PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

January 12, 2021

Southern California Gas Company
Advice Letter: 5617-G

Ronald van der Leeden
Director Regulatory Affairs
Southern California Gas Company
555 W. Fifth Street, GT14D6
Los Angeles, CA 90013-1011

Subject: Approval of Southern California Gas Company's Advice Letter 5617 - Proposed Acceleration of Pipeline Safety Enhancement Plan (PSEP) Projects to Achieve Operational Efficiencies and Cost Savings and Enhance the Safety of SoCalGas' System

Dear Van der Leeden,

This letter approves Southern California Gas Company's (SoCalGas) Advice Letter (AL) 5617-G, requesting to accelerate three pipeline safety enhancement plan (PSEP) projects. As discussed below, SoCalGas has satisfactorily addressed the protest raised by Public Advocates Office and The Protect Our Communities Foundation.

Background

In its 2019 GRC Application (A.) 17-10-008, SoCalGas presented cost estimates associated with Pipeline Safety Enhancement Plan (PSEP) Phase 2A projects and valve automation projects during years 2019 through 2021. The Commission issued D.19-09-051 in response to A.17-10-008.

On April 9, 2020, SoCalGas submitted AL 5617-G to accelerate three PSEP projects that will achieve costs savings and enhance the safety of SoCalGas' system. SoCalGas submitted AL 5617-G pursuant to Ordering Paragraph (OP) 16 of SoCalGas' 2019 GRC D.19-09-051, which states,

> "Southern California Gas Company shall file a Tier 2 Advice Letter to request project ***substitution*** of an approved Pipeline Safety Enhancement Plan with another project. The advice letter will contain the name and scope of the delayed project, the circumstances that led to the substitution, and identification of the substituted project as well as the scope and estimated costs to complete the substituted project." (emphasis added)

The three projects are:

- Line 2005 Hydrotest Project - pressure test approximately 0.28 miles of natural gas pipeline in Riverside County, beginning in the Moreno Small Station and continuing south to the Moreno Large Station.

• Line 235 East North Needles Station Replacement project - replace approximately 120 feet of natural gas pipeline at the North Needles Compressor Station within San Bernardino County.
• Line 235 East Newberry Springs Station Replacement project - replace approximately 258 feet (0.049 miles) of natural gas pipeline at the Newberry Springs Compressor Station within San Bernardino County.

Protests

The Public Advocates Office (Cal PA) and The Protect Our Communities Foundation's (POC) timely protested AL 5617-G on the grounds that the projects were "accelerated", not "substitutions" and, therefore, did not comply with D.19-05-091 OP 16.

Cal PA provides that SoCalGas fails to meet the requirements in OP 16 of the 2019 GRC D.19-09-051; has included pipeline segments in AL 5617-G that are outside the scope of its authorized PSEP; and is unable to provide requested information in a timely manner.

POC argues that SoCalGas fails to identify the name and scope of the delayed projects or identify safety or reliability circumstances that led to the substitution. POC also argues that AL 5617-G violates D.14-06-007, which embodied the Decision Tree[1], and that it does not contain the requisite details. POC further argues that the easement and land acquisition costs are unjust and that the CPUC does not have the jurisdiction to grant the relief requested.

Discussion and Disposition

CPUC staff has reviewed the AL 5617-G, the associated protests and SoCalGas' reply to the protests.

The accelerated work SoCalGas plans to perform are safety- and reliability-oriented, which do not add to the revenue requirement that was already approved in D.19-09-05. As a result, SoCalGas' project acceleration, even if out of scope, is practical and benefits ratepayers, i.e., making the pipeline system safer and more reliable at no added cost to ratepayers.

If the work associated with these three projects is not approved, SoCalGas will need to request approval to perform this work in a future Rate Case Application, at additional ratepayer costs. Because no additional cost is associated with SoCalGas' pipeline safety request, we find no merit in the protestants' arguments. SoCalGas should not be deterred from finding operational efficiencies and cost savings for ratepayer benefits.

SoCalGas is therefore allowed to accelerate the three aforementioned pipeline projects described in AL 5617-G.

Please contact Carlos Velasquez at 415-703-1124 or Carlos.Velasquez@cpuc.ca.gov for any questions.

[1] The Decision Tree details an analytical reasoned-based process of testing the safety and reliability of the SDG&E and SoCalGas natural gas pipeline system.

Sincerely,

Edward Randolph
Deputy Executive Director for Energy and Climate Policy /
Director, Energy Division

cc: Simon Baker, Energy Division, CPUC (Simon.Baker@cpuc.ca.gov)
Dorothy Duda, Energy Division, CPUC (Dorothy.Duda@cpuc.ca.gov)
Elizabeth La Cour, Energy Division, CPUC (Elizabeth.LaCour@cpuc.ca.gov)
Carlos Velasquez, Energy Division, CPUC (Carlos.Velasquez@cpuc.ca.gov)
Ray Ortiz, Sempra Energy (ROrtiz@socalgas.com)
Tariffs@socalgas.com
Service list in A.17-10-007
Service list in A.17-10-008
SoCalGas GO 96-B service list

Ronald van der Leeden
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April 9, 2020

Advice No. 5617
(U 904 G)

Public Utilities Commission of the State of California

Subject: Proposed Acceleration of Pipeline Safety Enhancement Plan (PSEP) Projects to Achieve Operational Efficiencies and/or Cost Savings and Enhance the Safety of SoCalGas' System

Purpose

Southern California Gas Company (SoCalGas) hereby submits this Tier 2 Advice Letter pursuant to Ordering Paragraph (OP) 16 of Decision (D.)19-09-051 (the GRC Decision) requesting approval from the California Public Utilities Commission (Commission or CPUC) to accelerate three PSEP projects.[1]

Background

In D.11-06-017, the California Public Utilities Commission (Commission or CPUC) ordered California natural gas transmission pipeline operators to file Implementation Plans "to either pressure test or replace all segments of natural gas pipelines which were not pressure tested or lack sufficient details related to performance of any such test."[2] Pipeline operators were also directed to consider retrofitting pipeline to improve shut-off valve capability as part of their Implementation Plans.[3] Pipeline operators were required to prioritize pipeline segments in more populated areas, with pipeline segments in less populated areas assigned lower priority.[4] The Commission further directed that the Implementation Plan "should provide for testing or replacing all such pipeline as soon as

[1] Please note the fluidity of the Coronavirus (COVID-19) public health crisis may alter the execution timing of the projects included herein. The information provided is based on the execution schedule as of the date of this Advice Letter and assumes initiation of construction in 2020 without any material suspension of work resulting from COVID-19.
[2] D.11-06-017, at 19.
[3] Id., OP 8, at 32.
[4] Id., OP 4, at 31.

practicable"[5] and "should reflect a timeline for completion that is as soon as practicable."[6] These requirements were subsequently codified by the California Legislature in the Natural Gas Pipeline Safety Act of 2011 (Cal. Pub. Util. Code §958). In response to this directive, SoCalGas filed a joint proposed PSEP with San Diego Gas and Electric Company (SDG&E) in August 2011. The Commission adopted Phase 1 of the plan in D.14-06-007, issued June 20, 2014.

In accordance with the Commission's directives to prioritize pipelines located in more populated areas (Phase 1), ahead of those routed through less populated areas (Phase 2), SoCalGas and SDG&E have pressure tested or replaced over 115 miles of pipe as part of Phase 1 of PSEP[7] and over 25 miles of pipe as part of Phase 2 through 2019. SoCalGas and SDG&E have also newly installed or automated more than 350 pipeline isolation valves as part of PSEP.

In its 2019 General Rate Case (GRC) Application (A.) 17-10-008, SoCalGas presented cost estimates to complete 22 Phase 2 projects and 284 valve automation projects during years 2019 through 2021. SoCalGas also presented eight additional estimates to complete PSEP projects in 2022 in the event the Commission granted SoCalGas's request for a four-year GRC term.

PSEP projects were identified as mitigations to a top safety risk of *Catastrophic Damage Involving High Pressure Pipeline Failure* in SoCalGas's 2016 and 2019 Risk Assessment Mitigation Phase reports.

Given the breadth of both SoCalGas's system and the large scope of PSEP, SoCalGas pointed out in its GRC testimony that: 1) delays to commencing construction of already authorized projects, and/or 2) opportunities for prudent acceleration of future projects, could occur. As such, SoCalGas requested approval to substitute or accelerate PSEP projects where efficiencies could be gained for operational, reliability, or safety reasons, provided the substituted or accelerated project(s) did not cause SoCalGas to exceed the aggregate amount authorized for recovery for PSEP projects in the GRC Decision. The Commission approved SoCalGas' request in the GRC Decision, ordering SoCalGas to submit a Tier 2 Advice Letter to seek authorization to substitute PSEP projects "to afford the Commission sufficient opportunity to review the proposal without unnecessarily delaying the process."[8]

The Commission recently issued D.20-01-002 addressing the rate case plan for the large energy utilities in California and extending the GRC cycle from three to four years. To transition to a four-year cycle, D.20-01-002 extended the current GRC cycle by two attrition

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[5] Id., at 19.
[6] Id., Conclusion of Law 5, at 29.
[7] Phase 1 mileage totals presented are inclusive of accelerated and/or incidental mileage that was included in certain projects to minimize customer impacts, in response to operational constraints, or because of the cost and operational efficiencies gained by incorporating them into the project scope rather than circumventing them.
[8] D.19-09-051, at 217.

years. SoCalGas and SDG&E were also specifically ordered to "file a petition to modify [their 2019 GRC] decision to add third and fourth attrition years for 2022 and 2023."[9] SoCalGas and SDG&E are submitting a Petition for Modification as directed in D.20-01-002.

As discussed below, SoCalGas seeks authorization to accelerate three PSEP projects under the Project Substitution provision to enhance public safety, minimize customer and community impacts, and reduce overall costs for customers. This request to accelerate projects, consistent with the Project Substitution requirements set forth in the GRC Decision, is needed unless or until the Commission determines that pre-approval of the substitution of PSEP projects is no longer required.

Discussion

As described in SoCalGas and SDG&E's PSEP, the overarching objectives of PSEP are to: 1) enhance public safety; 2) comply with the Commission's directives; 3) minimize customer and community impacts; and 4) maximize the cost effectiveness of safety investments for customers.[10] The request in this Advice Letter furthers the above objectives, particularly where efficiencies can be gained by accelerating projects for operational, reliability, or safety reasons.

As noted above, SoCalGas' authority to accelerate projects is limited to the aggregate amount approved for PSEP in the GRC Decision. As SoCalGas has advanced the planning and design of some of the larger hydrotest projects approved in the GRC Decision through the detailed design phase, SoCalGas has identified opportunities to refine the scope of those projects to reduce costs for customers. SoCalGas has also refined the scope of certain valve projects subsequent to filing the GRC, which similarly enables SoCalGas to achieve further reductions in costs for customers. As a result, SoCalGas anticipates an overall reduction in the actual Operations and Maintenance (O&M) and Capital PSEP costs relative to the aggregate PSEP project costs authorized in the GRC Decision.

Consistent with SoCalGas' commitment to maximize the cost effectiveness of safety investments for the benefit of customers, SoCalGas requests authority to accelerate the PSEP projects described in the following section. Doing so would enhance the safety and reliability of PSEP Phase 2 pipeline segments that would otherwise need to be addressed at a later date. Accelerating the below projects would also comport with the Commission's directive to test or replace pipeline within the scope of PSEP as soon as practicable. SoCalGas intends to complete the proposed accelerated projects in addition to the projects already authorized in the GRC Decision without exceeding the aggregate amount authorized for recovery for GRC PSEP projects.

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[9] D.20-01-002, at 3.

[10] A.11-11-002, Exhibit SCG-02, August 26, 2011 Testimony of Rick Morrow in support of SoCalGas and SDG&E's Pipeline Safety Enhancement Plan, *as amended* December 2, 2011, at 10.

SoCalGas' request to accelerate the following projects in 2020 is based on the present assumption that no material work suspensions associated with the COVID-19 public health crisis will occur.

Projects to be Accelerated

Supplemental workpapers presenting detailed cost forecasts for the below projects are included in Attachment A.

Pressure Test Projects

Line 2005 Hydrotest
(Direct Costs – Thousands)

Project	Location	Mileage	O&M	Capital	Total
L2005 Hydrotest	Riverside County	0.28	2,519[11]	840	3,359

The Line 2005 Hydrotest Project will pressure test approximately 0.28 miles of natural gas pipeline in Riverside County, beginning in the Moreno Small Station and continuing south to the Moreno Large Station. The entire length of this project consists of Phase 2A pipe. The project is to be tested in one segment due to minimal elevation changes over the length of the hydrotest. The lowest and highest elevations are 1,557 feet and 1,580 feet, respectively. The capital work of this project includes the replacement of two short sections of pipe to facilitate the hydrotesting procedure. This capital work totals approximately 72 feet. A detailed map, included in the supplemental workpapers, depicts the scope of the project and individual test sections.

