodivisioninspectionrequest@pge.com
6	Grass Valley	12840 Bill Clark Way	95603	(707) 449-5720	(707) 449-5720	CCDGrassValleyInspecc@pge.com
2	Hayward	24300 Clawitter Rd	94545	(510) 784-3210	(510) 784-3317	MissionInspections@pge.com
5	Jackson	12626 Jackson Gate Rd	95642	(209) 272-8643	(209) 272-8643	stocktondivisioninspectionrequest@pge.com
2	Livermore	998 Murietta Blvd	94550	(925) 373-2620	(510) 784-3317	MissionInspections@pge.com
5	Madera	2871 Airport Dr	93637	(209) 726-6373	(209) 726-6373	YosemiteDivisionInspectionRequest@pge.com
5	Manteca	226 E Yosemite St	95336	(209) 272-8643	(209) 272-8643	stocktondivisioninspectionrequest@pge.com
5	Mariposa	5166 Jones St	95338	(209) 726-6373	(209) 726-6373	YosemiteDivisionInspectionRequest@pge.com
6	Marysville	29 4th St	95901	(530) 634-6442	(530) 634-6442	EDLHCCDMarysville@pge.com
5	Merced	4155 E Childs Ave	95341	(209) 726-6373	(209) 726-6373	YosemiteDivisionInspectionRequest@pge.com
5	Modesto	1524 N Carpenter Rd	93637	(209) 726-6373	(209) 726-6373	YosemiteDivisionInspectionRequest@pge.com
3	Monterey	2311 Garden Rd	93940	(831) 784-3614	(831) 784-3614	CentralCoastInspect@pge.com
7	Napa	1850 Soscol Ave	94559	(707) 257-5918	(707) 257-5918 (707) 257-5938	EDLHServiceDeskNapa-@pge.com
5	Oakhurst	50150 Rd 426	93644	(209) 726-6373	(209) 726-6373	YosemiteDivisionInspectionRequest@pge.com
2	Oakland	4801 Oakport St	94601	(510) 437-2616	(510) 437-2088	EDLHCCDOakport@pge.com
6	Placerville	4636 Missouri Flat Rd	95667	(530) 621-7275	(530) 621-7275	EDLHCCDPlacerville@pge.com
6	Redding	3600 Meadow View Dr	96002	(530) 246-6440	(530) 246-6527 (530) 246-6541	EDLHCCDRedding@pge.com
2	Richmond	1100 S 27th St	94804	(510) 231-2926	(510) 437-2100	EDLHCCDRichmond@pge.com

Appendix O: Sample Form B and Composite

FORM B - JOINT TRENCH COST SHARE AGREEMENT EXAMPLE

Project

PROJECT TITLE

PROJECT NUMBER

Date

12/7/2021

Joint Trench and Substructure Excavation																						
Section Name	Type	Qty	Length (Feet)	Adjusted footage	Width (Inches)	Depth (Inches)	Unit Price	Excavation Subtotal	PG&E (Electric)				PG&E (GAS)			TELEPHONE			CABLE		% TOTAL	
									%	Primary Conduit	Secondary/Service Conduit	TOTAL	%	Pipe	TOTAL	%	Conduit	TOTAL	%	Conduit		TOTAL
A-01, PTC	TRN	1	25		24	49	\$200	\$5,000	52%	1-4", 2-6"		\$2,600	0%		\$0	25%	2-4"	\$1,250	23%	2-2"	\$1,150	100%
A-02, P	TRN	1	23		42	57	\$220	\$5,060	100%	4-4", 2-6"		\$5,060	0%		\$0	0%		\$0	0%		\$0	100%
A-03, P	TRN	1	15		24	52	\$210	\$3,150	100%	2-4", 2-6"		\$3,150	0%		\$0	0%		\$0	0%		\$0	100%
A-04, P	TRN	1	14		24	52	\$210	\$2,940	100%	1-4", 2-6"		\$2,940	0%		\$0	0%		\$0	0%		\$0	100%
A-05, PTC	TRN	1	12		24	49	\$200	\$2,400	50%	1-4", 2-6"		\$1,200	0%		\$0	25%	2-4"	\$600	25%	4-2"	\$600	100%
A-06, PTC	TRN	1	320		24	57	\$220	\$70,400	52%	2-4", 2-6"		\$36,608	0%		\$0	24%	2-4"	\$16,896	24%	4-2"	\$16,896	100%
A-07, S	TRN	1	51		18	37	\$180	\$9,180	100%		1-4"	\$9,180	0%		\$0	0%		\$0	0%		\$0	100%
A-08, PSTC	TRN	1	10		24	37	\$180	\$1,800	48%	2-4", 2-6"	1-4"	\$864	0%		\$0	26%	2-4"	\$468	26%	4-2"	\$468	100%
A-09, PSC	TRN	1	40		24	55	\$214	\$8,560	66%	2-4", 2-6"	1-4"	\$5,650	0%		\$0	0%		\$0	34%	4-2"	\$2,910	100%
A-10, T	TRN	1	25		18	37	\$180	\$4,500	0%			\$0	0%		\$0	100%	2-4"	\$4,500	0%		\$0	100%
A-11, T	TRN	1	20		18	37	\$180	\$3,600	0%			\$0	0%		\$0	100%	2-4"	\$3,600	0%		\$0	100%
A-12, PSTC	TRN	1	20		24	57	\$220	\$4,400	48%	1-4", 2-6"	1-4"	\$2,112	0%		\$0	26%	2-4"	\$1,144	26%	4-2"	\$1,144	100%
A-13, PSTC	TRN	1	75		24	57	\$220	\$16,500	48%	1-4", 2-6"	2-4"	\$7,920	0%		\$0	26%	2-4"	\$4,290	26%	4-2"	\$4,290	100%
A-14, P (BORE)	TRN	1	90		18	43	\$190	\$17,100	100%	1-4"		\$17,100	0%		\$0	0%		\$0	0%		\$0	100%
Z-01, S-SVC	TRN	1	20		18	37	\$180	\$3,600	100%		1-4"	\$3,600	0%		\$0	0%		\$0	0%		\$0	100%
Z-02, S-SVC	TRN	1	90		18	37	\$180	\$16,200	100%		1-4"	\$16,200	0%		\$0	0%		\$0	0%		\$0	100%
Total			850			0		\$174,390				\$114,184			\$0.00			\$32,748			\$27,458	

