

Attachment 8



SEATTLE
RICHLAND
PORTLAND
FAIRBANKS
ANCHORAGE
DENVER
SAINT LOUIS

June 11, 2007

Alaska Demolition LLC
2903 Tanglewood Drive
Anchorage, Alaska 99517

Attn: Mr. Justin Green

**RE: STORM WATER PLAN REQUIREMENT, PRS INERT WASTE MONOFILL
PALMER, ALASKA**

This letter has been prepared by Shannon & Wilson Inc. (S&W) to address the applicability of storm water regulations under the National Pollutant Discharge Elimination System (NPDES) regulations for site activities at the Palmer Reclamation Site (PRS) inert waste monofill. Specifically, the document addresses the need for a Storm Water Pollution and Prevention Plan (SWPPP) under the NPDES regulations.

REGULATORY REQUIREMENTS FOR STORMWATER PLANS

The PRS facility is an inert waste monofill that is contained within a pre-existing quarry. Facility activities are permitted by the City of Palmer Planning and Zoning Commission Conditional Use Permit for Tax Parcel 17N02E08D008. The Conditional Use Permit requires under *Other Conditions*, Item #12 that "A storm water plan which meets applicable state law shall be prepared and implemented as approved."

Alaska state law regulates storm water management under the Environmental Protection Agency's (EPA) Clean Water Act and NPDES regulations. A SWPPP would be required for a NPDES storm water discharge permit, if such a permit was required for the PRS facility. The SWPPP serves to describe the potential sources of pollution that could enter storm water discharges, controls to retain sediment and remove pollutants, and other storm water management practices to protect water quality of receiving waters. However, the EPA states that "An industrial facility requires (NPDES) permit coverage for its storm water discharges under two conditions: 1) the runoff enters waters of the United States or enters a municipal separate storm sewer system before draining to waters of the U.S., and 2) the facility conducts an industrial activity as defined in the regulations (the Code of Federal Regulations at 40 CFR 122.26(b)(14)(i)-(xi))." A copy of the EPA Industrial Permitting Decision Tree is attached.

Mr. Nathan Patry of the Alaska Department of Environmental Conservation (ADEC) Division of Water was contacted on April 30, 2007 regarding the need for a SWPPP for the PRS facility. Mr. Patry indicated that if the storm water from the facility activities is captured on-site and allowed to evaporate, infiltrate the ground surface, or is used for irrigation, coverage under the NPDES permit is generally not necessary. In this circumstance, development and implementation of a SWPPP would not be required.

OVERVIEW OF SITE DRAINAGE CHARACTERISTICS

The PRS inert waste monofill is contained within a pre-existing quarry. The facility's industrial activities are conducted entirely within the existing excavation, at a lower elevation than the local surface grade. Accordingly, storm water within the monofill is contained entirely on-site, with negligible potential for runoff or other off-site conveyance. In accordance with the site's solid waste disposal permit, the fill area was evaluated for potential to accumulate standing water. Through the initial 1 to 1.5 years of operation, permanent ponded water was not observed by the on-site operators, or by occasional site visits by S&W personnel. During extended periods of heavy rainfall, it is reported that water temporarily accumulates in localized depressions, but completely infiltrates the underlying soil within one to two days following cessation of precipitation.

Storm water from nearby properties also drains to the open excavation. Of particular note is a culvert outlet near the site's northeast corner. This area was regularly monitored by site operators to evaluate potential impact of storm water drainage into the monofill. Based on these observations, there was less flow than anticipated, particularly during the spring thaw when snowmelt was expected to create a temporary storm water surge. We understand that at no time did storm water discharge through the culvert create standing water within the monofill pit.

CONCLUSIONS

Based on the site's drainage characteristics, the site does not presently generate a regulated storm water discharge. Precipitation and runoff is contained within the site boundaries, and infiltrates the ground surface instead of draining to a surface water body or municipal storm sewer system. Therefore, it is our professional opinion that a SWPPP is not required for the PRS facility at this time.

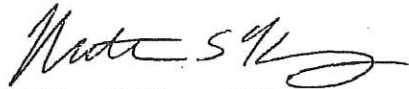
LIMITATIONS

The conclusions presented in this letter are based on site conditions and industrial activities reported by Alaska Demolition staff, and as observed by a Shannon & Wilson Inc. representative on November 3, 2005. It is assumed that the information provided is representative of the conditions and industrial activities throughout the site. The evaluation performed can only provide you with our best judgment as to the environmental characteristics of this site, and in no way guarantees that an agency or its staff will reach the same conclusions as Shannon & Wilson, Inc. The information presented in this letter should be considered representative of the time of our site assessment. Changes in site conditions can occur over time due to natural forces or human activity. In addition, changes in government codes, regulations, or laws may occur. Because of such changes beyond our control, our observations and interpretations for this site may need to be revised.

If you have questions or comments regarding this submittal, please contact the undersigned at (907) 561-2120. We look forward to the opportunity to continue providing environmental consulting needs on this project.

Sincerely,

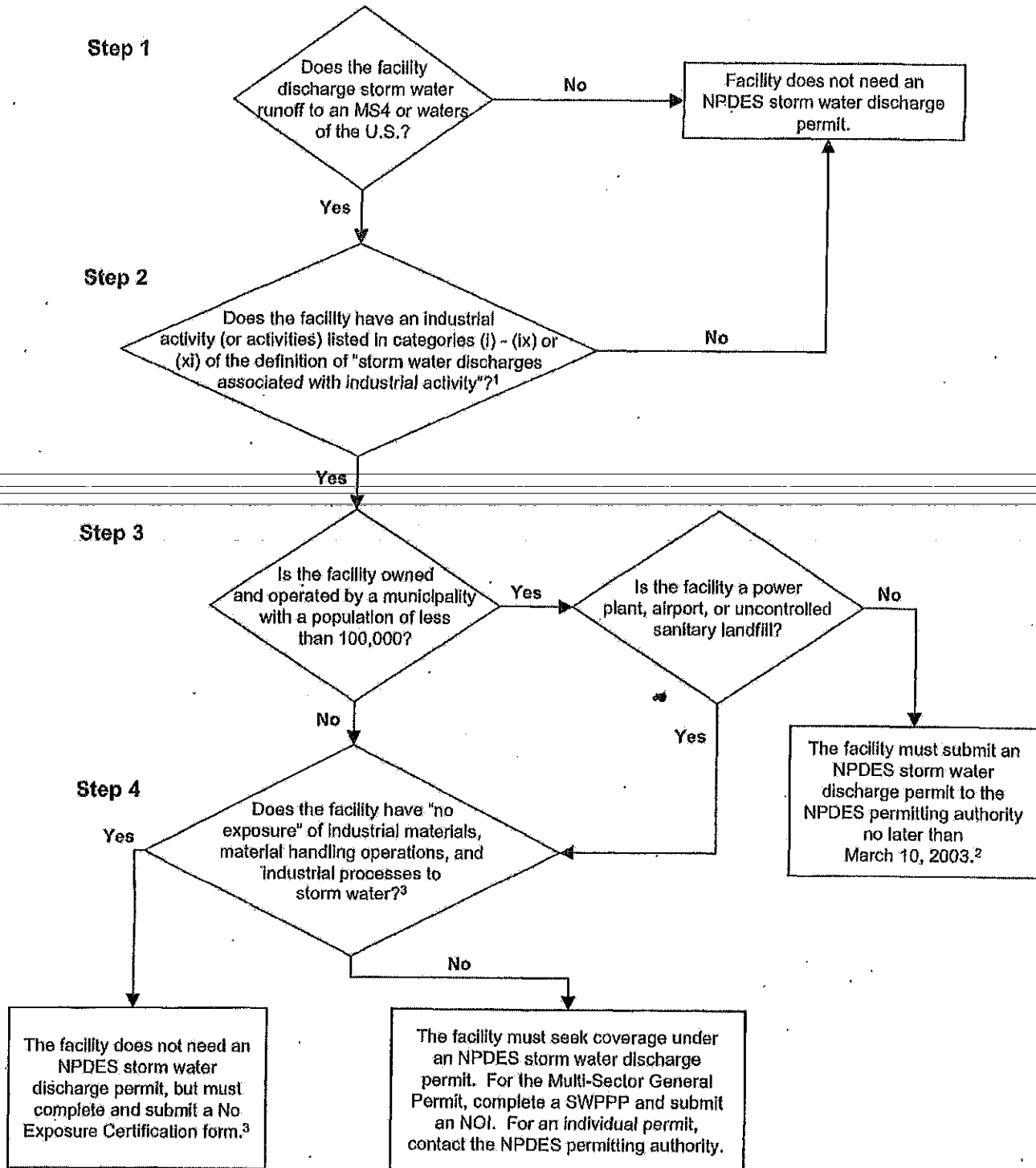
SHANNON & WILSON, INC.



Matthew S. Hemry, P.E.
Vice President

Enc: EPA Industrial Permitting Decision Tree

Industrial Facilities Storm Water Program Permitting Decision Tree



1. See 40 CFR 122.26(b)(14)(i)-(ix), (xi).

2. See new 122.26(e)(1)(ii). A permit is required unless there is a condition of no exposure as defined at new 122.26(g).

3. See new 122.26(g) for the definition of "no exposure" and the certification requirements.

Attachment 9



THE STATE
of ALASKA
GOVERNOR BILL WALKER

March 13, 2017

Mr. Justin T.F. Green
Alaska Demolition, LLC
2817 Rampart Dr.
Anchorage, AK 99501

Subject: Palmer AK Demo Construction & Demolition Waste Monofill
Solid Waste Permit No. SWZA004-19a

Dear Mr. Green:

The Alaska Department of Environmental Conservation (ADEC) has completed its evaluation of the Alaska Demolition, LLC (AK Demo) request for modification of the Palmer Construction & Demolition (C&D) Waste Monofill permit, #SWZA004-19. The modification will include an expansion of operations into Cell 2, adjacent to the current monofill cell. The modification was public noticed in the Mat-Su Valley Frontiersman on November 27 and 29, 2015. ADEC hereby modifies the permit and reissues it as #SWZA004-19a. This permit is being modified in accordance with Alaska Statute (AS) 46.03; Title 18, Chapter 15 of the Alaska Administrative Code (18 AAC 15); and the Solid Waste Regulations (18 AAC 60). Please review the conditions and stipulations in the permit and ensure that they are understood.

Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195 - 18 AAC 15.340 or an informal review by the Division Director in accordance with 18 AAC 15.185. **Informal review requests** must be delivered to the Division Director, Alaska Department of Environmental Conservation, 555 Cordova Street, Anchorage, AK 99501 within 15 days of the permit decision. **Adjudicatory hearing requests** must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99801, within 30 days of the permit decision. If a hearing is not requested within 30 days, the right to appeal is waived. More information regarding submitting a request for an informal review or adjudicatory hearing may be found at www.dec.state.ak.us/commish/ReviewGuidance.htm. Even if an adjudicatory hearing has been requested and granted, all permit conditions remain in effect unless a stay has been granted.

Please contact Reese Thieme at (907) 269-7590 or by email at reese.thieme@alaska.gov if you have any questions, or require any additional information.

Sincerely,

A handwritten signature in blue ink, appearing to be "Lori Aldrich".

