BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Application of Southern California Gas Company (U 902 G) to Recover Costs Recorded in the Transmission Integrity Management Program Balancing Account from January 1, 2019 to December 31, 2023.	A.25-04-020 (Filed April 30, 2025)

AMENDED WORKPAPERS SUPPORTING THE PREPARED DIRECT TESTIMONY OF JORDAN A. ZEOLI, FIDEL GALVAN, AND TRAVIS T. SERA (Technical – Project Execution and Management, Volume II of VII)

[PUBLIC VERSION]

Respectfully submitted on behalf of the SoCalGas,

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SCG-02-WP-A

Amended Workpapers Supporting the Prepared Direct Testimony of

Jordan A. Zeoli, Fidel Galvan, and Travis T. Sera

(Technical – Project Execution and Management, Volume II of VII; Public Version)

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I. LINE 404 PHASE 2 [redacted] TIMP PROJECT

A. Background and Summary

Line 404 Phase 2 [redacted] Transmission Integrity Management Program (TIMP) Project assessed an [redacted] and [redacted] multi-diameter transmission line that runs approximately 35.2 miles from [redacted], through residential neighborhoods, commercial areas, rural and undeveloped lands. The pipeline is routed across Class 1, 2, 3, and 4 locations with 28.4 miles within High Consequence Areas (HCAs) and 16.8 miles within non-HCAs. This Workpaper describes the activities associated with a TIMP Assessment that includes an Inspection using In-Line Inspection (ILI) and the Direct Examinations made to eleven sites, of which sites four contained Immediate Repair Conditions (IRCs). The Project activities were located in Santa Rosa Valley, Los Angeles, Camarillo, Ventura County, and Thousand Oaks. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $14,377,887.

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Final Workpaper for Line 404 Phase 2 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	Line 404
Segment	Phase 2 – [redacted]
Inspection Type	[redacted] tools
Location	Ventura County and Los Angeles
Class	1, 2, 3, 4
HCA Length	28.4 miles
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]

Final Workpaper for Line 404 Phase 2 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	1
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	2
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

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Final Workpaper for Line 404 Phase 2 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	3
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Band
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	4
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	5
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	6
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Final Workpaper for Line 404 Phase 2 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	7
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	8
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

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Final Workpaper for Line 404 Phase 2 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	9		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Replacement		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Direct Examination Details			
Site	10		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Replacement		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Direct Examination Details			
Site	11		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	9,298,666	5,079,220	14,377,887

B. Maps and Images

Figure 1: Satellite Image of Line 404 Phase 2 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspections and Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 404 Phase 2 [redacted] for Inspection using ILI.
   a. ILI from a temporary launcher site within [redacted] to a temporary receiver site within [redacted] including installation of a filter separator and associated piping.
   b. Installation of a [redacted] tap and valve on Line 3001 within [redacted] to facilitate the ILI.
   c. Installation of a permanent support for a valve at [redacted].
   d. Installation of temporary supports for a span during the ILI.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, 11 Direct Examination[1] sites were identified

[1] Costs related to the Direct Examinations that will be completed after December 31st, 2023 fall under a future General Rate Case (GRC) and are not included in this Workpaper. Costs incurred in the 2019 General Rate Case (January 1st, 2019 through December 31st, 2023) are included in this Workpaper to align with A.17-10-008.

for validation. A portion of activities for seven of the Direct Examinations were completed after the TY 2019 General Rate Case Cycle.

a. Direct Examination Site #1 consisted of a 23 foot pipe replacement.
b. Direct Examination Site #2 consisted of a 29 foot pipe replacement.
c. Direct Examination Site #3 consisted of a band repair.
d. Direct Examination Site #4 consisted of an 11 foot pipe replacement.
e. Direct Examination Site #5 consisted of soft pad repairs.
f. Direct Examination Site #6 consisted of soft pad repairs
g. Direct Examination Site #7 consisted of soft pad repairs
h. Direct Examination Site #8 consisted of a 5 foot pipe replacement.
i. Direct Examination Site #9 consisted of a 37 foot pipe replacement and two elbow replacements.
j. Direct Examination Site #10 consisted of a 42 foot pipe replacement.
k. Direct Examination Site #11 consisted of soft pad repairs.
l. The Project identified four Immediate Repair Conditions (IRCs).

3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis will be used to determine if additional examinations are required.

4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI and 11 Direct Examinations.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
404	35.2 mi	[redacted]	[redacted]	[redacted]	Yes

[redacted]

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
404	1	Yes	Yes	28 ft	Replacement	23 ft	Capital
404	2	Yes	Yes	32 ft	Replacement	29 ft	Capital
404	3	Yes	Yes	18 ft	Band	N/A	Capital
404	4	Yes	Yes	30 ft	Replacement	11 ft	Capital
404	5	No	No	29 ft	Soft Pad	N/A	O&M
404	6	Yes	No	20 ft	Soft Pad	N/A	O&M
404	7	Yes	No	29 ft	Soft Pad	N/A	O&M
404	8	Yes	No	15 ft	Replacement	5 ft	Capital
404	9	Yes	No	85 ft	Replacement	37 ft	Capital
404	10	Yes	No	50 ft	Replacement	42 ft	Capital
404	11	Yes	No	125 ft	Soft Pad	N/A	Capital

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 404 Phase 2 [redacted] Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The Project performed an ILI from a temporary launcher at [redacted] to a temporary receiver at [redacted].
2. HCA Threats:
   [redacted]

[redacted]

[redacted]

3. Pipe Vintage: Multiple vintages from [redacted]
4. Long Seam Type:

[redacted]

5. Inspection Tools and Technologies:
   a. The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
   b. The Project ran the ILI tool a second time due to data loss and speed excursions during the first run.
6. Inspection Retrofits:
   a. The Project Team installed a [redacted] tap and valve on Line 3001 within [redacted] to facilitate the ILI.
   b. The Project Team installed a permanent support for a valve at [redacted].
7. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which the pipeline could be inspected without system impacts.
8. Customer Impacts: The Project Team determined that customer service could be maintained to core customers by installing a temporary bypass during the ILI.

[redacted]

9. Community Impacts: No identified impacts.
10. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
11. Environmental: No identified impacts.
12. Permit Restrictions: The Project Team obtained a noise variance permit from the Los Angeles Police Department for installation of the filter separator at [redacted].
13. Land Use: The Project Team obtained a Temporary Right of Entry (TRE) for use of a laydown yard near the receiver site.
14. Traffic Control: No identified impacts.
15. Schedule Delay:
    a. The Project Team determined that additional engineering analysis was required on spans of Line 404 that delayed the start of the ILI.
    b. During construction, the Project Team was required to secure a replacement construction contractor to complete the ILI.
16. Constructability: The Project Team installed temporary supports on a span of Line 404 to facilitate the ILI.

C. Engineering, Design, and Constructability Factors – Direct Examination

Continuing the planning process for the Line 404 Phase 2 [redacted] TIMP Project, SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

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Final Workpaper for Line 404 Phase 2 [redacted] TIMP Project

1. Engineering Assessment:
   a. There were 11 Direct Examination Sites selected for validation of the ILI within the Line 404 Phase 2 [redacted] TIMP Project.
      i. Direct Examination Site #1 consisted of a 23 foot pipe replacement.
      ii. Direct Examination Site #2 consisted of a 29 foot pipe replacement.
      iii. Direct Examination Site #3 consisted of a band repair.
      iv. Direct Examination Site #4 consisted of an 11 foot pipe replacement.
      v. Direct Examination Site #5 consisted of soft pad repairs.
      vi. Direct Examination Site #6 consisted of soft pad repairs
      vii. Direct Examination Site #7 consisted of soft pad repairs
      viii. Direct Examination Site #8 consisted of a 5 foot pipe replacement.
      ix. Direct Examination Site #9 consisted of a 37 foot pipe replacement and two elbow replacements.
      x. Direct Examination Site #10 consisted of a 42 foot pipe replacement.
      xi. Direct Examination Site #11 consisted of soft pad repairs
2. SRC/IRC: Direct Examination Sites #1, #2, #3, and #4 resulted in IRCs and required expedited project schedules.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examinations could be completed using alternative sources of feed for customers.
4. Customer Impacts: The Project Team used Compressed Natural Gas (CNG) to maintain customer service to core customers during construction on Direct Examination Sites that required pipe replacement.
5. Community Impacts: Traffic impacts and occasional noise at Direct Examination Sites #1, #6, #7, #8, #9, and #11.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: The Project Team performed a nesting bird survey and biological monitoring during construction activities at Site #5 and Site #7.

8. Permit Restrictions:
   a. The Project Team obtained a resurfacing permit from the City of Los Angeles for Site #1 and #6.
   b. The Project Team obtained encroachment permits from [redacted], the City of Los Angeles, County of Ventura, and the City of Thousand Oaks for Sites #2, #6, #9, and #11.
9. Land Use: The Project Team obtained TREs for additional workspace at Sites #5, #7, #8, and #10.
10. Traffic Control: The Project Team obtained approval for Traffic Control Plans from the City of Los Angeles, Ventura County, and the City of Thousand Oaks at Sites #1, #6, #9, and #11.
11. Schedule Delay:
    a. The Project Team identified nesting birds during construction which caused a schedule delay of approximately three weeks.
    b. Weather conditions during construction led to system constraints and schedule delays of approximately one month.
12. Constructability: The Project Team performed two separate excavations at Site #9 to perform pipe and elbow replacements. The elbow replacements will facilitate future ILIs by reducing the likelihood of speed excursions.

D. Engineering, Design, and Constructability Factors – Post-Assessment

The Project Team will use the data collected from the Inspection and Direct Examinations during the Post-Assessment step to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis is still pending and will be used to determine if additional examinations are required to enhance the overall integrity and safety of the pipeline.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractors that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examination

Mobilization 1: Direct Examination Sites #1 to #4		
Construction Start Date	[redacted]	
Construction Completion Date		
Mobilization 2: Direct Examination Sites #5 to #1		
Construction Start Date	[redacted]	
Construction Completion Date		

Table 6: Construction Timeline – IRC

SRC/IRC Discovery Date – Site #2	[redacted]	
Repair Date – Site #2		
SRC/IRC Discovery Date – Site #3		
Repair Date – Site #3		
SRC/IRC Discovery Date – Site #4		
Repair Date – Site #4		
SRC/IRC Discovery Date – Site #5		
Repair Date – Site #5		

Figure 2: In-Line Inspection Tool After Run

Figure 3: Direct Examination Site #8

C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas exercised due diligence in the design, planning, and construction activities for this Project to minimize or avoid costs when prudent to do so. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

B. Actual Costs[7]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $14,377,997.

Table 7: Actual Direct Costs[8]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	472,622	824,029	1,296,651
Contract Costs	6,008,769	2,490,471	8,499,241
Material	193,632	65,803	259,435
Other Direct Charges	1,049,271	938,054	1,987,324
Total Direct Costs	7,724,293	4,318,357	12,042,651

Table 8: Actual Indirect Costs[9]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	1,451,532	760,863	2,212,395
AFUDC	101,929	0	101,929
Property Taxes	20,912	0	20,912
Total Indirect Costs	1,574,373	760,863	2,335,236

Table 9: Total Costs[10]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	9,298,666	5,079,220	14,377,887

[7] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[8] Values may not add to total due to rounding.
[9] Ibid.
[10] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 404 Phase 2 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $14,377,887.

End of Line 404 Phase 2 [redacted] TIMP Project Final Workpaper

I. LINE 404 PHASE 3 [redacted] TIMP PROJECT

A. Background and Summary

Line 404 Phase 3 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a multi-diameter transmission line that runs approximately 8.3 miles from [redacted], through residential neighborhoods and agricultural land. The pipeline is routed across Class 1, 2, and 3 locations with 1.0 mile within High Consequence Area(s) (HCAs) locations and 7.3 miles within non-HCAs locations. This Workpaper describes the activities and costs associated with an Inspection using In-Line Inspection (ILI) and the Direct Examinations made to 4 sites, which contained one Safety Related Condition (SRC) and one Immediate Repair Condition (IRC) located in Ventura County. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Workpaper is $9,222,337.

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Final Workpaper for Line 404 Phase 3 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	404
Segment	Phase 3 – [redacted]
Inspection Type	[redacted] ILI Tool
Location	Ventura County
Class	1, 2, 3
HCA Length	1 mile
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Site	1
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad, Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

[1] *See* PHMSA, *Gas Transmission Integrity Management: FAQs, Continual Assessment and Evaluation FAQ, No. FAQ-41* (August 2021) at 32, *available at* (*https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2021-09/Final%20GAS%20IM%20FAQs%208-26-21.pdf*). "Effective January 3, 2012, the maximum interval may be set using the specified number of calendar years."

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	2
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad, Replacement
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	3
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Replacement
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

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Final Workpaper for Line 404 Phase 3 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	4		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad, Band		
Within HCA	No		
SRC/IRC	Yes		
SRC/IRC Discovery Date	[redacted]		
Repair Date	[redacted]		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	6,465,167	2,757,169	9,222,337

B. Maps and Images

Figure 1: Satellite Image of Line 404 Phase 3 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspection and Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2, and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 404 Phase 3 for Inspection using ILI from [redacted].
   a. The Project Team excavated and removed a y-section of Line 404 and a valve at the launcher site to facilitate the ILI.
   b. The Project Team installed a removable spool piece to accommodate future ILI runs.
   c. The Project Team installed a temporary launcher valve, a temporary launcher and associated piping at [redacted].
   d. The Project Team installed a temporary receiver, filter separator, and associated piping at [redacted].
   e. The Project Team excavated and removed a receiver valve and pipe supports.
   f. The Project Team installed a permanent receiver valve supports at [redacted].

2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, four Direct Examination sites were identified for validation.
   a. Direct Examination Site #1 consisted of soft pad repairs and a 30-foot replacement.
   b. Direct Examination Site #2 consisted of soft pad repairs and a 12-foot replacement.
   c. Direct Examination Site #3 consisted of a 5-foot replacement.
   d. Direct Examination Site #4 consisted of soft pad repairs and a band repair.
   e. The Project contained one SRC and one IRC.
3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations or remediation.
4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI, and four Direct Examinations.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
404 P3	8.3 mi	[redacted]	[redacted]	[redacted]	Yes

[redacted]

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
404 P3	1	Yes	Yes	37 ft	Soft Pad, Replacement	30 ft	Capital
404 P3	2	Yes	No	16 ft	Soft Pad, Replacement	12 ft	Capital
404 P3	3	No	No	55 ft	Replacement	51 ft	Capital
404 P3	4	No	Yes	28 ft	Soft Pad, Band	N/A	Capital

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 404 Phase 3 [redacted] Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The Inspection started at a temporary launcher site assembled southeast of [redacted] and ended at a temporary receiver site assembled at [redacted].
2. HCA Threats:
   [redacted]

[redacted]

[redacted]

3. Pipe Vintage: [redacted].
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the inspection.
6. Inspection Retrofits: The Project Team performed the following retrofits to facilitate ILI runs:
   a. Excavated and removed a y-section of Line 404 and a valve at the launcher site.
   b. Installed a removable spool piece to accommodate future ILI runs.
   c. Excavated and removed receiver valve and pipe supports.
   d. Installed permanent receiver valve supports at [redacted].
7. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.
8. Customer Impacts: The Project Team did not identify any anticipated service disruptions to customers.
9. Community Impacts: No identified impacts.
10. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
11. Environmental: No identified impacts.

[redacted]

12. Permit Restrictions: No identified impacts.
13. Land Use: The Project Team required a Temporary Right of Entry (TRE) for a laydown yard at the launcher site.
14. Traffic Control: The Project Team did not identify any traffic control needs at the site.
15. Schedule Delay: The Project Team experienced a schedule delay due to Inspection tool availability.
16. Constructability: While laying out the launcher assembly prior to fabrication, the Construction Team determined a better layout for the launcher that decreased amount of pipe needed and resulted in better alignment.

C. Engineering, Design, and Constructability Factors – Direct Examination

Continuing the planning process for Line 404 Phase 3 [redacted] TIMP Project TIMP Project, SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment: There were four Direct Examination Sites selected for validation of the ILI within the 404 Phase 3 [redacted] TIMP Project.
   a. Direct Examination Site #1 consisted of soft pad repairs and a 30 ft replacement.
   b. Direct Examination Site #2 consisted of soft pad repairs and a 12 ft replacement.
   c. Direct Examination Site #3 consisted of a 51 ft replacement.
   d. Direct Examination Site #4 consisted of soft pad repairs and a band repair.
2. SRC/IRC: Direct Examination Site #1 contained an IRC and Direct Examination Site #4 contained an SRC. Both sites required expedited project schedules.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examinations could be completed without system impacts.

4. Customer Impacts: No identified impacts.
5. Community Impacts: No identified impacts.

   Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
6. Environmental: No identified impacts.
7. Permit Restrictions:
   a. The Project Team required an Encroachment Permit from the county of Ventura for Direct Examination Site #2.
   b. The Project Team required an Encroachment Permit from Caltrans for Direct Examination Site #2 which restricted construction activities to night work.
8. Land Use: The Project Team required a TRE for a laydown yard at Direct Examination Site #3.
9. Traffic Control: The Project team obtained a Traffic Control Plan (TCP) from Caltrans for Ventura County at Direct Examination Site #2. The plan consisted of a lane closure and the use of flaggers.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations or remediation.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractors that best met the criteria for this Project.

B. Construction Schedule

Table 6: Construction Timeline – Inspection

Construction Start Date	[redacted]
Construction Completion Date	
Inspection Due Date	

Table 7: Construction Timeline – Direct Examination

Mobilization 1: Direct Examination Site #1	
Construction Start Date	[redacted]
Construction Completion Date	
Mobilization 2: Direct Examination Site #3 and #4	
Construction Start Date	[redacted]
Construction Completion Date	
Mobilization 3: Direct Examination Site #2	
Construction Start Date	[redacted]
Construction Completion Date	

Table 8: Construction Timeline – IRC

IRC Discovery Date – Site #1	[redacted]
Repair Date – Site #1	

[5] *See* PHMSA, *Gas Transmission Integrity Management: FAQs, Continual Assessment and Evaluation FAQ, No. FAQ-41* (August 2021) at 32, *available at* (*https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2021-09/Final%20GAS%20IM%20FAQs%208-26-21.pdf*). "Effective January 3, 2012, the maximum interval may be set using the specified number of calendar years."

Table 9: Construction Timeline – SRC

SRC Discovery Date – Site #4	[redacted]	
Repair Date – Site #4		

Figure #2: Temporary Launcher at [redacted]

Final Workpaper for Line 404 Phase 3 [redacted] TIMP Project

Figure #3: Temporary Receiver Site at [redacted]

Figure #4: Direct Examination Site #1

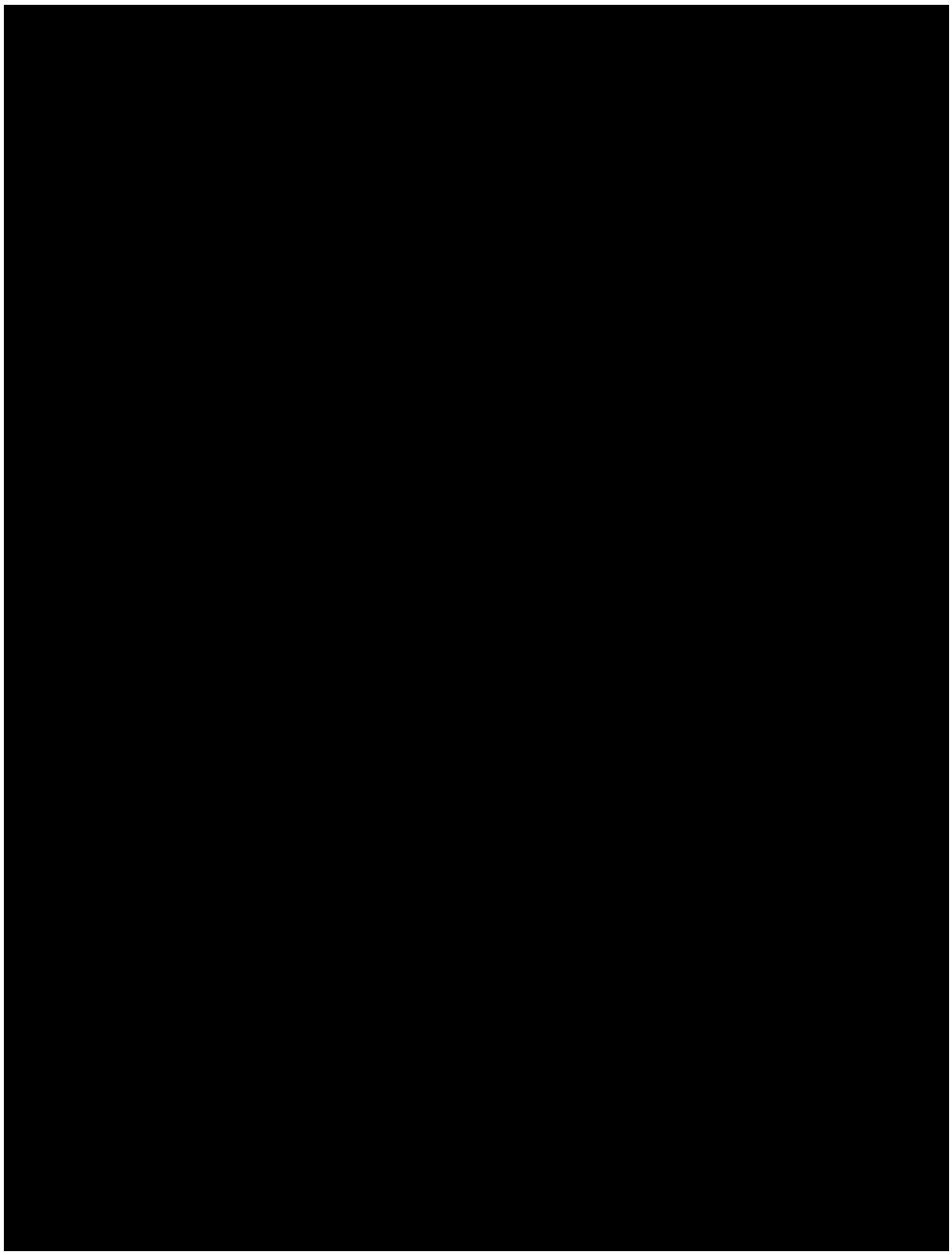


Figure #5: Direct Examination Site #4

Figure #6: Direct Examination Site #3

B. Actual Costs[6]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $9,222,337.

Table 10: Actual Direct Costs[7]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	663,895	272,257	936,152
Contract Costs	3,739,371	1,531,763	5,271,134
Material	110,759	67,345	178,104
Other Direct Charges	790,321	581,020	1,371,340
Total Direct Costs	5,304,346	2,452,385	7,756,731

Table 11: Actual Indirect Costs[8]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	1,143,811	304,784	1,448,595
AFUDC	11,106	0	11,106
Property Taxes	5,905	0	5,905
Total Indirect Costs	1,160,822	304,784	1,465,606

Table 12: Total Costs[9]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	6,465,167	2,757,169	9,222,337

[6] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[7] Values may not add to total due to rounding.
[8] Ibid.
[9] Ibid.

C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 404 Phase 3 [redacted] TIMP Project. Through this Project, SoCalGas successfully implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $9,222,337.

End of Line 404 Phase 3 [redacted] TIMP Project Final Workpaper

I. LINE 406 PHASE 1 [redacted] TIMP PROJECT

A. Background and Summary

Line 406 Phase 1 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] and [redacted] multi-diameter transmission line that runs approximately 50.3 miles from [redacted]. The pipeline is routed across Class 1, 2, 3, and 4 locations with 27.4 miles within High Consequence Area(s) (HCAs) and 23.3 miles within non-HCAs. This Workpaper describes the activities and costs associated with an Inspection using In-Line Inspection (ILI). The Project activities were in Ventura and Encino. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $3,784,742.

SoCalGas

Final Workpaper for Line 406 Phase 1 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details			
Pipeline	406		
Segment	Phase 1 – [redacted]		
Inspection Type	[redacted] Tool		
Location	Ventura and Encino		
Class	1, 2, 3, 4		
HCA Length	27.4 miles		
Vintage	Multiple vintages from [redacted]		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	Multiple SMYS values from [redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Final Tool Run Date	[redacted]		
Inspection Due Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	30,488	3,754,254	3,784,742

B. Maps and Images

Figure 1: Satellite Image of Line 406 Phase 1 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspection.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Table 2 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 406 Phase 1 for Inspection using ILI.
   a. ILI from a temporary launcher site within [redacted] to a temporary receiver site at the intersection of [redacted].
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, Direct Examination sites were identified for validation and will be addressed after 2023.
3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the future Direct Examinations will be used to determine if additional examinations are required.
4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
406	50.3 mi	[redacted]	[redacted]	[redacted]	No

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 406 Phase 1 [redacted] Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The Project performed an ILI from a temporary launcher site within [redacted] to a temporary receiver site at the intersection of [redacted].
2. HCA Threats:
   [redacted]
3. Pipe Vintage: Multiple vintages from [redacted]

[redacted]

4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could only be inspected between May and October to avoid system impacts.
7. Customer Impacts: No customer impacts.
8. Community Impacts: Traffic impacts and occasional noise.
9. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
10. Environmental: No identified impacts.
11. Permit Restrictions:
    a. The Project Team obtained permits from the Los Angeles Bureau of Engineering for excavation, construction, and peak hours exemptions for the receiver site at [redacted].
    b. The Project Team obtained a Noise Variance Permit from the Los Angeles Police Department for the receiver site at [redacted].
12. Land Use: No identified impacts.
13. Traffic Control: The Project Team obtained approval for Traffic Control plans from the Los Angeles Department of Transportation. The traffic control performed included multiple lane closures, temporary striping, and signage along Lindley Avenue during installation of the temporary receiver.

14. Constructability: The Project Team identified one pipeline span required temporary support during the ILI.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Following the completion of the Inspection using ILI, Direct Examination sites have been identified for validation and will be addressed after 2023.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team will use the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis is still pending and will be used to determine if additional examinations are required to enhance the overall integrity and safety of the pipeline.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 3: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Figure 2: Temporary Launcher at [redacted]

Figure 3: Temporary Receiver at [redacted]

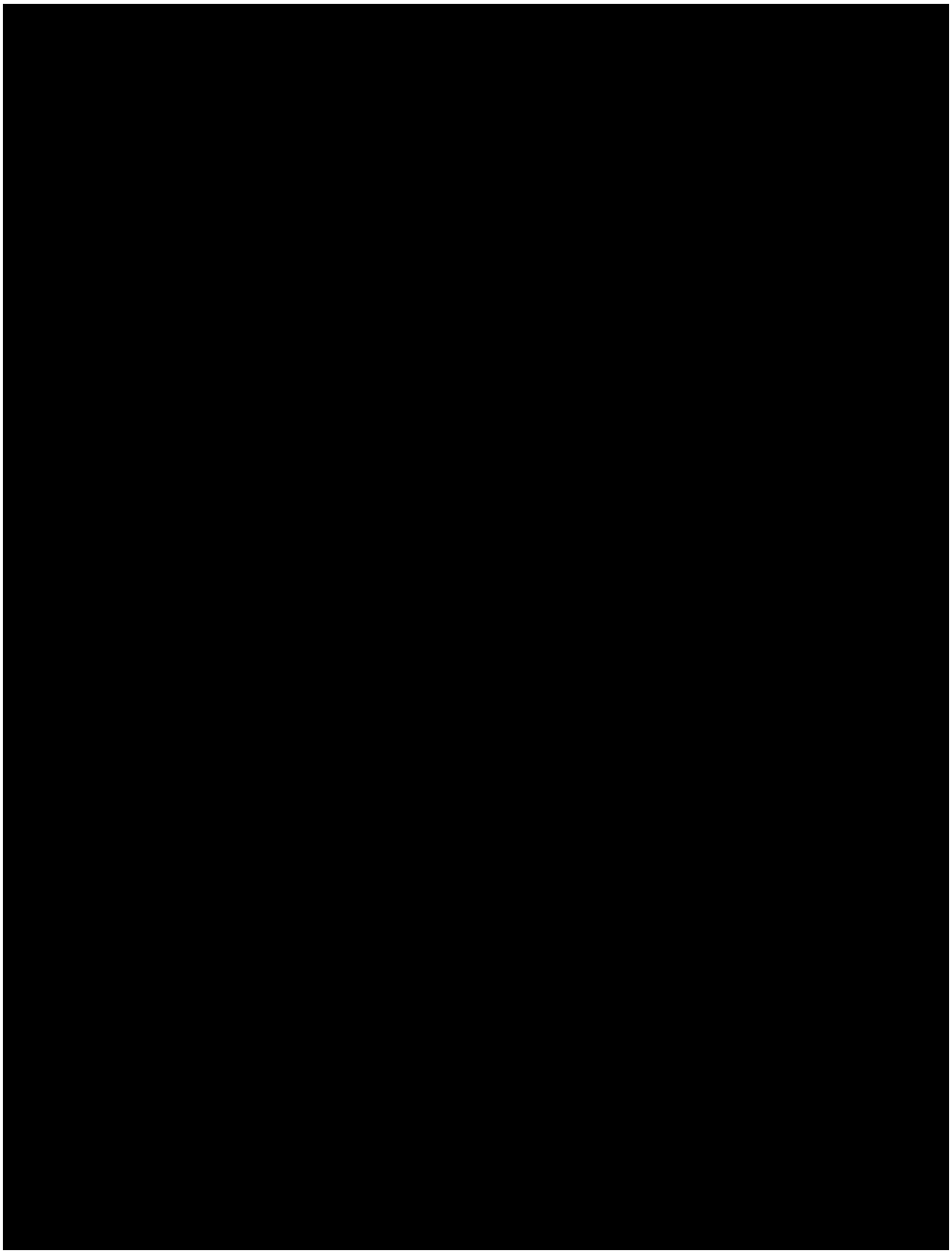


Figure 3: Inspection Tool after ILI

C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design. Specific examples of cost efficiency actions taken on this Project were:

1. Schedule Coordination: The Project Team coordinated with another SoCalGas project in the same area for permitting, project outreach, and to share use of a laydown yard.

B. Actual Costs[4]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $3,784,742.

Table 4: Actual Direct Costs[5]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	744	548,709	549,453
Contract Costs	1,120	1,826,615	1,827,735
Material	18,697	108,628	127,325
Other Direct Charges	0	746,248	746,248
Total Direct Costs	20,561	3,230,200	3,250,760

Table 5: Actual Indirect Costs[6]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	7,329	524,054	531,384
AFUDC	1,799	0	1,799
Property Taxes	799	0	799
Total Indirect Costs	9,927	524,054	533,981

Table 6: Total Costs[7]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	30,488	3,754,254	3,784,742

[4] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[5] Values may not add to total due to rounding.
[6] Ibid.
[7] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 406 Phase 1 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $3,784,742.

End of Line 406 Phase 1 [redacted] TIMP Project Final Workpaper

I. LINE 408 [redacted] TIMP PROJECT

A. Background and Summary

Line 408 [redacted] Transmission Integrity Management Program (TIMP) project assessed a predominately [redacted] diameter transmission line that runs approximately 911 feet. The Project also assessed four short segments of [redacted] and [redacted] pipeline associated with Line 408 using the [redacted] assessment method. The pipeline is routed across [redacted] locations entirely within High Consequence Area(s) (HCAs). This Workpaper describes the activities and costs associated with an Inspection using [redacted] In-Line Inspection (ILI) and the Direct Examinations made to five sites. This Project was located in the City of Santa Clarita. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $3,840,098.

SoCalGas

Final Workpaper for Line 408 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	408
Inspection Type	[redacted] ILI Tool
Location	Santa Clarita
Class	[redacted]
HCA Mileage	911 feet
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start	[redacted]
Construction Completion	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Site	1
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start	[redacted]
Construction Completion	[redacted]

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	2
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start	[redacted]
Construction Completion	[redacted]
Direct Examination Details	
Site	3
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start	[redacted]
Construction Completion	[redacted]

SoCalGas

Final Workpaper for Line 408 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	4		
Examination ID	[redacted]		
Type	[redacted]		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start	[redacted]		
Construction Completion	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	899,477	2,940,621	3,840,098

B. Maps and Images

Figure 1: Satellite Image of Line 408 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspection and Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 408 for Inspection using [redacted] ILI.
   a. [redacted] ILI from a temporary launcher and receiver site near [redacted].
   b. Installation of [redacted] and pipe supports.
2. Direct Examination – Engineering, Design, and Constructability: Four Direct Examination sites were identified to assess pipeline segments that could not accommodate an ILI tool.
   a. Direct Examination Site #1 consisted of soft pad repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
   c. Direct Examination Site #3 consisted of soft pad repairs.
   d. Direct Examination Site #4 consisted of soft pad repairs.
   e. Validation for the [redacted] ILI was completed on a validation spool piece during the Inspection.
3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the spool piece following the Inspection resulted in no additional examinations.

4. Final Project Scope: The final project scope of this Workpaper includes Inspection using [redacted] ILI and four Direct Examinations sites.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
408	911 ft	[redacted]	[redacted]	[redacted]	Yes

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
408	1	Yes	No	32 ft	Soft Pad	N/A	O&M
408-0.00-XO2	2	Yes	No	36 ft	Soft Pad	N/A	O&M
408	3	Yes	No	13 ft	Soft Pad	N/A	O&M
408-0.00-XO1	4	Yes	No	48 ft	Soft Pad	N/A	Capital

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 408 [redacted] Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The [redacted] ILI of Line 408 was launched through a temporary launcher and receiver site at the new [redacted] location.
2. HCA Threats:
   [redacted]
3. Pipe Vintage: Multiple vintages from [redacted].
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized a [redacted] ILI [redacted] technology during the Inspection of the pipeline.
6. Inspection Retrofits: Installation of a [redacted] and pipe supports in order to facilitate the ILI.
7. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.
8. Customer Impacts: No customer impacts.
9. Community Impacts: No identified impacts.
10. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
11. Environmental: No identified impacts.
12. Permit Restrictions: The Project Team obtained a City of Santa Clarita Encroachment Permit.
13. Land Use: The Project Team obtained a Temporary Right of Entry Agreement (TRE) between SoCalGas and a private landowner to use the site as a laydown yard.
14. Traffic Control: The Project Team required traffic control to facilitate a single lane closure on [redacted] to facilitate ILI.

15. Constructability:
    a. The sites to be assessed using [redacted] were conducted during the Inspection Phase of the Project.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas initiated the planning process for the Line 408 TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follow:

1. Engineering Assessment:
    a. There were four [redacted] Sites selected to assess pipeline segments that could not accommodate an ILI tool within the Line 408 TIMP Project.
        i. Direct Examination Site #1 consisted of soft pad repairs.
        ii. Direct Examination Site #2 consisted of soft pad repairs.
        iii. Direct Examination Site #3 consisted of soft pad repairs.
        iv. Direct Examination Site #4 consisted of soft pad repairs.
        v. The Project Team completed these Direct Examinations during the Inspection Phase of the Project.
    b. Validation was completed on a validation spool piece during the Inspection.
    c. SRC/IRC: There were no SRCs or IRCs during the Direct Examinations.
2. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examinations could be completed without system impacts.
3. Customer Impacts: No customer impacts.
4. Community Impacts: Traffic impacts and occasional noise.
5. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.

6. Environmental: No identified impacts.
7. Permit Restrictions: The Project Team obtained a City of Santa Clarita Encroachment Permit.
8. Land Use: The Project Team obtained a TRE between SoCalGas and a private landowner to use the site as a laydown yard.
9. Traffic Control: The Project Team required traffic control to facilitate a single lane closure on Newhall Avenue.
10. Constructability:
    b. The Project Team completed the Direct Examination Sites during the Inspection Phase of the Project.
    c. Direct Examination Site #2 required demolition of an existing pipe support in order to complete the direct examination. Once the examination was complete, the Project Team was required to install a new support.

D. Engineering, Design, and Constructability Factors – Post-Assessment

The Project Team used the data collected from the Inspection and Direct Examinations during the Post-Assessment step to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

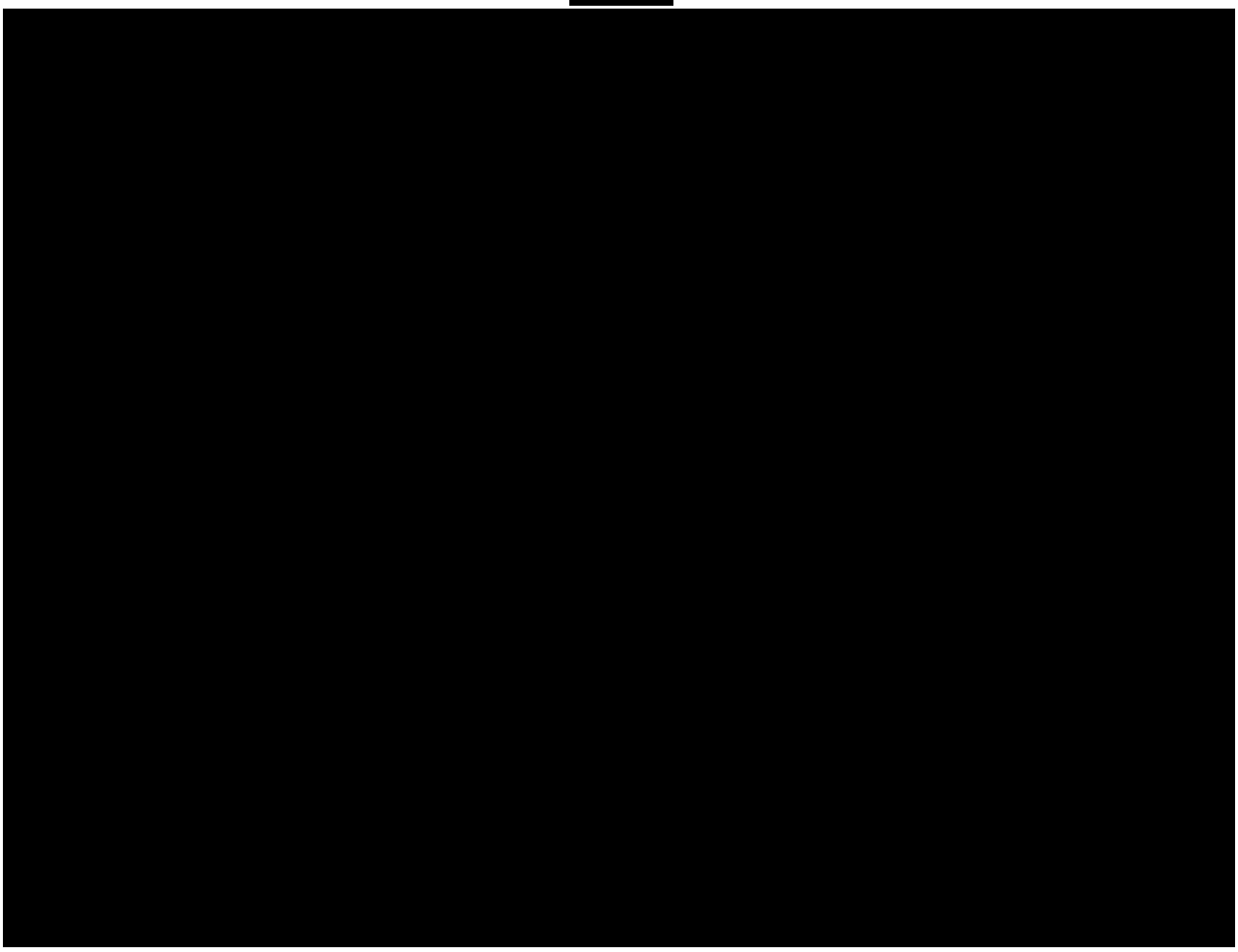
Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examination

Construction Start Date	[redacted]	
Construction Completion Date		

Final Workpaper for Line 408 [redacted] TIMP Project

Figure #1: [redacted] ILI Tool



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

B. Actual Costs[1]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $3,840,098.

Table 6: Actual Direct Costs[2]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	6,481	234,593	241,074
Contract Costs	657,783	1,739,105	2,396,888
Material	48,889	53,132	102,021
Other Direct Charges	48,204	640,597	688,801
Total Direct Costs	761,356	2,667,427	3,428,783

Table 7: Actual Indirect Costs[3]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	134,895	273,194	408,089
AFUDC	2,675	0	2,675
Property Taxes	551	0	551
Total Indirect Costs	138,121	273,194	411,315

Table 8: Total Costs[4]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	899,477	2,940,621	3,840,098

[1] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[2] Values may not add to total due to rounding.
[3] Ibid.
[4] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 408 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $3,840,098.

End of Line 408 [redacted] TIMP Project Final Workpaper

I. LINE 765 PHASE 1 [redacted] TIMP PROJECT

A. Background and Summary

Line 765 Phase 1 [redacted] Transmission Integrity Management Program (TIMP) assessed a [redacted] diameter transmission line that runs approximately 6.2 miles from [redacted], through residential and industrial areas. The Project also assessed one short segment of [redacted] pipeline associated with Phase 1 of Line 765 using the [redacted] assessment method. The pipeline is routed across [redacted] locations entirely within High Consequence Area(s) (HCAs). This Workpaper describes the activities and costs associated with an Inspection using In-Line Inspection (ILI) and the Direct Examinations. The activities were located in the neighborhoods of [redacted] in Los Angeles. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $3,532,637.

SoCalGas

Final Workpaper for Line 765 Phase 1 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	765
Segment	Phase 1 – [redacted]
Inspection Type	[redacted] Tool
Location	[redacted] in Los Angeles
Class	[redacted]
HCA Length	6.2 miles
Vintage	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start	[redacted]
Construction Completion	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Line	765
Site	1
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	No Repair
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start	[redacted]
Construction Completion	[redacted]
Due Date	[redacted]

Final Workpaper for Line 765 Phase 1 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	2
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start	[redacted]
Construction Completion	[redacted]
Direct Examination Details	
Site	3
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start	[redacted]
Construction Completion	[redacted]

Project Costs ($)	Capital	O&M	Total
Loaded Project Costs	154,279	3,378,358	3,532,637

Final Workpaper for Line 765 Phase 1 [redacted] TIMP Project

B. Maps and Images

Figure 1: Satellite Image of Line 765 Phase 1 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspection and Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 765 Phase 1 [redacted] for Inspection using ILI.
   a. ILI from a temporary launcher site within private property in [redacted] to a temporary receiver site within [redacted].
   b. The Project required temporary installation of a valve, barrel and associated piping the launcher site.
   c. The Project required temporary installation of a barrel, associated piping, and filter separator at the receiver site.
2. Direct Examination – Engineering, Design, and Constructability: Four Direct Examination sites were identified to either assess pipeline segments that could not accommodate an ILI tool or for validation. Activities for one of the four Direct Examinations will be addressed after 2023.
   a. Direct Examination Site #1 consisted of no repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
   c. Direct Examination Site #3 consisted of soft pad repairs.

