

# Environmental Cap and Drainage System Inspection Report

---

Former Murray Pacific No. 2 Log Sort Yard  
(Ecology Facility ID #1211)

*Prepared for:*

**Port of Tacoma**

February 28, 2025

Project No. M0615.18.004

*Prepared by:*

Maul Foster & Alongi, Inc.

2815 2nd Avenue, Suite 540, Seattle, WA 98121

© 2025 Maul Foster & Alongi, Inc.

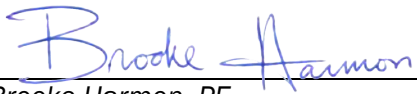


# Environmental Cap and Drainage System Inspection Report

## Former Murray Pacific No. 2 Log Sort Yard (Ecology Facility ID #1211)

*The material and data in this report were prepared  
under the supervision and direction of the undersigned.*

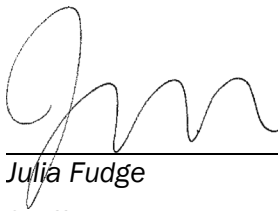
*Maul Foster & Alongi, Inc.*



---

Brooke Harmon, PE

Senior Engineer



---

Julia Fudge

Staff Engineer

# Certification

---

I hereby certify that I am familiar with the facilities addressed in this report and that the inspection was conducted in accordance with acceptable engineering practices.

2/28/2025

*Brooke Harmon, PE  
Senior Engineer*

# Contents

---

Abbreviations.....	v
1 Introduction.....	1
1.1 Purpose and Scope .....	1
1.2 Site Background .....	1
2 Field Observations.....	2
2.1 Environmental Cap .....	3
2.2 Stormwater Drainage System .....	4
3 Status and Recommendations .....	4
3.1 Maintenance and Repair Performed Since Previous Inspection .....	4
3.1.1 Environmental Cap .....	4
3.1.2 Stormwater Drainage System .....	4
3.2 Recommendations .....	5
3.2.1 Environmental Cap .....	5
3.2.2 Stormwater Drainage System .....	5
References .....	6

## Limitations

## Figures

- 1-1 Site Location
- 2-1 Environmental Cap Issues
- 2-2 Environmental Cap Repairs
- 2-3 Stormwater Drainage System

## Tables

- 2-1 Environmental Cap Issues Observed During 2024 Inspection
- 2-2 Environmental Cap Repairs Observed During 2024 Inspection
- 2-3 Stormwater Drainage System Issues Observed During 2024 Inspection

## Appendix

### Appendix

Murray Pacific Cap Repairs

# Abbreviations

---

Ecology	Washington State Department of Ecology
ID	identification
Inspections	Environmental cap and drainage system inspections
MFA	Maul Foster & Alongi, Inc.
Port	Port of Tacoma
Murray Pacific	former Murray Pacific No. 2 log sort yard
WUT	Washington United Terminals

# 1 Introduction

---

This report summarizes the field activities and results for the environmental cap and stormwater drainage system inspection conducted on behalf of the Port of Tacoma (Port) for the former Murray Pacific No. 2 log sort yard (Murray Pacific) Facility. The Murray Pacific Facility is owned by the Port and leased by Washington United Terminals (WUT) on Port Parcel No. 25. The Facility is located at 1815 Port of Tacoma Road in Tacoma, Washington, and is assigned Ecology Facility ID #1211 (the Site) (Figure 1-1). The ground surface at the Site is covered by an environmental cap and has several stormwater drainage features, further described herein in this report.

Inspection activities were conducted in accordance with the requirements identified in Consent Decree No. 94-2-099227 issued by the Washington State Department of Ecology (Ecology) to the Port (Washington Superior Court 1994) and the operations and maintenance plan (HLA 1997). A memorandum of understanding between Ecology and the Port, updating the cap inspection frequency to every 30 months starting with an inspection in February 2012, was issued on September 12, 2011 (Ecology and Port of Tacoma 2011).

## 1.1 Purpose and Scope

The purpose of this report is to present the findings of the 2024 environmental cap and stormwater drainage system inspection at the Site. The purpose of the environmental cap is to prevent surface water infiltration, exposure of humans and the environment to underlying materials, and erosion. The stormwater drainage system is used to convey stormwater off the cap surfaces to prevent infiltration and erosion.

Maul Foster & Alongi, Inc. (MFA) performed the inspection on August 18, 2024, which included the following tasks:

- Inspection of the asphalt/concrete pavement for the presence of cracks or other failures in the pavement that allow surface water runoff to infiltrate the bark/slag surficial fill (e.g., cracks greater than 1/8 inch wide, sub-base material exposed, pavement edge deterioration, and general appearance).
- Evaluation of the structural and functional condition of the cap and drainage systems (including catch basins, slot drains, and oil/water separators).
- Evaluation of debris/sediment accumulation in the stormwater structures (if visible).

The inspection observations are presented in this report.

## 1.2 Site Background

The Site is located along the southwest shore of the Blair Waterway which connects to Commencement Bay. The environmental cap on the Site consists of 49.5 acres of the larger 110-acre property. The Site is operated by WUT as a shipping terminal. Metal shipping containers are on- and off-loaded from cargo ships, stacked in the yard, and on- and off-loaded from trains via a railroad

that runs through the south end of the Site. Shipping containers are frequently moved and stored across large areas of the environmental cap.

Murray Pacific Corporation leased and operated the Site as a log sort yard from 1970 to 1994 (Ecology 2019). To stabilize site grade for the heavy loads associated with log yard operations, approximately 68,000 tons of ASARCO slag, along with rock and gravel, were placed at the Site (Ecology 2019). Elevated concentrations of arsenic, copper, lead, and zinc were detected in stormwater samples collected by Ecology in 1983 and 1984. Ecology identified the ASARCO slag as the likely source of the elevated metals concentrations.

In 1993, a remedial investigation/feasibility study that included soil, bark, sediment, surface water runoff, and groundwater sampling was completed for the Site (Ecology 2019). Remedial activities were conducted between 1995 and 1998 and included the installation of a low-permeability asphalt cap, stormwater controls, groundwater monitoring, and institutional controls.

The Port is required to conduct environmental cap and drainage system inspections (inspections) every 30 months (Ecology and Port of Tacoma 2011). The last inspection was performed in February 2022 (MFA 2022). Cracks, gouges, fatigue cracking (interlaced or interconnected cracks), and curb damage were recommended for repair identified in the 2022 inspection.

Groundwater monitoring has been conducted at the Site since 1998 to monitor the effectiveness of the remedial action. Groundwater quality is monitored every 18 months (Ecology 2019). The last groundwater monitoring event was conducted in February 2024 (described in a separate report [MFA 2024]). Increased concentrations of dissolved arsenic were observed in monitoring well MW-Y. The area surrounding MW-Y was observed to have damage near this well during the cap inspection conducted in 2022.

Based on the recommendations in the 2022 cap inspection report and observed increase of dissolved arsenic in MW-Y, the Port conducted cap repairs. In 2022, WUT paved the main aisle located west of monitoring well MW-Y. In October 2023, the Port crack sealed the western half of the intermodal yard and paved the area around monitoring well MW-Y and an area further to the north in this same section of the yard. In May 2024, the Port paved the area between the 2023 paving areas, as well as the area west of the WUT 2022 paving area. Additionally, the Port removed approximately 35 wheel stops that were no longer necessary for operations. The wheel stops included removal of 115 pins which were filled with AR 7000 Rubberized Mastic prior to paving. The edges of the new pavement were also sealed with the same mastic. In September 2024, after the 2024 cap inspection was conducted, the Port crack sealed joints throughout the intermodal yard area and repaired larger spalls of concrete in this area with asphalt. Additional details on environmental cap repairs from 2022 through 2024 are included in the appendix. The next groundwater monitoring event will be conducted in August 2025 and will evaluate the effectiveness of the 2022–2024 cap repairs.

## 2 Field Observations

---

MFA performed the cap and stormwater drainage system inspection at the Site on August 18, 2024, making use of the previous inspection results and information regarding maintenance work provided

by the Port (see the appendix). The inspection was led by a Washington State licensed professional engineer.

## 2.1 Environmental Cap

Significant portions of the cap were not accessible for inspection due to shipping container storage activities across the yard. Approximately 35 percent of the asphalt cap was covered with metal containers which prevented the inspection of cap conditions and restricted access to stormwater structures. Relevant Site features and the Site boundary are shown on Figure 2-1, 2-2, and 2-3. Photographs depicting cap issues are provided in Table 2-1.

Areas of alligator cracking (interlaced or interconnected cracks) wider than 1/8 inch in asphalt were observed across the Site. Surface damage to asphalt including chipping, scrapes, divots, and depressions caused by trailers and shipping containers were observed in storage areas across the Site. These divots were generally shallow and did not appear to impact the cap integrity, as documented in Table 2-1.

Several concrete structures run across the cap, including a large concrete drive lane along the southern border of the cap adjacent to the railroad tracks. Cracking, exposed rebar, and other deterioration were observed in concrete structures across the Site. In general, the conditions of concrete observed were worse than the conditions of asphalt surfaces. Concrete running along the rail area had significant damages including cracks a few inches wide and gouges where concrete material was missing. A concrete curb runs along the southern border of the cap. The curb was observed to have multiple areas of damage through the entire vertical profile which may be affecting runoff.

Pavement repairs were completed in 2024 and are summarized in Section 3 and the appendix. Pavement repairs observed during the 2024 inspection are presented in Figure 2-2 and described in Table 2-2. Photographs of the observed repairs are provided in Table 2-2.

The table below provides a summary of the cap conditions observed during the 2024 inspection; observations, photographs, and recommended actions keyed to specific locations are presented in Table 2-1 following this report.

Required Inspection Element	Observed Condition	Recommended Action
Presence of cracks wider than 1/8 inch	Cracks wider than 1/8 inch were observed across the Site and in concrete structures	Repair pavement as shown in Figure 2-1 and described in Table 2-1
Curb deterioration	Curb damage deterioration observed near the southeastern edge	Continue to monitor and reevaluate during next inspection cycle
Degradation, subsidence, general appearance	Surficial divots observed in asphalt across site; alligator cracking observed in portions of asphalt; damage to curb structures, damaged wheel stops; significant cracking and wear on concrete structures	Locations of pavement deterioration are shown in Figure 2-1 and described in Table 2-1. The more severe cracks should be prioritized for repair first.

