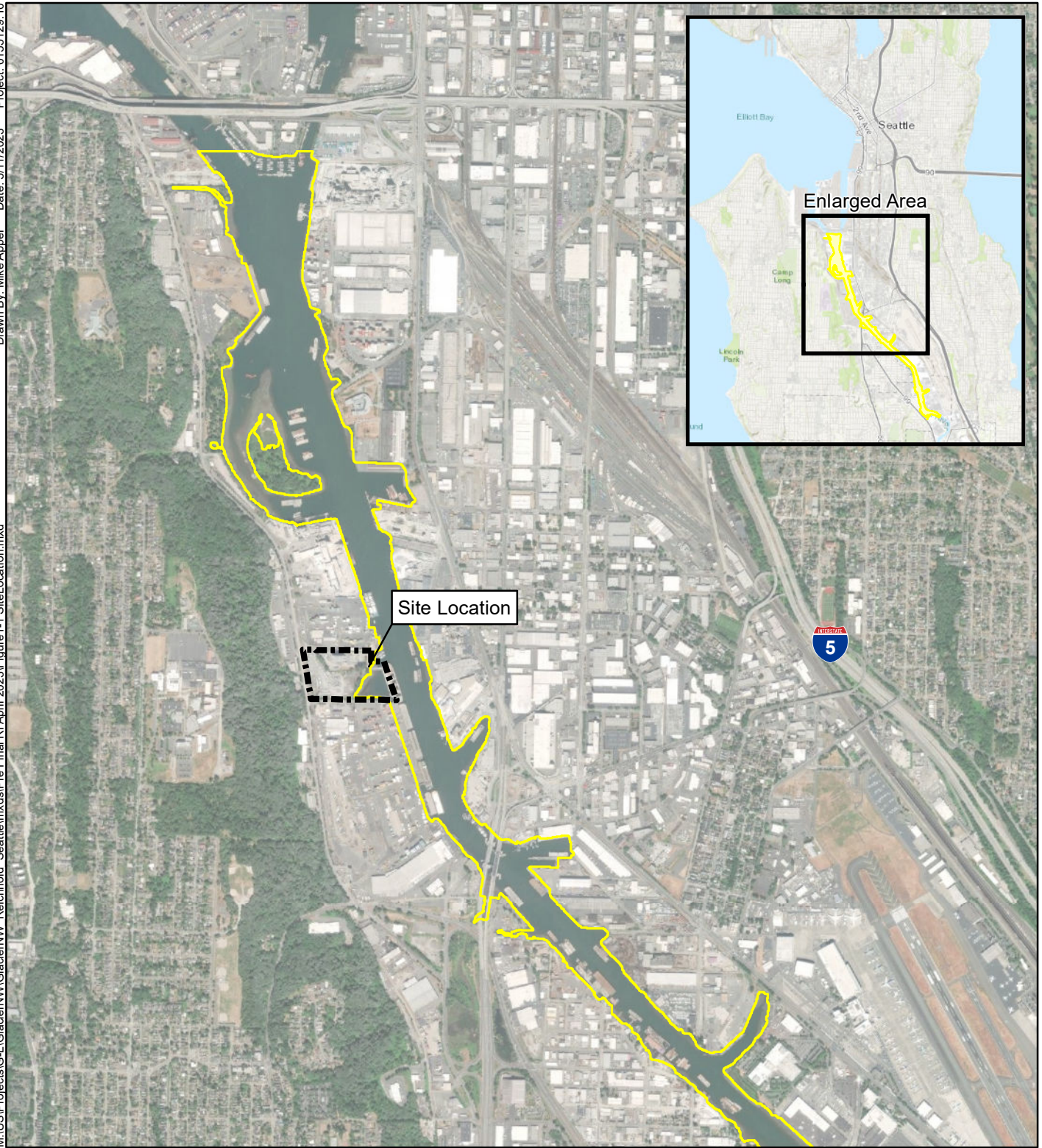




FIGURES



Legend

-  Current Property Boundary
-  Lower Duwamish Waterway Superfund Study Area



0 2,000 4,000 Feet

FIGURE 1-1
SITE LOCATION MAP
5900 West Marginal Way Site
Seattle, Washington

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Seattle, Washington 98101
425-214-0468





Legend

 King County Parcel Boundary

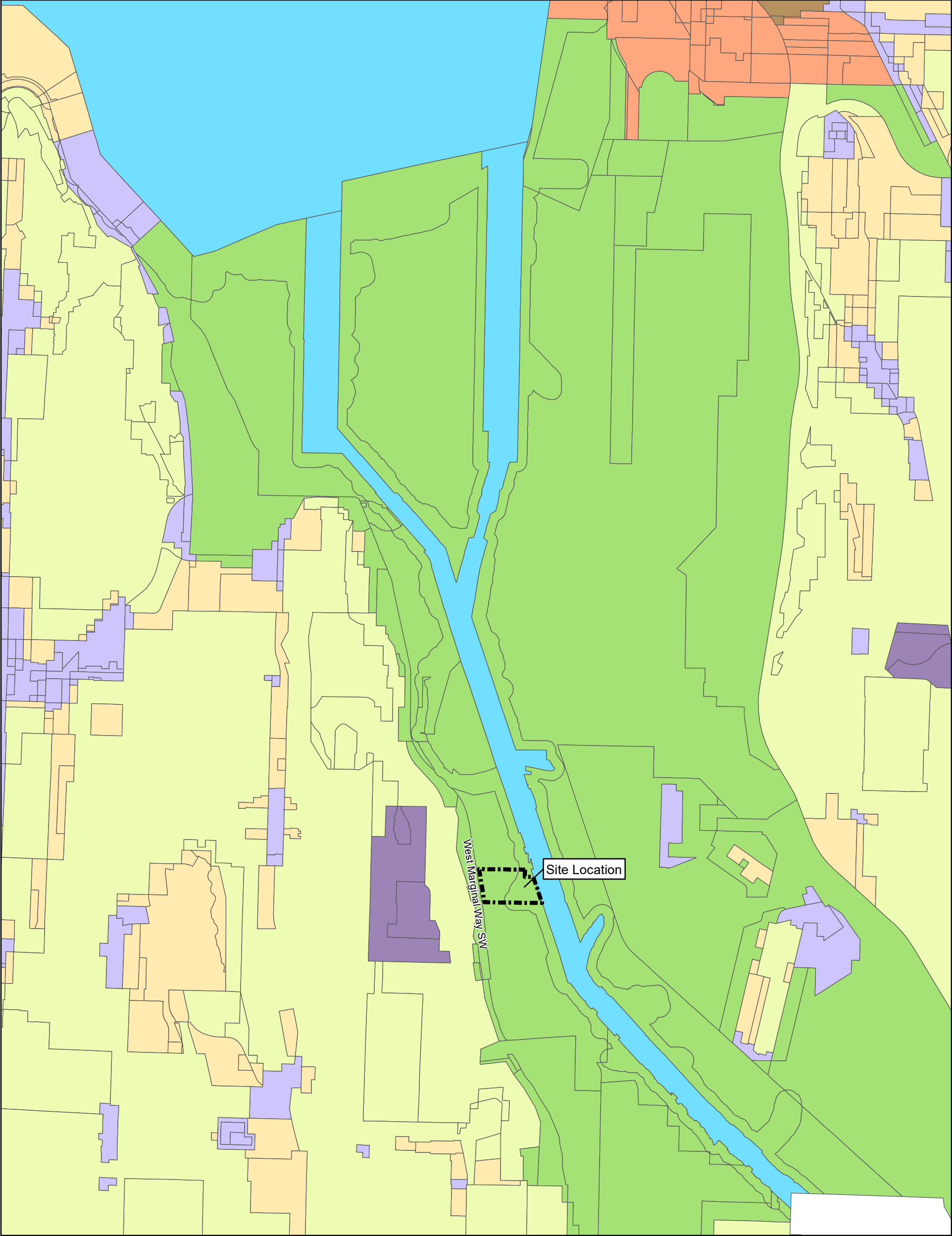


0 250 500 Feet

FIGURE 2-1
SITE AND AREA PARCEL OWNERSHIP
 5900 West Marginal Way Site
 Seattle, Washington

Environmental Resources Management
 1201 3rd Avenue, Floor 22
 Seattle, Washington 98101
 425-214-0468





Legend

- Current Property Boundary
- Multi-Family Residential
- City of Seattle Zoning
- Single Family Residential
- Downtown
- Neighborhood/Commercial
- Major Institutions
- Master Planned Community
- Manufacturing/Industrial
- Water
- Residential/Commercial

FIGURE 2-2
LOWER DUWAMISH WATERWAY LAND USE
5900 West Marginal Way Site
Seattle, Washington

Notes:
Parcel zoning provided by City of Seattle.



Legend

Active Stormwater Drainage Outfalls

Existing Transformer Location

Current Property Boundary

Navigation Channel Limits

King County Parcel Boundary

Pervious Surface

Impervious Surface

Gravel

Alaska Marine Lines Property

Duwamish Shipyard Inc. Property

Port of Seattle T115 Property

N

070140280

Feet

Notes:

- Aerial: King County: 3/23/2012, 0.25 ft per pixel

FIGURE 2-3

CURRENT SITE LAYOUT

5900 West Marginal Way Site

Seattle, Washington

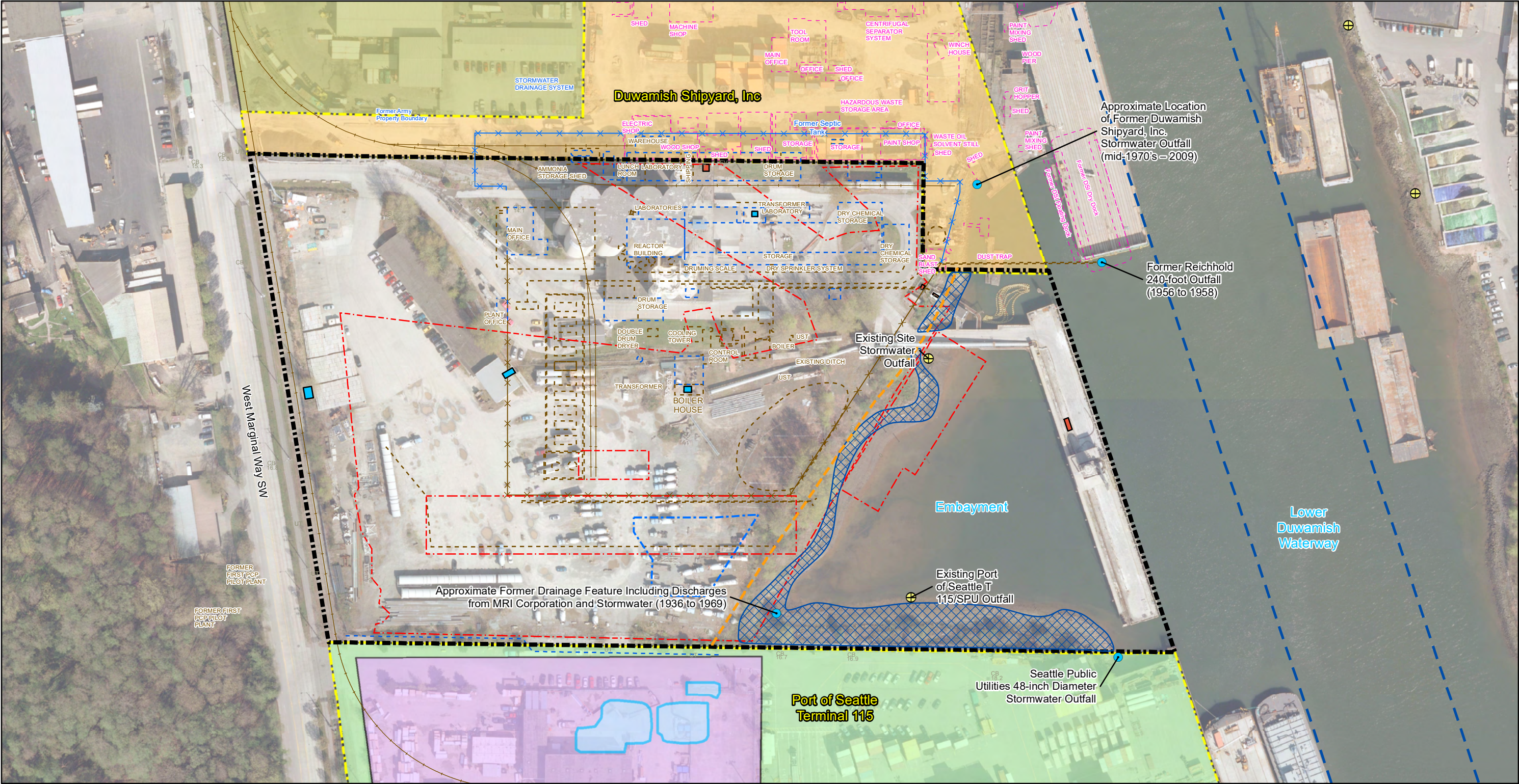
Environmental Resources Management

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ERM



Legend

- Active Stormwater Outfall
- Former Stormwater Outfall
- Former Transformer Location
- Existing Transformer Location
- Current Property Boundary
- MRI Settling Ponds and Evaporation Lagoons
- Former Army Building or Feature
- Former Army Fenceline
- Former Army Property Boundary
- Former Reichhold Feature
- Former Railroad Track
- Former Reichhold Fenceline
- Former Mineralized Cell Operations Area

- Approximate Extent of Riprap
- Former Duwamish Shipyard, Inc (DSI) Feature (As shown on 1969 to 1974 aerial photograph)
- Approximate location of wooden bulkhead (circa 1922; current location and presence unknown)
- Navigation Channel Limits
- King County Parcel Boundary

- Alaska Marine Lines
- Duwamish Shipyard Inc.
- Former MRI Corporation (T115 North Site)
- Port of Seattle T115

Notes:
- Aerial: King County: 3/23/2012, 0.25 ft per pixel
- The presence and location of the bulkhead is inferred from a 1922 aerial photograph.

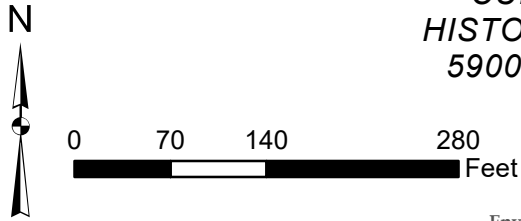


FIGURE 2-4
CURRENT SITE PLAN AND
HISTORICAL SITE FEATURES
5900 West Marginal Way Site
Seattle, Washington



Legend

- Sample Locations
- Stormwater Outfall
- Catch Basin Location
- Stormwater Swale
- Dock Drainage System
- Stormwater Conveyance
- Water Tanks
- Stormwater Drainage Mainline
- Current Property Boundary
- Stormwater Surface Flow Direction
- SPU Stormwater Drainage Easement



0 60 120 240 Feet

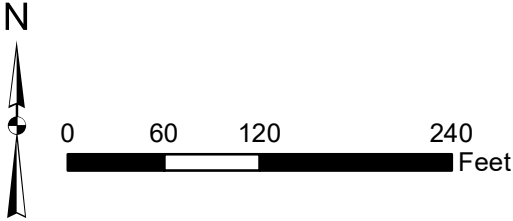
Notes:
- Aerial: King County: 3/23/2012, 0.25 ft per pixel

FIGURE 2-5
CURRENT STORMWATER CONVEYANCE SYSTEM
5900 West Marginal Way Site
Seattle, Washington



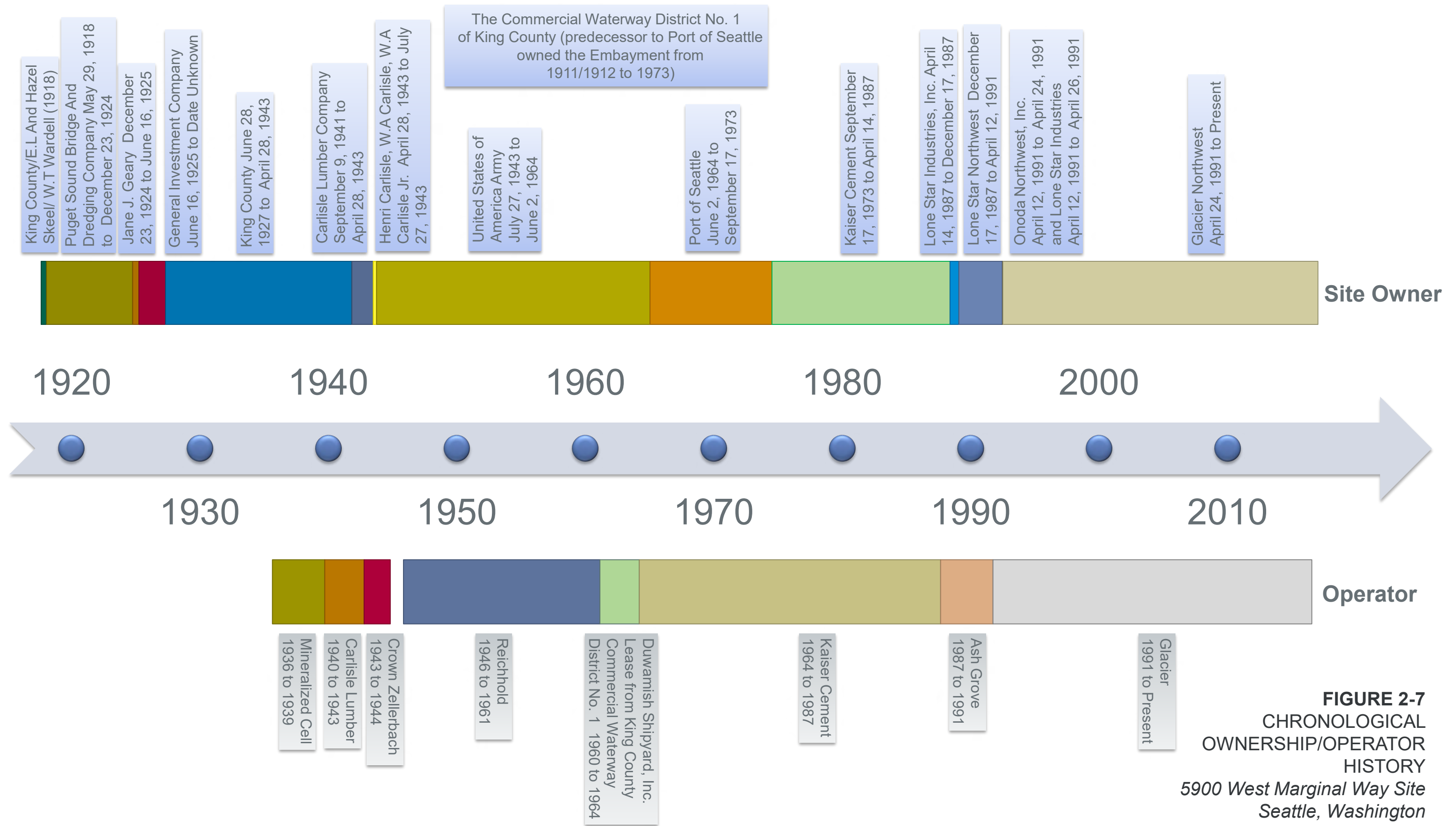
Legend

- Stormwater Outfall
- Catch Basin Location (Abandoned by filling with concrete prior to 1991)
- - - 15 Inch Diameter Historical Stormwater Conveyance: Inactive prior to 1991 and abandoned August 2014
- Stormwater Drainage Mainline
- SPU Stormwater Drainage Easement
- ▤ Property Boundary



Notes:
- Aerial: King County: 3/23/2012, 0.25 ft per pixel

FIGURE 2-6
HISTORICAL STORMWATER PIPE
5900 West Marginal Way Site
Seattle, Washington





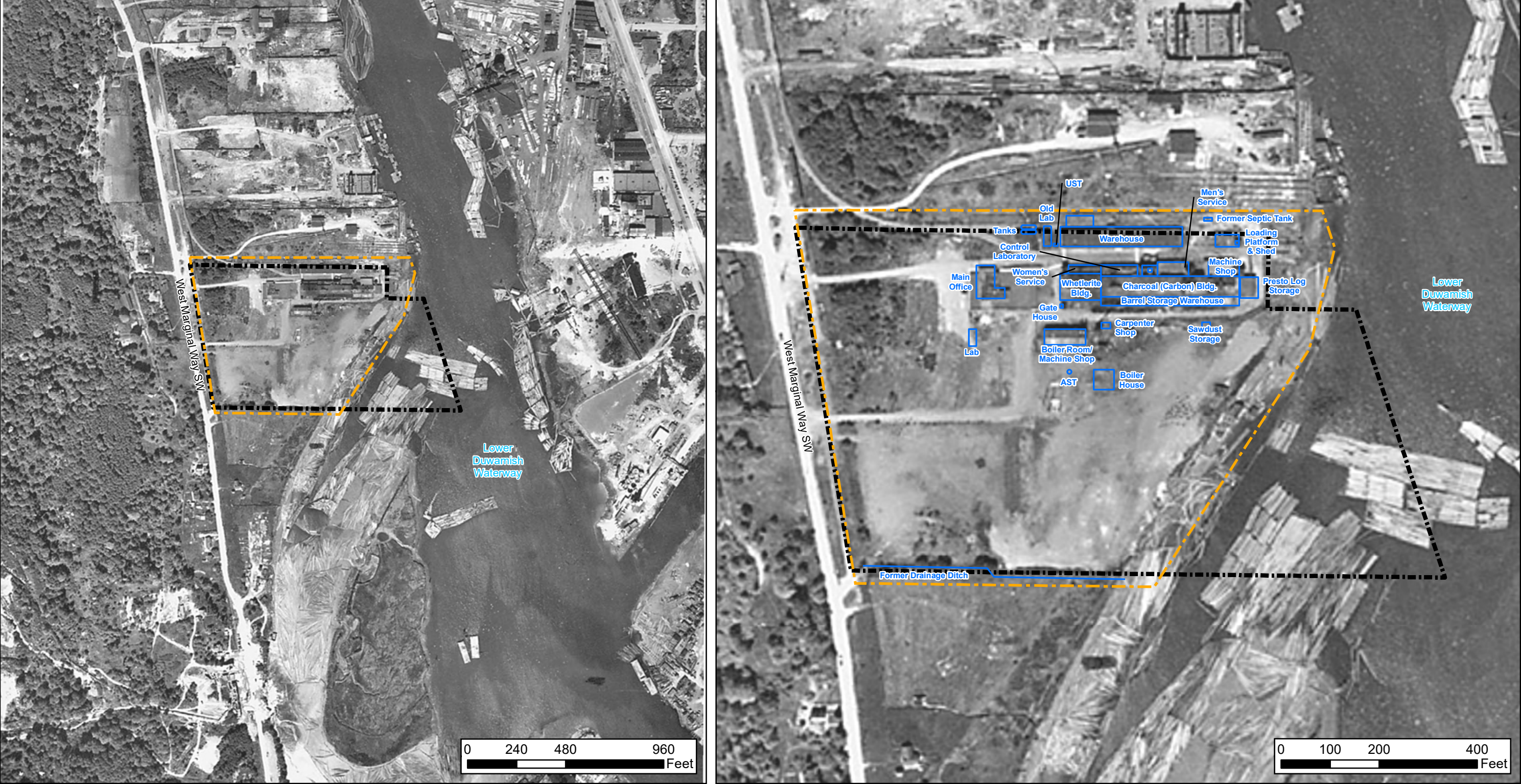
Legend

- Approximate Footprint of Former Mineralized Cell Wood Preserving Company Features (based on infrastructure and disturbed land evident on 1936 aerial photograph)
- Current Property Boundary



Notes:
Aerial image provided by Walker & Associates.

FIGURE 2-8
HISTORICAL SITE PLAN - MINERALIZED
CELL WOOD PRESERVING COMPANY 1936
5900 West Marginal Way Site
Seattle, Washington



- Legend**
- Former Army Building or Feature
 - - - Former Property Boundary
 - - - Current Property Boundary

Notes:
Aerial image provided by Walker & Associates.