3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations is in progress and will be used to determine if additional examinations are required.
4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI and three Direct Examinations.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
765	6.2 mi	[redacted]	[redacted]	[redacted]	No

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
765	1	Yes	No	27 ft	No Repair	N/A	O&M
765	2	Yes	No	23 ft	Soft Pad	N/A	O&M
765	3	Yes	No	21 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 765 Phase 1 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: ILI from a temporary launcher site within private property in [redacted] to a temporary receiver site within [redacted].

2. HCA Threats:
   [redacted]
3. Pipe Vintage: [redacted].
4. Longseam Type:
   a. [redacted]
5. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.
7. Customer Impacts: No customer impacts.
8. Community Impacts: No identified impacts.
9. Environmental: No identified impacts.
10. Permit Restrictions: No identified impacts.
11. Land Use: The Project Team obtained a temporary right of entry (TRE) agreement from a private landowner to utilize property as a temporary launcher location and laydown yard for the Inspection. The TRE also ensured the Project Team had access to Direct Examination Site #1, a removable spool piece at the launcher location.
12. Traffic Control: No identified impacts.
13. Constructability:
    a. One site to be assessed using [redacted] was conducted during the Inspection Phase of the Project.

[redacted]

b. The Project Team coordinated with another TIMP ILI Project and shared an excavation at the launcher location for this Project.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas initiated the planning process for the Line 765 Phase 1 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Engineering Assessment:
   a. There was one [redacted] Site selected to assess a pipeline segment that could not accommodate an ILI tool within the Line 765 Phase 1 [redacted] TIMP Project.
      i. Direct Examination Site #1 consisted of no repairs.
      ii. The Project Team completed this Direct Examination during the Inspection Phase of the Project, as this was a removable spool piece at the launcher location.
   b. There were two Direct Examination Sites selected for validation of the ILI within the Line 765 Phase 1 [redacted] TIMP Project.
      i. Direct Examination Site #2 consisted of soft pad repairs.
      ii. Direct Examination Site #3 consisted of soft pad repairs.
2. SRC/IRC: There were no SRCs or IRCs during the Direct Examinations.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examinations could be completed without system impacts.
4. Customer Impacts: No customer impacts.
5. Community Impacts: The Project Team notified various nearby locations of project activities and schedules, including schools in the project vicinity.

6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: No identified impacts.
8. Permit Restrictions: The Project Team obtained individual permits from the Los Angeles Bureau of Engineering for Direct Examination Sites #2 and #3.
9. Land Use: The Project Team obtained a TRE agreement with a private landowner to utilize nearby property as a laydown yard.
10. Traffic Control: The Project Team obtained individual Traffic Control Plans (TCPs) from the Los Angeles Department of Transportation (LADOT) for Direct Examination Sites #2 and #3 that included signage, cones, barricades, and flaggers to direct traffic and minimize community impact.
11. Constructability: The Project Team completed Direct Examination Site #1 during the Inspection phase of the Project.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team used will use the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis is still pending and will be used to determine if additional examinations are required to enhance the overall integrity and safety of the pipeline.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examination

Mobilization 1: Direct Examination Site #1		
Construction Start Date	[redacted]	
Construction Completion Date		
Mobilization 2: Direct Examination Sites #2, #3		
Construction Start Date	[redacted]	
Construction Completion Date		

Figure 2: Temporary Receiver within [redacted]

Figure 3: Direct Examination Site #2

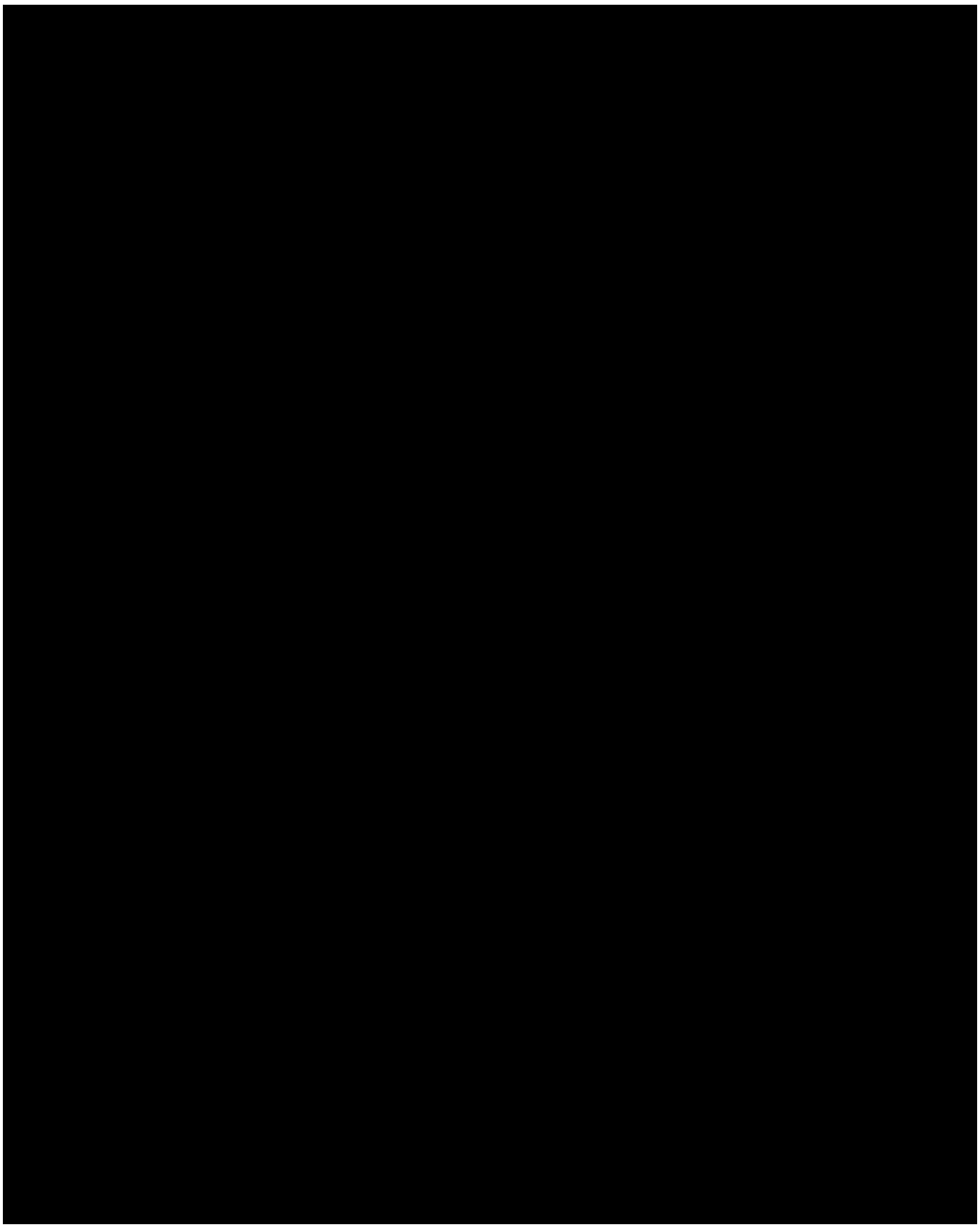
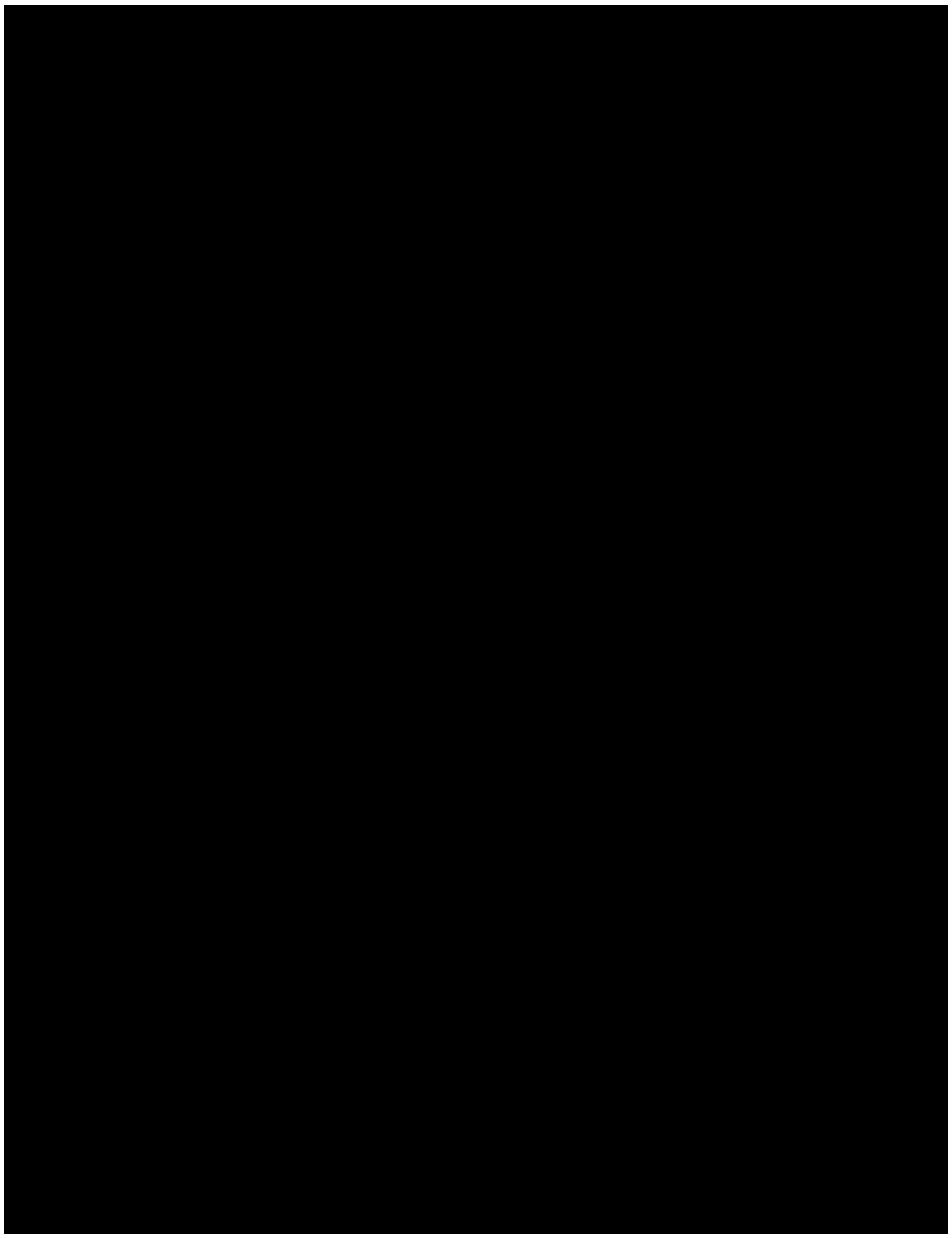


Figure 4: Direct Examination Site #3



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design. Specific examples of cost efficiency actions taken on this Project were:

1. Bundling of Projects and Schedule Coordination: The Project Team coordinated with other active TIMP Projects to execute sequenced ILI's for multiple phases of Line 765 utilizing the same construction contractor, providing efficiencies including minimized costs for mobilizations and excavations.
2. Land Use:
   a. The Project Team shared costs with other Projects for the TRE at the launcher location during the Inspection.
   b. The private property laydown yard utilized for Direct Examination Sites #2 and #3 was previously used for two other SoCalGas projects. The Project Team coordinated with the other Project Teams to provide efficiencies in contacting the property owner and saved costs by using existing security deposits.
3. Permit Conditions: The Project Team coordinated with another TIMP Project, utilizing their existing TCP from the City of Los Angeles to secure temporary parking and signage near the receiver location within Spence Station.
4. Construction Execution: The Project Team coordinated with another TIMP ILI Project to share an excavation site at the launcher location.

B. Actual Costs[2]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $3,532,637.

Table 5: Actual Direct Costs[3]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	460	273,421	273,881
Contract Costs	11,067	1,936,911	1,947,978
Material	100,225	137,576	237,801
Other Direct Charges	0	675,119	675,119
Total Direct Costs	111,751	3,023,027	3,134,778

Table 6: Actual Indirect Costs[4]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	35,596	355,331	390,927
AFUDC	6,020	0	6,020
Property Taxes	911	0	911
Total Indirect Costs	42,527	355,331	397,858

Table 7: Total Costs[5]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	154,279	3,378,358	3,532,637

[2] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[3] Values may not add to total due to rounding.
[4] Ibid.
[5] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 765 Phase 1 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $3,532,637.

End of Line 765 Phase 1 [redacted] TIMP Project Final Workpaper

I. LINE 765 PHASE 2 [redacted] TIMP PROJECT

A. Background and Summary

Line 765 Phase 2 [redacted] the Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 6.3 miles from [redacted], through residential neighborhoods and commercial areas. The Project also assessed three short segments of [redacted] and [redacted] pipeline associated with Phase 2 of Line 765 using the [redacted] assessment method. The pipeline is routed across [redacted] High Consequence Area(s) (HCAs). This Workpaper describes the activities and costs associated with an Inspection using In-Line Inspection (ILI) and the Direct Examinations made to four sites. The Project activities were located in the City of Glendale and City of Los Angeles. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $4,717,684.

SoCalGas

Final Workpaper for Line 765 Phase 2 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	765
Segment	Phase 2 – [redacted]
Inspection Type	[redacted] ILI Tools
Location	Glendale and Los Angeles
Class	[redacted]
HCA Length	6.3 miles
Vintage	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Line	765
Site	1
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	No Repairs
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Due Date	[redacted]

SoCalGas

Final Workpaper for Line 765 Phase 2 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details	
Line	765-6.20-BO
Site	2
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Due Date	[redacted]
Direct Examination direct examination	
Line	765-6.20-BR
Site	3
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	No Repairs
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Due Date	[redacted]

Final Workpaper for Line 765 Phase 2 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	4		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	No Repairs		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP			
SMYS			
Construction Start Date			
Construction Completion Date			
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	0	4,717,684	4,717,684

B. Maps and Images

Figure 1: Satellite Image of Line 765 Phase 2 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspection and Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 765 Phase 2 [redacted] TIMP Project for Inspection using ILI.
   a. ILI from a temporary launcher site on [redacted] to a temporary receiver site near the intersection of [redacted].
   b. The Project Team excavated and removed existing spool pieces at the launcher and receiver locations to accommodate the temporary installation of temporary assemblies for the ILI. Temporary installations included launcher and receiver barrels, associated piping, and a filter separator.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, four Direct Examination sites were identified to either assess pipeline segments that could not accommodate an ILI tool or for validation.
   a. Direct Examination Site #1 consisted of no repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
   c. Direct Examination Site #3 consisted of no repairs.
   d. Direct Examination Site #4 consisted of no repairs.

3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations.
4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI and four Direct Examinations.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
765	6.3 mi	[redacted]	[redacted]	[redacted]	No

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
765	1	Yes	No	22 ft	No Repairs	N/A	O&M
765-6.20-BO	2	Yes	No	14 ft	Soft Pad	N/A	O&M
765-6.20-BR	3	Yes	No	2 ft	No Repairs	N/A	O&M
765	4	Yes	No	16 ft	No Repairs	N/A	O&M

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 765 Phase 2 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

SoCalGas

Final Workpaper for Line 765 Phase 2 [redacted] TIMP Project

1. Site Description: The Inspection started at a temporary launcher site assembled near [redacted] and ended at a temporary receiver site assembled near the intersection of [redacted].
2. HCA Threats:
   [redacted]
3. Pipe Vintage: [redacted]
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected in the month of March without system impacts.
7. Customer Impacts: No customer impacts.
8. Community Impacts: The Project Team mitigated community impact by means of outreach communications to residential customers in the Project vicinity.
9. Substructures: The Project required additional Inspection and permitting for a sewer line within the excavation for the receiver site.
10. Environmental: No identified impacts.
11. Permit Restrictions: The Project Team obtained approved permits from the following entities:

[redacted]

a. Excavation Permit from the City of Glendale for construction activities at the temporary launcher site.
b. Excavation Permit from the City of Los Angeles for construction activities at the temporary receiver site. The Excavation Permit required an additional Pre-approved Sewer Permit from the City of Los Angeles Bureau of Engineering (BOE) for Inspection of sewer line within the excavation perimeter.
c. Sewer Permit from the City of Los Angeles BOE.

12. Land Use: The Project required a temporary right of entry (TRE) agreement with a private landowner for a laydown yard during the Inspection.
13. Traffic Control: The Project Team required an approved Traffic Control Plan (TCP) from each of the following entities:
    a. City of Los Angeles Department of Transportation for temporary traffic control at the receiver site.
    b. City of Los Angeles Department of Transportation for permanent traffic control at the receiver site.
    c. Fire Department for permanent traffic control at the receiver site.
14. Constructability: Three sites to be assessed using [redacted] were conducted during the Inspection Phase of the Project.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of this Project are as follow:

1. Engineering Assessment:
    a. There were three [redacted] Sites selected to assess pipeline segments that could not accommodate an ILI tool within the Line 765 Phase 2 [redacted] TIMP Project.
        i. Direct Examination Site #1 consisted of repairs.

ii. Direct Examination Site #2 consisted of soft pad repairs.

iii. Direct Examination Site #3 consisted of no repairs.

iv. The Project Team completed these Direct Examinations during the Inspection Phase of the Project.

b. There was one Direct Examination Site selected for validation of the ILI within the Line 765 Phase 2 [redacted] TIMP Project.

i. Direct Examination Site #4 consisted of no repairs.

2. SRC/IRC: There were no SRCs or IRCs during the Direct Examinations.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examination could be completed without system impacts.
4. Customer Impacts: No customer impacts.
5. Community Impacts: The Project Team mitigated community impact by means of outreach communications to residential customers in the project vicinity.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: No identified impacts.
8. Permit Restrictions: The Project Team obtained approved permits from the following entities:
   a. Excavation Permit from the City of Los Angeles which restricted daytime working hours and resulted in the Project Team working at night to complete Direct Examination Site #4.
   b. Construction Noise Variance Permit from the Los Angeles Police Commission for Direct Examination Site #4.
9. Land Use: The Project required a temporary right of entry (TRE) agreement with a private landowner for a laydown yard during the Inspection.
10. Traffic Control: The Project Team obtained an approved TCP from the City of Los Angeles Department of Transportation BOE for Direct Examination Site #4.

11. Constructability: The Project Team completed Direct Examination Sites #1, #2, and #3 during the Inspection Phase of the Project.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examination

Mobilization 1: Direct Examination Sites #1, #2, #3		
Construction Start Date	[redacted]	
Construction Completion Date		
Mobilization 1: Direct Examination Site #4		
Construction Start Date	[redacted]	
Construction Completion Date		

Figure 2: Temporary Launcher Site at [redacted]

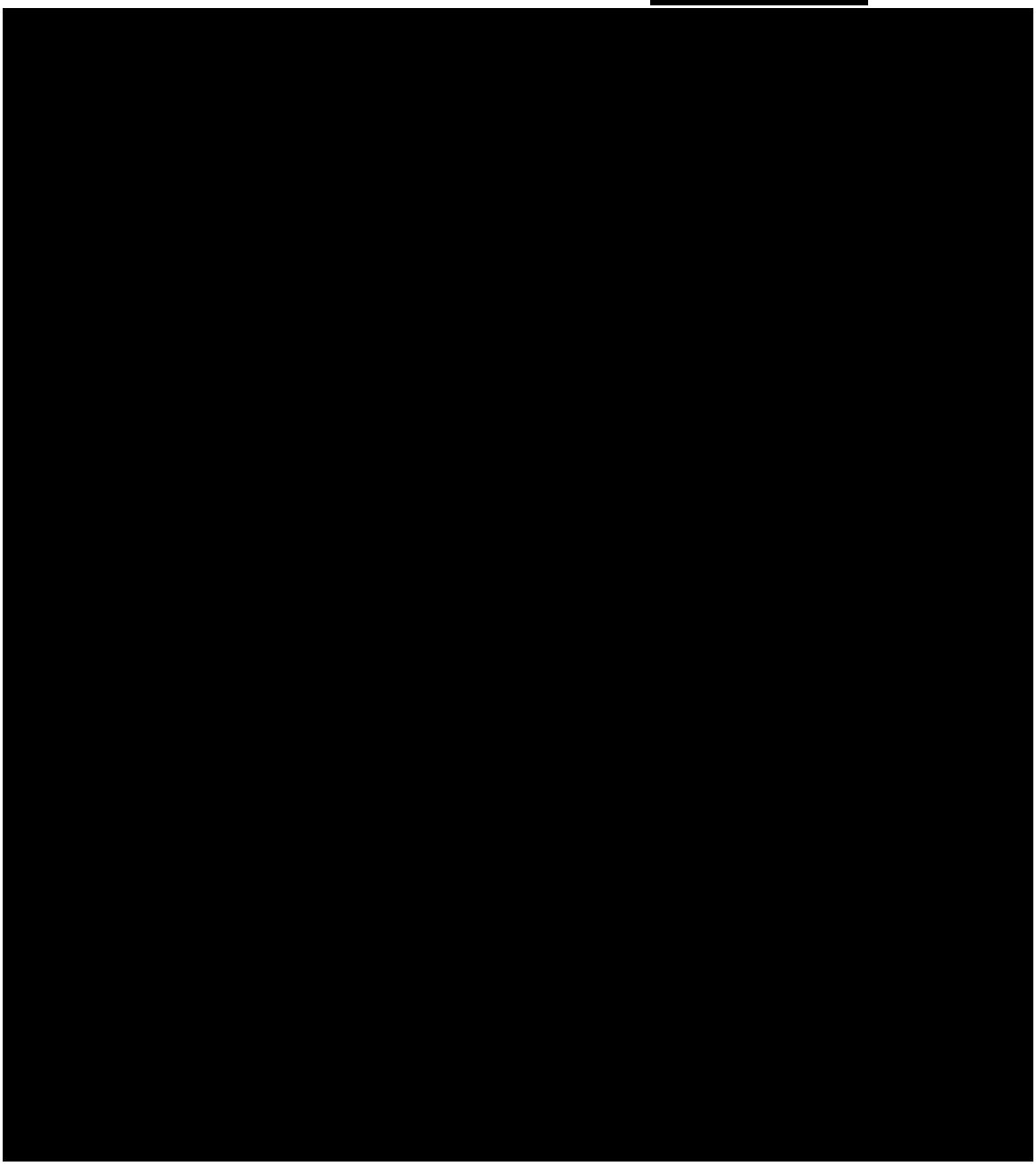


Figure 3: Temporary Receiver Site near [redacted]

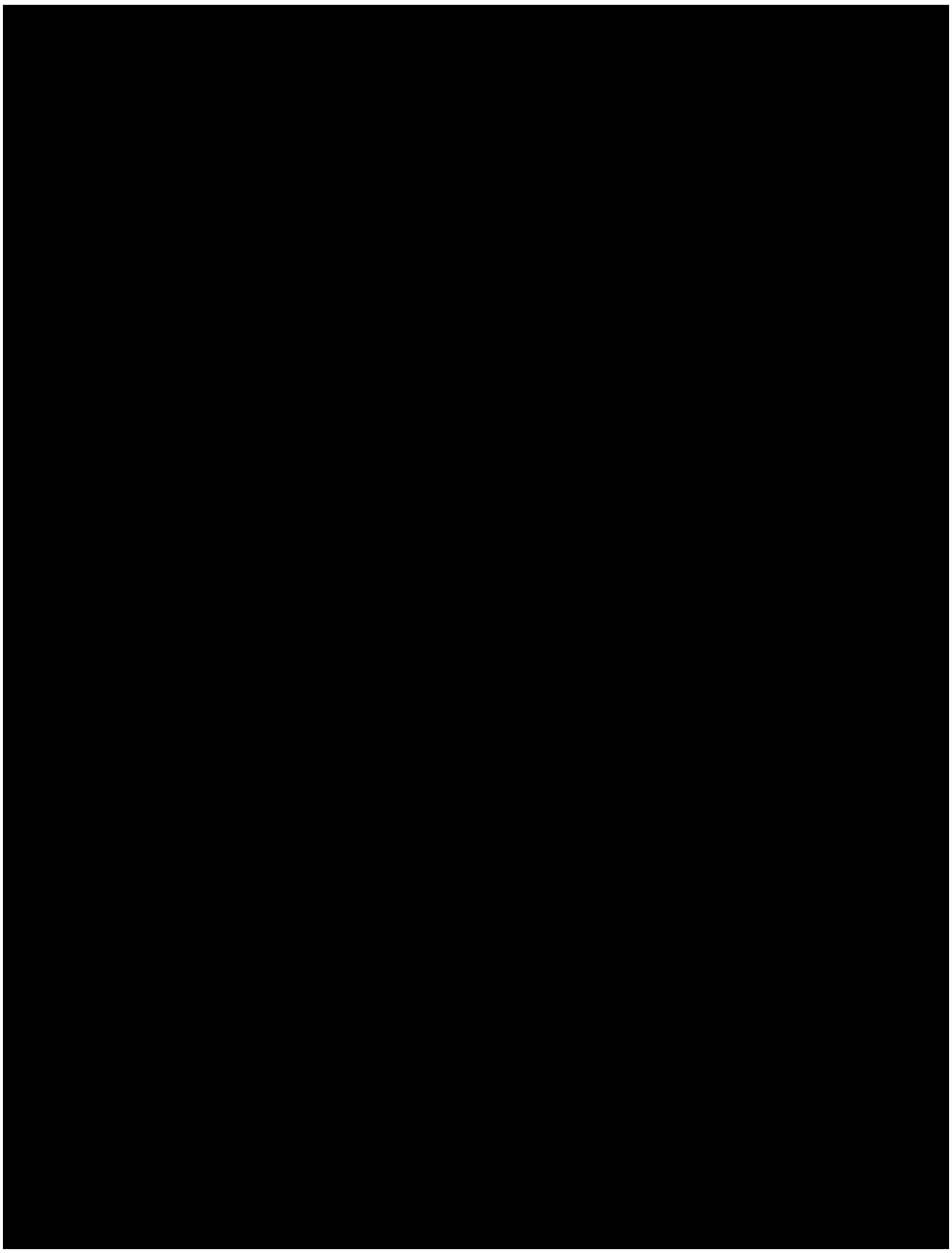


Figure 4: Direct Examination Site #1 – Removable Spool Piece at the Receiver Site

Figure 5: Proximity of Direct Examination Sites #2 and #3

Figure 6: Direct Examination Site #4

C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the Project plan and design.

B. Actual Costs[2]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $4,717,684.

Table 6: Actual Direct Costs[3]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	0	262,741	262,741
Contract Costs	0	3,367,015	3,367,015
Material	0	212,878	212,878
Other Direct Charges	0	451,110	451,110
Total Direct Costs	0	4,293,745	4,293,745

Table 7: Actual Indirect Costs[4]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	0	411,581	411,581
AFUDC	0	10,855	10,855
Property Taxes	0	1,503	1,503
Total Indirect Costs	0	423,939	423,939

Table 8: Total Costs[5]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	0	4,717,684	4,717,684

[2] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[3] Values may not add to total due to rounding.
[4] Ibid.
[5] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 765 Phase 2 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting findings of the assessment. The total loaded cost of the Project is $4,717,684.

End of Line 765 Phase 2 [redacted] TIMP Project Final Workpaper

I. LINE 765 PHASE 3 [redacted] TIMP PROJECT

A. Background and Summary

Line 765 Phase 3 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 17.2 miles from [redacted]. The Project also assessed four short segments of [redacted] and [redacted] pipeline associated with Phase 3 of Line 765 using the [redacted] assessment method. The pipeline is routed across Class 1, 2, and 3 locations with 16.8 miles within High Consequence Area(s) (HCAs) and 0.4 miles within non-HCAs. This Workpaper describes the activities and costs associated with an Inspection using In-Line Inspection (ILI) and the Direct Examinations made to six sites. The Project activities were located in Los Angeles County. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $4,238,274.

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Final Workpaper for Line 765 Phase 3 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	765
Segment	Phase 3 – [redacted]
Inspection Type	[redacted] ILI Tools
Location	Los Angeles and Long Beach
Class	1, 2, 3
HCA Length	16.8 miles
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Line	765
Site	1
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	No Repair
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Due Date	[redacted]

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Final Workpaper for Line 765 Phase 3 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details	
Line	30-6205
Site	2
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Due Date	[redacted]
Direct Examination Details	
Line	30-73
Site	3
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	No Repairs
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Due Date	[redacted]

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Final Workpaper for Line 765 Phase 3 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details	
Line	30-73BR1
Site	4
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Due Date	[redacted]
Direct Examination Details	
Site	5
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	No Repair
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Final Workpaper for Line 765 Phase 3 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	6		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	0	4,238,274	4,238,274

B. Maps and Images

Figure 1: Satellite Image of Line 765 Phase 3 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspection and Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 765 Phase 3 [redacted] TIMP Project for Inspection using ILI.
   a. ILI from a temporary launcher site within [redacted] to a temporary receiver site within [redacted].
   b. The Project required temporary installation of barrels, associated piping, and a filter separator.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, six Direct Examination sites were identified to either assess pipeline segments that could not accommodate an ILI tool or for validation.
   a. Direct Examination Site #1 consisted of no repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
   c. Direct Examination Site #3 consisted of no repairs.
   d. Direct Examination Site #4 consisted of soft pad repairs.
   e. Direct Examination Site #5 consisted of no repairs.
   f. Direct Examination Site #6 consisted of soft pad repairs.

3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations.
4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI and six Direct Examinations.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
765	17.2 mi	[redacted]	[redacted]	[redacted]	No

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
765	1	Yes	No	10 ft	No Repair	N/A	O&M
30-6205	2	Yes	No	6.3 ft	Soft Pad	N/A	O&M
30-73	3	Yes	No	1.3 ft	No Repair	N/A	O&M
30-73BR1	4	Yes	No	1.3 ft	Soft Pad	N/A	O&M
765	5	Yes	No	25.6 ft	No Repair	N/A	O&M
765	6	Yes	No	17 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 765 Phase 3 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The Inspection started at a temporary launcher site within [redacted] and ended at a temporary receiver site within [redacted]. The Project required temporary installation of associated piping at both the launcher and receiver locations. The Project also required a temporary filter separator at the receiver location.
2. HCA Threats:
   [redacted]
3. Pipe Vintage: Multiple vintages from [redacted].
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Inspection could be completed with system adjustments to maintain capacity.

[redacted]

7. Customer Impacts: No customer impacts.
8. Community Impacts: No identified impacts.
9. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
10. Environmental: No identified impacts.
11. Permit Restrictions: The Project Team obtained a Temporary Entry Permit (TEP) from a private landowner to access the receiver site and utilize the area for temporary staging.
12. Land Use: The Project Team obtained a Temporary Right of Entry (TRE) Agreement from a private landowner for a shared laydown yard in the City of Carson to be used for fabrication and hydrotesting.
13. Traffic Control: The Project Team obtained approved required Traffic Control Plans (TCP) from the City of Los Angeles to secure temporary parking and signage near the launcher location within [redacted].
14. Schedule Delay: The Project experienced the following schedule changes causing delayed demobilization:
    a. Unanticipated site restoration near the receiver site.
    b. Additional testing required for on-site equipment.
15. Constructability:
    a. The Project required a two-day isolation of the pipeline to install the temporary receiver assembly within [redacted].
    b. The Project Team replaced fencing at the receiver site as part of site restoration for the Project.
    c. The Project Team identified valves requiring repair near the receiver location to complete temporary installations prior to the Inspection.
    d. One site to be assessed using [redacted] was conducted during the Inspection Phase of the Project.
16. Other Identified Risks: The Project receiver location had various overhead powerlines which impacted project execution and construction activities.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment:
   a. There were four [redacted] Sites selected to assess pipeline segments that could not accommodate an ILI tool within the Line 765 Phase 3 [redacted] TIMP Project.
      i. Direct Examination Site #1 consisted of no repairs.
      ii. Direct Examination Site #2 consisted of soft pad repairs.
      iii. Direct Examination Site #3 consisted of no repairs.
      iv. Direct Examination Site #4 consisted of soft pad repairs.
      v. The Project Team completed Direct Examination Site #1 during the Inspection Phase of the Project.
   b. There were two Direct Examination Sites selected for validation of the ILI within the Line 765 Phase 3 [redacted] TIMP Project.
      i. Direct Examination Site #5 consisted of no repairs.
      ii. Direct Examination Site #6 consisted of soft pad repairs.
2. SRC/IRC: There were no SRCs or IRCs during the Direct Examinations.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examinations could be completed without system impacts.
4. Customer Impacts: No customer impacts.
5. Community Impacts: The Project Team issued notifications to residents and local businesses near the Project vicinity to communicate night construction hours for Direct Examination Sites #3 and #4.

6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: No identified impacts.
8. Permit Restrictions: The Project Team obtained the following permits:
   a. Encroachment Utility Permit from the City of Vernon for Direct Examination Site #2. This permit restricted construction activities on Fridays and weekends. The permit also required a TRE from Union Pacific Railroad prior to approval.
   b. Encroachment Permit from the City of South Gate Public Works Department for Direct Examination Sites #3 and #4. The Permit required soil compaction examinations after all construction activities at both sites. The Permit also required an additional Traffic Control Permit (TCP) as well as notifications to be sent to the following stakeholders within 48-hours in advance of construction activities:
      i. Los Angeles County Fire Department
      ii. South Gate Police Department
      iii. Residents and Businesses near the Project vicinity.
   c. Temporary Entry Permit (TEP) from a private landowner to access Direct Examination Sites #5 and #6. This TEP also granted the Project a nearby area to be utilized as a laydown yard.
9. Land Use:
   a. The Project Team obtained a TRE from Union Pacific Railroad for Direct Examination Site #2.
10. Traffic Control: The Project Team obtained a TCP from the following entities:
    a. City of Vernon for Direct Examination Site #2 requiring lane closures and flaggers to redirect traffic.
    b. City of South Gate for Direct Examination Sites #3 and #4. The TCP accounted for impacts to traffic lanes resulting in scheduled night hours for construction activities.
11. Schedule Delay: The Project experienced the following schedule delays:

a. Observer and flagger personnel required per the Union Pacific Railroad TRE were unavailable until mid-November, delaying construction activities for Direct Examination Site #2.
b. Delayed approval of Encroachment Permit from the City of South Gate Public Works Department for Direct Examination Sites #3 and #4 due to the City's third-party contractor bid process for night work inspector(s).
c. Restricted Maintenance Operations issued in March 2023, impacting scheduled for Direct Examination Site #5 and #6.
d. Rainfall causing delayed coating and pipeline Inspections for Direct Examination Sites #5 and #6.
e. Delayed approval of TEP for Direct Examinations #5 and #6.

12. Constructability:
    a. The Project required separate mobilizations for the Direct Examinations due to extended permitting processes for Direct Examination Sites #2, #5, and #6.
    b. The Project required additional soil compaction examinations for Direct Examination Sites #3 and #4, per City of South Gate Public Works Department permit requirements.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractors that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examinations

Mobilization 1: Direct Examination Site #1		
Construction Start Date	[redacted]	
Construction Completion Date		
Mobilization 2: Direct Examination Sites #3, #4		
Construction Start Date	[redacted]	
Construction Completion Date		
Mobilization 3: Direct Examination Sites #5, #6		
Construction Start Date	[redacted]	
Construction Completion Date		
Mobilization 4: Direct Examination Site #2		
Construction Start Date	[redacted]	
Construction Completion Date		