## 2.2 Stormwater Drainage System

The Site's stormwater drainage system consists of 17 catch basins, two slot drains, and five oil/water separators. In 2024, all accessible drainage system components were inspected for general appearance, sediment and debris accumulation (if visible), and structural and functional condition. In general, the stormwater features were structurally sound and functioning normally. Inspectors were unable to observe the interiors of catch basins CB8, CB10, CB11, CB12, CB14 and oil/water separators OWS1 and OWS4 due to equipment and shipping containers blocking structure lids. Table 2-3 summarizes the observations made at each drainage structure. Stormwater drainage features observed appeared to be structurally sound and functioning normally.

# 3 Status and Recommendations

---

## 3.1 Maintenance and Repair Performed Since Previous Inspection

### 3.1.1 Environmental Cap

The 2022 inspection report (MFA 2022) recommended the following repairs:

- Seal/reseal joints between concrete structures and asphalt surfaces across the Site
- Repair curb along southern border of environmental cap (C1)
- Repair cracks in concrete structures and asphalt across the Site
- Monitor and re-evaluate shallow alligator cracking at numerous locations across the Site during the next inspection cycle
- Seal/reseal the joints between concrete and asphalt at the recently repaired sections of pavement

### 3.1.2 Stormwater Drainage System

The 2022 inspection report recommended the following repairs/maintenance:

- Restore access to CB5 to facilitate inspection during the next inspection cycle
- Clean or replace filter inserts
- Remove debris and floatables in accordance with stormwater maintenance requirements
- Cleanout structure by removing sheen, floatables and deposits
- Clean and/or service coalescing separator plates in the oil/water separator to remove accumulated sediment

## 3.2 Recommendations

### 3.2.1 Environmental Cap

The following recommendations are based on this 2024 inspection and subsequent environmental cap repairs:

- Repair curb along the southeastern portion of the asphalt cap (C1)
- Repair concrete (some as wide as 2 inches) in several locations (P48 and P67)
- Reseal cracks between concrete structures and asphalt cap (P19, P28, P34, P35, P49, and P52)
- Seal cracks (some as wide as 3 in wide) in asphalt throughout the Site
- Repair divots in asphalt (P36, P66, P69, P80, and P88)
- Remove vegetation and reseal cracks around settlements (P39 and P52) in tack

Asphalt across the cap was generally in satisfactory condition, with portions of unsealed cracks and surficial damage from shipping containers identified across the Site. Damaged asphalt across the Site generally did not appear to extend through the environmental cap. Concrete structures observed on the Site had larger cracks and damage which included exposed rebar, unsealed cracks, and vertical gaps between concrete slabs. The environmental cap extends below all rail components so cracks at concrete rail crossings are recommended to be monitored. Otherwise, it is recommended that these concrete structures be repaired. Required and recommended actions are described in further detail in Table 2-1.

### 3.2.2 Stormwater Drainage System

The following recommendations are based on this 2024 inspection:

- Clean or replace filter inserts in catch basins
- Seal cracks around catch basin CB13
- Remove debris and floatables from catch basins and oil/water separators in accordance with stormwater maintenance requirements
- Cleanout structure by removing sheen, floatables and deposits

Additionally, though no issues were observed during the inspection, MFA recommends the oil/water separators' coalescing separator plates be cleaned annually per the site's Operation and Maintenance Plan (HLA 1997). This includes cleaning and/or servicing coalescing separator plates in the oil/water separator to remove accumulated sediment (when accumulated sediment depth reaches 10% of the chamber depth or approximately 8 inches in depth).

All stormwater features observed appeared to be structurally sound and functioning properly. Filter inserts in several catch basins required maintenance or replacement due to sediment and debris accumulation. Floatables were observed in several structures and should be removed in accordance with stormwater maintenance requirements. Several stormwater features were inaccessible for inspection due to the presence of container boxes and/or vehicles. Required and recommended actions are further described in Table 2-3.

# References

---

- Ecology, Port of Tacoma. 2011. Memorandum of understanding. Former log yard groundwater monitoring and cap inspection. Washington State Department of Ecology and Port of Tacoma.
- Ecology. 2019. Second periodic review report final. Murray Pacific No. 2. Washington State Department of Ecology.
- HLA. 1997. Operation and Maintenance Plan, Murray Pacific Log Yard Remediation Project. Port of Tacoma, Tacoma WA. Harding Lawson Associates, Bellevue, WA.
- MFA. 2022. Cap Inspection Report, Former Murray Pacific No. 2 Sort Yard. Maul Foster & Alongi, Inc., Seattle, Washington. June 15.
- MFA. 2024. Letter (re: Groundwater Monitoring Report, Former Murray Pacific No. 2 Sort Yard, Consent Decree No. 94-2-09922-7, Facility Site ID #1211, Monitoring Date: February 17, 2024) to S. Hooton, Port of Tacoma, from A. Hackett and C. Wise, Maul Foster & Alongi, Inc., Seattle, Washington. May 14.
- Washington Superior Court. 1994. Consent Decree No. 94-5-099227. Washington State Department of Ecology.

# Limitations

---

The services undertaken in completing this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Observations in this report are limited to environmental cap areas that were visible to the MFA field team. In some instances, portions of the cap surface may have been covered and not readily available for inspection. Inspection of stormwater structures was limited to observations made from the surface and by means of direct observation, probes (extendible poles to check for sediment), and photography. No confined space entry was performed. Observation of some stormwater structures was also limited by storm flow and/or the presence of damaged or sediment-laden catch basin inserts that could not be safely removed. No guarantee is made that all cap or stormwater deficiencies that could impact cap/drainage system performance were identified.

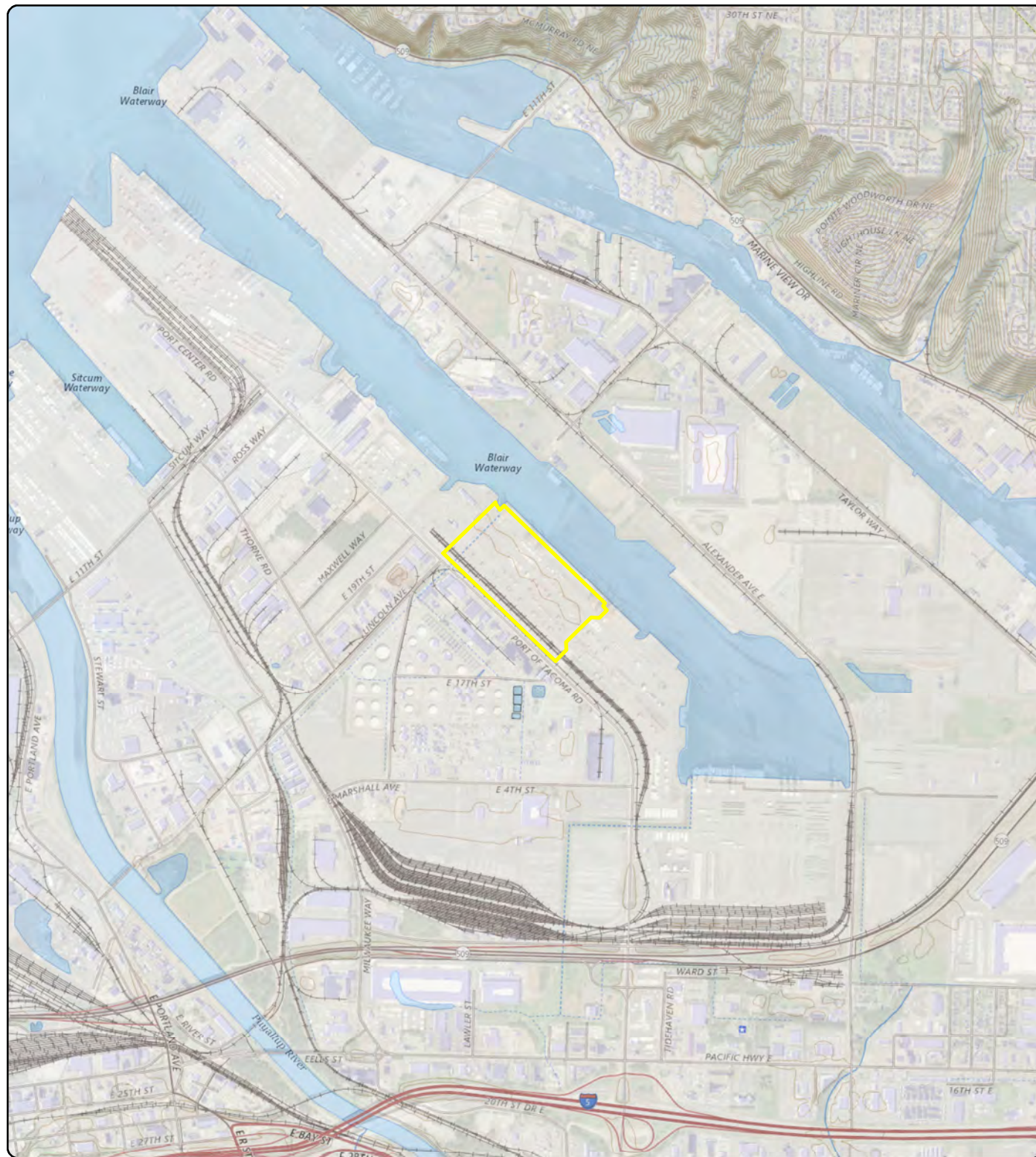
Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

# Figures

---



MAUL  
FOSTER  
ALONGI



Source:  
US Geological Survey (2021) 7.5-minute  
topographic quadrangle: Tacoma North.  
Township 21 North, Range 3 East, Section 34.  
Property boundary obtained from  
Pierce County GIS.

