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TECHNICAL MEMORANDUM

DATE:	July 22, 2022
TO:	Jeff Neuner, Seattle Public Utilities Rob Howie, South Park Property Development
FROM:	Laura Lee; Tiffany Neier, PE; and Lisa Gilbert, LHG
SUBJECT:	2022 Landfill Cap Inspection
CC:	Julia Schwarz, Ecology
PROJECT NUMBER:	553-1550-067
PROJECT NAME:	South Park Landfill Site Coordination

INTRODUCTION

The purpose of this Technical Memorandum is to summarize the findings of the 2022 Landfill Cap Inspection at South Park Landfill including the reinspection of identified concerns from the 2021 Baseline Landfill Cap Inspection performed on April 22nd, 2021. The April 2021 Baseline Landfill Cap Inspection Technical Memorandum (April 2021 Technical Memorandum) is included in Appendix B-1A of the 2021 Operations, Maintenance, and Monitoring Annual Report South Park Landfill (2021 Annual Report). Attachment F of the April 2021 Technical Memorandum includes the field inspection report and photos from the January 15, 2021 field inspection which was performed after a large rain event. Table 1 provides a conversion between the location names from the 2020 and 2021 inspections to their current 2022 designation.

The 2022 Landfill Cap Inspection was performed on April 20, 2022, by two Parametrix staff members (Tiffany Neier, PE and Lisa Gilbert, LHG). The inspection satisfies the requirements of the Cleanup Action Plan (CAP) which fulfills a requirement of the Consent Decree that was signed on March 26, 2019. The primary objective of this inspection was to reinspect issues identified during the 2021 Baseline Landfill Cap Inspection, document current status, and complete another inspection of the landfill cap to identify areas that may be compromised and need maintenance. The inspection also included observing areas identified in the January 15, 2021, inspection conducted as a result of a storm event.

The inspection took place on Wednesday, April 20, 2022, from approximately 9:15 a.m. to 1:45 p.m. The weather was cloudy, and the temperature was 55°F. The last substantial rain event was two days prior (Monday, April 18) when approximately 0.32 inches of rain fell. The inspection started on the northern portion of the site at the South Recycling and Disposal Station (SRDS) property and progressed south to the South Park Property Development (SPPD) property and the surrounding right-of-way (ROW). Figure 1 shows the approximate CAP bounds for the two properties and the ROW. The landfill refuse extends over two additional properties, but they are not currently included in the Settlement Area of the Consent Decree at this time. The extent of the Settlement Area is shown in Figure 2. Cap Inspection Form A was completed for the SRDS property, the SPPD property, and the ROW and the forms are included as Attachment A. Photographs were taken and the approximate location was determined using an aerial map and identifiable site features from previous inspections. The photographs are numbered and included in Attachment B with numbered locations mapped on the 2022 Landfill Cap Inspection figures. The following inspection results are presented in accordance with the associated property and respective responsible party (property owner).

All repairs should be documented on a Cap Maintenance Form B (Appendix B2-A of the 2021 Annual Report) by the responsible party. Maintenance Reports from 3/30/2021 to 2/09/2022 are included in Appendix B2-B of the 2021 Annual Report. There have been no additional maintenance reports completed since then.

The basis of determining the timeline for repairs shown in the tables in this report comes from the CAP Landfill Post-Closure Operations, Maintenance, and Monitoring Plan (OMMP). The OMMP has the following guidance for the timeline of maintenance/repairs:

1. If underlying material (such as geomembrane) is exposed, corrective action shall occur within 60 days.
2. If minor cracks or ponding do not expose underlying materials and the problem does not appear to be getting worse the issue shall be reinspected in 6 months.
3. If underlying material is not exposed but is worsening or the issue needs to be elevated to a repair before it worsens, the corrective action shall occur within the calendar year.

Corrective actions proposed by the property owners should be coordinated with the Site Coordinator prior to taking action. The Site Coordinator should perform verification inspections during and/or after corrective actions are complete to determine if the maintenance and repairs are consistent with the intent of the regulatory requirements. The Site Coordinator shall perform a reinspection in October or November of 2022. The next regular annual inspection shall occur in the first quarter of 2023. The property owner should document any repairs or maintenance in Part 1 of the Cap Maintenance Form B (a blank sample is located in Appendix B2-A of the 2021 Annual Report), and the Site Coordinator will provide observations in Part 2 of the form.

SRDS PARCEL

The general property condition was good. Locations on the SRDS property identified in the April 2021 Technical Memorandum were reinspected during this site visit. Pavement cracks and ponding areas remain the primary concerns; however, with the planned redevelopment of the property, temporary pavement restoration is not recommended based on conditions at this time, except at location SRDS AC-2 and SRDS AC-5. Table 2 briefly describes the issue or concern at each location on the SRDS property, status of previous repairs or change of condition if applicable, indicates a recommended action, and proposes a timeline for repairs, maintenance, and/or reinspection. Each location of concern is identified by number in Figures 1, 2, and 5, and corresponding photographs are in Attachment B-1.

Figure 1 shows the SRDS CAP boundary and the locations of concern. The Cap Inspection Checklist Form A was completed for the SRDS property and is included in Attachment A-1.

Repairs Completed from 2021 Inspection:

- SRDS AC-8 was noted as a sinkhole in 2021 and has been filled with gravel as a repair on 3/18/2021 (Appendix B2-B of the 2021 Annual Report).

2022 Recommended Repairs or Actions:

- The concrete cracking around the catch basin at location SRDS AC-2 should be repaired by the end of the calendar year and the debris cleared out.
- SRDS AC-5 has worsened since the last inspection. The pavement cracking and small depression identified in 2021 has deepened to a pothole and should be repaired within the calendar year.
- The catch basins at SRDS SW-1 and SW-2 should have the obstructions removed in the next 6 months.
- 6-month reinspection of locations of concern not recommended for repairs in 2022.

The Cap Inspection Checklist Form A was completed for the SRDS property and is included in Attachment A-1.

SPPD PARCEL

The general property condition was good. Locations on the SPPD property identified in the April 2021 Technical Memorandum were reinspected during this site visit. The paved area is in good condition, though ponding will be monitored to ensure the depressions do not get deeper, which could indicate asphaltic concrete cap damage. Vegetated slopes are uniform and generally in good condition with one bare patch at SPPD G-9. There are two primary concerns of exposed geomembrane at the parking area interface at SPPD G-7 and G-10. Table 3 briefly describes the issue or concern at each location on the SPPD property, status of previous repairs or change of condition if applicable, indicates a recommended action, and proposes a timeline for repairs, maintenance, and/or reinspection. Previous concerns identified remain in the same general condition. Each location of concern is identified by number in Figures 1, 2, 3 and 4, and corresponding photographs are in Attachment B-2.

Figure 1 shows the SPPD CAP boundary and the locations of concern. The Cap Inspection Form A was completed for the SPPD property and is included in Attachment A-2.

Repairs Completed from 2021 Inspection:

- Maintenance reports for SPPD G-2 (3/30/2021 report) and SPPD G-3 through G-6 (11/2/2021 report) are provided in Appendix B2-B of the 2021 Annual Report. The Maintenance Reports note that though there has been improvement to the geomembrane cover soil, additional work is needed to complete the recommendations from the April 2021 Technical Memorandum.
- Pipes previously located at location SPPD G-1 are no longer visible and may have been removed per recommendation from the April 2021 Technical Memorandum. The Site Coordinator was not informed of any actions taken by the property owner.

Change of Condition:

- There were significant changes at the location of the onsite buildings (SPPD AC-3). In 2021, some drill hole asphalt penetrations had been noted and since then new trailers have been added and the original trailer has been removed in the vicinity of location SPPD AC-3. There are small drill holes where the previous trailer had been and active drilling with a hand drill to anchor a tent was occurring during the site visit. No maintenance report had been submitted for these activities. The Site Coordinator was not informed of this construction by the property owner.
- An electric security fence was installed around the First Student tenant's portion of the property since the April 2021 inspection. The Site Coordinator was not informed of this construction until February 23, 2022, by Ecology (Maintenance Report 11/15/21 in Appendix B2-B of the 2021 Annual Report).

2022 Recommended Repairs or Actions:

- The landfill cap geomembrane is exposed at SPPD G-7 and G-10 at the interface of the parking area. This area is of highest concern due to the potential compromise of the landfill cap. The improvements completed in 2021 at SPPD G-4, G-5 and G-6 did not appear to adequately restore the cover system in accordance with the IAWP. Construction documentation should be used to determine how the installation was performed and how to bring the existing location back to design conditions. Exposed geomembrane should be cleaned and inspected for cracking or signs of failure. If geomembrane is in good condition, revegetate to the maximum extent practicable and monitor for erosion. Site Coordinator should be present during the investigation and at any restoration activities. Action should be taken within the next 60 days.
- The drill holes at location SPPD AC-3 should be filled and sealed within the next 60 days.

- SPPD should provide the Site Coordinator with foundation details for the new trailers (SPPD AC-3) to demonstrate that the cap was not penetrated within the next 60 days. Permitting information and/or photographs of the foundations should also be provided to the Site Coordinator.
- Regrade for positive drainage away from fire hydrant (SPPD AC-2) by the end of calendar year.
- Seal the interface between the posts of the new electric fence and the asphalt (SPPD AC-6).
- Repair the soil and vegetation at SPPD G-2. SPPD should investigate source of erosion, identify possible solutions in coordination with Site Coordinator, and take corrective action. Area should be inspected by Site Coordinator after heavy persistent rain.
- Exposed and shallowly covered geomembrane at SPPD G-8 should be carefully exposed so as to not damage the geomembrane and inspected to determine if it is excess material or part of the cover. Make repairs as necessary and install adequate cover soil in accordance with the IAWP within the next 60 days.
- Re-establish vegetation in the next 60 days to prevent erosion at SPPD G-9.
- The bioswale at SPPD SW-1 has standing water with a sheen on it. The water should be tested to determine if the sheen is organic or total petroleum hydrocarbons (TPH) and dealt with accordingly. The standing water potentially does not meet the Department of Ecology's Stormwater Management Manual of Western Washington's design requirements. The swale was originally intended to have a 1.5% drainage gradient. The standing water increases infiltration potential into the landfill refuse. Along with Site Coordinator, prepare a plan to address this situation.
- The invasive, deep-rooted plants in the west bioswale (SPPD SW-2) should be removed before the end of the calendar year.
- Complete Part 1 of Cap Maintenance Form B no later than the calendar year for the following:
  - Removal of pipes at SPPD G-1
- 6-month reinspection of locations of concern not needing repairs in 2022.