The Line 2005 Hydrotest Project is proposed to be accelerated to coincide with the pressure test work with another PSEP project, the Line 2000 Phase 2 Replacement Project. The Line 2000 Phase 2 Replacement Project is within the Moreno Large Station and has multiple connection points with Line 2005, as well as locations that require physical isolation for gas handling purposes. Due to the location of these lines within the station, hand excavation and backfill will be required to safely complete the replacement of Line 2000 and install test breaks for Line 2005. The Line 2000 Phase 2 Replacement Project is currently being planned for construction and is anticipated to be executed in Q2 2020. By accelerating the Line 2005 Hydrotest Project to coincide with the construction schedule for the Line 2000 Replacement Phase 2 Project, SoCalGas will be able to maximize coordination opportunities and avoid multiple mobilization events, because the same construction contractor crew, inspection, and standby personnel could be used for the two scopes of work. Water management and handling and permitting efforts would also be consolidated for the two projects. Additionally, by coordinating the two projects, SoCalGas will avoid the need to isolate portions of Lines 2000 and 2005 at separate times during the year, reducing the potential for customer and community impacts associated with the isolation. Because each isolation event requires gas blowdown/capture, there is a

[11] Includes $80K recorded in the Pipeline Safety Enhancement Plan – Phase 2 Memorandum Account (PSEP-P2MA), recovery of which will be sought in a reasonableness review in the 2024 GRC.

cost savings opportunity in addition to the operational and community impact advantages gained by combining the project schedules.

Acceleration of future PSEP scope in the manner discussed above enables SoCalGas to reduce overall costs for customers (by avoiding additional gas blowdown/capture and costs associated with re-mobilization), minimize customer impacts (by avoiding the need to remove the same pipeline from service again in the future as part of a subsequent PSEP project), and minimize community impacts (by eliminating the need to re-mobilize to the same location again as part of a future PSEP project), consistent with the overarching objectives of PSEP.

Replacement Projects

Line 235 East North Needles Station Replacement
(Direct Costs – Thousands)

Project	Location	Mileage	O&M	Capital	Total
L235E North Needles Replacement	San Bernardino County	0.023	0	2,914	2,914

The Line 235 East North Needles Station Replacement project will replace approximately 120 feet of natural gas pipeline at the North Needles Compressor Station within San Bernardino County. The entire length of this project consists of Phase 2A pipe.[12] A detailed map, included in the supplemental workpapers, depicts the scope of the project and replacement sections.

The Line 235 East North Needles Station Replacement project is proposed to be accelerated to coincide with a planned compressor station discharge valve replacement project that is being planned by SoCalGas' Gas Transmission Technical Services (GTTS) department. The valve replacement will require taking a portion of Line 235 East—a backbone line that provides critical pipeline capacity—out of service. The outage on Line 235 East will require a substantial gas capture effort to isolate the affected section of Line 235 East. The valve replacement work is currently being planned for construction and is anticipated to be executed in Q2 2020. By accelerating the PSEP North Needles Station Replacement to coincide with the construction schedule for the GTTS valve replacement project, SoCalGas can reduce overall costs for customers by concurrently constructing the two projects and completing the gas capture effort on a single occasion. Additionally, SoCalGas can minimize potential customer and system impacts by isolating Line 235 East only once, since the acceleration of the PSEP scope to coincide with the valve replacement work would negate the need for a second isolation event at a later date.

Acceleration of future PSEP scope in the manner discussed above enables SoCalGas to reduce overall costs for customers (by avoiding additional gas capture activities) and minimize customer impacts (by avoiding the need to remove the same critical transmission

[12] This project is separate from and not adjacent to the three Line 235 West pressure test projects authorized in the GRC Decision.

pipeline from service again in the future as part of a subsequent PSEP project), consistent with the primary objectives of PSEP.

Line 235 East Newberry Springs Station Replacement
(Direct Costs – Thousands)

Project	Location	Mileage	O&M	Capital	Total
L235E Newberry Springs Replacement	San Bernardino County	0.049	0	4,379	4,379

The Line 235 East Newberry Springs Station Replacement project will replace approximately 258 feet (0.049 miles) of natural gas pipeline at the Newberry Springs Compressor Station within San Bernardino County. The entire length of this project consists of Phase 2A pipe.[13] A detailed map, included in supplemental workpapers, depicts the scope of the project and replacement section.

As with the North Needles replacement, SoCalGas proposes to accelerate the Line 235 East Newberry Springs Station Replacement Project to coincide with a planned compressor station valve replacement project that is being planned by SoCalGas' GTTS department. The valve replacement will require taking a portion of Line 235 East—a backbone line that provides critical pipeline capacity—out of service. The valve replacement work is currently being planned for construction and is anticipated to be executed in Q4 2020. By accelerating the PSEP Newberry Springs Station Replacement to coincide with the construction schedule for the GTTS valve replacement project, SoCalGas can minimize potential system impacts by isolating Line 235 East only once, since the acceleration of the PSEP scope to coincide with the valve replacement work would eliminate the need for a second isolation event at a later date.

Acceleration of future PSEP scope in the manner discussed above enables SoCalGas to minimize customer impacts (by avoiding the need to remove the same critical transmission pipeline from service again in the future as part of a subsequent PSEP project), consistent with the overarching objectives of PSEP.

Protests

Anyone may protest this Advice Letter to the Commission. The protest must state the grounds upon which it is based, including such items as financial and service impact, and should be submitted expeditiously. The protest must be made in writing and received within 20 days of the date of this Advice Letter, which is April 29, 2020. The address for mailing or delivering a protest to the Commission is:

CPUC Energy Division
Attn: Tariff Unit
505 Van Ness Avenue
San Francisco, CA 94102

[13] Id.

Copies of the protest should also be sent via e-mail to the Energy Division Tariff Unit (EDTariffUnit@cpuc.ca.gov). A copy of the protest should also be sent via both e-mail and facsimile to the address shown below on the same date it is mailed or delivered to the Commission.

Attn: Ray B. Ortiz
Tariff Manager - GT14D6
555 West Fifth Street
Los Angeles, CA 90013-1011
Facsimile No.: (213) 244-4957
E-mail: ROrtiz@socalgas.com

Effective Date

SoCalGas believes that this submittal is subject to Energy Division disposition, and should be classified as Tier 2 (effective after staff approval) pursuant to General Order (GO) 96-B. This submittal is consistent with OP 16 of the GRC Decision. Therefore, SoCalGas respectfully requests that this submittal be approved on May 9, 2020, which is thirty (30) calendar days after the date submitted.

Notice

A copy of this Advice Letter is being sent to SoCalGas' GO 96-B service list and the Commission's service lists in A.17-10-007 and A.17-10-008. Address change requests to the GO 96-B service list should be directed by e-mail to Tariffs@socalgas.com or call 213-244-2837. For changes to all other service lists, please contact the Commission's Process Office at 415-703-2021 or by e-mail at Process_Office@cpuc.ca.gov.

/s/ Ronald van der Leeden

Ronald van der Leeden
Director – Regulatory Affairs

California Public Utilities Commission

ADVICE LETTER SUMMARY

ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No.:

Utility type:

☐ ELC ☐ GAS ☐ WATER

☐ PLC ☐ HEAT

Contact Person:
Phone #:
E-mail:
E-mail Disposition Notice to:

EXPLANATION OF UTILITY TYPE

ELC = Electric GAS = Gas WATER = Water
PLC = Pipeline HEAT = Heat

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #:

Tier Designation:

Subject of AL:

Keywords (choose from CPUC listing):

AL Type: ☐ Monthly ☐ Quarterly ☐ Annual ☐ One-Time ☐ Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #:

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL:

Summarize differences between the AL and the prior withdrawn or rejected AL:

Confidential treatment requested? ☐ Yes ☐ No

If yes, specification of confidential information:
Confidential information will be made available to appropriate parties who execute a nondisclosure agreement. Name and contact information to request nondisclosure agreement/ access to confidential information:

Resolution required? ☐ Yes ☐ No

Requested effective date:

No. of tariff sheets:

Estimated system annual revenue effect (%):

Estimated system average rate effect (%):

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected:

Service affected and changes proposed[1]:

Pending advice letters that revise the same tariff sheets:

[1]Discuss in AL if more space is needed.

Protests and all other correspondence regarding this AL are due no later than 20 days after the date of this submittal, unless otherwise authorized by the Commission, and shall be sent to:

CPUC, Energy Division Attention: Tariff Unit 505 Van Ness Avenue San Francisco, CA 94102 Email: EDTariffUnit@cpuc.ca.gov	Name: Title: Utility Name: Address: City: State: Zip: Telephone (xxx) xxx-xxxx: Facsimile (xxx) xxx-xxxx: Email:
	Name: Title: Utility Name: Address: City: State: Zip: Telephone (xxx) xxx-xxxx: Facsimile (xxx) xxx-xxxx: Email:

ATTACHMENT A

Advice No. 5617

PSEP Project Supplemental Workpapers
(Redacted and Confidential)

Confidential and Protected Materials provided pursuant to PUC Section 583, GO 66-D, D.17-09-023, the accompanying declaration, and/or non-disclosure agreement.

BEFORE THE PUBLIC UTILITIES
COMMISSION OF THE STATE OF CALIFORNIA

DECLARATION OF HUGO MEJIA REGARDING CONFIDENTIALITY OF CERTAIN DATA PURSUANT TO D.17-09-023

I, Hugo Mejia, do declare as follows:

1. I am a Project and Execution Manager in the Program Management Office for Southern California Gas Company ("SoCalGas"). I have been delegated authority to sign this declaration by Rodger Schwecke, Senior Vice President of Gas Operation and Construction for SoCalGas and San Diego Gas & Electric ("SDG&E"). I have reviewed the PSEP Project Acceleration Tier II Advice Letter documents that SoCalGas and SDG&E concurrently provide in the accompanying electronic files, submitted concurrently herewith:

CONFIDENTIAL L235E Newberry Springs Station Replacement

CONFIDENTIAL L235E North Needles Station Replacement

CONFIDENTIAL L2005 Hydrotest

2. I am personally familiar with the facts in this Declaration and, if called upon to testify, I could and would testify to the following based upon my personal knowledge and/or information and belief.

3. I hereby provide this Declaration in accordance with Decision ("D.") 17-09-023 and General Order ("GO") 66-D Revision 1[1] to demonstrate that the confidential information ("Protected Information") provided and highlighted in gray in the above-listed electronic files falls within the scope of data protected as confidential under applicable law.

[1] GO 66-D was modified by D.19-01-028 to create GO 66-D Revision 1 which became effective February 1, 2019.

BEFORE THE PUBLIC UTILITIES
COMMISSION OF THE STATE OF CALIFORNIA

4. For the reasons set forth in the narrative justification provided in Attachment A, the Protected Information should be protected from public disclosure.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct to the best of my knowledge. Executed this 7th day of April 2020, at Los Angeles, California.

Hugo Mejia
Project and Execution Manager
SoCalGas

ATTACHMENT A

SoCalGas and SDG&E Request for Confidentiality on the following information in its PSEP Project Acceleration Tier II Advice Letter workpapers