FIGURE 2-9
HISTORICAL SITE PLAN
ARMY OPERATIONS 1946
5900 West Marginal Way Site
Seattle, Washington

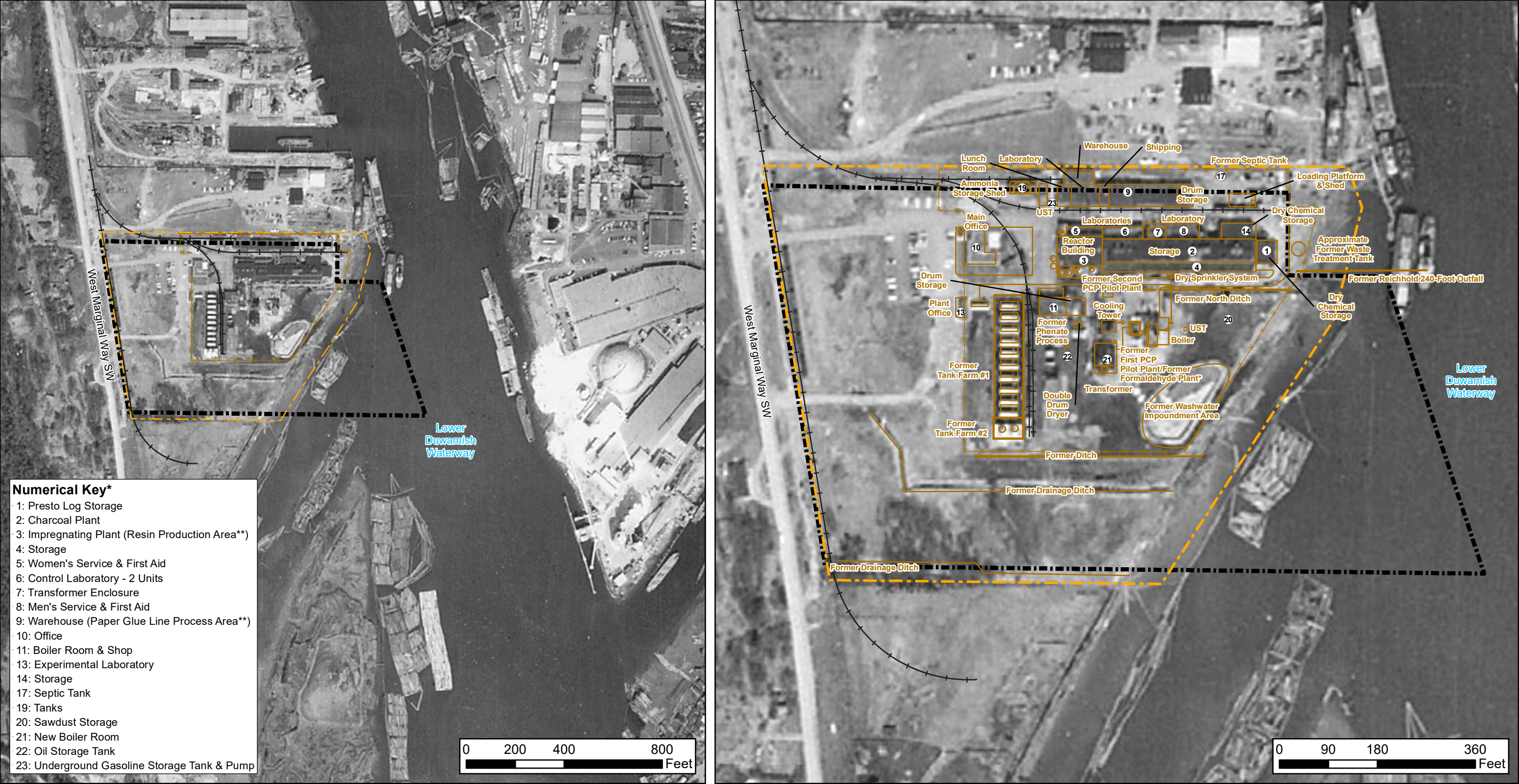
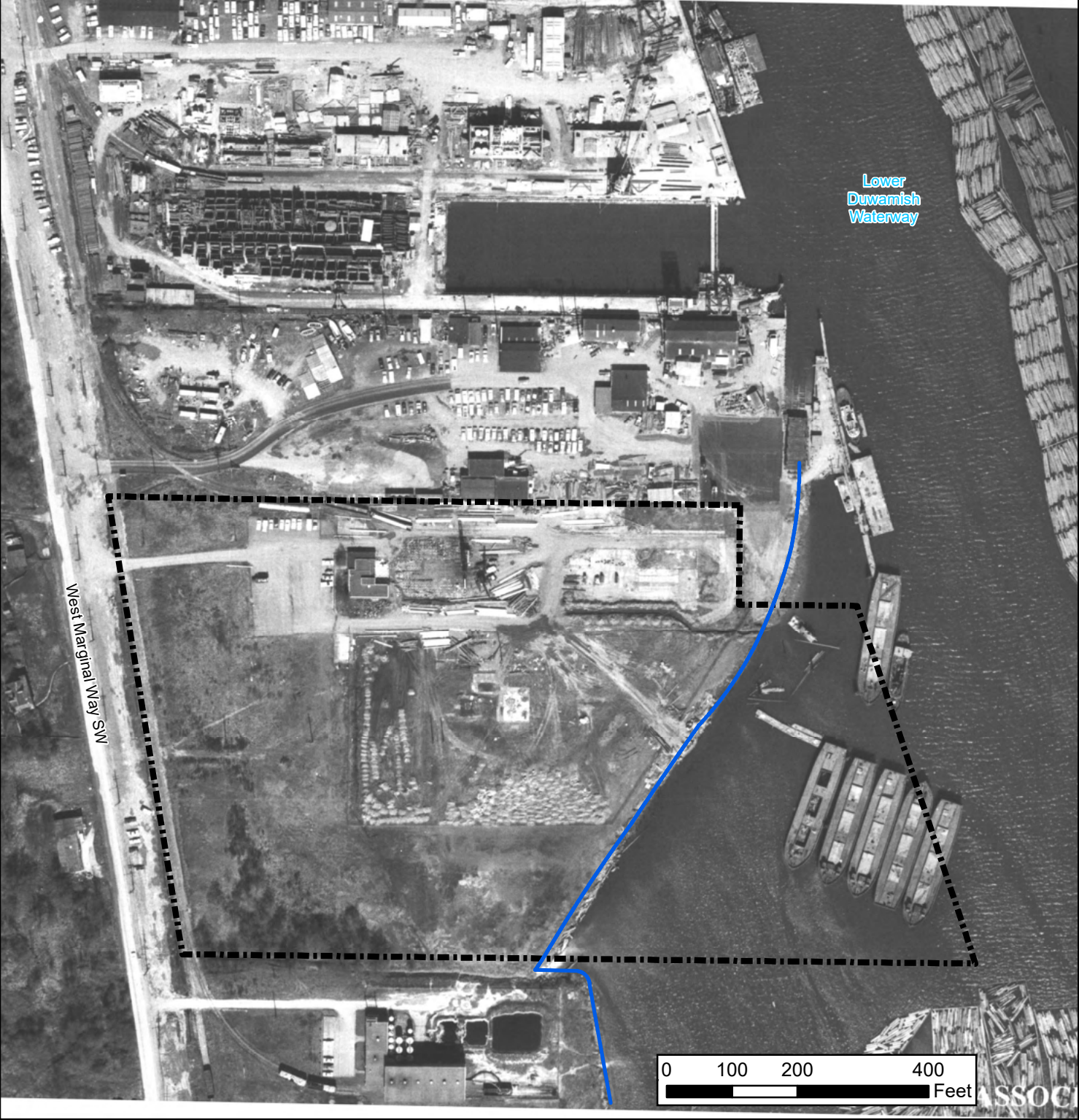


FIGURE 2-10
HISTORICAL SITE PLAN -
REICHHOLD OPERATIONS 1956-1959
5900 West Marginal Way Site
Seattle, Washington

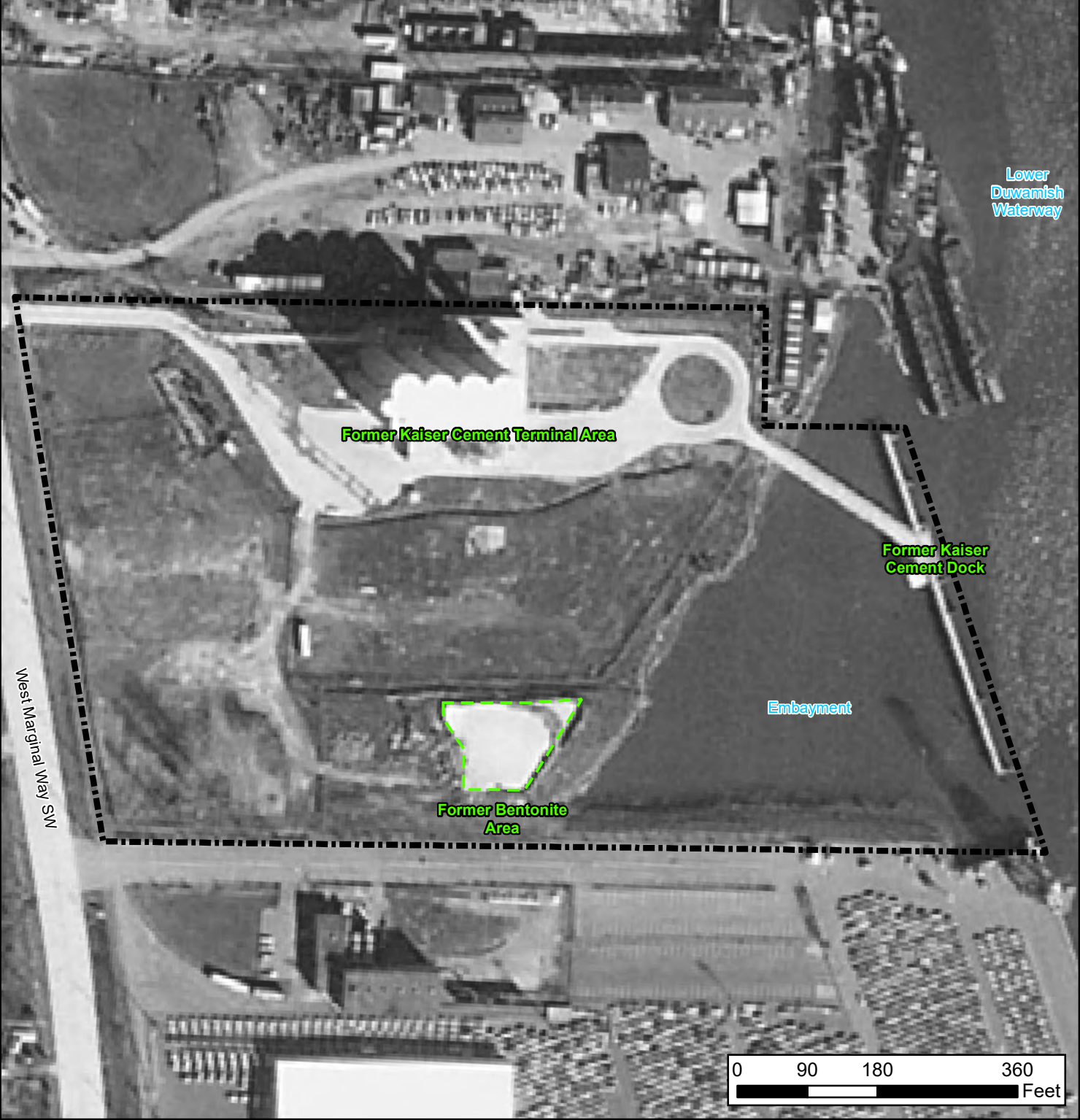
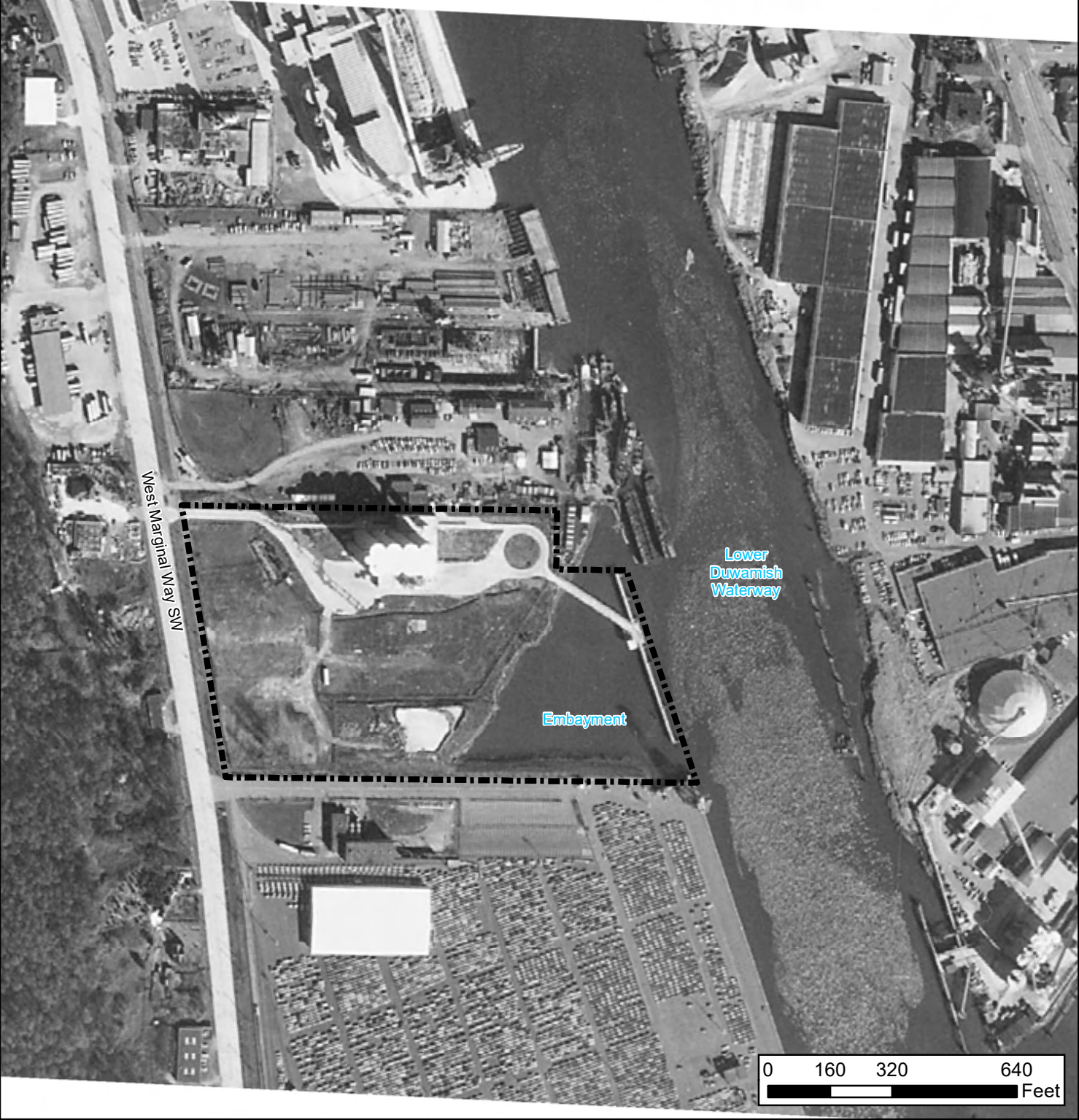


- Legend**
- 1967 Shoreline
 - Current Property Boundary



Notes:
Aerial image provided by Walker & Associates.

FIGURE 2-11
HISTORICAL SITE PLAN -
PORT OF SEATTLE 1967
5900 West Marginal Way Site
Seattle, Washington

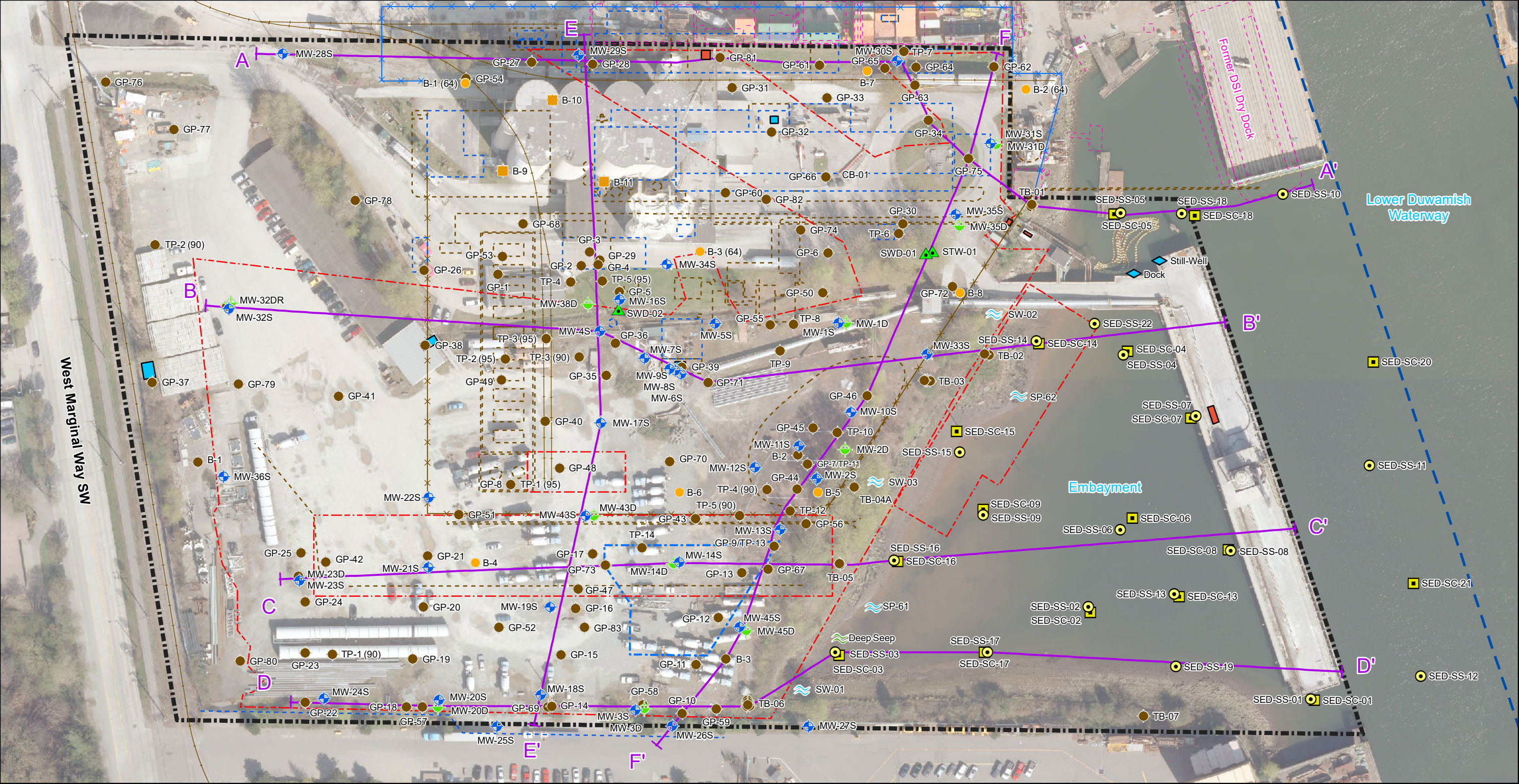


Legend

-  Current Property Boundary
-  Former Kaiser Bentonite Area

Notes:
Aerial image provided by Walker & Associates.

FIGURE 2-12
HISTORICAL SITE PLAN -
KAISER OPERATIONS 1974
5900 West Marginal Way Site
Seattle, Washington



● Soil Boring/Samples

○ Surface Sediment

■ Sediment Core

▲ Drainage Ditch

◆ Surface Water

≈ Seep

≈ Approximate Location of Deep Seep

⊕ Shallow Monitoring Well

⊕ Deep Monitoring Well

● 1964 Shannon & Wilson Geotechnical Borings

■ 1966 Shannon & Wilson Geotechnical Borings

■ Former Transformer Location

■ Existing Transformer Location

— Navigation Channel Limits

■ Current Property Boundary

--- Former Army Building or Feature

— Former Army Fenceline

--- Former Army Property Boundary

--- Former Reichhold Feature

— Former Railroad Track

--- Former Reichhold Fenceline

--- Former Mineralized Cell Operations Area

--- Former Duwamish Shipyard, Inc (DSI) Feature (As shown on 1969 aerial photograph)

N

0 50 100 200 Feet

Notes:

- Aerial: King County: 3/23/2012, 0.25 ft per pixel

FIGURE 2-13

GEOLOGIC CROSS SECTION PROFILES

5900 West Marginal Way Site

Seattle, Washington

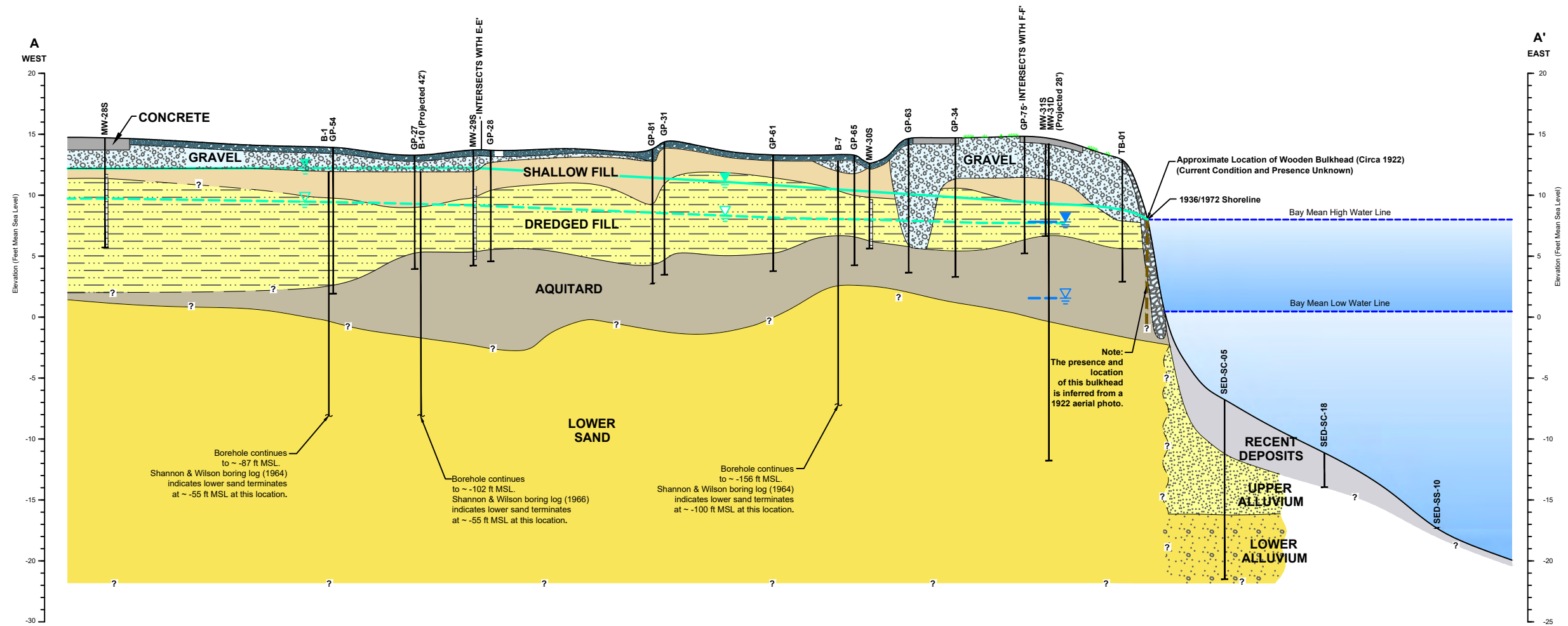
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LEGEND:

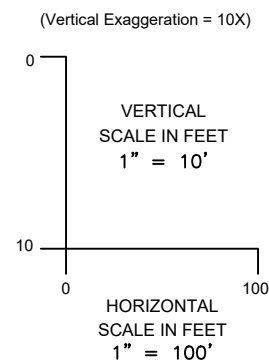
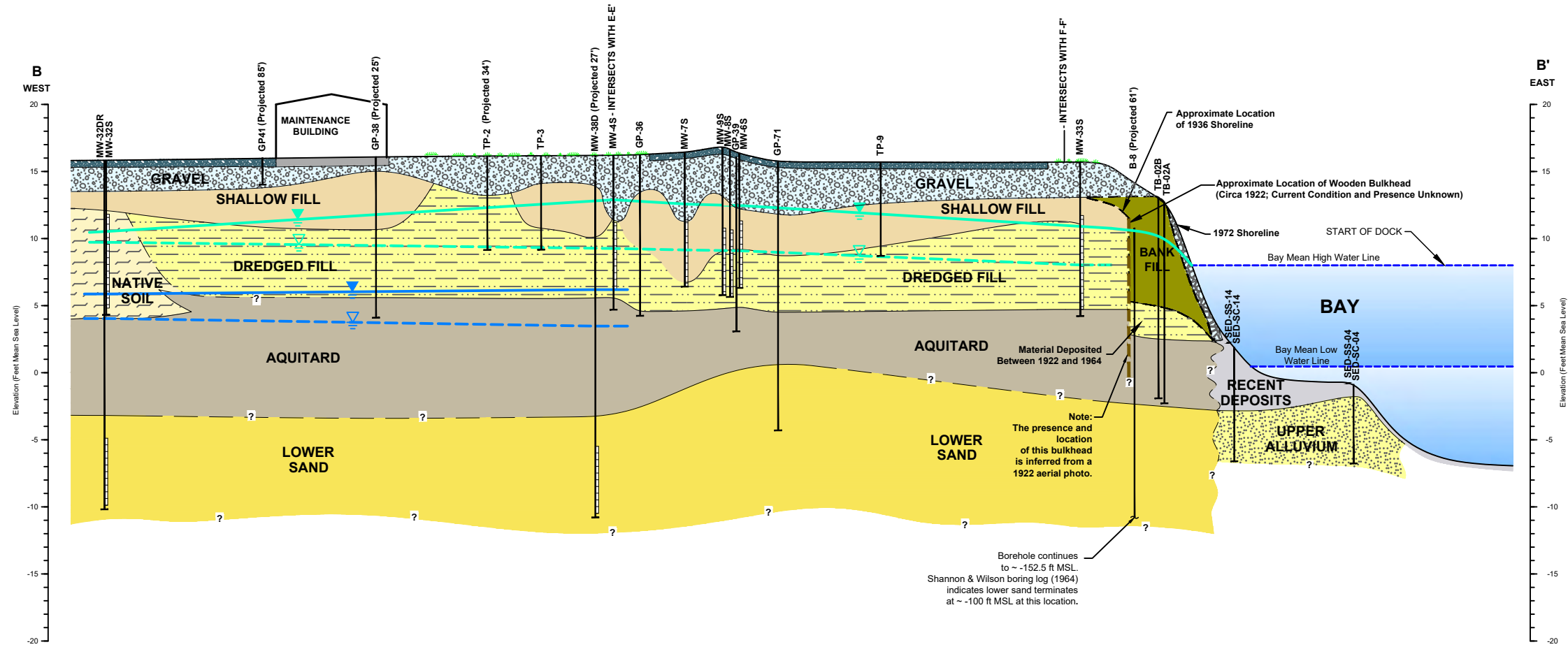


FIGURE 2-14
GEOLOGIC CROSS SECTION A-A'
5900 WEST MARGINAL WAY SITE
SEATTLE, WASHINGTON



LEGEND:

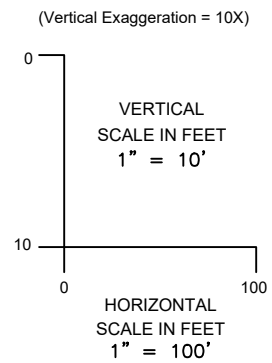
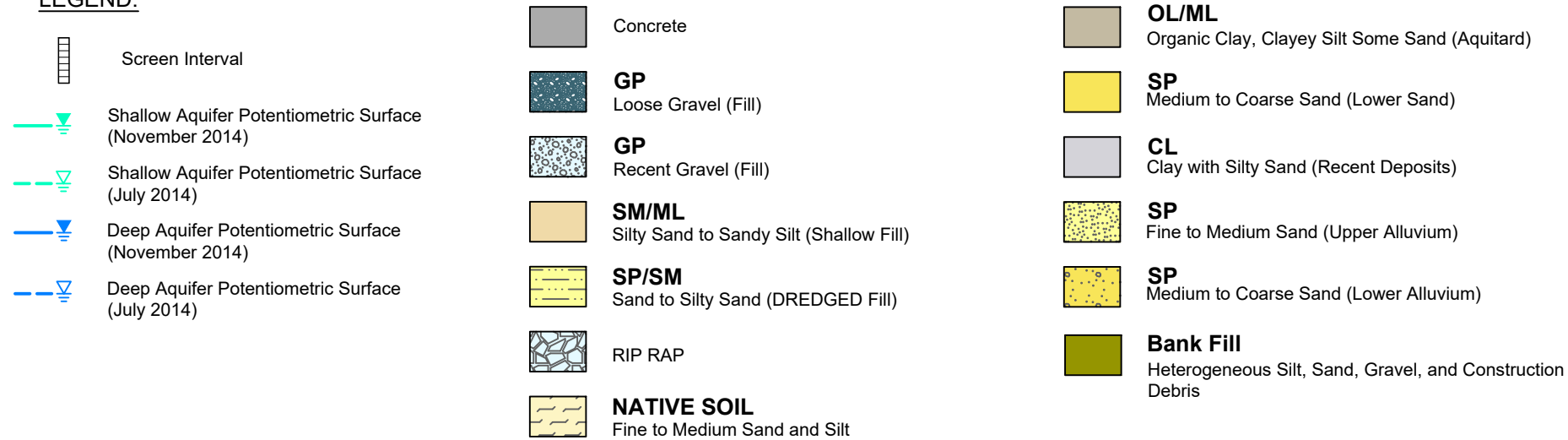
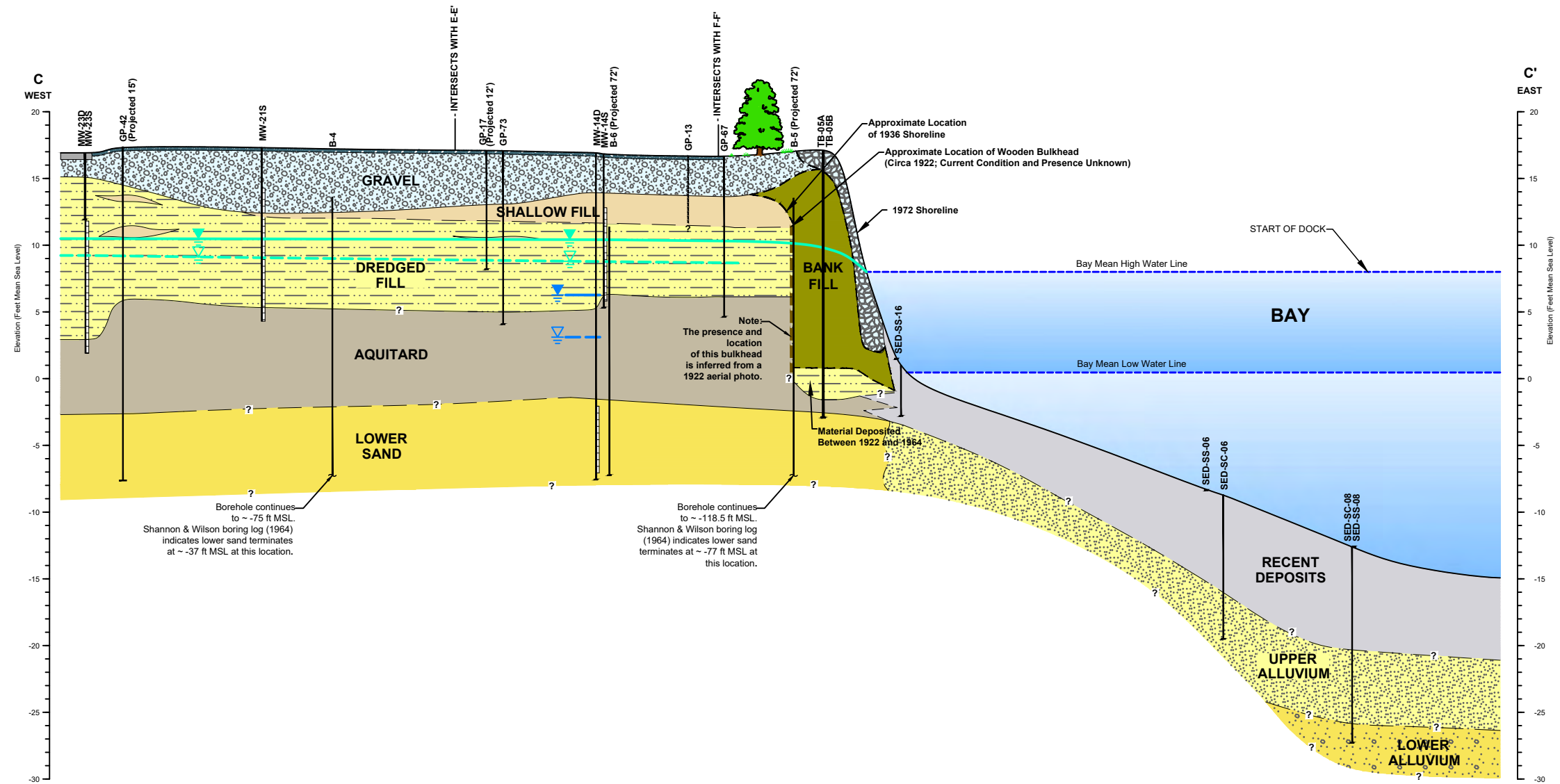


Figure 2-15
Geologic Cross Section B-B'
5900 West Marginal Way Site
Seattle, Washington



LEGEND:

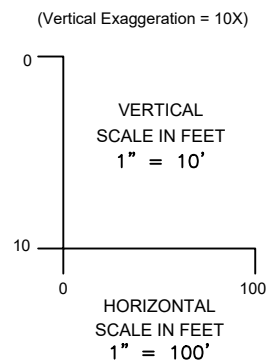
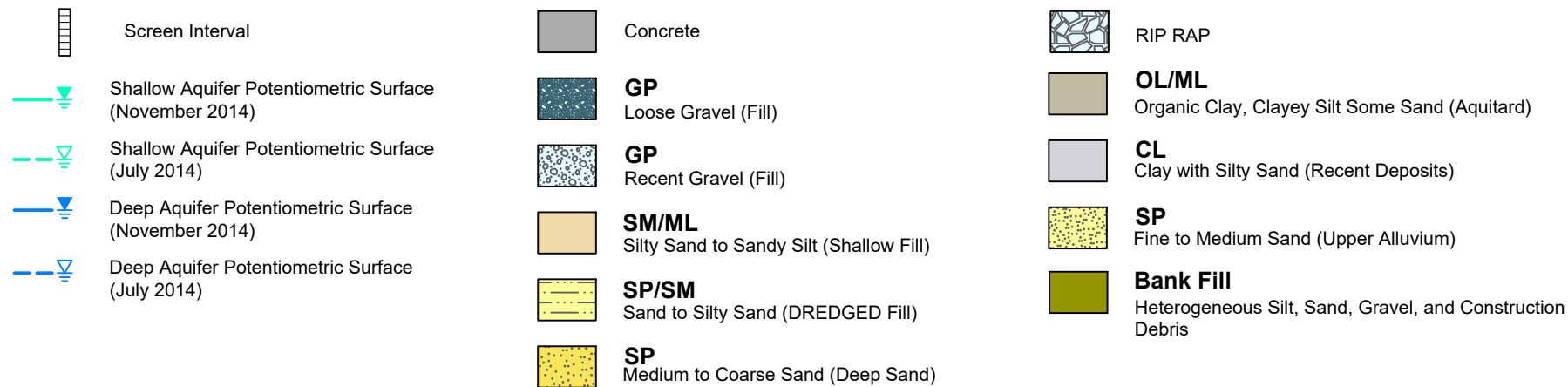
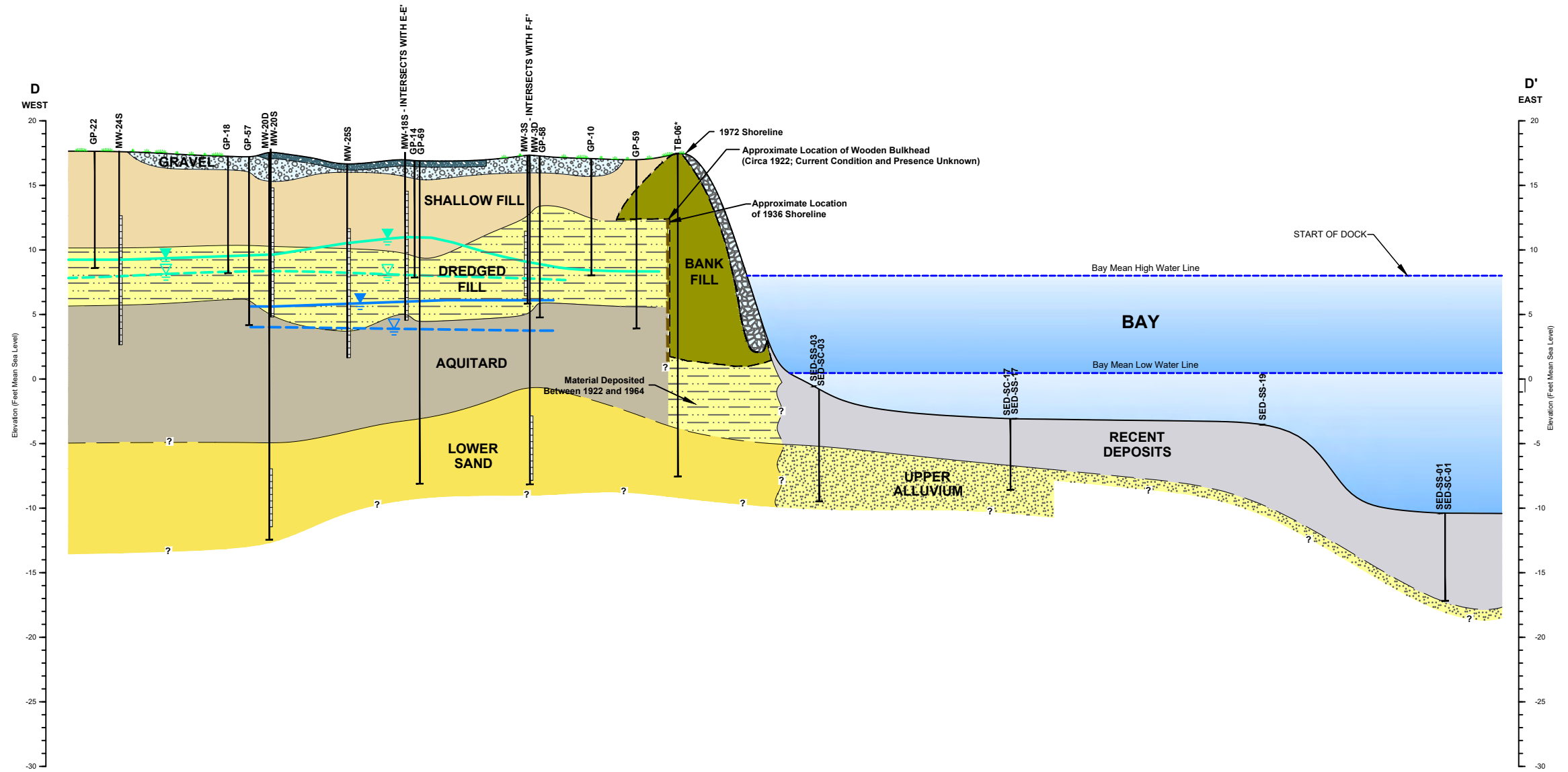
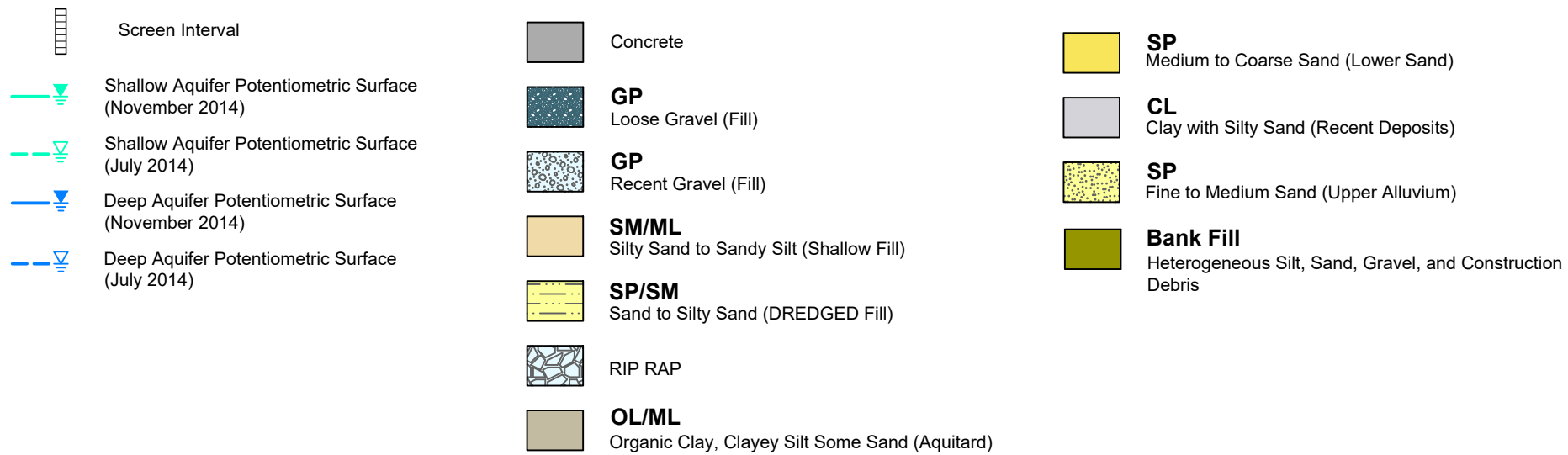


Figure 2-16
Geologic Cross Section C-C'
5900 West Marginal Way Site
Seattle, Washington



LEGEND:



(Vertical Exaggeration = 10X)

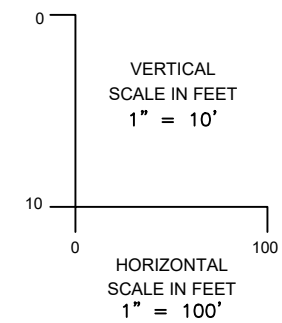
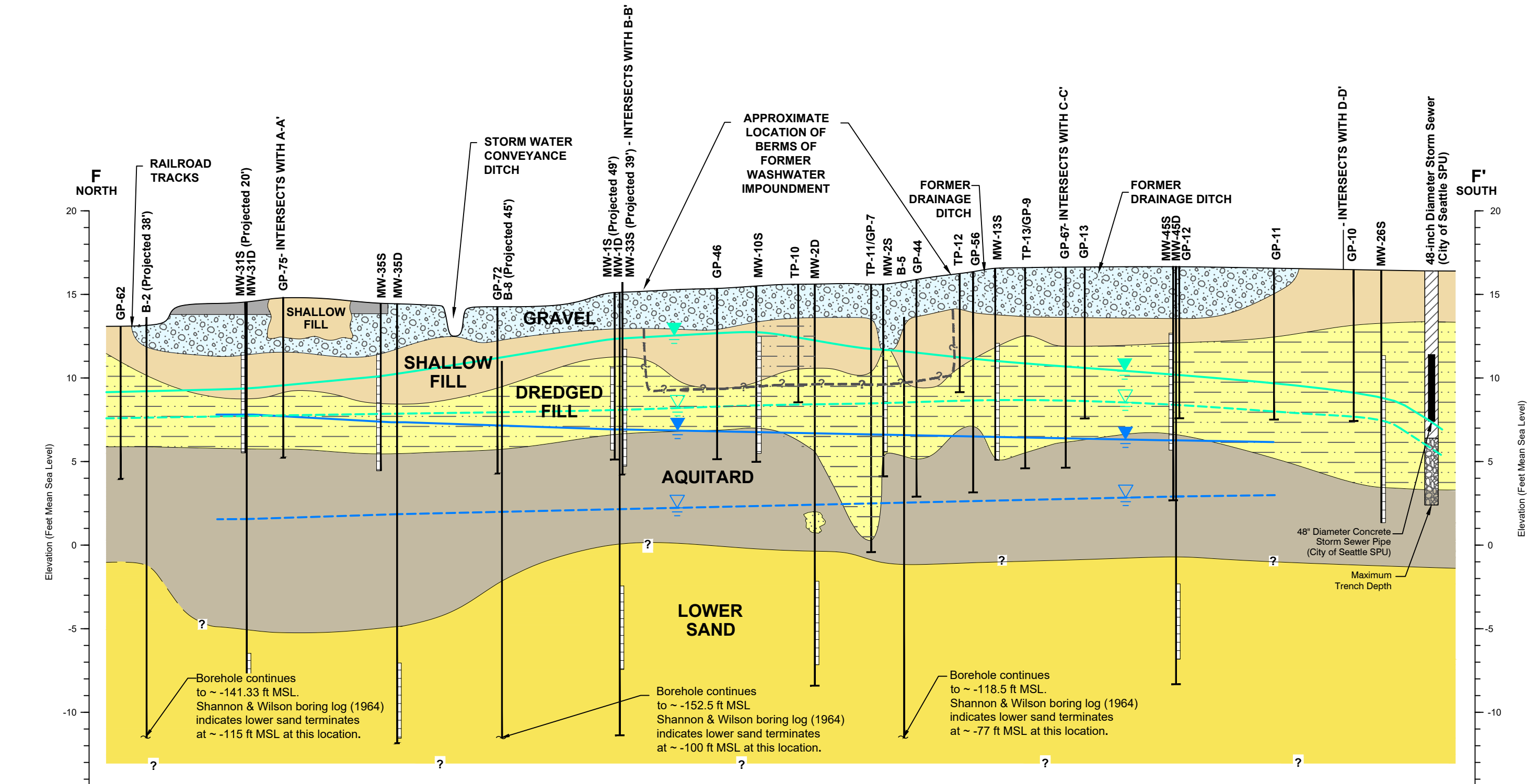


Figure 2-17
Geologic Cross Section D-D'
5900 West Marginal Way Site
Seattle, Washington



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www.erm.com





LEGEND

- | | | | | | |
|--|--|--|---|--|--|
| | Screen Interval | | Concrete | | OL/ML
Organic Clay, Clayey Silt Some Sand (Aquitard) |
| | Shallow Aquifer Potentiometric Surface (November 2014) | | GP
Recent Gravel (Fill) | | SP
Medium to Coarse Sand (Lower Sand) |
| | Shallow Aquifer Potentiometric Surface (July 2014) | | SM/ML
Silty Sand to Sandy Silt (Shallow Fill) | | Approximate Location of Former Washwater Impoundment |
| | Deep Aquifer Potentiometric Surface (November 2014) | | SP/SM
Sand to Silty Sand (DREDGED Fill) | | |
| | Deep Aquifer Potentiometric Surface (July 2014) | | | | |

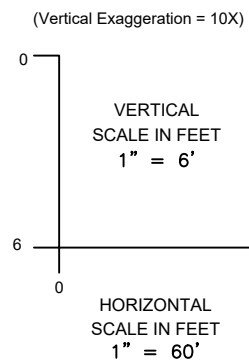


Figure 2-19
Geologic Cross Section F-F'
5900 West Marginal Way Site
Seattle, Washington





Legend

- Stormwater Drainage Mainline
- Top of Aquitard Contour (1 ft)
- Stormwater Outfall
- Current Property Boundary