Lori Aldrich
Solid Waste Regional Program Manager

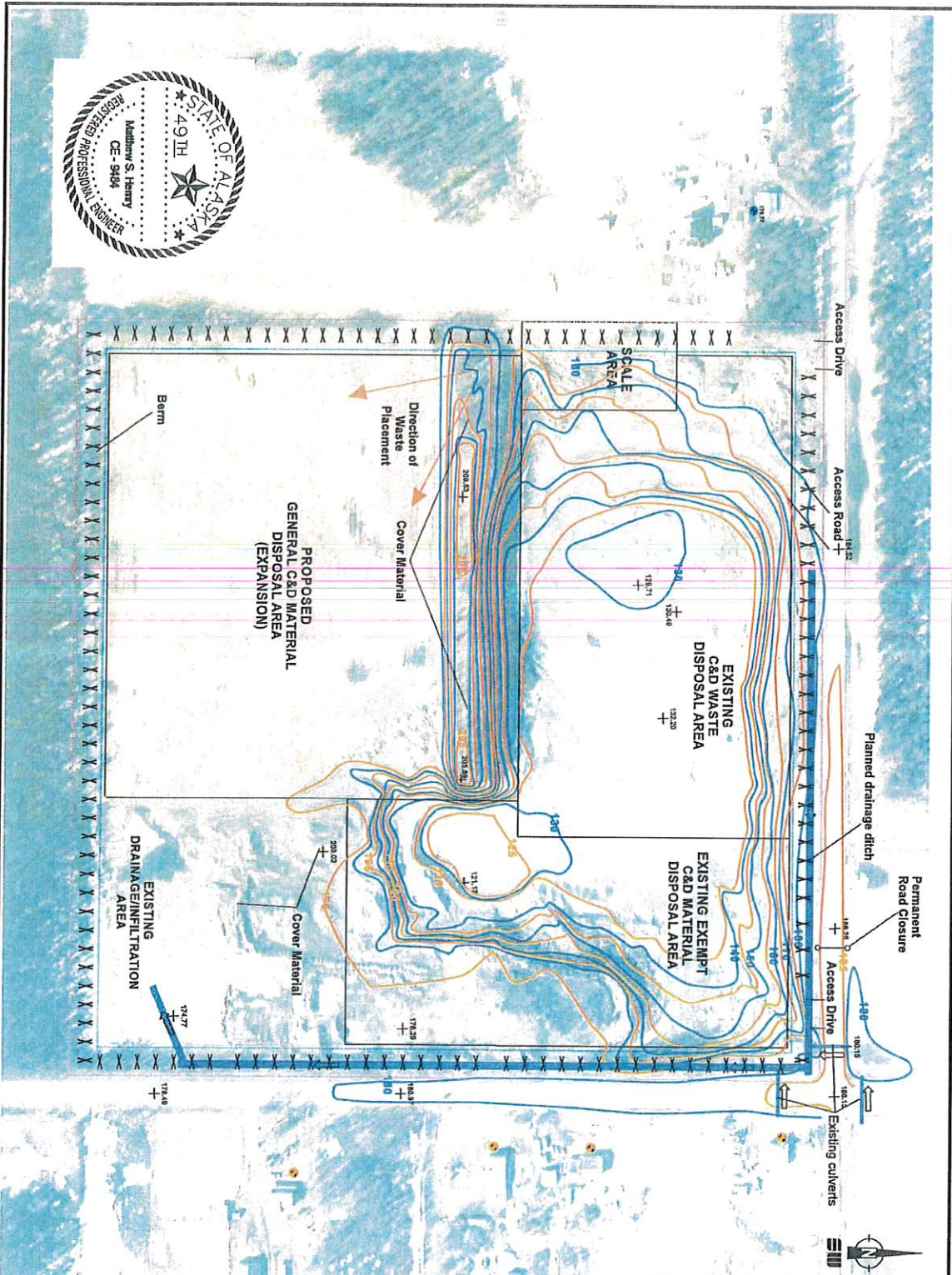
Enclosure: Permit #SWZA004-19a, expiring on April 1, 2019.

Department of Environmental
Conservation

DIVISION OF ENVIRONMENTAL HEALTH
Solid Waste Program

555 Cordova Street
Anchorage, AK 99501
Phone: 907.269.7802
Fax: 907.269.7600
www.dec.alaska.gov

Certified Mail #7016 2070 0000 6898 9227
Return Receipt Requested



LEGEND

- Approximate location of a drinking water well. Precise on-property location of well was not identified. For conservatism, the drinking water wells are assumed to be located west of each residence.
- Surveyed location of abandoned water well used to establish depth to groundwater at the project site.
- Property boundary - a fence will be installed along the property boundary to restrict site access.
- Fifty-foot setback from property boundary
- Potential drainage ditches and/or retention swales
- Water drainage flow direction
- Selected survey point locations are shown with elevation in feet above mean sea level.
- Berm

NOTES

The nearest earthquake fault is the Border Ranges Fault, located about 7 miles southeast of the site at its closest point.

Regional groundwater flow is to the south.

The site is not located within a floodplain.

There is not permafrost at the project location.

Groundwater is located about 26 feet below the lowest point of the landfill. Based on USGS water level records for a nearby well, the highest anticipated groundwater level will be about 18 feet below the lowest point of the landfill.

There is no known unstable ground at the facility.

Red arrows indicate direction of waste placement.



Palmer Reclamation Site Palmer, Alaska	
SITE MAP	
August 2015	32-1-16736
SHANNON & WILSON, INC. Geotechnical & Environmental Consultants	
Fig. 2	