Location of Protected Information	Legal Citations	Narrative Justification
All grey highlighted Pipeline attributes (i.e., SMYS, MAOP, diameter, pressure, grade) in the following attachments: CONFIDENTIAL L235E Newberry Springs Station Replacement Pgs: 1,7 CONFIDENTIAL L235E North Needles Station Replacement Pg: 1 CONFIDENTIAL L2005 Hydrotest Pg: 1	California Public Records Act (CPRA) Exemption, Gov't Code § 6254(ab) ("Critical infrastructure information, as defined in Section 131(3) of Title 6 of the United States Code, that is voluntarily submitted to the Office of Emergency Services for use by that office"); CPRA Exemption, Gov't Code § 6254(k) ("Records, the disclosure of which is exempted or prohibited pursuant to federal or state law"): • 6 U.S.C. §§ 131(3), 133(a)(1)(E); • 6 CFR §§ 29.2(b), 29.8 (defining CII and restricting its disclosure); • 18 CFR § 388.113(c); FERC Orders 630, 643, 649, 662, 683, and 702 (defining CEII); • Critical Energy Infrastructure Information, 68 Fed. Reg. 9862 (Dep't of Energy Mar. 3, 2003) (final rule) (listing what gas information qualifies as CEII); • FERC's Guidelines for Filing Critical Energy/Electric Infrastructure Information, February 21, 2017; available at https://www.ferc.gov/resources/ guides/filing-guide/file-ceii/ceii-guidelines/guidelines.pdf; • 18 C.F.R. § 157.14(a)(8-10); • 18 C.F.R. § 157.18(c); • 18 C.F.R. § 260.8 (FERC Form 567); • 49 CFR §§ 1520.5, 1520.9 (defining SSI and restricting its disclosure); • *Chowdhury v. Nw. Airlines Corp.*, 226 F.R.D. 608 (N.D. Cal. 2004); • PHMSA Guidelines, Federal Register Vol. 81, No. 120, June 22, 2016, pg 40764; • CPRA Exemption, Gov't Code § 6254(ab) (Critical Infrastructure Information)	These engineering design values of a proposed or existing critical infrastructure could potentially be used to determine the criticality of a gas facility and identify vulnerabilities of the gas delivery network. The value can be used to identify the volume of gas present in an area and ascertain the relative potential consequences of intentional acts against the gas transportation and distribution network.
All grey highlighted Vendor information. (Contracts, Vendor bid and pricing information including rates and invoices, customer and	California Public Records Act ("CPRA") Gov't Code § 6254(k) ("Records the disclosure of which is exempted or prohibited pursuant to federal or state law") • D.11-01-36, 2011 WL 660568 (2011) (confidential prices and contract terms specifically negotiated with a program vendor is proprietary and	Based on input received by the vendor, and based on SoCalGas/SDG&E's concurring position, the produced documents are proprietary and represent and contain information that is proprietary, commercially sensitive,

vendor proprietary information). in the following attachments: CONFIDENTIAL L235E Newberry Springs Station Replacement Pg: 5 CONFIDENTIAL L235E North Needles Station Replacement Pg: 5 CONFIDENTIAL L2005 Hydrotest Pg: 9	commercially sensitive and should remain confidential).	trade secrets, and content not intended for public disclosure. Vendor contracting efforts involve communications and work product which is intended only for access by designated parties. Public disclosure would pose potential negative impacts and/or harm to the vendors, and/or inhibit SoCalGas/SDG&E's efforts to reduce costs for customers by obtaining competitive pricing from vendors.
All grey highlighted Pipeline Locational Information (i.e., GPS coordinates, repair location) in the following attachments: CONFIDENTIAL L235E Newberry Springs Station Replacement Pg: 5 CONFIDENTIAL L235E North Needles Station Replacement Pg: 5 CONFIDENTIAL L2005 Hydrotest Pg: 5	CPRA Exemption, Gov't Code § 6254(k) ("Records, the disclosure of which is exempted or prohibited pursuant to federal or state law"): • Civ. Code §§ 1798.80 *et seq. (*process for protecting customer records) • Pub. Util. Code § 8380(d) (a utility "shall use reasonable security procedures and practices to protect a customer's unencrypted electrical or gas consumption data from unauthorized access, destruction, use, modification, or 'disclosure'"); and associated CPUC Decisions (D.11-07-056 and D.12-08-045). CPRA Exemption, Gov't Code § 6254(k) ("Records, the disclosure of which is exempted or prohibited pursuant to federal or state law"): • 6 U.S.C. §§ 131(3), 133(a)(1)(E); • 6 CFR §§ 29.2(b), 29.8 (defining CII and restricting its disclosure); • 18 CFR § 388.113(c); FERC Orders 630, 643, 649, 662, 683, and 702 (defining CEII); • Critical Energy Infrastructure Information, 68 Fed. Reg. 9862 (Dep't of Energy Mar. 3, 2003) (final rule) (listing what gas information qualifies as CEII); • FERC's Guidelines for Filing Critical Energy/Electric Infrastructure Information, February 21, 2017, available at https://www.ferc.gov/resources/ guides/filing-guide/file-ceii/ceii-guidelines/guidelines.pdf; • 18 C.F.R. § 157.14(a)(8-10); • 18 C.F.R. § 157.18(c);	GPS coordinates and pipeline location are identified as confidential because the data would provide sufficient information to be used by a third party to excavate or access above-ground facilities without notifying the utility through the local Underground Service Alert (USA) or could be used to identify locations for illegal tapping or other acts that could impact the safety of residents.

	• 18 C.F.R. § 260.8 (FERC Form 567); • PHMSA Guidelines, Federal Register Vol. 81, No. 120, June 22, 2016, pg 40764; • PHMSA also issued an advisory bulletin on December 9, 2016: ABD-2016-0137; Pipeline Safety: Safeguarding and Securing Pipelines from Unauthorized Access detailing the need for operators to protect their gas systems; • D.17-06-015, Conclusion of Law (COL) 7 at 151 ("For security purposes, it is reasonable to publicly report natural gas emission leak data aggregated by zip code or census tract rather than GIS coordinates and street addresses.").	

Line 2005 Hydrotest Project

PSEP | Pipeline Safety Enhancement Plan

SoCalGas
A Sempra Energy utility

Pipeline Safety Enhancement Plan Workpaper Supporting Tier II Advice Letter

LINE 2005 HYDROTEST PROJECT

PROJECT COSTS – O&M	Prior to 2019*	2019	2020	2021	2022	Total
DIRECT LABOR	$11,684	$0	$0	$0	$317,390	$329,074
DIRECT NON-LABOR	$77,769	$0	$0	$0	$2,112,466	$2,190,235
TOTAL DIRECT COSTS	$89,453	$0	$0	$0	$2,429,856	$2,519,309
Total O&M Costs	$89,453	$0	$0	$0	$2,429,856	$2,519,309

* Actual costs incurred associated with planning and engineering design work are included in the project cost estimates

PROJECT COSTS - CAPITAL	Prior to 2019*	2019	2020	2021	2022	Total
DIRECT LABOR	$5,491	$0	$0	$0	$104,211	$109,702
DIRECT NON-LABOR	$36,545	$0	$0	$0	$693,602	$730,147
TOTAL DIRECT COSTS	$42,036	$0	$0	$0	$797,813	$839,849
Total Capital Costs	$42,036	$0	$0	$0	$797,813	$839,849

* Actual costs incurred associated with planning and engineering design work are included in the project cost estimates

TOTAL PROJECT COSTS	Prior to 2019*	2019	2020	2021	2022	Total
DIRECT LABOR	$17,175	$0	$0	$0	$421,601	$438,776
DIRECT NON-LABOR	$114,314	$0	$0	$0	$2,806,068	$2,920,382
TOTAL DIRECT COSTS	$131,489	$0	$0	$0	$3,227,669	$3,359,158
Total Costs**	$131,489	$0	$0	$0	$3,227,669	$3,359,158

* Actual costs incurred associated with planning and engineering design work are included in the project cost estimates
** Costs shown do not include $278,872 ($86,916 in Capital and $191,956 in O&M) in Implementation Continuity Costs as indicated in the Implementation Continuity Costs Workpaper.

Project Description

The Line 2005 project will hydrostatically test 0.280 miles of [redacted] pipe. L-2005 is a high pressure transmission pipeline that was installed in 1950. The pipeline has an MAOP of [redacted] psig.

The L-2005 project takes place in Riverside County, CA, beginning in the Moreno Small Station and continuing south to the Moreno Large Station. The entire length of this project consists of Phase 2A pipe.

The project is to be tested in one segment due to negligible elevation changes over the length of the hydrotest. The lowest and highest elevations are 1,557 feet and 1,580 feet, respectively. The capital work of this project includes the replacement of two short sections of pipe to facilitate the hydrotesting procedure. This capital work totals to 72 feet.

Alternatives Considered

Line 2005 is the primary tie-over from L-2001 West to L-2000 to feed gas from the SoCalGas transmission system to San Diego. The abandonment of L-2005 would result in a substantial loss in capacity to the San Diego Transmission Zone since gas moves from Blythe towards San Diego via this route. Because of this, abandonment is not a viable option. Derating the pipeline to less than 20% SMYS would reduce the capacity of the system resulting in an inability to meet customer demand and also is not an option.

Shut-In Analysis

The line section can be temporarily taken out of service to perform the hydrotests during the summer months. There are no customers within the hydrotest segment that must be considered before an outage could be implemented. However, L-2005 is a tie-over pipeline from L-2001 West to L-2000, during the outage, customers served by the L-2005 tie-over will be supplied solely by L-2000.

Forecast Methodology

SoCalGas developed a Total Installed Cost (TIC) estimate to implement the above scope of work. The TIC estimate includes direct costs associated with project management, engineering and design, environmental permitting, land acquisition, material and equipment procurement, and construction.

Schedule

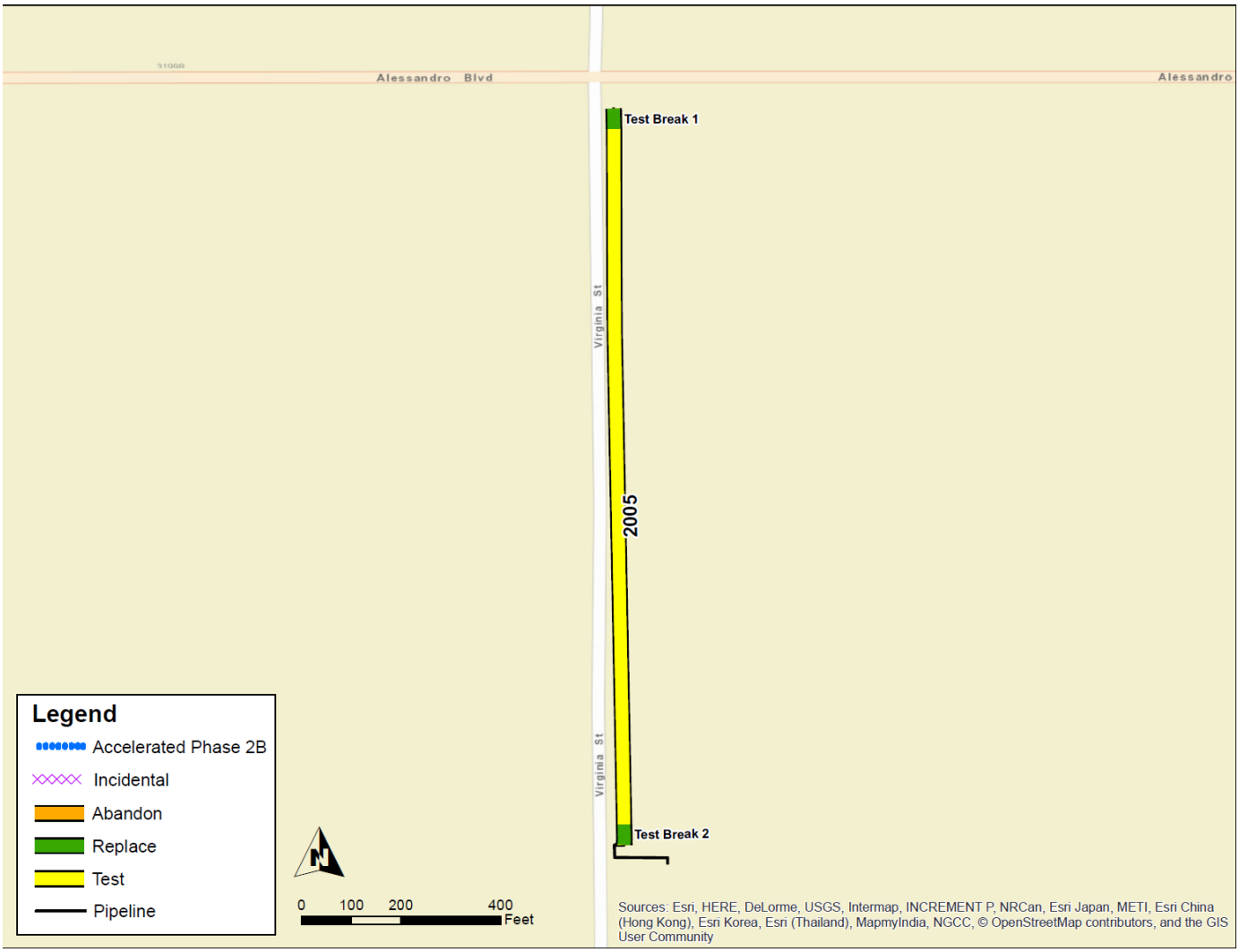
The schedule was developed based on the seven stage project life cycle described in testimony. As defined in testimony, key project deliverables were identified and incorporated into a work breakdown structure. This work breakdown structure was then sequenced, and predecessor and successor tasks were linked. Estimated durations were established for each task to derive a total project timeline.

As described in greater detail below, the preliminary Construction Schedule is assumed to span 43 working days.