### Legend

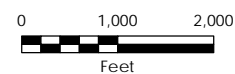
 Site Boundary

Figure 1-1  
Site Location

Port of Tacoma  
Murray Pacific

MAUL FOSTER ALONGI  
p. 971 544 2139 | [www.maulfooster.com](http://www.maulfooster.com)




This product is for informational purposes and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.



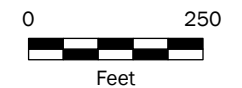


**Figure 2-1**  
**Environmental Cap**  
**Issues Observations**  
Former Murray Pacific  
No. 2 Sort Yard Site  
Tacoma, WA

### Legend

-  Pavement Observation
-  Site Boundary
-  Tax Lot

NOTE:  
Inspection completed on August 18, 2024.



## Data Sources

Aerial photograph obtained from the USDA; tax lot data obtained from Pierce County GIS.



MAUL FOSTER ALONG I  
p. 971 544 2139 | [www.maulfoster.com](http://www.maulfoster.com)

This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

© 2024 Maul Foster & Alongi, Inc.

Path: X:\0615\18\004\Proj\MO615\_18\_004\_004\_Cap\_Inspection\_Field.aprx Fig 2-2 Environmental Cap Repairs Observations  
Print Date: 12/19/2024  
Reviewed By:  
Produced By: givavata  
Project: MO615\_18\_004

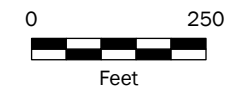


**Figure 2-2**  
**Environmental Cap**  
**Repairs Observations**  
Former Murray Pacific  
No. 2 Sort Yard Site  
Tacoma, WA

**Legend**

- Pavement Observation
- Cap Repairs 2022-2024
- Site Boundary
- Tax Lot

NOTE:  
Inspection completed on August 18, 2024.



**Data Sources**  
Aerial photograph obtained from the USDA; tax lot data  
obtained from Pierce County GIS.

 **MAUL FOSTER ALONGI**  
p. 971 544 2139 | [www.maulfooster.com](http://www.maulfooster.com)

This product is for informational purposes and may not have been prepared for, or be suitable  
for legal, engineering, or surveying purposes. Users of this information should review or  
consult the primary data and information sources to ascertain the usability of the information.  
© 2024 Maul Foster & Alongi, Inc.

Path: X:\061518\004\Pro\M0615\_18\_004\_004\_Cap\_Inspection\_Fieldaprx\Fig 2-3 Stormwater Drainage System Observations  
Print Date: 12/6/2024  
Reviewed By:  
Produced By: gignavata  
Project: M061518\_004



**Figure 2-3**  
**Stormwater Drainage**  
**System Observations**  
Former Murray Pacific  
No. 2 Sort Yard Site  
Tacoma, WA

**Legend**

Type

- Catch Basin
- Oil/Water Separator
- Site Boundary
- Tax Lot

NOTE:  
Inspection completed on August 18, 2024.



**Data Sources**  
Aerial photograph obtained from the USDA; tax lot data obtained from Pierce County GIS.

 **MAUL FOSTER ALONGI**  
p. 971 544 2139 | [www.maulfooster.com](http://www.maulfooster.com)

This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.  
© 2024 Maul Foster & Alongi, Inc.

# Tables

---





MAUL  
FOSTER  
ALONGI



**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

**Table 2-1: Environmental Cap Issues Observed During 2024 Inspection**

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
C1	Curb	Sections of curb damage extending approximately 100 lf feet; portions of damage extend through vertical profile; exposed rebar; large chunks missing	Repair curb	
P1B	Pavement	Cracking in concrete filled with mastic and slurry sealed in September 2024 <sup>2</sup> , wider than 2 inches in places, varying depths extends several hundred feet along drive lane; associated with damage documented in P16	Monitor and reevaluate during next inspection cycle	

<sup>1</sup> IDs are sequentially numbers and are continued from previous cap inspection events to maintain consistency with recurring pavement observations. Skipped numbers indicate the issue was addressed in a previous inspection and is no longer an issue or is a repair (See Table 2-2).



<sup>2</sup> Repairs conducted in September 2024 (see appendix to Environmental Cap and Drainage System Inspection Report [MFA, 2025] for the former Murray Pacific No. 2 Log Sort Yard).

R:\0615.18 Port of Tacoma - Murray Pacific\Documents\004\_2025.02.28 Cap Inspection Report\Tables\Table 2-1 Environmental Cap Issues photos.docx

© 2025 Maul Foster & Alongi, Inc.





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P4	Pavement	Partially unsealed slot drain joint	Reseal joints around slot drain. Feature repaired following cap inspection <sup>2</sup>	
P7	Pavement	Divot in asphalt, approximately 3 feet long and less than 1 inch deep	Monitor and reevaluate during the next inspection cycle	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P13/P37	Pavement	Linear crack in asphalt adjacent to rail track, several hundred feet	Seal cracks in asphalt	
P15	Pavement	Previous asphalt repair with wear; approximately 50 lf parallel cracks; up to 1/2 inch wide	Seal cracks in asphalt	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P16	Pavement	Concrete area approximately 70 feet wide that runs the length of the cap; numerous cracks wider than 1/8 inch; all cracks shallower than 2 inches; most cracks appear to have been previously sealed, but sealant has failed	Seal/reseal cracks; consider alternate sealant that holds up to heavy machinery/tire wear. Feature repaired following cap inspection <sup>2</sup>	
P17	Pavement	Sealant in joints around concrete pad running the length of cap is failing in places; separation as wide as 2 inches and as deep as 1.5 inches; concrete appears to have been previously sealed	Seal/reseal joints/cracks. Feature repaired following cap inspection <sup>2</sup>	

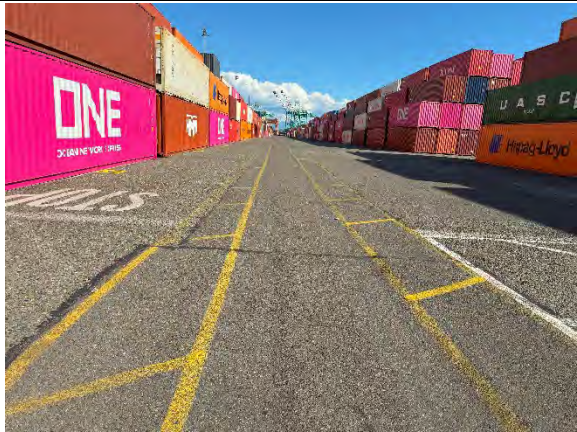



**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P18	Pavement	Cracks wider than 1/8 inch and shallower than 1/2 inch observed in concrete and adjacent asphalt	seal/reseal cracks	
P19	Pavement	Joint between concrete and asphalt with separation wider than 1/8 inch; extends approximately 100 lf northwest from point	Reseal joint	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P20	Pavement	Tire ruts in previous asphalt repair; extends length of drive lane	Monitor and reevaluate during next inspection cycle	
P22	Pavement	Sawcut and removed pavement between two rail tracks; 2 inches wide and 2 to 3 inches deep; dirt and vegetation accumulation in area of removed pavement	Monitor and reevaluate during next inspection cycle	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P23	Pavement	Asphalt and concrete deterioration adjacent to two asphalt repairs	Monitor and reevaluate during next inspection cycle	
P28	Pavement	Separation wider than 1/8 inches in portions of joint between concrete structure and asphalt; gps point is northwest end of structure; extends approximately 500 feet along drive lane	Reseal joints	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P31	Pavement	Approximately 3-inch deep sawcut for fiber optic line; impervious membrane intact; extends approximately 250 lf	Monitor and reevaluate during next inspection cycle	
P32	Pavement	Crack as wide as 2 inches and as deep as 1 inch; crack starts at point and extends several hundred feet northwest along the drive aisle; divots as wide as 1 foot along crack in several locations	Seal crack/repair asphalt	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P34	Pavement	Previously repaired concrete around maintenance hole; no seal between asphalt and concrete	Seal joint between concrete and asphalt	
P35	Pavement	Previously repaired concrete around maintenance hole; wear of seal between concrete and asphalt	Reseal joint between concrete and asphalt	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P36	Pavement	Divots as deep as 2 inches observed starting at this point and extending southeast several hundred feet; in line with pavement markings	Repair pavement	
P39	Pavement	Crack wider than 1/8 inches with vegetation growth; approximately 10 lf	Remove vegetation and seal crack	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P40	Pavement	Cracking in concrete at slot drain joint wider than 1/8 inch; approximately 2 to 3 feet wide	Repair concrete and seal joint with asphalt. Feature repaired following cap inspection <sup>2</sup>	
P41	Pavement	Cracking in concrete at slot drain joint wider than 1/8 inch; approximately 2-3 feet wide	Repair concrete and seal joint with asphalt. Feature repaired following cap inspection <sup>2</sup>	