Figure 2: Launcher Site

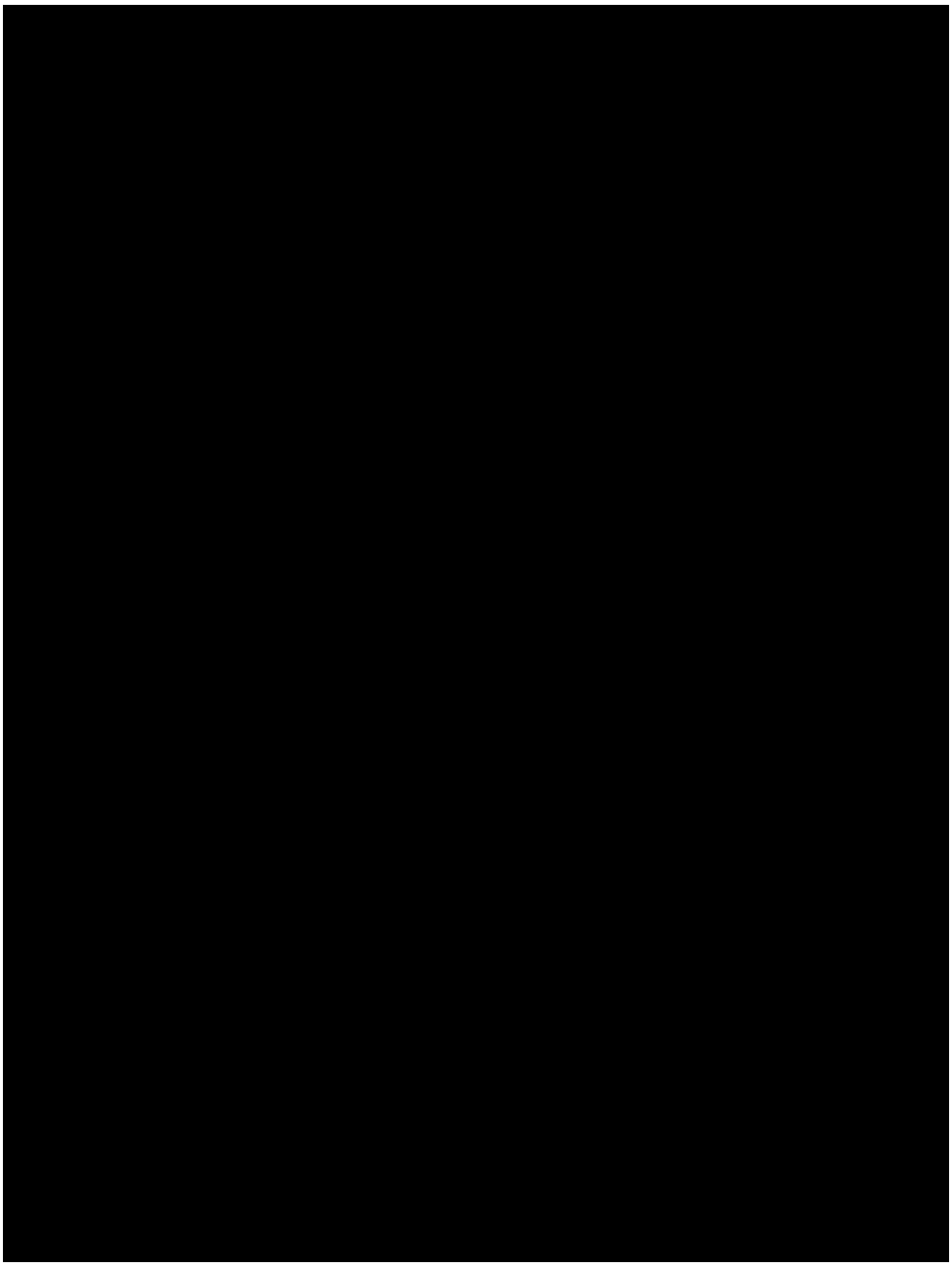


Figure 3: Receiver Site

Figure 4: Direct Examination Site #2

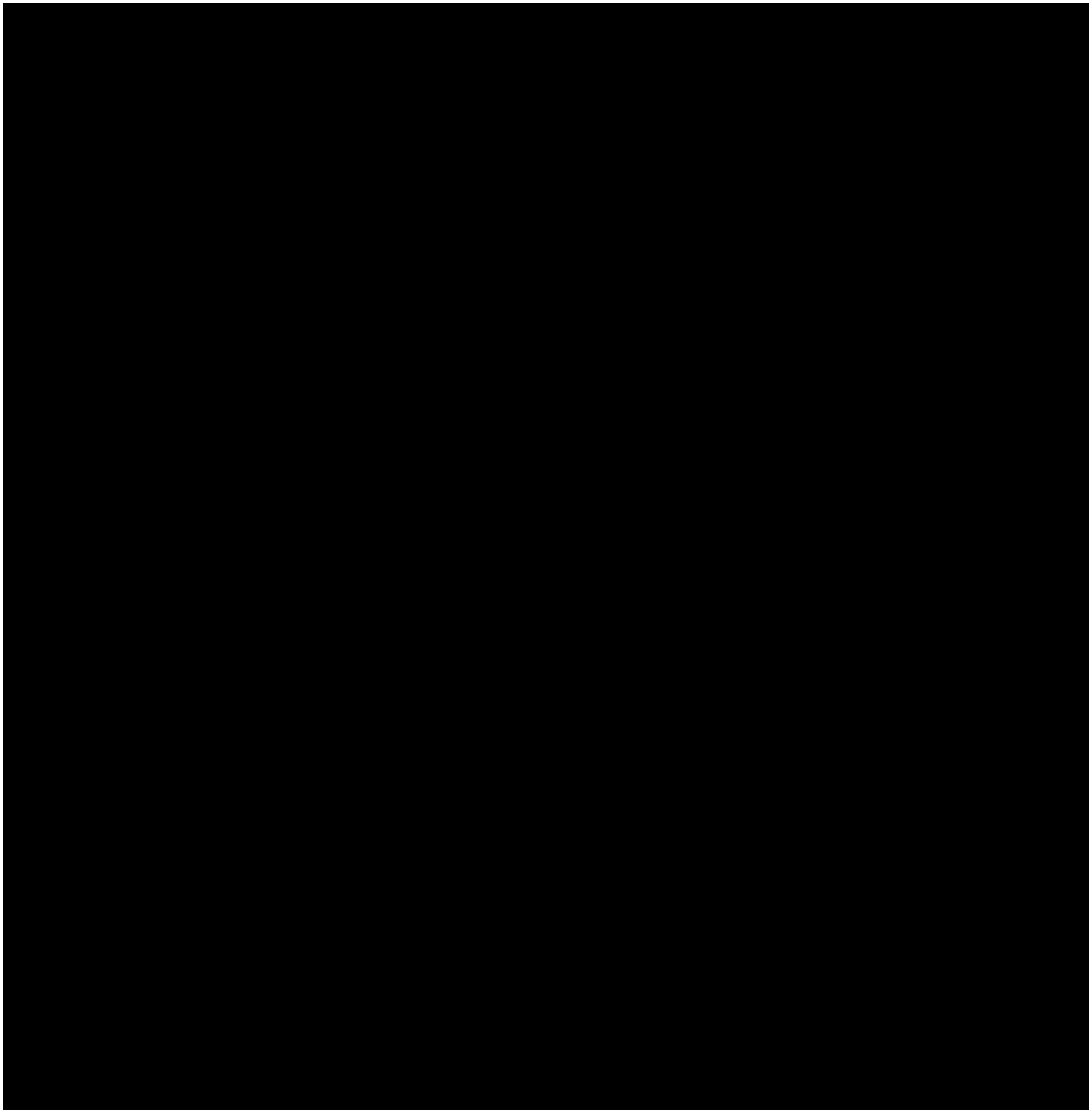


Figure 5: Direct Examination Site #2

Figure 6: Direct Examination Site #5

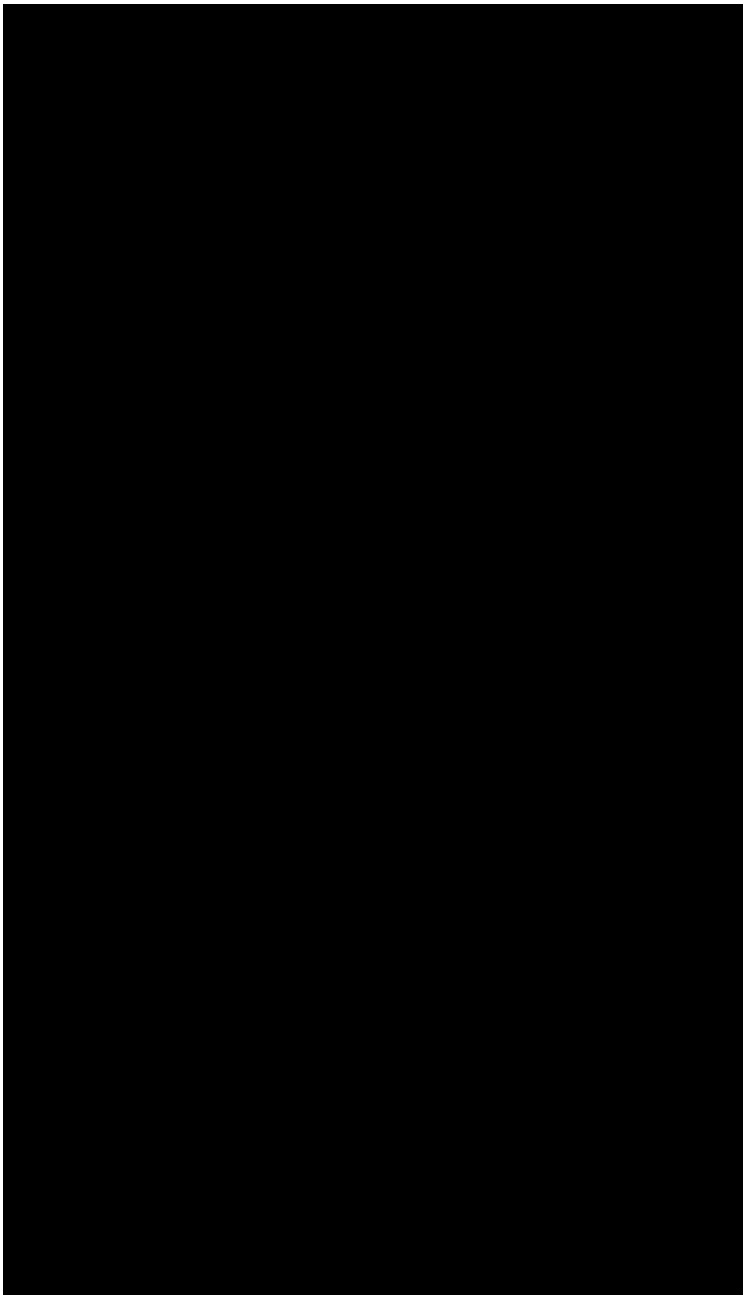
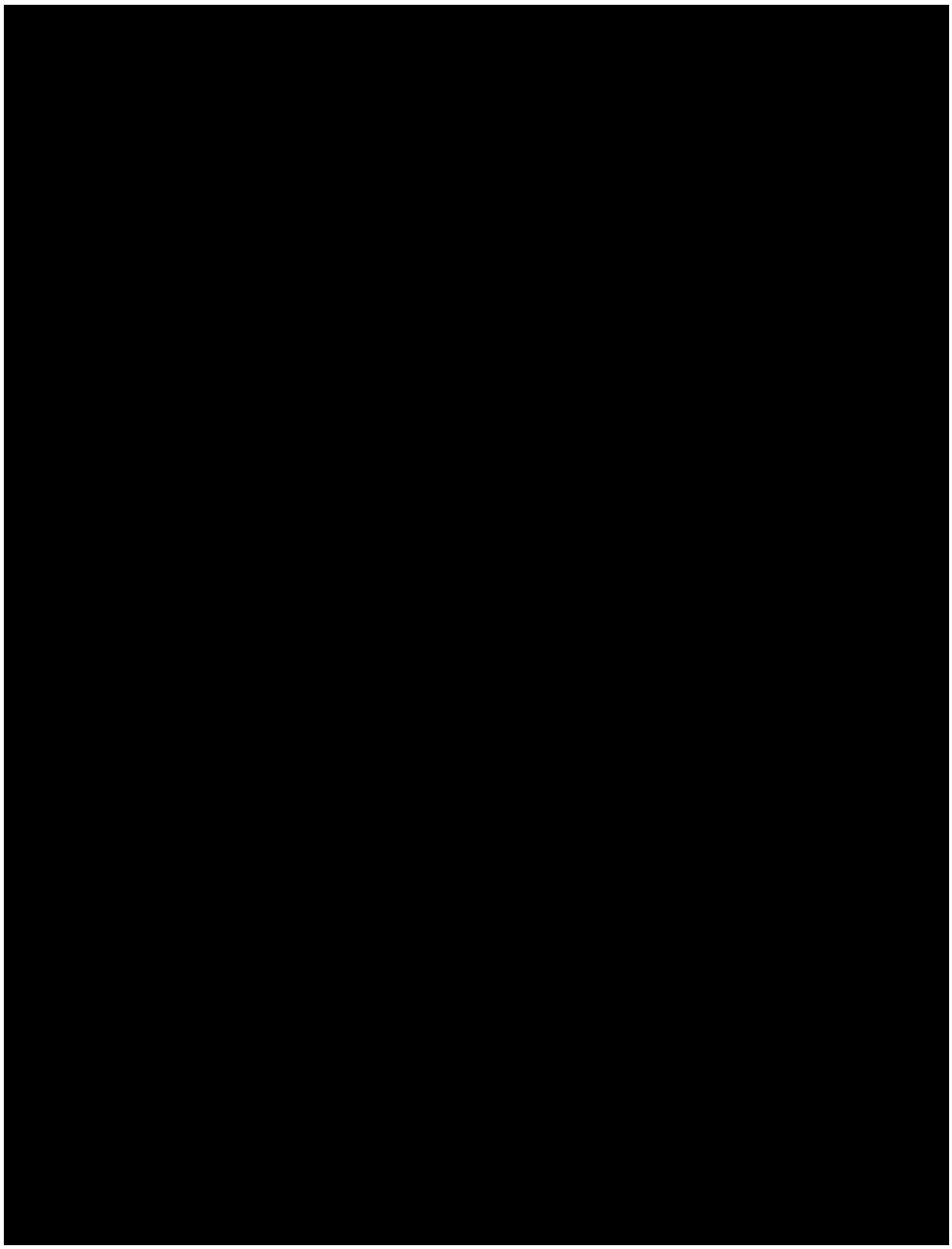


Figure 7 Direct Examination Site #6



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas exercised due diligence in the design, planning, and construction activities for this Project to minimize or avoid costs where applicable. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design. Specific examples of cost efficiency actions taken on this Project were:

1. Construction Execution: The Project Team completed construction activities for Direct Examination Site #1 during the Inspection portion of the Project.
2. Permit Conditions:
   a. The Project Team requested the TCP for Direct Examination Sites #3 and #4 to accommodate construction vehicles and safe workspace areas, avoiding the need for a separate laydown yard.
   b. The Project Team coordinated with a private landowner to ensure one TEP could be applied to access two Direct Examinations locations, Sites #5 and #6, as well as utilize nearby area for a laydown yard.
3. Other: The Project Team negotiated and minimized costs for third party inspector fees required for night work for Direct Examination Sites #3 and #4.

B. Actual Costs[2]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $4,238,274.

Table 6: Actual Direct Costs[3]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	0	456,747	456,747
Contract Costs	0	2,259,030	2,259,030
Material	0	326,411	326,411
Other Direct Charges	0	629,513	629,513
Total Direct Costs	0	3,671,701	3,671,701

Table 7: Actual Indirect Costs[4]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	0	543,722	543,722
AFUDC	0	19,535	19,535
Property Taxes	0	3,316	3,316
Total Indirect Costs	0	566,573	566,573

Table 8: Total Costs[5]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	0	4,238,274	4,238,274

[2] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[3] Values may not add to total due to rounding.
[4] Ibid.
[5] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 765 Phase 3 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $4,238,274.

End of Line 765 Phase 3 [redacted] TIMP Project Final Workpaper

I. LINE 765 PHASE 4 [redacted] TIMP PROJECT

A. Background and Summary

Line 765 Phase 4 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 588 feet along a pedestrian bridge that crosses [redacted], near residential neighborhoods and industrial areas. The pipeline is routed across [redacted] locations entirely within High Consequence Area(s) (HCAs). This Workpaper describes the activities and costs associated with an Inspection using In-Line Inspection (ILI). The Project activities were located in the City of Los Angeles. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $3,265,107.

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Final Workpaper for Line 765 Phase 4 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details			
Pipeline	765		
Segment	Phase 4 – [redacted]		
Inspection Type	[redacted] ILI Tool		
Location	City of Los Angeles		
Class	[redacted]		
HCA Length	588 feet		
Vintage	[redacted]		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	Multiple SMYS values from [redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Final Tool Run Date	[redacted]		
Inspection Due Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	0	3,265,107	3,265,107

B. Maps and Images

Figure 1: Satellite Image of Line 765 Phase 4 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspection.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Table 2 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 765 Phase 4 [redacted] TIMP Project for Inspection using ILI.
   a. ILI from a temporary launcher site near the intersection of [redacted] to a temporary receiver site within private property on [redacted].
   b. The Project required temporary installation of a valve, barrel, and associated piping at the launcher site.
   c. The Project required temporary installation of a valve, barrel, associated piping, and a filter separator at the receiver site.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, Direct Examination was completed using a validation spool piece and it was determined that no additional Direct Examination Sites were required.
3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the spool piece following the Inspection resulted in no additional examinations.

4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
765	686 ft	[redacted]	[redacted]	[redacted]	No

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 765 Phase 4 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The Project consisted of an ILI from a temporary launcher site near the intersection of [redacted] to a temporary receiver site within private property on [redacted].
2. HCA Threats:
   [redacted]
3. Pipe Vintage: [redacted].
4. Long Seam Type: [redacted].

[redacted]

5. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded system adjustments were required to complete the Inspection.
7. Customer Impacts: No customer impacts.
8. Community Impacts:
   a. The Project Team notified various nearby residents, businesses, and a school of the Project activities and schedules.
   b. During construction, the Project Team worked closely with a nearby commercial business to mitigate impacts due to project activities.
9. Substructures: The Project required additional Inspection and permitting for a sewer line within the excavation for the launcher site.
10. Environmental: No identified impacts.
11. Permit Restrictions: The Project obtained approved permits from the following entities:
    a. Excavation Permit from the City of Los Angeles for construction activities at the temporary launcher site. The Excavation Permit required an additional Pre-approved Sewer Permit from the City of Los Angeles Bureau of Engineering (BOE) for inspection of sewer line within the excavation perimeter.
    b. Sewer Permits from the City of Los Angeles BOE.
    c. Construction Noise Variance Permit from the Los Angeles Police Commission for the launcher site.
12. Land Use: The Project Team obtained an approved Temporary Right of Entry (TRE) agreement from a private landowner to access the receiver location.

13. Traffic Control: The Project Team obtained approved temporary and permanent Traffic Control Plans (TCPs) from the City of Los Angeles Department of Transportation for the launcher location. The TCPs required daily setup and breakdown of traffic control. This included multiple lane impacts on [redacted] throughout the duration of the Project, as well as K-rail setups once the temporary launcher assemblies were installed.
14. Constructability:
    a. The Project Team excavated and removed existing spool pieces at the launcher and receiver locations to install the temporary assemblies for the ILI, requiring temporary isolation of the pipeline.
    b. The Project Team coordinated with other TIMP ILI projects and shared excavations at the launcher and receiver locations for this Project.
    c. The Project scope included Inspection of a pipeline span along a pedestrian bridge and required additional engineering review.
    d. Considering the location and length of the segment, the Project Team proactively coordinated with various stakeholders to install a temporary validation spool piece to complete the Direct Examination requirement for this assessment.
15. Other Identified Risks: The City of Los Angeles updated their permitting requirements, therefore the Project Team revised the Project design to reduce the excavation size and expedite permit approval.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas completed the Direct Examination for the Line 765 Phase 4 [redacted] TIMP Project using a validation spool piece and it was determined that no additional Direct Examination Sites were required for validation.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team used the data collected from the Inspection and Direct Examination to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 3: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Figure 2: Temporary Launcher Location with Validation Spool Piece

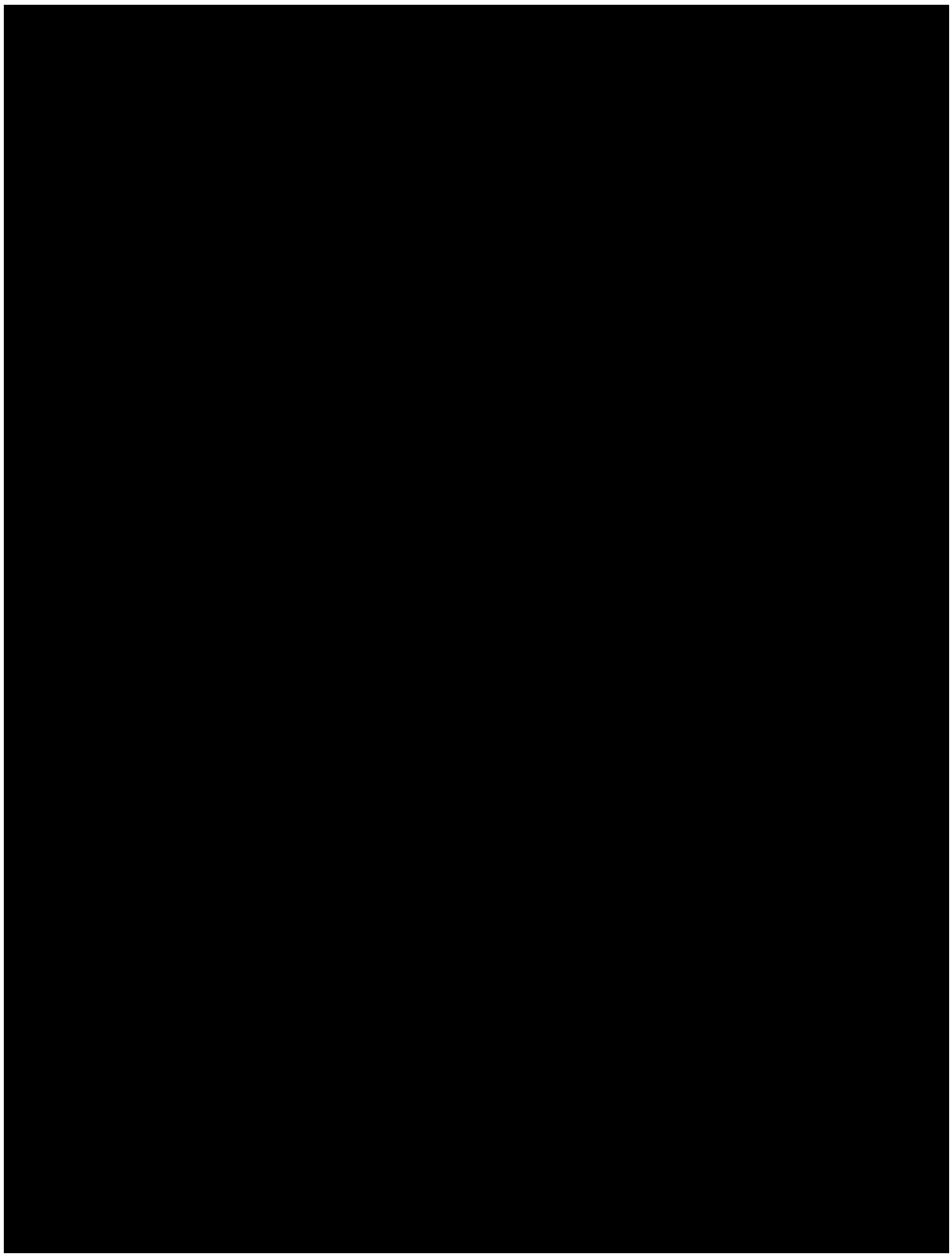
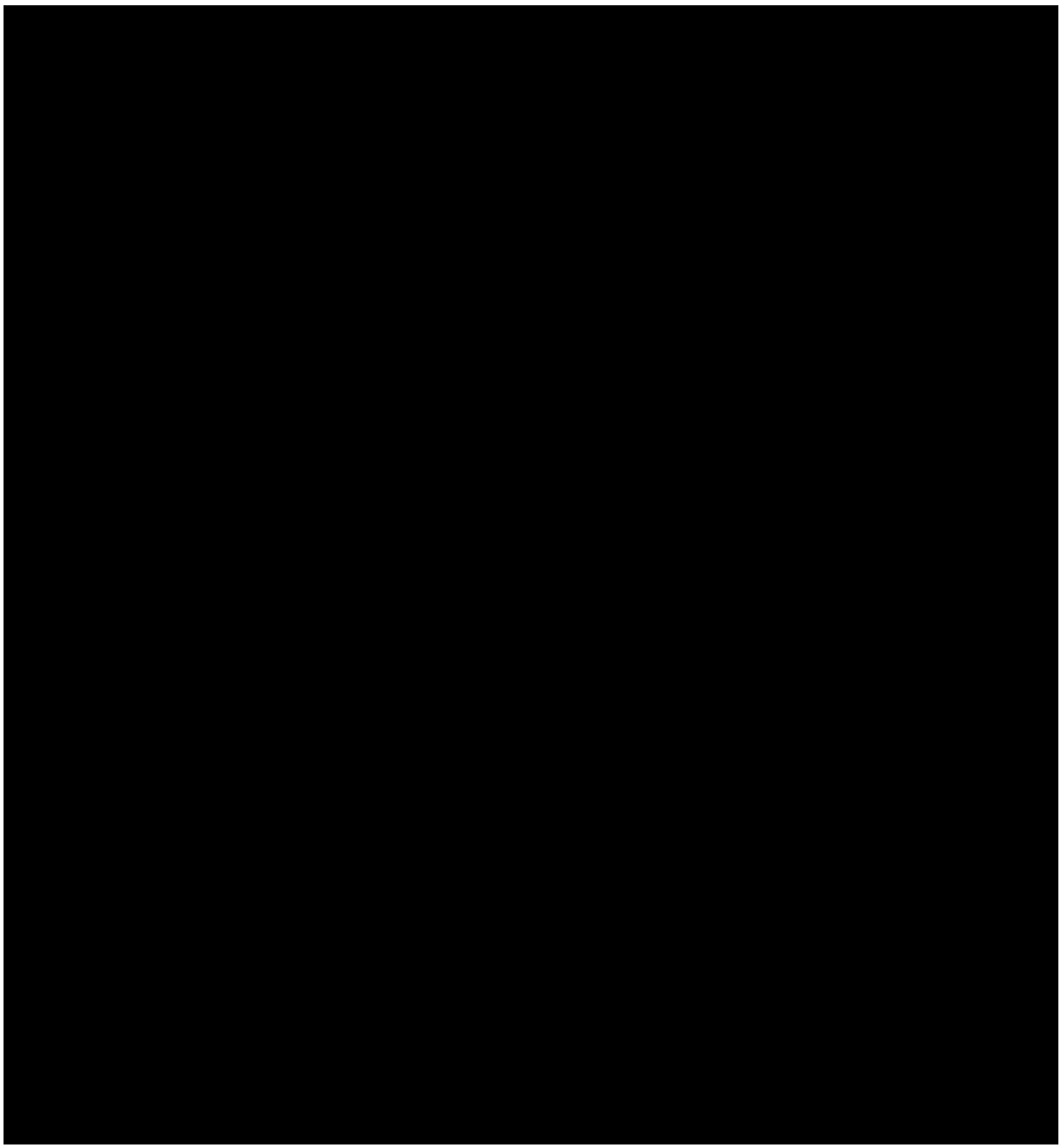


Figure 3: Temporary Launcher Location with Validation Spool Piece



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas exercised due diligence in the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the Project plan and design. Specific examples of cost efficiency actions taken on this Project were:

1. Land Use: The Project shared costs for a TRE agreement at the receiver location with other projects.
2. Permit Conditions: The Project Team shared permit costs with two other Inspection projects on Line 765.
3. Construction Execution: This Project was scheduled and executed in sequence with other Inspections of Line 765, resulting in efficiencies for completing project deliverables, shared excavations, and utilizing the same construction contractor for mobilizations.

B. Actual Costs[2]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $3,265,107.

Table 4: Actual Direct Costs[3]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	0	177,817	177,817
Contract Costs	0	1,717,543	1,717,543
Material	0	505,191	505,191
Other Direct Charges	0	546,153	546,153
Total Direct Costs	0	2,946,703	2,946,703

Table 5: Actual Indirect Costs[4]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	0	318,336	318,336
AFUDC	0	57	57
Property Taxes	0	11	11
Total Indirect Costs	0	318,404	318,404

Table 6: Total Costs[5]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	0	3,265,107	3,265,107

[2] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[3] Values may not add to total due to rounding.
[4] Ibid.
[5] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 765 Phase 4 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $3,265,107.

End of Line 765 Phase 4 [redacted] TIMP Project Final Workpaper

I. LINE 767 [redacted] TIMP PROJECT

A. Background and Summary

Line 767 [redacted] the Transmission Integrity Management Program (TIMP) Project assessed a multi-diameter [redacted] diameter transmission line that runs approximately 5.43 miles from [redacted], through residential neighborhoods and commercial areas. The pipeline is routed across [redacted] locations with 5.37 miles within High Consequence Area(s) (HCAs) and 0.06 miles within non-HCAs. This Workpaper describes the activities and costs associated with a TIMP Assessment that includes Inspections using In-Line Inspection (ILI) methods and the Direct Examinations made to four sites, of which one site contained an Immediate Repair Condition (IRC). The Project activities were located in the City of Alhambra and the City of Rosemead. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $2,511,821.

SoCalGas

Final Workpaper for Line 767 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	767
Segment	[redacted]
Inspection Type	[redacted] and [redacted] ILI Tools
Location	Alhambra and Rosemead
Class	[redacted]
HCA Length	5.37 miles
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Site	1
Examination ID	[redacted]
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

[1] *See* PHMSA, *Gas Transmission Integrity Management: FAQs, Continual Assessment and Evaluation FAQ, No. FAQ-41* (August 2021) at 32, *available at* (*https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2021-09/Final%20GAS%20IM%20FAQs%208-26-21.pdf*). "Effective January 3, 2012, the maximum interval may be set using the specified number of calendar years."

SoCalGas

Final Workpaper for Line 767 [redacted] TIMP Project

Table 1: General Project Information (continued)

Direct Examination Details	
Site	2
Examination ID	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	3
Examination ID	[redacted]
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC or IRC	Yes
IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Final Workpaper for Line 767 [redacted] TIMP Project

Table 1: General Project Information (continued)

Direct Examination Details			
Site	4		
Examination ID	[redacted]		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	1,028,206	1,483,615	2,511,821

B. Maps and Images

Figure 1: Satellite Image of Line 767 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post Assessment. This Workpaper outlines construction activities during the Assessment process that typically occur during the Inspections including four Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 767 for Inspection[2] using [redacted] and [redacted] ILI methods.
   a. ILI from a temporary launcher site at [redacted] to a temporary receiver site at [redacted] totaling approximately 5.37 miles.
   b. The Project also completed a 340 foot Inspection using [redacted] ILI at [redacted], due to unpiggable fittings on this segment.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspections using [redacted] and [redacted] ILIs, four Direct Examination sites were identified for validation.
   a. Direct Examination Site #1 consisted of a 24 foot replacement.
   b. Direct Examination Site #2 consisted of soft pad repairs.

[2] SoCalGas identified this pipeline for Inspection using ILI. Costs related to the ILI that were completed on or before December 31st, 2018 fall under a previous General Rate Case (GRC) and are not included in this Workpaper. Costs incurred in the 2019 General Rate Case (January 1st, 2019 through December 31st, 2023) are included in this Workpaper to align with A.17-10-008.

c. Direct Examination Site #3 was identified as an IRC and consisted of an 8-foot replacement.

d. Direct Examination Site #4 consisted of soft pad repairs.

3. Post Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no remediations and involved additional preventative and mitigative measures to enhance the overall integrity and safety of the pipeline.

4. Final Project Scope: The final project scope of this Workpaper includes Inspection and four Direct Examinations.

Table 2: Final Inspection Project Scope - ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
767	5.37 miles	[redacted]	[redacted]	[redacted]	No
767	340 feet	[redacted]	[redacted]	[redacted]	No

[redacted]

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
767	1	Yes	No	30 ft	Replacement	24 ft	Capital
767	2	Yes	No	18 ft	Soft Pad	N/A	O&M
767	3	Yes	Yes	15 ft	Replacement	8 ft	Capital
767	4	Yes	No	29 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 767 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The ILI included a temporary launcher site at [redacted] and temporary a receiver site at [redacted]. In addition, the Project scope included a [redacted] Inspection from [redacted] all within the City of Alhambra.
2. HCA Threats:
   [redacted]

[redacted]

3. Pipe Vintage: Multiple vintages from [redacted].
4. Long Seam Type:

   [redacted]

5. Inspection Tools and Technologies:
   a. The Project utilized an ILI [redacted] capabilities for the majority of the pipeline. [redacted] were also utilized in preparation for the Inspection.
   b. The Project also used a [redacted] ILI combination tool with [redacted] technology for a 340' segment of the pipeline that is unable to be inspected through traditional ILI methods.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded that the pipeline could be inspected without system impacts.
7. Customer Impacts: No customer impacts.
8. Community Impacts: The Project location required significant traffic control at the ILI launcher and receiver locations. The Project Team made the community aware of this by conducting outreach for these traffic impacts.
9. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.

[redacted]

10. Environmental: The Project Team planned for the abatement of Asbestos Containing Material (ACM).
11. Permit Restrictions: The Project Team obtained the following permits:
    a. City of Alhambra traffic control and encroachment permit.
    b. City of Rosemead traffic control and encroachment permit.
    c. Notification to Union Pacific Railroad (UPPR) for work adjacent to their existing right of way (ROW).
12. Land Use: No identified impacts.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment: There were 4 Direct Examination Sites selected for validation within the Line 767 [redacted] TIMP Project.
    a. Direct Examination Site #1 consisted of a 24-foot replacement.
    b. Direct Examination Site #2 consisted of soft pad repairs.
    c. Direct Examination Site #3 consisted of an 8-foot replacement.
    d. Direct Examination Site #4 consisted of soft pad repairs.
2. SRC/IRC: Direct Examination Site #3 resulted in an IRC and required and expedited project schedule.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.
4. Customer Impacts: The Project Team did not identify any anticipated service disruptions to customers.
5. Community Impacts: The Project required traffic control on public roads.

6. Substructures: The Project Team identified a [redacted] water main and an existing retaining wall at Direct Examination Site #2 which restricted the excavation method to hand-digging.
7. Environmental: No identified impacts.
8. Permit Restrictions: The Project Team obtained the following permits:
   a. City of Alhambra Encroachment Permit for Direct Examination Sites #1 and #2.
   b. San Gabriel Encroachment Permit for Direct Examination Site #3.
   c. Caltrans Encroachment Permit for Direct Examination Site #4.
9. Land Use: No identified impacts.
10. Traffic Control: The Project required traffic control at each of the Direct Examination sites in order to execute the Direct Examinations safely.

D. Engineering, Design, and Constructability Factors – Post Assessment

During the Post Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractors that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examination

Direct Examination Sites 1, 3		
Construction Start Date	[redacted]	
Construction Completion Date		
Direct Examination Sites 2, 4		
Construction Start Date	[redacted]	
Construction Completion Date		

Table 6: Construction Timeline – IRC

IRC Discovery Date	[redacted]	
Repair Date		

Figure 2: Direct Examination Site #1 Coating Inspection

Figure 3: Direct Examination Site #3 Bare Pipe Inspection

Figure 4: Direct Examination Site #2 Coating Completed

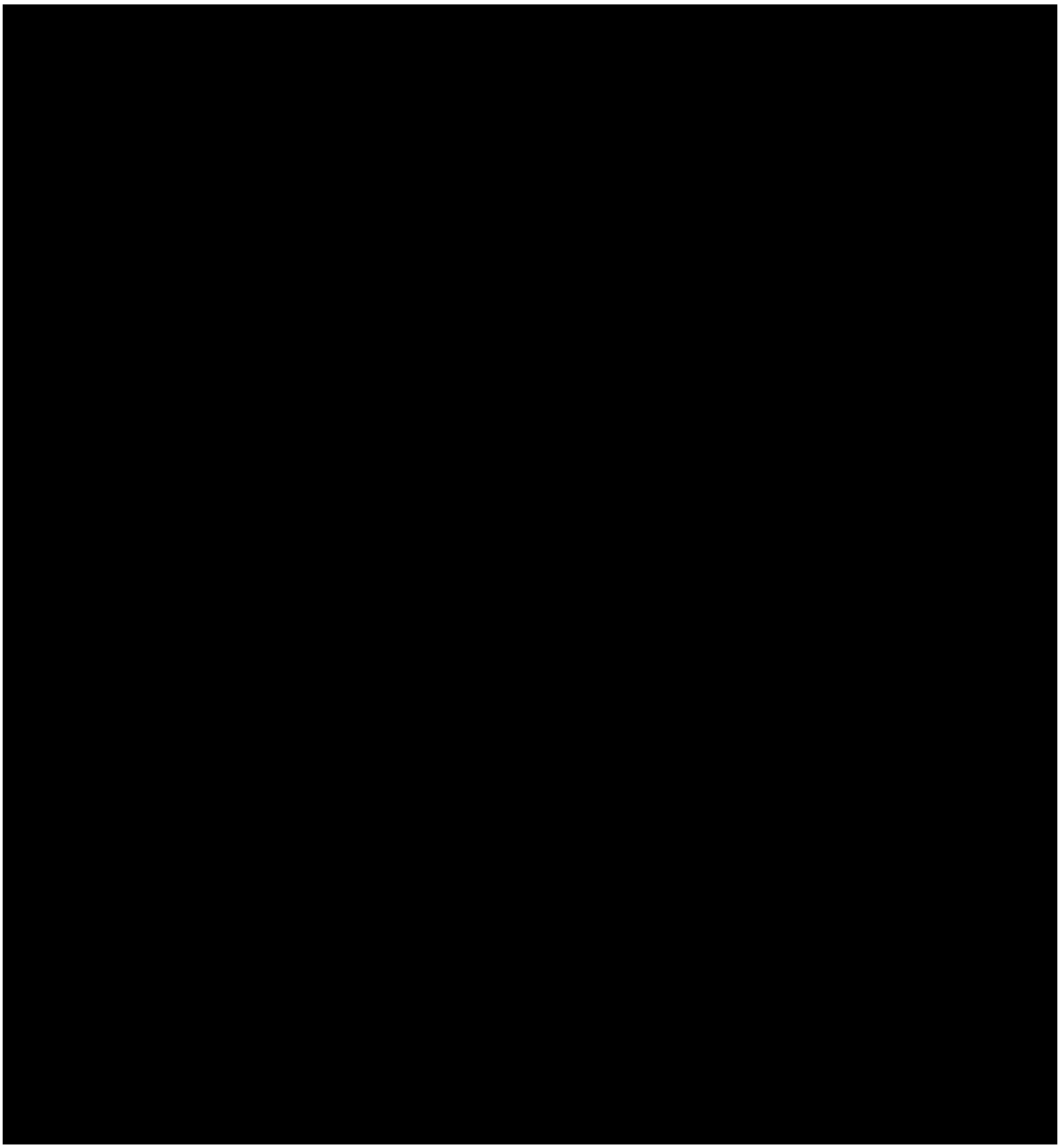


Figure 5: Direct Examination Site #3 Final Paving Work

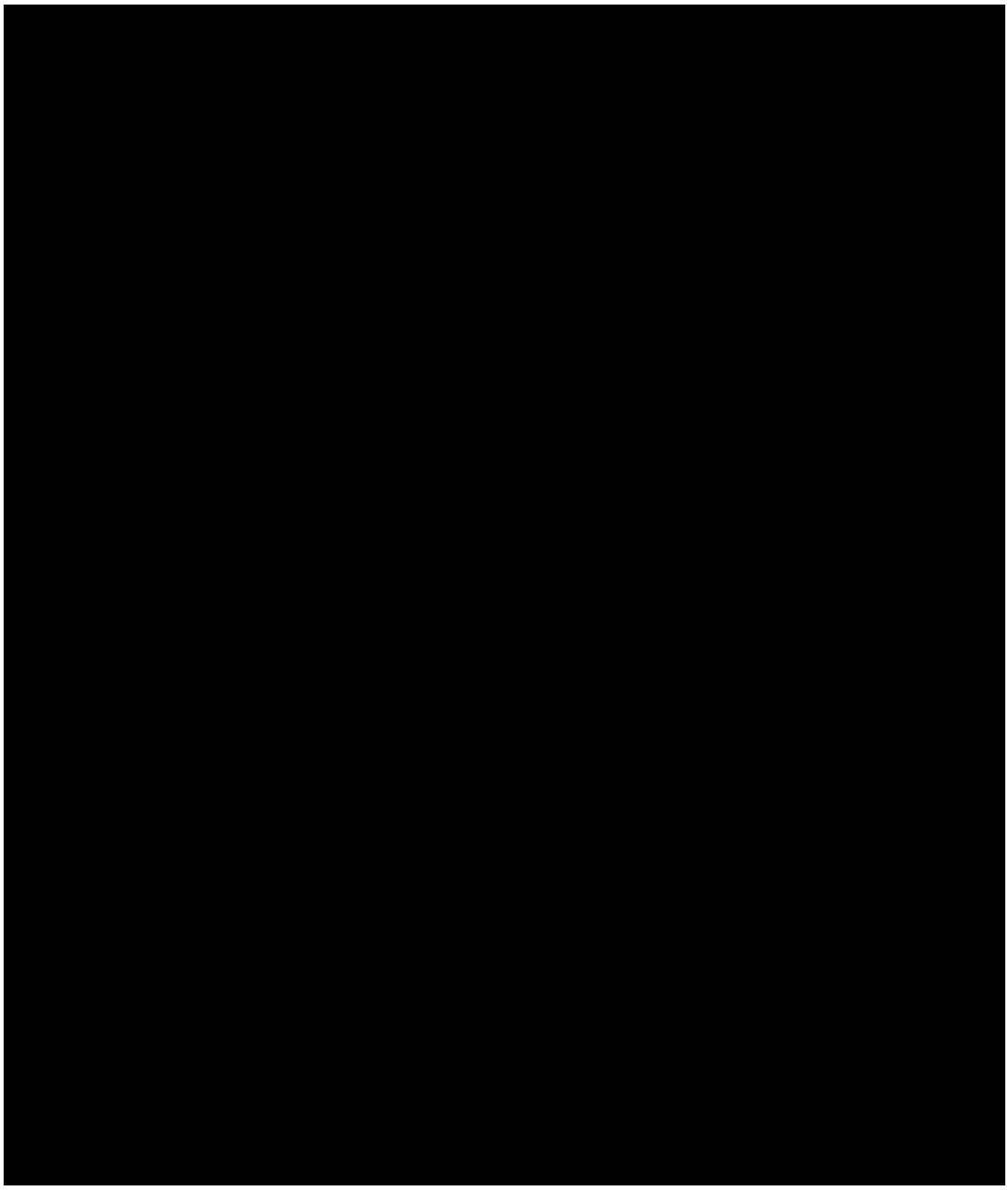


Figure 6: Direct Examination Site #1 Overview

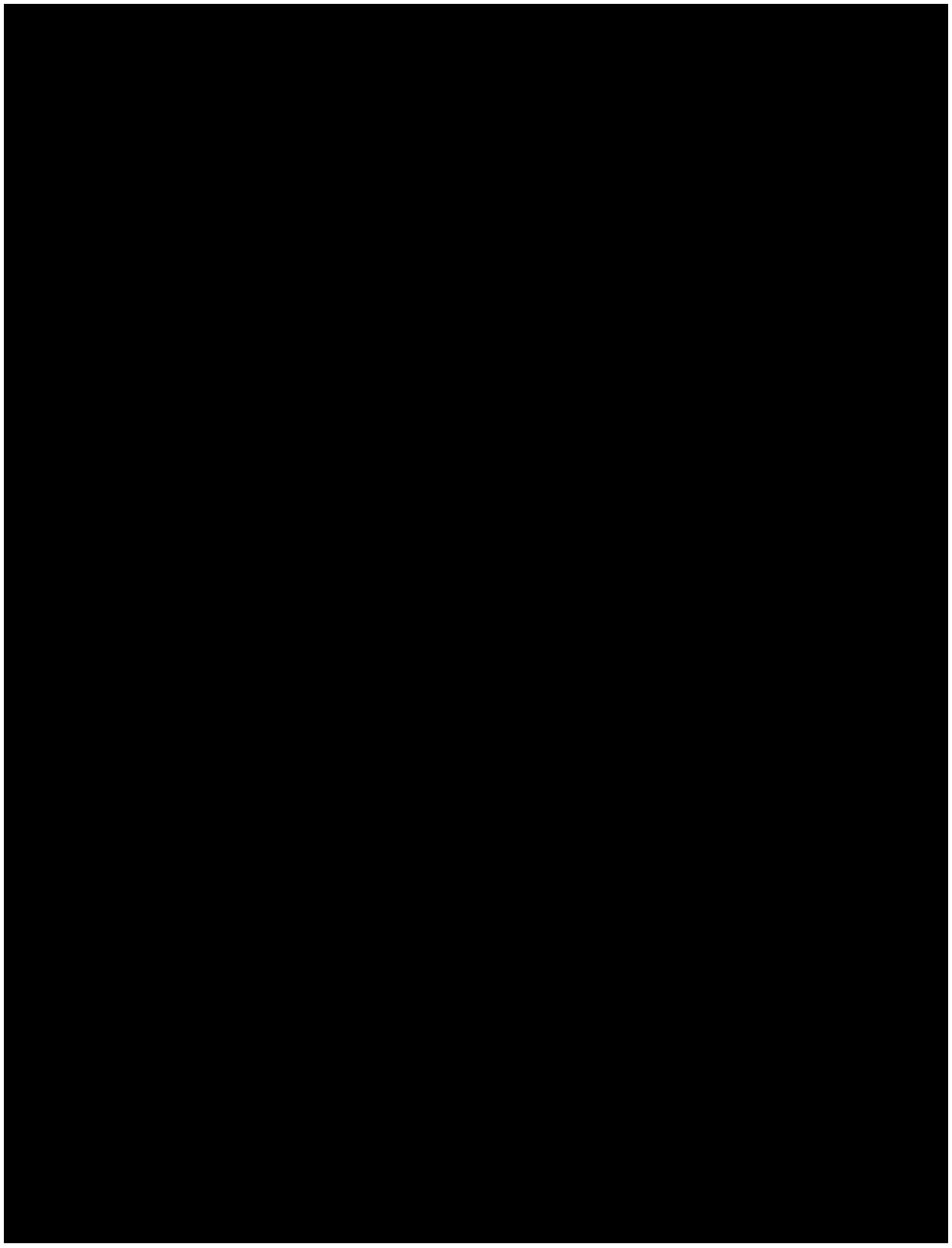


Figure 7: Direct Examination Site #2 Overview

Figure 8: Direct Examination Site #3 Overview

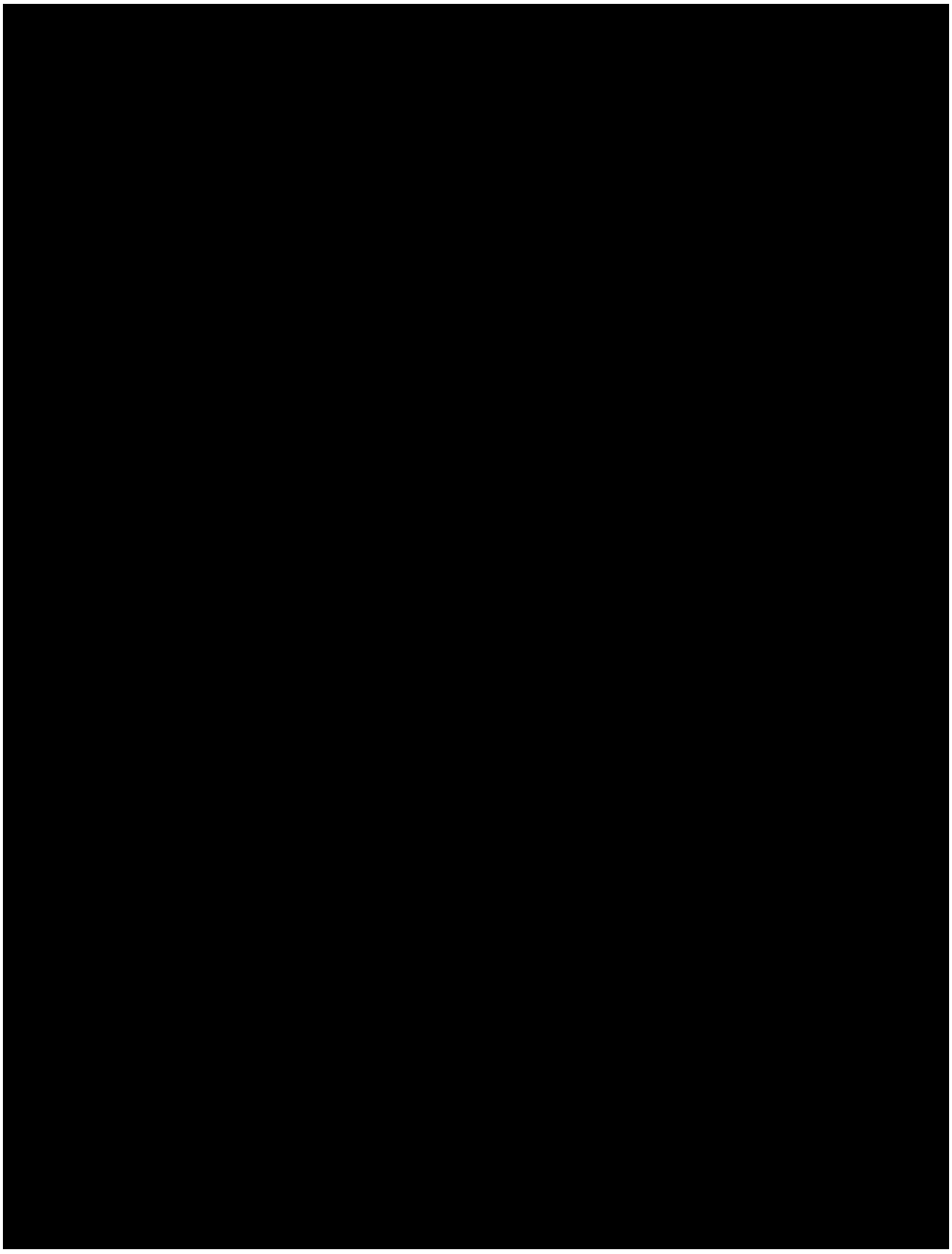


Figure 9: Direct Examination Site #4 Overview

C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

B. Actual Costs[6]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $2,511,821.

Table 7: Actual Direct Costs[7]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	113,997	104,857	218,854
Contract Costs	576,918	1,121,085	1,698,004
Material	100,414	5,149	105,563
Other Direct Charges	69,878	103,193	173,070
Total Direct Costs	861,207	1,334,285	2,195,492

Table 8: Actual Indirect Costs[8]

Indirect Costs/Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	165,475	149,330	314,805
AFUDC	229	0	229
Property Taxes	1,295	0	1,295
Total Indirect Costs	166,999	149,330	316,329

Table 9: Total Costs[9]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	1,028,206	1,483,615	2,511,821

[6] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[7] Values may not add to total due to rounding.
[8] Ibid.
[9] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 767 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $2,511,821.

