Balaraju, Panjini (ECY)

From: Dave Johnson <DJohnson@landauinc.com>
Sent: Friday, June 11, 2021 11:22 AM
To: Balaraju, Panjini (ECY)
Cc: Todd Sawin; tsantos@steilacoom.k12.wa.us; Lewis, Shawn
Subject: FW: Abitibi Consolidated Sales Corp, Site 2884
Attachments: Steilacoom HS Maintenance Facility Draft Environmental and Geotechnical Feasibility Study 1.31.2020.pdf; F01 Vicinity Map_updated_draft.pdf

Hello Mr. Balaraju,

I am following up on behalf of the Steilacoom School District. Please recall that we were in discussions about this Site about a year or more ago. The District is planning on constructing a maintenance facility on property they own (Parcel No. 7615000022) which was formerly used as the aeration stabilization basin (ASB) for Abitibi Corporation and the former mill works. See the attached documents for a brief background summary.

In summary:

Cleanup activities for the former mill property were completed in accordance with Agreed Order No. DE3154, dated November 29, 2006, between the Abitibi Consolidated Sales Corporation and the Washington State Department of Ecology (Ecology). In May 2009, Ecology issued a final cleanup action plan (CAP), and on March 31, 2010, a restrictive environmental covenant (EC) was recorded and established for Parcel Nos. 0220294002 and 0220294007. An EC was required, because cleanup actions did not result in complete remediation of known COCs. Following the cleanup actions, residual PAH-contaminated soil was detected near the main process area and arsenic-contaminated groundwater was detected throughout the site. Concentrations exceeded applicable MTCA CULs. Parcel No. 0220294002 is the parent parcel of Parcel No. 7615000022, which the District now owns and is considering developing with a new maintenance facility.

The District would like the restrictive covenant removed on parcel no. 7615000022 which is the daughter parcel of 0220294002 which has a recorded covenant that restricts groundwater usage due to elevated arsenic. The current EC does not really apply any longer to this parcel for various reasons which I can discuss in detail as needed. Would there be a good time to setup a meeting to discuss this with you and the next steps for the SD? I am fairly open next week so feel free to propose a time. I also want to give you enough time to get up to speed on this site again. If you have any immediate questions please give me a call and we can discuss as needed.

Thanks,

Dave Johnson, PE
Landau Associates

Direct: (360) 628-5243
Cell: (360) 319-7641

From: Dave Johnson
Sent: Thursday, April 23, 2020 10:15 AM

To: Balaraju, Panjini (ECY) <PBAL461@ECY.WA.GOV>
Subject: RE: Abitibi Consolidated Sales Corp, Site 2884

Hello Panjini,

I hope you are doing well these days. I am following up on behalf of the Steilacoom School District in regards to the Former Abitibi Consolidated Sales Corporation Site (Site ID 2884). The School District has requested Landau to work towards getting the Restrictive Environmental Covenant removed from the parcel they own (Parcel No. 7615000022). The current EC is no longer relevant or is required to be in place. The SD decided to move forward with construction of a new Maintenance Facility on the parcel. Recall we had some prior discussions in regards to parcel and EC.

Is there a time we could touch base to discuss the removal of the EC? I am pretty open this week or next so just let me know if there is a time that works. Thanks,

Dave Johnson, PE
Landau Associates

Direct: (360) 628-5243
Cell: (360) 319-7641

From: Balaraju, Panjini (ECY) [mailto:PBAL461@ECY.WA.GOV]
Sent: Wednesday, January 8, 2020 7:33 AM
To: Dave Johnson <DJohnson@landauinc.com>
Subject: RE: Abitibi Consolidated Sales Corp, Site 2884

Good morning Dave,

Few months ago Marv Coleman retired.

I will check the Restrictive Covenant and let you know. I am busy this week (I have Haz Mat Refresher class and other meetings), I will get back to you early next week.

Thanks.