CONDUIT & SUBSTRUCTURE INSTALLATION																						
Bid & Section Item	Qty	Length	UNIT	Unit Price	Installation Subtotal	PG&E (Electric)				PG&E (GAS)			TELEPHONE			CABLE		% TOTAL				
						%	Primary Conduit	Secondary/Service Conduit	TOTAL	%	Conduit	TOTAL	%	Conduit	TOTAL	%	Pipe		TOTAL			
4" PG&E Conduit		1468	FT	\$6.50	\$9,542	100%			\$9,542	0%		\$0	0%		\$0	0%		\$0	0%		\$0	100%
6" PG&E Conduit		1108	FT	\$8.00	\$8,864	100%			\$8,864	0%		\$0	0%		\$0	0%		\$0	0%		\$0	100%
4" AT&T Conduit		1014	FT	\$6.50	\$6,591	0%			\$0	0%		\$0	100%		\$6,591	0%		\$0	0%		\$0	100%
2" Comcast Conduit		1934	FT	\$2.50	\$4,835	0%			\$0	0%		\$0	0%		\$0	100%		\$4,835	0%		\$0	100%
E-#7 BOX 4'-6" x 8'-6"	1		EA	\$6,500.00	\$6,500	100%			\$6,500	0%		\$0	0%		\$0	0%		\$0	0%		\$0	100%
E-PMI	1		EA	\$4,000.00	\$4,000	100%			\$4,000	0%		\$0	0%		\$0	0%		\$0	0%		\$0	100%
T2 - 30" x 48"	1		EA	\$1,500.00	\$1,500	0%			\$0	0%		\$0	100%		\$1,500	0%		\$0	0%		\$0	100%
C2 -24" x 36"	1		EA	\$1,500.00	\$1,500	0%			\$0	0%		\$0	0%		\$0	100%		\$1,500	0%		\$0	100%
Total	4	3590		0	\$43,332				\$28,906			\$0			\$8,091			\$6,335				

CUT BREAK & PAVE - Includes sawcutting, backfill, breaking, and restoration(12" tee trench).