**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P43	Pavement	Previously repaired concrete around maintenance hole; wear of seal between concrete and asphalt	Reseal joint between concrete and asphalt. Feature repaired following cap inspection <sup>2</sup>	
P48	Pavement	Concrete missing from slot drain joint; approximately 1 foot by 6 inches	Repair concrete. Feature repaired following cap inspection <sup>2</sup>	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P49	Pavement	partially unsealed joint between concrete and asphalt; previously sealed	Reseal joint	
P52	Pavement	Cracking and uneven pavement settling near bollard; vegetation growth in cracks	Remove vegetation and repair asphalt/concrete	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P53	Pavement	Previously sealed cracking in asphalt with visible sealant deterioration and unsealed portions	Reseal crack in asphalt	
P54	Pavement	Alligator cracking as wide as 2 inches and as deep as 1 inch; approximately 4 foot by 4 foot area	Seal cracks in asphalt	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P56	Pavement	alligator cracking wider than 1/8 inch and as deep as 0.5 inches; approximately 5 foot by 5 foot area	Seal cracks in asphalt	
P59	Pavement	Cracking in asphalt as wide as 6 inches in places and up to 3 inches deep; approximately 3 lf depressions from container stacks	Seal cracks in asphalt	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P60	Pavement	Former asphalt patch missing; Divot approximately 2 feet long and 1 foot wide	Repair patch/divot. Feature repaired following cap inspection <sup>2</sup>	
P62	Pavement	Degraded or missing asphalt patches	Reseal cracks. Feature repaired following cap inspection <sup>2</sup>	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P63	Pavement	Unsealed joint between concrete and asphalt with gouge as deep as 2 inches and approximately 3 feet long; associated with impacts documented in P16	Repair concrete and reseal joint. Feature repaired following cap inspection <sup>2</sup>	
P65	Pavement	Crack wider than 1/8 inch; approximately 20 feet long	Seal crack. Feature repaired following cap inspection <sup>2</sup>	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P66	Pavement	Multiple gouges in asphalt approximately 6 inches long each and 1.5 inches deep	Repair asphalt	
P67	Pavement	Cracking and damage to concrete; approximately 5 feet wide; approximately 1-foot-long gouge in concrete as deep as 2 inches	Repair concrete	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P68	Pavement	Alligator cracking wider than 1/8 inch and as deep as 1 inch in places; approximately 6 feet by 4 feet area	Seal cracks	
P69	Pavement	Previous asphalt patch with wear and a divot approximately 4 feet in length and less than 1 inch deep	Reseal asphalt and repair divot	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P70	Pavement	Asphalt depressions and gouges from containers; up to 2 inches deep	Monitor and reevaluate during next inspection cycle	
P71	Pavement	Concrete degradation at rail crossing; rebar exposed; approximately 1 inch by 6 inches and up to 4 inches deep; cap extends below rail components	Monitor and reevaluate during next inspection cycle	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P72	Pavement	Sealed cracks with sealant missing in places	Reseal areas of missing sealant. Feature repaired following cap inspection <sup>2</sup>	
P73	Pavement	Concrete degradation at rail crossing; approximately 2 feet long and up to 3 inches deep; cap extends below rail components	Monitor and reevaluate during next inspection cycle	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P74	Pavement	Depressions and gauges from containers; approximately 80 feet by 100 feet area; full extent not visible	Monitor and reevaluate during next inspection cycle	
P75	Pavement	Existing asphalt repair with deterioration; approximately 4 feet by 1 foot	Reseal cracks in asphalt. Feature repaired following cap inspection <sup>2</sup>	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P76	Pavement	Several cracks and asphalt patch deterioration; approximately 10 lf and as wide as 1 foot	Seal cracks in asphalt. Feature repaired following cap inspection <sup>2</sup>	
P77	Pavement	Cracks and asphalt patch deterioration; up to 2 inches deep	Seal cracks in asphalt. Feature repaired following cap inspection <sup>2</sup>	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P78	Pavement	Unsealed joint between concrete and asphalt with gouge as deep as 2 inches and approximately 3 feet long; associated with impacts documented in P16	Repair concrete and reseal joint. Feature repaired following cap inspection <sup>2</sup>	
P79	Pavement	Concrete degradation; approximately 15 foot by 20 foot area; up to 1 inch deep	Monitor and reevaluate during next inspection cycle. Feature repaired following cap inspection <sup>2</sup>	





**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P80	Pavement	Divot in asphalt; approximately 1 foot by 6 inches by 1 inch; approximately 20 lf crack	Seal cracks and fill divot	
P81	Pavement	Alligator cracking in asphalt; approximately 10 foot by 20 foot area; asphalt depression; approximately 5 foot by 1 foot	Seal cracks and repair asphalt	




**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P82	Pavement	Asphalt depressions from shipping containers; extend along extent of cap	Monitor and reevaluate during next inspection cycle	
P86	Pavement	Gouge in asphalt; approximately 15 lf; wider than 1/8 inch	Seal gouge	



**Project Name:** Environmental Cap Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P88	Pavement	Depressions and divots from shipping containers; up to 3 feet by 2 feet and as deep as 2 inches	Repair divots and seal cracks	

NOTES:

C = curb

ft = feet

lf = linear feet

P = pavement

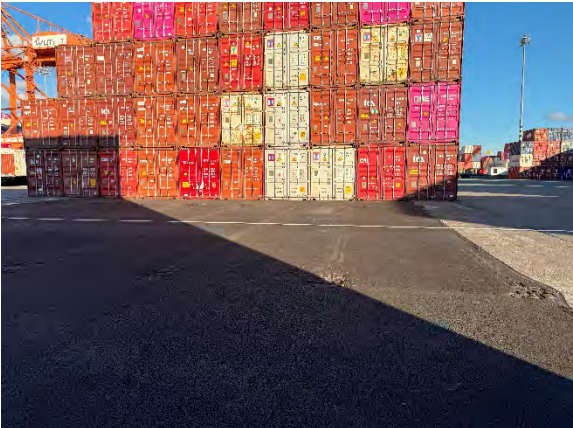

<sup>1</sup> IDs are sequentially numbers and are continued from previous cap inspection events to maintain consistency with recurring pavement observations. Skipped numbers indicate the issue was addressed in a previous inspection and is no longer an issue or is a repair (See Table 2-2).

<sup>2</sup> Repairs conducted in September 2024 (see appendix to Environmental Cap and Drainage System Inspection Report [MFA, 2025] for the former Murray Pacific No. 2 Log Sort Yard).



**Project Name:** Environmental Cap Repairs Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific


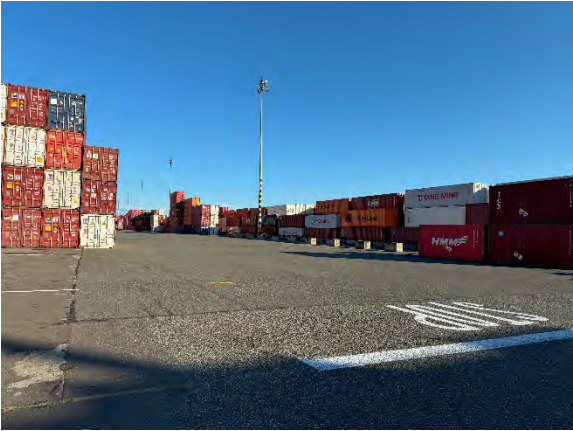
**Table 2-2: Environmental Cap Repairs Observed During 2024 Inspection**

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P8	Pavement	Asphalt repair; approximately 60 feet by 70 feet; degradation from shipping containers	Monitor and reevaluate during next inspection cycle	
P14	Pavement	Sealed cracks in concrete; approximately 30 lf	Monitor and reevaluate during next inspection cycle	

<sup>1</sup> IDs are sequentially numbers and are continued from previous cap inspection events to maintain consistency with recurring pavement observations. Skipped numbers indicate the repair was observed during a previous inspection and no action was required or it is presented as an issue needing repair (See Table 2-1).


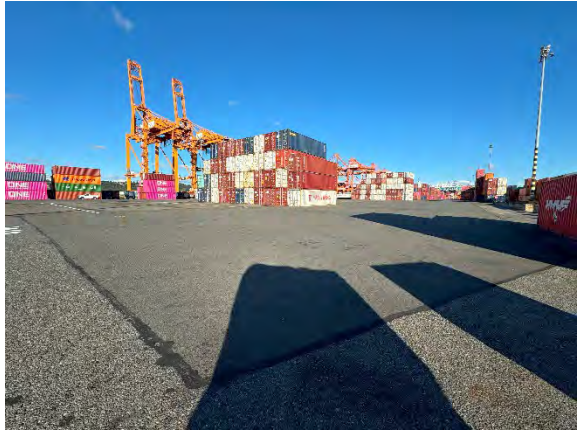


**Project Name:** Environmental Cap Repairs Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P21	Pavement	Sealant added between concrete pads	None	
P27	Pavement	WUT 2022 asphalt repair; approximately 60 feet wide by several hundred feet long	None	





**Project Name:** Environmental Cap Repairs Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P29	Pavement	Cracks in asphalt around well covers repaired as part of larger asphalt repair (included in the asphalt repair described in P27)	None	
P30	Pavement	Alligator cracking repaired as part of larger asphalt repair (included in the asphalt repair described in P27)	None	

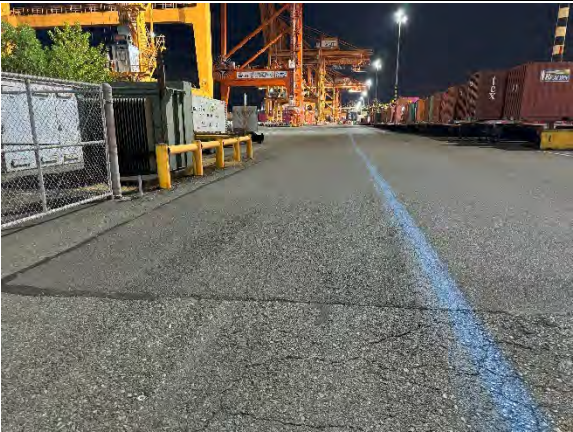



**Project Name:** Environmental Cap Repairs Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P31	Pavement	Partially sealed sawcut; extends approximately 250 lf	Seal crack in asphalt	
P33	Pavement	Sealant added around previously repaired concrete	None	

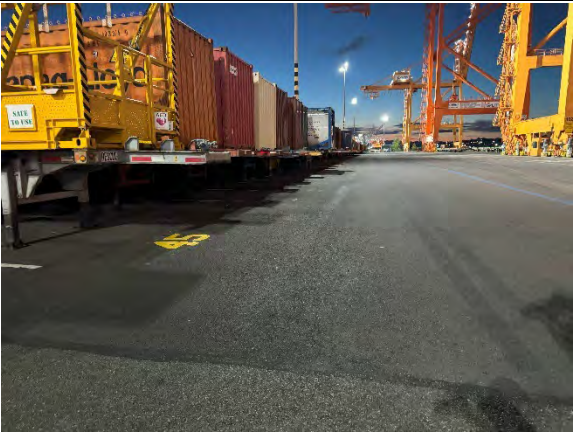



**Project Name:** Environmental Cap Repairs Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P38	Pavement	Asphalt repair; extends along dock; several hundred feet long by approximately 40 feet wide	None	
P42	Pavement	Sealant added and divots repaired	None	