N

050100200

Feet

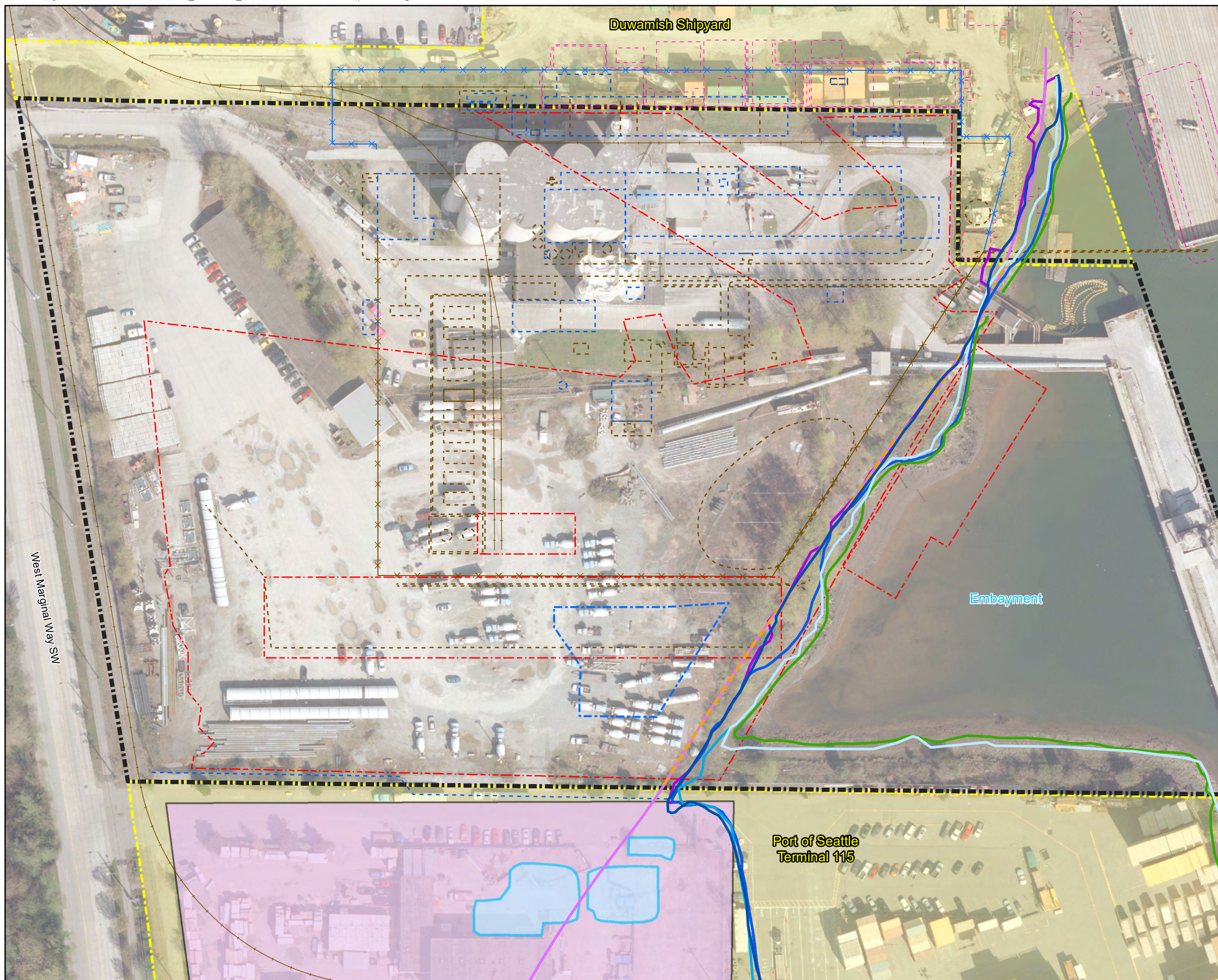
FIGURE 2-20

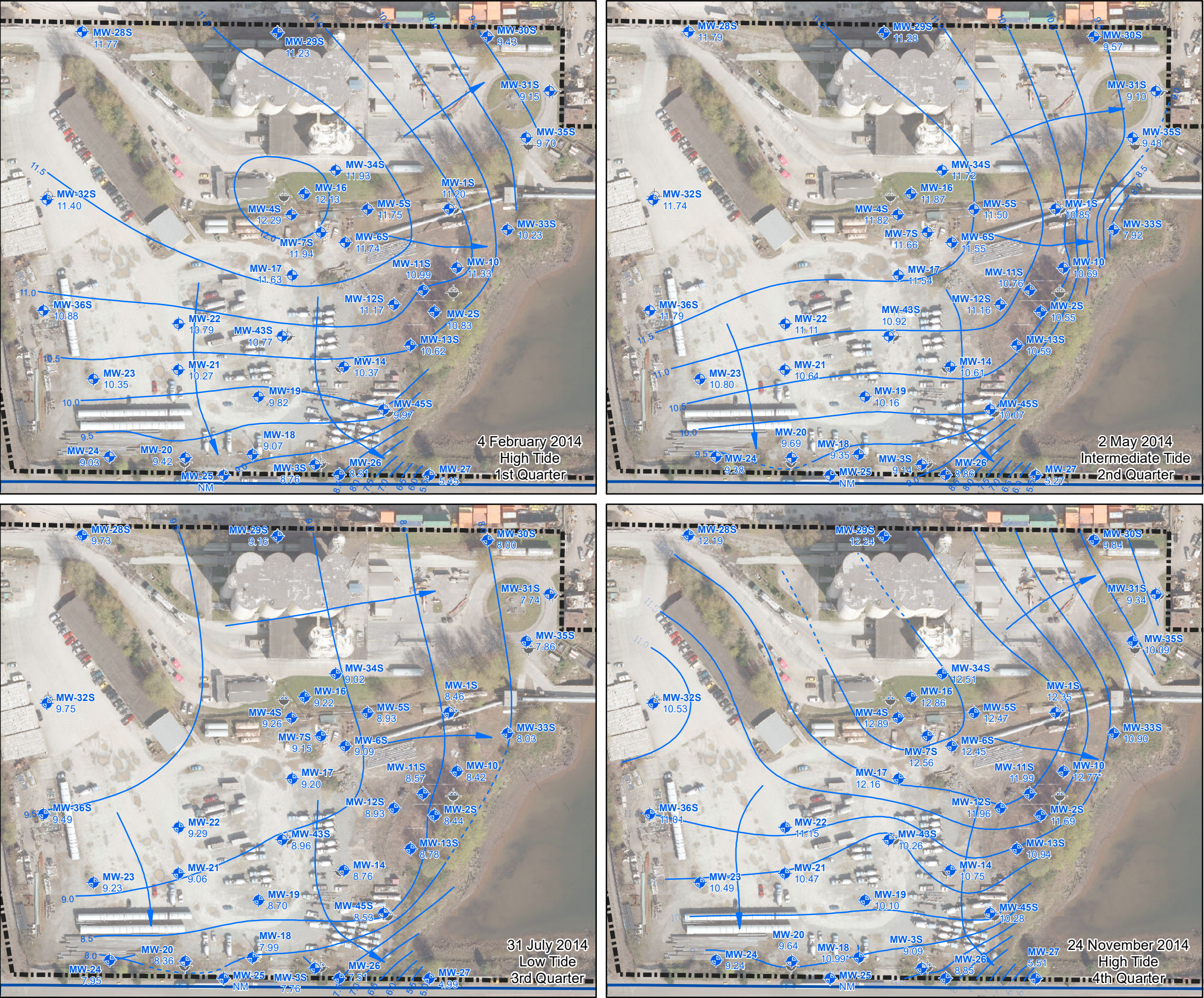
TOP OF AQUITARD ELEVATION CONTOUR MAP

5900 West Marginal Way Site

Seattle, Washington

Notes:
- Aerial: King County: 3/23/2012, 0.25 ft per pixel
- Elevations in feet above mean sea level, NAVD88.





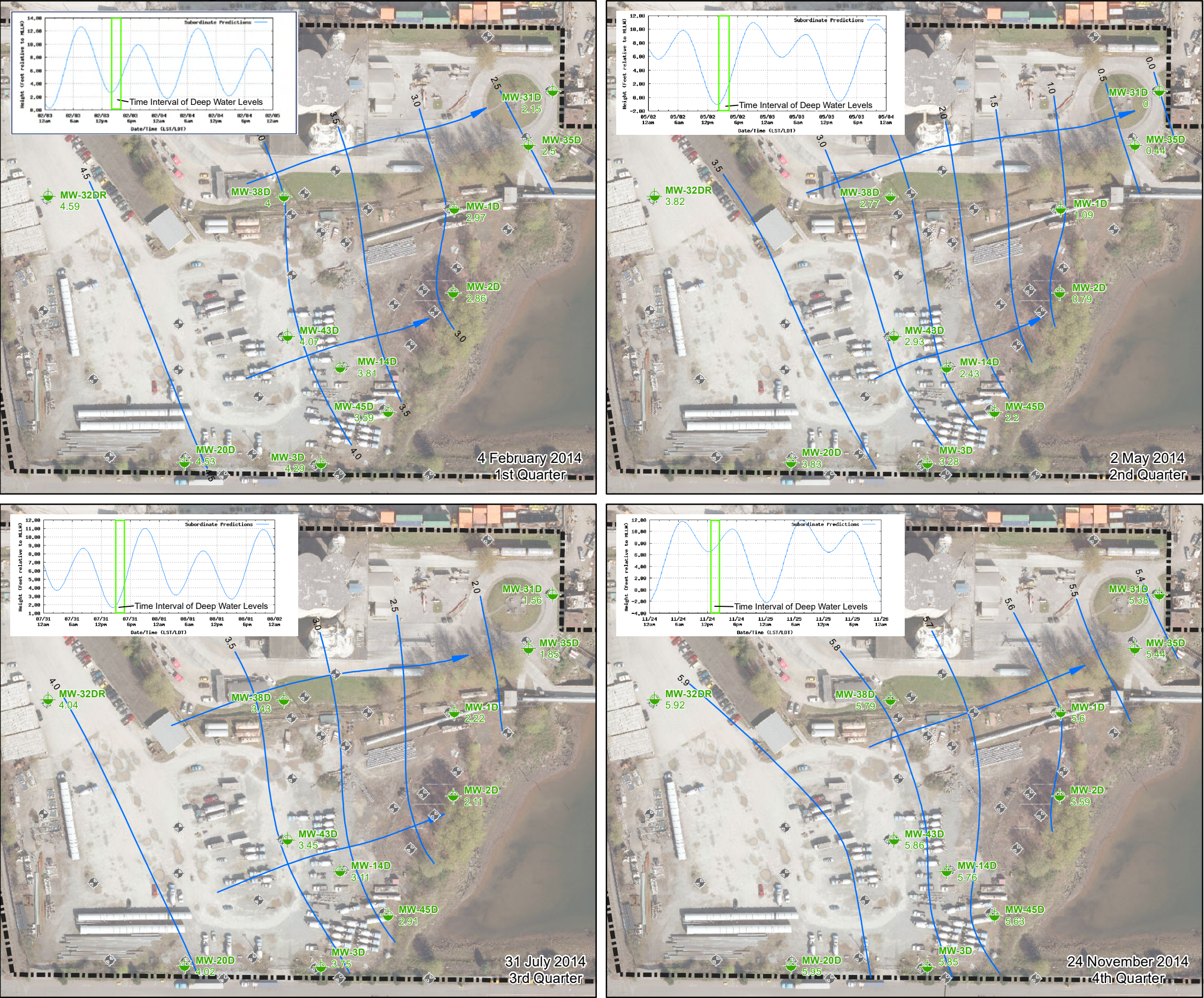
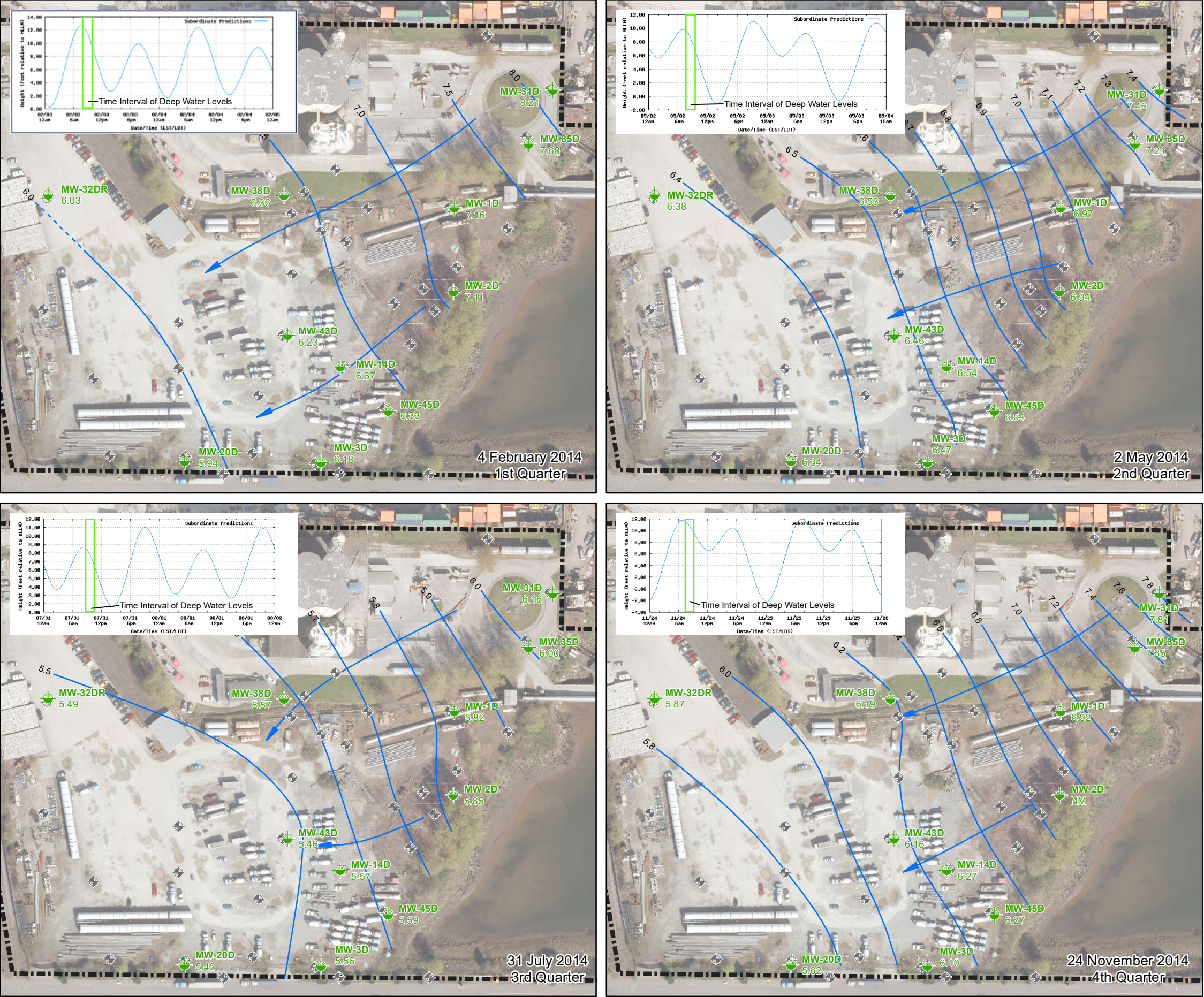


FIGURE 2-23
DEEP GROUNDWATER
POTENTIOMETRIC SURFACE MAP
(LOW TIDE) - 2014
5900 West Marginal Way Site
Seattle, Washington





Legend

- Road

— Contiguous, Undeveloped Land 500ft Radius

— Navigation Channel Limits

Contiguous, Undeveloped Land (6.7 Acres)

Gravel (Approx.) 3.3 Acres

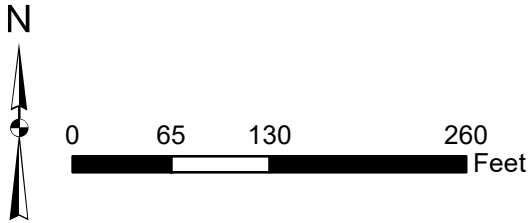
Vegetated Area (0.77 Acres)

Current Property Boundary
- Pervious Surface (Approx.) 4.7 Acres

Impervious Surface (Approx.) 8.8 Acres

Major Arterial Road

Railroad Track



Notes:
- Aerial: King County: 3/23/2012, 0.25 ft per pixel

FIGURE 2-25
TERRESTRIAL ECOLOGICAL EVALUATION
5900 West Marginal Way Site
Seattle, Washington



Legend

-  Soil Boring
  Composite Sample Location
  Current Property Boundary
-  Shallow Monitoring Well
  Former Army Building or Feature
-  Deep Monitoring Well
  Former Army Fenceline
-  Test Pit
  Former Reichhold Feature
-  Seep
  Former Railroad Track
-  Approximate Location of Deep Seep
  Former Reichhold Fenceline
-  Former Mineralized Cell Operations Area
  Former Duwamish Shipyard, Inc. Feature



A horizontal scale bar with tick marks at 0, 50, 100, and 200 feet. The bar is black with a white segment between the 50 and 100-foot marks.

Notes:

- Aerial: King County: 3/23/2012, 0.25 ft per pixel
- The presence and location of the bulkhead is inferred from a 1922 aerial photograph.

FIGURE 3-1
*HISTORICAL SOIL, GROUNDWATER, AND
SEEP SAMPLE LOCATIONS
5900 West Marginal Way Site
Seattle, Washington*



Legend

- ▲

 Surface Sediment
- Sediment Core
- ⋈

 Seep
- LDW Sediment Sample
- Stormwater Outfall
- Navigation Channel Limits
- Approximate location of wooden bulkhead (circa 1922; current location and presence unknown)
- Former Duwamish Shipyard Drydock (1968-1974)
- Current Property Boundary



0 50 100 200 Feet

Notes:
- Aerial: King County: 3/23/2012, 0.25 ft per pixel
- The presence and location of the bulkhead is inferred from a 1922 aerial photograph.

FIGURE 3-2
SEDIMENT INVESTIGATION LOCATIONS
5900 West Marginal Way Site
Seattle, Washington



Legend

- Soil Boring or Soil Sample Location

●

Historical Soil Boring

⊕

Historical Shallow Monitoring Well

⊕

Historical Deep Monitoring Well

⊕

Historical Test Pit

◆

Historical Composite Sample Location
- Stormwater Outfall

Former Army Building or Feature

Former Army Fenceline

Former Reichhold Feature

Former Railroad Track

Former Reichhold Fenceline

Former Mineralized Cell Operations Area
- Former Duwamish Shipyard, Inc. Feature

Approximate location of wooden bulkhead (circa 1922; current location and presence unknown)

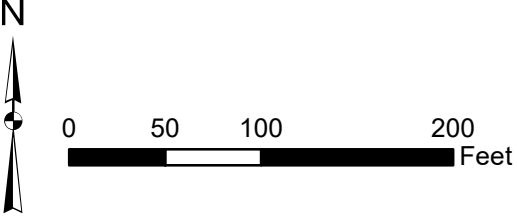
■

Former Transformer Location

■

Existing Transformer Location

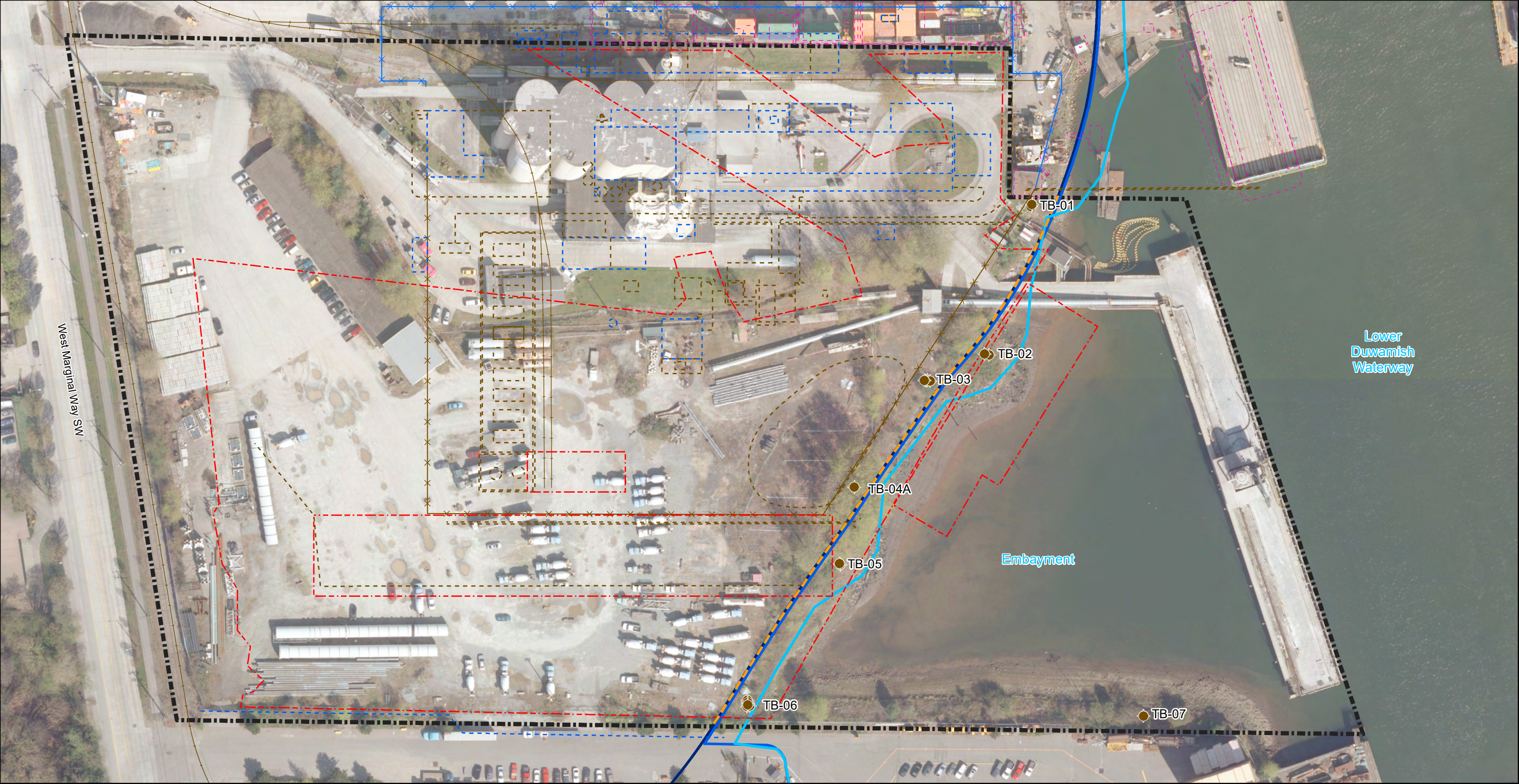
Current Property Boundary



Notes:

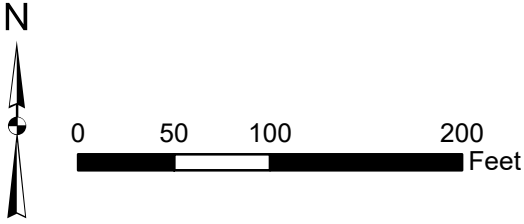
- Aerial: King County: 3/23/2012, 0.25 ft per pixel
- The presence and location of the bulkhead is inferred from a 1922 aerial photograph.

FIGURE 3-3
2009-2019 SOIL BORING LOCATIONS
5900 West Marginal Way Site
Seattle, Washington



Legend

- Top-of-Riverbank Soil Boring Location
- Approximate location of wooden bulkhead (circa 1922; current location and presence unknown)
- 1936 Shoreline
- 1967 Shoreline
- 1967 B Shoreline
- Current Property Boundary
- Former Army Building or Feature
- Former Army Fenceline
- Former Reichhold Feature
- Former Railroad Track
- Former Reichhold Fenceline
- Former Mineralized Cell Operations Area
- Former Duwamish Shipyard, Inc. Feature
- Approximate location of wooden bulkhead (circa 1922; current location and presence unknown)



Notes:

- Aerial: King County: 3/23/2012, 0.25 ft per pixel
- The presence and location of this bulkhead is inferred from a 1922 aerial photograph

FIGURE 3-4
TOP-OF-RIVERBANK SOIL BORING LOCATIONS
5900 West Marginal Way Site
Seattle, Washington



Legend

●

RI Soil Boring Location

→

Ground Penetrating Radar (GPR) Transect (Transect Noted)

●

Utility Pipe Detected (Depth Noted)

—

Approximate location of wooden bulkhead (circa 1922; current location and presence unknown)

—

Utility Tunnel or Trench

—

Area of Coarse Fill

—

Areas of Disturbed Soil

—

Approximate Former Drainage

—

Ditch Location (Provided by Ecology)

□

Current Property Boundary

N

0

50

100

200

Feet

Notes:

Aerial: King County: 3/23/2012, 0.25 ft per pixel

Former drainage ditch locations are based on Figure 6 from the Final Remedial Investigation and Feasibility Study Work Plan, dated August 2012, prepared by the Washington Department of Ecology (Ecology).

The presence and location of the bulkhead is inferred from a 1922 aerial photograph.