April 2, 2024

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

This map is for
Service is not
base data sho
be used in acc
Wetlands Map

550 Rebarcheck Avenue and Surrounding Water Wells

Well Locations obtained from ADNR Well Log Tracking System

LEGEND



WELL LOCATIONS AS SHOWN ON ADNR WELLS MAPPER

Area within approximately 1/2 mile of PRS

Palmer Reclamation Site (PRS) Property

E Rebarcheck Ave

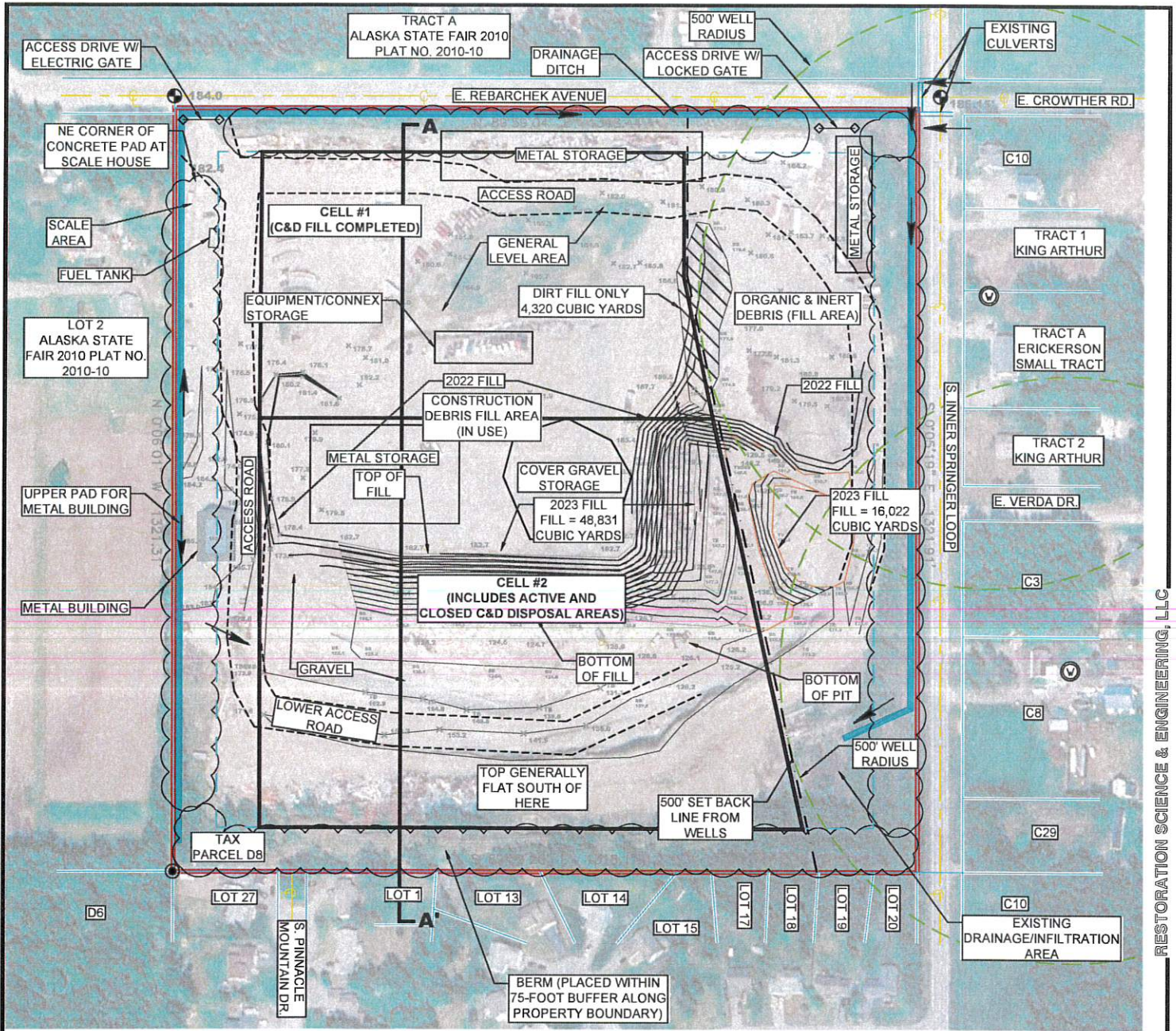
NOTE: ADNR WELTS MAPPER IDENTIFIED WELL LOCATIONS MAY NOT BE CORRECT

Google Earth

Image © 2024 Airbus

3000 ft

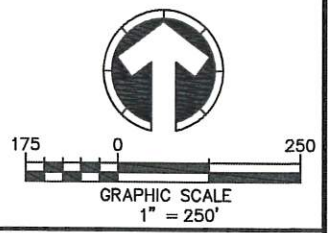




RESTORATION SCIENCE & ENGINEERING, LLC

NOTES

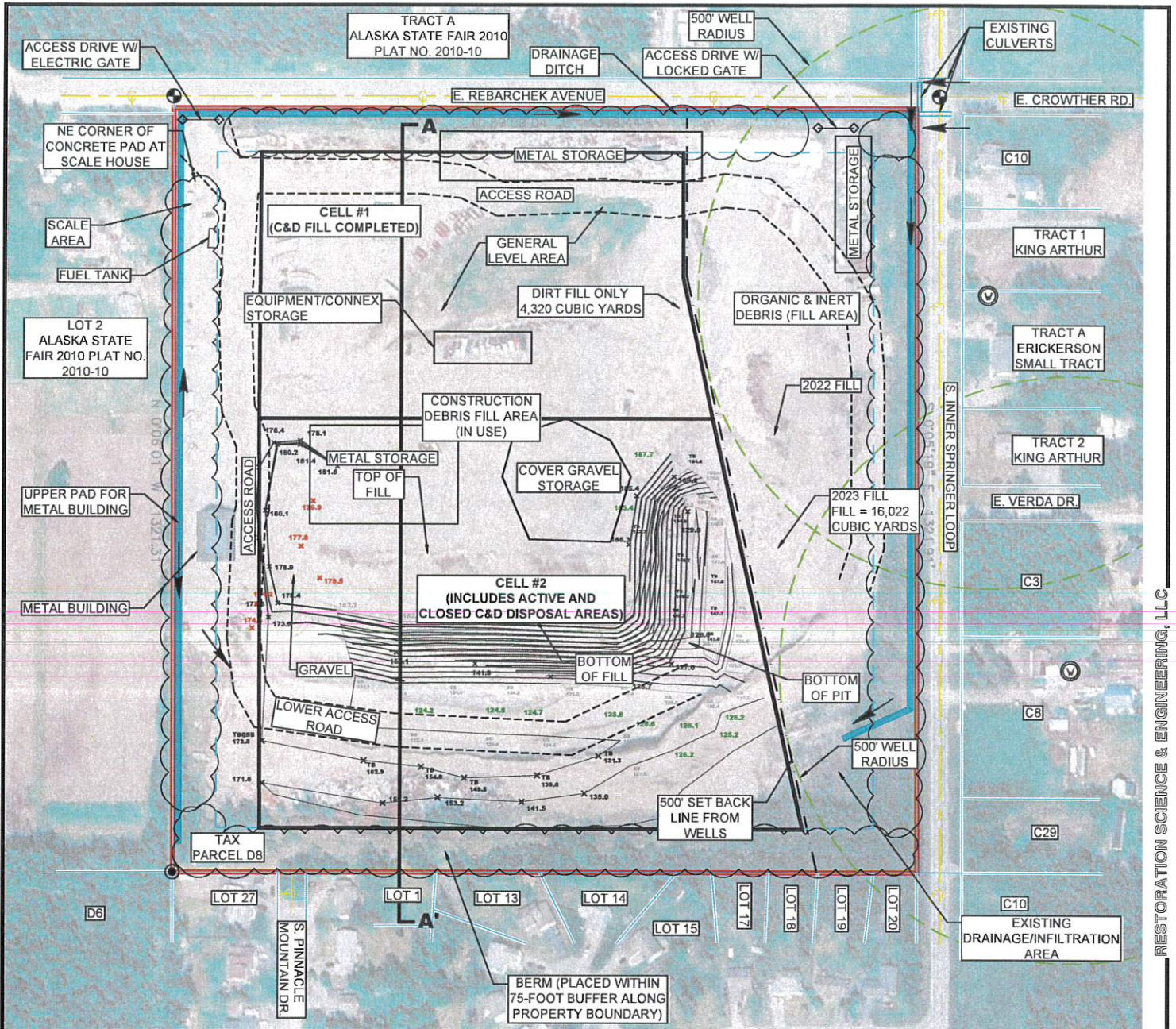
1. SURVEY BASEMAP DATED AUGUST 14, 2023 PROVIDED BY DENALI NORTH.
2. OTHER SITE MAP DRAINAGE AND NOTES OBTAINED FROM SHANNON & WILSON SEPTEMBER 2018 FIGURE 1 SITE MAP.
3. THE NEAREST EARTHQUAKE FAULT IS THE BORDER RANGES FAULT, LOCATED ABOUT 7 MILES SOUTHEAST OF THE SITE AT ITS CLOSEST POINT.
4. REGIONAL GROUNDWATER FLOW IS TO THE SOUTH.
5. THE SITE IS NOT LOCATED ON A FLOODPLAIN.
6. THERE IS NOT PERMAFROST AT THE PROJECT LOCATION.
7. GROUNDWATER IS LOCATED ABOUT 26 FEET BELOW THE LOWEST POINT OF THE LANDFILL.
8. BASED ON USGS WATER LEVEL RECORDS FOR NEARBY WELL, THE HIGHEST ANTICIPATED.
9. GROUNDWATER LEVEL WILL BE ABOUT 18 FEET BELOW THE LOWEST POINT OF THE LANDFILL.
10. THERE IS NO KNOWN UNSTABLE GROUND AT THE FACILITY.
11. CONTOUR LINES FOR ELEVATION ARE FROM SURVEY PRIOR TO INITIAL CELL CONSTRUCTION.
12. WELL LOCATION ONLY FOUND ON TRACT A ERICKERSON SMALL AND TAX PARCEL C8.
13. WELL LOCATION SURVEY DONE MARCH 8TH/ 2023.
14. SEE FIGURE 4 FOR PROFILE A-A.



LEGEND

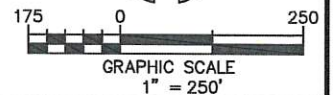
- APPROXIMATE PARCEL BOUNDARY
- ADJACENT LOTS
- EXISTING BUILDING
- SETBACK (BUFFER FROM PROPERTY BOUNDARY)
- DRAINAGE DITCHES
- WATER DRAINAGE FLOW DIRECTION
- BERM
- SURVEYED DRINKING WATER WELL LOCATION

ALASKA DEMOLITION PALMER RECLAMATION SITE LANDFILL PERMIT RENEWAL	
CURRENT SITE MAP	 RESTORATION Science & Engineering, LLC 911 West 8th Avenue, Suite 100 Anchorage, Alaska 99501 PH (907) 278-1023 FAX (907) 277-5718
PALMER, ALASKA	
JOB NO: 23-2784	DRAWN: SWS
DATE: 04.18.2024	CHECKED: NW
FIGURE 1	



NOTES

1. SURVEY BASEMAP DATED AUGUST 14, 2023 PROVIDED BY DENALI NORTH.
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13. WELL LOCATION SURVEY DONE MARCH 8TH/ 2023.
14. SEE FIGURE 5 FOR PROFILE A-A.



LEGEND

- APPROXIMATE PARCEL BOUNDARY
- ADJACENT LOTS
- EXISTING BUILDING
- SETBACK (BUFFER FROM PROPERTY BOUNDARY)
- DRAINAGE DITCHES
- WATER DRAINAGE FLOW DIRECTION
- BERM
- SURVEYED DRINKING WATER WELL LOCATION

**ALASKA DEMOLITION
PALMER RECLAMATION SITE
LANDFILL PERMIT RENEWAL**

FUTURE SITE MAP

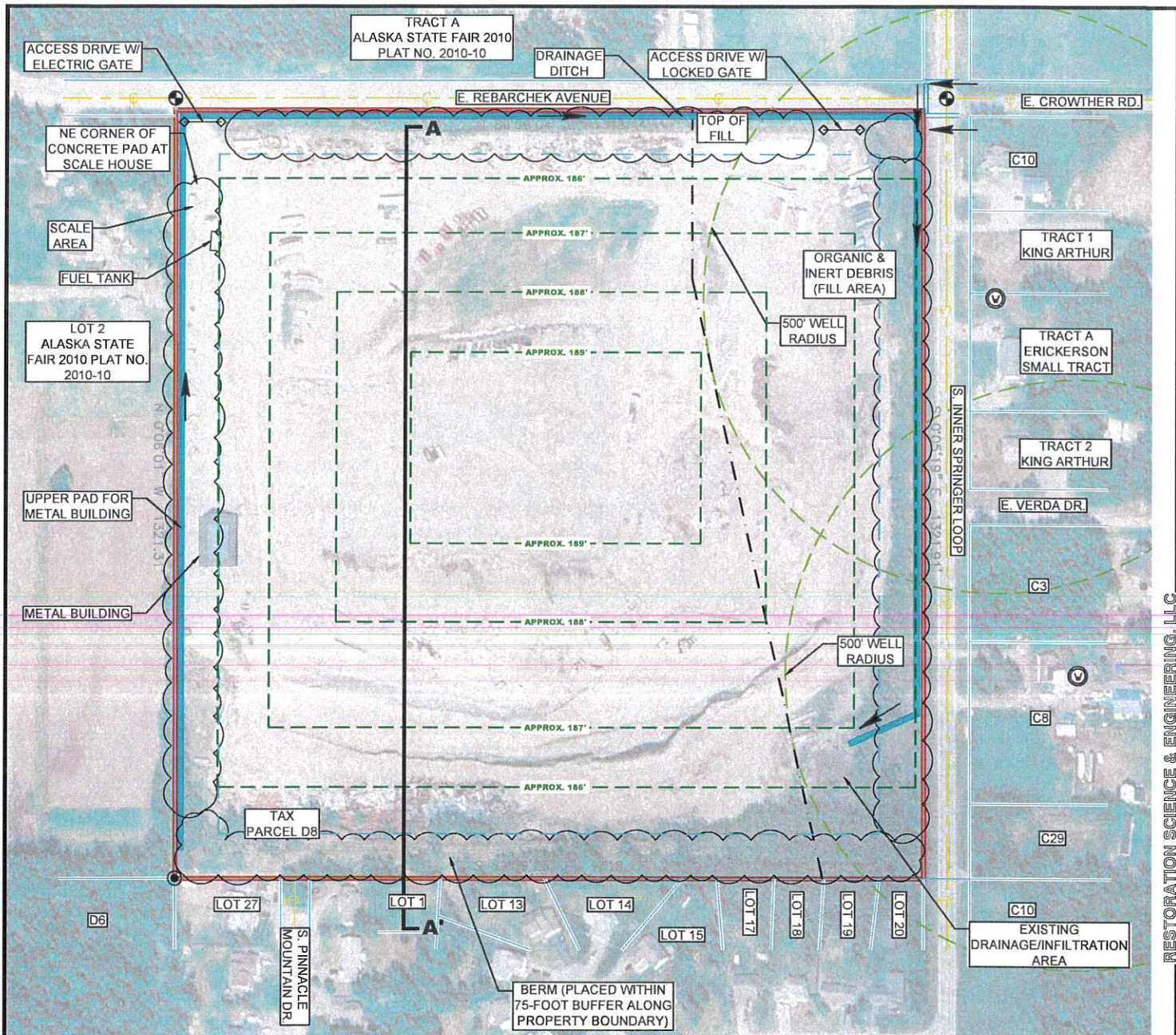
PALMER, ALASKA

JOB NO: 23-2784
DATE: 04.18.2024

DRAWN: SWS
CHECKED: NW

RESTORATION
Science & Engineering, LLC
911 West 8th Avenue, Suite 100
Anchorage, Alaska 99501
PH (907) 278-1023 FAX (907) 277-5718

FIGURE 2



NOTES

1. SURVEY BASEMAP DATED AUGUST 14, 2023 PROVIDED BY DENALI NORTH.
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13. WELL LOCATION SURVEY DONE MARCH 8TH/ 2023.
14. SEE FIGURE 6 FOR PROFILE A-A.



