Company: San Diego Gas and Electric Company (U 904 G)
Proceeding: 2028 General Rate Case
Application: A.26-06-XXX
Exhibit: SDGE-06-WP-S

REDACTED

SUPPLEMENTAL WORKPAPERS TO

PREPARED DIRECT TESTIMONY

OF DEVIN K. ZORNIZER

(GAS MAJOR PROJECTS)

ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

VOLUME 1 OF 6

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Introduction to Workpapers Supporting the Prepared Direct Testimony of Gas Major Projects

I. INTRODUCTION

The purpose of the introduction is to provide additional details for the supplemental workpapers supporting the zero-based GTSR pipeline and valve forecasts and reasonableness review for PSEP (including Line 1600).

As described in testimony, SDG&E GTSR and PSEP Projects are managed according to the Stage Gate Review Process[1] which sequences and schedules project workflow deliverables. Key design, management and execution actions and activities occur within and across the various stages. The Stage Gate Review Process for projects presented for review in this Application consisted of discrete stages with specific objectives for each stage, and an evaluation gate at the end of each stage to verify that those objectives have been met prior to proceeding to the next stage.

These workpapers are presented in the five sections that follow:

- Section II comprises SDG&E's **GTSR Forecast Project Workpaper Structure.** This section provides a description of the workpaper format.
- Section III comprises SDG&E's **PSEP Reasonableness Review Project Workpaper Structure.** This section provides a description of the workpaper format.
- Appendix A contains a **Summary of Standard Planning and Construction Practices for Replacement, Hydrotest, Valve and Abandonment Projects**. This provides a synopsis of typical pre-construction and construction activities that occur during SDG&E's pipeline and valve enhancement projects.
- Appendix B contains the **Glossary of Terms and Acronyms** that will assist in defining specific construction and financial terminology used throughout the workpapers.

[1] Refer to the SDG&E Direct Testimony of Devin Zornizer (Gas Major Projects), Section II.2.a.

II. SDG&E GTSR FORECAST PROJECT WORKPAPER STRUCTURE

The project workpapers that follow provide detailed information regarding the estimated cost for each of the two GTSR Part 1 projects that are included. The methodology used to develop these costs include components that follow the guiding principles of Stages One (Project Initiation) through Three (Begin Detailed Planning) of the Five Stage Review process, which was established to promote efficient project execution. As stated in testimony, rather than presenting a forecast that relies on the execution of specific projects in specific years, SDG&E is instead requesting authorization to establish a revenue requirement based on an anticipated level of executable spending from a portfolio of projects.

The Table of Forecast Projects provide a summary of relevant data for each project included in this Application: Line Number, Phase, project type (replacement, pressure test, abandonment, de-rate), direct costs (O&M, capital and total), mileage, and diameter.

Table 1 – GTSR Part 1 Pipeline Projects in the 2028 GRC Forecast

Project Workpaper Title	Project Type	O&M Costs	Capital Costs	Total Costs	Mileage (Miles)
Supply Line 49-16	Test / Replace	$0	$28,945,850	$28,945,850	9.47
Supply Line 49-18	Test	$0	$17,293,767	$17,293,767	8.12
Supply Line 49-24	Test	$0	$6,742,297	$6,742,297	2.16

Forecast project costs are estimated following AACE International Recommended Practice No. 97R-18, which defines classes of estimates based on project definition and anticipated accuracy. The projects addressed in the workpapers that follow were primarily estimated at a Class 3 level, with a small number of GTSR projects estimated at a Class 4 level[2]. Each forecast workpaper follows the below format to provide relevant project details and the underlying assumptions informing the Basis of Estimate (BOE) for each project. An explanation describing each section's objective is as follows:

Project Cost Summary – Provides an overview of Direct O&M, Direct Capital, and Total Direct project costs.

Project Description – Provides overview of project scope, location, and unique project attributes.

[2] A Class 4 estimate is based on 1-15% project definition and typically results in final project costs that are within +50% to -30% of the estimated cost. In contrast, Class 3 estimates are based on 10-40% project definition and typically result in final project costs that are within +30% to -20% of the estimated amount.

Alternatives Considered – Describes alternatives to hydrotesting or replacement such as derating and/or abandonment).

Forecast Methodology – Describes the basis of estimated costs and the categories of costs considered in developing all project estimates.

Schedule – Describes the basis for the schedule used across all project estimates.

Overview and Satellite Maps – Two maps are provided (when applicable): a conventional map to provide the reader with general location of the project, and a satellite map that shows the type of terrain (urban, rural, river crossings, highways, etc.) the project traverses.

Project Mileage Table – The mileage for the project broken down by phase and accelerated and incidental miles, as defined in the glossary.

Material Cost Table – Estimate based on the type and quantities of material required for each project.

Construction Cost Table – Based upon input from construction contractors, assumptions made in the development of the construction component of the project, which generally account for approximately 50% of total project cost. General assumptions include a geographically based construction cost estimate, estimated construction schedule duration, working days and hours taking into consideration any working hour restrictions, type of pipe installation method for replacement projects, and other pertinent construction assumptions. Additional detailed construction information, including site mobilization/facilities, site management, material handling, traffic control, substructure location, postconstruction pressure test, final pipeline tie-in, abandonment of existing pipeline, paving, site restoration, site demobilization, and construction field overhead assumptions.

Environmental Survey / Permitting / Monitoring / Abatement Cost Table – Based upon evaluation of the project by PSEP Environmental Services, assumptions and associated costs regarding anticipated permitting, surveys, and monitoring, hazardous/non-hazardous waste containment/disposal, Permit fees, and mitigation fees. Identified environmental issues unique to the project are also listed.

Permits Cost Table – Provides assumptions and estimated costs for temporary construction encroachment within a municipality, city, county, state, or federal right of way or franchise.

Land & Right-of-Way Acquisition Cost Table – Assumptions include need for new easements, construction yards for the storage of material and construction trailers and associated permits and legal services.

Company Labor Cost Table – Anticipated activity and level of effort for SDG&E management and represented personnel in support of the project.

Other Project Costs – Estimated costs of contracted Project Management and Engineering services.

III. SDG&E REASONABLENESS REVIEW PIPELINE PROJECT WORKPAPERS STRUCTURE

The project workpapers that follow provide detailed components of the workpapers for the 19 PSEP Line 1600 projects included in the CPUC-SED-approved Test or Replace Plan, and one additional PSEP replacement project subject to reasonableness review. The Line 1600 workpapers that follow are being provided to support SDG&E's cost recovery request in compliance with Commission Decisions D.20-02-024 and D.24-01-007. These workpapers also fulfill the additional requirements set forth in D.24-12-074, including the provision of providing more information regarding FTEs and cost variance explanations.

Table 2 – Pipeline Hydrotest and Replacement Projects for the 2028 GRC Reasonableness Review

Pipeline Workpaper Title	Project Scope (miles, rounded)		
	Hydrotest	Replace	Abandon
Line 1600 Section 1 Rainbow		3.755	
Line 1600 Section 2 Rice Canyon	3.360		
Line 1600 Section 3 Couser Canyon North	2.688		
Line 1600 Section 4 Couser Canyon South	2.569		
Line 1600 Section 5 [redacted]		6.002	
Line 1600 Section 6 Moosa Creek	1.022		
Line 1600 Section 7 Daley Ranch	3.138		
Line 1600 Section 8 La Honda Lincoln		1.645	
Line 1600 Section 9 [redacted]		3.070	
Line 1600 Section 10 Bear Valley		3.591	
Line 1600 Section 11 [redacted]		6.100	
Line 1600 Section 12 [redacted]		4.519	
Line 1600 Section 13 [redacted]		3.686	
Line 1600 Section 14 Black Mountain		4.192	
Line 1600 Section 15 MCAS North		1.125	
Line 1600 Section 16 MCAS Central		1.451	
Line 1600 Section 17 MCAS South		0.903	
Line 1600 Section 18 Kearny Mesa		2.245	
Line 1600 Section 19 Serra Mesa		4.397	
Supply Line 49-17 Phase 1A		0.004	

Each workpaper is divided into five sections: A) Project Introduction; B) Engineering, Design and Planning; C) Construction; D) Project Costs; and E) Conclusion.

A general explanation is provided for each section's objective is as follows:

A. PROJECT INTRODUCTION

1. Background and Summary

This section includes a high-level summary of the project scope which is also summarized in *Table 1: General Project Information*, providing overall project details such as mileage, pipe diameter (confidential), construction start/stop, project costs, etc. The pipe vintage listed reflects the vintage of the Category 4 Criteria mileage[3].

In addition, maps and satellite images are included to provide a perspective of the project in relation to the community it impacts and demonstrate the reasonable inclusion of accelerated and incidental pipe when remediating the Category 4 Criteria pipe segments and, when applicable, the rerouted pipeline alignment. Schematic drawings are sometimes included to illustrate and magnify pipeline interconnections and features that are not discernable from the map images.

B. ENGINEERING, DESIGN, AND PLANNING

1. Project Scope:

This section consists of *Table 2: Mileage Information* depicted by mileage type: Criteria, Accelerated, Incidental, New, and Total (both miles and feet). In some instances, an alignment offset, or rerouted pipeline results in "New" mileage that is greater than or less than the original route. The terms are defined as follows:

- Criteria Mileage is Phase 1A mileage. These are pipeline segments that lack sufficient documentation of a post-construction strength test to at least 1.25 times the MAOP and are located in Class 3 & 4 locations and Class 1 & 2 High Consequence Areas (HCA).
- Accelerated Mileage is pipeline that would otherwise be addressed in a later phase of PSEP under the approved prioritization process but have been advanced to Phase 1A to realize operating and cost efficiencies. Accelerated miles may be Phase 1B or Phase 2 mileage.
- Incidental Mileage is pipeline that does not fall within the scope of the Commission's directives in D.11-06-017 or California Public Utilities Code section 958, but is addressed as

[3] Category 4: Pipelines segments that lack sufficient documentation of a post-construction strength test to at least 1.25 times the MAOP.

part of a PSEP project, where its inclusion is determined to improve cost and program efficiency, address constructability, or facilitate continuity of testing.