Panjini Balaraju

From: Dave Johnson <DJohnson@landauinc.com>
Sent: Tuesday, January 7, 2020 4:36 PM
To: Balaraju, Panjini (ECY) <PBAL461@ECY.WA.GOV>; marv.coleman@ecy.wa.gov
Subject: Abitibi Consolidated Sales Corp, Site 2884

Hello Marv and Panjini,

I have a question in regards to the Abitibi Consolidated Sales Corp Site. Specifically, does the existing environmental covenant cover the Steilacoom School District owned property (Parcel No. 7615000022)?

https://epip.co.pierce.wa.us/cfapps/atr/epip/map.cfm?parcel=7615000022

Part of my confusion is the parcel numbers listed in the EC have changed. Who would be a good resource to discuss this with? Thx.

Dave Johnson, PE
Associate Engineer
Landau Associates

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955 Malin Lane SW, Suite B, Tumwater, WA 98501
www.landauinc.com

Draft Technical Memorandum

TO: Ms. Kasey Wyatt, KWA Consulting Group

FROM: Dave Johnson, PE, and Calvin McCaughan, PE

DATE: January 31, 2020

RE: **Environmental/Geotechnical Feasibility Study**
Steilacoom High School Maintenance Facility
Steilacoom, Washington
Project No. 0477002.010.011

Introduction

This technical memorandum summarizes the results of an environmental/geotechnical feasibility study completed by Landau Associates, Inc. (LAI) in support of the proposed Steilacoom High School Maintenance Facility project, located north of 54 Sentinel Drive in Steilacoom, Washington (site; Pierce County Tax Parcel No. 7615000022).

Services have been provided in accordance with the scope outlined in the Agreement for Consulting Services between Steilacoom Historical School District No. 1 (District; project owner) and LAI, dated January 15, 2020.

Site History

Based on information provided by AHBL, Inc. (project civil engineer) and KWA Consulting Group, LAI understands that the District is considering constructing a maintenance facility on the 13-acre site. The site is located directly north of Steilacoom High School, and is owned by the District.

The site was part of the now-defunct Abitibi West Tacoma Mill property. According to the remedial investigation and feasibility study report prepared by CH2M Hill (2007), the pulp- and paper-manufacturing mill operated from 1919 to 2000. During that time, the site was developed with a wastewater treatment facility that included a primary clarifier unit and aeration stabilization basin (ASB). The ASB had a 32 million-gallon capacity and occupied approximately 5.3 acres of the site. The ASB featured earthen perimeter berms and an impermeable membrane liner on its bottom and sidewalls. During mill operations, wastewater effluent in the ASB was biologically treated, and nutrients were added to sustain the biomass. Wastewater then was discharged to Puget Sound from a 30-inch-diameter outfall.

In 2001, during preparations for a property transfer, environmental site investigations identified constituents of concern (COCs) in the main process area (Figure 1). COCs included petroleum hydrocarbons, benzene, polycyclic aromatic hydrocarbons (PAHs), and arsenic, all detected at concentrations exceeding their respective Model Toxics Control Act (MTCA) cleanup levels (CULs).

In 2001, the ASB was emptied and permanently taken out of service, and all biomass above the impermeable liner was removed. Eleven soil samples were collected from the subsurface beneath the ASB, and analyzed for total petroleum hydrocarbons (TPHs), semi-volatile organic compounds (SVOCs), metals, and dioxins. In the soil samples, no COCs were detected at concentrations above MTCA CULs. Groundwater seep samples were collected from an area near the ASB. Laboratory analysis of the groundwater samples detected concentrations of arsenic above applicable MTCA CULs. The source of arsenic in groundwater is unknown, but is likely the result of naturally occurring background concentrations.