LEGEND

- APPROXIMATE PARCEL BOUNDARY
- ADJACENT LOTS
- EXISTING BUILDING
- SETBACK (BUFFER FROM PROPERTY BOUNDARY)
- POTENTIAL DRAINAGE DITCHES AND/OR RETENTION SWALES
- WATER DRAINAGE FLOW DIRECTION
- BERM
- SURVEYED DRINKING WATER WELL LOCATION

**ALASKA DEMOLITION
PALMER RECLAMATION SITE
LANDFILL PERMIT RENEWAL**

FINAL SITE MAP

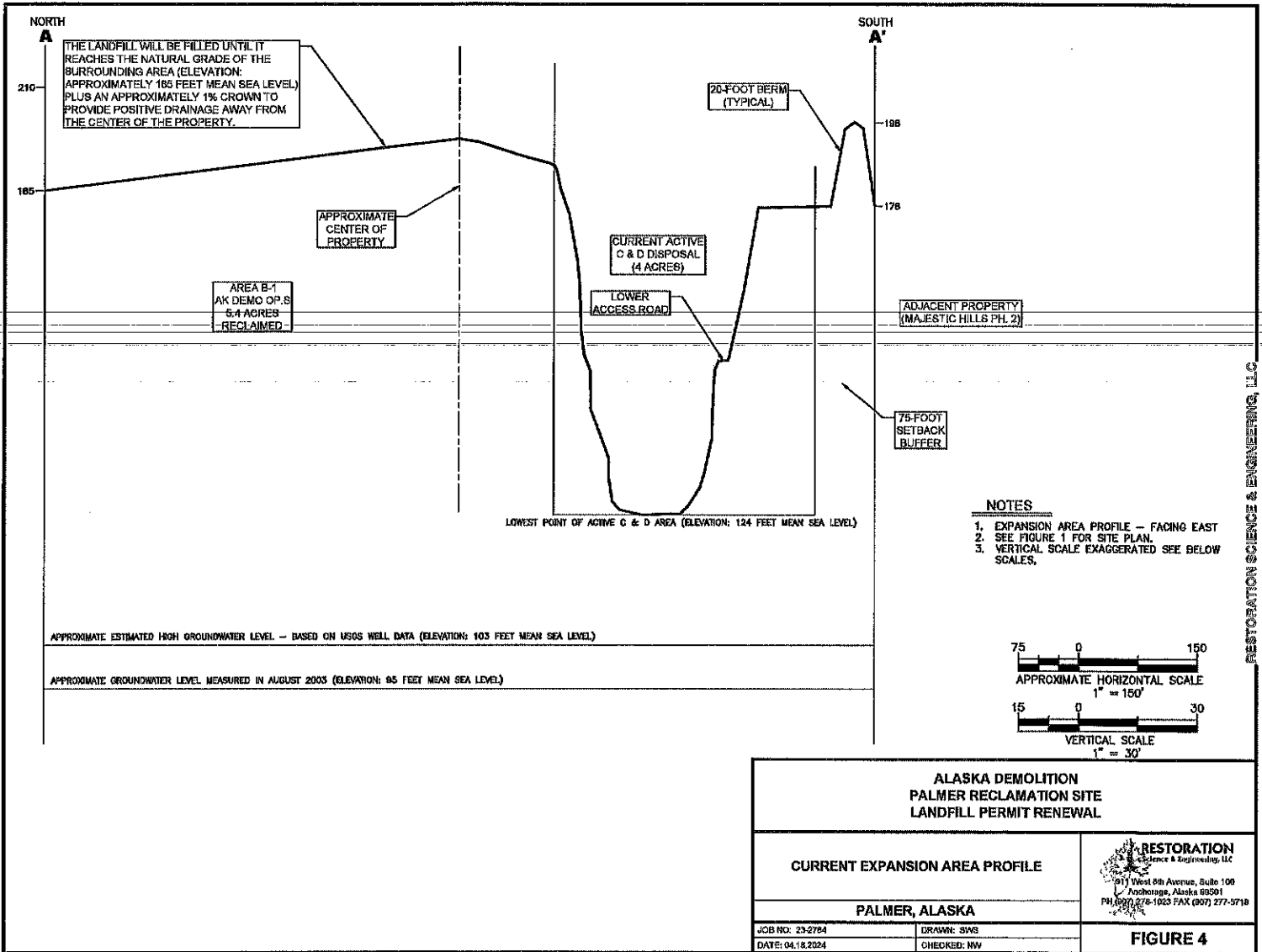
PALMER, ALASKA

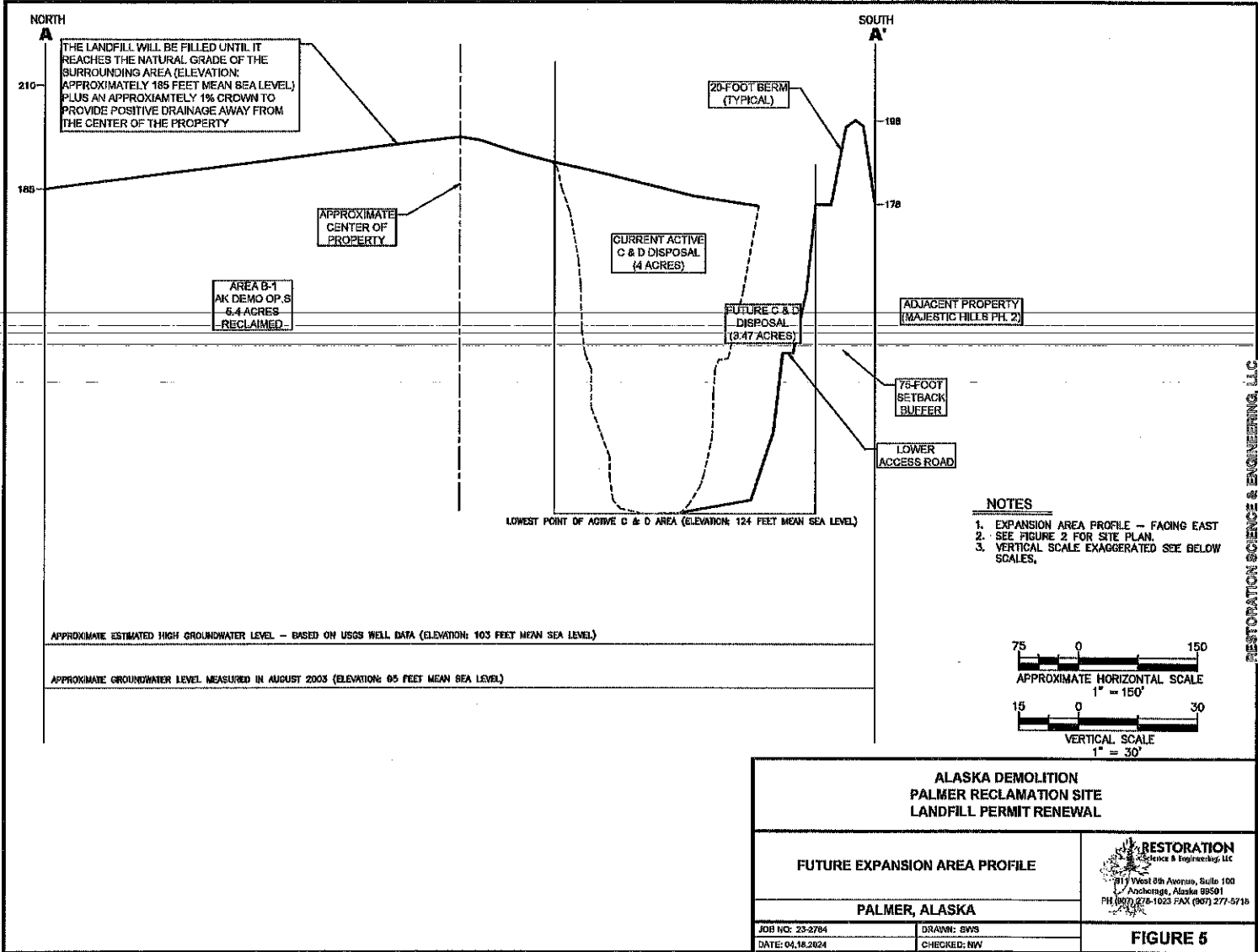
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DATE: 04.18.2024

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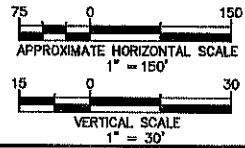
RESTORATION
Science & Engineering, LLC
911 West 8th Avenue, Suite 100
Anchorage, Alaska 99501
PH (907) 278-1023 FAX (907) 277-5718


FIGURE 3



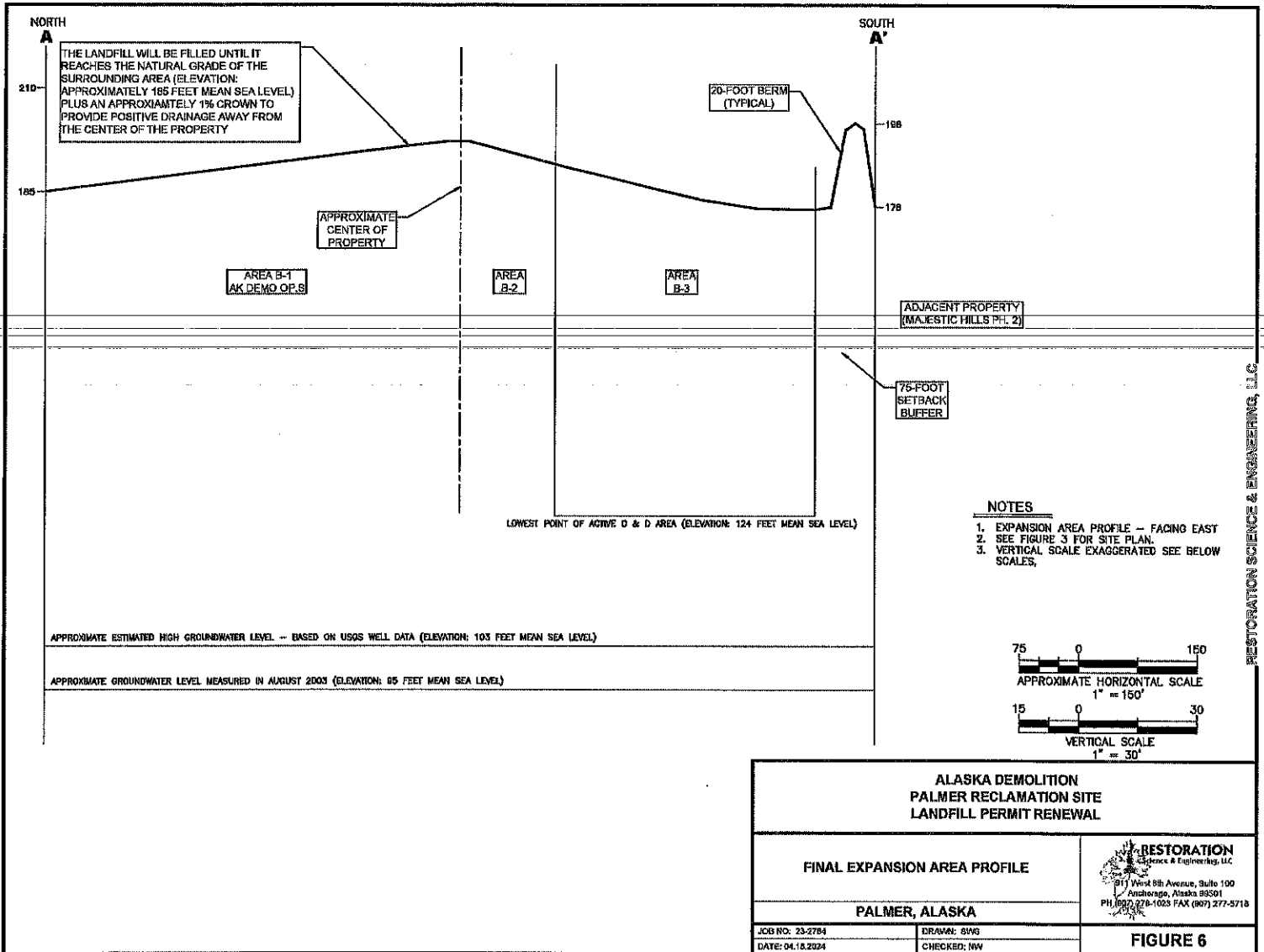


- NOTES**
1. EXPANSION AREA PROFILE -- FACING EAST
 2. SEE FIGURE 2 FOR SITE PLAN.
 3. VERTICAL SCALE EXAGGERATED SEE BELOW SCALES.



