



Request for Proposals

Alameda Corridor Maintenance Services

To be submitted to:

**Alameda Corridor Transportation Authority
3760 Kilroy Airport Way, Suite 200
Long Beach, CA 90806**

ALAMEDA CORRIDOR MAINTENANCE SERVICES Request for Proposals updated 3/27/25

The current published Request for Proposals (RFP) released on 3/27/25 changed the previous RFP (released on 9/30/24) in the following key areas:

Updated Schedule and Deadlines

- New proposal due date: April 29, 2025
- Pre-proposal meeting, written question deadlines, interview dates, and board approval timeline have been updated to reflect the new schedule.

Cost Evaluation Updates

- The number of Cost Proposal Forms has been reduced from five (5) to three (3).
- The following forms have been removed:
 - AR-IV: Vehicles & Equipment
 - AR-V: Additional Cost Items
- Proposers must now submit only:
 - AR-I: Track, Bridge & Safety Labor
 - AR-II: Signal & Communication Labor + Equipment
 - AR-III: Contractor Markups
- Updated cost evaluation point distribution:
 - Qualification of Team and Proposed Staff: max 35 points (no change)
 - Understanding and Approach to Services: max 33 points (up from 30 points)
 - Cost Proposal Forms: max 32 points (down from 35 points)
- Firms must complete the new fillable forms in updated Appendix P:
 - Staff levels in Forms AR-I and AR-II are fixed; positions cannot be added or removed
 - All listed positions must have a value entered
 - ACTA has defined these as the baseline staffing levels required for cost evaluation
 - Points will be pro-rated based on the lowest cost proposer for the respective section.

Clarification regarding SBE Utilization (RFP Section 5.4):

- Material purchase by SBE subcontractors will not count toward the minimum participation level.

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Alameda Corridor Maintenance Services Request for Proposals

1.0 Introduction

The Alameda Corridor Transportation Authority (“ACTA”) is soliciting proposals from qualified contractors to provide rail and non-rail maintenance and capital construction services on the Alameda Corridor (Rail Corridor). The Rail Corridor is a triple-track, heavy freight rail line that extends 20 miles from downtown Los Angeles to the Port of Los Angeles (POLA) and Port of Long Beach (POLB) collectively (“Ports”). The two largest Class 1 railroads in the United States, the Union Pacific Railroad (“UP”) and the BNSF Railway (“BNSF”), collectively (“Railroads”), and to a limited extent the Ports’ short-haul provider Pacific Harbor Line (PHL), all use the Rail Corridor to serve the largest port complex in the country. ACTA is a joint-powers authority created by the Cities of Los Angeles and Long Beach in 1989 to develop, finance, construct, and operate the Rail Corridor, which commenced operations on April 15, 2002.

ACTA intends to enter into an agreement commencing approximately in January 2026 with one firm or team (“Contractor”) for a five-year period (with a five-year extension option) to perform the maintenance services as summarized in this Request for Proposals (RFP). A draft of the Maintenance Agreement (“Agreement”) is included in **Appendix A** of this RFP.

Capitalized terms in the RFP are defined in the Agreement.

2.0 Rail Corridor Description

Currently, the Railroads dispatch trains on the Rail Corridor from the San Bernardino, California Joint Dispatch Center, and the Railroads’ Police Department provides security on the Rail Corridor. The Ports own all the rail rights-of-way upon which the Rail Corridor is located. In addition, the Ports individually, and in some cases jointly, own properties within each Port’s jurisdiction. The Rail Corridor was built to accommodate the anticipated increase in port container activity. The Railroads, and in some cases PHL, operate their respective trains on the Rail Corridor using their own crews.

The Rail Corridor is comprised of three segments referred to as the North End, the Mid-Corridor, and the South End. The one-mile long North End segment and nine-mile long South End segment are standard at-grade railroad facilities with highway grade separations over or under the railroad. The Mid-Corridor segment is a 10-mile long below-grade trench located directly adjacent to Alameda Street. There are approximately a total of sixty highway and railroad bridges throughout the three Rail Corridor segments.

Appendix B contains the Rail Corridor track charts showing the locations of bridges, mileposts, storm drain facilities in the trench, control points, signal locations, maintenance limits, and other significant features. The rail right-of-way varies in width from 30 to 100 feet along the Rail Corridor.

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North End

The North End extends east of Santa Fe Avenue in Los Angeles and provides connections to the transcontinental rail network of each Railroad. In addition, there are connections to other Railroad branches, industries, and rail yards. The Rail Corridor is grade separated at Santa Fe Avenue, Washington Boulevard, and the BNSF/Amtrak/Metrolink line at Redondo Junction. The Railroads maintain all tracks, structures and other facilities east of the Rail Corridor connections with their own or contract forces.

Mid-Corridor

The Mid-Corridor segment, between Santa Fe Avenue at the north and the Artesia Freeway (SR-91) at the south, is below grade in a trench about 33 feet deep and 51 feet wide. Thirty-two east-west streets cross above the trench via roadway bridges. In addition, two rail bridges cross the trench carrying the BNSF's Harbor Subdivision at Slauson Avenue and the UP La Habra Branch at Randolph Street. Both rail bridges remain active with minimal daily train activity.

Paralleling the trench for about six miles between Firestone Boulevard at the north and SR-91 at the south is UP's at-grade Santa Ana Bypass Track. The track and grade crossings, although on the Ports' right-of-way, are maintained by the UP or its designee (PHL) under a separate agreement.

South End

South of the SR-91 Freeway, the ACTA mainline tracks are at-grade, and most streets crossing the Rail Corridor are raised above the tracks and Alameda Street. Exceptions to this are two locations where the ACTA main tracks are constructed on railroad bridges over Alameda Street.

Between Laurel Park Road and Carson Street, there are two 7,500 foot-long storage tracks for use by either Railroad. In this area, the Corridor occupies from 60 to 80 feet of the westerly portion of a 250-foot wide railroad right-of-way. The remaining right of way is UP's Dolores Yard, which stretches about 6 miles from Laurel Park Road to Lomita Boulevard. UP or PHL maintains the Southerly Drill Track on the Ports' property west of ACTA's three main lines for local industry service.

Numerous rail connections exist in the southerly portion of the Rail Corridor. These include but are not limited to:

- 1) the Dolores Yard Lead Track at MP 10.65 and the UP Wilmington Branch at MP 11.6
- 2) two leads connecting Dolores Yard to the UP Intermodal Container Transfer Facility (ICTF)
- 3) several oil refinery industrial tracks, and
- 4) the BNSF lead track to its Watson Yard and the south end of the BNSF's Harbor Subdivision.

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In addition to the Railroads' operation, PHL shuttles trains to and from Dolores Yard and Watson Yard for both Railroads. PHL also operates trains to local industries on the South Drill Track for UP and BNSF and the Santa Ana Bypass Track for UP. Although the Railroads maintain the tracks located on their property, the selected maintenance contractor will be required to coordinate their services periodically with the Railroads.

South of Pacific Coast Highway, the ACTA's three main lines split into four tracks: two to POLB and two to Terminal Island. The Rail Corridor ends several hundred feet east of Anaheim Street in POLB and at the north side of Cerritos Channel at the Badger Avenue Bridge to Terminal Island.

The southerly end of the South End segment is within the Ports' jurisdictional boundaries and within PHL's zone of operations. PHL, a subsidiary of Anacostia Rail Holdings Company, is a short line railroad established in 1998 that currently provides rail services within the Ports' complex, including maintenance and dispatching of train movements.

3.0 RESERVED

4.0 Request For Proposals Schedule

Proposals shall be submitted in-person, and as otherwise set forth herein, by 3:00 p.m. (Pacific Daylight Time) on **April 29, 2025** to:

**Graham Christie
Chief Operating Officer
Alameda Corridor Transportation Authority
3760 Kilroy Airport Way, Suite 200
Long Beach, CA 90806**

Electronic delivery of Proposals by email or fax will not be accepted. All Proposals will be date-stamped upon receipt. The opening of the Proposals will not be a public event.

Proposers are solely responsible for the timeliness of their submittals. Proposers are advised to allow adequate time to ensure timely delivery at the location designated at or before the deadline set forth above. Proposers are encouraged to consider conditions such as, but not limited to, traffic congestion, parking, and/or events in and around the ACTA office that might increase the amount of time necessary to deliver the Proposal in person.

ACTA reserves the right to reject any and all Proposals, and to waive or correct any irregularity in a Proposal at its sole discretion, including but not limited to irregularities related to mathematical computation errors and missing information. ACTA also reserves the right to receive any necessary clarification from proposers to assist in correcting irregularities in a Proposal. Failure to meet the Small Business Enterprise or Good Faith Effort requirements set forth in this RFP is not waivable and such Proposals shall be deemed non-responsive.

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Proposers are advised that all documentation submitted in response to this RFP will be considered property of ACTA and may become available to the public as a public record and be released without further notification. Any information that a proposer considers confidential should not be submitted with the proposal.

A Pre-Proposal Meeting will be held on **April 3, 2025** via video conference. While not mandatory, Prime Contractors are strongly encouraged to attend the pre-proposal meeting.

All questions and requests for clarification regarding the RFP shall be submitted to the following email address MOWRFP@acta.org.

Written questions will be accepted up until 3:00 p.m. (PDT) on **April 10, 2025**. Written responses will be posted on ACTA's website by close of business on **April 17, 2025**.

Interviews may be conducted at the sole discretion of ACTA. If interviews are conducted, they will be conducted on May 13, 2025. This date may be subject to change. Further instruction will be provided if interviews are conducted.

A review panel comprised of representatives from ACTA, both Ports and one outside public transportation agency (e.g., Metro or Metrolink) will evaluate the written proposals, conduct interviews (optional), and recommend a firm for selection. Refer to Section 6.0 for additional evaluation criteria. ACTA will finalize an Agreement (See **Appendix A**) with the recommended firm and transmit the recommended selection and Agreement terms to the Ports and Railroads for approval. If approved, ACTA staff will submit the final Agreement to the ACTA Governing Board for approval.

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Schedule for Selection of a Maintenance of Way Contractor

	<u>Date</u>
Release of RFP:	• Mar 27, 2025
Pre-Proposal Meeting:	• Apr 3, 2025
Close of Written Questions: (Deadline 3:00 p.m.)	• Apr 10, 2025
Response to Written Questions:	• Apr 17, 2025
Proposals Due: (Deadline 3:00 p.m.)	• Apr 29, 2025
Interviews: *	• May 13, 2025
Recommendation for ACTA Board Approval: **	• November 2025
Agreement Effective and Services Begin (approximate)	• January 2026

* *Optional and may be subject to change*

** *Follows approval by Railroads and Port Harbor Commissions*

5. Proposal Format and Contents

Each Proposal submission package shall include the following:

- 1) One (1) original and five (5) copies of
 - the Proposal Cover Letter
 - the firm's Technical Proposal, including the DIR Form set forth in **Appendix D** the firms' Cost Proposal Forms as set forth in **Appendix P**
- 2) One (1) original set of the SBE Forms as set forth in **Appendix O** OR evidence showing compliance with the Good Faith Efforts set forth in **Appendix O**
- 3) One (1) flash drive containing the firm's entire proposal.

Proposals shall be typed using 1.5 line spacing, 12-point font limit, and submitted on single-sided 8-1/2 x 11 inch paper. Tables, charts and graphics may be single spaced with smaller font, but must be readily legible and subject to clear copy capability. Proposals shall not include any promotional materials and shall be limited only to the information requested in this RFP.

Proposals should not exceed 25 single-sided pages in length, **excluding** the following:

- Proposal Letter
- team member resumes
- Cost Proposal
- SBE Forms/GFE information.
- Documents submitted as evidence of insurance and bonding
- Any additional supporting documentation beyond summary information for Safety Violations, Claims History, Denial of Award or Prequalification, Completion by Surety, Assessment of Liquidated Damages, and FRA Violations. Such additional supporting information can be provided in appendices.

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5.1 Proposal Cover Letter

The Proposal Cover Letter shall be no longer than three pages and contain the following information:

Provide a brief description of the firm and all proposed subcontractors (include firm names, address, telephone, email address and fax numbers) and identify the entity type for each firm (e.g., corporation, joint venture, partnership, or sole proprietorship).

Provide the name, address, and telephone number of the contact person during the period of Proposal evaluation.

Provide a statement that the Proposal, including costs, shall remain valid for a period of not less than 180 days from the date of submittal.

Provide a statement that the Proposer can comply with the terms of the Maintenance Agreement included in **Appendix A** of this RFP.

Provide a statement confirming that the firm and all subcontractors proposed to perform any public work services are registered with the Department of Industrial Relations as public works contractors.

Provide a statement certifying that the Proposal constitutes Proposer's full and complete written response to the RFP, and acknowledging that additional material outside of such Proposal shall not be considered by ACTA in connection with this RFP, unless ACTA provides a written request for such additional written materials.

The Proposal Letter shall include the following provisions verbatim:

"The undersigned firm acknowledges and accepts that the evaluation selection of the maintenance contractor will not be based on lowest ultimate cost, but rather will be based on evaluation of the qualification of proposed team and staff, understanding and approach to the required services, and pricing considerations as outlined in the RFP."

"The undersigned firm has not prepared this Proposal in collusion with any other proposer. The contents of this Proposal have not been communicated at any time or in any manner by the undersigned firm, its employees, agents, or any interested party of the undersigned firm to any other proposer. This Proposal is genuine, and not a sham or collusive, nor made in the interest or on behalf of any person not herein named; the undersigned firm, its employees, or agents have not directly or indirectly induced or solicited any other proposer to put in a sham proposal, or any other person, firm or corporation to refrain from submitting a proposal; and the undersigned firm, its employees or agents have not in any manner sought by collusion to secure for themselves an advantage over any other proposer."

Provide a statement that the Proposal cover letter is signed by the person or persons authorized to legally bind the firm.

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5.2 Technical Proposal

Firms are requested to submit the following information in their proposal to show the firm's skills, knowledge, and understanding of the subject matter involved to perform the required services including examples of previous experience in similar or related assignments, staff experience, workload capabilities, and providing client references.

A. Qualification of Team and Proposed Staff

1. *Similar Projects and References* – Provide a description of recently completed or ongoing projects involving work similar in magnitude and scope to that described by this RFP, including any prevailing public works projects in California. In addition, projects performed by parent or sister entities of Proposer may be listed separately, but Proposer shall make clear which parent or sister entity performed each project. Listed projects should detail the Proposer's specific technical and management experience and explain how it is applicable to the types of work described in this RFP, including but not limited to inspecting, maintaining, repairing, rehabilitating, and constructing track, structures, grade crossings and railroad-related infrastructure.

Provide a narrative describing up to three projects that highlight the firm's specific experience in implementing safety training and bridge management programs. For each project, include the client firm name, a contact name, phone and email for references, the date range of the work performed, and specific details of the Proposer's participation and responsibilities on the project. Include information detailing the firm's railroad-related maintenance tasks, evidence of successful relationships with Class 1 railroads and maintenance of FRA Class 4 or better trackage.

Provide a statement confirming that the proposed team is familiar with and qualified to provide services in compliance with the UP Track and Signal Standards contained in **Appendix F**.

Organization Chart, Staffing Plan, and Key Personnel - Provide an organization chart that identifies the Key Personnel and support and other management personnel that will be assigned to the services, including the Maintenance Contract Manager, Signal and Communications Supervisor, Track Supervisor, Bridge and Structures Supervisor, and other key staff. Indicate whether each position listed is a full or part-time assignment. Include as an appendix to the proposal resumes for Key Personnel, as well as a list of certifications as necessary or required. A description of required Qualifications of Key Personnel can be found in **Appendix N**. ACTA reserves the right to waive the minimum years of experience for Key Personnel.

2. *Subcontracting Plan* – Provide a subcontracting plan describing any work where the firm intends to engage subcontractors. Provide narratives detailing the firm's prior experience with each proposed subcontractor. For each subcontractor, provide the firm's name and address, and a lead staff name, title and contact information.

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3. **Safety Violations** - Provide a list detailing any citations issued against the firm by CAL/OSHA or the Federal OSHA for any “serious”, “willful”, or “repeat” violations of safety or health regulations in the past five (5) years. For any citations, include the dates of the citations, the nature of the violation, the project on which the citation(s) was/were issued, and the amount of penalty paid, if any. If the citation was appealed to the Occupational Safety and Health Appeals Board and a decision has been issued, list the case number and date of the decision. Where the firm provides project experience for parent or sister entities, the citations issued for these projects shall also be provided.
4. **Federal Railroad Administration (FRA) Violations** - Provide a narrative describing any FRA violations issued to the firm or any proposed team members including subcontractors during the past five (5) years. Explain the nature, date, and reference number of the violations; fines or penalties; and corrective actions. Where a provides project experience of parent or sister entities, the FRA violations for those projects shall also be described.
5. **Licenses** - Provide a list of the firms’ and subcontractors’ license numbers, classifications and expiration dates of the licenses. List the dates, if any, when any of the firm’s licenses have been revoked at any time or if the firm and subcontractors have been debarred from any public works project in the past ten (10) years.
6. **Claims History** - Disclose and explain all litigation, mediation, or arbitration of claims against the firm or brought by the firm seeking payment of money or other relief arising out of construction or maintenance projects during the past five (5) years, including but not limited to claims for compensable delays, conflicts on additional scope of work or contract terms, unforeseen conditions, liquidated damages, and warranty and maintenance issues. Identify each claim by providing the project name, date of claim, parties to the claim, a brief description of the nature of the claim, the court and case number, the original amount of the claim, and whether the claim is pending or a brief description of the resolution including the final amount paid on the claim.
7. **Denial of Award or Prequalification** - Provide a list of any instances where the firm has been denied an award of a public works contract based on a denial of prequalification or a finding by a public agency that the firm was not a responsible bidder. Include the year of the denial, the public agency, the name of the project, and the basis for the finding by the public agency.
8. **Completion by Surety** – Provide a list of any projects where the firm’s surety company completed a contract on the firm’s behalf, or paid for completion because the firm was default terminated within the past ten (10) years. Include the amount of each claim, the name of each claimant, the date of the claim, the grounds for the claim, the date of resolution of the claim, and the nature and amount of resolution.

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9. Assessment of Liquidated Damages - Provide a list of any projects for which the firm was assessed and/or paid liquidated damages under a contract. Identify the project by owner, the date of completion of the project, the amount of liquidated damages assessed/paid, and all other information necessary to explain the assessment of liquidated damages.
10. Experience Modification Rate (EMR) - Provide the firm's annual EMR issued by the firm's workers compensation insurance carrier for the past three (3) years.

Evidence of Insurance - Provide evidence of the firm's ability to obtain appropriate insurance with an insurer having an AM Best's Guide current rating of not less than A-:VIII, with minimum limits as set forth in Section 17 of the draft Maintenance Agreement in **Appendix A**.

B. Evidence of Bonding Capacity

A performance bond in the amount of \$6,000,000, and a payment bond in the amount of \$1,500,000 will be required for this Agreement to cover the estimated value of one year of Services under this Agreement. Proposer shall provide with its proposal a notarized statement from a California admitted surety insurer with an AM Best's Guide rating of at least A-:VIII, which states that the Contractor's current bonding capacity is sufficient to cover the Services under the Agreement.

C. Understanding and Approach to Services

Provide a work plan that addresses the Scope of Services set forth in Exhibit 1 and show the firm's understanding of the requirements. Any additional Services that the firm may deem necessary should be identified and discussed in the proposal.

Include in the proposal:

1. Describe the firm's understanding of, and overall approach to, performing the Services and tasks to be accomplished, including a mobilization plan for start-up services.
2. Describe the resources the firm will use for basic maintenance services and supplemental capital improvement work activities, including the firm's ability to mobilize additional forces for emergency or extraordinary planned activities.
3. Describe the firm's understanding of San Pedro Bay Ports' freight rail service and Rail Corridor operations.
4. Describe the firm's familiarity and experience with the UP Track and Signal Standards, and how the organization and staffing plans are designed to meet these requirements.
5. Propose any recommended procedural or technical enhancements and innovations to the Scope of Services that do not create any material deviations from the objectives or requirements.
6. Describe the proposed size and makeup of the full and part-time workforce to provide the Services.
7. Describe the firm's experience and ability to develop a Bridge Management Plan for the

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Rail Corridor that conforms to FRA standards.

8. Describe the firm's ability to develop a training and safety program for the Rail Corridor that conforms to ACTA, FRA, and Cal OSHA standards.
9. Discuss the equipment that the firm and subcontractors will use and its availability. Describe the firm's and subcontractors' material procurement processes. Describe which equipment will be charged full-time year-round and any equipment that will be charged only as needed for specific maintenance or capital work.
10. Describe the firm's document record keeping process for maintenance and inspection activities. Describe the firm's administrative support process for invoicing, budgeting and inventory control.
11. Provide samples of inspection forms from ongoing or previous maintenance assignments. Sample inspection forms may be submitted as an appendix and will not count toward the proposal page count.

5.3 Cost Proposal Forms

Firms shall submit the Cost Proposal Forms AR-I through AR-V in **Appendix P** as part of the proposal. The Annual Maintenance Budget will contain many variable cost items for both routine and special maintenance, as well as Capital Improvements. The purpose of the Cost Proposal information is not to arrive at a complete estimated total price for the first Annual Maintenance Budget under the Agreement. Rather, the firm's Cost Proposal Forms will be used to evaluate the cost elements of the labor and services to be provided and to obtain a general sense of the following cost elements:

- 1) the burdened labor rates for the proposed work force;
- 2) the proposed contractor markup for all subcontractors, materials and other procurements.

These cost elements will be used to evaluate the firm's proposals for costs as set forth in Section 6.0 – Evaluation Criteria. In addition, certain of these cost elements will be used in the computation of SBE participation. (See **Appendix O**.) Note that during negotiations of the Annual Maintenance Budget for the first Contract Year, the unit costs contained in the Cost Proposal shall not be increased but may be subject to a negotiated decrease.

By submitting the Cost Proposal Forms, firms grant ACTA the right to examine (for the purpose of verifying the cost and pricing data submitted) those books, records, quotes, documents, and other supporting data, which will permit adequate evaluation of the data, including computations and projections used to generate the Cost Proposal.

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5.4 SBE Utilization

The ACTA Governing Board has established the following SBE participation levels for all ACTA contracts awarded after January 1, 2017:

- (1) an aggregate average of 25% by contract value, and/or
- (2) 25% of all contracts awarded to certified SBE firms.

The minimum required SBE participation level by contract value for this Maintenance of Way Services Agreement is 15%. However, Proposers are encouraged to maximize SBE participation above this level on their the SBE Forms set forth in **Appendix O** to the extent possible.

It is ACTA's objective to provide SBE subcontracting opportunities for all subcontracted activity, as well as to encourage contractors to subcontract activities which might have otherwise been performed by the contractor itself to meet and exceed the 15% minimum participation level. Material purchase by SBE subcontractors will not count toward the minimum participation level.

In order for the Proposal to be deemed responsive, the Proposer must submit the forms in **Appendix O** showing that it meets the established 15% minimum SBE participation level, or complete SBE Form 05 in **Appendix O** showing the Good Faith Efforts that were used to try to meet the minimum participation level and the reduced participation level that will be achieved.

If the Proposer is a certified SBE, the 15% SBE minimum participation level is deemed to have been met provided that the percentage of work performed by the certified SBE meets the 15% minimum participation level.

Details of the required submissions, certifications, forms, and good faith efforts requirements and evaluation are included in **Appendix O**.

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6.0 Evaluation Criteria

The Proposals submitted in response to this RFP will be evaluated by a review panel using the following evaluation criteria:

A. QUALIFICATION OF TEAM AND PROPOSED STAFF Weight 0-35 points

Qualifications of the Prime Contractor and key Subcontractors will be evaluated, considering the following:

15 pts	<ul style="list-style-type: none">• Experience with similar projects.• Experience implementing safety, training, and bridge management programs.• Experience with California prevailing wage projects; Appendix D, DIR Form 01 submitted and complete• Experience with Class 1 railroads and FRA Class 4 track maintenance.• Reference checks.
5 pts	Organization chart, staffing plan, and key personnel. Subcontracting plan, and prior experience with purposed subcontractors.
5 pts	<ul style="list-style-type: none">• CAL-OSHA and Federal OSHA violations history.• FRA violations history.
10 pts	<ul style="list-style-type: none">• Claims history, denial of award or prequalification, completions by surety, assessment of liquidated damages, and any suspension or debarment.• Experience Modification Rate (EMR) and ability to comply with licensing, insurance, and bonding requirements, as well as financial capacity to provide maintenance and construction services for the term of the contract.

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B. UNDERSTANDING AND APPROACH TO SERVICES

Weight 0-33 points

The effectiveness of the proposed work plan, including the mobilization plan, shall be evaluated based on the following criteria:

12 pts	<ul style="list-style-type: none"> • Overall understanding and approach, including mobilization plan. • Resources for basic maintenance and supplemental capital work. • Ability to mobilize additional forces for emergencies and extraordinary planned work. • Understanding of freight rail service and Rail Corridor operations.
5 pts	<ul style="list-style-type: none"> • Understanding of the scope of services to be provided. • Familiarity of UP Track and Signal Standards. • Any proposed enhancements to the scope of services.
5 pts	<ul style="list-style-type: none"> • Assessment of the proposed size and makeup of workforce.
5 pts	<ul style="list-style-type: none"> • Ability to develop relevant i.e. FRA, CPUC, ACTA, etc... compliant training and safety programs and Bridge Management Plan.
6 pts	<ul style="list-style-type: none"> • Equipment rationalization and material procurement processes. • Maintenance and inspection records process. Sample inspection forms provided. • Administrative support process for budgeting, invoicing and inventory control.

C. COST PROPOSAL FORMS

Weight 0-32 points

Firms shall submit the Cost Proposal Forms set forth in **Appendix P**. The cost forms will be reviewed and evaluated according to the following point allocation, indicating the maximum points allowed for each Cost Proposal Form:

20 pts	<ul style="list-style-type: none"> • Form AR-I, Track, Bridge & Safety Labor Positions
10 pts	<ul style="list-style-type: none"> • Form AR-II, Signal & Communication Labor Positions; Vehicles & Equipment
2 pts	<ul style="list-style-type: none"> • Form AR-III, Proposed Contractor Markups

D. SBE PARTICIPATION EVALUATION (Responsive/Non-Responsive)

SBE Participation will be used only to assess whether the firm is responsive to the minimum requirements found in Section 5.4 of this RFP. SBE participation will not be scored as part of the weighted evaluation i.e. scoring, process as outlined above in paragraphs A, B and C of this section.

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6.1 Evaluation Process

All proposals will be initially reviewed by ACTA for completeness and a determination whether each proposal is responsive or non-responsive. Once this initial review process is complete, all proposals deemed responsive will be distributed to the review panel. Any proposals deemed non-responsive will be returned to the proposer and rejected.

The proposals will be scored independently by each evaluator pursuant to the criteria set forth herein. The average score for each firm will be calculated for an initial ranking for all responsive proposals received. The evaluation panel will decide whether to conduct any interviews or to take other appropriate steps in the selection process. The number of firms to interview, if any, will be at the sole discretion of the evaluation panel, with a recommendation made to ACTA's Chief Executive Officer and Chief Operating Officer for a final decision.

Following interviews, if any are held, evaluators may choose to rescore those areas of the proposals where points are allocated (i.e., the Technical and Cost Proposals) based on the performance of the interviewed firms.

The final scores for the interviewed firms will be averaged, and the highest average scored firm may be asked to negotiate a final Agreement.

As part of negotiations, the highest average scored firm shall provide the following documents for ACTA review:

- (1) the firm's audited consolidated balance sheets for the three most recent fiscal years and the related consolidated statements of income, stockholder's equity and cash flows, and
- (2) the firm's unaudited consolidated balance sheet for the most recent fiscal quarters after the last fiscal year and the related consolidated statements of income, shareholder's equity, and cash flows.

The selection of the firm must be approved by the parties of the Use and Operating Agreement (UOA) i.e. POLA, POLB, BNSF and UP. Once the 4 parties to the UOA have agreed, the selection can then be taken to the ACTA Board.

All such statements shall be prepared in conformity with GAAP. At all times during the RFP process, ACTA reserves the right to terminate the RFP, and if proposals have been received, to reject any and all Proposals.

Maintenance of Way Services Request for Proposals

EXHIBIT 1

Scope of Services

Required Services and General Requirements

The Services to be provided under the proposed engagement include the maintenance, inspection, repair, replacement, graffiti removal, and maintenance of ACTA's surface area and other services for the Maintained Facilities. In general, the Maintained Facilities include: 1) track, signal, and communications/security systems; 2) drainage, pump station, and trench emergency ladder systems, and emergency generator located at CP Alameda; 3) bridges, retaining walls, embankments, barriers, sound walls, and fencing; and 4) the Maintenance Facility.

ACTA has a Maintenance Facility located at 1017 Foote Avenue in Wilmington. The facility includes an office building, parking lot, and indoor and outdoor storage areas. ACTA cannot guarantee to the selected contractor that the facility will remain available during the term of the Agreement, and ACTA will reserve the right to provide a substitute facility should a relocation be necessary. See the RFP **Appendix C** for the existing Maintenance Facility location.

The selected contractor will be responsible for payment of all ordinary costs associated with the operation of the Maintenance Facility, including costs associated with HVAC service and repair, utility bills such as electricity, water, and gas, and other similarly associated building costs.

In addition, the Contractor shall perform graffiti and trash removal and vegetation control for the Maintained Facilities, as well as any traffic control including detours and road closures necessary to perform the Services. The Contractor shall also perform inspections and maintain records as required by regulatory agencies and the Agreement, and manage, repair, and replace inventory, as needed.

The Contractor shall operate during normal business hours, Monday through Friday and be on call 24 hours per day, seven days per week, to perform or support planned and emergency work.

The Contractor shall provide all labor, supervision, subcontractors, materials, and equipment necessary for the Services. ACTA shall have the right to accept or reject proposed subcontractors. The Contractor and any subcontractors shall comply with all requirements of the California Contractor's State Licensing Board and the California Department of Industrial Relations.

Prevailing Wage and Apprenticeship Requirements

The services provided under the Agreement will be subject to Labor Code § 1720 et seq. governing payment of prevailing wages on public works, Title 8 of the California Code of Regulations § 16000 et seq., and subject to compliance, monitoring and enforcement by the State of California Department of Industrial Relations. Pursuant to Labor Code § 1771, the Contractor and all subcontractors of any tier shall not pay less than the per diem prevailing rate, and the general prevailing rate for holiday and overtime work, in the locality in which public work is performed for each craft, classification or type of workers needed to execute the services. The selected Contractor shall post a schedule at the Maintenance Facility office building or other appropriate, visible location on the jobsite showing all prevailing wage rates for each craft, classification, or type of worker needed to perform the services. Copies of prevailing rate of per diem wages are available on the Internet at:

<http://www.dir.ca.gov/dlsr/DPreWageDetermination.htm>

and are on file at ACTA's office located at 3760 Kilroy Airport Way, Suite 200, Long Beach, California 90806 and made available by ACTA upon request.

Pursuant to Labor Code § 1771.4, and as directed by the California Labor Commissioner, the Contractor and subcontractors performing prevailing wage work must furnish electronic Certified Payroll Records (eCPRs) directly to the California Labor Commissioner (aka Division of Labor Standards Enforcement). The Contractor and its subcontractors must also comply with employment and training programs established by the Department of Industrial Relations - Division of Apprenticeship Standards, pursuant to Labor Code §§ 1773 and 1773.1.

Equipment

The Contractor shall provide, operate, and maintain all equipment necessary to perform the Services. Equipment types shall include, but not be limited to, hi-rail vehicles, a bucket truck that extends at least 35 feet, track construction and maintenance machinery and tools, trucks, and vehicles. A detailed list of required equipment is not set forth in the RFP or the Agreement. Proposers are required to provide a proposed equipment list, indicating ownership, availability, and rates in their proposal.

Maintenance by Others

In all three Rail Corridor segments, public roadway elements, such as asphalt or concrete pavement, street lighting, traffic signals, curb, gutters and sidewalks, landscaping, and utilities (sewer, storm drains, oil, gas, water, electrical and others) within the roadways, are maintained by the local cities, Los Angeles County, California Department of Transportation (Caltrans), or utility owners.

These entities also maintain roadway surfaces, curbs, gutters, sidewalks, and fencing on the trench bridges (Roadway Bridge Structures), utilities within the bridges, and utilities lines crossing the trench between the bridges. In some cases, maintenance of these third-party facilities will have to be coordinated by or with the Contractor. The structural elements of the Roadway Bridge Structures are maintained by the Contractor.

The Drill Track and its grade crossing protection (which includes the Santa Ana By-Pass Track) and cantilevered portions of the trench supporting the Drill Track are maintained by UPRR or PHL. Trackage beyond the limits of the Rail Corridor, including mainlines, yard leads, and yards, is maintained by UPRR, BNSF, Metrolink, Amtrak, or PHL. Industry tracks are maintained by their owners.

Maintenance Budget and Meetings

Prior to September 1st of each year, the selected Contractor will be required to submit an “Annual Maintenance Budget” along with a narrative work plan that includes a forecast and schedule of work activities for the next calendar year. The Ports, BNSF and UP will approve the Annual Maintenance Budget by November of each year, in time for it to become effective the following January 1st.

The Annual Maintenance Budget shall contain the costs for all Services including Subcontractors, vendors, labor, equipment, materials, and consumables, as well as the costs for Capital Improvements. Management and supervisory personnel shall be salaried employees. All other hourly public works labor shall not be paid less than prevailing wage rates. All labor rates for salaried and hourly employees of the selected Contractor shall be Fully Burdened Labor Rates including profit and safety and administrative support items.

There are several special meetings each year that the selected Contractor will be required to attend, at which the Contractor will provide a briefing and written narrative detailing the status of ongoing work, a forecast of anticipated activity, and maintenance issues or concerns. The selected Contractor will also be required to attend weekly PHL meetings.

During the budget year, additional services and/or scope may be requested by ACTA or submitted by the Contractor for ACTA approval. In either case, the Contractor is required to submit a proposed cost for such additional services for approval by ACTA. In addition, the Contractor is required to submit written notice of anticipated overruns of any items in the approved Annual Maintenance Budget for ACTA to provide approval prior to the Contractor performing the additional work. ACTA reserves the right to have any Services performed by forces other than the Contractor.

The Selected Contractor will be required to perform services using the rates identified in the Cost Proposal Forms set forth in the Agreement, on a time and material or unit basis if applicable. **Appendix E** contains a sample annual Maintenance of Way (MOW) budget form and **Appendix Q** contains the approved CY2023 Operations & Maintenance (O&M) and MOW Budgets.

Payment for Services

ACTA is the contracting entity and will make payments to the Contractor for all Services rendered under the Agreement within 30 days following receipt of a monthly invoice containing complete backup documentation for the costs therein and as reviewed and approved by ACTA.

Maintenance and Inspection Standards

The selected Contractor will be required to perform all necessary inspections of track, signals, and other facilities as specified by the Federal Railroad Administration (FRA), the California Public Utilities Commission (CPUC), the Occupational Safety and Health Administration (OSHA), and any other applicable regulatory agencies.

Maintenance and inspection of track and signals shall be in accordance with the UP Track and Signal Standards and Exceptions in **Appendix F**. The selected Contractor will be required to maintain facilities to FRA Class 4 standards or better. All welding must be done in conformance to FRA Standards by qualified and certified staff. Current copies of welding certification per individual performing these duties must be provided to ACTA and must be properly updated as necessary.

ACTA-maintained rail bridges shall be maintained and inspected pursuant to a Bridge Management Plan developed by the Contractor in compliance with the requirements set forth in 49 CFR Part 237 et seq. **See Appendix G** for more information on bridge and other structure inspections, as well as a list of all ACTA-maintained bridges along the Rail Corridor. **See Appendix H** for a comprehensive list of all road and rail crossings including private crossings. **Appendix R** contains the latest annual Bridge Inspection Report. **Appendix S** contains the latest Underwater Bridge Inspection Report, which is prepared every 5 years.

The selected Contractor will be required to maintain and repair the trench pump stations in accordance with the standards set forth in **Appendix I**.

The selected Contractor will be required to file and maintain all inspection records and reports as required by law, and provide them to ACTA for review upon request. The selected Contractor will act as ACTA's agent for all FRA and CPUC matters, and ACTA will submit the selected Contractor's name to the regulatory agencies as the responsible party for inspection, maintenance and recordkeeping. Refer to **Appendix J** for a partial list of the number and frequency of inspections/tests, reporting requirements, and sample reports.

Ultrasonic testing of rails, as required by the FRA, will be included within the Agreement's scope of Services. **Appendix T** contains the latest Ultrasonic Rail Testing Defect Reports. The selected Contractor will be required to inspect all structures using experienced qualified staff. The Contractor will be required to coordinate all inspections that require fouling of tracks with the San Bernardino Dispatch Center and PHL's Badger Bridge Control House a minimum of one week in advance of the scheduled services when possible. Exceptions may be granted by ACTA for emergencies on a case-by-case basis.

The selected Contractor will be required to maintain to operating standards two emergency generators located at Foote Street and CP Alameda. The Contractor will be required to make inspection records available for ACTA's periodic review.

Railroad Involvement and Coordination

The proposed services involve activities on an operating railroad and the selected Contractor will be required to coordinate its activities with the Railroads and PHL, ensuring that any service disruption and track outages remain limited. The selected Contractor will be required to request and coordinate all "track and time" requests with the San Bernardino Dispatch Center and/or PHL's Badger Bridge Control Houses. The Railroads reserve the right to perform or share certain tasks including but not limited to derailment clearing and repairs.

Both Railroads will provide local personnel for technical support to the selected Contractor. In addition to regular inspections by the FRA and CPUC, each Railroad will periodically inspect the track structure and the signal and communication systems to assess the Contractor's performance.

At a minimum of twice per year, the Railroads will provide, at no additional cost to the Contractor, specialized equipment to inspect the geometry and condition of the tracks, and the Contractor will be required to assist with these inspections upon request. The inspection results will be provided to the Contractor for information or corrective action and used to evaluate the Contractor's performance. Any corrective actions necessary shall be the responsibility of the Contractor per FRA and Railroad requirements. **Appendix U** contains the latest Geometry Car Inspection Report.

Permits and Approvals

The selected Contractor will be responsible for obtaining appropriate permits and approvals from ACTA, the Railroads, and other regulatory agencies as may be required to perform services under the Agreement. Examples of other required approvals and permits include those that may be necessary for the ACTA Annual Emergency Drill, and pump station maintenance services requiring traffic lane closures.

Safety & Security

The selected Contractor is expected to make safety its first priority. The selected Contractor shall submit a Safety Plan for approval by ACTA prior to commencement of Services and update it annually prior to each calendar year. The Contractor will be required to report all injuries in accordance with **Appendix K** and appropriate regulations. All safety and injury records shall be subject to audit by ACTA. All workers shall be trained in accordance with the requirements outlined in **Appendix K**, and records of training shall be kept on file and made available on request.

The selected Contractor shall ensure that its employees and its Subcontractors' employees have a valid current picture ID card issued by the Contractor or Subcontractor. Every employee must have a valid ID card to enter upon the Rail Corridor or Ports' properties. The contractor and its Subcontractors must assure that proper background checks have been performed and completed before any of its employees work under the ACTA Maintenance of Way Agreement.

Pursuant to requirements of the Transportation Security Administration's (TSA), all Contractor and Subcontractor employees must have a valid Transportation Worker Identification Credential (TWIC) before entering upon the Rail Corridor or Ports' properties.

Security services for the Rail Corridor are provided by Railroads' and local police forces. The Contractor is required to provide a Subcontractor for security guard services at the Maintenance Yard, the cost of which will be included in the Annual Maintenance Budget.

Emergencies

In case of an emergency (natural disaster, vandalism, or accident) the Contractor shall be available to provide immediate support and assistance. The Contractor shall coordinate its activities with the appropriate municipalities, agencies, Railroads, and Rail Corridor security forces. The Contractor shall adhere to the ACTA Crisis Communications Plan as it relates to communication and notification of incidents. In the case of structural damage, the Contractor shall consult with ACTA's designated engineer and the Railroads prior to placing tracks back into service.

The Mid-Corridor trench has pre-cast concrete struts at the top of the wall every 10 to 25 feet depending on the location. If an emergency exists where more access from the top of the trench is needed than available, the removal of one or more struts might be possible as a last resort with approval of ACTA's engineer. No strut shall be removed without the written consent of ACTA. If this extreme measure must be taken, extensive repairs to the wall structure might be necessary prior to resuming operations and will require approval and oversight by ACTA's designated engineer and the Railroads.

The Contractor shall provide direct support in case of an emergency on a 24 hour / 7 days a week basis. This includes support in the event of train derailment, trespassing, injury, a leaking container or rail car, hazardous material spills, fire, flood, earthquakes, signal and switch failures, broken or buckled rail, pump failures or other service disruptions. In the event of an emergency, the Contractor shall make specialized Subcontractors available as needed to provide assessment, repair and removal.

Utilities and Municipalities

Numerous utilities are located along and across the Rail Corridor. Refer to **Appendix L** for a list of the utility types and locations. The Contractor shall periodically inspect the utility casings crossing the trench for leaks or damage. The Contractor shall coordinate services impacting utilities with the appropriate utility owner.

ACTA has agreements with various municipalities regarding the division of maintenance for various structures throughout the Rail Corridor. An inventory of these structures is attached in **Appendix G**.

Records

The Contractor shall make available to ACTA and its representatives any documents related to inspection, maintenance, and costs for the Agreement. This includes all FRA and CPUC required reports, inspections, and testing, asset records and inventory as well as all other reports generated through the Safety Plan or emergency response. A plan to retain timecards, certified payroll, and other employee or cost support data shall be agreed upon with ACTA prior to start of the Agreement.

Flagging Services

In addition to providing flagging to perform the Services, the Contractor shall provide additional flagging services for projects undertaken by ACTA, other agencies, private companies or utilities that require work within fifty feet of the Rail Corridor. These additional flagging services are provided on an as-needed basis and are not included in the Annual Maintenance Budget.

Stairs and Ladders

The trench has a total of 53 emergency access stairs and ladders, with 46 drop-type emergency ladders, one fixed ladder and six emergency stairwells within the trench. The stairs and ladders are used by train crews to exit, and first responders to enter, the trench in an emergency. The drop ladders are manually raised and lowered by a winch system from either the top or bottom of the trench. When the ladders are lowered, a sensor on the ladder sends a signal to the San Bernardino Dispatch Center so the track is taken out of service due to restricted clearance. In addition, there are four stairwells that access two trench control points and two pump stations and two caged ladders that access signal niches used by maintenance personnel. The maintenance of these stairs and ladders is a crucial element of the Rail Corridor's safety system and the selected Contractor will be solely responsible for keeping all ladders and stairs in operating condition. See **Appendix M** for the Ladder Inspection and Maintenance Plan.

Dispatching

The Alameda Belt Line, a joint venture between the two Railroads, operates the Rail Corridor's train control system from the Joint Dispatch Center in San Bernardino, California. In addition, PHL provides dispatching for the port area from the Badger Bridge Control House. The Badger Bridge is a lift bridge over Cerritos Channel, manned 24 hours a day, 7 days a week by PHL.

There is a clear division of dispatching and maintenance responsibility in the Ports between PHL and the Contractor. The Railroads maintain the dispatching equipment in San Bernardino, California. PHL, with support from the Railroads, maintains the dispatching equipment in the Badger Bridge Control House. The Contractor will be responsible for servicing and maintaining the ACTA alarm system at both the Joint Dispatch Center and PHL's Badger Bridge Control House. The ACTA Track Charts in **Appendix B** shows the dispatching responsibility and maintenance responsibility jurisdictions.

Automatic Equipment Identification (AEI) Readers

There is a network of AEI Readers located in the Rail Corridor as described and shown in **Appendix O**. The AEI Reader system is an integral element of ACTA's Revenue Collection System and must be operational at all times. The Contractor, using qualified personnel, is responsible for maintaining all of the AEI equipment located along the Rail Corridor. ACTA personnel maintains the AEI computer equipment at an off-site location.

Pump Stations

There are two storm drain pump stations in the trench at the Greenleaf Station in Compton and the Nadeau Station in the Los Angeles County unincorporated area of Walnut Park. These pump stations must be operational at all times. The trench is designed to accept storm water from a 100-year storm, collect the water in below-track holding basins, and pump the storm water out of the holding basins into municipal systems. In addition, the drainage channels throughout the trench must be kept free of sediment. The drainage channels are covered by removable steel gratings and have portable steel plate dams spaced along the channels to be dropped in place in the event of a hazardous spill. The selected Contractor must propose qualified pump personnel to provide regular maintenance for the pump stations and coordinate maintenance of the pump stations with ACTA's environmental staff. There are also under track drains in the at-grade sections of the Rail Corridor that must be maintained and cleaned out periodically. These facilities are also inspected by regulatory agencies for conformance to discharge requirements.

Special Trench Features – Alarms, Cameras, Cables

There is a fiber optic line along the trench barrier walls that provides communications between the San Bernardino Dispatch Center and the various control points along the trench. Motion detectors are in place at the fixed stairwells and trench portals. There are also security cameras located throughout the trench and at the Opp Street private crossing. At each ladder location, there are emergency telephones at street and track level, and a sensor switch to notify the Dispatch Center that the ladder is lowered. The Contractor will be required to test this equipment on a quarterly basis to maintain it and keep in operational at all times. Fire department dry standpipes are located every 500 feet along one side of the trench and the selected Contractor will be responsible for testing the dry standpipes on an approved schedule. The selected Contractor will be required to support ACTA in holding an annual emergency drill every March which includes participation by local fire departments, other emergency response providers, and the Railroads.

Spare Parts

ACTA maintains spare parts for the AEI Reader equipment, signals, switches and communication equipment, and has rail and ties (both concrete and timber) and other specialty track parts in inventory, which will be available to and replaced by the Contractor. An inventory of these items will be provided to the selected Contractor for written acceptance. The Contractor shall maintain the inventory and record materials used and received during the term of the Agreement. The Contractor will order replacement parts when necessary, with the cost of replacement items included in the annual budget and billed monthly when received. The Contractor will be required to obtain ACTA's approval prior to ordering special parts or equipment authorized in the annual budget.

Graffiti/Trash/Vegetation Control

The selected Contractor will be required to regularly remove graffiti and trash from the Rail Corridor and related facilities, as well as provide vegetation control and removal services throughout the Rail Corridor.

Capital Replacement and Enhancements

Throughout the term of the Agreement, the selected Contractor will be required to perform capital repairs and replacement of track and other items as approved under each annual budget.

If and when additional tracks, extensions, switches, or other items are required and placed into service during the term of the Agreement, these enhancements will become the maintenance responsibility of the selected Contractor.

Overhead Clearance

ACTA's standard for minimum vertical clearance along the Rail Corridor is 24 feet 8 inches above top of rail. The selected Contractor will be required to maintain no less than this minimum 24 feet 8 inches where the existing clearance is greater than or equal to this height. In several locations along the Rail Corridor where this minimum clearance can not be achieved, the Contractor shall maintain the existing vertical clearance between 23 feet 6 inches and 24 feet 8 inches.

Additional Information furnished by ACTA

The following additional information shall be made available as necessary to the selected Contractor:

- Memorandums of Understanding between municipalities and ACTA
- Agreements with utility owners
- Railroad agreements
- As-built drawings of ACTA facilities
- Complete track and signal design drawings
- ACTA crisis communications plan
- Other relevant documents and information maintained by ACTA and requested by the Consultant

Maintenance of Way Services

Appendix A

Draft Maintenance Agreement

**ALAMEDA CORRIDOR
MAINTENANCE AGREEMENT
(RAIL CORRIDOR AND NON-RAIL COMPONENTS)**

by and between

ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY,
a California joint powers authority

and

Contractor Name

dated as of

[_____], 2026

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EXHIBIT 6	SMALL BUSINESS ENTERPRISE (SBE) REQUIREMENTS
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SCHEDULE 1	SCHEDULE OF MATERIALS AND EQUIPMENT DELIVERED BY ACTA TO CONTRACTOR

ALAMEDA CORRIDOR MAINTENANCE AGREEMENT
RAIL CORRIDOR AND NON-RAIL COMPONENTS

THIS ALAMEDA CORRIDOR MAINTENANCE AGREEMENT (this “**Agreement**”) is made and entered into by and between **ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY**, a joint powers authority created under the laws of the State of California (“**ACTA**”), and [_____] a [_____] (“**Contractor**”) with reference to the following Recitals:

RECITALS:

A. Pursuant to that certain Amended and Restated Alameda Corridor Use and Operating Agreement dated as of December 15, 2016 (as such agreement has been or may be amended, modified or supplemented from time to time, “**Operating Agreement**”), by and among ACTA, the City of Long Beach, a municipal corporation acting through its Board of Harbor Commissioners (“**POLB**”), the City of Los Angeles, a municipal corporation acting through its Board of Harbor Commissioners (“**POLA**”), BNSF Railway Company, a Delaware corporation (formerly known as The Burlington Northern and Santa Fe Railway Company) (“**BNSF**”), and Union Pacific Railroad Company, a Delaware corporation (“**UP**”), ACTA constructed the rail infrastructure project known as the Alameda Corridor in Los Angeles County, California.

B. Pursuant to the Operating Agreement, the Contractor has been selected to provide the maintenance services for the Rail Corridor and the Non-Rail Components and perform related duties, as described in this Agreement. In accordance with the Operating Agreement, ACTA seeks to engage Contractor to provide the maintenance services and Contractor desires to perform such maintenance services and fulfill its other duties, all as more particularly described in this Agreement.

NOW, THEREFORE, Contractor and ACTA hereby agree as follows:

ARTICLE 1
DEFINITIONS

1.1 Specific Definitions. The following capitalized terms are used in this Agreement with the following meanings:

“**AEI Readers**” means the “Automatic Equipment Identification” reader system equipment located on the Rail Corridor.

“**ACTA AEI Reader Maintenance**” means maintenance of the AEI Readers through subscription and usage of a remote site monitor service from an equipment manufacturer or similar provider to monitor the health of the readers, hands on hardware replacement and/or diagnostics, and weekly and monthly management reports. The weekly and monthly management report shall be attached to the monthly fixed fee invoice as support.

“**Affiliate**” has the meaning given to such term in Section 150 of the California Corporations Code, as amended from time to time.

“**Allowed Markup**” means a percentage amount added to the costs and expenses actually incurred by Contractor in purchasing or providing equipment, materials, supplies and/or other Direct Costs, including the costs of subcontracting and vendor services, in connection with Contractor’s performance of the Services under this Agreement. This percentage shall equal 5 percent (5%) for labor, 5 percent (5%) for Subcontractors’ entire costs (including Subcontractors’ materials, equipment, and supplies), and 10 percent (10%) for materials (any items built into construction). The Allowed Markup shall not apply to Contractor’s Fully Burdened Labor Rates, Contractor-owned or leased vehicles and equipment, Services performed under this Agreement by an Affiliate of the Contractor, and Services transferred to a Subcontractor that were to be performed by the Contractor under the Approved Maintenance Plan unless otherwise approved by ACTA.

“**Annual Maintenance Budget**” has the meaning given such term in Section 5.1.

“**Approved Maintenance Plan**” has the meaning given such term in Section 5.2.

“**Bridge Management Plan**” means the plan to maintain and inspect ACTA rail bridges developed by the Contractor in compliance with FRA 49CFR Part §237 et seq. requirements.

“**Capital Expenses**” means the costs and expenses incurred in making any Capital Improvements.

“**Capital Expense Guidelines**” means the guidelines adopted pursuant to the Operating Agreement from time to time, the current version of which is attached hereto as Exhibit 4.

“**Capital Improvements Charges**” means any capital additions, betterments and upgrades, or capital replacements to the Maintained Facilities as determined to be Capital Expenses in accordance with the Capital Expense Guidelines.

“**CFR**” means the Code of Federal Regulations.

“**Commencement Date**” has the meaning given such term in Section 4.1.

“**Consequential Damages**” has the meaning given such term in Section 15.2.2.

“**Contract Year**” means each twelve month period commencing on January 1 and ending on December 31 during the term hereof, except that the first Contract Year of the term hereof shall commence on the Commencement Date and end on December 31, 2025, and the last Contract Year of the term hereof shall commence on January 1, 2030 and end at 11:59 p.m. Los Angeles time on April 14, 2030.

“Corridor Dispatcher” means the entity selected from time to time pursuant to the Operating Agreement to provide dispatching service with respect to the Rail Corridor. As of the date hereof, the Corridor Dispatcher is, collectively, BNSF and UP.

“CTO” means a Contract Task Order for work authorized under Section 5.9.

“Deficiency Notice” has the meaning given such term in Section 5.3.

“Direct Costs” has the meaning given such term in Section 5.6.5.

“Drill Track” means a single track rail line, support structures relating thereto and the real property on and along which such rail line is located, generally running adjacent to and parallel with the Rail Corridor, as shown on the Map, which Drill Track is for the use and operation of UP in connection with serving local industry and access to UP’s Dolores Yard.

“Environmental Laws” means any and all federal, state and local laws, statutes, ordinances, orders, regulations, plans, policies and decrees and the like now or hereafter in effect and applicable to the Rail Corridor which relate to (a) Hazardous Substances; (b) the generation, use, storage, transportation or disposal of Hazardous Substances or solid waste; or (c) occupational safety and health, industrial hygiene, land use or the protection of human, plant or animal health, safety or welfare, and the rules, regulations and ordinances of applicable federal, state and local agencies and bureaus, as amended from time to time.

“Environmental Losses” means all charges, losses, liabilities, damages, fees, demands, claims, proceedings, investigations, actions, judgments, causes of action, disbursements, monetary settlements, assessments, fines, penalties, costs and expenses incurred in connection with any investigation, characterization, defense of claims, clean-up, remediation, disposal or repairs arising out of or relating to the release of Hazardous Substances on, in, under or around the Maintained Facilities or other areas from and after the date hereof.

“Federal Acquisition Regulation” means the Federal Acquisition Regulation contained in 48 CFR 2.101, as amended from time to time.

“Force Majeure Event” means an event due to any cause(s) beyond Contractor’s control, including, but not limited to, acts of God, fire, earthquake, flood, mud slide, washout, storm, blockage, explosion, casualty, strike, labor dispute (excluding labor disputes involving the Contractor or its Subcontractors), riot, insurrection, civil disturbance, act of civil or military authority, embargo, act of public enemy, war, delays in transportation due to a force majeure event, court order or injunction, delays caused by acts or orders of a governmental body, including changes in law or regulations. Force Majeure Events shall not include derailments unless the derailment resulted directly from one of the Force Majeure Events described in the preceding sentence.

“FRA” means the Federal Railroad Administration.

“FRWS” means the FRA Railroad Workplace Safety standards contained in 49 CFR 214.

“**FTSS**” means the FRA Track Safety Standards contained in 49 CFR 213 Subparts A to F.

“**Fully Burdened Labor Rate**” means the annually negotiated hourly rates at which Contractor will bill ACTA for labor costs incurred in connection with Rail Corridor Services and/or Non-Rail Component Services performed under an Approved Maintenance Plan. Each Approved Maintenance Plan shall set forth the agreed to Fully Burdened Labor Rate for each Contractor job classification. For the first Contract Year, such rates and classifications will be those contained in the Approved Maintenance Plan effective on the Commencement Date (Exhibit 3). The Fully Burdened Labor Rate shall include the applicable hourly rate or salary (expressed as an hourly rate) subject to minimum prevailing wage requirements which the Contractor pays an employee in such job classification during the course of their daily work performed in a single role or multiple roles per day as necessary all of Contractor’s markups for overhead (including fringe benefits and bonuses), profit on labor, Local Administrative and Office Support Costs, and Safety Equipment Costs. The Fully Burdened Labor Rate shall be an all-inclusive rate and Contractor shall not be permitted to charge any other amount for the labor of its employees.

“**Hazardous Substances**” means (a) any chemical, compound, material, mixture or substance that is now or hereafter defined or listed in, or otherwise classified pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. Section 9601, *et seq.*, the Hazardous Materials Transportation Act, 40 U.S.C. Section 1801 *et seq.*, the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. Section 6901 *et seq.*, the California Health and Safety Code, Sections 25115-25117, 25249.5, 25249.8, 25281 and 25316, and any other applicable Environmental Laws, as a “hazardous substance”, “hazardous material”, “hazardous waste”, “extremely hazardous waste”, “acutely hazardous waste”, “radioactive waste”, “infectious waste”, “biohazardous waste”, “toxic substance”, “pollutant” “toxic pollutant”, “contaminant” and any other term or terms not mentioned herein intended to define, list, or classify substances by reason of properties such as ignitability, corrosivity, reactivity, carcinogenicity, toxicity, reproductive toxicity, “EP toxicity” or “TCLP toxicity”; (b) petroleum, natural gas, natural gas liquids, liquefied natural gas, synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas) and ash produced by a resource recovery facility utilizing a municipal solid waste stream, and drilling fluids, produced waters and other wastes associated with the exploration, development or production of crude oil, natural gas, or geothermal resources; (c) “hazardous materials” as defined in Section 2782.6(d) of the California Civil Code; (d) “waste” as defined in Section 13050(d) of the California Water Code; (e) asbestos in any form; (f) urea formaldehyde foam insulation; (g) transformers or other equipment which contain dielectric fluid containing levels of polychlorinated biphenyls (PCBs) above levels permitted by applicable law; and (h) any other chemical, material, or substance that, because of its quantity, concentration, or physical or chemical characteristics, exposure to which is limited or regulated for health and safety reasons by any governmental authority.

“**Indemnitee**” has the meaning given such term in Section 16.4.1.

“**Indemnified Entities**” has the meaning given such term in Section 16.1.

“**Indemnified Matter**” has the meaning given such term in Section 16.4.1.

“**Indemnitor**” has the meaning given such term in Section 16.4.1.

“**Local Administrative and Office Support Costs**” means costs of items such as office supplies, cleaning supplies, office equipment, computers and accessories, office furniture, photography equipment and accessories, cell phone service and phone accessories, telephone and internet services, postal & courier service and supplies, ice/water for the office, soda & coffee (and related supplies), food (including catering) for meetings/training sessions/holidays, marketing materials, auto cleaning supplies, gifts for safety awards, tools (including but not limited to hand tools, motorized, electrical, test devices, cordless, or any other tools which would be necessary to perform the “Services” as described in Article 6 of this agreement), and personal work boots. These costs shall be included in the Fully Burdened Labor Rates.

“**Losses**” means liabilities, losses, actions, causes of action, penalties, demands, detriments, claims, damages, costs and judgments and all expenses incurred in connection therewith, including claims made under the Federal Employer’s Liability Act, costs of investigation, attorneys’ fees and costs, expenses or arbitration, trial or appeal, and judgments. “Losses” shall include any claim, action, judgment or similar liability incurred or made by a third party, including those relating to personal injury, death or property damage.

“**M&O Charges**” means the annual cost of maintaining and repairing the Maintained Facilities, including the cost of maintaining and repairing communications facilities, signals and interlockers, debris removal, repair and maintenance of rails, ties, ballast, undercutting, drainage and surfacing, but the term “M&O Charges” does not include the “Non- Rail Maintenance and Capital Improvement Charges” as defined below.

“**Maintained Facilities**” means all portions of the Rail Corridor, to the limits shown on the Map, including (a) the real property comprising the Rail Corridor (to the limits of Owner’s ownership of such real property) and all Trackage now or hereafter located thereon, (b) the storm water system for the Rail Corridor, including under-track drains at various locations, and including the storm water system located in the trench portion of the Rail Corridor (which portion of the storm water system is part of the Non-Rail Components), (c) the Maintenance Yard, and (d) the Non-Rail Components. The Maintained Facilities shall include the Roadway Bridge Structures. Notwithstanding anything to the contrary in this Agreement, the Maintained Facilities do not include (i) the cantilevered platform over the trench portion of the Rail Corridor on which the Drill Track is located (all of which, as of the date hereof, are maintained by UP), (ii) public streets, roadways or highways along the Rail Corridor, including curbs, gutters, sidewalks, landscaping, street lights and traffic signals, drainage and utility lines and facilities located on such public streets, roadways or highways, (iii) the surface pavement of streets on the Roadway Bridge Structures, or the curbs, gutters, sidewalks, landscaping, lighting and traffic signals, drainage, barrier walls, fence structures and fencing, and utility lines and facilities located on the Roadway Bridge Structures, (iv) any Trackage (including Drill Track) which on or after the date hereof is maintained by PHL or its successors or assigns (as indicated on the Map), (v) any Trackage beyond the limits of the Rail Corridor shown on the Map, or (vi) the track, ballast and signaling devices comprising the Drill Track; provided that, the Maintained Facilities shall include landscaping to the extent landscaping encroaches on or interferes with the use or operation of the Rail Corridor.

“**Maintenance Invoices**” has the meaning given such term in Section 5.6.1.

“**Maintenance Standards**” has the meaning given such term in Section 6.2.

“**Maintenance Yard**” has the meaning given such term in Section 11.7.

“**Map**” means the map (consisting of 25 pages) attached hereto as Exhibit 1.

“**Non-Rail Components**” means (i) the walls, retaining walls, embankments, barrier walls, fence structures and fencing, support structures, drainage facilities (including the two storm water pump stations shown on the Map) and emergency drop ladders (and related telephone and alarm equipment) of and for the trench portion of the Rail Corridor, (ii) the structural portions of the Washington Avenue Grade Separation bridge and the Henry Ford Avenue Grade Separation bridge, and (iii) the AEI Readers. Notwithstanding anything to the contrary in this Agreement, the Non-Rail Components do not include (i) any Trackage (including the Drill Track), (ii) the cantilevered platform over the trench portion of the Rail Corridor on which the Drill Track is located, (iii) public streets, roadways or highways along the Rail Corridor, including curbs, gutters, sidewalks, landscaping, street lights and traffic signals, drainage and utility lines and facilities located on such public streets, roadways or highways, or (iv) the surface pavement of streets on the Roadway Bridge Structures, or the curbs, gutters, sidewalks, landscaping, lighting and traffic signals, drainage, barrier walls, fence structures and fencing, and utility lines and facilities located on the Roadway Bridge Structures.

“**Non-Rail Maintenance Charges**” means the cost of maintaining and repairing the Non-Rail Components.

“**Operating Agreement**” has the meaning given such term in the Recitals.

“**Owner**” means, collectively, POLA and POLB.

“**Request for Proposals**” has the meaning given such term in Section 3.3.

“**PHL**” means Pacific Harbor Line, Inc., a Delaware corporation.

“**Port Rail Agreements**” means, collectively, (i) that certain San Pedro Bay Harbor Rail Operating Agreement dated as of December 1, 1997, by and between POLA and PHL, and (ii) that certain Long Beach Rail Operating Agreement dated as of June 1, 1998, by and between POLB and PHL, as each of such agreements has been or in the future may be extended or amended from time to time.

“**Quarterly Reconciliation Invoice**” means, an invoice provided by the Contractor to ACTA for (i) previously disputed items that have been subsequently accepted by ACTA or corrected by the Contractor, or (ii) adjustments for labor or other direct costs that were paid within the previous quarter but were later found to be incorrect, or (iii) invoices from vendors and suppliers or Subcontractor costs that were not previously submitted in the appropriate monthly invoice. The purpose of the Quarterly Reconciliation Invoice is to allow ACTA and the Contractor to financially record monthly costs in a timely manner but to also allow for necessary adjustments

before closing those months from the previous quarter. The Quarterly Reconciliation Invoice should be submitted to ACTA no later than 45 days after the end of each calendar quarter and those costs are to be included in the quarterly unaudited statement required in Article 13.2 of this Agreement.

“Rail Corridor” means the multiple main track, high density, mainline railroad system (including the Trackage), together with the real property on which such railroad system is located, as shown on the Map, located along and parallel to Alameda Street beginning, in the north, for each Railroad, at the point that such Railroad leaves the mainline tracks or trackage rights owned or held by such Railroad (other than the Rail Corridor itself), which point, for each Railroad, is shown on the Map, and ending, in the south, at the points shown on the Map.

“Railroad” means, individually, BNSF or UP, as the context may require, and **“Railroads”** means, individually or collectively, BNSF and/or UP, as the context may require, and the assignees of the foregoing permitted pursuant to the Operating Agreement, together with any other Class I or financially responsible and experienced regional railroad that in the future may be granted rights to use the Rail Corridor consistent with the terms of the Operating Agreement.

“Remedial Action” means Contractor’s response to conditions detected during inspections, including measures to protect the safety of Trains and the public, temporary adjustments or repairs, and permanent adjustments, corrections and/or repairs and measures specified as Remedial Action by the FTSS.

“Roadway Bridge Structures” means the structural portions of the bridges and overpasses over the trench portion of the Rail Corridor.

“Safety Equipment Costs” means the costs of safety supplies and equipment including but not limited to hard hats, reflective vests, safety glasses, and safety shoes. These costs shall be included in the Fully Burdened Labor Rates.

“Services” has the meaning given such term in Section 6.1.

“Subcontractor” means any third party hired by Contractor which is qualified to perform the work for which it is engaged, to assist or perform Contractor’s Services under this Agreement; provided, however, that no such engagement shall relieve Contractor of any of its obligations or liabilities under this Agreement.

“Trackage” means all present and future railroad related improvements, systems or equipment, and all tracks (including main line tracks, spur tracks, lead tracks, passing tracks, yard tracks and industry tracks) and other rail facilities, including rails and fastenings, switches, frogs, bumpers, ties, ballast, signaling devices and systems, interlocking devices and plants, crossing warning devices, crossing surfaces, pole lines and communication facilities and equipment (including the fiber optic communications line installed in and along the Rail Corridor for purposes relating to the Rail Corridor, but excluding the AEI Readers), and all track support structures and related facilities (including roadbed, embankments, bridges, dikes, pavement, culverts, tunnels, drainage systems, and maintenance, access and service roads).

“**Train**” means one or more freight trains, locomotives, cabooses, railroad cars, track and maintenance equipment, track inspection equipment, and all other rail-related machines and equipment.

“**Vacant Position**” has the meaning given such term in Section 5.8.

1.2 References. All references made (i) in the neuter, masculine or feminine gender shall be deemed to have been made in all such genders, and (ii) in the singular or plural shall be deemed to have been made, respectively, in the plural or singular as well. All references to Sections and subsections are to Sections and subsections of this Agreement unless indicated otherwise. The words “herein”, “hereof”, “hereunder” and other similar compounds of the word “here” when used in this Agreement shall refer to this entire Agreement and not to any particular provision or section unless specifically indicated otherwise. The terms “include” or “including” do not limit the preceding words or terms.

ARTICLE 2 ENGAGEMENT OF CONTRACTOR; USE OF RAIL CORRIDOR

2.1 Engagement of Contractor; Changes in Scope of Services. On and subject to the terms and conditions of this Agreement, ACTA hereby engages Contractor to perform the Services specified in this Agreement with respect to the Maintained Facilities. Contractor accepts such engagement, acknowledges that it has inspected and reviewed the Services to be provided under this Agreement, and shall exercise the care and skill expected of an experienced practitioner in its profession in the prompt performance of all its obligations under this Agreement. The foregoing engagement is non-exclusive and, as between ACTA and Contractor, ACTA may in its sole discretion augment or supplement the Services to be provided under this Agreement with forces of another contractor. Further, notwithstanding anything to the contrary in this Agreement (including Section 5.7 and Article 7) and, from time to time during the term of this Agreement, ACTA may elect, in its sole discretion, by providing thirty (30) days’ prior written notice to Contractor (except that in an emergency, ACTA shall be required to give only such notice as may be feasible under the circumstances) to cause certain Services to be provided by the forces of another contractor (e.g., if ACTA determines that the Contractor’s proposed cost of certain Services, as set forth in a proposed annual maintenance plan and budget, or otherwise, is more expensive than the cost for such Services that would be charged by another entity, ACTA may elect to have such Services provided by an entity other than Contractor). In any case where work in or on the Maintained Facilities is to be conducted by another entity, Contractor shall cooperate fully with such other entity.

2.1.1 In the event that ACTA elects to have such Services performed by another entity as described above, other than on a temporary basis (i.e., Services performed over a period of one hundred eighty (180) days or less), ACTA shall notify the Contractor in writing pursuant to Article 21 and Contractor shall submit to ACTA (no later than ten (10) days’ following notice to Contractor), a proposed termination statement which shall include (1) all amounts owed to Contractor or any Subcontractor for those Services performed through the proposed termination date; (2) termination payments, if any, contractually owed by Contractor to Subcontractors and/or vendors as a direct result of the termination of such Services; provided, however, that (i) ACTA

previously authorized and directed Contractor to perform such Services, and (ii) such termination payments, if any, are a reasonable approximation of the damages incurred by Subcontractors and/or vendors as a direct result of the termination of such Services; and (3) reasonable costs incurred by Contractor to comply with ACTA's written directions in connection with the transfer of Services, including reasonable demobilization costs, if any. Contractor shall provide ACTA with supporting documentation as requested by ACTA, including but not limited to copies of contracts, invoices, receipts and other documents. Notwithstanding the foregoing, in no event shall ACTA be obligated to pay for lost profits or other consequential damages resulting from any such termination.

2.1.2 In the event that ACTA elects to proceed to have such Services performed by another entity, then (a) ACTA and Contractor may agree to equitably adjust, as necessary, pursuant to a CTO as provided in Section 5.9, the Approved Maintenance Plan to account for any anticipated decrease in Contractor's time and costs of performance, and (b) ACTA shall pay the termination statement described in Section 2.1.1 in accordance with and subject to the provisions of Section 5.6. Notwithstanding the foregoing, Contractor shall have a duty to mitigate Contractor's losses that arise from ACTA's termination of such Services.

2.2 Use of Rail Corridor. Contractor and its Subcontractor are hereby authorized to use the Rail Corridor for the term of this Agreement to the extent necessary to perform the Services hereunder, and for no other purpose. Contractor hereby is granted a license to enter the Rail Corridor to perform the Services described in this Agreement on the terms and conditions contained herein; such engagement, however, does not, and shall not be construed to, give or grant Contractor any right, title or interest of any kind or character in or to the Rail Corridor or any portion thereof or interest therein, or in or to any other property of POLA, POLB, ACTA, BNSF and/or UP, and Contractor specifically acknowledges that it has no leasehold, easement or other interest in any of such real or personal property. Contractor shall have no right to grant, convey, enter into, modify, extend or renew leases, licenses, easements or conveyances of all or any portion of the Rail Corridor, or any right or interest therein.

2.3 Use by POLA, POLB, ACTA, BNSF and/or UP. POLA, POLB, ACTA, BNSF and/or UP may use or grant additional rights to third parties in and to all or any portion of the Rail Corridor in such manner as each such entity deems appropriate, consistent with and subject to the terms and conditions of the Operating Agreement, so long as such rights and the actual use of the Rail Corridor by such entities or by others duly authorized by such entities do not materially interfere with Contractor's ability to perform the Services hereunder.

2.4 Additions to, Modifications of and Removal of Facilities by POLA, POLB, ACTA, BNSF and/or UP.

2.4.1 Additions. Subject to Section 8.4, any of ACTA, POLA, POLB, BNSF and/or UP, each acting in its sole discretion and consistent with and subject to the terms and conditions of the Operating Agreement, at any time may construct new track and other rail facilities in and on the Rail Corridor and designate such new track and other rail facilities as Maintained Facilities. Where reasonably practicable, ACTA shall consult with Contractor prior to the commencement of construction of any such addition or modification to the Rail Corridor or Non-Rail Components if such construction foreseeably would interfere with Contractor's ability to

perform the Services hereunder or risk safety of any of Contractor's employees or Subcontractors. When such addition or modification is completed and any necessary regulatory approvals or exemptions have been obtained, such addition or modification may be designated by ACTA as part of the Maintained Facilities. Unless ACTA designates a different maintenance standard, the maintenance standard for new facilities or additions or modifications made to the Maintained Facilities under this Agreement shall be the Maintenance Standards, as set forth in Section 6.2.

2.4.2 Removals. As between ACTA and Contractor, and subject to ACTA, POLA, POLB, BNSF and/or UP obtaining any necessary regulatory approvals or exemptions, ACTA may remove (or cause to be removed) any portion of the Maintained Facilities from service, either temporarily or permanently, upon thirty (30) days' prior written notice to the Contractor (except that in an emergency, ACTA shall be required to give only such notice as may be feasible under the circumstances). In the event that the removal of any Maintained Facilities adversely affects Contractor's overall rights or obligations hereunder, then Contractor may submit to ACTA (no later than ten (10) days' following notice to Contractor) a proposed termination statement pertaining only to that portion of the Maintained Facilities at issue, which shall include (1) all amounts owed to Contractor or any Subcontractor for those Services performed with respect to the removed Maintained Facilities through the proposed removal date; (2) termination payments, if any, contractually owed by Contractor to Subcontractors and/or vendors as a direct result of the removal of such Maintained Facilities; provided, however, that (i) ACTA previously authorized and directed Contractor to perform Services with respect to the removed Maintained Facilities, and (ii) such termination payments, if any, are a reasonable approximation of the damages incurred by Subcontractors and/or vendors as a direct result of the removal of such Maintained Facilities; and (3) reasonable costs incurred by Contractor to comply with ACTA's written directions in connection with the removal of such Maintained Facilities from Service, including demobilization costs, if any. Contractor shall provide ACTA with supporting documentation as requested by ACTA, including but not limited to copies of contracts, invoices, receipts and other documents. Notwithstanding the foregoing, in no event shall ACTA be obligated to pay for lost profits or other consequential damages resulting from any such termination. In the event that ACTA elects to proceed with the removal of such Maintained Facilities, then ACTA shall pay such termination statement in accordance with and subject to the provisions of Section 5.6. Notwithstanding the foregoing, Contractor shall have a duty to mitigate Contractor's losses that arise from ACTA's removal of any portion of the Maintained Facilities.

2.4.3 Adjustment to Approved Maintenance Plan. In the event of any additions to, modifications of, and/or removal of Maintained Facilities as described in Section 2.4, the Approved Maintenance Plan may be equitably adjusted, as necessary, pursuant to a CTO as provided in Section 5.9, to reflect any such additions to, modifications of, and/or removal of Maintained Facilities and any corresponding anticipated increase (or decrease, as the case may be) in Contractor's time and costs of performance. For purposes of Section 2.4, any removal or deletion from service of a portion of the Maintained Facilities for less than 90 days shall not be considered a "removal" requiring an adjustment to the Approved Maintenance Plan.

2.5 No Changes to Maintained Facilities by Contractor. Contractor shall not take out of service, embargo, make change to or remove any of the Maintained Facilities (other than temporarily in the course of its maintenance and repair activities, in an emergency or as a result of

a hazardous condition) without the prior written approval of ACTA, which approval may be given or withheld in the sole discretion of ACTA.

ARTICLE 3
AS-IS; WARRANTY DISCLAIMER;
CONSTRUCTION WARRANTIES

3.1 Acknowledgement Regarding Investigations. Contractor acknowledges that prior to its execution of this Agreement, Contractor had the opportunity to investigate and determine (a) the physical aspects and condition of all portions of the Maintained Facilities, (b) past and present rail operations on the Maintained Facilities, and (c) such other matters as Contractor deemed relevant to analyze the proposed transaction, to discover any risks and to determine whether the transaction is economically viable for Contractor. Without limiting the generality of the foregoing, if ACTA and/or the Railroads notify Contractor that any geometry car or other rail or facility inspections of the Rail Corridor will be conducted after the date hereof and prior to the Commencement Date, Contractor shall cause Contractor's personnel (appropriately trained for such inspections) to accompany ACTA's and/or the Railroads' personnel on such inspections, and Contractor shall promptly notify ACTA in writing if such inspections disclose any condition that Contractor believes will negatively affect Contractor's ability to perform the Services under this Agreement. Contractor's investigations have included, among other things, meetings with Owner, ACTA and the Railroads. Contractor further acknowledges that (i) Contractor has received and reviewed a copy of the Operating Agreement and the Port Rail Agreements, (ii) Contractor's entry into this Agreement is based solely on the results of its own investigations and examinations, or its election not to investigate some or all of such matters as may be relevant, and not on any representation, warranty, promise or statement by Owner, ACTA, either Railroad or any representative, employee or agent thereof (other than those expressly provided in this Agreement), and (iii) none of ACTA, Owner or either Railroad, or the employees, representatives or agents of any of them, has made any representation, warranty, promise or statement, express or implied, to Contractor, or to anyone acting for or on behalf of Contractor, concerning or regarding such matters.

3.2 Acceptance of Rail Corridor and Maintained Facilities As-Is. Subject to Section 16.3, Contractor hereby enters into this Agreement and accepts the Maintained Facilities in THEIR AS-IS CONDITION AND IN THEIR AS-IS STATE OF REPAIR ON THE DATE OF THIS AGREEMENT. Contractor hereby waives, and ACTA hereby disclaims, all warranties of any type or kind whatsoever with respect to the Maintained Facilities, or any component thereof, including those of fitness for a particular purpose or use.

3.2.1 Notwithstanding the foregoing, it is agreed that if Contractor encounters unforeseen latent defects of an unknown and concealed nature that (i) could not or should not have been discovered or anticipated by Contractor after the exercise of due diligence in inspecting the Maintained Facilities ("**Latent Defects**"), and (ii) such Latent Defects increase Contractor's cost of performance of Services beyond any budgeted contingencies for the relevant period, as its sole remedy Contractor may submit a request for a CTO to equitably increase the Approved Maintenance Plan to the extent made necessary by the Latent Defect(s) encountered. For purposes

of this Agreement, Latent Defects shall not include, among other things, conditions arising in the ordinary course as a result of ordinary wear and tear of the Maintained Facilities.

3.3 No Representations or Warranties Regarding Materials or Documents.

Contractor acknowledges that the delivery of materials and documents (including the Request for Proposals for Alameda Corridor Maintenance Services dated September 30, 2024 and the related appendices and addenda thereto (the “**Request for Proposals**”) to Contractor by or on behalf of ACTA has been made solely to facilitate Contractor’s investigations relating to this transaction, and none of ACTA, POLA, POLB, BNSF or UP make any representations or warranties of any kind regarding the completeness, accuracy or thoroughness of the information contained in such materials and documents.

**ARTICLE 4
COMMENCEMENT DATE; TERM**

4.1 Commencement Date and Term. The term of this Agreement, and Contractor’s duties hereunder, shall commence on [____], 2025 (the “**Commencement Date**”). Unless it is terminated earlier in accordance with any provision entitling a party to terminate this Agreement, this Agreement shall terminate at 11:59 p.m. Los Angeles time on April 14, 2030. However, if a replacement maintenance contractor for the Maintained Facilities has not been selected on or before April 14, 2030, or if the replacement maintenance contractor has been selected but is not prepared to commence maintenance services as of April 15, 2030, then Contractor shall continue to perform the Services on the terms set forth in this Agreement until the earlier of (i) April 14, 2030, or (ii) the termination date set forth in a written notice from ACTA to Contractor once a replacement maintenance contractor has been selected in accordance with the provisions of the Operating Agreement and Contractor has completed all remaining Services directed by ACTA. Notwithstanding anything to the contrary contained herein, ACTA, in accordance with the provisions of the Operating Agreement, shall have the right to extend the term of this Agreement with Contractor for an additional term of five (5) years terminating at 11:59 p.m. Los Angeles time on April 14, 2035, by providing Contractor with written notice of such election at least ninety (90) days prior to the expiration of the initial term.

**ARTICLE 5
APPROVED MAINTENANCE PLAN; MAINTENANCE INVOICES**

5.1 Annual Maintenance Budget. No later than September 1 of each Contract Year, Contractor shall provide to ACTA, POLA, POLB, BNSF and UP proposed maintenance plans and budgets for the Maintained Facilities for the next succeeding Contract Year. However, since the last Contract Year ends April 14, 2030, the plans and budgets that are submitted in the preceding year should be prepared for the entire calendar year through December 31, 2030. The plans and budgets shall be substantially in the form contained in Exhibit 3 hereto and shall include all items necessary for Contractor to comply with the maintenance requirements and standards established under this Agreement for the Maintained Facilities (the “**Annual Maintenance Budget**”). The Annual Maintenance Budget shall be developed in good faith between Contractor and ACTA and shall include the following items:

- (a) A written Work Plan and monthly schedule containing all the routine and special work items to be performed, including assumptions used in developing such Annual Maintenance Budget;
- (b) Separate subplans and subbudgets for each of the categories of charges and expense: (i) M&O Charges, (ii) Capital Improvements Charges, (iii) Non-Rail Maintenance Charges, and (iv) ACTA AEI Reader maintenance charges;
- (c) Estimates of all amounts to be paid by ACTA for direct labor and staffing (including the supporting information for the Fully Burdened Labor Rate associated with each job classification appearing in the plan);
- (d) Estimates of all amounts to be paid by ACTA for Direct Costs (based on agreed-upon standard rates and unit prices for materials, equipment, rentals and other anticipated Direct Costs);
- (e) Estimates of all Services to be subcontracted, including a list of all Subcontractors that Contractor intends to engage during the applicable Contract Year;
- (f) Estimates of all amounts to be paid by ACTA relating to safety plans, security, employee training and associated costs; and
- (g) All assumptions used in developing such Annual Maintenance Budget.

5.2 Review and Approval of Proposed Maintenance Plans. Within 30 days after receipt of Contractor's proposed Annual Maintenance Budget for the Maintained Facilities under Section 5.1, POLA, POLB, BNSF and UP shall approve or disapprove such plan and budget through Mutual Agreement in accordance with the provisions of Section 8.3 of the Operating Agreement. Upon approval of the proposed Annual Maintenance Budget, the proposed Annual Maintenance Budget shall become the Approved Maintenance Plan for the applicable Contract Year. If the proposed Annual Maintenance Budget is not approved, then the parties disapproving the proposed Annual Maintenance Budget shall provide to the Contractor detailed reasons for such disapproval, whereupon Contractor within 15 days after its receipt of notice of such disapproval, shall deliver to ACTA, POLA, POLB, BNSF and UP a revised Annual Maintenance Budget which shall reflect the comments (if any) made to the original proposed Annual Maintenance Budget. The process described in the preceding two sentences shall continue until a revised Annual Maintenance Budget is approved. If a proposed Annual Maintenance Budget for a Contract Year has not been approved by January 1 of such year, then to reduce any disruption to maintenance and operations on the Maintained Facilities, the prior Contract Year's Approved Maintenance Plan shall apply to the maximum extent practicable or necessary and Contractor shall provide the Services in accordance therewith and ACTA shall pay Maintenance Invoices in accordance herewith, until an Annual Maintenance Budget is approved.

5.2.1 The Annual Maintenance Plan may be amended from time to time during the Contract Year through Mutual Agreement of the Owners and Railroads in which case Contractor shall receive a notice from ACTA pursuant to Article 21. Such amendments will occur when:

(a) ACTA requests the Contractor to add items or modify existing items contained in the Approved Maintenance Plan using authorized contingency funds approved by the Owner and Railroads for each calendar year; or

(b) ACTA requests the Contractor to add items or modify existing items contained in the Approved Maintenance Plan pursuant to Mutual Agreement of the Owner and Railroads during the calendar year.

5.2.2 The Annual Maintenance Plan for the first Contract Year shall be that contained in Exhibit 3, which includes the negotiated Fully Burdened Rates for the first Contract Year.

5.3 Plan Dispute. If ACTA changes Contractor's proposed budget for the Maintained Facilities for the upcoming Contract Year in the Approved Maintenance Plan without a commensurate change in Contractor's applicable responsibilities, then Contractor, within 15 days after being notified by ACTA of such changes may for reasonable cause notify ACTA in writing (a "**Deficiency Notice**") that in Contractor's reasonable judgment the approved plan will not enable Contractor to meet the standards required of Contractor under this Agreement, specifying in detail the reasons why Contractor believes deficiencies exist, and all areas where Contractor believes deficiencies exist. Contractor and ACTA promptly shall meet after delivery of the Deficiency Notice to attempt to resolve any differences. If the parties are unable to resolve their differences within 20 days after delivery of the Deficiency Notice, then either Contractor or ACTA may invoke the dispute resolution procedures specified in Article 20. Should such dispute not be resolved prior to the beginning of the applicable Contract Year, then to reduce any disruption to maintenance and operations on the Maintained Facilities, the Approved Maintenance Plan shall apply and Contractor shall provide the Services in accordance therewith and ACTA shall pay Maintenance Invoices in accordance therewith until the dispute is resolved; provided, that if the arbitrator determines that the Approved Maintenance Plan was not sufficient to meet the standards required of Contractor hereunder, Contractor shall not be deemed in default under this Agreement for failing to meet such standards if such failure resulted from deficiencies in the Approved Maintenance Plan.

5.4 Modifications to Maintenance Standards. As between Contractor and ACTA, ACTA shall have the right, in its sole discretion, consistent with and subject to the terms and conditions of the Operating Agreement, to modify the Maintenance Standards, or scope thereof, to be observed by Contractor with respect to the Services; provided, that ACTA gives thirty (30) days' prior written notice of such modifications to Contractor (except that in an emergency, ACTA shall be required to give only such notice as may be feasible under the circumstances). In such event, ACTA and Contractor may agree to equitably adjust, as necessary, pursuant to a CTO as provided in Section 5.9, the Approved Maintenance Plan to account for any anticipated increase in Contractor's time and cost of performance as a direct result of such modifications.

5.5 Not-to-Exceed Amount. In no event shall the maximum aggregate amount of Maintenance Invoices in any calendar year exceed (i) the estimated amount contained in the Approved Maintenance Plan, and (ii) additional funds, if any, paid directly by the Railroads to ACTA pursuant to the terms of the Operating Agreement and/or a separate agreement among

ACTA, the Railroad(s) and the Owner, without the prior written approval of ACTA, the Owner and the Railroads.