- New Mileage is an alignment offset or rerouted pipeline segment that resulted in mileage that is greater than the original route.

A high-level summary of the progression of the project follows that chronicles the project evolution is typically organized as follows:

1. 2011 PSEP Filing indicates the type of project (replacement or hydrotest) and the Phase 1A mileage type as submitted in A.11-11-002.
2. Scope Validation summarizes the outcome of scope validation that included evaluation of existing pipeline documentation to confirm the project scope. Criteria mileage originally included for remediation may be increased or decreased due to the scope validation efforts. Criteria mileage may have been removed if a reduction in Maximum Allowable Operating Pressure (MAOP) was determined to be appropriate from a gas operating system perspective.
3. Engineering, Design and Constructability summarizes the constructability factors that influenced the project design, mileage, route, and construction methods.
4. Final Project Scope: summarizes the final project scope including mileage, construction method and other project activity, such as engineered crossings or new mainline valves (MLV) that contributed to the project complexity and/or cost.

2. Engineering, Design, and Planning Factors

This section summarizes the notable engineering, design and planning activities. Planning is initiated by the analysis of pipeline attribute records, survey and mapping activities and site visits. During the initial planning and design process, information is updated, and new information is acquired regarding the permit conditions, existence of substructures, land rights, environmental issues, etc. that may differ from the original assumptions. These data points serve to influence the routing and design of the project, and the project schedule.

Once the detailed design is finished and construction documents are completed, necessary permits and authorizations are attained, pipeline materials are purchased, received, inspected, and prepared for turnover to the construction contractors. Material procurement is identified in two main phases, long-lead items and short-lead items. Long-lead material is identified and

purchased at the 30% design stage while short-lead material is identified and purchased at the 60% design stage. When possible, SDG&E acquires materials by aggregating anticipated material needs (bulk purchasing) from many projects thereby making periodic purchases for larger quantities of material at a lower unit cost.

The information that influenced the preliminary pre-construction design described in this section of the workpaper and will include a summary of the conditions that influenced the preliminary pre-construction design and was the basis for the preliminary cost estimate. Only the relevant factors that impacted the project design are listed in the workpaper.

3. Scope Changes

This section describes any major scope or redesign changes made after the preliminary design and estimate were authorized. Changes are initiated to accommodate constructability or scheduling challenges[4] and can occur at any stage of the Project lifecycle. Scope changes are authorized and documented using a scope change form. The revised project scope and design, given all the unique conditions and constraints of each project, considered cost effectiveness, system operating efficiencies, mitigation of customer and community impacts, and system capacity. The incremental costs associated with scope changes are *not* reflected in the estimated costs in Tables 4 and 5.

It is important to note that in some instances, when there are obstacles that apply to only a portion of the project, a project scope change involves the sectionalizing of the Project so that the unimpeded sections can be remediated as soon as practicable. The remaining sections are postponed until the obstacles have been addressed.

C. CONSTRUCTION[5]

1. Construction Contractor Selection

This section details the estimated (confidential) Construction Contractor Costs and the final negotiated (confidential) Construction Contractor costs. Construction activity begins with the selection of the Construction Contractor. For PSEP projects, the Construction Contractors are

[4] Examples of the challenges frequently encountered are permit or land use restrictions, environmental constraints, customer impacts, traffic and other community impacts, system constraints, or pipe conditions identified once the pipe is exposed through potholing efforts.

[5] Construction Activities further detailed in Appendix A to these workpapers, which provides a description of the large variety of field activities that may take place on a PSEP pipeline or valve project.

predominately selected through the Performance Partner Program process which are assigned to a geographical area. Five of the seven pipeline projects in this Reasonableness Review were assigned to the Performance Partner selected for that region. The Performance Partner Program allows for competitive pricing of projects and provides incentives associated with the program to encourage the Construction Contractors to further reduce costs. Occasionally, Performance Partners work outside their assigned regions to maintain a balance of work across all Performance Partners. When it was not practical to use a Performance Partner, the Construction Contractor was chosen through a competitive solicitation process.

In either instance, based on the Issue-for-Bid design (90% design drawing), a final scope of work (SOW) was prepared and provided to the Construction Contractor which was used to prepare a Target Price Estimate (TPE). Each project executed by a Performance Partner required negotiation to reach an agreed-upon TPE. In a competitive bidding process, SDG&E awarded the construction contract to the bidder that best met the selection criteria for the Project. For each Project, the workpaper will state in this section if the Project was executed through the Performance Partnership or through Competitive Bid and further details:

- SDG&E preliminary, confidential cost estimate for Construction Contractor costs, sometimes referred to as the Total Installed Cost (TIC).
- The Construction Contractor's confidential Target Price Estimate (TPE) or bid and the variance between the final bid and SDG&E preliminary estimate/TIC.

2. Construction Schedule

This section consists of *Table 3: Construction Timeline* depicting the construction start date, completion date and Notice of Operation (NOP) date for each project. For projects with more than one section, Table 3 will reflect the construction start date for the first section and the construction completion and NOP dates for the last section, if completed under different timelines.

3. Changes During Construction

This section summarizes the notable change orders that were initiated after the Project went to construction. Most of the pipeline replacement, hydrotest and abandonment projects presented for review in this Application are located in dense urban environments, which greatly adds to the complexity of the construction activities. Many of the construction challenges were mitigated and

planned for; however, others were unanticipated and were addressed as they arose in the field. These unforeseen conditions may have required activities that were outside of the original scope of work upon which the TPE was established. As unexpected conditions were encountered during construction, the Construction Contractor described the conditions and the proposed solution to SDG&E via a Request for Information (RFI) form. If authorized by the PSEP Project Manager, the solution was executed, and any incremental costs were documented via a change order. The workpapers for each project describe notable construction change orders (i.e. when the total construction change order costs are more than 10% of the TPE). Change orders are summarized in the workpapers and are categorized generally by cause.

4. Commissioning and Site Restoration

This section describes site restoration activities that are typically completed several weeks or even a month or more after the pipeline is returned to service. The site is demobilized, test water is disposed of or stored and removed for use on an adjacent project and the area is returned to its previous condition, which may include repaving and restoration of landscaping. Closeout activities are executed within the final months of the project lifecycle and include finalization of as-built drawings and uploading of updated information into the company's documentation and recordkeeping systems to reflect the final scope of work.

D. PROJECT COSTS

1. Cost Avoidance Actions:

This section describes the notable cost avoidance decisions and actions that are described in the project workpapers. Because PSEP projects are thoughtfully and prudently designed with safety and cost efficiency at top of mind, not all cost avoidance actions are specifically noted, and it would be impractical to list all the costlier design options that were briefly considered and rejected. Some typical areas of cost avoidance and cost savings are derived from planning and design choices that include reduction of project scope, choice of materials or bulk purchasing of materials, project designs that eliminate or reduce features that would complicate routine maintenance activities to reduce future maintenance costs, and planning and coordination of the PSEP project schedule to incorporate other projects to share resources or avoid duplicative or wasted effort. Prudent negotiation of terms with landowners and permit terms, as well as shared land use, are additional means of avoiding costs. Finally, costs are avoided through prudent engineering and design

decisions made in the field to address and mitigate unanticipated conditions revealed once the pipe was exposed or otherwise identified during the latter stages of project execution.

2. Cost Estimate

Estimating activities were initiated with the approval of the Phase 1 Work Order Authorization (WOA) reflecting the estimated costs for preliminary design, mapping and survey activities. Subsequently, based on 30% design drawings, a Total Installed Cost (TIC) estimate was prepared using the most current version of the PSEP Estimating Tool. The TIC was presented to PSEP leadership and approval was required to move forward.

The TIC costs reflect Direct Costs only, which are typically used to prepare the Phase 2 WOA. The Phase 2 WOA includes Indirect Costs, and therefore, reflects the Total Loaded Project Cost estimate.

The approval of the Phase 2 WOA was required to proceed with execution of the project. Any significant project activities and costs subsequently added to the project scope after execution of the TIC would not be reflected in the estimated costs presented in Tables 4 and 5. These additional costs and activities are authorized and documented through the scope change process.

3. Actual Direct and Indirect Costs

The Estimated and Actual Costs shown in *Table 4: Estimated and Actual Direct Costs and Variances* in workpapers are defined as follows:

- Company Labor: Labor costs for SDG&E employees charging directly to the project, such as project managers, engineers, land services personnel, environmental services personnel, communication and outreach managers, construction managers, and field support personnel.
- Materials: Costs for materials that SDG&E purchased to complete the project, such as piping, valves, fittings, and other miscellaneous materials. Materials planned to be purchased by the construction contractor may be included in the construction contractor costs.
- Construction Contractor: Costs for Construction Contractor activity and materials or equipment acquired by the contractor. The actual construction contractor costs also include authorized change order costs and risk reward payments, minus construction credits, when applicable.

- Construction Management and Support: Costs for construction inspection, contamination mitigation, environmental monitoring, hydrotesting services, and other miscellaneous activities that occur in the field.
- Environmental: Costs for environmental assessments, monitoring, asbestos abatement, water and waste management, and miscellaneous environmental permits and fees not reflected in other cost categories.
- Engineering and Design: Costs for planning and design services, engineering, environmental services, land use and permitting fees not included in other categories, and project support, such as survey, mapping and miscellaneous expenses.
- Project Management Services: Contracted costs for project management services and general PSEP program support.
- ROW & Permits: Costs associated with permitting fees and land easement, or acquisition expenses not reflected in other cost categories.
- General Management and Administration (GMA) Costs: PSEP project support costs not directly tied to a specific project and incurred to support the overall implementation of PSEP that are not included in Company Overheads. GMA costs were applied to projects prior to the 2019 GRC Decision directing PSEP to transition and utilize the GRC overhead framework.

Indirect Costs are listed in *Table 5: Estimated and Actual Indirect Costs, Total Costs, and Variances*. These costs are incremental overheads applied to PSEP projects. Indirect costs are for those activities and services that are associated with indirect costs – such as payroll taxes, pension, and benefits. Also included is interest that SDG&E earns for funds used during construction for capital projects (AFUDC) and Property Tax for construction work in progress (CWIP) for capital projects.