The Cap Inspection Form A was completed for the SPPD property and is included in Attachment A-2.

RIGHT-OF-WAY

There are three areas in the ROW identified as locations of concern. Table 4 briefly describes the issue or concern at each location in the ROW, status of previous repairs or change of condition if applicable, indicates a recommended action, and proposes a timeline for repairs, maintenance, and/or reinspection. Each location of concern is identified by number in Figures 1 and 2, with corresponding photographs in Attachment B-3.

Figure 1 shows the ROW CAP boundary and the locations of concern. The Cap Inspection Form A was completed for the ROW and is included in Attachment A-3.

Repairs Completed from 2021 Inspection:

- The S Sullivan Street pavement has several potholes (ROW AC-1). Some portions of the asphalt was recently repaired but there is a section that was not re-paved. The repair was done by SDOT. Under the CAP, routine street maintenance does not require Ecology notification or maintenance reports.

2022 Recommended Repairs or Actions:

- The asphalt at ROW AC-1 should be repaired no later than the end of 2022.
- 6-month reinspection of locations of concern not needing repairs in 2022.

TABLES

FIGURES

ATTACHMENTS

Tables

Table 1. South Park Landfill 2020 through 2022 Cap Inspection Location Name Conversion

SRDS Location Name			SPPD Location Name			ROW Location Name		
Current	**2021**	**2020**	**Current**	**2021**	**2020**	**Current**	**2021**	**2020**
AC-1	21-2	20-28, 20-39	AC-1	-	20-26	AC-1	21-20	20-8
AC-2	21-3	-	AC-2	21-11	20-6			
AC-3	21-4	20-27, 20-29	AC-3	21-16	-			
AC-4	-	20-30	AC-4	-	0			
AC-5	21-5	0	AC-7	-	20-18, 20-19			
AC-6	-	20-32	AC-8	-	20-20			
AC-7	21-6	-	AC-9	-	20-13			
AC-8	21-7	-	AC-11	-	20-24, 20-25			
AC-9	-	20-31	AC-12	-	20-23			
			G-1	-	20-10			
			G-2	21-9	20-33			
			G-3	21-12	20-7			
			G-4	21-13	-			
			G-5	21-14	-			
			G-6	21-15	-			
			G-7	21-17	-			
			G-8	21-18	20-9			
			SW-2	-	Jan Storm Event			

Notes:

AC = Asphalt Concrete

G = Low-Permeability Geomembrane

SW = Stormwater Management Facilities

Table 2. Status of Identified Locations of Concern on the South Park Landfill SRDS Property, April 20, 2022 Inspection

SRDS Location	Description	2021 Inspection		2022 Inspection			
		Recommended Action	Action Taken[1]	Condition Status	Recommended Action	Timeline for Repair and/or Reinspection	Recommended Action Assignment
Aspalt Concrete							
AC-1	Minor pavement cracking	Follow-up inspection	No actions taken or required	No Change	Follow-up inspection	6 months	Site Coordinator
AC-2	**Concrete cracking at catch basin, catch basin full of debris**	Repair concrete at catch basin.	No actions taken or required	No Change	**Repair concrete at catch basin and remove debris.**	**No later than end of calendar year**	**SRDS**
AC-3	Minor pavement cracking and ponding	Follow-up inspection	No actions taken or required	No Change	Follow-up inspection	6 months	Site Coordinator
AC-4	Ponding	Follow-up inspection	No actions taken or required	No Change	Follow-up inspection	6 months	Site Coordinator
AC-5	**Cracking**	Follow-up inspection	No actions taken or required	Worse	**Cracking has deepend to a pothole. Repair is needed.**	**No later than end of calendar year**	**SRDS**
AC-6	Minor pavement cracking	Follow-up inspection	No actions taken or required	No Change	Follow-up inspection	6 months	Site Coordinator
AC-7	Ponding	Follow-up inspection	No actions taken or required	No Change	Follow-up inspection	6 months	Site Coordinator
AC-8	Sinkhole	Immediate repair	Sinkhole filled with gravel (see 3/18/2021 Maintenance Report)	Improved	Ongoing observations during annual cap inspections until the site is redeveloped in 2024 to verify if the fill remains adequate	6 months	Site Coordinator
AC-9	Ponding	Follow-up inspection	No actions taken or required	No Change	Follow-up inspection	6 months	Site Coordinator
AC-10	Minor pavement cracking with grass growing in the cracks	-	-	New	Follow-up inspection	6 months	Site Coordinator
AC-11	Ponding	-	-	New	Follow-up inspection	6 months	Site Coordinator
AC-12	Minor pavement cracking	-	-	New	Follow-up inspection	6 months	Site Coordinator
AC-13	Minor pavement cracking and rutting	-	-	New	Follow-up inspection	6 months	Site Coordinator
AC-14	Minor pavement spalling with moss	-	-	New	Follow-up inspection	6 months	Site Coordinator
AC-15	Minor pavement cracking with moss growing in the cracks	-	-	New	Follow-up inspection	6 months	Site Coordinator
AC-16	Minor pavement cracking	-	-	New	Follow-up inspection	6 months	Site Coordinator
AC-17	Ponding	-	-	New	Follow-up inspection	6 months	Site Coordinator
AC-18	Ponding	-	-	New	Follow-up inspection	6 months	Site Coordinator
Stormwater Management Facilities							
SW-1	**Obstructed catch basin**	-	-	New	**Remove obstruction**	**No later than end of calendar year**	**SRDS**
SW-2	**Obstructed catch basin**	-	-	New	**Remove obstruction**	**No later than end of calendar year**	**SRDS**
SW-3	Previous figures depict this area as asphalt concrete cap. Inspection shows the area as landscaped.	-	-	New	Research to determine if there is any documentation of geomembrane in the area	No later than end of calendar year	SRDS

Table 2. Status of Identified Locations of Concern on the South Park Landfill SRDS Property, April 20, 2022 Inspection

SRDS Location	Description	2021 Inspection		2022 Inspection			
		Recommended Action	Action Taken[1]	Condition Status	Recommended Action	Timeline for Repair and/or Reinspection	Recommended Action Assignment
SW-4	Potential run-on from SPPD	-	-	New	Site Coordinator attempted a rain event inspection on October 29, 2021. At the time of the inspection event, it was not raining. It does appear that there is a pathway for runoff to leave the SRDS parking lot and flow across the SPPD site in this location. However, there is a row of ecology blocks that may be preventing runoff from taking this path of travel. Without sustained rainfall during the inspection, we were unable to determine if runoff sheetflows across the SRDS property that comes directly from the SPPD site. A follow-up inspection should happen during a prolonged period of heavy rain.	6 months	Site Coordinator

Notes:

[1] Maintenance Reports are provided in Appendix B2-B of the 2021 Operations, Maintenance, and Monitoring Annual Report, South Park Landfill (2021 Annual Report)

Locations with recommended repairs are in **BOLD** text.

Table 3. Status of Identified Locations of Concern on the South Park Landfill SPPD Property, April 20, 2022 Inspection

SPPD Location	Description	2021 Inspection		2022 Inspection			
		Recommended Action	Action Taken[1]	Condition Status	Recommended Action	Timeline for Repair and/or Reinspection	Recommended Action Assignment
Asphalt Concrete							
AC-1	Previously had ponding - not re-checked	Follow-up inspection	No Change	No Change	Follow-up inspection	6 months	Site Coordinator
AC-2	**Depression at fire hydrant**	Regrade for positive drainage away from fire hydrant.	No Change	No Change	**Regrade for positive drainage away from fire hydrant.**	**No later than end of calendar year**	**SPPD**
AC-3	**New buildings, potential cap penetrations. Site Coordinator was not informed of this change to the property.**	Repair holes	New buildings were added at location of holes identified during 2021 inspection. The original trailer was removed. There are small drilled holes where the original trailer was and active drilling during inspection for a tent installation.	Changed	**Property owner should provide foundation details for the new structures. Fill and seal all holes in the asphalt.**	**60 days**	**SPPD**
AC-4	Ponding	Follow-up inspection	No Change	No Change	Follow-up inspection	6 months	Site Coordinator
AC-5	Ponding, modification of asphalt	Follow-up inspection	Well head V-7 lid and ring raised approximately 2 in and new asphalt placed around it (Maintenance Report 1/26/22)	New	Follow-up inspection of ponding	6 months	Site Coordinator
AC-6	**Electric fence installed around perimeter of First Student**	-	Electric fence was added around the perimeter of First Student. Site Coordinator was not informed of this until February 23, 2022 by Ecology (Maintenance Report 11/15/21)	New	**Seal the interface between the posts of the new electric fence and the asphalt**	**60 days**	**SPPD**
AC-7	Several areas of ponding	Follow-up inspection	No Change	No Change	Follow-up inspection	6 months	Site Coordinator
AC-8	Ponding	Follow-up inspection	No Change	No Change	Follow-up inspection	6 months	Site Coordinator
AC-9	Ponding	Follow-up inspection. See 2020 baseline inspection for details and photos.	No Change	No Change	Follow-up inspection	6 months	Site Coordinator
AC-10	Ponding	-	-	New	Follow-up inspection	6 months	Site Coordinator
AC-11	Ponding	Follow-up inspection	No Change	No Change	Follow-up inspection	6 months	Site Coordinator
AC-12	Ponding	Follow-up inspection	No Change	No Change	Follow-up inspection	6 months	Site Coordinator
Low-Permeability Geomembrane							
G-1	**Unknown pipes from April 2021 inspection not found**	If pipes are not functional, excavate and remove. Determine relation to the landfill cap and repair as required in accordance with the IAWP. See 2020 baseline inspection for details and photos.	Pipes no longer visible, may have been removed per recommendations.	Resolved	**Provide maintenance forms for removal of pipes**	**No later than end of calendar year**	**SPPD**
G-2	**Minimal erosion of soil cover between the swale and parking area.**	Work with Site Coordinator to prepare a plan to reestablish a uniform slope and vegetate. The team shall investigate source of erosion, identify possible solutions and take corrective action. Additionally, this area shall be inspected after heavy persistent rain.	Added topsoil and seed as well as planted plants at basin of swale (Maintenance Report 3/30/21)	Improved	**Work with Site Coordinator to prepare a plan to reestablish a uniform slope and vegetation. SPPD should investigate source of erosion, identify possible solutions in coordination with Site Coordinator, and take corrective action. Additionally, this area should be inspected by Site Coordinator after heavy persistent rain.**	**60 days**	**SPPD will work in coordination with Site Coordinator to establish a solution**