End of Line 767 [redacted] TIMP Project Final Workpaper

I. LINE 800 [redacted] TIMP PROJECT

A. Background and Summary

Line 800 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a predominantly [redacted] diameter transmission line that runs approximately 26.0 miles from [redacted], through residential neighborhoods and agricultural land. The pipeline is routed across Class 1, 2, and 3 locations with 1.5 miles within High Consequence Area(s) (HCAs) and 24.5 miles within non-HCAs. This Workpaper describes the activities and costs associated with an Inspection using In-Line Inspection (ILI) and the Direct Examinations made to nine sites, of which sites two contained Safety Related Conditions (SRCs). The Project activities were located in Kings County. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $12,619,076.

SoCalGas

Final Workpaper for Line 800 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	800
Segment	[redacted]
Inspection Type	[redacted] ILI Tools
Location	Avenal, Lemoore and Kings County
Class	1, 2, 3
HCA Length	1.51 miles
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Site	1
Examination ID	[redacted]
Mitigation/Remediation Type	Band
Within HCA	No
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

SoCalGas

Final Workpaper for Line 800 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	2
Examination ID	[redacted]
Mitigation/Remediation Type	Replacement
Within HCA	No
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	3
Examination ID	[redacted]
Mitigation/Remediation Type	Replacement
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	4
Examination ID	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

SoCalGas

Final Workpaper for Line 800 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	5
Examination ID	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	6
Examination ID	[redacted]
Mitigation/Remediation Type	Replacement
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	7
Examination ID	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Final Workpaper for Line 800 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	8		
Examination ID	[redacted]		
Mitigation/Remediation Type	Soft Pad		
Within HCA	No		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Direct Examination Details			
Site	9		
Examination ID	[redacted]		
Mitigation/Remediation Type	Soft Pad		
Within HCA	No		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	5,036,135	7,582,941	12,619,076

B. Maps and Images

Figure 1: Satellite Image of Line 800 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities that during the Assessment process that occurred during the Inspections including Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 800 [redacted] for Inspection using ILI.
   a. ILI from a permanent launcher site at [redacted] to a permanent receiver site at [redacted] within SoCalGas property.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, nine Direct Examination sites were identified for validation.
   a. Direct Examination Site #1 consisted of a band installation.
   b. Direct Examination Site #2 consisted of an 18 foot replacement.
   c. Direct Examination Site #3 consisted of a 155 foot replacement.
   d. Direct Examination Site #4 consisted of soft pad repairs.
   e. Direct Examination Site #5 consisted of Soft pad repairs.
   f. Direct Examination Site #6 consisted of a 156 foot replacement.
   g. Direct Examination Site #7 consisted of soft pad repairs.
   h. Direct Examination Site #8 consisted of soft pad repairs.
   i. Direct Examination Site #9 consisted of soft pad repairs.
   j. The Project identified two Direct Examination sites containing SRCs.

3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations.
4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI and nine Direct Examinations.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
800	25.97 mi	[redacted]	[redacted]	[redacted]	No

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
800	1	No	SRC	20 ft	Band	N/A	Capital
800	2	No	SRC	24 ft	Replacement	18 ft	Capital
800	3	No	No	180 ft	Replacement	155 ft	Capital
800	4	No	No	31 ft	Soft Pad	N/A	O&M
800	5	No	No	49 ft	Soft Pad	N/A	O&M
800	6	No	No	179 ft	Replacement	156 ft	Capital
800	7	No	No	25 ft	Soft Pad	N/A	O&M
800	8	No	No	165 ft	Soft Pad	N/A	O&M
800	9	No	No	30 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 800 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The ILI took place within SoCalGas property from a permanent Launcher located at [redacted] to a permanent Receiver located at [redacted]
2. HCA Threats:
   [redacted]
3. Pipe Vintage: Multiple vintages from [redacted]
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts as long as it was scheduled to not overlap with other pipeline Inspection projects.

[redacted]

7. Customer Impacts: The Project Team determined that customer service could be maintained to core customers by utilizing CNG as an alternate source of feed during the assessment.
8. Community Impacts: No identified impacts.
9. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
10. Environmental: No identified impacts.
11. Permit Restrictions: There were no special permits or permit restrictions for this Project.
12. Land Use: No identified impacts.
13. Traffic Control: The Project Team did not identify any traffic control needs at the site.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment: There were nine Direct Examination Sites selected for validation within the Line 800 [redacted] TIMP Project.
   a. Direct Examination Site #1 consisted of a band installation.
   b. Direct Examination Site #2 consisted of an 18 foot replacement.
   c. Direct Examination Site #3 consisted of a 155 foot replacement.
   d. Direct Examination Site #4 consisted of soft pad repairs.
   e. Direct Examination Site #5 consisted of Soft pad repairs.
   f. Direct Examination Site #6 consisted of a 156 foot replacement.
   g. Direct Examination Site #7 consisted of soft pad repairs.
   h. Direct Examination Site #8 consisted of soft pad repairs.
   i. Direct Examination Site #9 consisted of soft pad repairs.

2. SRC/IRC: Direct Examination Sites #1 and #2 contained SRCs and required expedited project schedules.
   a. The SRC at Direct Examination Site #1 was identified after Inspection.
   b. The SRC at Direct Examination Site #2 was identified once exposed during the Direct Examination.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examinations could be completed without system impacts during a limited time period.
4. Customer Impacts: Customers were temporarily curtailed while repairs were made on the SRCs at Direct Examination Sites #1 and #2.
5. Community Impacts: No identified impacts.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: No identified impacts.
8. Permit Restrictions: No identified impacts.
9. Land Use: The Project Team obtained Temporary Right of Entry (TREs) for Direct Examination Sites #3 through #8.
10. Traffic Control: The Project Team did not identify any traffic control needs at the site.
11. Schedule Delay: The Project was delayed by a year due to system restraints from other SoCalGas projects.
12. Constructability:
    a. The Project Team incurred additional costs due to overtime work needed to meet the compliance date.
    b. The Project Team performed two additional survey-only digs during the Project to obtain additional information of existing welded fittings.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examination

Mobilization 1: Direct Examination Site #1 and #2		
Construction Start Date	[redacted]	
Construction Completion Date		
Mobilization 2: Direct Examination Sites #2		
Construction Start Date	[redacted]	
Construction Completion Date		
Mobilization 3: Direct Examination Sites #3 through #9		
Construction Start Date	[redacted]	
Construction Completion Date		

Table 6: Construction Timeline – SRCs

SRC Discovery Date – Site #1	[redacted]	
Repair Date – Site #1		
SRC Discovery Date – Site #2		
Repair Date – Site #2		

Final Workpaper for Line 800 [redacted] TIMP Project

Figure #2: Direction Examination Site #2 SRC Overview

Final Workpaper for Line 800 [redacted] TIMP Project

Figure #3: Direction Examination Site #2 Replacement

Figure #4: Direction Examination Site #6 Prepared Pipe for Replacement

C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas exercised due diligence in the design, planning, and construction activities for this Project to minimize or avoid costs when prudent to do so. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

B. Actual Costs[2]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $12,619,076.

Table 7: Actual Direct Costs[3]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	502,432	816,826	1,319,258
Contract Costs	2,611,903	4,439,221	7,051,124
Material	395,498	141,713	537,211
Other Direct Charges	654,820	1,344,086	1,998,906
Total Direct Costs	4,164,653	6,741,846	10,906,499

Table 8: Actual Indirect Costs[4]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	865,036	841,095	1,706,131
AFUDC	3,090	0	3,090
Property Taxes	3,356	0	3,356
Total Indirect Costs	871,482	841,095	1,712,577

Table 9: Total Costs[5]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	5,036,135	7,582,941	12,619,076

[2] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[3] Values may not add to total due to rounding.
[4] Ibid.
[5] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 800 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings the assessment. The total loaded cost of the Project is $12,619,076.

End of Line 800 [redacted] TIMP Project Final Workpaper

I. LINE 1004 PHASE [redacted] TIMP PROJECT

A. Background and Summary

Line 1004 Phase 2 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 9.8 miles from [redacted], through commercial areas and undeveloped land. The pipeline is routed across Class 1 and 3 locations with 5.79 miles within High Consequence Area(s) (HCAs) and 4.01 miles within non-HCAs. This Workpaper describes the activities associated with a TIMP Assessment that includes an Inspection using In-Line Inspection (ILI) and the Direct Examinations made to three sites. Project activities were located in Ventura County. The specific attributes of this Project are detailed in Table 1 below. The total loaded cost of the Project is $4,303,991.

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Final Workpaper for Line 1004 Phase 2 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	1004
Segment	Phase 2 – [redacted] Station
Inspection Type	[redacted] Tools
Location	Ventura County
Class	1 and 3
HCA Mileage	5.79 miles
Vintage	Multiple vintages from [redacted]
Pipe Diameter *(confidential)*	[redacted]
MAOP *(confidential)*	[redacted]
SMYS *(confidential)*	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	
Final Tool Run Date	
Inspection Due Date	
Direct Examination Details	
Site	1
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter *(confidential)*	[redacted]
MAOP *(confidential)*	
SMYS *(confidential)*	
Construction Start Date	
Construction Completion Date	

SoCalGas

Final Workpaper for Line 1004 Phase 2 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	2		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad		
Within HCA	No		
SRC/IRC	No		
Pipe Diameter *(confidential)*	[redacted]		
MAOP *(confidential)*	[redacted]		
SMYS *(confidential)*	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Direct Examination Details			
Site	3		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad		
Within HCA	No		
SRC/IRC	No		
Pipe Diameter *(confidential)*	[redacted]		
MAOP *(confidential)*	[redacted]		
SMYS *(confidential)*	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	220,870	4,083,120	4,303,991

B. Maps and Images

Figure 1: Satellite Image of Line 1004 Phase 2 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspection and Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 1004 Phase 2 [redacted] for Inspection using ILI.
   a. ILI from a temporary launcher site at [redacted] to a temporary launcher site at [redacted].
   b. The Project required the installation of a temporary launcher and receiver and associated piping.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, three Direct Examination sites were identified for validation.
   a. Direct Examination Site #2 consisted of soft pad repairs.
   b. Direct Examination Site #4 consisted of soft pad repairs.
   c. Direct Examination Site #5 consisted of soft pad repairs.
3. Post Assessment – Engineering, Design, and Constructability:
   The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations.
4. Final Project Scope: The final project scope consists of an Inspection using ILI and three Direct Examinations.

Table 2: Final Inspection Project Scope - ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Tool Type	Tool Method of Travel	Retrofits
1004	9.8 miles	[redacted]	[redacted]	[redacted]	No
1004	9.8 miles	[redacted]	[redacted]	[redacted]	No

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
1004	2	Yes	No	42 ft	Soft Pad	N/A	Capital
1004	4	No	No	25 ft	Soft Pad	N/A	O&M
1004	5	No	No	22 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 1004 Phase 2 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description:
   a. The Project Team installed a temporary launcher and associated piping at [redacted].
   b. The Project Team installed a temporary receiver and associated piping at the SoCalGas owned [redacted].
2. HCA Threats:
   [redacted]

[redacted]

3. Pipe Vintage: [redacted]
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.
7. Customer Impacts: No customer impacts.
8. Community Impacts: No identified impacts.
9. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
10. Environmental: The Project Team identified the need for abatement of coating material on existing pipe and disposal of hydrotest water.
11. Permit Restrictions: Launcher and receiver sites were both within private property, removing the need for permit approvals.
12. Land Use: No identified impacts.
13. Traffic Control: No identified impacts.

[1] A WROF threat is evaluated for applicability of preventative and mitigative measures and by identifying isolation valves to be considered in the event of a rupture.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment: There were three Direct Examination Sites selected for validation within the Line 1004 Phase 2 [redacted] TIMP Project.
   a. Direct Examination Site #2 consisted of soft pad remediation.
   b. Direct Examination Site #4 consisted of soft pad remediation.
   c. Direct Examination Site #5 consisted of soft pad remediation.
2. SRC and/or IRC: There were no Safety Related Conditions (SRCs) or Immediate Repair Conditions (IRCs) during the Direct Examinations.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examinations could be completed without system impacts.
4. Customer Impacts: No customer impacts.
5. Community Impacts: No identified impacts.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: No identified impacts.
8. Permit Restrictions: The Project Team obtained a Construction permit from the County of Ventura for Site #2.
9. Land Use: No identified impacts.
10. Traffic Control: No identified impacts.

D. Engineering, Design, and Constructability Factors – Post Assessment

The Project Team used the data collected from the Inspection and Direct Examinations during the Post Assessment step to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractors that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examination

Construction Start Date	[redacted]	
Construction Completion Date		

Figure 2: Pipeline Coating Condition at Direct Examination Site #1

Figure 3: Direct Examination Site #2 Overview

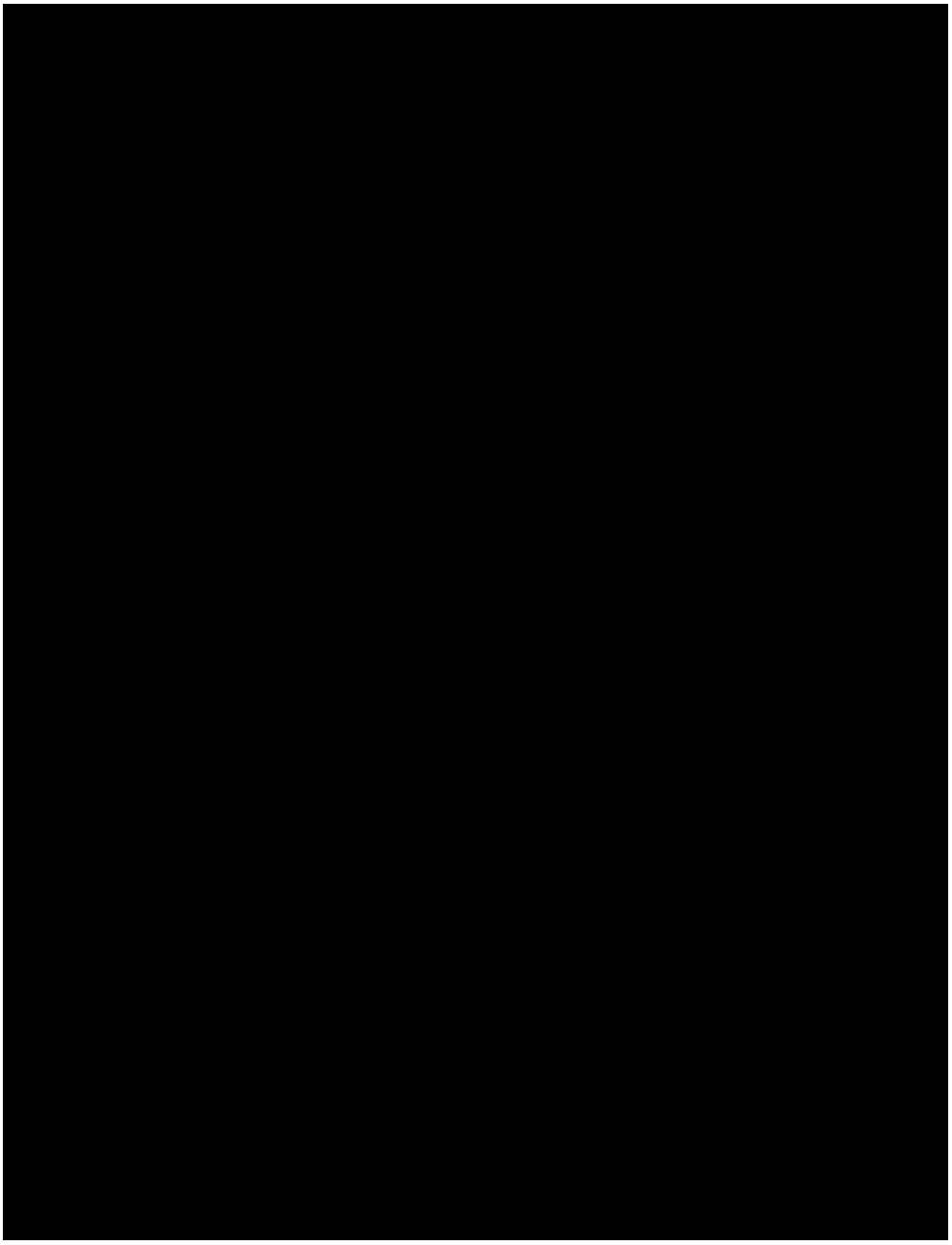
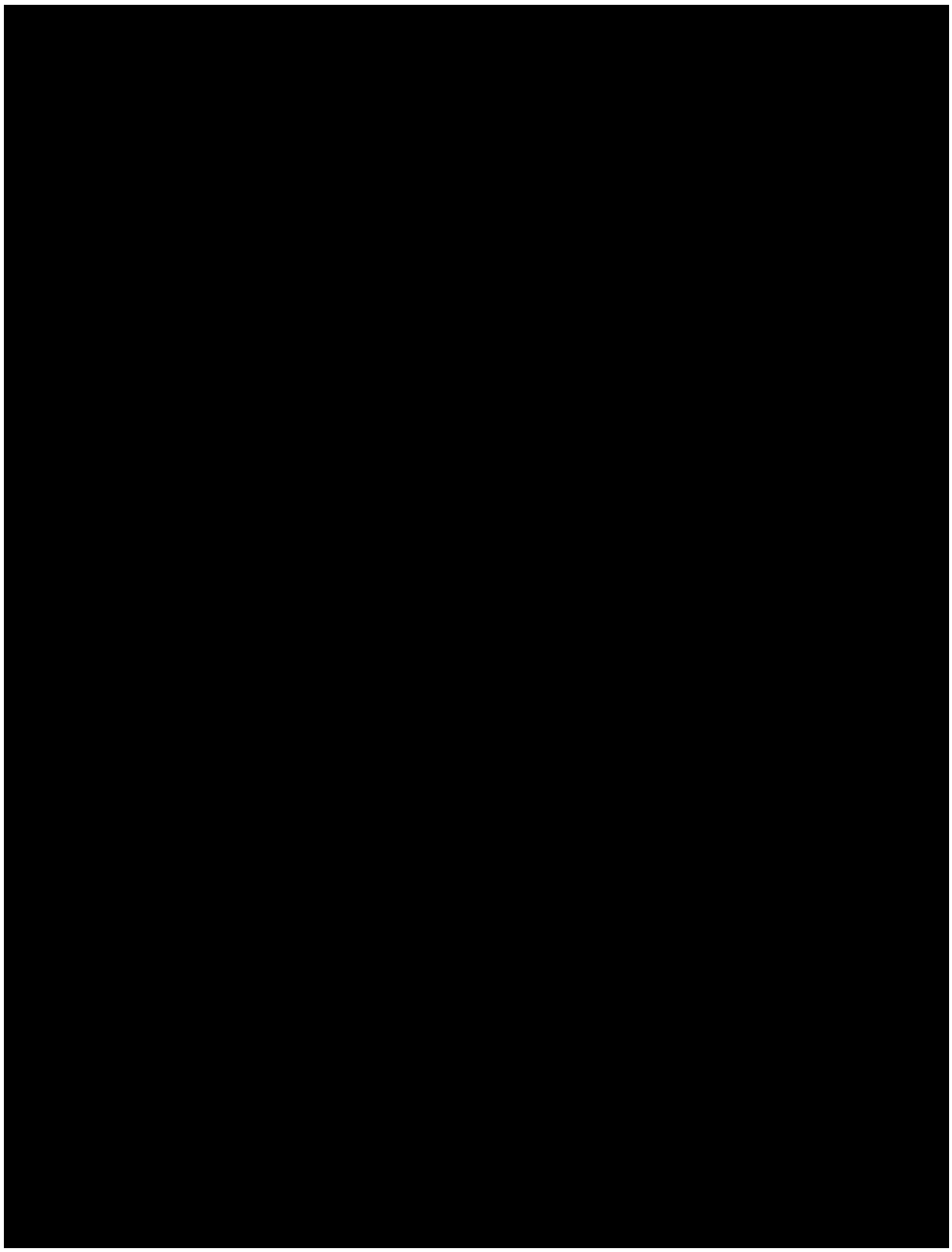


Figure 4: Direct Examination Site #2 Overview



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

B. Actual Costs[2]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $4,303,991.

Table 6: Actual Direct Costs[3]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	13,871	336,311	350,182
Contract Costs	13,978	1,920,219	1,934,197
Material	112,329	127,823	240,153
Other Direct Charges	14,834	1,361,504	1,376,338
Total Direct Costs	155,013	3,745,857	3,900,870

Table 7: Actual Indirect Costs and Total Costs[4]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	21,722	337,263	358,986
AFUDC	37,451	0	37,451
Property Taxes	6,684	0	6,684
Total Indirect Costs	65,858	337,263	403,121

Table 8: Total Costs[5]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	220,870	4,083,120	4,303,991

[2] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[3] Values may not add to total due to rounding.
[4] Ibid.
[5] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 1004 Phase 2 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $4,303,991.

End of Line 1004 Phase 2 [redacted] TIMP Project Final Workpaper

I. LINE 1010 [redacted] TIMP PROJECT

A. Background and Summary

Line 1010 [redacted] the Transmission Integrity Management Program (TIMP) Project assessed a predominantly [redacted] diameter transmission line that runs approximately 31.7 miles from [redacted]. The pipeline is routed across Class 1, 2, and 3 locations with 1.0 mile within High Consequence Areas (HCAs) and 30.7 miles within non-HCAs. This Workpaper describes the activities and costs associated with an Inspection using In-Line Inspection (ILI) and the Direct Examinations made to two sites. The Workpaper activities were located in Santa Barbra County. The specific attributes of this Project are detailed in Table 1 below. The total loaded cost of the Project is $3,186,680.

SoCalGas

Final Workpaper for Line 1010 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	1010
Segment	[redacted]
Inspection Type	[redacted] ILI Tools
Location	Santa Barbra county
Class	1, 2, 3
HCA Mileage	1.0 mile
Vintage	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Site	1
Examination ID	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

SoCalGas

Final Workpaper for Line 1010 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	2		
Examination ID	[redacted]		
Mitigation/Remediation Type	Soft Pad		
Within HCA	No		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	0	3,186,680	3,186,680

B. Maps and Images

Figure 1: Satellite Image of Line 1010 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre Assessment, Inspection, Direct Examination, and Post Assessment. This Workpaper outlines construction activities during the Assessment process that typically occur during the Inspection including Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2, and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 1010 [redacted] for Inspection using ILI.
   a. ILI from an existing permanent launcher within [redacted] to existing permanent receiver within [redacted].
   b. The Project required a temporary filter separator and associated piping installed within [redacted].
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, two Direct Examination sites were identified for validation.
   a. Direct Examination Site #1 consisted of soft pad repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
3. Post Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations or remediations and involved additional preventative and mitigative measures to enhance the overall integrity and safety of the pipeline.

4. Final Project Scope: The final project scope of this Workpaper includes Inspection of 31.7 miles of Line 1010 using a traditional ILI from [redacted] and two Direct Examinations.

Table 2: Final Inspection Project Scope - ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
1010	31.7 miles	[redacted]	[redacted]	[redacted]	No

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
1010	1	No	No	19 ft	Soft Pad	N/A	O&M
1010	2	No	No	33 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 1010 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The Inspection started at an existing permanent launcher site within [redacted] and ended at a permanent receiver site within [redacted].

[redacted]

2. HCA Threats:
   [redacted]
3. Pipe Vintage: [redacted]
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.
7. Customer Impacts: No customer impacts.
8. Community Impacts: No identified impacts.
9. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
10. Environmental: No identified impacts.
11. Permit Restrictions: No identified impacts.
12. Land Use: The Project Team obtained a Temporary Right of Entry (TRE) for nearby private property to be utilized as a laydown yard for the Inspection.

[redacted]

13. Traffic Control: No identified impacts.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas initiated the planning process for the Line 1010 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Engineering Assessment: There were two Direct Examination Sites selected for validation within the Line 1010 [redacted] Project.
   a. Direct Examination Site #1 consisted of soft pad repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
2. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examination could be completed without system impacts.
3. Customer Impacts: No customer impacts.
4. Community Impacts: No identified issues.
5. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
6. Environmental: No identified impacts.
7. Permit Restrictions: No identified impacts.
8. Land Use: The Project Team obtained a TRE for nearby private property to be utilized as a laydown yard for Direct Examination Site #1 and Site #2.
9. Traffic Control: No identified impacts.

D. Engineering, Design, and Constructability Factors – Post Assessment

During the Post-Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractors that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examination

Mobilization 1: Direct Examination Sites #1, #2		
Construction Start Date	[redacted]	
Construction Completion Date		

Figure 2: Direct Examination Site #1 Overview

Figure 3: Direct Examination Site #1 Coating Overview

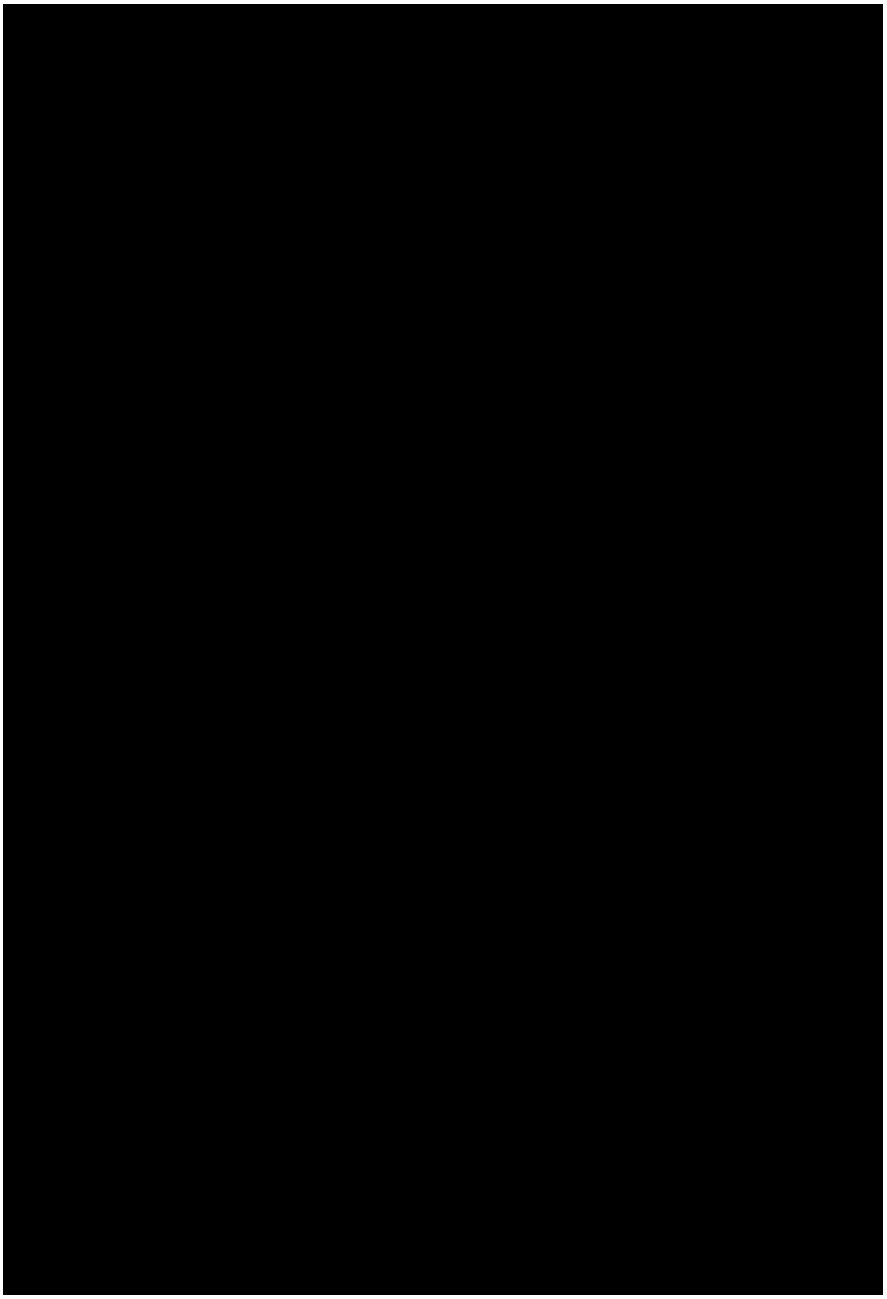


Figure 4: [redacted] Pre-Run 2)

C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

Final Workpaper for Line 1010 [redacted] TIMP Project

B. Actual Costs[4]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $3,186,680.

Table 6: Actual Direct Costs[5]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	0	539,086	539,086
Contract Costs	0	1,291,249	1,291,249
Material	0	36,450	36,450
Other Direct Charges	0	891,395	891,395
Total Direct Costs	0	2,758,180	2,758,180

Table 7: Actual Indirect Costs[6]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	0	426,091	426,091
AFUDC	0	2,100	2,100
Property Taxes	0	309	309
Total Indirect Costs	0	428,500	428,500

Table 8: Total Costs[7]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	0	3,186,680	3,186,680

[4] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[5] Values may not add to total due to rounding.
[6] Ibid.
[7] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 1010 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $3,186,680.

End of Line 1010 [redacted] TIMP Project Final Workpaper

I. LINE 1013 AND LINE 1015 [redacted] TIMP PROJECT

A. Background and Summary

Line 1013 and Line 1015 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a predominantly [redacted] diameter transmission line that runs approximately 14.37 miles from [redacted], through residential neighborhoods and commercial areas. The pipeline is routed across [redacted] locations with 14.0 miles within High Consequence Area(s) (HCAs) and 0.4 miles within non-HCAs locations. This Workpaper describes the activities associated with a TIMP Assessment that includes an Inspection using In-Line Inspection (ILI) and the Direct Examinations made to two sites. The Project activities were located in the cities of Brea, Fullerton, Placentia, and Santa Ana. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $2,293,528.

SoCalGas

Final Workpaper for Line 1013 and Line 1015 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	1013 and 1015
Segment	[redacted]
Inspection Type	[redacted] ILI Tools
Location	Brea, Santa Ana
Class	[redacted]
HCA Mileage	14.0 miles
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Site	1
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

SoCalGas

Final Workpaper for Line 1013 and Line 1015 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	2		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	0	2,293,528	2,293,528

B. Maps and Images

Figure 1: Satellite Image of Line 1013 and Line 1015 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II),TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspection and Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 1013 and Line 1015 [redacted] for Inspection using ILI.
   a. ILI from a permanent launcher site at [redacted] to a temporary receiver site on SoCalGas property at the intersection of [redacted].
   b. Line 1013 and Line 1015 were inspected as one continuous pipeline.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, two Direct Examination sites were identified for validation.
   a. Direct Examination Site #1 consisted of soft pad repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
3. Post Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations.
4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI and two Direct Examinations.

Table 2: Final Inspection Project Scope - ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
1013	4.672 mi	[redacted]	[redacted]	[redacted]	No
1013	4.672 mi	[redacted]	[redacted]	[redacted]	No
1015	9.545 mi	[redacted]	[redacted]	[redacted]	No
1015	9.545 mi	[redacted]	[redacted]	[redacted]	No

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
1013	1	Yes	No	42 ft	Soft Pad	N/A	O&M
1013	2	Yes	No	34 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Planning Factors – Inspection

SoCalGas initiated the planning process for the Line 1013 and Line 1015 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description:
   a. A permanent launcher was located on SoCalGas property at [redacted].

[redacted]

b. A temporary receiver, filter separator, and associated piping were installed on SoCalGas property at the intersection of [redacted].

2. HCA Threats:
   [redacted]
3. Pipe Vintage: Multiple vintages from [redacted].
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts during summer conditions with alternate feed from adjacent pipelines.
7. Customer Impacts: No customer impacts.
8. Community Impacts: Traffic impacts and occasional noise.
9. Environmental: No identified impacts.
10. Permit Restrictions: No identified impacts.
11. Land Use: No identified impacts.

[redacted]

12. Traffic Control: No identified impacts.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment: There were two Direct Examination Sites selected for validation of the ILI within the Line 1013 and Line 1015 [redacted] TIMP Project.
   a. Direct Examination Site #1 consisted of soft pad repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
2. SRC/IRC: There were no SRCs or IRCs during the Direct Examinations.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examination could be completed without system impacts.
4. Customer Impacts: No customer impacts.
5. Community Impacts: Traffic impacts and occasional noise.
6. Substructures: No identified impacts.
7. Environmental: No identified impacts.
8. Permit Restrictions: The Project Team obtained encroachment permits from the City of Placentia and the City of Fullerton.
9. Land Use: No identified impacts.
10. Traffic Control: The Project Team obtained approval for traffic control plans from the City of Placentia and the City of Fullerton for the Direct Examinations.

D. Engineering, Design, and Constructability Factors – Post Assessment

During the Post Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examination

Construction Start Date	[redacted]	
Construction Completion Date		

Figure 2: Direct Examination Site #1 Overview

Figure 3: Direct Examination Site #2 Overview

C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas exercised due diligence in the design, planning, and construction activities for this Project to minimize or avoid costs when prudent to do so. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

B. Actual Costs[3]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $2,293,528.

Table 6: Actual Direct Costs[4]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	0	184,802	184,802
Contract Costs	0	1,184,053	1,184,053
Material	0	261,416	261,416
Other Direct Charges	0	422,856	422,856
Total Direct Costs	0	2,053,127	2,053,127

Table 7: Actual Indirect Costs[5]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	0	239,443	239,443
AFUDC	0	774	774
Property Taxes	0	184	184
Total Indirect Costs	0	240,401	240,401

Table 8: Total Costs[6]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	0	2,293,528	2,293,528

[3] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[4] Values may not add to total due to rounding.
[5] Ibid.
[6] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 1013 and Line 1015 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $2,293,528.

End of Line 1013 and Line 1015 [redacted] TIMP Project Final Workpaper

I. LINE 1014 AND LINE 2006 [redacted] TIMP PROJECT

A. Background and Summary

Line 1014 and Line 2006 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 29 miles from [redacted]. The Project also assessed four short segments of [redacted] lateral pipeline associated with Line 1014 and Line 2006 using the [redacted] assessment method. The pipeline is routed across [redacted] location with 29 miles entirely within High Consequence Area(s) (HCAs). This Workpaper describes the activities and costs associated with an Inspection using In-Line Inspection (ILI) and the Direct Examinations made to seven sites, of which sites two contained Immediate Repair Conditions (IRCs). The Project activities were located in the cities of Anaheim, Buena Park, Placentia, Long Beach, and Los Angeles. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $9,030,394.

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Final Workpaper for Line 1014 and Line 2006 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	Line 1014 & Line 2006
Segment	[redacted]
Inspection Type	[redacted] ILI Tool
Location	Anaheim and Los Angeles
Class	[redacted]
HCA Mileage	29 miles
Vintage	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Line	Line 4000-118.10-X01
Site	1
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	Soft Pad, Band
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Inspection Due Date	[redacted]

Table 1: General Project Information (Continued)

Direct Examination Details	
Line	Line 4000-118.10-X02
Site	2
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	Soft Pad, Band
Within HCA	Yes
SRC/IRC	No
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Inspection Due Date	[redacted]
100% Direct Examination Details	
Line	Line 4000-118.10-X01 (Extension)
Site	3
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	Soft Pad, Band
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Inspection Due Date	[redacted]

Table 1: General Project Information (Continued)

100% Direct Examination Details	
Line	Line 2003 ID41-P1
Site	4
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Inspection Due Date	[redacted]
100% Direct Examination Details	
Line	Line 2003 ID41-P2
Site	5
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Inspection Due Date	[redacted]

SoCalGas

Final Workpaper for Line 1014 and Line 2006 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	6		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Direct Examination Details			
Site	7		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad, Replacement		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	3,159,304	5,871,090	9,030,394

B. Maps and Images

Figure 1: Satellite Image of Line 1014 and Line 2006 [redacted] TIMP Project – Inspection and Direct Examinations

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post Assessment. This report outlines construction activities during the Assessment process.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2, 3 and 4 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 1014 and Line 2006 [redacted] for Inspection using ILI.
   a. ILI from a temporary launcher site within [redacted] to a temporary receiver site on [redacted]
   b. The receiver site required the installation of a filter separator along with associated piping and valves.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection, seven Direct Examination sites were identified to both assess pipeline segments that could not accommodate an ILI tool and for validation.
   a. Direct Examination Site #1 consisted of soft pad and a band repair.
   b. Direct Examination Site #2 consisted of soft pad and band repairs.
   c. Direct Examination Site #3 consisted of soft pad and a band repair.
   d. Direct Examination Site #4 consisted of soft pad repairs.
   e. Direct Examination Site #5 consisted of soft pad repairs.
   f. Direct Examination Site #6 consisted of soft pad repairs.
   g. Direct Examination Site #7 consisted of a 39-foot replacement and soft pad repairs.

h. The Project Team identified three Immediate Repair Conditions (IRCs) at Direct Examination Sites #1, and #3.

3. Post Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations or remediation.
4. Final Project Scope: The final project scope of this Workpaper includes an Inspection using ILI and seven Direct Examinations.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Tool Type	Tool Method of Travel	Retrofits
1014	23.4 miles	[redacted]	[redacted]	[redacted]	No
2006	5.5 miles				

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
4000-118.10-X01	1	Yes	Yes	15 ft	Soft Pad, Band	N/A	Capital
4000-118.10-X02	2	Yes	No	15 ft	Soft Pad, Band	N/A	Capital
4000-118.10-X01 (Extension)	3	Yes	Yes	19 ft	Soft Pad, Band	N/A	Capital
2003 ID41-P1	4	Yes	No	41 ft	Soft Pad	N/A	O&M
2003 ID41-P2	5		No	41 ft	Soft Pad	N/A	O&M
1014	6	Yes	No	25 ft	Soft Pad	N/A	O&M
1014	7	Yes	No	50 ft	Soft Pad, Replacement	39 ft	Capital

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 1014 and Line 2006 [redacted] Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this project are as follows:

SoCalGas

Final Workpaper for Line 1014 and Line 2006 [redacted] TIMP Project

1. Site Description: The ILI from a temporary launcher site within [redacted] to a temporary receiver site on [redacted]. The receiver site required the installation of a filter separator along with associated piping and valves.
2. HCA Threats:
   [redacted]
3. Pipe Vintage: Multiple vintages from [redacted].
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized.
6. Inspection Retrofits: None.
7. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.
8. Customer Impacts: No customer impacts.
9. Community Impacts: Traffic impacts and occasional noise.
10. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
11. Environmental: No Identified impacts.
12. Permit Restrictions: The Project Team obtained approved permits from the following entities for the Inspection:

a. Encroachment Permit from the City of Placentia.
b. Encroachment Permit from the City of Anaheim.

13. Land Use: The Project Team obtained a Temporary Right of Entry (TRE) from a private landowner and from the City of Anaheim for the use of a laydown yard for the launcher site. The Project Team also obtained a temporary Right of Way (ROW) from the City of Anaheim for the use of a laydown yard at the launcher site.
14. Traffic Control: The Project Team required Traffic Control Plans (TCPs) from the City of Placentia, the City of Anaheim, and the City of Los Angeles for the installation of a temporary launcher and receiver.

C. Engineering, Design, and Constructability Factors – Direct Examination

Continuing the planning process for the Line 1014 and Line 2006 [redacted] TIMP Project, SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment:
   a. There were five [redacted] Sites selected to assess pipeline segments that could not accommodate an ILI tool within the Line 1014 and Line 2006 [redacted] TIMP Project.
      i. Direct Examination Site #1 assessed a lateral [redacted] crossover at the launcher site and contained an IRC.
      ii. Direct Examination Site #2 assessed a lateral [redacted] crossover at the launcher site.
      iii. Direct Examination Site #3 assessed a lateral [redacted] crossover at the launcher site and contained an IRC.
      iv. Direct Examination Site #4 assessed a lateral [redacted] crossover at the receiver site.

v. Direct Examination Site #5 assessed a lateral [redacted] crossover at the receiver site.

b. There were two Direct Examination Sites selected for validation within the Line 1014 and Line 2006 [redacted] TIMP Project.

i. Direct Examination Site #6 consisted of soft pad repairs.

ii. Direct Examination Site #7 consisted of a 39 foot replacement and soft pad repairs.