Pipeline Safety Enhancement Plan Workpaper Supporting Tier II Advice Letter

LINE 2005 HYDROTEST PROJECT

Project Overview Map for L-2005



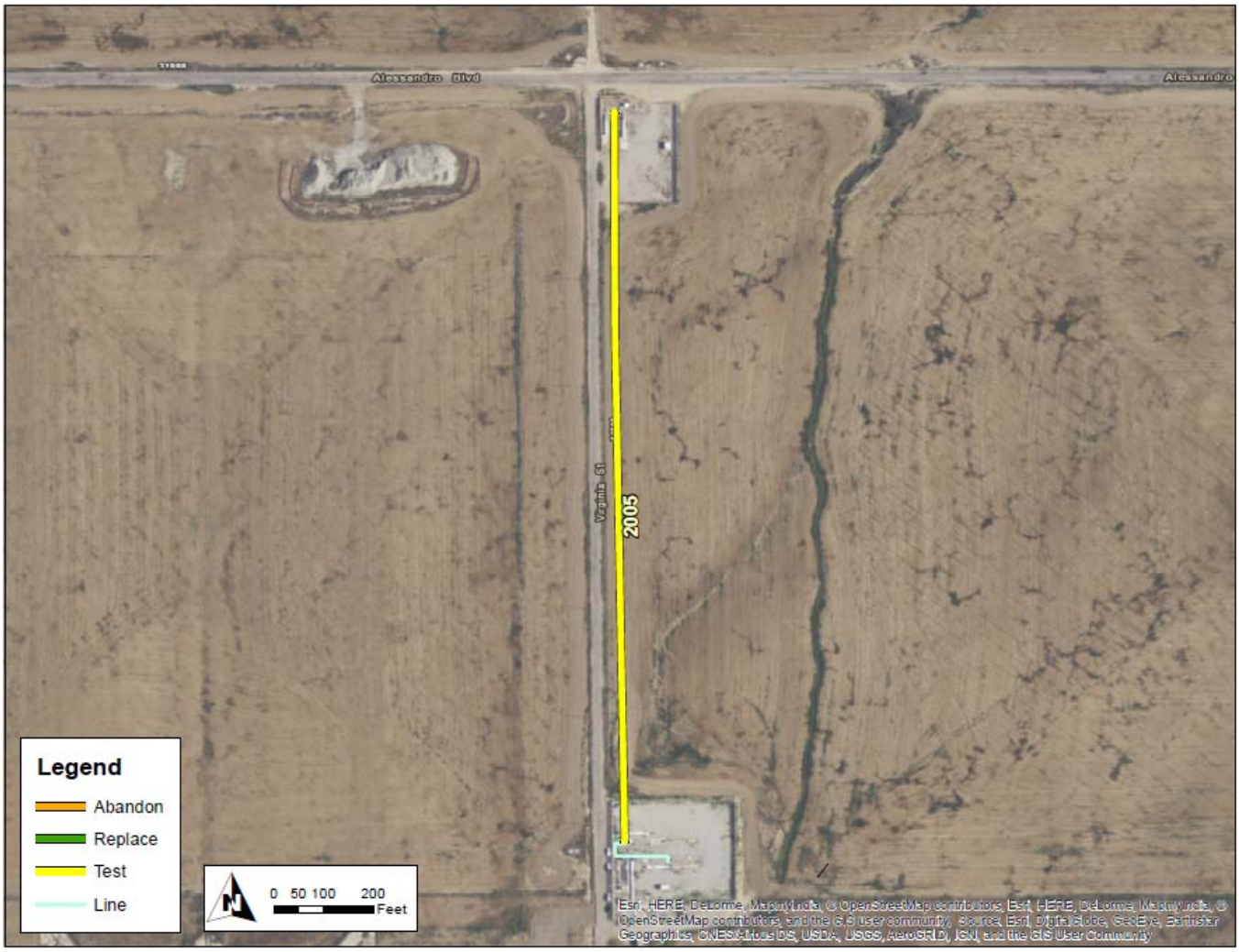
PROJECT MILEAGE TABLE

PHASE	MILEAGE
PHASE 2A	0.280
ACCELERATED PHASE 2B	0.000
INCIDENTAL	0.000
TOTAL MILEAGE	0.280

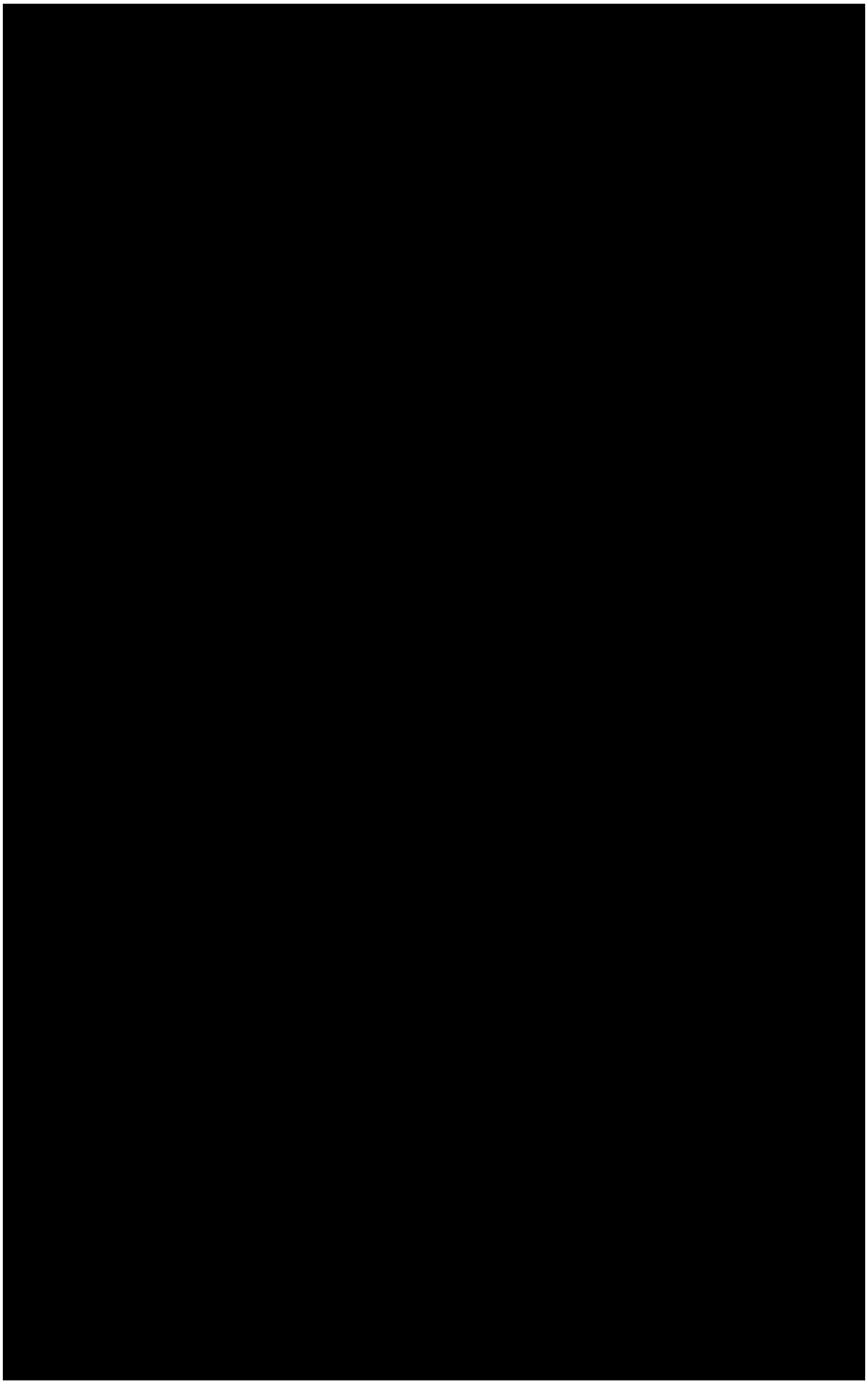
Pipeline Safety Enhancement Plan Workpaper Supporting Tier II Advice Letter

LINE 2005 HYDROTEST PROJECT

Project Satellite Map for L-2005



Elevation Exhibit for L-2005



The direct costs for each area are summarized below.

Material						
Project Costs	**Prior to 2019**	**2019**	**2020**	**2021**	**2022**	**Total**
DIRECT LABOR	$0	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$0	$0	$0	$0	$196,863	$196,863
TOTAL DIRECT COSTS	$0	$0	$0	$0	$196,863	$196,863

Assumptions

Materials for this project will not be purchased until final internal authorization is obtained. This will allow for material to be procured, inspected and delivered to coincide with the anticipated construction start date.

Construction						
Project Costs	**Prior to 2019**	**2019**	**2020**	**2021**	**2022**	**Total**
DIRECT LABOR	$0	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$0	$0	$0	$0	$1,795,136	$1,795,136
TOTAL DIRECT COSTS	$0	$0	$0	$0	$1,795,136	$1,795,136

General Assumptions

In the development of the construction estimate, the following assumptions and clarifications have been made:

- Pricing is based on current construction costs in Riverside County, CA
- Construction schedule is assumed to include 43 working days (10 hours per day, five day per week)
- Installation of three water storage tanks
- Receipt of all materials to main yard
- Fabrication and pre-testing of a total of two test heads
- Mechanical excavation up to approximately two feet of the existing pipeline; hand excavation within the two-foot zone
- Performance of asbestos abatement at each test break and anomaly location, along with pipe inspection
- Purging of gas and isolation of pipeline using contractor-fabricated isolation caps
- Backfilling of excavations with zero-sack slurry or sand padding to one foot above pipeline; remainder of backfilling with native soil or one-sack slurry (depending on permit conditions); excess spoils will be hauled off and disposed
- A single final tie-in will be performed
- Isolation and final tie-ins are a continuous operation
- Fabrication of line taps and reconnection after line is brought back into service
- No line seasoning
- Hauling off and disposal of hydrotest water

- Estimate does not include holiday work, cultural resources, or ground water

Additional Construction Information

- **Site Mobilization / Site Facilities**
  - One mobilization and one demobilization
  - Placement of two office trailers at the laydown yard
  - Site facility costs cover a two month duration
  - Crushed rock for laydown yard

- **Site Preparation**
  - Preparation of access roads prior to start of construction
  - Installation of lake tank pad
  - Temporary fencing has been included for laydown yard
  - Installation of additional temporary fencing to secure open excavations

- **Site Management / Best Management Practice (BMP)**
  - Environmental protective fencing at each of the hydrotest ends and anomaly excavations
  - BMP materials for spoil piles, laydown yards, and work sites

- **SoCalGas / Company Furnished Material Handling**
  - Unloading by contractor of two loads of SoCalGas furnished material at the laydown yard

- **Traffic Control**
  - Not required

- **Utility Locates**
  - Utility Locates have not been included as all excavations will be performed by hand excavation methods

- **Isolate Existing Pipeline**
  - Isolation of a total of zero taps prior to hydrotesting

- **Anomalies**
  - There are no anomalies present in this section that require replacement prior to hydrotesting

- **Pressure Test Pipeline**
  - A total of two test breaks sites will be excavated for test head installation
  - Hydrotesting of a total of one individual section
  - Installation of test heads below grade; no vertical offset installation of test heads to an above-ground orientation

- **Tie-In Pipeline**
  - Four cold tie ins will be performed at each of the test break sections
  - X-ray of all welds

- **Paving**
  - Not required

- **Retire / Abandon Existing Pipeline**
  - Not required

- **Site Restoration**
  - Restoration of work site locations to original condition

- **Site Demobilization**
  - Demobilization of site facilities, crew, and equipment
  - Removal of office trailers and breakdown of laydown yard
  - Excess piping will be hauled to SoCalGas desgined yard

- **Field Overhead**
  - One Project Manager (PM), one Superintendent, one Cost Controller, one General Forman, and one Safety Personnel have been included for full project duration
  - One water truck and driver for full project duration for dust suppression
  - One site security personnel have been employed for all non-working hours
  - Lodging and expenses for field personnel and project management team for full project duration

Environmental Survey/Permitting/Monitoring						
Project Costs	**Prior to 2019**	**2019**	**2020**	**2021**	**2022**	**Total**
DIRECT LABOR	$0	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$0	$0	$0	$0	$218,637	$218,637
TOTAL DIRECT COSTS	$0	$0	$0	$0	$218,637	$218,637

Assumptions

In generating the cost estimate, the following environmental issues and/or items were considered:

- Environmental Services (permitting support, surveys and monitoring)
- Abatement (asbestos, lead, and tar containment)
- Hazardous and Non-hazardous Waste Containment/ Disposal (including hydrostatic test water hauling and disposal)
- Water treatment and disposal
- Permits and fees

- Mitigation

Environmental Labor

Environmental Contract Services Labor: 162 hours

The high level assumptions and specific level of effort to provide environmental support for this project are described in more detail below.