5.6 Payments to Contractor.

5.6.1 Maintenance Invoices. As further described below, no later than the last day of each calendar month after the Commencement Date, Contractor shall submit an invoice to ACTA for the Services performed by Contractor during the prior calendar month (the "**Maintenance Invoice**"). Each Maintenance Invoice shall be payable in accordance with this Section 5.6 and shall include:

(a) A description of the Services performed for the prior calendar month, including (i) the job classification of each employee that performed during such period, (ii) the Fully Burdened Labor Rate assigned to each such job classification, and (iii) the number of hours worked by each employee in their assigned job classification during such period (or the number of hours which employee was available and present to work at the Maintained Facilities but was unable to do so for reasons beyond Contractor's control in accordance with Section 5.6.4(b); provided, however, in no event shall the total number of hours worked by any salaried employee exceed the limit described in Section 5.10);

(b) A description of the Direct Costs incurred for the prior calendar month, which Direct Costs shall either be based on the agreed-upon standard rates and unit prices contained in the Approved Maintenance Plan, or, for Direct Costs not included in the then current Approved Maintenance Plan and approved by ACTA, at the Contractor's cost plus the Allowed Markup;

(c) A description of the Services and Direct Costs for signals and communications work performed in the prior calendar month as provided in Section 5.6.3;

(d) The following four categories of Services and Direct Costs contained in the Approved Maintenance Budget, as may be amended pursuant to Section 5.2.1; (i) M&O Charges (funded from Railroad sources), (ii) Capital Improvements Charges (funded from the Reserve Account), (iii) Non-Rail Maintenance Charges (funded from the Reserve Account), and (iv) ACTA AEI Reader Maintenance (funded from Railroad sources and ACTA Administration sources); and

(e) Each such invoice shall provide reasonable details, including such supporting documentation as reasonably required by ACTA, subject to ACTA's audit rights as set forth in Section 13.3. Contractor shall attach to each such invoice signed timecards detailing the time each of Contractor's employees spent performing Services under this Agreement and payroll registers for that time period. Timesheets and payroll registers shall be audited and must reflect the correct rates paid for each employee during a normal workday in which that individual performs different duties in another job classification that is a higher rate than their designated job. In the event that Contractor uses subcontracting services during such period, Contractor shall also provide the information and documents required under Section 5.7 (including the invoice for subcontracting Services performed for the prior calendar month, which invoice shall be in

the same form and contain the same information, as may be applicable, as required under this Section 5.6.1).

5.6.2 CTO Invoices. Contractor shall submit separate individual invoices for additional work where a CTO has been issued pursuant to Section 5.9(f).

5.6.3 Quarterly Reconciliation Invoices. Contractor shall submit a Quarterly Reconciliation Invoice as defined in Article 1.

5.6.4 Payment of Invoices. Subject to Contractor's compliance with the requirements contained in this Section 5.6, payment of the amount shown on each such Maintenance Invoice shall be made within 30 days after ACTA's receipt of a complete and undisputed invoice (i.e. an invoice free of error and containing sufficient validation of charges). If the invoice includes disputed charges, ACTA shall notify the contractor of any invoice irregularities (including but not limited to unsupported costs, rate errors, mathematical errors, and discrepancies between signed timesheets and payroll registers) as soon as possible. If by mutual consent the invoice cannot be resolved before an agreed upon payment date, the charges for disputed items will be deducted from the invoice amount before payment is made. ACTA and the Contractor shall work to resolve the disputed issues and will later agree for corrected or subsequently accepted charges to be included in the Quarterly Reconciliation Invoice. If there remain any unresolved items for the quarter, the disputed portion shall move through the dispute resolution procedures set forth in Article 20. The monthly Maintenance Invoices and the Quarterly Reconciliation Invoices are subject to audit per Section 13.3 of this agreement.

5.6.5 Signals and Communications and AEI Reader Maintenance Costs. The signal, communications and AEI Reader maintenance costs shall be set forth in the Approved Maintenance Plan and shall constitute the basis for paying Contractor for signal, communications and AEI Reader maintenance work performed during each Contract Year. Contractor shall include in each monthly Maintenance Invoice the Services and Direct Costs for signal, communications as set forth in the Approved Maintenance Plan.

(a) Contractor shall invoice ACTA for AEI Reader Maintenance on a monthly basis in the amount of 1/12 of the budget, and include the invoice with the Weekly and Monthly Management reports. Hardware inventory replenishment shall be a separate line item on invoices with appropriate asset tag number included when the asset can be tagged.

5.6.6 ACTA's Payment Obligation. (a) Except as provided in Section 5.6.3 and Section 5.6.4(b), Contractor shall invoice ACTA for, and ACTA shall be obligated to pay Contractor for, only those Services actually performed by Contractor or Subcontractor. ACTA and Contractor each acknowledge and agree that this Agreement is not a "fixed price contract" and ACTA is obligated to pay only for those Services actually performed by Contractor or Subcontractor. In addition, unless otherwise approved in writing by ACTA (pursuant to a CTO or otherwise), ACTA shall have no obligation to pay Contractor or any Subcontractor for any Services or Direct Costs that exceed the estimated amount contained in the Approved Maintenance Plan or for which Contractor fails to provide the supporting documentation required under Section 5.6.1. ACTA shall not be obligated to pay Contractor for any Services or Direct Costs performed or

incurred by a Subcontractor for which Contractor has not satisfied the requirements contained in Section 5.7.

(b) Notwithstanding the foregoing, but only in the limited circumstances described below, Contractor may invoice ACTA for, and ACTA shall be obligated to pay Contractor for, Contractor's employee(s) and/or Subcontractor(s) that were available and present to work at the Maintained Facilities but were unable to do so for reasons solely attributable to the acts or omissions of ACTA, POLA, POLB and/or the Railroads (excluding Force Majeure Events), and such an event could not have been anticipated by Contractor or such Subcontractors. In no event, however, shall ACTA be obligated to pay more than 200 total hours of such down time in any calendar month. ACTA's obligation to pay such amounts shall be subject to Contractor's compliance with the requirements contained in Section 5.6. Notwithstanding the foregoing, if such a situation occurs, Contractor will promptly take steps to minimize the costs resulting from such situation, including, without limitation, performing work at another location, where possible.

5.6.5 Direct Costs. All materials, supplies, equipment, vendor services, subcontracting services and such other direct costs as defined in the Federal Acquisition Regulation (collectively, "**Direct Costs**") purchased or provided by Contractor to perform the Services under this Agreement, with the exception of costs included in Local Administrative and Office Support Costs and Safety Equipment Costs, shall be charged to ACTA at either the agreed-upon rates and unit prices contained in the Approved Maintenance Plan, or, for Direct Costs not included in the then current Approved Maintenance Plan and approved by ACTA, at the Contractor's cost plus the Allowed Markup; provided, however, that the Allowed Markup shall not apply to Services performed under this Agreement by an Affiliate of Contractor.

5.7 Subcontractors. Contractor shall be permitted to hire one or more Subcontractors with respect to the performance of the Services to be provided by Contractor hereunder, provided that the requirements contained in this Section 5.7 and elsewhere in this Agreement are satisfied.

5.7.1 Payments to Subcontractors. Each Subcontractor shall be paid by Contractor according to the rate established in the contract between Contractor and Subcontractor, provided that the following requirements are satisfied:

(a) Contractor shall deliver to ACTA (as part of the monthly Maintenance Invoice pursuant to Section 5.6.1), (1) an itemized list of all Services actually performed by Subcontractor in the prior calendar month with required support documents as required by the prime within this agreement and others document as needed; (2) a copy of the invoice prepared by Subcontractor with respect to such Services; (3) a copy of the certification or affidavit prepared by Subcontractor stating that the work has been performed and completed by Subcontractor and no lien, attachment or claim with respect to the Maintained Facilities has been filed that has not been released or will not be released simultaneously with the payment to Subcontractor; and (4) such additional supporting documentation as reasonably required by ACTA. With respect to Subcontractors that are paid based on hourly rates, the itemized list required under clause (1) above shall also include the job classification of each worker, the rate assigned to each such job classification, and the number of hours worked by each worker.

(b) In the event that Services are transferred to a Subcontractor that were to be performed by the Contractor under the Approved Maintenance Plan, then no Allowed Markup shall apply unless otherwise approved by ACTA.

(c) Except as provided in Section 5.6.4(b), in no event shall ACTA be obligated to pay for Services not actually performed by Subcontractor. In addition, unless otherwise approved in writing by ACTA (pursuant to a CTO or otherwise), ACTA shall have no obligation to pay Contractor for any Services performed or Direct Costs incurred by a Subcontractor that exceed the estimated amount contained in the Approved Maintenance Plan or for which Contractor fails to provide the supporting documentation required under Section 5.6.1.

5.7.2 Records Regarding Subcontractors. Contractor's records and books detailing work performed by a Subcontractor shall be in reasonable detail, shall include such supporting documentation as ACTA reasonably may request, and shall be subject to ACTA's audit rights as set forth in Section 13.3.

5.7.3 Contracts with Subcontractors. Contractor shall submit a Subcontractor Approval Form to obtain the written approval of ACTA prior to entering into any contract (or at any time during the term of the contract) in which the aggregate annual amount payable exceeds Twenty Five Thousand Dollars (\$25,000). Contractor shall provide ACTA with a copy of each such contract (and any amendments thereto). Contractor shall include in each contract with a Subcontractor a provision which entitles ACTA to audit Subcontractor's records and books, and shall require that Subcontractor's records and books (i) describe in reasonable detail the Services performed by Subcontractor, including any Direct Costs incurred, (ii) include such supporting documentation as ACTA reasonably may require, and (iii) be subject to ACTA's audit rights as set forth in Section 13.3. Contractor shall require Subcontractor to retain such books and records for a period of not less than three (3) calendar years after the termination of this Agreement. In addition, to the extent permitted by law, Contractor shall include in each subcontract the stipulation that Contractor, not ACTA, Owner or Railroads, is solely responsible for payment to the Subcontractor for the amounts owing and that the Subcontractor shall have no claim, and shall take no action against ACTA or any of the other Indemnified Entities for nonpayment by Contractor.

5.7.4 Prohibition Against Sub/Sub Subcontracting. Contractor shall include in each contract with a Subcontractor a provision which prohibits any Subcontractor of a Subcontractor from subcontracting any Services under this Agreement (i.e., any sub-sub-Subcontracting is prohibited) unless otherwise agreed to in writing by ACTA.

5.8 Vacant Positions. A position listed in the Annual Maintenance Budget that is no longer occupied by an employee of Contractor or by a Subcontractor for all or some of a monthly invoice period is a vacant position ("**Vacant Position**"). Any Vacant Position shall be listed by Contractor as a line item on Contractor's next Maintenance Invoice delivered to ACTA, along with a notation regarding the time period within the monthly invoice period for which the position is vacant. Contractor shall not invoice, nor shall ACTA be obligated to pay, for any Vacant Position.

5.9 CTOs. Contractor shall submit to ACTA or ACTA shall submit to the Contractor a proposed CTO in accordance with the procedures contained in this Section 5.9, in the event that one or more of the following should occur:

- (a) An addition to, modification of and/or removal of Maintained Facilities as described in Section 2.4;
- (b) Contractor encounters Latent Defects at the Maintained Facilities of the type described in Section 3.2;
- (c) ACTA determines to modify the Maintenance Standards as described in Section 5.4;
- (d) A delay or failure by ACTA, Owner, BNSF and/or UP results in material delay or failure by Contractor to perform Services hereunder, or otherwise materially adversely affects Contractor's rights or obligations hereunder;
- (e) ACTA requests the Contractor to perform emergency work; or
- (f) ACTA requests the Contractor to perform other additional services to support ACTA's capital program or third-party work such as by utility owners on or adjacent to the Rail Corridor (e.g., flagging and inspection services).

The CTO request shall include (i) the scope of the increased (or decreased, if applicable) Services (ii) the schedule for performing and completing the Services, if applicable, (iii) an estimate of the increased (or decreased, if applicable) labor and Direct Costs required to perform the Services (including necessary headcount and the Fully Burdened Labor Rate attributable to each job classification), (iv) the Contractor's Allowed Markup, if applicable, and (v) a maximum guaranteed amount agreed upon by Contractor and ACTA to be paid for such Services, if applicable. The CTO shall utilize the Fully Burdened Labor Rate and other standard unit costs and prices used in the then-effective Approved Maintenance Plan and any new job classifications and associated new or modified Fully Burden Rate. ACTA shall review, revise if necessary in its reasonable judgment, and approve in writing the CTO (or the revised CTO, if applicable); provided that prior to any such approval, ACTA where applicable shall first obtain the prior written approval of Owner and the Ports pursuant to Section 8.3 of the Operating Agreement. If ACTA approves in writing such CTO (or a revised CTO), then both Contractor and ACTA must sign the approved CTO before Contractor may, or is required to, begin any such Service. Until the completion of any such Service, Contractor shall submit a status report along with the monthly invoice described in Section 5.6.1 indicating the percentage of the total work that has been performed during such monthly invoice period. Upon completion of this process, the Approved Maintenance Plan shall be considered amended to reflect the increased (or decreased, if applicable) Services and estimated increase (or decrease, if applicable) costs set forth in the approved CTO.

If Contractor believes additional compensation is due for Services or Direct Costs not covered in the Approved Maintenance Plan, Contractor shall not be obligated to proceed until a CTO has been executed by both parties. In no event shall ACTA be prohibited from employing contractors other than Contractor to perform any such Service.

5.10 Fully Burdened Labor Rate. The Fully Burdened Labor Rate attributable to each of Contractor's employee job classifications which will be allocated, in whole or in part, to perform

Rail Corridor Services and/or Non-Rail Component Services must be specified in the Approved Maintenance Plan.

5.10.1 The Approved Maintenance Plan, in the course of identifying all job classifications allocated to provide Services under said plan and the applicable Fully Burdened Labor Rate, will also identify whether each job classification is compensated on an exempt salaried or non-exempt hourly basis. For exempt salaried job classifications, the Approved Maintenance Plan will further indicate whether one hundred percent (100%) of the individual's time is expected to be spent providing Services under said plan, and if not, the best estimate of the percentage of his or her time the individual will spend providing Services pursuant to the Approved Maintenance Plan. This estimate of time to be worked compared to actual time worked and other relevant conditions will be subject to audit by ACTA. Unless otherwise agreed to in writing by ACTA, in no event shall Contractor invoice ACTA for, nor shall ACTA be obligated to pay, more than forty (40) hours per week for any exempt salaried job classification.

5.10.2 In addition, except in the case of emergencies, planned overtime for non-exempt job classifications shall be approved in advance by ACTA. In the case of non-exempt employees performing work for another client on the same day or the same week, approval from ACTA must be obtained in writing to charge ACTA for overtime that is caused by this dual use.

5.10.3 It is Contractor's obligation to provide adequate employee coverage to staff the job classifications listed in the Approved Maintenance Plan, and, except as provided in Section 5.6.4(b), Contractor may only invoice ACTA (i) for the Fully Burdened Labor Rate attributable to job classifications as identified in the Approved Maintenance Plan and (ii) to the extent work was actually performed.

ARTICLE 6 MAINTENANCE OF THE MAINTAINED FACILITIES

6.1 **Contractor's Obligation to Provide the Services.** During the Term, Contractor shall provide all of the maintenance, inspection, repair, replacement, graffiti removal and other services with respect to the Maintained Facilities described in this Agreement, including, without limitation, the services more specifically described in Section 3.0 (Scope of Services) of Exhibit 7 attached hereto, performed to assure continued reliable and safe operation of the Maintained Facilities (collectively, the "Services").

6.1.1 Without limiting the generality of the foregoing, the Services shall include the following:

(a) Preventative maintenance of the Maintained Facilities in a manner that preserves the economic life of the property and guards against excessive wear, tear, erosion or damage.

(b) The prompt removal or painting over of any graffiti on the Maintained Facilities, repairing of any damage to the Maintained Facilities caused by vandals, and removal from the Maintained Facilities and proper disposal of all trash and debris. The Approved Maintenance Plan shall set forth a schedule for inspection, repair and removal

activities relating to graffiti, vandalism and debris. In addition to promptly removing or painting over graffiti in the normal course of providing the Services, Contractor shall remove or paint over any graffiti on the Maintained Facilities promptly after receiving a request from ACTA.

(c) The planning, purchasing, storage, distribution and control of all materials required to perform the Services under this Agreement. All materials and equipment purchased by Contractor pursuant to this Agreement for the provision of the Services shall be used solely for the purpose of providing the Services (for purposes of this subparagraph, material and equipment do not include items owned by Contractor the use of which is billed to ACTA at the agreed rates in the Approved Maintenance Plan). The Approved Maintenance Plan shall set forth agreed-upon procedures for purchasing materials for the applicable Contract Year and the amounts budgeted therefor, as well as procedures for storing, tracking and managing such materials (which procedures shall be subject to audit by ACTA, Owner and Railroads, or an agent of each such party, and shall remain available for audit by ACTA, Owner and Railroads during the term of this Agreement and for a period of not less than three (3) calendar years after the termination of this Agreement. Without limiting the generality of the foregoing, Contractor acknowledges that ACTA previously has purchased, and has delivered to Contractor the materials and equipment described in Schedule 1 attached hereto (which Schedule, if not finalized prior to the execution of this Agreement, shall be delivered by ACTA to Contractor as soon thereafter as possible, and upon delivery by ACTA such Schedule shall be deemed incorporated into this Agreement without the necessity of executing any further instruments). All of such material and equipment, and all material and equipment purchased by Contractor during the term of this Agreement at ACTA's expense, shall be stored and controlled by Contractor in a manner that ensures the security and safety thereof, and Contractor shall be solely responsible, at its cost, for any theft, loss or damage of any kind to such material while it is in the possession or under the control of Contractor. Upon the expiration or earlier termination of this Agreement, Contractor shall (i) provide a detailed written accounting of all such material and equipment previously received from ACTA or purchased at ACTA's expense, (ii) promptly turn over or deliver to ACTA (or as directed by ACTA) all such material not previously installed on or in the Maintained Facilities or otherwise disposed of in accordance with the provisions of this Agreement, and (iii) with respect to any such material and equipment unaccounted for under the preceding clause (ii), pay to ACTA an amount equal to the cost incurred to acquire such material and equipment.

(d) Contractor shall maintain an accurate inventory of all material, supplies and equipment purchased under this Agreement and provide to ACTA a copy thereof each year. Such annual inventory shall be subject to ACTA's audit rights set forth in Section 13.3. Contractor shall use bar codes, labels or other appropriate identification mechanism to identify and physically label ACTA's equipment. Furthermore, Contractor shall not commingle its equipment, supplies or materials with those belonging to ACTA.

(e) In the event of any emergency, (i) Contractor shall promptly notify ACTA and the Railroads of such emergency, and (ii) Contractor shall respond with all resources

needed to restore safe operating conditions and restore regular railroad service, consistent with other maintenance and safety obligations and consistent with good industry practice. Contractor shall cooperate fully with any investigation regarding an emergency situation. In any emergency, Contractor's employees shall provide any assistance requested in a manner that is not in conflict with rail service on the Rail Corridor and Contractor's obligations under this Agreement. Without limiting the generality of the foregoing, if Contractor at any time has taken any Trackage or other Maintained Facilities out of service in order to conduct the Services, and an event then occurs which causes or results in other Trackage or Maintained Facilities becoming blocked or fouled or otherwise being taken out of service, then at ACTA's request, Contractor shall take such steps as necessary to return to service, as promptly as reasonably possible, the Trackage or other Maintained Facilities on which Contractor had been conducting such Services.

6.2 Maintenance Standards.

6.2.1 All Services with respect to the Maintained Facilities will be made in a good and workmanlike manner, consistent with industry practice, and, in the case of replacements, will be made using materials of a kind and quality comparable to the items being replaced, which materials must be in compliance with all applicable laws (including building codes). Each of ACTA, Owner, BNSF and UP shall have the right, without obligation, to inspect the Maintained Facilities at any time to ensure compliance with this Section 6.2 and for any other purpose incidental to the rights of ACTA under this Agreement. Contractor shall maintain the Maintained Facilities (a) in a manner that does not impair the ability of ACTA, Owner or the Railroads to have access to and over and to operate on the Maintained Facilities, and which is designed to protect the safety of the public and preserve the economic life of the Maintained Facilities, (b) in accordance with the UP Track and Signal Standards set forth in Exhibit 7-Appendix F attached hereto, the Bridge Management Plan developed by the Contractor, and all applicable FRA, federal, state and local laws, rules and regulations (including the FTSS and FRWS), (c) in FRA Class 4 condition (except as noted in Exhibit 7-Appendix F attached hereto or unless otherwise agreed by ACTA in writing), and (d) in accordance with the applicable Approved Maintenance Plan.

6.2.2 From time-to-time ACTA (consistent with and subject to the terms and conditions of the Operating Agreement) may notify Contractor of proposed modifications to the Maintenance Standards to be observed by Contractor on the Maintained Facilities and, may adopt such modifications. Contractor also may propose modifications to such Maintenance Standards for consideration by ACTA. In the event that any modifications are adopted by ACTA, then the provisions of Section 5.4 shall apply.

6.3 Excess or Salvage Material. Contractor shall have the right to propose to ACTA that it would like to reuse at other locations on the Maintained Facilities any excess or second-hand material removed by Contractor in connection with replacement or repairs on the Maintained Facilities. ACTA, in its sole discretion, shall approve in writing or disapprove any such proposal within twenty (20) days after its receipt thereof. If ACTA does not approve in writing Contractor's proposed reuse of such excess or second-hand materials within such twenty-day (20) period, or if for any reason such excess or second-hand material is not reused by Contractor, then, subject to ACTA's prior written approval of such sale, Contractor shall sell such material removed by

Contractor from the Rail Corridor. The gross proceeds from any such sale shall be remitted to ACTA for deposit in the M&O Fund. The costs incurred in removing the materials and the cost incurred in connection with the sale shall be included in Contractor's monthly Maintenance Invoice. All receipts and supporting evidence must be presented at the time of the written request to salvage material.

6.4 Inspections. None of ACTA, Owner or any Railroad shall have any responsibility for inspecting, maintaining, servicing or repairing the Maintained Facilities or any portion thereof or any other equipment or property on the Maintained Facilities.

6.4.1 Notwithstanding the foregoing, ACTA, Owner and/or the Railroads shall have the right to inspect any such property or equipment at any time for safety and/or security reasons and, in the case of a non-safety/security inspection, at any time provided that such inspection shall not materially interfere with Contractor's ability to perform the Services. Without limiting the generality of the preceding sentence, if ACTA, Owner and/or the Railroads notify Contractor that any geometry car or other rail or facility inspections of the Rail Corridor will be conducted after the Commencement Date, Contractor shall support and assist in such inspections through flag protection, on board observation by Contractor's personnel (appropriately trained for such inspections), review of test results and analysis of data. Further, if any such inspections disclose that the Services provided or conducted by Contractor do not meet the Maintenance Standards, then Contractor shall promptly perform Remedial Action to correct such defects or deficiencies at its sole cost and expense.

6.4.2 Contractor shall perform special inspections of the Maintained Facilities after storms, fires, derailments, earthquakes, motor vehicle accidents, vandalism or other disruptions to service, to determine if there has been any damage or alteration of conditions affecting the condition of the Maintained Facilities or the safety of Trains. If regulatory agencies perform inspections of the Maintained Facilities, Contractor shall support such inspections through transportation, flag protection, inspection, and documentation of inspection, record research, and Remedial Actions for any defects or deficiencies discovered in such inspections.

6.5 Repair of Damage Caused by Contractor. Contractor shall be responsible for promptly repairing any damage to the Maintained Facilities resulting from Contractor's or Subcontractor's acts or omissions regardless of whether such acts were unintentional. Contractor shall promptly inform ACTA and each Railroad in writing of the nature of such damage caused by Contractor or Subcontractor and the exact Remedial Action performed or to be performed by Contractor to repair such damage. Such repair work performed by Contractor shall be completed in a timely manner at Contractor's sole cost and expense; provided, however, such repair work performed by Contractor shall not unreasonably interfere with ACTA, Owner, and/or Railroads' use of the Maintained Facilities.

6.6 Coordination of Services with Other Entities. Contractor acknowledges that the Maintained Facilities comprise a segment of a larger rail and infrastructure system which, among other things, connects with Trackage owned or operated by one or both of the Ports, one of the Railroads or PHL at the southerly end of the Rail Corridor as well as with Trackage owned or operated by each of the Railroads at the northerly end of the Rail Corridor and at certain connection

points along the Rail Corridor. Accordingly, as an integral component of the Services, Contractor at all times shall interface, coordinate and fully cooperate with any other entity providing repair, maintenance, improvement, dispatching, security services, railroad service and other services with respect to, or operating on, the Rail Corridor, and Trackage and rail facilities that connects to or are adjacent to the Rail Corridor, including (i) the Corridor Dispatcher with respect to the Rail Corridor, (ii) PHL (and its successors and assigns), Owner and the Railroads with respect to the Trackage at the southerly end of the Rail Corridor, (iii) the Railroads with respect to Trackage at the northerly end of the Rail Corridor and at various connection points along the Rail Corridor, and (iii) one or both of the Ports with respect to Trackage owned or operated by the Ports. Further, Contractor at all times shall interface, coordinate and fully cooperate with any other person or entity that from time to time may perform work on the Rail Corridor (including the entities providing train operations, dispatching services and security services with respect to the Rail Corridor, which services, as of the date of this Agreement, are provided jointly by BNSF and UP). In addition to the forgoing, Contractor at all times shall interface, coordinate and fully cooperate with other persons and entities which provide technical support and testing services with respect to the AEI Readers. Nothing in this Section 6.6 shall be construed as creating an obligation or duty by Contractor to permit other entities to utilize Contractor's equipment, materials or supplies.

6.7 Warranty of Services. Contractor warrants to ACTA, POLA, POLB, BNSF and UP on behalf of itself and on behalf of any Subcontractor it employs to perform the Services that (i) all Services performed by Contractor or Subcontractor shall be done in a workmanlike manner, in compliance with all applicable federal, state and local laws, regulations or other valid orders of a governmental agency, and other applicable professional standards and in compliance with the requirements of this Agreement, (ii) all parts, equipment and materials used by Contractor or Subcontractor in provision of the Services shall be equal or better than the specifications set forth in Exhibit 7-Appendix F, and (iii) Contractor shall employ and ensure that Subcontractor employs a sufficient number of skilled, qualified and trained employees to perform the Services.

6.7.1 Contractor shall be responsible for taking any corrective action required to satisfy the foregoing warranties. Within thirty (30) days after Contractor's discovery of, or within thirty (30) days after receiving written notice from any of ACTA, Owner, BNSF or UP of, a breach of the foregoing warranties, Contractor shall at its sole expense remove, repair and/or replace any non-conforming work (including parts and materials used in that work), or shall commence reasonable efforts to affect a cure, and shall bear the cost of repair or replacement of any other portions of the Maintained Facilities or work performed by any other contractor, that is damaged by Contractor's or Subcontractor's non-conforming work. Contractor shall repair any work which does not comply with applicable laws, regulations, orders or professional standards or which has not been done in a workmanlike manner, all at Contractor's sole cost.

6.7.2 Notwithstanding anything to the contrary in this Agreement, Contractor's warranty excludes remedy for manufacturer defects, damage or defect caused by abuse or modifications not executed by Contractor or its Subcontractors, improper or insufficient maintenance not performed by Contractor or its Subcontractors, or normal wear and tear under normal usage.

6.7.3 The only warranties made by Contractor in connection with the work are those set forth in this Section 6.7. Those warranties are exclusive and in lieu of all other warranties, whether statutory, express or implied, including warranties of merchantability, fitness for particular purpose and those arising from course of dealing and usage of trade. ACTA, POLA, POLB, BNSF and UP's sole and exclusive remedy for warranty nonconformities in the work shall be for Contractor to repair or replace the nonconforming work as provided in this Section 6.7.

6.7.4 If Contractor fails to commence reasonable efforts to affect a cure within a reasonable time of Contractor's discovery of, or receipt of written notice of, the alleged breach of the foregoing warranties, and thereafter complete such repair and/or replace any non-conforming work within a reasonable time, to the reasonable satisfaction of ACTA, Owner, BNSF and UP, any of ACTA, Owner, BNSF and/or UP shall have the right, but not the obligation, to correct and/or replace any work or materials that is/are defective or do not comply with the Maintenance Standards; provided, however, that the exercise of such right shall be without prejudice to any other right or remedy such party may have under this Agreement. Contractor shall fully reimburse ACTA, Owner, BNSF and/or UP (as applicable) for any expenses incurred hereunder, including the applicable party's overhead costs (provided, that if such work is done by BNSF and/or UP, overhead costs shall be billed in accordance with such Railroad's customary billing practices).

6.7.5 Notwithstanding any of the foregoing, if the work of Contractor or any of its Subcontractors is not in compliance with this Agreement or creates a hazard to the public health or safety or the safety of the employees or other contractors (and their employees) of ACTA, Owner or either Railroad or to the employees of Contractor or Subcontractor, ACTA may undertake at Contractor's sole expense and without prior notice all Services necessary to correct that hazardous situation.

6.7.6 Contractor shall require any Subcontractor to undertake and guaranty the same obligations to the Contractor and to ACTA, Owner and Railroads as are set forth in this Section 6.7.

6.7.7 Contractor's obligations under this Section 6.7 shall continue for three (3) years after either Contractor's completion of the non-conforming work or the termination of this Agreement, whichever is earlier.

ARTICLE 7 DERAILMENTS

7.1 Clearing of Derailments and Repair of Damage Caused by Derailments.
Pursuant to the Operating Agreement, any Railroad whose Train derails shall be responsible for promptly clearing the derailment. If a Railroad's Train derails and the Railroad does not promptly clear the derailment, ACTA has the right to engage one or more contractors to cause the derailment to be cleared.

7.1.1 As between Contractor and the Railroads, to the extent that a derailment was not caused by the act or omission of Contractor, the costs of clearance of such derailment shall be borne solely by the Railroad(s) whose Train(s) derailed. Contractor shall promptly provide to the applicable Railroad(s) or ACTA, as the case may be, all assistance that may be requested to

clear any derailment, regardless of the cause thereof. Further, Contractor promptly shall repair any damage to the Maintained Facilities resulting from any derailment. Except as provided in Section 7.1.2, Contractor shall be entitled to reimbursement of Contractor's costs for such work (at the agreed-upon standard rates and unit prices contained in the current Approved Maintenance Plan) incurred in connection with such assistance, and for repair of any damage to the Maintained Facilities resulting from any derailment, from the Railroad(s) whose Train(s) derailed. Contractor shall be responsible for collecting from the affected Railroad(s) such amounts; provided, however, that ACTA shall use commercially reasonable efforts (without any obligation to incur out-of-pocket costs thereby) to assist Contractor in Contractor's efforts to collect such amounts from the affected Railroad(s). In the event that the affected Railroad(s) does not make payment to Contractor within ninety (90) days of Contractor's submission of an invoice, then ACTA may (but is not obligated to) pay such invoice in accordance with the requirements set forth in Section 5.6, subject to reimbursement by the Railroad(s) pursuant to the terms of the Operating Agreement.

7.1.2 Contractor shall be responsible for the cost of any derailment to the extent that it was caused by the act or omission of Contractor or any Subcontractor. In any such case, Contractor shall promptly provide assistance in clearing the derailment and shall repair any resulting damage to the Maintained Facilities, at no cost to ACTA, Owner or the Railroads (but only to the extent of Contractor's responsibility). Any costs incurred by a Railroad in clearing any such derailment shall be calculated by that Railroad and provided to ACTA and Contractor, and Contractor promptly shall pay such amount to such Railroad, but only to the extent of Contractor's responsibility.

7.1.3 Where the extent of Contractor's responsibility for costs relating to a derailment is disputed, Contractor, ACTA and/or the Railroad(s) whose Train(s) derailed, may submit the issue to dispute resolution pursuant to Article 20.

ARTICLE 8 CAPITAL IMPROVEMENTS

8.1 Capital Improvements. Contractor shall make the Capital Improvements necessary to ensure that the Maintained Facilities are operated and maintained in compliance with all federal, state and local laws, and each Approved Maintenance Plan shall include a description of Capital Improvements that Contractor proposes to make during the applicable Contract Year. The costs of such Capital Improvements, if approved as part of the Approved Maintenance Plan in accordance with Article 5 hereof, will be paid as provided in Article 5. In addition, Contractor shall make such additional Capital Improvements requested by ACTA from time to time provided the following conditions are satisfied (i) ACTA (with the prior written approval of the Railroads and the Owners) determines that such additional Capital Improvements shall be included in the Scope of Services in accordance with Section 2.4 and Section 8.3 hereof, and (ii) the costs of such additional Capital Improvements shall be paid by either (x) funds allocated under the Approved Maintenance Plan or an amendment to the Approved Maintenance Plan, or (y) funds paid directly by the Railroads to ACTA pursuant to the terms of the Operating Agreement and/or a separate agreement among ACTA, the Railroad(s) and the Owner. Contractor invoices shall be in reasonable detail and shall include such supporting invoices and documentation as ACTA or the Railroad(s) may request. If the Railroad(s) or ACTA, as the case may be, in good faith dispute all

or any portion of any such invoice, ACTA shall be obligated to pay only the undisputed portion of such invoice until the dispute has been resolved. Any dispute regarding such an invoice shall be settled by the dispute resolution procedures set forth in Article 20.

8.1.1 Contractor and ACTA acknowledge that the annual Approved Maintenance Plans are intended to provide for a normalized maintenance and replacement schedule over a period of time that will maintain the Maintained Facilities and all components thereof in the condition required by this Agreement. The maintenance program set forth in the Approved Maintenance Plans shall include the periodic replacement of ties, rail, switches and other components of the Maintained Facilities, to the extent required during the Contract Year, with materials of like quality. Contractor and ACTA further acknowledge that notwithstanding consistent performance of the normalized maintenance and replacement program described above, at some point in the future major portions or components of the Maintained Facilities will need to be replaced. During the term of this Agreement, Contractor shall provide to ACTA (with a copy to the Owner and Railroads) information regarding annual replacement of ties, rail, switches and other components of the Maintained Facilities as part of the Approved Maintenance Plan.

8.2 Ownership of Improvements and Alterations. All materials, replacements, substitute items and Capital Improvements installed or made by or on behalf of Contractor or any other person on the Maintained Facilities, or on any other property owned or controlled by Owner or ACTA, shall be the property of Owner or ACTA (as the case may be) unless ACTA notifies Contractor otherwise.

8.3 Capital Improvements by ACTA, Owner or Railroads. None of ACTA, Owner or Railroads shall have any obligation whatsoever to make any Capital Improvements or other modifications or additions on or to the Maintained Facilities (or otherwise). Subject to the restrictions set forth in Article 14, ACTA, Owner and Railroads each shall be entitled, but shall not be obligated, to make such Capital Improvements and modifications to the Maintained Facilities as ACTA, Owner and Railroads, each in its sole discretion, and consistent with and subject to the terms and conditions of the Operating Agreement, deems necessary or desirable, and ACTA shall be entitled to employ contractors other than Contractor to perform such Capital Improvements or other modifications to the Maintained Facilities.

8.4 Construction Work by ACTA, Owner or Railroads. Upon at least 30 days' prior written notice to Contractor, and subject to the terms and conditions hereof, either ACTA, Owner or Railroads may elect to construct modifications, additions or other improvements (including Capital Improvements) to the Maintained Facilities, to the extent consistent with (and subject to) the terms and conditions of the Operating Agreement. In connection with any construction activity, ACTA, Owner or Railroad(s), as the case may be, may schedule at least one construction period of at least eight continuous hours during each day to perform its construction activities on or adjacent to the Maintained Facilities so long as such work will not interfere significantly with train operations on the Rail Corridor. The specific construction periods shall be determined by ACTA, Owner and/or the Railroads (whoever has elected to construct) in consultation with Contractor, with the goal of not significantly interfering with rail operations on the Maintained Facilities. ACTA, Owner and/or Railroads also may conduct construction and related activities at times

outside of the designated construction periods, provided, that such activities outside the designated period do not materially interfere with Contractor's ability to perform the Services.

8.5 Repair of Damage Caused by Force Majeure. Notwithstanding the other provisions of this Agreement, solely as between ACTA and Contractor, repair of any damage caused in the future by a Force Majeure Event shall be the sole responsibility of ACTA, subject to the provisions of Article 18.

ARTICLE 9 SAFETY AND SECURITY

9.1 Safety Program. Contractor shall establish, and Contractor and all Subcontractors shall observe, a safety program for all of its activities on the Maintained Facilities in accordance with prevailing industry standards including an FRA approved On-Track Safety Program, and shall use reasonable care in all of its activities in, on or about the Maintained Facilities. Contractor's safety program shall address, in reasonable detail, all safety and security measures undertaken or otherwise in the planning stages, in order to comply with various safety and security rules and regulations which may apply to the Services from time to time, including without limitation, the Transportation Workers Identification Credentialing program implemented by the Department of Homeland Security, and to the extent applicable to Contractor and/or its Subcontractors. Contractor will provide ACTA with a copy of all Contractor and subcontractor employees' Transportation Worker Identification Credential (TWIC) information. Contractor's safety plan shall be updated annually to reflect the Services to be provided by Contractor during the following Contract Year, with the annual updates to be delivered by Contractor to ACTA with the proposed Annual Maintenance Budget for the following Contract Year, and the original safety program and the annual updates shall be subject to prior review, comment and approval by ACTA, the Owner and the Railroads. Without limiting the generality of the foregoing, Contractor acknowledges and agrees that the emergency drop ladders located in the trench portion of the Rail Corridor shall not be used by Contractor or its employees or contractors for routine ingress or egress to or from the trench (but the foregoing shall not preclude Contractor and its employees and contractors from performing tests, inspections, repairs and maintenance services on and with respect to such emergency drop ladders in accordance with the provisions of this Agreement).

9.2 Encroachers, Trespassers and Other Third Parties; Hazards. Contractor shall notify ACTA in writing of any trespassers and other operations and activities on the Maintained Facilities which interfere with Contractor's performance of the Services. Contractor shall not allow or authorize any person or entity other than a Railroad, Contractor (including its contractors and Subcontractors), ACTA or Owner to operate equipment (including locomotives, hi-rail vehicles and track mobiles) on any of the Maintained Facilities. Contractor shall give ACTA prompt written notice of any encroachment onto the Maintained Facilities by adjoining property owners or tenants which interferes with operations on the Maintained Facilities.

9.3 Security. Contractor shall be solely responsible for providing any security services or measures it deems necessary or desirable for its property and equipment, but shall have no responsibility for providing any other security services or measures with respect to the Maintained Facilities. Contractor acknowledges that neither ACTA, Owner nor any Railroad shall have any

responsibility to provide any security services or measures to protect from theft of or vandalism or damage to any property, equipment or improvements owned or used by Contractor. Any loss due to theft, damage or vandalism of Contractor's property, equipment or improvements shall be borne by Contractor at its sole cost and expense, but only to the extent that such theft, damage or vandalism was not attributable to or did not result from, the negligent acts of ACTA, the Owner, BNSF and/or UP.

ARTICLE 10
COMPLIANCE WITH LAWS, LICENSING,
TAXES AND ASSESSMENTS

10.1 Compliance with Laws. Contractor shall ensure that Contractor and its Subcontractors comply, at its sole cost and expense, with all applicable federal, state and local laws, rules, ordinances, regulations, permits and orders in effect during the term of this Agreement that relate to or govern Contractor's performance of the Services (including, without limitation, all applicable requirements of the California Labor Code, the California Department of Industrial Relations, the FRA, the California Public Utilities Commission, the Department of Homeland Security and the requirements of the Occupational Safety and Health Act). If any failure on Contractor's part to so comply results in a fine, penalty, cost or charge being imposed or assessed on or against ACTA, POLA, POLB or any Railroad, Contractor and Subcontractor shall promptly reimburse, defend, indemnify and hold such parties harmless with respect to such fine, penalty, cost or charge and all expenses and attorneys' fees incurred in connection therewith, but only to the extent that such fine, penalty, cost or charge was not attributable to or did not result from, the negligent acts or omissions of ACTA, the Owner, BNSF and/or UP.

10.2 Licenses and Permits. Contractor shall obtain and maintain in full force and effect, at its sole cost and expense, all governmental licenses (including contractor's licenses required under California law), permits (including building permits), approvals, franchises and other entitlements that are necessary for it to perform the Services under this Agreement. Contractor acknowledges that any approval by or consent of ACTA which may be given pursuant to this Agreement with respect to the subject matter hereof shall not be deemed or construed as eliminating or reducing Contractor's obligation to obtain any licenses, permits, approvals, franchises or entitlements which may be necessary or required from UP, BNSF, POLA and/or POLB, or from departments or agencies of either POLA or POLB.

10.3 Compliance with Prevailing Wage Requirements. Services provided under this Agreement are subject to the provisions governing payment of prevailing wages on public works projects found in Labor Code Section 1720 *et seq.* and the requirements of Title 8 of the California Code of Regulations Section 16000 *et seq.*, and are subject to compliance and monitoring and enforcement by the State of California Department of Industrial Relations. Pursuant to Labor Code Section 1771, the Contractor and all Subcontractors of any tier must pay not less than the general prevailing rate of per diem wages, and the general prevailing rate of holiday and overtime work in the locality in which the public work is to be performed for each craft, classification or type of workers needed to execute this Agreement.

10.3.1 For the purpose of this Agreement, the wages required to be paid for all Contractor and Subcontractor job classifications shall be no less than the Prevailing Wage Rate for the County of Los Angeles established by the Director of the Department of Industrial Relations in effect on the first advertisement date of the Request for Proposal. Contractor shall post a schedule at the office building at the Maintenance Yard or other appropriate, visible location on the jobsite showing all prevailing wage rates for each craft, classification, or type of worker needed to perform the Services. Copies of prevailing rate of per diem wages are available on the Internet at: www.dir.ca.gov/dlsr/DPreWageDetermination.htm, and are on file at ACTA's office located at 3760 Kilroy Airport Way, Suite 200, Long Beach, California 90806 and shall be made available by ACTA upon request. Contractor and Subcontractors must comply with applicable statutes and regulations, including but not limited to the payroll record keeping requirements of Labor Code Section 1776, and the penalty provisions of Labor Code Sections 1775, 1776, 1777.7, and 1813. All hourly employees will be paid the appropriate rate for the work performed by classification on a daily basis when an employee is performing multiple duties in different job classifications that require a higher rate of pay per that job classification. Contractor must provide monthly employee payroll registers as part of the corresponding monthly invoice to show proof of the appropriate payment to the employee.

10.3.2 Pursuant to Labor Code Section 1774, Subcontractors of any tier must also comply with requirements for payment of prevailing wages. Contractor is responsible for ensuring that all Subcontractors comply with prevailing wage requirements and is responsible for Labor Code violations by Subcontractors of any tier. The agreement executed between Contractor and each Subcontractor must include a copy of the provisions of Labor Code Sections 1771, 1775, 1776, 1777.5, 1813 and 1815, at a minimum.

10.3.3 Pursuant to Labor Code Section 1771.4 and as directed by the Labor Commissioner, Contractor and Subcontractors performing prevailing wage work must furnish electronic Certified Payroll Records (eCPRs) directly to the Labor Commissioner (aka Division of Labor Standards Enforcement). ACTA reserves the right to require Contractor to submit to ACTA each month the Certified Payroll Records of Contractor and its Subcontractors of every tier. Pursuant to Labor Code Section 1776, Contractor must also make payroll records available for inspection by ACTA upon request at all reasonable hours at the principal office of the Contractor. The electronic Certified Payroll Records (eCPRs) are subject to ACTA's periodic audit.

10.3.4 No Contractor or Subcontractor may engage in the performance of Services under the Agreement unless currently registered and qualified to perform public work pursuant to Labor Code Sections 1725.5 and 1771.1.

10.4 Compliance with Apprenticeship Requirements. Contractor and its Subcontractors must comply with employment and training programs established by the Department of Industrial Relations - Division of Apprenticeship Standards, pursuant to Labor Code Sections 1773 and 1773.1. Pursuant to Labor Code Section 1777.5 and Title 8 of California Code of Regulations Section 230, Contractor and Subcontractors of any tier who are not already approved to train by an apprenticeship program sponsor shall, within ten (10) calendar days of signing the Agreement or Subcontract, as applicable, but in any event prior to the first day in which the Contractor or Subcontractor has workers employed at the Maintained Facilities, submit the

Public Works Contract Award Information form (DAS Form 140) to the appropriate local apprenticeship committees whose geographic area of operation include the area where the Services are being provided and who can supply apprentices. Contractors and Subcontractors must also submit a copy of the forms to ACTA upon request.

ARTICLE 11 PERSONNEL AND EQUIPMENT

11.1 Personnel. Contractor shall hire, train and supervise, at its sole cost and expense (except as provided in any Approved Maintenance Plan), all persons necessary to perform the Services except to the extent Contractor engages contractors or Subcontractors under Contractor's supervision and for whom Contractor shall be responsible, to perform such duties and obligations. Contractor shall ensure that all persons performing the Services, including all contractors and Subcontractors hired by Contractor, are competent, trained, qualified and, to the extent required by law or by sound business practices in the industry, licensed or certified for the task that they are performing. Contractor's training programs and hiring qualifications shall be subject to prior review, comment and approval by ACTA (which approval shall not be unreasonably withheld or delayed). Any Subcontractor hired by Contractor shall be required to accept joint and several liability with Contractor for any Losses to ACTA, POLA, POLB, BNSF and/or UP to the extent such Losses result from any act or omission of such Subcontractor. Any subcontract shall be subject to the prior review and approval of ACTA.

11.1.1 Without limiting the generality of the foregoing, Contractor shall designate a full-time qualified maintenance contract manager who shall be ACTA's point of contact for the management, operational administration, financial administration and supervision of this Agreement, which manager shall be subject to ACTA's prior approval. If ACTA is dissatisfied with the performance of such manager, and following consultation between Contractor's appropriate corporate officer and ACTA the dissatisfaction is not resolved, Contractor shall remove such manager immediately and name an interim manager, acceptable to ACTA, within a reasonable period. Contractor shall not otherwise transfer or reassign such manager until a replacement approved in writing by ACTA has accepted the position and is available to begin work in that position. Such manager shall attend service meetings with ACTA staff and otherwise, as requested. Further, Contractor shall develop and include in the Approved Maintenance Plan an organizational structure for its workforce. This structure will define the reporting relationships, assignments and job classifications, and shall include a telephone and radio contact list for each person listed. Included will be provisions for after hours and emergency response to problems (which shall include contacts for Contractor's personnel that can be reached 24-hours per day for emergency purposes). ACTA shall have the right to require Contractor to remove and replace any of the workforce personnel assigned by Contractor or any Subcontractor following prior consultation with Contractor's manager and/or other appropriate corporate officers. Contractor shall maintain an updated list of all FRA Part 213.7(a) qualified personnel working under this Agreement.

11.2 Relationship of ACTA and Contractor. Notwithstanding anything to the contrary contained herein, this Agreement shall not be deemed or construed to make ACTA, Railroads, POLB or POLA, on one hand, and Contractor, on the other, partners or joint venturers, or to render

one liable for any of the debts or obligations of the other unless expressly so provided in this Agreement.

11.3 Relationship of ACTA and Subcontractors. Notwithstanding anything to the contrary contained herein, this Agreement shall not be deemed or construed to make ACTA, Railroads, POLB or POLA, on one hand, and any Subcontractor, on the other, partners or joint venturers, or to render one liable for any of the debts or obligations of the other unless expressly so provided in this Agreement.

11.4 No Employment Relationship Created. Contractor's and Subcontractors' relationship to ACTA, Railroads, POLB or POLA in the performance of the Services is that of an independent contractor, and all of the terms and conditions of this Agreement shall be interpreted in light of that relationship. Contractor and Subcontractors agree and understand that their employees are not the employees of ACTA, Railroads, POLB or POLA, and that this Agreement is not intended to, nor does it, create a joint employment relationship or an employer-employee relationship.

11.4.1 Except as may be otherwise stated in this Agreement, Contractor shall select and shall have full and complete control of and responsibility for all the agents, employees, and Subcontractors (if any) which are employed or used by the Contractor to provide Rail Corridor Services and/or Non-Rail Component Services pursuant to an Approved Maintenance Plan. None of said agents, employees, or Subcontractors shall be, or shall be deemed to be, the agent, employee or subcontractor of ACTA, Railroads, POLB or POLA, for any purpose whatsoever, and ACTA, Railroads, POLB or POLA, shall have no duty, liability or responsibility, of any kind, to or for the acts or omissions of Contractor or its agents, employees or Subcontractors, or any of them.

11.4.2 Contractor agrees that it is exclusively liable for the payment of taxes or contributions for unemployment insurance or old age pensions or annuities or social security payments which are measured by the wages, salaries or other remuneration paid by Contractor to its employees and/or Subcontractors.

11.4.3 Any contract or agreement that Contractor enters into with a Subcontractor must contain language similar to that of this Section 11.4 (and its subsections) designed to ensure that the employees, agents, and independent contractors of Subcontractors are not treated as or found to be employees of ACTA, Owner or the Railroads.

11.5 Contractor Supplied Equipment. Contractor agrees to furnish Services as provided herein using the Contractor's own means and methods. Accordingly, Contractor and each Subcontractor shall provide its own equipment to perform the Services at the agreed-upon standard rates and unit prices contained in the Approved Maintenance Plan. All of Contractor's and each Subcontractor's equipment operating on the Maintained Facilities shall be adequately powered and otherwise in such condition that the efficient use and operation of the Maintained Facilities will not be disrupted. Without limiting the generality of the foregoing, Contractor shall at all times after the Commencement Date obtain and maintain the equipment identified on Exhibit 2 attached hereto for use in connection with performance of the Services. Contractor acknowledges that the list of equipment attached hereto as Exhibit 2 is a minimum requirement based on Contractor's initial estimates. If additional or different equipment is necessary from time to time for Contractor

to perform the Services, Contractor promptly shall obtain and place in service such equipment at its sole cost and expense (except to the extent set forth in an Approved Maintenance Plan).

11.6 Labor Protective Conditions. As between ACTA, Owner and the Railroads, on one hand, and Contractor, on the other, Contractor shall be responsible, at no cost to ACTA, Owner or the Railroads, for all labor protective conditions applicable to its employees and any Subcontractor performing the Services or in connection herewith. ACTA, POLA, POLB, UP and BNSF do not accept, succeed to or assume, and this Agreement shall not be construed to impose or allow ACTA's, POLA's, POLB's, UP's or BNSF's acceptance, succession to or assumption of, any obligations of Contractor or any Subcontractor under any of its collective bargaining agreements with its employees or their representatives. Contractor shall use all applicable agreements in place with its employees or their representatives to obtain any and all available cost and other efficiencies in the work force that can be derived from such practices. ACTA shall not be required to reimburse Contractor or any Subcontractor for any cost increases related to work rule changes (in the Contract Year the changes become effective) unless the changes are the result of a change in law and are mandated by said law changes to be paid by ACTA. Contractor's and each Subcontractor's agreements with any bargaining unit shall include a no-strike clause or, in the alternative, a clause that requires the employees covered by such agreement to complete all of the dispute resolution procedures in that agreement and required by applicable law before engaging in any self-help actions. If employees of Contractor or any Subcontractor picket or unlawfully honor a picket line of another union, and such picketing (or unlawful honoring of another picket line) disrupts operations on the Rail Corridor, Contractor shall reimburse ACTA for any and all costs and expenses incurred by ACTA, Owner and Railroad resulting from such service disruptions (including lost fees and other payments which otherwise would have been received by ACTA under the Operating Agreement had operations on the Rail Corridor not been disrupted). ACTA will have no liability or obligation for any additional costs incurred by Contractor or any Subcontractor in performing the Services as a result of picketing activities.

11.7 Maintenance Yard. ACTA may (but shall not be obligated to) provide to Contractor during the term of this Agreement one storage yard located in the southerly portion of the Rail Corridor in the location shown on Page 4 of the Map attached hereto as Exhibit 1 (to the extent actually provided by ACTA, the "**Maintenance Yard**"); such Maintenance Yard shall be used and operated by Contractor solely for purposes relating to this Agreement and the Rail Corridor, and Contractor shall not use the Maintenance Yard for the purpose of providing services or storage with respect to other customers or properties or for the other business interests of Contractor or its affiliates. With respect to the Maintenance Yard, the parties acknowledge that (a) the area shown on the Map consists of significantly more land than the area which will be made available to Contractor for such Maintenance Yard, and (b) such Maintenance Yard may consist of approximately four acres of land, the specific boundaries of which will be agreed upon by ACTA and Contractor, and an office building, parking lot, and indoor and outdoor storage areas. If ACTA elects to make the Maintenance Yard available to Contractor, ACTA will do so solely as an accommodation to Contractor in connection with this Agreement, and ACTA at all times reserves the right to modify, decrease or change the boundaries of such space or to move the location of the Maintenance Yard at its sole discretion. ACTA may decide not to make the Maintenance Yard available to Contractor for any reason. None of ACTA, POLA, POLB, BNSF or UP make any representation or warranty of any kind regarding the condition of the Maintenance

Yard or the adequacy of the Maintenance Yard (or any property hereinafter designated as a Maintenance Yard) for Contractor's purposes, and Contractor shall accept the Maintenance Yard in its "AS-IS, WHERE IS" condition, with all faults. Contractor shall be solely responsible for (i) providing any yards and facilities that Contractor may need in addition to the Maintenance Yard in connection with performing the Services, (ii) all maintenance, repair and replacement of the Maintenance Yard and all improvements and facilities thereon, (iii) payment of all utility costs and other costs and expenses relating to the use, operation, maintenance, repair and replacement of the Maintenance Yard and all improvements and facilities thereon; provided that, ACTA and Contractor shall each share on an equal basis the cost of providing security for the Maintenance Yard and the cost for janitorial services in connection with the cleaning of the office building located at the Maintenance Yard; provided further, that none of ACTA, POLA or POLB intend or are required to provide any such security services or janitorial services (all costs and expenses in this clause (iii) shall be included in the budgets for an Approved Maintenance Plan pursuant to the procedures set forth in Section 5.2 and reimbursed by ACTA in connection therewith, except to the extent such costs or expenses relate to or arise from damage, destruction, acts or omissions caused by Contractor or its employees, agents or Subcontractors), (iv) keeping the Maintenance Yard and all improvements and facilities thereon free of all contamination by Hazardous Substances as described in Section 16.2, (v) compliance with all applicable laws, rules, regulations and ordinances relating to the use, operation, maintenance and repair of the Maintenance Yard and all improvements and facilities thereon, and (vi) returning the Maintenance Yard to ACTA at the expiration or earlier termination of this Agreement in the same condition as existed on the date of this Agreement, reasonable wear and tear excepted, which obligation shall include turning over to ACTA any improvements or facilities constructed by Contractor during the term of this Agreement, or any improvements to any existing improvements or facilities, at no additional charge or cost to ACTA (the obligation in this clause (vi) shall survive the expiration or earlier termination of this Agreement).

11.7.1 If ACTA elects to make the Maintenance Yard available to Contractor, ACTA will have the right to subsequently terminate Contractor's use of the Maintenance Yard by giving at least 120 days prior written notice of such termination to Contractor, which termination shall not limit Contractor's duties and obligations under this Agreement; provided, that concurrently with such termination, ACTA, POLA and/or POLB may provide Contractor with one or more replacement yards in the vicinity of the Rail Corridor which are functionally equivalent to the Maintenance Yard being taken out of service, which replacement yard(s) will be provided at no charge to Contractor and thereafter will be deemed to be a "Maintenance Yard" under this Agreement, and Contractor will be responsible for moving any equipment or materials to the new Maintenance Yard; provided that ACTA shall reimburse Contractor for all of Contractor's reasonable costs, including labor costs, associated with moving any equipment or materials to the new Maintenance Yard.

ARTICLE 12
PROHIBITION AGAINST LIENS;
PAYMENT OF TAXES AND ASSESSMENTS

12.1 Liens. Contractor or Subcontractor shall not cause, allow or permit the filing of any mortgage, deed of trust, judgment lien or any mechanic's, materialman's or other lien, charge or encumbrance against any or all or any portion of any property owned or controlled by ACTA, POLA, POLB, UP and/or BNSF or any improvements thereon provided ACTA first pays Contractor all amounts due for the performance of the work that is the subject of the lien or security interest. However, if such filing does occur, Contractor shall cause the same to be discharged of record within 30 days after the date of filing of the same (or an earlier period if a suit for foreclosure of such lien has been filed or if a mortgagee requires the removal of such lien earlier and notice of such requirement is delivered to Contractor) provided, that Contractor shall be entitled to contest the same as provided by law so long as Contractor exercises such rights in a manner which prevents foreclosure of any such lien, charge or encumbrance.

12.2 Taxes. Contractor shall promptly pay all taxes of any kind or nature, and any governmental or special district assessments, all bonded indebtedness incurred by Contractor, all license fees and other charges, if any, properly levied or assessed against or as a result of this Agreement or Contractor's performances of Services under this Agreement, subject to Contractor's right to contest the same as provided by law, which right shall be exercised by Contractor in a manner which prevents the foreclosure of any lien for such taxes. Should Contractor elect to contest the taxes and assessments payable by Contractor under this Section 12.2, Contractor shall indemnify, defend and hold harmless ACTA, POLA, POLB, UP and BNSF and their respective officers, directors, employees, commissioners, agents, successors and assigns, from any and all matters arising therefrom, including any penalties or late charges relating to such taxes and assessments and all costs and expenses (including reasonable attorneys' fees) arising out of such contest.

ARTICLE 13
REPORTS AND NOTICES

13.1 Delivery of Notices. Contractor promptly shall deliver to ACTA copies of all notices, correspondence and information it receives from any governmental agency, tenant, licensee, shipper, customer, easement holder or Railroad (a) regarding the condition or maintenance of all or any portion of the Maintained Facilities and any other property owned or controlled by ACTA, POLA, POLB, BNSF and/or UP, or (b) alleging violation of any law with respect to the Rail Corridor by Contractor, any Railroad, ACTA, POLA, or POLB, or (c) alleging violation of or default under any agreement to which ACTA, POLA and/or POLB is a party with respect to the Maintained Facilities. In addition, if Contractor becomes aware of any persistent and continuing unsafe condition on the Maintained Facilities, Contractor shall promptly notify ACTA, the Owner and the Railroads of such unsafe condition.

13.2 Statements. Within forty-five (45) days after the end of each calendar quarter, Contractor shall deliver to ACTA quarterly unaudited statements for the immediately preceding calendar quarter in a form acceptable to ACTA, showing all cost incurred with respect to both the

Rail Corridor and the Non-Rail Components, and separately allocated to each of the Rail Corridor and Non-Rail Components, and if requested by ACTA, showing the location of all such cost incurred, and such other information as ACTA may reasonably request. Within 90 days after the end of each Contract Year, Contractor shall deliver to ACTA an annual report of cost incurred with respect to both the Rail Corridor and the Non-Rail Components, in a form acceptable to ACTA. Such unaudited statements and annual reports shall characterize each itemized cost incurred as either a Rail Corridor cost incurred or a Non-Rail Component cost incurred or an allocated cost and shall detail the allocation methodology. ACTA shall have the right to audit such statements and reports in accordance with Section 13.3.

13.3 Audit Rights. At any time during the term of this Agreement and for a period of not less than three (3) calendar years after the termination of this Agreement, ACTA has the right to inspect and audit Contractor's statements, books and records with respect to Contractor's performance of Services under this Agreement. Contractor agrees to accept the results of ACTA's audit(s), including, but not limited to, when questioned or disputed costs are extrapolated or applied to the entire population or Contract Year, and to pay or reimburse ACTA for any amounts due under this Agreement pursuant to such audit results. ACTA shall have the right to audit rates billed to ACTA as compared to rates paid to the Contractor's employee and whether or not the correct rate was applied in such instance, and/or the correct number of hours were applied to such rate, and whether wages meet or exceed the minimum prevailing wage rate requirement. ACTA has the right to enter, or cause its agent to enter, Contractor's or Subcontractor's place of business (or such other facilities where such books or records are stored pursuant to Section 13.6) during normal business hours to perform such inspection and audit; provided, that ACTA shall give Contractor and Subcontractor reasonable prior notice of its desire to inspect such books and records at Contractor's or Subcontractor's place of business (or such other facilities where such books or records are stored). Contractor shall also cause similar audit provisions to be a part of any subcontract agreement into which Contractor shall enter into in connection with this Agreement.

13.4 Inspection Reports. Contractor shall perform and document all inspections of the Maintained Facilities required under applicable federal, state and local laws and shall submit to the appropriate governmental entities all reports required to be submitted under applicable federal, state and local laws and shall deliver copies of such reports to ACTA. In addition, Contractor shall prepare and submit to ACTA all other data and reports relating to the Services as needed to satisfy requirements for submission of information or reports to any federal, state or local governmental agencies.

13.5 Other Reports and Information. Contractor and Subcontractor shall make available to ACTA, the Owner and the Railroads any reports prepared by or on behalf of Contractor regarding the condition or status of the Maintained Facilities or any portion thereof, and shall prepare and deliver to ACTA any other reports and information relating to the Services as may be reasonably requested by ACTA such as a monthly Incident Report. Contractor and Subcontractor shall retain all such information during the term of this Agreement and for a period of not less than three (3) calendar years after the termination of this Agreement.

13.6 Records Retention; Review. Contractor and Subcontractor, as the case maybe, shall maintain at its office in Los Angeles County, California, full and complete records of all of its activities pursuant to this Agreement, including all permits, licenses, inspection reports, governmental or regulatory notices or approvals, maintenance logs, inspection reports and records and reports of any accidents or injuries on the Maintained Facilities. ACTA, the Owner or the Railroads may at any time during normal business hours and upon reasonable prior written notice review and/or copy (at the expense of the person reviewing and copying the records) any or all of such records and information, which review may be performed by the employees of ACTA, the Owner or the Railroads or by any agent thereof. Such records shall be maintained by Contractor and Subcontractor for a period of not less than three (3) calendar years after the termination of this Agreement.

13.7 Public Records Act. All records, documents, drawings, plans, specifications and other material relating to the Maintained Facilities and the conduct of ACTA's business, including materials submitted by Contractor in its proposal and during the course of performing the Services under this Agreement, shall become the exclusive property of ACTA, and may be deemed public records to the extent required under the California Public Records Act. Said materials may be subject to the provisions of the California Public Records Act. ACTA's use and disclosure of its records are governed by this Act. ACTA will not advise as to the nature or content of documents entitled to protection from disclosure under the California Public Records Act, including interpretations of the Act or the definitions of trade secret, confidential or proprietary. Should ACTA receive materials that are clearly and prominently labeled "trade secret," "work product," "attorney-client privilege," "confidential," "proprietary" or "privileged," ACTA will notify, in writing, Contractor of any request for the disclosure of such materials. Under no circumstances, however, will ACTA be liable or responsible for the disclosure of any labeled materials whether the disclosure is required by law or a court order or occurs through inadvertence, mistake or negligence on the part of ACTA or its officers, employees, agents and/or contractors. In the event of litigation concerning the disclosure of any material submitted by Contractor, ACTA's sole involvement will be as a stake holder, retaining the material until otherwise ordered by a court. Contractor, at its sole expense and risk, shall be responsible for prosecuting or defending any action concerning the materials, and shall defend, indemnify and hold ACTA harmless from all costs and expenses, including reasonable attorneys' fees, in connection with such action.

13.8 Confidentiality.

13.8.1 For and during the entire term of this Agreement, Contractor shall consider and keep any information, data, figures, records, findings and the like received or generated by Contractor in the performance of the Services as private and privileged records and shall not divulge such matters to any person, firm, corporation or other entity except as provided in this Agreement or otherwise on the direct written authorization of ACTA or as required by law or a court order. Further, upon expiration or termination of this Agreement for any reason, Contractor shall continue to treat as private and privileged any information, data, figures, records and the like, and will not release any such information to any person, firm, corporation or other entity, either by statement, deposition, or as a witness, except upon direct written authority of ACTA or as required by law or a court order.

13.8.2 Contractor shall ensure that all published information regarding this Agreement and the Services is factual and that it does not in any way imply that ACTA, POLA, POLB, BNSF, and/or UP endorses Contractor's firm, service, and/or product except to the extent that ACTA, POLA, POLB, BNSF and/or UP gives written permission for Contractor to publish such an endorsement.

13.8.3 Contractor shall refer all inquiries from the news media to ACTA, and shall comply with ACTA's directions regarding statements to the media relating to this Agreement or the Services. However, if any news inquiries address, directly or indirectly, any action or inaction of Contractor, Contractor may issue such statements as it deems necessary or appropriate.

13.9 Ownership of Reports and Documents. The originals of all letters, documents, reports and other products and data produced under or in connection with this Agreement shall be delivered to, and become the property of ACTA. Copies may be made for Contractor's records, but shall not be furnished to others without written authorization from ACTA.

ARTICLE 14 OPERATING AGREEMENT

14.1 Role of Owner and Railroads. Contractor and ACTA acknowledge that pursuant to the Operating Agreement, the Owner and Railroads are required to establish and modify Maintenance Standards with respect to the Rail Corridor and have the right to review and approve or disapprove proposed maintenance plans, budgets, and Capital Expenses with respect to the Rail Corridor, all on the terms and conditions specified in the Operating Agreement. As provided under the Operating Agreement, ACTA acts on behalf of, and at the direction of, the Owner and Railroads with respect to this Agreement and the subject matter hereof. Accordingly, Contractor shall be required to deal only with ACTA as the contracting party under this Agreement and with respect to the Services. Contractor shall be entitled to conclusively rely upon any notice, consent or approval given by ACTA to Contractor pursuant to this Agreement, notwithstanding any conflicting notice Contractor may receive from the Owner or the Railroads.

14.2 No Modification of Operating Agreement. Notwithstanding anything to the contrary in this Agreement, this Agreement is not intended to, and shall not be deemed or interpreted to, amend, modify, limit or supersede in any way the respective rights, duties, obligations and liabilities of ACTA, POLA, POLB, UP and/or BNSF under the Operating Agreement, and as between and among such parties, the Operating Agreement shall continue to govern and control the respective rights, duties, obligations and liabilities of such parties.

14.3 Authorized ACTA Representatives. For the purpose of any approval, consent, authorization or other action required by ACTA under this Agreement, unless ACTA provides written notice to the Contractor otherwise, ACTA's Chief Executive Officer or his or her designee shall be deemed to be an authorized representative of ACTA hereunder and shall be authorized to perform all such actions on behalf of ACTA under this Agreement.

ARTICLE 15
DEFAULT AND REMEDIES

15.1 Defaults.

15.1.1 Contractor Defaults. Any of the following events shall be deemed a default by Contractor hereunder:

(a) Failure by Contractor to pay any undisputed amounts or charges required to be paid by it under this Agreement within thirty (30) days after receipt of written notice by Contractor that the same was not paid when due;

(b) Failure to maintain insurance as required hereunder, which failure continues for five (5) business days after Contractor's receipt of written notice by ACTA;

(c) Failure to perform any other non-monetary obligation of Contractor or Subcontractor hereunder within thirty (30) days of receipt of written notice by ACTA; provided, that if Contractor or Subcontractor commences to cure such failure but such failure cannot be cured within such 30 day period despite diligent pursuit of such cure, Contractor shall be entitled an extension of the period of time necessary to cure such default if Contractor continues to diligently pursue such cure and shall not be deemed in default;

(d) Commencement of an insolvency, bankruptcy or other similar proceeding by or against Contractor which proceeding is not dismissed within 90 days after commencement thereof;

(e) The making of a general assignment for the benefit of creditors of Contractor; and

(f) Violation by Contractor or Subcontractor of any collective bargaining or other labor agreement to which Contractor or Subcontractor is a party, which violation gives rise to a legal work stoppage, strike or other form of labor slowdown that disrupts rail operations on the Rail Corridor.

15.2 Remedies. The remedies provided for herein shall be cumulative.

15.2.1 Damages. In the event of a default by the Contractor under this Agreement which is not cured within the applicable cure period, if any, provided for herein, ACTA shall have all remedies available at law or in equity against the Contractor except as provided in Section 15.2.2.

15.2.2 Waiver of Consequential Damages. Subject to the exclusions set forth below, neither ACTA nor Contractor shall make a claim, and each party hereby agrees to waive such claim, against the other for consequential damages arising out of or related to this Agreement, regardless of whether the basis for such claim is breach of contract or tort. The term consequential damages shall mean those special, indirect or incidental damages which flow from an action or

failure to act, and includes loss of use, income, and profit (“**Consequential Damages**”). This waiver shall not apply to any claim made under any of the following circumstances:

- (a) A claim for fraud, intentional misconduct or criminal acts;
- (b) A claim for indemnification under Article 16, including any third-party claim subject to indemnity where Consequential Damages are claimed; and
- (c) A claim for Consequential Damages to the extent it is covered by the insurance required under Article 17.

15.2.3 Right to Cure. In the event of a default by Contractor under this Agreement which is not cured within the applicable cure period provided for herein, ACTA shall have the right, but not the obligation, to cure the default hereunder. All sums expended by ACTA in exercising its rights under the preceding sentence, including reasonable attorneys’ fees, shall be repaid by Contractor upon demand therefor.

15.2.4 Termination for Default. In the event of a default under this Agreement by Contractor which is not cured within the applicable cure period provided for herein, ACTA will have the right to terminate this Agreement by delivery of written notice to Contractor, Owner and the Railroads at least fifteen (15) days prior to declaring Contractor terminated.

15.3 Termination for Convenience. At any time during the term of this Agreement, ACTA shall have the right to terminate this Agreement for convenience and without any liability therefor, by providing written notice to Contractor at least ninety (90) days prior to the termination date set forth in such notice. In such event, as between ACTA and Contractor, ACTA shall be responsible for obtaining any governmental approvals or exemptions that may be necessary in connection with any such termination of Service. In the event that Contractor is terminated pursuant to this Section 15.3, Contractor shall submit a proposed termination statement to ACTA (no later than ten (10) days’ following the termination date) which shall include (1) all amounts owed to Contractor or any Subcontractor for Services performed through the termination date; (2) termination payments, if any, contractually owed by Contractor to Subcontractors and/or vendors as a direct result of the termination of such Services; provided, however, that (i) ACTA previously authorized and directed Contractor to perform all such Services, and (ii) such termination payments, if any, are a reasonable approximation of the damages incurred by Subcontractors and/or vendors as a direct result of the termination of such Services; and (3) reasonable costs incurred by Contractor to comply with ACTA’s written directions in connection with the termination, including demobilization costs, if any. In no event shall ACTA be obligated to pay for lost profits or other consequential damages resulting from any such termination. ACTA shall pay such termination statement in accordance with and subject to the provisions of Section 5.6.

15.4 Transfer of Rights Upon Termination. In the event that ACTA elects to terminate this Agreement pursuant to Section 15.2.4 or Section 15.3, ACTA, in its sole discretion, shall have the right to require the transfer of all of Contractor’s rights hereunder (other than the right to receive payments on account of periods prior to the assignment), on terms and conditions acceptable to ACTA, to a replacement maintenance contractor (or contractors) designated by ACTA, and ACTA shall so notify the Contractor who such replacement maintenance contractors

shall be. Upon such transfer Contractor shall (a) assign all of its right, title and interest in and to this Agreement to such replacement maintenance contractor(s) upon the request of ACTA; provided, however, that such assignment shall provide that Contractor be fully released from all obligations (except for obligations of indemnity pertaining to Services performed prior to the termination) under this Agreement that arise after the date of such assignment; (b) immediately cease all activities on the Maintained Facilities; (c) turn over to ACTA all material and inventory then held by Contractor with respect to the Rail Corridor and previously paid for by ACTA (with the understanding and agreement that, at a minimum, Contractor shall be obligated to turn over to ACTA all material and inventory delivered to Contractor at the commencement of the term of this Agreement, or to otherwise account for the use of such material and inventory in connection with Contractor's performance of the Services); and (d) remove, within 30 days after the termination of this Agreement, all equipment owned by Contractor from the Maintained Facilities.

ARTICLE 16 INDEMNIFICATION AND LIABILITY

16.1 General Indemnity. To the maximum extent permitted by applicable law, Contractor shall indemnify, defend (with counsel reasonably acceptable to the Indemnified Entities (as hereinafter defined)) and save harmless ACTA, POLA, POLB, and each of UP, BNSF and PHL, and each of them, and their respective officers, directors, employees, commissioners, agents, successors and assigns (individually "**Indemnified Entity**" and collectively, the "**Indemnified Entities**", but excluding from such persons Contractor and the respective agents, contractors and Subcontractors of Contractor), from and against any Losses to the extent that they result from any act or omission of Contractor or its affiliates or subsidiaries, or their respective employees, agents, representatives, contractors, Subcontractors, invitees or licensees, during the term hereof, including Losses for (a) personal injury to or death of any person or damage to property, including the property of any other person or entity, which may result from the Services or equipment of Contractor or its affiliates or subsidiaries, or their respective employees, agents, representatives, contractors, Subcontractors or invitees, (b) a breach of the terms of this Agreement or of any law, ordinance or regulation, or a failure by Contractor to obtain or maintain in effect any license, permit, approval, franchise or other governmental approval required by law, or (c) the activities during the term hereof of Contractor or its affiliates or subsidiaries, or their respective employees, agents, representatives, contractors, Subcontractors, invitees or equipment, on or around the Maintained Facilities or elsewhere. Notwithstanding anything in this Agreement to the contrary, Contractor shall have no obligation to defend and indemnify the Indemnified Entities for their sole negligence. The indemnification provided under this Section 16.1 shall not be limited by the waiver of Consequential Damages set forth in Section 15.2.2. Nothing in this Article 16 shall relieve ACTA or Contractor of any liability for breach of this Agreement. Further, nothing in this Article 16 shall be construed to relieve any insurer of its obligation to pay claims consistent with the provisions of a valid insurance policy.

16.2 Environmental Provisions and Indemnity.

16.2.1 Contractor shall not release, nor shall its affiliates or subsidiaries, or its or their respective agents, employees, representatives, contractors or Subcontractors, invitees or licensees release, any Hazardous Substances in, on or under the Maintained Facilities or on any

other property and shall comply, at no cost to ACTA, Owner or the Railroads, with all Environmental Laws in connection with performance of its duties and obligations hereunder and its operations on the Maintained Facilities, and shall cause its affiliates and subsidiaries, and its and their respective agents, employees, representatives, contractors or Subcontractors, invitees or licensees, to comply with all Environmental Laws. Contractor shall not, however, be in breach of this provision if the release is of a de minimis quantity of the Hazardous Substance in question, provided, that Contractor removes within a reasonable time the Hazardous Substances and repairs any damage caused by the release or its removal that was released. To the maximum extent permitted by law, Contractor shall indemnify, defend (with counsel reasonably acceptable to the Indemnified Entities) and hold harmless the Indemnified Entities from and against any Environmental Losses arising out of a breach of any obligation under this Section 16.2.1 except to the extent such Environmental Losses result directly from the sole negligence of the Indemnified Entities.

16.2.2 Contractor shall promptly send copies to ACTA of any material notice, information or request for information it receives from any governmental authority or third party with respect to Hazardous Substances on, in or under the Maintained Facilities. For purposes of this Section 16.2.2, a notice shall be deemed material if it concerns an actual or alleged violation of any Environmental Law.

16.3 ACTA's Indemnity for Certain Environmental Contamination. Solely as between ACTA and Contractor, ACTA shall indemnify, defend and hold harmless Contractor and its officers, directors, shareholders, employees, agents, successors and assigns, from and against any and all Environmental Losses resulting from either (a) the presence of Hazardous Substances in, on or under the Maintained Facilities prior to the Commencement Date, or (b) the migration of Hazardous Substances onto or under the Maintained Facilities after the Commencement Date and before termination hereof (excluding matters covered by Contractor's indemnification in Section 16.2.1), except to the extent any such Environmental Losses result from the negligence or willful misconduct of Contractor or Contractor's affiliates or subsidiaries, or their respective agents, employees, contractors or Subcontractors, representatives or invitees. Nothing in this Section 16.3 shall be deemed to supersede, limit, alter or modify in any way any existing agreements between or among ACTA, POLA, POLB, UP and/or BNSF with respect to the matters described in this Section 16.3.

16.4 Demand Process; Notifications.

16.4.1 Demand. If any claim, action, proceeding, investigation or demand is brought or threatened against any Indemnified Entity entitled to indemnification hereunder (an "**Indemnitee**"), by reason of any matter requiring indemnification (an "**Indemnified Matter**"), Indemnitee shall give written notice thereof to the person required to make such indemnification (an "**Indemnitor**") which notice shall contain a reasonably detailed description of the event, occurrence or condition giving rise to the claim for indemnity and shall enclose a true copy of any and all documents served upon or received by Indemnitee.

16.4.2 Payment. If Indemnitee suffers or incurs any Losses arising from or in connection with any Indemnified Matter, Indemnitor shall pay Indemnitee the total of such Losses

suffered and incurred by Indemnitee within 90 days following demand therefor and delivery of an account of Losses suffered by Indemnitee and thereafter as such Losses are incurred and reported to Indemnitor by Indemnitee.

16.4.3 Defense. Indemnitor shall at its own cost, expense, and risk: (a) defend the Indemnified Entities in all suits, actions, or other legal or administrative proceedings that may be brought or instituted against an Indemnitee on account of any Indemnified Matter with counsel selected by Indemnitor and reasonably acceptable to each Indemnitee; (b) pay and/or satisfy any judgment or decree that may be recorded against an Indemnitee in any such suit, action, or other legal or administrative proceedings; and (c) reimburse each Indemnitee for all Losses incurred by each Indemnitee relating to or in connection with any such suit, action, or other legal or administrative proceedings.

16.4.4 Settlement. Notwithstanding anything in this Agreement to the contrary, Indemnitor shall not, without the prior written consent of every Indemnitee (which consent shall not be unreasonably withheld, conditioned or delayed), settle or compromise any action, suit, proceeding, or claim relating, directly or indirectly, to any Indemnified Matter where such settlement or compromise includes a payment in excess of Fifty Thousand Dollars (\$50,000) on behalf of an Indemnified Entity, or consent to the entry of any judgment therein against an Indemnified Entity in excess of Fifty Thousand Dollars (\$50,000). Nothing in this Section 1.9.4.5 prohibits or limits an Indemnitor's right to settle or compromise, or consent to entry of judgment in, any action, suit, proceeding or claim against said Indemnitor.

16.4.5 Joinder. Without limiting the rights of any Indemnitee pursuant to this Section 16.4, any Indemnified Entity shall have the right to join and participate in, as a party if it so elects, any suits, actions, or other legal or administrative proceedings that may be brought or instituted against an Indemnified Entity on account of any Indemnified Matter. In any such case, an Indemnified Party may, at its own cost and expense, employ its own legal counsel and consultants to prosecute, negotiate, or defend any claim, action, or cause of action, provided, that such an Indemnified Party shall not, without the prior written consent of the Indemnitor (which consent shall not be unreasonably withheld, conditioned or delayed), settle or compromise any action, suit, proceeding, or claim relating, directly or indirectly, to any Indemnified Matter or consent to the entry of any judgment therein in excess of Fifty Thousand Dollars (\$50,000).

16.5 Releases.

16.5.1 To the maximum extent permitted by applicable law, Contractor hereby expressly releases, remises and discharges forever each of the Indemnified Entities from any and all liabilities, losses, actions, penalties, demands, detriments, claims, damages, costs or judgments which may have been or in the future may be incurred or suffered by Contractor or its property caused or otherwise resulting from the condition or state of repair of, or any defects in, the Maintained Facilities, except (i) as provided in Section 16.3 (with respect to indemnity for Environmental Losses), and (ii) to the extent that such liabilities, losses, actions, penalties, demands, detriments, claims, damages, costs or judgments result directly from the sole negligence or willful misconduct of an employee, agent, contractor, representative or invitee of an Indemnified Entity after the date hereof.

16.5.2 Contractor, after having read and been advised by legal counsel regarding the provisions of California Civil Code Section 1542 and in any and all similar statutes, rules and regulations and any other statute of the United States, hereby agrees, represents and warrants that the matters released in this Section 16.5 are not limited to the matters which are known or disclosed. California Civil Code Section 1542 reads as follows:

A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING A RELEASE WHICH, IF KNOWN BY HIM OR HER MUST HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR.

16.5.3 Contractor hereby agrees, represents and warrants that it realizes and acknowledges that factual matters now unknown to it may have given or may hereafter give rise to causes of action, claims, demands, controversies, damages, costs, losses and expenses which are presently unknown, unanticipated and unsuspected, and further agrees, represents and warrants that the releases contained in this Section 16.5 have been negotiated and agreed upon in light of that realization and that it nevertheless hereby intends to release and discharge ACTA and the other Indemnified Entities from any such causes of action, claims, demands, controversies, damages, costs, losses and expenses.

Contractor: _____

16.6 Interpretation.

16.6.1 Each of the parties hereto hereby agrees that this Agreement is not intended to be, and none shall construe it as, a contract or agreement covered by the provisions of California Civil Code Section 2784.5 (which Section concerns certain hauling, trucking or cartage contracts or agreements).

16.6.2 Contractor hereby agrees that neither Contractor nor any Subcontractor is, and is not intended to be, the agent, servant or independent contractor (as such terms are used in California Civil Code Section 2782) of ACTA, POLA, POLB, BNSF and/or UP. In addition, Contractor agrees that neither it nor any of its agents or representatives shall claim or assert that the negligence or willful misconduct of Contractor, any Subcontractor, any Railroad or PHL is or should be imputed to ACTA, POLA and/or POLB under any agency or other legal theory, or that the negligence or willful misconduct of Contractor, Subcontractor, ACTA, POLA or POLB is or should be imputed to BNSF, UP and/or PHL under any agency or other legal theory.

16.6.3 Each of the parties hereby waives, to the extent permitted by applicable law, the provisions of California Civil Code Section 2782 (which Section places limitations on indemnifications in certain construction contracts).

ACTA: _____

Contractor: _____

16.7 References to POLA, POLB and ACTA. For purposes of the indemnification and liability provisions of Sections 16.1, 16.2, 16.4, 16.5, 16.6, and 16.8, "POLA" shall include the

City of Los Angeles, the Port of Los Angeles and its Board of Harbor Commissioners, "POLB" shall include the City of Long Beach, the Port of Long Beach and its Board of Harbor Commissioners, "ACTA" shall include the ACTA Board of Directors, and the indemnification in favor of each party to this Agreement shall include its respective officers, directors and employees.

16.8 Survival. The provisions of this Article 16 shall survive the expiration or earlier termination of this Agreement.

ARTICLE 17 INSURANCE

17.1 Required Insurance. Prior to commencement of any work under this Agreement, Contractor shall, at its sole cost and expense, purchase and maintain not less than the minimum insurance coverage and limits with the endorsements and deductibles indicated in this Agreement. Such insurance coverage shall be maintained with insurers having a current A.M. Best rating of not less than A:VII and as described in this Agreement.

17.1.1 Commercial general liability insurance using, or providing coverage at least as broad as, Insurance Services Office (ISO) endorsement form CG 00 01. Limits are subject to review, but in no event less than One Hundred Million Dollars (\$100,000,000) per occurrence and general aggregate. Exact structure and layering of the coverage shall be left to the discretion of Contractor, however, any excess or umbrella policies used to meet limits shall be at least as broad as the underlying coverages and shall otherwise "follow form." The following provisions shall apply:

- (a) Coverage shall provide defense costs payable in addition to policy limits.
- (b) Coverage shall contain no contractors' limitation endorsement limiting the scope of coverage for liability arising from pollution, explosion, collapse or underground property damage nor shall the policy or any applicable endorsements contain any exclusions or limitations of liability under the Federal Employers Liability Act.
- (c) Coverage shall include contractually assumed liability for indemnification of a railroad using ISO endorsement form CG 24 17, "Contractual Liability - Railroads" or the equivalent.

17.1.2 Contractor's Pollution Legal Liability Insurance policy (or equivalent) with coverage limits not less than Five Million Dollars (\$5,000,000) each claim in connection with the Services performed under this Agreement. All activities contemplated in this Agreement shall be specifically scheduled on the policy as "covered operations." Such policy shall cover, at a minimum, liability for bodily injury, damage to and loss of use of property, and clean-up costs arising from sudden, accidental and gradual pollution and remediation in connection with the Services under this Agreement. The following provisions shall apply:

- (a) The policy shall provide coverage for the hauling of waste from the project site to the final disposal location, including non-owned disposal sites.

(b) Coverage shall be included on behalf of the insured for covered claims arising out of the actions of independent contractors.

(c) If the insured is using Subcontractors, the policy must include work performed “by or on behalf” of the insured.

(d) The policy shall contain no language that would invalidate or remove the insurer’s duty to defend or indemnify for claims or suits expressly excluded from coverage. The policy shall specifically provide for a duty to defend on the part of the insurer.

(e) Coverage shall include pollution losses as a result of derailment arising or occurring as a result of Contractor’s and/or its Subcontractors’ failure to adequately maintain the Maintained Facilities or any other acts or omissions of Contractor or its Subcontractor(s).