Table 3. Status of Identified Locations of Concern on the South Park Landfill SPPD Property, April 20, 2022 Inspection

SPPD Location	Description	2021 Inspection		2022 Inspection			
		Recommended Action	Action Taken[1]	Condition Status	Recommended Action	Timeline for Repair and/or Reinspection	Recommended Action Assignment
G-3	New vegetation and rock around culvert. (Maintenance Report 11/2/21)	Work with Site Coordinator to prepare a plan to reestablish cover over the geomembrane. Potential solutions may include adding rock on top of the geomembrane. However, if this is done a cushion material should be provided to protect the geomembrane.	The culvert headwall was repaired using angular rock. There was no geomembrane exposed following the corrective action but no cushion material was installed to protect the underlying geomembrane as recommended in the 2021 Baseline Landfill Cap Inspection technical memorandum (Maintenance Report 11/2/21)	Improved	Improvements were made to this location and the geomembrane is no longer exposed. Reinspect every 6 months. If loss of vegetation or erosion exposes the geomembrane, actions recommended in 2021 should be taken.	6 months	Site Coordinator
G-4	**New grass cover over previously exposed geomembrane**	The configuration of the geomembrane and cover at the interface of the parking area does not appear to be in accordance with Figure 5 of the Interim Action Work Plan (IAWP). The geomembrane appears to be directly below the asphalt with no drainage layer or surfacing layer in between. Some locations show evidence of geomembrane damage. Along with Site Coordinator, prepare a plan to reestablish cover over the geomembrane. Most likely, the area should be exposed, and the geomembrane tested for damage before repairs should be made. The crest of slope should then be provided cover to the maximum extent possible considering the existing asphalt and curb configuration.	Exposed geomembrane areas within the work area were covered with 2 to 3 inches of unconsolidated topsoil then heavily seeded. Erosion control measures, which included Jute netting and secured with 6-inch staples, were installed on the steep slopes but not at the top of the hill adjacent to the paved cap. (Maintenance Report 11/2/21)	Improved	**Construction documentation should be used to determine how the installation was performed and how to bring the existing location back to design conditions. Currently exposed geomembrane should be cleaned and inspected for cracking or signs of failure. If geomembrane is in good condition, revegetated to the maximum extent practicable and monitored for erosion.**	**60 days**	**SPPD will work in coordination with Site Coordinator to establish a solution**
G-5	**New grass cover over previously exposed geomembrane**	See Location G-4 (#21-13) recommendations.	See Location G-4 activities.	Improved	**See Location G-4 2022 recommendations.**	**60 days**	**SPPD will work in coordination with Site Coordinator to establish a solution**
G-6	**New grass cover over previously exposed geomembrane**	See Location G-4 (#21-13) recommendations.	See Location G-4 activities.	Improved	**See Location G-4 2022 recommendations.**	**60 days**	**SPPD will work in coordination with Site Coordinator to establish a solution**
G-7	**Exposed and damaged geomembrane at the parking area interface**	See Location G-4 (#21-13) recommendations.	See Location G-4 activities.	No Change	**See Location G-4 2022 recommendations.**	**60 days**	**SPPD will work in coordination with Site Coordinator to establish a solution**

Table 3. Status of Identified Locations of Concern on the South Park Landfill SPPD Property, April 20, 2022 Inspection

SPPD Location	Description	2021 Inspection		2022 Inspection			
		Recommended Action	Action Taken[1]	Condition Status	Recommended Action	Timeline for Repair and/or Reinspection	Recommended Action Assignment
G-8	**Exposed geomembrane around manhole**	Work with Site Coordinator to prepare a plan to reestablish cover over the geomembrane. The geomembrane should be exposed and inspected. Based on the visible geomembrane at the manhole, the original cap installation did not adequately depress the geomembrane, nor provide adequate cover. Other visibly damaged geomembrane appears to be the result of the shallow cover and landscaping activities.	No Change	No Change	**Work with Site Coordinator to prepare a plan to re-establish cover over the geomembrane. The geomembrane should be carefully exposed so as to not damage the geomembrane and inspected to determine if it is excess material or part of the cover. Make repairs as necessary and install adequate cover soil in accordance with the IAWP.**	**60 days**	**SPPD will work in coordination with Site Coordinator to establish a solution**
G-9	**Bare patch**	-	-	New	**Re-establish vegetated cover.**	**60 days**	**SPPD**
G-10	**Exposed and damaged geomembrane at the parking area interface**	-	-	New	**See Location G-4 2022 recommendations.**	**60 days**	**SPPD will work in coordination with Site Coordinator to establish a solution**
Stormwater Management Facilities							
SW-1	**Standing water with a sheen**	-	-	New	**The bioswale has standing water with a sheen. The water should be tested to determine if the sheen is organic or total petroleum hydrocarbons (TPH) and dealt with accordingly. The standing water potentially does not meet the Department of Ecology's Stormwater Management Manual of Western Washington's design requirements. Along with Site Coordinator, prepare a plan to address this situation.**	**No later than end of calendar year**	**SPPD will work in coordination with Site Coordinator to establish a solution**
SW-2	**Invasive/Deep Rooted Plants**	The willow (salix sp.) and black cottonwood (populus balsamifera) growing along the edge of the west bioswale are native but deep-rooted species that shall be removed from the swale. See Appendix F for details and photos.	No Change	No Change	**The willow (salix sp.) and black cottonwood (populus balsamifera) growing along the edge of the west bioswale are native but deep-rooted species that shall be removed from the swale. See 2021 Annual Report for details and photos.**	**No later than end of calendar year**	**SPPD**

Notes:

[1] Maintenance Reports are provided in Appendix B2-B of the 2021 Operations, Maintenance, and Monitoring Annual Report, South Park Landfill (2021 Annual Report)

Locations with recommended repairs are in **BOLD** text.

Table 4. Status of Identified Locations of Concern in the South Park Landfill Right-of-Way, April 20, 2022 Inspection

ROW Location	Description	2021 Inspection		2022 Inspection			
		Recommended Action	Action Taken[1]	Condition Status	Recommended Action	Timeline for Repair and/or Reinspection	Recommended Action Assignment
Aspalt Concrete							
AC-1	**Cracks and pavement repair**	**A portion of the asphalt appears to be marked for repair. However, the marked portion does not include the entire area that should be repaired. SPU should coordinate with SDOT to expand the limits of repair. Ultimately the asphalt needs to be repaired.**	**A portion of the asphalt was repaired.**	**Improved**	**SPU should coordinate with SDOT to repair remaining area of asphalt.**	**No later than end of calendar year.**	**SPU to coordinate with SDOT**
AC-2	Asphalt cracking	-	-	New	Follow-up inspection	6 months	Site Coordinator
AC-3	Asphalt cracking and pot holes along side of street	-	-	New	Follow-up inspection	6 months	Site Coordinator

Notes:

[1] Maintenance Reports are provided in Appendix B2-B of the 2021 Operations, Maintenance, and Monitoring Annual Report, South Park Landfill (2021 Annual Report)

Locations with recommended repairs are in **BOLD** text.