FIGURE 3-5

GPR TRANSECTS AND SOIL BORING LOCATIONS

5900 West Marginal Way Site

Seattle, Washington

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Legend

- | | | | |
|---|--|---|---|
|  | Shallow Monitoring Well |  | Former Reichhold Feature |
|  | Deep Monitoring Well |  | Former Railroad Track |
|  | Current Property Boundary |  | Former Reichhold Fenceline |
|  | Former Duwamish Shipyard, Inc. Feature |  | Former Mineralized Cell Operations Area |
|  | Former Army Building or Feature | | Approximate location of wooden bulkhead (circa 1922; current location and presence unknown) |
|  | Former Army Fenceline |  | |



A horizontal scale bar with tick marks at 0, 50, 100, and 200 feet. The bar is black with a white segment between the 50 and 100-foot marks.

Notes:

- Aerial: King County: 3/23/2012, 0.25 ft per pixel
- The presence and location of this bulkhead is inferred from a 1922 aerial photograph.

FIGURE 3-6
EXISTING MONITORING WELL NETWORK
5900 West Marginal Way Site
Seattle, Washington

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Seattle, Washington 98101
425-214-0468



ERM



Legend

- Stormwater Solids Sample Location

■

 Stormwater Sample Location

●

 Stormwater Outfall

□

 Catch Basin Location

—

 Stormwater Swale

—

 Dock Drainage System

—

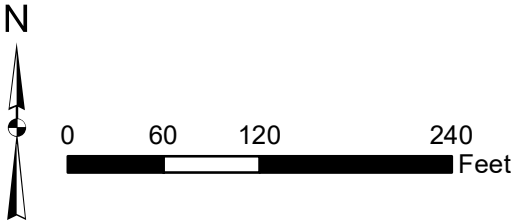
 Stormwater Conveyance
- Water Tanks

—

 Stormwater Drainage Mainline

⬜

 Current Property Boundary



Notes:
- Aerial: King County: 3/23/2012, 0.25 ft per pixel

FIGURE 3-7
STORMWATER INVESTIGATION
5900 West Marginal Way Site
Seattle, Washington



Legend

● Stormwater Outfall

■ SPU Stormwater Solids Sample Location (SPU 2010)

■ Stormwater Solids Sample Location

■ Right-of-way Catch Basin (SPU 2010)

■ Terminal 115 Catch Basin

--- Terminal 115 Stormdrain Line

--- 15-Inch Diameter Historical Stormwater Conveyance: Abandoned Prior to 1991

--- Tie in to 48-inch SPU line: Abandoned in August 2014

--- Stormwater Drainage Mainline

□ Former Catch Basin Location

--- Current Property Boundary

N

0 60 120 240 Feet

Notes:

- Aerial: King County: 3/23/2012, 0.25 ft per pixel
- SPU 2010 - Seattle Public Utilities Source Control Program for the Lower Duwamish Waterway, December 2010 Progress Report.

FIGURE 3-8

HISTORICAL STORMWATER INVESTIGATION

5900 West Marginal Way Site

Seattle, Washington

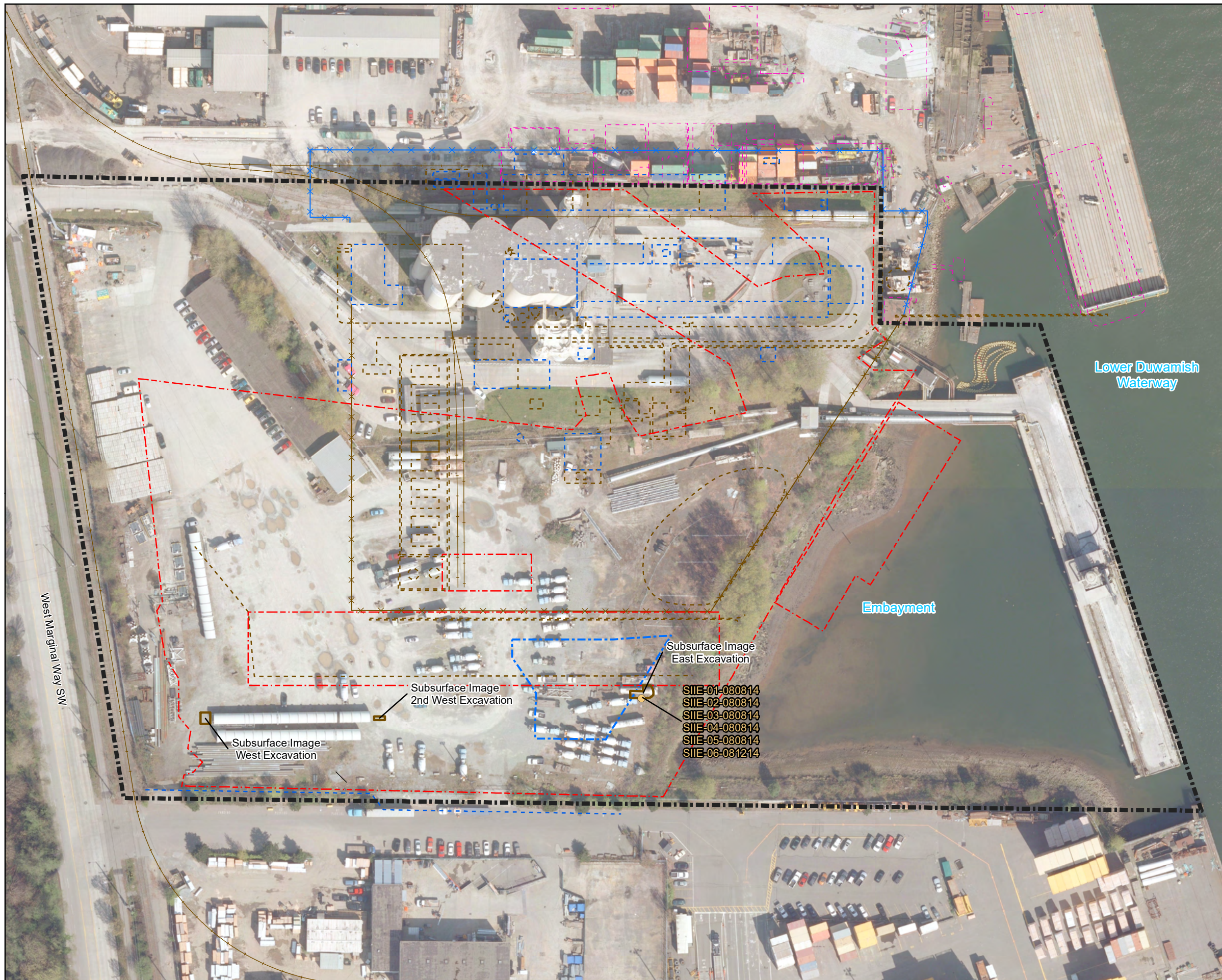
Environmental Resources Management

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Seattle, Washington 98101

425-214-0468

ERM



Legend

- Subsurface Image Investigation Evaluation (SIIE) Samples
- Stormwater Pipe Excavation Area
- ▤ Current Property Boundary
- - - Former Army Building or Feature
- × Former Army Fenceline
- - - Former Army Property Boundary
- - - Former Reichhold Feature
- × Former Railroad Track
- × Former Reichhold Fenceline
- - - Former Mineralized Cell Operations Area
- - - Former Duwamish Shipyards Feature

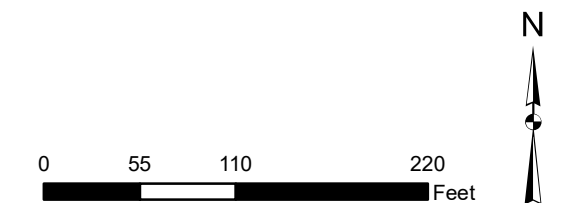


FIGURE 3-9
SUBSURFACE IMAGE
EVALUATION TEST PITS
5900 West Marginal Way Site
Seattle, Washington

Soil Layer

S Shallow Fill Layer

D Dredged Fill Layer

I Interface of Top of Silt Layer and Dredged Fill Layer

M Middle Silt Layer

L Lower Sand Layer

Arsenic Results in Soil

 >= 198 mg/kg

 >= 88 to 198 mg/kg

 >= 7 to < 88 mg/kg (Exceeds Screening Level)

 < 7 mg/kg

 Not Detected

 No Results from this Depth Interval

 Partially or Completely Saturated Sample

 Tributyltin Sample with Detection

 Tributyltin Sample with No Detection

 Current Property Boundary

 Adjacent Property Boundary

 1967 Silo Excavation Area (4 to 6 feet below ground surface)

 Stormwater Drainage Mainline

 Former Army Building or Feature

 Former Army Fenceline

 Former Reichhold Feature

 Former Railroad Track

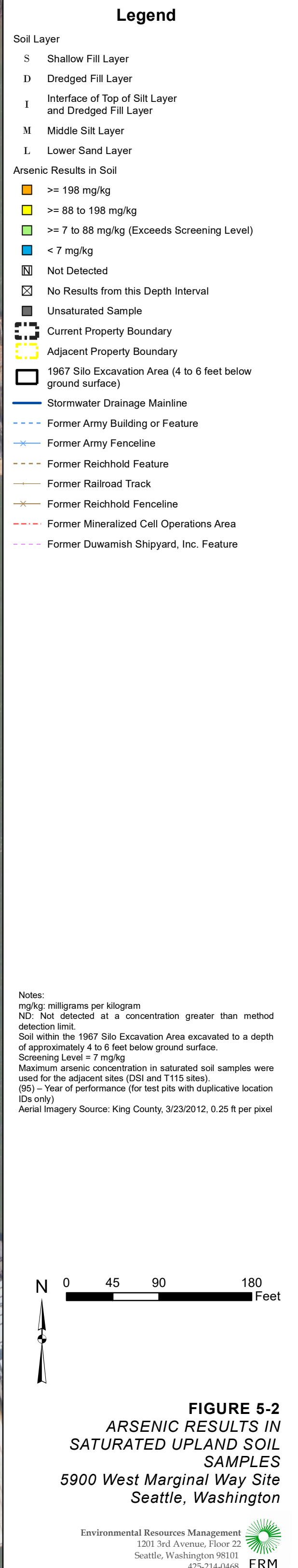
 Former Reichhold Fenceline

 Former Mineralized Cell Operations Area

 Former Duwamish Shipyard, Inc. Feature

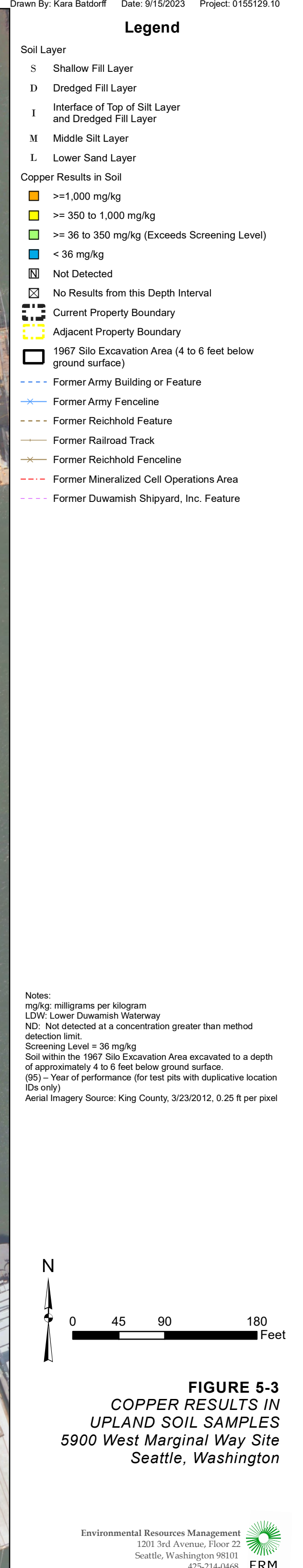
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Soil Layer

- S Shallow Fill Layer
- D Dredged Fill Layer
- I Interface of Top of Silt Layer and Dredged Fill Layer
- M Middle Silt Layer
- L Lower Sand Layer

Zinc Results in Soil

- > 5,971 mg/kg
- > 961 to 5,971 mg/kg
- > 300 to 961 mg/kg
- > 85 to 300 mg/kg (Exceeds Screening Level)
- < 85 mg/kg
- Not Detected
- No Results from this Depth Interval

Legend

- Current Property Boundary
- Adjacent Property Boundary
- 1967 Silo Excavation Area (4 to 6 feet below ground surface)
- Former Army Building or Feature
- Former Army Fenceline
- Former Reichhold Feature
- Former Railroad Track
- Former Reichhold Fenceline
- Former Mineralized Cell Operations Area
- Former Duwamish Shipyard, Inc. Feature

Notes:
mg/kg: milligrams per kilogram
LDW: Lower Duwamish Waterway
ND: not detected at a concentration greater than method detection limit
Soil within the 1967 Silo Excavation Area excavated to a depth of approximately 4 to 6 feet below ground surface.
Screening Level (Vadose) = 86 mg/kg
Screening Level (Saturated) = 85 mg/kg
(95) - Year of performance (for test pits with duplicative location IDs only)
Aerial Imagery Source: King County, 3/23/2012, 0.25 ft per pixel

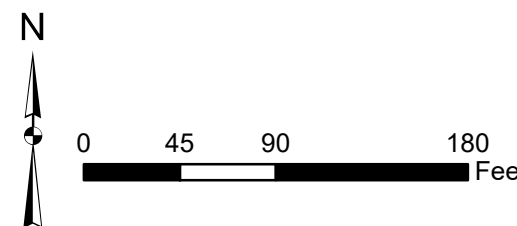


FIGURE 5-4
ZINC RESULTS IN
UPLAND SOIL SAMPLES
5900 West Marginal Way Site
Seattle, Washington

Legend

- Soil Layer
- S Shallow Fill Layer
 - D Dredged Fill Layer
 - I Interface of Top of Silt Layer and Dredged Fill Layer
 - M Middle Silt Layer
 - L Lower Sand Layer
- TPH- DRO + MORO Results in Soil
- > 3,800 mg/kg
 - > 2,000 to 3,800 mg/kg
 - >260 mg/kg to 2,000 mg/kg (Exceeds Screening Level)
 - <260 mg/kg
 - No Results from this Depth Interval
 - Not Detected
- Unsaturated PID
- PID Measurement < 20 ppm
 - PID Measurement >+ 20 ppm
- Saturated PID
- PID Measurement < 20 ppm
 - PID Measurement >+ 20 ppm
 - Saturated with No Data
- Current Property Boundary
- Adjacent Property Boundary
- 1967 Silo Excavation Area (4 to 6 feet below ground surface)
- Stormwater Drainage Mainline
- Former Army Building or Feature
- Former Army Fenceline
- Former Reichhold Feature
- Former Railroad Track
- Former Reichhold Fenceline
- Former Mineralized Cell Operations Area
- Former Duwamish Shipyard, Inc. Feature

Notes:
mg/kg: milligrams per kilogram
TPH-DRO+MORO:
Combined diesel-range and motor oil-range organics total petroleum hydrocarbons
ND: Not detected at a concentration greater than method detection limit.
TPH - Total Petroleum Hydrocarbons
DRO - Diesel-Range Organics
MORO - Motor Oil-Range Organics
Soil within the 1967 Silo Excavation Area excavated to a depth of approximately 4 to 6 feet below ground surface.
Screening Level = 260 mg/kg
Aerial Imagery Source: King County, 3/23/2012, 0.25 ft per pixel

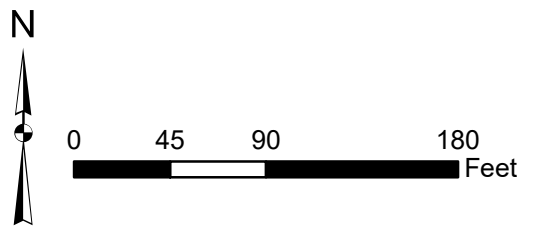


FIGURE 5-5
TPH- DRO + MORO RESULTS IN
UPLAND SOIL SAMPLES
5900 West Marginal Way Site
Seattle, Washington



Legend

Soil Layer

- S Shallow Fill Layer
- D Dredged Fill Layer
- I Interface of Top of Silt Layer and Dredged Fill Layer
- M Middle Silt Layer
- L Lower Sand Layer

Pentachlorophenol Results in Soil

- >=16 mg/kg
- >=1.6 mg/kg to 16 mg/kg
- >=0.16 mg/kg to 1.6 mg/kg
- >=0.05 mg/kg to 0.16 mg/kg (Exceeds PQL)
- < 0.05 mg/kg
- Not Detected
- No Results from this Depth Interval
- Current Property Boundary
- Adjacent Property Boundary
- 1967 Silo Excavation Area (4 to 6 feet below ground surface)
- Stormwater Drainage Mainline
- Former Army Building or Feature
- Former Army Fenceline
- Former Reichhold Feature
- Former Railroad Track
- Former Reichhold Fenceline
- Former Mineralized Cell Operations Area
- Former Duwamish Shipyard, Inc. Feature

Notes:
 PCP - Pentachlorophenol
 mg/kg: milligrams per kilogram
 LDW: Lower Duwamish Waterway
 ND: Not detected at a concentration greater than method detection limit.
 Screening Level (Vadose) = 3.2e-5 mg/kg
 Screening Level (Saturated) = 1.8e-6 mg/kg
 PQL = Practical Quantitation Limit
 Practical Quantitation Limit = 0.05 mg/kg
 Data were evaluated using the practical quantitation unit.
 Soil within the 1967 Silo Excavation Area excavated to a depth of approximately 4 to 6 feet below ground surface.
 Maximum PCP concentration in soil samples were used for the adjacent sites (DSI and T115 sites).
 (95) - Year of performance (for test pits with duplicative location IDs only).
 Aerial Imagery Source: King County, 3/23/2012, 0.25 ft per pixel

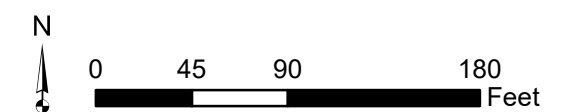


FIGURE 5-6
PENTACHLOROPHENOL RESULTS
IN UPLAND SOIL SAMPLES
5900 West Marginal Way Site
Seattle, Washington



Legend

Soil Layer

- S Shallow Fill Layer
- D Dredged Fill Layer
- I Interface of Top of Silt Layer and Dredged Fill Layer
- M Middle Silt Layer
- L Lower Sand Layer

Pentachlorophenol Results in Soil

- >=16 mg/kg
- >=1.6 mg/kg to 16 mg/kg
- >=0.16 mg/kg to 1.6 mg/kg
- >=0.05 mg/kg to 0.16 mg/kg (Exceeds PQL)
- < 0.05 mg/kg
- Not Detected
- No Results from this Depth Interval

Other Features

- Current Property Boundary
- Adjacent Property Boundary
- 1967 Silo Excavation Area (4 to 6 feet below ground surface)
- Stormwater Drainage Mainline
- Former Army Building or Feature
- Former Army Fenceline
- Former Reichhold Feature
- Former Railroad Track
- Former Reichhold Fenceline
- Former Mineralized Cell Operations Area
- Former Duwamish Shipyard, Inc. Feature

Notes:
PCP - Pentachlorophenol
SL - Screening Level
ft - feet below ground surface
mg/kg - milligrams per kilogram
µg/kg - micrograms per kilogram
LDW - Lower Duwamish Waterway
ND - Not detected at a concentration greater than method detection limit.
PCP Screening Level (Vadose) = 3.2e-5 mg/kg
PCP Screening Level (Saturated) = 1.8e-6 mg/kg
PQL = Practical Quantitation Limit
PCP Practical Quantitation Limit = 0.05 mg/kg
Data were evaluated using the practical quantitation unit.
Soil within the 1967 Silo Excavation Area excavated to a depth of approximately 4 to 6 feet below ground surface.
Maximum PCP concentration in soil samples were used for the adjacent sites (DSI and T115 sites).
(95) - Year of performance (for test pits with duplicative location IDs only)
Aerial Imagery Source: King County, 3/23/2012, 0.25 ft per pixel

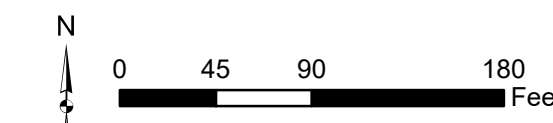


FIGURE 5-7
SOIL SCREENING LEVEL
EXCEEDANCES NOT CO-
LOCATED WITH PRIMARY
CONSTITUENTS OF POTENTIAL
CONCERN
5900 West Marginal Way Site
Seattle, Washington

Environmental Resources Management
1201 3rd Avenue, Floor 22
Seattle, Washington 98101
425-214-0468

ERM



Legend

- Soil Layer
- S Shallow Fill Layer
 - D Dredged Fill Layer
 - I Interface of Top of Silt Layer and Dredged Fill Layer
 - M Middle Silt Layer
 - L Lower Sand Layer
- cPAHs (TEQ = 1/2DL) Results in Soil
- > 1 mg/kg
 - >0.5 mg/kg and < 1 mg/kg
 - TEQ > 0.005 mg/kg and < 0.5 mg/kg (Exceeds PQL)
 - TEQ < 0.005 mg/kg
 - No Results from this Depth Interval
 - Not Detected
 - Current Property Boundary
 - Adjacent Property Boundary
 - 1967 Silo Excavation Area (4 to 6 feet below ground surface)
 - Stormwater Drainage Mainline
 - Former Army Building or Feature
 - Former Army Fenceline
 - Former Reichhold Feature
 - Former Railroad Track
 - Former Reichhold Fenceline
 - Former Mineralized Cell Operations Area
 - Former Duwamish Shipyard, Inc. Feature

Notes:

mg/kg = milligrams per kilogram

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

PQL = Practical Quantitation Limit

TEQ = Toxicity Equivalency Quotient of a mixture of cPAHs, calculated using half the detection limit (DL) for non-detects (NDs).

ND = not detected above method detection limit

Soil within the 1967 Silo Excavation Area excavated to a depth of approximately 4 to 6 feet below ground surface.

Screening Level (Vadose) = 0.00031 mg/kg

Screening Level (Saturated) = 0.000016 mg/kg

Practical Quantitation Limit = 0.005 mg/kg

Data were evaluated using the practical quantitation unit.

Saturation determination based on intersection of 1/25/2012 water table and bottom of sample elevation.

Maximum cPAH TEQ concentration in soil samples were used for the adjacent sites (DSI and T115 sites).

Data were evaluated using the practical quantitation unit.