Cleanup activities for the former mill property were completed in accordance with Agreed Order No. DE3154, dated November 29, 2006, between the Abitibi Consolidated Sales Corporation and the Washington State Department of Ecology (Ecology). In May 2009, Ecology issued a final cleanup action plan (CAP), and on March 31, 2010, a restrictive environmental covenant (EC) was recorded and established for Parcel Nos. 0220294002 and 0220294007. An EC was required, because cleanup actions did not result in complete remediation of known COCs. Following the cleanup actions, residual PAH-contaminated soil was detected near the main process area and arsenic-contaminated groundwater was detected throughout the site. Concentrations exceeded applicable MTCA CULs. Parcel No. 0220294002 is the parent parcel of Parcel No. 7615000022, which the District is considering developing with a new maintenance facility.

Current Site Conditions

The site can be accessed via a gate in its southeastern corner, near an auxiliary parking lot used by Steilacoom High School. Site features include the former ASB and the remnants of a primary clarifier to the north. The ASB is surrounded by an earthen berm, which extends approximately 40 feet (ft) above the ASB floor. The southeastern portion of the berm was graded to a slightly lower elevation during construction of the auxiliary parking lot. All primary clarifier equipment has been removed, and all that remains is a concrete settling tank. ASB equipment, including the influent and aeration manifold piping, has been demolished and left in place. Parts of the impermeable membrane liner are exposed along the ASB floor and sidewalls. Partial revegetation of the ASB is evident where membrane breakthrough has occurred, with trees and shrubs visible in the depression.

A significant portion of the ASB surface is covered with debris associated with former wastewater treatment, including polyvinyl chloride (PVC)/plastic aeration piping and hoses, concrete and ductile iron piping, other large pieces of concrete, and mounded piles of the removed membrane. Crushed and intact storage drums and other metal fragments were also observed. No biosolids were observed within or around the ASB or the primary clarifier at the time of LAI's January 21, 2020 site visit, and no other industrial/treatment process equipment was observed in the concrete settling tank associated with the primary clarifier. The rest of the site consists of unpaved dirt access roads around the ASB

and small, densely forested areas. Miscellaneous tractor equipment was noted north of the ASB, adjacent to the primary clarifier.

Environmental Recommendations

Based on review of available cleanup documents and on the environmental conditions observed during LAI's January 21, 2020 site visit, developing the site with a maintenance facility is feasible, and should not require additional environmental investigation. A review of available documents indicates that there is no known history of an environmental release at the site. LAI recommends that the District take the following actions to address current and historical environmental conditions at the site:

- The District should ask Ecology to remove the restrictive EC for Parcel No. 7615000022, as it is no longer applicable. LAI contacted the current Ecology Site Cleanup Manager to discuss the EC and changes to parcel numbering. Based on that discussion and a review of the 2017 periodic review report (Ecology), LAI assumes that the EC will remain in place. If the EC remains in place, the District will need to notify Ecology of proposed development at the site.
- A hazardous building materials survey should be performed to evaluate the existing ductile iron piping and concrete cladding for asbestos. If asbestos-containing material is found to be present, it shall be properly disposed of –off site before fill is placed.
- All existing ASB influent or effluent wastewater piping should be removed from the site or properly abandoned-in-place before fill is placed. Only material that has been sampled and found not to contain asbestos should be abandoned-in-place.
- All PVC aeration piping, waste/debris material, and organic soils and plants not suitable for abandonment-in-place should be removed before fill is placed.
- The ASB impermeable membrane liner should be removed entirely or abandoned-in-place. If abandoned-in-place, the liner should be punctured to allow natural infiltration in areas of observed ponding. At a minimum, 2-ft-wide puncture trenches should be spaced at 50-ft intervals before fill is placed.

Geotechnical Recommendations

Geotechnical development of the site appears feasible, and will likely consist of infilling all, or a portion of, the ASB (a 40-ft fill). In its current condition, the site is well suited for stormwater infiltration. Setbacks from steep slopes should be considered during development of the site layout. The following sections summarize the findings of LAI's geotechnical feasibility study.