The Actual Full-Time equivalents (FTEs) are included to provide context for the Company labor hours to support each pipeline project.

3. Cost Impacts

There are several factors that may cause a variance between actual and estimated costs. Most of the differences are attributed to one or more factors: 1) estimates are based on preliminary design, 2) reasonable changes in project scope are required to address conditions identified after the preliminary estimate is prepared, 3) Unforeseen and unplanned field conditions also

contribute to variances between the preliminary estimate and actual costs. The purpose of this section is to describe some of those factors and how they influenced each of the project's overall cost variance.

4. Disallowances

Of the seven PSEP pipeline projects presented for review in this Application, five projects addressed footages of post-1955 pipe that lacked pressure test records, making portions of those projects subject to disallowance. In the project workpapers for these five projects, the disallowed scope is described, and the calculation of disallowed costs is provided. The disallowed project costs are provided in the final workpapers for completeness, but the disallowed costs were previously recognized by SDG&E, are not recorded in the PSEP balancing accounts, and are not included in the revenue requirement presented for review in this Application, as described in testimony.

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SDG&E GTSR Part 1 Replacement and Hydrotests Forecast Project Workpaper

Gas Transmission Safety Rule Workpaper Supporting Exhibit SDGE-06

SUPPLY LINE 49-16 HYDROTEST AND REPLACEMENT PROJECT

Table 1: Total Direct Project Costs – All Capital

TOTAL PROJECT COSTS - CAPITAL	Stage 1[1,2]	Stage 2[3]	Stage 3[4]	Stage 4[5]	Stage 5[6]	Total[7]
DIRECT LABOR	$182,759	$371,736	$662,861	$1,696,606	$610,606	$3,524,568
DIRECT NON-LABOR	$559,539	$1,063,466	$3,499,560	$19,951,848	$346,869	$25,421,282
TOTAL COSTS - CAPITAL	$742,298	$1,435,202	$4,162,421	$21,648,454	$957,475	$28,945,850

Project Description

The Supply Line 49-16 Hydrotest and Replacement Project addresses pipeline requirements to reconfirm Maximum Allowable Operating Pressure (MAOP), in accordance with 49 CFR § 192.624. Supply Line 49-16 consists of approximately 9.5 miles of existing 16-inch high-pressure distribution pipeline located within the Cities of San Diego, National City, Lemon Grove, and La Mesa. The project will be completed through a combination of hydrostatic testing and pipeline replacement activities executed in a phased approach. The Supply Line 49-16 GTSR effort that is forecasted for this General Rate Case includes three separate sections: GTSR 49-16 South Hydrotest, GTSR 49-16 AO Smith Replacement Section 1, and the GTSR 49-16 North Hydrotest.

The overall project scope includes the installation of a temporary bypass, replacement of existing [redacted] mainline plug valves with new [redacted] mainline valves (MLVs), regulator station modifications, installation of new [redacted] regulator feed taps, installation of a new [redacted] pressure control fitting (PCF) for system isolation, and the collection coupon cutouts to be sampled within existing hydrotests for material verification.

The GTSR 49-16 **South Hydrotest section** will test approximately 4.8 miles of pipeline. Starting at [redacted] in National City and runs [redacted], and [redacted] in the City of San Diego, the south hydrotest includes the installation of a 60-foot temporary bypass at [redacted], a replacement of two existing [redacted] mainline plug valves, and the installation of three [redacted] regulator station tie-overs.

The GTSR 49-16 AO Smith **Replacement Section 1** will replace approximately 1.0 miles of pipeline. This section begins at [redacted] in San Diego and [redacted] to end near [redacted] in the City of Lemon Grove.

[1] Project Initiation.
[2] Actual costs incurred associated with planning and engineering design work are included in the project cost estimates.
[3] Preliminary Design.
[4] Detailed Design.
[5] Construction.
[6] Closeout.
[7] Values may not add to total due to rounding.

The GTSR 49-16 **North Hydrotest section** will test approximately 1.2 miles of pipeline. This section begins at [redacted], ending at [redacted] in La Mesa. This also includes the installation of one new [redacted] regulator station tie-over.

Each of the sections are planned to be executed separately and sequenced to maintain system reliability while minimizing operational and community impacts.

Forecast Methodology

SDG&E 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. The estimate was prepared in accordance with AACE Class 3 estimating practices and utilizes a combination of quantity-based, unit-cost, and factored estimating techniques.

Schedule

The schedule was developed based on the five-stage project life cycle as defined in the Project Delivery Model. 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 for each of the project sections is shown below:

- **South Hydrotest:** 102 working days
- **Replacement Section 1:** 104 working days
- **North Hydrotest:** 52 working days

Figure 1: Overview Map for Supply Line 49-16 Hydrotest and Replacement Project

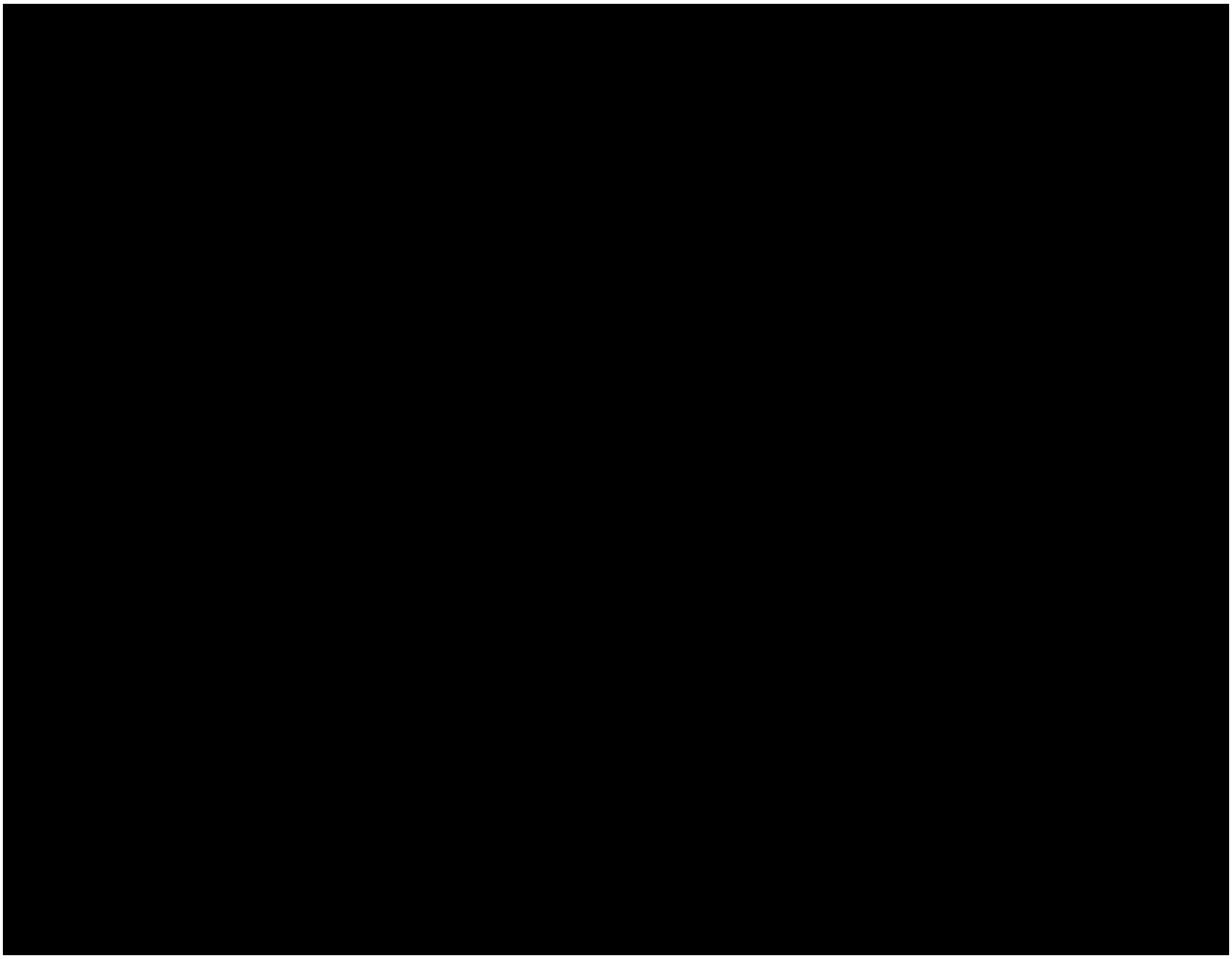

Table 2: Project Mileage

Project	Total Mileage	GTSR Mileage	Incidental Mileage
49-16 South Hydro	4.78	4.49	0.29
49-16 Replacement S1	0.98	0.91	0.07
49-16 North Hydro	1.23	0.96	0.27
49-16 Total	**9.47**	**8.20**	**1.27**

The direct costs for each area are summarized below

Table 3: Material

PROJECT COST	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Total
DIRECT LABOR	$0	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$0	$0	$1,455,313	$0	$0	$1,455,313
TOTAL DIRECT COSTS	$0	$0	$1,455,313	$0	$0	$1,455,313

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. The principal cost-driving materials necessary for this project include:

- 5,600 feet of [redacted] pipe.
- Four [redacted] tees
- Two [redacted] mainline valves

Table 4: Construction

PROJECT COST	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Total
DIRECT LABOR	$0	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$0	$0	$0	$16,445,567	$0	$16,445,567
TOTAL DIRECT COSTS	$0	$0	$0	$16,445,567	$0	$16,445,567

Assumptions

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

- One mobilization and one demobilization per section.
- Contractor work has been scheduled using an 8-hour per day, 5-day work week.
- All construction materials, equipment, and testing components are assumed to be received, staged, and distributed from the designated laydown yard(s).
- Mechanical excavation is assumed to be permitted to be within two feet of the existing pipeline. Hand excavation is assumed within the final two-foot tolerance zone and all hand excavation within existing stations.
- 15 frac tanks will be utilized to support hydrostatic testing operations on the South Hydrotest.
- Four frac tanks will be utilized to support hydrostatic testing operations for Replacement Section 1.
- Four frac tanks will be utilized to support hydrostatic testing operations.
- Test heads will be installed at each hydrotest break location.
- Excavations are to be backfilled with sand padding or zero slurry to one foot above the pipeline, with the remaining backfill performed using zero sack and one sack.
- Temporary water storage and pumping equipment (frac tanks and associated temporary fill piping) are included to support hydrostatic testing operations.
- Hydrostatic testing is to be performed on one primary test section.
- Pipeline isolation required for hydrostatic testing is achieved through a combination of existing mainline valves prior to testing activities.
- Non-Destructive Examination/X-Ray of welds.
- Construction Management and Inspection Services during project execution.

