MATANUSKA-SUSITNA BOROUGH
Planning and Land Use Department
Development Services Division
350 East Dahlia Avenue • Palmer, AK 99645
Phone (907) 861-7822 • Fax (907) 861-8158
Email: permitcenter@matsugov.us

APPLICATION FOR A CONDITIONAL USE PERMIT FOR EARTH MATERIALS EXTRACTION – MSB 17.30

Carefully read instructions and applicable borough code. Fill out forms completely. Attach information as needed. Incomplete applications will not be processed.

*THIS APPLICATION IS FOR MATERIALS EXTRACTION THAT **DOES NOT** OCCUR WITHIN FOUR FEET OF THE SEASONAL HIGH WATER TABLE. IF YOUR PLAN INCLUDES EXTRACTION WITHIN FOUR FEET OF THE SEASONAL HIGH WATER TABLE YOU MUST COMPLETE THE APPLICATION SPECIFIC TO THAT PURPOSE.*

Application fee must be attached, check one:

_____ $500 for Administrative Permit (Less than two years ***or*** less than 7,000cy annually)

N/A X $1,000 for Conditional Use Permit (More than two years ***and*** more than 7,000cy annually)

Prior to the public hearing, the applicant must also pay the mailing and advertising fees associated with the application. Applicants will be provided with a statement of advertising and mailing charges. Payment must be made prior to the application presentation before the Borough Planning Commission.

Subject Property: Township: 17N, Range: 02W, Section: 02, Meridian: S.M.
MSB Tax ID# 17N02W02C003
SUBDIVISION: _____ BLOCK(S): _____, LOT(S): _____
STREET ADDRESS: _____
FACILITY / BUSINESS NAME: MSB Land and Resource Management Division

Ownership: A written authorization by the owner must be attached for an agent or contact person, if the owner is using one for the application. Is authorization attached? ☐ **Yes** ☐ **No** ☒ **N/A**

Name of Property Owner
Matanuska-Susitna Borough
Mailing: 350 E. Dahlia Avenue
Palmer, AK 99645
Phone: Hm_____ Fax_____
Wk 861-7867 Cell_____
E-mail lmb@matsugov.us

Name of Agent / Contact for application
Emerson Krueger, Natural Resource Manager
Mailing: 350 E. Dahlia Avenue
Palmer, AK 99645
Phone: Hm_____ Fax_____
Wk 861-7867 Cell_____
E-mail ekrueger@matsugov.us

Description What type(s) of material is being extracted? Pit Run

Total acreage area of all parcels on which the activity will occur: 120-acre parcel

Total acreage area of earth material extraction activity: 61.9 acres

Total cubic yards extraction per year: 124,000 (Estimate)

Total projected cubic yards to be extracted: 1,800,000

What is the estimated final year extraction will occur? 2038 unless there are project delays

Required information

1. Attach a plan of sufficient detail to demonstrate compliance with the requirements of MSB 17.28.050 and MSB 17.28.060.

Plan of Operation	Attached
Provide seasonal start and end dates	x
Provide days of the week operations will take place.	x
Provide hours of operation.	x
Estimated end date of extraction	x
Estimated end date of reclamation	x
Describe all other uses occurring on the site	x
Describe methods used to prevent problems on adjacent properties, such as lateral support (steep slopes), water quality, drainage, flooding, dust control and maintenance of roads; how will the operation monitor the seasonal high water table to stay at least four feet above it	x
Provide quantity estimates and topographical information such as cross section drawings depicting depth of excavation, slopes and estimated final grade	x

2. Submit a site plan. Drawings must be detailed and **drawn to scale**. Drawings under seal of an engineer or surveyor are recommended but not required.