Aeration Stabilization Basin Fill Grading

Based on information provided by AHBL, fill materials will be imported from one or more of the following sources:

- **Pulling back the existing berms.** The existing ASB pond berms can be used as infill (i.e., pulling back). However, little subsurface data have been collected for the berms. LAI anticipates that

the berms consist of well-graded sand and gravel with variable cobble content (i.e., reworked Steilacoom gravel soil, the parent material that underlies the broader site).

If this source of fill is selected, LAI recommends that test pit explorations are completed prior to construction to characterize berm soils. For conceptual design, assume 90 percent of the berm material can be reused as fill; the other 10 percent will likely be oversized material and/or debris to be discarded.

- **Importing fill from other local projects.** With this approach, the fill prism is built gradually over months or years when free or low-cost material is available. At a minimum, import fill material should meet the criteria for Common Borrow in Section 9-03.14(3) of the Washington State Department of Transportation's 2020 *Standard Specifications for Road, Bridge, and Municipal Construction* (*2020 WSDOT Standard Specifications*). Common Borrow would be suitable for use as structural fill only during dry summer months, with ample time allowed for moisture conditioning. LAI notes that local fill often has an organic content in excess of 3 percent, and does not meet the criteria for Common Borrow.

  If this source of fill is selected, fill placement and compaction should be routinely inspected. Assume 2 ft of quality import structural fill will be required to cap the fill prism.

- **Importing quality structural fill.** This material should meet the criteria for Gravel Borrow in Section 9-03.14(1) of the *2020 WSDOT Standard Specifications.* The geotechnical engineer should be asked to review gradation testing and stockpile sources for local sand and gravel that will be used as import structural fill.

After waste/debris material has been removed, and the liner has been removed or punctured as described above, accessible subgrade areas should be proof-rolled in the presence of a qualified civil or geotechnical engineer, who is familiar with the site and can check for soft and/or disturbed areas.

New fill embankments should be constructed with 2 horizontal to 1 vertical (2H:1V) side slopes (or flatter), in accordance with Section 2-03 of the *2020 WSDOT Standard Specifications.* All fill should be placed and compacted in accordance with Section 2-03.3(14)C, Method C of the *2018 WSDOT Standard Specifications.* Compaction and moisture control tests should be performed in accordance with Section 2-03.3(14)D of the *2020 WSDOT Standard Specifications.* Alternatively, the maximum dry density and optimum water content can be determined using ASTM International standard test method D1557, *Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2,700 kN-m/m^3)).*

Soil Infiltration

To facilitate soil infiltration, gradation tests or onsite infiltration tests should be used during final design. Groundwater modeling also could be used to reduce the recommended slope buffers. To support conceptual design of soil infiltration facilities, LAI recommends the following:

- **Pulling back the existing berms.** Assume an infiltration rate of 10 inches per hour (liner removed) or 2 inches per hour (liner punctured) for facilities installed near the bottom of the ASB; these infiltration rates should be divided in half for facilities installed within reworked

berm fill. Maintain a 100-ft buffer from the top of slope (including a new fill slope) and a City of Steilacoom code-required setback from the new maintenance building.

- **Importing fill from other local projects.** Assume an infiltration rate of 10 inches per hour (liner removed) for facilities installed at the bottom of the ASB, and an infiltration rate of 0 inches per hour for facilities installed within new fill. LAI does not recommend puncturing the impermeable membrane liner if infiltration facilities will be installed beneath new site development consisting of Common Borrow fill; instead, the liner should be removed. Maintain a 100-ft buffer from the top of slope (including a new fill slope), and code-required setback from the new maintenance building.
- **Importing quality structural fill.** Assume an infiltration rate of 10 inches per hour (liner removed) or 2 inches per hour (liner punctured) for facilities installed at the bottom of the ASB; these infiltration rates should be divided in half for facilities installed within import Gravel Borrow fill prisms. Maintain a 100-ft buffer from the top of slope (including a new fill slope), and a code-required setback from the new maintenance building.
- **Areas outside the ASB footprint.** Provided a 100-ft slope buffer is maintained, infiltration facilities can be installed in the natural soils near the primary clarifier, following removal of the northern ASB berm. Assume an infiltration rate of 10 inches per hour for this area.