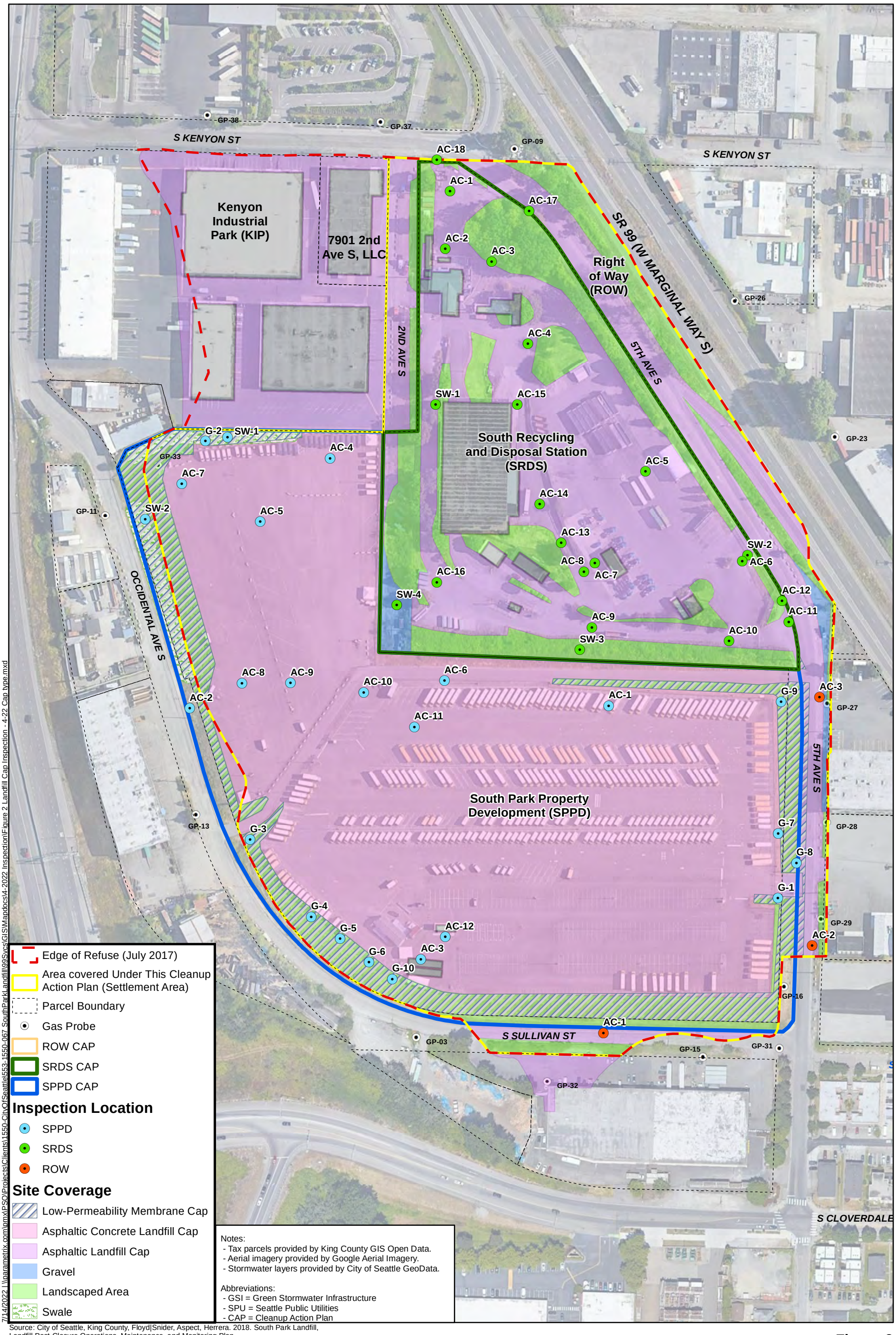
Figures

7/14/2022 | \\parametrix.com\pmx\PSO\Projects\Clients\1550-CityOfSeattle\553-1550-067 SouthParkLandfill\99Svcs\GIS\Mapdocs\4-2022 Inspection\Figure 1 Landfill Cap Inspection 4-22 - Site Plan with field data.mxd

Source: City of Seattle, King County, Floyd|Snider, Aspect, Herrera. 2018. South Park Landfill, Landfill Post-Closure Operations, Maintenance, and Monitoring Plan.

Parametrix

Figure 1
April 20, 2022 Landfill Cap Inspection
Site Plan
South Park Landfill
Seattle, WA

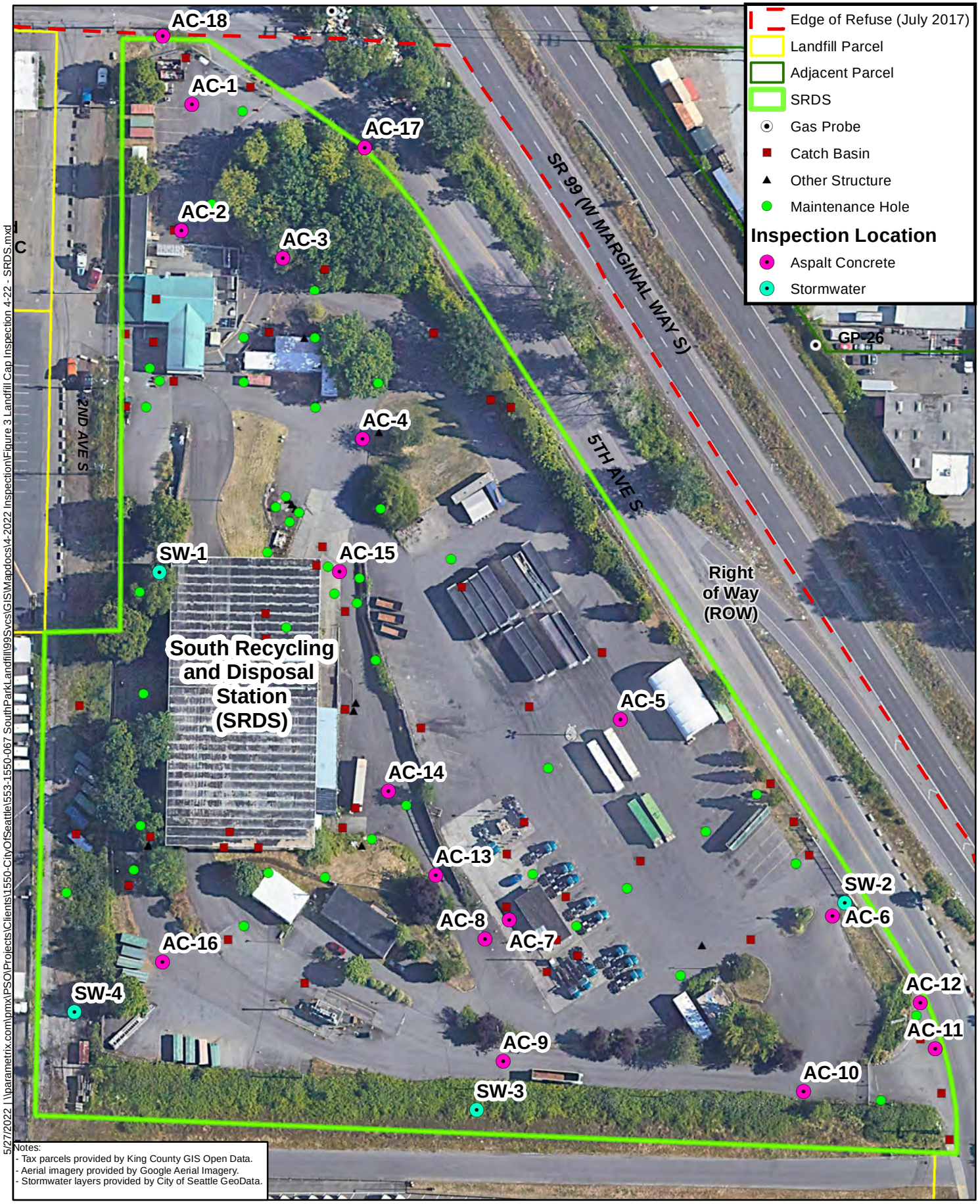


7/14/2022 \\parametrix.com\pmx\PSO\Projects\Clients\1550-CityOfSeattle\553-1550-067 SouthParkLandfill\99Svcs\GIS\Mapdocs\4-2022 Inspection\Figure 2 Landfill Cap Inspection - 4-22 Cap type.mxd

Source: City of Seattle, King County, Floyd|Snider, Aspect, Herrera. 2018. South Park Landfill, Landfill Post-Closure Operations, Maintenance, and Monitoring Plan.

Parametrix

Figure 2
April 20, 2022 Landfill Cap Inspection
Landfill Cover Material
South Park Landfill
Seattle, WA



5/27/2022 | \\parametrix.com\pmx\PSO\Projects\Clients\1550-CityOfSeattle\553-1550-067 SouthParkLandfill99Svcs\GIS\Mapdocs\4-2022 Inspection\Figure 3 Landfill Cap Inspection 4-22 - SRDS.mxd