SITE PLAN REQUIREMENTS	Attached
Identify location of permanent and semi-permanent structures on the site for verification of setback requirements. Include wells and septic systems.	x
Depict buffer areas, driveways, dedicated public access easements, and noise buffers (such as fences, berms or retained vegetated areas), and drainage control such as ditches, settling ponds etc.	x
Identify wetlands and waterbodies on site and within one mile	x
Identify existing surrounding land uses within one mile	x
Identify surrounding property ownership (i.e. public vs. private) within one mile of exterior boundaries	x
Show entire area intended for gravel/material extraction activity and the boundary of the lot(s) containing the operation. Identify areas used for past and future phases of the activity. Identify phases of proposed mining activities including a map showing the area to be mined, a description of the topography and vegetation, approximate time sequence for mining at particular locations, and general anticipated location of semi-permanent equipment such as conveyor belts, crushers, dredges, batch plants, etc.	x

Road and access plan that includes anticipated routes and traffic volumes. If the level of activity exceeds the minimum levels specified in MSB 17.61.090, traffic standards, a traffic control plan consistent with state regulations may be required	x
Visual screening measures that include a detailed description of the type of visual screening to be utilized. Visual screening may include, but is not limited to, berms, natural vegetation, solid fences, walls, evergreen hedges or other means as approved by the commission	x
Noise mitigation measures that include a description of measures to be taken by the applicant to mitigate or lessen noise impacts to surrounding properties. Measures shall include, but not be limited to, hours of operation of noise-producing equipment, erecting noise barriers (i.e., berms a minimum of 10 feet in height) between noise-producing equipment and adjacent uses, location of noise-producing equipment (i.e., below grade in excavated pit areas), and measures to utilize equipment with noise reduction features	x
Proposed lighting plan	x
Other (as required by MSB Planning Department)	x

3. Submit a reclamation plan including the following:

Reclamation Plan	**Attached**
Provided timeline for reclamation at particular locations and that is in compliance with MSB 17.28.067	x
Provide copy of reclamation financial assurance filed with the State of Alaska (If exempt, provide qualifying documents for exemption)	x

4. Submit documentation of compliance with borough, state and federal laws:

COMPLIANCE WITH BOROUGH, STATE AND FEDERAL LAWS	**Applied for (list file #)**	**Attached (list file #) or N/A**
Mining license as required by the Alaska State Department of Revenue, pursuant to A.S.42.65		N/A
Mining permit as required by the Alaska State Department of Natural Resources (ADNR) if extraction activities are to take place on state land		N/A
Reclamation plan as required by ADNR, pursuant to A.S. 27.19		x
Notice of intent (NOI) for construction general permit or multi-sector general permit and storm water pollution prevention plan, and other associated permits or plans required by the Environmental Protection Agency (EPA) pursuant to the National Pollutant Discharge Elimination System (NPDES) requirements	To be completed by Contractor	
United States Army Corps of Engineers permit pursuant to Section 404 of the Clean Water Act, 33 U.S.C. 1344, if material extraction activity is to take place within wetlands, lakes and streams.		N/A
Other (Such as, driveway / access permits. List as appropriate.)	To be completed by Contractor	

OWNER'S STATEMENT: I am owner or authorized agent of the following property:

MSB Tax account #(s) 17N02W02C003 and, I hereby apply for approval of conditional use permit for earth material extraction activities on the property as described in this application.

I understand all activity must be conducted in compliance with all applicable standards of MSB 17.28, MSB 17.30 and with all other applicable borough, state and federal laws, including but not limited to, air quality, water quality, and use and storage of hazardous materials, waste and explosives, per MSB 17.30.055.

I understand that other rules such as local, state and federal regulations, covenants, plat notes, and deed restrictions may be applicable and other permits or authorizations may be required. I understand that the borough may also impose conditions and safeguards designed to protect the public's health, safety and welfare and ensure the compatibility of the use with other adjacent uses.

I understand that it is my responsibility to identify and comply with all applicable rules and conditions, covenants, plat notes, and deed restrictions, including changes that may occur in such requirements.

I understand that this permit may transfer to subsequent owners of this land and that it is my responsibility to disclose the requirements of this status to operators on this property, and to the buyer when I sell the land. Additionally, I agree to comply with 17.30.120 Transfer of Conditional Use Permit, in the event this permit is transferred to a subsequent property owner.