Slopes and Structure Setbacks

LAI recommends structures are set back from the top of new fill slopes (2H:1V or flatter); setbacks should be equivalent to the slope height. Permanent slopes should be vegetated to reduce the potential for soil erosion. These recommendations should not be applied to stormwater pond side slopes, which should be graded and covered in accordance with municipal stormwater code (typically 3H:1V). LAI recommends structures be set back 50 ft from the top of the natural steep slope, as shown on Figure 1. Setback recommendations may be adjusted during final design, based on site layout and reporting requirements for critical areas.

Slope setbacks should be provided for new access roads, parking lots, and utilities. LAI is available to discuss appropriate setback distances after conceptual grading plans have been developed. Slope buffers for infiltration facilities are provided in the previous section.

Foundation Support

Shallow foundation support of structures is feasible using the ASB fill-grading concepts described above. Shallow foundations also can be installed in areas outside of the ASB footprint.

Development Outside of the Aeration Stabilization Basin

Installing the maintenance facility in the vicinity of the primary clarifier may be feasible; however, the development footprint would be limited by setbacks from steep slopes to the north. Additionally, installation would require demolition of the clarifier, which could be costly.

An existing stockpile or berm west of the primary clarifier could be a source of fill, and test pits and soil sampling could be completed during a geotechnical site investigation. This stockpile may provide a barrier between the site and residential development to the west, and modifying it could have permitting implications.

Use of This Technical Memorandum

This technical memorandum has been prepared for the exclusive use of Steilacoom Historical School District No. 1 and its consultants for specific application to the proposed Steilacoom High School Maintenance Facility project in Steilacoom, Washington. Use of the information contained in this technical memorandum by others or for another project is at the user's sole risk. The findings and recommendations presented herein are based on the environmental and geotechnical feasibility study completed for the project.

Closing

We trust that this technical memorandum provides you with sufficient information to proceed with the project. If you have questions or comments, or if we may be of further service, please contact the undersigned at (360) 791-3178.

LANDAU ASSOCIATES, INC.

David Johnson, PE
Associate

Calvin McCaughan, PE
Principal

DEJ/CAM/mcs
[Y:\0477\002.010\R\STEILACOOM HS MAINTENANCE FACILITY ENVIRONMENTAL AND GEOTECHNICAL FEASIBILITY STUDY 1.31.2020.DOCX]