- Document Preparation and Project Management
  - SoCalGas Environmental Services support in addition to consultant support throughout duration of project (planning, permitting, construction, and closeout)
  - Document Production anticipated:
    - Worker Environmental Awareness Program (WEAP) development
    - Cultural and biological survey and reports
    - Storm Water Pollution and Prevention Plan (SWPPP) and Notice of Intent (NOI)

- Biological Surveys
  - Habitat assessment for SKR and other sensitive species (one survey)
  - Burrowing Owl Survey (four total visits)
  - Pre-construction Clearance Surveys (two total visits)

- Closeout activities
  - Restoration and permit closeout support

Abatement

- Assuming 22 days for asbestos (assumes potential for debris field) and lead abatement (for aboveground structures) based on planned construction activities

Water Hauling and Disposal

- No groundwater expected to be encountered
- Hydrotest water (54,522 gallons total)
- Water source from hydrant at Moreno Valley will be used for the hydrostatic tests
- Testing source water from hydrant
- Trucking from Rancho Cucamonga to water source to laydown yard (100 miles round trip)
  - 12 truck loads
  - Testing from hydrant (one sample)
- Water Disposal
  - Testing for disposal (one sample)
  - 12 truck loads to [redacted] in Rancho Cucamonga (100 miles round trip)
  - Disposal fees will apply (assuming $0.20/gallon).
- Hydrotest standby support (one vacuum truck for each of the one day)

Haz Mat

- No contaminated soil expected to be encountered
- Assumes drums will be needed to contain waste from minor spills and lead paint waste abatement activities.
- Assumes up to two samples for profiling purposes through project construction and up to three disposal trips to Clean Harbors (200 miles round trip).
- Assumes one pig disposal trip (400 miles round trip for disposal to Buttonwillow).

Permit Fees

- South Coast AQMD Asbestos Abatement fee. Fee subject to change based on agency

Mitigation Fees

- None

Land & Right-of-Way Acquisition						
Project Costs	**Prior to 2019**	**2019**	**2020**	**2021**	**2022**	**Total**
DIRECT LABOR	$0	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$0	$0	$0	$0	$0	$0
TOTAL DIRECT COSTS	$0	$0	$0	$0	$0	$0

Assumptions

In generating the cost estimate, the following items were considered:

- Labor
- Legal Services
- Permitting Fees
- New Easement costs
- Temporary Right of Entry (TRE) - Construction Yards
- Temporary Right of Entry (TRE) - Workspace

Land Services Labor

- Land Contract Services Labor: 120 hours

Factors such as location, zoning, current market price and square footage are considered to determine a final estimated value specific to easements and temporary rights of entry permits. Previous project experience specific to the Riverside County area was also considered in generating the cost estimate.

Company Labor						
Project Costs	**Prior to 2019**	**2019**	**2020**	**2021**	**2022**	**Total**
DIRECT LABOR	$17,175	$0	$0	$0	$421,600	$438,775
DIRECT NON-LABOR	$0	$0	$0	$0	$0	$0
TOTAL DIRECT COSTS	$17,175	$0	$0	$0	$421,600	$438,775

Assumptions

SoCalGas Non-Union Labor is estimated based upon activity level of effort and is divided into the following categories:

- **SoCalGas Labor - Management, Engineering, and Non-Union Labor**
  - Project Management (1,182 hours)
  - Project Field Management (310 hours)
  - Project Engineer (560 hours)
  - Construction Management / Inspectors (490 hours)
  - Environmental (520 hours)
  - Other Departments (468 hours)

SoCalGas Union Labor costs were developed with the guidance of SoCalGas Construction Management and whose costs are duration-dependent and activity-specific.

SoCalGas Field Labor – Distribution, Transmission, Pipeline Integrity, and Other Field Departments

- SoCalGas Field Labor: 1,660 hours

Other Capital Costs						
Project Costs	**Prior to 2019**	**2019**	**2020**	**2021**	**2022**	**Total**
DIRECT LABOR	$0	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$114,314	$0	$0	$0	$595,433	$709,747
TOTAL DIRECT COSTS	$114,314	$0	$0	$0	$595,433	$709,747

Assumptions

Other capital costs assume use of contracted Project Management, Engineering and Design service.

The major components in this category include:

- Engineering / Design Services (1,864 hours)
- PM / Project Services (470 hours)
- Construction Management (2,150 hours)
- Surveying / As-builts (488 hours)

Line 235 East North Needles Station Replacement

PSEP | Pipeline Safety Enhancement Plan

SoCalGas
A Sempra Energy utility

Pipeline Safety Enhancement Plan Workpaper Supporting Tier II Advice Letter

Line 235 East North Needles Station Replacement

PROJECT COSTS – O&M	Prior to 2020*	2020	2021	2022	Total
DIRECT LABOR	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$0	$0	$0	$0	$0
TOTAL DIRECT COSTS	$0	$0	$0	$0	$0
TOTAL O&M COSTS	$0	$0	$0	$0	$0

* Actual costs incurred associated with planning and engineering design work are included in the project cost estimates.

PROJECT COSTS – CAPITAL	Prior to 2020*	2020	2021	2022	Total
DIRECT LABOR	$1,299	$566,540	$0	$0	$567,839
DIRECT NON-LABOR	$4,155	$2,342,403	$0	$0	$2,346,557
TOTAL DIRECT COSTS	$5,454	$2,908,942	$0	$0	$2,914,396
TOTAL CAPITAL COSTS	$5,454	$2,908,942	$0	$0	$2,914,396

* Actual costs incurred associated with planning and engineering design work are included in the project cost estimates.

TOTAL PROJECT COSTS	Prior to 2020*	2020	2021	2022	Total
DIRECT LABOR	$1,299	$566,540	$0	$0	$567,839
DIRECT NON-LABOR	$4,155	$2,342,403	$0	$0	$2,346,557
TOTAL DIRECT COSTS	$5,454	$2,908,942	$0	$0	$2,914,396
TOTAL COSTS	$5,454	$2,908,942	$0	$0	$2,914,396

* Actual costs incurred associated with planning and engineering design work are included in the project cost estimates.

Project Description

The Line 235 East Phase 2 North Needles Station Replacement project will replace approximately 92 feet of [redacted] natural gas pipeline and 28 feet of [redacted] branch lines. The Line 235 East Phase 2 North Needles Station Replacement project will be at the North Needles Compressor Station within San Bernardino County.

Alternatives Considered

Line 235 East is a backbone line that plays a critical role in meeting transmission system operational needs. Abandoning this line would create a substantial loss in capacity to the Northern Transmission Zone since gas moves from the receipt points at North and South Needles towards Adelanto via Line 235. The gas supply from Adelanto supports the entire SoCalGas Transmission System, which serves the Los Angeles Basin Loop from one or more of the City Gates. De-rating the pipeline would negatively impact the capacity of the system and is not a viable option.

Forecast Methodology

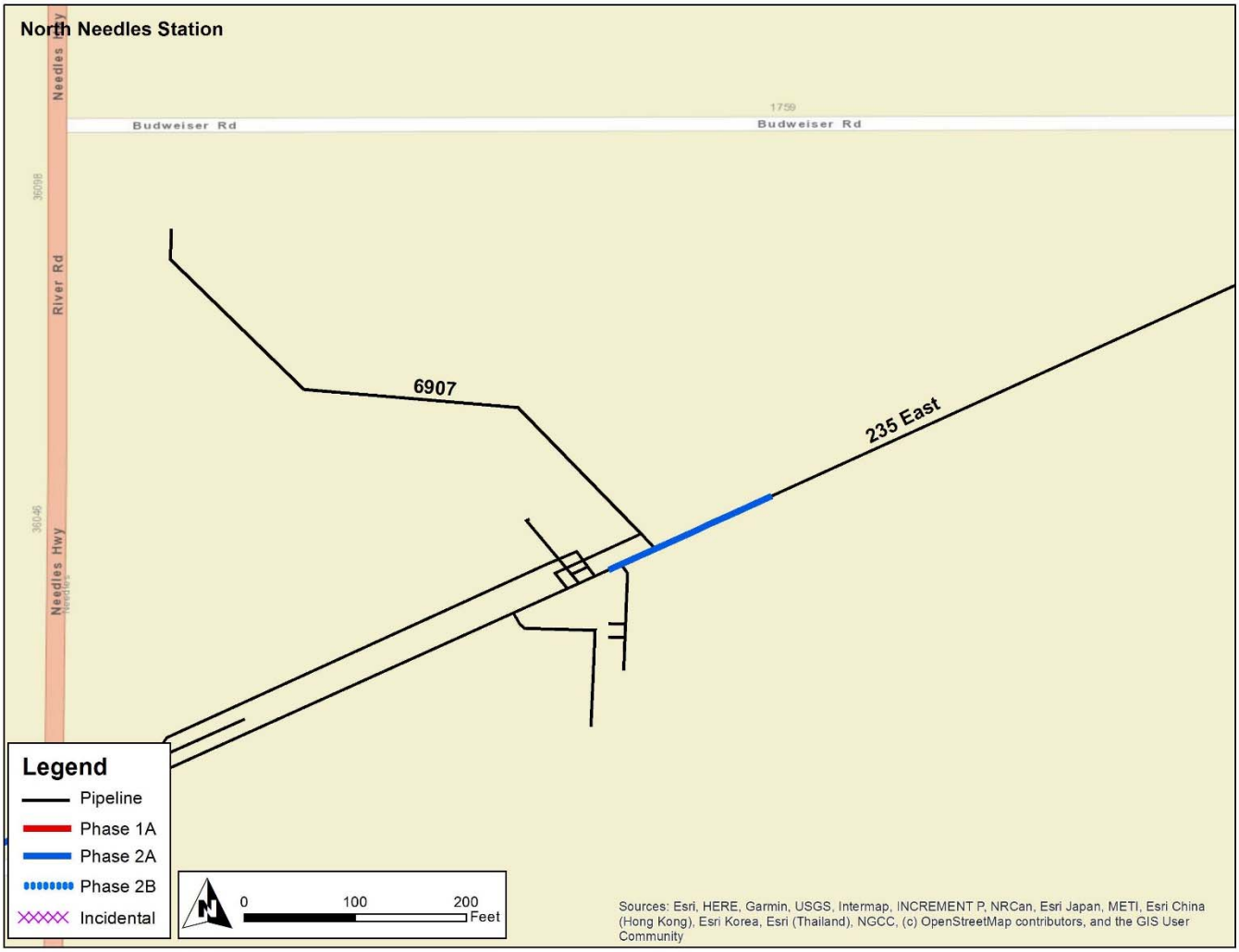
SoCalGas developed a Total Installed Cost (TIC) estimate to implement the above scope of work. The TIC Estimate includes direct costs associated with project management, engineering and design, environmental permitting, land acquisition, material and equipment procurement, and construction.

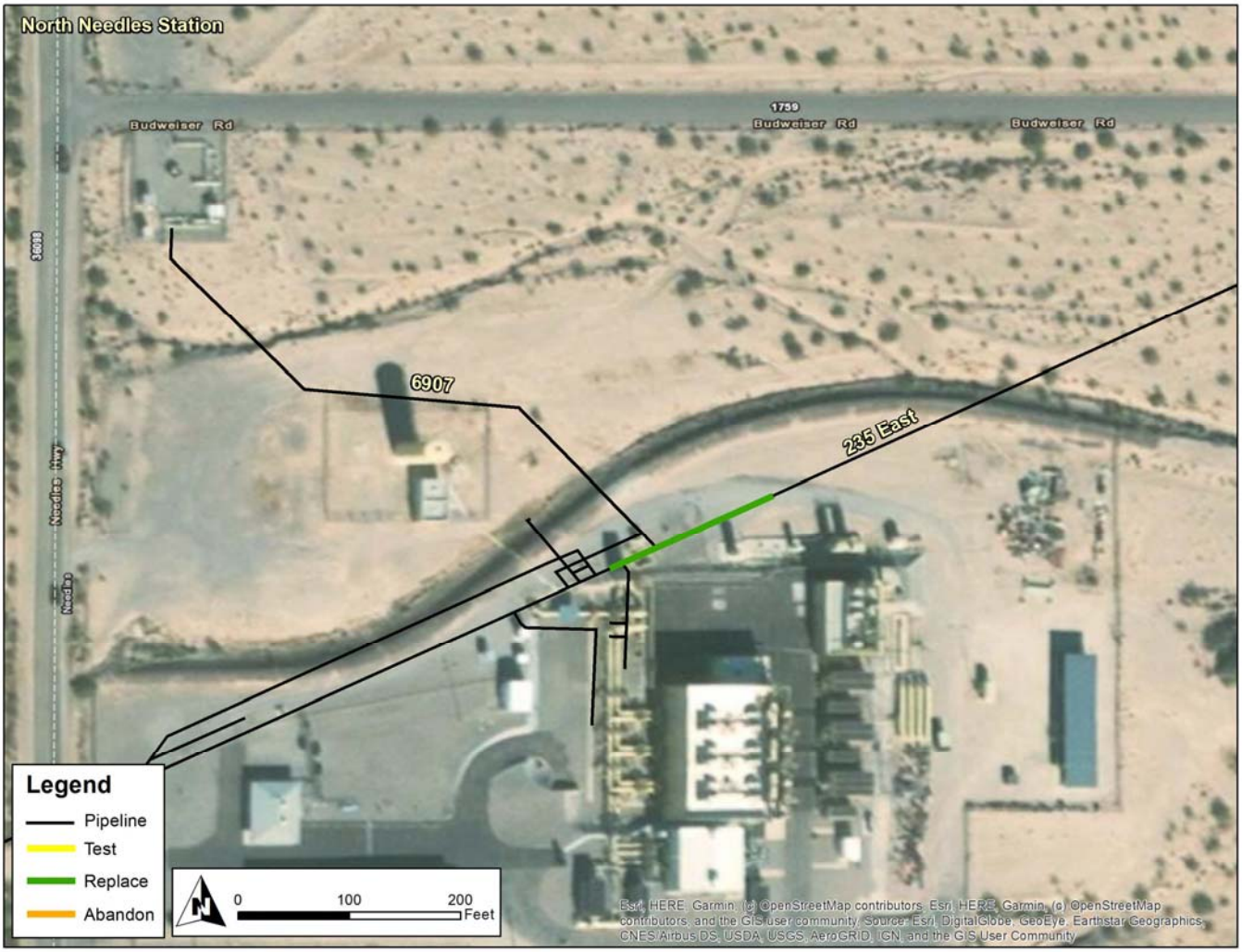
Schedule

The schedule was developed based on the seven-stage project life cycle as defined by PSEP. The key project deliverables were identified and incorporated into a work breakdown structure. This work breakdown structure was then sequenced, and predecessor and successor tasks were linked to each task. Finally, durations were added to each task to provide a total project duration.