**Project Name:** Environmental Cap Repairs Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P47	Pavement	Approximately 30 feet wide by several hundred feet long asphalt repair	None	
P50	Pavement	Repaired asphalt cracking in pavement	Monitor and reevaluate during next inspection cycle	

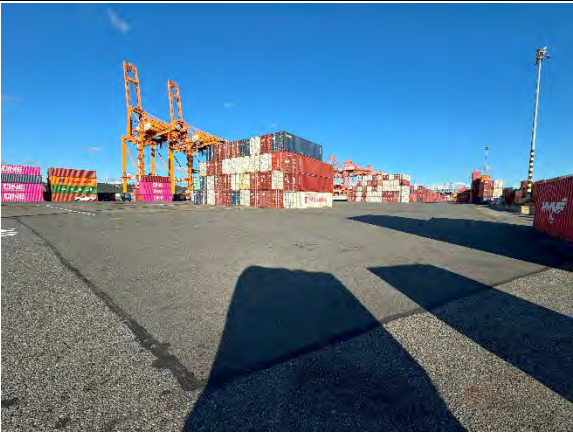
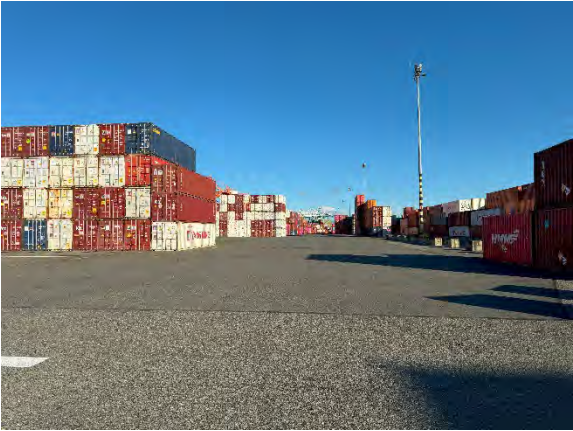


**Project Name:** Environmental Cap Repairs Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P51	Pavement	Sealed cracks	None	 A photograph showing a close-up view of a road surface with a single, long, dark, sealed crack running vertically through the center of the frame. The road is made of dark asphalt. In the background, there are some construction materials and a white pickup truck.
P55	Pavement	Approximately 6 foot by 6 foot asphalt repair	None	 A photograph showing a square-shaped asphalt repair patch on a road surface. The patch is a darker shade of gray than the surrounding asphalt. In the background, there are some construction materials and a white pickup truck.





**Project Name:** Environmental Cap Repairs Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P57	Pavement	Divots and alligator cracking repaired as part of larger asphalt repair (included in the asphalt repair described in P27)	None	
P58	Pavement	Alligator cracking repaired as part of larger asphalt repair (included in the asphalt repair described in P27)	None	

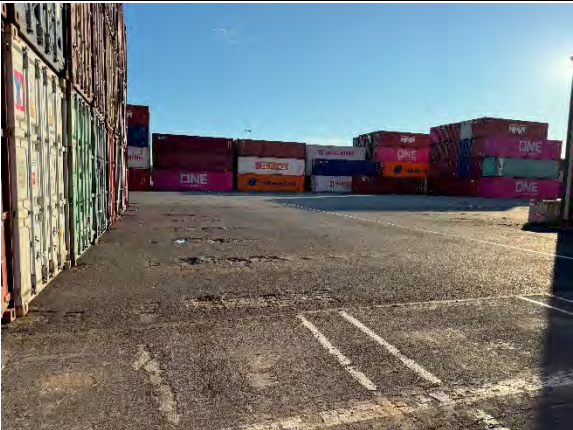
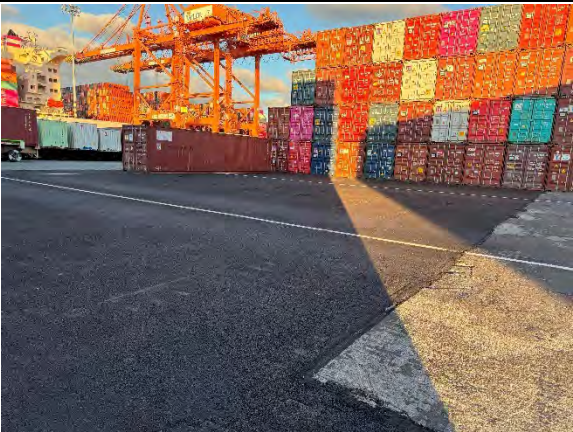


**Project Name:** Environmental Cap Repairs Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P64	Pavement	Resealed cracks	Monitor and reevaluate during next inspection cycle	
P72	Pavement	Sealed cracks with sealant missing in places	Reseal areas of missing sealant	

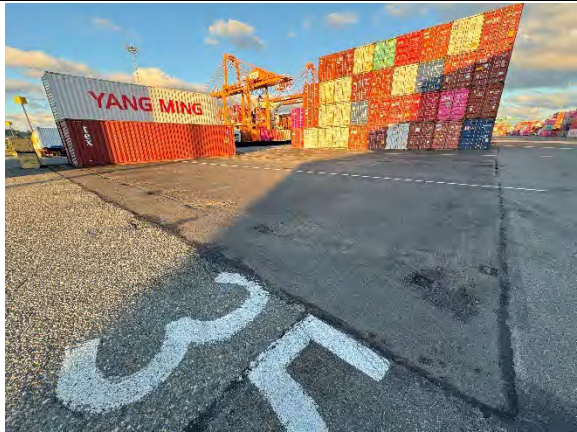



**Project Name:** Environmental Cap Repairs Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P83	Pavement	Port 2023 asphalt repair; approximately 80 feet long by 40 feet wide; degradation from shipping containers	Monitor and reevaluate during next inspection cycle	 A photograph showing a paved area with white parking lines. In the background, there are several stacked shipping containers in various colors (red, blue, yellow, green) under a clear blue sky.
P84	Pavement	Port 2024 asphalt repair; approximately 80 feet long by 60 feet long; degradation in adjacent concrete	Monitor and reevaluate during next inspection cycle	 A photograph showing a paved area with white parking lines. In the background, there are several stacked shipping containers in various colors (red, blue, yellow, green) under a clear blue sky. A large orange gantry crane is visible in the distance.



**Project Name:** Environmental Cap Repairs Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID <sup>1</sup>	Type of Structure	Observation	Recommended Actions	Photograph
P85	Pavement	Port 2023 asphalt repair; approximately 80 feet long by 60 feet wide; divots from shipping containers present	Monitor and reevaluate during next inspection cycle	
P87	Pavement	Asphalt repair; approximately 10 feet by 25 feet	None	



**NOTES:**

ft = foot  
 lf = linear foot  
 P = pavement





**Project Name:** Stormwater Drainage System Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

**Table 2-3: Stormwater Drainage System Issued Observed During 2024 Inspection**

ID	Type of Structure	Observed Condition	Sediment Accumulation	Additional Observations	Recommended Actions	Photograph
CB5	Catch basin	Structure in good condition; functioning normally	Water in structure and too deep to measure	Trace floatables on water surface	Replace insert and remove floatables in accordance with stormwater maintenance requirements	
CB6	Catch basin	Structure in good condition; functioning normally	Sediment accumulation in insert; water in structure and too deep to measure	Trace floatables on water surface	Replace insert in accordance with stormwater maintenance requirements	



**Project Name:** Stormwater Drainage System Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID	Type of Structure	Observed Condition	Sediment Accumulation	Additional Observations	Recommended Actions	Photograph
CB7	Catch basin	Structure in good condition; functioning normally	Debris and sediment accumulation in filter; water in structure and too deep to measure	Organic and inorganic debris in insert; floatables	Replace insert and remove floatables from structure in accordance with stormwater maintenance requirements	
CB8	Catch basin	Unable to access	nm	Inaccessible due to equipment	Clear equipment in area to allow observation during next inspection cycle	


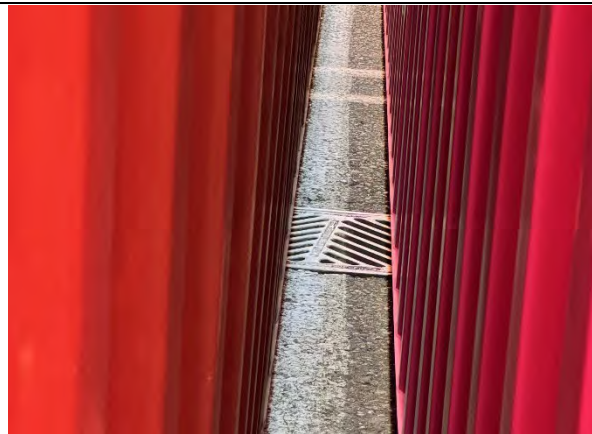


**Project Name:** Stormwater Drainage System Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID	Type of Structure	Observed Condition	Sediment Accumulation	Additional Observations	Recommended Actions	Photograph
CB9	Catch basin	Structure in good condition; functioning normally	4 inches of sediment accumulation in insert; water in structure and too deep to measure	Trace floatables on water surface; damaged insert	Replace insert in accordance with stormwater maintenance requirements	The 'Photograph' column contains two images. The top image is an interior view of a catch basin, showing a concrete structure with a metal grate insert that appears damaged or partially missing. The bottom image is an exterior view of the same catch basin, showing a concrete curb and a metal grate with some debris (a piece of dark material) lying on the pavement next to it.