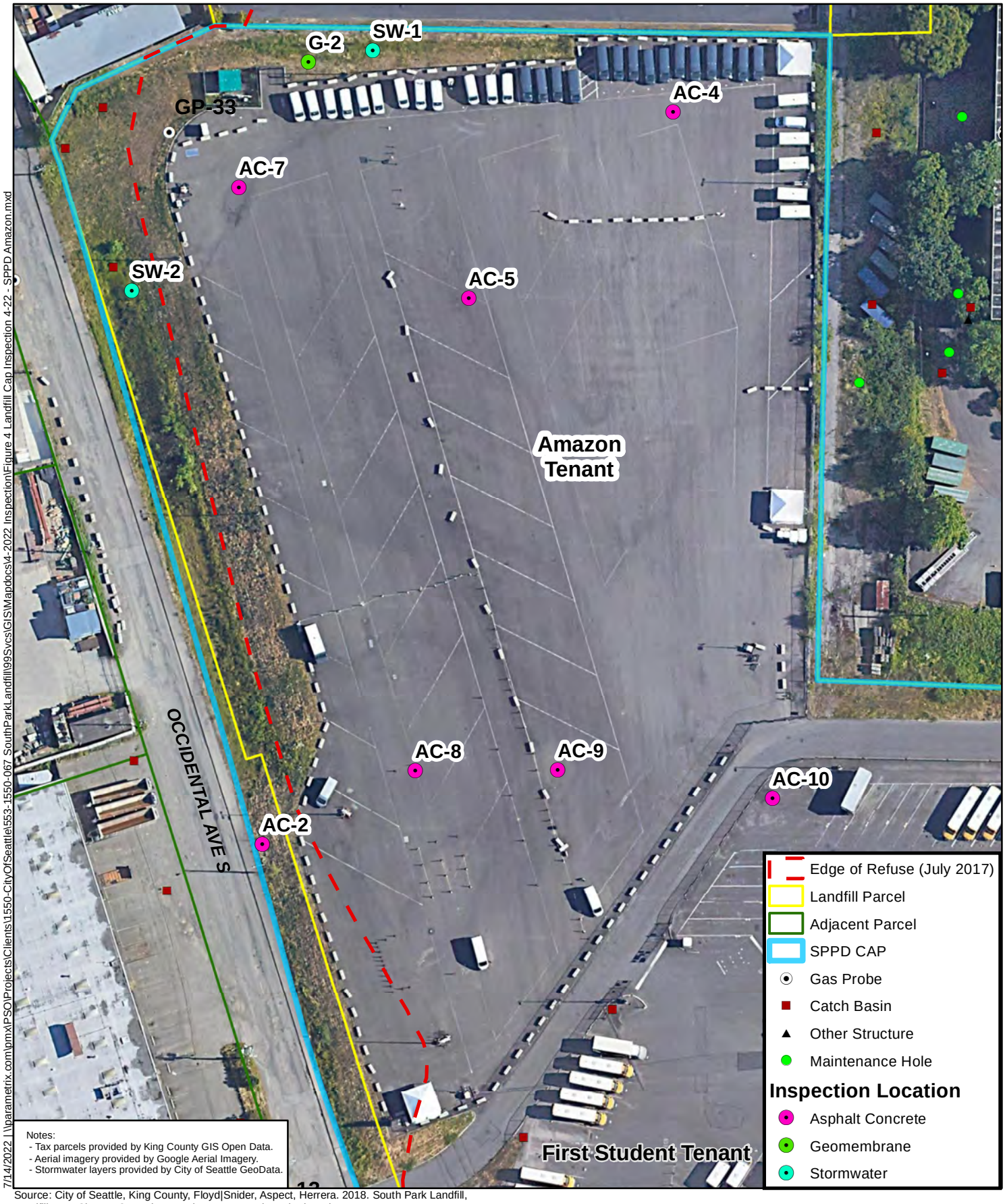
Notes:
- Tax parcels provided by King County GIS Open Data.
- Aerial imagery provided by Google Aerial Imagery.
- Stormwater layers provided by City of Seattle GeoData.

Source: City of Seattle, King County, Floyd|Snider, Aspect, Herrera. 2018. South Park Landfill, Landfill Post-Closure Operations, Maintenance, and Monitoring Plan.

Parametrix

0 50 100 200 Feet

Figure 3
April 20, 2022 Landfill Cap Inspection
SRDS Property
South Park Landfill
Seattle, WA



7/14/2022 | \\parametrix.com\pmx\PSO\Projects\Clients\1550-CityOfSeattle\553-1550-067 SouthParkLandfill\99Svcs\GIS\Mapdocs\4-2022 Inspection\Figure 4 Landfill Cap Inspection 4-22 - SPPD Amazon.mxd

Source: City of Seattle, King County, Floyd|Snider, Aspect, Herrera. 2018. South Park Landfill, Landfill Post-Closure Operations, Maintenance, and Monitoring Plan.

Parametrix

Figure 4
April 20, 2022 Landfill Cap Inspection
SPPD Property - Amazon Tenant
South Park Landfill
Seattle, WA

7/14/2022 I:\parametrix.com\pnw\PSO\Projects\Clients\1550-CityOfSeattle\553-1550-067 SouthParkLandfill\99Svcs\GIS\Mapdocs\4-2022 Inspection\Figure 5 Landfill Cap Inspection 4-22 - SPPD First Student.mxd

Source: City of Seattle, King County, Floyd|Snider, Aspect, Herrera. 2018. South Park Landfill, Landfill Post-Closure Operations, Maintenance, and Monitoring Plan.

Parametrix

Figure 5
April 20, 2022 Landfill Cap Inspection
SPPD Property - First Student Tenant
South Park Landfill
Seattle, WA

Attachment A

April 2022 Cap Inspection Forms

A-1

SRDS Cap Inspection Checklist

SOUTH PARK LANDFILL
CAP INSPECTION FORM A

Date: April 20, 2022	**Parcel Owner:** ☒ SRDS
Inspector(s): Tiffany Neier, Lisa Gilbert	☐ SPPD
	☐ Right-of-Way
Type of Inspection: ☒ Annual	
☐ Non-Routine Reason:	

Last Rain Event before Inspection: Daily precipitation observations from King County Hamm Creek Rain Station (HAU2).

Source: https://green2.kingcounty.gov/hydrology/DataDownload.aspx?G_ID=1517&Parameter=Precipitation

	4/14/22	4/15/22	4/16/22	4/17/22	4/18/22	4/19/22	4/20/22
Precipitation (in)	0.2	0.01	0.01	0	0.32	0.05	0.11

VISUAL INSPECTION CHECKLIST

Asphalt Concrete				
	Yes	**No**	**Needs Repair**	**If yes, describe:**
Minor cracking	☒	☐	☐	SRDS AC-1, 3, 6, 10, 12, 13, 15, 16: Minor asphalt cracking. Most likely due to age of pavement. No concerns at this time. Continue to monitor for further deterioration.
Open cracks/ruts	☒	☐	☐	SRDS AC-13: rut about 2-3" wide, less than 1' long, about 1-1.5" deep.
Differential settlement	☐	☒	☐	
Potholes	☒	☐	☒	SRDS AC-5: Pothole has gotten worse since 2021 inspection. There is concern about the integrity of the adjacent pavement. Pothole should be repaired.
Pooling or ponding	☒	☐	☐	SRDS AC-7: Visible ponding near vehicle wash area. Low spot in pavement is not centered on the nearest storm drain. Ponding depth is less than a few inches. Other areas of minor ponding at the site (AC-4, 7, 8, 9, 11, 17, 18) also need to be monitored. No concerns at this time.
Separation of pavement from curbs, gutters, or catch basins	☒	☐	☒	SRDS AC-2: Cracking in concrete slab around catch basin needs to be repaired.
Sloughing or crumbling of edge materials	☐	☒	☐	
Erosion	☒	☐	☐	SRDS AC-14: Minor pavement spalling with moss
Other signs of cap damage, failure, or disturbance	☐	☒	☐	

VISUAL INSPECTION CHECKLIST (continued)

Asphalt Concrete (continued)

Recommended Maintenance or Repair Type/Location:

SRDS AC-5: a pothole that needs to be repaired/filled. This continued sinking of pavement is concerning. If left unmitigated, the sinkhole will continue to allow runoff to seep below the asphaltic cap which could lead to water ponding underneath the cap. Runoff in this area should be reaching the next downstream catch basin instead of entering the pothole.

SRDS AC-2: there is cracking concrete at a catch basin that needs to be repaired.

Low-Permeability Geomembrane

	Yes	No	Needs Repair	If yes, describe:
Erosion of cover soil	☐	☒	☐	
Exposed geotextile	☐	☒	☐	
Holes/signs of unauthorized digging	☐	☒	☐	
Poor vegetative cover	☐	☒	☐	
Exposed geomembrane	☐	☒	☐	

Recommended Maintenance or Repair Type/Location:

Stormwater Management Facilities

	Yes	No	Needs Repair	If yes, describe:
Signs of water infiltration below structures	☐	☒	☐	
Erosion of soil	☐	☒	☐	
Exposed geotextile membrane	☐	☒	☐	
Holes/signs of unauthorized digging	☐	☒	☐	
Invasive/deep-rooted plants	☐	☒	☐	
Poor vegetative cover	☐	☒	☐	
Proper flow direction as designed	☒	☐	☒	SRDS SW-1 & 2: Obstructed catch basins

Recommended Maintenance or Repair Type/Location:

Remove obstruction on the catch basins at SRDS SW-1 & 2

Other Observations:

SW-3: Large landscaped area is incorrectly mapped as asphalt-concrete cap. Jeff Neuner from SPU met us at that location and indicated that there is geomembrane under that area.

SW-4: Potential stormwater run-on from SPPD.

Attach necessary documentation such as photographs, sketches, and additional notes.

See figures and inspection photos included in the cap inspection report.

A-2

SPPD Cap Inspection Checklist

SOUTH PARK LANDFILL
CAP INSPECTION FORM A

Date: April 20, 2022 **Inspector(s):** Tiffany Neier, Lisa Gilbert	**Parcel Owner:** ☐ SRDS ☒ SPPD ☐ Right-of-Way
Type of Inspection: ☒ Annual ☐ Non-Routine Reason:	

Last Rain Event before Inspection: Daily precipitation observations from King County Hamm Creek Rain Station (HAU2).
Source: https://green2.kingcounty.gov/hydrology/DataDownload.aspx?G_ID=1517&Parameter=Precipitation

	4/14/22	4/15/22	4/16/22	4/17/22	4/18/22	4/19/22	4/20/22
Precipitation (in)	0.2	0.01	0.01	0	0.32	0.05	0.11

VISUAL INSPECTION CHECKLIST

Asphalt Concrete				
	Yes	**No**	**Needs Repair**	**If yes, describe:**
Minor cracking	☐	☒	☐	
Open cracks/ruts	☐	☒	☐	
Differential settlement	☐	☒	☐	
Potholes	☐	☒	☐	
Pooling or ponding	☒	☐	☐	SPPD AC-2: Depression for ponding around fire hydrant. 9 locations (AC-1, AC-4, AC-5, AC-7 through AC-12) of minor ponding at the site need to be monitored. No concerns at this time.
Separation of pavement from curbs, gutters, or catch basins	☐	☒	☐	
Sloughing or crumbling of edge materials	☐	☒	☐	
Erosion	☐	☒	☐	
Other signs of cap damage, failure, or disturbance	☒	☐	☐	SPPD AC-3: There are new buildings with aprons that kept us from visualizing any potential penetrations, active drilling into the asphalt to anchor tent (depth unknown), holes noted in the cap from where the previous building was. These need to be checked to determine if the cap was fully penetrated.