Attachments: Figure 1. Vicinity Map

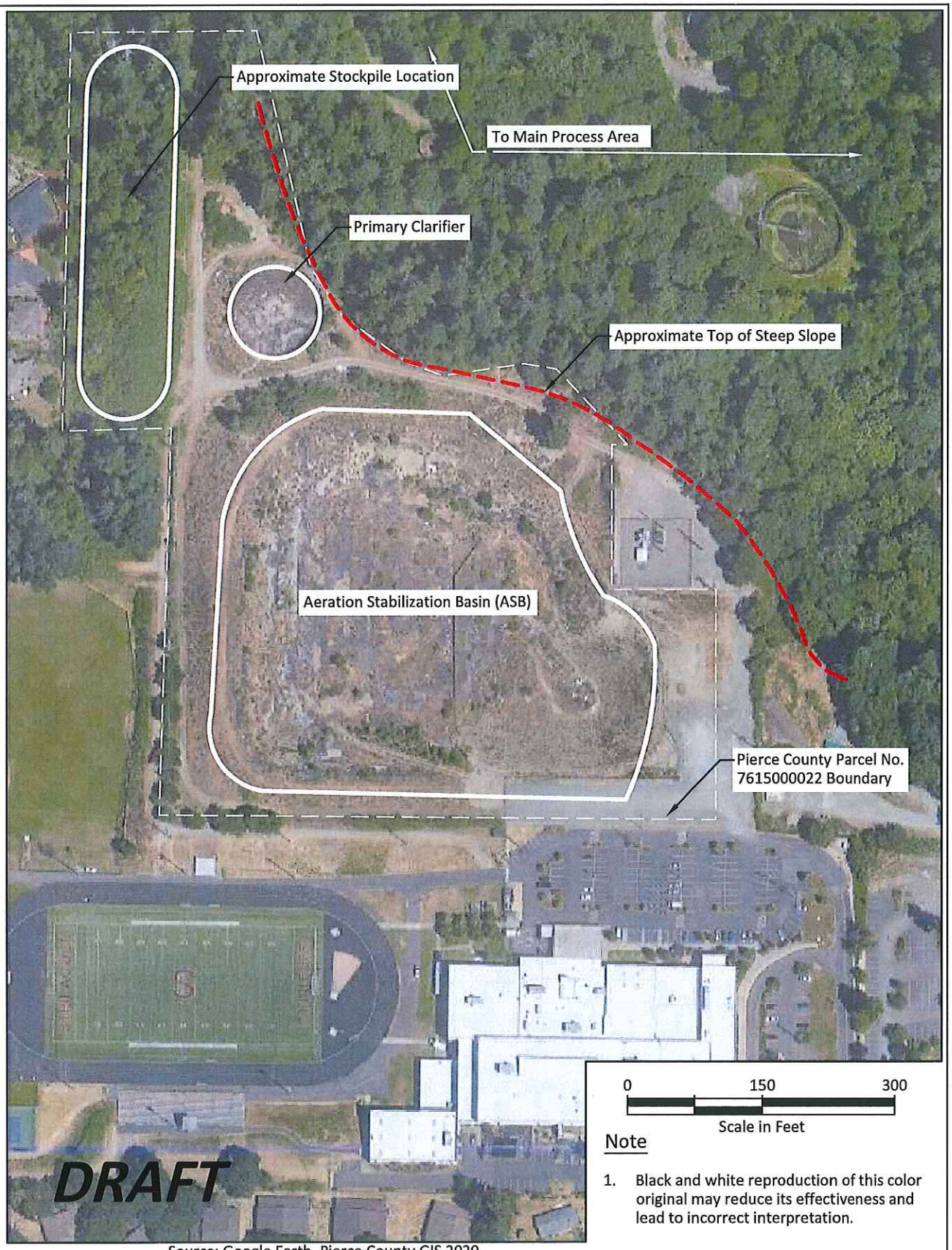
References

CH2M Hill. 2007. Final Remedial Investigation/Feasibility Study Report, Abitibi West Tacoma Mill. April.

Ecology. 2017. Final First Periodic Review Report, Abitibi Consolidated Sales Corp. Toxics Cleanup Program, Southwest Regional Office. March. Accessed January 17, 2020. Available online at: https://apps.ecology.wa.gov/gsp/DocViewer.ashx?did=62838.

Ecology. 2013. Letter of Satisfaction of Agreed Order No. DE 3154, Abitibi Consolidated Sales, Inc. Toxics Cleanup Program. April 10. Accessed January 17, 2020. Available online at: https://apps.ecology.wa.gov/gsp/DocViewer.ashx?did=19691.

WSDOT. 2019. *M 41-10: Standard Specifications for Road, Bridge, and Municipal Construction 2020. Washington State Department of Transportation.* September 1.



Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Source: Google Earth, Pierce County GIS 2020

LANDAU ASSOCIATES

Steilacoom High School Maintenance Facility
Geotechnical and Environmental Feasibility Study
Steilacoom, Washington

Vicinity Map

Figure 1

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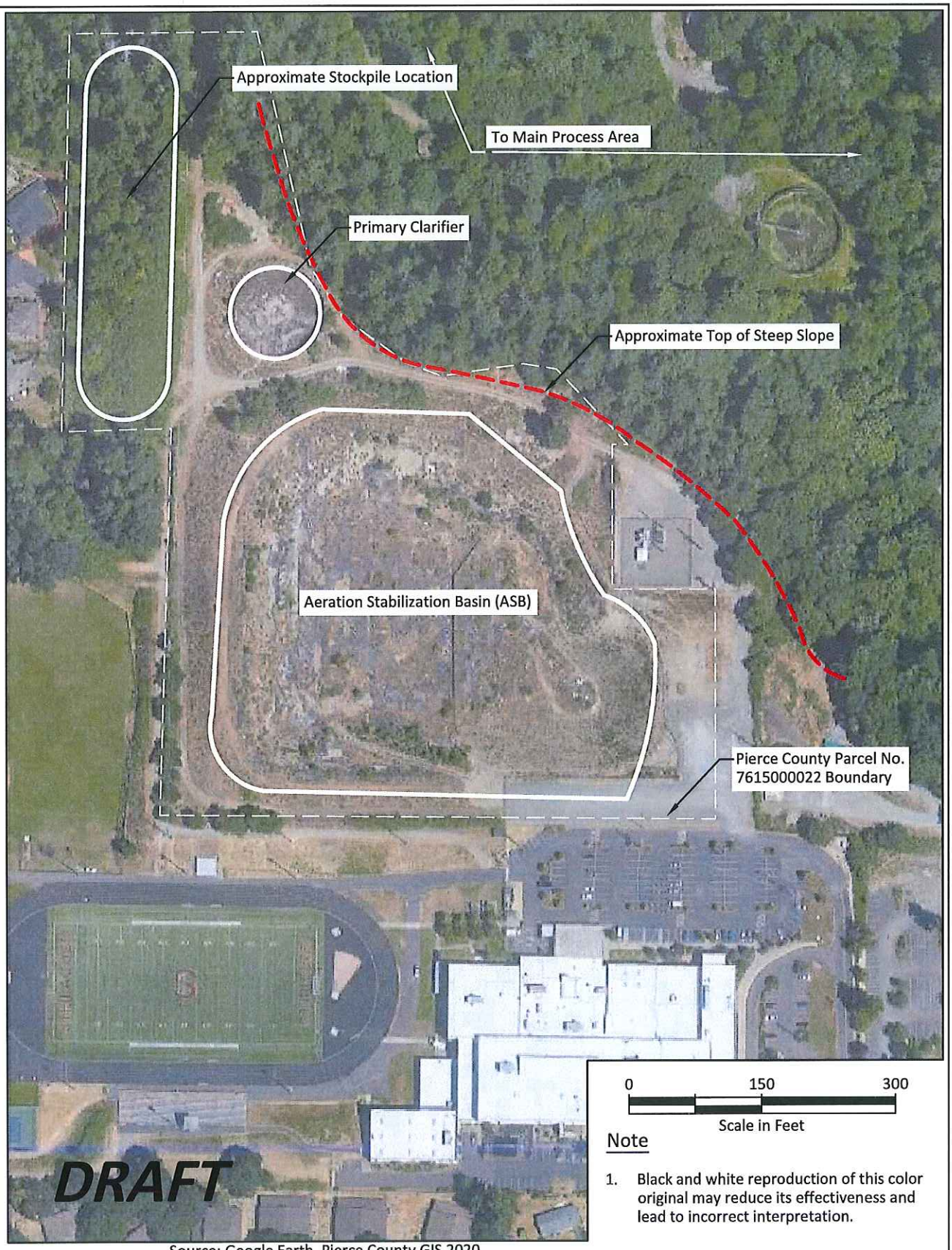

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Source: Google Earth, Pierce County GIS 2020

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Steilacoom High School Maintenance Facility
Geotechnical and Environmental Feasibility Study
Steilacoom, Washington

Vicinity Map

Figure 1