Additional Construction Information - South Hydrotest

- **Site Mobilization**
  - One mobilization of crew and equipment.
- **Site Preparation**
  - One laydown yard.
  - 500 Linear Feet (LF) temporary fencing at laydown yard.
  - Light clearing at laydown yard and workspaces.
- **Site Facilities**
  - Two office trailers will be placed at the laydown yard.
  - Site facility costs cover a five-month duration.
- **Site Management / BMP's**
  - Fiber rolls, sandbags, straw bales, sock drains, and poly sheeting will be procured and installed for BMP measures.
  - Four rumble plates are included.
- **Pipe Transportation / Handling**
  - Three loads of SDG&E furnished material will be unloaded by the contractor at the laydown yard.
- **Traffic Control**
  - 102 days with a flagger crew.
- **Site ROW Clearing**
  - Two vault removals.

- **Utility Locates**
  - One day of Ground Penetrating Radar (GPR).
  - 13 Gas Locates.
  - 13 Standard Locates.
- **Site Excavation**
  - 3,072 square feet (SF) asphalt grind for recessed plate installations.
  - 3,072 SF asphalt removal and disposal.
  - 10 LF concrete curb and gutter removal and disposal.
  - Shoring material and installation costs.
  - 104 Cubic Yard (CY) of Excavation for temporary bypass line at [redacted]
  - 178 CY of Excavations for Regulator Station trench and bell hole.
  - 89 CY of Excavations for test pits, MLV installations and MLV removals.
- **Remove Existing and Install New Features**
  - Welding and coating material.
  - Fabricate two test heads, four isolation caps, and ten wedding bands.
  - 160 LF of [redacted] pipe layout and weld.
  - 80 LF of [redacted] pipe layout and weld.
  - Two [redacted] test head installations.
  - Two [redacted] test head/cap installations.
  - Install four sets of new piping to the Regulator Stations.
  - Fabricate and install two new MLVs.
  - Two Test Head Installations and Tie-In pieces.
  - Two MLV Replacements.
  - Four Regulator Station Tie-Overs.
  - One Temporary 60 LF bypass.
- **Isolate Existing Pipeline**
  - One nitrogen truck for pipeline purging.
  - Fabricate, install, and test 60 LF of temporary bypass piping at [redacted].
  - Valve Closure Support using one [redacted] valve and one [redacted] stopple installation
  - Cut out and replace four pipe sections with anomalies that include excavation, section removal, section installation, and backfill of excavation.
  - Purge existing [redacted] pipeline.
- **Hydrotest / Pressure Test Pipeline**
  - Two test sections will be hydrotested and the test heads will be installed below grade.
- **Tie-In Pipeline**
  - One day to prep tie-ins.
  - One 24-hour shift to make tie-ins.
  - Four tap reconnections to existing regulator station piping.
- **Backfill Excavations**
  - Material Procurement of washed bedding sand, zero sack slurry, and one sack slurry.
  - Coat 16 welds for replacement piping.
  - Backfill excavations for four separate locations.

- **Site Restoration**
  - Restoration of work site locations to original condition which includes base paving, concrete work, street striping, restoration of 12 traffic loops, removal of temporary fencing, and final clean up.
- **Site Demobilization**
  - Demobilization of site facilities, crew, and equipment.
  - Hauling of one load of excess piping to a designated yard.
- **Field Overhead**
  - Full-Time Project Manager.
  - Full-Time Superintendent.
  - Full-Time Cost Controller.
  - Full-Time Timekeeper.
  - Full-Time Safety Personnel.
  - One water truck and driver are included for duration for dust suppression.
  - One Low-bed truck has been included to assist with equipment move arounds.
  - Three site security cameras for duration of construction.

Additional Construction Information - Replacement Section 1

- **Site Mobilization**
  - One mobilization of crew and equipment.
- **Site Preparation**
  - One laydown yard.
  - 400 LF temporary fencing at laydown yard.
- **Site Facilities**
  - A total of two office trailers will be placed in the laydown yard.
  - Site facility costs cover a five-month duration.
- **Site Management / BMP's**
  - Fiber rolls, sandbags, straw bales, sock drains, and poly sheeting will be procured and installed for BMP measures.
- **Pipe Transportation / Handling**
  - 11 loads of SDG&E furnished material will be unloaded by the contractor at the laydown yard.
- **Traffic Control**
  - 104 days with a flagger crew.
- **Utility Locates**
  - Two days GPR.
  - 10 Gas Locates.
  - 50 Standard Locates.
- **Pipeline Installation**
  - Site demolition of 17,380 SF asphalt, 5,012 SF concrete and 1,150 curb / gutter.
  - Excavate 5,544 LF of trench, 80 eight-foot bell holes and two tie-in bell holes.
  - String & bend 5,544 LF of [redacted] pipe.
  - Weld, lay and coat 5,544 LF of [redacted] pipe.

- Fabricate two [redacted] tie-in pieces and fittings.
- 5,544 LF trenching at six feet to eight feet depth.
- 80 eight-foot bell holes.
- Two tie-in bell holes.
- Fabricate and certify two [redacted] test heads.

- **Cathodic Protection**
  - Six ETS installations.
  - Eight ETS installations of pipeline markers.
- **Pipeline Isolation**
  - Valve Closure Support of two [redacted] valves.
  - One purge existing pipeline.
- **Hydrotest / Pressure Test Pipeline**
  - One test section will be hydrotested.
  - Test heads will be installed below grade.
- **Tie-In Pipeline**
  - One day to prep tie-in.
  - One 24-hour shift to make tie-in.
  - Support [redacted] valve openings.
  - Backfill tie-in excavation.
- **Retire / Abandon Existing Pipeline**
  - Asphalt removal and disposal.
  - Excavation of two bell holes.
  - Install two [redacted] abandonment plates.
  - Backfill excavation for two bell holes.
- **Site Restoration**
  - Restoration of work site locations to original condition which includes base paving, concrete work, street striping, restoration of two traffic loops, removal of temporary fencing, and final clean up.
- **Site Demobilization**
  - All site facilities, crew, and equipment will be demobilized.
  - One shift included for excess piping to be hauled to SDG&E designated yard.
- **Field Overhead**
  - Full-Time Project Manager.
  - Full-Time Superintendent.
  - Full-Time Cost Controller.
  - Full-Time Timekeeper.
  - Full-Time Safety Personnel.
  - One water truck and driver are included for full project duration for dust suppression.
  - One Low-bed trucks have been included to assist with equipment move arounds.
  - Three site security cameras for duration of construction.

Additional Construction Information - North Hydrotest

- **Site Mobilization**
  - One mobilization of crew and equipment.
- **Site Preparation**
  - One laydown yard.
  - 400 LF temporary fencing at laydown yard.
- **Site Facilities**
  - A total of two office trailers will be placed in the laydown yard.
  - Site facility costs cover a three month duration.
- **Site Management / BMP's**
  - Fiber rolls, sandbags, straw bales, sock drains, and poly sheeting will be procured and installed for BMP measures.
  - Four Rumble plates are included.
- **Pipe Transportation / Handling**
  - Two loads of SDG&E furnished material will be unloaded by the contractor at the laydown yard.
- **Traffic Control**
  - 42 days with a flagger crew.
- **Utility Locates**
  - Three Gas Locates.
  - Three Standard Locates.
- **Site Excavation**
  - 1,248 SF of asphalt grind for recessed plate installations for site preparation.
  - Site removal and disposal of 510 SF of asphalt 10 LF curb and gutter.
  - Excavate 140 CY for test break locations, trenches, and bell holes.
- **Remove Existing / Install New Features**
  - Fabricate 120 LF of [redacted] pipe, 80 LF of [redacted] pipe, two [redacted] test heads and two [redacted] test heads.
- **Isolate Existing Pipeline**
  - Procure one nitrogen truck for pipeline purging.
  - Valve Closure Support of one [redacted] valve and one [redacted] stopple installation.
  - Purge one existing [redacted] pipeline section.
- **Hydrotest / Pressure Test Pipeline**
  - One test section will be hydrotested.
  - One hydrotest will be conducted for the replacement pipe performed at the laydown yard.
  - Test heads will be installed below grade.
- **Tie-In Pipeline**
  - One day to prep tie-in.
  - One 24-hour shift to make tie-in.
  - One reconnection of existing regulator station piping.
- **Backfill Excavations**
  - Coat eight welds for replacement piping.
  - Backfill of excavations.

- **Site Restoration**
  - Restoration of work site locations to original condition which includes base paving, concrete work, street striping, removal of temporary fencing, and final clean up.
- **Site Demobilization**
  - All site facilities, crew, and equipment will be demobilized.
  - One shift included for excess piping to be hauled to SDG&E designated yard.
- **Field Overhead**
  - Full-Time Project Manager.
  - Full-Time Superintendent.
  - Full-Time Cost Controller.
  - Full-Time Timekeeper.
  - Full-Time Safety Personnel.
  - One water truck and driver are included for full project duration for dust suppression.
  - One Low-bed trucks have been included to assist with equipment move arounds.
  - Three site security cameras for the duration of construction.

Table 5: Environmental Survey/Permitting/Monitoring/Abatement

PROJECT COST	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Total
DIRECT LABOR	$0	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$0	$24,252	$465,064	$2,960,554	$143,223	$3,593,092
TOTAL DIRECT COSTS	$0	$24,252	$465,064	$2,960,554	$143,223	$3,593,092

Assumptions:

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

- Environmental Services (permitting support, surveys and monitoring).
- Non-hazardous waste containment/disposal.
- Abatement of Asbestos Containing Material (ACM).
- Water Treatment and Hazardous Materials.
- Permit Fees.
- Mitigation Fees.