2. SRC/IRC: There were two IRCs during the Direct Examinations.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examination could be completed without system impacts.
4. Customer Impacts: No customer impacts.
5. Community Impacts: The Project Team mitigated community impact by means of outreach communications for all Direct Examination Sites.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: The Project Team did not identify any environmental issues that impacted the design and engineering of the Project.
8. Permit Restrictions: The Project Team obtained approved permits from the following entities:
   a. Encroachment Permit from the City of Placentia for Direct Examination Site #1, Site #2, and Site #3.
   b. Encroachment Permit from the City of Anaheim for Direct Examination Site #1, Site #2, and Site #3.
   c. Permit to Root Prune Street Trees from the City of Los Angeles for Direct Examination Site #4 and Site #5.
   d. Excavation Permit from the City of Los Angeles for Direct Examination Site #4 and Site #5.

e. Excavation Permit from the City of Buena Park, which allotted work hours from 9:00am to 3:30pm, Monday through Friday for Direct Examination Site #6.
f. Excavation Permit from the City of Long Beach, which allotted work hours from 8:30am to 3:30pm, Monday through Friday for Direct Examination Site #7.

9. Land Use: The Project Team obtained a TRE from a private landowner and from the City of Anaheim for the use of a laydown yard for Direct Examination Site #1, Site #2, and Site #3.
10. Traffic Control: The Project Team required the following TCPs:
    a. From the City of Placentia and the City of Anaheim for Direct Examination Site #1, Site #2, and Site #3.
    b. From the City of Los Angeles for Direct Examination Site #4 and Site #5.
    c. From the City of Buena Park for Direct Examination Site #6.
    d. From the City of Long Beach for Direct Examination Site #7.
11. Schedule Delay: The Project Team expected to perform Direct Examination Site #1-#5 consecutively after the ILI, but experienced schedule delays due to COVID-19. A schedule delay occurred at Direct Examination Site #7 after the length of excavation was extended.
12. Constructability: Direct Examination Site #3 was an extension of Direct Examination Site #1 and added to the scope of work because an IRC was identified and occurred six weeks after the first IRC at Direct Examination Site #1 was repaired. This discovery led to two separate events on the same segment of pipe, which drove up costs due to two pressure reductions, two repairs, and both events needing construction schedules to be expedited.

D. Engineering, Design, and Constructability Factors – Post Assessment

During the Post Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential

required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examination

Mobilization 1: Direct Examination Site #1, Site #2, and Site #3		
Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		
Mobilization 2: Direct Examination Site #4 and Site #5		
Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		
Mobilization 3: Direct Examination Site #7		
Construction Start Date	[redacted]	
Construction Completion Date		
Mobilization 4: Direct Examination Site #6		
Construction Start Date	[redacted]	
Construction Completion Date		

Table 6: Construction Timeline – IRC

SRC/IRC Discovery Date – Site #1	[redacted]	
Repair Date – Site #1		
SRC/IRC Discovery Date – Site #3		
Repair Date – Site #3		

Figure 2: Direct Examination Site #1

Figure 3: Direct Examination Site #2

Figure 4: Direct Examination Site #3

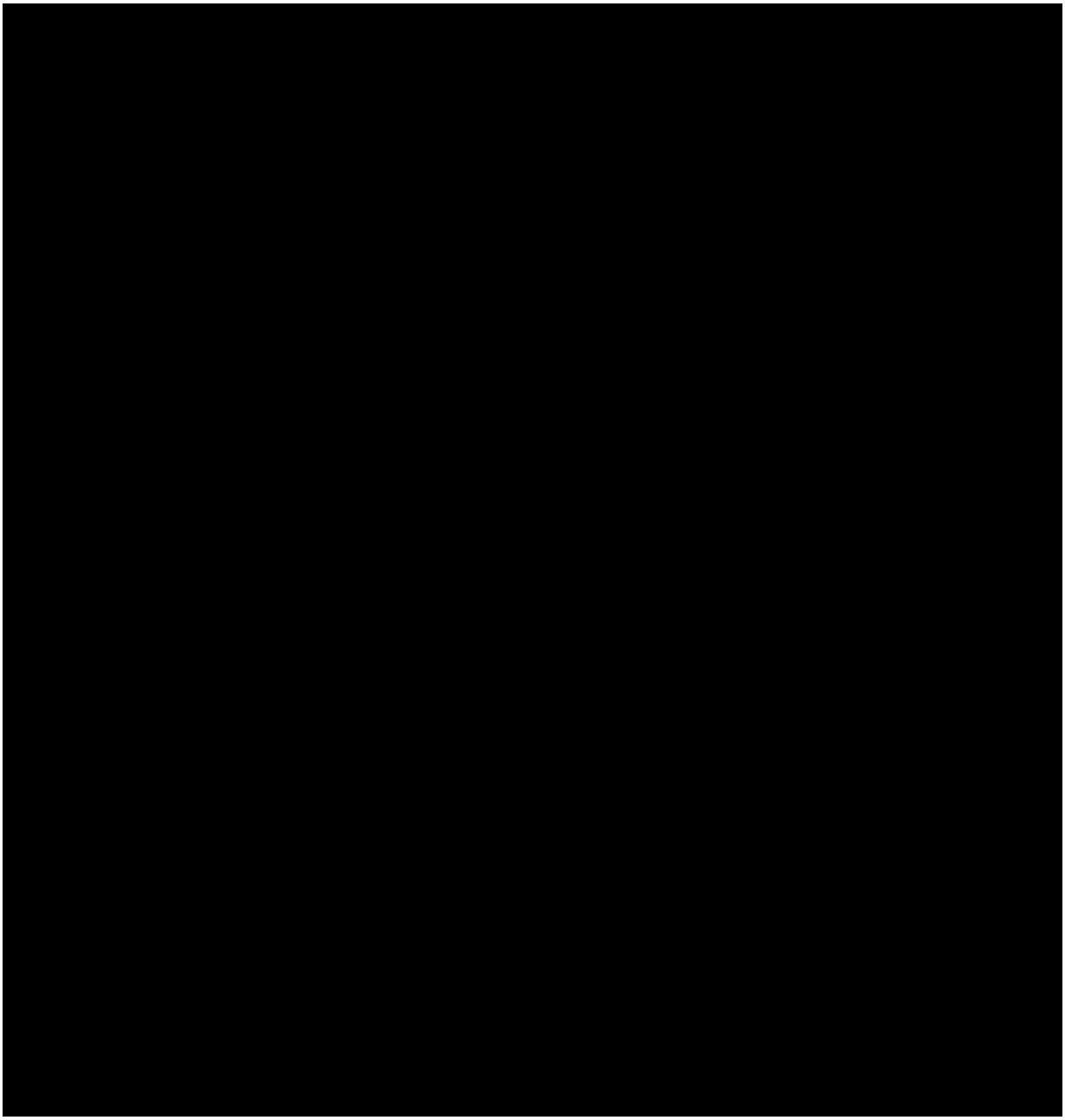

Figure 5: Direct Examination Site #4

Figure 6: Direct Examination Site #5

Figure 7: Direct Examination Site #6

Figure 8: Direct Examination Site #7

C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation, and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas exercised due diligence in the design, planning, and construction activities for this Project to minimize or avoid costs when prudent to do so. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design. Specific examples of cost efficiency actions taken on this Project were:

1. Schedule Coordination: The Project Team coordinated with another SoCalGas Project Team to use the same contractor in order to save mobilization and demobilization costs.
2. Land Use: The Project Team worked with the City Inspector to reduce the amount of required paving Direct Examination Site #7.

B. Actual Costs[1]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $9,030,394.

Table 7: Actual Direct Costs[2]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	194,806	479,791	674,597
Contract Costs	2,149,898	3,915,082	6,064,979
Material	18,508	266,796	285,304
Other Direct Charges	288,832	661,189	950,021
Total Direct Costs	2,652,043	5,322,858	7,974,902

Table 8: Actual Indirect Costs[3]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	504,854	547,657	1,052,512
AFUDC	635	575	1,210
Property Taxes	1,771	0	1,771
Total Indirect Costs	507,260	548,232	1,055,492

Table 9: Total Costs[4]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	3,159,304	5,871,090	9,030,394

[1] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[2] Values may not add to total due to rounding.
[3] Ibid.
[4] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of their integrated natural gas system by executing the Line 1014 and Line 2006 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $9,030,394.

End of Line 1014 and Line 2006 [redacted] TIMP Project Final Workpaper

I. LINE 1016 [redacted] TIMP PROJECT

A. Background and Summary

Line 1016 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 13.4 miles from [redacted]. The Project also assessed two short segments of [redacted] lateral pipeline associated with Line 1016 using the [redacted] assessment method. The pipeline is routed across Class 1, 3, 4 locations with 13.3 miles within High Consequence Area(s) (HCAs) and 0.1 miles within non-HCAs. This Workpaper describes the activities and costs associated with an Inspection using In-Line Inspection (ILI) and Direct Examinations made to four sites. The Project activities were located in the cities of Yorba Linda, Orange, Placentia, and Santa Ana. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $2,474,541.

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Final Workpaper for Line 1016 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	1016
Segment	[redacted]
Inspection Type	[redacted] ILI Tool
Location	Yorba Linda and Santa Ana
Class	1, 3, 4
HCA Length	13.4 miles
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Site	1
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Due Date	[redacted]

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Final Workpaper for Line 1016 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	2
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Due Date	[redacted]
Direct Examination Details	
Site	3
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

SoCalGas

Final Workpaper for Line 1016 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	4		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP			
SMYS			
Construction Start Date			
Construction Completion Date			
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	0	2,474,541	2,474,541

B. Maps and Images

Figure 1: Satellite Image of Line 1016 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspection and Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2, and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 1016 [redacted] TIMP Project for Inspection using ILI.
   a. ILI from a temporary launcher site within [redacted] to a permanent receiver site within [redacted].
   b. The Project required temporary installation of a launcher barrel, an adapter, and associated piping at the launcher site.
2. Direct Examination – Engineering, Design, and Constructability: Four Direct Examination sites were identified to either assess pipeline segments that could not accommodate an ILI tool or for validation.
   a. [redacted] Site #1 consisted of soft pad repairs.
   b. [redacted] Site #2 consisted of soft pad repairs.
   c. Direct Examination Site #3 consisted of soft pad repairs.
   d. Direct Examination Site #4 consisted of soft pad repairs.
3. Post Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations.
4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI and four Direct Examinations.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
1016	13.4 mi	[redacted]	[redacted]	[redacted]	No

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
1016BR1	1	Yes	No	21 ft	Soft Pad	N/A	O&M
1016ST3	2	Yes	No	3 ft	Soft Pad	N/A	O&M
1016	3	Yes	No	15 ft	Soft Pad	N/A	O&M
1016	4	Yes	No	15 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 1016 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The Inspection started at a temporary launcher site within [redacted] and ended at a permanent receiver site within [redacted].
2. HCA Threats:
   [redacted]

[redacted]

3. Pipe Vintage: Multiple vintages from [redacted].
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.
7. Customer Impacts: No customer impacts.
8. Community Impacts: The Project had minimal community impact because the launcher site was in a residential area. The Project Team coordinated outreach communications for the Inspection.
9. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
10. Environmental: No identified impacts.
11. Permit Restrictions: No identified impacts.
12. Land Use: The Project team utilized company facilities as laydown yards and as work areas.
13. Traffic Control: No identified impacts.

[redacted]

14. Constructability: The Project Team coordinated temporary changes at the launcher site to ensure the temporary installations for the Inspection could be completed without system impacts.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment:
   a. There were two [redacted] Sites selected to assess pipeline segments that could not accommodate an ILI tool within the Line 1016 [redacted] TIMP Project.
      i. Direct Examination Site #1 consisted of soft pad repairs.
      ii. Direct Examination Site #2 consisted of soft pad repairs.
   b. There were two Direct Examination Sites selected for validation within the Line 1016 [redacted] TIMP Project.
      i. Direct Examination Site #3 consisted of soft pad repairs.
      ii. Direct Examination Site #4 consisted of soft pad repairs.
2. SRC/IRC: There were no Safety Related Conditions (SRCs) or Immediate Repair Conditions (IRCs) during the Direct Examinations.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examinations could be completed with no significant system impacts. This system analysis restricted construction activities to the month of April for Direct Examination Sites #2, #3, and #4.
4. Customer Impacts: No customer impacts.
5. Community Impacts:
   a. The Project Team mitigated community impact by means of outreach communications for Direct Examination Site #1 and Direct Examination Site #2.

b. The Project Team provided required written notification of the Project to nearby establishments for Direct Examination Site #4.

6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: Direct Examination Site #2 is located within the [redacted]. The Project Team identified and coordinated accordingly for the following environmental concerns at Direct Examination Site #2:
   a. Nesting bird surveying.
   b. Active biological monitoring.
   c. Excavation activity monitoring by a qualified arborist.
   d. Storm Water and Non-Storm Water Best Management Practices (BMP) to ensure work materials did not enter nearby waterways.
8. Permit Restrictions: The Project Team obtained approved permits from the following entities:
   a. Encroachment Permit from the City of Orange Public Works Department for Direct Examination Site #1.
   b. Utility Permit from the City of Santa Ana Public Works Agency for Direct Examination Sites #2 and #4.
9. Land Use: The Project Team coordinated the use of the following land areas for the Direct Examinations:
   a. All Direct Examination Sites utilized company facilities as laydown yards.
   b. Utilized existing Right of Way to access Direct Examination Site #2 within [redacted].
10. Traffic Control: The Project Team obtained approved traffic control plans (TCPs) from the following entities:
    a. City of Orange for Direct Examination Site #1.
    b. City of Santa Ana for Direct Examination Site #4.

D. Engineering, Design, and Constructability Factors – Post Assessment

During the Post Assessment step, the Project Team used the data collected from the Inspections and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examinations

Mobilization 1: Direct Examination Site #1		
Construction Start Date	[redacted]	
Construction Completion Date		
Mobilization 2: Direct Examination Sites #2, #3, and #4		
Construction Start Date	[redacted]	
Construction Completion Date		

Figure 2: Temporary Launcher Site within [redacted]

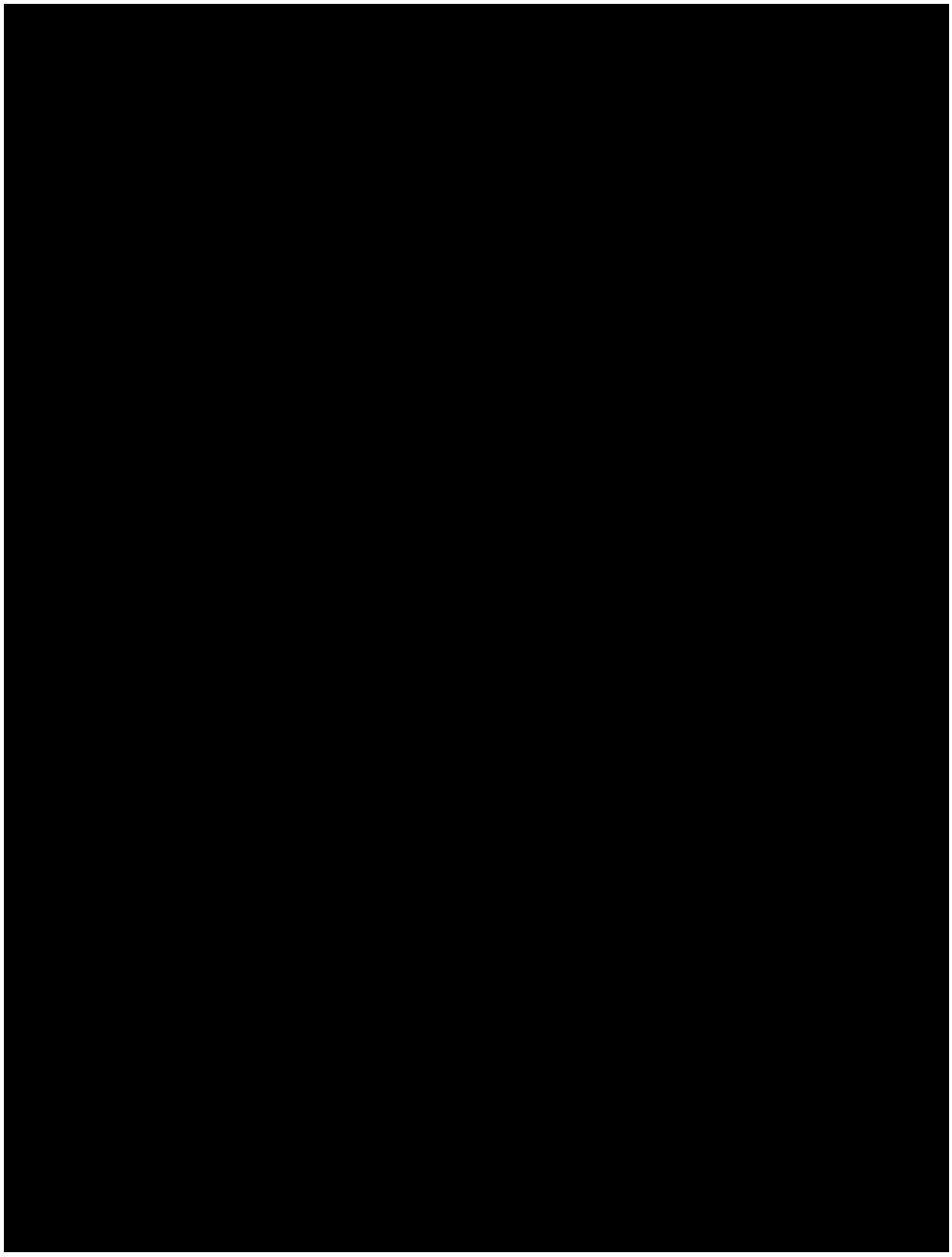


Figure 3: Temporary Launcher Site within [redacted]

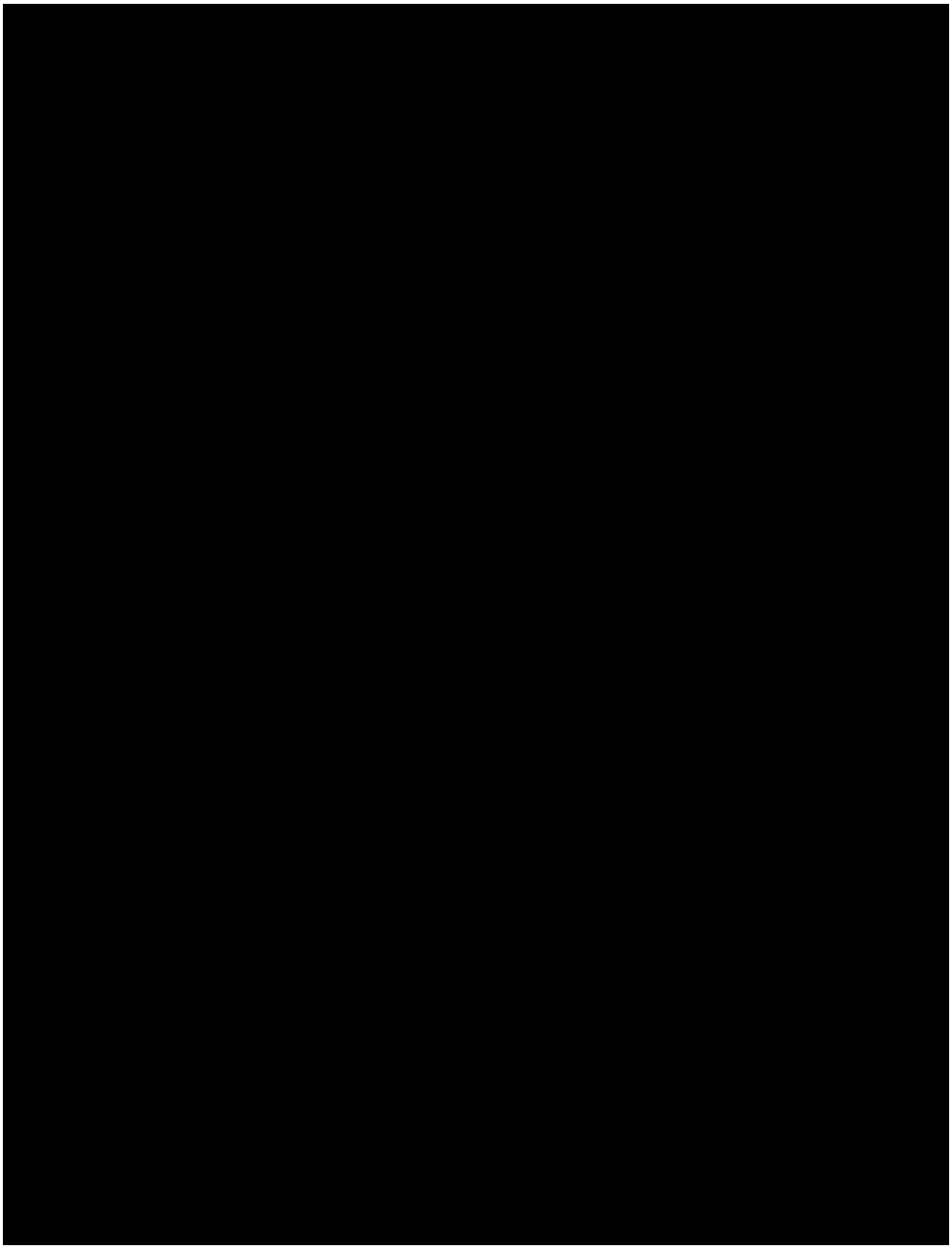
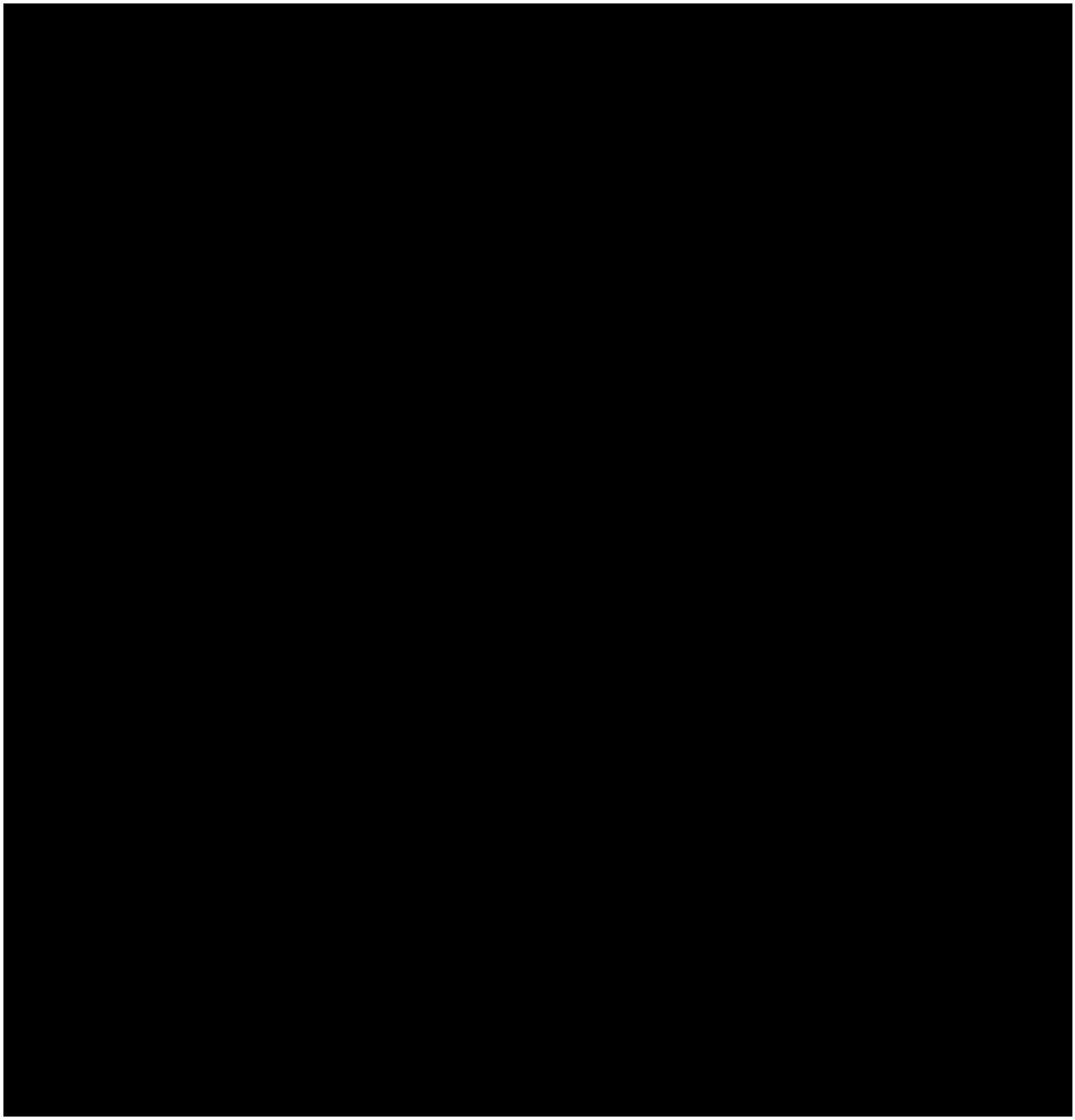


Figure 4: Direct Assessment Site #1



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design. Specific examples of cost efficiency actions taken on this Project were:

1. Land Use: The Project Team utilized company facilities as laydown areas and work areas.

B. Actual Costs[2]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $2,474,541.

Table 6: Actual Direct Costs[3]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	0	333,148	333,148
Contract Costs	0	1,402,737	1,402,737
Material	0	42,090	42,090
Other Direct Charges	0	350,956	350,956
Total Direct Costs	0	2,128,930	2,128,930

Table 7: Actual Indirect Costs[4]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	0	345,460	345,460
AFUDC	0	130	130
Property Taxes	0	20	20
Total Indirect Costs	0	345,611	345,611

Table 8: Total Costs[5]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	0	2,474,541	2,474,541

[2] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[3] Values may not add to total due to rounding.
[4] Ibid.
[5] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 1016 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $2,474,541.

End of Line 1016 [redacted] TIMP Project Final Workpaper

I. LINE 1017 PHASE 1 [redacted] TIMP PROJECT

A. Background and Summary

Line 1017 Phase 1 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 6.4 miles from [redacted], through primarily commercial areas. The pipeline is routed across [redacted] locations entirely within High Consequence Area(s) (HCA)s. This Workpaper describes the activities and costs associated with an Inspection using In-Line Inspection (ILI) and the Direct Examinations made to two sites, of which both sites contained Immediate Repair Conditions (IRCs). The Project activities were located in Santa Ana and Costa Mesa. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $5,847,928.

SoCalGas

Final Workpaper for Line 1017 Phase 1 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	1017
Segment	Phase 1 – [redacted]
Inspection Type	[redacted] ILI Tool
Location	Santa Ana and Costa Mesa
Class	[redacted]
HCA Length	6.4 miles
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted] and [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]

Final Workpaper for Line 1017 Phase 1 [redacted]
TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	1		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Replacement, Soft Pad		
Within HCA	Yes		
SRC/IRC	Yes		
SRC/IRC Discovery Date	[redacted]		
Repair Date			
Pipe Diameter			
MAOP			
SMYS			
Construction Start Date			
Construction Completion Date			
Direct Examination Details			
Site	2		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Band, Soft Pad		
Within HCA	Yes		
SRC/IRC	Yes		
SRC/IRC Discovery Date	[redacted]		
Repair Date			
Pipe Diameter			
MAOP			
SMYS			
Construction Start Date			
Construction Completion Date			
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	2,881,714	2,966,214	5,847,928

B. Maps and Images

Figure 1: Satellite Image of Line 1017 Phase 1 [redacted]
[redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspection and Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 1017 Phase 1 for Inspection using ILI.
   a. ILI from a permanent launcher site at [redacted] to a temporary receiver site at the intersection of [redacted].
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspections using ILI, two Direct Examination sites were identified for validation.
   a. Direct Examination Site #1 consisted of Replacement and Soft Pad repairs.
   b. Direct Examination Site #2 consisted of Band and Soft Pad repairs.
   c. The Project identified two Direct Examination Sites containing Immediate Repair Conditions (IRCs).
3. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI and two Direct Examinations.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
1017	6.4 mi	[redacted]	[redacted]	[redacted]	No

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
1017	1	Yes	Yes	41 ft	Replacement, Soft Pad	31 ft	Capital
1017	2	Yes	Yes	15 ft	Band, Soft Pad	N/A	Capital

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 1017 Phase 1 [redacted] by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: ILI was performed on a segment of Line 1017 from a permanent Launcher site at [redacted] to a temporary launcher at the intersection of [redacted].
2. HCA Threats:
   [redacted]
   [redacted]

3. Pipe Vintage: Multiple vintages from [redacted].
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline should be inspected in the Spring to reduce system impacts.
7. Customer Impacts: The Project Team coordinated with one non-core customer to perform a required curtailment during the customer's planned maintenance outage.
8. Community Impacts: Traffic impacts and occasional noise.
9. Substructures: The Project Team identified multiple utilities prior to construction and included them in the Project design.
10. Environmental: No identified impacts.
11. Permit Restrictions:
    a. The Project Team obtained encroachment permits from CalTrans and Orange County.
    b. The Project Team obtained a work permit from the City of Costa Mesa.
12. Land Use: No identified impacts.
13. Traffic Control: The Project Team obtained approval of a Traffic Control Plan (TCP) for installation of the temporary receiver in Costa Mesa by utilizing closure of multiple lanes on Santa Ana Avenue, striping, and signage.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment:
   a. There were two Direct Examination Sites selected for validation of the ILI within the Line 1017 Phase 1 [redacted] TIMP Project.
      i. Direct Examination Site #1 consisted of a 31 foot Replacement and Soft Pad repairs.
      ii. Direct Examination Site #2 consisted of a Repair Band and Soft Pad repairs.
2. SRC/IRC: Direct Examination Sites #1 and #2 resulted in an IRC and required expedited project schedules.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examinations could be completed without system impacts.
4. Customer Impacts: The Project Team determined that an emergency curtailment of one customer was required in order to perform repairs at Site #1.
5. Community Impacts: Traffic impacts and occasional noise.
6. Substructures: The Project Team encountered existing gas and water lines at Site #2 during the repair process.
7. Environmental: No identified impacts.
8. Permit Restrictions: The Project Team obtained approval from the City of Santa Ana and the City of Costa Mesa to complete the expedited repairs.
9. Land Use: No identified impacts.
10. Traffic Control: The Project required traffic control at Site #1 on [redacted] and at Site #2 at the intersection of [redacted] for repairs in the street.

11. Constructability:
    a. The Project Team perfomed 24-hour workdays for repairs at Site #1 to complete the emergency repairs as soon as possible.
    b. The Project Team could only perform repairs at Site #2 during nighttime due to its location in a major intersection.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team will use the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis is still pending and will be used to determine if additional examinations are required to enhance the overall integrity and safety of the pipeline.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]
Construction Completion Date	
Inspection Due Date	

Table 5: Construction Timeline – Direct Examination

Mobilization 1: Direct Examination Site #1	
Construction Start Date	[redacted]
Construction Completion Date	
Mobilization 2: Direct Examination Site #2	
Construction Start Date	[redacted]
Construction Completion Date	

Table 6: Construction Timeline – IRC

SRC/IRC Discovery Date – Site #1	[redacted]
Repair Date – Site #1	
SRC/IRC Discovery Date – Site #2	
Repair Date – Site #2	

Figure 2: [redacted] Inspection Tool

Figure 3: Temporary Receiver Site Installation

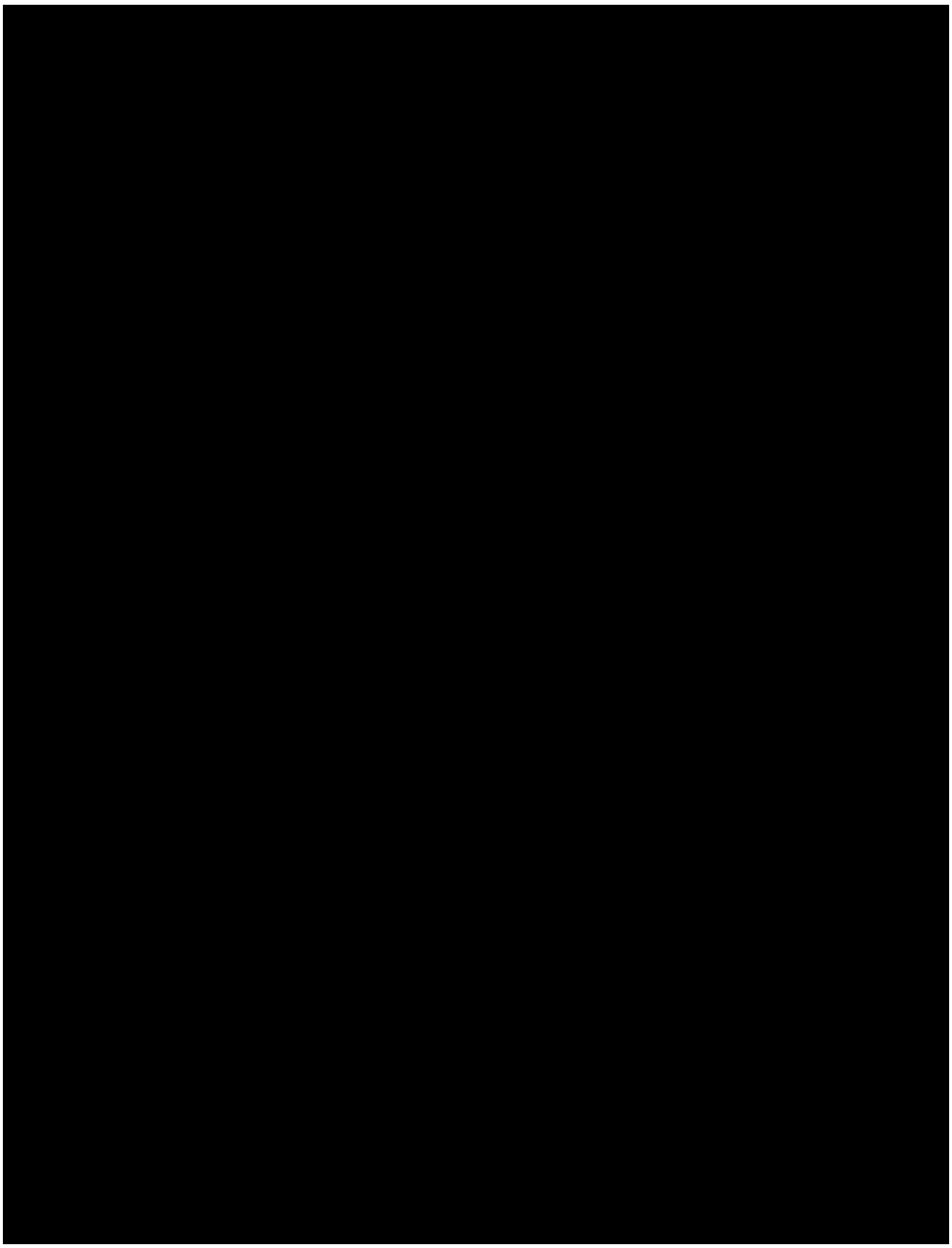
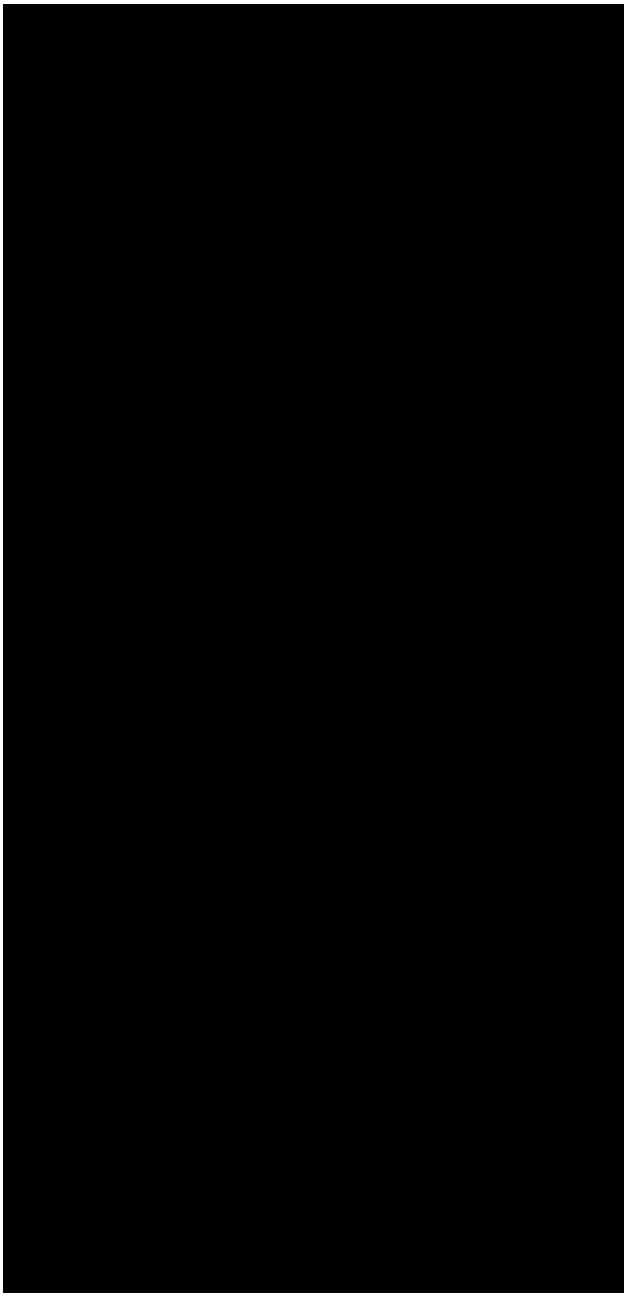


Figure 4: Site #1 Replaced Pipeline Segment



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas exercised due diligence in the design, planning, and construction activities for this Project to minimize or avoid costs when prudent to do so. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the Project plan and design.

B. Actual Costs[1]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $5,847,928.

Table 7: Actual Direct Costs[2]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	236,208	327,461	563,670
Contract Costs	1,702,980	1,276,293	2,979,273
Material	299,048	264,596	563,644
Other Direct Charges	95,368	712,315	807,682
Total Direct Costs	2,333,604	2,580,665	4,914,269

Table 8: Actual Indirect Costs[3]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	542,955	385,550	928,505
AFUDC	4,350	0	4,350
Property Taxes	804	0	804
Total Indirect Costs	548,110	385,550	933,659

Table 9: Total Costs[4]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	2,881,714	2,966,214	5,847,928

[1] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[2] Values may not add to total due to rounding.
[3] Ibid.
[4] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the the Line 1017 Phase 1 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $5,847,928.

End of Line 1017 Phase 1 Chestnut and [redacted] TIMP Project Final Workpaper

I. LINE 1018 [redacted] TIMP PROJECT

A. Background and Summary

Line 1018 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 24.92 miles from [redacted]. The pipeline is routed across Class 1,2, and 3 locations with 24.28 miles within High Consequence Area(s) (HCAs) and 0.64 miles within non-HCAs. This Workpaper describes the activities and costs associated with an Inspection using In-Line Inspection (ILI) located at [redacted] in Santa Ana and [redacted] and the Direct Examinations made to two sites located in Dana Point and San Juan Capistrano. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $2,507,039.

SoCalGas

Final Workpaper for Line 1018 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details			
Pipeline	1018		
Segment	[redacted]		
Inspection Type	[redacted] ILI Tool		
Location	Santa Ana and Dana Point		
Class	1, 2, 3		
HCA Length	24.28 miles		
Vintage	Multiple vintages from [redacted]		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	Multiple SMYS values from [redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Final Tool Run Date	[redacted]		
Inspection Due Date	[redacted]		
Direct Examination Details			
Site	1		
Examination ID	[redacted]		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Direct Examination Details			
Site	2		
Examination ID	[redacted]		
Repair Type	Soft Pad		
Within HCA	Yes		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	412,609	2,094,430	2,507,039

B. Maps and Images

Figure 1: Satellite Image of Line 1018 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post Assessment. This Workpaper outlines construction activities associated with the Inspection including Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 1018 [redacted] for Inspection using ILI.
   a. ILI from permanent launcher site within [redacted] to a temporary receiver site within [redacted].
   b. The Project installed a temporary receiver, filter separator, and associated piping at [redacted].
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, two Direct Examination sites were identified for validation.
   a. Direct Examination Site #1 consisted of a soft pad repair.
   b. Direct Examination Site #2 consisted of a soft pad repair.
3. Final Project Scope: The final project scope of this Workpaper includes an Inspection using ILI and two Direct Examinations requiring soft pad repairs.

Table 2: Final Inspection Project Scope - ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
1018	24.9 mi	[redacted]	[redacted]	[redacted]	No

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
1018	1	Yes	No	17 ft	Soft Pad	N/A	O&M
1018	2	Yes	No	42 ft	Soft Pad	N/A	Capital

B. Engineering, Design, and Planning Factors – Inspection

SoCalGas initiated the planning process for the Line 1018 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The launcher and receiver sites were both within company stations.
2. HCA Threats:
   [redacted]

[redacted]

[redacted]

3. Pipe Vintage: Multiple vintages from [redacted]
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.
7. Customer Impacts: No customer impacts.
8. Community Impacts: No identified impacts.
9. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
10. Environmental: No identified impacts.
11. Permit Restrictions: No identified impacts.
12. Land Use: The Project Team performed all work within company owned facilities.
13. Traffic Control: No identified impacts.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas initiated the planning process for the Line 1018 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Engineering Assessment: There were 2 Direct Examination Sites selected for validation within the Line 1018 [redacted] TIMP Project.
   a. Direct Examination Site #1 consisted of a soft pad repair.
   b. Direct Examination Site #2 consisted of a soft pad repair.
2. SRC and/or IRC: There were no SRCs or IRCs during the Direct Examinations.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examination could be completed without system impacts.
4. Customer Impacts: No customer impacts.
   Community Impacts: No customer impacts.
5. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
   Environmental: No identified impacts.
6. Permit Restrictions: The Project Team obtained permits for the Project which included Encroachment Permits for the City of Dana Point and the City of San Juan Capistrano.
7. Land Use: No identified impacts.
8. Traffic Control: The Project required flaggers at Direct Examination Site 2 due to the location being within a pedestrian pathway.