**Project Name:** Stormwater Drainage System Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID	Type of Structure	Observed Condition	Sediment Accumulation	Additional Observations	Recommended Actions	Photograph
CB10	Catch basin	Unable to access	nm	Structure inaccessible due to shipping containers; sediment accumulation in insert	Clear containers in area to allow observation during next inspection cycle; replace insert consistent with stormwater maintenance requirements	
CB11	Catch basin	Unable to access	nm	Structure inaccessible due to shipping containers	Clear containers in area to allow observation during next inspection cycle	
CB12	Catch basin	Unable to locate	nm	Structure inaccessible due to shipping containers	Clear containers in area to allow observation during next inspection cycle	[No photograph available]





**Project Name:** Stormwater Drainage System Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID	Type of Structure	Observed Condition	Sediment Accumulation	Additional Observations	Recommended Actions	Photograph
CB13	Catch basin	Structure in good condition; functioning normally	Water in structure and too deep to measure	Cracking in asphalt around catch basin	Seals cracks around structure	
CB14	Catch basin	Unable to access	nm	Structure inaccessible due to shipping containers	Clear containers in area to allow observation during next inspection cycle	[No photograph available]





**Project Name:** Stormwater Drainage System Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID	Type of Structure	Observed Condition	Sediment Accumulation	Additional Observations	Recommended Actions	Photograph
CB15	Catch basin	Unable to inspect due to integrity of insert	Sediment accumulation in insert	Damaged insert	Replace insert in accordance with stormwater maintenance requirements	
CB16	Catch basin	Minor cracking in riser; functioning normally	Sediment accumulation in insert; water in structure and too deep to measure	Trace floatables on water surface	Remove and floatables; replace insert in accordance with stormwater maintenance requirements	





**Project Name:** Stormwater Drainage System Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID	Type of Structure	Observed Condition	Sediment Accumulation	Additional Observations	Recommended Actions	Photograph
CB17	Catch basin	Structure in good condition; functioning normally	nm	None	None	
CB18	Catch basin	Structure in good condition; functioning normally	nm	None	None	





**Project Name:** Stormwater Drainage System Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID	Type of Structure	Observed Condition	Sediment Accumulation	Additional Observations	Recommended Actions	Photograph
CB19	Catch basin	Structure in good condition; functioning normally	nm	None	None	
CB20	Catch basin	Structure in good condition; functioning normally	nm	None	None	

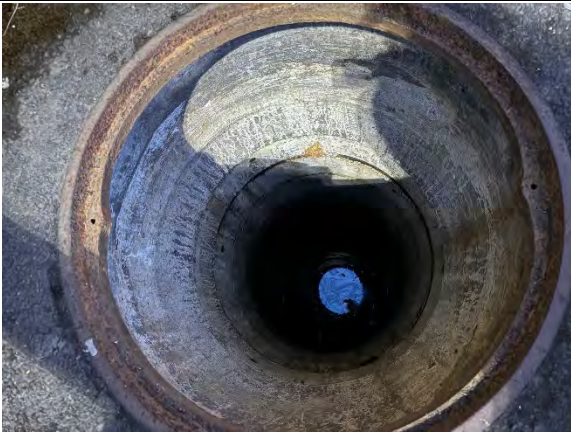



**Project Name:** Stormwater Drainage System Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID	Type of Structure	Observed Condition	Sediment Accumulation	Additional Observations	Recommended Actions	Photograph
CB21	Catch basin	Structure in good condition; functioning normally	nm	None	None	
OWS1	Oil/water separator	Unable to locate	nm	Inaccessible due to equipment.	Clear equipment in area to allow observation during next inspection cycle	[No photograph available]
OWS2	Oil/water separator	Unable to access	nm	Inaccessible due to trailers	Clear trailers in area to allow observation during next inspection cycle	




**Project Name:** Stormwater Drainage System Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID	Type of Structure	Observed Condition	Sediment Accumulation	Additional Observations	Recommended Actions	Photograph
OWS3	Oil/water separator	Structure in good condition; functioning normally	Water in structure and too deep to measure	Trace floatables on water surface	Remove floatables in accordance with stormwater maintenance requirements	
OWS4	Oil/Water Separator	Unable to access	nm	Inaccessible due to containers	Clear containers in area to allow observation during next inspection cycle	



**Project Name:** Stormwater Drainage System Inspection Report  
**Project Number:** M0615.18.004  
**Location:** Murray Pacific

ID	Type of Structure	Observed Condition	Sediment Accumulation	Additional Observations	Recommended Actions	Photograph
OWS5	Oil/ Water Separator	Unable to access	nm	Inaccessible due to trailers	Clear trailers in area to allow observation during next inspection cycle	

NOTES:  
CB = catch basin  
nm = not meaasured  
OWS= oil/water separator

# Appendix

---

## Murray Pacific Cap Repairs



MAUL  
FOSTER  
ALONGI



PORT 2023

PORT 2024

PORT 2023

WUT

2022

← PORT 2024

Cap Limits

CRACK SEAL PORT 2024

CRACK SEAL PORT 2023

M.W.