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 Consultants for preconstruction assessments, construction monitoring, and environmental closeout support.

  - Document production for Storm Water Pollution and Prevention Plan (SWPPP) and Notice of Intent (NOI).
- **Preconstruction Surveys**
  - Preliminary survey and base mapping.
  - Utility survey and potholing.
  - ROW and Construction staking.
  - Laydown yard staking.
  - Utility detection and mark out.
  - Construction as-built.
  - Completion packages and GIS system updates.
  - Plat and legal description development.
- **Abatement**
  - Eight days for abatement of ACMs.
  - Additional abatement and Industrial Hygiene (IH) expenses for equipment and subsistence.
  - Assumes abatement at cut points.
- **Water Treatment and Hazardous Materials**
  - Hydrostatic test water, estimated at 390,000 gallons.
  - Waste sampling and profiling anticipated to support disposal of waste 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**
  - SWPPP fee.
  - Dust Control Plan Fee.
  - Hydrant Permits.
  - Hazardous waste analytics discharge permit. Encroachment permits and traffic control plan costs.
  - Caltrans Permits.
  - Municipal permits from the cities of San Diego, National City, Lemon Grove, and La Mesa.
  - Internal and external permitting support and all non-labor permitting fees required for the project. Includes municipal, environmental, and agency permits.
- **Mitigation Fees**
  - Compensatory Mitigation – assumes one to one mitigation ratio that would occur through purchase of credits at CDFW approved mitigation banks.

Table 6: Land & Right-of-Way Acquisition

PROJECT COST	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Total
DIRECT LABOR	$0	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$0	$0	$17,886	$133,803	$6,038	$157,728
TOTAL DIRECT COSTS	$0	$0	$17,886	$133,803	$6,038	$157,728

Assumptions

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

- One Senior Land Agent to support land acquisition.
- Appraisal Reports.
- Title Reports.
- Temporary Right of Entry (TRE) - Construction Yards.
- Temporary Right of Entry (TRE) – Workspace.

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 San Diego County area was also considered in generating the cost estimate.

Table 7: Company Labor

PROJECT COST	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Total
DIRECT LABOR	$182,759	$371,736	$662,861	$1,696,606	$610,606	$3,524,568
DIRECT NON-LABOR	$0	$0	$0	$0	$0	$0
TOTAL DIRECT COSTS	$182,759	$371,736	$662,861	$1,696,606	$610,606	$3,524,568

Assumptions

SDG&E Labor - Management, Engineering, and Non-Union Labor

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

- Project Management.
- Project Field Management.
- Project Engineers.
- Construction Management.
- Other Departments.

SDG&E Labor Field Labor – Distribution, Transmission, Pipeline Integrity and Other Field Departments
SDG&E Union Labor costs were developed with the guidance of SDG&E Construction Management and whose costs are duration dependent and activity specific.

Table 8: Other Costs

PROJECT COST	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Total
DIRECT LABOR	$0	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$559,539	$1,039,214	$1,561,297	$411,923	$197,608	$3,769,582
TOTAL DIRECT COSTS	$559,539	$1,039,214	$1,561,297	$411,923	$197,608	$3,769,582

Assumptions
Other costs assume use of contracted services for certain Engineering, Survey, Project Management, and Design activities. These costs are included to account for the anticipated professional services required to support project planning, design development, execution, and closeout. The major components in this category include:

- Engineering and Design Services.
- Project Management Services.
- Surveying and As-builts.
- Project Support Services.

Table 1: Total Direct Project Costs – All Capital

TOTAL PROJECT COSTS - CAPITAL	Stage 1[1,2]	Stage 2[3]	Stage 3[4]	Stage 4[5]	Stage 5[6]	Total[7]
DIRECT LABOR	$170,565	$325,663	$621,589	$1,433,529	$471,381	$ 3,022,727
DIRECT NON-LABOR	$459,446	$843,129	$2,070,485	$10,555,260	$342,720	$ 14,271,040
TOTAL COSTS - CAPITAL	$630,011	$1,168,791	$2,692,073	$11,988,789	$814,102	$ 17,293,767

Project Description

The Supply Line 49-18 hydrotest Project will hydrotest 8.12 miles of pipeline that is required to reconfirm Maximum Allowable Operating Pressure (MAOP), in accordance with 49 CFR § 192.624. Mitigation will be accomplished through hydrostatic testing of existing [redacted] pipeline located within the City of San Diego and National City and executed in a phased approach. Incidental mileage has been included to allow for constructability, operational continuity, and efficient execution of project activities.

The project is divided into three sections: GTSR 49-18 North Hydrotest, GTSR 49-18 Central Hydrotest, and GTSR 49-18 South Hydrotest segments; each tested independently and sequenced throughout 2028 to minimize community impacts and maintain system reliability. Overall, the project scope includes five regulator station tie-overs, each requiring installation of a new regulator tap using a standardized assembly comprising a tee, valve, and Monolithic Insulating Coupling (MIC).

The GTSR 49-18 **North Hydrotest** will test approximately 2.41 miles of pipeline. The section starts at [redacted], and ends at the [redacted]. This segment is the first phase of the overall hydrotest sections. The North Hydrotest includes two tie-overs with new [redacted] regulation taps.

The GTSR 49-18 **Central Hydrotest** will test approximately 2.96 miles. The section starts at the intersection of [redacted] ending at [redacted]. This segment is the second phase of the overall hydrotest series and will follow completion of the North segment to maintain sequencing and system continuity. The Central hydrotest includes one tie-over with a new [redacted] regulation tap and cut out of an existing spherical tee.

The GTSR 49-18 **South Hydrotest** will test approximately 2.75 miles of the existing [redacted] pipeline. This section starts at the intersection of [redacted] and runs south ending at [redacted]

[1] Project Initiation.
[2] Actual costs incurred associated with planning and engineering design work are included in the project cost estimates.
[3] Preliminary Design.
[4] Detailed Design.
[5] Construction.
[6] Closeout.
[7] Values may not add to total due to rounding.

[redacted]. The scope includes two tie-overs with new [redacted] regulator taps. This segment is the final phase of the hydrotest series and will commence after completion of the North and Central phases.

Forecast Methodology

SDG&E 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 five-stage project life cycle as defined in the Project Delivery Model. 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 for each of the project sections is estimated to be as follows:

- **South Hydrotest:** Total construction schedule assumed at 67 days.
- **Central Hydrotest:** Total construction schedule assumed 63 days.
- **South Hydrotest:** Total construction schedule assumed at 67 days.

Figure 1: Overview Map for Line 49-18 Hydrotest Project

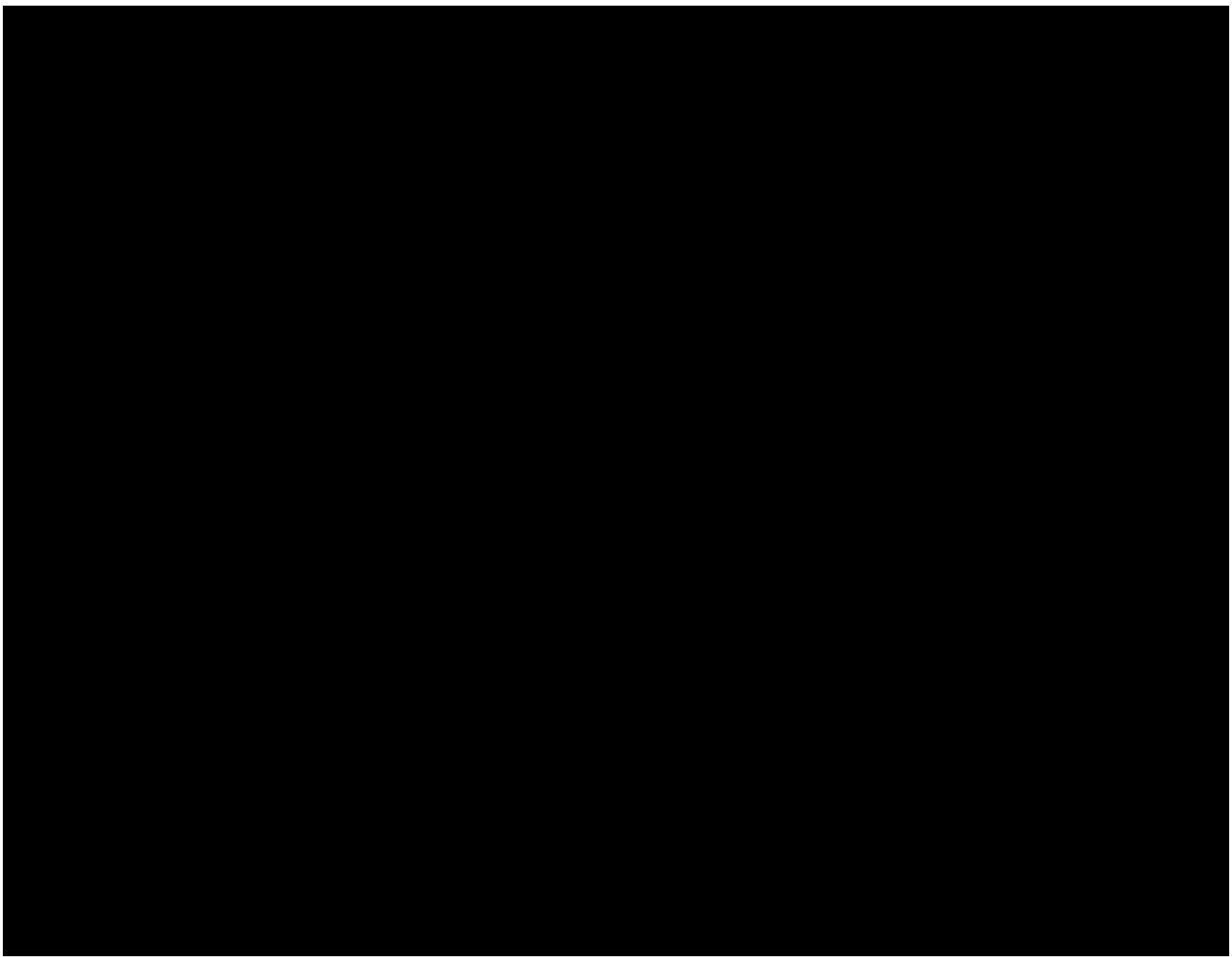

Table 2: Project Mileage

Project	Total Mileage	GTSR Mileage	Incidental Mileage
49-18 North Hydro	2.41	2.09	0.32
49-18 Central Hydro	2.96	2.4	0.56
49-18 South Hydro	2.75	2.25	0.5
49-18 Total	**8.12**	**6.74**	**1.38**

The direct costs for each area are summarized below

Table 3: Material

PROJECT COST	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Total
DIRECT LABOR	$0	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$0	$0	$461,661	$0	$0	$461,661
$0**TOTAL DIRECT COSTS**	$0	$0	$461,661	$0	$0	$461,661

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. The principal cost-driving materials necessary for this project include:

- 120 feet of [redacted] pipe.
- Two [redacted] tees, [redacted] valves, and piping.