VISUAL INSPECTION CHECKLIST (continued)

Asphalt Concrete (continued)

Recommended Maintenance or Repair Type/Location:

SPPD AC-2: Regrade for drainage away from fire hydrant.

SPPD AC-3: Detailed inspection of area for any further potential penetrations not immediately visible, determine if the drilled holes penetrated the cap, fill holes if so.

Other Observations:

SPPD AC-6: A new electric fence was installed around the perimeter of First Student. Monitor for a tight seal between post and asphalt.

Low-Permeability Geomembrane

	Yes	No	Needs Repair	If yes, describe:
Erosion of cover soil	☒	☐	☒	SPPD G-2: Minimal erosion of soil cover between the swale and parking area.
Exposed geotextile	☐	☒	☐	
Holes/signs of unauthorized digging	☐	☒	☐	
Poor vegetative cover	☒	☐	☒	SPPD G-9: bare patch in vegetation
Exposed geomembrane	☒	☐	☒	SPPD G-7, 10: Exposed and damaged geomembrane at the parking area interface SPPD G-8: Exposed geomembrane around maintenance hole

Recommended Maintenance or Repair Type/Location:

SPPD G-7, 8, & 10 need immediate attention. The black geomembrane is exposed in all of these locations. The membrane needs to be covered with 18" of topsoil in accordance with the Interim Action Work Plan (IAWP).

SPPD G-3, 4, 5, & 6 had some maintenance done but the maintenance report notes that the repair did not meet the criteria set forth in the 2021 Baseline Landfill Cap Inspection technical memorandum.

VISUAL INSPECTION CHECKLIST (continued)

Stormwater Management Facilities				
	Yes	**No**	**Needs Repair**	**If yes, describe:**
Signs of water infiltration below structures	☐	☒	☐	
Erosion of soil	☐	☒	☐	
Exposed geotextile membrane	☐	☒	☐	
Holes/signs of unauthorized digging	☐	☒	☐	
Invasive/deep-rooted plants	☒	☐	☒	SPPD SW-2: swale adjacent to Occidental Avenue South has willow and black cottonwood growing along the edge of the structure. These are native but deep-rooted species and should be removed.
Poor vegetative cover	☐	☒	☐	
Proper flow direction as designed	☐	☒	☒	SPPD SW-1: Standing water in north bioswale with a colorful sheen over the water

Recommended Maintenance or Repair Type/Location:

SPPD SW-1: The swale should be evaluated to determine if dredging and removal of herbaceous species would improve water conveyance and the water should be evaluated to see what is causing the sheen on the water.

SPPD SW-2: The willow and black cottonwood shrubs located within the west swale are deep-rooted plants and should be cut down and maintained.

Other Observations:

There were some areas of erosion and poor vegetated cover that are covered under the Low-Permeability Geomembrane checklist.

There was standing water in the west bioswale but that area has high groundwater and the standing water is likely groundwater since the swale is not lined

Attach necessary documentation such as photographs, sketches, and additional notes.

See figures and inspection photos included in the cap inspection report.

A-3

ROW Cap Inspection Checklist

SOUTH PARK LANDFILL
CAP INSPECTION FORM A

Date: April 20, 2022 **Inspector(s):** Tiffany Neier, Lisa Gilbert	**Parcel Owner:** ☐ SRDS ☐ SPPD ☒ Right-of-Way
Type of Inspection: ☒ Annual ☐ Non-Routine Reason:	

Last Rain Event before Inspection: Daily precipitation observations from King County Hamm Creek Rain Station (HAU2).

Source: https://green2.kingcounty.gov/hydrology/DataDownload.aspx?G_ID=1517&Parameter=Precipitation

	4/14/22	4/15/22	4/16/22	4/17/22	4/18/22	4/19/22	4/20/22
Precipitation (in)	0.2	0.01	0.01	0	0.32	0.05	0.11

VISUAL INSPECTION CHECKLIST

Asphalt Concrete				
	Yes	**No**	**Needs Repair**	**If yes, describe:**
Minor cracking	☒	☐	☐	ROW AC-2: cracking in the asphalt near a monitoring well. No concerns at this time. ROW AC-3: Cracking in the street. No concerns at this time.
Open cracks/ruts	☒	☐	☒	ROW AC-1: needs repair. There are large open cracks and ruts in the asphalt pavement. As shown in Figure 2, this area contains asphaltic concrete landfill cap and must be maintained in good condition.
Differential settlement	☐	☒	☐	
Potholes	☒	☒	☐	ROW AC-3: potholes along the road. No concerns at this time.
Pooling or ponding	☒	☒	☐	ROW AC-3: Ponding in the potholes. No concerns at this time.
Separation of pavement from curbs, gutters, or catch basins	☐	☒	☐	
Sloughing or crumbling of edge materials	☐	☒	☐	
Erosion	☐	☒	☐	
Other signs of cap damage, failure, or disturbance	☐	☒	☐	

Recommended Maintenance or Repair Type/Location:

ROW AC-1: Repair to the asphalt is needed by replacing the pavement. There is an area that has been repaired but the repair did not cover the entire area that needs replacing as shown in the attached photo for ROW AC-1.

VISUAL INSPECTION CHECKLIST (continued)

Low-Permeability Geomembrane				
	Yes	**No**	**Needs Repair**	**If yes, describe:**
Erosion of cover soil	☐	☐	☐	Not applicable to ROW.
Exposed geotextile	☐	☐	☐	Not applicable to ROW.
Holes/signs of unauthorized digging	☐	☐	☐	Not applicable to ROW.
Poor vegetative cover	☐	☐	☐	Not applicable to ROW.
Exposed geomembrane	☐	☐	☐	Not applicable to ROW.
Recommended Maintenance or Repair Type/Location:				

Stormwater Management Facilities				
	Yes	**No**	**Needs Repair**	**If yes, describe:**
Signs of water infiltration below structures	☐	☐	☐	Not applicable to ROW.
Erosion of soil	☐	☐	☐	Not applicable to ROW.
Exposed geotextile membrane	☐	☐	☐	Not applicable to ROW.
Holes/signs of unauthorized digging	☐	☐	☐	Not applicable to ROW.
Invasive/deep-rooted plants	☐	☐	☐	Not applicable to ROW.
Poor vegetative cover	☐	☐	☐	Not applicable to ROW.
Proper flow direction as designed	☐	☐	☐	Not applicable to ROW.
Recommended Maintenance or Repair Type/Location:				

Attach necessary documentation such as photographs, sketches, and additional notes.

See figures and inspection photos included in the cap inspection report.

Attachment B

April 2022 Cap Inspection Photographs

B-1

SRDS Cap Inspection Photographs

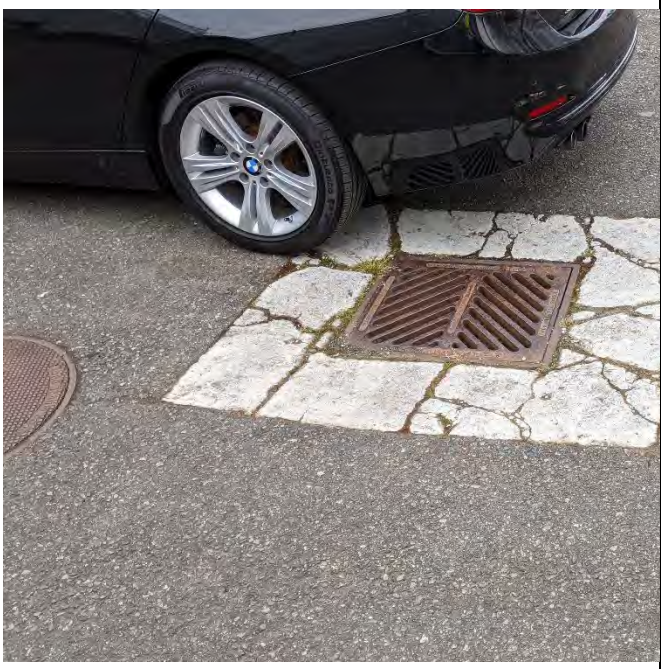
SRDS Photographs – April 20, 2022 Cap Inspection

Asphalt Concrete Cap (AC)

SRDS AC-1: Minor cracking

SRDS AC-1: Minor cracking

SRDS AC-2: Minor cracking and debris in catch basin



SRDS AC-2: Minor cracking and debris in catch basin

SRDS AC-3: Minor cracking and ponding

SRDS AC-3: Minor cracking

SRDS AC-4: Ponding

SRDS AC-5: Pothole

SRDS AC-6: Minor Cracking

SRDS AC-7: Ponding

SRDS AC-8: Sinkhole filled with gravel

SRDS AC-9: Ponding

SRDS AC-10: Minor cracking

SRDS AC-11: Ponding

SRDS AC-12: Minor cracking

SRDS AC-13: Minor cracking and rutting

SRDS AC-13: Pavement cracking and rutting

SRDS AC-14: Minor pavement spallding with moss

SRDS AC-15: Minor cracking

SRDS AC-16: Minor cracking

SRDS AC-17: Ponding

SRDS AC-18: Ponding

Stormwater Features (SW)

SRDS SW-1: Obstructed catch basin

SRDS SW-2: Obstructed catch basin

SRDS SW-3: Potential area of geomembrane

SRDS SW-4: Potential Run-on from SPPD

SRDS SW-4: Potential Run-on from SPPD

SRDS SW-4: Potential Run-on from SPPD

B-2

SPPD Cap Inspection Photographs

SPPD Photographs – April 20, 2022 Cap Inspection

Asphalt Concrete Cap (AC)