ALASKA DEMOLITION PALMER RECLAMATION SITE LANDFILL PERMIT RENEWAL	
FUTURE EXPANSION AREA PROFILE	
PALMER, ALASKA	
JOB NO: 23-2784	DRAWN: SWS
DATE: 04.18.2024	CHECKED: NW
 RESTORATION Science & Engineering, LLC 811 West 8th Avenue, Suite 100 Anchorage, Alaska 99501 PH: (907) 278-1023 FAX: (907) 277-5718	
FIGURE 5	

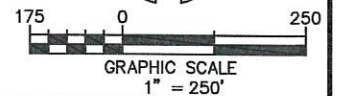
RESTORATION SCIENCE & ENGINEERING, LLC






RESTORATION SCIENCE & ENGINEERING, LLC

NOTE: MAP SOURCE GOOGLE EARTH AERIAL IMAGE DATE: JUNE 2023



ALASKA DEMOLITION PALMER RECLAMATION SITE LANDFILL PERMIT RENEWAL	
SITE PLAN JUNE 2023	 RESTORATION Science & Engineering, LLC 811 West 8th Avenue, Suite 100 Anchorage, Alaska 99501 PH (907) 278-1023 FAX (907) 277-5718
PALMER, ALASKA	
JOB NO: 23-2784	DRAWN: SWS
DATE: 04.18.2024	CHECKED: NW
FIGURE 7	



April 24, 2024

Alaska Department of Environmental Conservation
Division of Environmental Health Solid Waste Program
555 Cordova Street
Anchorage, Alaska 99501
Via Email: kaylie.holland@alaska.gov / reese.thieme@alaska.gov

Dear ADEC Solid Waste Program,

See the attached 2023 As-built survey of the Palmer Reclamation site which includes the updated surveyed location of drinking water wells east of the site and located on Tract A Erickson Small Tract and Lot C8 Erickson Small Tract. The updated survey location shows the 500-foot well setback to the Palmer Reclamation site was previously arbitrarily positioned. Based on this information, Alaska Demolition is proposing to adjust the 500-foot well setback location as shown on the attached 2023 survey. The 2022 As-built survey is also attached for reference to show the former 500-foot well setback location which was based on assumed well locations.

This letter is provided in response to the review ADEC Solid Waste comments dated March 28, 2024, regarding the Palmer Reclamation Site Inert Waste Monofil Permit Application as a reference to allow ADEC to easily locate the updated items referenced in the comments.

Comment No.	Response
1	The referenced Exhibit L was unable to be located in Alaska Demolition files. A likely earlier version of the same Exhibit (Exhibit A from 2018 CUP) was found and is provided in Attachment 7 along with the 2018 CUP.
2	Information added to cover letter.
3	Information added to Figures 1-2.
4	Correct legal description (The Northeast one-quarter of the Southeast one-quarter (NE 1/4, SE 1/4), Section 8, Township 17 North Range 2 East, Seward Meridian, Located in the Palmer Recording District, Third Judicial District, State of Alaska) added to permit application.
5	Shannon & Willson 2003 letter describing groundwater measurements provided in Attachment 1, reference to S&W 2003 letter also added to Inert Waste Permit application Letter in Attachment 1. Nearby historic Alaska State Fair well log showing static water level 86 feet below ground surface provided in Attachment 1.
6	Map showing wells identified on ADNR Well Log Tracking System Mapper within ½ mile of the PRS site provided in Attachment 1.
7	National Wetlands Inventory Mapper Map provided in Attachment 3.
8	FEMA Map provided in Attachment 1.
9	Figures updated to show requested items.
10	Figures updated to show requested items.
11	Figures updated to show requested items.
12	Figures updated to show requested items.

Specializing in Demolition and Environmental Services



13	Figures updated to show requested items.
14	Information added to Operations Plan.
15	Information added to Operations Plan.
16	Information added to Operations Plan.
17	Information added to Operations Plan. Metals storage locations added to Figures 1-2.
18	Information added to Operations Plan.
19	Information added to Operations Plan.
20	Information added to Operations Plan.
21	Information added to Operations Plan.
22	Information added to Operations Plan.
23	Information added to Operations Plan.
24	Information added to Operations Plan.
25	Information added to Operations Plan.
26	Information added to Operations Plan.
27	Figures 1-7 from the 2019 permit application provided after the 2024 figures.
28	Information added to Operations Plan.
29	Information added to Operations Plan.
30	Information added to Operations Plan.
Comment No.	Response
31	Visual Monitoring form updated with requested information. Waste, Materials, and other storage areas also added to Figures 1-2.
32	Visual monitoring form updated with requested information.
33	Visual monitoring form updated to reference correct portion of Operations Plan.
34	Visual monitoring form updated with requested information.
35	Visual monitoring form updated with requested information.
36	Visual monitoring form updated with requested information.
37	
38	Financial assurance information provided in Attachment 6 at end of Closure Plan.
39	Letter describing updated 500 foot well setback and 2023 and 2022 as-built surveys showing the former and proposed 2024 well setback provided in Attachment 9.
40	CUP approved in 2020 that expires in 2029 are provided in Attachment 7.
41	Operations Plan updated to outline lead acceptance limit policy and sampling protocols.



The updated permit application and updated attachments for the Palmer Reclamation Site Inert Waste Monofil Permit Application are attached. Please contact Shaun Tucker at 907-301-8889 for any questions.

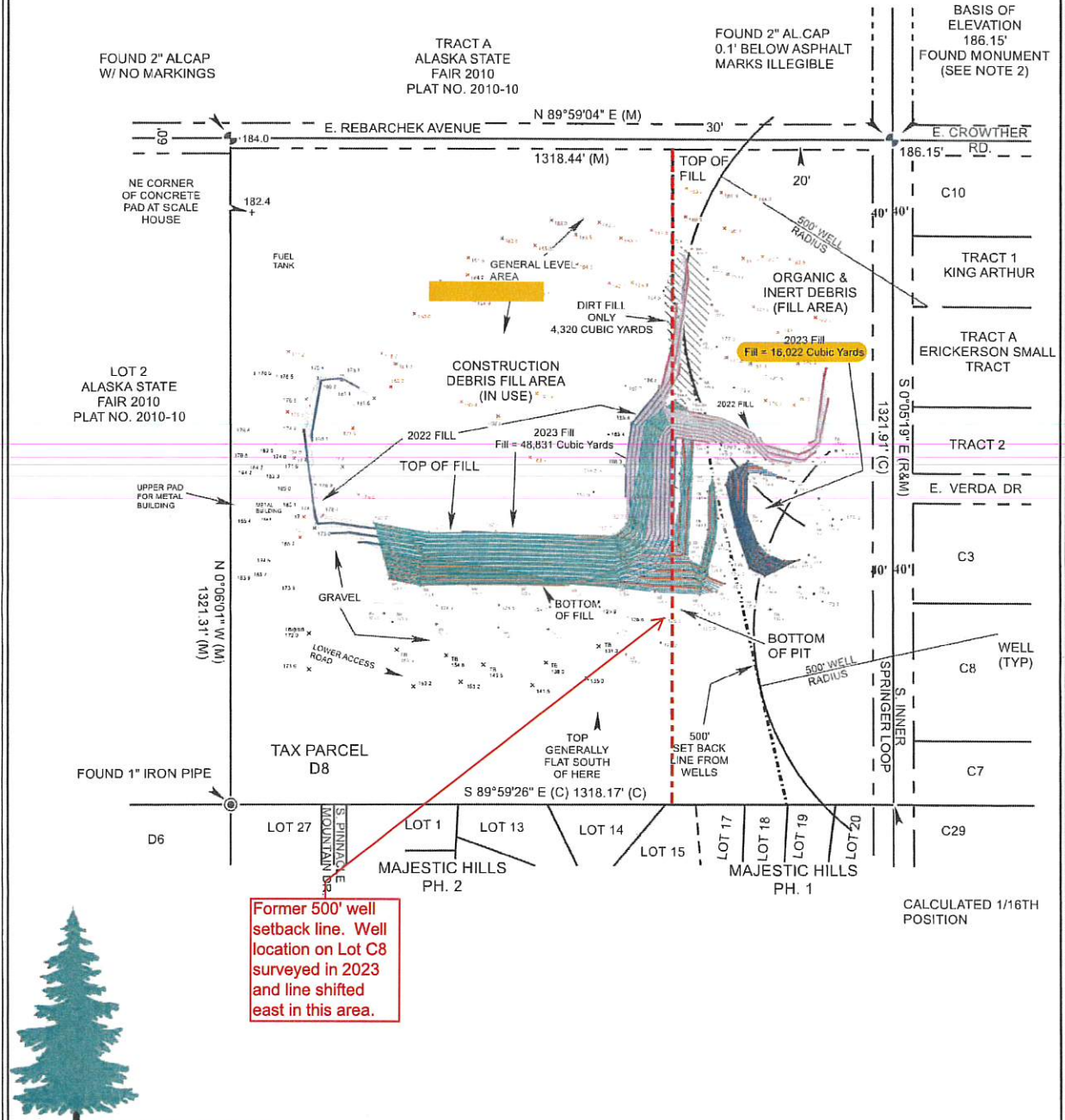
Best Regards,

Shaun Tucker
Environmental and Business Manager
Alaska Demolition LLC

Figures

NOTES:

1. THIS PARCEL MAY BE SUBJECT TO RESERVATIONS, EXCEPTIONS, EASEMENTS, RIGHT-OF-WAYS, AND OTHER MATTER, IF ANY, NO TITLE RESEARCH WAS CONDUCTED.
2. ELEVATION AS SHOWN ON UPDATED SITE MAP BY SHANNON & WILSON, INC.
3. (R) RECORD DATA FROM PLAT NO. 2005-5, (M) MEASURED DATA
4. FILL AREA ARE A COMBINATION OF CONSTRUCTION DEBRIS AND ONSITE GRAVEL.
5. WELL LOCATION ONLY FOUND ON TRACT A ERICKERSON SMALL AND TAX PARCEL C8
6. WELL LOCATION SURVEY DONE MARCH 8TH 2023



Former 500' well setback line. Well location on Lot C8 surveyed in 2023 and line shifted east in this area.