Table 4: Construction

PROJECT COST	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Total
DIRECT LABOR	$0	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$0	$0	$0	$7,931,895	$0	$7,931,895
TOTAL DIRECT COSTS	$0	$0	$0	$7,931,895	$0	$7,931,895

Assumptions

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

- One mobilization and one demobilization per section.
- Contractor work has been scheduled using a 10-hour per day, 5-day work week.
- No night work will be performed.
- No cultural resources are anticipated.
- No groundwater will be encountered.

- All construction materials, equipment, and testing components are assumed to be received, staged, and distributed from the designated laydown yards(s).
- Mechanical excavation is assumed to be permitted up to two feet from the existing pipeline. Hand excavation is assumed within the final two-foot tolerance zone and all hand excavation is assumed within existing stations.
- North Hydrotest: 11 frac tanks will be utilized to support hydrostatic testing operations.
- Central Hydrotest: 15 frac tanks will be utilized to support hydrostatic testing operations.
- South Hydrotest: 14 frac tanks will be utilized to support hydrostatic testing operations.
- Test heads will be installed at each hydrotest break location.
- Excavations are to be backfilled with sand padding or zero slurry to one foot above the pipeline, with the remaining backfill will be performed using zero sack and one sack slurry.
- Temporary water storage and pumping equipment (frac tanks and associated temporary fill piping) are included to support hydrostatic testing operations.
- Hydrostatic testing is to be performed on one primary test section.
- Pipeline isolation required for hydrostatic testing is assumed to be achieved through a combination of existing mainline valves prior to testing activities.
- Non-Destructive Examination/X-Ray of welds.
- Construction Management and Inspection Services during project execution.

Additional Construction Information - North Hydrotest

- **Site Mobilization**
  - One mobilization of crew and equipment.
- **Site Preparation**
  - One laydown yard.
  - 1,000 feet of temporary fencing at laydown yard and test breaks one and two.
- **Site Facilities**
  - A total of two office trailers will be placed at the laydown yard.
  - Site facility costs cover a three month duration.
- **Site Management / BMP's**
  - Fiber rolls, sandbags, straw bales, sock drains, and poly sheeting will be procured and installed for BMP measures.
- **Pipe Transportation / Handling**
  - Two loads of SDGE furnished material will be unloaded by the contractor at the laydown yard.
- **Traffic Control**
  - 63 days with a flagger crew.
- **Utility Locates**
  - Four gas locates and standard locates.
- **Site Excavation**
  - 780 square feet (SF) of asphalt grind for recessed plate installations.
  - Remove and dispose of 780 SF of asphalt.
  - Includes shorting material and installation.

  - 82 cubic yards (CY) for test excavations, 54 CY of trench and bell holes, and 16 CY of hand excavation anticipated inside station.
- **Remove Existing / Install New Features**
  - Fabricate and install two test heads and two isolation caps.
  - Install new piping to regulator stations, valves and piping.
- **Isolate Existing Pipeline**
  - Procure one nitrogen truck for pipeline purging.
  - Valve closure support of two [redacted] valves.
  - Purge existing [redacted] pipeline.
- **Hydrotest / Pressure Test Pipeline**
  - One test section will be hydrotested.
  - Additional Hydrotest for replacement pipe at laydown yard.
  - Test heads will be installed below grade.
- **Tie-In Pipeline**
  - One day to prep tie-in.
  - One 24-hr shift to make tie-in.
  - Two reconnections of existing regulator station piping.
- **Backfill Excavations**
  - Coat 16 welds for replacement piping.
  - Backfill excavations for four locations.
- **Site Restoration**
  - Restoration of work site locations to original condition which includes base paving, concrete work, street striping, restoration of two traffic loops, removal of temporary fencing, and final clean up.
- **Site Demobilization**
  - All site facilities, crew and equipment will be demobilized.
  - One shift included for excess piping to be hauled to SDG&E designated yard.
- **Field Overhead**
  - Full-Time Project Manager.
  - Full-Time Superintendent.
  - Full-Time Cost Controller.
  - Full-Time Timekeeper.
  - Full-Time Safety Personnel.
  - One water truck and driver are included for full project duration for dust suppression.
  - One Low-bed truck has been included to assist with equipment move arounds.
  - Three site security cameras for duration of construction.

<u>Additional Construction Information - Central Hydrotest</u>

- **Site Mobilization**
  - One mobilization of crew and equipment.
- **Site Preparation**
  - One laydown yard.
  - 500 LF temporary fencing.
  - Light clearing of workspace at [redacted] and creek crossing.

- **Site Facilities**
  - A total of two office trailers will be placed at the laydown yard.
  - Site facility costs cover a three month duration.
- **Site Management / BMP's**
  - Fiber rolls, sandbags, straw bales, sock drains, silt fencing, and poly sheeting will be procured and installed for BMP measures.
  - 12 rumble plates.
- **Pipe Transportation / Handling**
  - Two loads of SDG&E furnished material will be unloaded by the contractor at the laydown yard.
- **Traffic Control**
  - 55 days with a flagger crew.
- **Utility Locates**
  - Four Gas Locates.
  - Four Standard Locates.
- **Site Excavation**
  - Site Preparation includes 1,250 SF of asphalt grinding for recessed plate installations and traffic bridging at a test break.
  - Removal and dispose of 510 SF of asphalt for site demo.
  - Excavate 110 CY for test excavations, 24 CY for pipeline cut outs, 35 CY for regulator station excavations.
- **Remove Existing / Install New Features**
  - Fabricate two [redacted] test heads and two [redacted] test head/isolation caps.
  - One cut out and abatement support.
  - Installation of replacement pipe.
- **Isolate Existing Pipeline**
  - Procure one nitrogen truck for pipeline purging.
  - Valve closure support of two [redacted] valves.
  - Purge existing [redacted] pipeline.
- **Hydrotest / Pressure Test Pipeline**
  - Two test sections will be hydrotested.
  - Test heads will be installed below grade.
- **Tie-In Pipeline**
  - One day to prep tie-in.
  - One 16-hour shift to make tie-in.
  - One reconnection of existing regulator station piping.
- **Backfill Excavations**
  - Coat 16 welds for replacement piping.
  - Backfill excavations for four locations.
- **Site Restoration**
  - Restoration of work site locations to original condition which includes base paving, concrete work, street striping, restoration of two traffic loops, removal of temporary fencing, and final clean up.
- **Site Demobilization**
  - All site facilities, crew and equipment will be demobilized

  - One shift included for excess piping to be hauled to SDG&E designated yard.
- **Field Overhead**
  - Full-Time Project Manager.
  - Full-Time Superintendent.
  - Full-Time Cost Controller.
  - Full-Time Timekeeper.
  - Full-Time Safety Personnel.
  - One water truck and driver are included for full project duration for dust suppression.
  - One Low-bed truck has been included to assist with equipment move arounds.
  - Three site security cameras for duration of construction.

Additional Construction Information - South Hydrotest

- **Site Mobilization**
  - One mobilization of crew and equipment.
- **Site Preparation**
  - One laydown yard.
  - 400 LF temporary fencing.
- **Site Facilities**
  - A total of two office trailers will be placed at the laydown yard.
  - Site facility costs cover a three-month duration.
- **Site Management / BMP's**
  - Sandbags and sock drains will be procured and installed for BMP measures.
- **Pipe Transportation / Handling**
  - Two loads of SDG&E furnished material will be unloaded by the contractor at the laydown yard.
- **Traffic Control**
  - 67 days with flagger crew.
- **Utility Locates**
  - Four Gas Locates.
  - Four Standard Locates.
- **Site Excavation**
  - 780 SF of asphalt grind for recessed plate installations for site preparation.
  - Site Demolition to remove and dispose of 630 SF of asphalt and 540 SF of concrete.
  - Excavate 109 CY for test locations and 54 CY for Regulator Station excavations.
- **Remove Existing / Install New Features**
  - Material for welding and coating material.
  - Fabricate two test heads and four isolation caps.
    Fabricate and install two [redacted] test head, and two [redacted] test head/cap.
- **Isolate Existing Pipeline**
  - Procure one nitrogen truck for pipeline purging.
  - Two [redacted] valve closures.
  - Purge existing [redacted] pipeline.
- **Hydrotest / Pressure Test Pipeline**
  - One test section will be hydrotested for mainline.

  - One test for replacement pipe to be tested at laydown yard.
  - Test heads will be installed below grade.
- **Tie-In Pipeline**
  - One day to prep tie-in.
  - One 16-hour shift to make tie-in.
  - Two reconnection of existing regulator station piping.
- **Backfill Excavations**
  - Coat 16 welds for replacement piping.
  - Backfill of excavations for four locations.
- **Site Restoration**
  - Restoration of work site locations to original condition which includes base paving, concrete work, street striping, restoration of two traffic loops, removal of temporary fencing, and final clean up.
- **Site Demobilization**
  - All site facilities, crew and equipment will be demobilized.
  - One shift included for excess piping to be hauled to SDGE designated yard.
- **Field Overhead**
  - Full-Time Project Manager.
  - Full-Time Superintendent.
  - Full-Time Cost Controller.
  - Full-Time Timekeeper.
  - Full-Time Safety Personnel.
  - One water truck and driver are included for full project duration for dust suppression.
  - One Low-bed truck has been included to assist with equipment move arounds.
  - Three site security cameras for duration of construction.