The preliminary Stage 5 Construction Schedule received additional planning and stakeholder input considering that typically 50% of the project costs are expended during the construction phase. The construction schedule is assumed to be 38 days.

Project Map for Line 235 East North Needles Station Replacement

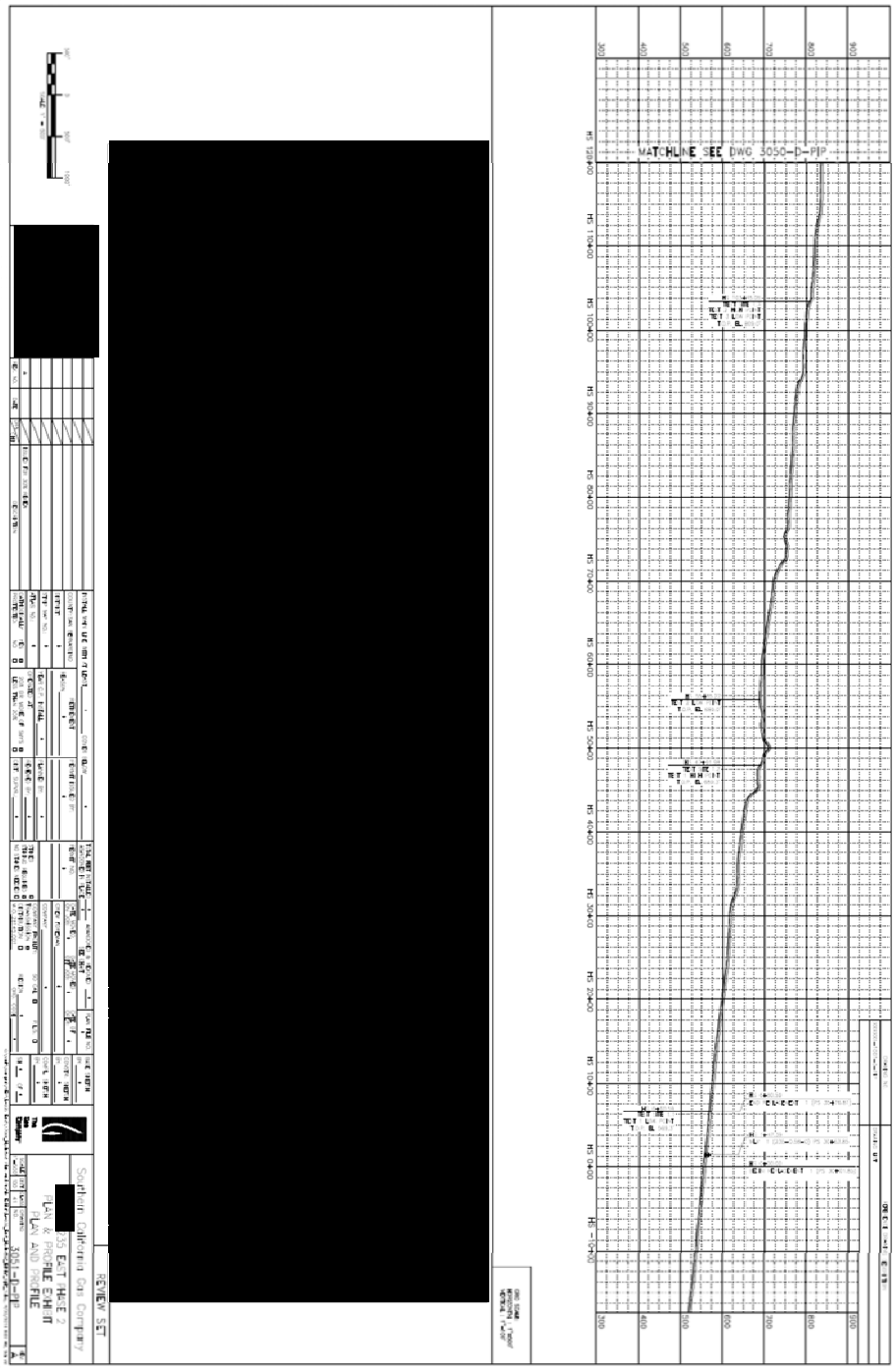




PROJECT MILEAGE TABLE

PHASE	MILEAGE
PHASE 2A	0.023
ACCELERATED - PHASE 2B	0.000
INCIDENTAL	0.000
TOTAL MILEAGE	0.023

Elevation Map for Line 235E North Needles Station Replacement



The direct costs for each area are summarized below.

Material					
PROJECT COST ($000,000 IN 2019 $'s)	Prior to 2020	2020	2021	2022	Total
DIRECT LABOR	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$0	$237,674	$0	$0	$237,674
TOTAL DIRECT COSTS	$0	$237,674	$0	$0	$237,674

Assumptions

Materials for this project will not be purchased until final internal authorization has been granted to purchase long lead time material. This will allow for material to be procured, inspected and delivered to coincide with the anticipated construction start date.

Construction					
PROJECT COST ($000,000 IN 2019 $'s)	Prior to 2020	2020	2021	2022	Total
DIRECT LABOR	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$211	$1,448,976	$0	$0	$1,449,187
TOTAL DIRECT COSTS	$211	$1,448,976	$0	$0	$1,449,187

General Assumptions

In the development of the construction estimate, the following assumptions and clarifications have been made:

- One mobilization and one demobilization
- Contractor work has been scheduled using a 10-hour per day, six-day work week calendar.
- One shift per day
- Work will be scheduled Monday through Saturday.
- All materials will be received at the laydown yard.
- A single final tie-in will be performed. Intermittent gas-ups have not been included.
- Line 235 East North Needles Station Replacement Isolation and Final Tie-Ins have been assumed for a 24-hour continuous duration.
- Line seasoning is not required.
- Hydrotest water will be hauled off and disposed.
- 100% per-diem for field labor and project management teams.

Additional Construction Information

- **Site Mobilization / Site Facilities**
  - One mobilization and one demobilization
  - A total of two office trailers will be placed at the laydown yard.
  - Site facility costs cover a two-month duration.

- **Site Preparation**
  - 1,480 Linear Feet (LF) Temporary Fencing has been included to delineate the laydown yard.

- **Site Management / Best Management Practices (BMPs)**
  - 1,000 Linear Feet (LF) Environmental protective fencing has been included.

- **SCG / Company Furnished Material Handling**
  - Two loads of SCG furnished material will be unloaded by the contractor at the laydown yard.

- **Traffic Control**
  - Traffic control is not included on this project.

- **Utility Locates**
  - No utility locate crew is assumed. All open cut excavations are through soft excavation means (Hand dug).

- **Isolate Existing Pipeline**
  - A total of four taps will be isolated prior to hydrotesting.

- **Pressure Test Pipeline**
  - One hydrostatic test will be conducted.

- **Tie In Pipeline**
  - Two hot tie ins will be performed
  - 100% of tie in welds will be x-rayed.

- **Retire / Abandon Existing Pipeline**
  - Not Applicable

- **Site Restoration**
  - All work site locations will be restored to original condition.
  - Disturbed native areas will be restored and graded to drain.

- **Site Demobilization**
  - All site facilities will be demobilized.
  - One load of excess piping will be hauled to SCG designated yard.
  - Crew and Equipment will be demobilized.

- **Field Overhead**
  - One Superintendent, one Safety Supervisor, and one Time Keeper have been included for full project duration.
  - One Part-Time Project Engineer and one Cost Control has been included.
  - Two water trucks and drivers are included. One water truck and driver for full project duration and One truck and driver from excavation thru backfill activities for dust and fire suppression.
  - Three site security personnel have been employed for all non-working hours.

- 100% per diem for field personnel and project management team for full project duration.

Environmental Survey/Permitting/Monitoring					
PROJECT COST ($000,000 IN 2019 $'s)	Prior to 2020	2020	2021	2022	Total
DIRECT LABOR	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$0	$111,541	$0	$0	$111,541
TOTAL DIRECT COSTS	$0	$111,541	$0	$0	$111,541

Assumptions

In calculating the total estimated environmental cost, the following items were considered:

- Environmental Services
- Abatement (asbestos and lead)
- Hazardous and non-hazardous waste containment/disposal (including hydrotest water hauling, treatment, and/or disposal)

The high-level assumptions and specific level of effort to provide environmental support for this project are described in more detail below.

Environmental Labor

- **Environmental Contract Services Labor:** 54 hours
  - Document Preparation and Project Management
  - SoCalGas Environmental Services support in addition to consultant support throughout duration of project (planning and construction)
  - Document Production anticipated:
    - Worker Environmental Awareness Procedure (WEAP) document
    - Environmental Clearance
    - Required notifications for hydrostatic test water discharge

- **Preconstruction Surveys**
  - One precon survey within 50 feet of project area
  - Pre-construction wildlife and nesting bird survey report

- **Environmental Monitoring**
  - No monitoring required for this project

- **Construction Monitoring**
  - No monitoring required for this project

- **Project Closeout Activities**
  - Restoration support, permit reporting, and closeout

Abatement

- 12 days for asbestos and lead abatement

Water Treatment and Hazardous Materials

- Source hydrostatic test water (estimated at 15,000 gallons) to be acquired by the pipeline contractor.
- Hydrotest water delivery to be trucked to the site (500 miles round trip).
- Water will either be hauled off-site to an approved facility or reused for dust control and soil compaction. Hydrotest water disposal from up to 500 miles roundtrip plus doposal fee.
- Groundwater dewatering is not anticipated for this project
- Hydrotest standby support (total of four days of support using one vacuum truck).
- Anticipating clean soil excavated and transported to disposal facility by construction contractor
- 2 Drums will be needed for accidental spills during construction and 2 drums for lead paint contaminant
- Waste sampling and profiling anticipated to support disposal of wastes generated during construction.
- Hazardous and non-hazardous waste transport and disposal anticipated for various wastes (e.g. lead paint waste, pigs used to dry the pipeline post hydrotest, asbestos containing material, etc.)

Permit Fees

- No Storm Water Pollution and Prevention Plan (SWPPP) required.
- No Dust Control Plan required (Title V Facility)

Land & Right-of-Way Acquisition					
PROJECT COST ($000,000 IN 2019 $'s)	Prior to 2020	2020	2021	2022	Total
DIRECT LABOR	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$292	$0	$0	$0	$292
TOTAL DIRECT COSTS	$292	$0	$0	$0	$292

Assumptions

SoCalGas - Land Services Internal Labor: 32 hours
Land Contract Services Labor: 34 hours

In generating for the total estimated cost for Line 235 East North Needles Station Replacement the following items were considered:

- Labor
  - One contract land agent and one company agent for duration of the project
  - Administrative Support, Document Control Specialist and Permit Coordinator at 2 hours/week for the duration of the project
- Legal Services
  - No legal fees anticipated at this point for this project.
- Permitting Fees
  - No permitting fees anticipated at this point for this project.

- New Easement costs
  - No new or temporary easement costs anticipated at this point for this project.
- No crops have been determined to be impacted through the construction process

Factors such as location, zoning, current market price and square footage are considered to determine a final estimated value specific to easements and temporary rights of entry permits. Previous project experience specific to the Bureau of Land Management (BLM) and State of California areas were also considered in generating the cost estimate.

Company Labor					
PROJECT COST ($000,000 IN 2019 $'s)	Prior to 2020	2020	2021	2022	Total
DIRECT LABOR	$1,299	$566,540	$0	$0	$567,839
DIRECT NON-LABOR	$0	$0	$0	$0	$0
TOTAL DIRECT COSTS	$1,299	$566,540	$0	$0	$567,839

Assumptions

SoCalGas Labor - Management, Engineering, and Non-Union Labor

SoCalGas Non-Union Labor is estimated based upon activity level of effort and is divided into the following categories:

- Project Management (1,589 hours)
- Project Field Management (136 hours)
- Project Engineers (657 hours)
- Inspectors/CA's (40 hours)
- Project Services (500 hours)
- Other Departments (134 hours)

SoCalGas Field Labor – Distribution, Transmission, Pipeline Integrity and Other Field Departments (2,464 hours)

SoCalGas Union Labor costs were developed with the guidance of SoCalGas Construction Management and whose costs are duration dependent and activity specific.