17.1.3 Business automobile liability insurance providing a minimum limit of not less than Five Million Dollars (\$5,000,000) each accident, using, or providing coverage at least as broad as, ISO endorsement form CA 00 01. Liability coverage shall apply to all owned, non-owned and hired autos. In the event that the work being performed involves transporting Hazardous Substances, Contractor and/or its Subcontractors shall provide coverage with a limit of Five Million Dollars (\$5,000,000) per accident covering transportation of such materials by the addition to the Business Auto Coverage policy of ISO endorsement form CA 99 48, which amends the pollution exclusion to cover pollutants that are in or upon, being transported or towed by, being loaded onto, or being unloaded from a covered auto. The policy also shall include endorsement form MCS-90. Coverage shall also include contractually assumed liability for indemnification of a railroad using ISO endorsement form CA 20 70, “Contractual Liability - Railroads” or the equivalent.

17.1.4 Workers’ compensation insurance as required by statute and employer’s liability with limits of at least One Million Dollars (\$1,000,000) policy limit Bodily Injury by disease, One Million Dollars (\$1,000,000) each accident/Bodily Injury and One Million Dollars (\$1,000,000) each employee Bodily Injury by disease. The policy shall include an “alternate employer” endorsement. The indemnification and hold harmless obligations of Contractor under this Agreement shall not be limited in any way by any limitation on the amount or type of damage, compensation or benefit payable by or for Contractor or any Subcontractor under Worker’s Compensation Acts, Disability Benefits Acts or other employee benefits acts. If and to the extent Contractor or Subcontractor is subject to the Federal Employers Liability Act, Contractor shall provide coverage through a stand-alone policy or by an endorsement to Contractor’s workers compensation policy using National Council on Compensation Insurance endorsement number WC 00 01 04 or the equivalent. Limits shall be no less than Five Million Dollars (\$5,000,000) per accident or disease or coverage may be scheduled under any umbrella or excess liability policy used to satisfy the limits requirements in Section 17.1.1 above.

17.2 **Additional Insureds.** ACTA, POLA, POLB, BNSF and UP, and their commissions or boards, officers, employees and agents, shall be added to Contractor’s commercial general liability and pollution liability policies as additional insureds in respect to liability arising out of Contractor’s or Subcontractor’s work under this Agreement. For the commercial general liability insurance policy, the required form is Insurance Services Office (ISO) endorsement form

CG 20 10 and form CG 20 37 or their respective equivalent with an edition date prior to 2004 or form otherwise acceptable to ACTA.

17.3 Insurance to be Primary. Each insurance policy provided by Contractor in compliance with these requirements shall contain wording or be endorsed to contain wording making it primary insurance as respects to, and not requiring contribution from, any other insurance the Indemnified Entities or additional insureds may possess, including any self-insurance or self-insured retention they may have. Any other insurance the Indemnified Entities or additional insureds may possess shall be considered excess insurance only and shall not be called upon to contribute with Contractor's insurance.

17.4 Separation of Insureds. Coverage under all liability policies shall apply separately to each insured against whom claim is made or suit is brought except with respect to the limits of liability. There shall be no cross liability exclusion precluding coverage for claims or suits by one insured against another. Any failure by Contractor to comply with reporting or other provisions of the policies of insurance required hereunder, including breaches of warranties, shall not affect coverage to the Indemnified Entities or additional insureds.

17.5 Cancellation or Termination of Insurance. Policies shall be endorsed to reflect that no cancellation or material modification of the coverage provided shall be effective until written notice has been given to ACTA at least thirty (30) days prior to the effective date of such modification or cancellation. In the event of non-renewal, written notice shall be given at least thirty (30) days prior to the effective date of non-renewal.

17.6 Verification and Maintenance of Coverage. Proof of compliance consisting of ISO endorsement form CG 20 10 and form CG 20 37 and any other endorsements as may be required by this Agreement and ACORD form 25 certificate of insurance (or equivalent) evidencing all required coverage shall be delivered to ACTA at or prior to execution of this Agreement. Upon ACTA's request, Contractor shall submit to ACTA copies of the actual insurance policies or renewals or replacements.

17.7 Failure to Maintain Insurance. A failure by Contractor to maintain the insurance required by this Article 17 shall be a default under this Agreement except as provided in Section 15.1.1, but shall not relieve Contractor of any of its liabilities or obligations under this Agreement. Furthermore, should Contractor fail to maintain the insurance required by this Article 17, in addition to any of ACTA's other remedies under this Agreement, at law or in equity, ACTA, at its sole option, may purchase any or all of the insurance required by this Article 17 and Contractor, immediately upon demand therefor, shall reimburse ACTA for the full cost of such insurance.

17.8 Changes to Coverage Requirements. ACTA reserves the right at any time during the term of this Agreement to change the amounts and types of insurance required by giving the Contractor sixty (60) days advance written notice of such change. If such change results in additional cost to the Contractor, ACTA will negotiate additional compensation proportional to the increased benefit to ACTA. Any type of insurance or any increase of limits of liability not described in this Agreement which Contractor requires for its own protection or on account of statute shall be its own responsibility and at its own expense.

17.9 Requirements not Limiting. Requirements of specific insurance coverage features described in this Article 17 shall not be construed to be a limitation of the liability on the part of Contractor or any of its Subcontractors, nor to relieve any of them of any liability or responsibility under this Agreement, as a matter of law or otherwise. Such requirements are not intended by any party to be limited to providing coverage for the vicarious liability of ACTA or of the Owner or the Railroads or to their supervisory role, if any. All insurance coverage provided pursuant to this Agreement in any way relating to ACTA, the Owners or the Railroads is intended to apply to the full extent of the policies involved.

17.10 Waiver of Right of Recovery. No liability insurance coverage provided pursuant to this Agreement shall prohibit Contractor, or Contractor's employees or agents, from waiving the right of recovery prior to a loss. Contractor hereby waives any right of recovery against the Indemnitees and agrees to require any Subcontractor to do so as well, and Contractor also shall obtain from its insurers a waiver of any right of recovery against the Indemnitees.

17.11 Agreement Deemed To Commence. For purposes of applying insurance coverage only, this Agreement will be deemed to commence when it is executed by both parties and any activity commences in furtherance of performance under this Agreement.

17.12 No Waiver by ACTA. Contractor acknowledges and agrees that any actual or alleged failure on the part of ACTA, the Owner or the Railroads to inform Contractor of non-compliance with any insurance requirement in no way imposes any additional obligations on ACTA, the Owner or the Railroads nor does it waive any rights hereunder in this or any other regard.

17.13 Priority of Interpretation. The insurance requirements in this Article 17 supersede all other articles and provisions of this Agreement to the extent that any other section or provision conflicts with or impairs the provisions of this Article 17. The insurance requirements set forth in this Article 17 are intended to be separate and distinct from any other provision in this Agreement and are intended to be interpreted as such.

17.14 Undisclosed Coverage Restrictions. None of the coverages required herein will be in compliance with these requirements if they include any coverage-limiting endorsement of any kind that has not been first submitted to and approved in writing by ACTA.

17.15 Self-Insurance Requires Approval; Retentions. Self-insurance will not be considered to comply with these requirements. Any self-insurance retention greater than Fifty Thousand Dollars (\$50,000) (or, with respect to the Pollution Legal Liability Insurance Policy described in Section 17.1.2, One Hundred Thousand Dollars (\$100,000)) shall be declared to and approved in writing by ACTA in accordance with the terms of the Operating Agreement.

17.16 Notice of Claim. Contractor agrees to provide immediate written notice to ACTA of any claim or loss against Contractor arising out of the work performed under this Agreement. ACTA assumes no obligation or liability by such notice, but has the right (but not the duty) to monitor the handling of any such claim or claims if they are likely to involve ACTA, the Owner or the Railroads or any of the Indemnified Entities.

17.17 Insurance for Subcontractors. Contractor agrees to require all Subcontractors or other parties hired under this Agreement to provide the same types of insurance as required of Contractor unless otherwise agreed to by ACTA, except that the coverage limits with respect to the liability insurance policies described in Section 17.1 shall be Five Million Dollars (\$5,000,000). The Subcontractor's general liability insurance shall add as additional insureds all parties identified in Section 17.2 using ISO endorsement form CG 20 10 and form CG 20 37. Additional insured status shall include coverage for completed operations. Contractor agrees to obtain certificates evidencing such coverage and make reasonable efforts to ensure that such coverage is provided as required hereby.

17.18 Supply Copies of Insurance Policies. Contractor shall provide to ACTA a copy of the insurance policies issued pursuant to this Article 17. Contractor shall provide to ACTA a copy of the insurance policies issued pursuant to Section 17.17 in connection with the Services performed by all Subcontractors or other parties hired under this Agreement. Contractor agrees to require all Subcontractors or other parties hired under this Agreement to comply with the requirements of this Section 17.18.

17.19 Payment and Performance Bonds. Prior to commencing any work under the Agreement, Contractor shall apply for and furnish ACTA separate payment and performance bonds. The performance bond shall be in the amount of 6 million dollars (\$6,000,000) and the payment bond shall be in the amount of 1.5 million dollars (\$1,500,000) covering 100% faithful performance of (at the time services are provided and one year after completion, and during any warranty or guarantee period) and payment of all obligations arising under this Agreement and/or guaranteeing the payment in full of all claims for labor performed and material supplied for the work. All bonds shall be provided by a California admitted surety insurer with an AM Best's Guide rating of at least A-:VIII and shall be executed on ACTA issued forms. Samples of the bonds are set forth in Exhibits 6.

ARTICLE 18 CASUALTY

18.1 No Requirement to Repair. None of ACTA, Owner or Railroads shall have any obligation to repair or replace damage to the Maintained Facilities caused by a Force Majeure Event unless insurance proceeds are available to make such repairs or replacement. In furtherance of the foregoing, ACTA shall be entitled immediately and unilaterally to remove from service any portion of the Maintained Facilities, without liability to Contractor (other than for amounts due for Services performed prior to the Force Majeure Event), which are damaged or destroyed as a result of a Force Majeure Event. In such event, solely as between ACTA and Contractor, ACTA shall be responsible for (and shall pay all costs associated with) obtaining any governmental approvals or exemptions that may be necessary in connection with any such removal from service. Nothing in this Section 18.1 shall limit ACTA's right to remove from service any Maintained Facilities damaged by a Force Majeure Event under Section 18.2, regardless of the availability of insurance proceeds to make necessary repairs or replacements. In no event shall ACTA, Owner, the Railroads or Contractor have any liability to each other for injury to persons or damage to any property resulting from a Force Majeure Event.

18.2 Termination for Force Majeure. If ACTA determines, in its sole discretion, that damage caused by a Force Majeure Event to all or any material portion of the Maintained Facilities renders continuation of Contractor's Services under this Agreement impracticable, and if ACTA determines not to repair or restore the affected portion of the Maintained Facilities, ACTA shall be entitled, unilaterally, to terminate this Agreement with respect to all of the Maintained Facilities by written notice to Contractor, provided, that such notice must be given within one-hundred and twenty (120) days after the occurrence of the Force Majeure Event. Contractor shall not be held in breach of its obligations under this Agreement to the extent such a breach arises solely as a direct result of ACTA's termination as a result of a Force Majeure Event. In such event, as between ACTA and Contractor, ACTA shall be responsible for obtaining any governmental approvals or exemptions that may be necessary in connection with any such removal from service. This Agreement shall be deemed terminated on the later of (a) the date on which such notice is delivered or (b) the date on which the regulatory approvals or exemptions necessary to terminate this Agreement have been obtained, provided, that Contractor shall have ninety (90) days after the effective date of termination to wind up its affairs and to remove its property from the Maintained Facilities. In the event that Contractor is terminated pursuant to this Section 18.2, Contractor shall submit a proposed termination statement to ACTA (no later than ten (10) days following notice to Contractor) which shall include (1) all amounts owed to Contractor or any Subcontractor for Services performed through the termination date; (2) termination payments, if any, contractually owed by Contractor to Subcontractors and/or vendors as a direct result of the termination of such Services; provided, however, that (i) ACTA previously authorized and directed Contractor to perform such Services, and (ii) such termination payments, if any, are a reasonable approximation of the damages incurred by Subcontractors and/or vendors as a direct result of the termination of such Services; and (3) reasonable costs incurred by Contractor to comply with ACTA's written directions in connection with the termination, including demobilization costs, if any. In no event shall ACTA be obligated to pay for lost profits or other consequential damages resulting from any such termination. ACTA shall pay such termination statement in accordance with and subject to the provisions of Section 5.6.

ARTICLE 19 REPRESENTATIONS AND WARRANTIES

19.1 Representations and Warranties of ACTA. ACTA represents and warrants to Contractor that it is fully authorized to enter into this Agreement and that this Agreement is binding and enforceable against it and its respective successors and assigns, in accordance with the terms of this Agreement.

19.2 Representations and Warranties of Contractor. Contractor represents and warrants to ACTA that it is fully authorized to enter into this Agreement and that this Agreement is binding and enforceable against it and its respective successors and assigns, in accordance with the terms of this Agreement.

**ARTICLE 20
DISPUTE RESOLUTION**

20.1 Written Notice and Good Faith Efforts. In the event of a claim or dispute arising out of this Agreement, the disputing parties, which may include POLA, POLB, BNSF and UP, as well as ACTA and Contractor, shall notify in writing the other party(ies) of the dispute and thereafter the parties shall make good faith efforts to resolve the dispute through negotiation. If the relevant parties so agree, they may involve a disinterested person or persons experienced in railroad operations or financial matters (such as an accountant), if appropriate, to render his or her objective advice and opinion, which advice and opinion shall be advisory only and not binding unless the relevant parties agree in writing to be bound by his or her judgment in a particular instance.

20.2 Superior Court Filing. If for any reason the dispute is not resolved within thirty (30) days after notice of the dispute as provided above, a party may file an action and pursue available legal remedies in the Superior Court for the State of California, County of Los Angeles.

20.3 Public Contract Code. Notwithstanding the foregoing, if any claim or dispute involves a Claim as defined in Public Contract Code Section 9204, then such Claim shall be resolved in accordance with the provisions of Public Contract Code Section 9204, as may be amended from time to time.

**ARTICLE 21
NOTICES**

21.1 Written Notification. All notices and other communications under this Agreement shall be in writing and shall be given and received upon on of the following

(a) upon receipt by the sending party of a written confirmation of receipt by the receiving party when the notice is sent by e-mail

(b) on receipt, if mailed to the party to whom notice is to be given by overnight courier or first class mail, registered or certified, return receipt requested, postage prepaid and properly addressed as follows:

Contractor: [_____]

ACTA: Alameda Corridor Transportation Authority
3760 Kilroy Airport Way, Suite 200
Long Beach, CA 90806
Attention: Chief Executive Officer
Email: mleue@acta.org

21.2 Address or Addressee Changes. Any party hereto may change its address or addressee to which notices are to be given by providing written notice of the change to the other parties.

ARTICLE 22 MISCELLANEOUS

22.1 Severability. Each provision of this Agreement shall be interpreted so as to be effective and valid under applicable law to the fullest extent possible. However, if any provision contained herein shall for any reason be held invalid, illegal or unenforceable in any respect, then, in order to effect the purposes of this Agreement it shall be construed as if such provision had never been contained herein.

22.2 Assignment; Agreement Binding on Successors and Assigns.

22.2.1 Assignment.

(a) Consistent with and subject to the terms and conditions of the Operating Agreement, (i) ACTA may assign all or a portion of this Agreement, and its rights and obligations hereunder, to Owner or to another entity which acquires all of the Rail Corridor or which is designated by Owner to operate the Rail Corridor, and (ii) Owner and each of the Railroads may sell, transfer or encumber all or any portion of the Rail Corridor or their rights or interest (if any) therein.

(b) Contractor may not assign or delegate its duties and obligations under this Agreement without the prior written consent of and notice to ACTA, which consent may be given or withheld by ACTA. Notwithstanding the preceding sentence, Contractor may employ Subcontractors, subject to the prior approval of ACTA, to perform specific duties of Contractor hereunder under a subcontract entered into in the normal course solely for performance of some, but not all, of Contractor's duties hereunder. Any such contract shall also include a provision that Subcontractor agrees to perform its work in accordance with the standards and obligations established by this Agreement. With respect to any Services provided by a Subcontractor, Contractor remains primarily liable to ACTA for fulfillment of all obligations stated in this Agreement (including the obligations stated in Article 16).

22.2.2 Binding Agreement. Subject to the restrictions on assignment set forth in this Agreement, this Agreement shall be binding upon and shall inure to the benefit of Contractor and ACTA, their respective successors and assigns.

22.3 Amendments. No modifications, amendments or changes herein or hereof shall be binding upon any party unless set forth in a document, duly executed and delivered by all parties. No provision of this Agreement shall be waived except by an instrument in writing signed by the party to be charged with such waiver.

22.4 Recordation and Termination. Without the prior written consent of all parties hereto, no party may record this Agreement. Upon termination of the rights granted to Contractor hereunder, Contractor shall execute, acknowledge and deliver to ACTA a copy of any appropriate instrument or instruments evidencing the termination.

22.5 Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, and all of which together shall constitute one and the same instrument. The signature page of any counterpart may be detached therefrom without impairing the legal effect of the signature(s) thereon provided such signature page is attached to any other counterpart identical thereto except having additional signature pages executed by other parties to this Agreement attached thereto.

22.6 Third Party Beneficiaries. It is the intent of each party to this Agreement that each provision of this Agreement inure to the benefit of the parties hereto as well as to the benefit of POLA, POLB, BNSF and UP and the permitted successors and assignees of each of them, and shall not inure to the benefit of any other person or entity (including any governmental or quasi-governmental agency or authority). Contractor acknowledges that POLA, POLB, BNSF and UP are express third party beneficiaries of this Agreement and that POLA, POLB, BNSF and UP, together or individually, may sue Contractor directly or demand dispute resolution for any breach of this Agreement.

22.7 Effect of Agreement. All negotiations relative to the matters contemplated by this Agreement (including negotiations of matters described in the Request for Proposals issued by ACTA) are merged herein and there are no other understandings or agreements relating to the matters and things herein set forth other than those incorporated in this Agreement or agreements expressly referenced in this Agreement or the documents executed in connection herewith.

22.8 Waiver. The failure of any party at any time or times to require performance of any provision hereof shall in no manner affect the right at a later time to enforce the same. No waiver by any party of any condition, or of any breach of any term, covenant, representation, or warranty contained herein, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such condition or breach or waiver of any other condition or of any breach of any other term, covenant, representation or warranty.

22.9 Time of Essence. With respect to the performance by Contractor under this Agreement, time is of the essence.

22.10 Governing Law; Forum.

22.10.1 THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF CALIFORNIA, WITHOUT REFERENCE TO THE CONFLICTS-OF-LAW RULES AND PRINCIPLES OF SUCH STATE.

22.10.2 THE PARTIES HERETO AGREE THAT ALL ACTIONS, SUITS, PROCEEDINGS, CLAIMS RELATED TO THIS AGREEMENT AND THE TRANSACTIONS CONTEMPLATED HEREBY (INCLUDING ANY APPEALS OF OR CHALLENGES TO ANY

DISPUTE RESOLUTION PROCEEDING UNDER ARTICLE 20) MUST BE BROUGHT, FILED, PROSECUTED AND DEFENDED IN THE SUPERIOR COURT FOR THE STATE OF CALIFORNIA, COUNTY OF LOS ANGELES.

22.11 Incorporation of Exhibits. The exhibits attached hereto are incorporated herein by reference. In the event of any inconsistency between the exhibits and the body of this Agreement, the body of this Agreement shall govern.

22.12 Incorporation of Request for Proposals. Section 2.0 (Rail Corridor Description) and Section 3.0 (Scope of Services) and each Appendix to the Request for Proposals (except Appendices A, O and Q) are incorporated herein by reference. The Request for Proposals is attached hereto as Exhibit 7. Contractor acknowledges and agrees to perform the Services as described therein, provided that in the event of any inconsistency between any provision in the Request for Proposals and this Agreement, the provision most favorable to ACTA shall control.

22.13 Construction. The language in all parts of this Agreement shall be in all cases construed simply according to its fair meaning and not strictly for or against any of the parties hereto. Section headings of this Agreement are solely for convenience of reference and shall not govern the interpretation of any of the provisions of this Agreement. References to “Sections” or “Articles” are to Sections or Articles of this Agreement and references to “Exhibits” are to Exhibits attached hereto, unless otherwise specifically provided.

22.14 No Relocation Assistance. Contractor understands and agrees that nothing contained in this Agreement shall create any right in Contractor for relocation assistance or payment upon expiration or termination of this Agreement except as otherwise stated in this Agreement. Contractor acknowledges and agrees that it shall not be entitled to relocation assistance or payment pursuant to the provisions of Title 1, Division 7, Chapter 16, of the Government Code of the State of California (Sections 7260 *et seq.*) or any similar statute with respect to any relocation of its business or activities upon the expiration or termination of this Agreement except as otherwise stated in this Agreement. In consideration of the rights given Contractor under this Agreement, Contractor expressly waives any relocation assistance which such statutes or any future statutes may allow.

22.15 Non-discrimination. Contractor shall not discriminate in its employment practices against any employee or applicant for employment because of the employee’s or applicant’s race, color, religion, national origin, ancestry, sex, age, disability, sexual orientation, AIDS, HIV status, physical handicap or veteran status. All assignments and transfers of interest permitted pursuant to this Agreement, and all contracts or subcontracts entered into by Contractor with respect to the Maintained Facilities, shall contain this provision.

22.16 Public Works Contract. For the purpose of this Agreement, the Rail Corridor and the Non-Rail Components shall be deemed “public works” pursuant to California Labor Code Section 1720 *et seq.* and, as such, the parties shall comply with all applicable provisions of the California Labor Code and Title 8 of the California Code of Regulations Section 16000 *et seq.*

22.17 Small Business Enterprise (SBE) Participation. For the purpose of this Agreement, Contractor shall meet the level of participation for certified SBE subcontractors and

vendors/suppliers contained in Exhibit 6, and comply with the other requirements therein, such as utilization, substitution, amendments to the scope of Services, compliance submissions, and monitoring.

22.18 Conflict of Interest. It is hereby understood and agreed that the parties to this Agreement have read and are aware of the provisions of Section 1090 *et seq.* and Section 87100 *et seq.* of the California Government Code relating to conflict of interest of public officers and employees. All parties hereto agree that they are unaware of any financial or economic interest of any public officer or employee of the City of Los Angeles or the City of Long Beach relating to this Agreement. Notwithstanding any other provision of this Agreement, it is further understood and agreed that if such a financial or economic interest does exist at the inception of this Agreement, ACTA may immediately terminate this Agreement without payment of any termination fee as provided herein or any other liability therefor by giving written notice thereof. Any termination fee which would otherwise be payable hereunder shall be paid by the party who failed to disclose the financial or economic interest.

22.19 Further Assurances. Each party shall execute all such instruments and documents and shall take in good faith all such actions as are reasonably necessary to carry out the provisions of this Agreement.

22.20 Transfer to Contractor of Certain Regulatory Obligations. To the maximum extent legally possible, ACTA intends to transfer to Contractor any maintenance, inspection and repair obligations that ACTA may have under applicable federal or state regulations with respect to the Maintained Facilities, including the requirements contained in 49 CFR § 213.5. Contractor accepts such transfer and shall fully cooperate with ACTA in the preparation and filing of any necessary applications with respect thereto. Upon any termination of this Agreement, Contractor shall execute such documents and instruments as may be necessary to transfer such responsibilities to another party designated by ACTA.

22.21 Taxpayer Identification Number. Contractor declares that it has an authorized taxpayer identification number which shall be provided to ACTA prior to payment under this Agreement. No payments will be made to Contractor under this Agreement without a valid taxpayer identification number.

[SIGNATURES ON NEXT PAGE]

IN WITNESS WHEREOF, the parties to this Agreement have duly executed it as of the day and year first above written.

“CONTRACTOR”

[_____]

By: _____
Name: _____
Its: _____

“ACTA”

**ALAMEDA CORRIDOR
TRANSPORTATION
AUTHORITY**, a Joint Powers Authority

Approved as to form this _____ day of
_____, 2025:

By: _____
Name: Michael Leue
Its: Chief Executive Officer

By: _____
Name: _____
Its: Co-General Counsel

EXHIBIT 1

**MAP OF RAIL CORRIDOR
AND
MAINTAINED FACILITIES**

(Exhibit to be added later)

Agreement No. C0__
Contractor Name

EXHIBIT 2

**SCHEDULE OF EQUIPMENT TO BE OBTAINED
AND
MAINTAINED BY CONTRACTOR**

(Exhibit to be added later)

Agreement No. C0__
Contractor Name

EXHIBIT 3

**APPROVED MAINTENANCE PLAN
FOR FIRST CONTRACT YEAR
(COMMENCEMENT DATE THROUGH
DECEMBER 31, 2025)**

(Exhibit to be added later)

EXHIBIT 4

**AMENDED AND RESTATED
ALAMEDA CORRIDOR
CAPITAL EXPENSE GUIDELINES
Effective January 1, 2018**

Agreement No. C0__
Contractor Name

Exhibit 4

**AMENDED AND RESTATED
ALAMEDA CORRIDOR
CAPITAL EXPENSE GUIDELINES
Effective January 1, 2018**

WHEREAS, Pursuant to Section 2.5 (b) of the AMENDED AND RESTATED ALAMEDA CORRIDOR USE AND OPERATING AGREEMENT, dated as of December 15, 2016 (the "Use and Operating Agreement"), by and among (i) BNSF RAILWAY COMPANY (formerly known as The Burlington Northern and Santa Fe Railway Company), a Delaware corporation (successor by merger to The Atchison, Topeka and Santa Fe Railway Company) ("BNSF"), (ii) UNION PACIFIC RAILROAD COMPANY, a Delaware corporation (which also is successor by merger to Southern Pacific Transportation Company) ("UP") (BNSF and UPRR are sometimes collectively referenced as "Railroads"), (iii) THE CITY OF LOS ANGELES, a municipal corporation, acting by and through its BOARD OF HARBOR COMMISSIONERS ("POLA"), (iv) THE CITY OF LONG BEACH, a municipal corporation, acting by and through its BOARD OF HARBOR COMMISSIONERS ("POLB") (POLA and POLB are sometimes collectively referenced as "Owner"), and (v) ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY, a joint powers authority created under the laws of the State of California ("ACTA"), rules and regulations previously established pursuant to the original Use and Operating Agreement dated as of October 12, 1998 "may be updated or modified from time to time through Mutual Agreement of the Owner and Railroads". Such previously established rules include guidelines for determining whether the replacement of components of the Rail Corridor will be treated as a capital item, and paid as a Capital Expense, or a maintenance item, and paid as an M&O Charge.

WHEREAS, the Owner and Railroads previously adopted Revised Amended and Restated Capital Expense Guidelines dated June 30 2012 (the "Prior Guidelines") pursuant to which criteria were established for determining whether the replacement of components are to be treated as Capital Expenses. The Prior Guidelines expire on December 31, 2017.

WHEREAS, pursuant to Section 7 of the Prior Guidelines such Guidelines shall be reviewed, and if appropriate, modified, to take into account (i) any departure from the anticipated performance and operations of the Rail Corridor and/or (ii) changes in accounting standards and policies related to the capitalization of component replacements.

WHEREAS, accordingly, the Owner and Railroads have reviewed the Prior Guidelines and desire to amend the Prior Guidelines as set forth in these Amended and Restated Alameda Corridor Capital Expenses Guidelines. Terms not defined herein shall have the meanings

assigned to such terms in the Use and Operating Agreement.

1. **Authorization for Amended and Restated Guidelines.** Article 1 of the Use and Operating Agreement defines “Capital Expenses” as the costs and expenses incurred in making any capital improvements or betterments, or replacements to the extent that costs and expenses of replacements are determined to be Capital Expenses to the Rail Corridor (other than the Non-Rail Components).
2. **Capital Expenses Defined.** Capital Expenses shall include the costs and expenses incurred in making any capital improvements or betterments, or the replacement of the components of the Rail Corridor listed on Exhibit A hereto. Capital Expenses shall not include the following components:
 - A. Replacement of any component that is the result of warranty work paid for or reimbursed by parties other than ACTA, POLA, POLB, UP and/or BNSF;
 - B. Except where required in connection with the installation of a capital improvement or betterment or the replacement of a component listed on Exhibit A hereto, replacement of any components or conducting any of the activities listed on Exhibit B hereto;
 - C. Replacement of any Non-Rail Component (the treatment and funding of maintenance and capital improvements and replacements of Non-Rail Components shall be determined in accordance with the relevant provisions of the Use and Operating Agreement, including but not limited to Section 7.4);
 - D. Replacement of any component that is the result of a casualty event (including any washout) for which ACTA, POLA, POLB, UP and/or BNSF (or their respective agents) is responsible; or
 - E. Replacement of any component covered under property and/or casualty insurance as described in Section 11.2 of the Use and Operating Agreement.
3. **Treatment of Related Costs.** For purposes of determining the total cost or expense of the replacement of a component under these Revised Amended and Restated Guidelines, related costs will include all material and labor charges, handling charges, shipping costs, taxes, customary overhead and other charges necessary to place such component in service. Business interruption costs, lost opportunity costs and similar costs or charges shall not be included.
4. **Treatment of Salvage Credits.** For purposes of determining the total cost or expense of the replacement of a component under these Revised Amended and Restated Guidelines, any income and/or credits generated by, or otherwise related to, the salvage of such component shall be deducted from the cost or expense of such component.
5. **Components Not Addressed Under the Amended and Restated Guidelines.** In the event a component of the Rail Corridor is not otherwise addressed under these Amended and Restated Guidelines, Mutual Agreement of the Owner and Railroads may be sought by

ACTA to establish additional guidelines or procedures for the treatment of such component (either on a case-by-case basis or by amendment to these Guidelines).

6. **Annual Adjustment of Amounts.** All dollar amounts listed on Exhibit A hereto shall be adjusted annually on January 1 of each year, commencing with January 1, 2025, by gross changes in the Index Rate as compared to that Index Rate in effect on January 1, 2024 (rounded to the nearest \$500). As used herein, the Index Rate shall mean the Producer Price Index – Industrial Commodities Less Fuels Series ID WPV03T15M03 (Base Data 198200), published by the United States Department of Labor, Bureau of Labor Statistics, or such successor index.
7. **Review of Standard.** It is recognized by ACTA, Owner and the Railroads that these Amended and Restated Guidelines are adopted taking into account (i) certain assumptions with respect to the anticipated performance and operations of the Rail Corridor and (ii) current accounting standards and policies related to the capitalization of replacements. Accordingly, Owner and the Railroads shall review these Amended and Restated Guidelines, and if appropriate, be modified by Mutual Agreement of the Owner and Railroads, from time to time to take into account (i) any departure from the anticipated performance and operations of the Rail Corridor and/or (ii) changes in accounting standards and policies related to the capitalization of replacements.
8. **Expiration of Amended and Restated Guidelines.** On or about June 30, 2022, a review of these Amended and Restated Guidelines shall be conducted by Owner and Railroads to determine whether there is a need for any changes or modifications to be made by Mutual Agreement of the Owner and Railroads. If Mutual Agreement by the Owner and Railroads to extend or modify these Amended and Restated Guidelines is not met then these Amended and Restated Guidelines, including any additions, modifications or amendments hereto pursuant to Paragraphs 4 and 6 above, shall automatically expire on December 31, 2022.
9. **Annual Maintenance and Capital Improvement Plan and Budget.** These Amended and Restated Guidelines shall not, and are not intended to, modify, change or otherwise alter the annual obligation under Section 8.3 of the Use and Operating Agreement to prepare or cause to be prepared a plan and budget for the inspection, maintenance, repairs and capital improvements and replacements to the Rail Corridor. These Amended and Restated Guidelines are intended to assist in such planning and budgeting process, but in no way shall these Amended and Restated Guidelines control or otherwise restrict approval or disapproval of any such plan and budget.
10. **Inconsistency with Use and Operating Agreement.** In the event of an inconsistency between any provision of these Amended and Restated Guidelines and the provisions of the Use and Operating Agreement, the provisions of the Use and Operating Agreement shall apply.

EXHIBIT A
REPLACEMENT OF TRACK AND TRACK SUPPORT STRUCTURE COMPONENTS
TO BE TREATED AS CAPITAL EXPENSES*

GRADING

- Programmed replacements (*i.e.*, work in which grading installed exceeds 300 cubic yards per mile)
- Embankment or roadbed stabilization costing more than \$7,000

The costs and expenses incurred in making these replacements shall be considered a Capital Expense if the component meets the above criteria.

OTHER RIGHT-OF-WAY EXPENDITURES

- Installation of paving totaling 40,000 square feet or more
- Protecting dike
- Rip rap (complete installation)
- Retaining and crash walls
- Road crossing surface material (complete replacement)
- Road crossing track and surface material (complete replacement)
- Encasement (complete installation at each location)
- Grade Separations
- Landscaping (complete installation at each location)
- Outside lighting (complete)

The costs and expenses incurred in making these replacements shall be considered a Capital Expense if (i) the component meets the above criteria and (ii) the cost of the component exceeds \$7,000.

BRIDGES, TRESTLES AND CULVERTS

- Bridge superstructure
- Bridge sub-structure
- Replacement of more than 50% of a bridge trestle or approach
- The complete machinery for operating a movable span
- Protecting crib

* As provided in Section 5 of these Amended and Restated Guidelines, the list of components and activities set forth herein is not intended to be exhaustive or all inclusive and any component or activity not otherwise covered herein shall be addressed by Owner and Railroads through Mutual Agreement by the Owner and Railroads in accordance with Section 5.

- Complete culvert, including head/wingwalls, dispersion and trap systems and liners
- Bridge deck
- Bridge walkways

The costs and expenses incurred in making these replacements shall be considered a Capital Expense if (i) the component meets the above criteria and (ii) the cost of the component exceeds \$7,000.

FENCES AND SIGNS

- One continuous mile of right-of-way fence
- One continuous mile of pipeline-with or without pumps
- Signage set/program if the cost exceeds \$7,000

The costs and expenses incurred in making these replacements shall be considered a Capital Expense if the component meets the above criteria.

TIES

- Programmed replacements (*i.e.*, replacement of more than 300 wooden cross ties per mile or 250 concrete cross ties per mile)
- Complete replacement of a turnout or crossover
- Complete replacement of a switch section (*i.e.* from point of switch to toe of frog) if the cost exceeds \$7,000
- Replacement of all ties on a bridge deck

The costs and expenses incurred in making these replacements shall be considered a Capital Expense if the component meets the above criteria.

RAIL AND OTHER TRACK MATERIAL

- 1,320 continuous track feet of rail, including rail welds, first pass rail grinding and other track material
- Turnout or crossover (complete), including rail and other track material
- Complete switch section or rail crossing frog
- Rail and other track material on individual curves regardless of length, including short tangents between connecting curves
- Special items of other track material if the cost of the item exceeds \$7,000
- Track panels, if permanent and rail length exceeds 1,320 continuous track feet
- Rail lubrication applicator (complete) if the cost of the item exceeds \$7,000

- First pass rail grinding, and 50% of the cost of all other annual programmed (tangent and curve) grinding
- Rail line relocation, if the relocation is made for the purpose of reducing curves or grades or eliminating bridges or tunnels or other physical features and if the portion of line being relocated exceeds 1,320 continuous track feet (including related ties, grading and ballast)

The costs and expenses incurred in making these replacements shall be considered a Capital Expense if the component meets the above criteria.

BALLAST

- Ballast replacements other than “skim lift” (i.e. out of face tamping of the track required to achieve a continuous raise of up to 1 inch to restore track surface and line) and other than “spot tamping” (i.e. lifting and tamping short sections of track of up to 215 feet, or a Number 20 turnout, per location, regardless of ballast depth, to restore track surface and line)

The costs and expenses incurred in making these replacements shall be considered a Capital Expense if the component meets the above criteria.

DRAINAGE AND WATER IMPROVEMENTS

- Complete water supply piping system
- A holding tank
- Pump house
- Pumping Machinery – each complete pump installation
- Water tank – each complete installation
- Water treating plant
- Well (including pump)
- Machinery & equipment
- Any individual component over \$7,000
- Drainage improvements one mile or greater in length and costing in excess of \$7,000
- Fire hydrant systems-complete

The costs and expenses incurred in making these replacements shall be considered a Capital Expense if the component meets the above criteria.

MISCELLANEOUS STRUCTURES AND FACILITIES

- A newly completed building
- Each outside installation, water, air, etc. line installation
- Each sewer installation, storm or sanitary

- Complete heating and/or air conditioning system (without ductwork)
- Machinery & equipment
- Each outside lighting installation complete
- Vehicular road
- Pollution abatement equipment-complete
- Catenary systems-complete
- Security and cargo scanning systems-complete
- Scales

The costs and expenses incurred in making these replacements shall be considered a Capital Expense if the component meets the above criteria.

COMMUNICATION SYSTEMS

- Complete mile section (or complete installation if less than a mile) of communication line
- Each mile or complete installation of cable with associated parts
- Each mile or complete installation of conduit and associated parts.
- Complete tower
- Complete installation at each location constituting a separate means of communication, such as radio, radar, carrier telephone, teletype, or other communication system
- Dispatching system
- Testing equipment (if purchased)
- Outside lighting (each complete installation)
- Communications equipment
- Computer software (acquisition or upgrades only)

The costs and expenses incurred in making these replacements shall be considered a Capital Expense if (i) the component meets the above criteria and (ii) the cost of the component exceeds \$7,000.

SIGNALS & INTERLOCKERS

- Interlocking plant
- Interlocking machine
- Signal bridge
- Each side of a highway crossing protection installation
- Traffic control or C.T.C. system installation

- Defect detectors/AEI readers (a complete separate system for the detection of hot-box journals, dragging equipment, high water on tracks, or hot & cold wheels on railroad cars and/or for recording car movements)
- Control board
- Computer equipment
- Stepper
- Code unit
- Signal
- Switch machine

The costs and expenses incurred in making such a replacement shall be a Capital Expense if (i) the component meets the above criteria and (ii) the cost of the component exceeds \$7,000.

EXHIBIT B

COMPONENTS AND ACTIVITIES NOT TO BE TREATED AS CAPITAL EXPENSES*

(Except as provided in Section 2.B. of the Guidelines)

- Track inspections, including visual, ultrasonic, track geometry car and hyrail.
- Signal and/or control system inspections and testing.
- Communication system inspections and testing.
- Bridge, trestle, culvert and other facility inspections.
- Pot holing and/or soil sampling.
- Vegetation control, including tree trimming/removal.
- Clearing of wrecks and rerailing.
- Right-of-way litter control/removal.
- Shifting and/or relocating of existing track.
- Rail transposition.
- Restoring chipped and/or battered rail ends.
- Track gauging.
- Replacing and/or tightening bolts and/or adjusting/replacing other rail fasteners.
- Replacing and/or resetting spikes and/or rail anchors in existing track.
- Maintaining/refilling rail lubricators.
- Adjusting switches.
- Pumping of excess water or other fluids from the right-of-way.
- Clean up/disposal of hazardous material spills and/or biohazard material.
- Cleaning switches.
- Replacement of broken or defective rails.
- Replacement of partial units or less-than-minimum quantities (as set forth in Exhibit A).
- Repairing insulated joints.
- Ballast regulating.
- Field welding and/or grinding.
- Lubricating joints.
- Repairing engine burns.
- Track shimming.
- Building and other facility maintenance, cleaning, repair, painting and/or landscape maintenance.
- Replacing signal wiring and/or relays.

* As provided in Section 5 of these Amended and Rested Guidelines, the list of components and activities set forth herein is not intended to be exhaustive or all inclusive and any component or activity not otherwise covered herein shall be addressed by Owner and Railroads through Mutual Agreement of the Owner and Railroads in accordance with Section 5.

- Small tools and supplies.
- Automotive and roadway work equipment repairs, maintenance and operation.
- Replacement of signal/communications system batteries.
- Purchase, maintenance and repair of radios, cell phones, Nextel devices, etc.
- Relocation of fiber optic cables and/or conduits.
- Updating/maintaining of signal drawings, track charts and other Facility records.
- Facility utility expense.
- Maintenance and repair of roadways, walkways, handrails and other bridge appurtenances.
- Gauge restraint testing.
- Derailment investigations.
- Work train expenses.
- Fence and gate repairs, maintenance and painting.
- Repair/replacement of crossing gates.
- Maintenance and repair of high/wide load, hot box and dragging equipment detectors and AEI readers.
- Repair of rail sun kinks and/or pull-aparts.
- M&O vehicle and equipment leases, repairs, maintenance and servicing.

EXHIBIT 5

**SMALL BUSINESS ENTERPRISE (SBE)
REQUIREMENTS**

Exhibit 5
Small Business Enterprise (SBE) Requirements

The following SBE requirements shall apply to the Agreement:

1. During the term of the Agreement, the Contractor shall be required to satisfy the SBE participation percentages using the SBE firms listed on its Commitment Plan Form (CPF), unless otherwise modified by written amendment to the Agreement.
2. Any SBE substitutions or changes in the participation percentages require a written amendment to the Agreement.
3. Unless otherwise approved by ACTA, the SBE participation percentages shall apply to each approved annual budget.
4. The Contractor shall submit for review an SBE Monthly Report showing the recent and cumulative dollar value of payments to small businesses.
5. If a firm's SBE status changes during the term of the Agreement, the Contractor shall notify ACTA for a determination as to whether a substitution or an addition shall be required.
6. Nothing herein shall be construed to supersede or limit the requirements for Contractor substitutions provided in Section 4100 et seq. of the California Public Contract Code.
7. ACTA may conduct site visits and interview SBE firms to verify compliance with the Agreement's SBE participation requirements. The Contractor shall ensure cooperation with such monitoring.
8. The Contractor may be considered in material breach of the Agreement for one or more of the following:
 - Failure to submit SBE Monthly Reports;
 - Failure to correct discrepancies found by ACTA in the SBE Monthly Reports;
 - Falsifying or misrepresenting any SBE information provided to ACTA, including information provided to or on the online SBE databases;
 - Substituting SBE firms without prior written ACTA approval; and/or
 - Failure to meet SBE participation percentages as required by the Agreement.

9. In addition to any other remedy ACTA may have under the Agreement or by law or in equity, ACTA, in its sole discretion, may impose any or all of the following provisions against the Contractor if determined by ACTA to be in breach of the Agreement:
- Assess the cost of ACTA's audit of the books and records of the Contractor and the SBE firms claiming certification, where such audit is necessary because the Contractor has failed to timely submit a required SBE Monthly Report;
 - Withhold payment up to 5 percent of each monthly invoice until the Contractor is deemed in compliance with the SBE requirements.

EXHIBIT 6

BOND SAMPLES
(Payment Bond and Performance Bond)

PERFORMANCE BOND SAMPLE

KNOW ALL PERSONS BY THESE PRESENTS:

That we, _____

as principal _____, and _____

as surety(ies) are held and firmly bound unto THE ALAMEDA CORRIDOR
TRANSPORTATION AUTHORITY, a California Joint Powers Authority ("ACTA"), in the
penal sum of _____

_____ dollars (\$ _____) lawful money of
the United States, for the payment of which sum well and truly to be made, we bind
ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly
by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH: that whereas the principal entered into
a certain contract, hereto attached, with ACTA, for the Alameda Corridor Maintenance
Agreement (Rail Corridor and Non-Rail Components), Agreement No. _____
("Contract").

NOW THEREFORE, if said principal(s) shall fail to faithfully perform and fulfill all the
undertakings, covenants, terms, conditions and agreements of said Contract during the
original term of said Contract and any extensions thereof that may be granted by ACTA,
with or without notice to the surety(ies), and during the life of any guaranty required under
the Contract, or shall fail to faithfully perform and fulfill all the undertakings, covenants,
terms, conditions and agreements of any and all duly authorized modifications of said
Contract that may hereafter be made, notice of which modifications to the surety(ies) being
hereby waived, said surety(ies) shall fully and faithfully carry out and perform all of the
terms, covenants and conditions of said Contract upon its part to be performed and if
surety(ies) does so, then this obligation to be null and void, otherwise to remain in full force
and effect, and in addition thereto, in case suit is brought upon this bond, the judgment
rendered against the principal or surety(ies), or both, a reasonable attorney's fee, to be
fixed by the court, taxed as costs and included in the judgment rendered therein, otherwise
this obligation to be void.

IN WITNESS WHEREOF, the above bounded parties have executed this instrument under their several hands and seals this ____ day of _____, 20__.

ATTEST

(Principal) _____

(Surety) _____

(Surety) _____

(Corporate Seal)

PAYMENT BOND SAMPLE

KNOW ALL PERSONS BY THESE PRESENTS:

That we, _____

as principal(s) and _____
_____ as surety(ies) _____
are held and firmly bound unto THE ALAMEDA CORRIDOR TRANSPORTATION
AUTHORITY, a California Joint Powers Authority ("ACTA"), and any person or party
named below in the penal sum equal to: _____
_____ dollars (\$_____) in lawful money of the United States, and the payment of which will
and truly be made, we bind ourselves, our heirs, executors, administrators and successors,
jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH,

THAT WHEREAS, the principal (s) entered into a certain contract attached hereto
with ACTA for the Alameda Corridor Maintenance Agreement (Rail Corridor and Non-Rail
Components), Agreement No. _____ ("Contract").

NOW, THEREFORE, if said principal (s) as Contractor(s) or subcontractor(s) fail(s)
to pay for any services provided by mechanics, material suppliers, contractors,
subcontractors, lessors of equipment, artisans, architects, registered engineers, licensed
land surveyors, machinists, builders, teamsters or dray, or fail(s) to pay all persons and
laborers of every class performing labor upon or bestowing skill or other necessary service
on, or furnishing materials or leasing equipment to be used or consumed in or furnishing
materials or leasing equipment to be used or consumed in or furnishing appliances, teams
or power contributing to a work or improvement or fail(s) to pay for the value of such labor
done or materials furnished and for the value and use of such appliances, equipment,
teams or power, whether done or furnished at the instance of ACTA or of any person acting
by its authority or under it as contractor or otherwise, or fail(s) to pay for amounts due
under the Unemployment Insurance Code of the State of California with respect to work,
or labor performed by any such claimant during the original term of said Contract and any
extension thereof that may be granted by ACTA with or without notice to the surety(ies) or
during the life of any guarantee required under the Contract, or fail(s) to pay for any
amounts required to be deducted, withheld and paid over to the Franchise Tax Board from
the wages of the Contractor and subcontractors pursuant to that portion of the Revenue
and Taxation Code, imposing liability for failure to deduct, withhold, and pay employee
taxes, with respect to such work and labor, then in such event said surety(ies) will pay the
same in an amount not exceeding the sum of _____

_____ dollars (\$_____) and, in addition thereto, in case suit is brought
upon this bond and judgment rendered against the principal (s) or surety(ies), or both, a
reasonable attorney's fee to be fixed by the court, taxed as costs and included in the

judgment rendered therein; otherwise this obligation to be void.

It is understood and agreed by principal (s) and surety(ies) herein that by its terms, this payment bond shall insure to the benefit of any person named in Section 9100 of the Civil Code so as to give a right of action such persons or their assigns in any suit brought upon this payment bond.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several hands and seals this ____ day of _____, 20__.

ATTEST

(Principal)_____

(Surety) _____

(Surety) _____

(Corporate Seal)

EXHIBIT 7

**REQUEST FOR PROPOSALS (INCLUDING
APPENDICES)**

RELEASE DATE: MARCH 27, 2025

(Exhibit to be added later)

SCHEDULE 1

**SCHEDULE OF MATERIALS AND
EQUIPMENT DELIVERED
BY ACTA TO CONTRACTOR**

(Schedule to be added later)






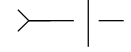


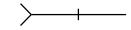









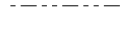


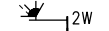





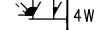


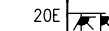









Agreement No. C0__
Contractor Name

Maintenance of Way Services

Appendix B

Rail Corridor Track Charts

LEGEND:

	POWER SWITCH		DRAGGING EQUIPMENT DETECTOR		WAYSIDE LUBRICATOR (NO. OF UNITS)
	HAND THROW SWITCH		HIGHWAY CROSSING GATE AND FLASHERS		GRADE SEPARATION
	SAFETRAN GCP 3000 BI-DIRECTIONAL		GRADE: DOWN		GRADE CROSSING
	SAFETRAN GCP 3000 UNI-DIRECTIONAL		AEI READER		BEGIN DEPRESSED CUT
	SIGNAL HOUSE		CROSSING DIAMOND		BUMPING POST
	MILEPOST		GROUND SIGNAL		HIGHWAY CROSSING FLASHER
	TRENCH WALLS		CD CORRIDOR DISPATCHING JURISDICTION		ACCESS LADDER
	2W SIGNAL STRUCTURE		CM CORRIDOR MAINTENANCE CONTRACTOR		EMERGENCY LADDER
	10EA 4W		PHL PHL MAINTENANCE		FIXED STAIRS
	20E 6W		ODM OTHER DISPATCH & MAINTENANCE		EMERGENCY TELEPHONE
	18EA		PHLD PHL DISPATCHING JURISDICTION		DRY STANDPIPE
	POWER DERAIL				DRAIN CUT OFF (STOP LOG)
	T.O. NUMBER				INSULATED JOINT
	HIGH/WIDE LOAD DETECTOR				
	HOT BOX DETECTOR				
	TRACK SEGMENT NUMBER				

NOTES:

SIGNAL SPACING AND BLOCK LENGTHS ARE SHOWN FOR REFERENCE ONLY.

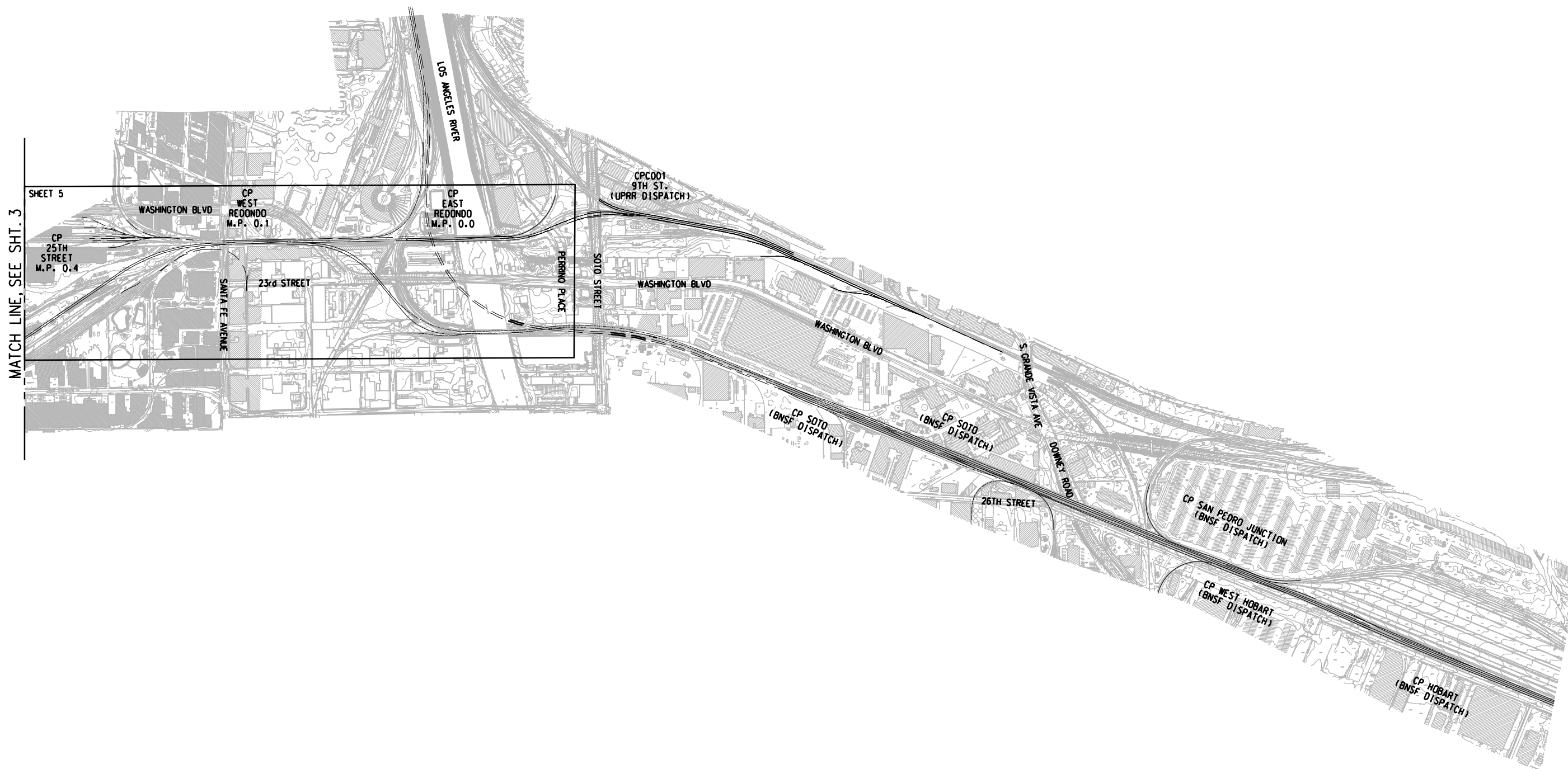
DIVISION OF MAINTENANCE AND DISPATCHING IS THE SIGNAL AND INSULATED JOINT CONTROLLING THE CONTROL POINT AS SHOWN.

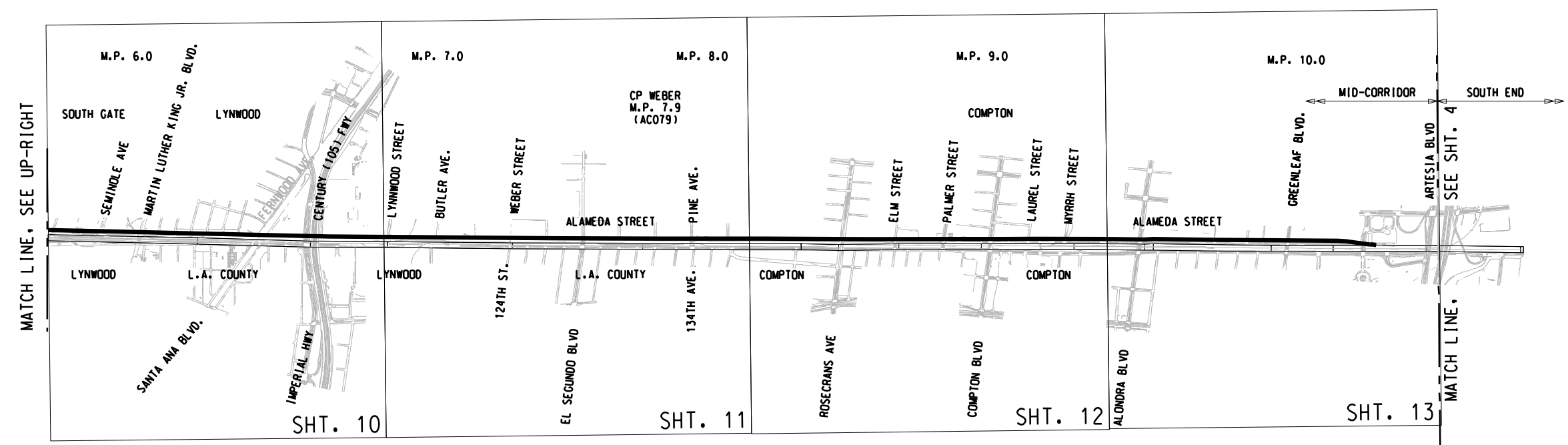
AEI READERS, INCLUDING THOSE SHOWN OUTSIDE THE MAINTENANCE LIMITS OF THE CORRIDOR MAINTENANCE CONTRACTOR, ARE TO BE MAINTAINED BY CORRIDOR MAINTENANCE OPERATOR

SPEEDS SHOWN ARE DESIGN SPEEDS. OPERATING SPEEDS MAY BE DIFFERENT.

REFER TO TRACK CHART OF CONTROLLING RAILROAD FOR INFORMATION ON NON-ACTA TRACKS.

ALL ACTA MAINLINE RAIL IS 136 RE CWR ON CONCRETE TIES UNLESS OTHERWISE STATE WITHIN THE TRACK CHARTS.





ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY TRACK CHART

REVISED: 09/23/2024

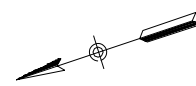
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SHEET # 03

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MID-CORRIDOR SOUTH END



ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY TRACK CHART

REVISED: 09/23/2024

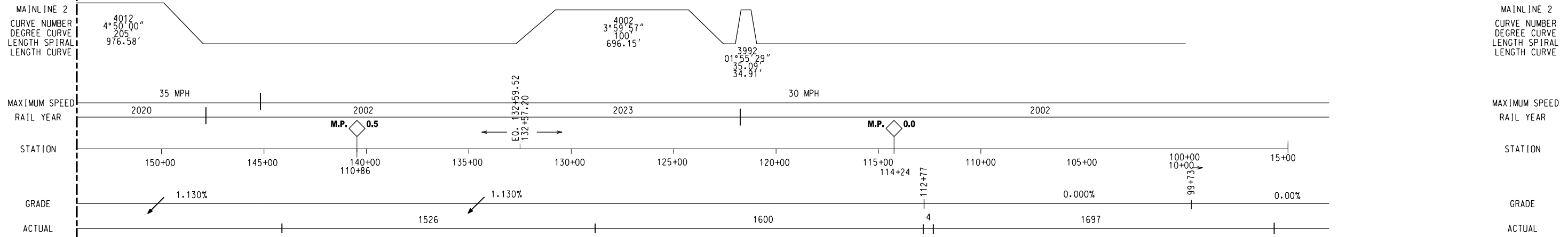
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SHEET # 04

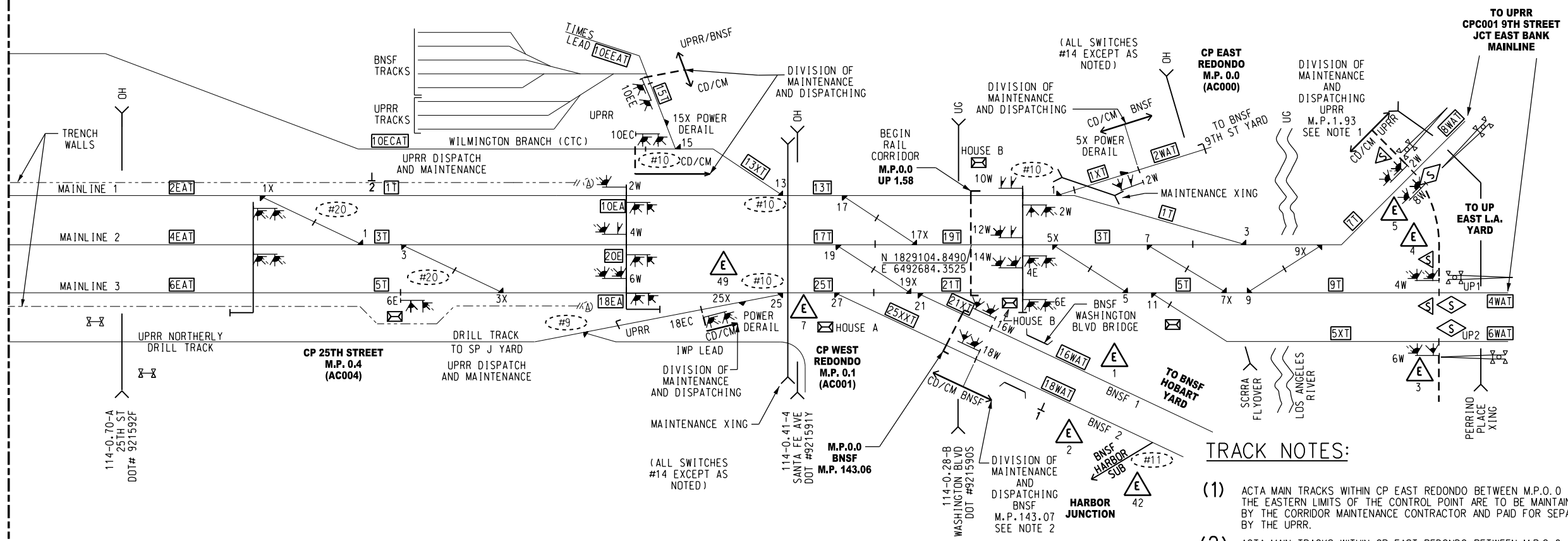
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RAILROAD WEST
(TOWARDS THE PORTS)

RAILROAD EAST
(TOWARDS DOWNTOWN
LOS ANGELES)



MATCH LINE - SEE SHEET 6



- TRACK NOTES:**
- (1) ACTA MAIN TRACKS WITHIN CP EAST REDONDO BETWEEN M.P. 0.0 AND THE EASTERN LIMITS OF THE CONTROL POINT ARE TO BE MAINTAINED BY THE CORRIDOR MAINTENANCE CONTRACTOR AND PAID FOR SEPARATELY BY THE UPRR.
 - (2) ACTA MAIN TRACKS WITHIN CP EAST REDONDO BETWEEN M.P. 0.0 AND THE 16W AND 18W SIGNALS ON THE BNSF CONNECTOR TRACKS LIMITS ARE TO BE MAINTAINED BY THE CORRIDOR MAINTENANCE CONTRACTOR AND PAID FOR SEPARATELY BY THE BNSF. RAIL IN CURVES WITHIN THESE LIMITS IS 14IRE.

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RAILROAD WEST
(TOWARDS THE PORTS)

RAILROAD EAST
(TOWARDS DOWNTOWN
LOS ANGELES)

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAXIMUM SPEED
RAIL YEAR

MAXIMUM SPEED
RAIL YEAR

STATION

STATION

GRADE

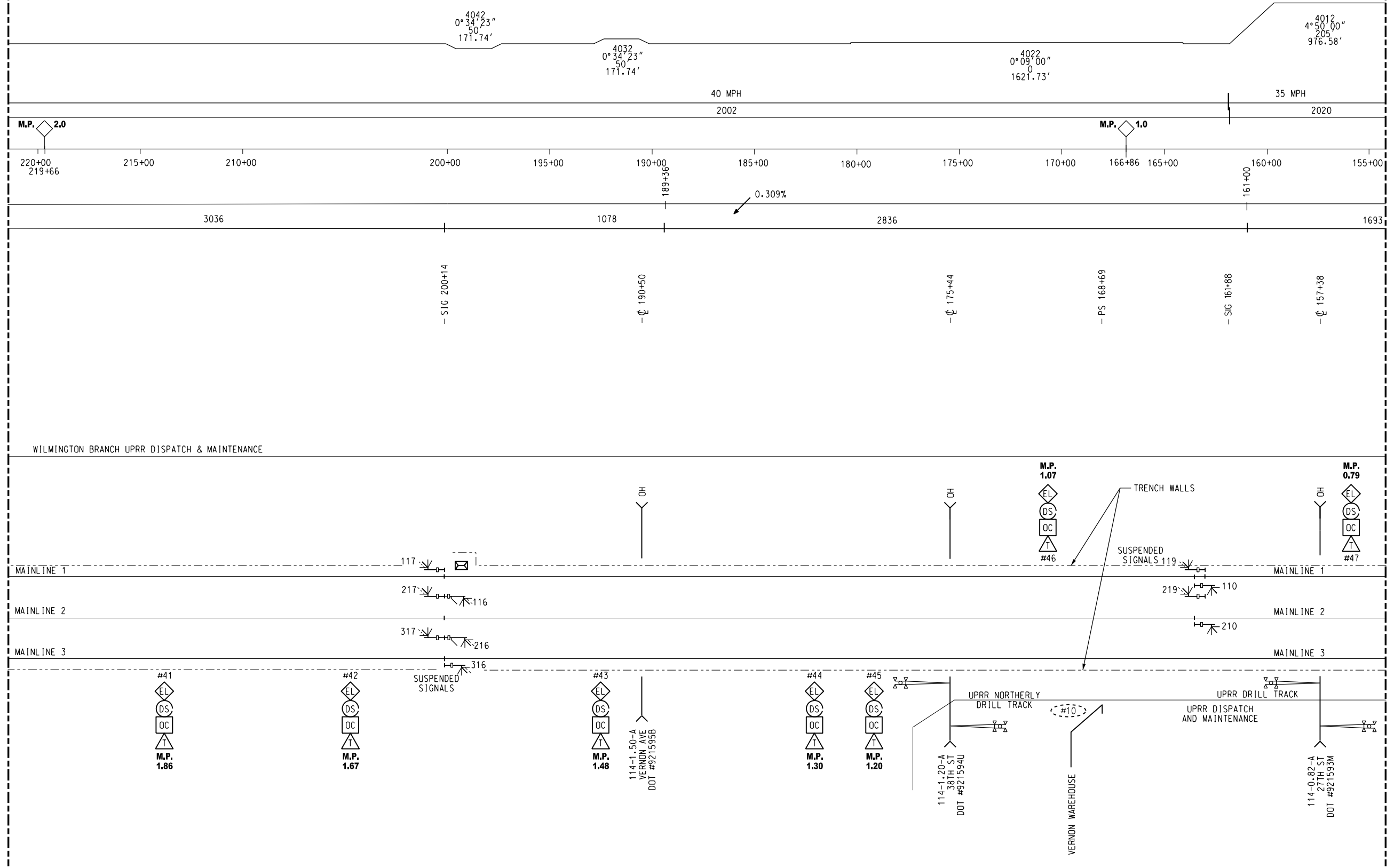
GRADE

ACTUAL

ACTUAL

MATCH LINE - SEE SHEET 7

MATCH LINE - SEE SHEET 5



RAILROAD WEST
(TOWARDS THE PORTS)

RAILROAD EAST
(TOWARDS DOWNTOWN
LOS ANGELES)

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAXIMUM SPEED
RAIL YEAR

MAXIMUM SPEED
RAIL YEAR

STATION

STATION

GRADE

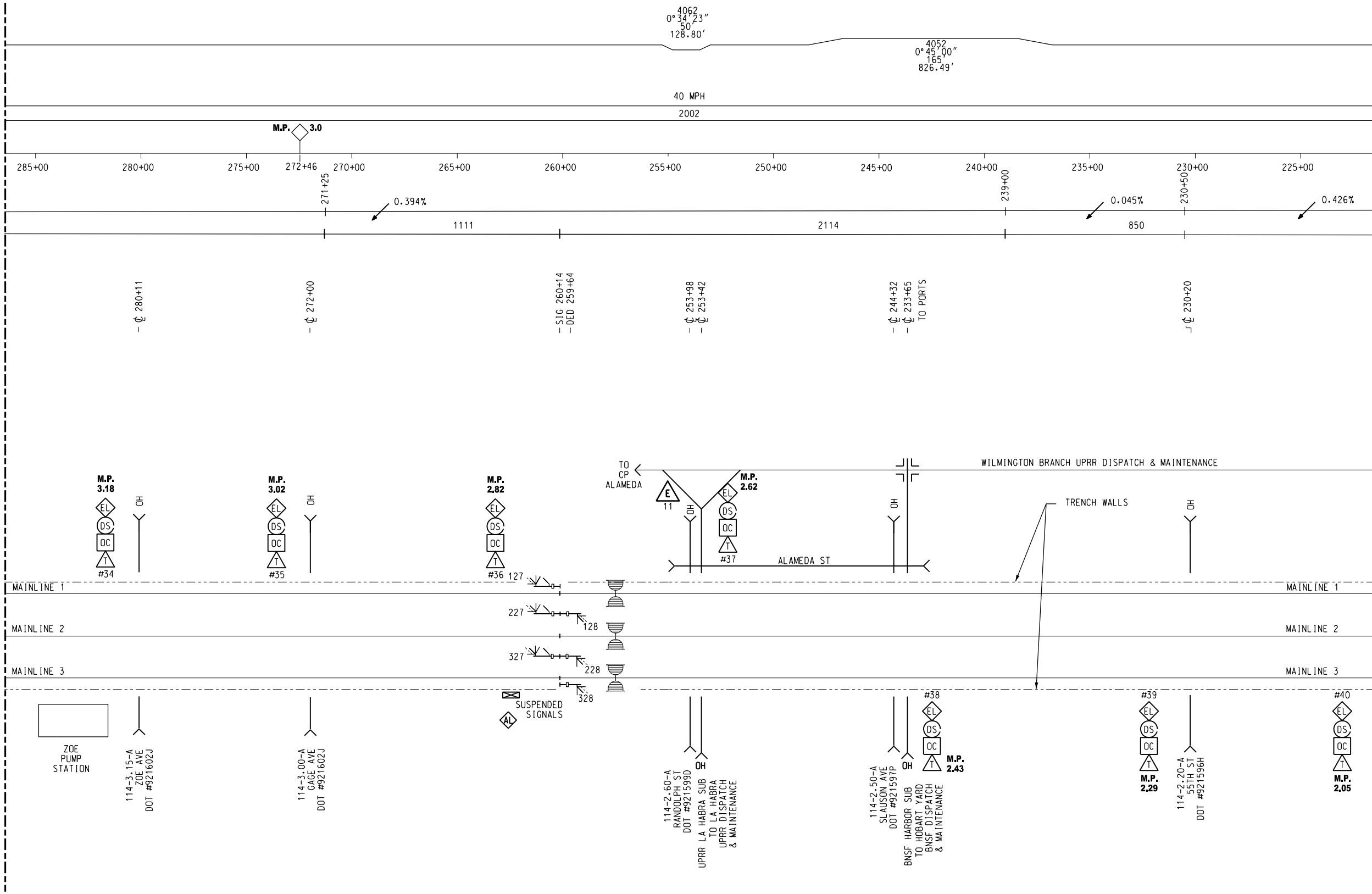
GRADE

ACTUAL

ACTUAL

MATCH LINE - SEE SHEET 8

MATCH LINE - SEE SHEET 6



RAILROAD WEST
(TOWARDS THE PORTS)

RAILROAD EAST
(TOWARDS DOWNTOWN
LOS ANGELES)

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAXIMUM SPEED
RAIL YEAR

MAXIMUM SPEED
RAIL YEAR

STATION

STATION

GRADE

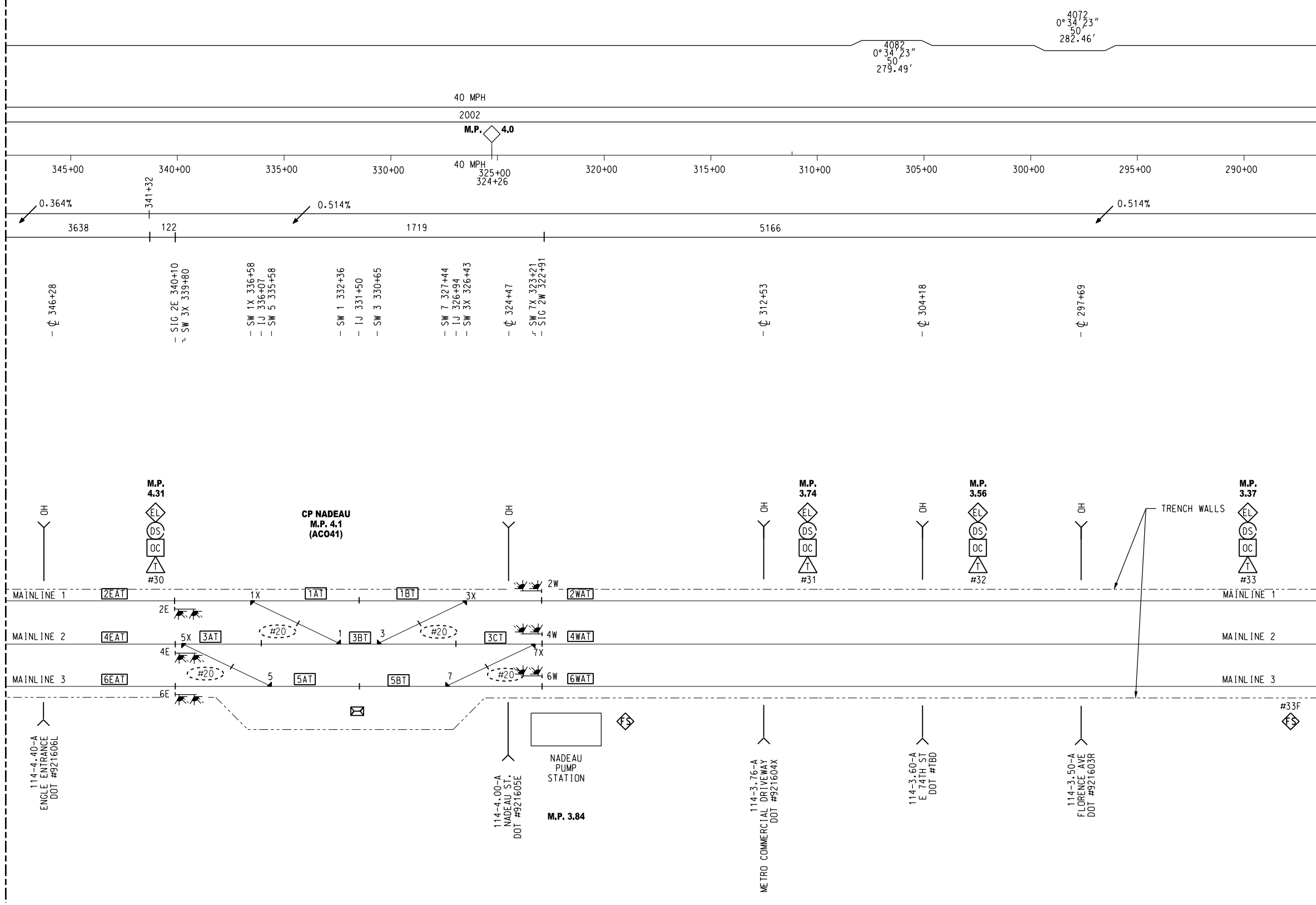
GRADE

ACTUAL

ACTUAL

MATCH LINE - SEE SHEET 9

MATCH LINE - SEE SHEET 7



RAILROAD WEST
(TOWARDS THE PORTS)

RAILROAD EAST
(TOWARDS DOWNTOWN
LOS ANGELES)

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

4092
0°09'00"
1947.78'

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAXIMUM SPEED
RAIL YEAR

40 MPH
2002

MAXIMUM SPEED
RAIL YEAR

STATION

410+00 405+00 400+00 395+00 390+00 385+00 380+00 378+06 377+70 375+00 370+00 365+00 360+00 355+00 350+00

STATION

GRADE

0.297%

1742

0.364%

3638

ACTUAL

GRADE

ACTUAL

MATCH LINE - SEE SHEET 10

MATCH LINE - SEE SHEET 8

M.P. 5.64
#23

M.P. 5.47
#24

M.P. 5.28
#25

M.P. 5.09
#26

M.P. 4.90
#27

M.P. 4.71
#28

M.P. 4.52
#29

MAINLINE 1

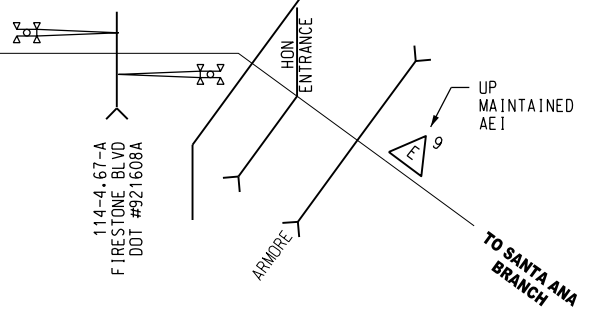
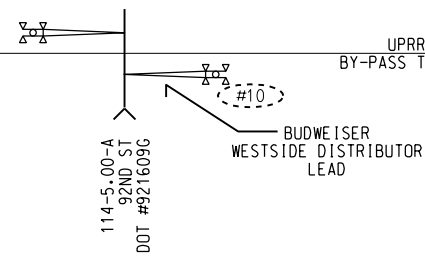
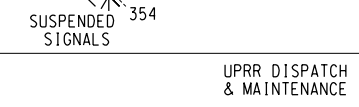
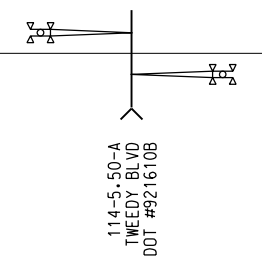
MAINLINE 1

MAINLINE 2

MAINLINE 2

MAINLINE 3

MAINLINE 3



RAILROAD WEST
(TOWARDS THE PORTS)

RAILROAD EAST
(TOWARDS DOWNTOWN
LOS ANGELES)

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAXIMUM SPEED
RAIL YEAR

MAXIMUM SPEED
RAIL YEAR

STATION

STATION

GRADE

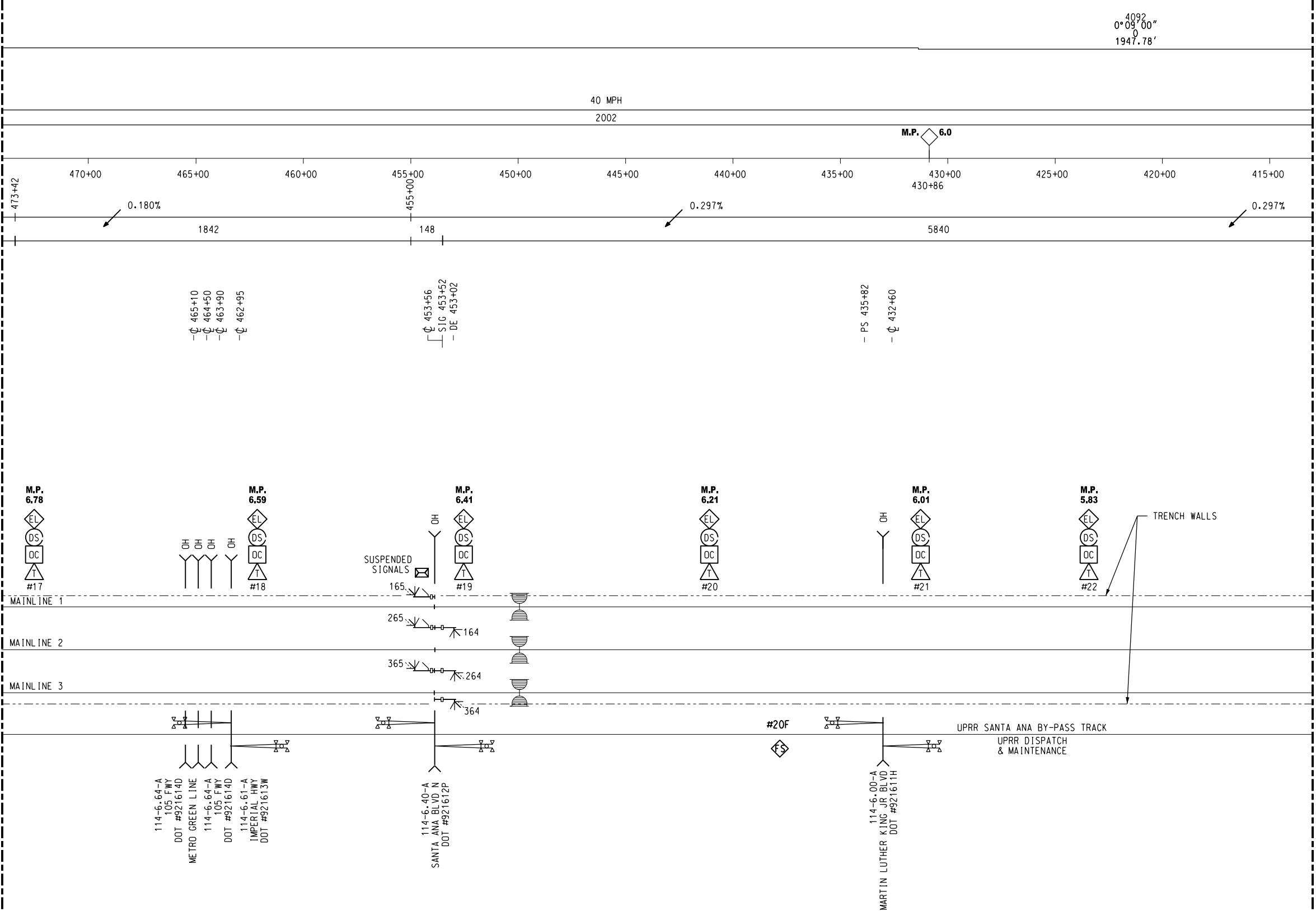
GRADE

ACTUAL

ACTUAL

MATCH LINE - SEE SHEET 11

MATCH LINE - SEE SHEET 9



RAILROAD WEST
(TOWARDS THE PORTS)

RAILROAD EAST
(TOWARDS DOWNTOWN
LOS ANGELES)

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAXIMUM SPEED
RAIL YEAR

MAXIMUM SPEED
RAIL YEAR

STATION

STATION

GRADE

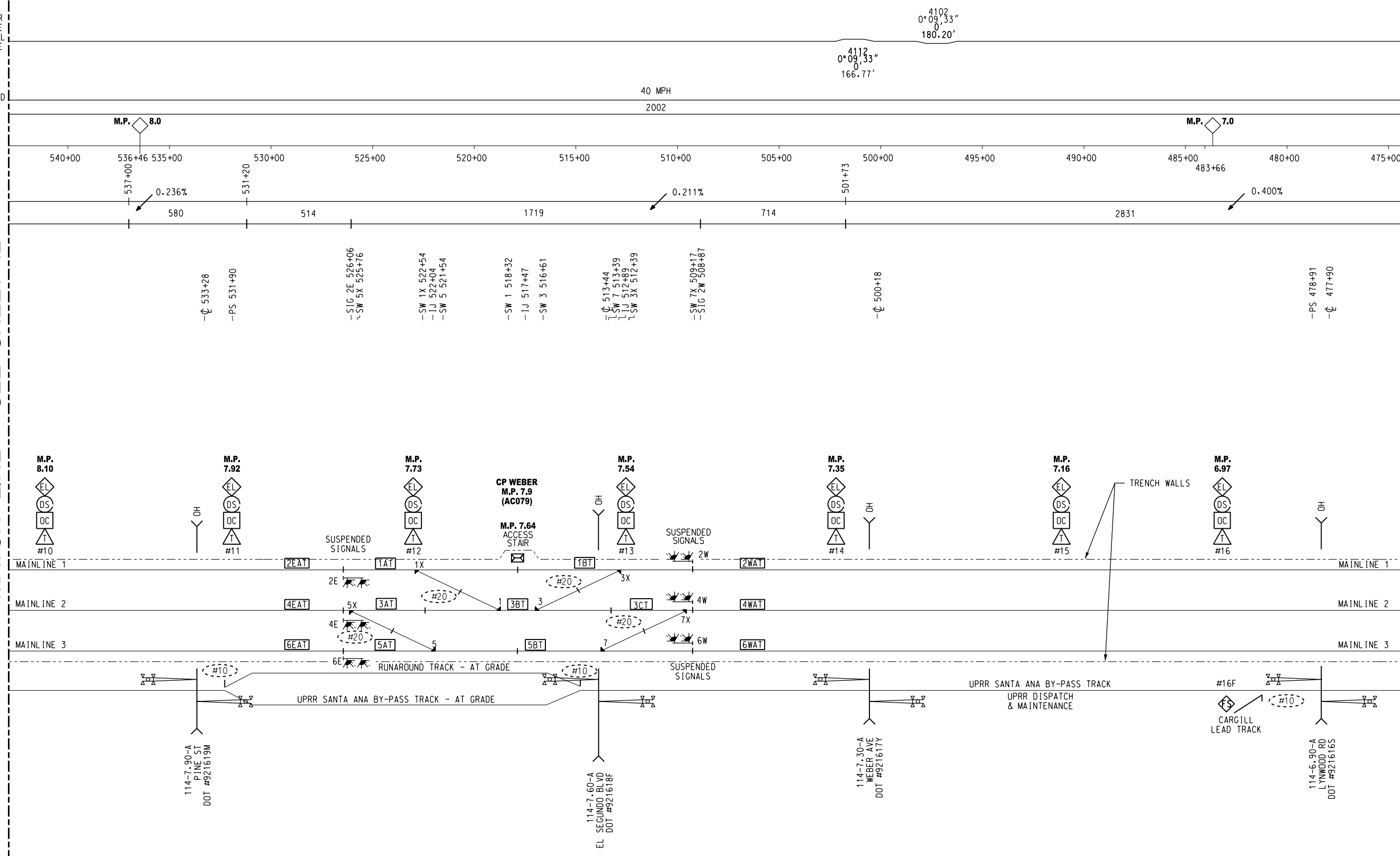
GRADE

ACTUAL

ACTUAL

MATCH LINE - SEE SHEET 12

MATCH LINE - SEE SHEET 10



RAILROAD WEST
(TOWARDS THE PORTS)

RAILROAD EAST
(TOWARDS DOWNTOWN
LOS ANGELES)