SPPD AC-2: Depression at fire hydrant

SPPD AC-3: New Buildings, potential cap penetration

SPPD AC-3: New Buildings, potential cap penetration

SPPD AC-3: New Buildings, potential cap penetration

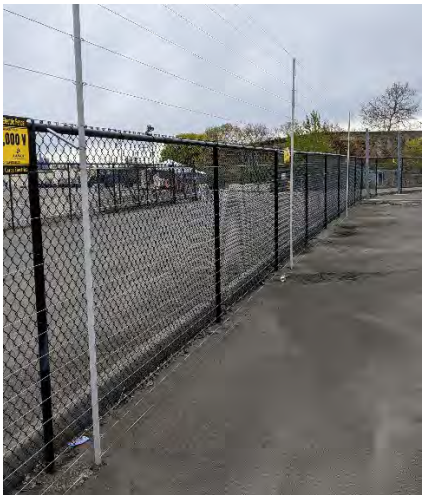
SPPD AC-3: Old building location, potential cap penetration

SPPD AC-4: Ponding

SPPD AC-5: Modification of asphalt

SPPD AC-6: New electric fence

SPPD AC-6: New electric fence



SPPD AC-6: New electric fence

SPPD AC-7: Several areas of ponding

SPPD AC-8: Ponding

SPPD AC-9: Ponding

SPPD AC-10: Ponding

SPPD AC-11: Ponding

SPPD AC-12: Ponding

Low Permeability Geomembrane Cap (G)

SPPD G-1: Unidentified pipes have been removed

SPPD G-1: Unidentified pipes have been removed

SPPD G-2: Erosion of soil cover

SPPD G-3: New vegetation and rock around culvert

SPPD G-4: New grass over membrane

SPPD G-5: New grass over membrane

SPPD G-6: New grass over geomembrane

SPPD G-7 Exposed and damaged geomembrane

SPPD G-7 Exposed and damaged geomembrane

SPPD G-8 Exposed geomembrane around manhole

SPPD G-9: Bare patch of soil

	
SPPD G-10: Exposed and damaged geomembrane	SPPD G-10: Exposed and damaged geomembrane

Stormwater Features (SW)

SPPD SW-1: Standing water in north bioswale with sheen

SPPD SW-2: Invasive/deep rooted plants

B-3

ROW Cap Inspection Photographs

ROW Photographs – April 20, 2022 Cap Inspection

Asphalt Concrete Cap (AC)

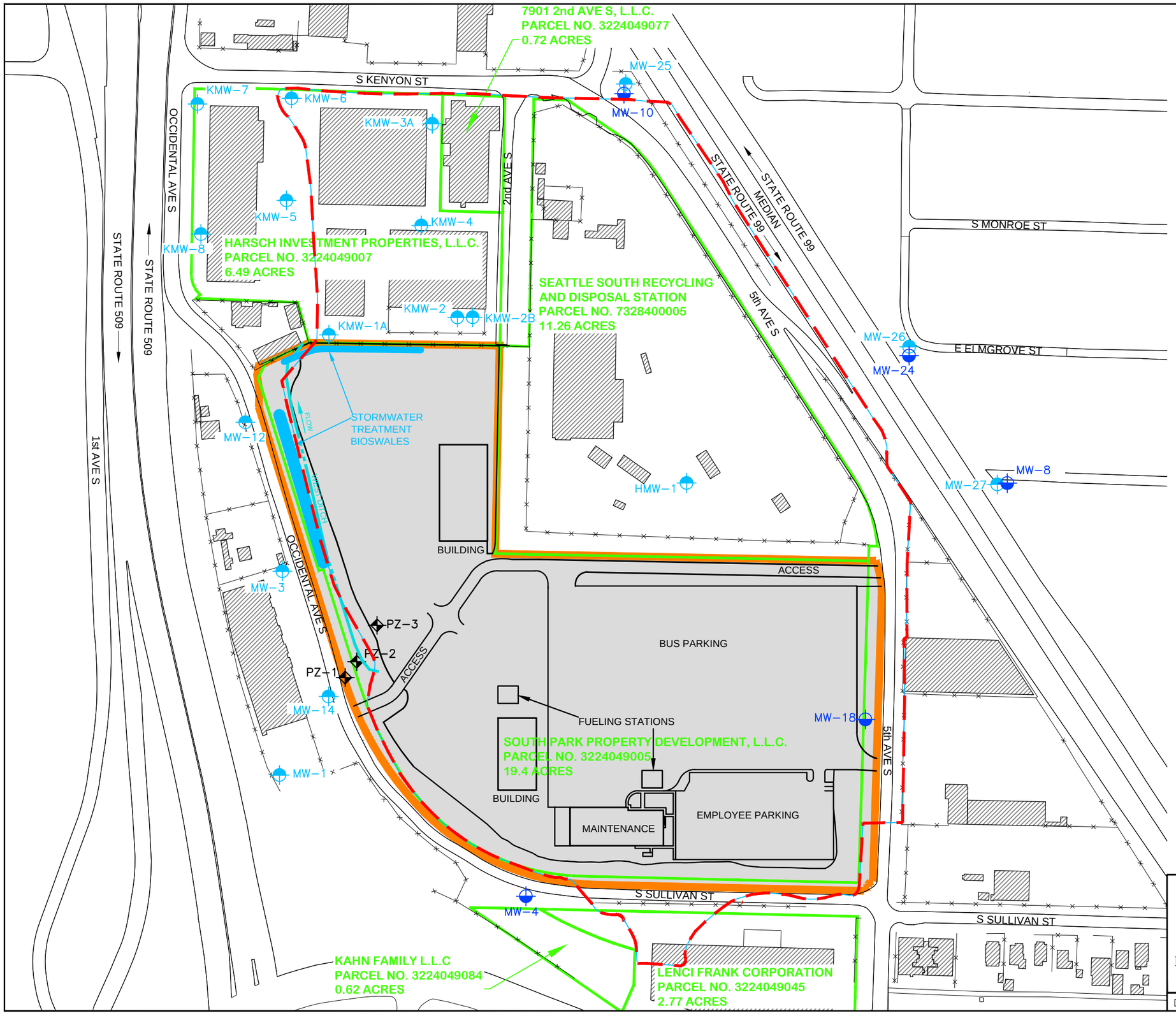
ROW AC-1: Cracks and pavement repair

ROW AC-2: Cracking

ROW AC-3: Cracking and pot holes

Attachment C

Figures 4 through 6 and
West Ditch Proposed Grading Sheet 1
of the Interim Action Work Plan



LEGEND

- INTERIM ACTION AREA
- SOUTH PARK LANDFILL BOUNDARY
- KING COUNTY TAX PARCEL BOUNDARY
- FENCE
- DITCH OR CHANNEL
- EXISTING BUILDING
- MONITORING WELL SCREENED IN UPPER ZONE OF SHALLOW AQUIFER (A-ZONE)
- MONITORING WELL SCREENED IN LOWER ZONE OF SHALLOW AQUIFER (B-ZONE)
- PIEZOMETER

NOTES:

1. FIGURE INCLUDES INFORMATION PRESENTED IN COLOR. PHOTOCOPIES MAY NOT DEPICT ALL INTENDED INFORMATION ON THE ORIGINAL DRAWING.
2. ALL LOCATIONS ARE APPROXIMATE

N

0 300

APPROXIMATE SCALE IN FEET

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

FIGURE 4

GENERAL SITE DEVELOPMENT PLAN
SOUTH PARK LANDFILL SITE
SEATTLE, WASHINGTON

FARALLON PN: 408-002

Drawn By: DEW	Checked By: CS	Date: 5/1/12	Disk Reference: BASEMAPb

F:\Projects\408 South Park Prop Dev\408002 SPPD Property Specific Work\Drawings_Plots\BASEMAPb.dwg, 5/1/2012 3:20:47 PM

WEST BIOSWALE AT APPROXIMATE ROAD SECTION 27+00

WEST SLOPE COVER SYSTEM | WEST BIOSWALE 17' | EAST SLOPE LOW-PERMEABILITY MEMBRANE CAP | ASPHALTIC CONCRETE CAP

OCCIDENTAL AVENUE SOUTH

APPROXIMATE ROAD ELEVATION +19'

PROPOSED SHOULDER IMPROVEMENTS

1.5' TO 3' IMPORTED FILL

APPROXIMATE PROPERTY BOUNDARY

APPROXIMATE LANDFILL BOUNDARY

EXISTING ASPHALT CONCRETE

APPROXIMATE TOP-OF-ASPHALT ELEVATION +24'

PROPOSED SPPD PROPERTY IMPROVEMENTS

6" TOPSOIL

1' IMPORTED FILL DRAINAGE LAYER

6" BEDDING LAYER

3:1

EXISTING SOIL COVER OVER SOLID WASTE (VARIABLE THICKNESS 0-48")

2' x 2' GRAVEL-FILLED GEOMEMBRANE ANCHOR

APPROXIMATE EXISTING GRADE

50 mil MINIMUM TEXTURED GEOMEMBRANE

SOLID WASTE

MARKER FABRIC PLACED ON PREPARED EXISTING GROUND SURFACE

2.5:1

1.5' IMPORTED FILL

APPROXIMATE FINISHED ELEVATION +12.9'

24" COLLECTOR STORM SEWER TO CAPTURE CURRENT TRIBUTARY INFLOWS TO WEST DITCH (APPROXIMATE INVERT ELEVATION +11.9')

PRE-CONSTRUCTION APPROXIMATE GROUNDWATER ELEVATION: +10.5'

SOLIDIFIED MATERIAL

APPROXIMATE ELEVATION = +5'

NATIVE MATERIAL

DRAINAGE (4' WIDE BY 2' DEEP TRENCH CUT INTO TOP OF SOLIDIFIED MASS AND FILLED WITH DRAIN ROCK)