I grant permission for borough staff members to enter onto the property as needed to process this application and monitor compliance. Such access will at a minimum, be allowed when the activity is occurring and, with prior notice, and at other times necessary to monitor compliance.

The information submitted in this application is accurate and complete to the best of my knowledge.

Signature: Property Owner	Eric Phillips Printed Name	5/13/2021 Date
Signature: Agent	Emerson Krueger Printed Name	5/13/21 Date

EARTH MATERIAL EXTRACTION APPLICATION

MATANUSKA-SUSITNA BOROUGH

17N02W02C003

July 23, 2021

MATANUSKA-SUSITNA BOROUGH
LAND AND RESOURCE MANAGEMENT DIVISION

17N02W02C003
PROPOSED GRAVEL MINING PLAN OF OPERATIONS AND SITE PLAN REQUIREMENTS

The following information is an attachment to the Matanuska-Susitna Borough (MSB) application for Earth Materials Extractions activities that do not occur within four feet of the water table under MSB 17.30, Conditional Use Permit (CUP).

1. Plan of Operation

The Matanuska-Susitna Borough Parcel Tax ID 17N02W02C003 is located approximately 0.25 mile north of the Parks Highway about one mile east of the Parks Highway intersection with Pittman Road. This Proposed Gravel Mining Plan (Plan) details the activities and dates of operation for material extraction proposed to prepare the parcel for future development.

Site Plans for the parcel are provided in Exhibits 3 and 4, depicting the proposed operation area, buffers, visual screening, and truck haul routes. A vicinity map, site map, the landowners within one-mile, wetlands and waterbodies within one mile, and other features are shown in Exhibits 1-6.

The current plan includes a future borrow source located within the property boundary. The maximum area proposed for gravel extraction within the 120-acre parcel is approximately 61.9 acres. The southeast 40-acres of the parcel are proposed to be sold, at less than fair market value, to the Meadow Lakes Community Council for use as open space and public recreation. The remaining acreage is set aside as buffers and visual screening. Property surrounding the parcel is a mix of industrial to the south and west, residential to the north and east, as well as recreational to the east.

The ultimate goal of the gravel extraction activities is to develop the parcel for future public facilities. The property is owned by the Matanuska-Susitna Borough (MSB). Modifications to the Plan will be submitted to the Land and Resources Management Division (MSB-LRMD), as needed, by the Contractor authorized to develop the site prior to the commencement of any mining activities.

The project is expected to last 15 years, but may need to be extended if delays occur. Full development of the borrow source is anticipated to be complete by 2037. Reclamation of the mined area is required prior to development of public facilities. Future public facility construction has not been defined at this time. The site will be developed to support such public facilities as a school, library, community center, fire station, or open space. Incremental reclamation will leave areas where mining has been completed in a vegetated condition suitable for use as public open space. However, given the layout of the mining plan, public recreation on the site will be prohibited until mining is complete for safety reasons.

Extraction operations will be at the Contractor's discretion and are not seasonally dependent. Hours of operation are expected to be Monday through Saturday from 6:00 a.m. to 10:00 p.m.

There will be no loading of trucks or crushing from 10pm to 6am. These hours of operation were agreed to by the Borough and the Meadow Lakes Community Council (MLCC).

A section line easement connects the southwest corner of the site to Pittman Road. This access route may be used as a local haul route, however, existing haul routes through the neighboring gravel pit may also be used. A 50-foot wide section line easement along the southern property boundary also extends to the east connecting to North Suzanna Street. This access route may also be developed for a local haul route. The east haul route is along an unconstructed right-of-way named West Stacy Street. Existing access roads on the adjoining private material site may be used for extraction. Haul routes will be restricted to the south end of the site to minimize negative effects on the residential land to the north. Haul routes will be maintained.

The Borough and MLCC have agreed to prohibit development of a local haul route extending north of the site, given the residential character of the surrounding property in that direction. The Site Plan illustrates each of the potential access routes. Furthermore, the Site Plan indicates 11 mining phases. This application is for all mining phases indicated on these drawings.