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAXIMUM SPEED
RAIL YEAR

MAXIMUM SPEED
RAIL YEAR

STATION

STATION

GRADE

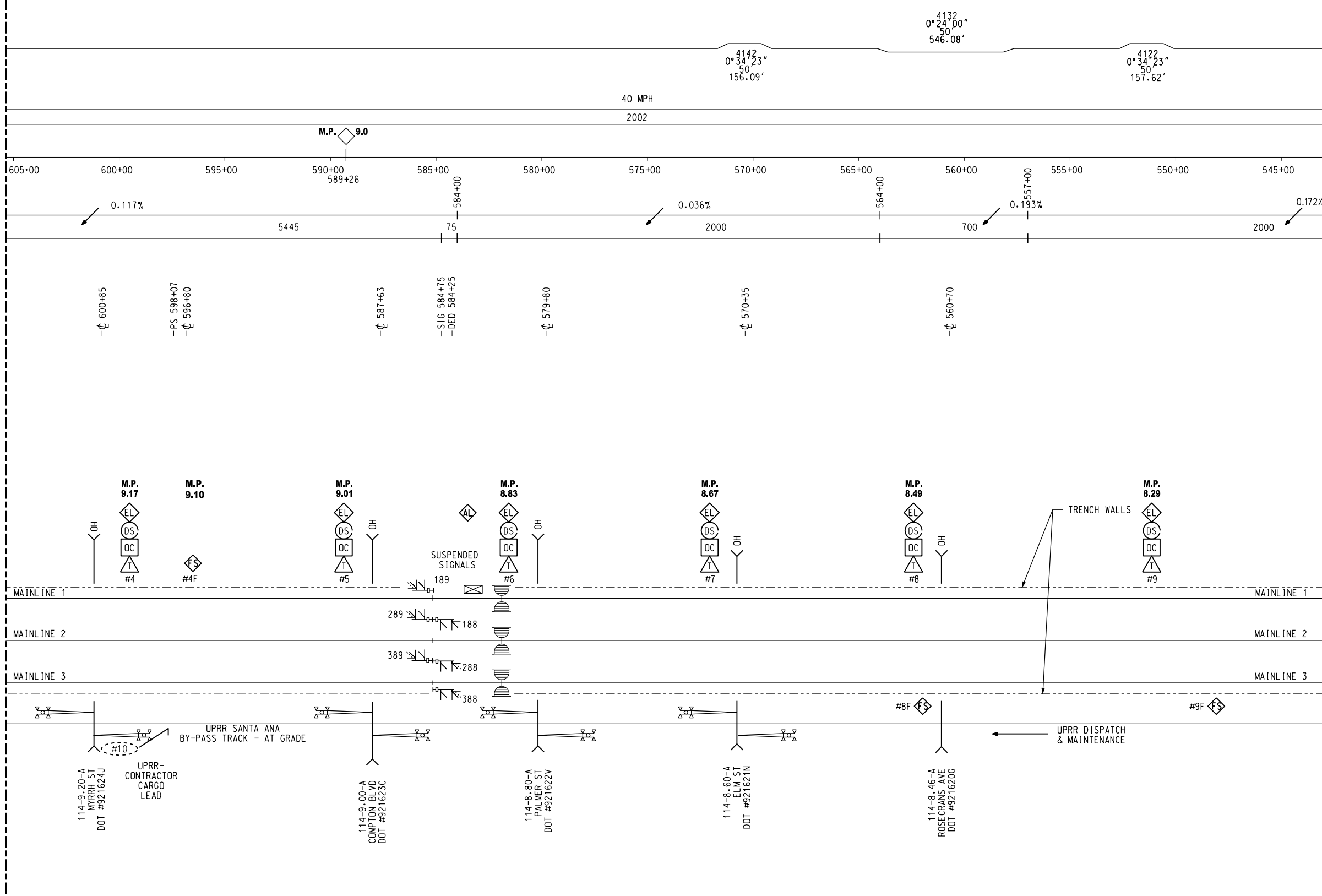
GRADE

ACTUAL

ACTUAL

MATCH LINE - SEE SHEET 13

MATCH LINE - SEE SHEET 11



RAILROAD WEST
(TOWARDS THE PORTS)

RAILROAD EAST
(TOWARDS DOWNTOWN
LOS ANGELES)

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAXIMUM SPEED
RAIL YEAR

MAXIMUM SPEED
RAIL YEAR

STATION

STATION

GRADE

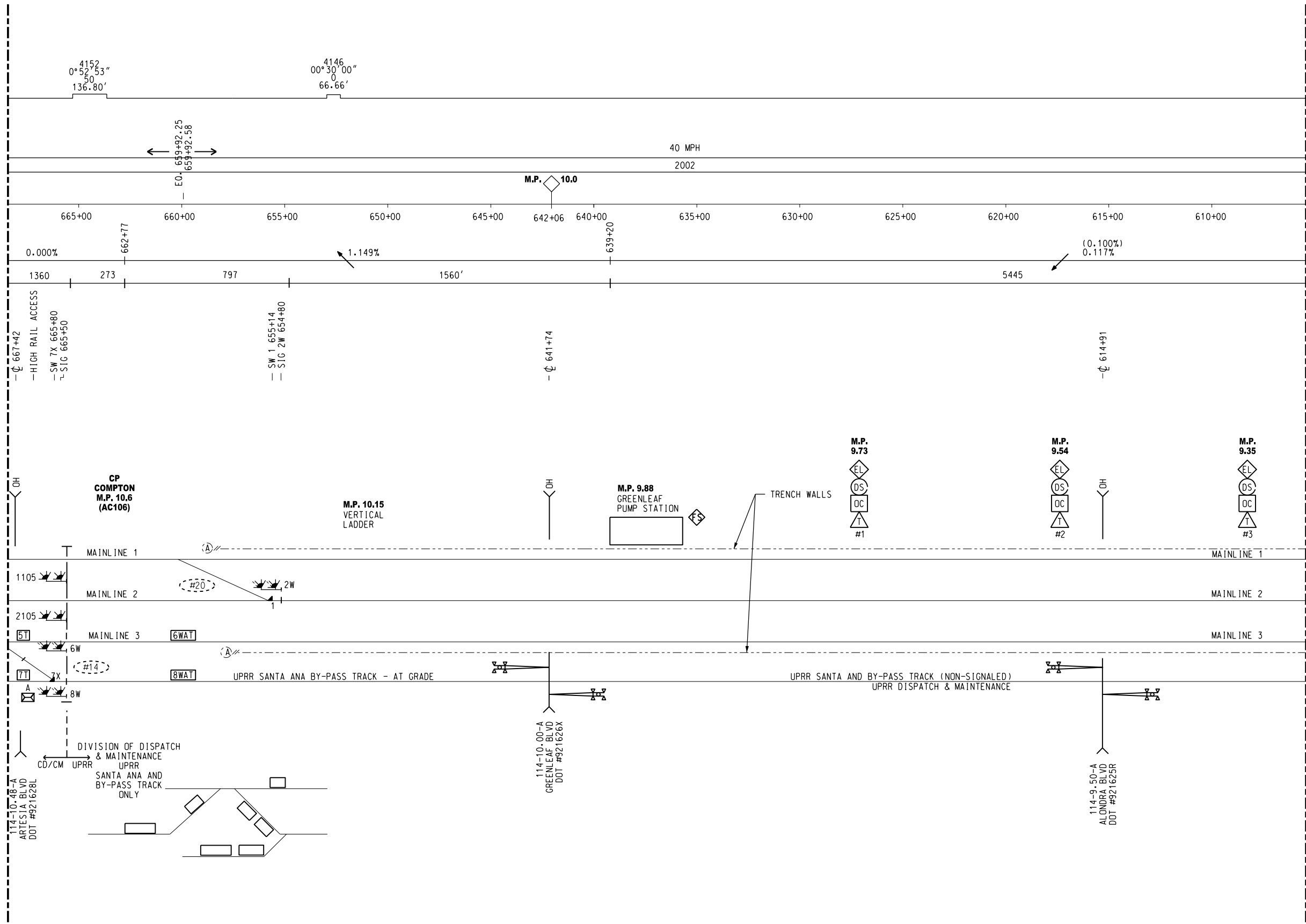
GRADE

ACTUAL

ACTUAL

MATCH LINE - SEE SHEET 14

MATCH LINE - SEE SHEET 12



RAILROAD WEST
(TOWARDS THE PORTS)

RAILROAD EAST
(TOWARDS DOWNTOWN
LOS ANGELES)

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAXIMUM SPEED
RAIL YEAR

MAXIMUM SPEED
RAIL YEAR

STATION

STATION

GRADE

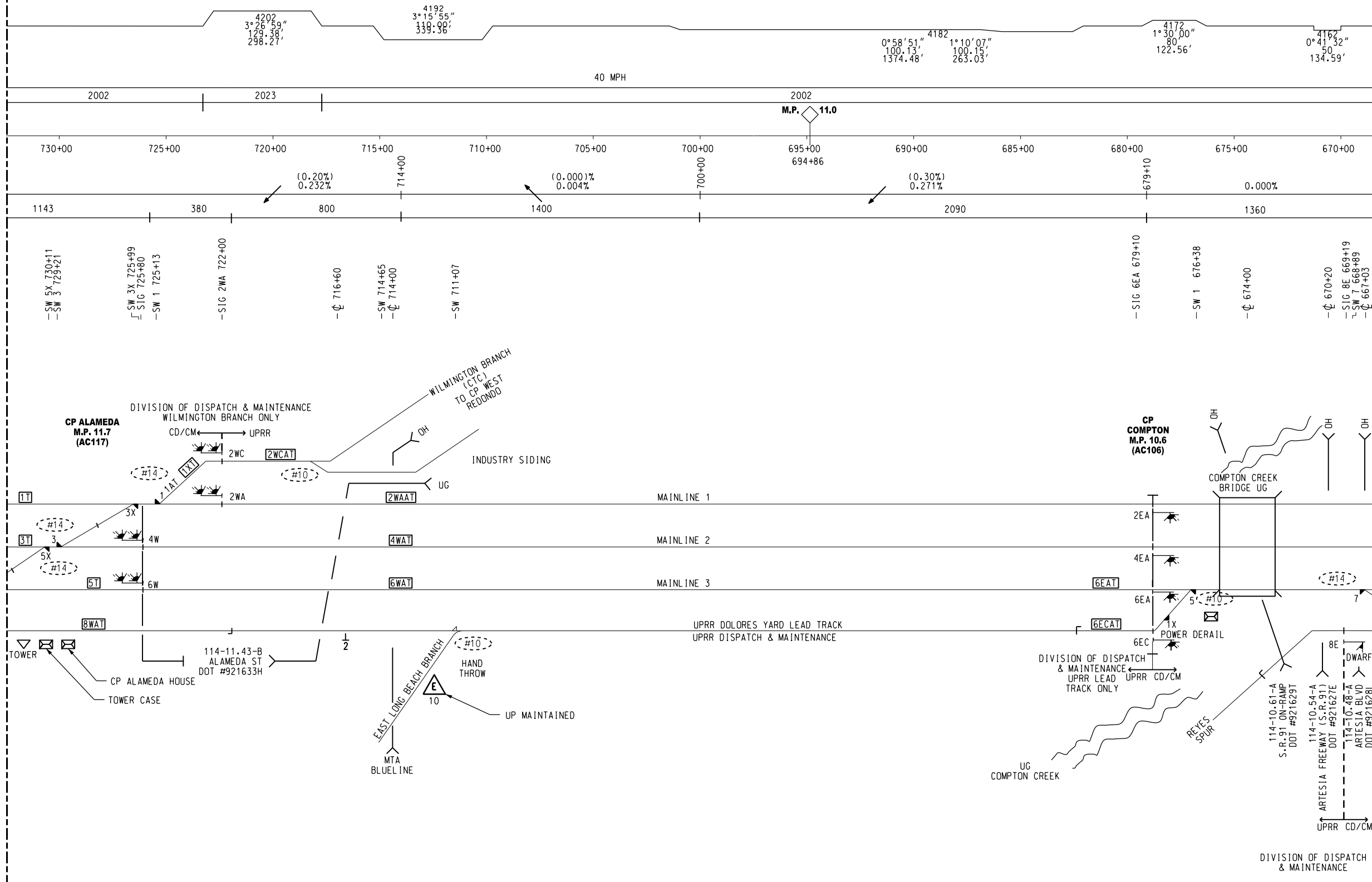
GRADE

ACTUAL

ACTUAL

MATCH LINE - SEE SHEET 15

MATCH LINE - SEE SHEET 13



ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY TRACK CHART

REVISED: 09/23/2024

SCALE: 1" = 500' (HORIZONTAL ONLY)

SHEET # 14

RAILROAD WEST
(TOWARDS THE PORTS)

RAILROAD EAST
(TOWARDS DOWNTOWN
LOS ANGELES)

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAXIMUM SPEED
RAIL YEAR

MAXIMUM SPEED
RAIL YEAR

STATION

STATION

GRADE

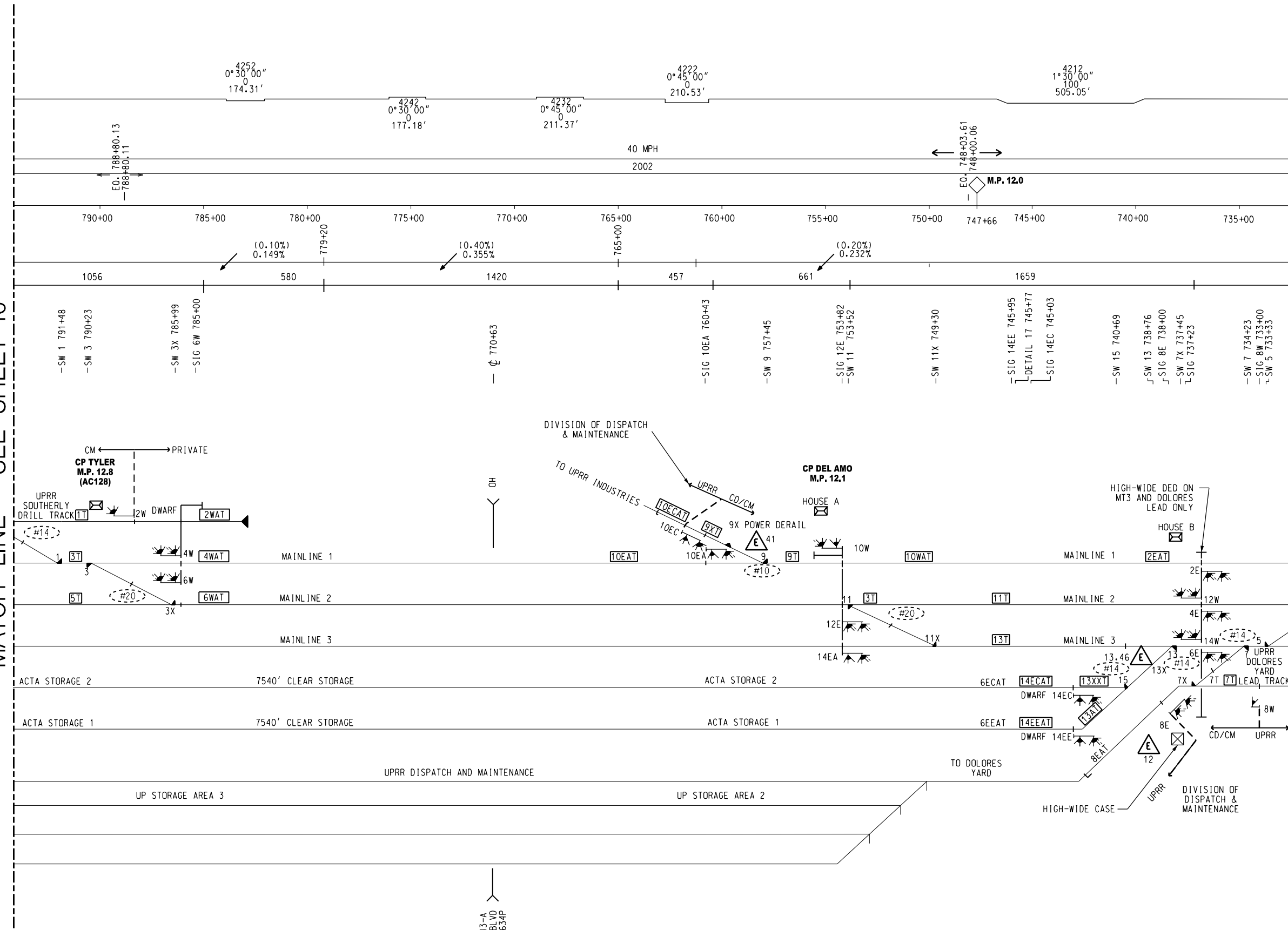
GRADE

ACTUAL

ACTUAL

MATCH LINE - SEE SHEET 16

MATCH LINE - SHEET 14



RAILROAD WEST
(TOWARDS THE PORTS)

RAILROAD EAST
(TOWARDS DOWNTOWN
LOS ANGELES)

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAXIMUM SPEED
RAIL YEAR

MAXIMUM SPEED
RAIL YEAR

STATION

STATION

GRADE

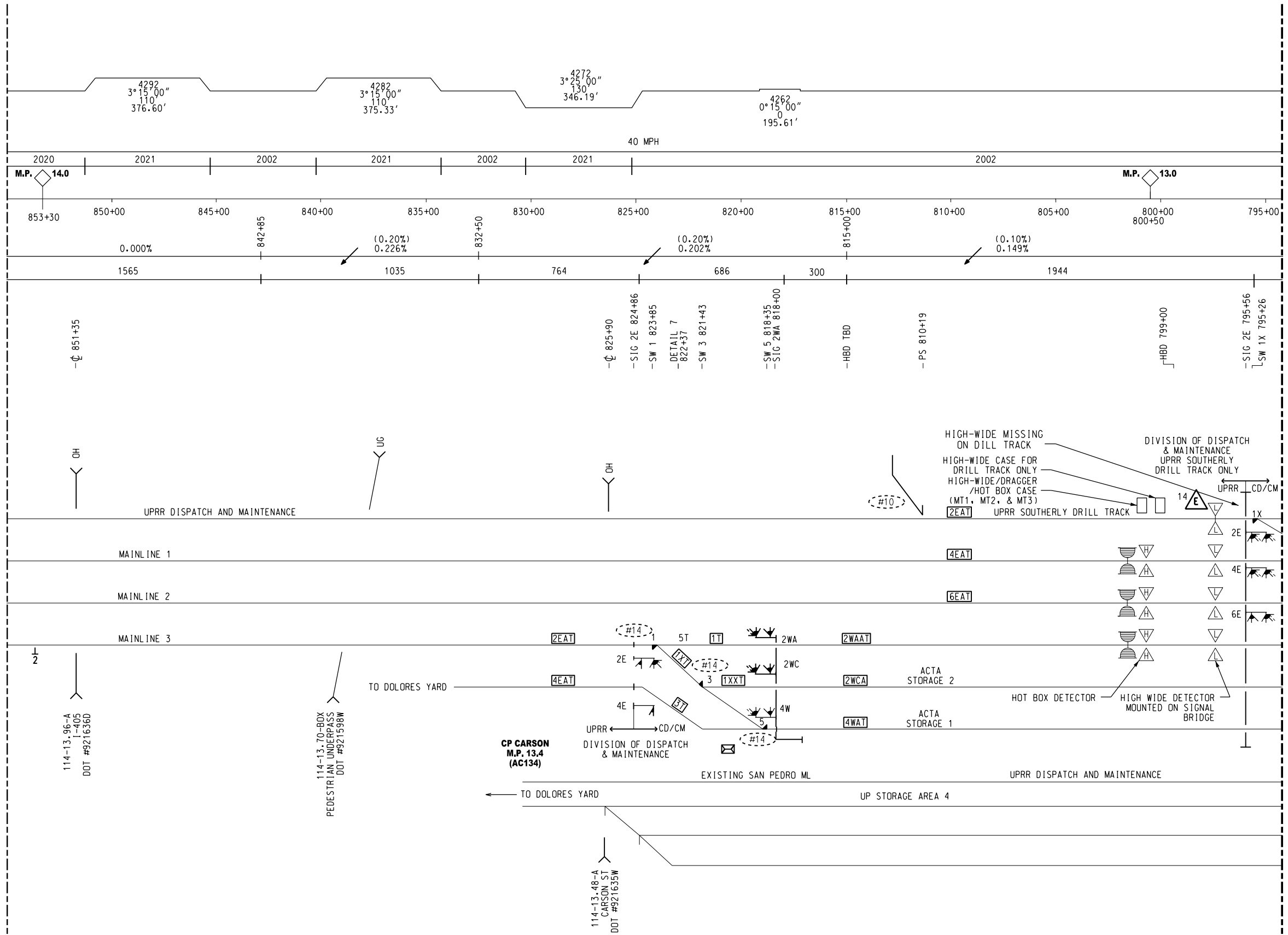
GRADE

ACTUAL

ACTUAL

MATCH LINE - SEE SHEET 17

MATCH LINE - SEE SHEET 15



RAILROAD WEST
(TOWARDS THE PORTS)

RAILROAD EAST
(TOWARDS DOWNTOWN
LOS ANGELES)

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAXIMUM SPEED
RAIL YEAR

MAXIMUM SPEED
RAIL YEAR

STATION

STATION

GRADE

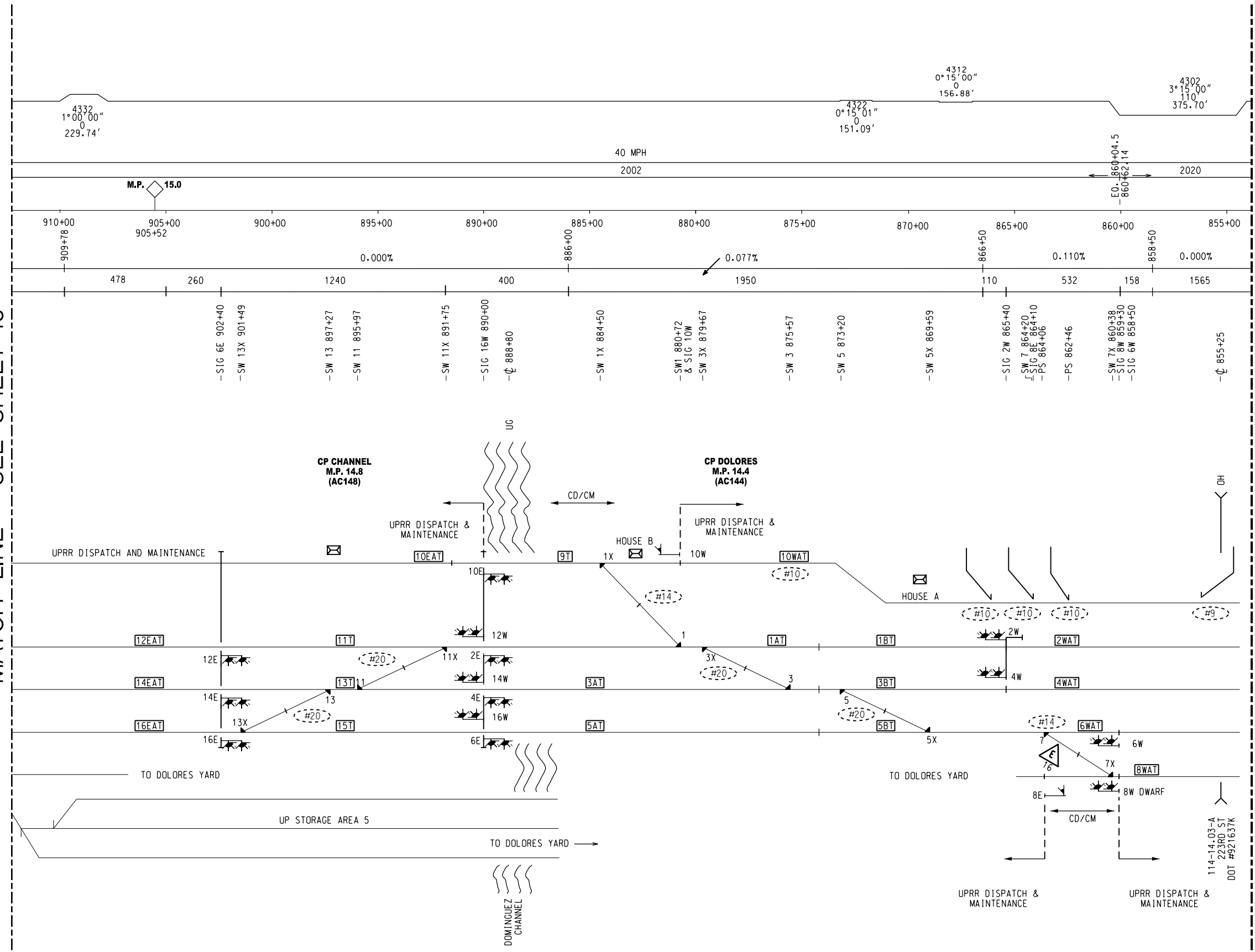
GRADE

ACTUAL

ACTUAL

MATCH LINE - SEE SHEET 18

MATCH LINE - SEE SHEET 16



RAILROAD WEST
(TOWARDS THE PORTS)

RAILROAD EAST
(TOWARDS DOWNTOWN
LOS ANGELES)

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAXIMUM SPEED
RAIL YEAR

MAXIMUM SPEED
RAIL YEAR

STATION

STATION

GRADE

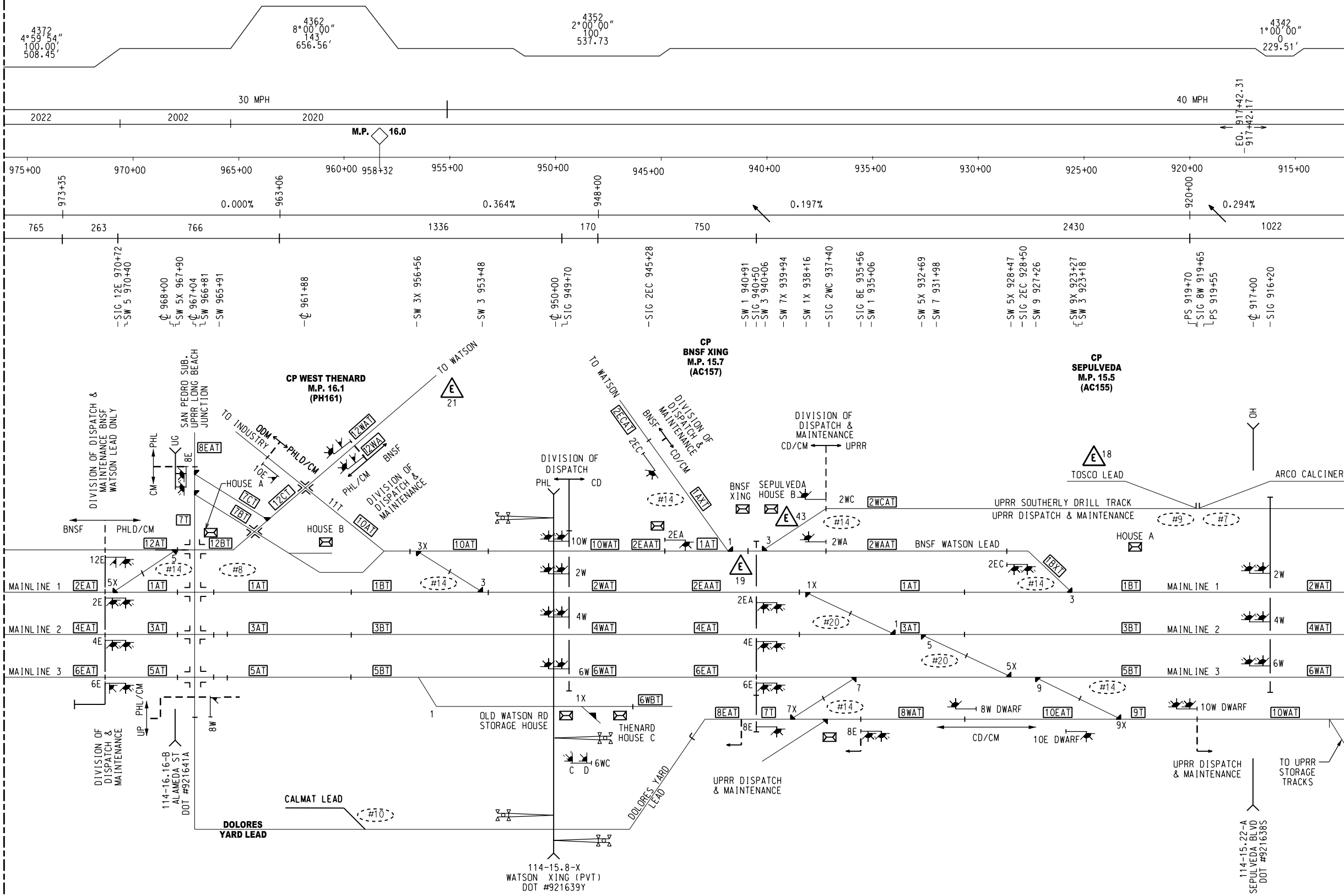
GRADE

ACTUAL

ACTUAL

MATCH LINE - SEE SHEET 19

MATCH LINE - SEE SHEET 17



RAILROAD WEST
(TOWARDS THE PORTS)

RAILROAD EAST
(TOWARDS DOWNTOWN
LOS ANGELES)

MAINLINE 1
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAXIMUM SPEED
RAIL YEAR

MAXIMUM SPEED
RAIL YEAR

STATION

STATION

GRADE

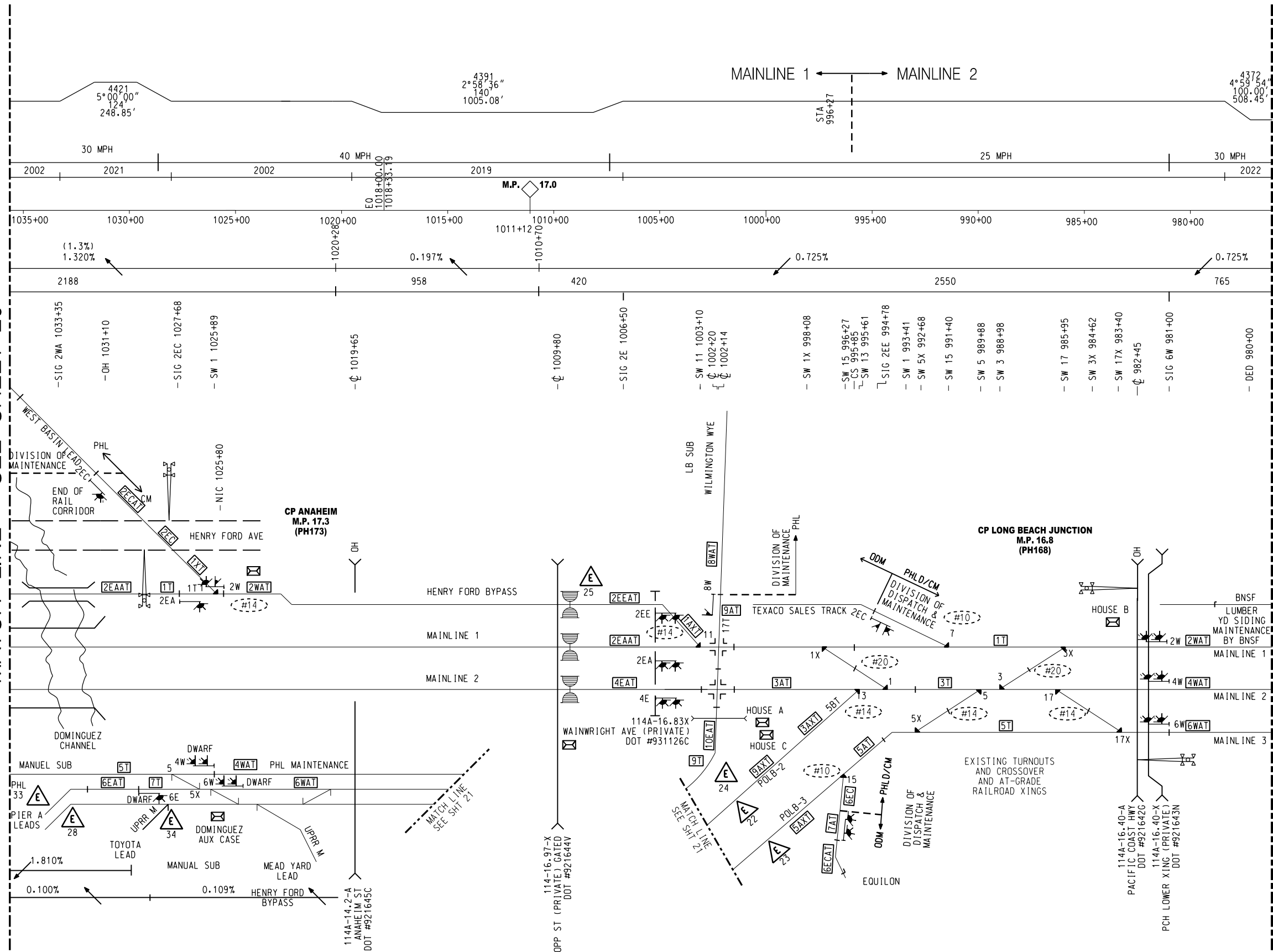
GRADE

ACTUAL

ACTUAL

MATCH LINE - SEE SHEET 20

MATCH LINE - SEE SHEET 18



RAILROAD WEST
(TOWARDS THE PORTS)

RAILROAD EAST
(TOWARDS DOWNTOWN
LOS ANGELES)

MAINLINE 1
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAXIMUM SPEED
RAIL YEAR

MAXIMUM SPEED
RAIL YEAR

STATION

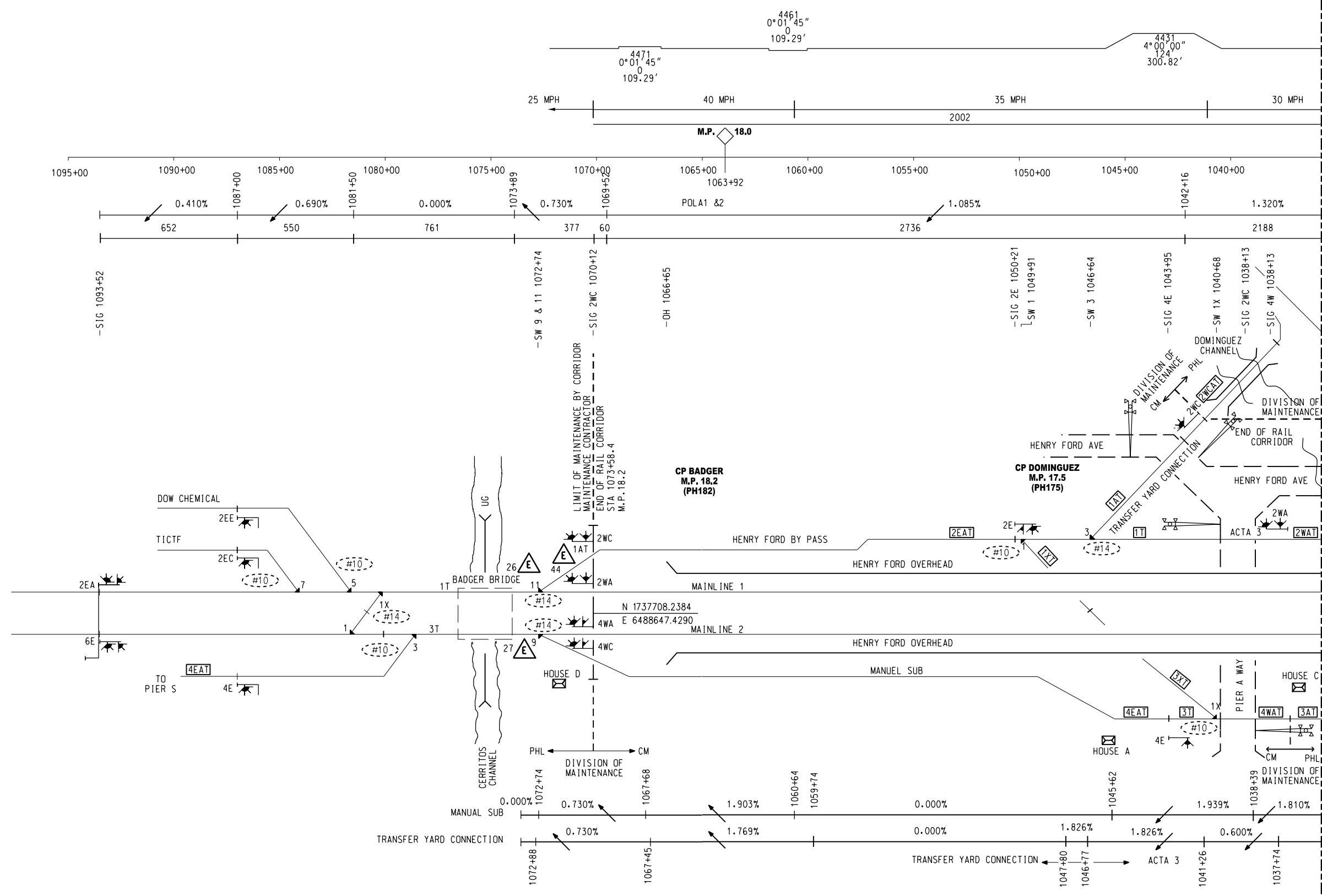
STATION

GRADE

GRADE

ACTUAL

ACTUAL



MATCH LINE - SEE SHEET 19

RAILROAD WEST
(TOWARDS THE PORTS)

RAILROAD EAST
(TOWARDS SAN
BERNARDINO)

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAINLINE 2
CURVE NUMBER
DEGREE CURVE
LENGTH SPIRAL
LENGTH CURVE

MAXIMUM SPEED
RAIL YEAR

MAXIMUM SPEED
RAIL YEAR

STATION

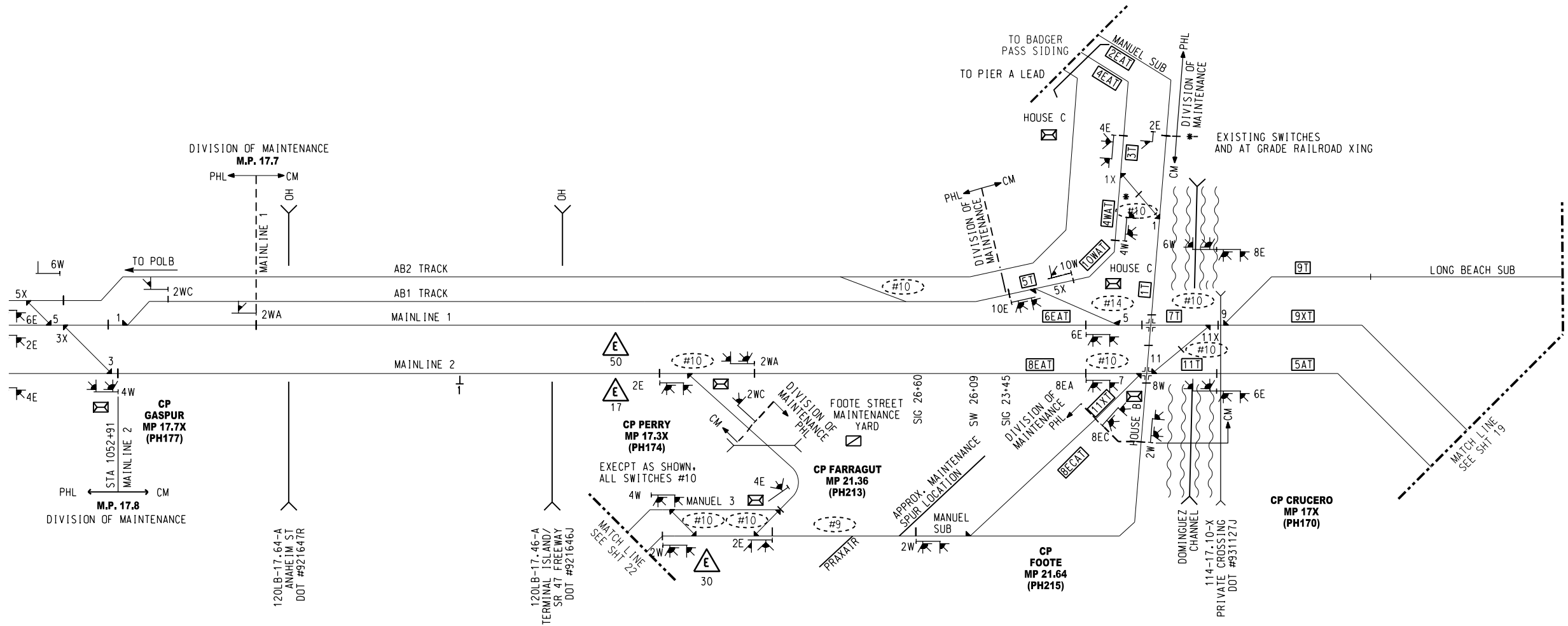
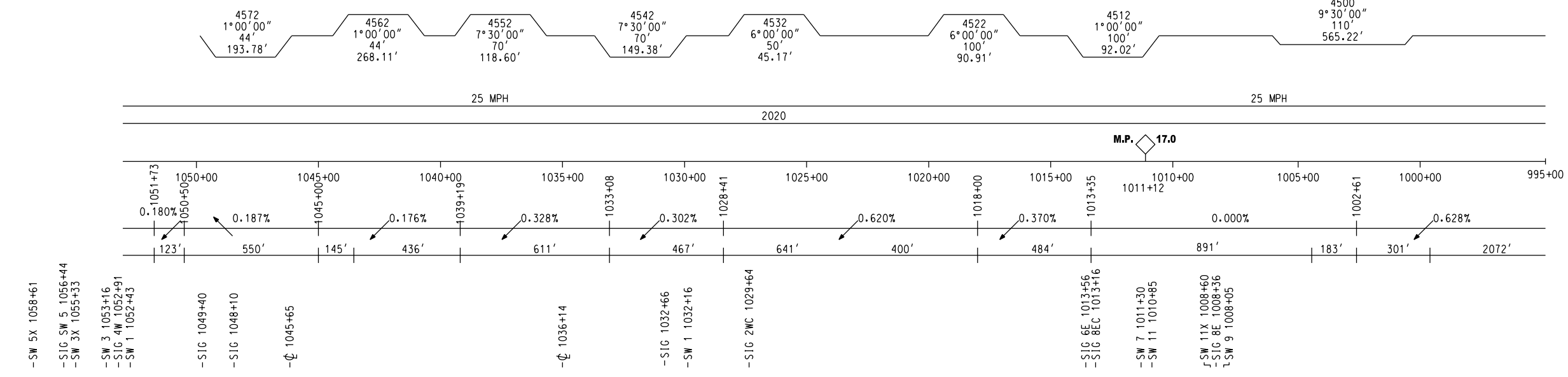
STATION

GRADE

GRADE

ACTUAL

ACTUAL



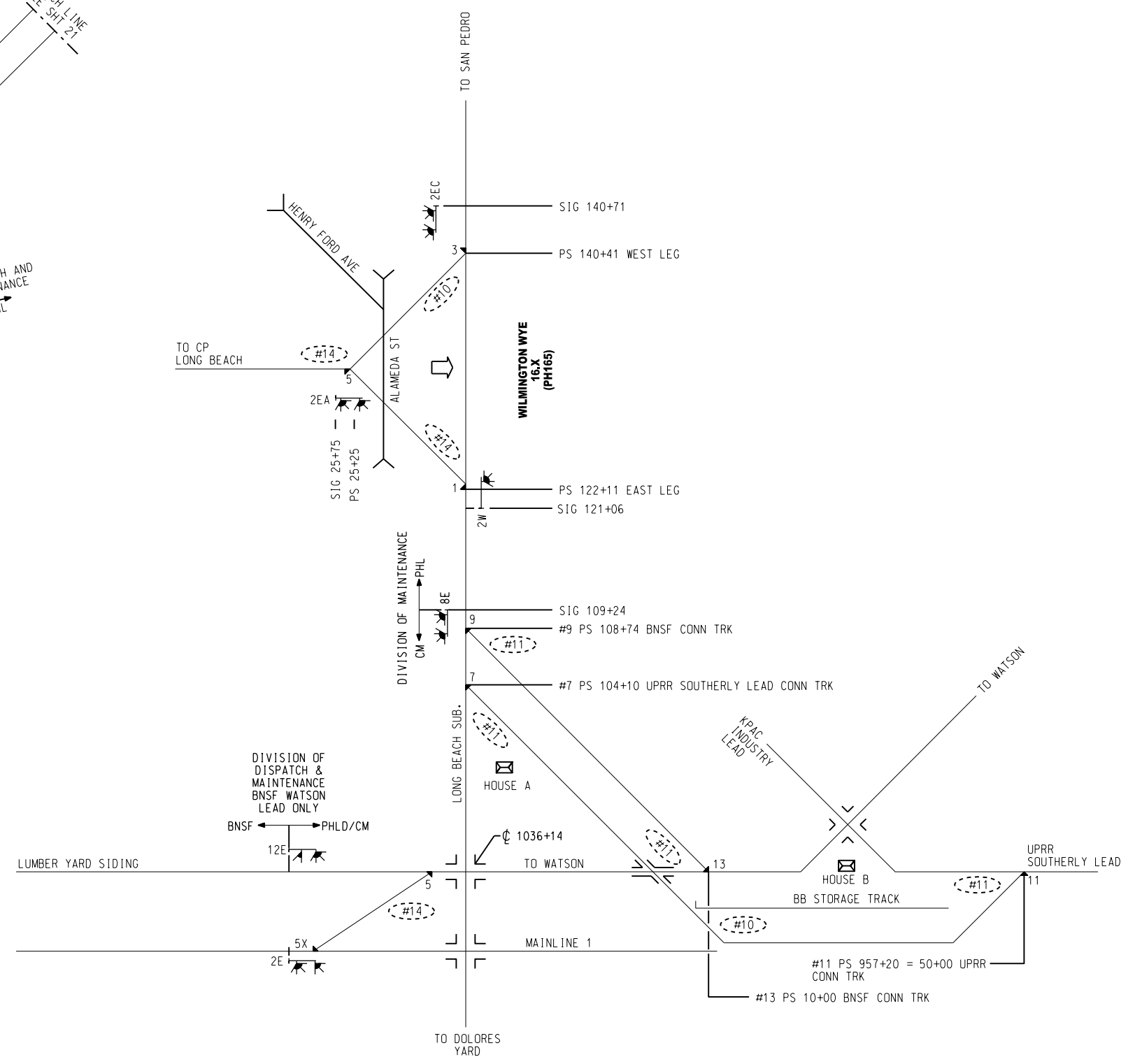
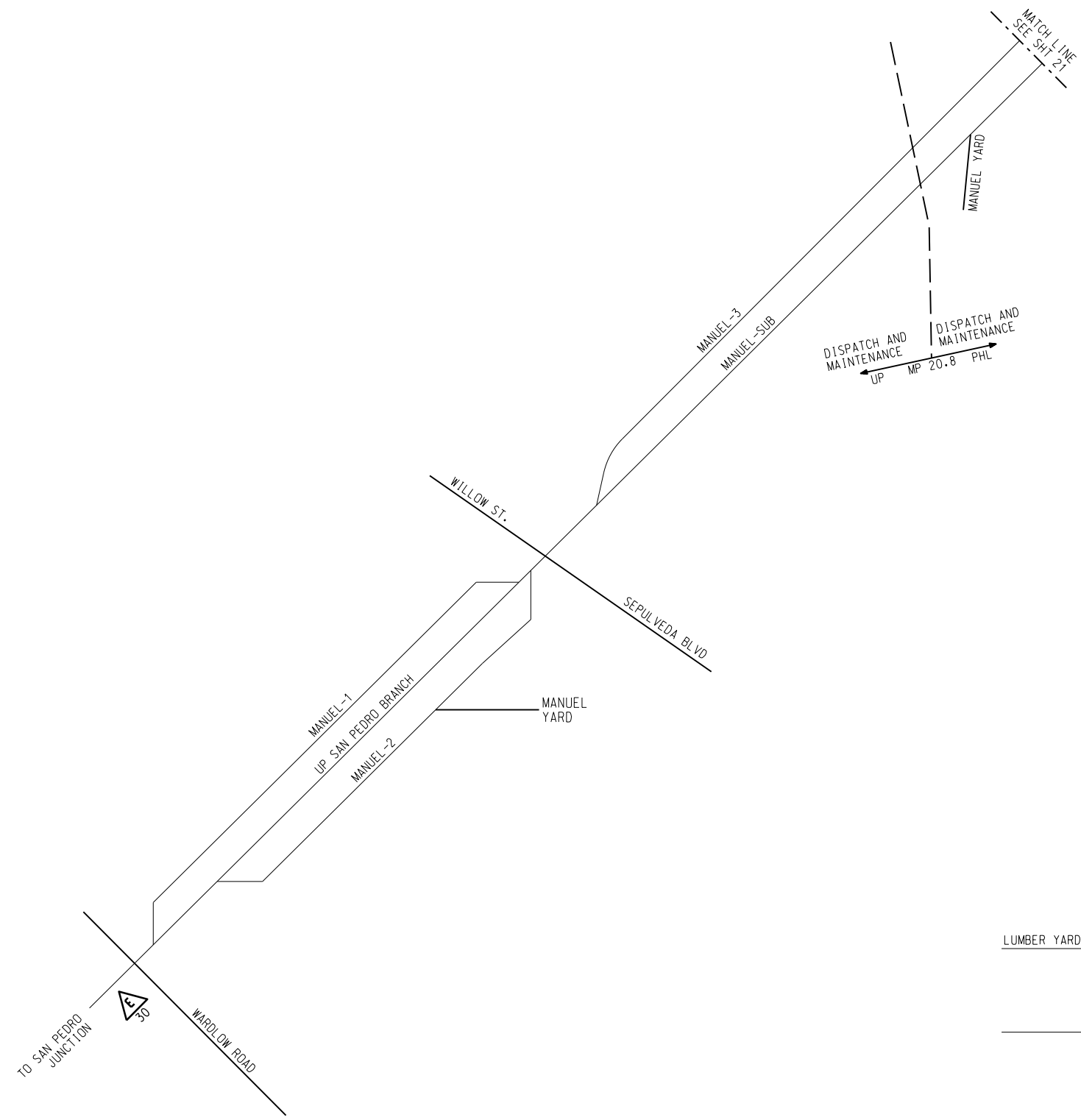
ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY TRACK CHART

REVISED: 09/23/2024

SCALE: 1" = 500' (HORIZONTAL ONLY)

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Maintenance of Way Services

Appendix C

ACTA Maintenance Yard Location



Corridor Maintenance Facilities

Yard
Pkg Bldg

Access from IT Fwy

Access from Anaheim St.



Maintenance of Way Services

Appendix D

Department of Industrial Relations (DIR) Form

DIR FORM 01

For the Contractor and all subcontractors listed in a proposal, provide the information requested below and submit this form with the proposal along with a page showing DIR registration confirmation from the DIR website for each listed firm.

	Firm Name	DIR Registration Number	Work Categories
Proposing Firm			
Subconsultants			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Add additional pages as necessary.

Maintenance of Way Services

Appendix E

Sample Annual Budget Forms

Sample Alameda Corridor - Maintenance of Way (MOW) Budget

(Number and title of positions, estimated hours, and cost shares shown below are examples only and are subject to revision based on actual work)

1. LABOR COSTS				20xx	R.R. M&O - Rail Cost	Res. Acct. Non-Rail Cost	ACTA Operating Budget Cost	Previous Year
SUBTOTAL 1:				18.5 Staff Positions	\$ -	\$ -	\$ -	\$ -
2. OPERATIONS MAINTENANCE				20xx	Share R.R. M&O - Rail Cost	Share Res. Acct. Non-Rail Cost	Share ACTA Operating Budget Cost	Previous Year
2.b	Pump Station Maintenance		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
2.b.i	Pump Station Repairs and Supplies (Subcontractor)		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
2.c	AEI & Other Communications Maintenance		\$ -	62.3%	\$ -	0.0%	37.7%	\$ -
2.d	Rail Flaw Detection (Subcontractor)		\$ -	100.0%	\$ -	0.0%	0.0%	\$ -
2.e	Graffiti Control		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
2.f	Weed Abatement (Subcontractor)		\$ -	80.0%	\$ -	20.0%	0.0%	\$ -
2.g	Safety Training (Subcontractor)		\$ -	85.0%	\$ -	15.0%	0.0%	\$ -
2.h	Safety Management		\$ -	85.0%	\$ -	15.0%	0.0%	\$ -
2.i	Vehicles		\$ -	75.0%	\$ -	25.0%	0.0%	\$ -
2.l	Full-Time Equipment		\$ -	100.0%	\$ -	0.0%	0.0%	\$ -
2.m	Maintenance Program Rail Grinding - (50% of Total Cost)		\$ -	100.0%	\$ -	0.0%	0.0%	\$ -
2.n	Track Materials / Supplies / Rentals		\$ -	100.0%	\$ -	0.0%	0.0%	\$ -
2.o	Signal Maintenance (Subcontractor)		\$ -	100.0%	\$ -	0.0%	0.0%	\$ -
2.p	Ladder / Fence / Traffic Support (Subcontractor)		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
2.q	Security - Trench Cameras		\$ -	70.0%	\$ -	25.0%	5.0%	\$ -
2.r	Security / Yard & Office Maintenance & Support (Subcontractor)		\$ -	100.0%	\$ -	0.0%	0.0%	\$ -
2.s	Underwater Bridge Inspection (Completed in 2023. Occurs again in 2028)		\$ -	100.0%	\$ -	0.0%	0.0%	\$ -
2.t	Trench Ditch Cleaning		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
2.w	Railroad Reporting and Record Keeping Software System (Subcontractor)		\$ -	100.0%	\$ -	0.0%	0.0%	\$ -
2.x	Railroad Emergency Drill Exercise		\$ -	100.0%	\$ -	0.0%	0.0%	\$ -
2.dd	Bridge Inspections (Subcontractor)		\$ -	100.0%	\$ -	0.0%	0.0%	\$ -
2.ee	Communication System Repair		\$ -	100.0%	\$ -	0.0%	0.0%	\$ -
SUBTOTAL 2:				\$ -	\$ -	\$ -	\$ -	\$ -
3. CAPITAL COSTS				20xx	Share R.R. M&O - Rail Cost	Share Res. Acct. Non-Rail Cost	Share ACTA Operating Budget Cost	Previous Year
3.a	Surfacing & Mobilization		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
3.c	Reballast Program - Labor & Equipment		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
3.d	Reballast Program - Ballast		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
3.f	Capital Program Rail Grinding - (50% of Total Cost)		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
3.h-2	Replace 20 Frogs		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
3.h-3	Replace 40 Switch Points and Stock Rails		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
3.h-5	Insulated Joint Replacement		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
3.o	Pump Station Upgrades (Subcontractor)		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
3.r	Trench Emergency Ladder, Stair Study, & Repairs (Subcontractor)		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
3.aa-1	Replace Long Beach Diamonds		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
3.gg-3	Curve Rail Replacement		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
3.il	Fixed Trench Ladders (Subcontractor)		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
3.mm	Miscellaneous Trench Structure Repairs (Subcontractor)		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
3.nn	Compton Bridges - Replace Deck Ties		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
3.oo	Replacement of M23A Switches Machines		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
3.qq	Furnish and Replace Rail Lubricator Systems		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
3.rr	Corridor Signal Maintenance - Construction		\$ -	0.0%	\$ -	100.0%	0.0%	\$ -
SUBTOTAL 3				\$ -	\$ -	\$ -	\$ -	\$ -
GRAND TOTAL 1, 2, 3:				\$ -	\$ -	\$ -	\$ -	\$ -

1. Sample ACTA Labor Costs

(Number and title of positions, estimated hours, and cost shares shown below are examples only and are subject to revision based on actual work)

1. LABOR	Positions	Needed Portion	EST Hours	20xx Hourly RATE	OT RATE	OT * VALUE	DT RATE	DT ** VALUE	20xx VALUE	R.R. M & O		Reserve Account			ACTA Operating Budget			Previous Year Approved Budget				
										Share	Rail Cost	Hours	Share	Non-Rail Cost	Hours	Share	Cost		Hours			
MANAGEMENT POSITIONS																						
1.a.i	Contract Manager	1	100.0%	2000	\$ -	N/A	N/A	N/A	N/A	\$ -	70.0%	\$ -	1,400	20.0%	\$ -	400	10.0%	\$ -	200	\$ -		
1.a.ii	Track Supervisor	1	100.0%	2000	\$ -	N/A	N/A	N/A	N/A	\$ -	80.0%	\$ -	1,600	20.0%	\$ -	400	0.0%	\$ -	-	\$ -		
1.a.iii	Safety Supervisor	1	100.0%	2000	\$ -	N/A	N/A	N/A	N/A	\$ -	80.0%	\$ -	1,600	20.0%	\$ -	400	0.0%	\$ -	-	\$ -		
1.a.iv	Office Manager	1	100.0%	2000	\$ -	N/A	N/A	N/A	N/A	\$ -	50.0%	\$ -	1,000	50.0%	\$ -	1,000	0.0%	\$ -	-	\$ -		
1.a.v	Office Assistant	0	100.0%	0	\$ -	N/A	N/A	N/A	N/A	\$ -	50.0%	\$ -	-	50.0%	\$ -	-	0.0%	\$ -	-	\$ -		
STAFF POSITIONS																						
1.b	Track Inspector	1	100.0%	2000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	100.0%	\$ -	2,000	0.0%	\$ -	-	0.0%	\$ -	-	\$ -		
1.b.i	Track Foreman	2	100.0%	4000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	100.0%	\$ -	4,000	0.0%	\$ -	-	0.0%	\$ -	-	\$ -		
1.b.ii	Assistant Foreman	0	100.0%	0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	100.0%	\$ -	-	0.0%	\$ -	-	0.0%	\$ -	-	\$ -		
1.b.iii	Track Laborers	4	100.0%	8000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	97.5%	\$ -	7,800	2.5%	\$ -	200	0.0%	\$ -	-	\$ -		
1.b.iv	Equipment Operators	1.5	100.0%	3000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	92.5%	\$ -	2,775	7.5%	\$ -	225	0.0%	\$ -	-	\$ -		
1.b.v	Welder	2	100.0%	4000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	100.0%	\$ -	4,000	0.0%	\$ -	-	0.0%	\$ -	-	\$ -		
1.b.vi	Welder Helper	1	100.0%	2000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	100.0%	\$ -	2,000	0.0%	\$ -	-	0.0%	\$ -	-	\$ -		
1.b.vii	Laborer (Non-Rail)	1	100.0%	2000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0.0%	\$ -	-	100.0%	\$ -	2,000	0.0%	\$ -	-	\$ -		
1.b.viii	Foreman (Non-Rail)	1	100.0%	2000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0.0%	\$ -	-	100.0%	\$ -	2,000	0.0%	\$ -	-	\$ -		
1.b.ix	Track Superintendent	1	100.0%	2000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	50.0%	\$ -	1,000	50.0%	\$ -	1,000	0.0%	\$ -	-	\$ -		
									18.5	37000	SUBTOTAL 1:		\$ -	-	29,175	\$ -	-	7,625	\$ -	-	200	\$ -
* OT Value Based on Working 80 Hours of OT During Calendar Year = 3.85% of Base Hours **DT Value Based on Working 24 Hours of DT During Year = 1.2% of Base Hours Note: all rates are Fully Burden Labor Rate. Additional detail is available upon request.																						

2. Sample ACTA Operations Maintenance Budget Detail

2.o	Signal Maintenance	U of M	QTY	Rate	Split	Total
Materials						
	Material Ongoing Purchases Total = LS (RWKS purchase)	LS	1	\$ -	100%	\$ -
	Materials - Signal Battery Replacements	Ea	1	\$ -	100%	\$ -
	<i>Subtotal - Materials</i>					\$ -
RailWorks Labor & Equipment						
	HiRail Bucket Truck	Monthly		\$ -	100%	\$ -
	Foreman	HR		\$ -	100%	\$ -
	Foreman - OT	HR		\$ -	100%	\$ -
	<i>Subtotal - RWs Labor & Equipment</i>					\$ -
Subcontractor						
	Office Administrator	HR	1800	\$ -	100%	\$ -
	Signal / Comm Supervisor	HR	1800	\$ -	100%	\$ -
	Signal / Comm Supervisor - OT (Based on 1Q&2Q2022)	HR	75	\$ -	100%	\$ -
	Signal / Comm Supervisor - DT (Based on 1Q&2Q2022)	HR	25	\$ -	100%	\$ -
	Signal Test Maintainer	HR	2000	\$ -	100%	\$ -
	Signal Test Maintainer - OT (Based on 1Q&2Q2022)	HR	75	\$ -	100%	\$ -
	Signal Test Maintainer - DT (Based on 1Q&2Q2022)	HR	25	\$ -	100%	\$ -
	Signal Maintainer (4) - HBS Requesting a 5th Maintainer	HR	9500	\$ -	100%	\$ -
	Signal Maintainer - OT (Based on 1Q&2Q2022) - 900	HR	900	\$ -	100%	\$ -
	Signal Maintainer - DT (Based on 1Q&2Q2022) - 350	HR	350	\$ -	100%	\$ -
	Vehicle - Signal / Comm Supervisor	Monthly	12	\$ -	100%	\$ -
	Vehicle - Signal Test Maintainer	Monthly	12	\$ -	100%	\$ -
	Vehicle - Signal Maintainers (4) - HBS Requesting a 5th	Monthly	12	\$ -	100%	\$ -
	Vehicle - Signal Test Maintainer &/or Signal Maintainer for Call-Outs	HR	1350	\$ -	100%	\$ -
	Vehicle - Sig/Comm Supv &/or Signal Engineer for Call-Outs	HR	100	\$ -	100%	\$ -
	Vehicle - Safety Manager	Monthly	12	\$ -	100%	\$ -
	Equipment - Bucket Truck	Monthly	12	\$ -	100%	\$ -
	Safety Manager - ST	HR	1080	\$ -	100%	\$ -
	Safety Manager - OT	HR	0	\$ -	100%	\$ -
	Safety Manager - DT	HR	0	\$ -	100%	\$ -
	<i>Subtotal - Subcontractor</i>					\$ -
					SUBTOTAL:	\$ -
				Materials	10%	Markup: \$ -
				Subcontractor	5%	Markup: \$ -
				Supplies	15%	Markup: \$ -
					TOTAL:	\$ -

2.p	Ladder / Fence / Traffic Support	U of M	QTY	Rate	Split	Total
Materials						
	Ladder Replacement Parts	LS	1	\$ -	100%	\$ -
	<i>Subtotal - Materials</i>					\$ -
Subcontractor						
	Traffic Support	LS	1	\$ -	100%	\$ -
	Fence Repair / Replacement	LS	1	\$ -	100%	\$ -
	<i>Subtotal - Subcontractor</i>					\$ -
					SUBTOTAL:	\$ -
				Materials	10%	Markup: \$ -
				Subcontractor	5%	Markup: \$ -
				Supplies	15%	Markup: \$ -
					TOTAL:	\$ -

2.q	Security - Trench Cameras	U of M	QTY	Rate	Split	Total
	Motion Detector Replacement Parts	LS	1	\$ -	100%	\$ -
	Wire Replacement Subcontractor	LS	1	\$ -	100%	\$ -
	Camera Replacement Parts	LS	1	\$ -	100%	\$ -
	<i>Subtotal - Subcontractor</i>					\$ -
					SUBTOTAL:	\$ -
				Materials	10%	Markup: \$ -
				Subcontractor	5%	Markup: \$ -
				Supplies	15%	Markup: \$ -
					TOTAL:	\$ -

3. Sample ACTA Capital Program

3.o	Pump Station Upgrades	U of M	QTY	Rate	Split	Total
	Materials	LS	1	\$ -	100%	\$ -
	Subcontractor	LS	1	\$ -	100%	\$ -
SUBTOTAL:						\$ -
	Materials			10%	Markup: \$	-
	Subcontractor			5%	Markup: \$	-
	Supplies			15%	Markup: \$	-
TOTAL:						\$ -

3.r	Trench Emergency Ladder, Stair Study, & Repairs	U of M	QTY	Rate	Split	Total
	Materials - Parts and other materials	LS	1	\$ -	100%	\$ -
	Subcontractor	LS	1	\$ -	100%	\$ -
SUBTOTAL:						\$ -
	Materials			10%	Markup: \$	-
	Subcontractor			5%	Markup: \$	-
	Supplies			15%	Markup: \$	-
TOTAL:						\$ -

3.aa-1	Replace Long Beach Diamonds (procurement into 2024)	U of M	QTY	Rate	Split	Total
RailWorks Labor & Equipment						
	Foreman	Hour	100	\$ -	100%	\$ -
	Laborers (x4)	Hour	400	\$ -	100%	\$ -
	Operators (x2)	Hour	200	\$ -	100%	\$ -
	Welder	Hour	100	\$ -	100%	\$ -
	Welder Helper	Hour	100	\$ -	100%	\$ -
	Flagger	Hour	100	\$ -	100%	\$ -
	Foreman Truck	Hour	100	\$ -	100%	\$ -
	Welding Truck	Hour	100	\$ -	100%	\$ -
	CWR Rail Heater / Vibrator	Hour	40	\$ -	100%	\$ -
	Rail Saw	Hour	80	\$ -	100%	\$ -
	Rail Drill	Hour	80	\$ -	100%	\$ -
	Mobile Power Pack	Hour	80	\$ -	100%	\$ -
	Flagger Truck	Hour	100	\$ -	100%	\$ -
<i>Subtotal - RWs Labor & Equipment</i>						\$ -
Materials						
	Thermite Welds	EA	24	\$ -	100%	\$ -
	Ballast	Ton	150	\$ -	100%	\$ -
	Diamonds	LS	1	\$ -	100%	\$ -
	Insulated Joint Plug Rails	EA	12	\$ -	100%	\$ -
<i>Subtotal - Materials</i>						\$ -
Subcontractor						
	Signal Support	Day	5	\$ -	100%	\$ -
	Subcontract Tamping	Day	2	\$ -	100%	\$ -
	Subcontract Tamping Mobilization	LS	1	\$ -	100%	\$ -
<i>Subtotal - Subcontractor</i>						\$ -
Supplies & Rental						
	Front End Loader Rental (2x)	Month	2	\$ -	100%	\$ -
	Front End Loader Mobilization	Ea	4	\$ -	100%	\$ -
<i>Subtotal - Supplies & Rental</i>						\$ -
SUBTOTAL:						\$ -
	Materials			10%	Markup: \$	-
	Subcontractor			5%	Markup: \$	-
	Supplies			15%	Markup: \$	-
TOTAL:						\$ -

Maintenance of Way Services

Appendix F

UPRR Track and Signal Standards and Exceptions

ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY

Track Exceptions from UPRR Track Standards

Section 3.1 Ties

Table 3-A

Concrete ties are to be used on all ACTA Main and Storage Tracks.

Nine-foot timber ties are to be used on all others, including industry leads.

Section 3.1.5

Table 3.K

The transition between concrete and timber ties shall use the standard for speeds 30 to 50 mph, regardless of the track.

Section 3.2

Table 3.Q

The tie pad used shall be the 3-piece poly pad, with a 1.4 mm steel plate on all concrete ties.

All maintenance is Class 4 or better.

Signal Exceptions from UPRR Signal Standards

1. Section 9.1.2.F Bonding:
All bonding of switch points, heel block joints, and rail connections must be made in accordance with ACTA Standard Drawings.
2. Section 12.1.2.E Underground Cables:
Track wires and underground cables shall be installed not less than 36 inches below the surface of the ground. Care shall be exercised to prevent sharp projections, such as rocks, from coming into contact with the wire or cable.



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<https://www.up.com/emp/engineering/mapcontent/fieldhandbook/Complete%20Book/Redacted%20Track%20Maintenance%20Field%20Handbook.pdf>

Maintenance of Way Services

Appendix G

Inspection of Structures

Inspection of Structures

FRA Bridge Safety Standards

The Contractor shall develop a Bridge Management Plan for ACTA pursuant 29CFR237 Bridge Safety Standards for ACTA-maintained rail bridges. (See attached inventory.) The program shall contain the elements of Subpart B 237.33 including an inventory of the rail bridges, record of the safe loading capacity of each, maintaining design documents and documenting of repairs, and a bridge inspection program covering inspection personnel safety, types of inspection, definition of defect levels and condition codes, documentation including standard forms, structure and component types, and numbering and identification protocol.

A bridge supervisor and qualified inspectors are to be made available pursuant to Subpart C 237.53 and 55.

Necessary manpower, track time, and inspection equipment and vehicles, including that required for underwater bridge components, shall be made available to perform and document such inspections.

Other Structures

Qualified inspectors shall be provided for other bridges (see attached inventory), and other railroad structures including signal bridges, signal masts, crossing warning devices, signal huts, radio towers, antennas, drainage facilities, manholes, vaults, retaining structures, pump stations, emergency ladders, overhead casings, fencing, concrete barriers, and other railroad-related structures. Inspectors shall be experienced in maintenance, inspection and construction; trained in the appropriate safety and inspection techniques; and qualified per FRA Track Safety Standards.

Inspections shall include routine and required annual inspections, as well as emergency inspections following accidents, derailments, floods, earthquakes, fire, and other conditions.

ACTA-Maintained Rail Bridge Inventory

Description	Location	Type	Crossing Number	Reference DWG	Length	# of Spans	Width
ACTA Mainline Over Washington	ACTA Mainline track over Washington Blvd e/o Santa Fe Ave.	Five Track Steel Under Girder	114-0.28-B	C0097 S-101 to S-127	176-3 ⁷ / ₈ " total 86'-8 ⁵ / ₈ " maximum	2	97'-1 ⁷ / ₈ " at east abutment
Compton Creek Bridge	ACTA Mainline over Compton Creek	3 track Steel Through Girder	N/A	C0101 S-001 to S-034	354'-9 ³ / ₄ " total 100'-0" maximum	4	63'-0"
Dolores Yard Ped Underpass	ACTA Mainline over pedestrian tunnel @ Dolores Yard	Concrete box	114-13.70-BDX		Spans ROW at skew	1	
Dominguez Channel Bridge	ACTA Mainline tracks over Dominguez Channel	4 tracks on precast, prestressed concrete box girders	N/A	C0102 S-001 to S-017	204'-0" total 35'-6" Maximum	6	70'-4"
Alameda Street Underpass	Alameda Street under ACTA Mainline Tracks @ Huntway Curve	4 track on steel under girder/ concrete deck	114-16.16-B	C0131 S-001 to S-023	131'-0 ¹ / ₄ " total equal	2	70'-1" added 2'-3" northside 3'-8" southside
Long Beach Lead Bridge	Long Beach Lead Track across the Dominguez Channel	2 track Steel under Girder with concrete deck	N/A	C0103 S-001 to S-023	204'-6" total 42'-0" maximum	6	38'-4"
Henry Ford Grade Separation Segment 2	ACTA Mainline Across Dominguez Channel	2 Track - 2 spans Steel Plate Under Girder & 1 span Through Truss	N/A	C0104 S-200 to S-247	550'-8" total 127'-0" PG maximum 296'-9 ³ / ₈ " truss	3	36'-2" Plate Girder 38'-6" truss
Henry Ford Grade Separation Segment 3	ACTA Mainline across Henry Ford / Peir A Way Intersection	2 Track on Steel Through Truss	114A-17.38-B	C0104 S-300 to S-309	295'-3 ³ / ₈ "	1	38'-6"
Henry Ford Grade Separation Segment 4	Viaduct Section over UP San Pedro Branch Line	2 track on precast concrete box girders		C0104 S-400 to S-440	856'-0" total 58'-0" maximum	19	36'-0"
Henry Ford Grade Separation Segment 5A	Continuation of Viaduct Section	2 track on precast concrete box girders	N/A	C0104 S-500 to S-509	554'-0" total 42'-6" maximum	13	36'-0"
ACTA -3 Dominguez Channel Bridge	ACTA-3 Track over the Dominguez Channel at Henry Ford Ave.	Single track on steel girders with timber ties	N/A				

ACTA-Maintained Trench Bridges

(Superstructure and substructure, roadway surface maintenance by others)

Description	Location	Type	Crossing Number	Reference DWG	Length	# of Spans	Width	Surface Maintenance
25th Street Overpass	25th Street over Trench e/o Alameda Street	4 Lane Road on Precast Concrete Girders with Cast in Place Concrete Deck	114-0.70-A	Segment 2 S-500 to S-522	51'-0"	1	180'-6"	Vernon
27th Street Overpass	27th Street over Trench on West Alameda St.	2 Lane Road on Precast Concrete Girders with Cast in Place Concrete Deck	114-0.80-A	Segment 2 S-400 to S-424	51'-0"	1	162'-7½"	City of LA
38th / 41st Street Overpass	38th / 41st Street across the trench adjacent to Alameda Street	2 Lane Road Precast Concrete Girders with Cast in Place Concrete Deck	114-1.20-A	Segment 2 S-300 to S-325	51'-0"	1	251'-6"	City of LA
Vernon Ave. Overpass	Vernon Ave. across the trench adjacent to Alameda Street	4 Lane Road on Precast Concrete Girders with Cast in Place Concrete Deck	114-1.50-A	Segment 2 S-200 to S-220	51'-0"	1	168'-6"	City of LA
55th Street Overpass	55th Street across the trench adjacent to Alameda Street	2 Lane Road on Precast Concrete Girders with Cast in Place Concrete Deck	114-2.20-A	Segment 2 S-100 to S-121	51'-0"	1	158'-6"	City of LA
Slauson Ave. and Railroad Overpass	Slauson Ave. and Railroad track across the trench adjacent to Alameda Street	6 Lanes (4 thru & 2 turn) & Railroad Track on Precast Concrete Girders with Cast in Place Concrete Deck	114-2.50-A 114-2.50-AT	Segment 3 S-201 to S-225	51'-0"	1	143'-8½"	Huntington Park
Randolph Street and Railroad Overpass	Randolph Street and Railroad track across the trench adjacent to Alameda Street	4 Lanes & Railroad Track on Precast Concrete Girders with Cast in Place Concrete Deck	114.2.60-A 114-2.60-AT	Segment 3 S-101 to S-123	51'-0"	1	175'-5½"	Huntington Park
Gage Ave. Overpass	Gage Ave across the trench adjacent to Alameda Street	5 Lanes (4 thru & 1 turn) on Precast Concrete Girders with Cast in Place Concrete Deck	114-3.00-A	Segment 3 S-501 to S-518	51'-0"	1	104'-0"	Huntington Park

Description	Location	Type	Crossing Number	Reference DWG	Length	# of Spans	Width	Surface Maintenance
Zoe Ave. Overpass	Zoe Ave across the trench adjacent to Alameda Street	4 Lanes (1 thru & 3 turn) on Precast Concrete Girders with Cast in Place Concrete Deck	114-3.15-A	Segment 3 S-401 to S-418	51'-0"	1	80'-0"	Huntington Park
Florence Ave. Overpass	Florence Ave across the trench adjacent to Alameda Street	5 Lanes (4 thru & 1 turn) on Precast Concrete Girders with Cast in Place Concrete Deck	114-3.50-A	Segment 3 S-301 to S-318	51'-0"	1	128'-0"	County of LA
74th St / shopping center access	Shopping center access across the trench adjacent to Alameda Street	Access Driveway on Precast Concrete Girders with Cast in Place Concrete Deck. Built by County after Corridor completion	114-3.60-A	LA County contract plans	51'-0"	1	48'-0"	County of LA
76th St / Metro Commercial Overpass	Metro Commercial Access across the trench adjacent to Alameda Street	Access Driveway on Precast Concrete Girders with Cast in Place Concrete Deck	114-3.76-A	Segment 3 S-601 to S-619	51'-0"	1	48'-0"	County of LA
Nadeau Street Overpass	Nadeau St across the trench adjacent to Alameda Street	5 Lanes (4 thru & 1 turn) on Precast Concrete Girders with Cast in Place Concrete Deck	114-4.00-A	Segment 3 S-201 to S-218	51'-0"	1	104'-0"	County of LA
Engle Driveway Overpass	Engle Driveway across Alameda Trench	Driveway Access on Precast Concrete Girders with Cast in Place Concrete Deck	114-4.40-A	Segment 3 S-101 to S-118	51'-0"	1	48'-0"	County of LA
Hon Driveway	Hon Driveway across Alameda Trench	Driveway Access on Precast Concrete Girders with Cast in Place Concrete Deck	114-4.60-A	Segment 4 S-401 to S-419	51'-0"	1	48'-0"	County of LA
Firestone Blvd Overpass	Firestone Blvd across the trench adjacent to Alameda Street	5 Lanes (4 thru & 1 turn) on Precast Concrete Girders with Cast in Place Concrete Deck	114-4.67-A	Segment 4 S-301 to S-319	51'-0"	1	144'-0"	County of LA
92nd St. / Southern Ave. Overpass	92 St / Southern Ave across the trench adjacent to Alameda Street	4 Lanes (3 thru & 1 turn) on Precast Concrete Girders with Cast in Place Concrete Deck	114-5.00-A	Segment 4 S-201 to S-218	51'-0"	1	96'-0"	County of LA

Description	Location	Type	Crossing Number	Reference DWG	Length	# of Spans	Width	Surface Maintenance
Tweedy Blvd Overpass	Tweedy Blvd across the trench adjacent to Alameda Street	4 Lanes (2 thru & 2 turn) on Precast Concrete Girders with Cast in Place Concrete Deck	114-5.50-A	Segment 4 S-101 to S-118	51'-0"	1	104'-0"	County of LA
Martin Luther King Jr Blvd Overpass	Martin Luther King Jr across the trench adjacent to Alameda Street	6 Lanes (2 thru & 4 turn) on Precast Concrete Girders with Cast in Place Concrete Deck	114-6.00-A	Segment 5 S-401 to S-418	51'-0"	1	128'-0"	Lynwood
Santa Ana Blvd / Fernwood Ave Overpass	Santa Ana Blvd / Fernwood Ave across the trench adjacent to Alameda Street	3 Lanes (2 thru & 1 turn) on Precast Concrete Girders with Cast in Place Concrete Deck	114-6.40-A	Segment 5 S-301 to S-318	51'-0"	1	112'-0"	County of LA
Imperial Hwy Overpass	Imperial Hwy across the trench adjacent to Alameda Street	6 Lane Road on Precast Concrete Girders with Cast in Place Concrete Deck	114-6.64-A	Segment 5 S-201 to S-218	51'-0"	1	136'-0"	County of LA
Lynwood Rd. Overpass	Lynwood Rd across the trench adjacent to Alameda Street	4 Lanes (1 thru & 3 turn) on Precast Concrete Girders with Cast in Place Concrete Deck	114-6.90-A	Segment 5 S-101 to S-118	51'-0"	1	88'-0"	Lynwood
124th St / Weber St Overpass	124 St / Weber St across the trench adjacent to Alameda Street	4 Lanes (2 thru & 2 turn) on Precast Concrete Girders with Cast in Place Concrete Deck	114-7.30-A	Segment 6 S-501 to S-517	51'-0"	1	80'-0"	County of LA
El Segundo Blvd Overpass	El Segundo Blvd across the trench adjacent to Alameda Street	6 Lanes (3 thru & 3 turn) on Precast Concrete Girders with Cast in Place Concrete Deck	114-7.60-A	Segment 6 S-401 to S-419	51'-0"	1	128'-0"	County of LA
134th St / Pine St Overpass	134 St / Pine St across the trench adjacent to Alameda Street	4 Lanes (2 thru & 2 turn) on Precast Concrete Girders with Cast in Place Concrete Deck	114-7.90-A	Segment 6 S-301 to S-317	51'-0"	1	96'-0"	County of LA

Description	Location	Type	Crossing Number	Reference DWG	Length	# of Spans	Width	Surface Maintenance
Elm Street Overpass	Elm Street across the trench adjacent to Alameda Street	5 Lanes on Precast Concrete Girders with Cast in Place Concrete Deck	114-8.60-A	Segment 6 S-201 to S-217	51'-0"	1	96'-0"	Compton
Palmer St Overpass & Plaza	Palmer Street and Pedestrian Plaza across the trench adjacent to Alameda Street	4 Lanes and Plaza on Precast Concrete Girders with Cast in Place Concrete Deck	114-8.80-A	Segment 6 S-101 to S-116A	51'-0"	1	208'-0"	Compton
Compton Blvd Overpass & Plaza	Compton Blvd and Pedestrian Plaza across the trench adjacent to Alameda Street	6 Lanes and Plaza on Precast Concrete Girders with Cast in Place Concrete Deck	114-9.00-A	Segment 7 S-401 to S-419	51'-0"	1	272'-0"	Compton
Myrrh Street Overpass & Plaza	Myrrh St and Pedestrian Plaza across the trench adjacent to Alameda Street	5 Lanes and Plaza on Precast Concrete Girders with Cast in Place Concrete Deck	114-9.20-A	Segment 7 S-301 to S-318	51'-0"	1	208'-0"	Compton
Alondra Blvd Overpass	Alondra Blvd across the trench adjacent to Alameda Street	7 Lane Road on Precast Concrete Girders with Cast in Place Concrete Deck	114-9.50-A	Segment 7 S-201 to S-218	51'-0"	1	104'-0"	Compton
Greenleaf Blvd Overpass	Greenleaf Blvd across the trench adjacent to Alameda Street	6 Lanes (4 thru & 2 turn) on Precast Concrete Girders with Cast in Place Concrete Deck	114-10.00-A	Segment 7 S-101 to S-120	51'-0"	1	104'-0"	Compton

Maintenance of Way Services

Appendix H

Roadway/Highway and Railroad Crossing List

Alameda Corridor
Roadway/Highway and Railroad Crossings
(At-grade shaded)

Street Name	Corridor Station	Milepost	Jurisdiction	Type of Crossing
Washington Blvd. Rail Bridge	115+00	0	Los Angeles	Undercrossing
Santa Fe Ave. Bridge	122+45	0.16	Los Angeles	Undercrossing
Santa Fe Ave./Hi-Rail Access	122+00		Los Angeles	Private/At-Grade
25th St. Bridge	149+50	0.7	Vernon	Overcrossing
27th St. Bridge	157+38	0.82	Vernon	Overcrossing
38th/41st St. Bridge	175+44	1.2	Vernon	Overcrossing
Vernon Ave. Bridge	190+50	1.5	Vernon	Overcrossing
55th St. Bridge	230+20	2.2	Vernon	Overcrossing
BNSF Harbor Subdivision Rail Bridge	244+12	2.46	Huntington Park	Overcrossing
Slauson Ave. Bridge	244+13	2.46	Huntington Park	Overcrossing
UPRR La Habra Branch Rail Bridge	253+42	2.64	Huntington Park	Overcrossing
Randolph St. Bridge	253+98	2.64	Huntington Park	Overcrossing
Gage Ave. Bridge	272+00	2.99	Huntington Park	Overcrossing
Zoe Ave. Bridge	280+11	3.14	Huntington Park	Overcrossing
Florence Ave. Bridge	297+69	3.48	Huntington Park	Overcrossing
74th St. Bridge	304+18	3.6	Walnut Park	Overcrossing
Metro Comm. Driveway (76th St) Bridge	312+53	3.76	Walnut Park	Overcrossing
Nadeau St. Bridge	324+47	3.99	Walnut Park	Overcrossing
Engle Entrance Bridge	346+28	4.4	Walnut Park	Overcrossing
Hon Entrance Bridge	355+79	4.58	South Gate	Overcrossing
Firestone Blvd. Bridge	360+52	4.67	South Gate	Overcrossing
92nd St./Southern Ave. Bridge	376+85	4.98	South Gate	Overcrossing
Tweedy Blvd. Bridge	401+76	5.45	South Gate	Overcrossing
Martin Luther King Blvd. Bridge	432+60	6.03	Lynwood	Overcrossing
Santa Ana Blvd./Fernwood Ave. Bridge	453+56	6.43	Lynwood	Overcrossing
Imperial Hwy. Bridge	462+95	6.61	Lynwood	Overcrossing
105 Fwy./Metro Green Line Bridge	464+50	6.64	Lynwood	Overcrossing
Lynwood Rd. Bridge	477+90	6.89	Lynwood	Overcrossing
124th St/Weber Ave. Bridge	500+18	7.31	Compton	Overcrossing
El Segundo Blvd. Bridge	513+44	7.56	Compton	Overcrossing
134th St/Pine St. Bridge	533+28	7.94	Compton	Overcrossing
Rosecrans Ave. Bridge	560+70	8.46	Compton	Overcrossing
Elm St. Bridge	570+35	8.64	Compton	Overcrossing
Palmer St. Bridge	579+80	8.81	Compton	Overcrossing
Compton Blvd. Bridge	587+63	8.97	Compton	Overcrossing
Myrrh St. Bridge	600+85	9.22	Compton	Overcrossing
Alondra Blvd. Bridge	614+91	9.43	Compton	Overcrossing
Greenleaf Blvd. Bridge	641+74	9.99	Compton	Overcrossing
Artesia Blvd.	667+42	10.48	Compton	Overcrossing
Artesia/ Hi-Rail Access	669+00	10.54	Compton	Private/At-Grade
SR91 Fwy. Bridge	670+20	10.54	Compton	Overcrossing
Artesia Fwy. (onramp) Bridge	673+65	10.71	Compton	Overcrossing

Alameda Corridor
Roadway/Highway and Railroad Crossings
(At-grade shaded)