---

# MURRAY PACIFIC 2024 CAP REPAIRS

---

Paving Portion

MAY 6, 2024  
PORT OF TACOMA  
1 Sitcum Plaza, Tacoma WA 98421

Blair Waterway

Blair Waterway

Cap Limits →

Washington United Terminals

2024 Mill & Park

2024 Crack Sealing

Port of Tacoma Rd

Liana Pacific

American Shredding

Tacoma Screw Products, Inc

Pacific Fuel

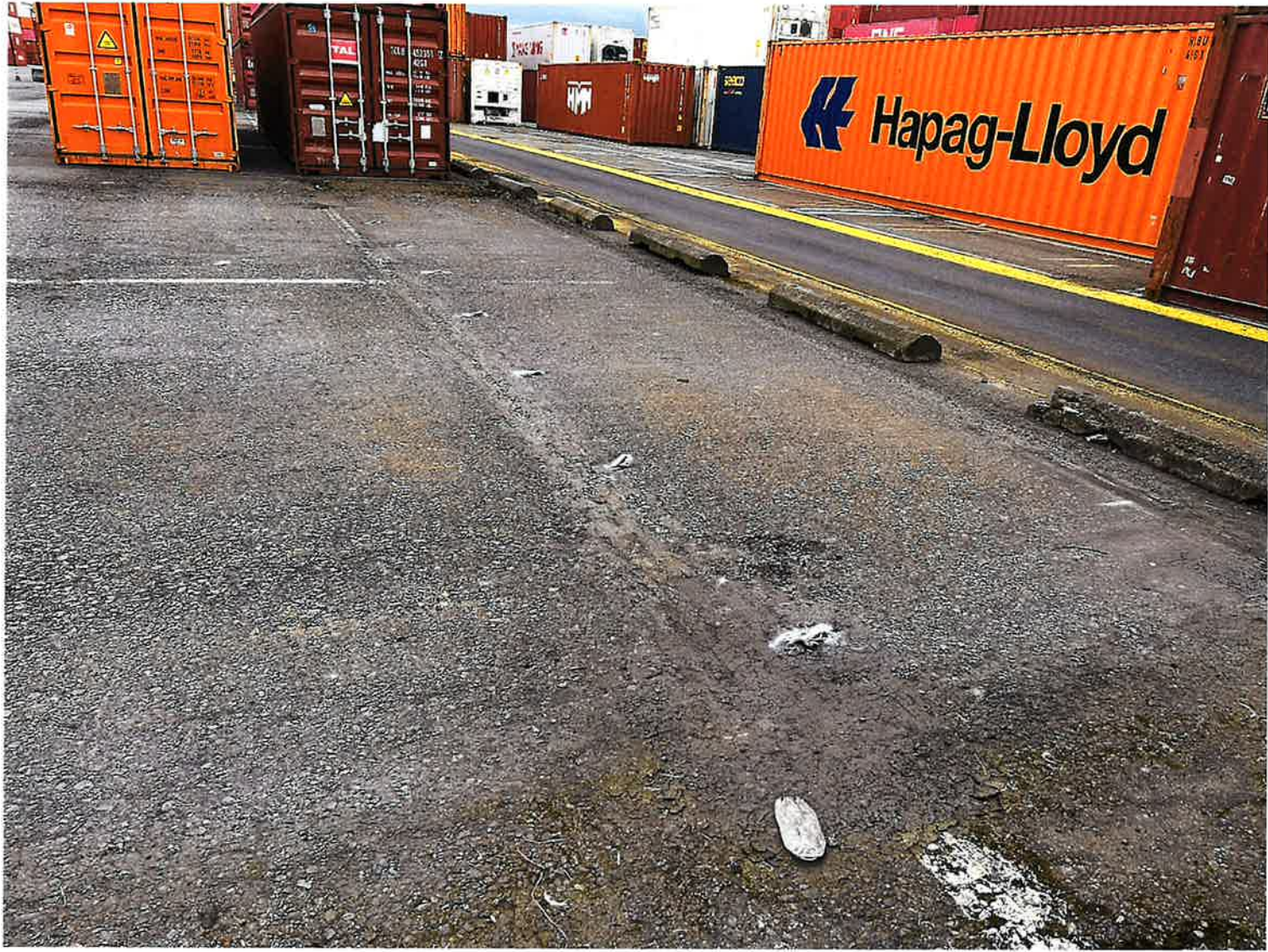
Tripak, Inc

Locke Systems Inc

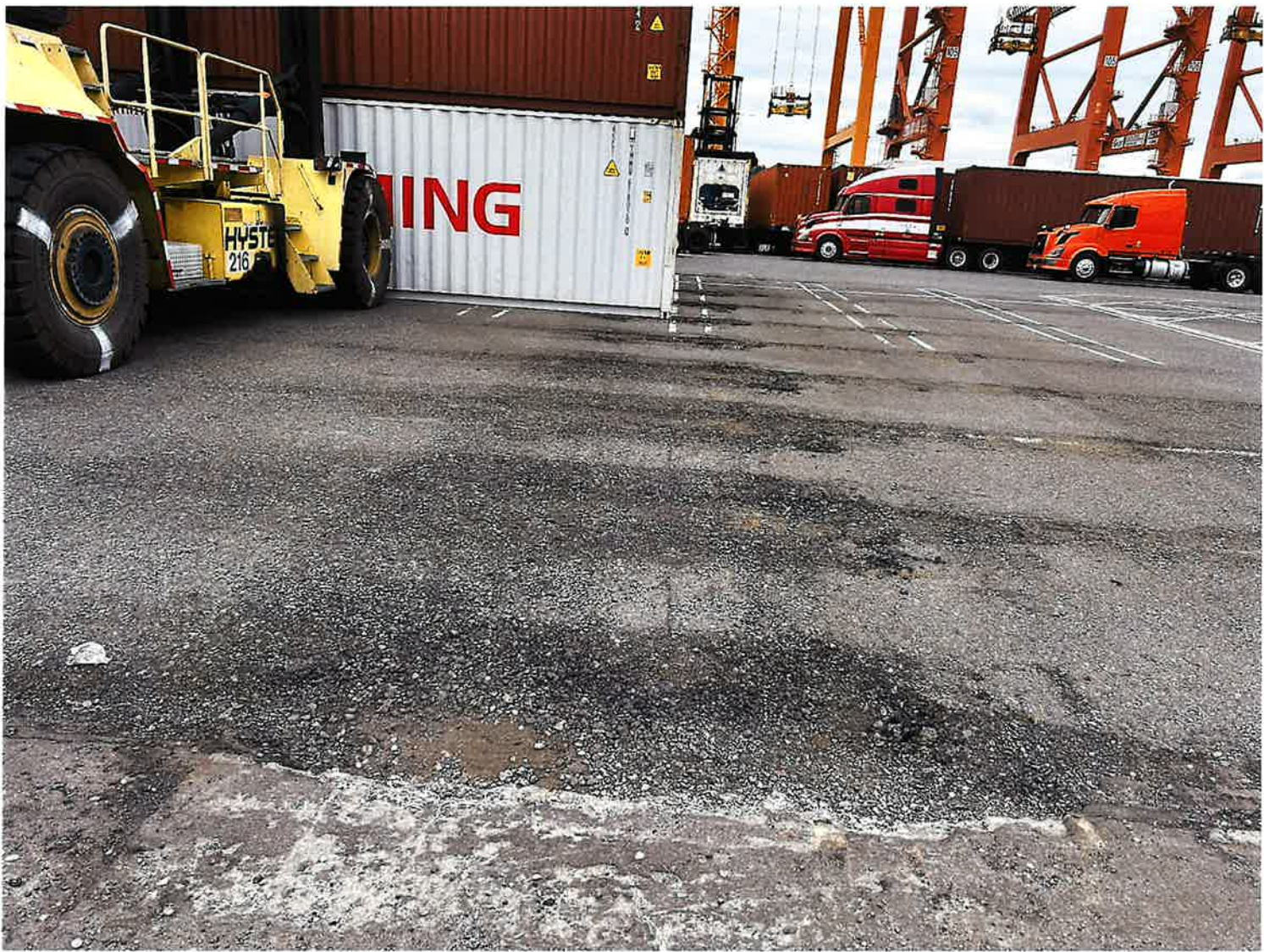
Paramount Supply

Google Earth

Imagery Date: 8/24/2022 47°15'41.71" N 122°23'28.86" W elev 0 ft eye alt 3257 ft



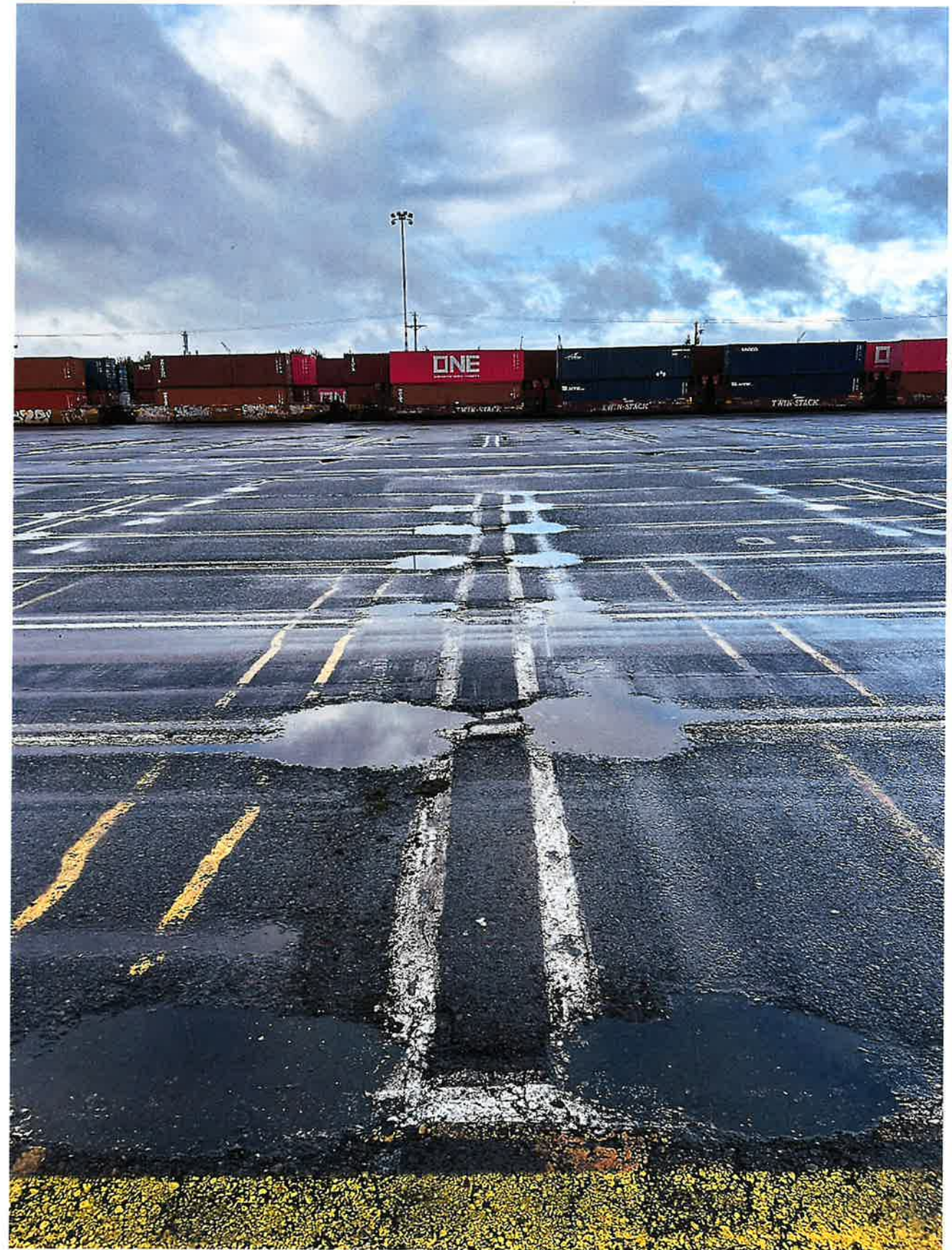
The Parking stops shown in this image are no longer necessary for terminal operations. Approximately 30 to 35 stops were removed as part of the 2024 effort. Each stop contained two hold down pins and as seen above previously removed stops simply had the pins bent over. Approximately 100 to 115 pins were removed as part of the 2024 work.



Typical damage to asphalt surface created by years of wear from container pockets. In the area completed in 2024 many of the areas of damage were thru the wearing course (upper 2 ½”) of asphalt. These areas were milled to a depth of 3” to ensure that repairs were below any damaged wearing course.



Adjacent area to repair seen after a recent rain. Damage from container pockets creates a field of puddles.



Another view of an adjacent area. Container pockets create depressions in the wearing (surface) course that typically extends approximately 2" deep into the asphalt.



2024 repair area seen after paving. Work was completed on Thursday May 2<sup>nd</sup>. Approximately 1000 tons of asphalt was removed and replaced. Surface water that is visible in areas is less than 1/8" deep. Pavement surface is solid and tight.



Another view of the larger repair area. Monitoring well is located on the opposite side of the building seen in this image.