D. Engineering, Design, and Constructability Factors – Post Assessment

During the Post Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis is still pending and will be used to determine if additional examinations are required to enhance the overall integrity and safety of the pipeline.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractors that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examination

Construction Start Date	[redacted]	
Construction Completion Date		

Figure 2: In-Line Inspection Tool

Figure 3: Direct Examination Site #1 Rain Impact

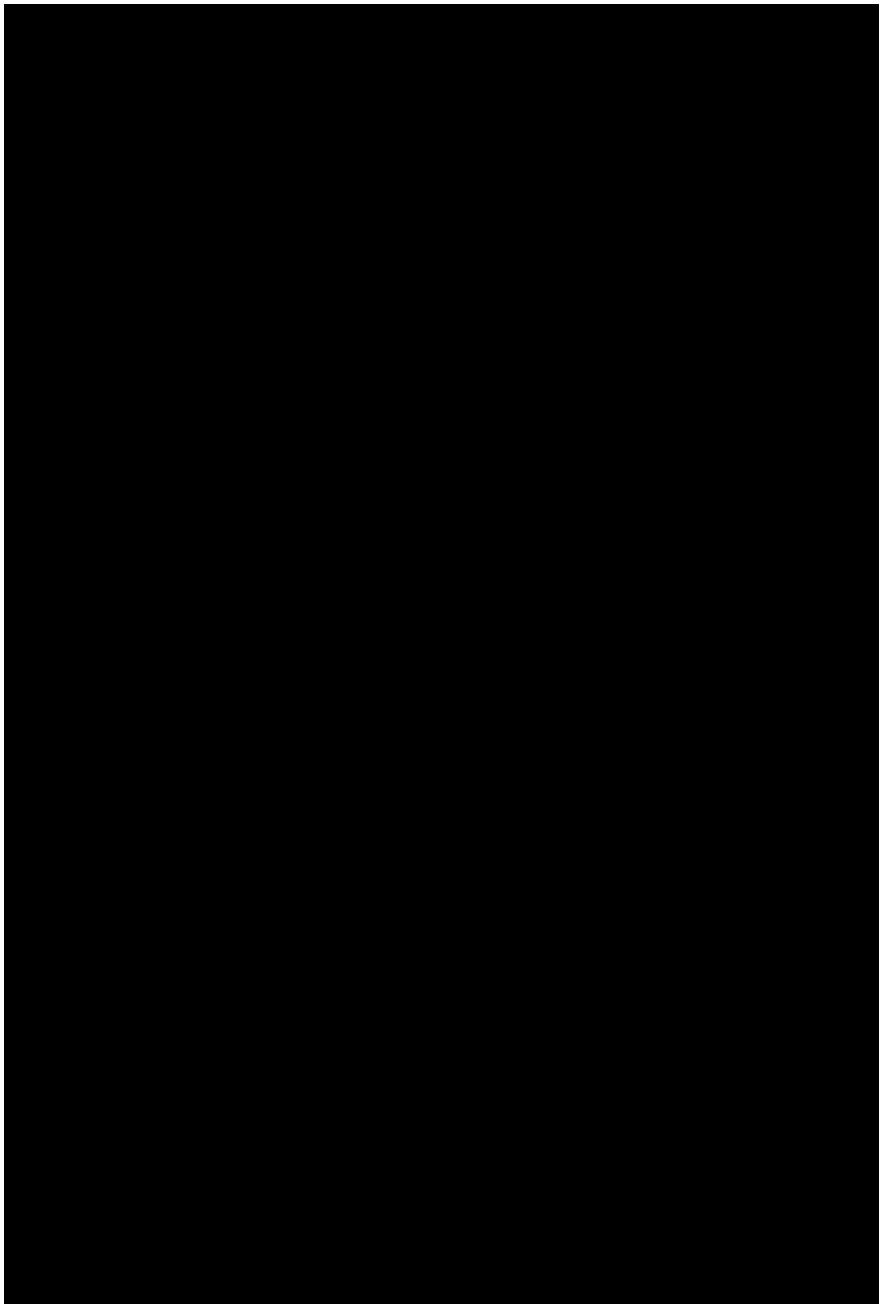


Figure 4: Direct Examination Site #1 Water Removal

Figure 5: Direct Examination Site #2 Extensive Excavation Work and Shoring

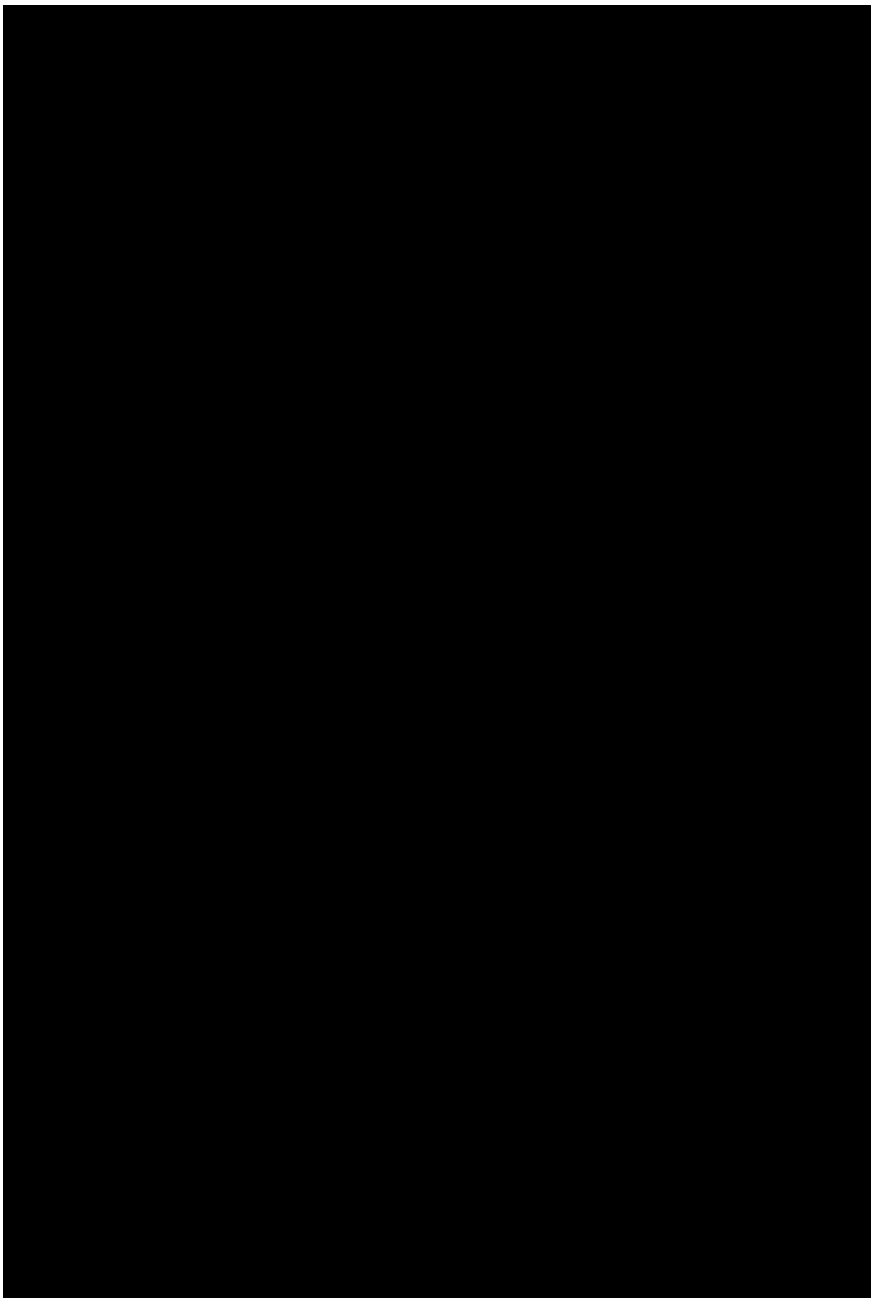
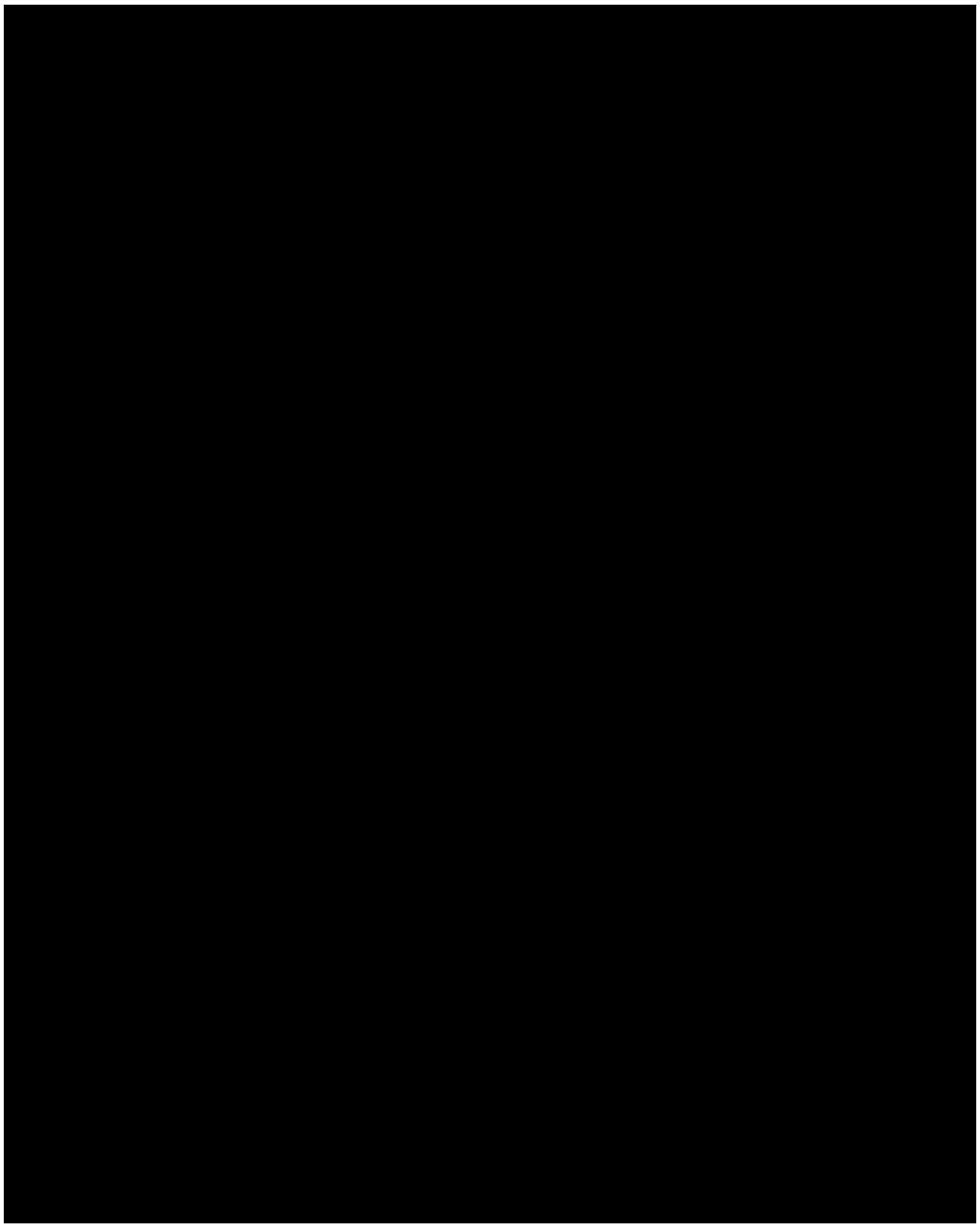


Figure 6: Direct Examination Site #2 Extensive Excavation Work



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

B. Actual Costs[2]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $2,507,039.

Table 6: Actual Direct Costs[3]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	8,578	471,721	480,300
Contract Costs	331,289	796,158	1,127,447
Material	0	35,603	35,603
Other Direct Charges	5,754	428,881	434,635
Total Direct Costs	345,621	1,732,363	2,077,984

Table 7: Actual Indirect Costs[4]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	66,645	362,066	428,711
AFUDC	271	0	271
Property Taxes	72	0	72
Total Indirect Costs	66,988	362,066	429,054

Table 8: Total Costs[5]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	412,609	2,094,430	2,507,039

[2] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[3] Values may not add to total due to rounding.
[4] Ibid.
[5] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 1018 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $2,507,039.

End of Line 1018 [redacted] TIMP Project Final Workpaper

I. LINE 1019 [redacted] TIMP PROJECT

A. Background and Summary

Line 1019 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] and [redacted] multi-diameter transmission line that runs approximately 14.6 miles from [redacted], through residential neighborhoods and commercial areas. The Project also assessed two short segments of [redacted] and [redacted] lateral pipeline associated with Line 1019 using the [redacted] assessment method. The pipeline is routed across Class 3 and 4 locations entirely within High Consequence Area(s) (HCAs). This Workpaper describes the activities associated with a TIMP Assessment that includes an Inspection using In-Line Inspection (ILI) and the Direct Examinations. The activities were located in the cities of Orange, Garden Grove, Seal Beach and Long Beach. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $2,909,191.

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Final Workpaper for Line 1019 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	1019
Segment	[redacted]
Inspection Type	[redacted] ILI Tool
Location	Orange and Long Beach
Class	3, 4
HCA Length	14.6 miles
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Site	1
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	No repairs
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Due Date	[redacted]

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Final Workpaper for Line 1019 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Inspection Details	
Site	2
Examination ID	[redacted]
Type	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Due Date	[redacted]
Direct Examination Details	
Site	3
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	4
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

SoCalGas

Final Workpaper for Line 1019 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	5		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	0	2,909,191	2,909,191

Final Workpaper for Line 1019 [redacted] TIMP Project

B. Maps and Images

Figure 1: Satellite Image of Line 1019 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), Transmission Integrity Management Program (TIMP) projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspection and Direct Examination.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 1019 [redacted] TIMP Project for Inspection using ILI.
   a. ILI from a permanent launcher site within [redacted] to a permanent receiver site within [redacted].
   b. The Project required temporary installation of associated piping at the launcher and receiver sites.
2. Direct Examination – Engineering, Design, and Constructability: Five Direct Examination sites were identified to either assess pipeline segments that could not accommodate an ILI tool or for validation.
   a. Direct Examination Site #1 consisted of no repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
   c. Direct Examination Site #3 consisted of soft pad repairs.
   d. Direct Examination Site #4 consisted of soft pad repairs.
   e. Direct Examination Site #5 consisted of soft pad repairs.
3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations.

4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI and five Direct Examinations.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
1019	14.6 mi	[redacted]	[redacted]	[redacted]	No

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
1019	1	Yes	No	28 ft	No Repairs	N/A	O&M
42-57	2	Yes	No	3 ft	Soft Pad	N/A	O&M
1019	3	Yes	No	22 ft	Soft Pad	N/A	O&M
1019	4	Yes	No	31 ft	Soft Pad	N/A	O&M
1019	5	Yes	No	26 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for Line 1019 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

SoCalGas

Final Workpaper for Line 1019 [redacted] TIMP Project

1. Site Description: The Inspection started at a permanent launcher site within [redacted] and ended at a permanent receiver site within [redacted]. The Project required temporary installation of associated piping at the launcher and receiver sites.
2. HCA Threats:
   [redacted]
3. Pipe Vintage: Multiple vintages from [redacted].
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which restricted the Inspection timeline to the months of July or August to minimize potential system impacts.
7. Customer Impacts: No customer impacts.
8. Community Impacts: The Project Team provided notifications to residents and businesses near the launcher and receiver locations.
9. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
10. Environmental: No identified impacts.

[redacted]

11. Permit Restrictions: The Project Team obtained an Encroachment Permit from the City of Orange to restrict public parking on [redacted].
12. Land Use:
    a. The Project utilized an existing Temporary Right of Entry (TRE) agreement with a public landowner to access existing company facilities within [redacted] and to utilize the area as workspace.
    b. The Project Team utilized a company facility as a laydown yard.
13. Traffic Control: The Project Team obtained approved Traffic Control Plans (TCPs) from the City of Orange to restrict public parking on [redacted].

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment:
    a. There were two [redacted] Sites selected to assess pipeline segments that could not accommodate an ILI tool within the Line 1019 [redacted] TIMP Project.
        i. Direct Examination Site #1 consisted of no repairs.
        ii. Direct Examination Site #2 consisted of soft pad repairs.
    b. There were three Direct Examination Sites selected for validation within the Line 1019 [redacted] TIMP Project.
        i. Direct Examination Site #3 consisted of soft pad repairs.
        ii. Direct Examination Site #4 consisted of soft pad repairs.
        iii. Direct Examination Site #5 consisted of soft pad repairs.
2. SRC/IRC: There were no SRCs or IRCs during the Direct Examinations.

3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examinations could be completed without system impacts.
4. Customer Impacts: No customer impacts.
5. Community Impacts:
   a. The Project Team provided notifications to residents and businesses near the Direct Examination locations.
   b. Direct Examination Sites #3 and #4 were in bus pad locations in the City of Seal Beach and required temporary usage suspension.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: No identified impacts.
8. Permit Restrictions: The Project Team obtained approved permits from the following entities:
   a. Encroachment Permit from the City of Orange Public Works Department for Direct Examination Site #1.
   b. Public Works Permit from the City of Seal Beach for Direct Examination Site #2.
   c. Public Works Permit from the City of Seal Beach for Direct Examination Site #3.
   d. Public Works Permit from the City of Seal Beach for Direct Examination Site #4.
   e. Street Permit from the City of Garden Grove Public Works Department for Direct Examination Site #5.
9. Land Use: No identified impacts.
10. Traffic Control: The Project required approved TCPs from the following entities:
    a. City of Orange Public Works Department for Direct Examination Site #1.
    b. City of Seal Beach Public Works Department for Direct Examination Site #2.
    c. City of Seal Beach Public Works Department for Direct Examination Site #3.
    d. City of Seal Beach Public Works Department for Direct Examination Site #4.
    e. City of Garden Grove Public Works Department for Direct Examination Site #5.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractors that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examinations

Construction Start Date	[redacted]	
Construction Completion Date		

Final Workpaper for Line 1019 [redacted] TIMP Project

Figure 2: Receiver Site within [redacted]

Figure 3: Filter Separator at the Receiver Site within [redacted]

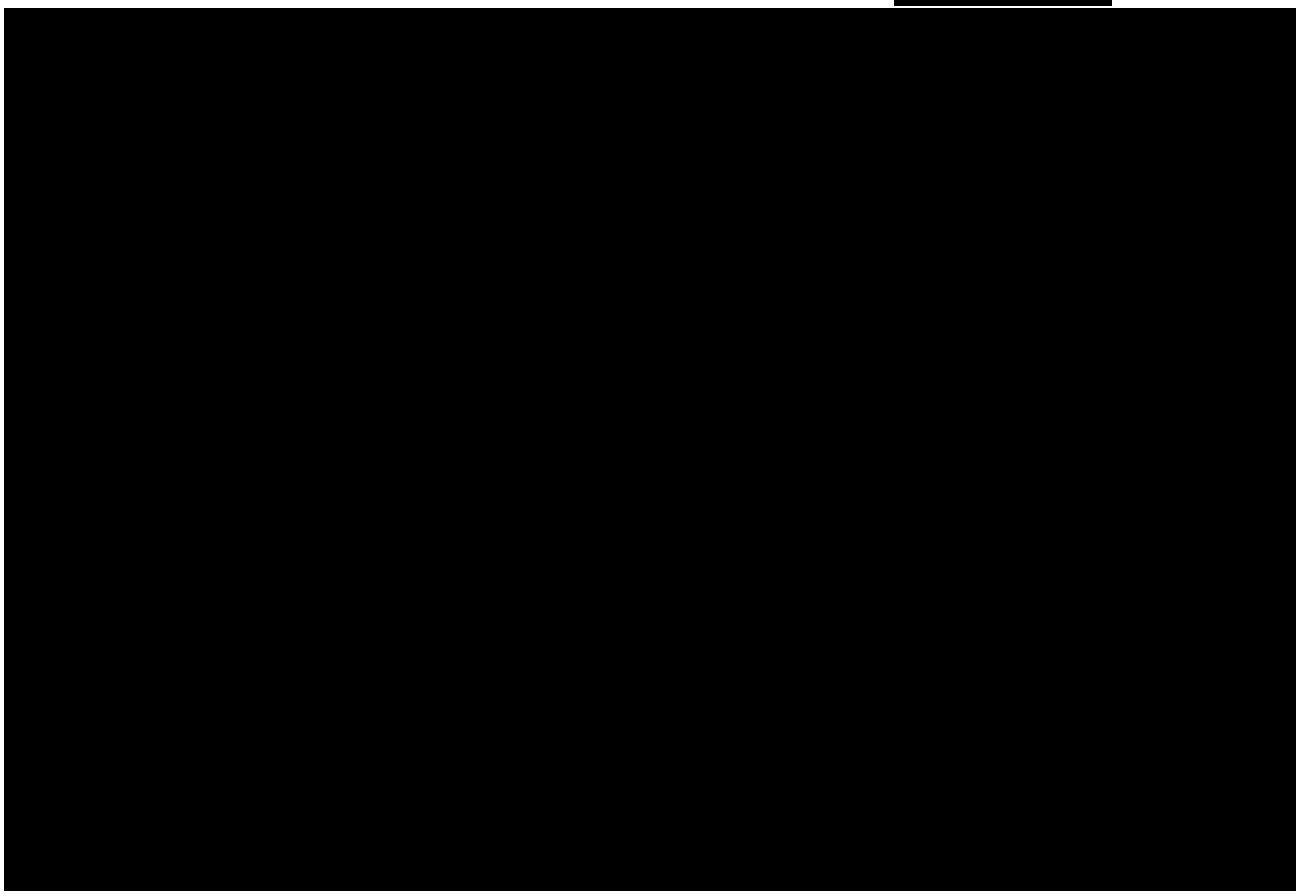


Figure 4: Direct Examination Site #1

Figure 5: Direct Examination Site #4

Figure 6: Direct Examination Site #5

C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the Project plan and design. Specific examples of cost efficiency actions taken on this Project were:

B. Actual Costs[2]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $2,909,191.

Table 4: Actual Direct Costs[3]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	0	431,297	431,297
Contract Costs	0	1,410,934	1,410,934
Material	0	54,680	54,680
Other Direct Charges	0	578,589	578,589
Total Direct Costs	0	2,475,500	2,475,500

Table 5: Actual Indirect Costs[4]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	0	432,623	432,623
AFUDC	0	0	0
Property Taxes	0	1,068	1,068
Total Indirect Costs	0	433,691	433,691

Table 6: Total Costs[5]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	0	2,909,191	2,909,191

[2] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[3] Values may not add to total due to rounding.
[4] Ibid.
[5] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 1019 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $2,909,191.

End of Line 1019 [redacted] TIMP Project Final Workpaper

I. LINE 1020 [redacted] TIMP PROJECT

A. Background and Summary

Line 1020 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 6.1 miles from the intersection of [redacted]. The pipeline is routed across [redacted] locations with 6 miles within High Consequence Area(s) (HCAs) and 0.1 miles within non-HCAs. This Workpaper describes the activities associated with a TIMP Assessment that includes an Inspection using In-Line Inspection (ILI) and the Direct Examination made to one site which contained one Immediate Repair Condition (IRC). The Project activities were located in Lakewood and Long Beach. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $2,722,849.

SoCalGas

Final Workpaper for Line 1020 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details			
Pipeline	1020		
Segment	[redacted]		
Inspection Type	[redacted] ILI Tools		
Location	Lakewood and Long Beach		
Class	[redacted]		
HCA Length	6.1 miles		
Vintage	Multiple vintages from [redacted]		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	Multiple SMYS values from [redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Final Tool Run Date	[redacted]		
Inspection Due Date	[redacted]		
Direct Examination Details			
Site	1		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad and Band		
Within HCA	Yes		
SRC/IRC	Yes		
SRC/IRC Discovery Date	[redacted]		
Repair Date	[redacted]		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	89,477	2,633,372	2,722,849

B. Maps and Images

Figure 1: Satellite Image of Line 1020 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspection and Direct Examination.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 1020 for Inspection using ILI.
   a. ILI from a temporary launcher site at the intersection of [redacted] to a permanent receiver site at [redacted].
   b. The Project required temporary associated piping at the launcher.
   c. The Project required temporary associated piping and a filter separator at the receiver.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, one Direct Examination site was identified for validation.
   a. Direct Examination Site #1 consisted of soft pad and band repairs.
   b. The Project identified one Direct Examination site containing one Immediate Repair Condition (IRC).
3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examination will be used to determine if additional examinations are required.

4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI and one Direct Examination.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
1020	6.1 mi	[redacted]	[redacted]	[redacted]	No

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
1020	1	Yes	Yes	19 ft	Soft Pad, Band	N/A	Capital

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 1020 [redacted] Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The Project completed the Inspection of the pipeline from a temporary launcher site at the intersection of [redacted] to a permanent receiver site at [redacted].
2. HCA Threats:
   [redacted]

[redacted]

c. [redacted]

3. Pipe Vintage: Multiple vintages from [redacted].
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.
7. Customer Impacts: The Project required full curtailment of a non-core customer to facilitate the Inspection.
8. Community Impacts: No identified impacts.
9. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
10. Environmental: The Project Team did not identify any notable environmental concerns at the site.
11. Permit Restrictions: The Project Team obtained the following permits:
    a. Caltrans Encroachment Permit.
    b. County of Los Angeles Public Works Encroachment Permit.
    c. City of Lakewood Public Works Permit.

[redacted]

12. Land Use:
    a. The Project Team required and obtained a Temporary Right of Entry (TRE) Agreement with a private landowner for a laydown yard and workspace at the Launcher location.
    b. The Project Team utilized an existing TRE with a municipal utility as a laydown yard at the receiver location.
13. Traffic Control: The Project Team required and obtained approved traffic control measures from the Caltrans and the City of Lakewood at [redacted] that included flaggers, cones, and signage to provide a safe work area at the Launcher location.
14. Constructability: In an effort to limit curtailment impacts, the Project Team coordinated closely with customers, monitored weather conditions to determine the most advantageous time for the curtailment, and was able to complete the ILIs in one day.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas initiated the planning process for the Line 1020 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Engineering Assessment:
    a. There was one Direct Examination Site selected for validation of the ILI within the Line 1020 [redacted] TIMP Project.
        i. Direct Examination Site #1 consisted of soft pad and band repairs.
2. SRC/IRC: Direct Examination Site #1 contained an IRC and required an expedited project schedule.

3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examinations could be completed in Fall 2023.
4. Customer Impacts: No customer impacts.
5. Community Impacts: The Project had minimal community impact because the site was in an area that did not require traffic control.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: No identified impacts.
8. Permit Restrictions: The Project Team obtained the following permits:
   a. City of Lakewood Encroachment Permit
   b. County of Los Angeles Public Works Flood Control District Construction Permit
   c. County of Los Angeles Public Works Flood Control District Access Permit
   d. Southern California Edison (SCE) Temporary Entry Permit (TEP)
9. Land Use:
   a. The Project Team obtained the use of the Los Angeles County Flood Control District's Right Of Way for parking and staging equipment during the Direct Examination.
10. Traffic Control: The Project Team did not identify any traffic control needs at the site.

D. Engineering, Design, and Constructability Factors – Post-Assessment

The Project Team will use the data collected from the Inspection and Direct Examination during the Post-Assessment step to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis is still pending and will be

used to determine if additional examinations are required to enhance the overall integrity and safety of the pipeline.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examination

Mobilization 1: Direct Examination Sites #1		
Construction Start Date	[redacted]	
Construction Completion Date		

Table 6: Construction Timeline – IRC

SRC/IRC Discovery Date – Site #1	[redacted]	
Repair Date – Site #1		

Final Workpaper for Line 1020 [redacted] TIMP Project

Figure1: Line 1020 Launcher at [redacted]

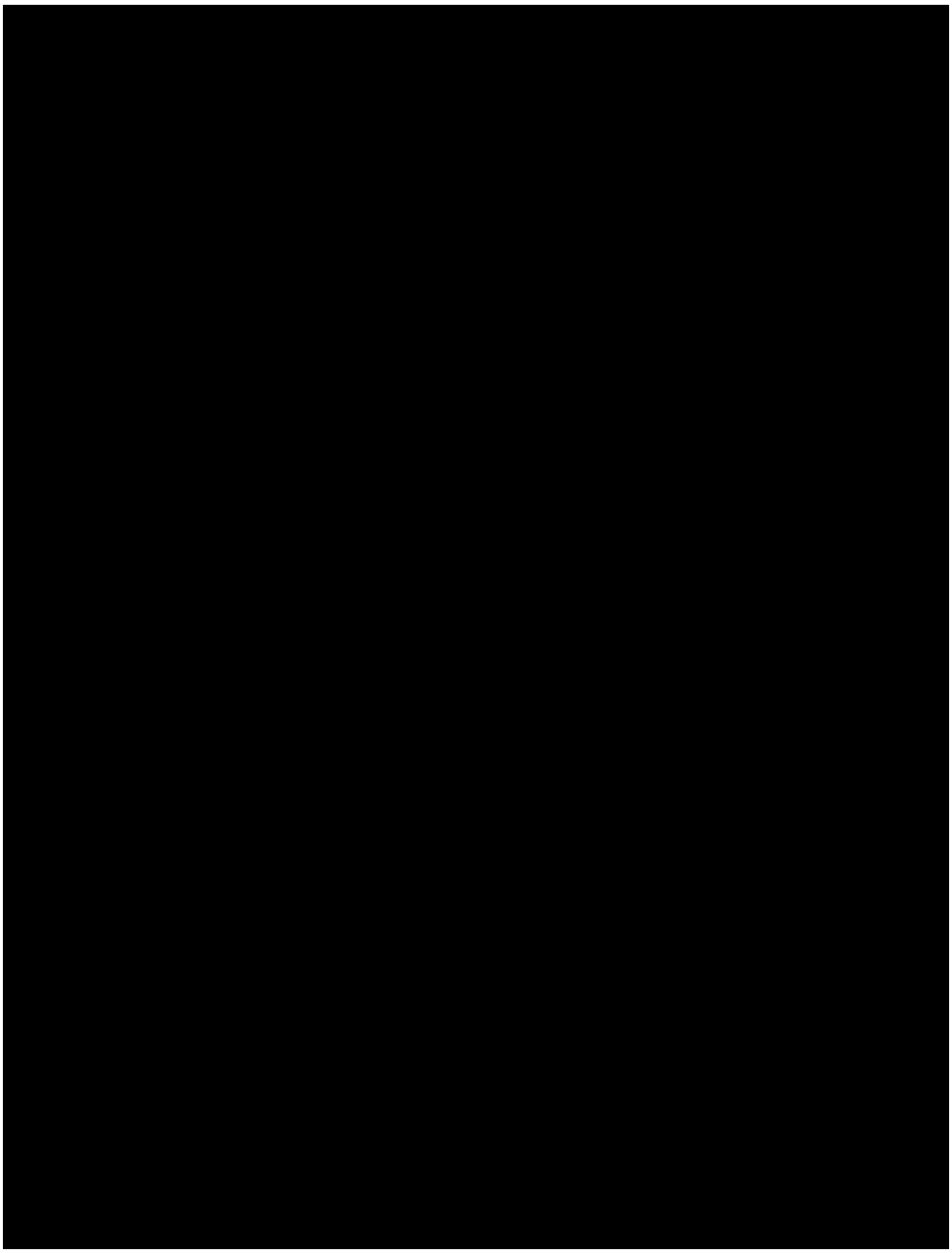


Figure 2: Line 1020 Receiver at [redacted]

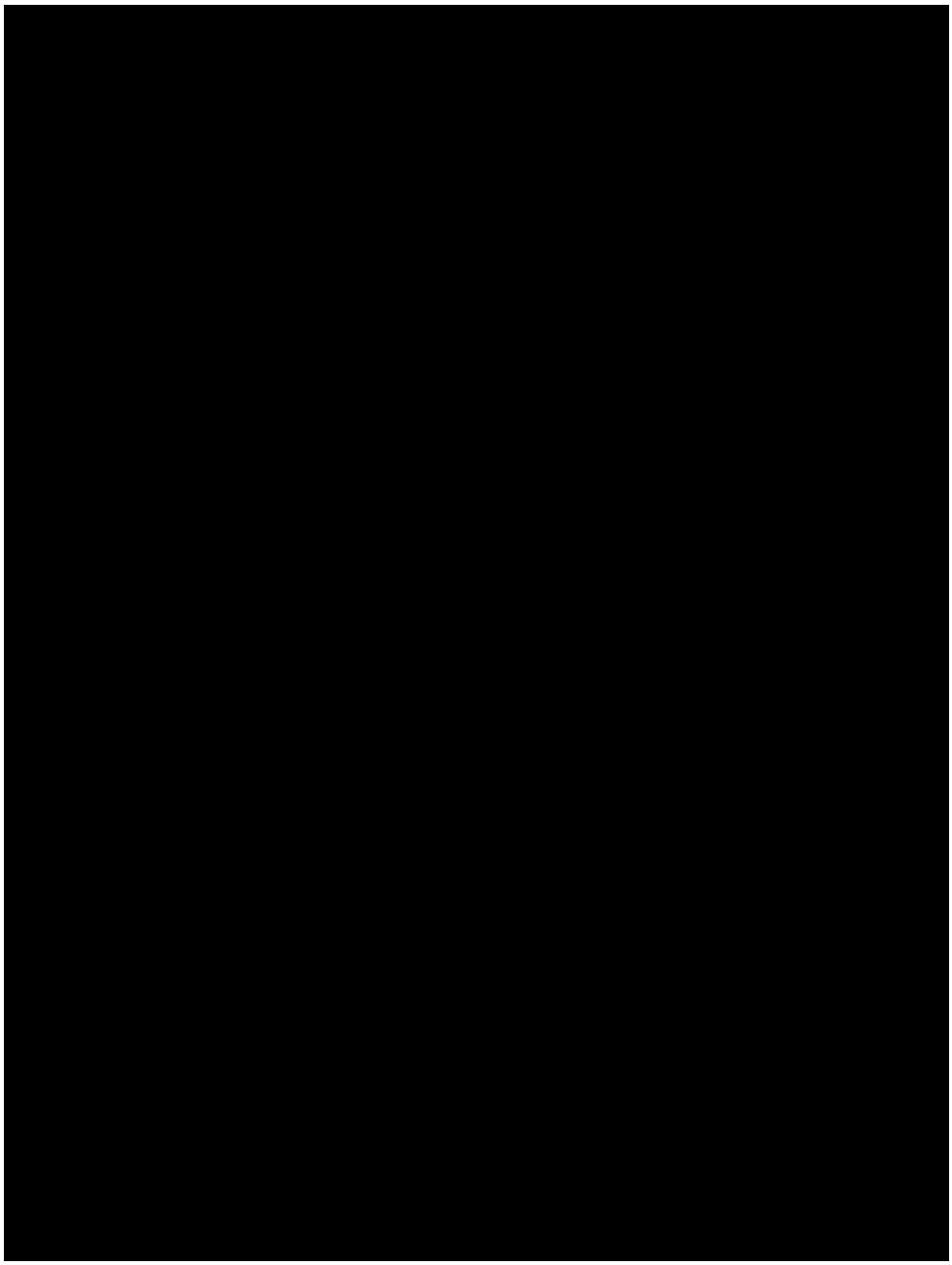
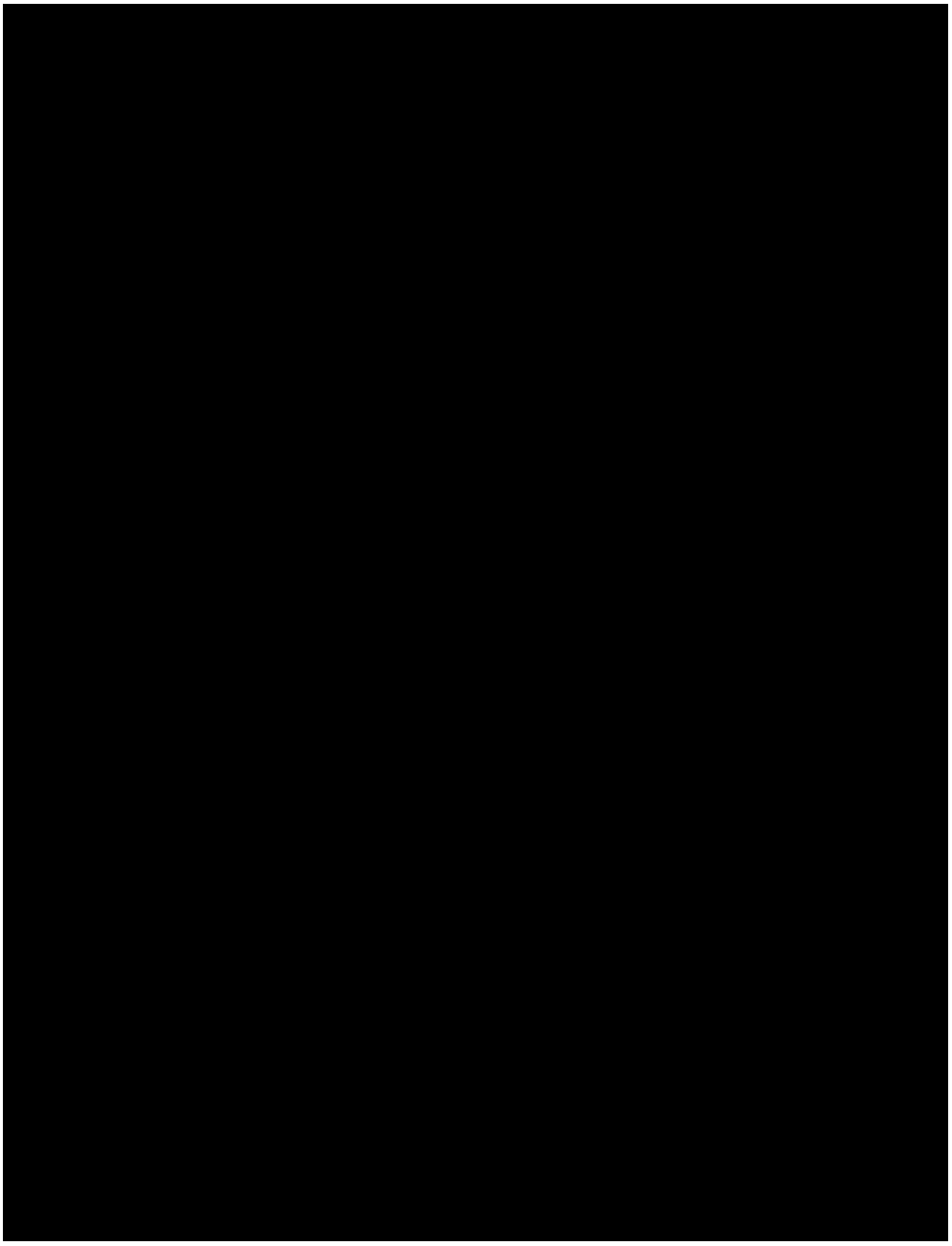


Figure 3: Line 1020 IRC Repair Band



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the Project plan and design.

B. Actual Costs[2]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $2,633,372.

Table 7: Actual Direct Costs[3]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	7,776	375,123	382,899
Contract Costs	59,416	1,379,257	1,438,674
Material	698	177,651	178,349
Other Direct Charges	7,030	331,306	338,336
Total Direct Costs	74,920	2,263,337	2,338,257

Table 8: Actual Indirect Costs[4]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	14,557	370,035	384,592
AFUDC	0	0	0
Property Taxes	0	0	0
Total Indirect Costs	14,557	370,035	384,592

Table 9: Total Costs[5]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	89,477	2,633,372	2,722,849

[2] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[3] Values may not add to total due to rounding.
[4] Ibid.
[5] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 1020 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $2,722,849.

End of Line 1020 [redacted] TIMP Project Final Workpaper

I. LINE 1024 AND LINE 1176 [redacted] TIMP PROJECT

A. Background and Summary

Line 1024 and Line 1176 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a predominantly [redacted] diameter transmission line that runs approximately 5.5 miles from [redacted], through residential neighborhoods and commercial areas. The Project also assessed four short segments of lateral pipeline associated with Line 1176 using the [redacted] assessment method. The pipeline is routed across [redacted] locations with all 5.5 miles within High Consequence Areas (HCAs). This Workpaper describes the activities associated with a TIMP Assessment that includes an Inspection using In-Line Inspection (ILI) and the Direct Examinations made to seven sites. The Project activities were located in Wilmington, Los Angeles and the City of Carson. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $6,327,741.

SoCalGas

Final Workpaper for Line 1024 and Line 1176 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	Line 1024 and Line 1176
Segment	[redacted]
Inspection Type	[redacted] ILI Tools
Location	Wilmington and Carson
Class	[redacted]
HCA Length	5.5 miles
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Line	Line 1176
Site	1
Examination ID	[redacted]
Inspection Type	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Inspection Due Date	[redacted]

SoCalGas

Final Workpaper for Line 1024 and Line 1176 [redacted]
TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details	
Line	Line 30-6292
Site	2
Examination ID	[redacted]
Inspection Type	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Line	Line 325XO1
Site	3
Examination ID	[redacted]
Inspection Type	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Inspection Due Date	[redacted]

SoCalGas

Final Workpaper for Line 1024 and Line 1176 [redacted]
TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details	
Line	Line 325XO2
Site	4
Examination ID	[redacted]
Inspection Type	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Line	Line 1176
Site	5
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Final Workpaper for Line 1024 and Line 1176 [redacted]
TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Line	Line 1024		
Site	6		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP			
SMYS			
Construction Start Date			
Construction Completion Date			
Direct Examination Details			
Line	Line 1176		
Site	7		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP			
SMYS			
Construction Start Date			
Construction Completion Date			
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	2,002,566	4,325,175	6,327,741

B. Maps and Images

Figure 1: Satellite Image of Line 1024 and Line 1176 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspections and Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 1024 and Line 1176 for Inspection using ILI.
   a. ILI from a temporary launcher within [redacted] to a temporary receiver at the intersection of [redacted].
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, seven Direct Examination sites were identified to either assess pipeline segments that could not accommodate an ILI tool or for validation.
   a. Direct Examination Site #1 consisted of Soft Pad Repairs.
   b. Direct Examination Site #2 consisted of Soft Pad Repairs.
   c. Direct Examination Site #3 consisted of Soft Pad Repairs.
   d. Direct Examination Site #4 consisted of Soft Pad Repairs.
   e. Direct Examination Site #5 consisted of Soft Pad Repairs.
   f. Direct Examination Site #6 consisted of Soft Pad Repairs.
   g. Direct Examination Site #7 consisted of Soft Pad Repairs.