Other Costs					
PROJECT COST ($000,000 IN 2019 $'s)	Prior to 2020	2020	2021	2022	Total
DIRECT LABOR	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$3,652	$544,211	$0	$0	$547,863
TOTAL DIRECT COSTS	$3,652	$544,211	$0	$0	$547,863

Assumptions

Other costs assume use of contracted Project Management, Engineering, Survey and Design service.

The major components in this category include:

- Engineering/Design Services (1,358 hours)
- PM/Project Services (1,072 hours)
- Construction Management / Inspection Services (1,540 hours)
- Surveying/As-builts (658 hours)

Line 235 East Newberry Springs Station Replacement

PSEP | Pipeline Safety Enhancement Plan

SoCalGas
A Sempra Energy utility

Pipeline Safety Enhancement Plan Workpaper Supporting Tier II Advice Letter

Line 235 East Newberry Springs Station Replacement

PROJECT COSTS – O&M	Prior to 2020*	2020	2021	2022	Total
DIRECT LABOR	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$0	$0	$0	$0	$0
TOTAL DIRECT COSTS	$0	$0	$0	$0	$0
TOTAL O&M COSTS	$0	$0	$0	$0	$0

* Actual costs incurred associated with planning and engineering design work are included in the project cost estimates.

PROJECT COSTS – CAPITAL	Prior to 2020*	2020	2021	2022	Total
DIRECT LABOR	$1,114	$666,951	$0	$0	$668,065
DIRECT NON-LABOR	$3,561	$3,707,320	$0	$0	$3,710,881
TOTAL DIRECT COSTS	$4,675	$4,374,271	$0	$0	$4,378,946
TOTAL CAPITAL COSTS	$4,675	$4,374,271	$0	$0	$4,378,946

* Actual costs incurred associated with planning and engineering design work are included in the project cost estimates.

TOTAL PROJECT COSTS	Prior to 2020*	2020	2021	2022	Total
DIRECT LABOR	$1,114	$666,951	$0	$0	$668,065
DIRECT NON-LABOR	$3,561	$3,707,320	$0	$0	$3,710,881
TOTAL DIRECT COSTS	$4,675	$4,374,271	$0	$0	$4,378,946
TOTAL COSTS	$4,675	$4,374,271	$0	$0	$4,378,946

* Actual costs incurred associated with planning and engineering design work are included in the project cost estimates.

Project Description

The Line 235 East Phase 2 Newberry Springs Station Replacement project will replace approximately 258 feet (0.049 miles) of [redacted] natural gas pipeline. The Line 235 East Phase 2 Newberry Springs Station Replacement project will be at the Newberry Springs Compressor Station within San Bernardino County.

Alternatives Considered

Line 235 East is a backbone line that plays a critical role in meeting transmission system operational needs. Abandoning this line would create a substantial loss in capacity to the Northern Transmission Zone since gas moves from the receipt points at North and South Needles towards Adelanto via Line 235. The gas supply from Adelanto supports the entire SoCalGas Transmission System, which serves the Los Angeles Basin Loop from one or more of the City Gates. De-rating the pipeline would negatively impact the capacity of the system and is not a viable option.

Forecast Methodology

SoCalGas developed a Total Installed Cost (TIC) estimate to implement the above scope of work. The TIC Estimate includes direct costs associated with project management, engineering and design, environmental permitting, land acquisition, material and equipment procurement, and construction.

Schedule

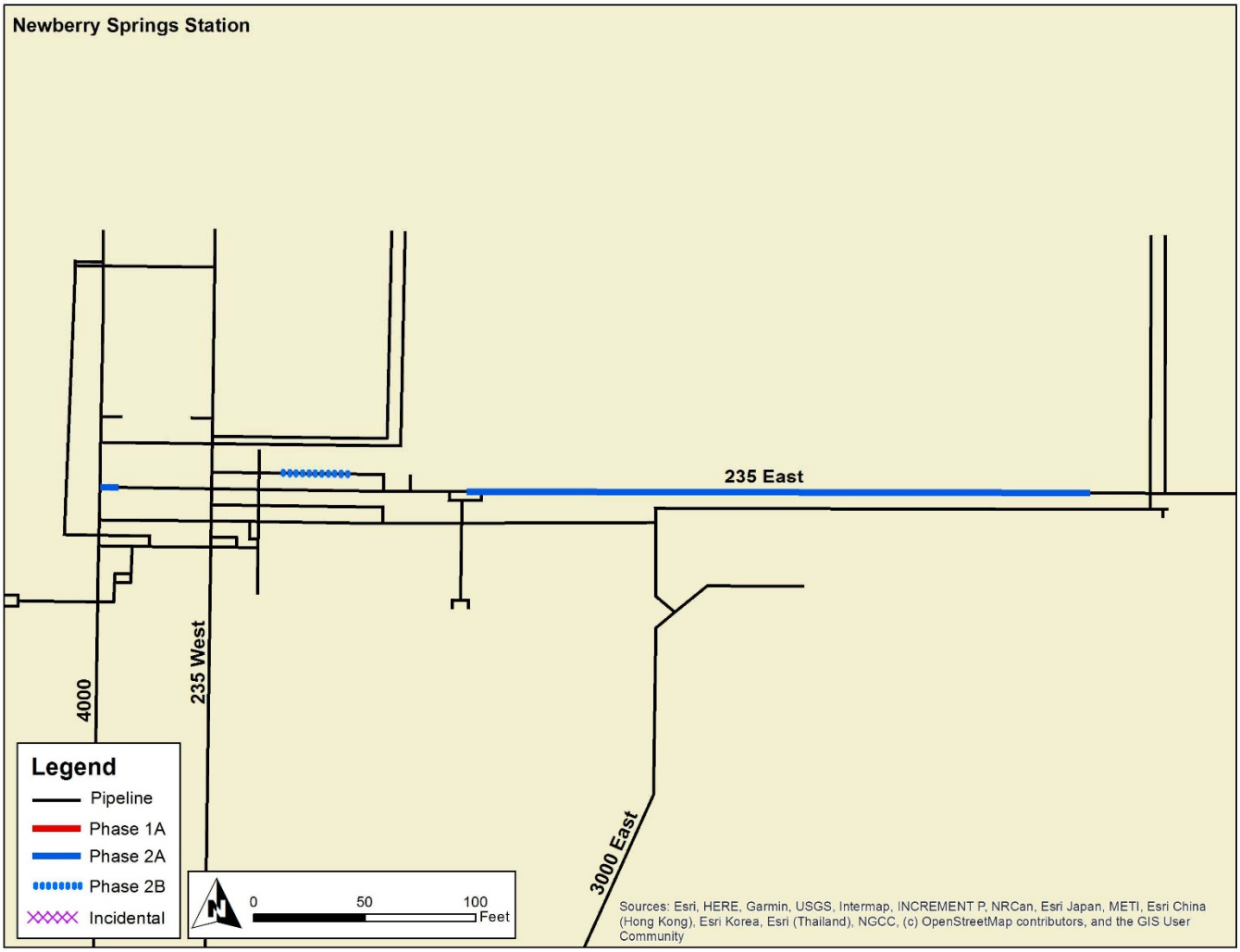
The schedule was developed based on the seven-stage project life cycle as defined by PSEP. The key project deliverables were identified and incorporated into a work breakdown structure. This work breakdown structure was then sequenced, and predecessor and successor tasks were linked to each task. Finally, durations were added to each task to provide a total project duration.

The preliminary Stage 5 Construction Schedule received additional planning and stakeholder input considering that typically 50% of the project costs are expended during the construction phase. The construction schedule is assumed to be 56 days.

Pipeline Safety Enhancement Plan Workpaper Supporting Tier II Advice Letter

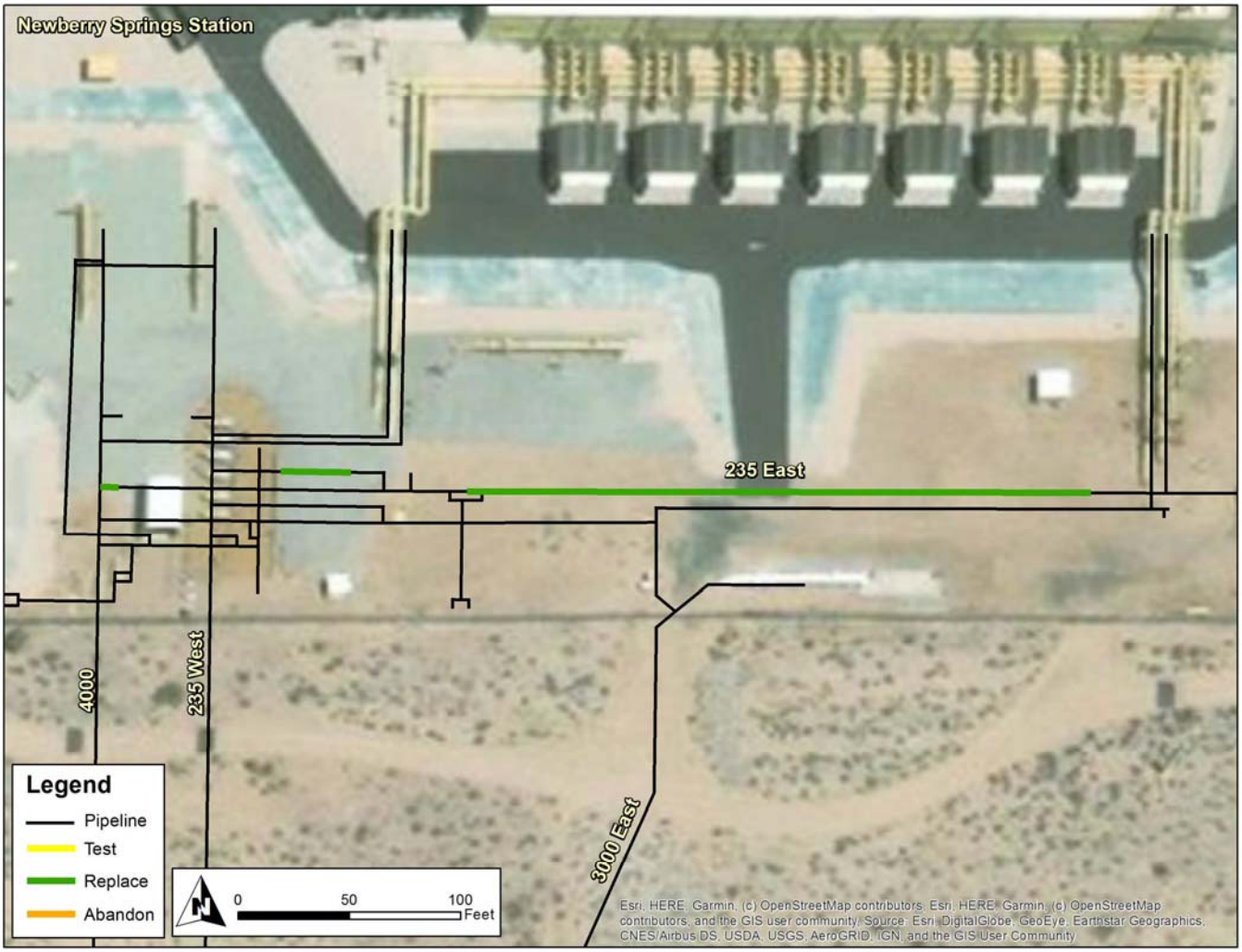
Line 235 East Newberry Springs Station Replacement