Aerial Imagery Source: King County, 3/23/2012, 0.25 ft per pixel

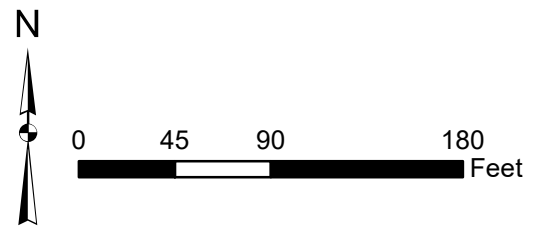


FIGURE 5-8
CARCINOGENIC PAHs TEQ
RESULTS IN UPLAND
SOIL SAMPLES
5900 West Marginal Way Site
Seattle, Washington



Legend

- Soil Layer
- S Shallow Fill Layer
 - D Dredged Fill Layer
 - I Interface of Top of Silt Layer and Dredged Fill Layer
 - M Middle Silt Layer
 - L Lower Sand Layer
- Total PCB Aroclors Results in Soil
- >= 2 mg/kg
 - >= 0.13 mg/kg to 2 mg/kg
 - >= 0.004 mg/kg to 0.13 mg/kg (Exceeds PQL)
 - < 0.004 mg/kg
 - No Results from this Depth Interval
 - Partially or Completely Saturated Sample
 - Current Property Boundary
 - 1967 Silo Excavation Area (4 to 6 feet below ground surface)
 - Adjacent Property Boundary
 - Stormwater Drainage Mainline
 - Former Army Building or Feature
 - Former Army Fenceline
 - Former Reichhold Feature
 - Former Railroad Track
 - Former Reichhold Fenceline
 - Former Mineralized Cell Operations Area
 - Former Duwamish Shipyard, Inc. Feature

Notes:
mg/kg: milligrams per kilogram
Total Polychlorinated Biphenyls (PCB) Aroclor calculated with 0 for Aroclors not detected on the site in soil.
Screening Level: 0.00043 mg/kg
PQL = Practical Quantitation Limit
Practical Quantitation Limit = 0.004 mg/kg
ND: Not detected at concentrations greater than method detection limit
Soil within the 1967 Silo Excavation Area excavated to a depth of approximately 4 to 6 feet below ground surface.
Saturation determination based on intersection of 1/25/2012 water table and bottom of sample elevation.
Data were evaluated using the practical quantitation unit.
Maximum PCB concentration in unsaturated soil samples were used for the adjacent sites (DSI and T115 sites).
(95) - Year of performance (for test pits with duplicative location IDs only)
Aerial Imagery Source: King County, 3/23/2012, 0.25 ft per pixel

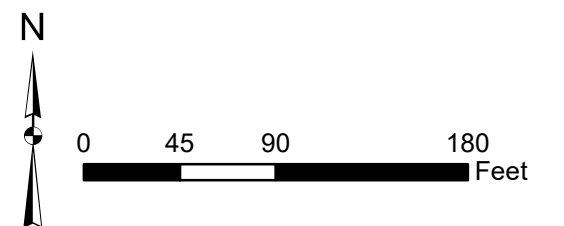
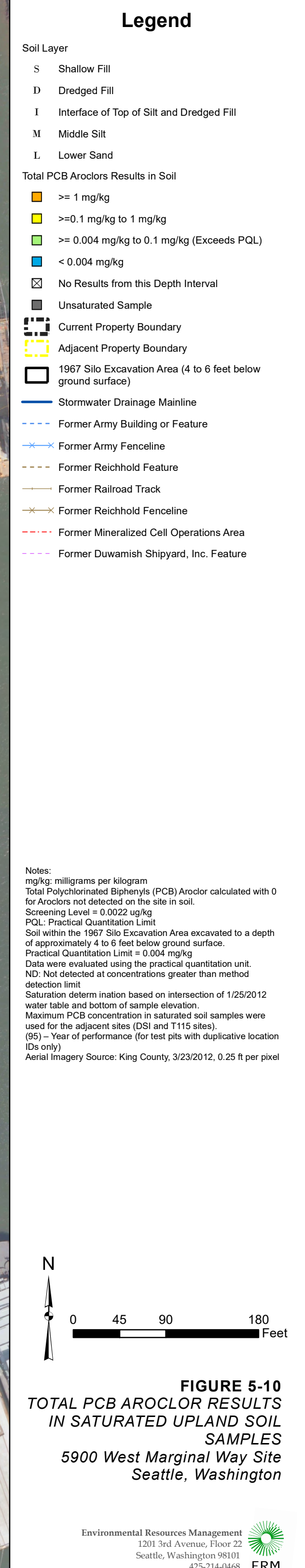


FIGURE 5-9
TOTAL PCB AROCLOR RESULTS
IN UNSATURATED UPLAND SOIL
SAMPLES
5900 West Marginal Way Site
Seattle, Washington



Legend

- Soil Layer
- S Shallow Fill
 - D Dredged Fill
 - I Interface of Top of Silt and Dredged Fill
 - M Middle Silt
 - L Lower Sand
- Dioxins/Furans (TEQ=1/2DL) Results in Soil
- TEQ >= 1680 pg/g
 - TEQ >=5.2 and <1680 pg/g (Exceeds Screening Level)
 - TEQ < 5.2 pg/g
 - No Results from this Depth Interval
 - Not Detected
- Current Property Boundary
- Adjacent Property Boundary
- 1967 Silo Excavation Area (4 to 6 feet below ground surface)
- Stormwater Drainage Mainline
- Former Army Building or Feature
- Former Army Fenceline
- Former Reichhold Feature
- Former Railroad Track
- Former Reichhold Fenceline
- Former Mineralized Cell Operations
- Former Duwamish Shipyard, Inc. Feature

Notes:

No results were processed > 15 feet.

pg/g: picograms per gram

ND: Not detected at a concentration greater than method detection limit.

TEQ: Toxicity Equivalency Quotient of a mixture of dioxins and dioxin-like compounds, calculated using half the detection limit (DL) for non-detects (NDs).

Screening Level = 5.2 pg/g

Soil within the 1967 Silo Excavation Area excavated to a depth of approximately 4 to 6 feet below ground surface.

Maximum D/F concentration in soil samples were used for the adjacent sites (DSI and T115 sites)

(95) – Year of performance (for test pits with duplicative location IDs only)

Aerial Imagery Source: King County, 3/23/2012, 0.25 ft per pixel

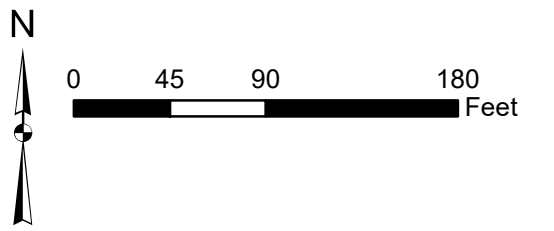


FIGURE 5-11
DIOXINS/FURANS TEQ
(ND=1/2DL) RESULTS IN UPLAND
SOIL SAMPLES
5900 West Marginal Way Site
Seattle, Washington





Legend

Arsenic > 221 µg/L

Arsenic > 80 to 221 µg/L

Arsenic > 8 to 80 µg/L (Exceeds Screening Level)

Arsenic <= 8 µg/L

Analyte Not Detected in Sample

No Results from this Sampling Event

Current Property Boundary

Adjacent Property Boundary

Stormwater Drainage Mainline

Former Army Building or Feature

Former Army Fenceline

Former Reichhold Feature

Former Railroad Track

Former Reichhold Fenceline

Former Mineralized Cell Operations Area

Former Duwamish Shipyard, Inc. Feature

Nov/Dec 2011 Data

March 2014 Data

March/April 2015 Data

April/May 2012 Data

Aug/Sept 2014 Data

Aug/Sept 2015 Data

Notes:

All values reported in micrograms per liter (µg/L).

Screening Level = 8 µg/L

ND: not detected at a concentration greater than method detection limit

Maximum dissolved arsenic concentrations in groundwater used for the adjacent sites (DSI and T115 sites).

FIGURE 5-13
DISSOLVED ARSENIC RESULTS IN
DEEP GROUNDWATER
WELLS
5900 West Marginal Way Site
Seattle, Washington

Environmental Resources Management
1201 3rd Avenue, Floor 22
Seattle, Washington 98101
425-214-0468


ERM



Legend

Dissolved Copper In Groundwater

- Copper >640 µg/L
- Copper 14-640 µg/L
- Copper 3.1-14 µg/L (Exceeds Screening Level)
- Copper <= 3.1 µg/L
- Analyte Not Detected in Sample
- No Results from this Sampling Event
- Stormwater Drainage Mainline
- Former Army Building or Feature
- Former Army Fenceline
- Former Reichhold Feature
- Former Railroad Track
- Former Reichhold Fenceline
- Former Mineralized Cell Operations Area
- Former Duwamish Shipyard, Inc. Feature
- Current Property Boundary
- Adjacent Property Boundary

Nov/Dec 2011 Data

March 2014 Data

March/April 2015 Data

April/May 2012 Data

Aug/Sept 2014 Data

Aug/Sept 2015 Data

Notes:

All values reported in micrograms per liter (µg/L).

ND: not detected at a concentration greater than method detection limit

Screening Level = 3.1 µg/L

Maximum dissolved copper concentrations in groundwater used for the adjacent sites (DSI and T115 sites).

*MW-13S not sampled for Copper after April 2011. Maximum dissolved copper concentration detected in the shallow groundwater at the Site detected in sample collected from MW-13S on 24 March 2009 (61.7 ug/L).

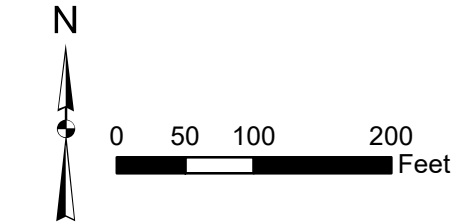


FIGURE 5-14
DISSOLVED COPPER RESULTS IN
SHALLOW GROUNDWATER
WELLS
5900 West Marginal Way Site
Seattle, Washington

Environmental Resources Management
1201 3rd Avenue, Floor 22
Seattle, Washington 98101
425-214-0468

ERM



Legend

Total Copper In Groundwater

- Copper >640 µg/L
- Copper 14-640 µg/L
- Copper 3.1-14 µg/L (Exceeds Screening Level)
- Copper ≤ 3.1 µg/L
- Analyte Not Detected in Sample
- No Results from this Sampling Event
- Stormwater Drainage Mainline
- Former Army Building or Feature
- Former Army Fenceline
- Former Reichhold Feature
- Former Railroad Track
- Former Reichhold Fenceline
- Former Mineralized Cell Operations Area
- Former Duwamish Shipyards Feature
- Current Property Boundary
- Adjacent Property Boundary

Nov/Dec 2011 Data

March 2014 Data

March/April 2015 Data

April/May 2012 Data

Aug/Sept 2014 Data

Aug/Sept 2015 Data

Notes:

All values reported in micrograms per liter (µg/L).

Screening Level = 3.1 µg/L

Maximum dissolved copper concentrations in groundwater used for the adjacent sites (DSI and T115 sites).

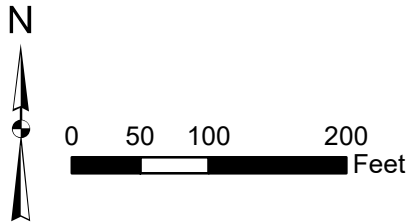


FIGURE 5-15
DISSOLVED COPPER RESULTS IN
DEEP GROUNDWATER WELLS
5900 West Marginal Way Site
Seattle, Washington

Environmental Resources Management
1201 3rd Avenue, Floor 22
Seattle, Washington 98101
425-214-0468

ERM



Legend

- TPH-DRO+MORO $\geq$ 500 $\mu\text{g/L}$ (Exceeds Screening Level)
- TPH-DRO+MORO $<$ 500 $\mu\text{g/L}$
- Analyte Not Detected in Sample
- No Results from this Sampling Event
- Current Property Boundary
- Adjacent Property Boundary
- Stormwater Drainage Mainline
- Former Army Building or Feature
- Former Army Fenceline
- Former Reichhold Feature
- Former Railroad Track
- Former Reichhold Fenceline
- Former Mineralized Cell Operations Area
- Former Duwamish Shipyard, Inc. Feature

Data Sources:

- Nov/Dec 2011 Data
- March 2014 Data
- March/April 2015 Data
- April/May 2012 Data
- Aug/Sept 2014 Data
- Aug/Sept 2015 Data

Notes:

- All values reported in micrograms per liter ($\mu\text{g/L}$).
- Screening Level = 500 $\mu\text{g/L}$.
- TPH-DRO+MORO: Combined diesel-range and motor oil-range organics total petroleum hydrocarbons.
- ND: not detected at a concentration greater than method detection limit.
- Maximum dissolved arsenic concentrations in groundwater used for the adjacent sites (DSI and T115 sites).

Scale and Orientation:

- North Arrow
- Scale: 0, 50, 100, 200 Feet

FIGURE 5-16
TPH- DRO + MORO RESULTS IN
SHALLOW GROUNDWATER
WELLS
5900 West Marginal Way Site
Seattle, Washington

Environmental Resources Management
1201 3rd Avenue, Floor 22
Seattle, Washington 98101
425-214-0468

ERM



Legend

- PCP > 100 µg/L
- PCP > 10 to 100 µg/L
- PCP > 1.0 to 10 µg/L
- PCP > 0.50 to 1.0 µg/L (Exceeds PQL)
- PCP <= 0.50 µg/L
- Analyte Not Detected in Sample
- No Results from this Sampling Event
- Current Property Boundary
- Adjacent Property Boundary
- Stormwater Drainage Mainline
- Former Army Building or Feature
- Former Army Fenceline
- Former Reichhold Feature
- Former Railroad Track
- Former Reichhold Fenceline
- Former Mineralized Cell Operations Area
- Former Duwamish Shipyard, Inc. Feature

- Nov/Dec 2011 Data
- March 2014 Data
- March/April 2015 Data
- April/May 2012 Data
- Aug/Sept 2014 Data
- Aug/Sept 2015 Data

Notes:

PCP - Pentachlorophenol

All values reported in micrograms per liter (µg/L).

ND: not detected at a concentration greater than method detection limit

PQL: Practical Quantitation Limit

Screening Level = 0.002 ug/L

Practical Quantitation Limit = 0.5 ug/L

*Maximum PCP concentration detected at MW-4S in sample collected 27 April 2010 (648 ug/L).

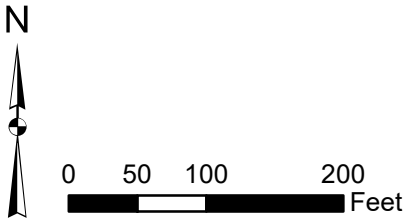


FIGURE 5-17
PENTACHLOROPHENOL RESULTS
IN SHALLOW GROUNDWATER
WELLS
5900 West Marginal Way Site
Seattle, Washington



Legend

- PCP > 100 µg/L
- PCP > 10 to 100 µg/L
- PCP > 1.0 to 10 µg/L
- PCP > 0.50 to 1.0 µg/L (Exceeds PQL)
- PCP <= 0.50 µg/L
- Analyte Not Detected in Sample
- No Results from this Sampling Event
- Current Property Boundary
- Adjacent Property Boundary
- Stormwater Drainage Mainline
- Former Army Building or Feature
- Former Army Fenceline
- Former Reichhold Feature
- Former Railroad Track
- Former Reichhold Fenceline
- Former Mineralized Cell Operations Area
- Former Duwamish Shipyard, Inc. Feature

Nov/Dec 2011 Data

March 2014 Data

March/April 2015 Data

April/May 2012 Data

Aug/Sept 2014 Data

Aug/Sept 2015 Data

Notes:
PCP - Pentachlorophenol
All values reported in micrograms per liter (µg/L).
SL: Screening Level
ND: not detected at a concentration greater than method detection limit
U = Result is ≤ the laboratory detection limit or qualified as non-detect in accordance with NFGs
j = The value reported is less than the PQL and should be considered an estimate; qualifier reported by the laboratory.
PQL: Practical Quantitation Limit
PCP Screening Level = 0.002 ug/L
PCP Practical Quantitation Limit = 0.5 ug/L
*Maximum PCP concentration detected at MW-4S in sample collected 27 April 2010 (648 ug/L).

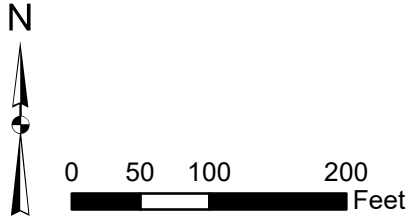


FIGURE 5-18
SHALLOW GROUNDWATER
SCREENING LEVEL
EXCEEDENCES NOT CO-LOCATED
WITH PRIMARY CONSTITUENTS
OF POTENTIAL CONCERN
5900 West Marginal Way Site
Seattle, Washington

Environmental Resources Management
1201 3rd Avenue, Floor 22
Seattle, Washington 98101
425-214-0468

ERM





Legend

- Dioxins/Furans TEQ > 6.7 pg/L
- Dioxins/Furans TEQ >= 2.5 to < 6.7 pg/L
- Dioxins/Furans TEQ >= 1 to < 2.5 pg/L
- Dioxins/Furans TEQ >= 0.0051 to < 1 pg/L (Exceeds Screening Level)
- Dioxins/Furans TEQ < 0.0051 pg/L
- Analyte Not Detected in Sample
- No Results from this Sampling Event
- Current Property Boundary
- Adjacent Property Boundary
- Former Army Building or Feature
- Former Army Fenceline
- Former Reichhold Feature
- Former Railroad Track
- Former Reichhold Fenceline
- Former Mineralized Cell Operations Area
- Former Duwamish Shipyard, Inc. Feature

Nov/Dec 2011 Data (Yellow square)
March 2014 Data (Green square)
March/April 2015 Data (Light Green square)

April/May 2012 Data (Blue square)
Aug/Sept 2014 Data (Light Yellow square)
Aug/Sept 2015 Data (Light Green square)

Notes:
 All values reported in pg/L
 TEQ: Toxicity Equivalency Quotient of a mixture of dioxins and dioxin-like compounds, calculated using half the detection limit (DL) for non-detects (NDs).
 pg/L - picograms per liter
 Screening Level = 0.0051 pg/L
 Maximum dioxin/furans concentrations in groundwater used for the adjacent DSI site.
 Dioxin/furans data not collected on T115 property.

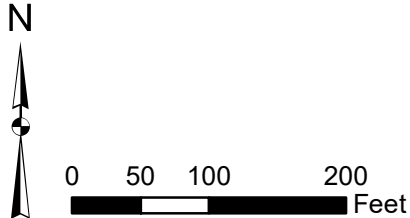


FIGURE 5-20
DIOXINS/FURANS TEQ (ND=1/2DL)
RESULTS IN SHALLOW
GROUNDWATER WELLS
5900 West Marginal Way Site
Seattle, Washington

Environmental Resources Management
 1201 3rd Avenue, Floor 22
 Seattle, Washington 98101
 425-214-0468

ERM



Legend

Dioxins/Furans TEQ > 6.7 pg/L

Dioxins/Furans TEQ >= 2.5 to < 6.7 pg/L

Dioxins/Furans TEQ >= 1 to < 2.5 pg/L

Dioxins/Furans TEQ >= 0.0051 to < 1 pg/L (Exceeds Screening Level)

Dioxins/Furans TEQ < 0.0051 pg/L

Analyte Not Detected in Sample

No Results from this Sampling Event

Current Property Boundary

Adjacent Property Boundary

Former Army Building or Feature

Former Army Fenceline

Former Reichhold Feature

Former Railroad Track

Former Reichhold Fenceline

Former Mineralized Cell Operations Area

Former Duwamish Shipyard, Inc. Feature

Nov/Dec 2011 Data

March 2014 Data

March/April 2015 Data

April/May 2012 Data

Aug/Sept 2014 Data

Aug/Sept 2015 Data

Notes:
All values reported in pg/L
TEQ: Toxicity Equivalency Quotient of a mixture of dioxins and dioxin-like compounds, calculated using half the detection limit (DL) for non-detects (NDs).
pg/L - picograms per liter
Screening Level = 0.0051 pg/L
Maximum dioxin/furans concentrations in groundwater used for the adjacent DSI site.
Dioxin/furans data not collected on T115 property.

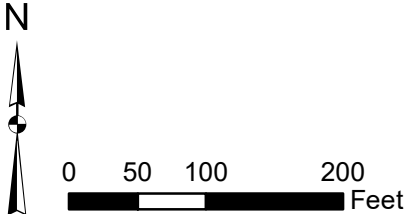
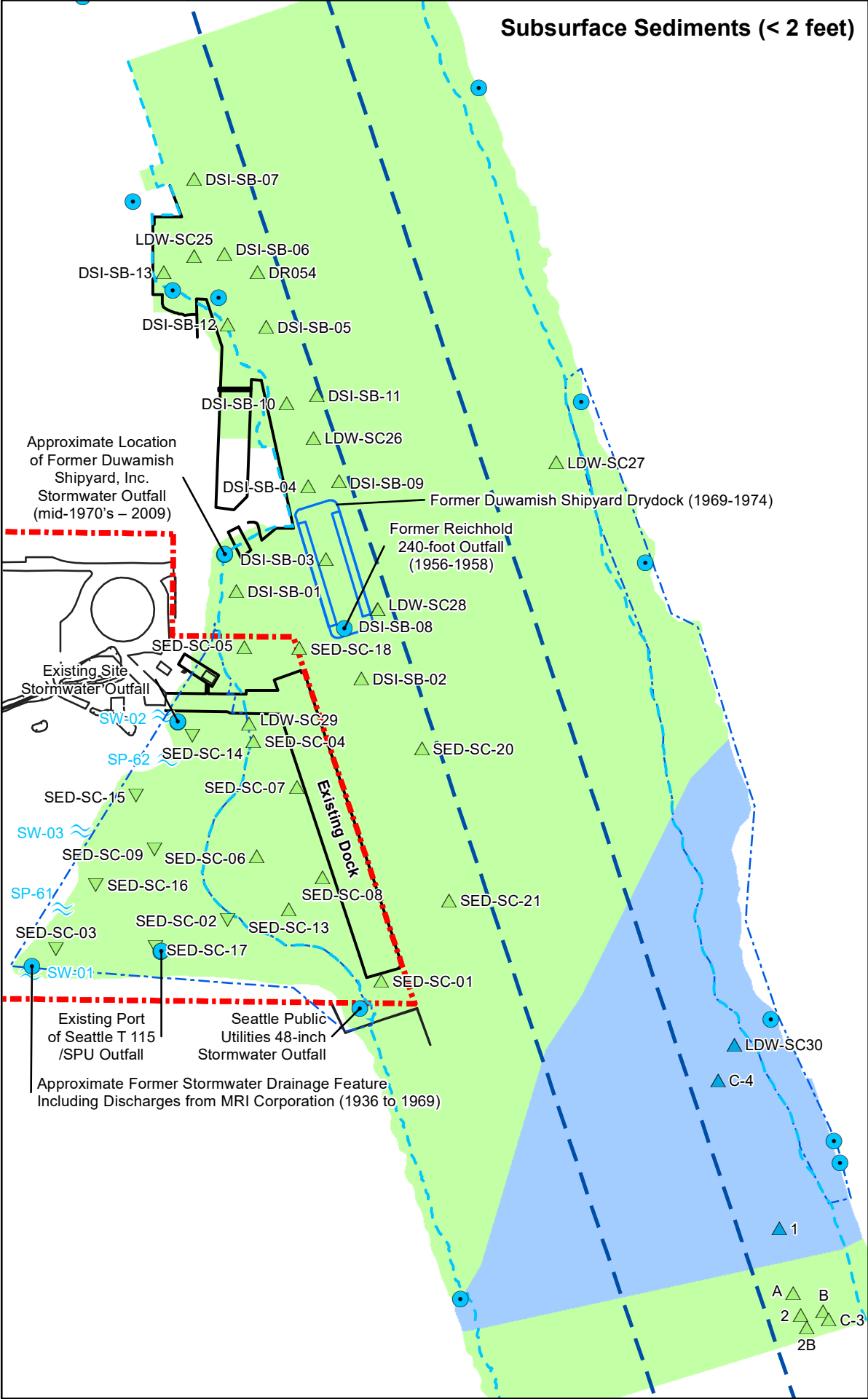
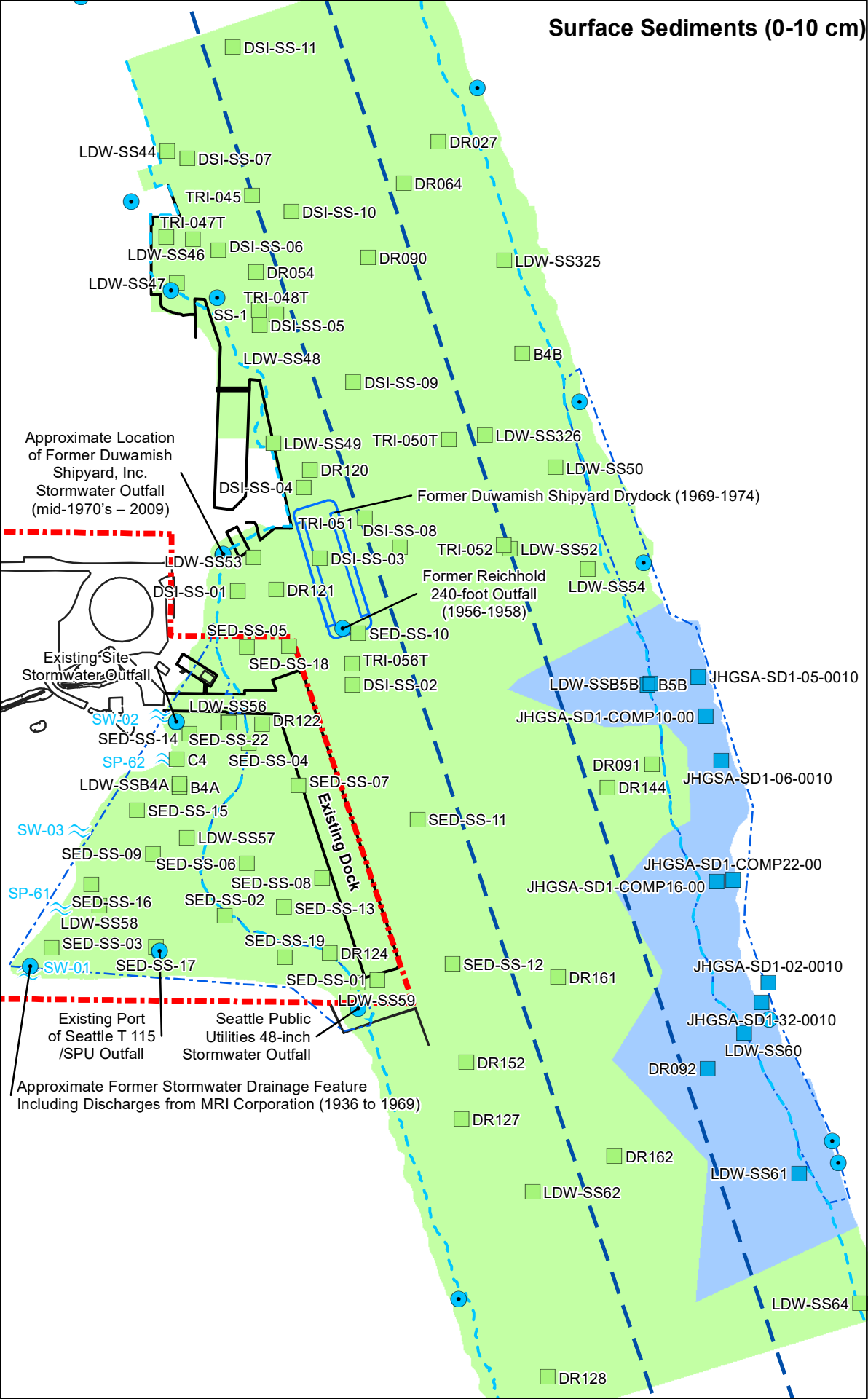


FIGURE 5-21
DIOXINS/FURANS TEQ (ND=1/2DL)
RESULTS IN DEEP
GROUNDWATER WELLS
5900 West Marginal Way Site
Seattle, Washington

Environmental Resources Management
1201 3rd Avenue, Floor 22
Seattle, Washington 98101
425-214-0468


ERM



Legend

- Arsenic in Surface Sediment**
- > 7 mg/kg dw (Exceeds Screening Level)
 - < 7 mg/kg dw
- Arsenic in Subsurface Sediments in Potential Clamming Areas**
- > 7 mg/kg dw (Exceeds Screening Level)
 - < 7 mg/kg dw
- Arsenic in Subsurface Sediments Outside of Potential Clamming Areas**
- > 7 mg/kg dw (Exceeds Screening Level)
 - < 7 mg/kg dw
- Seep
- Stormwater Outfall
- Intertidal/Subtidal Boundary (-4 MLLW)
- Clamming Area Boundary
- Property Boundary
- Former Duwamish Shipyard Drydock
- Navigation Channel Limits

Notes:

All concentrations given in milligrams per kilogram (mg/kg).