3. Post Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations.
4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI and seven Direct Examinations.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
1024	1.7 mi	[redacted]	[redacted]	[redacted]	No
1176	3.8 mi	[redacted]	[redacted]	[redacted]	No

[redacted]

[2] Ibid.

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
1176	1	Yes	No	45 ft	Soft pad	N/A	Capital
30-6292	2	Yes	No	5 ft	Soft Pad	N/A	O&M
325X O1	3	Yes	No	9 ft	Soft Pad	N/A	O&M
325X O2	4	Yes	No	14 ft	Soft Pad	N/A	O&M
1176	5	Yes	No	31 ft	Soft Pad	N/A	O&M
1024	6	Yes	No	11 ft	Soft Pad	N/A	O&M
1176	7	Yes	No	31 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 1024 and Line 1176 [redacted] Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: ILI from a temporary launcher within [redacted] to a temporary receiver at the intersection of [redacted].
2. HCA Threats:
   [redacted]

[redacted]

3. Pipe Vintage: Multiple vintages from [redacted].
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.
7. Customer Impacts: The Project Team did not identify any anticipated service disruptions to customers.
8. Community Impacts: Traffic impacts and occasional noise.
9. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
10. Environmental: No identified impacts.
11. Permit Restrictions: The Project Team obtained an excavation permit from the City of Carson.
12. Land Use:
    a. The Project Team obtained a Temporary Right of Entry (TRE) from the City of Los Angeles for the launcher site.
    b. The Project Team obtained a TRE from the City of Carson for the receiver site.
13. Traffic Control: No identified impacts.

[redacted]

Final Workpaper for Line 1024 and Line 1176 [redacted]
TIMP Project

Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment:
   a. There were four [redacted] Sites selected to assess pipeline segments that could not accommodate an ILI tool within the Line 1024 and Line 1176 [redacted] TIMP Project.
      i. Direct Examination Site #1 assessed a segment of Line 1176 near the receiver site and consisted of Soft Pad Repairs.
      ii. Direct Examination Site #2 assessed a lateral pipeline and consisted of Soft Pad Repairs.
      iii. Direct Examination Site #3 assessed a lateral pipeline and consisted of Soft Pad Repairs.
      iv. Direct Examination Site #4 assessed a lateral pipeline and consisted of Soft Pad Repairs.
   b. There were three Direct Examination Sites selected for validation within the Line 1024 and Line 1176 [redacted] TIMP Project.
      i. Direct Examination Site #5 consisted of Soft Pad Repairs.
      ii. Direct Examination Site #6 consisted of Soft Pad Repairs.
      iii. Direct Examination Site #7 consisted of Soft Pad Repairs.
2. SRC/IRC: There were no SRCs or IRCs during the Direct Examinations.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded pipeline could be inspected without system impacts as long as minimum pressure levels were maintained and surrounding pipelines remained in service.
4. Customer Impacts: The Project Team determined that customer service could be maintained to core and non-core customers.

5. Community Impacts: Traffic impacts and occasional noise.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: No identified impacts.
8. Permit Restrictions: The Project Team obtained encroachment permits from the City of Los Angeles and the City of Carson.
9. Land Use: No identified impacts.
10. Traffic Control: No identified impacts.

C. Engineering, Design, and Constructability Factors – Post Assessment

The Project Team used the data collected from the Inspection and Direct Examinations during the Post Assessment step to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 5: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
NOP Date		
Inspection Due Date		

Table 6: Construction Timeline – Direct Examination

Mobilization 1: Direct Examination Site #1		
Construction Start Date	[redacted]	
Construction Completion Date		
NOP Date		
Mobilization 2: Direct Examination Sites #2 to #6		
Construction Start Date	[redacted]	
Construction Completion Date		
NOP Date		

Figure 2 : Inspection of Exposed Short Segment 325XO1

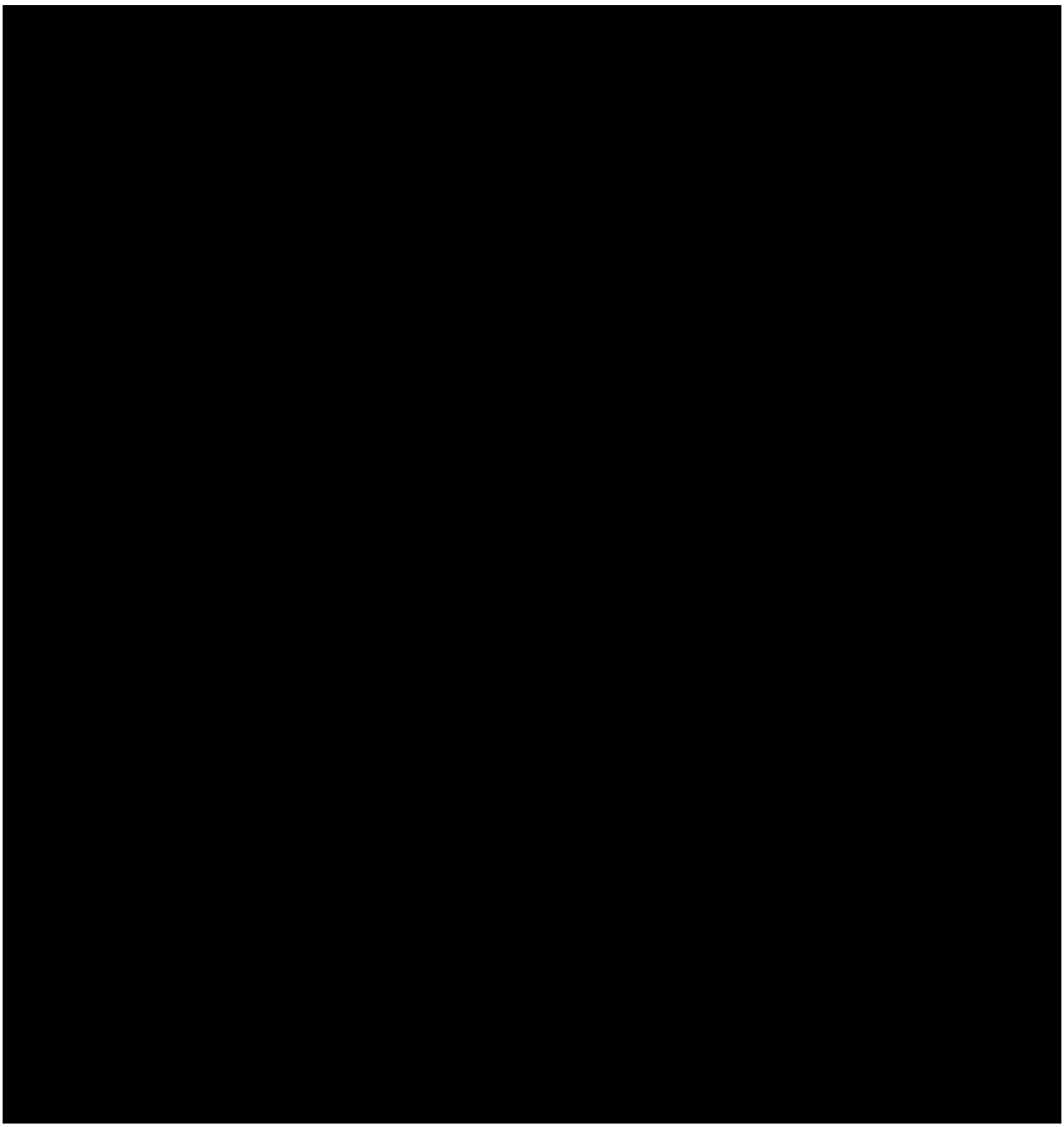


Figure 3: Inspection of Exposed Short Segment 30-6292

C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas exercised due diligence in the design, planning, and construction activities for this Project to minimize or avoid costs when prudent to do so. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

B. Actual Costs[4]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $6,327,741.

Table 7: Actual Direct Costs[5]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	76,960	443,601	520,561
Contract Costs	1,448,519	2,523,663	3,972,182
Material	30,020	189,271	219,292
Other Direct Charges	158,827	679,131	837,958
Total Direct Costs	1,714,326	3,835,667	5,549,993

Table 8: Actual Indirect Costs[6]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	287,551	489,508	777,059
AFUDC	515	0	515
Property Taxes	173	0	173
Total Indirect Costs	288,239	489,508	777,748

Table 9: Total Costs[7]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	2,002,566	4,325,175	6,327,741

[4] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[5] Values may not add to total due to rounding.
[6] Ibid.
[7] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 1024 and Line 1176 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $6,327,741.

End of Line 1024 and Line 1176 [redacted] TIMP Project Final Workpaper

I. LINE 1027 MORENO TO RAINBOW TIMP PROJECT

A. Background and Summary

Line 1027 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 34.5 miles from [redacted]. The pipeline is routed across Class 1, 2, 3 locations with 22.1 miles within High Consequence Areas (HCAs) and 12.5 miles within non-HCAs. This Workpaper describes the activities associated with a TIMP Assessment that includes an Inspection using In-Line Inspection (ILI) and the Direct Examinations made to 10 sites, of which sites two contained Immediate Repair Conditions (IRCs) and three One-Year Conditions. The Project activities were located in the cities of Moreno and Rainbow. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $7,127,518.

SoCalGas

Final Workpaper for Line 1027 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	1027
Segment	[redacted]
Inspection Type	[redacted] ILI Tool
Location	Moreno and Rainbow
Class	1, 2, 3
HCA Length	22.1 miles
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Site	1
Examination ID	[redacted]
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

SoCalGas

Final Workpaper for Line 1027 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	2
Examination ID	[redacted]
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	Yes
SRC/IRC Discovery Date	[redacted]
Repair Date	[redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	3
Examination ID	[redacted]
Mitigation/Remediation Type	Replacement
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

SoCalGas

Final Workpaper for Line 1027 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	4
Examination ID	[redacted]
Mitigation/Remediation Type	Replacement
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	5
Examination ID	[redacted]
Mitigation/Remediation Type	Replacement
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	6
Examination ID	[redacted]
Mitigation/Remediation Type	Replacement
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

SoCalGas

Final Workpaper for Line 1027 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details	
Site	7
Examination ID	[redacted]
Mitigation/Remediation Type	Replacement
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	8
Examination ID	[redacted]
Mitigation/Remediation Type	Replacement
Within HCA	No
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	9
Examination ID	[redacted]
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

SoCalGas

Final Workpaper for Line 1027 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	10		
Examination ID	[redacted]		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	4,916,653	2,210,864	7,127,518

Final Workpaper for Line 1027 [redacted] TIMP Project

B. Maps and Images

Figure 1: Satellite Image of Line 1027 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post Assessment. This Workpaper outlines construction activities during the Assessment process that typically occur during the Inspections and Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 1027 for Inspection using ILI.
   a. ILI from a permanent launcher site within [redacted] to a permanent receiver site within [redacted].
   b. The Project required one additional ILI due to a malfunction that occurred during the initial Inspection.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspections using ILI, ten Direct Examination sites were identified for validation.
   a. The Project identified Direct Examination Sites #1 and #2 as Immediate Repair Conditions (IRCs).
   b. Direct Examination Site #1 consisted of a 42 foot replacement.
   c. Direct Examination Site #2 consisted of a 44 foot replacement.
   d. Direct Examination Site #3 consisted of a 9 foot replacement.
   e. Direct Examination Site #4 consisted of a 25 foot replacement.
   f. Direct Examination Site #5 consisted of a 17 foot replacement.
   g. Direct Examination Site #6 consisted of a 30 foot replacement.

h. Direct Examination Site #7 consisted of a 25 foot replacement.

i. Direct Examination Site #8 consisted of a 11 foot replacement.

j. Direct Examination Site #9 consisted of soft pad repairs.

k. Direct Examination Site #10 consisted of soft pad repairs.

3. Post Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations.

4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI and 10 Direct Examinations.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
1027	34.5 mi	[redacted]	[redacted]	[redacted]	No
1027	34.5 mi	[redacted]	[redacted]	[redacted]	No

[redacted]

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
1027	1	Yes	Yes	48 ft	Replacement	42 ft	Capital
1027	2	Yes	Yes	50 ft	Replacement	44 ft	Capital
1027	3	No	No	25 ft	Replacement	9 ft	Capital
1027	4	No	No	33 ft	Replacement	25 ft	Capital
1027	5	No	No	22 ft	Replacement	17 ft	Capital
1027	6	No	No	37 ft	Replacement	30 ft	Capital
1027	7	No	No	33 ft	Replacement	25 ft	Capital
1027	8	No	No	19 ft	Replacement	11 ft	Capital
1027	9	Yes	No	49 ft	Soft Pad	N/A	Capital
1027	10	Yes	No	23 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 1027 [redacted] Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: The In-Line Inspection tools were launched from a permanent launcher site within [redacted] to a permanent receiver site within [redacted] on company property.
2. HCA Threats:
   [redacted]

[redacted]

3. Pipe Vintage: Multiple vintages from [redacted].
4. Long Seam Type:

[redacted]

5. Inspection Tools and Technologies:
   a. The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
   b. The Project required one additional [redacted] ILI due to a memory card malfunction that occurred during the initial [redacted] Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which the pipeline could be inspected without system impacts.
7. Customer Impacts: No customer impacts.
8. Community Impacts: No identified impacts.
9. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
10. Environmental: No identified impacts.
11. Permit Restrictions: No identified impacts.

[redacted]

12. Land Use: No identified impacts.
13. Traffic Control: No identified impacts.
14. Schedule Delay: The Project schedule was delayed due to the additional [redacted] ILI run that was required.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment: There were ten Direct Examination Sites selected for validation within the Line 1027 [redacted] TIMP Project.
   a. Direct Examination Site #1 consisted of a 42 foot replacement.
   b. Direct Examination Site #2 consisted of a 44 foot replacement.
   c. Direct Examination Site #3 consisted of a 9 foot replacement.
   d. Direct Examination Site #4 consisted of a 25 foot replacement.
   e. Direct Examination Site #5 consisted of a 17 foot replacement.
   f. Direct Examination Site #6 consisted of a 30 foot replacement.
   g. Direct Examination Site #7 consisted of a 25 foot replacement.
   h. Direct Examination Site #8 consisted of a 11 foot replacement.
   i. Direct Examination Site #9 consisted of soft pad repairs.
   j. Direct Examination Site #10 consisted of soft pad repairs.
2. SRC/IRC: Direct Examination Sites #1 and #2 were identified as IRCs and required expedited project schedules.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.

4. Customer Impacts: The Project Team determined that customer service could be maintained by providing Compressed Natural Gas (CNG) feed during the replacement activities on the IRCs and at Direct Examination Site #5.
5. Community Impacts: The Project had minimal community impact during the IRC work due to construction related noises.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental:
   a. Direct Examination Sites #3, #4, #6, #7, and #8 required a Take Authorization for Stephens' Kangaroo Rat (SKR) Agreement with the Riverside County Habitat Conservation Agency (RCHCA) and California Department of Fish and Wildlife (CDFW). A qualified biologist with authorization to handle SKR was present at the Direct Examination sites and completed activities to minimize impacts to the listed species.
   b. A nesting bird survey was required at Direct Examination Site #5 prior to mobilization.
8. Permit Restrictions: No identified impacts.
9. Land Use: Direct Examination Site #10 required a Temporary Right of Entry (TRE) agreement with a private landowner for vehicle parking.
10. Traffic Control: No identified impacts.
11. Schedule Delay:
    a. The Project Team initially collaborated with a landowner and planned to utilize a large area owned by them as a laydown yard for Direct Examination Sites #3, #4, #6, #7, and #8. Just before construction mobilized, the landowner rescinded their offer on the property use and the Project Team had to develop a different plan to work entirely within pipeline right of way.
12. Constructability: The Direct Examinations were executed in two groups;
    a. Direct Examination Sites #5, #9, and #10 were executed as a group due to their proximity and being within the same overall isolated pipeline segment.

b. Direct Examination Sites #3, #4, #6, #7, and #8 were executed as a group due to the location, being within the same overall isolated pipeline segment, and similar long lead time environmental requirements.

D. Engineering, Design, and Constructability Factors – Post Assessment

During the Post-Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractors that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examination

Mobilization 1: Direct Examination Sites #1 and #2		
Construction Start Date	[redacted]	
Construction Completion Date		
Mobilization 1: Direct Examination Site #5, #9, and #10		
Construction Start Date	[redacted]	
Construction Completion Date		
Mobilization 2: Direct Examination Sites #3, #4, #6, #7, and #8		
Construction Start Date	[redacted]	
Construction Completion Date		

Table 6: Construction Timeline – IRC

IRC Discovery Date – Sites #1 and #2	[redacted]	
Repair Date – Sites #1 and #2		

Figure 2: [redacted] tool Post ILI Run

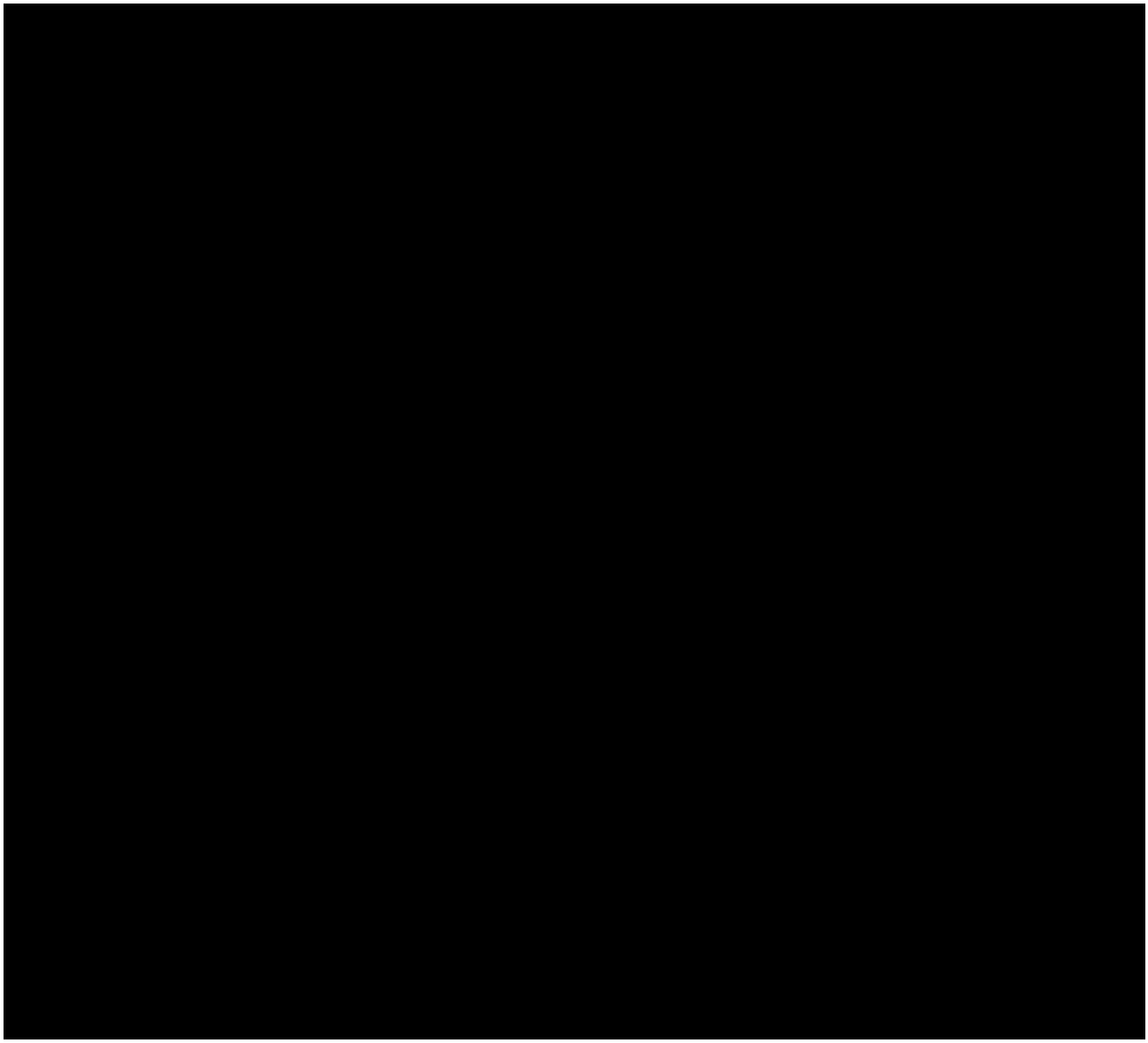


Figure 3: Direct Examination Site #8 Overview

Figure 4: Direct Examination Site #7 Restoration

Figure 5: Direct Examination Site Overview

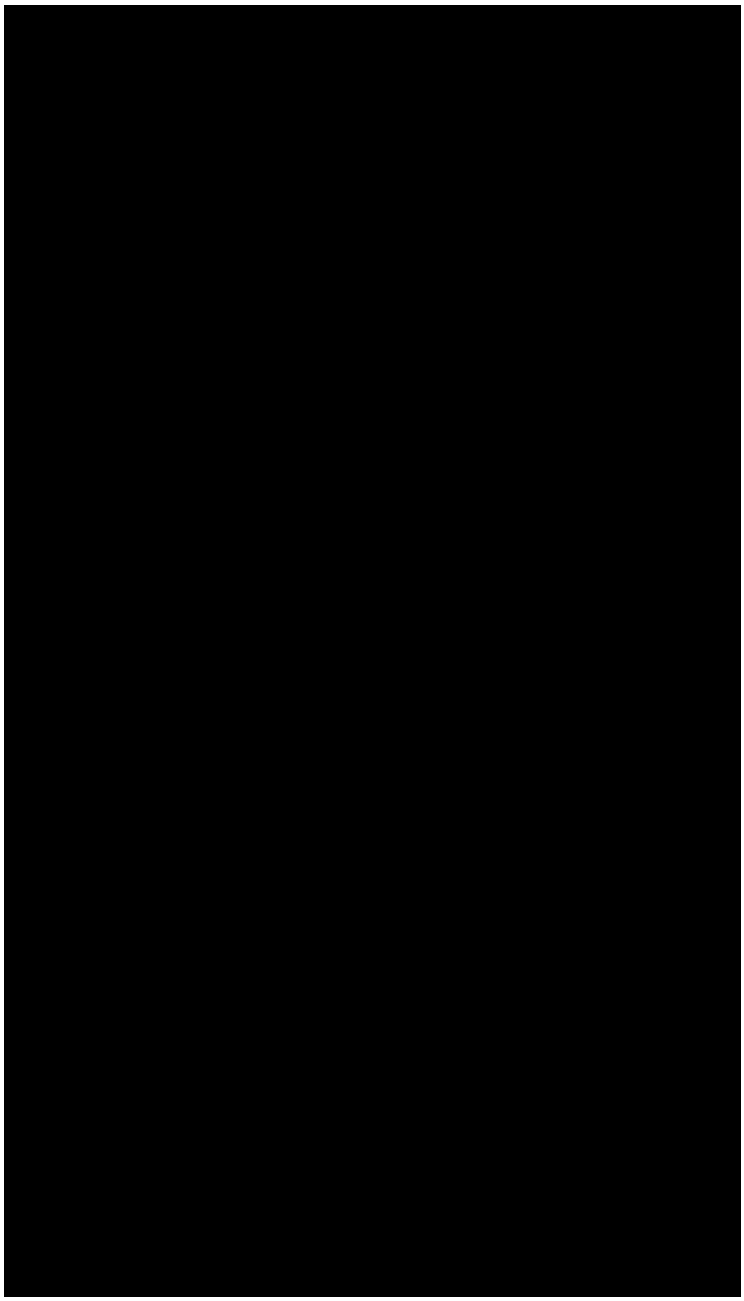


Figure 6: Direct Examination Site Overview

C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation, and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas exercised due diligence in the design, planning, and construction activities for this Project to minimize or avoid costs when prudent to do so. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

B. Actual Costs[4]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $7,127,518.

Table 7: Actual Direct Costs[5]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	784,088	247,478	1,031,566
Contract Costs	2,291,810	1,049,639	3,341,449
Material	79,059	39,538	118,598
Other Direct Charges	731,358	625,848	1,357,206
Total Direct Costs	3,886,316	1,962,503	5,848,819

Table 8: Actual Indirect Costs[6]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	1,021,689	248,362	1,270,051
AFUDC	5,311	0	5,311
Property Taxes	3,337	0	3,337
Total Indirect Costs	1,030,337	248,362	1,278,699

Table 9: Total Costs[7]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	4,916,653	2,210,864	7,127,518

[4] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[5] Values may not add to total due to rounding.
[6] Ibid.
[7] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 1027 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $7,127,518.

End of Line 1027 [redacted] TIMP Project Final Workpaper

I. LINE 1028 [redacted] TIMP PROJECT

A. Background and Summary

Line 1028 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter line that runs approximately 34.7 miles from [redacted]. The pipeline is routed across Class 1, 2, and 3 locations with 22.5 miles within High Consequence Areas (HCAs) and 12.2 miles within non- HCAs. This Workpaper describes the activities associated with a TIMP Assessment that includes an Inspection using In-Line Inspection (ILI) and the Direct Examinations made to two sites. The Project activities were located in the cities of Moreno Valley and Temecula. The specific attributes of this Project are detailed in Table 1 below. The total loaded cost of the Project is $4,540,330.

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Final Workpaper for Line 1028 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	1028
Segment	[redacted]
Inspection Type	[redacted] ILI Tools
Location	Moreno Valley and Temecula
Class	1, 2, 3
HCA Length	22.51 miles
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]
Direct Examination Details	
Site	1
Examination ID	[redacted]
Mitigation/Remediation Type	Replacement
Within HCA	Yes
SRC/IRC	No
Pipe Diameter *(confidential)*	[redacted]
MAOP *(confidential)*	[redacted]
SMYS *(confidential)*	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

SoCalGas

Final Workpaper for Line 1028 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	2		
Examination ID	[redacted]		
Mitigation/Remediation Type	Soft Pad		
Within HCA	No		
SRC/IRC	No		
Pipe Diameter *(confidential)*	[redacted]		
MAOP *(confidential)*	[redacted]		
SMYS *(confidential)*	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	2,372,345	2,167,986	4,540,330

B. Maps and Images

Figure 1: Satellite Image of Line 1028 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the prepared direct testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspection and Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 1028 for Inspection using ILI.
   a. ILI from a permanent launcher site within [redacted] to a permanent receiver site within [redacted].
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, two Direct Examination sites were identified for validation.
   a. Direct Examination Site #1 consisted of a 14-foot replacement.
   b. Direct Examination Site #2 consisted of soft pad repairs.
3. Post Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations.
4. Final Project Scope: The final Workpaper scope consists of Inspection using ILI and two Direct Examinations.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
1028	34.7 mi	[redacted]	[redacted]	[redacted]	No

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
1028	1	Yes	No	19 ft	Replacement	14 ft	Capital
1028	2	No	No	212 ft	Soft Pad	N/A	Capital

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 1028 [redacted] TIMP Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the project, confirm the appropriate Inspection methods, and select the inspection tools. Key factors that influenced the engineering and design of this project are as follows:

1. Site Description: The site consisted of a permanent launcher located at [redacted] and a permanent receiver located at [redacted].
2. HCA Threats:
   [redacted]

[redacted]

3. Pipe Vintage: Multiple vintages from [redacted].
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.
7. Customer Impacts: The Project Team utilized a temporary CNG supply for one customer.
8. Community Impacts: No identified impacts.
9. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
10. Environmental: No identified impacts.
11. Permit Restrictions: No identified impacts.
12. Land Use: No identified impacts.
13. Traffic Control: No identified impacts.

[redacted]

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment: There were two Direct Examination Sites selected for validation within the Line 1028 TIMP Project.
   a. Direct Examination Site #1 consisted of a 14-foot replacement.
   b. Direct Examination Site #2 consisted of soft pad repairs.
2. SRC/IRC: There were no SRCs or IRCs during the Direct Examinations.
3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded that the pipeline could be inspected without system impacts.
4. Customer Impacts: No identified impacts.
5. Community Impacts: Due to safety concerns, the Project Team blocked access to the walkway adjacent to [redacted] at Direct Examination Site #1.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: No identified impacts.
8. Permit Restrictions: No permits were required.
9. Land Use: Direct Examination Site #2 is located on lands owned by the California Department of Fish and Wildlife (CDFW). The Project Team completed all work within the existing easement and utilized an existing SoCalGas owned property as a laydown yard.
10. Traffic Control: No identified impacts.

D. Engineering, Design, and Constructability Factors – Post Assessment

The Project Team used the data collected from the Inspection and Direct Examinations during the Post Assessment step to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractors that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examination

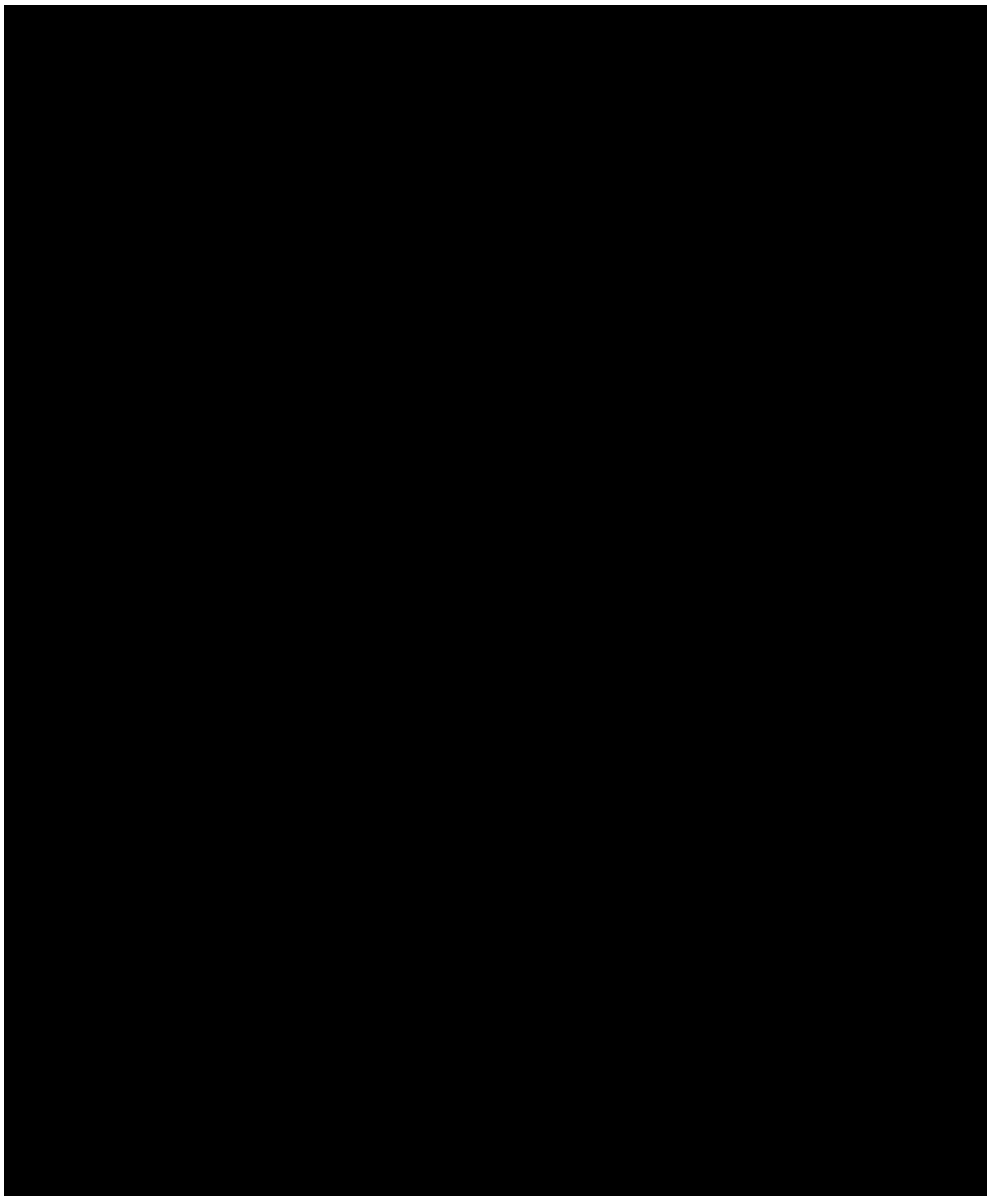
Construction Start Date	[redacted]	
Construction Completion Date		

Figure 2: Direct Examination Site #1 Coating Inspection

Figure #3: Direct Examination Site #2 Soft Pad Repair

Figure 4: Direct Examination Site #2 Overview

Figure 5: Direct Examination Site #1 Overview



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas exercised due diligence in the design, planning, and construction activities for this project to minimize or avoid costs when prudent to do so. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

B. Actual Costs[2]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $4,540,330.

Table 6: Actual Direct Costs[3]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	117,335	361,278	478,613
Contract Costs	1,515,537	501,336	2,016,873
Material	2,411	54,470	56,881
Other Direct Charges	367,687	965,771	1,333,458
Total Direct Costs	2,002,970	1,882,856	3,885,826

Table 7: Actual Indirect Costs[4]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	339,887	285,130	625,016
AFUDC	20,589	0	20,589
Property Taxes	8,899	0	8,899
Total Indirect Costs	369,375	285,130	654,505

Table 8: Total Costs[5]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	2,372,345	2,167,986	4,540,330

[2] These are the total project costs incurred between January 1, 2019, and December 31st, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[3] Values may not add to total due to rounding.
[4] Ibid.
[5] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 1028 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $4,540,330.

End of Line 1028 [redacted] TIMP Project Final Workpaper

I. LINE 1167 [redacted] TIMP PROJECT

A. Background and Summary

Line 1167 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 2.5 miles from [redacted] to Los Angeles, south of [redacted] Station, through residential neighborhoods and commercial areas. The pipeline is routed across Class 1, 3, and 4 locations with 2 miles within High Consequence Area(s) (HCAs) and 0.5 miles within non-HCAs. This Workpaper describes the activities and costs associated with the Direct Examinations made to two sites, of which one site contained Immediate Repair Conditions (IRCs). The Project activities were located in [redacted] The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $2,097,793.

SoCalGas

Final Workpaper for Line 1167 [redacted] TIMP Project

Table 1: General Project Information

Direct Examination Details			
Site	1		
Examination ID	[redacted]		
Mitigation/Remediation Type	Replacement		
Within HCA	Yes		
SRC/IRC	Yes		
SRC/IRC Discovery Date	[redacted]		
Repair Date	[redacted]		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	Multiple SMYS values from [redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Direct Examination Details			
Site	2		
Examination ID	[redacted]		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	1,332,597	765,196	2,097,793

B. Maps and Images

Figure 1: Satellite Image of Line 1167 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Table 2 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 1167 [redacted] for Inspection using ILI, activities related to the ILI were completed for this Project before the TY 2019 General Rate Case (GRC) cycle.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, two Direct Examination sites were identified for validation.
   a. Direct Examination Site #1 consisted of a 16 foot pipeline replacement. This location contained two IRCs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examinations following the Inspection resulted in no additional examinations.
4. Final Project Scope: The final project scope of this Workpaper includes two Direct Examinations.

Table 2: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
1167	1	Yes	Yes	24 ft	Replacement	16 ft	Capital
1167	2	Yes	No	18 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Planning Factors – Inspection

SoCalGas completed the Inspection for the Line 1167 [redacted] TIMP Project before the TY 2019 GRC cycle.

C. Engineering, Design, and Constructability Factors – Direct Examination

Continuing the planning process for the Line 1167 [redacted] TIMP Project, SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment: There were two Direct Examination Sites selected for validation within the Line 1167 [redacted] TIMP Project.
   a. Direct Examination Site #1 consisted of a 16 foot pipeline replacement. This location contained two IRCs.
   b. Direct Examination Site #2 consisted of soft pad repairs.

2. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Project could only be completed during a specified timeframe to minimize system impacts. The Project required additional coordination to ensure system reliability was maintained.
3. Customer Impacts: No customer impacts.
4. Community Impacts: No identified impacts.
5. Substructures: The Project Team approached accessing the pipeline by method of hand digging to minimize impacts due to the location of Direct Examination Site #1.
6. Environmental:
   a. The Project Team encountered dark and pungent water at both Direct Examination locations, requiring water and air testing to ensure the site remained nonhazardous.
   b. The Project Team coordinated to minimize and avoid impacts to vegetation and nearby water basin.
   c. The Project Team provided biological monitoring for the Direct Examination Sites.
7. Permit Restrictions: No identified impacts.
8. Land Use: No identified impacts.
9. Traffic Control: No identified impacts.
10. Constructability: The Project Team encountered a high water table at both Direct Examination locations. The water was pumped from the excavation locations and transported offsite to a company approved disposal facility.
11. Other Identified Risks: The Project required an NDE tool for additional Direct Examination analyses. Delays in obtaining an NDE tool impacted standby costs for the open excavations.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team used the data collected from the previous Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 3: Construction Timeline – Direct Examination

Construction Start Date	[redacted]	
Construction Completion Date		

Figure 2: Direct Examination Site #1

Figure 3: Direct Examination Site #1

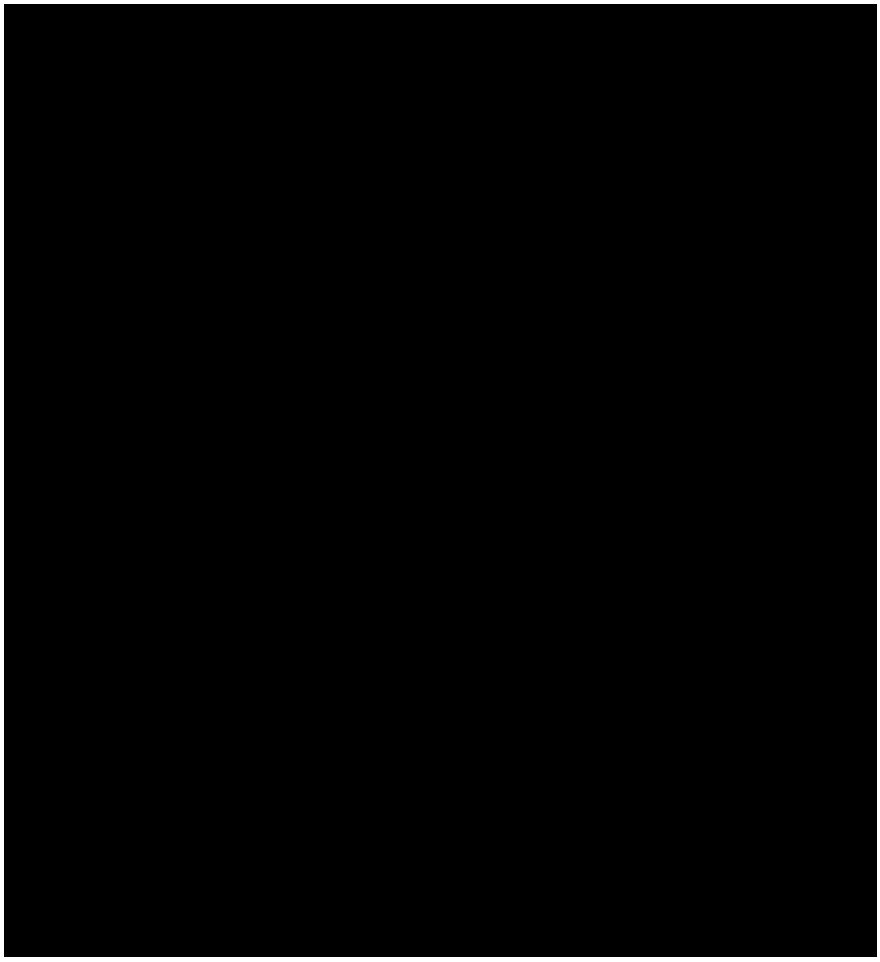


Figure 4: Direct Examination Site #1

Figure 5: Direct Examination Site #2

Figure 6: Direct Examination Site #2

C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas exercised due diligence in the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design. Specific examples of cost efficiency actions taken on this Project were:

1. Permit Conditions: The Project Team pursued Direct Examination sites that had low permit risk while still complying with assessment criteria.

B. Actual Costs[1]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $2,097,793.

Table 4: Actual Direct Costs[2]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	115,514	101,177	216,691
Contract Costs	769,408	277,498	1,046,906
Material	2,803	10,265	13,068
Other Direct Charges	250,435	294,593	545,028
Total Direct Costs	1,138,160	683,534	1,821,693

Table 5: Actual Indirect Costs[3]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	193,079	81,662	274,741
AFUDC	565	0	565
Property Taxes	793	0	793
Total Indirect Costs	194,438	81,662	276,099

Table 6: Total Costs[4]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	1,332,597	765,196	2,097,793

[1] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[2] Values may not add to total due to rounding.
[3] Ibid.
[4] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 1167 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $2,097,793.

End of Line 1167 [redacted] TIMP Project Final Workpaper

I. LINE 1172 AND 1177 [redacted] TIMP PROJECT

A. Background and Summary

Line 1172 and 1177 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 6.9 miles from [redacted], through residential neighborhoods and industrial areas. The pipeline is routed across Class 1, 3, and 4 locations with 3.8 miles within High Consequence Areas (HCAs) and 3.1 miles within non-HCAs. This Workpaper describes the activities and costs associated with a Transmission Integrity Management Program (TIMP) Assessment that includes Inspections using In-Line Inspection (ILI) and the Direct Examination made to one site. The Project activities were located in the cities of El Segundo, Manhattan Beach, and Hawthorne. The specific attributes of this Project are detailed in Table 1 below. The total loaded cost of the Project is $5,871,434.