DENALI NORTH

230 E. Paulson Ave. Suite 67 Wasilla, Alaska 99654
Phone (907) 376-9535

I HEREBY CERTIFY THAT I HAVE SURVEYED THE FOLLOWING DESCRIBED PROPERTY A PORTION OF THE
 N 1/4 SE 1/4, SECTION 8, TOWNSHIP 17 NORTH, RANGE 1
 EAST, SEWARD MERIDIAN, ALASKA TAX PARCEL D8
 PALMER RECORDING DISTRICT, AND THERE ARE NO
 ENCROACHMENTS VISIBLE AT THE TIME OF THIS SURVEY,
 EXCEPT AS INDICATED.
 DATED THIS 14TH DAY OF AUGUST 20 23 AT PALMER,
 ALASKA. IT IS THE RESPONSIBILITY OF THE OWNERS OR
 BUILDERS TO DETERMINE THE EXISTENCES OF ANY EASEMENTS,
 COVENANTS OR RESTRICTIONS WHICH DO NOT APPEAR
 ON THE RECORDED SUBDIVISION PLAT. UNDER NO
 CIRCUMSTANCES SHOULD ANY DATA HEREON BE USED FOR
 CONSTRUCTION OR ESTABLISHING BOUNDARY OR FENCE LINES.
 THIS IS NOT A LOT CORNER SURVEY.



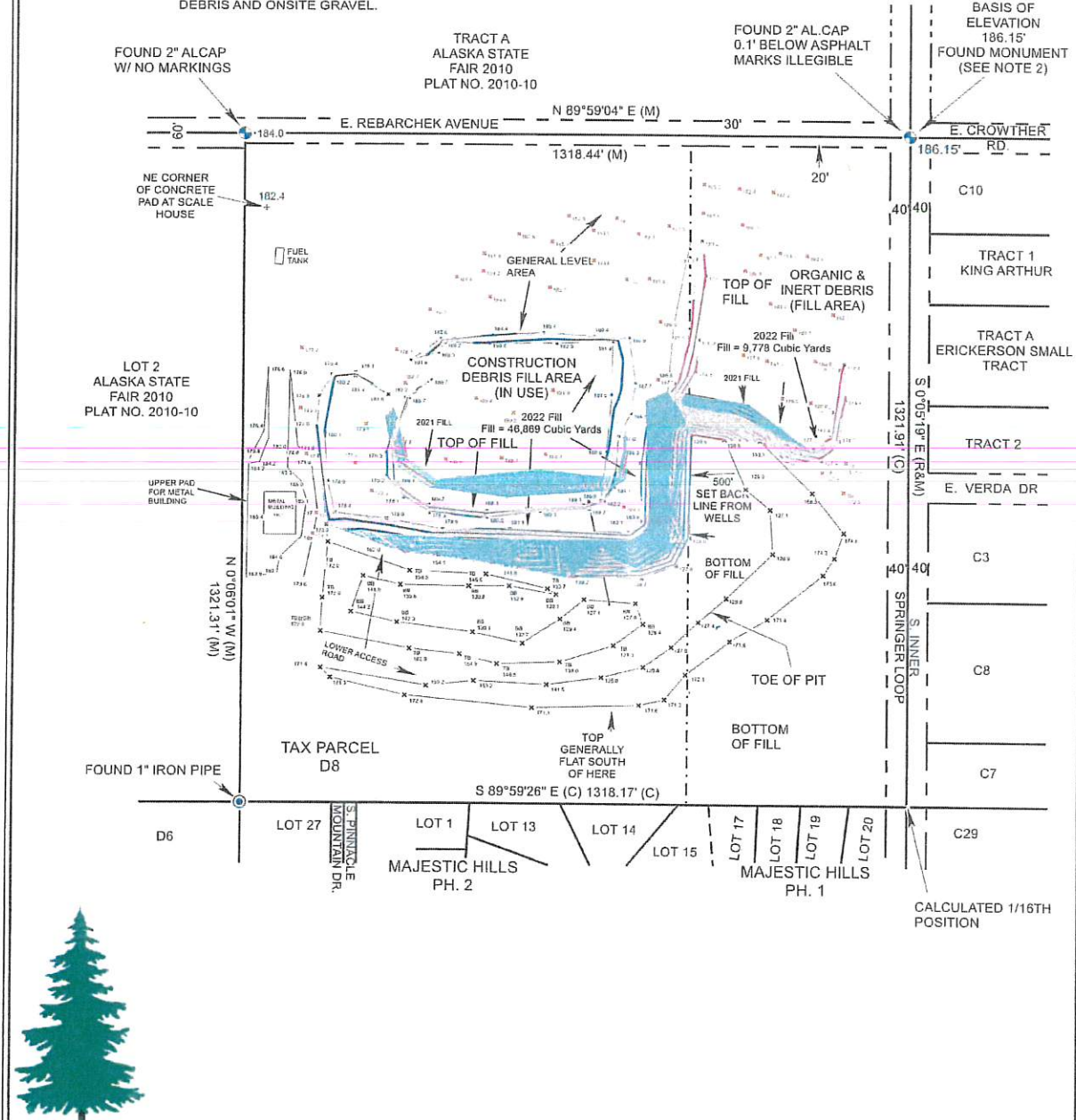
JOB NO. 07214/2008/A-1, 2009/A-2, /2010/A-2, /2011/A-2, /2012/A-1,
 13-1E7/2013, 14-213/2014, 15-385/2015, 16-328/2016, 17-375/2017,
 18-3C4/2018, 19-333/2019, 20-291/2020, 21-333/2021, 22-157/2022,
 23-028/2023

FIELD BOOK/PG(S): 253/8-21

SCALE 200 FvIn	PLOT PLAN	ASBUILT	X	DRAWN GL	CKD. WW
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**ALASKA
 DEMOLITION
 DISPOSAL SITE
 FILL MONITORING
 2023
 ADJACENT WELL
 LOCATION
 2023**

- NOTES:
1. THIS PARCEL MAY BE SUBJECT TO RESERVATIONS, EXCEPTIONS, EASEMENTS, RIGHT-OF-WAYS, AND OTHER MATTER, IF ANY, NO TITLE RESEARCH WAS CONDUCTED.
 2. ELEVATION AS SHOWN ON UPDATED SITE MAP BY SHANNON & WILSON, INC.
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DENALI NORTH

230 E. Pautson Ave. Suite 67 Wasilla, Alaska 99654
Phone (907) 376-9535

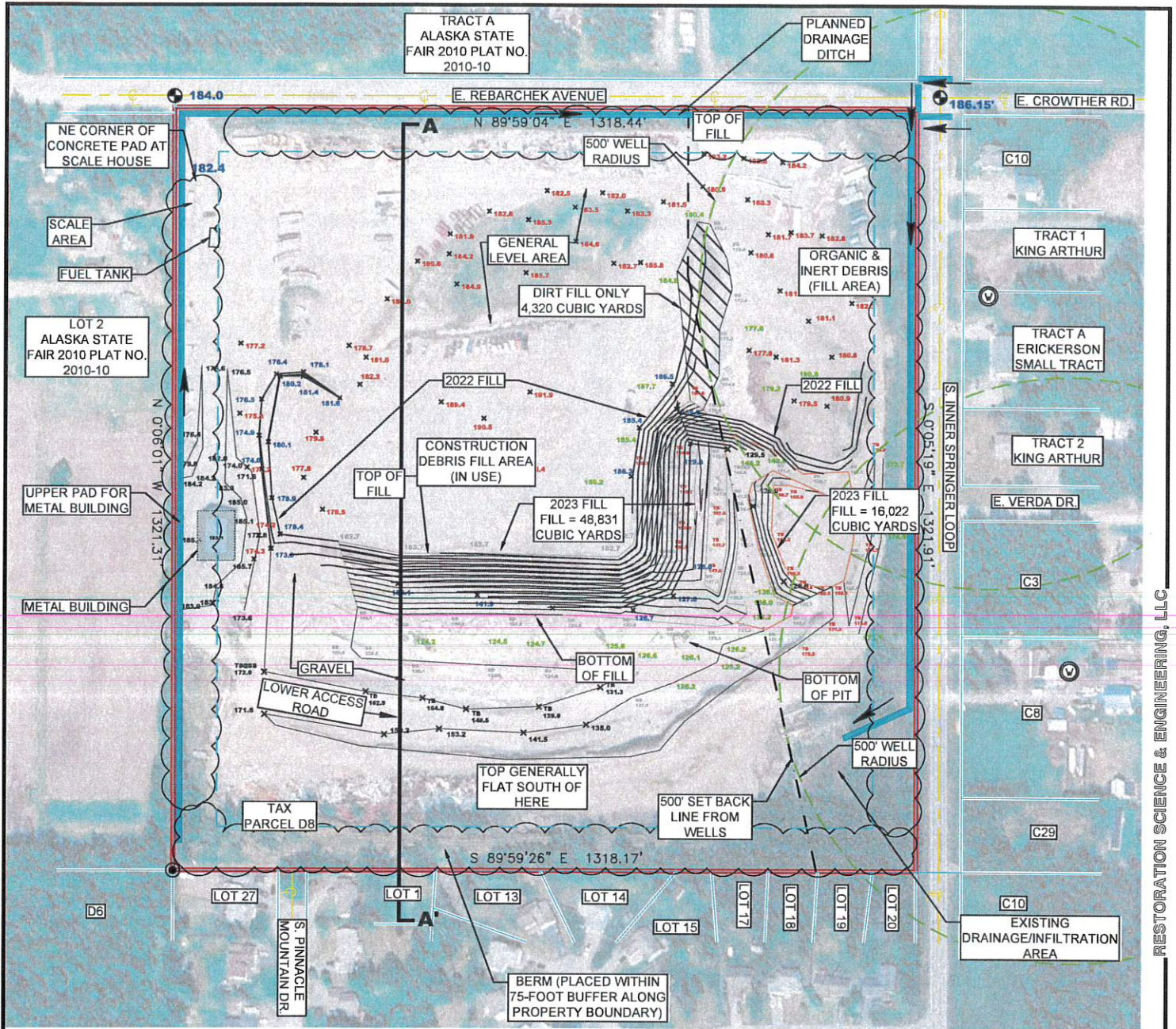
I HEREBY CERTIFY THAT I HAVE SURVEYED THE FOLLOWING DESCRIBED PROPERTY - A PORTION OF THE NE 1/4 SE 1/4, SECTION 8, TOWNSHIP 17 NORTH, RANGE 2 EAST, SEWARD MERIDIAN, AK, A.K.A. TAX PARCEL D8 PALMER RECORDING DISTRICT, AND THERE ARE NO ENCROACHMENTS VISIBLE AT THE TIME OF THIS SURVEY, EXCEPT AS INDICATED.
DATED THIS 26TH DAY OF JULY 2022, AT PALMER, ALASKA IT IS THE RESPONSIBILITY OF THE OWNERS OR BUILDERS TO DETERMINE THE EXISTENCES OF ANY EASEMENTS, COVENANTS OR RESTRICTIONS WHICH DO NOT APPEAR ON THE RECORDED SUBDIVISION PLAT. UNDER NO CIRCUMSTANCES SHOULD ANY DATA HEREON BE USED FOR CONSTRUCTION OR ESTABLISHING BOUNDARY OR FENCE LINES. THIS IS NOT A LOT CORNER SURVEY.