Table 5: Environmental Survey/Permitting/Monitoring/Abatement

PROJECT COST	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Total
DIRECT LABOR	$0	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$0	$20,852	$426,896	$2,294,585	$166,896	$2,909,229
TOTAL DIRECT COSTS	$0	$20,852	$426,896	$2,294,585	$166,896	$2,909,229

Assumptions:

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

- Environmental Services (permitting support, surveys and monitoring).
- Non-hazardous waste containment/disposal.
- Abatement of Asbestos Containing Material (ACM).
- Water Treatment and Hazardous Materials.
- Permit Fees.
- Mitigation Fees.

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 Consultants for preconstruction assessments, construction monitoring, and environmental closeout support.
  - Document production for Storm Water Pollution and Prevention Plan (SWPPP) and Notice of Intent (NOI).
- **Preconstruction Surveys**
  - Preliminary survey and base mapping.
  - Utility survey and potholing.
  - Right-of-way (ROW) and construction staking.
  - Laydown yard staking.
  - Utility detection and mark out.
  - Construction as-builts.
  - Completion packages and GIS system updates.
  - Plat and legal description development.
- **Abatement**
  - Eight days for abatement of ACMs.
  - Additional abatement and Industrial Hygiene (IH) expenses for equipment and subsistence.
  - Assumes abatement at cut points.
- **Water Treatment and Hazardous Materials**
  - Hydrostatic test water, estimated at 700,000 gallons.
  - Waste sampling and profiling anticipated to support disposal of waste 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**
  - Costs associated with encroachment permits and traffic control plan costs.
  - City of San Diego and National City permits.
  - Internal and external permitting support and all non-labor permitting fees required for the project. Includes municipal, environmental, and agency permits.
  - SWPPP fee.
  - Dust Control Plan Fee.
  - Hydrant Permits.
  - Hazardous waste analytics discharge permit.
- **Mitigation Fees**
  - Compensatory Mitigation – assumes one to one mitigation ratio that would occur through purchase of credits at CDFW approved mitigation banks.

Table 6: Land & Right-of-Way Acquisition

PROJECT COST	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Total
DIRECT LABOR	$0	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$0	$0	$17,349	$78,068	$17,349	$112,766
TOTAL DIRECT COSTS	$0	$0	$17,349	$78,068	$17,349	$112,766

Assumptions

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

- Land Agent to support land acquisition
- Temporary Right of Entry (TRE) – Construction Yards
- Temporary Right of Entry (TRE) – Workspace

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 San Diego County area was also considered in generating the cost estimate.

Table 7: Company Labor

PROJECT COST	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Total
DIRECT LABOR	$170,565	$325,663	$621,589	$1,433,529	$471,381	$3,022,727
DIRECT NON-LABOR	$0	$0	$0	$0	$0	$0
TOTAL DIRECT COSTS	$170,565	$325,663	$621,589	$1,433,529	$471,381	**$3,022,727**

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.
- Project Field Management.
- Project Engineers.
- Construction Management.
- Other Departments.

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

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

Table 8: Other Costs

PROJECT COST	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Total
DIRECT LABOR	$0	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$459,446	$822,276	$1,164,579	$250,713	$158,475	$2,855,489
TOTAL DIRECT COSTS	$459,446	$822,276	$1,164,579	$250,713	$158,475	$2,855,489

Assumptions

Other costs assume use of contracted services for certain Engineering, Survey, Project Management, and Design activities. These costs are included to account for the anticipated professional services required to support project planning, design development, execution, and closeout. The major components in this category include:

- Engineering and Design Services.
- Project Management Services.
- Surveying and As-builts.
- Project Support Services.

Table 1: Total Direct Project Costs – All Capital

TOTAL PROJECT COSTS - CAPITAL	Stage 1[1,2]	Stage 2[3]	Stage 3[4]	Stage 4[5]	Stage 5[6]	Total[7]
DIRECT LABOR	$15,260	$39,552	$39,552	$224,906	$44,052	$363,322
DIRECT NON-LABOR	$122,847	$458,520	$793,861	$4,771,314	$232,433	$6,378,975
TOTAL COSTS - CAPITAL	$138,107	$498,072	$833,413	$4,996,220	$276,486	$6,742,297

Project Description

The Supply Line 49-24 hydrotest Project will hydrotest 2.16 miles of pipeline that is required to reconfirm Maximum Allowable Operating Pressure (MAOP), in accordance with 49 CFR § 192.624. Mitigation will be accomplished through hydrostatic testing of existing [redacted] and [redacted] pipeline located within the City of Chula Vista and executed in two sections. Incidental mileage has been included to allow for constructability, operational continuity, and efficient execution of project activities.

Section 1 will test approximately 0.49 miles of [redacted] diameter pipe that runs from the intersection of [redacted] and includes the replacement of a reducer. Section 2 will test approximately 1.67 miles of [redacted] pipe that runs from the [redacted]. This section also includes the replacement of a [redacted] mainline valve (MLV), replacement of a [redacted] Ball Valve, the replacement of a 200-foot section, and one new [redacted] regulator station tie-over requiring installation of a new regulator tap using a standardized assembly comprising a tee, valve, and Monolithic Insulating Coupling (MIC). The two sections will then be tested together via a pipeline jumper connection at [redacted].

Forecast Methodology

SDG&E 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. The estimate was prepared in accordance with the Association for the Advancement of Cost Engineering (AACE) Class 5 estimating practices.

[1] Project Initiation.
[2] Actual costs incurred associated with planning and engineering design work are included in the project cost estimates.
[3] Preliminary Design.
[4] Detailed Design.
[5] Construction.
[6] Closeout.
[7] Values may not add to total due to rounding.

Schedule

The schedule was developed based on the five-stage project life cycle as defined in the Project Delivery Model. 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.

The preliminary Stage 4 construction schedule incorporated additional planning and stakeholder input, recognizing that most project costs are incurred during the construction phase. The construction schedule is 65 days working.

Table 2: Project Mileage

Project	Total Mileage	GTSR Mileage	Incidental Mileage
49-24 Section 1	0.49	0.48	0.01
49-24 Section 2	1.67	1.62	0.05
49-24 Total	**2.16**	**2.10**	**0.06**

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SDG&E Valve Rule Forecast Workpaper

Table 1: Total Direct Project Costs – All Capital

TOTAL PROJECT COSTS	Stage 1[1,2]	Stage 2[3]	Stage 3[4]	Stage 4[5]	Stage 5[6]	Total[7]
DIRECT LABOR	$45,429	$80,290	$80,290	$175,574	$92,810	$474,393
DIRECT NON-LABOR	$151,768	$318,183	$879,550	$4,073,415	$210,488	$5,633,404
TOTAL DIRECT COSTS	$197,197	$398,473	$959,840	$4,248,989	$303,298	$6,107,797

General Project Description

The purpose of this workpaper is to describe the cost basis for a representative automated main line valve installation project that is typical of forecasted work comprising the PHMSA Valve Rule program. The primary objective of this program is to enhance system safety and reliability by enabling rapid isolation of pipeline segments and improved control of gas flow during emergency conditions. The program includes the replacement of existing in-line valves with new automated main line valves integrated with SCADA and line break detection systems.

The representative project described herein generally reflects the standard work required at each location, and as such, forms a reasonable basis from which to forecast a programmatic level of work where detailed site-specific engineering and refined cost estimates will be developed and addressed later in the project lifecycle. The costs presented reflect the estimated amount for the single representative project that has been extrapolated to a larger pool of projects as described in SDGE-06 Gas Major Projects.

For forecasting and planning purposes, the project is estimated on an average, per-valve basis using a standardized scope and a consistent set of assumptions applied uniformly across all locations. While certain cost elements vary by valve diameter, many components—such as controls, communications equipment, civil construction, traffic control, and restoration—are assumed to be generally consistent across sites. These factors are combined to develop a representative average cost per valve project suitable for program-level estimating.

The scope of work applies to main line valves ranging in size from 6 inches to 24 inches in diameter. All existing valves at these locations are assumed to require replacement due to valve type, orientation, or incompatibility with automation requirements. Each installation includes a new automated main line valve and a permanent, manually operated bypass assembly to allow for installation activities, routine inspection, and annual maintenance without requiring gas outages or temporary supply measures. For the purposes of the representative project forming the basis of this forecast, a valve size of [redacted] was assumed.

Each site includes installation of standardized control and communications equipment, including line break

[1] Project Initiation.
[2] Actual costs incurred associated with planning and engineering design work are included in the project cost estimates.
[3] Preliminary Design.
[4] Detailed Design.
[5] Construction.
[6] Closeout.
[7] Values may not add to total due to rounding.

detection, SCADA hardware, a utility meter, and an antenna pole. This equipment is consistent across all valve sizes and locations, with standardized spacing and configurations. An underground vault housing the valve actuator is installed at each site, with vault dimensions sized to accommodate an actuator.

All installations are assumed to occur in urban environments within roadways. Pipeline modifications are included as necessary to reposition piping closer to the curb to meet actuator distance limitations, with a maximum allowable separation of 20 feet between the valve and actuator. Traffic control, pavement restoration, and coordination with local jurisdictions are inherent to the scope.

Forecast Methodology

SDG&E 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 five stage project life cycle as defined in the Project Delivery Model. 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 4 Construction Schedule received additional planning and stakeholder input considering that the majority of the project costs are expended during the construction phase. The construction schedule is assumed to be 70 days.

The direct costs for each area are summarized below.

Table 2: Material

Project Costs	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Total
DIRECT LABOR	$0	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$9,400	$74,997	$544,342	$0	$0	$ 628,739
TOTAL DIRECT COSTS	$9,400	$74,997	$544,342	$0	$0	$ 628,739

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. The principal cost-driving materials necessary for this project include:

- One [redacted] ball valve.
- Two [redacted] Pressure Control Fittings (PCFs).
- One Actuator.
- One [redacted] Vault.