A-ZONE OF ALLUVIAL AQUIFER

ESTUARINE DEPOSIT (APPROXIMATE ELEVATION BELOW WEST DITCH -10')

NOT TO SCALE
DRAFT

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

FIGURE 5

SCHEMATIC CROSS-SECTION:
ROAD STATION 27+100
SOUTH PARK LANDFILL SITE
SEATTLE, WASHINGTON

FARALLON PN: 408-002

Drawn By: DEW	Checked By: CS	Date: 5/1/12	Disk Reference: DITCH_DET

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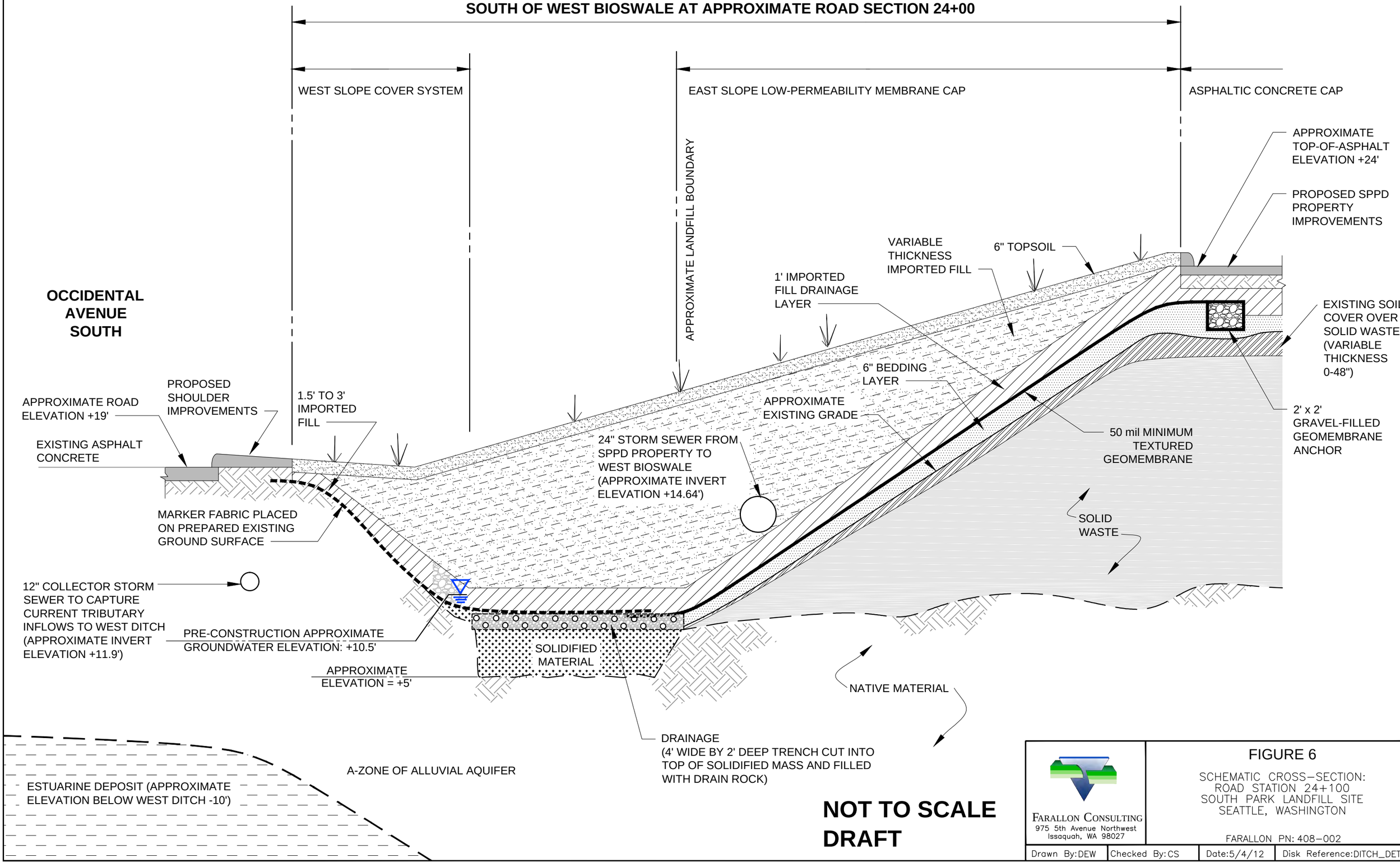
SOUTH OF WEST BIOSWALE AT APPROXIMATE ROAD SECTION 24+00



NOT TO SCALE
DRAFT

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

FIGURE 6

SCHEMATIC CROSS-SECTION:
ROAD STATION 24+100
SOUTH PARK LANDFILL SITE
SEATTLE, WASHINGTON

FARALLON PN: 408-002

Drawn By: DEW	Checked By: CS	Date: 5/4/12	Disk Reference: DITCH_DET

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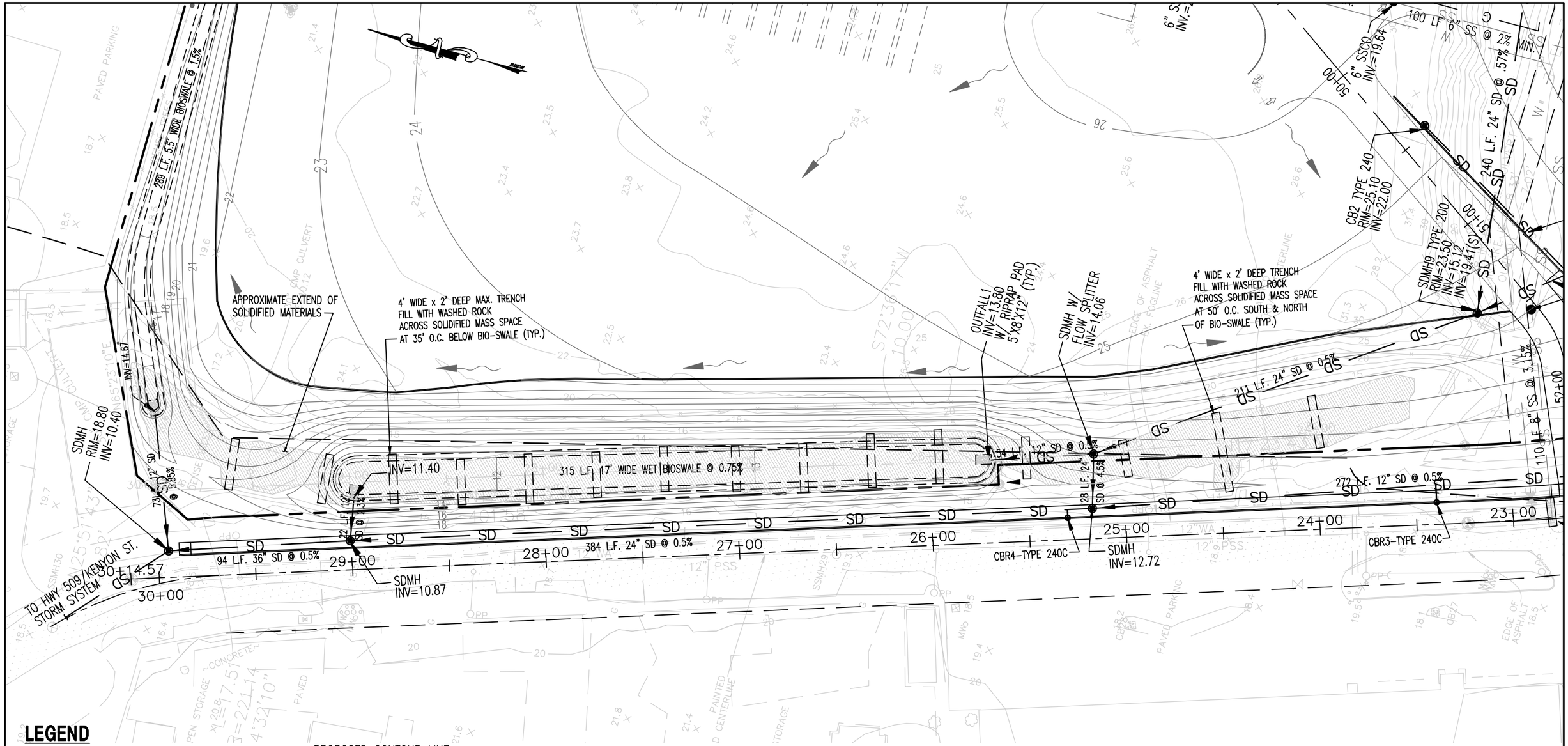

LEGEND

- PROPOSED CONTOUR LINE
- EXISTING CONTOUR
- PROPERTY (R/W) LINE
- APPROXIMATE LIMITS OF SOLID WASTE
- SD — PROPOSED STORM
- SS — PROPOSED SANITARY SEWER
- CENTER LINE OF R/W

VERTICAL DATUM:

C-O-S BENCH MARK

(NAVD 88) FOUND BRASS CAP LOCATED AT THE INT. OF S. KENYON ST. AND OCCIDENTAL AVE. S. ELEVATION ON CAP = 20.41'

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft.

exeltech
Lacey, WA Seattle, WA

PROJECT: SOUTH PARK LANDFILL	WEST DITCH INTERIM ACTION AND PROPOSED GRADING	DRAWN: CMC	CHECK: CMC
		SCALE: AS SHOWN	DATE: 04-25-2012
CLIENT: SOUTH PARK DEVELOPMENT LLC		JOB NO: 0716	SHEET NO: 1
		REVISION:	

P:\2007\0716 – South Park Land Fill\02–CADD\0716C3.0–DRAINAGE.dwg, 05–02–12, 4:23pm, cchin, 1