**ALASKA
DEMOLITION
DISPOSAL SITE
FILL MONITORING**

2022

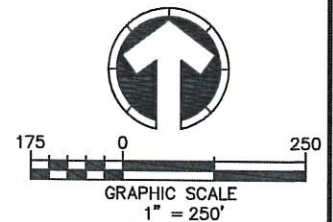
SCALE 200 F/IN	PLOT PLAN	ASBUILT X	DRAWN GL	CKD. WW
JOB NO. 07214/2008/A-1, 2009/A-2, 2010/A-2, 2011/A-2, 2012/A-1, 13-167/2013, 14-213/2014, 15-385/2015, 16-328/2016, 17-375/2017, 18-304/2018, 19-333/2019, 20-291/2020, 21-333/2021, 22-157/2022		FIELD BOOK/PG(S) 253/8-21		



RESTORATION SCIENCE & ENGINEERING, LLC

NOTES

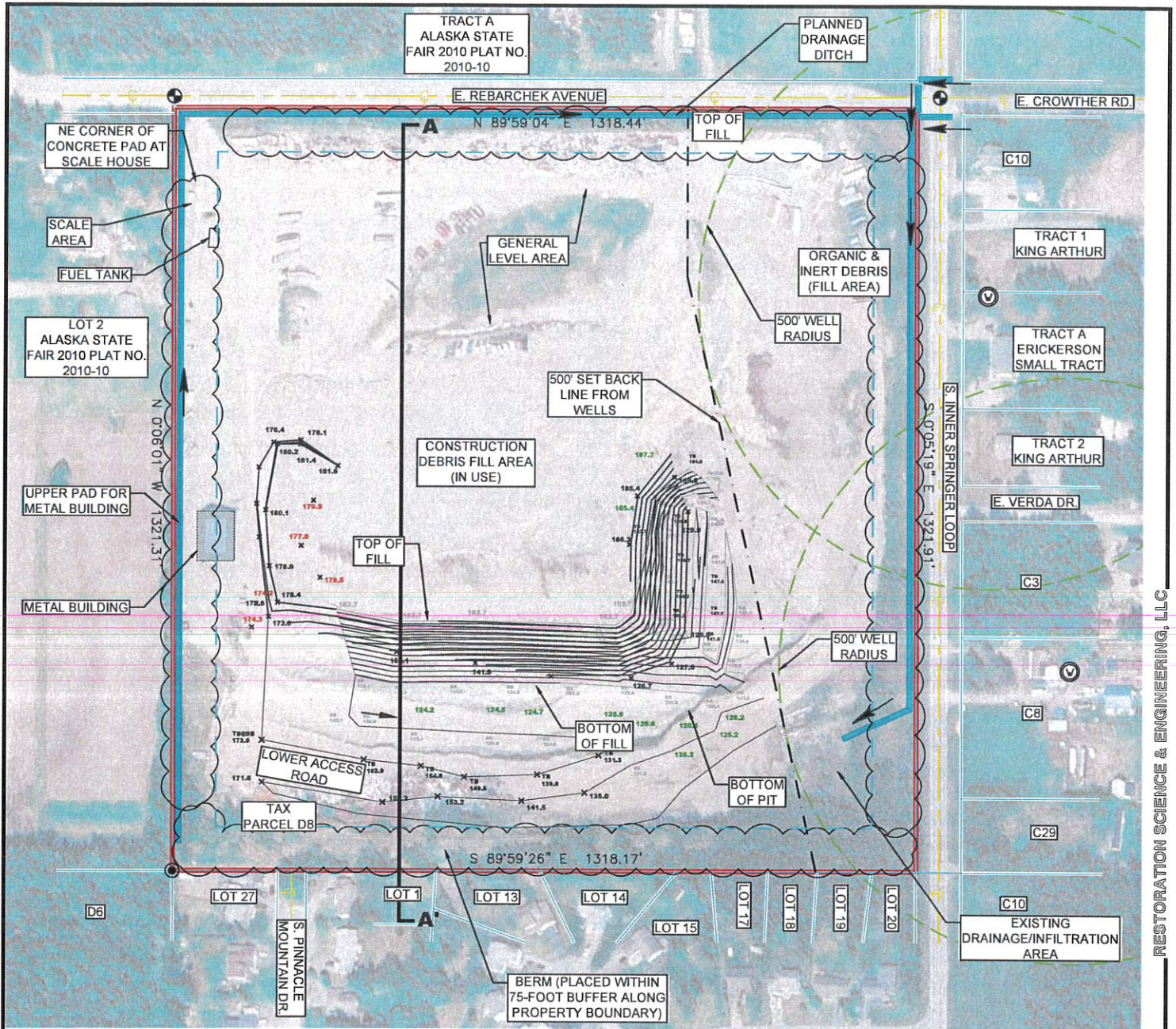
1. SURVEY BASEMAP DATED AUGUST 14, 2023 PROVIDED BY DENALI NORTH.
2. OTHER SITE MAP DRAINAGE AND NOTES OBTAINED FROM SHANNON & WILSON SEPTEMBER 2018 FIGURE 1 SITE MAP.
3. THE NEAREST EARTHQUAKE FAULT IS THE BORDER RANGES FAULT, LOCATED ABOUT 7 MILES SOUTHEAST OF THE SITE AT ITS CLOSEST POINT.
4. REGIONAL GROUNDWATER FLOW IS TO THE SOUTH.
5. THE SITE IS NOT LOCATED ON A FLOODPLAIN.
6. THERE IS NOT PERMAFROST AT THE PROJECT LOCATION.
7. GROUNDWATER IS LOCATED ABOUT 26 FEET BELOW THE LOWEST POINT OF THE LANDFILL.
8. BASED ON USGS WATER LEVEL RECORDS FOR NEARBY WELL, THE HIGHEST ANTICIPATED.
9. GROUNDWATER LEVEL WILL BE ABOUT 18 FEET BELOW THE LOWEST POINT OF THE LANDFILL.
10. THERE IS NO KNOWN UNSTABLE GROUND AT THE FACILITY.
11. CONTOUR LINES FOR ELEVATION ARE FROM SURVEY PRIOR TO INITIAL CELL CONSTRUCTION.
12. WELL LOCATION ONLY FOUND ON TRACT A ERICKERSON SMALL AND TAX PARCEL CB.
13. WELL LOCATION SURVEY DONE MARCH 8TH/ 2023.
14. SEE FIGURE 4 FOR PROFILE A-A.



LEGEND

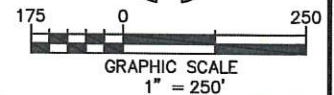
- APPROXIMATE PARCEL BOUNDARY
- ADJACENT LOTS
- EXISTING BUILDING
- SETBACK (BUFFER FROM PROPERTY BOUNDARY)
- POTENTIAL DRAINAGE DITCHES AND/OR RETENTION SWALES
- WATER DRAINAGE FLOW DIRECTION
- BERM
- SURVEYED DRINKING WATER WELL LOCATION

ALASKA DEMOLITION PALMER RECLAMATION SITE LANDFILL PERMIT RENEWAL		 RESTORATION Science & Engineering, LLC 911 West 8th Avenue, Suite 100 Anchorage, Alaska 99501 PH (907) 278-1023 FAX (907) 277-5718
CURRENT SITE MAP		
PALMER, ALASKA		FIGURE 1
JOB NO: 23-2784	DRAWN: SWS	
DATE: 01.25.2024	CHECKED: NW	



NOTES

1. SURVEY BASEMAP DATED AUGUST 14, 2023 PROVIDED BY DENALI NORTH.
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10. THERE IS NO KNOWN UNSTABLE GROUND AT THE FACILITY.
11. CONTOUR LINES FOR ELEVATION ARE FROM SURVEY PRIOR TO INITIAL CELL CONSTRUCTION.
12. WELL LOCATION ONLY FOUND ON TRACT A ERICKERSON SMALL AND TAX PARCEL CB.
13. WELL LOCATION SURVEY DONE MARCH 8TH/ 2023.
14. SEE FIGURE 5 FOR PROFILE A-A.



LEGEND

- APPROXIMATE PARCEL BOUNDARY
- ADJACENT LOTS
- EXISTING BUILDING
- SETBACK (BUFFER FROM PROPERTY BOUNDARY)
- POTENTIAL DRAINAGE DITCHES AND/OR RETENTION SWALES
- WATER DRAINAGE FLOW DIRECTION
- BERM
- SURVEYED DRINKING WATER WELL LOCATION

**ALASKA DEMOLITION
PALMER RECLAMATION SITE
LANDFILL PERMIT RENEWAL**

FUTURE SITE MAP

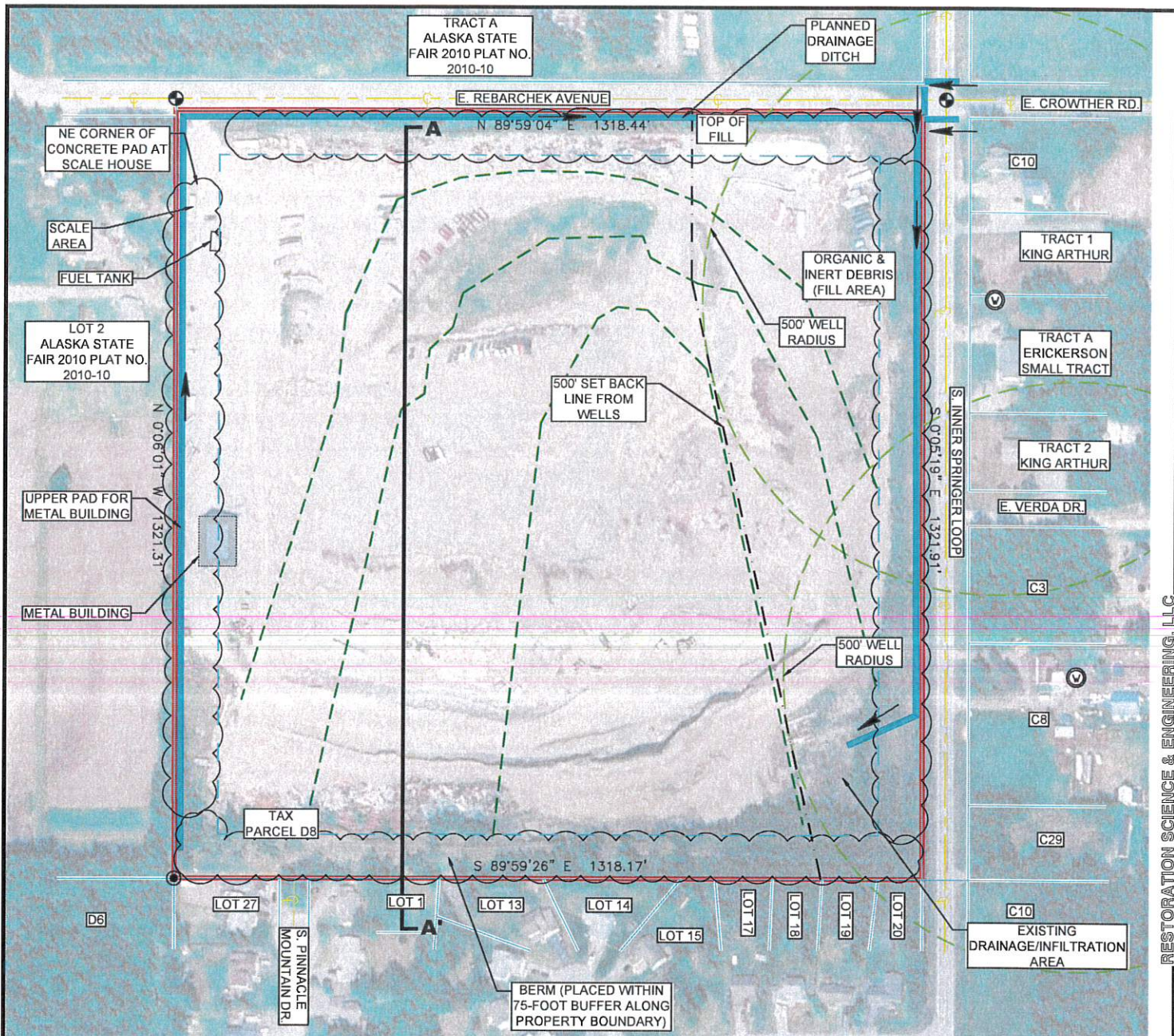
PALMER, ALASKA

JOB NO: 23-2784
DATE: 01.25.2024

DRAWN: SWS
CHECKED: NW

RESTORATION
Science & Engineering, LLC
911 West 8th Avenue, Suite 100
Anchorage, Alaska 99501
PH (907) 278-1023 FAX (907) 277-5718

FIGURE 2



NOTES

1. SURVEY BASEMAP DATED AUGUST 14, 2023 PROVIDED BY DENALI NORTH.
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10. THERE IS NO KNOWN UNSTABLE GROUND AT THE FACILITY.
11. CONTOUR LINES FOR ELEVATION ARE FROM SURVEY PRIOR TO INITIAL CELL CONSTRUCTION.
12. WELL LOCATION ONLY FOUND ON TRACT A ERICKERSON SMALL AND TAX PARCEL C8.
13. WELL LOCATION SURVEY DONE MARCH 8TH/ 2023.
14. SEE FIGURE 6 FOR PROFILE A-A.