Street Name	Corridor Station	Milepost	Jurisdiction	Type of Crossing
Compton Creek Bridge	673+65	10.71	Compton	Railroad Bridge
MTA Blue Line Bridge	714+00	11.36	Rancho Dominguez	Overcrossing
Alameda St. Bridge	717+80	11.43	Rancho Dominguez	Undercrossing
Del Amo Blvd. Bridge	770+63	12.43	Rancho Dominguez	Overcrossing
Carson St. Bridge	825+90	13.48	Carson	Overcrossing
Dolores Yard Ped Tunnel	837+14	13.7	Carson	Undercrossing
San Diego Fwy. Bridge	851+35	13.95	Carson	Overcrossing
223rd St. Bridge	855+25	14.04	Carson	Overcrossing
Dominguez Channel Rail Bridge	888+80	14.68	Carson	Railroad Bridge
Sepulveda Blvd. Bridge	916+80	15.2	Carson	Overcrossing
Watson At-Grade Private Crossing	950+00	15.84	Carson	Private/At-Grade
UPRR San Pedro Branch Diamonds	966+70	16.15	Carson	Rail to Rail Crossing
Thenard Wye At-Grade Crossing	N/A		Los Angeles	At Alameda Street
Alameda St. Rail Bridge	967+60	16.16	Los Angeles	Undercrossing
Pacific Coast Hwy Bridge	982+43	16.4	Los Angeles	Overcrossing
Pacific Coast Hwy Private Crossing	982+29	16.44	Los Angeles	Private/At-Grade
Long Beach Lead Diamonds	1002+50	16.83A	Los Angeles	Rail to Rail Crossing
Private Crossing		16.93	Los Angeles	Private/At-Grade
POLB Lead Rail Bridge (Dominguez Channel)	1009+50	16.96B	Los Angeles	Railroad Bridge
Manuel Subdivision Diamonds		17.1	Los Angeles	Rail to Rail Crossing
Terminal Island Fwy Bridge (LB Lead)	1036+14	17.45B	Los Angeles County	Overcrossing
Anaheim St. Bridge (LB Lead)	1045+65	17.63B	Los Angeles County	Overcrossing
Opp St. At-Grade Private Crossing	1009+80	16.97A	Los Angeles	Private/At-Grade
Anaheim St. Bridge	1019+60	17.15A	Los Angeles	Overcrossing
Henry Ford Viaduct/End of Corridor Rail Bridge	1031+00	17.35A	Los Angeles	Undercrossing
Henry Ford Ave Grade Crossing	1030+00		Los Angeles	3 Sets of Gates
Henry Ford Ave Hwy Bridge Over Dominguez Channel	1037+00	17.49	Los Angeles	
				rev. 7/25/2024

Alameda Corridor
Roadway/Highway and Railroad Crossings
(At-grade shaded)

ID #	Street Name	Corridor Station	Milepost	Jurisdiction	Type of Crossing
16	Washington Blvd. Rail Bridge	115+00	0	Los Angeles	Undercrossing
17	Santa Fe Ave. Bridge	122+45	0.16	Los Angeles	Undercrossing
	Santa Fe Ave./Hi-Rail Access	122+00		Los Angeles	At-Grade
18	25th St. Bridge	149+50	0.67	Vernon	Overcrossing
19	27th St. Bridge	157+38.12	0.82	Vernon	Overcrossing
20	38th/41st St. Bridge	175+48.79	1.16	Vernon	Overcrossing
21	Vernon Ave. Bridge	190+38.99	1.45	Vernon	Overcrossing
22	55th St. Bridge	230+31.18	2.2	Vernon	Overcrossing
	BNSF Harbor Subdivision Rail Bridge	244+12	2.46	Huntington Park	Overcrossing
23	Slauson Ave. Bridge	244+12.51	2.46	Huntington Park	Overcrossing
	UPRR La Habra Branch Rail Bridge	253+41.53	2.64	Huntington Park	Overcrossing
24	Randolph St. Bridge	253+41.53	2.64	Huntington Park	Overcrossing
25	Gage Ave. Bridge	271+98.81	2.99	Huntington Park	Overcrossing
26	Zoe Ave. Bridge	280+11.00	3.14	Huntington Park	Overcrossing
27	Florence Ave. Bridge	297+68.56	3.48	Huntington Park	Overcrossing
28a	74st St. Bridge	304+17.66	3.6	Walnut Park	Overcrossing
28	Metro Comm. Driveway (76st St) Bridge	312.56	3.76	Walnut Park	Overcrossing
29	Nadeau St. Bridge	324+47.86	3.99	Walnut Park	Overcrossing
30	Engle Entrance Bridge	346+27.95	4.4	Walnut Park	Overcrossing
31	Hon Entrance Bridge	355+79.05	4.58	South Gate	Overcrossing
32	Firestone Blvd. Bridge	360+52.16	4.67	South Gate	Overcrossing
33	92nd St./Southern Ave. Bridge	376+85.39	4.98	South Gate	Overcrossing
34	Tweedy Blvd. Bridge	401+76.48	5.45	South Gate	Overcrossing
35	Martin Luther King Blvd. Bridge	432+60.75	6.03	Lynwood	Overcrossing
36	Santa Ana Blvd./Fernwood Ave. Bridge	453+56.05	6.43	Lynwood	Overcrossing
37	Imperial Hwy. Bridge	463+11.16	6.61	Lynwood	Overcrossing
38/39	105 Fwy./Metro Green Line Bridge	464+50	6.64	Lynwood	Overcrossing
40	Lynwood Rd. Bridge	477+89.30	6.89	Lynwood	Overcrossing
41	124th St/Weber Ave. Bridge	500+18.39	7.31	Compton	Overcrossing
42	El Segundo Blvd. Bridge	513+44.79	7.56	Compton	Overcrossing
43	134th St/Pine St. Bridge	533+52.00	7.94	Compton	Overcrossing
44	Rosecrans Ave. Bridge	560+70.00	8.46	Compton	Overcrossing
45	Elm St. Bridge	570+33.29	8.64	Compton	Overcrossing
46	Palmer St. Bridge	579+08.44	8.81	Compton	Overcrossing
47	Compton Blvd. Bridge	587+63.26	8.97	Compton	Overcrossing
48	Myrrh St. Bridge	600+86.51	9.22	Compton	Overcrossing
49	Alondra Blvd. Bridge	614+80.49	9.43	Compton	Overcrossing
50	Greenleaf Blvd. Bridge	641+73.83	9.99	Compton	Overcrossing
51	Artesia Blvd.	667+41.13	10.48	Compton	Overcrossing
	Artesia/ Hi-Rail Access	669+00	10.54	Compton	At-Grade
52	SR91 Fwy. Bridge	670+20	10.48	Compton	Overcrossing
53	Artesia Fwy. (onramp) Bridge	673+65	10.71	Compton	Overcrossing
55	Compton Creek Bridge	673+65	10.71	Compton	Railroad Bridge

Alameda Corridor
Roadway/Highway and Railroad Crossings
(At-grade shaded)

ID #	Street Name	Corridor Station	Milepost	Jurisdiction	Type of Crossing
	Perrino Place Grade Crossing	0	0	Los Angeles	At-Grade
16	Washington Blvd. Rail Bridge	114+00	0	Los Angeles	Undercrossing
17	Santa Fe Ave. Bridge	122+49.11	0.16	Los Angeles	Undercrossing
	Santa Fe Ave./Hi-Rail Access	0	0	Los Angeles	At-Grade
18	25th St. Bridge	149+53.55	0.67	Vernon	Overcrossing
19	27th St. Bridge	157+38.12	0.82	Vernon	Overcrossing
20	38th/41st St. Bridge	175+48.79	1.16	Vernon	Overcrossing
21	Vernon Ave. Bridge	190+38.99	1.45	Vernon	Overcrossing
22	55th St. Bridge	230+31.18	2.2	Vernon	Overcrossing
23	Slauson Ave. Bridge	244+12.51	2.46	Huntington Park	Overcrossing
	BNSF Harbor Subdivision Rail Bridge	244+12	2.46	Huntington Park	Overcrossing
24	Randolph St. Bridge	253+41.53	2.64	Huntington Park	Overcrossing
	UPRR La Habra Branch Rail Bridge	253+41.53	2.64	Huntington Park	Overcrossing
25	Gage Ave. Bridge	271+98.81	2.99	Huntington Park	Overcrossing
26	Zoe Ave. Bridge	280+11.00	3.14	Huntington Park	Overcrossing
27	Florence Ave. Bridge	297+68.56	3.48	Huntington Park	Overcrossing
28a	74st St. Bridge	304+17.66	3.6	Walnut Park	Overcrossing
28	Metro Comm. Driveway (76st St) Bridge	312.56	3.76	Walnut Park	Overcrossing
29	Nadeau St. Bridge	324+47.86	3.99	Walnut Park	Overcrossing
30	Engle Entrance Bridge	346+27.95	4.4	Walnut Park	Overcrossing
31	Hon Entrance Bridge	355+79.05	4.58	South Gate	Overcrossing
32	Firestone Blvd. Bridge	360+52.16	4.67	South Gate	Overcrossing
33	92nd St./Southern Ave. Bridge	376+85.39	4.98	South Gate	Overcrossing
34	Tweedy Blvd. Bridge	401+76.48	5.45	South Gate	Overcrossing
35	Martin Luther King Blvd. Bridge	432+60.75	6.03	Lynwood	Overcrossing
36	Santa Ana Blvd./Fernwood Ave. Bridge	453+56.05	6.43	Lynwood	Overcrossing
37	Imperial Hwy. Bridge	463+11.16	6.61	Lynwood	Overcrossing
38/39	105 Fwy./Metro Green Line Bridge	0	6.64	Lynwood	Overcrossing
40	Lynwood Rd. Bridge	477+89.30	6.89	Lynwood	Overcrossing
41	124th St/Weber Ave. Bridge	500+18.39	7.31	Compton	Overcrossing
42	El Segundo Blvd. Bridge	513+44.79	7.56	Compton	Overcrossing
43	134th St/Pine St. Bridge	533+52.00	7.94	Compton	Overcrossing
44	Rosecrans Ave. Bridge	560+70.00	8.46	Compton	Overcrossing
45	Elm St. Bridge	570+33.29	8.64	Compton	Overcrossing
46	Palmer St. Bridge	579+08.44	8.81	Compton	Overcrossing
47	Compton Blvd. Bridge	587+63.26	8.97	Compton	Overcrossing
48	Myrrh St. Bridge	600+86.51	9.22	Compton	Overcrossing
49	Alondra Blvd. Bridge	614+80.49	9.43	Compton	Overcrossing
50	Greenleaf Blvd. Bridge	641+73.83	9.99	Compton	Overcrossing
51/52	Artesia Blvd. / SR91 Fwy Bridge	667+41.13	10.48	Compton	Overcrossing
	Artesia/ Hi-Rail Access	0	10.54	Compton	At-Grade
53	Artesia Fwy. (onramp) Bridge	0	10.61	Compton	Overcrossing
55	Compton Creek Bridge	673+65	10.71	Compton	Railroad Bridge
54	MTA Blue Line Bridge	714+00	11.36	Rancho Dominguez	Overcrossing

Alameda Corridor
Roadway/Highway and Railroad Crossings
(At-grade shaded)

56	Alameda St. Bridge	717+80	11.43	Rancho Dominguez	Undercrossing
57	Del Amo Blvd. Bridge	770+30	12.43	Rancho Dominguez	Overcrossing
58	Carson St. Bridge	825+90	13.48	Carson	Overcrossing
59	San Diego Fwy. Bridge	851+35	13.95	Carson	Overcrossing
60	223rd St. Bridge	855+25	14.04	Carson	Overcrossing
61	Dominguez Channel Rail Bridge	888+80	14.68	Carson	Overcrossing
63	Sepulveda Blvd. Bridge	916+80	15.2	Carson	Overcrossing
	Watson At-Grade Private Crossing	0????	0????	Carson	At-Grade/Private
	UPRR San Pedro Branch Diamonds	966+70	16.15	Carson	Rail to Rail Crossing
	Thenard Wye At-Grade Crossing			Los Angeles	At Alameda Street
64	Alameda St. Rail Bridge	967+60	16.16	Los Angeles	Undercrossing
65	Pacific Coast Hwy Bridge	982+15	16.16	Los Angeles	Overcrossing
	Pacific Coast Hwy Private Crossing	982+15	16.44	Los Angeles	At-Grade/ HR Access
	Long Beach Lead Diamonds	1002+50	16.83A	Los Angeles	Rail to Rail Crossing
67	POLB Lead Rail Bridge	1009+50	16.96B	Los Angeles	Railroad Bridge
68	Terminal Island Fwy Bridge (LB Lead)	1036+14	17.45B	Los Angeles County	Overcrossing
69	Anaheim St. Bridge (LB Lead)	1045+65	17.63B	Los Angeles County	Overcrossing
	Opp St. At-Grade Private Crossing	1010+10	16.97A	Los Angeles	Private/At-Grade
70	Anaheim St. Bridge	1019+60	17.15A	Los Angeles	Overcrossing
71-74	Henry Ford Viaduct/End of Corridor Rail Bridge	1031+00	17.35A	Los Angeles	Undercrossing
	Henry Ford Ave Grade Crossing	1030+00		Los Angeles	3 Sets of Gates
75	Henry Ford Ave Hwy Bridge Over Dominguez Channel	1037+00	17.49	Los Angeles	
76	Henry Ford Ave Rail Bridge Over Dominguez Channel			Los Angeles	Railroad Bridge
					rev. 12/02/2016

Maintenance of Way Services

Appendix I

Pump Stations-Discharge Sequence and Operation and Maintenance Manual

**GREENLEAF AND NADEAU PUMP STATIONS
OPERATION AND MAINTENANCE MANUAL**

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1. INTRODUCTION

The Mid-Corridor Trench pump stations are located on the east side of the trench near Nadeau Street and on the west side of the trench near Greenleaf Boulevard and provide flooding protection for the Mid-Corridor Trench. The watershed area drained by the pump stations extends the full width and length of the trench and includes the area between about Santa Fe Avenue to the north and State Route 91 (SR-91) Artesia Freeway to the south. At each end, where the tracks reach the elevation of the adjacent ground, there is a flood barrier. The barrier is intended to prevent the intrusion of runoff and flood waters from outside of the trench into the trench storm water removal systems.

Each pump station contains four sets of pumps that perform different functions. In addition, there is an extensive list of supporting equipment including control systems, power supply, ventilation equipment, control building and related facilities. The two pump stations have a slightly different layout due to their size limitations, but contain the same amount of equipment, and have the same logic for operation.

There are a total of 11 pumps at each pump station and are labeled groundwater pumps, first flush pumps, storm water pumps and sump pumps. These are described below.

Groundwater Pumps - The groundwater pumps are submersible pumps that discharge clean-up/wash-down flows, infiltrating ground waters, and storm water runoff from the initial start of a rain event (<0.10" of rain) into the Los Angeles County Sanitation District (LACSD) sanitary sewer system. There are 2 groundwater pumps in each of the groundwater wet wells with one set as the lead pump and the other set as the lag pump. The discharge from these pumps is regulated by a LACSD industrial waste permit. However, in order to access the LACSD sanitary sewer at the Nadeau Pump Station, the discharge must first flow through a small section of sewer pipe owned by the Los Angeles County Department of Public Works (LACDPW). Therefore, there is a second industrial waste permit from LACDPW regulating the discharge. At both locations, the industrial waste permits regulate the daily discharge volume, flow rate, hours of discharge, and concentrations of compounds. These pumps are linked to a combustible gas sensor and rain gauge to prevent unauthorized discharges into the LACSD sanitary sewer and a flow meter for monitoring purposes. The groundwater wet well was designed to store the volume of one tank car in the event of a serious accident.

First Flush Pumps – The first flush pumps are rotary lobe pumps that discharge between 0.1" and 0.5" of rain (following the shutdown of the groundwater pumps), mechanical failure of the groundwater pumps, or if a large rain event occurs and overcomes the pumping capacity of the groundwater pumps. There are 3 first flush pumps in each of the first flush wet wells with one set as a lead

pump, two set as a lag pumps. Their discharge flows into a series of oil/water separators to remove contaminants before discharging into the closest surface water body via the local storm drain system. The discharge from these pumps is regulated by a National Pollutant Discharge Elimination System (NPDES) permit. To support the work of the oil/water separators, there is an alum metering system and an activated carbon drum system.

Storm Water Pumps – The storm water pumps are vertical turbine pumps that discharge greater than 0.5” of rain or if a large rain event occurs and overcomes the pumping capacity of the groundwater and first flush pumps. There are 4 storm water pumps in each of the storm water wet wells with one set as a lead pump, and the other 3 set as lag pumps. Their discharge flows directly into the closest surface water body via the local storm drain system regulated by a NPDES permit.

Clean-out Sump Pumps - The sump pumps are 2 additional submersible pumps with one located in the first flush wet well and a second located in the storm water wet well. These pumps are used at the end of the rainy season to completely empty these 2 wet wells for maintenance purposes and to prevent the breeding of mosquitos and other insects.

The groundwater, first flush and storm water pump systems are connected to their own individual magnetic flow meters which measure and indicate both the instantaneous flow rate and the total flow quantity (to date) for each system. The groundwater pumps are linked to its magnetic flow meter to prevent unauthorized discharges into the LACSD sanitary sewer and through a small portion of the LACDPW sanitary system. If the total daily flow quantity is exceeded per the set volume included in the permits, the programmable logic control (PLC) will shut down the groundwater pumps until the following day. The first flush and storm water pump systems do not have the same restrictions. Service water is available near each of these pumping systems as well as at grade near the alum system to allow for clean-up and hosing down. Additionally, it may be used to fill the wet wells in order to calibrate, and/or operate the pumps for maintenance purposes.

There are many types of valves included throughout each of the pump stations and these are used to isolate pumps and separators, control flow rate and direction, for the purpose of safety and when service or repairs are needed on a specific unit.

There are two different types of fan units, one to provide air changes in the main control building (exhaust fan) and one to facilitate air changes in the wet wells (ventilator).

The following sections identify and describe the above mentioned equipment, purpose of this equipment, relationship to adjacent units, operation, controls, operational problems and maintenance. Refer to the attached as-built mechanical drawings for the location of this equipment at the Greenleaf and Nadeau Pump Stations.

2. GROUNDWATER PUMP

2.1 PURPOSE: To discharge clean-up/wash-down flows, infiltrating ground waters, and storm water runoff from the initial start of a rain event (less than 0.1" of rain) into the Los Angeles County Sanitation District (LACSD) sanitary sewer system.

2.2 EQUIPMENT: Two (2) constant speed submersible pumps (P-101/102 Greenleaf Pump Station [GPS] and P-601/602 Nadeau Pump Station [NPS]) are provided to pump the waste waters, ground waters, and/or storm waters from the groundwater sump into the LACSD sanitary sewer. One pump is placed on lead and the other is on lag. These designations are manually rotated throughout the year to extend the life of each pump.

A mercury float switch system consisting of two (2) floats, LSL-103/LSH-103 GPS and LSL-603/LSH-603 NPS are provided to control pump operation.

2.3 RELATIONSHIP TO ADJACENT UNITS

During wet weather periods, if the water level in the wet well continues to rise and exceeds the high level setting, LSH-103 NPS and LSH-603 GPS, the water will eventually flow over the weir baffle into the adjacent first flush pump wet well while the pumps are pumping. The operating groundwater pump will be stopped by the signal from the level switch LSH-110 GPS and LSH-610 NPS in the first flush pump wet well, which will also activate the operation of first flush pump, or the rain gauge level switch LS-105 GPS and LS-605 NPS, where the rainfall indicator is set at 0.1" level. Note: the rain gauge level switch will be reset 2 hours and 45 minutes after the end of the rain event and the groundwater pumps will resume operation.

A combustible gas sensor, AE-112 GPS and AE-612 NPS, is installed about one foot below the galvanized steel grating, which is directly above the groundwater pumps, to detect the presence of combustible gases in the groundwater pump wet wells.

At any time when the catalytic bead combustible gas sensor detects any combustible gases with a concentration at 15% lower explosive limit (LEL) the sensor switch, ASH-11 GPS and ASH-612 NPS, will actuate an alarm at the PLC cabinet in the control building and at the Alameda Corridor Control Center through the common alarm. The alarm will remain indicating on the PLC cabinet until it is manually reset. Should the combustible gas level reach the upper alarm level (20% LEL), the sensor switch ASSHH-12 GPS and ASHH-612 NPS will shut down the operation of the groundwater pumps and actuate an alarm at the PLC panel and at the Alameda Corridor Control Center through the common alarm. The sensor switch ASHH-112 GPS and

ASHH-612 NPS will also prevent the first flush pumps and ventilator from running until the alarm is manually reset.

Magnetic flow meters, FE-104 GPS and FE-604 NPS, sense the pump discharge and instantly record the flow rate and total flow quantity on the indicator / transmitter device, which is integrally mounted directly on the flow meter. The device also transmits the flow rates to the PLC cabinet in the pump control building for recording. Should the daily flow quantity reached the LACSD permitted limits (36,000 gallons per day [gpd] GPS and 19,200 gpd NPS), the operating groundwater pump will be stopped by the signal from the magnetic flow meters and will also activate the operation of first flush pumps.

2.4 OPERATION

2.4.1 Initial Start-up before Operation

1. Check for proper cleanliness (free of sediment, trash, etc.) of the pump wet well to avoid damage to the pump casing and impeller.
2. If the pumps is being lowered down along guide bars to the discharge head connection, check to be sure that the pump casing nozzle is properly engaged with the discharge head.
3. Check pump discharge valves for proper operation.
4. Verify the level sensors are operational.
5. Check to be sure that the wet well is filled with water before the pumps are run for any period of time.

Each pump should be started by placing the selector switch in the “HAND” position on the control building panel with the operator inspecting for excessive noise, vibration, etc. If it runs smoothly, it should be placed in the normal mode of operation (“AUTO” position), which will be controlled by the settings of the level switches (LSL-105/LSH-105 GPS and LSL-605/LSH-605 NPS). When the pump is in the operation, all of the valves and piping associated with the pump operation should be checked for leaks and proper operation. The magnetic flow meter (FE-104 GPS and FE-604 NPS) on the pump discharge manifold should be checked to verify the readout of the total pumping flow rate.

2.4.2 Normal Operation

Operation of the groundwater pumps include the automatic starting and stopping of the pumps by the level switches, rain gauge or combustible gas sensor. The selector switch should be placed in the “AUTO” position on the control building panel during normal operation. The level switches in the pump wet well will automatically control the pumping operation in response to the water level in the wet well. The wet well water levels at

which the float switches automatically start and stop the pumps are as follows:

<u>Level Switches</u>	<u>Activated Elevation</u>	<u>Function</u>
LSH-103 GPS/LSH-603 NPS	3'-0" from floor	Start Pump
LSL-103 GPS/LSL-603 NPS	12" from floor	Stop Pump

2.4.3 Emergency Operation

The groundwater storage provided in the wet well was designed to have sufficient capacity to hold a full tank cargo volume of the freight train in the event of an accident. In the event of a tank cargo spillage, the groundwater pumps should only be operated in "HAND" mode (manual) or turned off. The operator has to be present at the site to make sure there are no pollutants discharged into the LACSD sanitary sewer that exceed discharge limits and should act in accordance with the ACTA Emergency Response Plan. Depending on the analytical results, the spillage may have to be removed by vacuum truck for off-site disposal.

If the combustible gas sensor detects combustible gases in the wet well, and activates the sensor alarm at 20% LEL, the operation of the groundwater pumps will be shut down completely. The operator should investigate the condition in accordance with the ACTA Emergency Response Plan.

If the lead pump breaks down, a visual alarm will be indicated at the PLC panel and at the Alameda Corridor Control Center through the common alarm. The lag pump should be placed into service. The inoperative pump should be taken out of service by turning it off (placing it in the "OFF" mode) and inserting a lock out/tag out tag in the handle to prevent it from being used. The operator should investigate the condition of the pump and determine if it can be repaired or should be replaced. In any case, the inoperative unit should be put back into service as soon as possible.

2.5 CONTROLS

2.5.1 Flow Control

Since the groundwater pumps are of the centrifugal type pump, the flow rates will vary. At a minimum, once a year the flow rate should be checked to ensure that it does not exceed the specified LACSD industrial waste permit peak flow rates (300 gallons per minute [gpm] GPS and 150 gpm NPS). The flow rates are controlled by the pump discharge valves.

Due to the vibration caused by the movement of trains, this discharge valve may be effected by opening or closing a little bit each time thus altering the flow rates. The flow rate is checked on the magnetic flow meters located on the pump discharge piping and should be adjusted accordingly.

2.5.2 Electrical Control

The electrical controls for the groundwater pumps are located on the PLC cabinet and the motor control center in the pump station control building at the street level. The lead and lag pumps are selected by pressing the buttons on the front of the PanelMate unit located on the front of the PLC cabinet. The pump may be placed in the OFF, AUTO (automatic), or HAND (manual) position on the front of the motor control center. Caution: When the pump is manually controlled, care should be taken so that the pump does not continue pumping after the liquid level in the wet well has decreased to the bottom of the pump inlet. Operation of the pump in a dry condition may cause damage to the pump.

2.6 OPERATIONAL PROBLEMS

2.6.1 Mechanical Equipment Problems

Clogging of the pumps and their associated piping may be a problem. The rectangular ditches along the Corridor trench walls are covered with galvanized steel gratings and screens are installed prior to the drop inlet into the underneath detention basin and groundwater wet well. Foreign materials such as vegetation and trash (Styrofoam and plastic materials) are known to enter the detention basin and groundwater wet well. Due to the concerns that some unexpected foreign materials may get into the groundwater pump wet well and cause clogging problems in the pumps and piping, routine checking and cleaning of the ditches along the Corridor trench should be done and recorded.

For additional mechanical equipment problems, the manufacturer's operation and maintenance manuals for the submersible pumps should be checked.

2.6.2 Trouble Shooting

Refer to the manufacture's operation and maintenance manuals for the Flygt Pumps or the abs/Sulzer Pumps for trouble shooting. The recommended remedies are provided to solve the possible operational problems on the pumps and motors.

2.7 MAINTENANCE

2.7.1 Preventative Maintenance

Refer to the Operation and Maintenance Manuals for the Flygt Pumps or the abs/Sulzer Pumps for preventative maintenance. Particular attention should be paid on the following:

1. Visual inspection for worn and damaged parts.
2. Check for oil chamber leaks, oil level, and the requirement of oil change.
3. Check for cable entry leaks, damage on the outer jacket, and replace as required.

The recommended schedules and the types of oil should be followed. Also, as a safety precaution, all work on the motors, which are of the explosion-proof type, should be performed by authorized Flygt and abs/Sulzer personnel.

2.7.2 Maintenance During Operation Periods

The pump and motor should be checked for operational problems such as excessive noise, vibration or other abnormal conditions. In addition, check to see that:

1. The level switches respond to the rising and falling water level in the wet well.
2. The unit starts and stops as designated.

3. MAGNETIC FLOWMETER

3.1PURPOSE: To measure and indicate both the instantaneous flow rate and the total flow quantity (to date) through the magnetic flow meter.

3.2EQUIPMENT: Separate flow meters (FE-104/-111/-206 GPS and FE-604/-611/-706 NPS) are installed, respectively, to measure the discharges from groundwater, first flush runoff, and storm water pumps.

3.3 RELATIONSHIP TO ADJACENT UNITS

The flow meters are provided to measure the following pump discharges:

Flow Meter FE-104 GPS and FE-604 NPS: Groundwater Pumps P-101/P-102 GPS and P-601/P-602 NPS

Flow Meter FE-111 GPS and FE-611 NPS: First Flush Pumps P-106/P-107/P-108 GPS and P-606/P-607/P-608 NPS

Flow Meter FE-206 GPS and FE-706 NPS: Storm Water Pumps P-201/P-202/P-203/P-204 GPS and P-701/P-702/P-703/P-704 NPS

3.4 OPERATION

3.4.1 Initial Start-up before Operation

1. Check units for proper installation, mounting, and electrical connections.
2. Ensure that the meter readings are accurate only when the power is on and the pipe is in full flow conditions.

3.4.2 Normal Operation

The flow meter senses the pump discharge and has the instantaneous and the total flow quantity at the moment displayed locally on the indicator / transmitter device, which is integrally mounted directly on the flow meter. The device also transmits the flow rates to the PLC cabinet in the pump control building for recording.

The flow meters installed at the pump station have the following flow ranges:

Flow Meter FE-104 GPS and FE-604 NPS: 100 to 400 gallons per minute (gpm)

Flow Meter FE-111 GPS and FE-611 NPS: 1,050 to 2,100 gpm

Flow Meter FE-206 GPS and FE-706 NPS: 6,000 to 12,600 gpm

3.4.3 Emergency Operation

In case of a power failure or equipment breakdown, the flow meter sensor will not operate. The meter will function only after the power is resumed (either from main power or standby power) or the repair is done.

3.5 CONTROLS

3.5.1 Flow Control

Except for the straight runs installed at both upstream and downstream of the meter for accurate operation, no valve is provided for hydraulic flow control.

3.5.2 Electrical Control

No "On/Off" switch is provided for each flow meter. The meter is always ready to measure the flow rates so long as there is no power interruption.

3.6 OPERATIONAL PROBLEMS

In general, very few problems should occur with the meter, since there are no moving parts and obstruction less design through the meter tube. If repetitive erratic meter readings occur, the operator should contact the flow meter manufacturer (Danfoss Instrumark International) for checking, calibration, or repair.

3.7 MAINTENANCE

The magnetic flow meter is considered an almost "maintenance free" instrument. However, the instrument must be hydraulically calibrated annually in accordance with LACSD industrial wastewater discharge flow measurement requirements. Equipment calibration cannot be performed based on the installation configuration.

4. COMBUSTIBLE GAS SENSOR

4.1 PURPOSE: To detect the presence of combustible gases in the groundwater wet wells and prevent these gases from entering the LACSD sanitary sewer system and the storm drain system by shutting down the groundwater and first flush pumping systems and the ventilator.

4.2 EQUIPMENT: A combustible gas sensor, AE-112 GPS and AE-612 NPS, is installed about one foot below the galvanized steel grating, which is directly above the groundwater pumps, to detect the presence of combustible gases in the groundwater pump wet wells.

4.3 RELATIONSHIP TO ADJACENT UNITS

The combustible gas sensor is provided to measure the combustible gases in the groundwater wet well. At any time when the catalytic bead combustible gas sensor detects any combustible gases with a concentration at 15% lower explosive limit (LEL) the sensor switch, ASH-11 GPS and ASH-612 NPS, will actuate an alarm at the PLC cabinet in the control building and at the Alameda Corridor Control Center through the common alarm. The alarm will remain indicating on the PLC cabinet until it is manually reset. Should the combustible gas level reach the upper alarm level (20% LEL), the sensor switch ASSHH-12 GPS and ASSHH-612 NPS will shut down the operation of the groundwater pumps and actuate an alarm at the PLC panel and at the Alameda Corridor Control Center through the common alarm. The sensor switch ASHH-112 GPS and ASHH-612 NPS will also prevent the first flush pumps and ventilator from running until the alarm is manually reset.

4.4 OPERATION

4.4.1 Initial Start-up before Operation

Prior to system start-up, the entire system should be visually inspected to ensure proper installation.

The combustible gas sensor settings must be set and utilizes a visual menu system operated by means of a magnet. A magnet stick is supplied for this purpose. The menu system is used to configure alarm set-points, calibrate the sensor module, and for maintenance procedures and alarms acknowledge. The module menu system is operated by means of directing the magnet stick toward each of four independent hall-effect magnetic switches. Each switch functions as if it is a manually activated key. The keys are located above and below the faceplate display and are labeled "M", "E", and up and down arrows. The low alarm (15%), high alarm (20%), and methane concentration (50%) to be used for calibration

need to be set. Once these are set, the combustible gas sensor should be calibrated to verify this setting and operation.

4.4.2 Normal Operation

During normal operation, the combustible gas sensor readings will fluctuate slightly. As required by the LACSD, the span check/adjustment shall be performed on a regular basis (no less than twice per month) and the zero check/adjustment shall be done on a more frequent basis than the span check/adjustment (i.e., once per week versus twice per month). A calibration kit is maintained in the main control building for this purpose. The calibration readings shall be recorded on the Combustible Gas Detection Meter Calibration Check Record form maintained in the main control building. These forms shall be kept and retained for a period of four years.

The combustible gas sensor utilizes a visual menu system operated by means of a magnet. A magnet stick is supplied for this purpose. The menu system is used to configure alarm set-points, calibrate the sensor module, and for maintenance procedures and alarms acknowledge. The module menu system is operated by means of directing the magnet stick toward each of four independent hall-effect magnetic switches. Each switch functions as if it is a manually activated key. The keys are located above and below the faceplate display and are labeled "M", "E", and up and down arrows. The SMC Instruction Manual on Table 6-1 shows the step by step process of the calibration procedures.

4.4.3 Emergency Operation

If the combustible gas sensor detects combustible gases in the wet well, and activates the sensor alarm at 20% LEL, the operation of the groundwater pumps will be shut down completely. The operator should investigate the condition in accordance with the ACTA Emergency Response Plan.

In addition to the regular calibration schedule, and as required by the LACSD, the span check/adjustment shall be performed if the upper alarm level (20%) is reached. This is to ensure the continued proper operation of the unit. A calibration kit is maintained in the main control building for this purpose. The calibration readings shall be recorded on the Combustible Gas Detection Meter Calibration Check Record form maintained in the main control building. These forms shall be kept and retained for a period of four years.

4.5 OPERATIONAL PROBLEMS

The inspection and troubleshooting guide located in the SMC Instruction Manual can be used to determine the corrective action if a fault occurs. Examples of a fault include if the unit is unreliable, noisy, or cannot be calibrated.

4.6 MAINTENANCE

Operator should refer to the SMC Instruction Manual for maintenance procedures. A separate on/off switch has been installed adjacent to the unit to remove the system power.

5. RAIN GAUGE

5.1 PURPOSE: The rain gauge is installed in accordance with the discharge permit requirements of the LACSD. When the rainfall at the pump station area exceeds 0.1 inch, the level switch in the rain gage will send an electrical signal to the PLC cabinet to shutoff the operation of groundwater pumps. If the rainfall continues, the groundwater sump becomes full and the water spills over the weir wall into the first flush sump, where the water will be pumped to the oil/water separators for treatment prior to being discharged to the storm drain system.

5.2 EQUIPMENT: One (1) rain gauge, ME-105 GPS and ME-605 NPS, is provided to stop the pumping of the groundwater into the LACSD sanitary sewer system during rain events. The installation of the rain gauge is done in accordance with the discharge permit requirements of the LACSD.

5.3 RELATIONSHIP TO ADJACENT UNITS

The rain gauge is linked to the groundwater pumps by the PLC as described below.

5.4 OPERATION

Rain will fall in the 14" diameter funnel on the top of the rain gauge. As the rain collects in the float chamber, which is right below the funnel, a float ball will detect the level of the water. As the water level rises, the float will lift a magnetic piston into the operating zone of the level switch, LS-105 GPS and LS-605 NPS, which is installed with the float chamber. The switch will be actuated after approximately 0.1 inch of rain has fallen and will send an electrical signal to the PLC cabinet to shutoff the operation of the groundwater pumps. The following will also occur in accordance with the discharge permit requirements of the LACSD:

- The switch will turn on the green light on the front of the PLC cabinet. The green light will stay lit while the groundwater pumps are deactivated.
- There is a 60 second delay from when the rain gauge has been activated and when the water will drain from it (solenoid valve SV-105 GPS and SV-605 NPS).
- Once the rain gauge has deactivated the groundwater pumps, they will remain deactivated for 2 hours and 45 minutes.
- This timer will be reset every time the rain gauge is filled up again (after emptying every 60 seconds). This is to acknowledge that it is still raining outside.

5.5 OPERATIONAL PROBLEMS

The operator should maintain the cleanliness of the rainfall collection funnel. Any debris, such as tree litter, paper, plastic, and accumulation of dust in the funnel will clog the entrance to the float chamber and cause the gauge read to erroneously.

5.6 MAINTENANCE

Since a long period of dry weather season is predictable in Southern California, covering the top of the funnel may minimize the clogging problem during the dry season.

6. FIRST FLUSH PUMP

6.1 PURPOSE: To pump the first flush water, which are waters from the groundwater wet well, including rain waters between 0.1 inch and 0.5 inch during rainy periods, into the oil/water separators for oil and solids removal. The treated first flush water is then discharge into the 42" diameter storm drain line underneath West Alameda Street and then eventually disposed of into Compton Creek at GPS and 27" diameter storm drain line underneath Leota Street and then eventually disposed of into the Los Angeles River at NPS.

6.2 EQUIPMENT: Three (3) constant speed rotary lobe pumps (P-106/107/108 GPS and P-606/607/608 NPS) are provided to pump the water that flows over the weir from the groundwater wet well into the first flush wet well. These waters are pumped from the first flush wet well into the treatment equipment prior to discharge into the local storm drain system. One pump is placed on lead and the other two are placed on lag. These designations are manually rotated throughout the year to extend the life of each pump.

A mercury float switch system consisting of three (3) floats, LSL-110/LSH-110/LSHH-110 GPS and LSL-610/LSH-610/LSHH-610 NPS are provided to control pump operation.

6.3 RELATIONSHIP TO ADJACENT UNITS

The first flush pumps are provided to pump between 0.1" and 0.5" of rainfall collected from the Corridor trench to the oil/water separators for treatment during rainy periods. If the water level in the wet well continues to rise and exceed the high level setting, LSHH-110 GPS and LSHH-610 NPS, the water will eventually flow over the weir baffle separating the first flush wet well and the storm water wet well. The first flush pumps will be stopped by the signal from the level switch LSM-205 GPS and LSM-705 NPS in the storm water wet well, which is to activate the operation of the storm water pumps.

The first flush pumps will also be started again by the signal from the level switch LSL-205 GPS and LSL-705 in the storm water wet well, which is to stop the operation of the storm water after each storm event. The first flush pumps will continue pumping until the water level in their wet well reaches the pre-set lowest elevation and will be stopped by LSL-110 GPS and LSL-610 NPS.

At any time when the catalytic bead combustible gas sensor detects any combustible gases with a concentration at 15% LEL the sensor switch, ASH-11 GPS and ASH-612 NPS, will actuate an alarm at the PLC cabinet in the control building and at the Alameda Corridor Control Center through the common alarm. The alarm will remain indicating on the PLC cabinet until it is

manually reset. Should the combustible gas level reach the upper alarm level (20% LEL), the sensor switch ASSHH-112 GPS and ASHH-612 NPS will shut down the operation of the groundwater pumps and actuate an alarm at the PLC panel and at the Alameda Corridor Control Center through the common alarm. The sensor switch ASHH-112 GPS and ASHH-612 NPS will also prevent the groundwater pumps and ventilator from running until the alarm is manually reset.

6.4 OPERATION

6.4.1 Initial Start-up before Operation

1. Check for proper cleanliness (free of large size rocks, wood residues, trash, etc.) of the pump wet well to avoid damage to the pump casing and rotary lobes.
2. Check to be sure that the pump casing cover plate is properly bolted in place and the pump and motor drive shafts and driven belt are covered with safety guard. Safety guards are to prevent access to the rotating parts.
3. Check to ensure that the discharge pipe from rotary pups all the way to the oil/water separators is not blocked and valves are not closed to prevent damage to the pump by excessively high pressures.

Note: Should the excessive discharge pressure occur, a 2" pressure relief valve installed on the pump discharge manifold will be activated and a portion of the pump discharge will be released back into the wet well through the grating opening directly above the wet well clean-out sump pump.

4. Check to ensure that the pump has no suction difficulties. If such a problem exists, fill either the suction or discharge nozzles with water and remove the plug from breather.
5. Check to ensure that the hydraulic oil canister installed on the top of the pump casing is filled adequately for the periods of operation.
6. Check to make sure all equipment items (pumps, motors, and valves) are properly lubricated.
7. Check pump discharge valves for proper operation.
8. Verify the level sensors are operational.
9. Check to be sure that the wet well is filled with water before the pumps are turned on and run for any length of time.

Each pump should be started by placing the selector switch in the "HAND" position on the control building panel with the operator inspecting for excessive heat, noise, vibration, etc. If it runs smoothly, it should be placed in the normal mode of operation ("AUTO" position), which will be controlled by the settings of the level switches (LSL-110/LSH-110/LSHH-110 GPS and LSL-610/LSH-610/LSHH-610 NPS). When the pump is in

the operation, all of the valves and piping associated with the pump operation should be checked for leaks and proper operation. The magnetic flow meter (FE-111 GPS and FE-611 NPS) on the pump discharge manifold should be checked to verify the readout of the total pumping flow rate.

6.4.2 Normal Operation

Operation of the first flush pumps include the automatic starting and stopping of the pumps by the level switches, rain gauge or combustible gas sensor. The selector switch should be placed in the “AUTO” position on the control building panel during normal operation. The level switches in the pump wet well will automatically control the pumping operation in response to the water level in the wet well. The wet well water levels at which the float switches automatically start and stop the pumps are as follows:

<u>Level Switches</u>	<u>Activated Elevation</u>	<u>Function</u>
LSHH-110 GPS/LSHH-610 NP	5’-4” from floor	Start Pump
LSL-110 GPS/LSL-610 NPS	1’-4” from floor	Stop Pump

6.4.3 Emergency Operation

If the lead pump breaks down, a visual alarm will be indicated at the PLC panel and at the Alameda Corridor Control Center through the common alarm. One of the lag pumps should be placed into service. The inoperative pump should be taken out of service by turning it off (placing it in the “OFF” mode) and inserting a lock out/tag out tag in the handle to prevent it from being used. The operator should investigate the condition of the pump and determine if it can be repaired or should be replaced. In any case, the inoperative unit should be put back into service as soon as possible.

If the combustible gas sensor detects combustible gases in the groundwater wet well, and activates the sensor alarm at 20% LEL, the operation of the groundwater and first flush pumps and the ventilator will be shut down completely. The operator should investigate the condition in accordance with the ACTA Emergency Response Plan.

6.5 CONTROLS

6.5.1 Flow Control

Since the first flush pumps are a positive displacement type pump, their pumping flow rates remain constant regardless of the pumping heads incurred, therefore, any flow controls are not recommended. No isolation valves are allowed to be in the "CLOSED" positions in the pump discharge line. Closed pump discharge will ruin the pump unit in no time. The butterfly valve is an isolation valve for each pump and should be left in the fully "OPEN" position during normal operation.

6.5.2 Electrical Control

The electrical controls for the first flush pumps are located on the PLC cabinet and the motor control center in the pump station control building at the street level. The lead and lag pumps are selected by pressing the buttons on the front of the PanelMate unit located on the front of the PLC cabinet. The pump may be placed in the OFF, AUTO (automatic), or HAND (manual) position on the front of the motor control center. Caution: When the pump is manually controlled, care should be taken so that the pump does not continue pumping after the liquid level in the wet well has decreased to the bottom of the pump inlet. Operation of the pump in a dry condition may cause damage to the pump.

6.6 OPERATIONAL PROBLEMS

6.6.1 Mechanical Equipment Problems

1. Clogging of the pumps and their associated piping may be a problem, though this should not occur. Due to the concerns that some unexpected foreign materials may get into the first flush pump wet well and cause clogging problems in the pumps and piping, routine checking and cleaning of the ditches along the Corridor trench should be done and recorded.
2. Quenching oil contamination may occur and the condition of the oil should be checked. If contamination is visible after the first 50 hours or every 200 operating hours thereafter, the quenching oil should be changed with oil recommended in the manufacture's operation and maintenance manual.
3. If the pump housing shells wear out, re-adjust the segments per procedures described in the manufacture's operation and maintenance manual.

For additional mechanical equipment problems, the manufacture's operation and maintenance manuals for the submersible pumps should be checked.

6.6.2 Trouble Shooting

Refer to Vogelsang Pumps' Installation, Operation and Maintenance Instructions for trouble shooting. The recommended remedies are provided to solve the possible operational problems on the pumps and motors.

6.7 MAINTENANCE

6.7.1 Preventative Maintenance

Refer to the Vogelsang Pumps' Installation, Operation and Maintenance Instructions for the preventative maintenance schedule for pumps and preventative maintenance. Particular attention should be on changing the pump quenching oil and gear oil and the lubrication of the motor. The recommended schedules and the types of oil and lubricants should be followed.

In addition, the first flush pumps are normally operated during rain events. Operators should be aware of the forecasted weather conditions and conduct the necessary maintenance to have the pumping units ready for full operation prior to the start of the storm season.

6.7.2 Maintenance During Operation Periods

The pump and motor should be checked for operational problems such as excessive noise, vibration or other abnormal conditions. In addition, check to see that:

1. The level switches respond to the rising and falling water level in the wet well.
2. The units start and stop as designated.
3. The motor speed comes up quickly and is maintained.
4. The motors do not spark excessively when starting or running.

7. ALUM FEED METERING PUMP

7.1 PURPOSE: To inject the aluminum sulfate (alum), which is used as a coagulant, into the oil/water separator influent to enhance oil/water/solids separation. The injection point is located directly on the first flush discharge manifold at the location very close to the storm water discharge box.

7.2 EQUIPMENT: Two (2) positive displacement hydraulically balanced diaphragm pumps (P-401/402 GPS and P-901/902 NPS) are provided. One pump is on duty and the other is used as a standby unit. The control panel, UCP-400 GPS and UCP-900 NPS, is installed near the pumps. A calibration chamber is provided on the pump suction header for checking the pump outputs.

A float switch, LSL-405 GPS and LSL-905 NPS, is provided to shut down the pumps when the liquid level in the alum storage tank reaches the preset low level.

7.3 RELATIONSHIP TO ADJACENT UNITS

The operation of the slum feed pump is interlocked with the first flush runoff pumps. The alum solution is injected to the storm water only when the first flush pumps are operating.

A vertical fiberglass chemical storage tank is provided near the pumps to supply the alum solution to the pumps. The tank is equipped with a float switch, LSL-405 GPS and LSL-905 NPS, to shut down the pump when the liquid level in the tank drops to the preset low level, and to actuate an alarm on the PLC cabinet in the pump control building.

7.4 OPERATION

7.4.1 Initial Start-up before Operation

1. Check to be sure that the gear and hydraulic reservoir oil has been filled.
2. Check to see that the coupling guard is in place to prevent access to moving parts.
3. Check to see that the pumping rates have been calibrated.
4. Check to be sure that there is adequate alum solution in the storage tank for the expected periods of operation.

Each pump should be started by placing the selector switch in the "HAND" position with the operator inspecting for abnormal noise, vibration, etc. If it runs smoothly, it should be placed in the normal mode of operation

("AUTO" position), which will be controlled by the operation of the first flush pumps. When the pump operation should be checked for leaks and proper operation.

7.4.2 Normal Operation

During normal operation, the operator selects the lead pump at the PLC control cabinet in the pump station control room and places the "HAND-OFF-AUTO" switch in "AUTO" position. Thereon, the pump will be started and stopped with the operation of the first flush pumps.

7.4.3 Emergency Operation

Breakdown of a pumping unit is not considered an emergency situation; however, the oil/water/solids separation performance will deteriorate. Pump failure will actuate an alarm at the PLC cabinet in the pump control building and at Alameda Corridor Control Center through the common alarm.

The inoperative pump should be taken out of service by closing its suction and discharge valves. The lag pump should be put into service. The operator should investigate the condition of the pump and determine if it can be repaired or should be replaced. In any case, the inoperative unit should be put back into service as soon as possible.

7.5 CONTROLS

7.5.1 Flow Control

Alum feed rates should be adjusted periodically in accordance with the water quality of the storm water being pumped to the oil/water separators. Each pump is provided with a lock-in place micrometer knob adjustment for changing length of stroke, while in operation or idle, and thus changing the pump output. In addition, at the initial start-up operation, check to be sure that the pumping output is accurate by timing the solution level changes in the calibration cylinder, which is installed in the pump suction header. Refer to Pulsafeeder Pumps' Installation, Operation, and Maintenance Instructions for calibration.

7.5.2 Electrical Control

The electrical controls for the alum feed metering pumps are located at the local control panel, UCP-400 GPS and UCP-900 NPS. The pumps are selected by the selector switch HS-403 GPS and HS-903 NPS on the UCP. The alternator in the panel will automatically alternate the pumps after each pumping event. Each pump is controlled by its "HAND-OFF-

AUTO” switch. Normally, the “HAND-OFF-AUTO” switch for each pump is in the “AUTO” position to automatically start/stop with the operation of the first flush pumps.

The “HAND” and “OFF” positions of the “HAND-OFF-AUTO” selector switch are provided for the manual starting and stopping of the auger. Caution: When the pump is manually controlled, care should be taken so that the pump does not continue pumping after the liquid level in the storage tank has decreased to the pump inlet. Operation of the pump in a dry condition will damage the pump.

All pumps running status, OL-401/402 GPS and OL-801/802 NPS, will be indicated on the UCP. Pump operational failure will also actuate an alarm at the PLC cabinet and at the Alameda Corridor Control Center through the common alarm.

7.6 OPERATIONAL PROBLEMS

7.6.1 Mechanical Equipment Problems

The operator should investigate the problem and determine if he can repair it or if a trained serviceman or a manufacturer’s representative is needed. In any case, the inoperative unit should be repaired and put back into service as soon as possible. Unless it is absolutely necessary, do not take the alum feed metering pumps out of service during rain events (arrange for the repair to be done during dry weather periods).

For additional mechanical equipment problems, the manufacture’s operation and maintenance manuals for the alum feed metering pumps should be checked.

7.6.2 Trouble Shooting

Refer to Pulsafeeder Pumps’ Installation, Operation and Maintenance Instructions manual for trouble shooting. The recommended remedies are provided to solve the possible operational problems on the pumps and motors.

7.7 MAINTENANCE

7.7.1 Preventative Maintenance

Refer to Pulsafeeder Pumps’ Installation, Operation and Maintenance Instructions manual for the preventative maintenance schedule for alum pumps and motors. Particular attention should be on the following:

1. Periodic inspection of the hydraulic diaphragm.
2. Periodic checking of hydraulic oil in the gear and oil reservoir.
3. Periodic checking of check valves in the pump head.
4. Periodic calibration of the pumping output.

In addition, the alum feed metering pumps are normally operated during rain events. Operators should perform general inspections on the interior of the tank and conduct the necessary maintenance on the auger drives to have the units ready for full operation prior to the start of the storm season.

7.7.2 Maintenance During Operation Periods

The alum feed metering pumps and motors should be checked for operational problems such as excessive noise, heat, vibration or other abnormal conditions. In addition, check to see that the pump starts and stops in response to the operation of the first flush pumps.

8. OIL/WATER SEPARATORS

8.1 PURPOSE: To remove the oil and settleable solids from the first flush storm water runoff prior to being discharged into the Los Angeles County Sanitation District (LACSD) sanitary sewer line.

8.2 EQUIPMENT: Three (3) corrugated plate interceptor oil/water separators (T-301/T-302/T-303 GPS and T-801/T-802/T-803 NPS) are provided to treat the storm water pumped from the first flush pumps. Each separator is complete with a separation chamber, oil chamber, effluent chamber and sludge chamber. A sludge auger assembly, complete with gear motor drive, is installed adjacent to each sludge hopper to convey the sludge from the hopper into the underground sludge holding tank. A total of six (6) sludge augers are provided. The operations of the auger assemblies are controlled by control panel (UCP-300 GPS and UCP-800 NPS) located near the storm water discharge box.

8.3 RELATIONSHIP TO ADJACENT UNITS

The inlet valve of each oil/water separator is always in the "OPEN" position to receive the storm water from the first flush pumps. After oil/water separation, the oil removed in the separator is accumulated in the oil chamber until it is disposed of by a collection truck. The effluent water continuously overflows into a below-grade 16" diameter manifold line and then flows into the storm water discharge box. The solids settling in the separator hoppers are periodically removed in accordance with the timer settings in the control panel and dumped into the underground sludge holding tank. The sludge in the holding tank will need to be periodically hauled away by truck for off-site disposal.

Prior to being discharged to the atmosphere, the vapors collected from the each of the covered oil/water separators are conveyed through a 4" diameter header to an activated carbon drum for removal of volatile organic compounds (VOCs).

8.4 OPERATION

8.4.1 Initial Start-up before Operation

1. Check to see that the inlet valve of each oil/water separator is in the "OPEN" position and the oil withdrawal valve is closed.
2. Check that the oil and effluent weir levels are properly set.
3. Check that the separators are filled with the clean water prior to receiving the flow from first flush pumps.
4. Check that the gear unit of sludge auger has adequate oil level and safety guard is in place to cover up the rotating shafts.

5. Check that the separator covers/lids are properly bolted with gaskets in place.
6. Check that the timer in the control panel is properly set for sludge removal intervals.
7. Verify that the carbon absorption drum has adequate capacity remaining.

Each sludge auger should be started by placing its selector switch in the "HAND" position with the operator inspecting for abnormal noise, vibration, etc. If it runs smoothly, it should be placed in the normal mode of operation ("AUTO" position), which is thereon controlled by the timer of the unit control panel (UCP-300 GPS and UCP-800 NPS).

8.4.2 Normal Operation

During normal operation, the operator should put all of the augers in the "AUTO" position on the unit control panel. Sludge removal will be done in accordance with the timer settings on each of the augers. When the augers are in operation, all the valves and piping associated with the auger operation should be checked for leaks and proper operation. The flow control valves (FCV-301/FCV-302/FCV-303 GPS and FCV-801/FCV-802/FCV-803 NPS), which are provided in each of the sludge lines, and are also controlled by the same panel. The valves will "OPEN" and "CLOSE" the operation of the augers.

8.4.3 Alternative Operation

Alternative methods of operation include the manual starting and stopping of the augers and shutting down the augers for maintenance or repairs. The operated auger should have its selector switch placed in the "HAND" or "OFF" position. (Refer to Section 1.5.1 Caution).

8.4.4 Emergency Operation

Breakdown of a sludge auger unit is not considered an emergency situation, since the sludge will be continuously accumulated in the hopper until it is withdrawn by manually opening the flow control valve. Without running of the auger, sludge will not be withdrawn evenly and completely out of the hopper. The electric motor actuated flow control valves, FCV-301/FCV-302/FCV-303 GPS and FCV-801/FCV-802/FCV-803 NPS, are of the Fail to Close type (i.e., the valve will remain in "CLOSED" position when it fails).

8.5 CONTROL

8.5.1 Electrical Control

The electrical control for the oil/water separators are located at the local control panel close to the storm water discharge box. Each sludge auger drive is controlled by its "HAND-OFF-AUTO" selector switch on the panel. Normally, the "HAND-OFF-AUTO" selector switch for each auger drive is in the "AUTO" position to provide automatic sludge removal through the timer controller of the panel.

The "HAND" and "OFF" positions of the "HAND-OFF-AUTO" selector switch are provided for the manual starting and stopping of the auger. Caution: When the auger is manually controlled, care should be taken so that the auger does not continue to withdraw the sludge after the first flush pumps are stopped to feed the storm water into the separator. Operation of the augers for a long period of time, while no feed is coming from the first flush pumps, will drain the liquids out of the separator tank and well below its weir crest level. This may create a vacuum condition in the tank and create other maintenance problems afterwards, such as forming of oil and solids crusts on corrugate plates and weir plates (if liquid level is not resumed to the weir crest level), intake of fresh air into the vapor space, etc.

Note: A 4" diameter pressure/vacuum relief valve is installed on the top of each separator to prevent the tank shell from excessive pressure/vacuum conditions.

All auger running status, OL-301AB/OL-302AB/OL-303AB GPS and OL-801AB/OL-802AB/OL-803AB NPS, and failure alarms, OA-301AB/OA-302AB/OA-303AB GPS and OA-801AB/OA-802AB/OA-803AB NPS, are all indicated on the separator control panel.

8.6 OPERATIONAL PROBLEMS

8.6.1 Mechanical Equipment Problems

1. Overload of the auger drive.
2. Breakdown of the flow control valve.
3. Clogging of the sludge withdrawal pipe due to a long period of inoperative auger or control valve.

The operator should investigate the problem and determine if it can be repaired or if a trained serviceman is needed. In any case, the inoperative unit should be repaired and put back into service as soon as possible.

Unless it is absolutely necessary, do not take the separator out of service during rain events (arrange for the repair to be done during dry weather periods).

8.6.2 Trouble Shooting

Refer to Hydro-Flo Technologies' Installation, Operation & Maintenance Instructions manual for trouble shooting. A list of trouble indicators include the following:

1. Effluent quality is deteriorating.
2. Offensive vapor is being generated.
3. Problem in removing the sludge.
4. Problem in removing the oil.

Refer to the manual for individual trouble shooting guides and techniques to solve the possible operational problems.

8.7 MAINTENANCE

8.7.1 Preventive Maintenance

Refer to Hydro-Flo Technologies' Installation, Operation & Maintenance Instructions manual for preventive maintenance schedule for auger motors and gear drives. Particular attention should be on the motor and gear drive lubrications. The recommended schedules and the types of lubricants should be followed.

In addition, the oil/water separators are normally to operate during rain events. Operators should perform general inspections on the interior of the tank and conduct the necessary maintenance on the auger drives to have the units ready for full operation prior to the start of the storm season.

Safety Precautions:

1. Keep all flammable materials away from tanks.
2. Do not enter the tank until the atmosphere has been tested and it has been shown to be safe to enter.

8.7.2 Maintenance During Operation Periods

The auger motors and gear drives should be checked for operational problems such as excessive noise, heat, vibration, or other abnormal conditions.

In addition, check to see if any leaks are occurring at the point where the auger shaft enters the tank. Adjust the packing gland as required.

9. ACTIVATED CARBON DRUM

9.1 PURPOSE: A 200 pound activated carbon drum is installed at the oil/water separator area to capture the volatile organic compounds (VOCs) in the vapor, which is emitted and collected from the gas space above the liquid surfaces of the oil/water separators.

9.2 EQUIPMENT: One (1) activated carbon drum with a dimension of approximately 24" diameter by 36" high is provided with a 2-inch inlet assembly kit, a 2-inch outlet assembly kit, and a 2-inch flexible hose connector. The hose connector is to connect the inlet of the activated carbon drum to the vent header on the oil/water separators. A ¼-inch shutoff sampling cock is installed on each of the tee fittings of the inlet and outlet assemblies. The entire activated carbon drum is placed on a concrete slab for easy maintenance.

9.3 RELATIONSHIP TO ADJACENT UNITS

The activated carbon drum is connected to the oil/water separators to remove VOCs from the vapor.

9.4 OPERATION

The activated carbon drum has to be replaced after the activated carbon inside the drum has captured or absorbed excessive VOCs and becomes saturated (i.e., the VOCs in the inlet and outlet of the drum have the same concentration).

Based on the design data, it calculated that the air/vapor flow rate from the oil/water separators to the activated carbon drum is very slow, and the pressure drop through the activated carbon drum is negligible. Therefore, the 200 pound activated carbon drum may last up to two (2) years without replacement. However, to take some unexpected factors into consideration, such as higher oil concentration, it is recommended that the activated carbon drum be replaced once a year, unless periodic sampling confirms that the activated carbon drum is not exhausted.

Sampling the VOC concentrations in the activated carbon in the drum should be performed by a trained individual.

9.5 OPERATIONAL PROBLEMS AND MAINTENANCE

1. Check to see that all piping, fittings, and hose connectors are properly connected, and no vapor leaks.
2. Check the last date that the activated carbon drum was replaced, and a test to confirm that the current drum is not exhausted.

10. STORM WATER PUMP

10.1PURPOSE: To pump the storm water runoff, which are waters from the first flush wet well, including rain waters greater than 0.5 inch during rainy periods. The water is discharge into the 42" diameter storm drain line underneath West Alameda Street and then eventually disposed of into Compton Creek at GPS and 27" diameter storm drain line underneath Leota Street and then eventually disposed of into the Los Angeles River at NPS.

10.2 EQUIPMENT: Four (4) constant speed vertical turbine pumps (P-201/202/203/204 GPS and P-701/702/703/704 NPS) are provided to pump the water that flows over the weir from the first flush wet well into the storm water wet well. One pump is placed on lead and the other three are placed on lag. These designations are manually rotated throughout the year to extend the life of each pump.

A mercury float switch system consisting of three (3) floats, LSL-205/LSM-205/LSH-205 GPS and LSL-705/LSM-705/LSH-705 NPS are provided to control pump operation. An additional float switch, LSHH-205 GPS and LSHH-705 NPS is also provided to actuate the high-high level alarm at the Control Room PLC cabinet and the common alarm at the Alameda Corridor Control Center, when the water level in the wet well is at the alarming level.

A one-gallon oil reservoir is provided with each pump for automatic pump line shaft lubrication. The solenoid valve of the oiler assembly is interlocked with the storm water pump and will open to inject the oil to lubricate the line shaft bearings whenever the pump operates.

A pressure switch (PSL-201/PSL-202/PSL-203/PSL-204 GPS and PSL-701/PSL-702/PSL-703/PSL-704 NPS) is provided with each pump to shut down the pumping unit, if the pump fails to achieve the operating pressure as sensed by the switch. In this case, the pumping pressure may not be adequate to fully open the check valve on the pump discharge.

10.3 RELATIONSHIP TO ADJACENT UNITS

The storm water pumps are provided to pump greater than 0.5" of rainfall collected from the Corridor trench during rainy periods. The storm water pumps have a pumping capacity corresponding to the 10-year peak rainfall. When a 50-year storm occurs, the balance of the runoff from this event will be stored in the wet well where it will be pumped out continuously until the water level reaches the pump shut-off level.

10.4 OPERATION

10.4.1 Initial Start-up before Operation

1. Check for proper cleanliness to avoid damage to the pump impellers and bowls.
2. Check to be sure the oil reservoir is full of the proper oil. If necessary, refer to Johnston Pump's Operation and Maintenance Instructions.
3. Adjust the sight feed valve of the oiler assembly to have one drop per second.
4. Check to make sure the pump shaft turns freely.
5. Check pump discharge valves for proper operation.
6. Check to make sure all equipment items (pumps, motors, and valves) are lubricated.
7. Verify the level sensors are operational.
8. Check to be sure that the wet well is filled with water before the pumps are turned on and run for any length of time.

Each pump should be started by placing the selector switch in the "HAND" position on the control building panel with the operator inspecting for excessive heat, noise, vibration, etc. If it runs smoothly, it should be placed in the normal mode of operation ("AUTO" position), which will be controlled by the settings of the level switches (LSL-205/LSM-205/LSH-205 GPS and LSL-705/LSM-705/LSH-705 NPS). When the pump is in the operation, all of the valves and piping associated with the pump operation should be checked for leaks and proper operation. The magnetic flow meter (FE-206 GPS and FE-706 NPS) on the pump discharge manifold should be checked to verify the readout of the total pumping flow rate.

10.4.2 Normal Operation

Operation of the storm water pumps include the automatic starting and stopping of the pumps by the level switches, rain gauge or combustible gas sensor. The selector switch should be placed in the "AUTO" position on the control building panel during normal operation. The level switches in the pump wet well will automatically control the pumping operation in response to the water level in the wet well. The wet well water levels at which the float switches automatically start and stop the pumps are as follows:

<u>Level Switches</u>	<u>Activated Elevation</u>	<u>Function</u>
LSM-205 GPS/LSM-705 NPS	7'-4" from floor	Start Pump
LSL-205 GPS/LSL-705 NPS	5'-0" from floor	Stop Pump
LSHH-205 GPS/LSHH-705 NPS	10'-2" from floor	Sound High-High Water Alarm

10.4.3 Emergency Operation

If the lead pump breaks down, a visual alarm will be indicated at the PLC panel and at the Alameda Corridor Control Center through the common alarm. One of the lag pumps should be placed into service. The inoperative pump should be taken out of service by turning it off (placing it in the "OFF" mode) and inserting a lock out/tag out tag in the handle to prevent it from being used. The operator should investigate the condition of the pump and determine if it can be repaired or should be replaced. In any case, the inoperative unit should be put back into service as soon as possible.

When the water level in the wet well exceeds the maximum preset level, it will actuate the level switch LSHH-205 GPS and LSHH-705 NPS and the high-high level alarm at the PLC cabinet in the pump control building and the common alarm at the Alameda Corridor Control Center through the common alarm.

10.5 CONTROLS

10.5.1 Flow Control

Each pump is provided with a discharge check valve and butterfly valve. The check will swing open and close with the on and off operation of the pump. The butterfly valve is an isolation and control valve for each pump and shall be locked in the appropriate position during normal operation.

10.5.2 Electrical Control

The electrical controls for the storm water pumps are located on the PLC cabinet and the motor control center in the pump station control building at the street level. The lead and lag pumps are selected by pressing the buttons on the front of the PanelMate unit located on the front of the PLC cabinet. The pump may be placed in the OFF, AUTO (automatic), or HAND (manual) position on the front of the motor control center. Caution: When the pump is manually controlled, care should be taken so that the pump does not continue pumping after the liquid level in the wet well has decreased to the bottom of the pump inlet. Operation of the pump in a dry condition may cause damage to the pump.

10.6 OPERATIONAL PROBLEMS

10.6.1 Mechanical Equipment Problems

Clogging of the pumps and their associated piping may be a problem, though this should not occur. The rectangular ditches along the Corridor

trench walls are covered with galvanized steel gratings and screens are installed at the drop inlet into the wet wells. The ditches are provided to convey the storm water or groundwater seepage from the Corridor trench into the underneath detention basin and storm water pump wet well. Foreign materials, such as large size gravel/rocks or trash are not expected. However, in the event unexpected foreign materials enter the wet well, routine checking and cleaning of the ditches along the Corridor trench should be done and recorded.

For additional mechanical equipment problems, the manufacture's operation and maintenance manuals for the submersible pumps should be checked.

10.6.2 Trouble Shooting

Refer to Johnston Pumps' Installation, Operation and Maintenance Instructions for trouble shooting. The recommended remedies are provided to solve the possible operational problems on the pumps. For the motors, refer to U.S. Electrical Motors Vertical High Thrust Motors Installation, Operation and Maintenance Manual.

10.7 MAINTENANCE

10.7.1 Preventative Maintenance

Refer to the Johnston Pumps' Installation, Operation and Maintenance Instructions for the preventative maintenance schedule for pumps and refer to U.S. Electrical Motors Vertical High Thrust Motors Installation, Operation and Maintenance Manual for the preventative maintenance schedule for motors. The recommended schedules and the types of oil and lubricants should be followed.

In addition, the storm water pumps are normally operated during rain events. Operators should be aware of the forecasted weather conditions and conduct the necessary maintenance to have the pumping units ready for full operation prior to the start of the storm season.

10.7.2 Maintenance During Operation Periods

The pumps and motors should be checked for operational problems such as excessive noise, heat, vibration or other abnormal conditions. In addition, check to see that:

1. The level switches respond to the rising and falling water level in the wet well.
2. The units start and stop as designated.

3. The motor speed comes up quickly and is maintained.
4. The motors do not spark excessively when starting or running.

11. CLEAN-OUT SUMP PUMP

11.1 PURPOSE: The clean-out sump pumps are used to drain the residual water remaining in the detention basin and both the first flush pump and storm water pump wet wells. The pumping operation is normally done during dry weather periods or preferably during summer time when the inspection on the interiors of the detention basin and wet wells is necessary or to prevent the breeding of insects.

11.2 EQUIPMENT: Two (2) constant speed submersible pumps (P-121/211 GPS and P-621/711 NPS) are provided, one in each individual wet well, to pump the residual water to the oil/water separators for solids removal prior to discharge into the storm drain system. A level switch, LSL-121/211 GPS and LSL-621/711 NPS, each equipped with one float, is provided in each sump to stop the pump operation.

11.3 RELATIONSHIP TO ADJACENT UNITS

Each clean-out sump pump is operated independently. The clean-out or drainage water is pumped into the oil/water separators for solids removal. Make sure that the separators are ready to receive the clean-out water.

The potable water from the hose bibs installed above the wet well openings should be used to hose down the interiors of the detention basin and wet wells.

11.4 OPERATION

11.4.1 Initial Start-up before Operation

1. Check for proper cleanliness (free of trash and debris) of the wet well to avoid damage to the pump casing and impeller
2. If the pump is being lowered down along guide bars to the discharge head connection, check to be sure that the pump nozzle is properly engaged with the discharge head.
3. Check pump discharge valves for proper operation.
4. Verify the level sensors are operational.
5. Check to be sure that the wet well is filled with water before the pumps are run for any period of time.

Each pump should be started by pushing the "START" pushbutton with the operator inspecting for abnormal noise, vibration, etc. If it runs smoothly, it should be able to be stopped by releasing the hand from the pushbutton. Thereon, it will be stopped by the low level switch (LSL) in the sump.

When the pump is in operation, all valves and piping associated with the pump operation should be checked for leaks and proper operation.

11.4.2 Normal Operation

Once the "START" pushbutton is pushed, the operating pump will automatically stop when the liquid level in the sump drops to the level controlled by the low level switch LSL-121/LSL-211 GPS and LSL-621/LSL-711 NPS. The frequencies of the operations will be based on the inspection and maintenance schedule of the detention basin and pump wet wells.

11.4.3 Emergency Operation

If one of the pumps breaks down, the inoperative pump should be taken out of service by closing the discharge plug valve and lifting the pump up and out of the wet well for inspection. The operator should investigate the condition of the pump and determine if he can repair it or if a trained serviceman or a pump manufacturer's serviceman is needed.

Since the two clean-out sump pumps are identical in their fabrication and performance, the pumps are interchangeable. The operable pup can be lifted up from one sump and lowered into the other sump and operated. In any case, the inoperative unit should be repaired and put back into service as soon as possible.

11.5 CONTROLS

11.5.1 Flow Control

No flow control is required. All valves in the pump discharge line should be in full open position.

11.5.2 Electrical Control

The electrical controls for the clean-out sump pumps are located at the unit control panel, UCP-120 GPS and UCP-620 NPS, near the sump openings. Though each pump is to operate independently, the two pumps share one common panel. Each pump is started by its local manual "START" pushbutton and stopped by the associated level switch (LSL) in the pump.

The pumps running status, OL-121/211 GPS and OL-621/711 NPS, and failure alarms, OA-121/211 GPS and OA-621/711 NPS, will be indicated at the UCP-120 GPS and UCP-620 NPS.

11.6 OPERATIONAL PROBLEMS

11.6.1 Mechanical Equipment Problems

1. Should clogging in pump casing, valves, or piping, it should be cleaned as soon as detected. Note: Submersible pumps as manufactured by Flygt Pumps, model CP 3127 are capable of passing a 3" diameter solid sphere.
2. Water enters into the pump oil chamber. Should this occur, the sensor in the oil chamber will activate an operational failure alarm on the UCP. The inoperative pump should be taken out of service by lifting it up out of the wet well. The operator should contact the Flygt serviceman for repair.

For additional mechanical equipment problems, the manufacture's operation and maintenance manuals for the clean-out sump pumps should be checked.

11.6.2 Trouble Shooting

Refer to Flygt Pumps' Installation, Care and Maintenance Instructions manual for trouble shooting. The recommended remedies are provided to solve the possible operational problems on the pumps and motors.

11.7 MAINTENANCE

11.7.1 Preventative Maintenance

Refer to Flygt Pumps' Installation, Care and Maintenance Instructions manual for the preventative maintenance for pumps and electric motors. Particular attention should be on the following:

1. Visual inspection for worn and damaged parts.
2. Check for oil chamber leaks, oil level, and the requirement/frequency for oil change.
3. Check for cable entry leaks, damage on outer jacket, and replace as required.

The recommended schedules and the types of oil should be followed. Also, as a safety precaution, all work on the motors, which are of the explosion-proof type, should be performed by authorized Flygt personnel or personnel authorized by Flygt.

11.7.2 Maintenance During Operation Periods

The pump and motor should be checked for operational problems such as excessive noise, heat, vibration or other abnormal conditions. In addition, check to see that the level switch responds to the water level in the sump. Clean, and adjust as required.

12. SERVICE WATER

12.1 PURPOSE: A 1-1/2 inch potable water line is provided at the pump stations for cleaning up and hosing down the alum feed facility area, oil/water separator area, and the pumping facility area in the trench. Additionally, it may be used to fill the wet wells in order to calibrate, and/or operate the pumps for maintenance purposes.

12.2 EQUIPMENT: A 1-1/2 inch water line is connected to the City's potable water supply line by a 1 inch water meter and a 1 inch reduced pressure type backflow preventer. The meter is installed in a below-grade meter box and backflow preventer, together with its two 1 inch isolation valves installed above ground in accordance with City Water Department requirements. The meter and backflow preventer are located outside of the barrier wall and south of alum storage tank at GPS and inside the vehicular gate and northeast of the main control building.

A total of four (4) hose bibs are provided including two (2) hose bibbs of the wall mounted type are at the pumping facility areas – one near the access opening to the groundwater pumps and one near the access opening to the clean-up sump pumps opening and two (2) hose bibbs of the post mounted type are at the oil/water separators area – one near the oil/water separators and one near the alum storage tanks.

12.3 RELATIONSHIP TO ADJACENT UNITS

Service water is independent of other units.

12.4 OPERATION

Pumping facility area – When required for inspection, clean-up, calibration and maintenance, operator should use a hose of proper length. Connect hose to the hose bibb, and hose down the interiors of the wet wells and the basin and other areas as needed. If the wet wells/basins are entered, OSHA requirements shall be followed.

Oil/water separator area – Since the oil/water is in an enclosed tank with an overflow outlet pipe connected to the below-grade manifold to the storm runoff discharge box, there should be no leakage or drips from the oil/water separator during normal operation. However, while the oil in the separator is withdrawn for truck hauling and disposal, oil may spill at the quick-coupler hose connection joint. If this occurs, a spill kit is available and stored in the main control building.

Alum feed facility area – If there is leakage at the hose coupling joint or spillage from the tank overflow pipe during tank fill, a spill kit is available and stored in the main control building.

12.5 MAINTENANCE

Check for leaks in the service water system and repair as soon as possible.

13. VALVES (BUTTERFLY VALVES, CHECK VALVES, PLUG VALVES, BALL VALVES, PRV, PCV, SHEAR GATE)

13.1 PURPOSE:

Butterfly Valves: Butterfly valves are installed at the pump discharges of the first flush pumps (P-106/P-107/P-108 GPS and P-606/P-607/P-608 NPS) and storm water pumps (P-201/P-202/P-203/P-204 GPS and P-701/P-702/P-703/P-704 NPS) and at the inlets of the oil/water separators (T-301/T-302/T-303 GPS and T-801/T-802/T-803 NPS), are used to isolate the pump(s) and the separator(s), when service or repair on the unit is required. A 4" butterfly valve is also installed at each outlet of the oil withdrawal pipe of the oil/water separator to open/close for the truck connection.

Swing Check Valve: Swing check valves are installed at the pump discharges of the first flush and storm water pumps to prevent the reversal of flow back into the pump impellers.

Ball Check Valves: Ball check valves are installed at the pump discharges for the groundwater pumps (P-101/P-102 GPS and P-601/P-602 NPS) and clean-out sump pumps to prevent the reversal of flow back into the pump impellers.

Plug Valves: Eccentric plug valves, equipped with motorized actuators, are installed at each outlet of oil/water separator sludge pipe for automatic sludge withdrawal. Manually operated eccentric plug valves are also installed on the discharge lines of each clean-out pump for isolation of the pump unit.

Ball Valves: The PVC ball valves are installed throughout the alum feed lines for isolation of the alum liquid solution when the unit needs to be shut down for maintenance or repair.

Pressure Reducing Valves (PRV): PRVs are installed at the discharge lines of the positive displacement type pumps, i.e., first flush pumps (rotary lobes) and alum feed metering pumps (hydraulic diaphragm), to prevent overpressure on the pump casings and associated piping.

Pressure Control Valves: A pressure control valve is installed on the discharge header of alum feed pumps for accurate operation of the pumps.

Shear Gate Valve: A 4" shear gate valve is installed at the floor level on the wall between the groundwater pump wet well and the first flush pump wet well for cleaning and maintenance.

13.2 EQUIPMENT

Refer to PURPOSE section above for description.

13.3 RELATIONSHIP TO ADJACENT UNITS

Refer to PURPOSE section above for description.

13.4 OPERATION

13.4.1 Initial Start-up before Operation

All valves, regardless of type and function, require checking before being put into operation.

1. Visually inspect valve to insure it has been properly installed.
2. Are gaskets and/or packings properly installed?
3. Does valve move smoothly during operation?
4. No fluid leakage should be visible.

13.4.2 Normal Operation

All valves at the pump station are generally in Open or Close positions. Visual inspection for wear, corrosion, or hindered valve movement should be done regularly.

Prior to storm seasons, all valves should be inspected, lubricated, and operated throughout their entire operating range to ensure that they have not become frozen or jammed in position and can achieve full shutoff in any circumstances.

13.5 CONTROLS

Except for the motorized eccentric plug valves (FCV-301/FV-302/FCV-303 GPS and FCV-801/FV-802/FCV-803 NPS) installed at the sludge outlet lines of oil/water separators, and the spring-loaded pressure valves, all other valves are manually operated to open or close as required.

The operation of each motorized eccentric plug valve is controlled by the settings of the master timer KS-300 GPS and KS-800 NPS, which is in the local unit control panel (UCP-300 GPS and UCP-800 NPS) of the oil/water separators.

The spring-loaded pressure relief valves will automatically pop open to release excessive pressure in the pump discharge lines of the positive

displacement pumps, such as first flush pumps and alum feed metering pumps. The setting of the spring is mechanically adjustable as required.

13.6 OPERATIONAL PROBLEMS

The most common operational problems with valves are the following:

1. Leakage from stem packing (butterfly valves, eccentric plug valves).
2. Leakage from diaphragm seal (pressure reducing valves).
3. Leakage from O-ring seals (PVC ball valves).
4. Leakage from valve seat (swing check valves).

If leakage occurs, operator should refer to the valve manufacturer's instruction manual for repair. The timing for repair should be scheduled to have minimum interference to the pumping operation.

13.7 MAINTENANCE

Except for the valves installed with the groundwater pumps, which require regular maintenance during both the dry and wet weather conditions, all other valves are operated only during rain events. These valves should be thoroughly inspected for wear, corrosion, jamming, gasket replacement, and etc. or repaired, lubricated, replaced as necessary before the storm season comes.

Operator should refer to the valve manufacturer's catalogue sheets and installation and maintenance instructions for procedures for disassembly and re-assembly of valves.

14. VENTILATOR

14.1 PURPOSE: The ventilator is provided to facilitate air changes in the wet wells and associated underground detention basin. (NOTE: Refer to OSHA requirements for supplemental air supply for other sources, such as portable air blowers, and other safety devices should be put into use while working in the confined or enclosed space.)

14.2 EQUIPMENT: Ventilator (F-131 GPS and F-631 NPS) is installed at the south end of the storm water pumps to ventilate the air space above the liquid level in the wet wells.

A local hand switch, HS-131 GPS and HS-631 NPS, and the timer switch, KS-131 GPS and KS-631 NPS, at the PLC cabinet of the pump control building are used to control the operation of ventilator.

14.3 RELATIONSHIP TO ADJACENT UNITS

At any time when the catalytic bead combustible gas sensor detects some combustible gases with a concentration at 15% LEL the sensor switch, ASH-112 GPS and ASH-612 NPS, will actuate an alarm at the PLC cabinet in the pump control building and at the Alameda Corridor Control Center through the common alarm. The alarm will remain indicating on the PLC cabinet until reset pushbutton switch is pushed. Should the combustible gas level reach the upper alarm level (20% LEL), the sensor switch ASHH-112 GPS and ASHH-612 NPS will shut down the operation of the ventilator and actuate an alarm at the PLC cabinet in the pump control building and at the Alameda Corridor Control Center through the common alarm. The sensor switch ASHH-112 GPS and ASHH-612 NPS will also prevent the groundwater pumps and first flush pumps from running until the alarm is reset.

14.4 OPERATION

14.4.1 Initial Start-up before Operation

All valves, regardless of type and function, require checking before being put into operation.

1. Check to see that ventilator stack cap, safety guard, and motor base plate are properly secured. Check and tighten all bolts, fasteners, and set crews as necessary.
2. Switch to the "HAND" position from the local hand switch, HS-131 GPS and HS-631 NPS, at the ventilator and allow the ventilator to run at full speed. Check for excessive vibration, unusual noise, proper belt tension, and proper lubrication. If any problem is indicated, switch off immediately, repeat the checking procedure in accordance with

ventilator manufacturer's (Hartzell Fan, Inc.) installation, operation, and maintenance manual.

3. If the ventilator seems to be operating satisfactorily, switch to "OFF" position and let it completely stop, and then switch to "AUTO" position.

14.4.2 Normal Operation

During normal operation, the operator should have the local selector switch, HS-131 GPS and HS-631 NPS, in the "AUTO" position. Thereon, the ventilator will be controlled by the timer switch at the PLC cabinet in the pump control interlocked with the combustible gas sensor.

14.5 OPERATIONAL PROBLEMS

14.5.1 Mechanical Problems

The most common operational problems are excessive vibration and unusual noise due to improper driven belt tension and/or under-lubricated impeller and/or motor bearings.

Check belt tension often. Ideal tension is the tension at which the belt will not slip under normal operating conditions. Also check sheave alignment. Sheaves that are not properly aligned cause belt wear and sheave wear. Motor bearings and ventilator impeller bearing should be greased at regular intervals in accordance with the manufacturer's recommended schedule.

See Hartzell's Installation, Operation, and Maintenance Manual for proper type and amount of lubricants to be used and guidelines for checking belt tension.

14.5.2 Trouble Shooting

Refer to Hartzell's Installation, Operation and Maintenance Instructions manual for trouble shooting chart. The possible causes and related problems are indicated in the chart.

The operator should investigate the problems and determine if he can repair it or if a ventilator manufacturer's serviceman is needed. In any case, the unit should be repaired and put back into service as soon as possible.

14.6 MAINTENANCE

The ventilator should be on the regular maintenance list regardless of dry or wet weather conditions. Properly lubricate the impeller and motor bearings

and check the V-belt drive for proper alignment, tension, and excessive wear are the major tasks for good maintenance and minimum trouble operation. Also, check impeller for any buildup of foreign material or wear from abrasion. Clean the impeller of any foreign material. Replace the belt and/or the impeller if excessive vibration and wear occur.

15. EXHAUST FAN

15.1 PURPOSE: The exhaust fan is provided to have air changes in the main control building and dissipate the heat generated from the motor control center and other equipment.

15.2 EQUIPMENT: One (1) wall mounted exhaust fan is installed on the north wall of the main control buildings.

15.3 RELATIONSHIP TO ADJACENT UNITS

The exhaust fan is independent of other units.

15.4 OPERATION

15.4.1 Initial Start-up before Operation

1. Check to see that mounting plate, fan hood, and motor are properly secured. Check and tighten all bolts, fasteners, and set crews as necessary.
2. Switch on the electrical supply and allow the fan to run at full speed. Check for excessive vibration, unusual noise, and proper lubrication. If any problem is indicated, switch off immediately, repeat the checking procedure in accordance with the fan manufacturer's (CFM Company/Greenheck) installation, operation, and maintenance manual.
3. If the fan seems to be operating satisfactorily, switch off and let it completely stop, and then switch on again to make sure it will operate smoothly from now on.

15.4.2 Normal Operation

During normal operation, the operator should let the exhaust fan continuously run to have proper ventilation in the main control building.

15.5 OPERATIONAL PROBLEMS

15.5.1 Mechanical Problems

The most common operational problems are excessive vibration and unusual noise due to under-lubricated fan and/or motor bearings. Motor bearing and fan bearings should be greased at regular intervals in accordance with the manufacturer's recommended schedule.

15.5.2 Trouble Shooting

Refer to CFM Company's Installation, Operation and Maintenance Instructions manual for trouble shooting table. The possible causes, related problems and corrective actions are indicated in the table.

The operator should investigate the problems and determine if he can repair it or if a ventilator manufacturer's serviceman is needed. In any case, the unit should be repaired and put back into service as soon as possible.

15.6 MAINTENANCE

The exhaust fan should be on the regular maintenance list regardless of dry or wet weather conditions. Properly lubricate the fan and motor bearings and check for excessive noise and wear are the major tasks for good maintenance and trouble-free operation. Check fan impeller for any buildup of foreign material and clean up as necessary.

Maintenance of Way Services

Appendix J

Track and Signal Inspection Forms



MONTHLY TURNOUT INSPECTION REPORT

Sub Division:			Month/Year:										Inspector Name:													
DATE	SWITCH LOCATION	Switch Number	SWITCH POINT			CONDITION						FROG		GUARD RAILS			CONDITION					REMARKS OR REMEDIAL ACTION				
			TURNOUT="T" SIDING="S" MT="M"	POINT THROW OPENING	CON- DITION	SW RODS	RAIL BRACES & FAS- TENERS	STOCK RAIL	SWITCH TIMBERS	COTTER PINS	SUR- FACE OF SWITCH	MAX GAUGE	CON- DITION	TRACK GAUGE	CON- DITION	GUARD CHECK GAUGE	GUARD FACE GAUGE	GUARD RAIL BOLTS	FROG BOLTS	ALL JOINTS INSPECTED IN TURNOUT	SUR- FACE		FROG TIMBERS	HOLD DOWN DEVICES	SPRING HOU- SING	
			M																							
			T																							
			M																							
			T																							
			M																							
			T																							
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Inspector's Signature		Date	Inspector's Signature			Date	Inspector's Signature			Date	Inspector's Signature		Date	Inspector's Signature		Date	Inspector's Signature		Date	"G" FOR GOOD "F" FOR FAIR "P" FOR POOR						



**ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY
ANNUAL SWITCH INSPECTION REPORT**

LOCATION AND DESCRIPTION OF SWITCH		<input type="checkbox"/> POWER OPERATED <input type="checkbox"/> HAND THROW	
TURNOUT NUMBER	FROG TYPE	GUARD RAIL TYPE	
		M.L. SIDE	T.O. SIDE

INDICATE CONDITION OF

STOCK RAILS	RH	LH				
SWITCH POINTS	RH	LH				
HEEL BLOCKS						
RAIL JOINTS AND BOLTS AT HEEL OF SWITCH POINTS	RH			LH		
HEAD BLOCK TIES			SWITCH STAND			
SWITCH LOCK			TRANSIT CLIPS & BOLTS			
SWITCH TIES			SWITCH PLATES			
GAUGE PLATES			SWITCH POINT THROW AT No. 1 ROD			
No. 20 T.O. SWITCH POINT THROW	P.S.	No. 1 ROD	No. 2 ROD	No. 3 ROD	No. 4 ROD	No. 5 ROD
FROG				FROG BOLTS		
FROG PLATES				RETARDER		
RAIL JOINTS & BOLTS ON FROG	TOE			HEEL		
HOLD DOWN BRACKETS ON WING RAIL						
GUARD RAILS	ML SIDE			T.O. SIDE		
SETTING OF GUARD RAILS	ML SIDE			T.O. SIDE		
INSULATED JOINTS						
RAIL JOINTS & BOLTS						
LINE, SURFACE & GAUGE OF MAIN TRACK THRU SWITCH						
LINE, SURFACE & GAUGE THRU T.O. SIDE OF SWITCH						

REMARKS

DATE OF INSPECTION	_____
DATE EXCEPTIONS FURNISHED TO SECTION FOREMAN	_____
DATE EXCEPTIONS CORRECTED	_____

Contract Manager



**ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY
YEARLY TEST OF HAZARD DETECTORS**

Date Submitted: _____

Sheet #: _____

Inspected by: _____

READING MARK

C - Test complete. Equipment in satisfactory condition.