SoCalGas

Final Workpaper for Line 1172 and 1177 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details	
Pipeline	1172 and 1177
Segment	[redacted]
Inspection Type	[redacted] ILI Tool
Location	El Segundo and Manhattan Beach
Class	1, 3, 4
HCA Length	3.7 miles
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]
Inspection Details	
Pipeline	Line 1172
Segment	[redacted]
Inspection Type	[redacted] Tool
Location	[redacted]
Class	[redacted]
HCA Length	633 feet
Vintage	Multiple vintages from [redacted]
Pipe Diameter	[redacted]
MAOP	[redacted]
SMYS	Multiple SMYS values from [redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Final Tool Run Date	[redacted]
Inspection Due Date	[redacted]

Final Workpaper for Line 1172 and 1177 [redacted] TIMP Project

Table 1: General Project Information (Continued)

Direct Examination Details			
Line	Line 1172		
Site	1		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	0	5,871,434	5,871,434

B. Maps and Images

Figure 1: Satellite Image of Line 1172 and 1177 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Inspections and Direct Examination.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2 and 3 below.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 1172 and Line 1177 for Inspection using ILI.
   a. ILI from a temporary launcher site at [redacted] to a temporary receiver site at [redacted]
   b. [redacted] ILI from a temporary launcher and receiver site within a private property in El Segundo.
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspections using [redacted] ILI, one Direct Examination site was identified for validation.
   a. Direct Examination Site #1 consisted of soft pad repairs.
3. Post Assessment – Engineering, Design, and Constructability: The validation analysis of the Direct Examination following the Inspection resulted in no additional examinations.
4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI, an Inspection using [redacted] ILI, and one Direct Examination.

Table 2: Final Inspection Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
1172/ 1177	6.8 mi	[redacted]	[redacted]	[redacted]	No
1172	671 ft	[redacted]	[redacted]	[redacted]	No

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/ IRC	Examination Length	Mitigation/ Remediation Type	Replacement Length	Cost Category
1172	1	Yes	No	36 ft	Soft Pad	N/A	O&M

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 1172 and 1177 [redacted] Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description:
   a. ILI from a temporary launcher site at [redacted] to a temporary receiver site at [redacted] that were both installed in the roadway.
   b. ILI with a [redacted] tool from a temporary launcher and receiver site on private property to inspect a pipeline segment that feeds a private property in El Segundo.

2. HCA Threats:
   [redacted]
3. Pipe Vintage: Multiple vintages from [redacted].
4. Long Seam Type:
   [redacted]
5. Inspection Tools and Technologies:
   a. The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection. There was a total of 14 cleaning runs performed in order to clear debris before running the ILI tool.
   b. The Project also utilized a [redacted] ILI [redacted] technology for a segment of the pipeline.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the pipeline could be inspected without system impacts.

[redacted]

7. Customer Impacts: The Project required the full curtailment of a non-core customer during ILI operations. The Project Team was able to coordinate this curtailment early in the planning phase to align with the customer's upcoming maintenance outage, mitigating the impact.
8. Community Impacts: Traffic impacts and occasional noise due to the locations of the temporary launcher and receiver.
9. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
10. Environmental: No identified impacts.
11. Permit Restrictions: The Project Team obtained the following:
    a. City of El Segundo Encroachment Permit.
    b. City of Manhattan Beach Excavation Permit.
    c. City of Hawthorne Encroachment Permit.
12. Land Use: Temporary Right of Entry (TRE) Agreements with private landowners were required to secure a laydown yard for the [redacted] ILI and a work area near the [redacted] ILI launcher and receiver location.
13. Traffic Control: The Project Team required and obtained approved traffic control measures from the City of Manhattan and the City of El Segundo to conduct lane closures on [redacted] that included barricades, cones, and signage to provide a safe work area for the temporary launcher and receiver locations of the In-Line Inspection.
14. Constructability:
    a. Line 1177 and most of Line 1172 are connected and can be continuously inspected in one [redacted] ILI run. There is 633 feet of Line 1172 that feeds the [redacted] and could not be inspected using [redacted] ILI Tools due to the configuration of the pipeline. Therefore, a [redacted] Inspection was chosen to inspect this segment.
    b. An Americans with Disabilities Act (ADA) ramp in the project vicinity that was originally installed by SoCalGas required upgrades by the City of El Segundo.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment:
   a. There was one Direct Examination Site selected for validation of the ILI within the Line 1172 and 1177 [redacted] TIMP Project.
      i. Direct Examination Site #1 consisted of soft pad repairs.
   b. Following the completion of the [redacted] ILI, a Direct Examination was done on a validation spool piece, and it was determined that no additional Direct Examination sites were required for validation of that pipeline segment.
2. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded the Direct Examination could be completed without system impacts.
3. Customer Impacts: No customer impacts.
4. Community Impacts: Traffic impacts and occasional noise due to the Direct Examination location in the roadway.
5. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
6. Environmental: No identified impacts.
7. Permit Restrictions: The Project Team obtained a City of El Segundo Encroachment Permit.
8. Land Use: A TRE Agreement with a private landowner was required to secure a laydown yard for the Direct Examination.
9. Traffic Control: The Project Team required and obtained approved traffic control measures from the City of El Segundo to conduct lane closures on El Segundo Boulevard that included barricades, cones, and signage to provide a safe work area for the Direct Examination.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 4: Construction Timeline – Inspection

In-Line Inspection		
Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		
[redacted] In-Line Inspection		
Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Table 5: Construction Timeline – Direct Examination

Construction Start Date	[redacted]	
Construction Completion Date		

Figure 2: Launcher Assembly Hydrotest

Figure 3: Receiver Assembly

Figure 4: Direct Examination Site #1

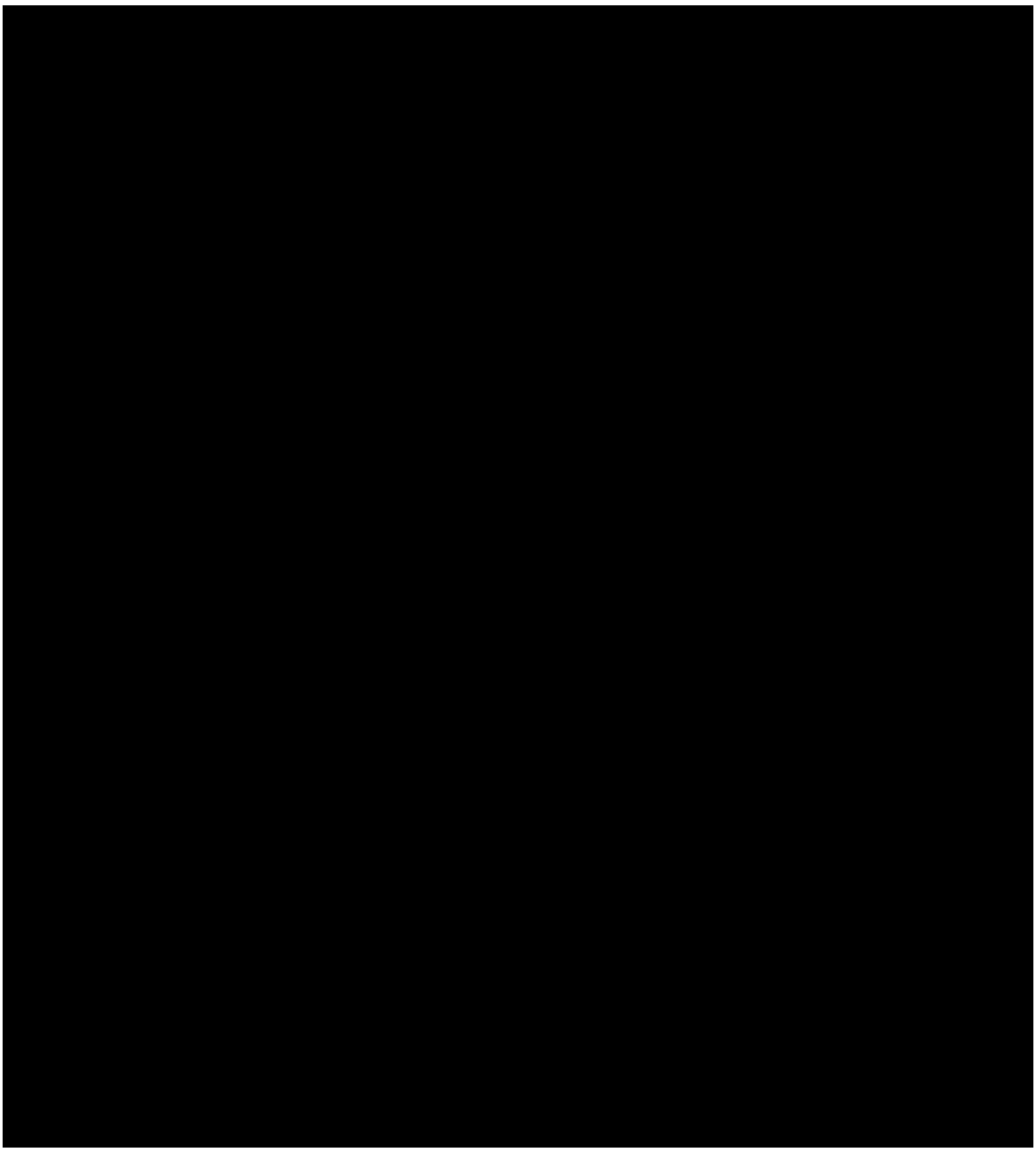
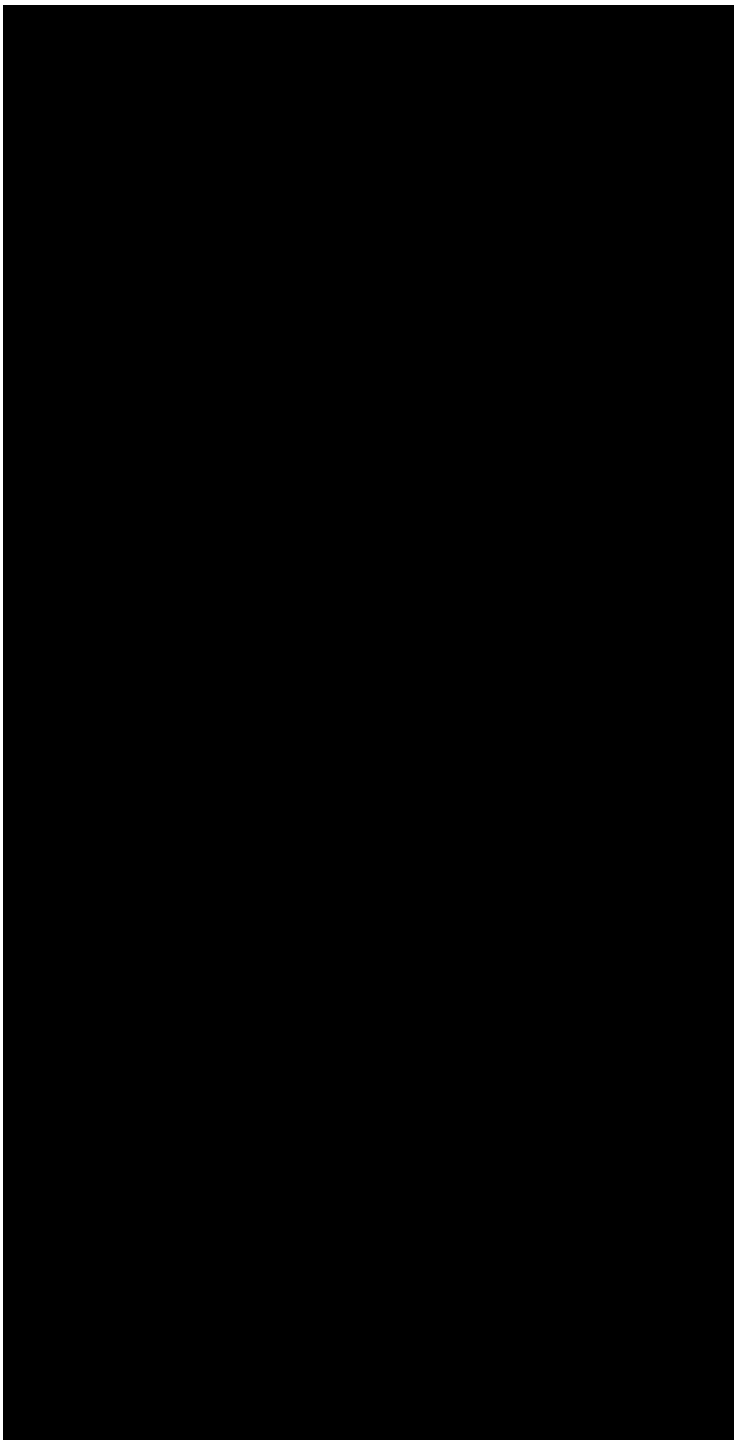


Figure 4: Direct Examination Site Overview



C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design. Specific examples of cost efficiency actions taken on this Project were:

1. Land Use: The Project Team utilized a shared laydown yard with a nearby SoCalGas project which required only one TRE agreement.
2. Construction Execution: In order to compete the Direct Examination Phase, a sample cut out of the pipeline was required to be examined. The Project Team was able to collect this sample from a recent Project completed by another SoCalGas department, which resulted in considerable savings as the Project Team no longer needed to cut-out a pipeline segment during the Direct Examination soft pad repairs.

B. Actual Costs[2]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $5,871,434.

Table 6: Actual Direct Costs[3]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	0	623,785	623,785
Contract Costs	0	3,471,610	3,471,610
Material	0	32,918	32,918
Other Direct Charges	0	1,047,894	1,047,894
Total Direct Costs	0	5,176,206	5,176,206

Table 7: Actual Indirect Costs[4]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	0	693,788	693,788
AFUDC	0	1,256	1,256
Property Taxes	0	184	184
Total Indirect Costs	0	695,228	695,228

Table 8: Total Costs[5]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	0	5,871,434	5,871,434

[2] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[3] Values may not add to total due to rounding.
[4] Ibid.
[5] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 1172 and 1177 [redacted] TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR Part 192, Subpart O, including the continual identification of threats to its pipelines, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $5,871,434.

End of Line 1172 and 1177 [redacted] TIMP Project Final Report

I. LINE 1173 AND LINE 1241 [redacted] TIMP PROJECT

A. Background and Summary

Line 1173 and Line 1241 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 2.82 miles from [redacted], through residential and commercial areas. The pipeline is routed across Class 3 and 4 locations with 2.47 miles within High Consequence Area(s) (HCAs) and 0.40 miles within non-HCAs. This Workpaper describes the activities and costs associated with an Inspection using In-Line Inspection (ILI). The Project activities were located in the City of El Segundo. The specific attributes of this Workpaper are detailed in Table 1 below. The total loaded cost of the Project is $3,162,830.

Final Workpaper for Line 1173 and Line 1241 [redacted] TIMP Project

Table 1: General Project Information

Inspection Details			
Pipeline	1173 and 1241		
Segment	[redacted]		
Inspection Type	[redacted] ILI Tool		
Location	El Segundo		
Class	3 and 4		
HCA Length	2.47 miles		
Vintage	Multiple vintages from [redacted]		
Pipe Diameter	[redacted]		
MAOP	[redacted]		
SMYS	Multiple SMYS values from [redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Final Tool Run Date	[redacted]		
Inspection Due Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Loaded Project Costs	0	3,162,830	3,162,830

B. Maps and Images

Figure 1: Satellite Image of Line 1173 and Line 1241 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the Prepared Direct Testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that typically occur during the Inspection.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Tables 2.

1. Inspection – Engineering, Design, and Constructability: SoCalGas identified Line 1173 and Line 1241 for Inspection using ILI.
   a. ILI from a temporary launcher site where there is an existing underground removable spool piece on [redacted], to a temporary receiver site installed on [redacted].
2. Direct Examination – Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, direct examination was done on a validation spool piece, and it was determined that no additional Direct Examination sites were required for validation.
3. Post-Assessment – Engineering, Design, and Constructability: The validation analysis of the spool piece following the Inspection resulted in no additional examinations.
4. Final Project Scope: The final project scope of this Workpaper includes Inspection using ILI.

Table 2: Final Project Scope – ILI

Final Project Scope					
Line	Inspection Length	Threat Type	Inspection Technology	Tool Method of Travel	Retrofits
1173/ 1241	2.87 mi	[redacted]	[redacted]	[redacted]	No

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas initiated the planning process for the Line 1173 and Line 1241 [redacted] Project by performing a Pre-Assessment engineering analysis to determine existing conditions and any impacts to the Project, confirm the appropriate Inspection methods, and select the Inspection tools. Key factors that influenced the engineering and design of this Project are as follows:

1. Site Description: ILI from a temporary launcher site where there is an existing underground removable spool piece on [redacted], to a temporary receiver site installed on [redacted].
2. HCA Threats:
   [redacted]
3. Pipe Vintage: Multiple vintages from [redacted].
4. Long Seam Type:
   [redacted]

5. Inspection Tools and Technologies: The Project utilized [redacted] capabilities during the Inspection of the pipeline. [redacted] were also utilized in preparation for the Inspection.
6. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded pipeline could be inspected without system impacts.
7. Customer Impacts: The Project Team did not identify any anticipated service disruptions to customers.
8. Community Impacts: No identified impacts.
9. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
10. Environmental: No identified impacts.
11. Permit Restrictions: The Project Team obtained an Encroachment Permit from the City of El Segundo.
12. Land Use: The Project Team obtained a Temporary Right of Entry (TRE) from a private land owner in the City of El Segundo for the use of a laydown yard.
13. Traffic Control: The Project Team required a Traffic Control Plan (TCP) from the City of El Segundo for the launcher site, and a TCP from the City of Los Angeles for the receiver site.
14. Constructability: The Project Team utilized a removable permanent spool piece located on Line 1241 to install a temporary launcher for the Inspection.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas completed the Direct Examination for the Line 1173 and Line 1241 [redacted] using a validation spool piece and it was determined that no additional Direct Examination Sites were required for validation.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step the Project Team used the data collected from the Inspection to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in no additional examinations.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 3: Construction Timeline – Inspection

Construction Start Date	[redacted]	
Construction Completion Date		
Inspection Due Date		

Figure 2: Removeable Spool Piece

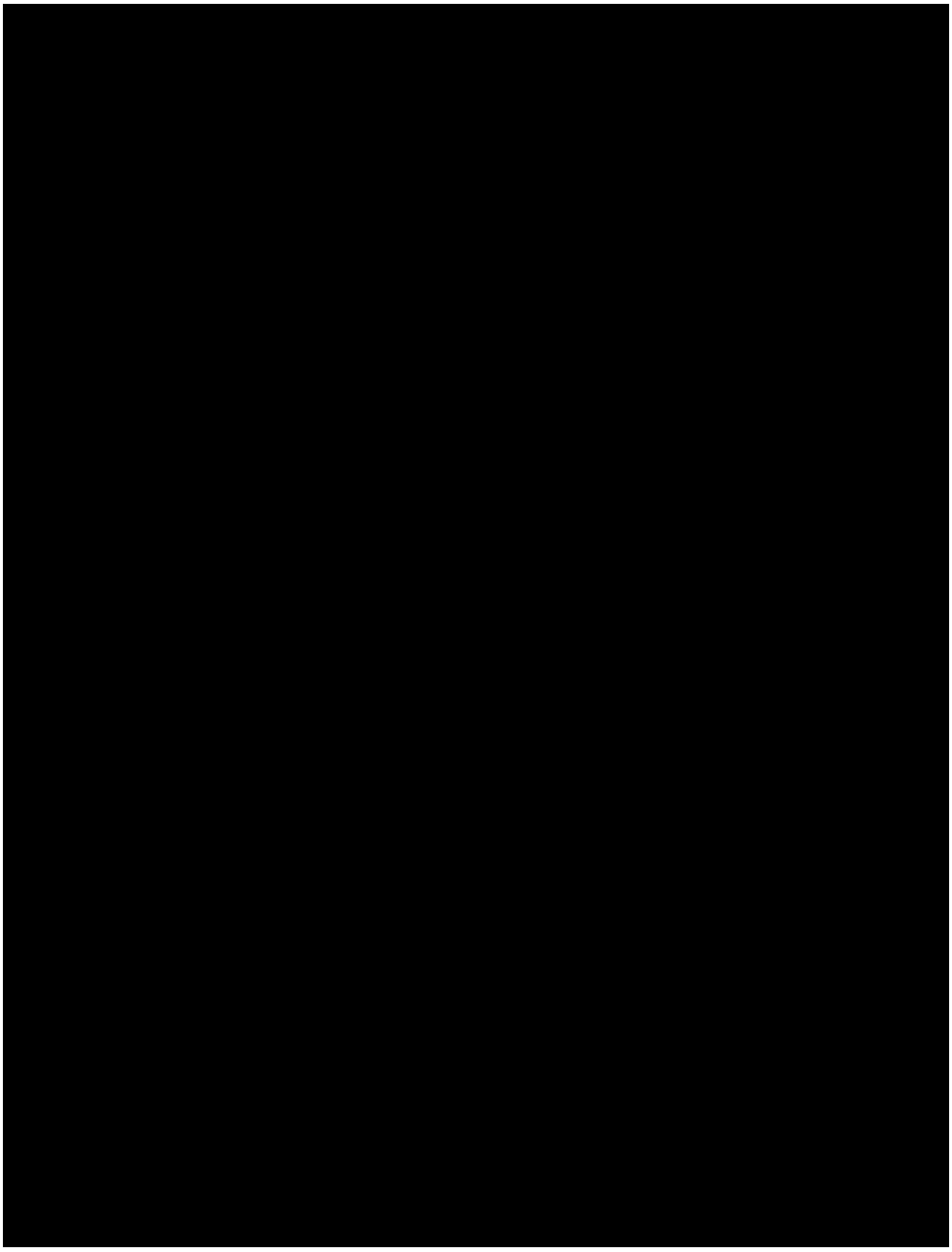


Figure 3: Validation Spool Piece

C. Commissioning and Site Restoration

Commissioning activities include restoration of the site; final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

B. Actual Costs[1]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $3,162,830.

Table 4: Actual Direct Costs[2]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	0	211,949	211,949
Contract Costs	0	2,057,745	2,057,745
Material	0	132,682	132,682
Other Direct Charges	0	438,916	438,916
Total Direct Costs	0	2,841,291	2,841,291

Table 5: Actual Indirect Costs[3]

Indirect Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	0	321,520	321,520
AFUDC	0	18	18
Property Taxes	0	0	0
Total Indirect Costs	0	321,538	321,538

Table 6: Total Costs[4]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	0	3,162,830	3,162,830

[1] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).
[2] Values may not add to total due to rounding.
[3] Ibid.
[4] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of their integrated natural gas system by prudently executing the Line 1173 and Line 1241 [redacted] TIMP Project. Through this Project, SoCalGas successfully implemented and managed the requirements set forth in 49 CFR 192, Subpart O to achieve the objective to continually identify threats to its pipelines, determine the risk posed by these threats, schedule and track assessments to address threats, conduct an appropriate assessment in a prescribed timeline, collect information about the condition of the pipelines, take actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and Workpaper findings of Line 1173 and Line 1241 in the City of El Segundo. The total loaded cost of the Project is $3,162,830.

End of Line 1173 and Line 1241 [redacted] TIMP Project Final Workpaper

I. LINE 1175 [redacted] TIMP PROJECT

A. Background and Summary

Line 1175 [redacted] Transmission Integrity Management Program (TIMP) Project assessed a [redacted] diameter transmission line that runs approximately 2.0 miles along [redacted] through residential neighborhoods and commercial areas. The pipeline is routed across Class 1 and 3 locations with 1.9 miles within High Consequence Areas (HCAs) and 0.1 miles within non-HCAs. This Workpaper describes the activities associated with a TIMP Assessment including Direct Examinations made to four sites. The Project activities were located in Hawthorne and Los Angeles. The specific attributes of this Project are detailed in Table 1 below. The total Loaded cost of the Project is $2,380,128.

Table 1: General Project Information

Direct Examination Details	
Site	1
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter *(confidential)*	[redacted]
MAOP *(confidential)*	[redacted]
SMYS *(confidential)*	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]
Direct Examination Details	
Site	2
Examination ID	[redacted]
Type	Validation
Mitigation/Remediation Type	Soft Pad
Within HCA	Yes
SRC/IRC	No
Pipe Diameter *(confidential)*	[redacted]
MAOP *(confidential)*	[redacted]
SMYS *(confidential)*	[redacted]
Construction Start Date	[redacted]
Construction Completion Date	[redacted]

Table 1: General Project Information (Continued)

Direct Examination Details			
Site	3		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter *(confidential)*	[redacted]		
MAOP *(confidential)*	[redacted]		
SMYS *(confidential)*	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Direct Examination Details			
Site	4		
Examination ID	[redacted]		
Type	Validation		
Mitigation/Remediation Type	Soft Pad		
Within HCA	Yes		
SRC/IRC	No		
Pipe Diameter *(confidential)*	[redacted]		
MAOP *(confidential)*	[redacted]		
SMYS *(confidential)*	[redacted]		
Construction Start Date	[redacted]		
Construction Completion Date	[redacted]		
Project Costs ($)	**Capital**	**O&M**	**Total**
Direct Project Costs	1,859,780	520,348	2,380,128

B. Maps and Images

Figure 1: Satellite Image of Line 1175 [redacted] TIMP Project

II. ENGINEERING, DESIGN, AND CONSTRUCTABILITY

A. Project Scope

As described in the prepared direct testimony of Jordan Zeoli, Fidel Galvan, and Travis Sera (Chapter II), TIMP projects follow the four-step assessment process: Pre-Assessment, Inspection, Direct Examination, and Post-Assessment. This Workpaper outlines construction activities during the Assessment process that occurred during the Direct Examinations.

Prior to initiating execution of the assessment, SoCalGas reviewed available information and performed a detailed system analysis to verify the scope of the Project. The final scope of this Project is summarized in Table 2 below.

1. Inspection - Engineering, Design, and Constructability: SoCalGas identified Line 1175 [redacted] for Inspection using In-Line Inspection (ILI), activities related to the ILI were completed for this Project before the TY 2019 General Rate Case (GRC) cycle.
   a. ILI along [redacted].
2. Direct Examination - Engineering, Design, and Constructability: Following the completion of the Inspection using ILI, six Direct Examination sites were identified to either assess pipeline segments that could not accommodate an ILI tool or for validation. Activities for four of the six Direct Examinations were completed during the TY 2019 GRC cycle.
   a. Direct Examination Site #1 consisted of soft pad repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
   c. Direct Examination Site #3 consisted of soft pad repairs.
   d. Direct Examination Site #4 consisted of soft pad repairs.
3. Final Project Scope: The final project scope of this Workpaper includes four Direct Examination sites.

Table 3: Final Direct Examination Project Scope

Final Project Scope							
Line	Site	Within HCA	SRC/IRC	Examination Length	Mitigation/ Remediation Length	Replacement Type	Cost Category
1175	1	Yes	No	18 ft	N/A	Soft Pad	O&M
1175	2	Yes	No	49 ft	N/A	Soft Pad	Capital
1175	3	Yes	No	45 ft	N/A	Soft Pad	Capital
1175	4	Yes	No	15 ft	N/A	Soft Pad	O&M

B. Engineering, Design, and Constructability Factors – Inspection

SoCalGas completed the Inspection for the Line 1175 [redacted] TIMP Project before the TY 2019 GRC cycle.

C. Engineering, Design, and Constructability Factors – Direct Examination

SoCalGas reviewed Inspection reports, completed various site evaluations, and communicated with project stakeholders. Key factors that influenced the engineering and design of the Project are as follows:

1. Engineering Assessment: There were four Direct Examination Sites selected for validation within the Line 1175 El Segundo TIMP Project.
   a. Direct Examination Site #1 consisted of soft pad repairs.
   b. Direct Examination Site #2 consisted of soft pad repairs.
   c. Direct Examination Site #3 consisted of soft pad repairs.
   d. Direct Examination Site #4 consisted of soft pad repairs.
2. SRC/IRC: There were no Safety Related Conditions (SRCs) or Immediate Repair Conditions (IRCs) during the Direct Examinations.

3. System Analysis: The Project Team completed a review of the Pipeline system to evaluate project feasibility, which concluded that Line 1170 and Line 2003 must remain in operation during the Direct Examination repairs to maintain system capacity.
4. Customer Impacts: The Project Team determined that customer service could be maintained to core and non-core customers by utilizing pressure control fittings (PCFs) during the tie-in.
5. Community Impacts: Traffic impacts and occasional noise. A nearby condominium complex was impacted by construction at Site #3, requiring the Project Team to provide temporary relocation.
6. Substructures: The Project Team did not identify any existing substructures that impacted the design and engineering.
7. Environmental: The Project Team did not identify any notable environmental concerns for the Direct Examinations.
8. Permit Restrictions:
   a. The Project Team obtained permits from the City of Los Angeles and the City of Hawthorne for night work at Sites #1, #2, and #4 and approval from the Transportation Construction Traffic Management Committee.
   b. The Project experienced delays in obtaining permits from the City of El Segundo and the City of Hawthorne, which caused Sites #2 and #3 to be completed much later than Site #1 and #4.
9. Traffic Control: The Project Team identified the need for northbound lane closures during construction, which required the additional permitting for night work.

D. Engineering, Design, and Constructability Factors – Post-Assessment

During the Post-Assessment step, the Project Team used the data collected from the Inspection and Direct Examinations to determine the effectiveness of the Inspection and evaluate the tool's performance to review the integrity of the pipeline, identify potential

required examinations or remediations, and to establish the next reassessment interval for the threats assessed. This analysis resulted in additional examinations to be completed after the TY 2019 GRC cycle.

III. CONSTRUCTION

A. Construction Contractor Selection

Following completion of the engineering, design, and planning activities described above, SoCalGas selected the Construction Contractor that best met the criteria for this Project.

B. Construction Schedule

Table 3: Construction Timeline – Direct Examination

Mobilization 1: Direct Examination Sites #1 and #4	
Construction Start Date	[redacted]
Construction Completion Date	
Mobilization 2: Direct Examination Sites #2 and #3	
Construction Start Date	[redacted]
Construction Completion Date	

Figure 2: Sandblasted Pipe Inspection at Site #4

Figure 3: Site #4 Excavation

Figure 4: Bare Pipe Inspection at Direct Examination Site #2

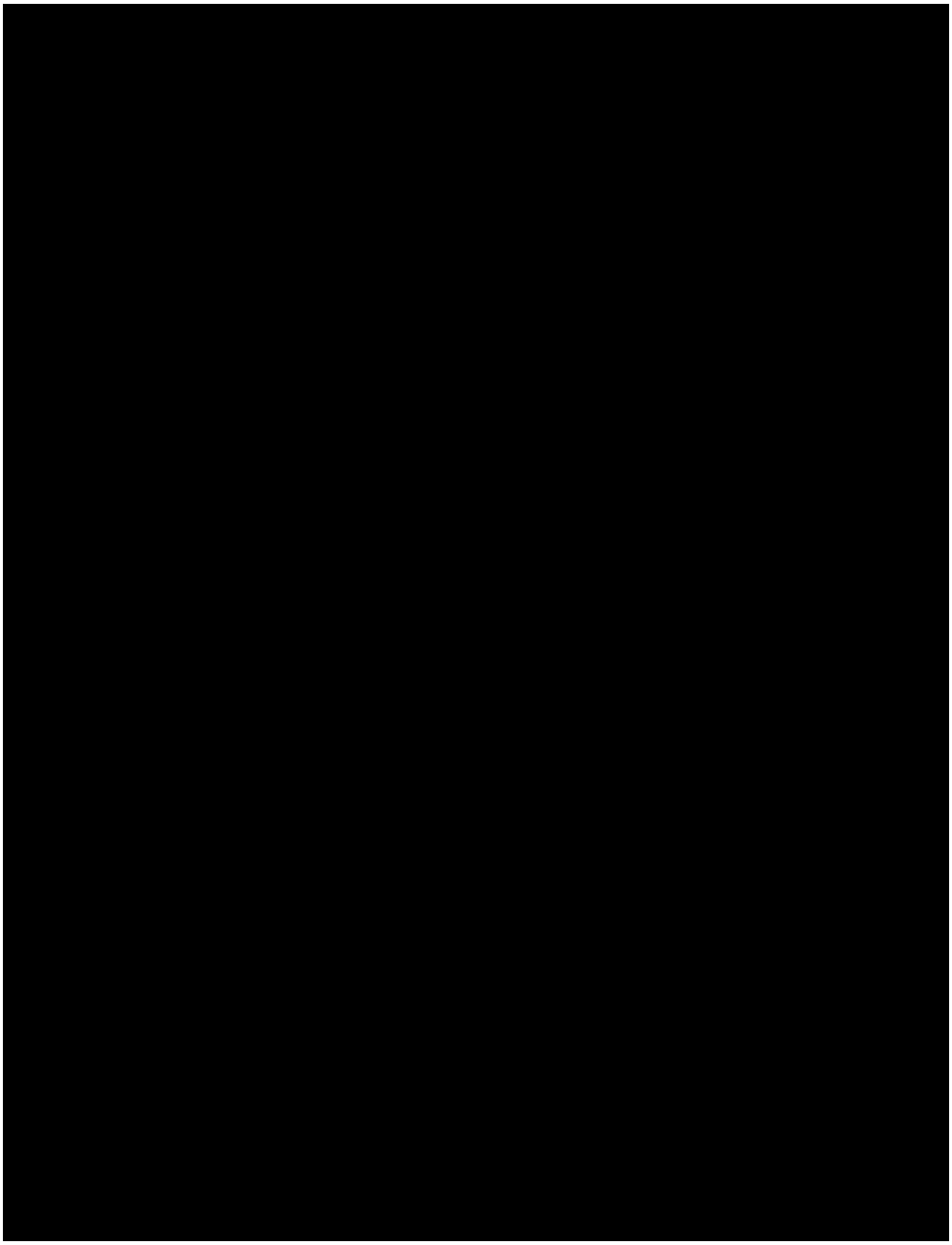


Figure 5: Direct Examination Site #3 Overview

Figure 6: Direct Examination Site #4 Overview

C. Commissioning and Site Restoration

Commissioning activities include restoration of the site, final Inspection and returning pipeline to normal operating conditions, transportation and disposal of hydrotest water and hazardous material, and site demobilization. Closeout activities include development of final drawings, finalization of a reconciliation package, and updates to company recordkeeping systems to reflect the completed scope of work.

IV. PROJECT COSTS

A. Cost Efficiency Actions

SoCalGas executed the design, planning, and construction activities for this Project to minimize or avoid costs where appropriate. As discussed above, the Project Team reviewed existing information, communicated with external stakeholders, and conducted a site evaluation to incorporate the site conditions in the project plan and design.

B. Actual Costs[1]

Actual loaded costs reflect the Labor, Material, and Services costs incurred to execute the Project. The total loaded cost of the Project is $2,380,128.

Table 3: Actual Direct Costs[2]

Direct Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Company Labor	117,464	41,421	158,884
Contract Costs	1,228,814	378,915	1,607,729
Material	297	0	297
Other Direct Charges	215,512	62,242	277,754
Total Direct Costs	1,562,087	482,577	2,044,664

Table 4: Actual Indirect Costs[3]

Indirect and Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Overheads	291,187	37,771	328,958
AFUDC	5,094	0	5,094
Property Taxes	1,412	0	1,412
Total Indirect Costs	297,693	37,771	335,464

Table 5: Actual Indirect Costs[4]

Total Costs ($)	Capital Costs	O&M Costs	Total Actual Costs
Total Loaded Costs	1,859,780	520,348	2,380,128

[1] These are the total project costs incurred between January 1, 2019, and December 31, 2023. Only direct costs and vacation and sick contribute to the TIMPBA revenue requirement that is presented in the Prepared Direct Testimony of Rae Marie Yu (Chapter III).

[2] Values may not add to total due to rounding.

[3] Ibid.

[4] Ibid.

V. CONCLUSION

SoCalGas enhanced the integrity of its natural gas system by executing the Line 1175 [redacted] Street TIMP Project. Through this Project, SoCalGas implemented and managed the requirements set forth in 49 CFR 192, Subpart O, including the continual identification of threats to its pipelines in HCAs, determination of the risk posed by these threats, scheduling and tracking assessments to address threats, conducting an appropriate assessment in a prescribed timeline, collecting information about the condition of the pipelines, taking actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure, and reporting the findings of the assessment. The total loaded cost of the Project is $2,380,128.

End of Line 1175 [redacted] TIMP Project Final Workpaper

BEFORE THE PUBLIC UTILITIES
COMMISSION OF THE STATE OF CALIFORNIA

DECLARATION OF TRAVIS T. SERA REGARDING CONFIDENTIALITY OF CERTAIN DOCUMENTS PURSUANT TO D.21-09-020

I, Travis T. Sera, do declare as follows:

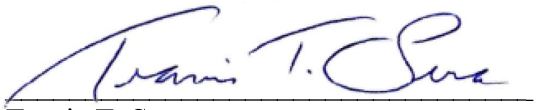
1. I am the Director of Integrity Management for Southern California Gas Company (SoCalGas). I have been delegated authority to sign this declaration by Amy Kitson, Vice President of Gas Engineering and System Integrity for SoCalGas. I have reviewed the confidential information included within SoCalGas-02-WP Amended Workpapers Supporting the Prepared Direct Testimony of Jordan A. Zeoli, Fidel Galvan, and Travis T. Sera (Technical – Project Execution and Management) ("TIMP Amended Workpapers"). I am personally familiar with the facts and representations 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 to demonstrate that the confidential information ("Protected Information") provided in the TIMP Amended Workpapers is within the scope of data protected as confidential under applicable law.

3. In accordance with the legal authority described 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 5th day of September, 2025 at Los Angeles, California.



Travis T. Sera
Director of Integrity Management
Southern California Gas Company

ATTACHMENT A

SoCalGas Request for Confidentiality on the following Protected Information in its Amended Transmission Integrity Management Program (TIMP) Workpapers

Location of Data	Applicable Confidentiality Provisions	Basis for Confidentiality
SCG-02-WP (Volumes I, IV, V, and VII); Amended Workpapers Supporting the Prepared Direct Testimony of Jordan A. Zeoli, Fidel Galvan, and Travis T. Sera (Technical – Project Execution and Management) have been marked/highlighted as confidential pursuant to PUC Section 583, GO 66-D, and D.21-09-020. Confidential Information: Critical Energy Infrastructure Information (CEII), Pipe attributes (SMYS, MAOP/MOP, Diameter, Seam type, Install date, Class location, HCA segment information, Assessment method, Assessment date, Coating type, Construction dates/schedules, Inspection results, Directional flow of natural gas), Threat type, Specific locational information and system pipeline map.	CPRA Exemption, Gov't Code § 7927.705 ("Records, the disclosure of which is exempted or prohibited pursuant to federal or state law") • Cal. Civil Code §§ 3426 *et seq.* (Uniform Trade Secrets Act) • *TMX Funding Inc. v. Impero Technologies, Inc.*, 2010 WL 2745484 at *4 (N.D. Cal. 2010) (defining trade secret in an injunction to include "business plans and strategies") • *O2 Micro Int'l Ltd. v. Monolithic Power Sys., Inc.*, 420 F. Supp. 2d 1070, 1089–1090 (N.D. Cal. 2006) ("It does not matter if a portion of the trade secret is generally known, or even that every individual portion of the trade secret is generally known, so long as the combination of all such information is not generally known.") • 18 CFR § 388.113(c) (defining CEII) • FERC Order Nos. 630, 643, 649, 662, 683, and 702 (defining CEII) • 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	It is SoCalGas's practice to designate certain data as confidential because this data is similar to data protected by CEII regulations and, if made publicly available, could potentially present a risk to public and pipeline safety. Engineering design values (i.e., Pipe attributes and production data) for existing critical infrastructure could be used to determine the criticality of a gas facility and identify vulnerabilities of the gas delivery network. Because of the critical nature of these attributes, they have been identified by PHMSA to be restricted attributes available only to government officials. Inspection results (including assessment results/dates) are forms of production data that is protected and includes details related to the transmission and distribution of energy. This information if released to the public can be used to predict repair schedules and availability of segments of the transportation network. It may affect market pricing for gas transportation and delivery and lead to speculation in the energy markets that may be detrimental to consumers. This information could also be used to identify vulnerabilities of the gas network. It is SoCalGas's practice to designate portions of their threat analysis, such as threat types, as confidential because this data is considered proprietary, not currently published by PHMSA, and, if made publicly available, could potentially present a risk to public and

	Infrastructure Information, (Feb. 21, 2017), *available at* https://www.ferc.gov/sites/default/files/2020-04/CEII-Filing-guidelines.pdf o Exhibits G, G-1, G-II of pipeline certificate applications. 18 CFR § 157.14 o Exhibit V of abandonment applications. 18 CFR § 157.18 o 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.") • The Pipeline and Hazardous Materials Safety Administration's (PHMSA) guidelines consider the data to be restricted pipeline information. PHMSA Guidelines, 81 Fed. Reg. 40757, 40764 (June 22, 2016). • PHMSA also issued an advisory bulletin on December 9, 2016: ABD-2016-0137; Pipeline Safety: Safeguarding and Securing Pipelines from Unauthorized Access detailing	pipeline safety, as well as a potential financial loss of future revenue as these documents could be monetized. Pipeline locations (including street names) and maps at a scale of 1 inch to 24,000 feet scale or less 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 living near the natural gas pipeline or gas facility.

	the need for operators to protect their gas systems • *See* Administrative Law Judge's Ruling Granting Applicant's Motion for Leave to Submit Confidential Materials Under Seal as to Appendix K Geographic Information System (GIS) Data at 2, Application 16-07-016 (December 1, 2016); Administrative Law Judge's Ruling Granting Applicant's Motion to File Specified Documents Under Seal, Application 16-04-022 (June 2, 2016) • *See Mr. Doug Hall*, 114 FERC ¶ 62194, 2006 WL 463906 (Feb. 27, 2006) (letter from the FERC Office of External Affairs to an applicant seeking to review information containing CEII, explaining that "precise dam coordinates which could be used to target the dam. In addition, providing coordinate data for all facilities in a specific geographic region increases the vulnerability of those facilities to attack . . . this information could be used to compromise the dams, placing lives at risk.") • *Ms. Alison Arnold*, 108 FERC ¶ 62287, 64538 (Sept. 30, 2004) (ruling on a request to the U.S. Department of Interior for a copy of GIS data regarding hydropower projects located in the State of Washington that "contains critical energy infrastructure information (CEII)") • *N. Dakota Pipe Line Co., LLC 24-Inch Crude Oil Pipeline - Sandpiper Project Siting Application*, GE-13-193, 2014	

	WL 2567685, at *1 (May 13, 2014) (deeming confidential all the information in "a sealed envelope containing a CD and labeled 'Critical Energy Infrastructure Information.' The information also includes GIS mapping data, GIS data, and two plots of Souris River Crossing relating to the location of the Sandpiper Pipeline.") CPRA Exemption, Gov't Code § 7929.205 (Critical Infrastructure Information)	