All concentrations reported on a dry weight (DW) basis. Screening Level = 7 mg/kg

Intertidal Zone from +11.3 to -4 mean low low water (MLLW).

Recovery Category data from LDW Final Feasibility Study (10/31/2012).

Sediment Data from the LDW Final Feasibility Study dataset and from the Duamish Ship Yard Phase 1 Remedial Investigation.

Interpolation done using Thiessen polygons.

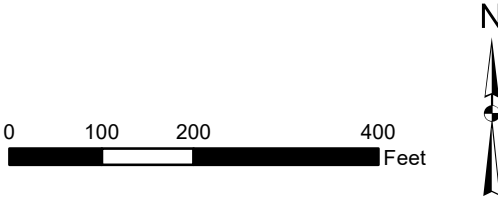
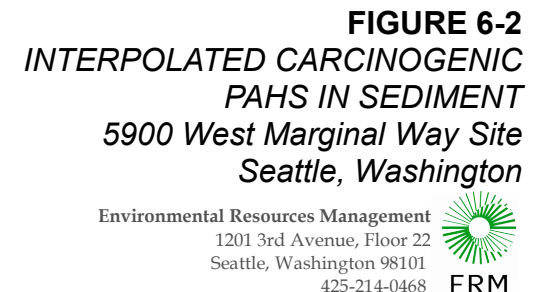
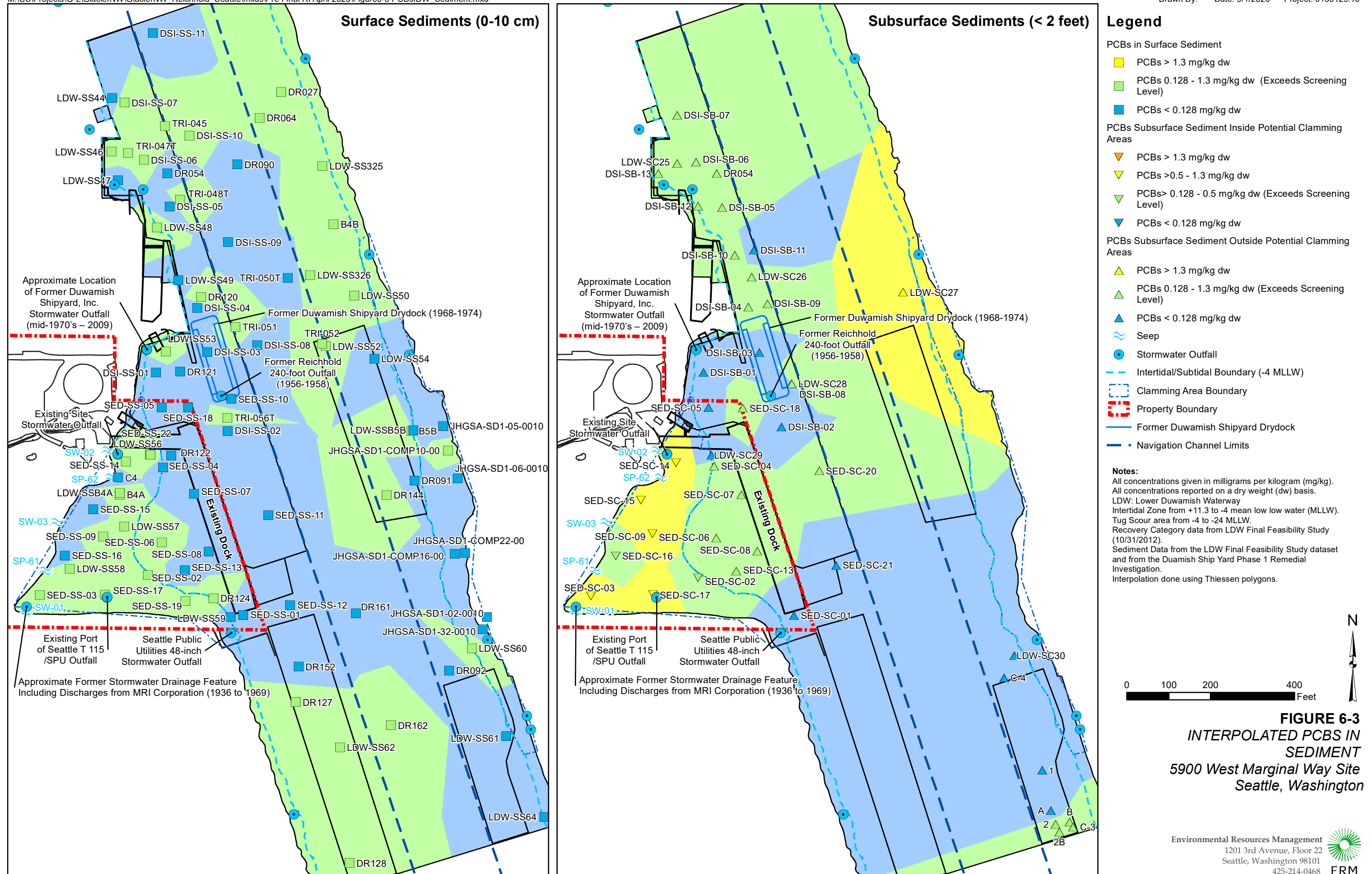
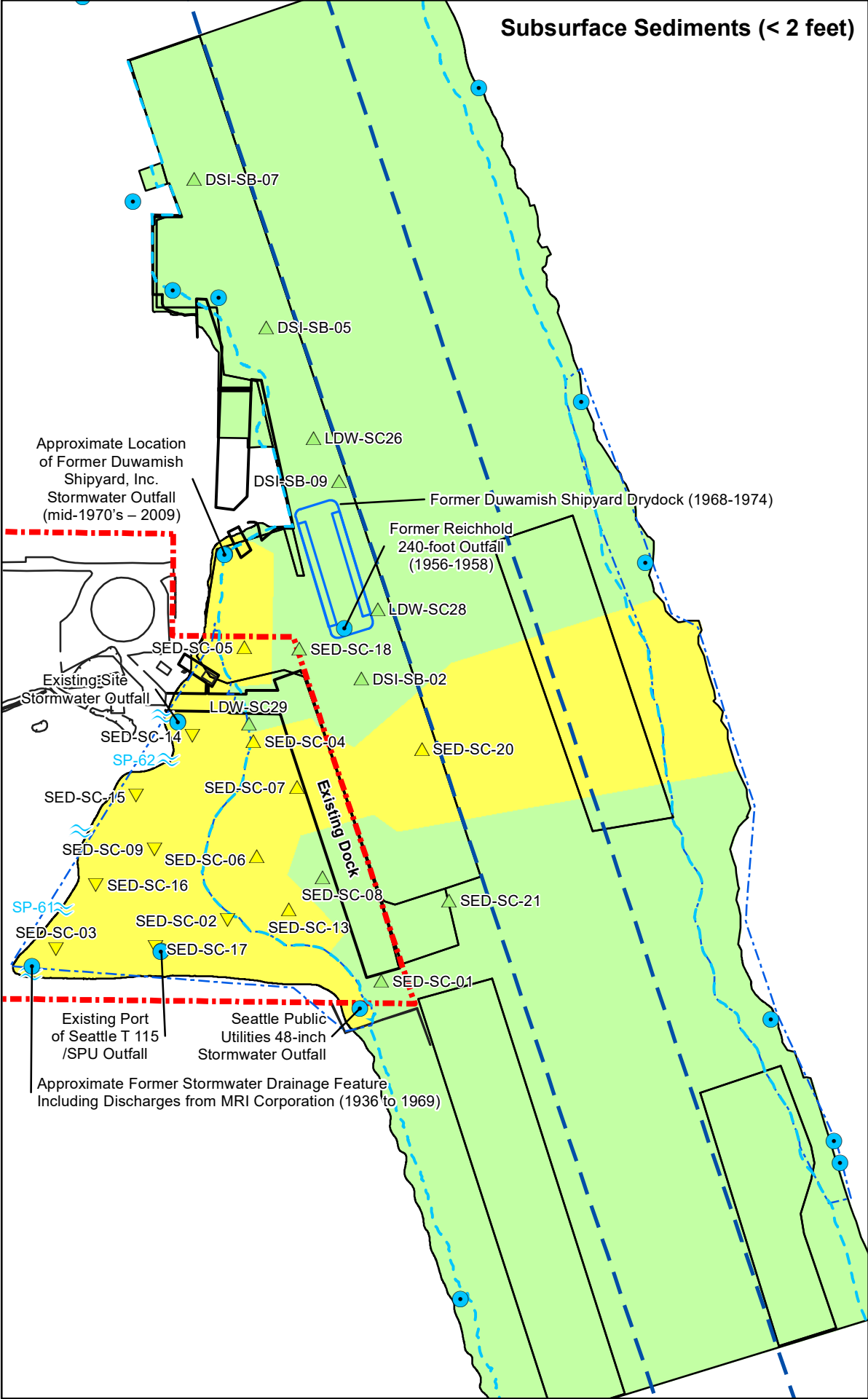
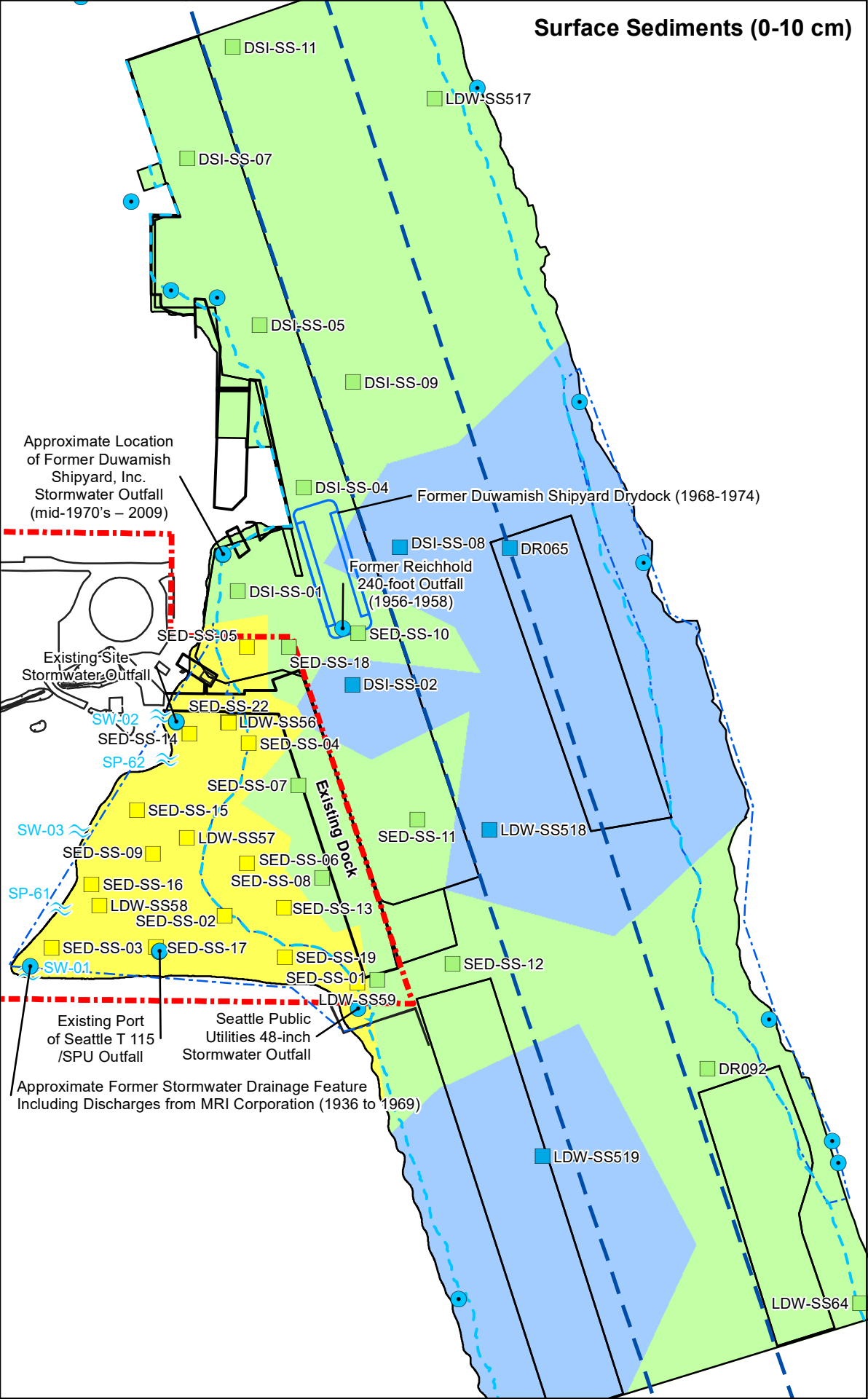


FIGURE 6-1
INTERPOLATED ARSENIC IN
SEDIMENT
5900 West Marginal Way Site
Seattle, Washington







Legend

Dioxin/Furan TEQs in Surface Sediment

- TEQ > 37 ng/kg dw
- TEQ 5 - 37 ng /kg dw (Exceeds PQL)
- TEQ < 5 ng/kg dw

Dioxin/Furan TEQ Subsurface Sediment Inside Potential Clamming Areas

- TEQ > 37 ng/kg dw
- TEQ 5 - 37 ng /kg dw (Exceeds PQL)
- TEQ < 5 ng/kg dw

Dioxin/Furan TEQ Subsurface Sediment Outside Potential Clamming Areas

- TEQ > 37 ng/kg dw
- TEQ 5 - 37 ng /kg dw (Exceeds PQL)
- TEQ < 5 ng/kg dw

- Seep
- Stormwater Outfall
- Clamming Area Boundary
- Property Boundary
- Former Duwamish Shipyard Drydock
- Navigation Channel Limits
- Intertidal/Subtidal Boundary (-4 MLLW)

Notes:
All concentrations given in nanograms per kilogram (ng/kg).
All concentrations reported on a dry weight (DW) basis.
Screening Level = 2 ng/kg
LDW: Lower Duwamish Waterway
PQL: Practical Quantitation Limit
TEQ = Toxic Equivalency Quotient
TEQs calculated using 1/2 the method detection limit (DL) for non-detects (NDs).
Intertidal Zone from +11.3 to -4 mean low low water (MLLW).
Recovery Category data from LDW Final Feasibility Study (10/31/2012).
Sediment Data from the LDW Final Feasibility Study dataset and from the Duamish Ship Yard Phase 1 Remedial Investigation.
Interpolation done using Thiessen polygons.

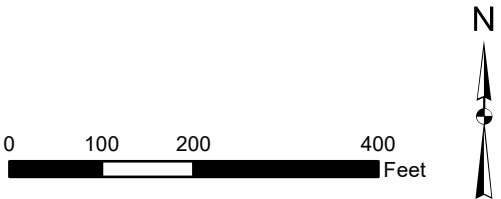
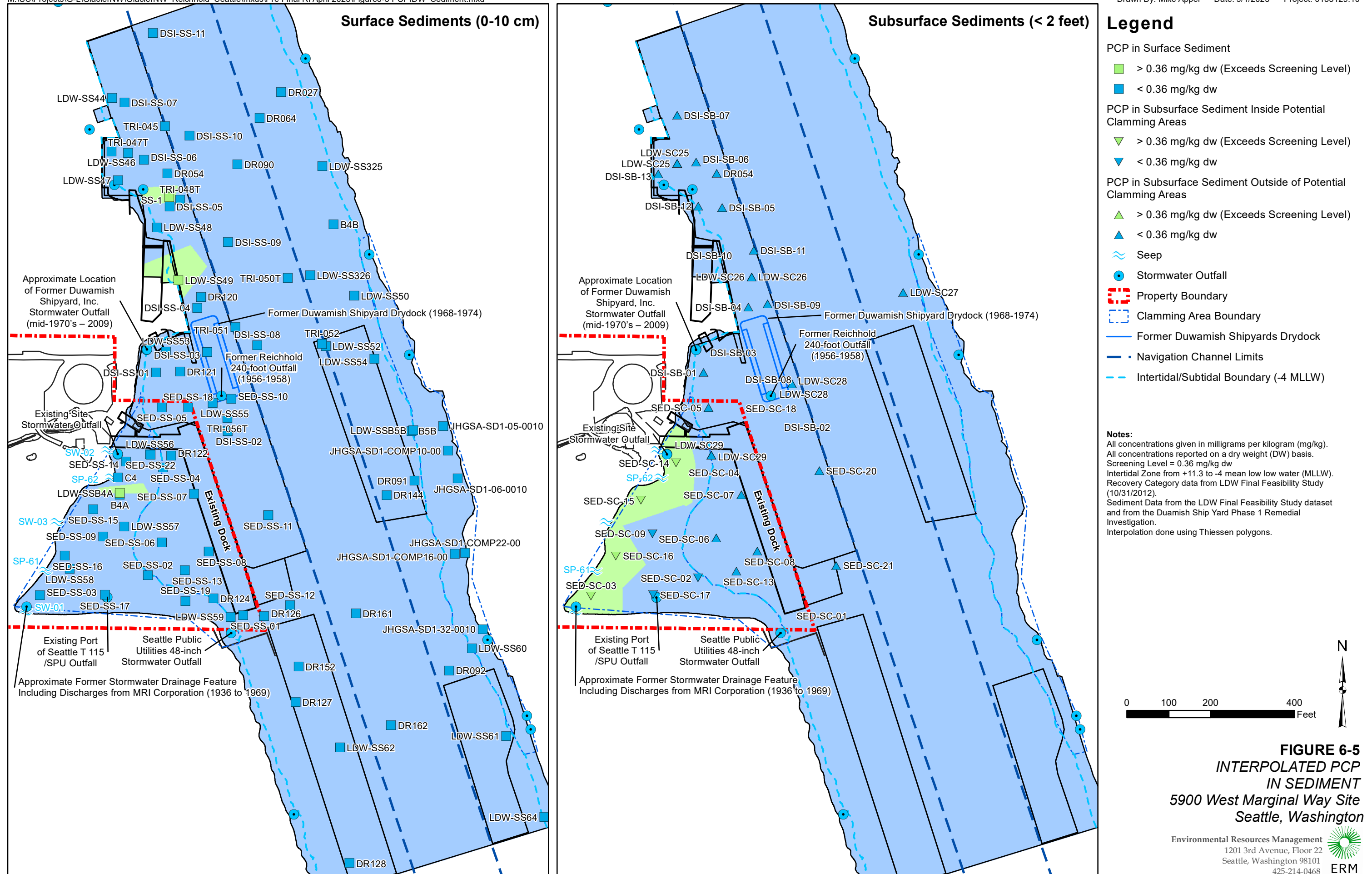
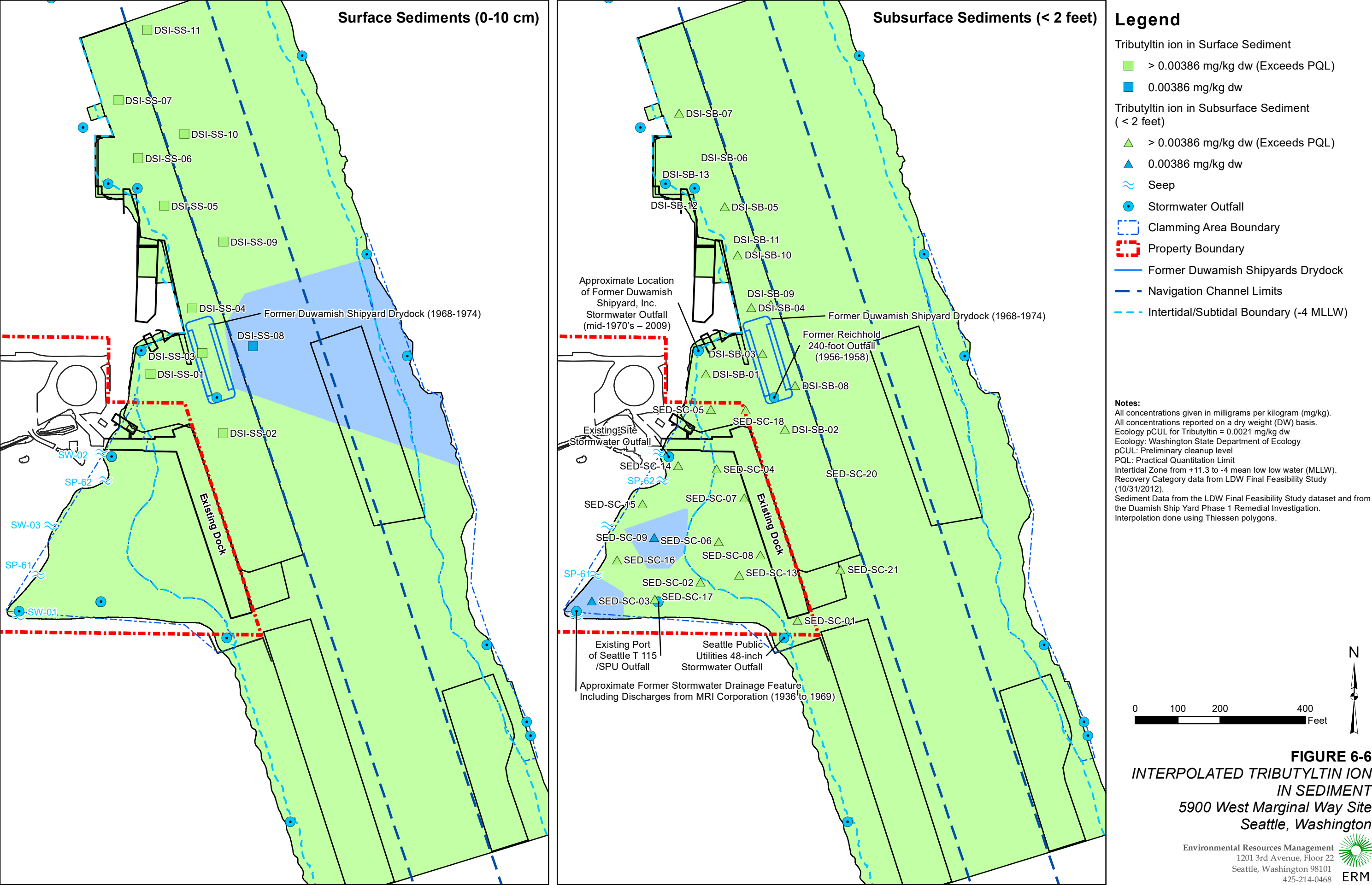
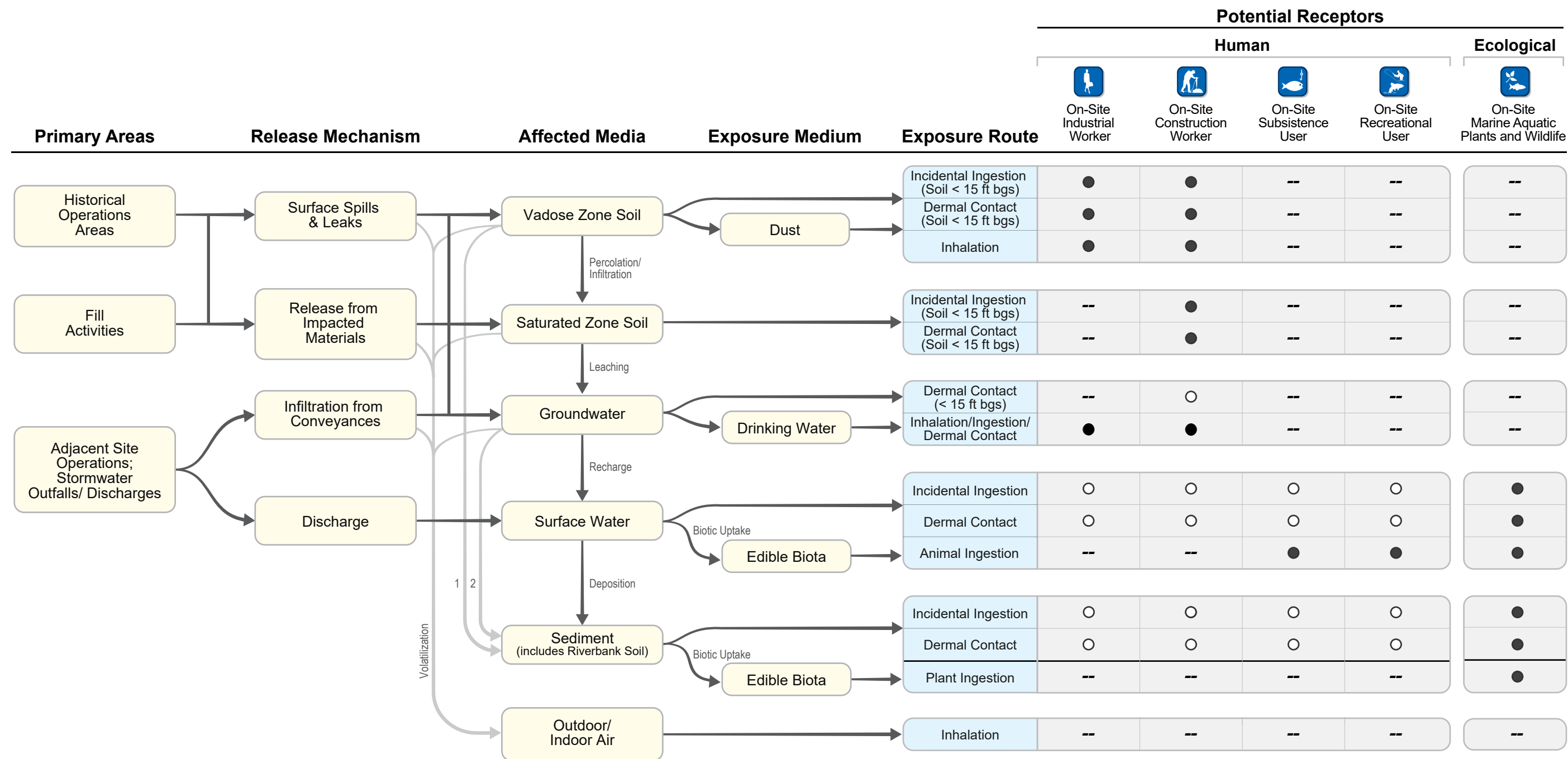