Section Name	Surface type	Qty	Length (Feet)	Width (Feet)	SqFt	\$/SqFt	CBP Subtotal	PG&E (Electric)			PG&E (GAS)			TELEPHONE			CABLE		% TOTAL		
								%	Primary Conduit	Secondary/Service Conduit	TOTAL	%	Conduit	TOTAL	%	Conduit	TOTAL	%		Pipe	TOTAL
A-01, PTC	C	1	25	4	100	\$21.00	\$2,100	34%			\$714	0%		\$0	33%		\$693	33%		\$693	100%
A-02, P	C	1	23	5.5	127	\$25.00	\$3,163	100%			\$3,163	0%		\$0	0%		\$0	0%		\$0	100%
A-03, P	C	1	15	4	60	\$21.00	\$1,260	100%			\$1,260	0%		\$0	0%		\$0	0%		\$0	100%
A-04, P	C	1	14	4	56	\$21.00	\$1,176	100%			\$1,176	0%		\$0	0%		\$0	0%		\$0	100%
A-05, PTC	C	1	12	4	48	\$21.00	\$1,008	34%			\$343	0%		\$0	33%		\$0	33%		\$333	100%
A-06, PTC	C	1	10	4	40	\$21.00	\$840	34%			\$286	0%		\$0	33%		\$277	33%		\$277	100%
A-06, PTC	C&G	1	2	3.5	7	\$100.00	\$700	34%			\$238	0%		\$0	33%		\$231	33%		\$231	100%
A-06, PTC	A	1	308	4	1,232	\$15.00	\$18,480	34%			\$6,283	0%		\$0	33%		\$6,098	33%		\$6,098	100%
A-07, S	A	1	37	3.5	130	\$14.00	\$1,813	100%			\$1,813	0%		\$0	0%		\$0	0%		\$0	100%
A-07, S	C&G	1	2	3	6	\$80.00	\$480	100%			\$480	0%		\$0	0%		\$0	0%		\$0	100%
A-07, S	C	1	12	3.5	42	\$18.00	\$756	100%			\$756	0%		\$0	0%		\$0	0%		\$0	100%
A-08, PSTC	A	1	10	4	40	\$15.00	\$600	34%			\$204	0%		\$0	33%		\$198	33%		\$198	100%
A-09, PSC	C	1	40	4	160	\$21.00	\$3,360	50%			\$2,405	0%		\$0	0%		\$0	50%		\$1,680	100%
A-10, T	C&G	1	2	3	6	\$90.00	\$540	0%			\$0	0%		\$0	100%		\$0	0%		\$0	100%
A-10, T	C	1	23	3.5	81	\$18.00	\$1,449	0%			\$0	0%		\$0	100%		\$0	0%		\$0	100%
A-11, T	C	1	18	3.5	63	\$18.00	\$1,134	0%			\$0	0%		\$0	100%		\$1,134	0%		\$0	100%
A-11, T	C&G	1	2	3	6	\$90.00	\$540	0%			\$0	0%		\$0	100%		\$540	0%		\$0	100%
A-12, PSTC	C&G	1	20	3.5	70	\$100.00	\$7,000	34%			\$4,522	0%		\$0	33%		\$2,310	33%		\$2,310	100%
A-13, PSTC	C	1	75	4	300	\$21.00	\$6,300	34%			\$0	0%		\$0	33%		\$0	33%		\$2,079	100%
Z-01, S-SVC	C	1	20	3.5	70	\$18.00	\$1,260	100%			\$1,260	0%		\$0	0%		\$0	0%		\$0	100%
Z-02, S-SVC	A	1	38	3.5	133	\$13.00	\$1,729	100%			\$0	0%		\$0	0%		\$0	0%		\$0	100%
Z-02, S-SVC	C&G	1	4	3	12	\$90.00	\$1,080	100%			\$0	0%		\$0	0%		\$0	0%		\$0	100%
Z-02, S-SVC	C	1	48	3.5	168	\$18.00	\$3,024	100%			\$0	0%		\$0	0%		\$0	0%		\$0	100%
Total							\$59,792				\$24,902			\$0			\$11,482			\$13,899	

MISCELLANEOUS													
Item	Misc. Subtotal	PG&E (Electric)			PG&E (GAS)			TELEPHONE			CABLE		% TOTAL
		%		TOTAL	%	TOTAL	%	TOTAL	%	TOTAL			
Composite Preparation & Cost share agreement(Form B)	\$150,000	45%		\$67,475	0%		\$0	28%		\$41,467	27%		\$41,058
Erosion and Sedimate Control Plan	\$50,000	45%		\$22,492	0%		\$0	28%		\$13,822	27%		\$13,686
Traffic Control	\$100,000	45%		\$44,984	0%		\$0	28%		\$27,644	27%		\$27,372
Landscaping Costs	\$10,000	45%		\$4,498	0%		\$0	28%		\$2,764	27%		\$2,737
Total	\$310,000			\$139,449			\$0			\$85,698			\$84,853

GENERAL TERMS AND ASSUMPTIONS

By signing you agree to the unit cost of each item. The Totals are estimates based on the composite design and may be different in the field.
 These costs are valid under the assumption that PG&E begins trenching within one year of the date on this form.
 Trenching costs include spoils removal.
 Cable to provide their own conduit and substructures
 Telephone to provide their own conduit and substructures
 Gas to provide their own pipe and substructures
 City of XYZ to provide their own conduit and substructures
 No costs for materials have been included in this cost share agreement
 Trenching will be done in non-inclement weather.
 Shoring will only be required with trench depths greater than 60".
 There are no underground obstructions (hazardous waste, burial grounds, unseen underground vaults, etc.)
 **No costs associated with this trench section. Gas service will be inserted into existing gas service.

FORM B SUMMARY					
	TOTAL	PG&E (Electric) TOTAL	PG&E (GAS) TOTAL	TELEPHONE TOTAL	CABLE TOTAL
JOINT TRENCH/SUBSTRUCTURE EXCAVATION	\$174,390	\$114,184	\$0	\$32,748	\$27,458
CONDUIT & SUBSTRUCTURE INSTALLATION	\$43,332	\$28,906	\$0	\$8,091	\$6,335
CUT BREAK & PAVE	\$59,792	\$24,902	\$0	\$11,482	\$13,899
MISCELLANEOUS	\$310,000	\$139,449	\$0	\$85,698	\$84,853
GRAND TOTAL	\$277,514	\$307,440	\$0	\$138,019	\$132,545

	Trench Ft	Cost	\$/Ft
Total Trench Footage	850	\$277,514	\$326.49
PG&E (Electric)	825	\$307,440	\$372.66
TELEPHONE	507	\$138,019	\$272.23
CABLE	502	\$132,545	\$264.03

AUTHORIZATION:

PG&E _____ Date _____

TELEPHONE _____ Date _____

CABLE _____ Date _____

City of XYZ _____ Date _____