Table 3: Construction

Project Costs	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Total
DIRECT LABOR	$0	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$0	$0	$0	$3,756,663	$0	$3,756,663
TOTAL DIRECT COSTS	$0	$0	$0	$3,756,663	$0	$3,756,663

Assumptions

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

- **Site Mobilization**
  - Mobilization of labor, equipment, & non-supplied materials.
  - One mobilization and one demobilization.

- **Site Preparation**
  - Assumes company-supplied survey crew for layout.

- **Site Facilities**
  - On-site office facilities are included.
  - Work has been scheduled using an 8-hour per day, five-day work week.
  - Includes toilet and washing stations rental.

- **Site Management / BMP's**
  - Ten crew hours for offloading and staging of Company materials.
  - Two loads of SDG&E furnished material will be unloaded by the contractor at the laydown yard.

- **Traffic Control**
  - Two phase K-rail permanent closures for duration of the project are included.
  - Includes eight days of subcontracted traffic control for setting up and tearing down each phase.
  - Includes ten days traffic control flagging.

- **Site ROW Clearing and Utility Locates**
  - Assumes 30 crew hours for ROW-clearing activities.
  - Assumes potholing four utility locates.

- **Excavation / Fabrication / Installation**
  - Excavations included for the vault, two stopples, the main line valve, sense lines, foundations, electrical trenches, groundwire grid, and conduit, totaling approximately 500 Cubic Yards (CY).
  - Installation of sense lines, MLV, and permanent bypass with valve.

- **Electrical Contractor**
  - Assumes 26 day duration for electrical contractor.

- Includes the installation of one SCADA, line break, and meter pedestal.
- Includes all instrumentation tubing, tubing supports, wire pulls, terminations, continuity checks, input/output testing for all devices and transmitters, and instrument line soap test.

- **Isolate Existing Piping**
  - One pipeline isolation using two [redacted] PCFs and [redacted] bypass piping for gas handling.

- **Test and Tie-in Piping**
  - The project includes one nitrogen test two hydrotests.
  - Tie-ins to be completed in one 24-hr shift.

- **Backfill Excavation**
  - Backfill of excavations with 100% slurry.

- **Site Restoration and Demobilization**
  - Includes a clean-up crew for one day to return site to existing condition.
  - Assumes all costs for de-mobilizing labor, equipment, & non-supplied materials

- **Field Overhead**
  - Assumes the following project management crew on site:
  - Full-Time Project Manager.
  - Full-Time Field Engineer.
  - Full-Time Superintendent.
  - Full-Time Safety Person.
  - Two onsite security guards for the project site during non-working hours.

Table 4: Environmental/Permitting/Monitoring/Abatement

Project Costs	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Total
DIRECT LABOR	$0	$0	$0	$0	$0	$0
DIRECT NON-LABOR	$5,704	$14,923	$44,769	$57,485	$0	$122,881
TOTAL DIRECT COSTS	$5,704	$14,923	$44,769	$57,485	$0	$122,881

Assumptions

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

- Environmental Services (permitting support, surveys and monitoring).
- Non-hazardous waste containment/disposal.
- One day for abatement of Asbestos Containing Material (ACM).
- Water Treatment and Hazardous Materials.

- **Permit Fees**
  - Permitting fees related to an encroachment permit and traffic control plans.

Table 5: Land & Right-of-Way Acquisition

Project Costs	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Total
DIRECT LABOR	$0	$ 0	$ 0	$ 0	$ 0	$ 0
DIRECT NON-LABOR	$5,290	$46,033	$138,099	$ 0	$ 0	$189,421
TOTAL DIRECT COSTS	$5,290	$46,033	$138,099	$ 0	$ 0	$189,421

Assumptions

In generating the total estimated cost the following items were considered:

- **Labor**
  - One Senior Land Agent to support land acquisition.

- **Land Acquisition**
  - One Appraisal report.
  - One Title report.
  - Obtaining one Temporary Right-of-Entry (TRE) to be used as laydown yard and work area.

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.

Table 6: Company Labor

Project Costs	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Total
DIRECT LABOR	$45,429	$80,290	$80,290	$175,574	$92,810	$474,393
DIRECT NON-LABOR	$0	$0	$0	$0	$0	$0
TOTAL DIRECT COSTS	$45,429	$80,290	$80,290	$175,574	$92,810	$474,393

Assumptions

SDG&E Labor - Management, Engineering, and Non-Union Labor

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

- Project Management.
- Project Field Management.
- Project Engineers.
- Construction Management.
- Environmental Services.
- Other Departments.

SDG&E Field Labor – Distribution, Transmission, Pipeline Integrity, and Other Field Departments
SDG&E Union Labor costs were developed with the guidance of SDG&E Construction Management and whose costs are duration dependent and activity specific.

Table 7: Other Costs

Project Costs	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Total
DIRECT LABOR	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
DIRECT NON-LABOR	$131,374	$182,230	$152,340	$259,267	$210,488	$935,700
TOTAL DIRECT COSTS	$131,374	$182,230	$152,340	$259,267	$210,488	$935,700

Assumptions
Other costs assume use of contracted services for certain Engineering, Survey, Project Management, and Design activities. These costs are included to account for the anticipated professional services required to support project planning, design development, execution, and closeout.

The major components in this category include:
- Engineering and Design Services.
- Project Management Services.
- Surveying and As-builts.
- Project Support Services.

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

DECLARATION OF DEVIN ZORNIZER REGARDING CONFIDENTIALITY OF CERTAIN DATA PURSUANT TO D.21-09-020

I, Devin Zornizer, do declare as follows:

1. I am the Vice President of the Infrastructure Project Delivery organization for Southern California Gas Company (SoCalGas). I have reviewed the confidential information included within the SDG&E Exhibit SDGE-06 Gas Major Projects Supplemental Workpaper Volumes I, IV, and V for the 2028 General Rate Case (GRC) proceeding (A.26-05-XXX). 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.

2. I hereby provide this Declaration in accordance with Decision ("D.") 21-09-020 and General Order ("GO") 66-D, Revision 2 to demonstrate that the confidential information ("Protected Information") provided in the SDG&E Exhibit SDGE-06 Gas Major Projects Supplemental Workpaper Volumes I, IV, and V is within scope of the data protected as confidential under applicable law.

3. In accordance with 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 12th day of June, 2026, at Los Angeles, California.

E-SIGNED by Devin Zornizer
on 2026-06-12 07:26:15 PDT

Devin Zornizer
Infrastructure Project
Delivery SoCalGas

ATTACHMENT A

SDGE Request for Confidentiality on the following information in the response to the 2028 General Rate Case Supplemental Workpaper Volumes I, IV, and V of Devin Zornizer, Exhibit SDGE-06 ("Gas Major Projects")

Location of Protected Information	Legal Citations	Narrative Justification
All grey highlighted Pipeline attributes (i.e., SMYS, MAOP, diameter, pressure, grade) in the following attachments: SDGE-06-WP-S Supplemental Workpapers to Prepared Direct Testimony of Gas Major Projects – Volume I CONFIDENTIAL SDGE-06-WP-S Supplemental Workpapers to Prepared Direct Testimony of Gas Major Projects – Volume IV CONFIDENTIAL SDGE-06-WP-S Supplemental Workpapers to Prepared Direct Testimony of Gas Major Projects – Volume V CONFIDENTIAL	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/sites/default/files/2020-04/CEII-Filing-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 vendor proprietary information). in the following attachments:	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 commercially sensitive and should remain confidential).	Based on input received by the vendor, and based on SDGE position, the produced documents are proprietary and represent and contain information that is proprietary, commercially sensitive, trade secrets, and content not intended for public disclosure. Vendor contracting efforts involve communications and work product which is intended only for access by

SDGE-06-WP-S Supplemental Workpapers to Prepared Direct Testimony of Gas Major Projects – Volume IV CONFIDENTIAL SDGE-06-WP-S Supplemental Workpapers to Prepared Direct Testimony of Gas Major Projects – Volume V CONFIDENTIAL		designated parties. Public disclosure would pose potential negative impacts and/or harm to the vendors, and/or inhibit 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, pipeline location) in the following attachments: SDGE-06-WP-S Supplemental Workpapers to Prepared Direct Testimony of Gas Major Projects – Volume I CONFIDENTIAL SDGE-06-WP-S Supplemental Workpapers to Prepared Direct Testimony of Gas Major Projects – Volume IV CONFIDENTIAL SDGE-06-WP-S Supplemental Workpapers to Prepared Direct Testimony of Gas Major Projects – Volume V CONFIDENTIAL	CPRA Exemption, Gov't Code § 7927.705 ("Records, the disclosure of which is exempted or prohibited pursuant to federal or state law") • 18 CFR § 388.113(c) (defining CEII) • FERC Order Nos. 630, 643, 649, 662, 683, and 702 (defining CEII) • FAST Act - Critical Electric Infrastructure Security, Pub. L. 114-94, amended December 4, 2015 (protecting **electric** infrastructure) • FERC Order 833 (including amendments to the CEII regulations, required by The FAST Act) • Critical Energy Infrastructure Information, 68 Fed. Reg. 9857, 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, (Feb. 21, 2017), *available at* https://www.ferc.gov/sites/default/files/2020-04/CEII-Filing-guidelines.pdf ◦ Exhibits G, G-1, G-II of pipeline certificate applications. 18 CFR § 157.14 ◦ Exhibit V of abandonment applications. 18 CFR § 157.18 ◦ FERC Form 567. 18 CFR § 260.8 • CPUC Res. L-436, at 8 (stating CPUC will "refrain from making available to the public detailed maps and schematic diagrams showing the location of specific utility regulator stations, valves, and similar facilities") • Cal. Pub. Util. Code § 364(d) ("The commission may, consistent with other provisions of law, withhold from the public information generated or obtained pursuant to this section that it deems would pose a security threat to the public if disclosed.") CPRA Exemption, Gov't Code § 7922.000 (Balancing Test)	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.