FIGURE 6-4
INTERPOLATED DIOXINS/FURANS
TEQ IN SEDIMENT
5900 West Marginal Way Site
Seattle, Washington







Notes:

-- Indicates exposure pathway is not complete for these receptors.

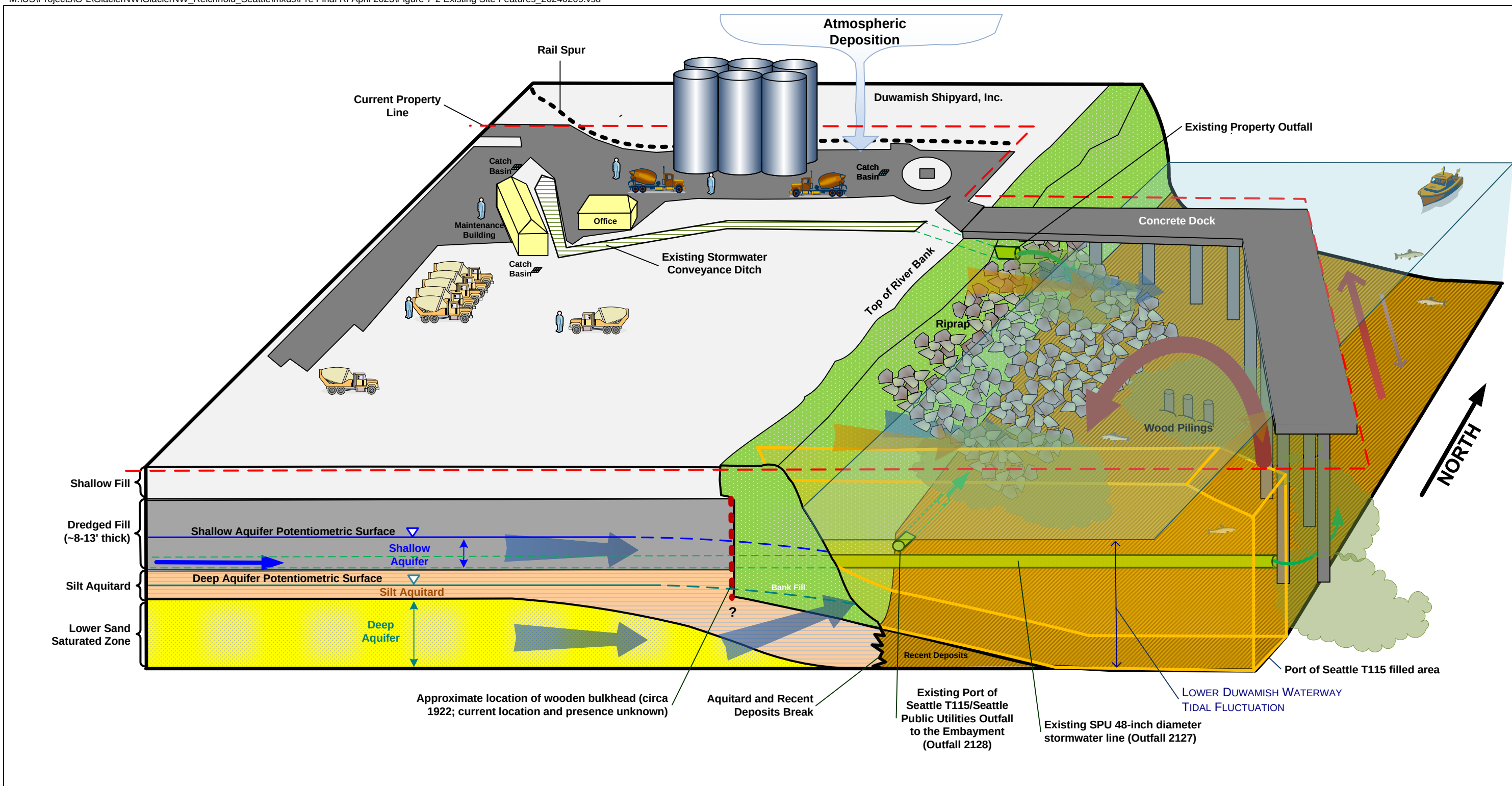
○ Indicates exposure pathway is complete for these receptors but judged to be inconsequential due to very limited exposure and/or RBCs or SLVs are not established for these exposure pathways.

● Indicates exposure pathway is complete for these receptors.

1 Erosion of riverbank soil via wind and water and deposition in sediment.

2 Precipitation and/or adsorption of contaminants in groundwater onto sediment in groundwater discharge areas.

FIGURE 7-1
CONCEPTUAL SITE EXPOSURE MODEL
5900 W. Marginal Way SW
Seattle, Washington

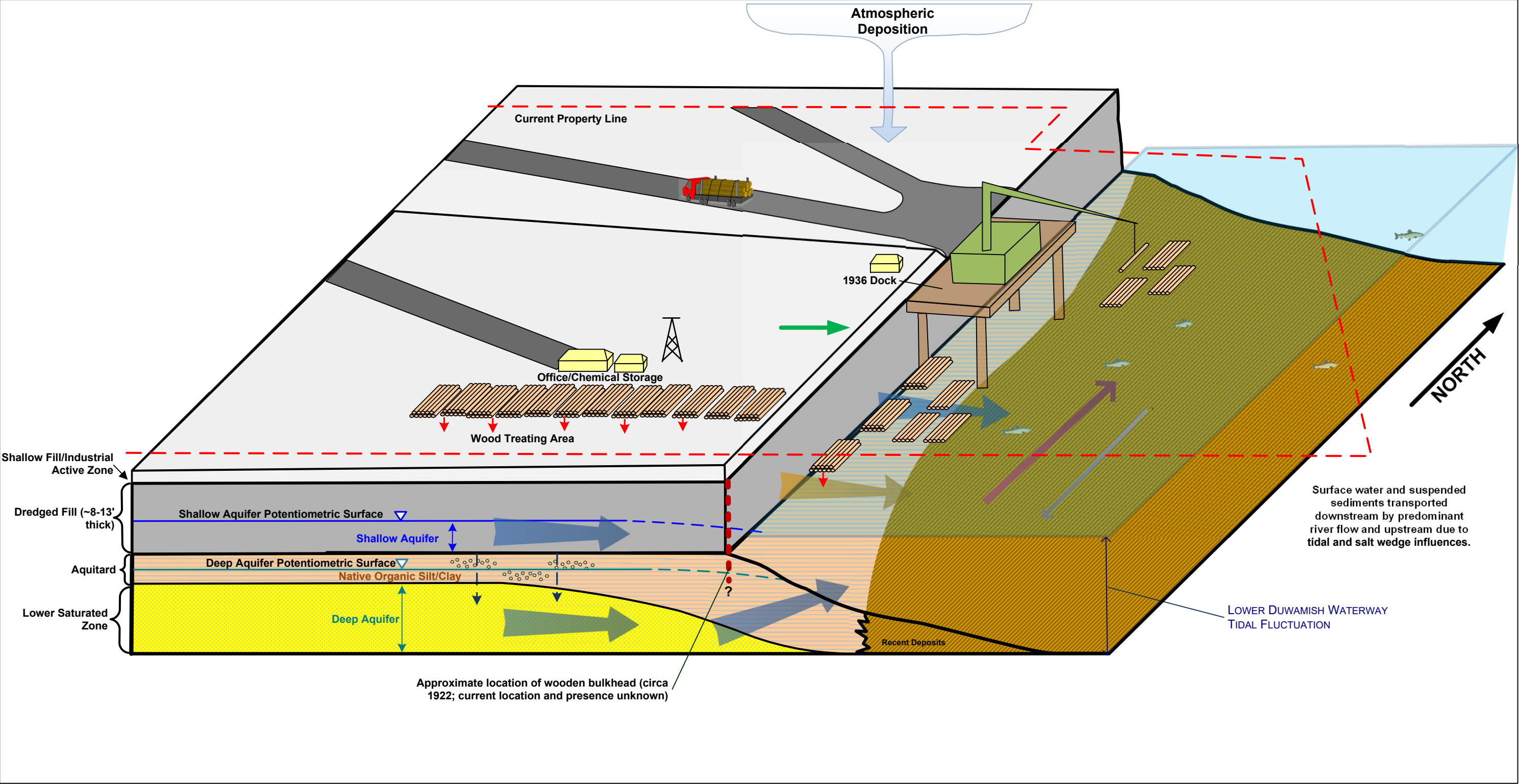


LEGEND

- | | | | |
|---|---|--|--|
|  | Aquatic organisms |  | Downstream Sediment Transport |
|  | Onsite workers and visitors |  | Upstream Sediment Transport due to tidal and salt wedge influences |
|  | Recreational users/fishermen |  | Paved/Concrete Surface |
|  | Preferential pathway for groundwater | | |
|  | Stormwater discharge to surface water and sediments | | |
|  | Groundwater flow direction and discharge to surface water and sediments | | |
|  | Bank erosion pathway to surface water and sediments | | |

Conceptual - Not to scale
Not representative of actual site feature
locations and relative sizes

FIGURE 7-2
EXISTING SITE FEATURES
5900 West Marginal Way Site
Seattle, Washington

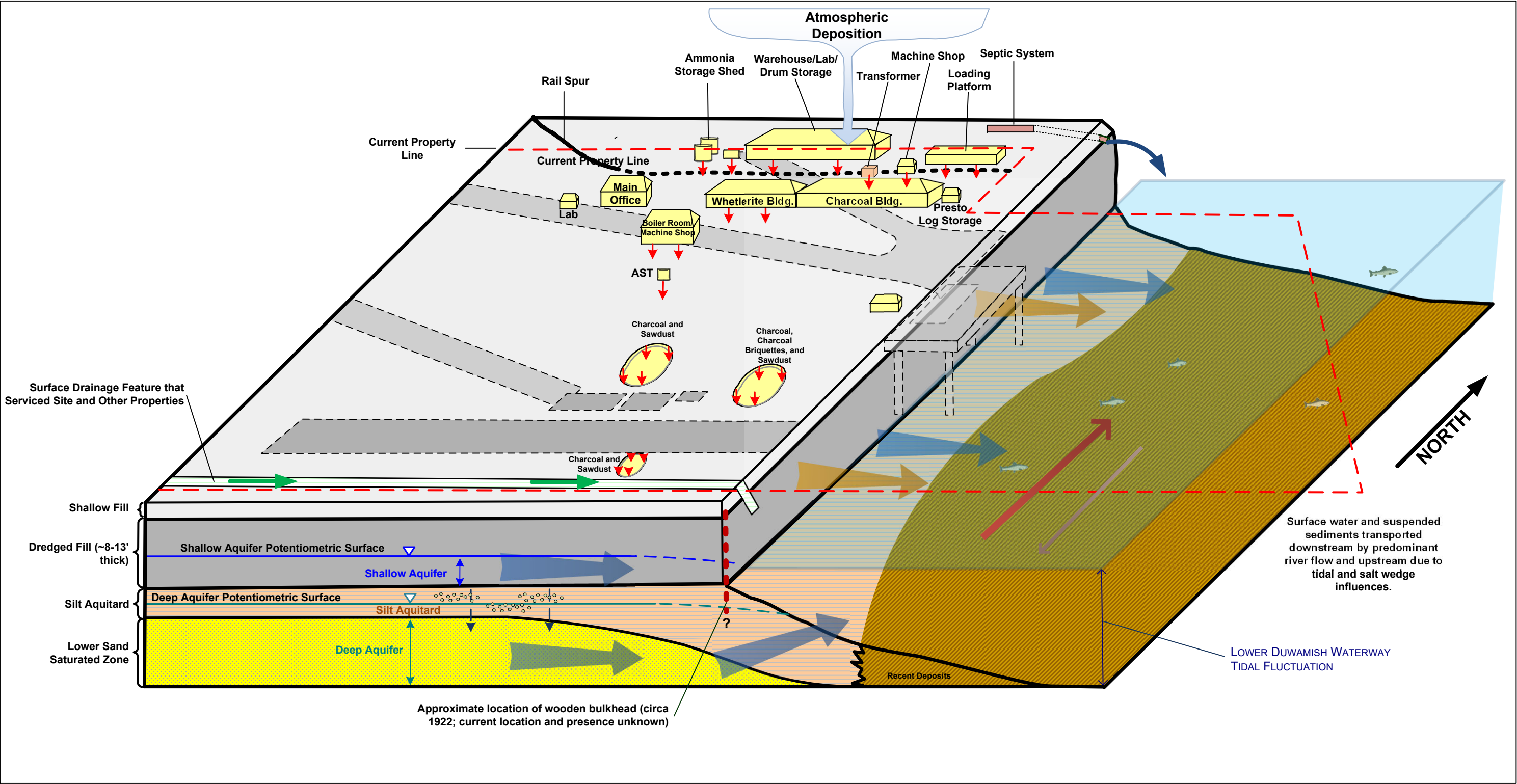


- LEGEND**
- Aquatic organisms
 - Leaks, spills and/or direct discharges
 - Stormwater discharge to surface water and sediments
 - Groundwater discharge to surface water and sediments
 - Bank erosion pathway to surface water and sediments
 - Downstream sediment transport
 - Upstream sediment transport due to tidal and salt wedge influences

Migration via diffusion

Conceptual - Not to scale
Not representative of actual site
feature locations and relative sizes

FIGURE 7-3
Former Wood Preservation Operations
Between Approximately 1936 and 1939
5900 West Marginal Way Site
Seattle, Washington



LEGEND

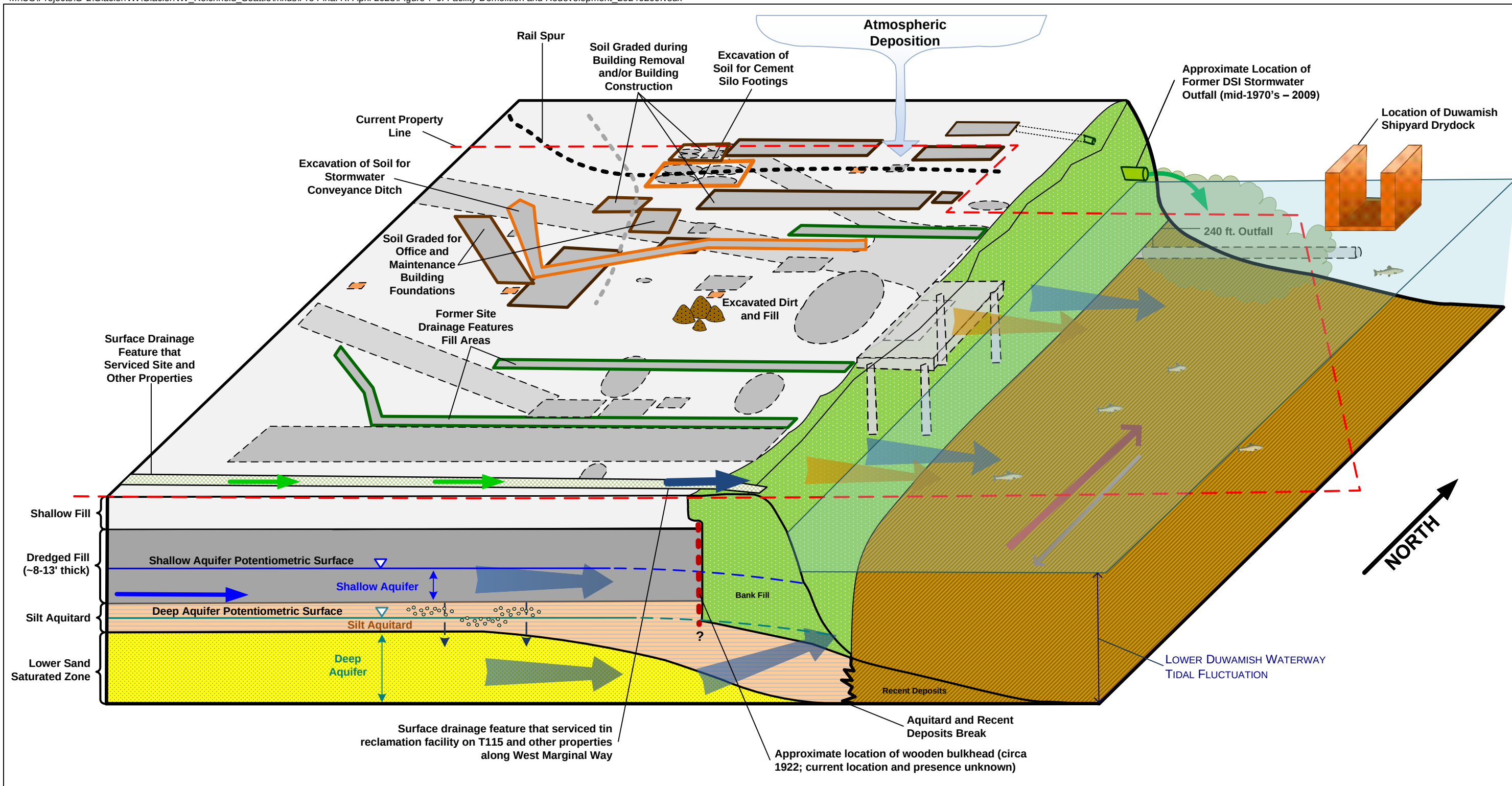
- | | | | |
|---|---|--|--|
|  | Aquatic organisms |  | Upstream sediment transport due to tidal and salt wedge influences |
|  | Leaks, spills and/or direct discharges |  | Former Operations Areas |
|  | Stormwater migration pathway to surface water and sediments |  | Migration via diffusion |
|  | Groundwater discharge to surface water and sediments |  | Direct discharge |
|  | Bank erosion pathway to surface water and sediments | | |
|  | Downstream sediment transport | | |

Conceptual - Not to scale
Not representative of actual site
feature locations and relative sizes

FIGURE 7-4
FORMER CHARCOAL AND WHETLERITE
MANUFACTURING AND TESTING BETWEEN
1940 AND 1944
5900 West Marginal Way Site
Seattle, Washington



Conceptual - Not to scale
Not representative of actual site feature
locations and relative sizes



LEGEND

- | | | | |
|--|---|--|--|
| | Aquatic organisms | | Upstream sediment transport due to tidal and salt wedge influences |
| | Leaks, spills and/or direct discharges | | Preferential pathway for groundwater |
| | Stormwater migration pathway to surface water and sediments | | Former Operations Areas |
| | Groundwater discharge to surface water and sediments | | Migration via diffusion |
| | Bank erosion pathway to surface water and sediments | | Direct discharge |
| | Downstream sediment transport | | |

Conceptual - Not to scale
Not representative of actual site
feature locations and relative sizes

FIGURE 7-6
Facility Demolition and Redevelopment Between
1964 and 1969
5900 West Marginal Way Site
Seattle, Washington



Legend

- 1963 Shoreline
- 1970 Shoreline
- Former Army Building or Feature
- Former Army Property Boundary
- Former Reichhold Feature
- Former Railroad Track
- Former Mineralized Cell Operations Area
- Shallow Cut Area (< 2 feet)
- Deep Cut Area (> 2 feet)
- Drainage Ditch Fill Areas
- Shoreline Fill Area
- Port of Seattle Shoreline Fill
- Current Property Boundary

Notes:
Aerial: King County: 3/23/2012, 0.25 ft per pixel

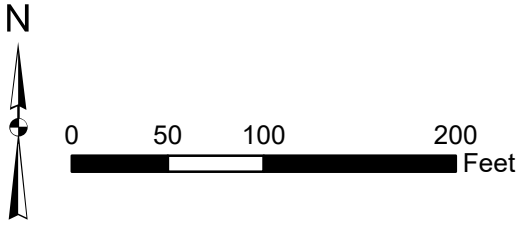


FIGURE 7-7
APPROXIMATE CUT
AND FILL AREAS
5900 West Marginal Way Site
Seattle, Washington

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