Project Map for Line 235 East Newberry Springs Station Replacement



Pipeline Safety Enhancement Plan Workpaper Supporting Tier II Advice Letter

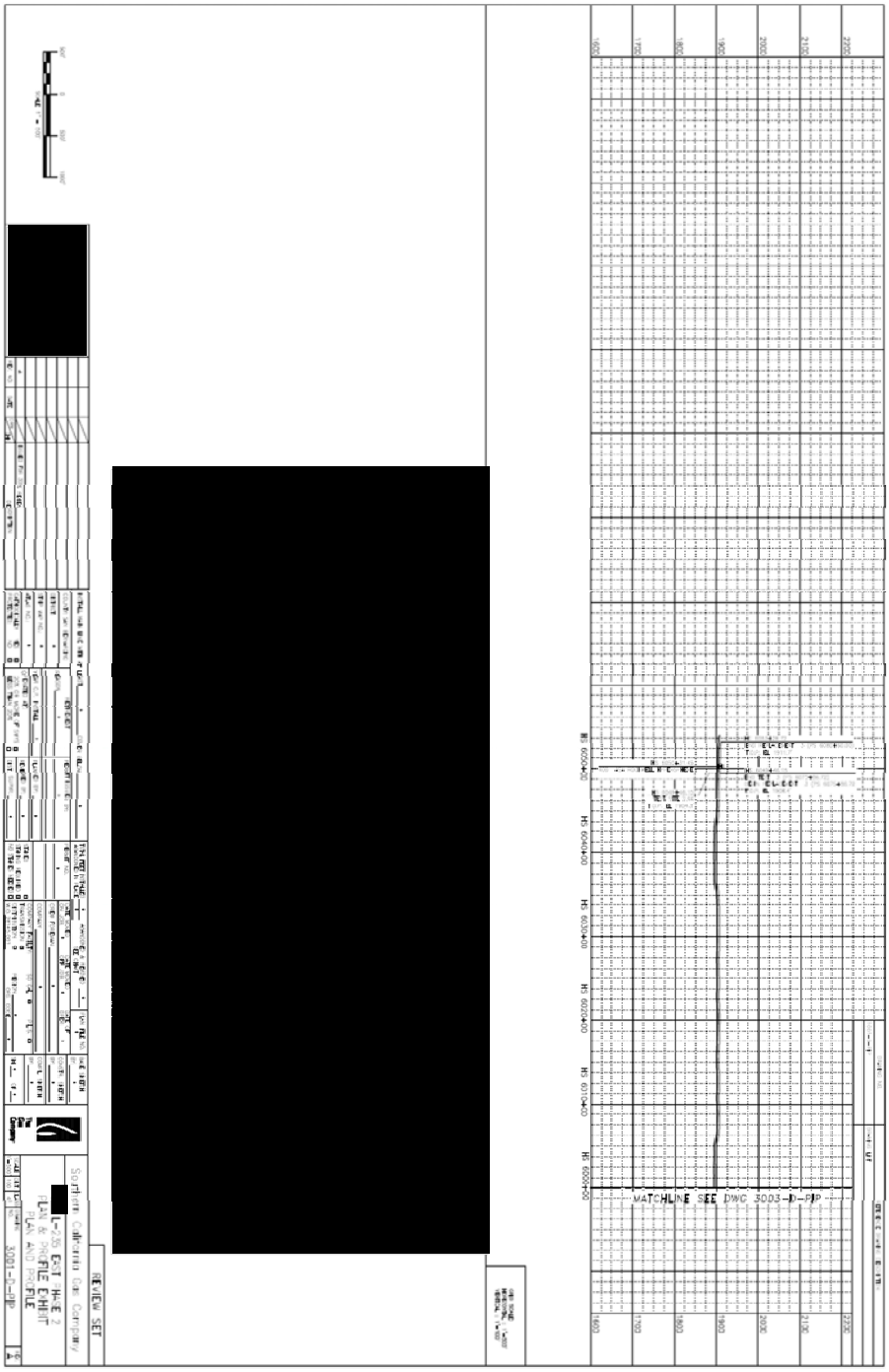
Line 235 East Newberry Springs Station Replacement



PROJECT MILEAGE TABLE

PHASE	MILEAGE
PHASE 2A	0.0439
ACCELERATED - PHASE 2B	0.0049
INCIDENTAL	0.0000
TOTAL MILEAGE	0.0488

Elevation Map for Line 235E Newberry Station Replacement



The direct costs for each area are summarized below.

Materials					
PROJECT COST ($000,000 IN 2019 $'s)	Prior to 2020	2020	2021	2022	Total
DIRECT LABOR	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$0	$225,707	$0	$0	$225,707
TOTAL DIRECT COSTS	$0	$225,707	$0	$0	$225,707

Assumptions

Materials for this project will not be purchased until final internal authorization has been granted to purchase long lead time material. This will allow for material to be procured, inspected and delivered to coincide with the anticipated construction start date.

Construction					
PROJECT COST ($000,000 IN 2019 $'s)	Prior to 2020	2020	2021	2022	Total
DIRECT LABOR	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$180	$2,146,285	$0	$0	$2,146,466
TOTAL DIRECT COSTS	$180	$2,146,285	$0	$0	$2,146,466

General Assumptions

In the development of the construction estimate, the following assumptions and clarifications have been made:

- One mobilization and one demobilization
- Contractor work has been scheduled using a 10-hour per day, five-day work week calendar.
- One shift per day.
- Work will be scheduled Monday through Friday. Weekend work has not been included.
- Access to work site shall be continuous once project commences.
- No environmental protection fencing will be required within the compressor station
- There will be one (1) laydown yards located within the compressor station.
- All piping will be shaded with zero sack slurry. Remainder of trench zone will receive native soils material.
- Excess spoils will be hauled off and disposed of nearest approved location or landfill.
- Single spread is assumed during construction.
- Contaminated soil has not been anticipated.
- Tie ins will be performed during a 24-hour continuous shift.
- New replacement pipe will be water filled, hydro-tested, drained and dried above ground, prior to tie-in.
- No hydro-seeding has been assumed.
- Laydown yard and work areas will be restored to original condition at the end of the project.

Additional Construction Information

- **Site Mobilization / Site Facilities**
  - One mobilization

- Two (2) Office Trailers have been included for management and inspection personnel.
- Site facility includes set-up and removal of two (2) trailers, six (6) portable toilets, two (2) wash stations, and one (1) storage container. Also includes the rental cost for a 3-month duration.
- Temporary fencing (300'LF) has been included.
- No track-out plates have been included.

- **Site Preparation**
  - Site Preparation is not needed since all work will occur within the station.

- **Site Management / Best Management Practices (BMPs)**
  - SWPPP has not yet been developed.
  - Fiber rolls, sand bags, reinforced poly sheeting, and silt fencing will be procured and installed for BMP measures.

- **SCG / Company Furnished Material Handling**
  - (1) load of SCG furnished material will be unloaded by the contractor at Newberry Station laydown yard.

- **Traffic Control**
  - Traffic control is not included on this project.

- **Mainline Valve**
  - Fabrication and installation of new [redacted] mainline valve included.
  - Estimate does not include scope for valve automation.
- **Utility Locates**
  - No utility locate crew is assumed. All open cut excavations are through soft excavation means (Hand dug).

- **Isolate Existing Pipeline**
  - Three (3) [redacted] and three (3) [redacted] Isolation caps will be furnished.
  - Cut-out and removal of two (2) pipe sections included.
  - Installation and removal of Isolation Caps included

- **Pressure Test Pipeline**
  - One (1) [redacted] and One (1) [redacted] Test Heads will be furnished.
  - Installation and removal of two (2) test heads included

- **Tie In Pipeline**
  - 10-hour shift for tie-in preparations included.
  - Two (2) pipeline section tied-in's included.
  - 72-hours are included for Tie-in activities.
  - Final backfill includes installation of slurry and native spoils backfill materials.
  - Two (2) days of soils density testing included.
  - Excess spoils haul off and disposal fees included.

- **Retire / Abandon Existing Pipeline**
  - Not Applicable

- **Site Restoration**
  - Final Clean-Up includes the removal of BMP's Materials and Temporary fencing.
  - No rocking or weed barrier assumed in estimate.

- **Site Demobilization**
  - Removal of the Site facility includes removal of two (2) office trailers, six (6) portable toilets, two (2) wash stations, and one (1) storage container.
  - The loading and return transportation of excess piping materials (1 Load) is included.
  - All crews and equipment will be demobilized.

- **Field Overhead**
  - One (1) Superintendent, one (1) Safety Supervisor, and One (1) Cost Controller and one (1) part-time scheduler have been included for full project duration.
  - 10 additional days were included for the project superintendent and cost controller for project close-out.
  - No security guards have been included for non-working hours.
  - 100% per diem for field personnel and project management team for full project duration.

Environmental Survey/Permitting/Monitoring					
PROJECT COST ($000,000 IN 2019 $'s)	**Prior to 2020**	**2020**	**2021**	**2022**	**Total**
DIRECT LABOR	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$0	$287,960	$0	$0	$287,960
TOTAL DIRECT COSTS	$0	$287,960	$0	$0	$287,960

Assumptions

In calculating the total estimated environmental cost, the following items were considered:

- Environmental Services (permitting support, surveys and monitoring)
- Abatement (asbestos and lead)
- Hazardous and non-hazardous waste containment/disposal (including hydrotest water hauling, treatment, and/or disposal)
- Permit fees
- Mitigation

The high-level assumptions and specific level of effort to provide environmental support for this project are described in more detail below.

Environmental Labor

- **Environmental Contract Services Labor:** 1,436 hours
  - Document Preparation and Project Management

- SoCalGas Environmental Services support in addition to consultant support throughout duration of project (planning and construction)
- Document Production anticipated:
  - Worker Environmental Awareness Procedure Document
  - Required notifications for hydrostatic test water discharge

- **Preconstruction Surveys**
  - Pre-construction wildlife and nesting bird survey report

- **Construction Monitoring**
  - 2 monitors; 51 work days and will be traveling 10 hours per week for 11 weeks (10hr days)

- **Project Closeout Activities**
  - Restoration support, permit reporting, and closeout

Abatement

- 12 days for asbestos and lead abatement

Water Treatment and Hazardous Materials

- Source hydrostatic test water (estimated at 15,000 gallons) to be acquired by the pipeline contractor
- Hydrotest Water Delivery: Trucking to site less than 100 miles roundtrip
- Water will either be hauled off-site to an approved facility and reused for dust control and soil compaction
- Hydrotest standby support (total of three days of support using one vacuum truck)
- Groundwater dewatering is not anticipated for this project
- Anticipating clean soil excavated and transported to disposal facility by construction contractor
- 2 Drums will be needed for accidental spills during construction and 2 drums for lead paint contaminent
- Waste sampling and profiling anticipated to support disposal of wastes generated during construction.
- Hazardous and non-hazardous waste transport and disposal anticipated for various wastes (e.g. lead paint waste, pigs used to dry the pipeline post hydrotest, asbestos containing material, etc.)

Permit Fees

- No permit fees included

Mitigation Fees

- No mitigation fees included

Land & Right-of-Way Acquisition					
PROJECT COST ($000,000 IN 2019 $'s)	**Prior to 2020**	**2020**	**2021**	**2022**	**Total**
DIRECT LABOR	$251	$2,763	$0	$0	$3,014
DIRECT NON-LABOR	$0	$0	$0	$0	$0
TOTAL DIRECT COSTS	$251	$2,763	$0	$0	$3,014

Assumptions

SoCalGas - Land Services Internal Labor: 106 hours
Land Contract Services Labor: 152 hours

In generating for the total estimated cost for Line 235 East Newberry Springs Station Replacement the following items were considered:

- Labor
  - One contract land agent and one company agent for duration of the project
  - Administrative Support, Document Control Specialist and Permit Coordinator at 2 hours/week for the duration of the project
- Legal Services
  - No legal fees anticipated at this point for this project.
- Permitting Fees
  - No permitting fees anticipated at this point for this project.
- New Easement costs
  - No new or temporary easement costs anticipated at this point for this project.
- No crops have been determined to be impacted through the construction process

Factors such as location, zoning, current market price and square footage are considered to determine a final estimated value specific to easements and temporary rights of entry permits. Previous project experience specific to the Bureau of Land Management (BLM) and State of California areas were also considered in generating the cost estimate.

Company Labor					
PROJECT COST ($000,000 IN 2019 $'s)	**Prior to 2020**	**2020**	**2021**	**2022**	**Total**
DIRECT LABOR	$1,114	$666,951	$0	$0	$668,065
DIRECT NON-LABOR	$0	$0	$0	$0	$0
TOTAL DIRECT COSTS	$0	$0	$0	$0	$668,065

Assumptions

SoCalGas Labor - Management, Engineering, and Non-Union Labor

SoCalGas Non-Union Labor is estimated based upon activity level of effort and is divided into the following categories:

- Project Management (1,069 hours)
- Project Field Management (136 hours)
- Project Engineers (603 hours)
- Inspectors/CA's (40 hours)
- Project Services (1,219 hours)
- Other Departments (219 hours)

SoCalGas Field Labor – Distribution, Transmission, Pipeline Integrity and Other Field Departments (2,522 hours)
SoCalGas Union Labor costs were developed with the guidance of SoCalGas Construction Management and whose costs are duration dependent and activity specific.

PROJECT COST ($000,000 IN 2019 $'s)	Prior to 2020	2020	2021	2022	Total
DIRECT LABOR	$3,130	$1,044,604	$0	$0	$1,047,734
DIRECT NON-LABOR	$0	$0	$0	$0	$0
TOTAL DIRECT COSTS	$3,130	$1,044,604	$0	$0	$1,047,734

Assumptions
Other costs assume use of contracted Project Management, Engineering, Survey and Design service.

The major components in this category include:

- Engineering/Design Services (1,440 hours)
- PM/Project Services (1,137 hours)
- Construction Management / Inspection Services (2,140 hours)
- Surveying/As-builts (664 hours)