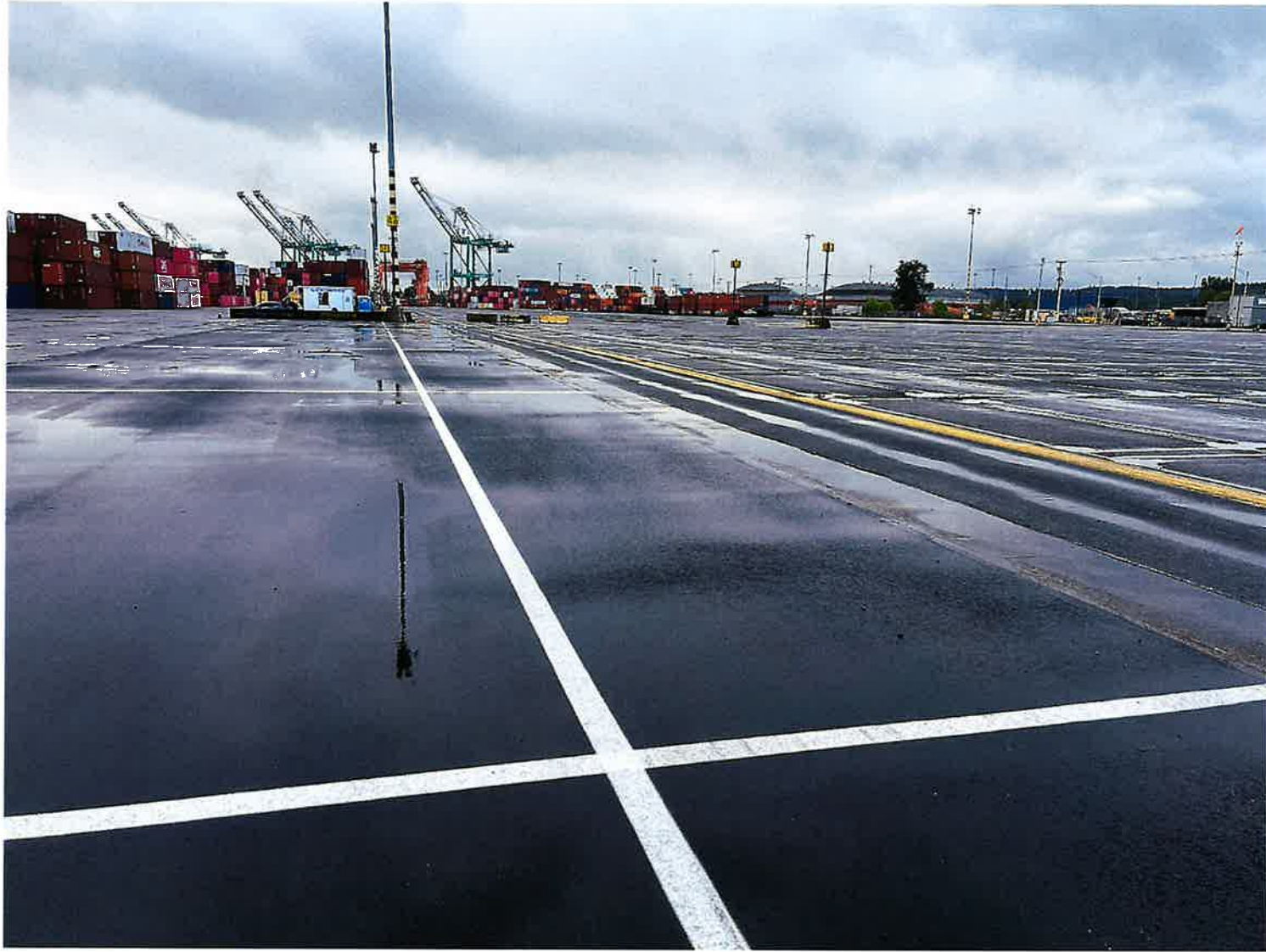


Image of the smaller repair area on the west side of the aisleway. Note that the parking stops have been removed along with the pin anchors. Anchors holes are filled with asphaltic sealer prior to paving. Edges of new paving to existing are also sealer with AR 7000 Rubberized Mastic.

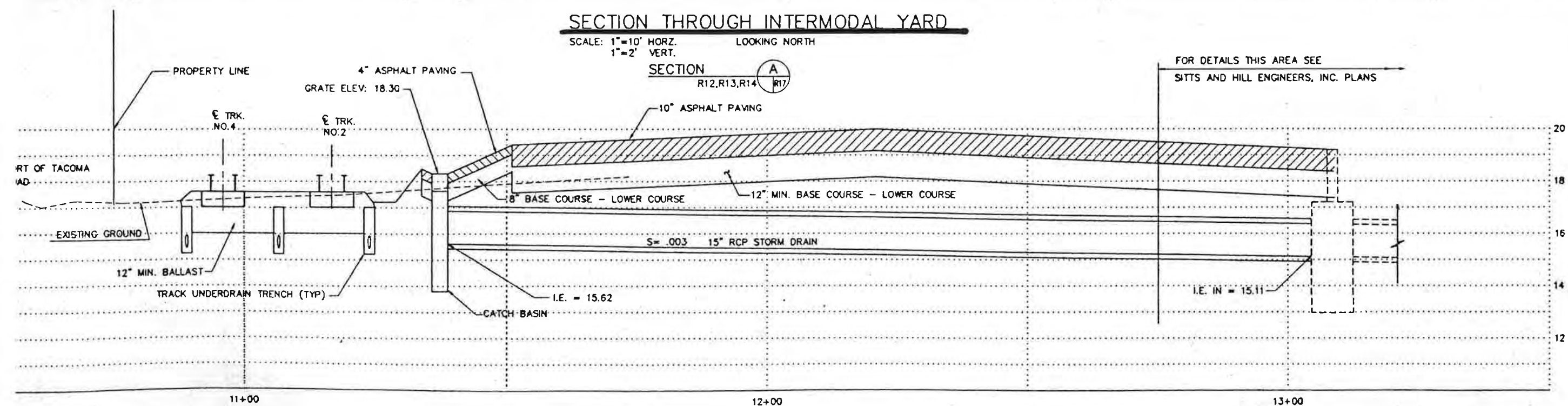
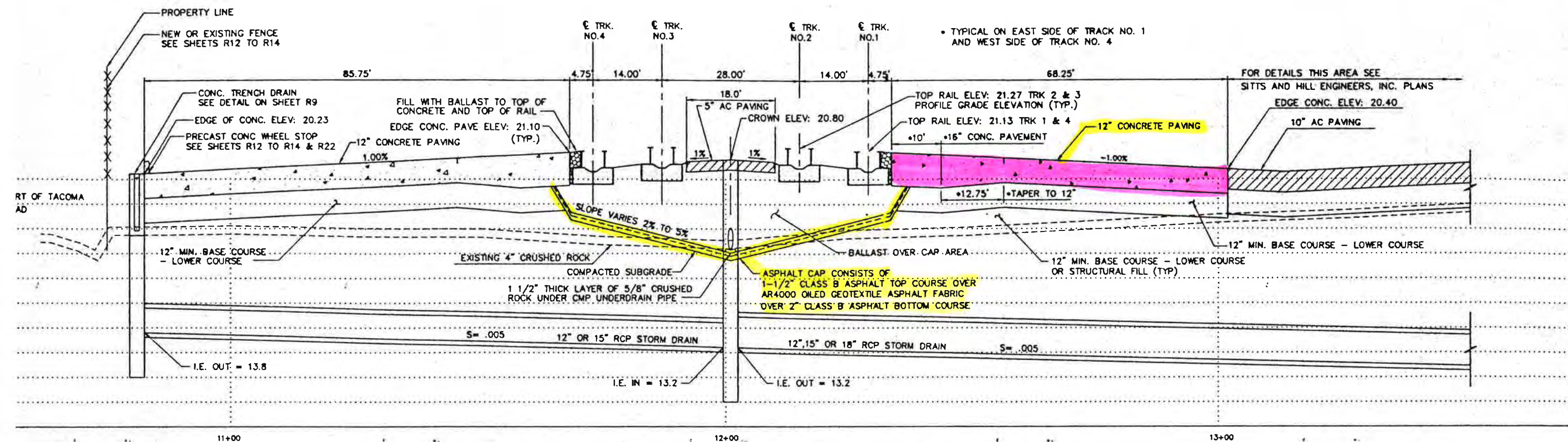


Another image of the repairs made to the west of the aisleway.

## Murray Pacific September 2024 Intermodal Yard crack sealing.



In early September 2024 Puget Paving completed a crack sealing effort in the area depicted in blue above. This area is constructed of 12" concrete. The cracks and joints in the concrete panels were blown out to remove debris. Cracks were sealed with AR7000 Rubberized Mastic. In areas of larger concrete spalling the impacted concrete was removed and the area filled with asphalt paving.



### SECTION THROUGH INTERMODAL YARD

SCALE: 1"=10' HORZ. 1"=2' VERT. LOOKING NORTH

SECTION B





Cracks sealed at northeast end of work area around strip drain



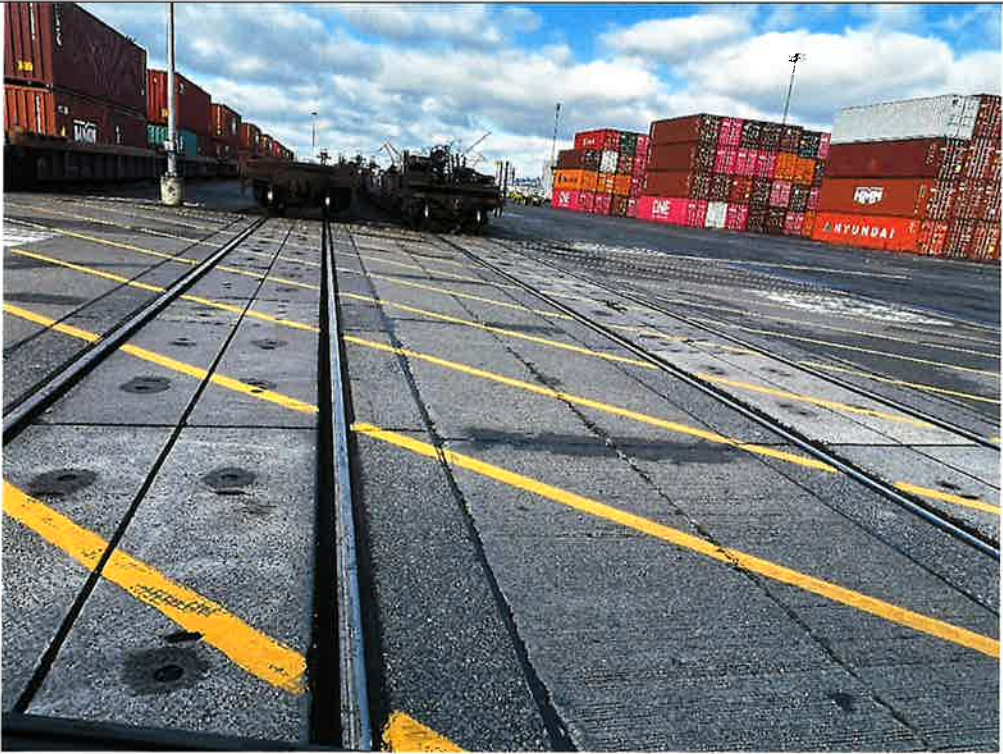
Typical joint and crack sealing in the intermodal yard



Area of larger spall filled with asphalt paving and adjacent cracks and joints sealed with AR 7000 Rubberized Mastic



Within the crossing the tubs on the rail lines are not included in this maintenance effort. Only the crossing panel cracks are sealed.



Area within the rail lines is protected by a cap beneath the ballast as shown on the attached section



Area of larger spall repaired with asphalt



Typical area of crack and joint sealing



Typical joint and crack sealing.  
In 2010 the Port did an extensive repair of the concrete portion of the cap that included removal of all loose and spalled concrete. Rubberized mastic was placed back in the joints. In larger joints and pockets the mastic was extended with pea gravel to ensure better adhesion. The areas of work were then coated with an asphaltic slurry that included stone chips. This material is still present as seen in the area of black on the concrete. While surface cracking is occurring, the rubberized mastic installed previously is still in tack and providing protection from water intrusion. This effort provides a layer of surface protection for the previous repairs.



Typical joint and crack sealing.