A - Adjustment made and test complete.

R - Repairs or replacement needed.

S - Repairs or replacement made. Equipment in satisfactory condition.

* - Explain on back of form.

DATE OF TEST (mm/dd/yy)	MILE POST LOCATION	TYPE OF DETECTOR (High, Wide, & Hot Box)	DETECTOR CAUSE PROPER SIGNAL TO BE DISPLAYED (Yes or No)	RESULTS	Line Num ber
					1
					2
					3
					4
					5
					6
					7
					8
					9
					10
					11
					12
					13
					14
					15
					16
					17
					18
					19
					20



ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY
INSULATION RESISTANCE TEST
 RULE 236.108 AND RULE 234.267

Recording Mark

- C - Test complete. Equipment in satisfactory condition.
- A - Adjustment made and test complete.
Equipment in satisfactory condition.
- R - Repairs or replacement needed.
- S - Repairs or replacement made.
Equipment in satisfactory condition.
- * - Explain on back of form.

SIGNATURE _____
 M.P. TO M.P. _____
 SHEET _____ OF _____ SHEETS

In no case shall a circuit be permitted to function when resistance is less than 200,000 ohms.

DATE OF TEST	LOCATION	CABLE IDENTIFICATION	IF RESISTANCE READING OF ANY CONDUCTOR WITHIN A CABLE IS LESS THAN 500,000 OHMS, LIST EACH WIRE IDENTIFICATION AND RESISTANCE VALUE WITHIN THAT CABLE.		TEST RESULTS	LINE NO. REMARKS	DATE OF TEST	LOCATION	CABLE IDENTIFICATION	IF RESISTANCE READING OF ANY CONDUCTOR WITHIN A CABLE IS LESS THAN 500,000 OHMS, LIST EACH WIRE IDENTIFICATION AND RESISTANCE VALUE WITHIN THAT CABLE.		TEST RESULTS	LINE NO. REMARKS
			WIRES IDENTIFICATION	RESISTANCE						WIRES IDENTIFICATION	RESISTANCE		
						1							16
						2							17
						3							18
						4							19
						5							20
						6							21
						7							22
						8							23
						9							24
						10							25
						11							26
						12							27
						13							28
						14							29
						15							30



Recording Mark

**ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY
SIGNAL DEPT. D.O.T. - RS & I TEST**

- C - Test complete. Equipment in satisfactory condition.
- A - Adjustment made & test complete.
Equipment in satisfactory condition.
- R - Repairs or replacement needed
- S - Repairs or replacement made.
Equipment in satisfactory condition.
- * - Explain on back of form.

VITAL RELAY TEST RULE 236.106 AND RULE 234.263

Each relay shall be tested once every 4 years except: "AC" centrifugal relays shall be tested every 12 months. "AC" vane relays and "DC" polar relays shall be tested every 2 years, and all relays with soft iron magnets structure shall be tested every 2 years.

RELAY NAME		MANUFACTURER & MODEL			COIL OHMS	SERIAL NUMBER			SUBDIVISION		RESULTS OF TEST	M.P.
DATE OF TEST MM/DD/YY	TAG READINGS		PICKUP		WORKING		DROP-AWAY		POLAR PICKUP			
	SIGNATURE OF INSPECTOR		VOLTS	AMPS	VOLTS	AMPS	VOLTS	AMPS	VOLTS	AMPS		

Maintenance of Way Services

Appendix K

Training Requirements

**ALAMEDA CORRIDOR TRANSPORTION AUTHORITY
MAINTENANCE OF WAY SERVICES
TRAINING REQUIREMENTS FOR MOW PERSONNEL**

Course No.	Type of Training	Frequency of Training	Craft
1 .	General Code of Operating Rules for Maintenance of Way Employees	Annually	All maintenance of way
2.	Roadway Worker - CFR49 Section 214.3 On-Track Safety program	Annually	All maintenance of way
3.	1. EIC	Annually	Inspectors, flaggers, supervisors (track, bridge, signals & comm), and contract manager
	2. Lone Worker	Annually	Inspectors, flaggers, supervisors (track, bridge, signals & comm), and contract manager
4.	First Responder/ Hazardous Material (40 hours)	Annually	Supervisors (track, bridge, signals & comm), and contract manager
5.	Hazardous Material (40 hours)	3 years	Supervisors (track, bridge, signals & comm), and contract manager
6.	CFR49 Section 213/7	Once	Inspectors, rail repair leaders, supervisors (track, bridge, signals & comm), and flaggers
7.	Fall Protection/ Rescue 214 (Annual Recertification)	Annually	Supervisors (track, bridge, signals & comm), contract manager, and as required
8.	Confined Space OSHA	Annually	As required
9.	CWR Maintenance	Annually	Inspector, rail repair leaders, welders, track supervisor and contract manager
10.	Track Welding	Current Certification	Welders, welder helpers, supervisors
11 .	Emergency Ladder Inspection and Maintenance	Annually	Supervisors (track, bridge, signals & comm), contract manager, and others as required.

COURSE SPECIFICATIONS

The training to be provided by the Contractor to its employees listed above will contain the course material, require the duration, and will be expected to meet the course objectives listed in the following sections.

The Contractor shall furnish a schedule of training classes to be given as a part of the proposed Maintenance of Way and Structures Service Plan. For the period between the start date and the first annual budget cycle, the Contractor shall furnish a schedule of training within 30 days of the start date. ACTA will review the schedule and reserves the right to alter the schedule to avoid depletion of the work force or to avoid conflicts with scheduled maintenance activities.

ACTA may monitor the Contractor's classes for content and effectiveness of presentation and will be provided the results of tests of the students. In the event that ACTA believes that course content or presentation is not meeting the objectives of the specifications identified below, the Contractor and ACTA representatives will meet to review the current training schedule and make changes, as necessary.

General Code of Operating Rules for Maintenance of Way Employees

(5-Day Class for persons not previously qualified on the GCOR)

1. Introduction and Safety Briefing of the Facility
2. Course Content
 - A. Overview of documents and how they work together:
 - GCOR
 - Employee Timetable, Special Instructions, and Modifications to GCOR
 - General Orders
 - Track Bulletins
 - B. Rules
 - Rule 1, General Responsibilities • Rule 2, Railroad Radio
 - Rule 3, Standard Time
 - Rule 4, Timetables • Rule 5, Signals
 - Rule 6, Fouling and Working on Tracks
 - Rule 7, Moving Equipment Safely
 - Rule 8, Switches
 - Rule 9, Block System Rules
 - Rule 10, Centralized Traffic Control
 - Rule 14, Track Warrant Control
 - Rule 15, Track Bulletin Rules
 - 1/2 day out on the field
 - C. Examination

**Roadway Worker Class Outline
(4-hour class)**

1. Introduction and Safety Briefing of the Facility
2. Background of the Rule Making
 - A. 2 years in the making
 - B. Group of peers/FRA/Training officers each RR
 - C. Reason for rule
3. Definition of
 - A. On-Track Safety
 - B. Training
4. Hierarchy of On-Track Safety
5. Definitions of:
 - A. Roadway Worker; Who is a Roadway Worker?
 - B. Fouling a track
 - C. Job Briefing
 - D. Employee In Charge
 - E. Lone Worker
 - F. Watchman
 - G. Exclusive Track
 - H. Non-Controlled Track
 - I. Inaccessible Track
6. Types of Protection
 - A. Track and Time
 - B. Watchman
 - C. Lone Worker, Individual Train Detection
7. Right to Challenge
8. On-Track Equipment
9. Test - Question and Answers

Roadway Worker
Employee-in-Charge, Lone Worker, Watchmen Class Outline
(8-hour class)

1. Introduction and Safety Briefing of the Facility
2. Background of the rule making
 - A. 2 years in the making
 - B. Group of peers/FRA/Training officers each RR
 - C. Reason for rule
3. Definition of
 - A. On-Track Safety
 - B. Training
4. Hierarchy of On-Track Safety
5. Definitions of:
 - A. Roadway Worker; Who is a Roadway Worker?
 - B. Fouling a track
 - C. Job Briefing
 - D. Employee In Charge
 - E. Lone Worker
 - F. Watchman
 - G. Bridge Worker; Fall Protection
6. Responsibilities of:
 - A. EIC
 - B. Lone Worker
 - C. Watchman
 - D. Machine Operator
 - E. Bridge Worker
7. Review the following Definitions
 - A. Exclusive Track
 - B. Non-Controlled Track
 - C. Inaccessible Track
8. Types of Protection
 - A. Track and Time

- B. Watchman
 - C. Lone Worker, Individual Train Detection
9. Types of Protective Equipment
- A. Concentrating on Fall Protection
10. Right to Challenge

First Responder Awareness Level Outline
(8-hour class)

1. Introduction

Provides the essential information for individuals who are likely to witness, discover, or respond to an incident of a hazardous substance release and who have been trained to initiate and emergency response sequence by notifying the proper authorities of the release.

2. Review of hazard communication (Right-to-Know).

At the completion of this training course, the participant will be acquainted with the following information:

- A. Understanding of hazardous substances and risks associated with them in an incident
- B. Understanding of potential outcome associated with an emergency created when hazardous substances are present.
 - Ability to recognize the presence of hazardous substances in an emergency.
 - Ability to identify the hazardous substance, if possible
 - Understanding of the role of the first responder awareness individual in the employer's emergency response plan. (Including site security and control) and the US department of transportation's Emergency Response Guidebook.
 - The ability to realize the need for additional resources, and to make appropriate notification to the communication center.

**Hazardous Material Course EIC
(40 hours) Outline (5-day 8 hour/day)
12 participants per class**

A comprehensive technical course designed to provide a thorough introduction to regulations covering personnel involved in investigation and remediation of hazardous waste sites.

Topics include:

- Classes of hazardous materials
- Site safety
- Levels of protection
- Personal equipment programs
- Medical and emergency considerations
- Site Safety plans sources of information
- Decontamination procedures and instructions commonly used on-site.

**Track Safety Standards Class
FRA part 213 sections A to F
Basic Course for First-Time Qualification
(4-Day Class)**

1. Introduction and Safety Briefing of the Facility
 - A. Foundation of the railroads physical plant
 - B. Determination of acceptable variation in track
2. Technical Discussion
3. Course Description

This course will allow the student to understand the FRA 213 Track Safety Standards and to make track evaluations based on the minimum safety requirements.

A. General Information

- Application
- Excepted track
- Responsibility of track owners
- Designation of qualified persons to supervise certain renewals and inspect track
- Class of track operating speed
- Civil penalty
- Exemptions

B. Roadbed

- Drainage
- Vegetations

C. Track Geometry

- Gage
- Alignment
- Curves
- Elevation
- Surface

D. Track Structure

- Ballast; general
- Crossties
- Defective rails
- Rail end mismatch
- Railjoints
- Rail fasteners
- Turnouts, switches and frogs

E. Track Appliances

- Scope
- Derails

F. Inspections

- Track inspection
- Crosstie inspection
- Rail inspection
- Special inspections
- Inspection records

Fall Protection and Rescue (4-hours)

1. Introduction and Safety Briefing
2. Background: 49 CFR 214 (Roadway Worker)
3. Fall Protection
 - A. When is it required?
 - B. Inspection
 - C. Exceptions
4. Fall Protection Equipment
 - A. Intended Use
 - B. Certification
 - C. Inspection before use
 - D. Training
5. Working over Water
6. Scaffolding
7. Rescue Plan
 - A. Communications
 - B. Assignment of personnel to roles for rescue
 - C. Equipment

**Confined Space Outline
(8-hour classroom)**

1. Introduction and Safety Briefing
2. Equipment Knowledge
 - A. Oxygen
 - B. Hazardous Gas
3. Proper dress for levels
 - A. Clean
 - B. Chemical
4. Proper ventilation
5. Vertical rescue
6. Record Keeping
 - A. Gas monitoring

**CWR Maintenance Class Outline (8-hour class)
Given on an Annual Basis**

1. Introduction and Safety Briefing

Maintenance of Continuously Welded Rail was prepared to focus on reducing the problems that tend to occur in CWR track. In order to give participants a firm understanding of the problem and the solutions, the following main points must be covered:

- A. The theory of thermal expansion
- B. Understanding the cause of track buckles and pull apart
- C. Inspection techniques to locate and identify possible buckle/pull apart sites
- D. Proper diagnostic and preventative maintenance methods to be used
- E. Step-by step procedures for the repair and reinstatement of thermally defective track
- F. Requirements of 49CFR213.119

2. Technical Discussion

A. Course Description

The aim of the course is to provide a training program that will be taught to all track maintenance forces that have responsibility for the inspection, maintenance and distressing of CWR B. Objectives

At the end of the course the participant will:

- Understand the theory of thermal expansion.
- Identify and demonstrate the inspection techniques and identifiers used to determine rail stress conditions.
- Calculate the length of an unrestrained rail at different temperatures.
- Calculate track rail stress at different temperatures.
- Define stress free temperatures, preferred rail laying temperatures, preferred rail laying temperatures range.
- Calculate the adjustment required to return rail to its stress-free condition at any temperature.
- Identify when distressing can be performed.
- Understand the proper steps for distressing rail.
- Identify precautions to be taken when distressing rail.

List all maintenance work that must only be performed within the preferred rail laying temperature range, working zone, and joint inspections limits.

Satisfy the requirement for training under 49CFR213.1 19.

**Track Welding Class Outline (4-hour Classroom)
(4-hour Shooting Welds)**

Introduction and Safety Briefing

- A. Discussion of:
 - 1. Welding Safety
 - 2. Approved Welding Procedures
 - 3. Prohibited Welding
- B. Welding of frogs and switches
 - 1. Types
- C. Thermite Welds
 - 1. Welding Process
 - 2. Adjusting CWR Temperature
 - 3. Making the weld

Maintenance of Way Services

Appendix L

Utility Types and Placement

ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY

UTILITIES ON AND ADJACENT TO RAIL CORRIDOR

Types of Utilities (not all inclusive)

Aerial and Underground Electrical
Aerial and Underground Telephone Communications
Above and Below Ground Fiber Optic
Chemicals
Communication Towers and Antennas
Concrete Box Storm Drains
Drainage Culverts
Gas
Groundwater and Other Observation Wells
North End Trench Lighting
Oil
Open Storm Drains in Trench with Gratings
PVC and Other Type Plastic Track Drains
Railroad and Traffic Signal
Refined Petroleum Product
Sanitary Sewer
Storm Drains
Storm Water Storage/Collection and Pump Stations
Street Lighting
Water

Carrier Methods and Housings

Communication Cable & Vaults
Direct Burial Cables
Electrical Conduits
Fiber Optic Fiberglass Communication Conduit on Trench Wall
Grade Crossing Control Cabinets
Guy Wires
Highway Traffic Signal Cabinets
Open Drainage Channels
RR Signal and Communication Control Houses
RR Signal Bridges
Signal Boxes and Vaults
Steel Casings Over Corridor Trench
Steel Casings Along and Crossing Rail Corridor
Street Light Conduit
Trench Pump Station Equipment, Treatment, and Storage
Telephone Conduits
Wood and Steel Poles

Maintenance of Way Services

Appendix M

Emergency Ladders

&

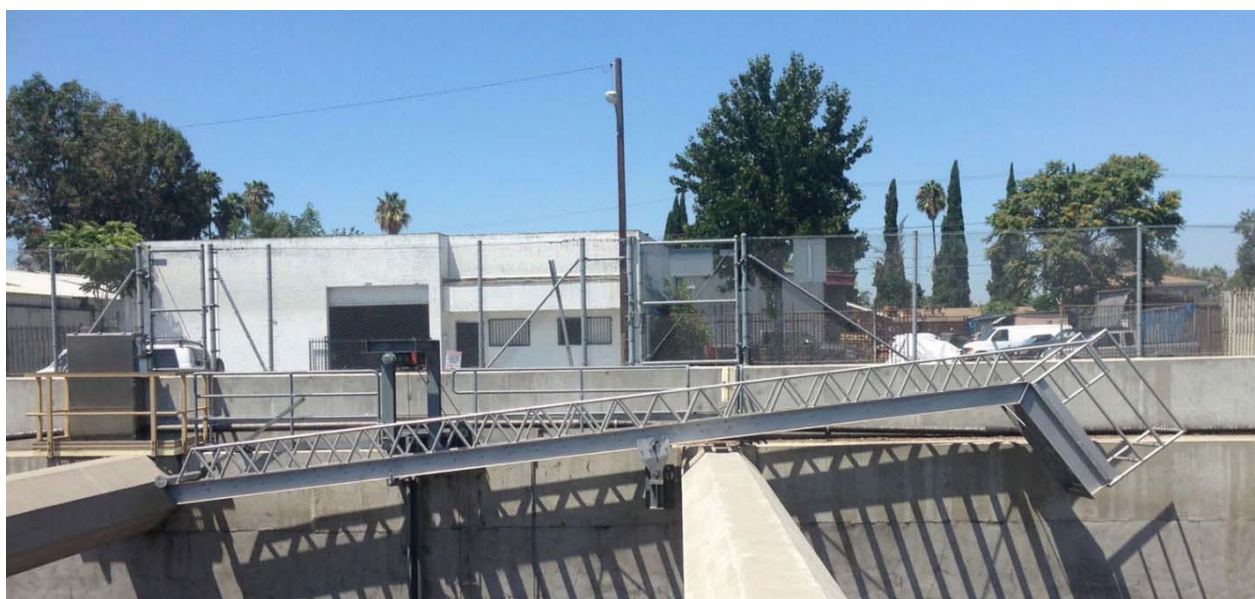
Fixed Stairways in Trench

Emergency Phone System

At each emergency ladder and control point there are emergency phones with direct dial to the dispatcher. The phones are managed by one main and one backup server with a conferencing software solution by Asteria Solutions Group of Huntsville AL. All the networking equipment that tie the emergency phone and ladder system are on the ACTA owned single mode fiber optic network that runs the length of the corridor. The link from the corridor to the dispatcher at San Bernardino is thru a wide area network connection. The system is managed and monitored with a SCADA system.



Alameda Corridor
Inspection, Lubrication and Testing Plan
for
Emergency Mechanical Ladders in Trench



July 2024

Table of Contents

- 1.0 Introduction
- 2.0 Ladder Types and Components
- 3.0 Lubrication Points
- 4.0 Inspection Checklist
- 5.0 Semi-Annual Deployment
- 6.0 Future Improvements
- 7.0 Summary and Conclusions

Appendix A – Ladder Locations

1.0 Introduction

The Alameda Corridor Trench is a ten-mile-long below ground structure that contains three operating tracks. It runs parallel to Alameda Street through various municipalities. There are approximately 30 perpendicular bridges (28 roadway and 2 railroad) that cross the trench at street level. The open trench is approximately 30 feet deep and is fully protected along its entire length and at the bridges by a six-foot high fence that sits atop a short concrete parapet wall.

Access into and egress from the trench is provided by:

- fixed stairways at three locations consisting of concrete stairs on the J-Yard embankment at the north-end, and steel staircases at each of the two intermediate trench pump stations;
- a fixed steel ladder at one location at the south-end; and
- aluminum and steel mechanical ladders at 46 locations approximately 1,000 feet apart, which are raised and lowered by hand-cranked from both street level and track level. (See Appendix A for ladder locations.)

The purpose of this document is to establish an inspection and lubrication plan for the third category above – the mechanical ladders - to ensure safe and reliable operation. (In this document the term “ladder(s)” shall refer to the mechanical ladder(s). These mechanical ladders were installed as part of the original Alameda Corridor trench construction to provide emergency access by police, fire departments and other authorized personnel, and to provide emergency egress by railroad, maintenance and other authorized personnel. They have been available for service since the opening of the corridor April 2002.

2.0 Ladder Types and Components

There are two basic types of ladders in the trench, as determined by the spacing of the perpendicular concrete support struts, which brace the top of the trench walls. Each of the ladder types is shown below.

The spacing of the struts are typically between 25 and 15 feet. Because the ladders are longer than the clear distance between the struts, a somewhat complex mechanical system exists that causes the ladders to move both horizontally and vertically as they are lowered and raised. Accordingly, there are numerous moving parts and joints requiring periodic inspection and lubrication to ensure proper alignment and smooth operation.



Ladder Type 1 (#1-7, 9-36)



Ladder Type 2 (#37-47)

Major ladder mechanism components and specific issues are as follows:

a) Ladder

Each of the ladders is built of aluminum and includes channel stringers, stair tread gratings, a landing grating, and pipe railings. Each ladder weights about 900 pounds.

Issues: A crack was found at one location in the pipe railing (#2). A crack was found at another location in the stringer where the riser stringer is joined to the landing stringer (#41).



Ladder #2
(Repair later completed)



Ladder #41
(Repair pending)

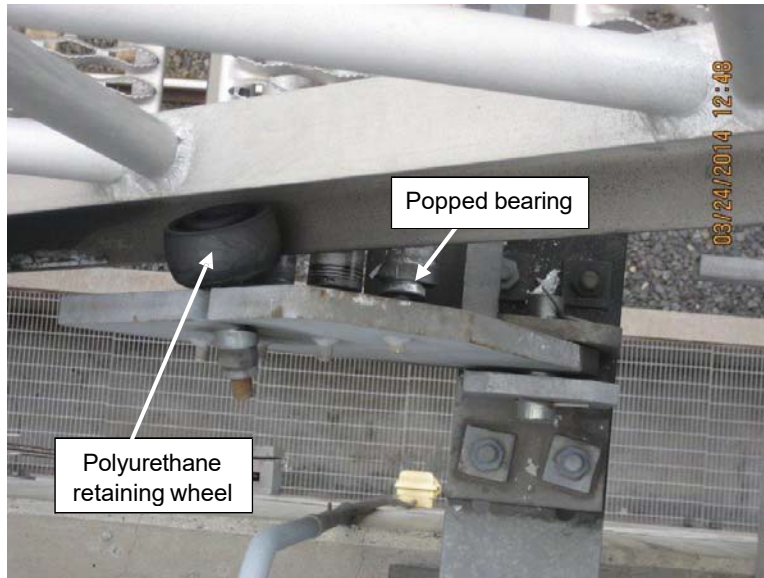
b) Pivot Stand

The ladders rotate and roll on a steel pivot stand attached to the trench wall. There are four conveyor rollers on each ladder stand that make direct contact with and support the ladder stringers. The rollers are attached to two side plates that pivot on pins as the ladder changes its angle during operation. A polyurethane wheel guides and ensures stringer contact with the rollers.



Pivot Stand

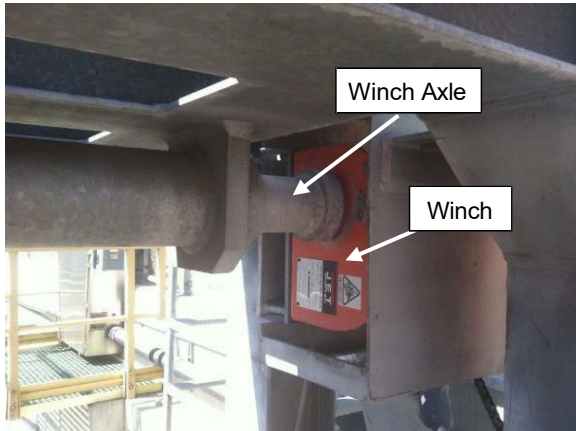
Issues: The stringers do not remain in contact with all four rollers throughout deployment. Popped bearings were noted at three locations (#2, 41, and 44) and the conveyor axle was also bent at one of those popped bearing locations (#41).



Ladder #41
(Repair pending)

c) **Upper Crank Stand**

The crank stand is another steel frame attached to the trench wall, which contains a hand-crank winch incorporating two spools of cable, one connected to each stringer. The winch controls the lowering and raising of the ladder. The cranking effort is less when lowering than lifting, because the weight of the ladder and its counterweights as described below provides gravitational assistance on the descent. It takes about 120 crank turns to lower or raise the ladder.



Crank Stand



Outer Cable Spool



Cranking from Street Level

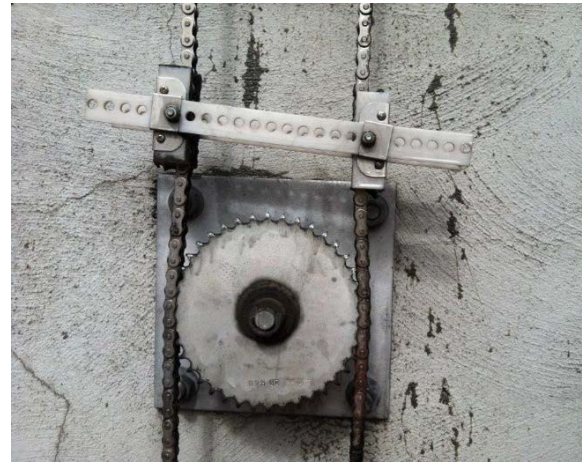
Issues: The winch connection to the spool axle was sheared off at Ladder #37. The two cables are not equally tensioned throughout deployment. The weight appears to shift from one cable to the other at points.



Broken Winch Shaft (#37)
(Repaired and reinstalled)

d) **Lower Crank Box**

The lower crank box is mounted on the trench wall at track level. It contains a hand-crank and sprocket that is connected to the upper crank stand winch by means of two closed-loop chains, similar to bicycle chains. Two intermediate idler sprockets with tensioners are mounted on the wall to maintain chain alignment. Both the upper and lower crank sprockets turn simultaneously regardless of whether the cranking occurs above or below.



Idler Sprocket and Chain Tensioner

Lower Crank Box and Emergency Telephone

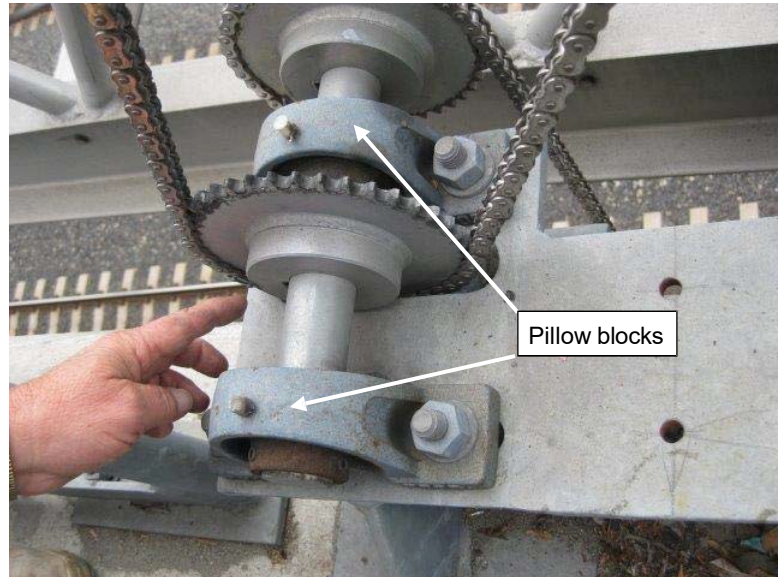
Issues: Corrosion was noted on the crank handles, which are loose and stored in the crank box. This prevents insertion into the winch drive. Also some of the chain tensioners were broken or missing.

e) **Upper Chain Drive Block**

The upper chain drive block is the intermediate load transfer station for the two drive chains connected to the upper and lower crank sprockets. It is connected to the upper crank stand frame. It contains a rotating pin in two pillow blocks with two sprockets that transfer the direction of the two closed-loop chains.



Chain Drive Block with Cover



Chain Drive Block without Cover

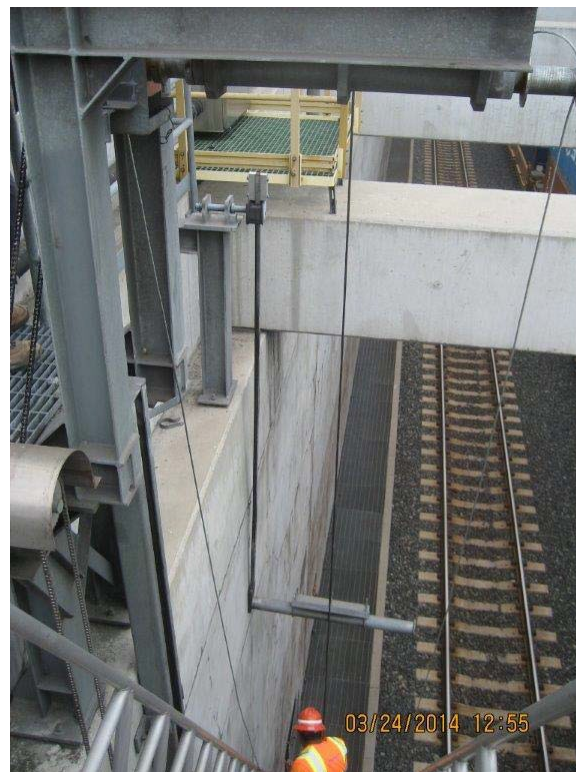
Issues: It was noted that the block can shift due to play in the bolt mounting holes. This can cause the chain to grind against the slot in the mounting beam and shave the chain. The cover must be removed from the block to observe this condition.

f) **Counterweight Stand(s)**

There is either one or two steel counterweight stands per ladder depending on the ladder type – at one end for Type 1 and at both ends for Type 2. The purpose of the weights is to provide: 1) additional force to assist ladder lowering and 2) enough cable tension to promote smooth unspooling and spooling on the drums. Absent these weights, the ladder is nearly balanced on the pivot stand like a seesaw with the same weight at both ends.



Lower End Counterweight – Up Position



Lower End Counterweight – Down Position



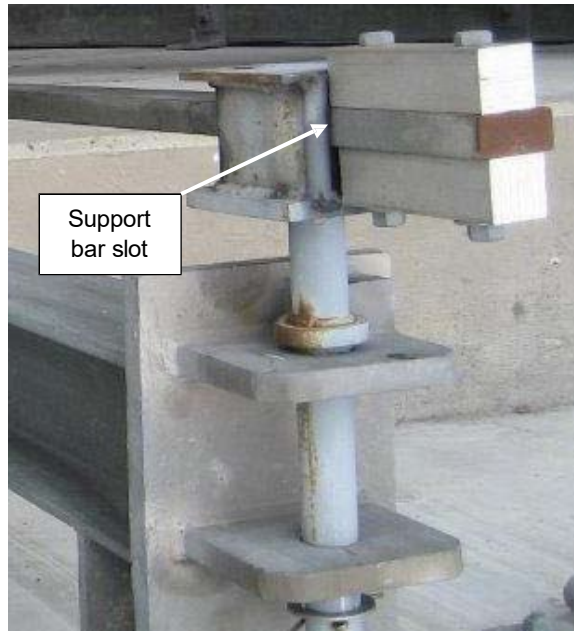
Upper End Counterweight Stand

In order to lower the ladder, the counterweights, which make contact with but are not attached to the ladder, must remain in contact with the ladder and move freely in order for the ladder to operate properly. By design, these counterweights only engage during part of the ladders vertical travel to avoid overstressing the winch.

If the counterweights do not remain in contact with the ladder and move freely, the ladder will not lower and the cable will drape. If cranking continues, an unsafe condition results that can potentially damage the cable, the ladder and its mechanisms when and if the ladder falls due to its own weight or the sudden engagement of the counterweight.

Accordingly, it is important that an operator verify through observation that the cable is not slackening during cranking, that the ladder is descending, and that the counterweight(s) is and remains in contact with the ladder.

Issues: The counterweight at the foot end of the ladder can bind in the slot through which the support bar must travel, causing the counterweight to be ineffective in lowering the ladder. See above. No problems were noted for the counterweights at the landing end of the Type 2 ladders. Type 1 ladders do not have a landing counterweight.



Lower Counterweight Stand

g) Trench Wall Guide Track

The ladder's vertical travel is guided by a polyurethane roller on a shaft connected to the ladder stringers. This roller travels in a nearly vertical, open steel channel bolted to the face of the trench wall. It has a flattened "J" shape to account for both horizontal and vertical travel.



Guide Track

Issues: The polyurethane guide wheel can bind in the channel, creating friction during travel.

3.0 Lubrication Points

All the sprockets, pins, chains, and sliding surfaces must be kept lubricated. The points and types of lubrication are shown in the Lubrication Table and photographs below. Lubrication is recommended at least twice a year in conjunction with the semi-annual inspection cycle.

Lubrication Table

Assembly	Parts (#Items)	Lube Type
a) Ladder	<ul style="list-style-type: none"> • Poly. wheel (sealed bearing) • Shaft through stringer plate (2) • Lower flange face at counterweight contact point 	TBD
b) Pivot stand	<ul style="list-style-type: none"> • 1 1/2" pins (2) • Conveyor rollers (4) • Polyurethane roller (2) 	TBD
c) Upper crank stand	<ul style="list-style-type: none"> • Winch • Winch axle (both ends) 	TBD
d) Lower crank box	<ul style="list-style-type: none"> • Crank shaft (1) • Idler sprockets (2) • Chain tensioner (2) 	TBD
f) Upper counterweight stand Lower counterweight stand	<ul style="list-style-type: none"> • Pins (2) • Under flange stringer (2) • 1"x2" rod slot (1) • Pin (2 plates) 	TBD
e) Upper chain drive block	<ul style="list-style-type: none"> • Pin (2 pillow blocks) • Chains (2) 	TBD
g) Guide track	<ul style="list-style-type: none"> • Inside channel faces (2) 	TBD

4.0 Inspection Checklist

During the semi-annual inspection and lubrication cycle, all the moving parts should be inspected in accordance with the Inspection Checklist and photographs below.

Inspection Checklist

a) Ladder	<input type="checkbox"/> Railing and welds <input type="checkbox"/> Stringer welds <input type="checkbox"/> Grating connections <input type="checkbox"/> Stringer shaft <input type="checkbox"/> Cable connections to stringer shaft <input type="checkbox"/> Guide wheel and bearings
b) Pivot Stand	<input type="checkbox"/> Poly wheel and connections <input type="checkbox"/> Conveyor rollers (loose bearings) <input type="checkbox"/> Pins <input type="checkbox"/> Channel spacer welds <input type="checkbox"/> Bracket bolts <input type="checkbox"/> Support beam welds and bolts
c) Upper Crank Stand	<input type="checkbox"/> Winch cover and lock <input type="checkbox"/> Winch handle <input type="checkbox"/> Winch winding <input type="checkbox"/> Winch axle <input type="checkbox"/> Outer spool and winding <input type="checkbox"/> Cable condition <input type="checkbox"/> Axle casing and neoprene insert <input type="checkbox"/> Frame welds and connections
d) Lower Crank Box	<input type="checkbox"/> Cover lock <input type="checkbox"/> Handle and fit <input type="checkbox"/> Cotter pin <input type="checkbox"/> Chain on sprocket <input type="checkbox"/> Idler sprockets and tensioners
e) Upper Chain Drive Block	<input type="checkbox"/> Cover and bolts <input type="checkbox"/> Pillow blocks and bolts <input type="checkbox"/> Chain clearance at slot <input type="checkbox"/> Chain condition <input type="checkbox"/> Sprocket alignment <input type="checkbox"/> Frame bolts and welds
f) Counterweight Stand Lower Counterweight Stand Upper	<input type="checkbox"/> Counterweight plate bolts <input type="checkbox"/> Bar slot <input type="checkbox"/> Pin condition <input type="checkbox"/> Counterweight plate connections <input type="checkbox"/> Frame welds and bolts <input type="checkbox"/> Pins <input type="checkbox"/> Support frame welds and connections <input type="checkbox"/> Evidence of ladder binding
g) Guide track	<input type="checkbox"/> Channel wall bolts <input type="checkbox"/> Upper closure plate weld <input type="checkbox"/> Edge guard (cable protectors)

5.0 Semi-Annual Deployment

Ladders should be fully deployed twice a year – once from street level and once from track level. This deployment should not include the deployment that occurs during Annual Emergency Drill. Those specific ladders to be operated during the annual drill should be deployed within 60 days prior to the drill. Therefore, the ladders at the emergency drill locations will be deployed three times a year.

6.0 Future Improvements

The ladders are undergoing a design review to determine where improvements can be made to better ensure reliability. Once the Operating Committee approves the proposed improvements, the improvements will be installed at a prototype location for verification testing. If the tests are successful, a program and schedule will be established to install the improvements system-wide.

In general, the inspection and lubrication plan will remain in effect for both the old and improved ladder systems during the improvement installation phase. Select changes may be made as needed to the plan after the improvements are installed.

7.0 Summary/Conclusions

The mechanical ladders have been in service since 2002. Due to design requirements, the ladder mechanisms are a complex organization of moveable parts that must all work in concert for the ladders to operate properly. Recent experience with ladder deployment has indicated the need for a standardized schedule of inspection and lubrication. In addition, some of the ladder mechanisms are being reviewed from a design standpoint to determine if they can be improved for increased reliability.

In mid-2014, most all the ladders were deployed for the purpose of identifying and correcting problems common to all ladders and specific problems to some. Many of the problems were immediately corrected and others are being evaluated. This comprehensive review exercise was very beneficial and was used as input into the inspection and lubrication plan.

Therefore, the reliability and safe operation of the ladders will be ensured by the combination of bi-annual inspection, lubrication and testing; future installation of certain design improvements; and issuance of instructions and training to potential users, addressing proper operation and how to spot and correct trouble conditions.

Ladder Locations

**Alameda Corridor Mid-Corridor Trench
Emergency Access Ladder & Fixed Stairs Locations**

Ladder No.	Station	Mile Post	Geographic Location	Comments
Vertical Ladder	649+75	10.15	west side of trench, s/o Auto Drive North - Compton	Vertical Ladder
Greenleaf Pump Station Stairway	635+40	9.88	west side of trench, n/o Bennet Street - Compton	Fixed Stairs
1	627+40	9.73	west side of trench, s/o Tichenor Street - Compton	
2	617+40	9.54	west side of trench, s/o Alondra Blvd. - Compton	
3	607+40	9.35	west side of trench, s/o Cypress Street - Compton	
4	598+10	9.17	west side of trench, n/o Myrrh Street - Compton	
4F	594+10	9.11	west side of trench, n/o Myrrh Street - Compton	Fixed Stairs
5	589+50	9.01	west side of trench, s/o Compton Blvd. - Compton	
Caged Ladder	584+68	8.93	west side of trench, 60 yds n/o Compton Blvd. - Compton	Caged Ladder for Signal Niche
6	581+10	8.83	west side of trench, 400 yds s/o Palmer Street - Compton	
7	571+17	8.67	west side of trench, 400 yds s/o Elm Street - Compton	
8	461+35	8.49	west side of trench, 400 yds s/o Rosecrans Ave - Compton	Fixed Stairs replaced Drop Ladder
9F	551+40	8.29	east side of trench, 270 yds n/o Mealy Street - Compton	Fixed Stairs
9	551+35	8.29	west side of trench, 270 yds n/o Mealy Street - Compton	
10	541+46	8.10	west side of trench, 230 yds s/o Oris Street - Compton	
11	531+76	7.92	west side of trench, 570 yds n/o 134th Street/Pine St. - Compton	
12	521+40	7.73	west side of trench, 500 yds s/o 130th Street - Compton	
Control Point Weber Access Stairway	517+54	7.67	west side of trench, 110 yds s/o El Segundo Blvd.	Fixed Stairs
13	511+74	7.54	west side of trench, 470 yds n/o El Segundo Blvd. - Compton	
14	501+61	7.36	west side of trench, 530 yds s/o 124th Street/Weber Ave. - Compton	
15	491+38	7.16	west side of trench, 1970 yds s/o Industry Way - Lynwood	
16F	481+55	6.97	east side of trench, 290 yds n/o Industry Way - Lynwood	Fixed Stairs
16	481+50	6.97	west side of trench, 290 yds n/o Industry Way - Lynwood	
17	470+94	6.78	west side of trench, 470 yds s/o Imperial Hwy- Lynwood	
18	461+05	6.59	west side of trench, 500 yds n/o Imperial Hwy - Lynwood	
19	451+79	6.41	west side of trench, 600 yds n/o Santa Ana Blvd. - South Gate	
20F	441+15	6.20	east side of trench, 350 yds n/o 110th Street. - South Gate	Fixed Stairs
20	441+23	6.21	west side of trench, 330 yds n/o 110th Street - South Gate	
21	431+35	6.01	west side of trench, 400 yds n/o Martin Luther King Blvd. - South Gate	
22	421+45	5.83	west side of trench, 460 yds s/o 103rd Street - South Gate	
23	410+95	5.64	west side of trench, 240 yds n/o 103rd Street - South Gate	
24	403+08	5.47	west side of trench, 470 yds s/o Tweedy Blvd. - South Gate	
25	392+23	5.28	west side of trench, 470 yds n/o 96th Place - LA County	
26	382+35	5.09	west side of trench, 470 yds n/o 94th Street - LA County	
27	371+78	4.90	west side of trench, 45 yds n/o 90th Street - LA County	
28	362+54	4.71	Compton - west side of trench, 700 yds s/o Firestone Ave. - LA County	

**Alameda Corridor Mid-Corridor Trench
Emergency Access Ladder & Fixed Stairs Locations**

Ladder No.	Station	Mile Post	Geographic Location	Comments
29	352+56	4.52	Compton - west side of trench, 330 yds s/o Manchester Ave. LA County	
30	341+50	4.31	west side of trench, 170 yds s/o 83rd Street - LA County	
Nadeau Control Point Access Stairway	331+90	4.13	east side of trench, 400 yds s/o Center Street - LA County	Fixed Stairs.
Nadeau Pump Station Access stairway	322+60	3.95	east side of trench, 175 yds s/o Leota Street - LA County	Fixed Stairs.
31	311+50	3.74	west side of trench, 125 yds s/o 76th Street - LA County	
32	301+07	3.56	west side of trench, 130 yds s/o Florence Ave - Huntington Park	
33F	290+90	3.37	east side of trench, 35 yds s/o Saturn Avenue - Huntington Park	Fixed Stairs.
33	291+11	3.37	west side of trench, 90 yds n/o Hawkins Circle - Huntington Park	
34	281+44	3.18	west side of trench, 50 yds s/o Zoe Ave. Huntington Park	
35	272+92	3.02	west side of trench, 50 yds s/o Gage Ave - Huntington Park	
36	262+28	2.82	west side of trench, 310 yds s/o Randolph Street - Huntington Park	
Caged Ladder	259+20	2.79	east side of trench, 168 yds s/o Randolph Street - Huntington Park	Caged Ladder for Signal Niche
37	251+67	2.62	east side of trench, 70 yds n/o Randolph Street - Huntington Park	
38	241+85	2.43	east side of trench, 70 yds n/o Slauson Ave. Huntington Park	
39	231+66	2.24	east side of trench, s/o 55th Street - Vernon	
40	221+90	2.05	east side of trench, n/o 52nd Street - Vernon	
41	211+85	1.86	east side of trench, s/o 49th Street - Vernon	
42	201+85	1.67	east side of trench, n/o 48th Street - Vernon	
43	191+85	1.48	east side of trench, s/o Vernon Ave - Vernon	
44	182+41	1.3	east side of trench, n/o Vernon Ave - Vernon	
45	177+81	1.20	east side of trench, s/o 38th Street - Vernon	
46	167+26	1.01	east side of trench, n/o Martin Luther King Blvd. - Vernon	
47	155+31	0.79	west side of trench, n/o 27th Street - City of Los Angeles	
Fixed Access Stairway	138+38	0.4	east Side of J-Yard Slope - Acces for CP 25th St.	Fixed Access Stairway

Maintenance of Way Services

Appendix N

Qualifications of Key Personnel

MAINTENANCE CONTRACT MANAGER

Duties:

- Plan, direct, manage, and coordinate the activities of the Contractor (including subcontractors) in the performance of Services to ensure compliance with contract requirements, applicable regulations, ACTA standards, and approved budgets.
- Coordinate activities, as necessary, with other ACTA contractors, third-party contractors, and other public and private entities.
- Serve as the point of contact for ACTA for all matters relating to the contract and attend consultation and planning meetings with ACTA.
- Coordinate preparation of documents including annual budget and work plan; training schedule and curriculums; inspection and safety plans; Contract Task Orders (CTOs); required records and reports; ACTA contract invoices; subcontracts; and vendor purchase orders.
- Supervise and manage subcontractors and Contractor staff and arrange for replacement personnel in the event of vacancies.
- Respond immediately to emergency events and initiate inspection and/or repair to track, signal and communications systems, and other facilities as required to safely support railroad operations.

Requirements: (Note: ACTA reserves the right to reduce required years-of-experience based on evaluation of individual resume.)

1. 8-10 years of progressively responsible experience in railroad track maintenance and/or construction on a signalized operating railroad, including at least 3 years in a similar contract manager role supervising and managing employees engaged in such activities, and 3 years managing construction and/or maintenance contracts.
2. Knowledge of the safe and proper procedures for operating railroad maintenance hand/power tools and railroad maintenance equipment.
3. Ability to communicate both verbally and in writing in the English language and have prior record keeping and invoicing experience.
4. Must possess strong interpersonal skills, experience dealing directly with clients, and experience managing administrative and accounting staff.
5. Knowledge of FTSS and FRWS and the ability to be qualified for part 213.7 of FTSS and the GCOR related to these regulations at the Start Date.

6. Previously qualified with a railroad to provide workplace protection under FRWS and to inspect track and supervise restoration of track under FTSS.
7. Basic knowledge of the physical layout and operation of the ACTA Rail Corridor.
8. Knowledge of time to complete and cost to repair track and right-of-way facilities, and ability to make value judgments regarding efficient and economical repair and/or replacement of these facilities.
9. Knowledge of the adjustment of thermal stress in continuously welded rail per part 213.119 of the FTSS.
10. Ability to read and interpret drawings, plans, and specifications for railroad track and civil construction.
11. Knowledge of track and signal inspection procedures and experience supervising the work of others for compliance with these procedures.
12. Ability to complete work under time constraints and to maintain composure under the stress of emergency situations.
13. Ability to perform scheduled and emergency repair or construction work at any time on any day of the week.
14. Possess or obtain within six weeks of the Start Date, a valid California driver's license and have no more than three moving violations and no DUIs within the last three years.
15. Pass a pre-employment physical examination including a drug and alcohol test.
16. Ability to work outdoors in all weather conditions, lift objects weighing up to 50 lbs., distinguish colors, and hear warning signals and radio and telephone devices.

RAILROAD BRIDGE SUPERVISOR

Duties:

- Supervise and coordinate the activities of crews that inspect, repair, maintain, and construct railroad bridges, tunnels, culverts, and embankments.
- Arrange for the materials, tools, and equipment required for these tasks.
- Arrange protection of work activities per FRWS, including temporary speed restrictions while performing duties in accordance with the FTSS and operating on-track inspection equipment.
- Coordinate with other maintenance activities of the Contractor, railroad dispatchers, third-party contractors, and other impacted public and private entities.
- Train employees in safe and proper work methods, dispatcher communications, and efficient use of labor and material.
- Prepare documentation of inspections performed and resources (labor, material, equipment, and supplies) used.
- Assist Maintenance Contract Manager in overall supervision of the Services.
- Initiate inspections and/or repairs of structures in response to emergency conditions at any time of any day.
- Arrange schedule, material procurement, equipment availability, and transportation for inspection and repair crews.

Requirements: (Note: ACTA reserves the right to reduce required years-of-experience based on evaluation of individual resume.)

1. 6-8 years of progressively responsible experience in railroad structure maintenance and/or construction on a signalized operating railroad, including at least 4 years supervising or directing the work of others engaged in such activities.
2. Familiarity with the inspection, construction, and repair of structures comprised of pre-stressed and cast-in-place concrete, steel, timber, and combinations thereof.
3. Familiarity with the railroad bridge rating system using Cooper E-80 Load.
4. Knowledge of the safe and proper procedures for operating railroad maintenance hand/power tools and railroad maintenance equipment.
5. Ability to communicate verbally and in writing in the English language with prior record keeping experience.

6. Must possess strong interpersonal skills.
7. Knowledge of the FRWS (including fall protection and rescue measures) GCOR related to these regulations at the Start Date.
8. Knowledge of Confined Space regulations of OSHA and CalOSHA.
9. Previously qualified with a railroad to provide worker protection under FRWS.
10. Basic knowledge of the physical layout and operation of the ACTA Rail Corridor.
11. Knowledge of time to complete and cost to repair bridge and right-of-way facilities, and ability to make value judgments regarding efficient and economic repair and/or replacement of these facilities.
12. Ability to read and interpret drawings, plans, and specifications for railroad structural and civil construction.
13. Ability to complete work under time constraints and to maintain composure under the stress of emergency situations.
14. Ability to perform scheduled and emergency repair or construction work at any time on any day of the week.
15. Possess or obtain within six weeks of Start Date, a valid California Class "A" driver's license with no more than three moving violations and no DUIs within the last 3 years.
16. Pass a pre-employment physical examination including a drug and alcohol test.
17. Ability to work outdoors in all weather conditions, lift objects up to 50 lbs., distinguish colors, and hear warning signals and radio and telephone devices.

RAILROAD TRACK SUPERVISOR

Duties:

- Supervise and coordinate day-to-day activities of crews that inspect, test, repair, maintain, and construct railroad track, special trackwork, embankments, and right-of-way.
- Perform visual inspections of the track and right-of-way, and arrange for necessary materials, tools, and equipment required to keep facilities in good repair.
- Arrange worker protection for crews per FRWS. Control and operate on-track inspection trucks and machinery.
- Coordinate individual and concurrent maintenance and repair activities with railroad dispatchers, third-party contractors, and other impacted public and private entities.
- Training employees in safe and proper inspection, maintenance, and construction methods, how to communicate and coordinate with dispatchers.
- Apply efficiently and economical use of labor, material, and equipment.
- Prepare documentation of inspections, maintenance, repairs, and replacements performed as well as resources (labor, material, equipment, and supplies) used.
- Assist Maintenance Contract Manager in overall supervision of the Services.
- Initiates inspections and/or repairs of track in response to emergency conditions at any time of any day.

Requirements: (Note: ACTA reserves the right to reduce required years-of-experience based on evaluation of individual resume.)

1. 6-8 years of progressively responsible experience in railroad track maintenance and/or construction on a signalized operating railroad, including at least 4 years supervising and/or directing the work of others engaged in such activities.
2. Knowledge of the safe and proper procedures for operating railroad maintenance hand/power tools and railroad maintenance equipment.
3. Ability to communicate verbally and in writing in the English language with record keeping experience.
4. Must possess strong interpersonal skills.
5. Knowledge of FTSS and FRWS and the ability to be qualified for part 21 3.7 of FTSS and the GCOR related to these regulations at the Start Date.

6. Previously qualified with a railroad to provide workplace protection under FRWS and to inspect track and supervise restoration of track under FTSS.
7. Basic knowledge of the physical layout and operation of the ACTA Rail Corridor.
8. Knowledge of the time to complete and cost to repair track, special trackwork, and right-of-way facilities, and the ability to make value judgments regarding efficient and economic repair and/or replacement of these facilities.
9. Knowledge of the adjustment of thermal stress in continuously welded rail per part 213.119 of the FTSS.
10. Knowledge of techniques to maintain, repair, and replace special trackwork items such as turnouts, crossovers, diamonds, and crossing panels.
11. Ability to read and interpret drawings, plans, and specifications for railroad track and civil construction.
12. Ability to complete work under time constraints and maintain composure under the stress of emergency situations.
13. Ability to perform scheduled and emergency repair or construction work at any time on any day of the week.
14. Possess or obtain within six weeks of the Start Date, a valid California driver's license with no more than three moving violations and no DUIs within the last 3 years.
15. Pass a pre-employment physical examination including a drug and alcohol test.
16. Ability to work outdoors in all weather conditions, lift objects up to 50 lbs., distinguish colors and hear warning signals and radio and telephone devices.

RAILROAD SIGNAL AND COMMUNICATIONS SUPERVISOR

Duties:

- Supervise and coordinate the day-to-day activities of crews that inspect, test, repair, maintain, and construct railroad signal and communication systems, including grade crossing warning devices.
- Arrange for worker protection per CFR 49.
- Coordinate with other maintenance activities of the Contractor, dispatchers, third-party contractors, and impacted public and private entities.
- Train employees in safe and proper inspection, testing, installation and repair methods, how to communicate with dispatchers regarding activities to be performed, and the efficient use of labor and material.
- Prepare documentation of inspections, tests and installations performed and resources (labor, material, equipment, and supplies) used.
- Assist Maintenance Contract Manager in overall supervision of the Services.
- Initiate inspections, tests and repairs of signal & communications systems in response to emergency conditions at any time of any day.
- Arrange scheduling, material procurements, equipment availability, and transportation for signal and communications crews.

Requirements: (Note: ACTA reserves the right to reduce required years-of-experience based on evaluation of individual resume.)

1. 6-8 years of progressively responsible experience in railroad signal and communications maintenance and/or construction in an operating railroad environment, including at least 4 years supervising or directing the work of others engaged in such activities.
2. Ability to read and understand complex signal and electrical circuits and possess knowledge of standard signal practices.
3. Knowledge of hot box detectors, high-wide detectors, dragging equipment detectors, grade crossing warning devices, and radio communications elements.
4. Demonstrate understanding of the VHLC (Vital Harmon Logic Controller) and have the ability to reprogram the VHLC at any given time. Ability to modify or make changes to the VHLC program, changes to basic signal circuits such as highway grade crossing systems, switch control circuits etc. Knowledge of Safetrain or Harmon Grade Crossing

Predictors.

5. Familiarity with and capability to perform all tests and inspections set forth in FRA, CFR 49 parts 234 and 236.
6. Knowledge of the safe and proper procedures for operating railroad maintenance hand/power tools and railroad maintenance equipment.
7. Ability to communicate verbally and in writing in the English language with prior record keeping experience.
8. Must possess strong interpersonal skills.
9. Knowledge of the time to complete and cost to repair railroad signal & communication systems and how to address failures, and ability to make value judgments regarding economic repair and/or replacement of these facilities.
10. Ability to complete work under time pressures and to maintain composure under the stress of emergency situations.
11. Ability to perform scheduled and emergency repair or construction work at any time on any day of the week.
12. Possess or obtain within six weeks of the Start Date, a valid California driver's license with no more than three moving violations and no DUIs within the last 3 years.
13. Pass a pre-employment physical examination including a drug and alcohol test.
14. Ability to work outdoors in all weather conditions, lift objects up to 50 lbs., distinguish colors, and hear warning signals and radio and telephone devices.

SAFETY SUPERVISOR

Duties:

- Manages and coordinates all aspects ACTA and Railroad safety programs, ensuring that all safety programs are correctly administered as set forth in the Special conditions, as well as knowledge of FRA standards and qualified under FRA Track Safety Standards, Part 213, Railroad Workplace Safety, Part 214, applicable CPUC General Orders, Right-of-Way, and Structures Engineering instructions, and Roadway Worker Protection rules and regulations.
- Implements and manages safety policies and procedures in compliance with local, state, and federal OSHA rules and regulations.
- Manages the administration of project safety, accident, and hazard communication programs to maintain safe work environments.
- Corrects unsafe employee activities, procedures, and practices.
- Inspect work locations to detect existing or potential accidents and health hazards.
- Documents unsafe conditions, safety hazards, determines corrective or preventative measures where indicated, and follows up to ensure measures have been implemented.
- Evaluates contractors' safety programs and policies; recommends changes and manages implementation of changes.
- Conducts investigations of accidents and injuries through employee interviews, equipment inspections and site inspections, carefully reviewing the integrity of personal protective equipment, materials, and job-site specific gear.
- Provides regular worksite safety training for all employees; provides training for hourly labor, foremen, supervisors and local managers in work site safety practices, fire prevention and correct handling techniques for toxins, equipment and other materials.
- Recommends appropriate disciplinary action when safety policies are violated.
- Manages administration of contractor safety training.
- Requires that all required records and reports be complete, accurate and correctly submitted to comply with all internal processes and comply with all state and federal regulations.
- Provides informational signs, posters, barriers, and other materials to warn of

potential and actual safety hazards and to prevent access to hazardous conditions.

Requirements: (Note: ACTA reserves the right to reduce required years-of-experience based on evaluation of individual resume.)

1. A minimum of 5 years of experience in safety positions in the railroad industry.
2. A bachelor's degree in occupational safety or a related science field.
3. Knowledge of and experience with OSHA rules, and regulations and reporting processes and procedures.
4. Knowledge of FRA standards and qualified under FRA Track Safety Standards, Part 213, Railroad Workplace Safety, Part 214, and applicable CPUC General Orders.
5. Possess or obtain within six weeks of the Start Date, a valid California driver's license with no more than three moving violations and no DUIs within the last 3 years.
6. Ability to effectively communicate, train and manage staff.
7. Strong verbal and written communication skills: ability to interact with all levels of individuals and regulatory agencies.

RAILROAD MACHINE OPERATORS

Duties:

- The MOW contractor shall provide qualified Railroad Machine Operators and will not be allowed to operate any equipment within the Authority Right-of-Way until the following requirements are met:

Requirements: (Note: ACTA reserves the right to reduce required years-of-experience based on evaluation of individual resume.)

1. Knowledge of railroad methods of track construction and maintenance.
2. Equipment operators with at least two years of experience operating the make and model of the equipment assigned to operate.
3. Certification from MOW Safety Supervisor that operator has successfully completed any and all training on equipment or machine assigned to operate.
4. Must have a valid California driver's license with no more than three moving violations and no DUI's in any state in the last three years.
5. Must pass a pre-employment physical examination including a drug and alcohol test.
6. Ability to work outdoors in all weather conditions, to lift objects weighing a minimum of 50 lbs. and must be able to distinguish colors and hear warning signs and radio and telephone devices.

Maintenance of Way Services

Appendix O

Small Business Enterprises (SBE) Forms

SBE Participation

Subcontracting Opportunities List

It is ACTA's objective to provide SBE subcontracting opportunities for all subcontracted activity, as well as to encourage contractors to subcontract activities which might have otherwise been performed by the contractor itself to meet and exceed the 15% minimum participation level.

During the term of the Maintenance of Way Agreement, there may be subcontracting opportunities in the following areas. While this list is not all inclusive, the Proposer is encouraged to consider any and all opportunities where appropriate.

- Crane service
- Damaged bridge and structure repairs
- Debris removal
- Emergency ladder repairs
- Fence installation and repair
- Graffiti removal
- Maintenance facility security
- Maintenance facility cleaning and repair
- Painting of structures
- Pump station repair and maintenance – electrical, plumbing, mechanical
- Rail grinding
- Rail flaw detection
- Traffic control
- Weed abatement/vegetation control

Alameda Corridor Transportation Authority

Small Business Enterprise (SBE) Participation Requirements

1.0 SBE Participation

ACTA promotes using Small Business Enterprises (SBEs) and has established a minimum participation level of 15% for the Maintenance of Way Services Agreement. However, Proposers are encouraged to maximize SBE participation above that amount to the extent possible.

2.0 Definitions

Contractor - an individual, partnership, corporation or other legal entity that is submitting a bid or proposal to perform construction related work. A Contractor must have a valid State of California Contractor's License to the extent required by law.

Department of General Services (DGS) - serves as the business manager for the State of California.

Good Faith Effort (GFE) - a prescribed set of actions conducted by Proposers to identify SBEs to meet the established SBE participation 15% SBE minimum participation level for this procurement. See Good Faith Effort Evaluation Criteria.

National Institute of Governmental Purchasing (NIGP) - a professional association for public procurement that seeks to develop, support and promote the public procurement profession through educational and research programs, professional support, technical services and advocacy initiatives that benefit members and constituents.

NIGP Codes - standardized commodity/service codes developed by the NIGP.

North American Industrial Classification System (NAICS) - classifies business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. economy. The NAICS industry codes define establishments based on activities in which they are primarily engaged.

NAICS Codes - used as the certification codes for Small Business Certifications.

Small Business Enterprise (SBE) - eligibility may be determined by either using U.S. Small Business Administration (SBA) size standards which are matched to the NAICS codes, or by the SBE standards set by the DGS.

Subcontractor - an individual, firm, or entity having a direct contract with the prime Contractor or with any other Subcontractor to perform a portion of the subject contract. A Subcontractor must have a valid State of California Contractor's License to the extent required by law.

Vendor/Supplier - an individual, firm or entity providing materials or supplies directly to the subject contract. For a prime Contractor to receive participation credit for using an SBE Vendor or Supplier, the materials/supplies must be directly applicable to the subject contract.

3.0 Application

- 3.1 Non-SBE prime Contractors are encouraged to the extent possible to use SBE subcontractors. Non-SBE prime Contractors shall meet the 15% SBE minimum participation level or document and submit an acceptable GFE, for their proposal to be deemed responsive. SBE prime Contractors, certified through online SBE databases and/or the DGS database or certified through local agencies and verified by ACTA, are deemed to have met the SBE component of the 15% SBE minimum participation level.
- 3.2 All prime Contractors are encouraged to use SBE Subcontractors, whether at a first tier or lower tier level, as well as small business Vendors and Suppliers. Lower tier subcontractors, Vendors and Suppliers must provide services/materials directly related to the contract to be counted toward meeting the 15% SBE minimum participation level.

4.0 SBE Databases: Vendor Registration and SBE Certification

- 4.1 In order to be counted toward meeting the 15% SBE minimum participation level, an SBE firm shall be certified through any local agency or State program, and must be certified by the due date of the prime Contractor's Proposal.
- 4.2 Prior to contract award, SBE status shall be verified and may be audited by ACTA.

5.0 Commitment

- 5.1 The Proposal shall include a completed SBE Commitment Plan Form (CPF) indicating the estimated percentage of SBE participation to be achieved.
- 5.2 If the Proposal does meet the 15% SBE minimum participation level, the Proposer shall submit GFE documentation with the Proposal. The Proposer must achieve a GFE minimum score of 70 out of 100 points for a Proposal to be deemed responsive.
- 5.3 A Proposer that does not meet the 15% SBE minimum participation level and does not submit GFE documentation with the Proposal, or submits GFE documentation that does not achieve the minimum passing score of 70 shall be deemed non-responsive.
- 5.4 If an SBE firm listed on a prime Contractor's CPF loses its SBE status or certification prior to contract award, the firm will not count toward meeting the 15% SBE minimum participation level unless:
 - The firm becomes eligible for recertification and is recertified; or
 - If the firm is not eligible for recertification, the prime Contractor replaces the firm and submits a revised CPF for approval.

- 5.5 After negotiations have been completed and the Agreement is executed, achieving the 15% SBE minimum participation level or the GFE reduced commitment is a contractual commitment and can only be altered with written approval of ACTA. During the Annual Maintenance Budget approval process, SBE participation will be negotiated and maximized based on the planned activity for the upcoming year.
- 5.6 See RFP Appendix A, Draft Maintenance Agreement for information concerning substitutions after award, reporting, compliance, monitoring, violations, and remedies.

6.0 Good Faith Effort Evaluation Criteria

A Proposer submitting a proposal that does not meet the 15% SBE minimum participation level may be deemed responsive if the Proposer submits documentation showing it made an acceptable Good Faith Effort (GFE) to meet the 15% SBE minimum participation level. There are 9 criteria that will be used to evaluate a GFE, and a score of 70 or more of a possible 100 points must be achieved for a proposal to be declared responsive. The following are the weighted GFE criteria:

- 6.1 **Attend Pre-Proposal Meeting (5 points):** The Proposer submitted written evidence that it attended the pre-proposal meeting.
- 6.2 **Subdivide the Work (10 points):** The Proposer identified the services (work category) to be performed by its own workforces and those to be subcontracted or supplied by others in an effort to meet the 15% SBE minimum participation level. The services shall be identified using NAICS and/or NIGP codes with dollar values clearly identifying the level of SBE participation sought.
- 6.3 **Advertise (10 points):** The Proposer submitted written evidence of commercial advertising for SBE participation at least 14 calendar days prior to the Proposal deadline. The advertisement shall identify the list of services identified for SBE participation. Proof of advertising shall include the name of the advertiser(s); a copy of the advertisement(s) showing the date(s) published; and an affidavit from advertiser(s) attesting to the placement of the advertisement(s).
- 6.4 **Use of Vendor Databases (15 points):** The Proposer submitted written evidence of using local agency and/or DGS online SBE databases.
- 6.5 **Directly Solicit SBEs (15 points):** The Proposer submitted written evidence of directly soliciting an adequate number of SBE potential participants certified in available databases at least 14 calendar days prior to Proposal submission. The evidence shall contain names, contact persons, addresses, phone numbers and dates of all SBE firms contacted; services requested; and how more specific service requirements were communicated or provided.

The Proposer shall contact an adequate number of SBE firms for each category of work that was identified for SBE participation. The number of contacts depends on the total number of SBE firms certified in the database within the category of work. If the database contains 5 or less, then the bidder or proposer shall contact all SBE firms in that database. If the database contains 6 to 10, at least 5 shall be contacted. If the database contains 11 to 50, at least half shall be contacted. If the database contains more than 50 at least 25 shall be contacted.

- 6.6 **Conduct Follow-Up (15 points):** Proposer shall submit a contact log with names, contact persons, phone numbers, dates and methods used for follow-up on initial solicitations. The follow-up log should contain a minimum of 75% of the initial solicitations.
- 6.7 **Offer Assistance (5 points):** The Proposer shall demonstrate that it has offered to assist SBEs in obtaining bonding, insurance, lines of credit, equipment or other means of support.
- 6.8 **Negotiate and Document Bid Results (15 points):** The Proposer shall submit written evidence that it negotiated in good faith with interested SBEs. Negotiations include discussions regarding scope of work, materials, equipment, insurance, bonding, personnel, timing of project, etc. For any negotiations that were unsuccessful, the Proposer shall submit the unsuccessful firm's name, telephone number, contact person, price bid (if applicable) and the reason for rejecting the SBE firm. ACTA reserves the right to require the Proposer to submit copies of all SBE and non-SBE bids for each item of work before finalizing the score for this criterion.
- 6.9 **Proposer Commitment Value (10 points):** The Proposer's SBE commitment percentage in relation to that of other Proposers. Percentage must equal or be greater than the average commitment percentage of the other Proposers.

SBE FORM 01 – Proposer SBE Status

1.0 At the time of submitting a proposal is the Proposer a Certified SBE?

YES _____ NO ____

If yes, attached a copy of the SBE certification, indicating the certifying agency.

2.0 Verification/Declarations

I declare under penalty of perjury under the laws of the State of California that the foregoing information is true and correct.

Date: _____

Signature: _____

Print Name: _____

Title: _____

Proposer: _____

SBE FORM 02 – SBE Participation Calculation

Cost Item	Total Dollar Amount	SBE Dollar Amount *	Name of SBE Certified Firm **
A. Track, Bridge, Safety Positions (Enter Total from Form AR-I. See App. R Cost Forms)			
B. Signal / Comm ARR Unit Costs (Enter Total from Form AR-II (1 of 2). See App. R Cost Forms)			
Subtotal of A & B			

C. Subcontracting Work Items	Assume Total Value of	SBE Dollar Amount *	Name of SBE Certified Firm **
C1. Crane Service	\$ 50,000		
C2. Bridge and Structure Repairs	200,000		
C3. Debris Removal	15,000		
C4. Emergency Ladder Repairs	100,000		
C5. Fence Installation / Repair	70,000		
C6. Graffiti Removal	120,000		
C7. Maintenance Facility Cleaning / Repair	24,000		
C8. Maintenance Facility Security	150,000		
C9. Painting of Structures	100,000		
C10. Pump Station Repair / Maintenance – electrical, plumbing, mechanical	100,000		
C11. Rail Grinding	100,000		
C12. Rail Flaw Detection	30,000		

C13. Traffic Control	30,000		
C14. Weed Abatement / Vegetation Control	30,000		
Subtotal of C	\$1,119,000		

D. Special Material Purchase	Assume Total Value of	SBE Dollar Amount *	Name of SBE Certified Firm **
D1. Rail Ties and Ballast	\$ 240,000		
D2. Switch Ties and Ballast	260,000		
Subtotal of D	\$ 500,000		

Grand Total (A+B+C+D)		
	GT1	GT2

SBE % = (GT2/GT1) x 100

* Enter N/A if Not Applicable

** Provide SBE detailed information on SBE Form 03

SBE FORM 03 – SBE Commitment Plan Form (CPF)

This information shall be submitted with Proposal. A Proposal shall be deemed non-responsive and not considered for award of contract, if: (1) the CPF is not received with the Proposal, or (2) the Proposal does not meet the minimum 15% SBE participation level, and does not include GFE documentation with the Proposal that achieves the minimum passing score of 70.

PROPOSER'S NAME: _____

Only certified SBE firms are to be listed on this form. Firms must be currently certified on the date of the Proposal. Include all SBE firms from SBE Form 02. Copies of current SBE certifications must be submitted with the Proposal.

	Name of Certified SBE Firm	Certifying Agency *	Certification Number	Services or Materials Supplied **	Contact Information (Telephone # & Email Address)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

Form continues on next page.
Add additional pages if necessary.

SBE FORM 04 – Other Certifications of SBE Firms

Supplemental SBE Form

If any of the SBE certified firms listed on SBE Form 03 also have other certifications such as but not limited to MBE, WBE, DBE, DVBE, or LBE, please include below. Copies of the certifications listed below should be submitted with the Proposal.

	Name of Certified SBE Firm from SBE Form 03	Additional Certification Type	Certification Number	Certifying Agency
1				
2				
3				
4				
5				

Add additional pages if necessary.

SBE FORM 05 – SBE Good Faith Effort Evaluation Form (GFE)

This information shall be submitted with Proposal. A Proposal shall be deemed non-responsive and not considered for award of contract, if: (1) the GFE is not received with the Proposal, or (2) the Proposal does not meet the minimum 15% SBE participation level, and does not include GFE documentation with the Proposal that achieves the minimum passing score of 70.

PROPOSER'S NAME: _____

Only certified SBE firms are to be listed on this form. Firms must be currently certified on the date of the Proposal. Include all SBE firms from SBE Form 02. Copies of current SBE certifications must be submitted with the Proposal.

	Evaluation Criteria	Comments	Yes	No	Points
1	Did the Proposer Attend the Pre-Proposal Meeting? (5 Points)				
2	Did the Proposer Subdivide the Work? (10 Points)				
3	Did the Proposer Advertise. (10 Points)				
4	Did the Proposer use the Vendor Database? (15 Points)				
5	Did the Proposer Directly Solicit SBE's. (15 Points)				
6	Did the Proposer Conduct Follow-up. (15 Points)				
7	Did the Proposer Offer Assistance. (5 Points)				
8	Did the Proposer Negotiate and Document Bid Results? (15 Points)				
9	What is the Proposer Commitment Value .(10 Points)				
	TOTAL VALUE				

Maintenance of Way Services

Appendix P

Cost Proposal Forms

Form AR - I

SECTION I. Value 20 points							
I. TRACK, PUMP STATION, BRIDGE & SAFETY LABOR POSITIONS ⁽¹⁾	Firm(s)	Number of Positions	Straight-time Hours Per Year Per Position	Yearly Hours	Hourly Rate	Total Annual Cost	
I-A. MANAGEMENT POSITIONS - Salaried or Hourly							
Contract Manager		1	2,000	2,000		\$ -	
Track Supervisor		1	2,000	2,000		\$ -	
Safety Supervisor		1	2,000	2,000		\$ -	
Office Manager		1	2,000	2,000		\$ -	
I-B. STAFF POSITIONS - Hourly							
Track Superintendent		1	2,000	2,000		\$ -	
Track Foreman		2	2,000	4,000		\$ -	
Asst. Foreman		0	0	0		\$ -	
Track Inspector		1	2,000	2,000		\$ -	
Laborers		4	2,000	8,000		\$ -	
Equipment Operators		1.5	2,000	3,000		\$ -	
Welder		2	2,000	4,000		\$ -	
Welder Helper		1	2,000	2,000		\$ -	
						Sub-Total	\$ -
I-C. ANNUAL MAINTENANCE YARD SECURITY ⁽²⁾							
						Grand Total Track	\$ -
<p>⁽¹⁾ All quoted hourly rates are to be fully burdened, including but not limited to: salary paid to employee; overhead markups including fringe benefits, etc.; insurance; profit; Local Administrative and Office Support Costs (See Appendix A, Article 1 Definitions); and Safety Equipment Costs (See Appendix A, Article 1 Definitions) for contractor and subcontractor. If position is through a subcontractor so indicate, and include general contractor markup as applicable in rate.</p> <p>⁽²⁾ Including markups, if applicable.</p> <p>Section I is worth 20 points. The lowest Proposer's Grand Total for Section I receives 20 points. The other Proposers will receive a prorated number of points related to the lowest Proposer cost for Section I.</p>							

Form AR - II

SECTION II. Value 10 points

II. SIGNAL & COMMUNICATION (S&C) LABOR POSITIONS ⁽¹⁾	Firm(s)	Number of Positions	Straight-time Hours Per Year Per Position	Yearly Hours	Hourly Rate	Total Annual Cost
II-A. MANAGEMENT POSITIONS - Salaried or Hourly						
Signal/Comm Supervisor		1	1,800	1,800		\$ -
Safety Supervisor		1	1,300	1,300		\$ -
Office Administrator		1	1,800	1,800		\$ -
II-B. STAFF POSITIONS - Hourly						
Test Maintainer		1	2,000	2,000		\$ -
Signal Maintainers		5	2,000	10,000		\$ -
AEI/Comm Technician		1	2,000	2,000		\$ -
Sub-Total						\$ -
II-C. MAINTENANCE YARD SECURITY ⁽²⁾						
Grand Total S&C Costs						\$ -

⁽¹⁾ All quoted hourly rates are to be fully burdened, including but not limited to: salary paid to employee; overhead markups including fringe benefits, etc.; insurance; profit; Local Administrative and Office Support Costs (See Appendix A, Article 1 Definitions); and Safety Equipment Costs (See Appendix A, Article 1 Definitions) for contractor and subcontractor. If position is through a subcontractor so indicate, and include general contractor markup as applicable in rate.

⁽²⁾ Including markups, if applicable.

Section II is worth 10 points. The lowest Proposer's Grand Total for Section II receives 10 points. The other Proposers will receive a prorated number of points related to the lowest Proposer cost for Section II.

Form AR - III

SECTION III. Value 2 points

PROPOSED CONTRACTOR MARKUP FOR ALL SUBCONTRACTORS, MATERIALS, AND OTHER PROCUREMENTS.

LIST SEPARATELY

(These markups are to be included in all costs in I & II where applicable)

A - Subcontractor

B - Materials

Average of A & B: $((A+B)/2)$

Other if any (do not use in computing average above) _____
(description)

Section III is worth up to 2 points. Lowest Proposer's average receives 2 points. The other Proposers will receive a prorated number of points related to the lowest Proposer cost for Section III.

Maintenance of Way Services

Appendix Q

CY2024 Operations and Maintenance

&

Maintenance of Way Budgets

Alameda Corridor - **Approved Amended** CY2023 Operations & Maintenance (O&M) Budget

		Calendar Year 2023					Amended Calendar Year 2022				Variance											
		Basis of Apportionment		R.R. M & O Rail Cost	Reserve Account Non-	ACTA Operating	Total	R.R. M & O Rail Cost	Reserve Account Non-	ACTA Operating	Total	CY23-CY22	% Change									
		GR Ton MI	Train MI	(A)	Rail Cost (B)	Budget Cost (C)		(A)	Rail Cost (B)	Budget Cost (C)												
I. Labor & Operations Maintenance: (1. Labor, 2. Operations Maintenance)																						
1.a.i	Contract Manager		TM	227,486.00	64,996.00	32,498.00	324,980.00	220,863.97	63,103.99	31,552.00	315,519.95	\$	9,460	3.0%								
1.a.ii	Track Supervisor	GTM		205,248.00	51,312.00	-	256,560.00	199,275.76	49,818.94	-	249,094.70	\$	7,465	3.0%								
1.a.iii	Safety Supervisor	GTM		205,248.00	51,312.00	-	256,560.00	199,275.76	49,818.94	-	249,094.70	\$	7,465	3.0%								
1.a.iv	Office Manager		TM	59,870.00	59,870.00	-	119,740.00	58,122.10	58,122.10	-	116,244.19	\$	3,496	3.0%								
1.a.v	Office Assistant		TM	48,870.00	55,370.00	-	104,240.00	58,122.10	58,122.10	-	116,244.19	\$	(12,004)	-10.3%								
1.b	Track Inspector	GTM		222,541.68	-	-	222,541.68	202,312.96	-	-	202,312.96	\$	20,229	10.0%								
1.b.i	Track Foreman	GTM		401,083.36	-	-	401,083.36	202,312.96	-	-	202,312.96	\$	198,770	98.2%								
1.b.ii	Assistant Foreman	GTM		-	-	-	-	199,076.73	-	-	199,076.73	\$	(199,077)	-100.0%								
1.b.iii	Track Laborers	GTM		761,899.87	19,535.89	-	781,435.76	725,914.11	18,613.18	-	744,527.29	\$	36,908	5.0%								
1.b.iv	Equipment Operators		TM	350,874.22	14,466.01	-	365,340.23	363,631.52	9,323.89	-	372,955.41	\$	(7,615)	-2.0%								
1.b.v	Welder	GTM		410,144.86	-	-	410,144.86	391,681.01	-	-	391,681.01	\$	18,464	4.7%								
1.b.vi	Welder Helper	GTM		195,358.94	-	-	195,358.94	186,131.82	-	-	186,131.82	\$	9,227	5.0%								
1.b.vii	Laborer (Non-Rail)		TM	-	195,358.94	-	195,358.94	-	186,131.82	-	186,131.82	\$	9,227	5.0%								
1.b.viii	Foreman (Non-Rail)		TM	-	211,541.68	-	211,541.68	-	202,312.96	-	202,312.96	\$	9,229	4.6%								
1.b.ix	Track Superintendent	GTM		134,166.70	134,166.71	-	268,333.41	139,530.03	139,530.03	-	279,060.05	\$	(10,727)	-3.8%								
2.b	Pump Station Maintenance		TM	-	15,480.00	-	15,480.00	-	13,416.00	-	13,416.00	\$	2,064	15.4%								
2.b.i	Pump Station Repairs and Supplies (Subcontractor)		TM	-	34,815.00	-	34,815.00	-	31,650.00	-	31,650.00	\$	3,165	10.0%								
2.c	AEI & Other Communications Maintenance		TM	244,287.00	-	147,952.89	392,239.89	202,587.42	-	122,697.45	325,284.87	\$	66,955	20.6%								
2.d	Rail Flaw Detection (Subcontractor)	GTM		63,000.00	-	-	63,000.00	56,700.00	-	-	56,700.00	\$	6,300	11.1%								
2.e	Graffiti Control		TM	-	30,726.00	-	30,726.00	-	27,276.00	-	27,276.00	\$	3,450	12.6%								
2.f	Weed Abatement (Subcontractor)		TM	56,390.40	14,097.60	-	70,488.00	53,568.00	13,392.00	-	66,960.00	\$	3,528	5.3%								
2.g	Safety Training (Subcontractor)		TM	29,006.25	5,118.75	-	34,125.00	27,221.25	4,803.75	-	32,025.00	\$	2,100	6.6%								
2.h	Safety Management		TM	20,750.63	3,661.87	-	24,412.50	20,750.63	3,661.88	-	24,412.50	\$	-	0.0%								
2.i	Vehicles	GTM		273,996.00	91,332.00	-	365,328.00	249,198.00	60,290.40	2,115.60	311,604.00	\$	53,724	17.2%								
2.l	Full-Time Equipment	GTM		288,960.00	-	-	288,960.00	262,128.00	-	-	262,128.00	\$	26,832	10.2%								
2.m	Maintenance Program Rail Grinding - (50% of Total Cost)	GTM		347,415.45	-	-	347,415.45	304,062.49	-	-	304,062.49	\$	43,353	14.3%								
2.n	Track Materials / Supplies / Rentals	GTM		303,600.00	-	-	303,600.00	264,000.00	-	-	264,000.00	\$	39,600	15.0%								
2.o	Signal Maintenance (Subcontractor)		TM	2,233,564.58	-	-	2,233,564.58	1,553,671.90	-	-	1,553,671.90	\$	679,893	43.8%								
2.p	Ladder / Fence / Traffic Support (Subcontractor)		TM	-	367,461.00	-	367,461.00	-	279,510.00	-	279,510.00	\$	87,951	31.5%								
2.q	Security - Trench Cameras		TM	14,322.00	5,115.00	1,023.00	20,460.00	14,322.00	5,115.00	1,023.00	20,460.00	\$	-	0.0%								
2.r	Security / Yard & Office Maintenance & Support (Subcontractor)		TM	259,182.00	-	-	259,182.00	233,415.00	-	-	233,415.00	\$	25,767	11.0%								
2.s	Underwater Bridge Inspection (Not until 2023)		TM	73,187.50	-	-	73,187.50	-	-	-	-	\$	73,188									
2.t	Trench Ditch Cleaning		TM	-	73,500.00	-	73,500.00	-	46,200.00	-	46,200.00	\$	27,300	59.1%								
2.v	Replace Signal Wire on the Corridor (Subcontractor)		TM	-	-	-	-	-	-	-	-	\$	-									
2.w	Railroad Reporting and Record Keeping Software System (Subcontractor)		TM	46,620.00	-	-	46,620.00	44,100.00	-	-	44,100.00	\$	2,520	5.7%								
2.x	Railroad Emergency Drill Exercise		TM	29,808.04	-	-	29,808.04	27,342.80	-	-	27,342.80	\$	2,465	9.0%								
2.dd	Bridge Inspections (Subcontractor)	GTM		37,800.00	-	-	37,800.00	35,700.00	-	-	35,700.00	\$	2,100	5.9%								
2.ee	Communication System Repair	GTM		4,000,000.00	-	-	4,000,000.00	1,317,530.00	-	-	1,317,530.00	\$	2,682,470	203.6%								
Subtotal Labor & Operations Maintenance				\$	11,544,681.48	\$	1,499,236.45	\$	181,473.89	\$	13,225,391.82	\$	7,812,548.32	\$	1,320,212.97	\$	157,388.05	\$	9,290,149.34	\$	3,935,242.48	42.4%

	Calendar Year 2023					Amended Calendar Year 2022				Variance		
	Basis of Apportionment		R.R. M & O Rail Cost	Reserve Account Non-	ACTA Operating	Total	R.R. M & O Rail Cost	Reserve Account Non-	ACTA Operating	Total	CY23-CY22	% Change
	GR Ton MI	Train MI	(A)	Rail Cost (B)	Budget Cost (C)		(A)	Rail Cost (B)	Budget Cost (C)			
II. Capital Costs												
3.a	Surfacing & Mobilization	GTM	\$ -	\$ 549,390.90	\$ -	\$ 549,390.90	\$ -	\$ 503,065.67	\$ -	\$ 503,065.67	\$ 46,325.23	9.2%
3.c	Reballast Program - Labor & Equipment		\$ -	\$ 347,870.80	\$ -	\$ 347,870.80	\$ -	\$ 324,775.97	\$ -	\$ 324,775.97	\$ 23,094.83	7.1%
3.d	Reballast Program - Ballast		\$ -	\$ 63,800.00	\$ -	\$ 63,800.00	\$ -	\$ 58,300.00	\$ -	\$ 58,300.00	\$ 5,500.00	9.4%
3.f	Capital Program Rail Grinding - (50% of Total Cost)	GTM	\$ -	\$ 102,415.45	\$ -	\$ 102,415.45	\$ -	\$ 304,062.49	\$ -	\$ 304,062.49	\$ (201,647.04)	-66.3%
3.h-2	Replace 20 Frogs		\$ -	\$ 768,036.80	\$ -	\$ 768,036.80	\$ -	\$ 728,557.20	\$ -	\$ 728,557.20	\$ 39,479.60	5.4%
3.h-3	Replace 40 Switch Point and Stock Rail		\$ -	\$ 729,476.80	\$ -	\$ 729,476.80	\$ -	\$ 458,201.73	\$ -	\$ 458,201.73	\$ 271,275.07	59.2%
3.h-5	Insulated Joint Replacement		\$ -	\$ 286,816.25	\$ -	\$ 286,816.25	\$ -	\$ 256,060.44	\$ -	\$ 256,060.44	\$ 30,755.81	12.0%
3.o	Pump Station Upgrades (Subcontractor)	GTM	\$ -	\$ 234,850.00	\$ -	\$ 234,850.00	\$ -	\$ 213,500.00	\$ -	\$ 213,500.00	\$ 21,350.00	10.0%
3.r	Trench Emergency Ladder, Stair Study, & Repairs (Subcontractor)		\$ -	\$ 129,000.00	\$ -	\$ 129,000.00	\$ -	\$ 129,000.00	\$ -	\$ 129,000.00	\$ -	0.0%
3.w.1	Rehab Henry Ford Crossing - Near PHL Offices N of Bridge		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
3.y	Signal Battery Replacement		\$ -	\$ 121,000.00	\$ -	\$ 121,000.00	\$ -	\$ 110,000.00	\$ -	\$ 110,000.00	\$ 11,000.00	10.0%
3.aa-1	Replace Crucero Diamonds		\$ -	\$ -	\$ -	\$ -	\$ -	\$ 631,773.17	\$ -	\$ 631,773.17	\$ (631,773.17)	-100.0%
3.gg-3	Curve Rail Replacement		\$ -	\$ 1,177,293.85	\$ -	\$ 1,177,293.85	\$ -	\$ 657,204.85	\$ -	\$ 657,204.85	\$ 520,089.01	79.1%
3.ii	Fixed Trench Ladders (Subcontractor)		\$ -	\$ 420,000.00	\$ -	\$ 420,000.00	\$ -	\$ 420,000.00	\$ -	\$ 420,000.00	\$ -	0.0%
3.mm	Miscellaneous Trench Structure Repairs (Subcontractor)		\$ -	\$ 63,000.00	\$ -	\$ 63,000.00	\$ -	\$ 63,000.00	\$ -	\$ 63,000.00	\$ -	0.0%
3.nn	Compton Bridges - Replace Deck Ties		\$ -	\$ 850,273.10	\$ -	\$ 850,273.10	\$ -	\$ 572,913.23	\$ -	\$ 572,913.23	\$ 277,359.87	48.4%
3.oo	Replacement of M23A Switches Machines		\$ -	\$ 110,000.00	\$ -	\$ 110,000.00	\$ -	\$ 30,800.00	\$ -	\$ 30,800.00	\$ 79,200.00	257.1%
3.pp	Signal Module VHLC Replacements to XLC		\$ -	\$ 155,713.95	\$ -	\$ 155,713.95	\$ -	\$ 141,699.60	\$ -	\$ 141,699.60	\$ 14,014.35	9.9%
3.qq	Furnish and Replace Rail Lubricator Systems		\$ -	\$ 102,602.00	\$ -	\$ 102,602.00	\$ -	\$ 86,411.66	\$ -	\$ 86,411.66	\$ 16,190.34	18.7%
	Subtotal Capital Costs		\$ -	\$ 6,211,539.90	\$ -	\$ 6,211,539.90	\$ -	\$ 5,689,326.00	\$ -	\$ 5,689,326.00	\$ 522,213.90	9.2%
	Subtotal of I & II		\$ 11,544,681.48	\$ 7,710,776.35	\$ 181,473.89	\$ 19,436,931.72	\$ 7,812,548.32	\$ 7,009,538.97	\$ 157,388.05	\$ 14,979,475.33	\$ 4,457,456.38	29.8%
	Multiple use contingency for 2023, not in MOW Budget but included in O&M Total					\$ 440,000.00 *				\$ 500,000.00 *	\$ (60,000.00)	-12.0%
III. Operating & Other Costs												
	Insurance (annual amount) (8)	TM	\$ 1,863,000.00	\$ -	\$ -	\$ 1,863,000.00	\$ 1,600,000.00	\$ -	\$ -	\$ 1,600,000.00	\$ 263,000.00	16.4%
	Dispatching (1)	(9)	\$ 662,385.79	\$ -	\$ -	\$ 662,385.79	\$ 662,385.79	\$ -	\$ -	\$ 662,385.79	\$ -	0.0%
	Security - Labor (2)	(9)	\$ 1,455,116.00	\$ -	\$ -	\$ 1,455,116.00	\$ 1,455,116.00	\$ -	\$ -	\$ 1,455,116.00	\$ -	0.0%
	Security - Equipment (3)	(9)	\$ 281,540.40	\$ -	\$ -	\$ 281,540.40	\$ 281,540.40	\$ -	\$ -	\$ 281,540.40	\$ -	0.0%
	Utilities (5)	TM	\$ 220,000.00	\$ -	\$ -	\$ 220,000.00	\$ 214,000.00	\$ -	\$ -	\$ 214,000.00	\$ 6,000.00	2.8%
	Storm Water Discharge Permits, Water Testing & Support Services (4)	TM	\$ 75,000.00	\$ -	\$ -	\$ 75,000.00	\$ 75,000.00	\$ -	\$ -	\$ 75,000.00	\$ -	0.0%
	Provide 3rd Party Security Monitoring & Support Services	TM	\$ 4,000.00	\$ -	\$ -	\$ 4,000.00	\$ 3,500.00	\$ -	\$ -	\$ 3,500.00	\$ 500.00	14.3%
	M&O or Capital Reserve Support Service (6)	TM	\$ 698,400.00	\$ 264,827.00	\$ -	\$ 963,227.00	\$ 426,039.00	\$ 142,013.00	\$ -	\$ 568,052.00	\$ 395,175.00	69.6%
	Communications Network and Alarm/Phone Upgrades and Renewals	TM	\$ 35,000.00	\$ -	\$ -	\$ 35,000.00	\$ 30,000.00	\$ -	\$ -	\$ 30,000.00	\$ 5,000.00	16.7%
	Rehab Henry Ford Crossing @ CP Dominguez (Engineering & Permits) (Also see 3.w.)	TM	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
	PRE Signal Plan Updates for Various Control Points	TM	\$ 30,000.00	\$ -	\$ -	\$ 30,000.00	\$ 50,000.00	\$ -	\$ -	\$ 50,000.00	\$ (20,000.00)	-40.0%
	Extraordinary Right-of-Way Cleanup	TM	\$ 175,000.00	\$ -	\$ -	\$ 175,000.00	\$ 150,000.00	\$ -	\$ -	\$ 150,000.00	\$ 25,000.00	16.7%
	AEI Readers Component Replacements	Special Apportionment	\$ 15,575.00	\$ -	\$ 9,425.00	\$ 25,000.00	\$ 15,575.00	\$ -	\$ 9,425.00	\$ 25,000.00	\$ -	0.0%
	Subtotal Operating & Other Costs		\$ 5,515,017.19	\$ 264,827.00	\$ 9,425.00	\$ 5,789,269.19	\$ 4,963,156.19	\$ 142,013.00	\$ 9,425.00	\$ 5,114,594.19	\$ 674,675.00	13.2%
	Total of I, II, & III		\$ 17,059,698.67	\$ 7,975,603.35	\$ 190,898.89	\$ 25,666,200.91	\$ 12,775,704.51	\$ 7,151,551.97	\$ 166,813.05	\$ 20,594,069.52	\$ 5,072,131.38	24.6%

(1,2,3) These costs are for memorandum purposes only & are internal Railroads costs not paid by ACTA

(4) Includes annual fees

(5) Previous Actual Expenditures + 5% increase per year

(6) Split based on work estimates

* \$60k of \$500K contingency used for 2.p, approved by ODG in _____ 2024

(7) Split based upon allocation plan for installation & maintenance agreed to by ACTA and the Railroads

(8) Estimate based on 2022 plus 10 increase

(9) Apportionment between Railroads based upon private agreement between the parties.