LEGEND

- APPROXIMATE PARCEL BOUNDARY
- ADJACENT LOTS
- EXISTING BUILDING
- SETBACK (BUFFER FROM PROPERTY BOUNDARY)
- POTENTIAL DRAINAGE DITCHES AND/OR RETENTION SWALES
- WATER DRAINAGE FLOW DIRECTION
- BERM
- SURVEYED DRINKING WATER WELL LOCATION

ALASKA DEMOLITION PALMER RECLAMATION SITE LANDFILL PERMIT RENEWAL	
FINAL SITE MAP	
PALMER, ALASKA	
JOB NO: 23-2784	DRAWN: SWS
DATE: 01.25.2024	CHECKED: NW
 RESTORATION Science & Engineering, LLC 811 West 8th Avenue, Suite 100 Anchorage, Alaska 99501 PH (907) 278-1023 FAX (907) 277-5718	
FIGURE 3	

NORTH
A

THE LANDFILL WILL BE FILLED UNTIL IT REACHES THE NATURAL GRADE OF THE SURROUNDING AREA (ELEVATION: APPROXIMATELY 185 FEET MEAN SEA LEVEL) PLUS A 4-5% CROWN UP TOWARDS THE CENT OF THE PROPERTY

210

185

APPROXIMATE CENTER OF PROPERTY

AREA B-1
AK DEMO OP.S
5.4 ACRES
RECLAIMED

CURRENT ACTIVE C & D DISPOSAL (4 ACRES)

LOWER ACCESS ROAD

20-FOOT BERM (TYPICAL)

198

178

ADJACENT PROPERTY (MAJESTIC HILLS PH. 2)

75-FOOT SETBACK BUFFER

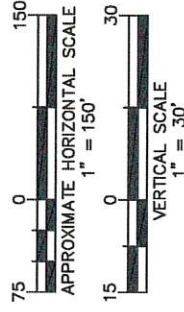
LOWEST POINT OF ACTIVE C & D AREA (ELEVATION: 124 FEET MEAN SEA LEVEL)

NOTES

1. EXPANSION AREA PROFILE - FACING EAST
2. SEE FIGURE 1 FOR SITE PLAN.
3. VERTICAL SCALE EXAGGERATED SEE BELOW SCALES,

APPROXIMATE ESTIMATED HIGH GROUNDWATER LEVEL - BASED ON USGS WELL DATA (ELEVATION: 103 FEET MEAN SEA LEVEL)

APPROXIMATE GROUNDWATER LEVEL MEASURED IN AUGUST 2003 (ELEVATION: 95 FEET MEAN SEA LEVEL)



ALASKA DEMOLITION
PALMER RECLAMATION SITE
LANDFILL PERMIT RENEWAL

CURRENT EXPANSION AREA PROFILE



PALMER, ALASKA

JOB NO: 23-2784
DATE: 01/25/2024
DRAWN: SWS
CHECKED: NW

FIGURE 4

NORTH
A

THE LANDFILL WILL BE FILLED UNTIL IT REACHES THE NATURAL GRADE OF THE SURROUNDING AREA (ELEVATION: APPROXIMATELY 185 FEET MEAN SEA LEVEL) PLUS A 4-5% CROWN UP TOWARDS THE CENT OF THE PROPERTY

210

185

APPROXIMATE CENTER OF PROPERTY

AREA B-1
AK DEMO OF S
5.4 ACRES
RECLAIMED

CURRENT ACTIVE
C & D DISPOSAL
(4 ACRES)

ADJACENT PROPERTY
(MAJESTIC HILLS PH. 2)

75-FOOT
SETBACK
BUFFER

LOWER
ACCESS ROAD

20-FOOT BERM
(TYPICAL)

198

178

FUTURE C & D
DISPOSAL
(3.47 ACRES)

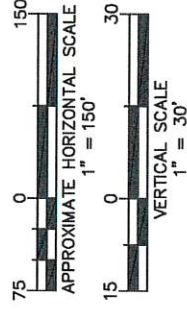
LOWEST POINT OF ACTIVE C & D AREA (ELEVATION: 124 FEET MEAN SEA LEVEL)

NOTES

1. EXPANSION AREA PROFILE - FACING EAST
2. SEE FIGURE 2 FOR SITE PLAN.
3. VERTICAL SCALE EXAGGERATED SEE BELOW SCALES.

APPROXIMATE ESTIMATED HIGH GROUNDWATER LEVEL - BASED ON USGS WELL DATA (ELEVATION: 103 FEET MEAN SEA LEVEL)

APPROXIMATE GROUNDWATER LEVEL MEASURED IN AUGUST 2003 (ELEVATION: 95 FEET MEAN SEA LEVEL)



ALASKA DEMOLITION
PALMER RECLAMATION SITE
LANDFILL PERMIT RENEWAL



FUTURE EXPANSION AREA PROFILE

PALMER, ALASKA

DRAWN: SWS

CHECKED: NW

JOB NO: 23-2784

DATE: 01.25.2024

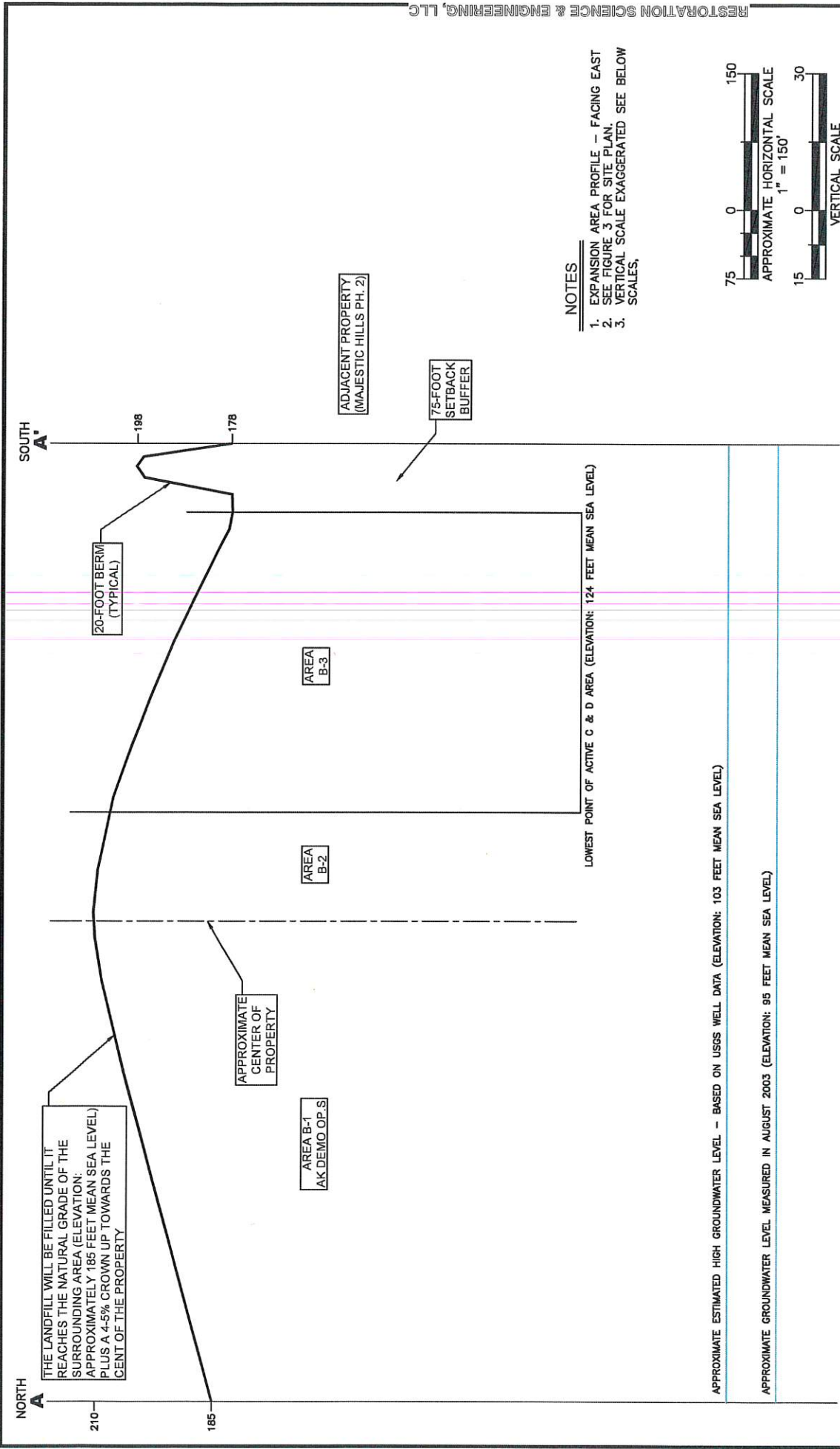


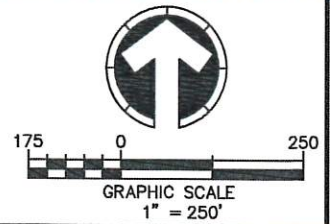
FIGURE 6


JOB NO: 23-2784
 DATE: 01.25.2024
 DRAWN: SWS
 CHECKED: NW



RESTORATION SCIENCE & ENGINEERING, LLC

NOTE: MAP SOURCE GOOGLE EARTH AERIAL IMAGE DATE: JUNE 2023



ALASKA DEMOLITION PALMER RECLAMATION SITE LANDFILL PERMIT RENEWAL	
SITE PLAN JUNE 2023	 RESTORATION Science & Engineering, LLC 911 West 8th Avenue, Suite 100 Anchorage, Alaska 99501 PH (907) 278-1023 FAX (907) 277-5718
PALMER, ALASKA	
JOB NO: 23-2784	DRAWN: SWS
DATE: 01.25.2024	CHECKED: NW
FIGURE 7	