FBLR = Fully Burden Labor Rate

(A) Costs paid by Railroads prorated among carriers

(B) Costs paid by ACTA from the Reserve Account

(C) Costs paid by ACTA

Alameda Corridor - Approved Amended 2023 Maintenance of Way (MOW) Budget

	# of Positions	2023 VALUE	Share	R.R. M & O		Reserve Account		ACTA Operating Budget		2022 Approved Budget	
				Rail Cost	Hours	Non-Rail Cost	Hours	Cost	Hours		
1. LABOR COSTS	19.5	4,113,218.86		3,222,791.63	30,325	857,929.23	8,475	32,498.00	200	4,012,700.77	
		Approved Amended CY2022 Budget		3,146,250.83	30,325	834,897.94	8,475	31,552.00	200	4,012,700.77	
		Variance		76,541		23,031		946.00		-	
		% Change		2.4%		2.8%		3.0%		0.0%	
2. OPERATIONS MAINTENANCE											
		2023		R.R. M&O - Rail		Res. Acct. Non-Rail		ACTA Operating Budget		2022	
				Cost	Hours	Share	Cost	Hours	Share	Cost	
2.b	Pump Station Maintenance	\$ 15,480.00	0.0%	\$ -		100.0%	\$ 15,480.00		0.0%	\$ -	\$ 13,416.00
2.b.i	Pump Station Repairs and Supplies (Subcontractor)	\$ 34,815.00	0.0%	\$ -		100.0%	\$ 34,815.00		0.0%	\$ -	\$ 31,650.00
2.c	AEI & Other Communications Maintenance	\$ 392,239.89	62.3%	\$ 244,287.00		0.0%	\$ -		37.7%	\$ 147,952.89	\$ 325,284.87
2.d	Rail Flaw Detection (Subcontractor)	\$ 63,000.00	100.0%	\$ 63,000.00		0.0%	\$ -		0.0%	\$ -	\$ 56,700.00
2.e	Graffiti Control	\$ 30,726.00	0.0%	\$ -		100.0%	\$ 30,726.00		0.0%	\$ -	\$ 27,276.00
2.f	Weed Abatement (Subcontractor)	\$ 70,488.00	80.0%	\$ 56,390.40		20.0%	\$ 14,097.60		0.0%	\$ -	\$ 66,960.00
2.g	Safety Training (Subcontractor)	\$ 34,125.00	85.0%	\$ 29,006.25		15.0%	\$ 5,118.75		0.0%	\$ -	\$ 32,025.00
2.h	Safety Management	\$ 24,412.50	85.0%	\$ 20,750.63		15.0%	\$ 3,661.87		0.0%	\$ -	\$ 24,412.50
2.i	Vehicles	\$ 365,328.00	75.0%	\$ 273,996.00		25.0%	\$ 91,332.00		0.0%	\$ -	\$ 311,604.00
2.l	Full-Time Equipment	\$ 288,960.00	100.0%	\$ 288,960.00		0.0%	\$ -		0.0%	\$ -	\$ 262,128.00
2.m	Maintenance Program Rail Grinding - (50% of Total Cost)	\$ 347,415.45	100.0%	\$ 347,415.45		0.0%	\$ -		0.0%	\$ -	\$ 304,062.49
2.n	Track Materials / Supplies / Rentals	\$ 303,600.00	100.0%	\$ 303,600.00		0.0%	\$ -		0.0%	\$ -	\$ 264,000.00
2.o	Signal Maintenance (Subcontractor)	\$ 2,233,564.58	100.0%	\$ 2,233,564.58		0.0%	\$ -		0.0%	\$ -	\$ 1,553,671.90
2.p	Ladder / Fence / Traffic Support (Subcontractor)	\$ 367,461.00	0.0%	\$ -		100.0%	\$ 367,461.00		0.0%	\$ -	\$ 279,510.00
2.q	Security - Trench Cameras	\$ 20,460.00	70.0%	\$ 14,322.00		25.0%	\$ 5,115.00		5.0%	\$ 1,023.00	\$ 20,460.00
2.r	Security / Yard & Office Maintenance & Support (Subcontractor)	\$ 259,182.00	100.0%	\$ 259,182.00		0.0%	\$ -		0.0%	\$ -	\$ 233,415.00
2.s	Underwater Bridge Inspection (Not until 2023)	\$ 73,187.50	100.0%	\$ 73,187.50		0.0%	\$ -		0.0%	\$ -	\$ -
2.t	Trench Ditch Cleaning	\$ 73,500.00	0.0%	\$ -		100.0%	\$ 73,500.00		0.0%	\$ -	\$ 46,200.00
2.w	Railroad Reporting and Record Keeping Software System (Subcontractor)	\$ 46,620.00	100.0%	\$ 46,620.00		0.0%	\$ -		0.0%	\$ -	\$ 44,100.00
2.x	Railroad Emergency Drill Exercise	\$ 29,808.04	100.0%	\$ 29,808.04		0.0%	\$ -		0.0%	\$ -	\$ 27,342.80
2.aa	AEI Readers Upgrade - Completed in 2021	\$ -	100.0%	\$ -		0.0%	\$ -		0.0%	\$ -	\$ -
2.dd	Bridge Inspections (Subcontractor)	\$ 37,800.00	100.0%	\$ 37,800.00		0.0%	\$ -		0.0%	\$ -	\$ 35,700.00
2.ee	Communication System Repair	\$ 4,000,000.00	100.0%	\$ 4,000,000.00		0.0%	\$ -		0.0%	\$ -	\$ 1,317,530.00
SUBTOTAL B:		\$ 9,112,172.96		\$ 8,321,889.85			\$ 641,307.22			\$ 148,975.89	\$ 5,277,448.56
3. CAPITAL COSTS											
		2023		R.R. M&O - Rail		Res. Acct. Non-Rail		ACTA Operating Budget		2022	
				Cost	Hours	Share	Cost	Hours	Share	Cost	
3.a	Surfacing & Mobilization	\$ 549,390.90	0.0%	\$ -		100.0%	\$ 549,390.90		0.0%	\$ -	\$ 503,065.67
3.c	Reballast Program - Labor & Equipment	\$ 347,870.80	0.0%	\$ -		100.0%	\$ 347,870.80		0.0%	\$ -	\$ 324,775.97
3.d	Reballast Program - Ballast	\$ 63,800.00	0.0%	\$ -		100.0%	\$ 63,800.00		0.0%	\$ -	\$ 58,300.00
3.f	Capital Program Rail Grinding - (50% of Total Cost)	\$ 102,415.45	0.0%	\$ -		100.0%	\$ 102,415.45		0.0%	\$ -	\$ 304,062.49
3.h-2	Replace 20 Frogs	\$ 768,036.80	0.0%	\$ -		100.0%	\$ 768,036.80		0.0%	\$ -	\$ 728,557.20
3.h-3	Replace 40 Switch Points and Stock Rails	\$ 729,476.80	0.0%	\$ -		100.0%	\$ 729,476.80		0.0%	\$ -	\$ 458,201.73
3.h-5	Insulated Joint Replacement	\$ 286,816.25	0.0%	\$ -		100.0%	\$ 286,816.25		0.0%	\$ -	\$ 256,060.44
3.o	Pump Station Upgrades (Subcontractor)	\$ 234,850.00	0.0%	\$ -		100.0%	\$ 234,850.00		0.0%	\$ -	\$ 213,500.00
3.r	Trench Emergency Ladder, Stair Study, & Repairs (Subcontractor)	\$ 129,000.00	0.0%	\$ -		100.0%	\$ 129,000.00		0.0%	\$ -	\$ 129,000.00
3.y	Signal Battery Replacement	\$ 121,000.00	0.0%	\$ -		100.0%	\$ 121,000.00		0.0%	\$ -	\$ 110,000.00
3.aa-1	Replace Crucero Diamonds	\$ -	0.0%	\$ -		100.0%	\$ -		0.0%	\$ -	\$ 631,773.17
3.gg-3	Curve Rail Replacement	\$ 1,177,293.85	0.0%	\$ -		100.0%	\$ 1,177,293.85		0.0%	\$ -	\$ 657,204.85
3.ll	Fixed Trench Ladders (Subcontractor)	\$ 420,000.00	0.0%	\$ -		100.0%	\$ 420,000.00		0.0%	\$ -	\$ 420,000.00
3.mm	Miscellaneous Trench Structure Repairs (Subcontractor)	\$ 63,000.00	0.0%	\$ -		100.0%	\$ 63,000.00		0.0%	\$ -	\$ 63,000.00
3.nn	Compton Bridges - Replace Deck Ties	\$ 850,273.10	0.0%	\$ -		100.0%	\$ 850,273.10		0.0%	\$ -	\$ 572,913.23
3.oo	Replacement of M23A Switches Machines	\$ 110,000.00	0.0%	\$ -		100.0%	\$ 110,000.00		0.0%	\$ -	\$ 30,800.00
3.pp	Signal Module VHLC Replacements to XLC	\$ 155,713.95	0.0%	\$ -		100.0%	\$ 155,713.95		0.0%	\$ -	\$ 141,699.60
3.qq	Furnish and Replace Rail Lubricator Systems	\$ 102,602.00	0.0%	\$ -		100.0%	\$ 102,602.00		0.0%	\$ -	\$ 86,411.66
SUBTOTAL C:		\$ 6,211,539.90		\$ -			\$ 6,211,539.90			\$ -	\$ 5,689,326.00
GRAND TOTAL A, B, C:		\$ 19,436,931.72		\$ 11,544,681.48			\$ 7,710,776.35			\$ 181,473.89	\$ 14,979,475.33

1. Approved Amended 2023 Labor Costs

1. LABOR	Positions	Needed Portion	EST Hours	2023 Hourly RATE	OT RATE	OT * VALUE	DT RATE	DT ** VALUE	2023 VALUE	Share	R.R. M & O Rail Cost	Hours	Share	Reserve Account Non-Rail Cost	Hours	Share	ACTA Operating Budget Cost	Hours	2022 Amended Approved Budget		
MANAGEMENT POSITIONS																					
1.a.i	Contract Manager	1	100.0%	2000	\$ 162.49	N/A	N/A	N/A	\$ 324,980.00	70.0%	\$ 227,486.00	1,400	20.0%	\$ 64,996.00	400	10.0%	\$ 32,498.00	200	\$ 315,519.95		
1.a.ii	Track Supervisor	1	100.0%	2000	\$ 128.28	N/A	N/A	N/A	\$ 256,560.00	80.0%	\$ 205,248.00	1,600	20.0%	\$ 51,312.00	400	0.0%	\$ -	-	\$ 249,094.70		
1.a.iii	Safety Supervisor	1	100.0%	2000	\$ 128.28	N/A	N/A	N/A	\$ 256,560.00	80.0%	\$ 205,248.00	1,600	20.0%	\$ 51,312.00	400	0.0%	\$ -	-	\$ 249,094.70		
1.a.iv	Office Manager	1	100.0%	2000	\$ 59.87	N/A	N/A	N/A	\$ 119,740.00	50.0%	\$ 59,870.00	1,000	50.0%	\$ 59,870.00	1,000	0.0%	\$ -	-	\$ 116,244.19		
1.a.v	Office Assistant	1	100.0%	2000	\$ 59.87	N/A	N/A	N/A	\$ 104,240.00	50.0%	\$ 48,870.00	1,000	50.0%	\$ 55,370.00	1,000	0.0%	\$ -	-	\$ 116,244.19		
STAFF POSITIONS																					
1.b	Track Inspector	1	100.0%	2000	\$ 98.67	\$ 132.56	\$ 10,207.12	\$ 166.44	\$ 3,994.56	\$ 222,541.68	100.0%	\$ 222,541.68	2,000	0.0%	\$ -	-	0.0%	\$ -	-	\$ 202,312.96	
1.b.i	Track Foreman	2	100.0%	4000	\$ 98.67	\$ 132.56	\$ 20,414.24	\$ 166.44	\$ 7,989.12	\$ 401,083.36	100.0%	\$ 401,083.36	4,000	0.0%	\$ -	-	0.0%	\$ -	-	\$ 202,312.96	
1.b.ii	Assistant Foreman	0	100.0%	0	\$ 97.17	\$ 130.31	\$ -	\$ 163.45	\$ -	\$ -	100.0%	\$ -	-	0.0%	\$ -	-	0.0%	\$ -	-	\$ 199,076.73	
1.b.iii	Track Laborers	4	100.0%	8000	\$ 91.19	\$ 121.34	\$ 37,372.72	\$ 151.49	\$ 14,543.04	\$ 781,435.76	97.5%	\$ 761,899.87	7,800	2.5%	\$ 19,535.89	200	0.0%	\$ -	-	\$ 744,527.29	
1.b.iv	Equipment Operators	1.5	100.0%	3000	\$ 123.90	\$ 167.47	\$ 19,342.79	\$ 211.04	\$ 7,597.44	\$ 365,340.23	97.5%	\$ 350,874.22	2,925	2.5%	\$ 14,466.01	75	0.0%	\$ -	-	\$ 372,955.41	
1.b.v	Welder	2	100.0%	4000	\$ 95.68	\$ 128.07	\$ 19,722.78	\$ 160.46	\$ 7,702.08	\$ 410,144.86	100.0%	\$ 410,144.86	4,000	0.0%	\$ -	-	0.0%	\$ -	-	\$ 391,681.01	
1.b.vi	Welder Helper	1	100.0%	2000	\$ 91.19	\$ 121.34	\$ 9,343.18	\$ 151.49	\$ 3,635.76	\$ 195,358.94	100.0%	\$ 195,358.94	2,000	0.0%	\$ -	-	0.0%	\$ -	-	\$ 186,131.82	
1.b.vii	Laborer (Non-Rail)	1	100.0%	2000	\$ 91.19	\$ 121.34	\$ 9,343.18	\$ 151.49	\$ 3,635.76	\$ 195,358.94	0.0%	\$ -	-	100.0%	\$ 195,358.94	2,000	0.0%	\$ -	-	\$ 186,131.82	
1.b.viii	Foreman (Non-Rail)	1	100.0%	2000	\$ 98.67	\$ 132.56	\$ 10,207.12	\$ 166.44	\$ 3,994.56	\$ 211,541.68	0.0%	\$ -	-	100.0%	\$ 211,541.68	2,000	0.0%	\$ -	-	\$ 202,312.96	
1.b.ix	Track Superintendent	1	100.0%	2000	\$ 124.92	\$ 171.93	\$ 13,238.61	\$ 218.95	\$ 5,254.80	\$ 268,333.41	50.0%	\$ 134,166.70	1,000	50.0%	\$ 134,166.71	1,000	0.0%	\$ -	-	\$ 279,060.05	
		19.5		39000						SUBTOTAL A:	\$ 4,113,218.86		\$ 3,222,791.63	30,325		\$ 857,929.23	8,475		\$ 32,498.00	200	\$ 4,012,700.77
										Approved Amended CY2022 Budget	\$ 4,012,700.77		\$ 3,146,250.83	30,325		\$ 834,897.94	8,475		\$ 31,552.00	200	\$ 4,012,700.77
										Variance	\$ 100,518.08		\$ 76,541	-		\$ 23,031	-		\$ 946.00	-	\$ -
										% Change	2.5%		2.4%		2.8%			3.0%		0.0%	

* OT Value Based on Working 80 Hours of OT During Calendar Year = 3.85% of Base Hours

**DT Value Based on Working 24 Hours of DT During Year = 1.2% of Base Hours

Note: all rates are Fully Burden Labor Rate. Additional detail is available upon request.

2. Approved Amended CY23 Operations Maintenance Budget Detail

Cost Code

2.b	Pump Station Maintenance	U of M	QTY	Rate	Split	Total
	Vehicle (Split 50/50 between 2.b & 2.e)	Monthly	12	\$ 2,580.00	50%	\$ 15,480.00

SUBTOTAL: \$ 15,480.00

Materials	10%	Markup: \$	-
Subcontractor	5%	Markup: \$	-
Supplies	15%	Markup: \$	-
TOTAL:		\$	15,480.00

2.b.i	Pump Station Repairs and Supplies	U of M	QTY	Rate	Split	Total
	Subcontractor - Repairs to Pumps	LS	1	\$ 18,700.00	100%	\$ 18,700.00
	Environmental Supplies (Chemicals for water treatment)	LS	1	\$ 13,200.00	100%	\$ 13,200.00

SUBTOTAL: \$ 31,900.00

Materials	10%	Markup: \$	-
Subcontractor	5%	Markup: \$	935.00
Supplies	15%	Markup: \$	1,980.00
TOTAL:		\$	34,815.00

2.c	AEI & Other Communications Maintenance	U of M	QTY	Rate	Split	Total
Materials						
	Material - Initial Inventory Purchase	LS	1	\$ 13,750.00	100%	\$ 13,750.00
	<i>Subtotal - Materials</i>					\$ 13,750.00

Subcontractor						
	Office Administrator	Hour	200	\$ 65.00	100%	\$ 13,000.00
	AEI / Comm Technician - ST	Hour	2000	\$ 128.72	100%	\$ 257,440.00
	AEI / Comm Technician - OT (Based on 1Q&2Q2021)	Hour	80	\$ 172.33	100%	\$ 13,786.40
	AEI / Comm Technician - DT (Based on 1Q&2Q2021)	Hour	16	\$ 257.44	100%	\$ 4,119.04
	Signal / Comm Supervisor	Hour	200	\$ 137.50	100%	\$ 27,500.00
	Vehicle - Signal / Comm Supervisor	Monthly	12	\$ 312.00	100%	\$ 3,744.00
	Vehicle - AEI / Comm Technician (Monthly Rate for FT Position)	Monthly	12	\$ 3,120.00	100%	\$ 37,440.00
	Vehicle - AEI / Comm Technician (Hourly Rate for Call-Outs)	Hour	120	\$ 17.73	100%	\$ 2,127.60
	<i>Subtotal - Subcontractor</i>					\$ 359,157.04

SUBTOTAL: \$ 372,907.04

Materials	10%	Markup: \$	1,375.00
Subcontractor	5%	Markup: \$	17,957.85
Supplies	15%	Markup: \$	-
TOTAL:		\$	392,239.89

2.d	Rail Flaw Detection	U of M	QTY	Rate	Split	Total
	Subcontractor - Mobilization	EA	3	\$ 5,000.00	100%	\$ 15,000.00
	Subcontractor - Daily Rate (3-day minimums)	EA	3	\$ 15,000.00	100%	\$ 45,000.00

SUBTOTAL: \$ 60,000.00

Materials	10%	Markup: \$	-
Subcontractor	5%	Markup: \$	3,000.00
Supplies	15%	Markup: \$	-
TOTAL:		\$	63,000.00

2.e	Graffiti Control	U of M	QTY	Rate	Split	Total
	Vehicle (Split 50/50 between 2.b & 2.e)	Monthly	12	\$ 2,580.00	50%	\$ 15,480.00
	Materials	LS	1	\$ 13,860.00	100%	\$ 13,860.00

SUBTOTAL: \$ 29,340.00

Materials	10%	Markup: \$	1,386.00
Subcontractor	5%	Markup: \$	-
Supplies	15%	Markup: \$	-
TOTAL:		\$	30,726.00

2.f	Weed Abatement	U of M	QTY	Rate	Split	Total
Subcontractor						
	Subcontractor	LS	1	\$ 36,960.00	100%	\$ 36,960.00
	Disposal - Dumpsters @ 1 per month	EA	12	\$ 1,200.00	100%	\$ 14,400.00
<i>Subtotal - Subcontractor</i>						\$ 51,360.00
Supplies & Rental						
	Specialty Equipment Rental	EA	12	\$ 1,200.00	100%	\$ 14,400.00
<i>Subtotal - Supplies & Rental</i>						\$ 14,400.00
SUBTOTAL:						\$ 65,760.00
	Materials			10%	Markup:	\$ -
	Subcontractor			5%	Markup:	\$ 2,568.00
	Supplies			15%	Markup:	\$ 2,160.00
TOTAL:						\$ 70,488.00

2.g	Safety Training	U of M	QTY	Rate	Split	Total
	Subcontractor - Training (Classes and Seminars)	LS	1	\$ 20,000.00	100%	\$ 20,000.00
	Instructor Lodging and Meals	Days	5	\$ 2,500.00	100%	\$ 12,500.00
SUBTOTAL:						\$ 32,500.00
	Materials			10%	Markup:	\$ -
	Subcontractor			5%	Markup:	\$ 1,625.00
	Supplies			15%	Markup:	\$ -
TOTAL:						\$ 34,125.00

2.h	Safety Management	U of M	QTY	Rate	Split	Total
	Drug Testing - Employees	EA	30	\$ 775.00	100%	\$ 23,250.00
SUBTOTAL:						\$ 23,250.00
	Materials			10%	Markup:	\$ -
	Subcontractor			5%	Markup:	\$ 1,162.50
	Supplies			15%	Markup:	\$ -
TOTAL:						\$ 24,412.50

2.i	Vehicles (Cost Accounts % split)	U of M	QTY	Rate	Split	Total
2.i.i	Contract Manager (RR M&O 72%/RA 28%)	Monthly	12	\$ 2,064.00	100%	\$ 24,768.00
2.i.ii	Track Supervisor - Hi-Rail (RR M&O 80%/RA 20%)	Monthly	12	\$ 2,580.00	100%	\$ 30,960.00
2.i.iii	Welding Truck - Hi-Rail (RR M&O 100%)	Monthly	12	\$ 6,880.00	100%	\$ 82,560.00
2.i.iv	Track Foreman - Hi-Rail (2 Each) (RR M&O 50%/RA 50%)	Monthly	24	\$ 4,988.00	100%	\$ 119,712.00
2.i.v	Assistant Track Foreman - Hi-Rail (RR M&O 100%)	Monthly	0	\$ 2,580.00	100%	\$ -
2.i.vi	Track Inspector - Hi-Rail (2 Each) (RR M&O 100%)	Monthly	24	\$ 2,580.00	100%	\$ 61,920.00
2.i.vii	Track Superintendent - Hi-Rail (RR M&O 50%/RA 50%)	Monthly	12	\$ 2,580.00	100%	\$ 30,960.00
2.k	Safety Supervisor Vehicle (RR M&O 80%/RA 20%)	Monthly	12	\$ 1,204.00	100%	\$ 14,448.00
SUBTOTAL:						\$ 365,328.00
	Materials			10%	Markup:	\$ -
	Subcontractor			5%	Markup:	\$ -
	Supplies			15%	Markup:	\$ -
TOTAL:						\$ 365,328.00

2.l	Full-Time Equipment	U of M	QTY	Rate	Split	Total
	Hi-Rail Grapple / Boom Truck	Monthly	12	\$ 10,492.00	100%	\$ 125,904.00
	Speedswing	Monthly	12	\$ 8,256.00	100%	\$ 99,072.00
	Combination Backhoe	Monthly	12	\$ 5,332.00	100%	\$ 63,984.00
SUBTOTAL:						\$ 288,960.00
	Materials			10%	Markup:	\$ -
	Subcontractor			5%	Markup:	\$ -
	Supplies			15%	Markup:	\$ -
TOTAL:						\$ 288,960.00

2.m	Maintenance Program Rail Grinding	U of M	QTY	Rate	Split	Total	
RailWorks Labor & Equipment							
	Foreman	HR	240	\$ 98.67	50%	\$ 11,840.40	
	Laborer	HR	240	\$ 91.19	50%	\$ 10,942.80	
	F350 HiRail Crew Truck	HR	240	\$ 15.00	50%	\$ 1,800.00	
	<i>Subtotal - RWs Labor & Equipment</i>					\$	24,583.20
Subcontractor							
	Mainline Grinding Subcontractor Mobilization	LS	2	\$ 80,000.00	50%	\$ 80,000.00	
	Mainline Grinding Contractor Basic Charge	Daily	30	\$ 10,500.00	50%	\$ 157,500.00	
	Mainline Grinding Production Charge	Miles	25	\$ 400.00	50%	\$ 5,000.00	
	Mainline Grinding Pre-Grind Survey Mobilization	LS	1	\$ 12,500.00	50%	\$ 6,250.00	
	Mainline Grinding Pre-Grind Survey Daily Rate	Daily	3	\$ 8,000.00	50%	\$ 12,000.00	
	Signal Support	Daily	30	\$ 1,033.00	50%	\$ 15,495.00	
	<i>Subtotal - Subcontractor</i>					\$	276,245.00
Supplies & Rental							
	Fuel for Grinder	Gallon	6000	\$ 7.00	50%	\$ 21,000.00	
	Water Truck Rental	Monthly	2	\$ 7,500.00	50%	\$ 7,500.00	
	<i>Subtotal - Supplies & Rental</i>					\$	28,500.00
Total is split 50/50 between R.R. M&O Cost and Capital						SUBTOTAL:	\$ 329,328.20
				Materials	10%	Markup:	\$ -
				Subcontractor	5%	Markup:	\$ 13,812.25
				Supplies	15%	Markup:	\$ 4,275.00
						TOTAL:	\$ 347,415.45

2.n	Track Materials / Supplies / Rentals	U of M	QTY	Rate	Split	Total	
Materials							
	Miscellaneous Track Materials - Bolts, etc.	Monthly	12	\$ 5,500.00	100%	\$ 66,000.00	
	Curve Grease - Grease and miscellaneous parts and pieces	Monthly	12	\$ 5,500.00	100%	\$ 66,000.00	
	Supplies and Consumables - Welding, etc.	Monthly	12	\$ 5,500.00	100%	\$ 66,000.00	
	<i>Subtotal - Materials</i>					\$	198,000.00
Supplies & Rental							
	Equipment Rental	Monthly	12	\$ 5,500.00	100%	\$ 66,000.00	
	<i>Subtotal - Supplies & Rental</i>					\$	66,000.00
						SUBTOTAL:	\$ 264,000.00
				Materials	10%	Markup:	\$ 26,400.00
				Subcontractor	5%	Markup:	\$ 3,300.00
				Supplies	15%	Markup:	\$ 9,900.00
						TOTAL:	\$ 303,600.00

2.o	Signal Maintenance	U of M	QTY	Rate	Split	Total	
Materials							
	Material Ongoing Purchases Total = LS (RWKS purchase)	LS	1	\$ 96,000.00	100%	\$ 96,000.00	
	<i>Subtotal - Materials</i>					\$	96,000.00
RailWorks Labor & Equipment							
	HiRail Bucket Truck	Monthly	12	\$ 3,600.00	100%	\$ 43,200.00	
	Foreman	HR	416	\$ 98.67	100%	\$ 41,046.72	
	Foreman - OT	HR	96	\$ 132.56	100%	\$ 12,725.76	
	<i>Subtotal - RWs Labor & Equipment</i>					\$	96,972.48
Subcontractor							
	Office Administrator	HR	1800	\$ 65.00	100%	\$ 117,000.00	
	Signal / Comm Supervisor	HR	1800	\$ 137.50	100%	\$ 247,500.00	
	Signal / Comm Supervisor - OT (Based on 1Q&2Q2022)	HR	75	\$ 206.25	100%	\$ 15,468.75	
	Signal / Comm Supervisor - DT (Based on 1Q&2Q2022)	HR	25	\$ 275.00	100%	\$ 6,875.00	
	Signal Test Maintainer	HR	2000	\$ 128.72	100%	\$ 257,440.00	
	Signal Test Maintainer - OT (Based on 1Q&2Q2022)	HR	75	\$ 172.33	100%	\$ 12,924.75	
	Signal Test Maintainer - DT (Based on 1Q&2Q2022)	HR	25	\$ 257.44	100%	\$ 6,436.00	
	Signal Maintainer	HR	8000	\$ 121.34	100%	\$ 970,720.00	
	Signal Maintainer - OT (Based on 1Q&2Q2022)	HR	225	\$ 161.71	100%	\$ 36,384.75	
	Signal Maintainer - DT (Based on 1Q&2Q2022)	HR	75	\$ 242.68	100%	\$ 18,201.00	
	Vehicle - Signal / Comm Supervisor	Monthly	12	\$ 2,808.00	100%	\$ 33,696.00	
	Vehicle - Signal Test Maintainer	Monthly	12	\$ 3,120.00	100%	\$ 37,440.00	
	Vehicle - Signal Maintainers (4)	Monthly	12	\$ 12,480.00	100%	\$ 149,760.00	
	Vehicle - Signal Test Maintainer &/or Signal Maintainer for Call-Outs	HR	1238	\$ 17.73	100%	\$ 21,949.74	
	Vehicle -Sig/Comm Supv &/or Signal Engineer for Call-Outs	HR	140	\$ 17.73	100%	\$ 2,482.20	
	<i>Subtotal - Subcontractor</i>					\$	1,934,278.19
						SUBTOTAL:	\$ 2,127,250.67
				Materials	10%	Markup:	\$ 9,600.00
				Subcontractor	5%	Markup:	\$ 96,713.91
				Supplies	15%	Markup:	\$ -
						TOTAL:	\$ 2,233,564.58

2.p	Ladder / Fence / Traffic Support	U of M	QTY	Rate	Split	Total
Materials						
	Ladder Replacement Parts	LS	1	\$ 12,705.00	100%	\$ 12,705.00
	<i>Subtotal - Materials</i>					\$ 12,705.00
Subcontractor						
	Traffic Support	LS	1	\$ 36,960.00	100%	\$ 36,960.00
	Fence Repair / Replacement	LS	1	\$ 242,550.00	100%	\$ 242,550.00
	<i>Subtotal - Subcontractor</i>					\$ 279,510.00
	<i>\$60,000 transferred from Contingency to cover fencing repairs thru the end of the year. No markup applied.</i>					\$ 60,000.00
	SUBTOTAL:					\$ 352,215.00
	Materials			10%	Markup:	\$ 1,270.50
	Subcontractor			5%	Markup:	\$ 13,975.50
	Supplies			15%	Markup:	\$ -
	TOTAL:					\$ 367,461.00
2.q	Security - Trench Cameras	U of M	QTY	Rate	Split	Total
	Motion Detector Replacement Parts	LS	1	\$ 2,500.00	100%	\$ 2,500.00
	Wire Replacement Subcontractor	LS	1	\$ 3,500.00	100%	\$ 3,500.00
	Camera Replacement Parts	LS	1	\$ 12,600.00	100%	\$ 12,600.00
	SUBTOTAL:					\$ 18,600.00
	Materials			10%	Markup:	\$ 1,860.00
	Subcontractor			5%	Markup:	\$ -
	Supplies			15%	Markup:	\$ -
	TOTAL:					\$ 20,460.00
2.r	Yard / Office Security / Maintenance / Support	U of M	QTY	Rate	Split	Total
Subcontractor						
	Security Guard Services	Monthly	12	\$ 16,170.00	100%	\$ 194,040.00
	Janitorial Services	Monthly	12	\$ 1,800.00	100%	\$ 21,600.00
	HVAC and Building Maintenance (Electrical, Mechanical, Pest)	Monthly	12	\$ 1,200.00	100%	\$ 14,400.00
	Quench / Dumpsters / Portable Sanitation / Pesticides	Monthly	12	\$ 1,400.00	100%	\$ 16,800.00
	SUBTOTAL:					\$ 246,840.00
	Materials			10%	Markup:	\$ -
	Subcontractor			5%	Markup:	\$ 12,342.00
	Supplies			15%	Markup:	\$ -
	TOTAL:					\$ 259,182.00
2.s	Underwater Bridge Inspection	U of M	QTY	Rate	Split	Total
Subcontractor						
	Underwater Bridge Inspection Subcontractor	Day	5	\$ 9,750.00	100%	\$ 48,750.00
	<i>Costs for Underwater Bridge Repairs per inspection findings. No markup applied.</i>					\$ 22,000.00
	SUBTOTAL:					\$ 70,750.00
	Materials			10%	Markup:	\$ -
	Subcontractor			5%	Markup:	\$ 2,437.50
	Supplies			15%	Markup:	\$ -
	TOTAL:					\$ 73,187.50
2.t	Trench Ditch Cleaning	U of M	QTY	Rate	Split	Total
Subcontractor						
	Hi-Rail Vac Truck if Required	Weeks	4	\$ 12,000.00	100%	\$ 48,000.00
	Disposal of Materials	LS	1	\$ 22,000.00	100%	\$ 22,000.00
	SUBTOTAL:					\$ 70,000.00
	Materials			10%	Markup:	\$ -
	Subcontractor			5%	Markup:	\$ 3,500.00
	Supplies			15%	Markup:	\$ -
	TOTAL:					\$ 73,500.00

2.w	Railroad Reporting & Record Keeping Software System	U of M	QTY	Rate	Split	Total
Subcontractor						
	Tier Based Management Fee	LS	1	\$ 40,000.00	100%	\$ 40,000.00
	Updates	LS	1	\$ 4,400.00	100%	\$ 4,400.00
						\$ -
SUBTOTAL:						\$ 44,400.00
				Materials	10%	Markup: \$ -
				Subcontractor	5%	Markup: \$ 2,220.00
				Supplies	15%	Markup: \$ -
						TOTAL: \$ 46,620.00

2.x	Railroad Emergency Drill Exercise	U of M	QTY	Rate	Split	Total
RailWorks Labor & Equipment						
	Track Foreman	HR	12	\$ 166.44	100%	\$ 1,997.28
	Crew Truck	HR	24	\$ 15.00	100%	\$ 360.00
	Track Laborer	HR	24	\$ 151.49	100%	\$ 3,635.76
<i>Subtotal - RWs Labor & Equipment</i>						\$ 5,993.04
Subcontractor						
	Maintenance of Traffic Subcontractor	LS	1	\$ 2,200.00	100%	\$ 2,200.00
<i>Subtotal - Subcontractor</i>						\$ 2,200.00
Supplies & Rental						
	Miscellaneous Supplies	LS	1	\$ 18,700.00	100%	\$ 18,700.00
<i>Subtotal - Supplies & Rentals</i>						\$ 18,700.00
SUBTOTAL:						\$ 26,893.04
				Materials	10%	Markup: \$ -
				Subcontractor	5%	Markup: \$ 110.00
				Supplies	15%	Markup: \$ 2,805.00
						TOTAL: \$ 29,808.04

2.dd	Bridge Inspections	U of M	QTY	Rate	Split	Total
	Subcontractor	LS	1	\$ 36,000.00	100%	\$ 36,000.00
SUBTOTAL:						\$ 36,000.00
				Materials	10%	Markup: \$ -
				Subcontractor	5%	Markup: \$ 1,800.00
				Supplies	15%	Markup: \$ -
						TOTAL: \$ 37,800.00

2.ee	Communication System Repair	U of M	QTY	Rate	Split	Total
	Ladder 6-15 \$1,425,000	LF	8860	\$ 161.00	100%	\$ 1,426,460.00
	Additional Impact Area (Ladder 3-5,16-47)	LF	38690	\$ 161.00	100%	\$ 6,229,090.00
SUBTOTAL:						\$ 7,655,550.00
				Materials	10%	Markup:
				Subcontractor	5%	Markup:
				Supplies	15%	Markup:
						TOTAL: \$ 7,655,550.00
						Allow prior to systems value engineering and bid: \$ 4,000,000.00

3. Approved Amended CY2023 Capital Program

Cost Code

3.a

Surfacing	U of M	QTY	Rate	Split	Total
RailWorks Labor & Equipment					
Operators	Hour	96	\$ 123.90	100%	\$ 11,894.40
Truck	Hour	96	\$ 15.00	100%	\$ 1,440.00
<i>Subtotal - RWs Labor & Equipment</i>					\$ 13,334.40
Subcontractor					
Subcontractor Tamping & Regulating - LazerWest	Day	70	\$ 5,506.00	100%	\$ 385,420.00
Signal Support	Day	70	\$ 1,033.00	100%	\$ 72,310.00
Subcontract Equipment Trucking	LS	12	\$ 4,400.00	100%	\$ 52,800.00
<i>Subtotal - Subcontractor</i>					\$ 510,530.00
Daily Rate with Subcontractor = \$5,966.13					

SUBTOTAL: \$ 523,864.40

Materials	10%	Markup: \$	-
Subcontractor	5%	Markup: \$	25,526.50
Supplies	15%	Markup: \$	-
TOTAL:			\$ 549,390.90

3.c

Reballast Program (Labor & Equipment Combined)	U of M	QTY	Rate	Split	Total
RailWorks Labor & Equipment					
Foreman	Hour	256	\$ 98.67	100%	\$ 25,259.52
Laborers	Hour	1024	\$ 91.19	100%	\$ 93,378.56
Operators	Hour	768	\$ 123.90	100%	\$ 95,155.20
Flagger	Hour	256	\$ 98.67	100%	\$ 25,259.52
Hi-Rail Rotary Dump Truck	Hour	256	\$ 40.00	100%	\$ 10,240.00
Ballast Regulator	Hour	256	\$ 94.00	100%	\$ 24,064.00
Crew Truck	Hour	256	\$ 29.00	100%	\$ 7,424.00
Flagger Truck	Hour	256	\$ 15.00	100%	\$ 3,840.00
<i>Subtotal - RWs Labor & Equipment</i>					\$ 284,620.80
Supplies & Rental					
Front End Loader	Month	4	\$ 8,250.00	100%	\$ 33,000.00
Mobilizations (Loaders, Regulators, Hi-Rail Dump Truck)	LS	1	\$ 22,000.00	100%	\$ 22,000.00
<i>Subtotal - Supplies & Rental</i>					\$ 55,000.00

SUBTOTAL: \$ 339,620.80

Materials	10%	Markup: \$	-
Subcontractor	5%	Markup: \$	-
Supplies	15%	Markup: \$	8,250.00
TOTAL:			\$ 347,870.80

3.d

Reballast Program - Ballast	U of M	QTY	Rate	Split	Total
Ballast	Ton	1000	\$ 58.00	100%	\$ 58,000.00
					\$ -

SUBTOTAL: \$ 58,000.00

Materials	10%	Markup: \$	5,800.00
Subcontractor	5%	Markup: \$	-
Supplies	15%	Markup: \$	-
TOTAL:			\$ 63,800.00

3.f Capital Program Rail Grinding

	U of M	QTY	Rate	Split	Total
RailWorks Labor & Equipment					
Foreman	HR	240	\$ 98.67	50%	\$ 11,840.40
Laborer	HR	240	\$ 91.19	50%	\$ 10,942.80
F350 HiRail Crew Truck	HR	240	\$ 15.00	50%	\$ 1,800.00
<i>Subtotal - RWs Labor & Equipment</i>					\$ 24,583.20
Subcontractor					
Mainline Grinding Subcontractor Mobilization	LS	2	\$ 80,000.00	50%	\$ 80,000.00
Mainline Grinding Contractor Basic Charge	Daily	30	\$ 10,500.00	50%	\$ 157,500.00
Mainline Grinding Production Charge	Miles	25	\$ 400.00	50%	\$ 5,000.00
Mainline Grinding Pre-Grind Survey Mobilization	LS	1	\$ 12,500.00	50%	\$ 6,250.00
Mainline Grinding Pre-Grind Survey Daily Rate	Daily	3	\$ 8,000.00	50%	\$ 12,000.00
Signal Support	Daily	30	\$ 1,033.00	50%	\$ 15,495.00
<i>Subtotal - Subcontractor</i>					\$ 276,245.00
Supplies & Rental					
Fuel for Grinder	Gallon	6000	\$ 7.00	50%	\$ 21,000.00
Water Truck Rental	Monthly	2	\$ 7,500.00	50%	\$ 7,500.00
<i>Subtotal - Supplies & Rental</i>					\$ 28,500.00
<i>Transferred \$35k to 3.h-2 and \$210k to 3.h-3 to cover increased costs. No markup applied.</i>					\$ (245,000.00)
Total is split 50/50 between R.R. M&O Cost (2.m) and Capital					SUBTOTAL: \$ 84,328.20
	Materials		10%	Markup: \$	-
	Subcontractor		5%	Markup: \$	13,812.25
	Supplies		15%	Markup: \$	4,275.00
	TOTAL:				\$ 102,415.45

3.h-2 Replace 20 Frogs

	U of M	QTY	Rate	Split	Total
RailWorks Labor & Equipment					
Foreman	Hour	160	\$ 98.67	100%	\$ 15,787.20
Laborers	Hour	320	\$ 91.19	100%	\$ 29,180.80
Operators	Hour	160	\$ 123.90	100%	\$ 19,824.00
Welder	Hour	320	\$ 95.68	100%	\$ 30,617.60
Welder Helper	Hour	320	\$ 91.19	100%	\$ 29,180.80
Flagger	Hour	320	\$ 98.67	100%	\$ 31,574.40
Foreman Truck	Hour	160	\$ 29.00	100%	\$ 4,640.00
Welding Truck	Hour	320	\$ 40.00	100%	\$ 12,800.00
CWR Rail Heater / Vibrator	Hour	160	\$ 63.00	100%	\$ 10,080.00
Rail Saw	Hour	160	\$ 11.00	100%	\$ 1,760.00
Rail Drill	Hour	160	\$ 11.00	100%	\$ 1,760.00
Mobile Power Pack	Hour	160	\$ 11.00	100%	\$ 1,760.00
Flagger Truck	Hour	320	\$ 15.00	100%	\$ 4,800.00
<i>Subtotal - RWs Labor & Equipment</i>					\$ 193,764.80
Materials					
#10 RBM Frogs	EA	2	\$ 17,600.00	100%	\$ 35,200.00
#14 RBM Frogs	EA	10	\$ 20,900.00	100%	\$ 209,000.00
#20 RBM Frogs	EA	8	\$ 25,300.00	100%	\$ 202,400.00
Thermite Weld Kits	EA	80	\$ 138.00	100%	\$ 11,040.00
<i>Subtotal - Materials</i>					\$ 457,640.00
Subcontractor					
Signal Support	Day	20	\$ 1,033.00	100%	\$ 20,660.00
Trucking Sub	Day	10	\$ 1,350.00	100%	\$ 13,500.00
<i>Subtotal - Subcontractor</i>					\$ 34,160.00
<i>Transferred \$35k from 3.f to cover installing of 20 frogs. No markup applied.</i>					\$ 35,000.00
SUBTOTAL:					\$ 720,564.80
	Materials		10%	Markup: \$	45,764.00
	Subcontractor		5%	Markup: \$	1,708.00
	Supplies		15%	Markup: \$	-
	TOTAL:				\$ 768,036.80

3.h-3 Replace 40 Switch Points and Stock Rails

	U of M	QTY	Rate	Split	Total
RailWorks Labor & Equipment					
Foreman	Hour	160	\$ 98.67	100%	\$ 15,787.20
Laborers	Hour	480	\$ 91.19	100%	\$ 43,771.20
Operators	Hour	320	\$ 123.90	100%	\$ 39,648.00
Welder	Hour	160	\$ 95.68	100%	\$ 15,308.80
Welder Helper	Hour	160	\$ 91.19	100%	\$ 14,590.40
Flagger	Hour	160	\$ 98.67	100%	\$ 15,787.20
Foreman Truck	Hour	160	\$ 29.00	100%	\$ 4,640.00
Welding Truck	Hour	160	\$ 40.00	100%	\$ 6,400.00
CWR Rail Heater / Vibrator	Hour	160	\$ 63.00	100%	\$ 10,080.00
Rail Saw	Hour	160	\$ 11.00	100%	\$ 1,760.00
Rail Drill	Hour	160	\$ 11.00	100%	\$ 1,760.00
Mobile Power Pack	Hour	160	\$ 11.00	100%	\$ 1,760.00
Flagger Truck	Hour	160	\$ 15.00	100%	\$ 2,400.00
<i>Subtotal - RWs Labor & Equipment</i>					\$ 173,692.80
Materials					
Switch Points	EA	20	\$ 9,980.00	100%	\$ 199,600.00
Stock Rails	EA	20	\$ 3,800.00	100%	\$ 76,000.00
Thermite Weld Kits	EA	60	\$ 138.00	100%	\$ 8,280.00
<i>Subtotal - Materials</i>					\$ 283,880.00
Subcontractor					
Signal Support	Day	20	\$ 1,033.00	100%	\$ 19,680.00
Trucking Sub	Day	10	\$ 1,350.00	100%	\$ 12,240.00
<i>Subtotal - Subcontractor</i>					\$ 31,920.00
Transferred \$210k to cover labor and materials/freight increases. No markup applied.					\$ 210,000.00

SUBTOTAL: \$ 699,492.80

	Materials	10%	Markup: \$	28,388.00
	Subcontractor	5%	Markup: \$	1,596.00
	Supplies	15%	Markup: \$	-
				TOTAL: \$ 729,476.80

3.h-5 Insulated Joint Replacement

	U of M	QTY	Rate	Split	Total
RailWorks Labor & Equipment					
Foreman	Hour	200	\$ 98.67	100%	\$ 19,734.00
Laborers	Hour	200	\$ 91.19	100%	\$ 18,238.00
Operators	Hour	200	\$ 123.90	100%	\$ 24,780.00
Welder	Hour	200	\$ 95.68	100%	\$ 19,136.00
Welder Helper	Hour	200	\$ 91.19	100%	\$ 18,238.00
Flagger	Hour	200	\$ 98.67	100%	\$ 19,734.00
Foreman Truck	Hour	200	\$ 29.00	100%	\$ 5,800.00
Welding Truck	Hour	200	\$ 40.00	100%	\$ 8,000.00
CWR Rail Heater / Vibrator	Hour	200	\$ 63.00	100%	\$ 12,600.00
Rail Saw	Hour	200	\$ 11.00	100%	\$ 2,200.00
Rail Drill	Hour	200	\$ 11.00	100%	\$ 2,200.00
Mobile Power Pack	Hour	200	\$ 11.00	100%	\$ 2,200.00
Flagger Truck	Hour	200	\$ 15.00	100%	\$ 3,000.00
<i>Subtotal - RWs Labor & Equipment</i>					\$ 155,860.00
Materials					
Thermite Welds	EA	50	\$ 138.00	100%	\$ 6,900.00
Insulated Joint Plug Rails	EA	25	\$ 3,500.00	100%	\$ 87,500.00
<i>Subtotal - Materials</i>					\$ 94,400.00
Subcontractor					
Signal Support	Day	25	\$ 1,033.00	100%	\$ 25,825.00
<i>Subtotal - Subcontractor</i>					\$ 25,825.00

SUBTOTAL: \$ 276,085.00

	Materials	10%	Markup: \$	9,440.00
	Subcontractor	5%	Markup: \$	1,291.25
	Supplies	15%	Markup: \$	-
				TOTAL: \$ 286,816.25

3.o	Pump Station Upgrades	U of M	QTY	Rate	Split	Total
	Materials	LS	1	\$ 77,000.00	100%	\$ 77,000.00
	Subcontractor	LS	1	\$ 143,000.00	100%	\$ 143,000.00
SUBTOTAL:						\$ 220,000.00
	Materials			10%	Markup:	\$ 7,700.00
	Subcontractor			5%	Markup:	\$ 7,150.00
	Supplies			15%	Markup:	\$ -
TOTAL:						\$ 234,850.00

3.r	Trench Emergency Ladder, Stair Study, & Repairs	U of M	QTY	Rate	Split	Total
	Materials - Parts and other materials	LS	1	\$ 60,000.00	100%	\$ 60,000.00
	Subcontractor	LS	1	\$ 60,000.00	100%	\$ 60,000.00
SUBTOTAL:						\$ 120,000.00
	Materials			10%	Markup:	\$ 6,000.00
	Subcontractor			5%	Markup:	\$ 3,000.00
	Supplies			15%	Markup:	\$ -
TOTAL:						\$ 129,000.00

3.y	Signal Battery Replacement	U of M	QTY	Rate	Split	Total
	Materials - Signal Batteries	Ea	1	\$ 110,000.00	100%	\$ 110,000.00
SUBTOTAL:						\$ 110,000.00
	Materials			10%	Markup:	\$ 11,000.00
	Subcontractor			5%	Markup:	\$ -
	Supplies			15%	Markup:	\$ -
TOTAL:						\$ 121,000.00

3.aa-1	Replace Long Beach Diamonds (procurement into 2024)	U of M	QTY	Rate	Split	Total
RailWorks Labor & Equipment						
	Foreman	Hour	100	\$ 98.67	100%	\$ 9,867.00
	Laborers (x4)	Hour	400	\$ 91.19	100%	\$ 36,476.00
	Operators (x2)	Hour	200	\$ 123.90	100%	\$ 24,780.00
	Welder	Hour	100	\$ 95.68	100%	\$ 9,568.00
	Welder Helper	Hour	100	\$ 91.19	100%	\$ 9,119.00
	Flagger	Hour	100	\$ 98.67	100%	\$ 9,867.00
	Foreman Truck	Hour	100	\$ 29.00	100%	\$ 2,900.00
	Welding Truck	Hour	100	\$ 40.00	100%	\$ 4,000.00
	CWR Rail Heater / Vibrator	Hour	40	\$ 63.00	100%	\$ 2,520.00
	Rail Saw	Hour	80	\$ 11.00	100%	\$ 880.00
	Rail Drill	Hour	80	\$ 11.00	100%	\$ 880.00
	Mobile Power Pack	Hour	80	\$ 11.00	100%	\$ 880.00
	Flagger Truck	Hour	100	\$ 15.00	100%	\$ 1,500.00
<i>Subtotal - RWs Labor & Equipment</i>						\$ 113,237.00
Materials						
	Thermite Welds	EA	15	\$ 138.00	100%	\$ 2,070.00
	Ballast	Ton	100	\$ 59.00	100%	\$ 5,900.00
	Diamonds	LS	1	\$ 550,000.00	100%	\$ 550,000.00
	Insulated Joint Plug Rails	EA	12	\$ 3,500.00	100%	\$ 42,000.00
<i>Subtotal - Materials</i>						\$ 599,970.00
Subcontractor						
	Signal Support	Day	5	\$ 1,033.00	100%	\$ 5,165.00
	Subcontract Tamping	Day	2	\$ 5,506.00	100%	\$ 11,012.00
	Subcontract Tamping Mobilization	LS	1	\$ 11,000.00	100%	\$ 11,000.00
<i>Subtotal - Subcontractor</i>						\$ 27,177.00
Supplies & Rental						
	Front End Loader Rental (2x)	Month	2	\$ 8,250.00	100%	\$ 16,500.00
	Front End Loader Mobilization	Ea	4	\$ 127.00	100%	\$ 508.00
<i>Subtotal - Supplies & Rental</i>						\$ 17,008.00
SUBTOTAL:						\$ 757,392.00
	Materials			10%	Markup:	\$ 59,997.00
	Subcontractor			5%	Markup:	\$ 1,358.85
	Supplies			15%	Markup:	\$ 2,551.20
TOTAL:						\$ -

3.gg-3 Curve Rail Replacement (Furnish and Install 8,000 LF)

	U of M	QTY	Rate	Split	Total
RailWorks Labor & Equipment					
Foreman	Hour	296	\$ 98.67	100%	\$ 29,206.32
Laborers	Hour	1480	\$ 91.19	100%	\$ 134,961.20
Operators	Hour	592	\$ 123.90	100%	\$ 73,348.80
Welder	Hour	296	\$ 95.68	100%	\$ 28,321.28
Welder Helper	Hour	296	\$ 91.19	100%	\$ 26,992.24
Flagger	Hour	296	\$ 98.67	100%	\$ 29,206.32
Foreman Truck	Hour	592	\$ 29.00	100%	\$ 17,168.00
Welding Truck	Hour	296	\$ 40.00	100%	\$ 11,840.00
CWR Rail Heater / Vibrator	Hour	296	\$ 63.00	100%	\$ 18,648.00
Rail Saw	Hour	296	\$ 11.00	100%	\$ 3,256.00
Rail Drill	Hour	296	\$ 11.00	100%	\$ 3,256.00
Mobile Power Pack	Hour	296	\$ 11.00	100%	\$ 3,256.00
Flagger Truck	Hour	296	\$ 15.00	100%	\$ 4,440.00
Flash-Butt Welding Truck	Hour	232	\$ 220.00	100%	\$ 51,040.00
Flash Weld Support Truck - F350 HR	Hour	232	\$ 15.00	100%	\$ 3,480.00
<i>Subtotal - RWs Labor & Equipment</i>					\$ 438,420.16
Materials					
Rail - 136RE, HH, 80' Lengths, Blank	Ton	270.368	\$ 1,936.00	100%	\$ 523,432.45
Rail Seat Pads, Insulators, Clips (per tie)	Each	5800	\$ 18.00	100%	\$ 104,400.00
Weld Kits	Each	50	\$ 138.00	100%	\$ 6,900.00
<i>Subtotal - Materials</i>					\$ 634,732.45
Subcontractor					
Signal Support	Day	20	\$ 1,033.00	100%	\$ 20,660.00
<i>Subtotal - Subcontractor</i>					\$ 20,660.00
Supplies & Rental					
Front End Loader Rental	Month	2	\$ 8,250.00	100%	\$ 16,500.00
<i>Subtotal - Supplies & Rental</i>					\$ 16,500.00

SUBTOTAL: \$ 1,110,312.61

Materials	10%	Markup: \$	63,473.24
Subcontractor	5%	Markup: \$	1,033.00
Supplies	15%	Markup: \$	2,475.00
		TOTAL: \$	1,177,293.85

3.II Fixed Trench Ladders

	U of M	QTY	Rate	Split	Total
Subcontractor Labor, Equipment & Materials	LS	4	\$ 100,000.00	100%	\$ 400,000.00

SUBTOTAL: \$ 400,000.00

Materials	10%	Markup: \$	-
Subcontractor	5%	Markup: \$	20,000.00
Supplies	15%	Markup: \$	-
		TOTAL: \$	420,000.00

3.mm Miscellaneous Trench Structure Repairs

	U of M	QTY	Rate	Split	Total
Subcontractor - Labor, Equipment & Materials	LS	1	\$ 60,000.00	100%	\$ 60,000.00

SUBTOTAL: \$ 60,000.00

Materials	10%	Markup: \$	-
Subcontractor	5%	Markup: \$	3,000.00
Supplies	15%	Markup: \$	-
		TOTAL: \$	63,000.00

3.nn Replace Compton Bridge Deck Ties - Track 3

	U of M	QTY	Rate	Split	Total
RailWorks Labor & Equipment (44 Bays at 2 Bays per Shift)					
Foreman & Flagger	Hour	400	\$ 98.67	100%	\$ 39,468.00
Laborers	Hour	1400	\$ 91.19	100%	\$ 127,666.00
Operators	Hour	400	\$ 123.90	100%	\$ 49,560.00
Assistant Foreman	Hour	400	\$ 97.17	100%	\$ 38,868.00
Foreman Truck x2	Hour	400	\$ 29.00	100%	\$ 11,600.00
Flagger Truck	Hour	200	\$ 15.00	100%	\$ 3,000.00
Grapple Truck	Hour	200	\$ 61.00	100%	\$ 12,200.00
Hi-Rail Excavator	Month	3	\$ 11,000.00	100%	\$ 33,000.00
Rail Cart	Hour	200	\$ 11.00	100%	\$ 2,200.00
Mobile Power Pack	Hour	200	\$ 11.00	100%	\$ 2,200.00
Hydraulic Tools x 2	Hour	400	\$ 22.00	100%	\$ 8,800.00
Possible Carryover from Unspent CY2022 Approved Budget	LS	1	\$ 160,000.00	100%	\$ 160,000.00
<i>Subtotal - RWs Labor & Equipment</i>					\$ 488,562.00
Materials					
Bridge Timbers - 10"x10"x10' SYP, Dapped, Pre-Drilled, then Treated	Each	300	\$ 350.00	100%	\$ 105,000.00
Sidewalk Support Timbers - 4'x10'x14' DF, Cut, Dapped, Treated	Each	150	\$ 200.00	100%	\$ 30,000.00
Timber Guard - 4-1/2 x 7-1/2 x 8' DF, Cut, Treated	Each	120	\$ 115.00	100%	\$ 13,800.00
Rolled Pandrol Tie Plates - 136RE, 4R/2SQ	Each	600	\$ 30.00	100%	\$ 18,000.00
E-Clips - RH Galvanized	Each	1200	\$ 10.00	100%	\$ 12,000.00
15/16" x 6-1/2" Evergrip Coach Screws	Each	2400	\$ 6.00	100%	\$ 14,400.00
Rail - 136RE (500TF plus waste)	Ton	26	\$ 1,936.00	100%	\$ 50,336.00
Weld Kits	Each	30	\$ 138.00	100%	\$ 4,140.00
Miscellaneous Hardware	LS	1	\$ 8,250.00	100%	\$ 8,250.00
Fall Protection Materials	LS	1	\$ 11,000.00	100%	\$ 11,000.00
<i>Subtotal - Materials</i>					\$ 266,926.00
Subcontractor					
Tie Disposal	EA	600	\$ 22.00	100%	\$ 13,200.00
Signal Support	Day	50	\$ 1,033.00	100%	\$ 51,650.00
<i>Subtotal - Subcontractor</i>					\$ 64,850.00

SUBTOTAL: \$ 820,338.00

Materials	10%	Markup: \$	26,692.60
Subcontractor	5%	Markup: \$	3,242.50
Supplies	15%	Markup: \$	-
		TOTAL: \$	850,273.10

3.oo	Replacement of M23A Switches Machines	U of M	QTY	Rate	Split	Total
	M23A Switch Machine Materials - Refurbishments	EA	4	\$ 25,000.00	100%	\$ 100,000.00
						\$ -
						SUBTOTAL: \$ 100,000.00
				Materials	10% Markup:	\$ 10,000.00
				Subcontractor	5% Markup:	\$ -
				Supplies	15% Markup:	\$ -
					TOTAL:	\$ 110,000.00

3.pp	Signal Module VHLC Replacements to XLC - Repeat for 3 Locations	U of M	QTY	Rate	Split	Total
	Materials					
	Materials - New XLC Module	EA	3	\$ 36,300.00	100%	\$ 108,900.00
	Design Changes and Prints	EA	3	\$ 3,850.00	100%	\$ 11,550.00
	Software + Engineering	EA	3	\$ 6,050.00	100%	\$ 18,150.00
						<i>Subtotal - Materials</i> \$ 138,600.00
	Subcontractor					
	Signal Subcontractor	Days	3	\$ 1,033.00	100%	\$ 3,099.00
						<i>Subtotal - Subcontractor</i> \$ 3,099.00
						SUBTOTAL: \$ 141,699.00
				Materials	10% Markup:	\$ 13,860.00
				Subcontractor	5% Markup:	\$ 154.95
				Supplies	15% Markup:	\$ -
					TOTAL:	\$ 155,713.95

3.qq	Furnish and Replace Rail Lubricator Systems	U of M	QTY	Rate	Split	Total
	Railworks Labor & Equipment					
	Foreman	Hour	40	\$ 98.67	100%	\$ 3,946.80
	Laborers	Hour	80	\$ 91.19	100%	\$ 7,295.20
	Foreman Truck	Hour	40	\$ 29.00	100%	\$ 1,160.00
						<i>Subtotal - RWs Labor & Equipment</i> \$ 12,402.00
	Furnish and Replace Rail Lubricator Systems					
	Rail Wheel Lubricator System	EA	2	\$ 41,000.00	100%	\$ 82,000.00
						<i>Subtotal - Materials</i> \$ 82,000.00
						SUBTOTAL: \$ 94,402.00
				Materials	10% Markup:	\$ 8,200.00
				Subcontractor	5% Markup:	\$ -
				Supplies	15% Markup:	\$ -
					TOTAL:	\$ 102,602.00

Maintenance of Way Services

Appendix R

2023 Bridge Inspection Report

ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY (ACTA)

Long Beach, California

2023 ANNUAL INSPECTION



811 Wilshire Blvd, Suite 1820
Los Angeles, California - 90017
Office : 213.627.0044
www.railpros.com

Inspection Method

For each inspection location, the track approaches, track profile, deck, superstructure, substructure, and the site conditions at the bridge site were inspected. The inspection was performed by means of visual assessment, measurement when appropriate, and in the case of concrete, sounding methods were used when necessary.

All the bridges inspected may have hidden conditions that cannot be determined without removal of members or destructive testing, which was not a part this inspection. Therefore, the railroad should conduct periodic bridge inspections, and have the track inspectors observe track line and surface on each inspection trip to detect problems with bridges in a timely manner.

Report Methodology

All bridges were numbered according to the master list provided by the Railroad. The bridge components were numbered in the following manner:

- Bents, Piers and Abutments were numbered starting with Bent or Abutment 1 increasing with mileposts.
- Piles were numbered starting with Pile 1 on the left while looking to increasing mileposts.
- Spans were numbered starting with Span 1 increasing with mileposts.
- Stringers were numbered starting with Stringer 1 on the left while looking to increasing mileposts.

The inspection reports show conditions reported by the inspectors regarding extent and type of conditions impacting the bridge components. The conditions are categorized into standardized condition codes. The condition codes and priority levels used by the inspector for the reported findings are shown in the *Condition Codes and Priority Levels* table below.

Condition Codes and Priority Levels

CONDITION RATING	PRIORITY
A. Failed (may require bridge out of service)	1. Immediately
B. Deficient (Trains are operating but have restrictions)	2. Within 3 to 6 months
C. Satisfactory but with exceptions (no impact on operations or safety)	3. Within 1 year
D. Good with minor exceptions	4. Within 3 years
E. Very good (no exceptions)	5. Within 5 years
F. Not inspected/Inaccessible	6. Monitor

Disclaimer

All assessments given in this report are an opinion given in good faith by the inspectors at the time of the inspection. Due to inaccessibility and hidden conditions, not all structural members, connections or conditions could be completely assessed. RailPros makes no guarantee, expressed or implied, of the structural load rating or integrity and assumes no responsibility for any damages incurred because of any performance failure of any bridge or structure observed during this inspection. Inspection of bridges, especially track line and surface, should be included as a regular part of daily and weekly track inspection by the railroad. Report any variations in track line or surface to the individual responsible for bridge maintenance. Underwater inspection is coordinated and performed by others.

ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY – Bridge Inventory									
Subdivision	Bridge Number	Mile Post	Crossing	Bridge Type	Length	Number of Spans	Center Height	Span Lengths	Built Date
ACTA Mainline	Br. 0.1	0.1	Washington Blvd.	Ballasted Deck Plate Girder	184'	2	15'-3"/24'-6"	92'	2000
ACTA Mainline	Br. 10.2	10.2	Compton Creek	Open Deck Thru Plate Girder	354'	4	16'-7"	2@100',2@77'	2000
ACTA Mainline	Br. 14.6	14.6	Dominguez Channel	Precast Concrete Box Girder	204'	6	15'	34'	2000
ACTA Mainline	Br. 16.3	16.3	Alameda Street	Ballasted Rolled Beam	130'	2	15'	62'	Unknown
ACTA Long Beach Lead	Br. 16.9	16.9	Dominguez Channel	Ballasted Rolled Beam	205'	6	14'	31' to 42'	Unknown
ACTA Mainline	Br. 17.4	17.4	Dominguez Channel	Ballasted Rolled Beam	337'	12	10'	28'	Unknown
ACTA Mainline	Br. 17.8-1	17.8	Dominguez Channel	Ballasted Deck Plate Girder	127'	1	16'	127'	2000
ACTA Mainline	Br. 17.8-2	17.8	Dominguez Channel/Henry Ford Ave	Ballasted Through Truss	297'	1	17'	297'	2000
ACTA Mainline	Br. 17.8-3	17.8	Henry Ford Ave	Ballasted Deck Plate Girder	127'	1	17'	127'	2000
ACTA Mainline	Br. 17.8-4	17.8	Henry Ford Ave	Ballasted Through Truss	295'	1	19'	295'	2000
ACTA Mainline	Br. 17.8-5	17.8	Terminal Island Lead	Precast Concrete Girder	1410'	36	Varies/25'	Varies/44'	2000

BRIDGE ID 0.1 ANNUAL INSPECTION REPORT



Prepared By: Marcos Lozano
Date Prepared: 9/7/2023

Reviewed By: Julina Corona
Date Reviewed: 9/7/2023

Date of Inspection: 8/16/2023

Weather: Sunny

Temperature (F°): 74

Inspectors: Marcos Lozano
Julina Corona

Bridge Location Information

Bridge ID: 0.1
Section Number: 1 of 1
Railroad: ACTA
Subdivision: ACTA
Crossing Feature: Washington Blvd
Latitude: 34.018230°
Longitude: -118.227861°
Nearest Hy-Rail Access: 2 tenths RR-East
City: Los Angeles
County: Los Angeles
State: CA

Immediate Action Required

If Yes to any item below contact RBE and BPM

Yes	Need railroad bridge engineer (RBE) review?
No	Slow order recommended?
No	Need bridge out of service?
No	Special inspection required?

Notes: Sheared bolts near midspan of Span 1 noted in 2019 at tension bottom cover plates. Review bridge load rating.

BRIDGE ID 0.1 ANNUAL INSPECTION REPORT

Structure Data

Bridge Type: BDPG
 Year Built: Unknown
 Plans On File: Yes
 Deck Type(s): Ballasted
 Number of Spans: 2
 Number of Walkways: 2
 Bridge Length (ft.): 184 (max.)
 Maximum Structure Height (ft.): 24.5
 Skewed: Yes
 Vertical Clearance (ft.): Unrestricted
 Horizontal Clearance (ft.): Unrestricted
 Vehicle Clearance (ft.): 15'-3"

Governing Bridge Condition & Priority Level

CONDITION RATING	PRIORITY LEVEL
A. Failed (may require bridge out of service)	1. Immediately
B. Deficient (Trains are operating but have restrictions)	2. Within 3 to 6 months
C. Satisfactory but with exceptions (no impact on operations or safety)	3. Within 1 year
D. Good with minor exceptions	4. Within 3 years
E. Very good (no exceptions)	5. Within 5 years
F. Not inspected/Inaccessible	6. Monitor
Notes:	
Notify RBE of sheared bolts for RBE review.	

Track Data

Operating Speed (mph): 30
 Number of Tracks: 5 into 4
 Rail Size: 136 #
 Degree of Curve: varies
 Super Elevation: varies
 Mile Post Increases: East to West

Site Conditions

Subject to Scour: No
 Vegetation Removal Needed: No
 Corrosive Materials Exposure: No
 Subject to Impact (type): Motor Vehicle no vertical clearance signs
 Subject to Heavy Drift: No
 Dangerous Fauna/Flora: No
 Active Faults: No
 Tidal Waters: No

BRIDGE ID 0.1 ANNUAL INSPECTION REPORT

Priority Level Recommendations

DECK & APPROACH

The following repairs are recommended:

	Priority
1. <i>Span 1 : Continue to monitor condition exceptions.</i>	6
2. <i>Walkway : Monitor handrail post connections. Some posts are loose at base due to cracks.</i>	6
3. <i>Walkway : Tighten upper handrail cable at right side of bridge for pedestrian and MOW staff safety.</i>	6

SUPERSTRUCTURE

The following repairs are recommended:

	Priority
1. <i>Span 1 : Sound test bolts to identify and tighten loose bolts. Bolts provide strength to the beam, refer to the RBE.</i>	3
2. <i>Span 2 : Repaint protective paint and replace missing bolts.</i>	6

SUBSTRUCTURE

The following repairs are recommended:

	Priority
1. <i>There are no recommendations.</i>	

Condition Report & General Notes

DECK & APPROACH *(includes approach, ties, tie fasteners, rail, ballast ballast retainers, etc.)*

All members reported to be in good condition except as indicated below:

	Condition
1. <i>Track: Line and Surface: Fair</i>	D
2. <i>Deck: Bridge-ties: N/A</i>	D
3. <i>Exterior Girder: Signage: Right side of bridge is missing overhead vertical clearance sign (Photo 1).</i>	B
4. <i>Exterior Girder: Signage: Left side of bridge is missing overhead vertical clearance sign.</i>	B
5. <i>Deck: Walkways: Mineral deposit found in cracks, locations varied along walkways.</i>	C

BRIDGE ID 0.1 ANNUAL INSPECTION REPORT

PRIMARY MEMBERS *(includes beams, girders, plate girder components, stiffeners, etc.)*

All members reported to be in good condition except as indicated below: **Condition**

1.	Span 1, Girder 22: Girders : Missing 3 bolts from bottom cover plate approximately 16' from face of down-mile abutment wall. (Photo 2)	C
2.	Span 1, Girder 23: Girders : Missing 8 bolts from bottom cover plate between 16' to 18' from face of down-mile abutment wall. (Photo 3)	C
3.	Span 1, Girder 24: Girders : Missing 8 bolts from bottom cover plate between 15' to 18' from face of down-mile abutment wall.	C
4.	Overall: Girders : Girders have three bottom flange cover plates. No other damage to girders and cover plates.	*Note
5.	Span 2: Girders : Minor bridge strike, most visible at right side end girder.	D
6.	Span 2, Girder 20: Girders : Missing 1 bolt from bottom cover plate approximately 12' from face of Bent 2 cap.	C

SECONDARY MEMBERS *(includes bracing, diaphragms, connection plates and bolts, etc.)*

All members reported to be in good condition except as indicated below: **Condition**

1.	Good, with minor exceptions.	D
----	------------------------------	---

BRIDGE SEAT *(includes bridge seat, bearing connections, etc.)*

All members reported to be in good condition except as indicated below: **Condition**

1.	Bearings: Inaccessible.	F
----	-------------------------	---

ABUTMENTS

All members reported to be in good condition except as indicated below: **Condition**

1.	Abutment wall: Missing or broken street lights under bridge.	C
----	--	---

BENT

All members reported to be in good condition except as indicated below: **Condition**

1.	Pier: Grafitti on both side of pier.	D
----	--------------------------------------	---

BENT CAPS

All members reported to be in good condition except as indicated below: **Condition**

1.	Bent 2: Cap has minor local damage above column 1 from vehicular impact.	D
----	--	---

BRIDGE ID 0.1 ANNUAL INSPECTION REPORT

Typical Bridge Photos:



Photo No.	Note: Right side of bridge, missing overhead vertical clearance sign.
1	



Photo No.	Note: Span 1, Girder 22, sheared bolts.
2	



Photo No.	Note: Span 1, Girder 23, 8 sheared bolts.
3	



Photo No.	Note: Handrail cable hardware missing at right side of bridge.
4	

BRIDGE ID 0.1 ANNUAL INSPECTION REPORT

Typical Bridge Photos:



Photo No.	Note: Loose handrail cable at right side of bridge.
5	



Photo No.	Note: Cap at concrete bent.
6	

BRIDGE ID 10.2 ANNUAL INSPECTION REPORT



Prepared By: Marcos Lozano
Date Prepared: 9/13/2023

Reviewed By: Julina Corona
Date Reviewed: 9/13/2023

Date of Inspection: 8/15/2023

Weather: Sunny

Temperature (F°): 78

Inspectors: Marcos Lozano
Julina Corona

Bridge Location Information

Bridge ID: 10.2
Section Number: 1 of 1
Railroad: ACTA
Subdivision: ACTA
Crossing Feature: Compton Creek
Latitude: 33.872545
Longitude: -118.216502
Nearest Hy-Rail Access: 300' east of bridge
City: Compton
County: Los Angeles
State: CA

Immediate Action Required

If Yes to any item below contact RBE and BPM

No	Need railroad bridge engineer (RBE) review?
Yes	Slow order recommended?
No	Need bridge out of service?
No	Special inspection required?

ML #2

BRIDGE ID 10.2 ANNUAL INSPECTION REPORT

Structure Data

Bridge Type: TPG
 Year Built: 2000
 Plans On File: Yes
 Deck Type(s): Open
 Number of Spans: 4
 Number of Walkways: 6
 Bridge Length (ft.): 354.58
 Maximum Structure Height (ft.) 16.6
 Skewed: Yes
 Vertical Clearance (ft.): N/A
 Horizontal Clearance (ft.): 9.6'
 Vehicle Clearance (ft.): N/A

Track Data

Operating Speed (mph): 40
 Number of Tracks: 3
 Rail Size: 136
 Degree of Curve: Tangent
 Super Elevation: N/A
 Mile Post Increases: East to West

Governing Bridge Condition & Priority Level

CONDITION RATING	PRIORITY LEVEL
A. Failed (may require bridge out of service)	1. Immediately
B. Deficient (Trains are operating but have restrictions)	2. Within 3 to 6 months
C. Satisfactory but with exceptions (no impact on operations or safety)	3. Within 1 year
D. Good with minor exceptions	4. Within 3 years
E. Very good (no exceptions)	5. Within 5 years
F. Not inspected/Inaccessible	6. Monitor
Notes:	
Plan and schedule to replace bridge-ties. Recommend a slow order on Main Line #2 until repairs are completed.	

Site Conditions

Subject to Scour: Yes (No scour identified)
 Vegetation Removal Needed: No
 Corrosive Materials Exposure: No
 Subject to Impact (type): No
 Subject to Heavy Drift: No
 Dangerous Fauna/Flora: No
 Active Faults: No
 Tidal Waters: No

BRIDGE ID 10.2 ANNUAL INSPECTION REPORT

Priority Level Recommendations

DECK & APPROACH

The following repairs are recommended:

	Priority
1. Deck : Lag Bolts to timber ties connection need to be repaired at main line #2	2
2. Deck : Replace bad bridge-ties on all spans on main track #2.	3
3. Span : Repair Tie Fasteners/anchors at floor system throughout bridge deck. (Photo #5 & #7)	3
4. Approaches : Install missing handrail cables at north approach on right side to prevent workers from falling. (Photo #1)	3

SUPERSTRUCTURE

The following repairs are recommended:

	Priority
1. Span 4 : Remove homeless camp prior to next years inspection at Abutment #5 bridge seat.	3

SUBSTRUCTURE

The following repairs are recommended:

	Priority
1. Abutment : Monitor crack.	6

BRIDGE ID 10.2 ANNUAL INSPECTION REPORT

Condition Report & General Notes

DECK & APPROACH *(includes approach, ties, tie fasteners, rail, ballast ballast retainers, etc.)*

All members reported to be in good condition except as indicated below:

Condition

1. Deck: Bridge-ties: 115 bad ties on Track 2 of 265 total ties.	B
2. Deck: Tie Fasteners: Lag Bolts are becoming loose at main line #2. (Photo #7)	B
3. Down-mile End: Approach: Missing handrail cables at north approach on right side. (Photo #1)	B
4. Deck: Bridge-ties: 97 bad ties on Track 3 of 264 total ties.	C
5. Deck: Tie Fasteners: Broken tie plate at up-mile left rail on Track 2.	C
6. Deck: Tie Fasteners: Tie Fasteners (lateral) are missing or loose at floorsystem, observed from below deck. (Photo	C
7. Approaches: Approaches: 30 10' approach ties on Abutment 1 Track 3. All in good condition.	D
8. Deck: Bridge-ties: Signs of fire at guard timber and ties with some section loss. Fire started from below by homeless encampment. (Photo #8)	C
9. Approaches: Approaches: 28 10' approach ties on Abutment 5 Track 3. All in good condition.	D
10. Approaches: Approaches: 30 approach ties on Abutment 1 Track 2. All in good condition.	D
11. Approaches: Approaches: 30 total approach ties on Abutment 1 and Abutment 5, of Track 2. All in good condition.	D
12. Deck: Bridge-ties: 36 bad ties on Track 1 of 264 total ties.	D
13. Deck: Rail: Bridge has guard rails. In good condition.	D
14. Deck: Tie Fasteners: Guard Timber bolts are loose at main line #3, observed from above deck (Photo #5)	D

PRIMARY MEMBERS *(includes beams, girders, plate girder components, stiffeners, etc.)*

All members reported to be in good condition except as indicated below:

Condition

1. Good, with minor exceptions.	D
---------------------------------	---

SECONDARY MEMBERS *(includes bracing, diaphragms, connection plates and bolts, etc.)*

All members reported to be in good condition except as indicated below:

Condition

1. Good, with minor exceptions.	D
---------------------------------	---

BRIDGE SEAT *(includes bridge seat, bearing connections, etc.)*

All members reported to be in good condition except as indicated below:

Condition

1. Abutment #5: Bridge seat not able to inspect due to homeless camp.	D
---	---

PIERS

All members reported to be in good condition except as indicated below:

Condition

1. Good, with minor exceptions.	D
---------------------------------	---

BRIDGE ID 10.2 ANNUAL INSPECTION REPORT

ABUTMENTS

All members reported to be in good condition except as indicated below:

Condition

1. <i>Good, with minor exceptions.</i>	<i>D</i>
--	----------

BACKWALL

All members reported to be in good condition except as indicated below:

Condition

1. <i>Backwall: Hairline crack between Tracks #1 and #2.</i>	<i>D</i>
--	----------

BRIDGE ID 10.2 ANNUAL INSPECTION REPORT

Typical Bridge Photos:



Photo No.	Note: Missing handrail cables at north approach on right side.
1	



Photo No.	Note: Floor system and bottom lateral bracing.
2	



Photo No.	Note: Homeless encampment at Span #3.
3	



Photo No.	Note: Typical substructure.
4	

BRIDGE ID 10.2 ANNUAL INSPECTION REPORT

Typical Bridge Photos:



Photo No.	Note: Split ties and loose lag bolts at multiple locations.
5	



Photo No.	Note: Tie Fasteners at Floorbeam system are loose and/or missing.
6	



Photo No.	Note: Loose lag bolts at multiple locations.
7	



Photo No.	Note: Section loss at guard timber and burned at ties.
8	

BRIDGE ID 14.6 ANNUAL INSPECTION REPORT



Prepared By: Marcos Lozano
Date Prepared: 9/13/2023

Reviewed By: Julina Corona
Date Reviewed: 9/13/2023

Date of Inspection: 8/15/2023

Weather: Overcast

Temperature (F°): 75

Inspectors: Marcos Lozano
Julina Corona

Bridge Location Information

Bridge ID: 14.6
Section Number: 1 of 1
Railroad: ACTA
Subdivision: ACTA
Crossing Feature: Domingez Channel
Latitude: 33.815555
Longitude: -118.232773
Nearest Hy-Rail Access: TBD
City: Wilmington, CA
County: Los Angeles
State: CA

Immediate Action Required

If Yes to any item below contact RBE and BPM

No	Need railroad bridge engineer (RBE) review?
No	Slow order recommended?
No	Need bridge out of service?
No	Special inspection required?

BRIDGE ID 14.6 ANNUAL INSPECTION REPORT

Structure Data

Bridge Type: Concrete Box Beam
 Year Built: Unknown
 Plans On File: Yes
 Deck Type(s): Ballasted
 Number of Spans: 6
 Number of Walkways: 2
 Bridge Length (ft.): 204
 Maximum Structure Height (ft.) 15'
 Skewed: No
 Vertical Clearance (ft.): N/A
 Horizontal Clearance (ft.): N/A
 Vehicle Clearance (ft.): N/A

Track Data

Operating Speed (mph): 40
 Number of Tracks: 4
 Rail Size: 136
 Degree of Curve: Tangent
 Super Elevation: N/A
 Mile Post Increases: East to West

Governing Bridge Condition & Priority Level

CONDITION RATING	PRIORITY LEVEL
A. Failed (may require bridge out of service)	1. Immediately
B. Deficient (Trains are operating but have restrictions)	2. Within 3 to 6 months
C. Satisfactory but with exceptions (no impact on operations or safety)	3. Within 1 year
D. Good with minor exceptions	4. Within 3 years
E. Very good (no exceptions)	5. Within 5 years
F. Not inspected/Inaccessible	6. Monitor
Notes:	
N/A	

Site Conditions

Subject to Scour: No
 Vegetation Removal Needed: No
 Corrosive Materials Exposure: No
 Subject to Impact (type): No
 Subject to Heavy Drift: No
 Dangerous Fauna/Flora: No
 Active Faults: No
 Tidal Waters: No

BRIDGE ID 14.6 ANNUAL INSPECTION REPORT

Priority Level Recommendations

DECK & APPROACH

The following repairs are recommended:

	Priority
1. <i>Handrails : Tighten hardware during periodic maintenance.</i>	6

SUPERSTRUCTURE

The following repairs are recommended:

	Priority
1. <i>Span 1 : Monitor crack at Box Girder annually for growth.</i>	6

SUBSTRUCTURE

The following repairs are recommended:

	Priority
1. <i>Backwall : Monitor for spalling.</i>	5

Condition Report & General Notes

DECK & APPROACH *(includes approach, ties, tie fasteners, rail, ballast ballast retainers, etc.)*

All members reported to be in good condition except as indicated below:

	Conditions
1. <i>Track: Line and Surface: Fair</i>	D
2. <i>Deck: Bridge-ties: N/A</i>	D
3. <i>Up-mile: Approaches: Good.</i>	D
4. <i>Approach: Handrails: hardware is loose and disconnected.</i>	C
5. <i>Deck: Walkways: Multiple small cracks at both walkways from top to bottom. (Photo #4)</i>	D

PRIMARY MEMBERS *(includes beams, girders, plate girder components, stiffeners, etc.)*

All members reported to be in good condition except as indicated below:

	Conditions
1. <i>Abutment #1: Girders : Large crack starting at Bridge Seat. (Photo #6)</i>	C

SECONDARY MEMBERS *(includes bracing, diaphragms, connection plates and bolts, etc.)*

All members reported to be in good condition except as indicated below:

	Conditions
1. <i>Good, with minor exceptions.</i>	D

BRIDGE SEAT *(includes bridge seat, bearing connections, etc.)*

All members reported to be in good condition except as indicated below:

	Conditions
1. <i>Good, with minor exceptions.</i>	D

BRIDGE ID 14.6 ANNUAL INSPECTION REPORT

ABUTMENTS

All members reported to be in good condition except as indicated below: **Conditions**

1. <i>Good, with minor exceptions.</i>	<i>D</i>
--	----------

BENT PILES

All members reported to be in good condition except as indicated below: **Conditions**

1. <i>Double pile rows with concrete caps.</i>	<i>D</i>
--	----------

BENT CAPS

All members reported to be in good condition except as indicated below: **Conditions**

1. <i>Good, with minor exceptions.</i>	<i>D</i>
--	----------

BACKWALL

All members reported to be in good condition except as indicated below: **Conditions**

1. <i>Abutment #1: Multiple cracks at Backwall at right side of bridge.</i>	<i>D</i>
---	----------

BRIDGE ID 14.6 ANNUAL INSPECTION REPORT

Typical Bridge Photos:



Photo No.	Note: All concrete bents composed of columns and caps.
1	



Photo No.	Note: Typical concrete end span.
2	



Photo No.	Note: Drain pipes along entire walkway
3	



Photo No.	Note: Hairline cracks along entire walkway from top to bottom
4	

BRIDGE ID 14.6 ANNUAL INSPECTION REPORT

Typical Bridge Photos:



Photo No.	Note: Utility conduit along walkway.
5	



Photo No.	Note: Vertical crack at left side of box girder end bearing at Abutment #1.
6	

BRIDGE ID 16.3 ANNUAL INSPECTION REPORT

Prepared By: Marcos Lozano
Date Prepared: 9/13/2023

Reviewed By: Julina Corona
Date Reviewed: 9/13/2023

Date of Inspection: 8/15/2023

Weather: Overcast

Temperature (F°): 74

Inspectors: Marcos Lozano
Julina Corona



Bridge Location Information

Bridge ID: 16.3
Section Number: 1 of 1
Railroad: ACTA
Subdivision: ACTA
Crossing Feature: Alameda St.
Latitude: 33.795089
Longitude: -118.239435
Nearest Hy-Rail Access: TBD
City: Compton
County: Los Angeles
State: CA

Immediate Action Required

If Yes to any item below contact RBE and BPM

Yes	Need railroad bridge engineer (RBE) review?
No	Slow order recommended?
No	Need bridge out of service?
No	Special inspection required?

Notes: *Sheared bolts near midspan @ span #2 at bottom lower plate.*

BRIDGE ID 16.3 ANNUAL INSPECTION REPORT

Structure Data

Bridge Type: Concrete Box Beam
 Year Built: Unknown
 Plans On File: Yes
 Deck Type(s): Ballasted
 Number of Spans: 2
 Number of Walkways: 2
 Bridge Length (ft.): 130
 Maximum Structure Height (ft.) TBD
 Skewed: Yes
 Vertical Clearance (ft.): N/A
 Horizontal Clearance (ft.): N/A
 Vehicle Clearance (ft.): 15'

Track Data

Operating Speed (mph): 40
 Number of Tracks: 4
 Rail Size: 136
 Degree of Curve: 0°45'00"
 Super Elevation: TBD
 Mile Post Increases: East to West

Site Conditions

Subject to Scour: No
 Vegetation Removal Needed: No
 Corrosive Materials Exposure: No
 Subject to Impact (type): Motor Vehicle
 Subject to Heavy Drift: No
 Dangerous Fauna/Flora: No
 Active Faults: No
 Tidal Waters: No

Governing Bridge Condition & Priority Level

CONDITION RATING	PRIORITY LEVEL
A. Failed (may require bridge out of service)	1. Immediately
B. Deficient (Trains are operating but have restrictions)	2. Within 3 to 6 months
C. Satisfactory but with exceptions (no impact on operations or safety)	3. Within 1 year
D. Good with minor exceptions	4. Within 3 years
E. Very good (no exceptions)	5. Within 5 years
F. Not inspected/Inaccessible	6. Monitor
Notes:	
No vertical clearance signs on northbound side of the bridge. Notify RBE of missing/sheared bolts for RBE review.	

Diamond at down-mile approach



BRIDGE ID 16.3 ANNUAL INSPECTION REPORT

Priority Level Recommendations

DECK & APPROACH

The following repairs are recommended:

	Priority
1. <i>Span 2 : Install missing handrail cables at up-mile end approach to prevent workers from falling. (Photo #4)</i>	3

SUPERSTRUCTURE

The following repairs are recommended:

	Priority
1. <i>Span 1 : Monitor for additional impacts at NB side of the bridge.</i>	6
2. <i>Span 2 : Monitor for additional impacts at SB side of the bridge.</i>	6

SUBSTRUCTURE

The following repairs are recommended:

	Priority
1. <i>Pier 2 : impact at top right side near girder bearing caused by vehicular traffic. (Photo #2)</i>	6

Condition Report & General Notes

DECK & APPROACH *(includes approach, ties, tie fasteners, rail, ballast ballast retainers, etc.)*

All members reported to be in good condition except as indicated below:

	Conditions
1. <i>Track: Line and Surface: Fair</i>	D
2. <i>Deck: Walkway: Hairline cracks on walkways on both sides of the bridge.</i>	D
3. <i>Up-mile End: Handrail: Missing handrail cables at approach. (Photo #4)</i>	B

PRIMARY MEMBERS *(includes beams, girders, plate girder components, stiffeners, etc.)*

All members reported to be in good condition except as indicated below:

	Conditions
1. <i>Span 2: Beams: Have been subject to vehicular impact. (Photo #1)</i>	D
2. <i>Span 2: Beam: Missing rivets (3) at lower center plate. (Photo #1)</i>	C
3. <i>Span 1: Beams: Have been subject to vehicular impact.</i>	D

SECONDARY MEMBERS *(includes bracing, diaphragms, connection plates and bolts, etc.)*

All members reported to be in good condition except as indicated below:

	Conditions
1. <i>Good, with minor exceptions.</i>	D

BRIDGE SEAT *(includes bridge seat, bearing connections, etc.)*

All members reported to be in good condition except as indicated below:

	Conditions
1. <i>Good, with minor exceptions.</i>	D

BRIDGE ID 16.3 ANNUAL INSPECTION REPORT

ABUTMENTS

All members reported to be in good condition except as indicated below: **Conditions**

- | | |
|---|---|
| 1. Pier 2: A crash cushion was previously installed at left side of Pier #2; no crash cushion currently. (Photo #3) | D |
|---|---|

BENT PILES

All members reported to be in good condition except as indicated below: **Conditions**

- | | |
|---------------------------------|---|
| 1. Good, with minor exceptions. | D |
|---------------------------------|---|

BENT CAPS

All members reported to be in good condition except as indicated below: **Conditions**

- | | |
|---------------------------------|---|
| 1. Good, with minor exceptions. | D |
|---------------------------------|---|

BACKWALL

All members reported to be in good condition except as indicated below: **Conditions**

- | | |
|---------------------------------|---|
| 1. Good, with minor exceptions. | D |
|---------------------------------|---|

BRIDGE ID 16.3 ANNUAL INSPECTION REPORT

Typical Bridge Photos:



Photo No.	Note: Missing min. clearance vehicular sign. Missing 3 rivets due to bridge impacts.
1	



Photo No.	Note: Pier #2 - Impact at top right side, near bearing seat, caused by vehicular traffic.
2	



Photo No.	Note: Crash cushion is no longer at left side of Pier #2.
3	



Photo No.	Note: missing guard cable at retaining wall connecting with Abutment #3 right side.
4	

BRIDGE ID 16.9 ANNUAL INSPECTION REPORT



Prepared By: Marcos Lozano
Date Prepared: 9/13/2023

Reviewed By: Julina Corona
Date Reviewed: 9/13/2023

Date of Inspection: 8/14/2023

Weather: Sunny
Temperature (F°): 74
Inspectors: Marcos Lozano
Julina Corona

Bridge Location Information

Bridge ID: 16.9
Section Number: 1 of 1
Railroad: ACTA
Subdivision: Long Beach
Crossing Feature: Dominguez Channel
Latitude: 33.7853023
Longitude: -118.2350872
Nearest Hy-Rail Access: TBD
City: Wilmington
County: Los Angeles
State: CA

Immediate Action Required

If Yes to any item below contact RBE and BPM

No	Need railroad bridge engineer (RBE) review?
No	Slow order recommended?
No	Need bridge out of service?
	Special inspection required?

Underwater inspection performed and coordinated by others

BRIDGE ID 16.9 ANNUAL INSPECTION REPORT

Structure Data

Bridge Type: BDPG
 Year Built: Unknown
 Plans On File: TBD
 Deck Type(s): Ballasted
 Number of Spans: 6
 Number of Walkways: 2 with a cross over
 Bridge Length (ft.): 205
 Maximum Structure Height (ft.): 14.0
 Skewed: No
 Vertical Clearance (ft.): Unrestricted
 Horizontal Clearance (ft.): N/A
 Vehicle Clearance (ft.): N/A

Track Data

Operating Speed (mph): 20
 Number of Tracks: 1
 Rail Size: 136
 Degree of Curve: Tangent
 Super Elevation: N/A
 Mile Post Increases: East to West

Site Conditions

Subject to Scour: No
 Vegetation Removal Needed: No
 Corrosive Materials Exposure: No
 Subject to Impact (type): No
 Subject to Heavy Drift: Yes
 Dangerous Fauna/Flora: No
 Active Faults: No
 Tidal Waters: Yes

Governing Bridge Condition & Priority Level

CONDITION RATING	PRIORITY LEVEL
A. Failed (may require bridge out of service)	1. Immediately
B. Deficient (Trains are operating but have restrictions)	2. Within 3 to 6 months
C. Satisfactory but with exceptions (no impact on operations or safety)	3. Within 1 year
D. Good with minor exceptions	4. Within 3 years
E. Very good (no exceptions)	5. Within 5 years
F. Not inspected/Inaccessible	6. Monitor
Notes:	
Span #1 and #6 were inaccessible.	

BRIDGE ID 16.9 ANNUAL INSPECTION REPORT

Priority Level Recommendations

DECK & APPROACH

The following repairs are recommended:

	Priority
1. <i>Near Abutment 1 : Signal cables exposed; monitor for vandalism.</i>	6

SUPERSTRUCTURE

The following repairs are recommended:

	Priority
1. <i>End Spans : Monitor homeless encampment before next annual inspection.</i>	6

SUBSTRUCTURE

The following repairs are recommended:

	Priority
1. <i>Abutments : Monitor homeless encampment before next annual inspection.</i>	6
2. <i>Piles : Underwater inspection performed and coordinated by others. (Photo #4)</i>	

Condition Report & General Notes

DECK & APPROACH *(includes approach, ties, tie fasteners, rail, ballast ballast retainers, etc.)*

All members reported to be in good condition except as indicated below:

	Condition
1. <i>Track: Line and Surface: Fair</i>	D
2. <i>Deck: Bridge-ties: N/A</i>	D
3. <i>Deck: Walkways: Span #1 and #2, top handrail cable is loose. Missing hardware. (Photo #4)</i>	C
4. <i>Deck: Approach: exposed signal cables near Abut #1 left side at signal post. Monitor for vandalism. (Photo #3)</i>	D

PRIMARY MEMBERS *(includes beams, girders, plate girder components, stiffeners, etc.)*

All members reported to be in good condition except as indicated below:

	Condition
1. <i>No conditions to report.</i>	D

BRIDGE SEAT *(includes bridge seat, bearing connections, etc.)*

All members reported to be in good condition except as indicated below:

	Condition
1. <i>Good, with minor exceptions.</i>	D

BRIDGE ID 16.9 ANNUAL INSPECTION REPORT

ABUTMENTS

All members reported to be in good condition except as indicated below:		Condition
1.	<i>Span #1 & #6: No access due to new riprap & barbed wire fence on both sides of the bridge. (Photo #1)</i>	<i>F</i>

BENT PILES

All members reported to be in good condition except as indicated below:		Condition
1.	<i>All Bents: Pile wrap at multiple piles showing aquatic vegetation growth.</i>	<i>C</i>

BENT CAPS

All members reported to be in good condition except as indicated below:		Condition
1.	<i>All Bents: Utility mounted to bent caps on right side of bridge</i>	<i>F</i>
2.	<i>Bent #6: Cold joint between column #2 and #3. Monitor for crack development.</i>	<i>D</i>

BACKWALL

All members reported to be in good condition except as indicated below:		Condition
1.	<i>Good, with minor exceptions.</i>	<i>D</i>

BRIDGE ID 16.9 ANNUAL INSPECTION REPORT

Typical Bridge Photos:



Photo No.	Note: Span #1 and #6 not accessible
1	



Photo No.	Note: Typical Bent
2	



Photo No.	Note: Exposed signal cables near Abut #1.
3	



Photo No.	Note: Span #1 and #2, top handrail cable is loose on right side. Missing hardware.
4	

BRIDGE ID 17.4 ANNUAL INSPECTION REPORT



Prepared By: Marcos Lozano
Date Prepared: 9/13/2023

Reviewed By: Julina Corona
Date Reviewed: 9/13/2023

Date of Inspection: 8/14/2023

Weather: Sunny

Temperature (F°): 74

Inspectors: Marcos Lozano
Julina Corona

Bridge Location Information

Bridge ID: 17.4
Section Number: 1 of 1
Railroad: ACTA
Subdivision: Long Beach
Crossing Feature: Dominguez Channel
Latitude: 33.77722
Longitude: -118.24052739999
Nearest Hy-Rail Access: TBD
City: Wilmington
County: Los Angeles
State: CA

Immediate Action Required

If Yes to any item below contact RBE and BPM

Yes	Need railroad bridge engineer (RBE) review?
No	Slow order recommended?
No	Need bridge out of service?
No	Special inspection required?

BRIDGE ID 17.4 ANNUAL INSPECTION REPORT

Structure Data

Bridge Type: ODPG
 Year Built: Unknown
 Plans On File: Yes
 Deck Type(s): Open
 Number of Spans: 12
 Number of Walkways: 2
 Bridge Length (ft.): 337
 Maximum Structure Height (ft.): 8.5
 Skewed: No
 Vertical Clearance (ft.): Unrestricted
 Horizontal Clearance (ft.): N/A
 Vehicle Clearance (ft.): N/A

Track Data

Operating Speed (mph): 40
 Number of Tracks: 1
 Rail Size: 136
 Degree of Curve: Tangent
 Super Elevation: N/A
 Mile Post Increases: East to West

Site Conditions

Subject to Scour: No
 Vegetation Removal Needed: No
 Corrosive Materials Exposure: No
 Subject to Impact (type): No
 Subject to Heavy Drift: No
 Dangerous Fauna/Flora/hazard: Yes
 Active Faults: No
 Tidal Waters: Yes

| Trash/hazardous material from homeless encampment at Span #1 and #12

Governing Bridge Condition & Priority Level

CONDITION RATING	PRIORITY LEVEL
A. Failed (may require bridge out of service)	1. Immediately
B. Deficient (Trains are operating but have restrictions)	2. Within 3 to 6 months
C. Satisfactory but with exceptions (no impact on operations or safety)	3. Within 1 year
D. Good with minor exceptions	4. Within 3 years
E. Very good (no exceptions)	5. Within 5 years
F. Not inspected/Inaccessible	6. Monitor
Notes:	
Monitor charred bridge-ties. Shear failure. At Abutments, damage/broken bearing concrete protection at anchor plates; getting out of place due to vibrations.	

BRIDGE ID 17.4 ANNUAL INSPECTION REPORT

Priority Level Recommendations

DECK & APPROACH

The following repairs are recommended:

	Priority
1. Various locations : Handrail was temporarily removed at left side. Handrail was torched to prevent homeless encampment on bridge bearing seats. Re-install handrail. (Photo #5 and #6)	2
2. Bridge-ties : Monitor charred bridge-ties.	6

SUPERSTRUCTURE

The following repairs are recommended:

	Priority
1. Multiple Spans : Concrete riser below bearing plates at Abutment #13 has sheared; bridge seat - right side. RBE review plans to confirm structural integrity is not affected.	2

SUBSTRUCTURE

The following repairs are recommended:

	Priority
1. There are no recommendations.	

Condition Report & General Notes

DECK & APPROACH *(includes approach, ties, tie fasteners, rail, ballast ballast retainers, etc.)*

All members reported to be in good condition except as indicated below:

	Condition
1. Deck: Bridge-ties: Ties 6-13 minor charring. (Photo #3)	C
2. Up-mile: Approaches: 34 approach ties (towards the crossing); good condition.	D
3. Down-mile: Approaches: 23 approach ties; good condition.	D
4. Deck: Bridge-ties: 42 of the total ties are also supporting walkway and pipe couples.	*Note
5. Deck: Bridge-ties: 5 1/2" clear space between ties.	*Note
6. Deck: Bridge-ties: 267 total ties, 10"x9.5"x10' (15 ctc).	*Note
7. Deck: Bridge-ties: every 4th tie supports walkway.	*Note

PRIMARY MEMBERS *(includes beams, girders, plate girder components, stiffeners, etc.)*

All members reported to be in good condition except as indicated below:

	Condition
1. Good, with minor exceptions.	D

SECONDARY MEMBERS *(includes bracing, diaphragms, connection plates and bolts, etc.)*

All members reported to be in good condition except as indicated below:

	Condition
1. Overall: Diaphragms: 4 welded beams, hardware on diaphragms in good condition.	D

BRIDGE ID 17.4 ANNUAL INSPECTION REPORT

BRIDGE SEAT *(includes bridge seat, bearing connections, etc.)*

All members reported to be in good condition except as indicated below: **Condition**

1.	Abutments and Bent Caps: Concrete riser or grout fill sheared around anchors at bearing plates. Cracked concrete is breaking up with train load vibrations. (Photo #1 and #2)	C
----	---	---

ABUTMENTS

All members reported to be in good condition except as indicated below: **Condition**

1.	Good, with minor exceptions.	D
----	------------------------------	---

BENT PILES

All members reported to be in good condition except as indicated below: **Condition**

1.	Good, with minor exceptions.	D
----	------------------------------	---

BENT CAPS

All members reported to be in good condition except as indicated below: **Condition**

1.	All Bents: Shear key at every cap. Good condition for all that were visible. (Photo 4)	D
----	--	---

BACKWALL

All members reported to be in good condition except as indicated below: **Condition**

1.	Good, with minor exceptions.	D
----	------------------------------	---

BRIDGE ID 17.4 ANNUAL INSPECTION REPORT

Typical Bridge Photos:



Photo No.	Note: Concrete riser or grout fill is cracked below bearing plates, Abut #1 right side
1	



Photo No.	Note: Concrete below bearing plates is cracked, Abut #13 right side
2	



Photo No.	Note: Open Timber Deck. Several charred timber bridge-ties at Span #1.
3	



Photo No.	Note: Skewed bent. Seismic Keys show minor cracks at base of bearing seat.
4	

BRIDGE ID 17.4 ANNUAL INSPECTION REPORT

Typical Bridge Photos:



Photo No.	Note: Missing handrail section on left side at low mile approach.
5	



Photo No.	Note: Missing upper handrail section at multiple spans.
6	



Photo No.	Note: Utility lines run on top of both walkways
7	



Photo No.	Note: Utility conduit has been tampered with.
8	

BRIDGE ID 17.8 ANNUAL INSPECTION REPORT



Prepared By: Marcos Lozano
Date Prepared: 9/14/2022

Reviewed By: Julina Corona
Date Reviewed: 9/14/2022

Date of Inspection: 8/14/2023
Weather: Sunny
Temperature (F°): 74
Inspectors: Marcos Lozano
Julina Corona

Bridge Location Information

Bridge ID: 17.8
Section Number: Multiple - 5
Railroad: ACTA
Subdivision: Long Beach
Crossing Feature: Henry Ford Ave
Latitude: 33.7771765
Longitude: -118.24045299999
Nearest Hy-Rail Access: TBD
City: Wilmington
County: Los Angeles
State: CA

Immediate Action Required

If Yes to any item below contact RBE and BPM

No	Need railroad bridge engineer (RBE) review?
No	Slow order recommended?
No	Need bridge out of service?
No	Special inspection required?

BRIDGE ID 17.8 ANNUAL INSPECTION REPORT

Structure Data

Bridge Type: DPG, Truss, Concrete Beams
 Year Built: Unknown
 Plans On File: Yes
 Deck Type(s): Ballasted
 Number of Spans: 36
 Number of Walkways: 2
 Bridge Length (ft.): 2256
 Maximum Structure Height (ft.) 30.0
 Skewed: No
 Vertical Clearance (ft.): TBD
 Horizontal Clearance (ft.): TBD
 Vehicle Clearance (ft.): TBD

Governing Bridge Condition & Priority Level

CONDITION RATING	PRIORITY LEVEL
A. Failed (may require bridge out of service)	1. Immediately
B. Deficient (Trains are operating but have restrictions)	2. Within 3 to 6 months
C. Satisfactory but with exceptions (no impact on operations or safety)	3. Within 1 year
D. Good with minor exceptions	4. Within 3 years
E. Very good (no exceptions)	5. Within 5 years
F. Not inspected/Inaccessible	6. Monitor

Track Data

Operating Speed (mph): 30
 Number of Tracks: 2
 Rail Size: 136
 Degree of Curve: TBD
 Super Elevation: TBD
 Mile Post Increases: East to West

Notes:

Remove homeless encampment before next annual inspection at Span 1 (Segment 1).

Site Conditions

Subject to Scour: No
 Vegetation Removal Needed: Yes Photo #8
 Corrosive Materials Exposure: No
 Subject to Impact (type): Motor Vehicle
 Subject to Heavy Drift: No
 Dangerous Fauna/Flora: No
 Active Faults: No
 Tidal Waters: No



BRIDGE ID 17.8 ANNUAL INSPECTION REPORT

Priority Level Recommendations

DECK & APPROACH

The following repairs are recommended:

	Priority
1. <i>Span 36 : Remove vegetation to avoid future damage to the end approach MSE wall panels. (Photo #8)</i>	3

SUPERSTRUCTURE

The following repairs are recommended:

	Priority
1. <i>Segment 4 : Install vehicle clearance sign.</i>	3

SUBSTRUCTURE

The following repairs are recommended:

	Priority
1. <i>Columns : Monitor map cracks</i>	6

Condition Report & General Notes

DECK & APPROACH *(includes approach, ties, tie fasteners, rail, ballast ballast retainers, etc.)*

All members reported to be in good condition except as indicated below:

	Condition
1. <i>Track: Line and Surface: Fair</i>	D
2. <i>Deck: Bridge-ties: N/A</i>	D
3. <i>Approaches: Handrail: Lower handrail cable is loose at end post. (Photo 7)</i>	D
4. <i>Approaches: Retaining Wall: Vegetation growing at both sides of the approach behind Abutment #36. (Photo #8)</i>	C

PRIMARY MEMBERS *(includes beams, girders, plate girder components, stiffeners, etc.)*

All members reported to be in good condition except as indicated below:

	Condition
1. <i>Girder (Segment 3): Girder 4 & 5 : missing nuts in earthquake restrain.</i>	C
2. <i>Truss (Segment 4): Chord: Left side vertical vehicle clearance not posted.</i>	C
3. <i>Girder (Segment 1): Girders : Barbed wire added between girders. Not accessible for inspection.</i>	F

SECONDARY MEMBERS *(includes bracing, diaphragms, connection plates and bolts, etc.)*

All members reported to be in good condition except as indicated below:

	Condition
1. <i>Good, with minor exceptions.</i>	D

BRIDGE SEAT *(includes bridge seat, bearing connections, etc.)*

All members reported to be in good condition except as indicated below:

	Condition
1. <i>Concrete beams (Segment 5): Bearing pads inaccessible and not visible for inspection.</i>	F

BRIDGE ID 17.8 ANNUAL INSPECTION REPORT

PIERS

All members reported to be in good condition except as indicated below:	Condition
1. <i>Columns: Map cracks at all columns. (Photo #4)</i>	<i>C</i>

ABUTMENTS

All members reported to be in good condition except as indicated below:	Condition
1. <i>Good, with minor exceptions.</i>	<i>D</i>

BENT PILES

All members reported to be in good condition except as indicated below:	Condition
1. <i>Good, with minor exceptions.</i>	<i>D</i>

BENT CAPS

All members reported to be in good condition except as indicated below:	Condition
1. <i>Good, with minor exceptions.</i>	<i>D</i>

BENT BRACING *(includes transverse and longitudinal bracing)*

All members reported to be in good condition except as indicated below:	Condition
1. <i>Good, with minor exceptions.</i>	<i>D</i>

BACKWALL

All members reported to be in good condition except as indicated below:	Condition
1. <i>Good, with minor exceptions.</i>	<i>D</i>

BRIDGE ID 17.8 ANNUAL INSPECTION REPORT

Typical Bridge Photos:



Photo No.	Note: Underwater column repairs around column wraps
1	



Photo No.	Note: Span 3 - Second through truss span over road.
2	



Photo No.	Note: Underwater column repairs around column wraps
3	



Photo No.	Note: Typical map cracks at columns and crash walls
4	

BRIDGE ID 17.8 ANNUAL INSPECTION REPORT

Typical Bridge Photos:



Photo No.	Note: Typical two column concrete bents.
5	



Photo No.	Note: Typical Truss bays, in good condition.
6	



Photo No.	Note: Lower handrail cable is loose at end post at up-mile approach.
7	



Photo No.	Note: Growing vegetation at both approach walls behind up-mile Abutment
8	

BRIDGE ID 17.8 ANNUAL INSPECTION REPORT



Prepared By: Marcos Lozano
Date Prepared: 9/14/2022

Reviewed By: Julina Corona
Date Reviewed: 9/14/2022

Date of Inspection: 8/14/2023
Weather: Sunny
Temperature (F°): 74
Inspectors: Marcos Lozano
Julina Corona

Bridge Location Information

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County: Los Angeles
State: CA

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No	Need railroad bridge engineer (RBE) review?
No	Slow order recommended?
No	Need bridge out of service?
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BRIDGE ID 17.8 ANNUAL INSPECTION REPORT

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CONDITION RATING	PRIORITY LEVEL
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Track Data

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 Number of Tracks: 2
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Notes:

Remove homeless encampment before next annual inspection at Span 1 (Segment 1).

Site Conditions

Subject to Scour: No
 Vegetation Removal Needed: Yes Photo #8
 Corrosive Materials Exposure: No
 Subject to Impact (type): Motor Vehicle
 Subject to Heavy Drift: No
 Dangerous Fauna/Flora: No
 Active Faults: No
 Tidal Waters: No



BRIDGE ID 17.8 ANNUAL INSPECTION REPORT

Priority Level Recommendations

DECK & APPROACH

The following repairs are recommended:

	Priority
1. <i>Span 36 : Remove vegetation to avoid future damage to the end approach MSE wall panels. (Photo #8)</i>	3

SUPERSTRUCTURE

The following repairs are recommended:

	Priority
1. <i>Segment 4 : Install vehicle clearance sign.</i>	3

SUBSTRUCTURE

The following repairs are recommended:

	Priority
1. <i>Columns : Monitor map cracks</i>	6

Condition Report & General Notes

DECK & APPROACH *(includes approach, ties, tie fasteners, rail, ballast ballast retainers, etc.)*

All members reported to be in good condition except as indicated below:

	Condition
1. <i>Track: Line and Surface: Fair</i>	D
2. <i>Deck: Bridge-ties: N/A</i>	D
3. <i>Approaches: Handrail: Lower handrail cable is loose at end post. (Photo 7)</i>	D
4. <i>Approaches: Retaining Wall: Vegetation growing at both sides of the approach behind Abutment #36. (Photo #8)</i>	C

PRIMARY MEMBERS *(includes beams, girders, plate girder components, stiffeners, etc.)*

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3. <i>Girder (Segment 1): Girders : Barbed wire added between girders. Not accessible for inspection.</i>	F

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	Condition
1. <i>Good, with minor exceptions.</i>	D

BRIDGE SEAT *(includes bridge seat, bearing connections, etc.)*

All members reported to be in good condition except as indicated below:

	Condition
1. <i>Concrete beams (Segment 5): Bearing pads inaccessible and not visible for inspection.</i>	F

BRIDGE ID 17.8 ANNUAL INSPECTION REPORT

PIERS

	Condition
All members reported to be in good condition except as indicated below:	
1. <i>Columns: Map cracks at all columns. (Photo #4)</i>	C

ABUTMENTS

	Condition
All members reported to be in good condition except as indicated below:	
1. <i>Good, with minor exceptions.</i>	D

BENT PILES

	Condition
All members reported to be in good condition except as indicated below:	
1. <i>Good, with minor exceptions.</i>	D

BENT CAPS

	Condition
All members reported to be in good condition except as indicated below:	
1. <i>Good, with minor exceptions.</i>	D

BENT BRACING *(includes transverse and longitudinal bracing)*

	Condition
All members reported to be in good condition except as indicated below:	
1. <i>Good, with minor exceptions.</i>	D

BACKWALL

	Condition
All members reported to be in good condition except as indicated below:	
1. <i>Good, with minor exceptions.</i>	D

BRIDGE ID 17.8 ANNUAL INSPECTION REPORT

Typical Bridge Photos:



Photo No.	Note: Underwater column repairs around column wraps
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Photo No.	Note: Span 3 - Second through truss span over road.
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7	



Photo No.	Note: Growing vegetation at both approach walls behind up-mile Abutment
8	

Maintenance of Way Services

Appendix S

2023 Underwater Bridge Inspection Report

INSPECTION



PHAMARINE
COMMERCIAL DIVING SERVICES
LONG BEACH, CALIFORNIA

PHAMARINE
Commercial Diving Services
Long Beach, CA 90813
Voice: 805 825 6035
Email: INFO@PHAMARINE.COM
Website: www.phamarine.com



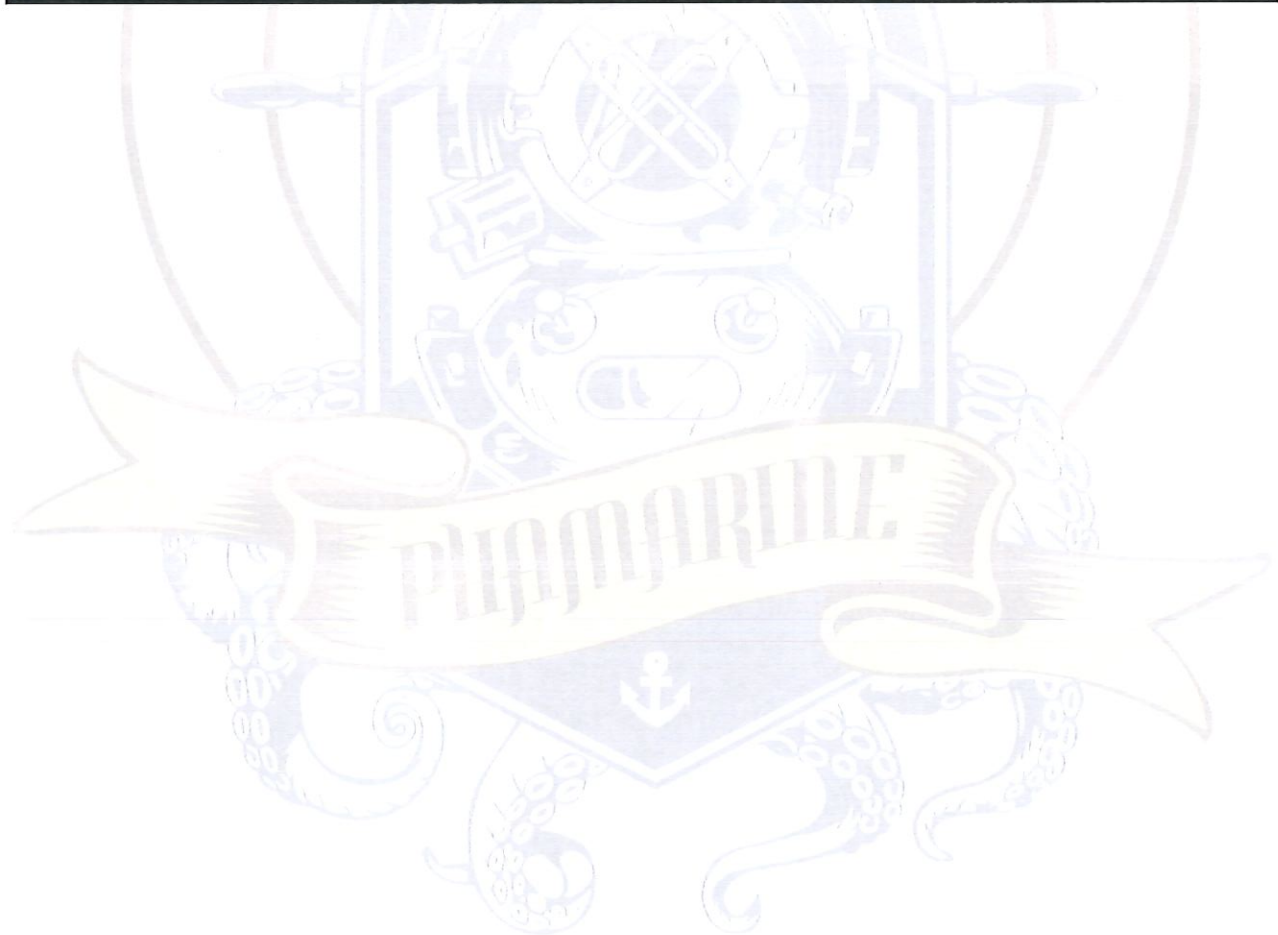
DIVE REPORT

ALAMEDA CORRIDOR BRIDGE – HENRY FORD BRIDGE

7TH JUNE 2023



UNDERWATER ASSIGNMENT				
DATE:	6.7.2023	SITE:	HENRY FORD	Job No: 0523022
CUSTOMER:	RAILWORKS TRACK SERVICES, LLC			P.O:
LOCATION:	LONG BEACH, CALIFORNIA			Depth: 7M
SEA STATE:	CALM	VISIBILITY:	5FT	CURRENT: -2KT-
SERVICE PERFORMED				
BRIDGE INSPECTION WITH PHOTOS		YES		
ATTENDING PERSONNEL				
SUPERVISOR		BILLY PHAM		
DIVERS		ROBERT FALLON		
TENDER		ANDY FREEMAN		
START TIME		0700		
END TIME		1500		



Summary of Findings

- Phamarine Commercial Diving services attended the HENRY FORD TRAIN BRIDGE on DATE 6.7.2023 IN LONG BEACH CALIFORNIA
- All Diving activities have been performed safely and in compliance with USCG, ADC and OSHA.

Henry Ford Bridge runs across the Dominguez channel from North to South, with the channel water flowing East and West. Henry Ford Bridge consists of two sections. The Bridges sit side by side, with the West side bridge (BRIDGE A) consisting of 9 Bents, with 2 piles per Bent. The second bridge (BRIDGE B) sitting on the East side consists of 4 main structural piles spread across two Bents.

Bridge A was inspected and labelled BENT 1 NORTH SIDE and all 'A' piles West side, 'B' piles East side, . Bridge A appeared free from any structural damage. All piles were inspected from the waterline down to the Mudline. The piles appear to be steel, and then wrapped in a 1mm polyurethane wrap from top to bottom. On all the piles, the Polyurethane appeared to go below the mudline, ensuring no steel was exposed. On several piles above the waterline, previous repairs have been made to the Polyurethane, which appears to be peeling, exposing the steel beneath and allowing active corrosion to take place. Phamarine have suggested the areas identified be cleaned and re wrapped to provide protection for the foreseeable future.

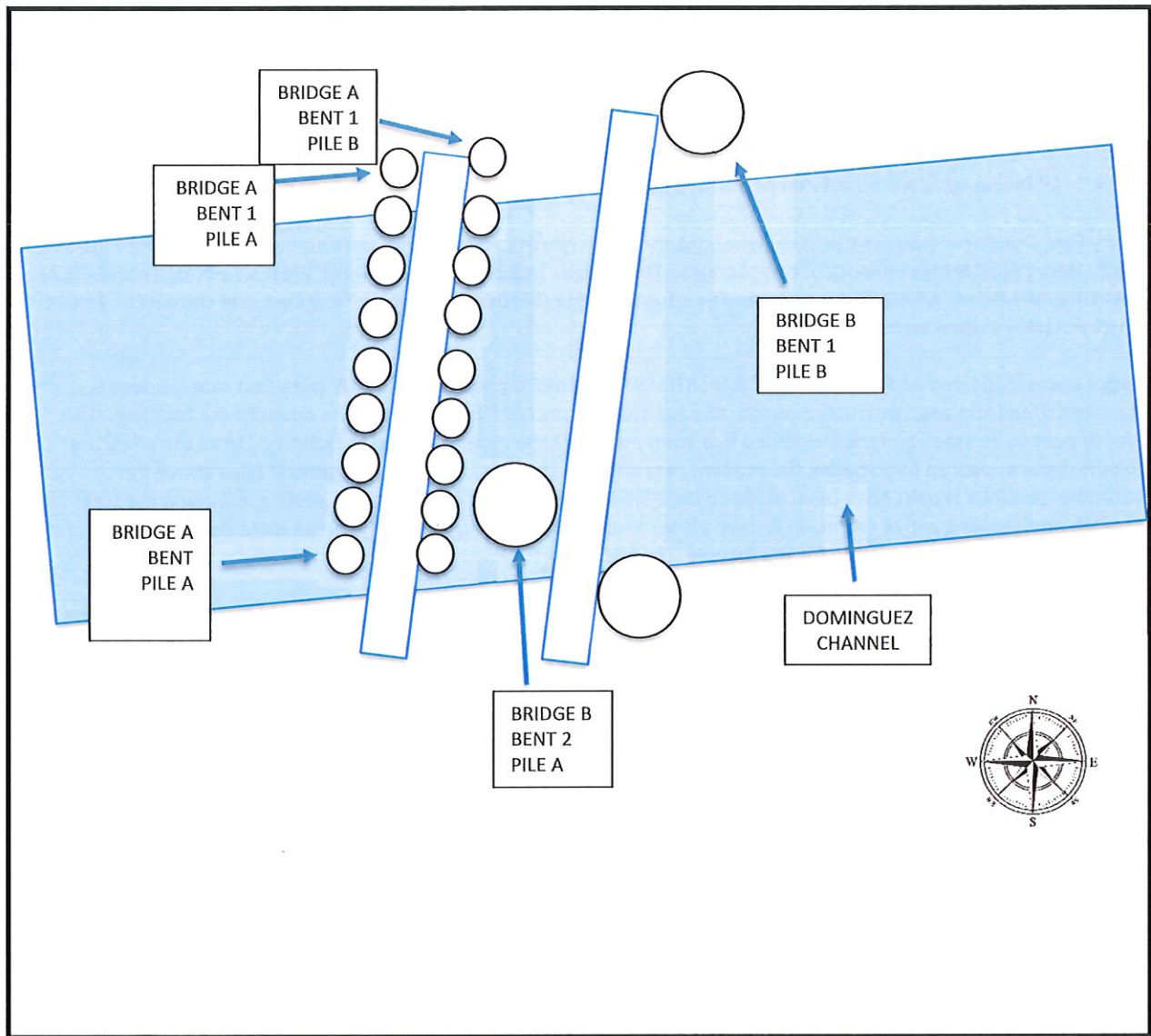
Bridge B was inspected and labelled BENT 1 NORTH SIDE and all 'A' piles West side, 'B' piles East side, . Bridge B had 3 piles on land and one in the water. The north side piles (bent 1) was not fully accessible due to fencing and trash. The South side piles (bent 2) were accessible, one of which sat in the water, the other on land.

All piles were inspected from the waterline down to the Mudline. The piles appear to be steel, and then wrapped in approximately half an inch of concrete and then painted with a polyurethane coating.

On the 3 piles that were accessible, the polyurethane coating is blistering, peeling, or completely gone, just leaving concrete exposed.

On Bent 2 Pile A on the South side, the Base of the pile was sighted to have some damage. Due to excessive surge, there appears to be major scouring on the North side of the piles mudline, which has completely exposed the North face of the piles foundation which is made of concrete. The exposure size of the concrete foundation is approximately 34 inches tall, and 4 feet wide. The concrete is not coated, exposed to direct flow of water and appears to have some chipping. The steel pile that sits on the foundation also shows signs of excessive surge impact over the years. The steel pile from the West side of the pile, moving clockwise around to the South East side of the pile has active corrosion. The Piles protective concrete layer of approximately 1 inch is missing and the steel pile beneath has been exposed, which is leading to erosion of the steel. Total depth when measured with a tape appears to be around 3 inches deep.

Phamarine has suggested the Pile should be cleaned and protected to prevent further damage, and that the Footing should be recovered with Rocks to prevent further damage.

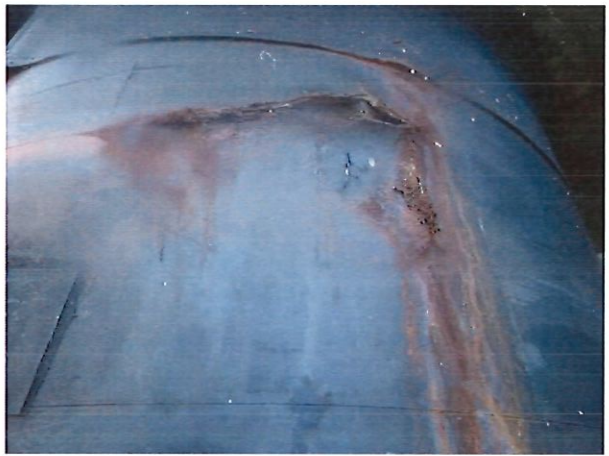


HENRY FORD- BRIDGE A

BENT I/D	PILE I/D	PILE MATERIAL	WRAP MATERIAL	WRAP MATERIAL RIPS/TEARS	MUDLINE SCOUR	STEEL PILES ONLY	CONCRETE PILES ONLY	
						STEEL ACTIVE CORROSION	SCALING	SPALING
<u>1</u>	<u>A</u>	<u>STEEL</u>	<u>1MM POLYURETHANE</u>		<u>NO</u>		<u>N/A</u>	<u>N/A</u>
<u>1</u>	<u>B</u>	<u>STEEL</u>	<u>1MM POLYURETHANE</u>		<u>NO</u>		<u>N/A</u>	<u>N/A</u>
<u>2</u>	<u>A</u>	<u>STEEL</u>	<u>1MM POLYURETHANE</u>		<u>NO</u>		<u>N/A</u>	<u>N/A</u>
<u>2</u>	<u>B</u>	<u>STEEL</u>	<u>1MM POLYURETHANE</u>		<u>NO</u>		<u>N/A</u>	<u>N/A</u>
<u>3</u>	<u>A</u>	<u>STEEL</u>	<u>1MM POLYURETHANE</u>		<u>NO</u>		<u>N/A</u>	<u>N/A</u>
<u>3</u>	<u>B</u>	<u>STEEL</u>	<u>1MM POLYURETHANE</u>	<u>YES</u>	<u>NO</u>		<u>N/A</u>	<u>N/A</u>
<u>4</u>	<u>A</u>	<u>STEEL</u>	<u>1MM POLYURETHANE</u>	<u>YES</u>	<u>NO</u>		<u>N/A</u>	<u>N/A</u>
<u>4</u>	<u>B</u>	<u>STEEL</u>	<u>1MM POLYURETHANE</u>		<u>NO</u>		<u>N/A</u>	<u>N/A</u>
<u>5</u>	<u>A</u>	<u>STEEL</u>	<u>1MM POLYURETHANE</u>	<u>YES</u>	<u>NO</u>		<u>N/A</u>	<u>N/A</u>
<u>5</u>	<u>B</u>	<u>STEEL</u>	<u>1MM POLYURETHANE</u>	<u>YES</u>	<u>NO</u>	<u>YES</u>	<u>N/A</u>	<u>N/A</u>
<u>6</u>	<u>A</u>	<u>STEEL</u>	<u>1MM POLYURETHANE</u>		<u>NO</u>		<u>N/A</u>	<u>N/A</u>
<u>6</u>	<u>B</u>	<u>STEEL</u>	<u>1MM POLYURETHANE</u>	<u>YES</u>	<u>NO</u>		<u>N/A</u>	<u>N/A</u>
<u>7</u>	<u>A</u>	<u>STEEL</u>	<u>1MM POLYURETHANE</u>	<u>YES</u>	<u>NO</u>	<u>YES</u>	<u>N/A</u>	<u>N/A</u>
<u>7</u>	<u>B</u>	<u>STEEL</u>	<u>1MM POLYURETHANE</u>	<u>YES</u>	<u>NO</u>	<u>YES</u>	<u>N/A</u>	<u>N/A</u>
<u>8</u>	<u>A</u>	<u>STEEL</u>	<u>1MM POLYURETHANE</u>	<u>YES</u>	<u>NO</u>		<u>N/A</u>	<u>N/A</u>
<u>8</u>	<u>B</u>	<u>STEEL</u>	<u>1MM POLYURETHANE</u>	<u>YES</u>	<u>NO</u>	<u>YES</u>	<u>N/A</u>	<u>N/A</u>
<u>9</u>	<u>A</u>	<u>STEEL</u>	<u>1MM POLYURETHANE</u>	<u>YES</u>	<u>NO</u>	<u>YES</u>	<u>N/A</u>	<u>N/A</u>
<u>9</u>	<u>B</u>	<u>STEEL</u>	<u>1MM POLYURETHANE</u>		<u>NO</u>		<u>N/A</u>	<u>N/A</u>



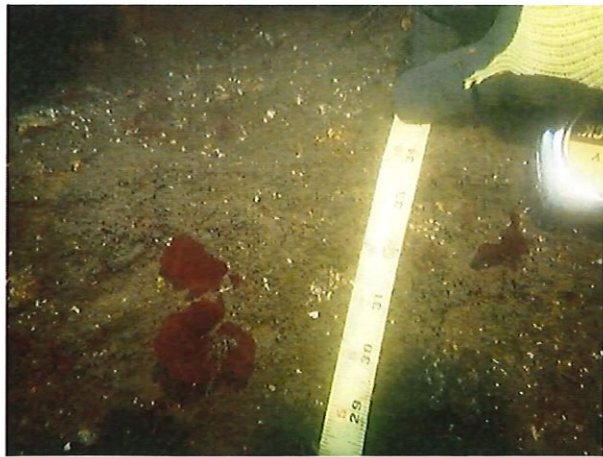


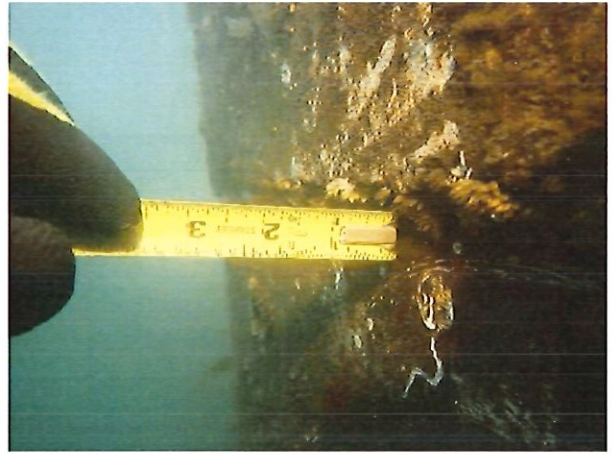
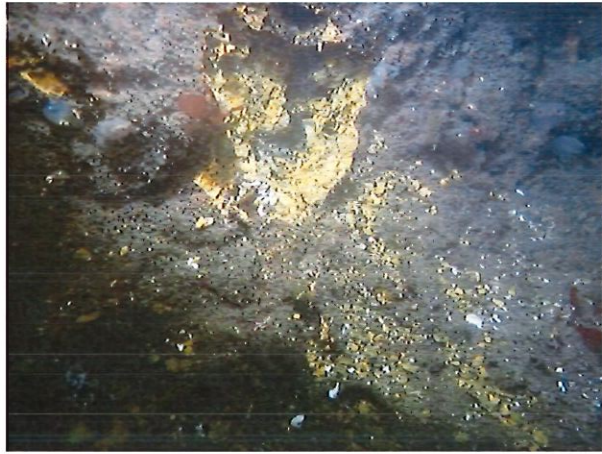
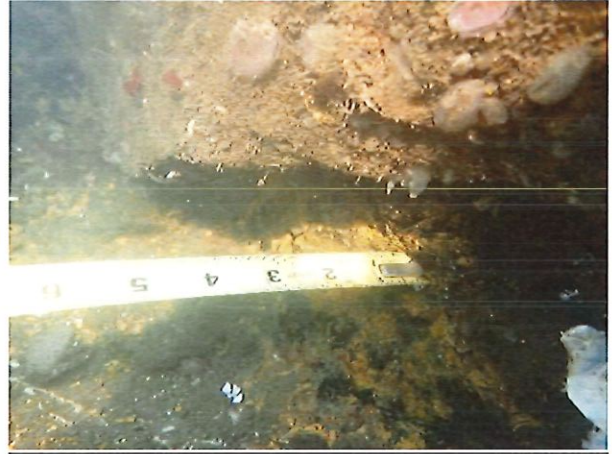
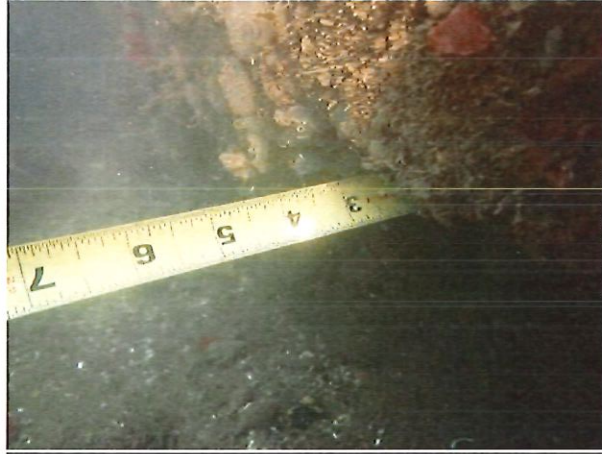




HENRY FORD- BRIDGE B

BENT I/D	PILE I/D	PILE MATERIAL	WRAP MATERIAL	WRAP MATERIAL RIPS/TEARS	MUDLINE SCOUR	STEEL PILES ONLY	CONCRETE PILES ONLY	
						STEEL ACTIVE CORROSION	SCALING	SPALLING
<u>1</u>	<u>A</u>	<u>STEEL</u>	<u>NOT ACCESSIBLE</u>					
<u>1</u>	<u>B</u>	<u>STEEL</u>	<u>CONCRETE</u>					
<u>2</u>	<u>A</u>	<u>STEEL</u>	<u>CONCRETE</u>		<u>YES</u>	<u>YES</u>	<u>NO</u>	<u>NO</u>
<u>2</u>	<u>B</u>	<u>STEEL</u>	<u>CONCRETE</u>					







DIVE REPORT

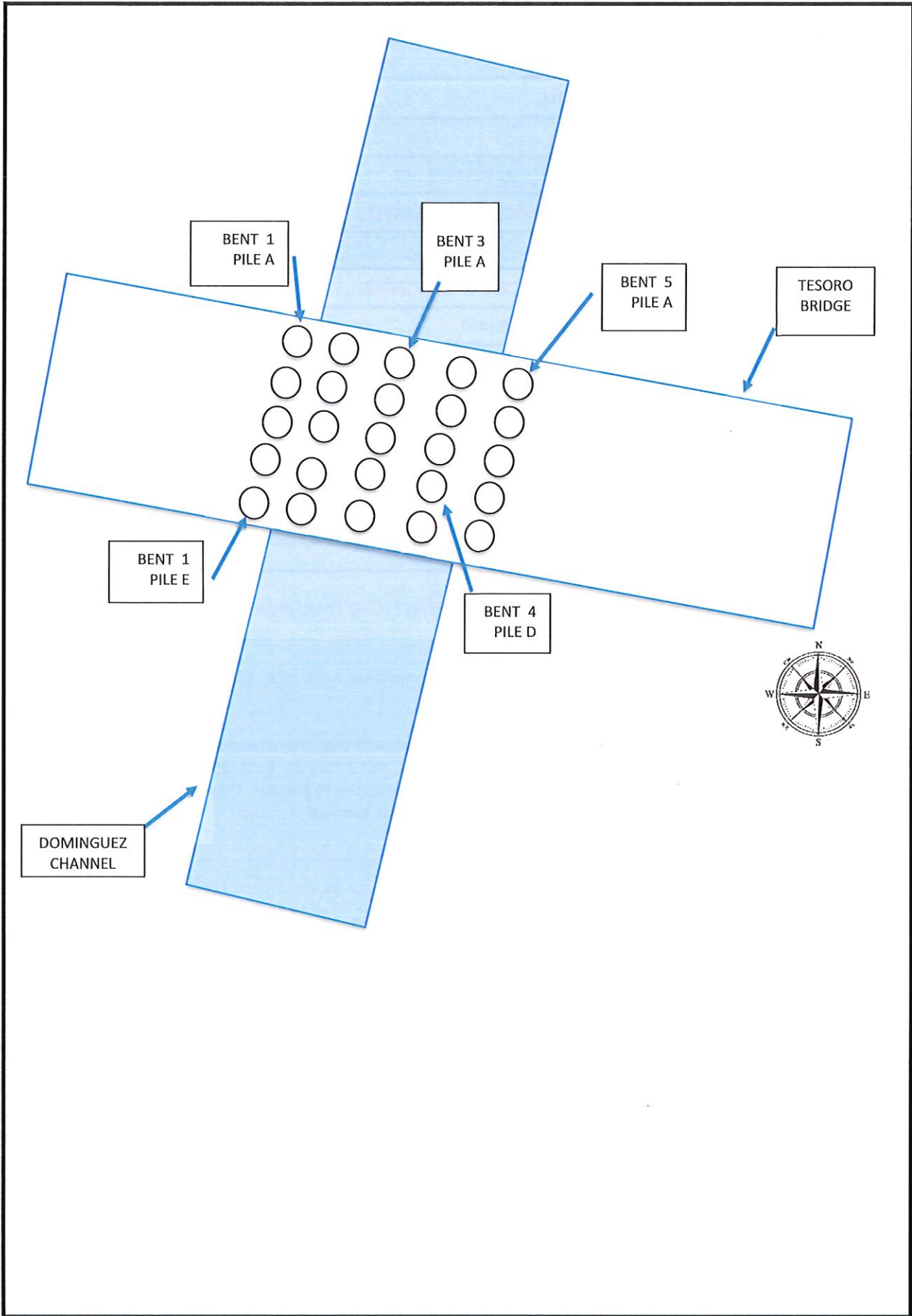
ALAMEDA CORRIDOR BRIDGE – TESORO BRIDGE

8TH JUNE 2023



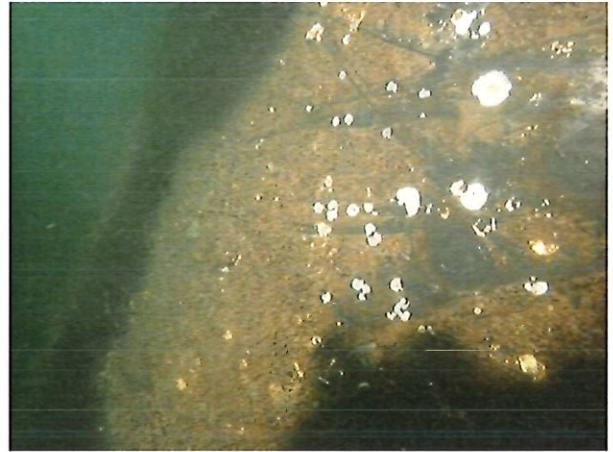
UNDERWATER ASSIGNMENT					
DATE:	6.7.2023	SITE:	TESORO	JOB No:	0523022
CUSTOMER:	RAILWORKS TRACK SERVICES, LLC			P.O:	
LOCATION:	LONG BEACH, CALIFORNIA			Depth:	5M
SEA STATE:	CALM	VISIBILITY:	5FT	CURRENT:	-1KT-
SERVICE PERFORMED					
BRIDGE INSPECTION WITH PHOTOS			YES		
ATTENDING PERSONNEL					
SUPERVISOR		BILLY PHAM			
DIVERS		ROBERT FALLON			
TENDER		ANDY FREEMAN			
START TIME		0700			
END TIME		1500			

Summary of Findings	
<ul style="list-style-type: none"> Phamarine Commercial Diving services attended the HENRY FORD TRAIN BRIDGE on DATE 6.7.2023 IN LONG BEACH CALIFORNIA All Diving activities have been performed safely and in compliance with USCG, ADC and OSHA. 	
<p>Tesoro Bridge runs across the Dominguez channel from East to West, with the channel water flowing North East and South West. Tesoro Bridge consists of one main bridge with 5 Bents, and 5 Piles per Bent (25 piles total). The piles appear to be steel, and then wrapped in a 1mm polyurethane wrap from top to bottom. On all the piles, the Polyurethane appeared to go below the mudline, ensuring no steel was exposed.</p>	
<p>All the Piles were sighted to be in good order except for on Bent 4. Multiple Piles on Bent 4 had damage on either the North face of the pile or the South face of the pile, which is the direction the river travels, suggesting the damage is Surge damage. The extent of the damage appears to be rips and tears to the Polyurethane wrap which has resulted in active corrosion of the steel below. Depth of the active corrosion is not identified as no Polyurethane wrap was removed.</p>	
<p>Phamarine have suggested the areas identified be cleaned and re wrapped to provide protection for the foreseeable future.</p>	



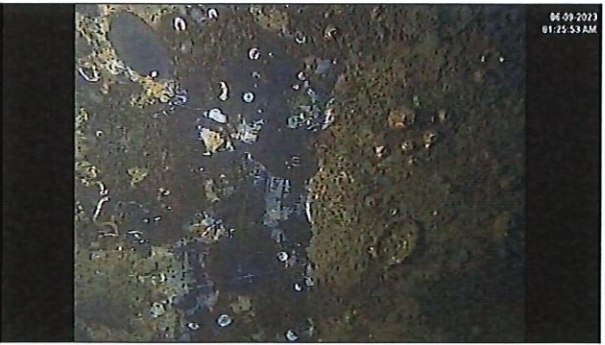
TESORO BRIDGE

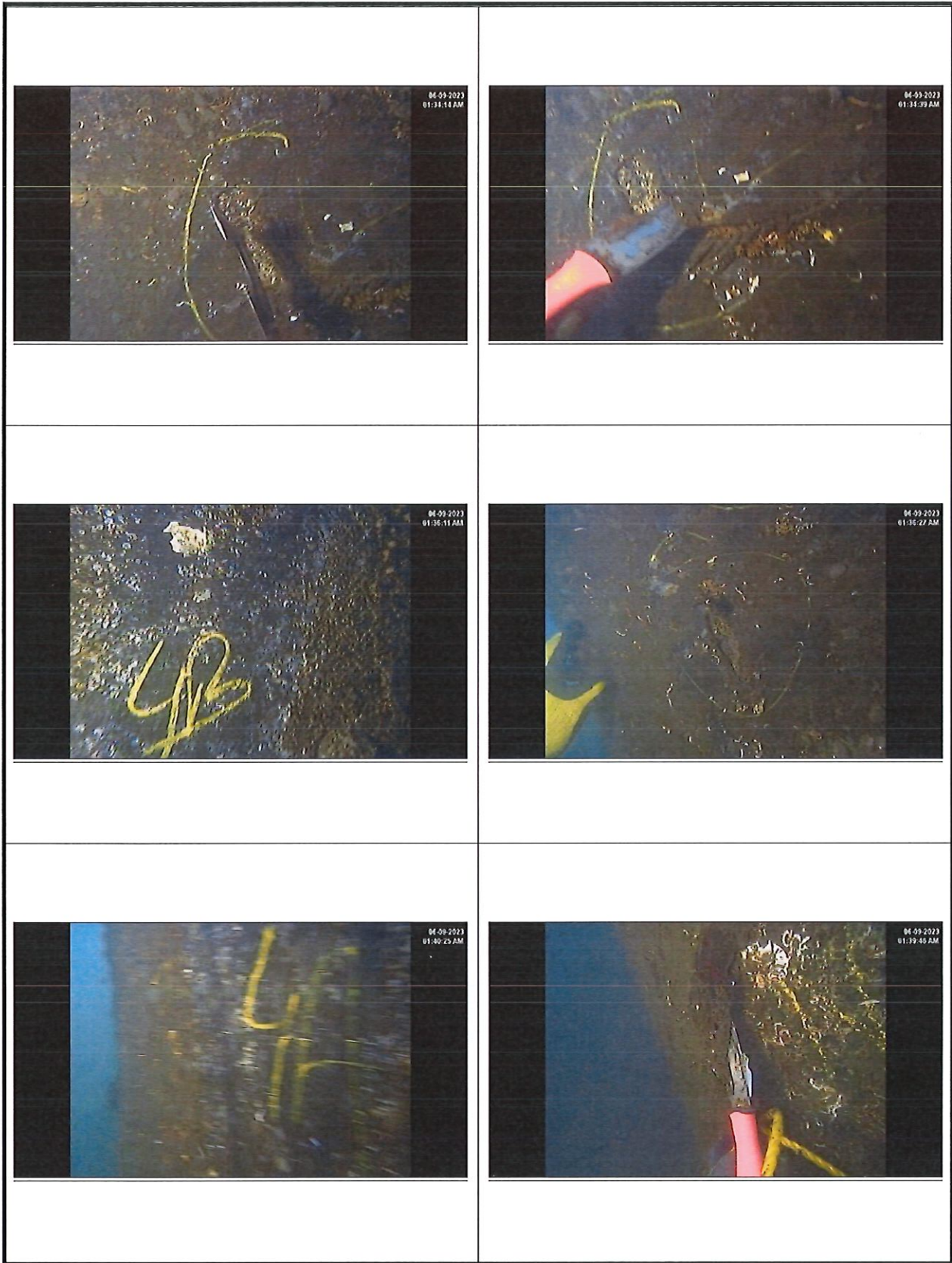
BENT I/D	PILE I/D	PILE MATERIAL	WRAP MATERIAL	WRAP MATERIAL RIPS/TEARS	MUDLINE SCOUR	STEEL PILES ONLY		CONCRETE PILES ONLY	
						STEEL ACTIVE CORROSION	SCALING	SPALING	
1	A	STEEL	1MM POLYURETHANE	YES	NO	YES	N/A	N/A	
1	B	STEEL	1MM POLYURETHANE	YES	NO	YES	N/A	N/A	
1	C	STEEL	1MM POLYURETHANE		NO		N/A	N/A	
1	D	STEEL	1MM POLYURETHANE		NO		N/A	N/A	
1	E	STEEL	1MM POLYURETHANE		NO		N/A	N/A	
2	A	STEEL	1MM POLYURETHANE		NO		N/A	N/A	
2	B	STEEL	1MM POLYURETHANE		NO		N/A	N/A	
2	C	STEEL	1MM POLYURETHANE		NO		N/A	N/A	
2	D	STEEL	1MM POLYURETHANE		NO		N/A	N/A	
2	E	STEEL	1MM POLYURETHANE		NO		N/A	N/A	
3	A	STEEL	1MM POLYURETHANE		NO		N/A	N/A	
3	B	STEEL	1MM POLYURETHANE		NO		N/A	N/A	
3	C	STEEL	1MM POLYURETHANE		NO		N/A	N/A	
3	D	STEEL	1MM POLYURETHANE		NO		N/A	N/A	
3	E	STEEL	1MM POLYURETHANE		NO		N/A	N/A	
4	A	STEEL	1MM POLYURETHANE	YES	NO	YES	N/A	N/A	
4	B	STEEL	1MM POLYURETHANE	YES	NO	YES	N/A	N/A	
4	C	STEEL	1MM POLYURETHANE	YES	NO	YES	N/A	N/A	
4	D	STEEL	1MM POLYURETHANE		NO		N/A	N/A	
4	E	STEEL	1MM POLYURETHANE		NO		N/A	N/A	
5	A	STEEL	1MM POLYURETHANE	YES	NO	YES	N/A	N/A	
5	B	STEEL	1MM POLYURETHANE		NO		N/A	N/A	
5	C	STEEL	1MM POLYURETHANE		NO		N/A	N/A	
5	D	STEEL	1MM POLYURETHANE		NO		N/A	N/A	
5	E	STEEL	1MM POLYURETHANE		NO		N/A	N/A	











DIVE REPORT

ALAMEDA CORRIDOR BRIDGE – CHANNEL BRIDGE

9TH JUNE 2023



UNDERWATER ASSIGNMENT					
DATE:	6.9.2023	SITE:	CHANNEL BRIDGE	JOB No:	0523022
CUSTOMER:	RAILWORKS TRACK SERVICES, LLC			P.O:	
LOCATION:	LONG BEACH, CALIFORNIA			Depth:	5M
SEA STATE:	CALM	VISIBILITY:	5FT	CURRENT:	-0KT-
SERVICE PERFORMED					
BRIDGE INSPECTION WITH PHOTOS		YES			
ATTENDING PERSONNEL					
SUPERVISOR		BILLY PHAM			
DIVERS		ANDY FREEMAN			
TENDER		GABRIEL MENDOZA			
START TIME		0700			
END TIME		1700			



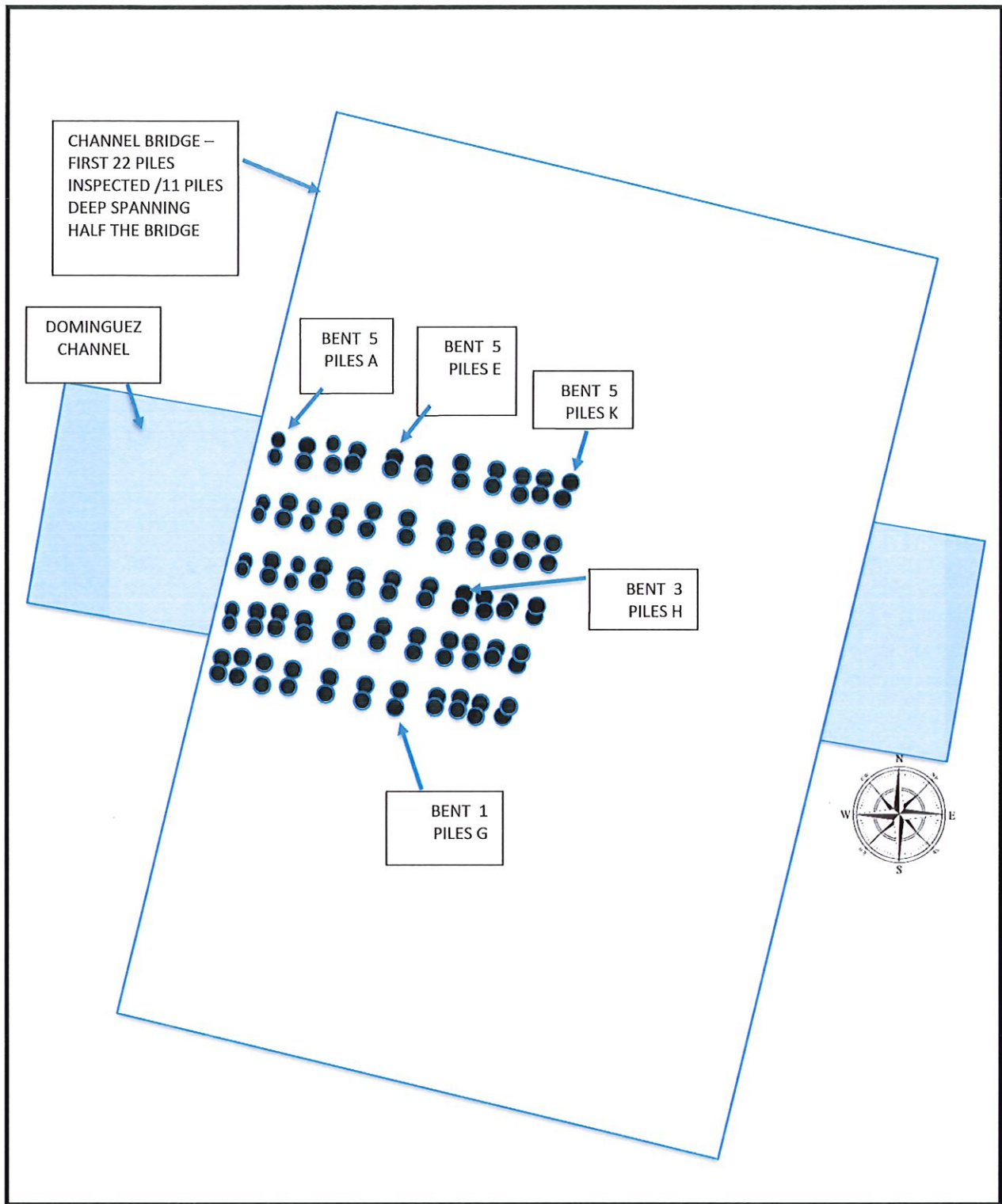
Summary of Findings

- Phamarine Commercial Diving services attended the CHANNEL BRIDGE on DATE 6.9.2023 IN LONG BEACH CALIFORNIA
- All Diving activities have been performed safely and in compliance with USCG, ADC and OSHA.

Channel Bridge runs across the Dominguez channel from North to South, with the channel water flowing East and West. Channel Bridge consists of one main bridge with multiple piles stretching under the bridge. Half of the bridge is operated by Rail works which was inspected. The other half was operated by Union Pacific and not inspected. Phamarine inspected 5 Bents. The first 22 piles in each bent were inspected (11 rows deep/2 piles each = 22)

All the piles on Channel Bridge appeared to be concrete. No wrapping of the pile was sighted at time of inspection. The inspected areas of the piles were cleaned to remove Bio fouling prior to inspection. Piles were inspected from the surface of the water to the mudline for those that sat in water. For the piles sitting out of the water, the entire pile was inspected.

No damage was sighted. All piles are free from any Scaling and Spalling.



CHANNEL BRIDGE								
BENT I/D	PILE I/D	PILE MATERIAL	WRAP MATERIAL	WRAP MATERIAL RIPS/TEARS	MUDLINE SCOUR	STEEL PILES ONLY	CONCRETE PILES ONLY	
						STEEL ACTIVE CORROSION	SCALING	SPALLING
1	A	CONCETE	N/A	N/A	NO	N/A	NO	NO
1	B	CONCETE	N/A	N/A	NO	N/A	NO	NO
1	C	CONCETE	N/A	N/A	NO	N/A	NO	NO
1	D	CONCETE	N/A	N/A	NO	N/A	NO	NO
1	E	CONCETE	N/A	N/A	NO	N/A	NO	NO
1	F	CONCETE	N/A	N/A	NO	N/A	NO	NO
1	G	CONCETE	N/A	N/A	NO	N/A	NO	NO
1	H	CONCETE	N/A	N/A	NO	N/A	NO	NO
1	I	CONCETE	N/A	N/A	NO	N/A	NO	NO
1	J	CONCETE	N/A	N/A	NO	N/A	NO	NO
1	K	CONCETE	N/A	N/A	NO	N/A	NO	NO
2	A	CONCETE	N/A	N/A	NO	N/A	NO	NO
2	B	CONCETE	N/A	N/A	NO	N/A	NO	NO
2	C	CONCETE	N/A	N/A	NO	N/A	NO	NO
2	D	CONCETE	N/A	N/A	NO	N/A	NO	NO
2	E	CONCETE	N/A	N/A	NO	N/A	NO	NO
2	F	CONCETE	N/A	N/A	NO	N/A	NO	NO
2	G	CONCETE	N/A	N/A	NO	N/A	NO	NO
2	H	CONCETE	N/A	N/A	NO	N/A	NO	NO
2	I	CONCETE	N/A	N/A	NO	N/A	NO	NO
2	J	CONCETE	N/A	N/A	NO	N/A	NO	NO
2	K	CONCETE	N/A	N/A	NO	N/A	NO	NO
3	A	CONCETE	N/A	N/A	NO	N/A	NO	NO
3	B	CONCETE	N/A	N/A	NO	N/A	NO	NO
3	C	CONCETE	N/A	N/A	NO	N/A	NO	NO
3	D	CONCETE	N/A	N/A	NO	N/A	NO	NO
3	E	CONCETE	N/A	N/A	NO	N/A	NO	NO
3	F	CONCETE	N/A	N/A	NO	N/A	NO	NO
3	G	CONCETE	N/A	N/A	NO	N/A	NO	NO
3	H	CONCETE	N/A	N/A	NO	N/A	NO	NO
3	I	CONCETE	N/A	N/A	NO	N/A	NO	NO
3	J	CONCETE	N/A	N/A	NO	N/A	NO	NO
3	K	CONCETE	N/A	N/A	NO	N/A	NO	NO
4	A	CONCETE	N/A	N/A	NO	N/A	NO	NO
4	B	CONCETE	N/A	N/A	NO	N/A	NO	NO
4	C	CONCETE	N/A	N/A	NO	N/A	NO	NO
4	D	CONCETE	N/A	N/A	NO	N/A	NO	NO
4	E	CONCETE	N/A	N/A	NO	N/A	NO	NO
4	F	CONCETE	N/A	N/A	NO	N/A	NO	NO
4	G	CONCETE	N/A	N/A	NO	N/A	NO	NO
4	H	CONCETE	N/A	N/A	NO	N/A	NO	NO
4	I	CONCETE	N/A	N/A	NO	N/A	NO	NO
4	J	CONCETE	N/A	N/A	NO	N/A	NO	NO
4	K	CONCETE	N/A	N/A	NO	N/A	NO	NO
5	A	CONCETE	N/A	N/A	NO	N/A	NO	NO
5	B	CONCETE	N/A	N/A	NO	N/A	NO	NO
5	C	CONCETE	N/A	N/A	NO	N/A	NO	NO
5	D	CONCETE	N/A	N/A	NO	N/A	NO	NO
5	E	CONCETE	N/A	N/A	NO	N/A	NO	NO
5	F	CONCETE	N/A	N/A	NO	N/A	NO	NO
5	G	CONCETE	N/A	N/A	NO	N/A	NO	NO
5	H	CONCETE	N/A	N/A	NO	N/A	NO	NO
5	I	CONCETE	N/A	N/A	NO	N/A	NO	NO
5	J	CONCETE	N/A	N/A	NO	N/A	NO	NO
5	K	CONCETE	N/A	N/A	NO	N/A	NO	NO





Maintenance of Way Services

Appendix T

Ultrasonic Rail Testing 2024 Defect Reports



ULTRASONIC TESTING REPORT

HERZOG Services, INC.

PO BOX 368 St. Joseph, MO 64502

Phone: (816) 364-3000 Fax: (816) 233-7757

Client: RAILWORKS TRACK SERVICES

Test Car: HRZ043

Operator: DM

Test Date: 9/9/2024

Crew: Derek Meyer, Eric Medina

LINES TESTED

Table with 5 columns: Line Segment, Division, Subdivision, Location, Remarks. Row 1: 2, RAILWORKS TRACK, ACTA, 0 To 9999, EIC: Ariel Manjarrez, Tested Main 3 and part of Main 2 track. Will continue testing tomorrow.

MOVEMENT DETAIL

Table with 13 columns: Line, Mode, Remarks, Time, Mile Post Beg/End, Track Dir/Type, Suf ID, Tested Miles/Min, Run-Light Non-Tran, Delay Train/Other/Supt/Hzg, Non-Bill, Service Minutes. Includes a Totals row at the bottom.

NO DEFECTS FOUND

HERZOG Chief Operator: [Signature]

Railroad Track Escort: [Signature]



Client: RAILWORKS TRACK SERVICES Test Car: HRZ043 Operator: DM Test Date: 9/10/2024
Crew: Derek Meyer, Eric Medina

LINES TESTED

Table with 5 columns: Line Segment, Division, Subdivision, Location, Remarks. Row 1: 2, RAILWORKS TRACK, ACTA, 0 To 9999, EIC: Ariel Manjarrez, Tested and completed Main 1. Will be back tomorrow to test Main 2.

MOVEMENT DETAIL

Table with 13 columns: Line, Mode, Remarks, Time, Mile Post Beg/End, Track Dir/Type, Suf ID, Tested Miles/Min, Run-Light Non-Tran, Delay Train/Other/Supt/Hzg, Non-Bill, Service Minutes. Includes a Totals row at the bottom.

NO DEFECTS FOUND

HERZOG Chief Operator: [Signature]

Railroad Track Escort: [Signature]



ULTRASONIC TESTING REPORT

HERZOG Services, INC.

PO BOX 368 St. Joseph, MO 64502

Phone: (816) 364-3000 Fax: (816) 233-7757

Client: RAILWORKS TRACK SERVICES

Test Car: HRZ043

Operator: DM

Test Date: 9/11/2024

Crew: Derek Meyer, Eric Medina

LINES TESTED

Line Segment:	Division:	Subdivision:	Location:	Remarks:
2	RAILWORKS TRACK	ACTA	0 To 9999	EIC: Ariel Manjarrez Finished Main 2 Track Tested Main 1 Track from CP Cruscero to CP Gaspur. This concludes Railworks testing. Thank you.

MOVEMENT DETAIL

Line	Mode	Remarks	Time	Mile Beg	Post End	Track Dir	Type	Suf ID	Tested Miles	Min	Run-Light Non-Tran	Delay Train	Other Supt	Hzg	Non-Bill	Service Minutes	
2	On Call	On Call	06:00														
2	Delay (Other)	Job Briefing	06:00									0:18				0:18	
2	Delay (Train)	Train Delay	06:18									1:06				1:06	
2	Test	Main 2	07:24	0.000	12.564	-	W	M 2	12.564	1:12						1:12	
2	Delay (Train)	Train Delay	08:36									0:30				0:30	
2	Test	Main 2	09:06	12.564	16.000	-	W	M 2	3.436	0:36						0:36	
2	Run-Light Non-Transfer		09:42								0:12					0:12	
2	Test	Main 1 CP CRUSCERO to CP GASPIR	09:54	17.000	17.950	-	W	M 1	0.950	0:12						0:12	
2	Run-Light Non-Transfer		10:06								3:54					3:54	
2	Off Call	Longbeach	14:00														
Totals:									16.950	2:00	4:06	0:00	1:36	0:18	0:00	0:00	8:00

NO DEFECTS FOUND

HERZOG Chief Operator:

Derek Meyer

Railroad Track Escort:

[Signature]

Maintenance of Way Services

Appendix U

Geometry Car Inspection Report 2024

BNSF 2-3-2023

Vehicle:

Date: 02/03/2023

Test Time: 09:24 AM

Page Nbr: 1

Line Segment: 8930

Division: SOU CALIFORNIA

Subdivision: ALAMEDA

Roadmaster: EDM UNKNOWN

Defect Number	Tag Type	Track Type:Nbr	Milepost/Location	Latitude	Longitude	Tag Amplitude	Defect Name	Tag Length	Trk Class	TSR (P/F)	Curve/Tangent	Repeat Tag
294327	YEL	M:3	0.596	34.016975	-118.225715	7/8"	STIFF_CAR	4	3		C	
294328	RED	M:3	0.661	34.017699	-118.226457	1 1/2"	STIFF_CAR	69	3	0/10	C	
294333	RED	M:3	0.710	34.018087	-118.227161	6 1/16"	UNB_F_XLEV	508	3	N/A /25	C	
294329	ORG	M:3	0.743	34.018189	-118.227716	1 1/16"	STIFF_CAR	9	3		C	
294330	YEL	M:3	0.743	34.018189	-118.227719	15/16"	STIFF_CAR	28	3		C	
294331	RED	M:3	0.748	34.018196	-118.227807	1 3/8"	TWIST31	19	3	0/25	C	
294332	RED	M:3	0.751	34.018199	-118.227852	1 1/2"	STIFF_CAR	40	3	0/10	C	
294334	YEL	M:3	0.751	34.018199	-118.227859	1 7/8"	WARP62:62	6	3		C	
294338	YEL	M:3	0.923	34.018145	-118.230850	1 1/2"	STIFF_CAR	58	3		C	
294339	YEL	M:3	1.496	34.013752	-118.239096	2 13/16"	UNB_F_XLEV	455	3		C	
294340	YEL	M:3	11.295	33.862366	-118.216330	13/16"	GAGE_WIDE_WOOD	12	3		C	
294341	YEL	M:3	11.299	33.862305	-118.216343	9/16"	LVHW_136RE	125	3		C	
294343	YEL	M:3	11.352	33.861563	-118.216587	9/16"	LVHW_136RE	80	3		C	
294342	YEL	M:3	11.355	33.861512	-118.216610	9/16"	LGFW_136RE	351	3		C	
294344	YEL	M:3	11.355	33.861512	-118.216610	1 1/8"	LCRW_136RE	368	3		C	
294345	YEL	M:3	13.657	33.829705	-118.228114	11/16"	LVHW_136RE	52	3		C	
294346	YEL	M:3	13.663	33.829624	-118.228170	13/16"	LVHW_141RE	26	3		C	
294347	YEL	M:3	13.681	33.829401	-118.228311	11/16"	LVHW_136RE	93	3		C	
294348	YEL	M:3	13.686	33.829341	-118.228346	13/16"	LVHW_141RE	26	3		C	
294349	YEL	M:3	13.700	33.829147	-118.228451	11/16"	LVHW_136RE	90	3		C	
294350	YEL	M:3	13.705	33.829080	-118.228486	13/16"	LVHW_141RE	41	3		C	
294351	YEL	M:3	13.721	33.828864	-118.228586	11/16"	LVHW_136RE	82	3		C	
294354	ORG	M:3	13.862	33.826920	-118.229305	1 1/4"	RCRW_136RE	37	3		C	
294356	ORG	M:3	13.862	33.826920	-118.229305	3/4"	RGFW_136RE	84	3		C	
294357	YEL	M:3	13.863	33.826903	-118.229311	1 1/8"	RCRW_136RE	398	3		C	
294352	YEL	M:3	13.870	33.826798	-118.229342	11/16"	LVHW_136RE	80	3		C	
294353	ORG	M:3	13.871	33.826792	-118.229344	13/16"	LVHW_136RE	5	3		C	
294355	YEL	M:3	13.872	33.826769	-118.229350	7/8"	LVHW_141RE	29	3		C	
294358	YEL	M:3	13.895	33.826458	-118.229424	5/8"	RGFW_136RE	366	3		C	
294359	YEL	M:3	13.895	33.826458	-118.229424	11/16"	LVHW_136RE	331	3		C	
294361	YEL	M:3	15.836	33.799439	-118.238659	3/4"	GAGE_WIDE_WOOD	4	3		C	
294362	ORG	M:3	15.984	33.797572	-118.239902	1 1/8"	STIFF_CAR	83	2		C	
294363	ORG	M:3	16.128	33.795607	-118.239769	1 3/16"	STIFF_CAR	32	2		C	
294364	RED	M:3	16.134	33.795528	-118.239708	1 5/8"	STIFF_CAR	58	2	0/10	C	

Line Segment: 8930

Division: SOU CALIFORNIA

Subdivision: ALAMEDA

Roadmaster: RDM UNKNOWN

Defect Number	Tag Type	Track Type:Nbr	Milepost/ Location	Latitude	Longitude	Tag Amplitude	Defect Name	Tag Length	Trk Class	TSR (P/F)	Curve/ Tangent	Repeat Tag
294366	YEL	M:3	16.134	33.795525	-118.239706	2"	WARF62:62	2	2		C	
294365	YEL	M:3	16.139	33.795469	-118.239662	1 5/16"	STIFF_CAR	12	2		C	
294367	YEL	M:3	16.457	33.791258	-118.237859	13/16"	GAGE_WIDE_WOOD	2	2		C	