A development plan will be prepared by the Contractor, based on project needs and request for access and/or use made to the MSB-LRMD. If a modification of the site plan or development plan is required, a modified plan will be submitted to MSB-LRMD to determine if an amendment to the permit will be required. Structures, either permanent or semi-permanent, and processing equipment will be permitted within southern 20-acres of the site. All contract specifications or use agreements for authorized use of this site shall be required to adhere to the Permit conditions and operational details. Plan deviations must be submitted to the MSB-LRMD by the Contractor for review and approval prior to site development and/or material extraction.

The schedule for excavation and reclamation will be more thoroughly defined by the Contractor developing the site, and will be required in all contractor bid packages. Reclamation will be required. Mined areas will be reclaimed as public open space until such time as public facility construction is needed.

Excavating the western and southern boundaries in anticipation of future road construction will serve to reduce the elevation difference between the existing material site and the subject property. The areas within the section line easement will be left above the grade of the existing material site and the remainder of the subject property to promote road drainage. These areas will be graded to retain storm water runoff on the property.

Retaining an undisturbed 200-foot natural vegetative buffer along the northern boundary will prevent any problems, such as erosion, water quality, draining, flooding on property adjoining the northern boundary of the site. In addition, this 200-foot buffer extends along the eastern boundary of the site where it abuts the Meadow Lakes Senior Housing and Sports Complex and will serve as additional undisturbed buffers between the site and the residential and recreational property to the east.

Retaining an undisturbed 25-foot natural vegetative buffer along the eastern boundary of the site, along the southeast 40-acres of the subject parcel will prevent problems on the adjacent MLCC property. This 40-acre portion of the parcel is proposed open space.

Reserving the southeast 40 acres of the 120-acre parcel for a less than fair market value sale to MLCC, and retaining an undisturbed 25-foot natural vegetative buffer within the proposed material site will minimize the potential for negative off-site effects on the proposed public open

space to the east. In addition, this 40-acre portion of the parcel will provide a buffer between the material site and the residential lots to the east.

A professional hydrologist, with experience evaluating the hydrology of the area was hired to review available data to ensure this mining plan will not result in negative off-site effects on groundwater quality and quantity. Deviations from this mining plan will only be authorized by the borough when supported with more detailed on-site data. The Hydrogeology Report is included as Exhibit 7. The proposed site conforms to the setbacks for public water systems as well as lakes, rivers, and streams recommended by the Alaska Department of Environmental Conservation User's Manual *Best Management Practices for Gravel Extraction Projects: Protecting Surface Water and Groundwater Quality in Alaska*. The nearest drinking water well is located approximately 700 feet up gradient from the site. The nearest waterbody is a stream located approximately 740 east of the site. The volume estimates are based on the estimated seasonal high water table. The average depth of excavation across the site is estimated to be 20 feet. This goal is to provide adequate separation between the ground surface and the seasonal high water table to allow for future public facilities. Test pits and monitoring wells will be installed prior to the solicitation for site development. The Contractor will be required to monitor the water table elevation prior to and during site development.

2. Site Plan Requirements

To isolate and minimize off-site effects of material processing, these activities will be located close to the existing material site, on the southern 20-acres of the Borough parcel. This includes laydown areas and vehicle parking. Laydown areas are locations where material is stored. Mining will commence at the south end of the property and is anticipated to proceed north as phases of mining are completed. Crushers, screening plants, or batch plants may be used at this location. A screening plant is planned for use in this operation. A screening plant is equipment used to separate materials based on grain size. Earthen berms may be installed around the material processing equipment to mitigate noise to the north and east. As the mining extends north and the working face of the excavation gets further from the material processing equipment, noise monitoring will used to determine when these earthen berms are required. It is not expected to, however, if processing equipment sound levels, measured at the nearest residential properties exceed the sound levels by receiving land use in MSB 17.28.060(A)(5), earthen berms around the equipment will be installed. The hours of operation are intended as noise mitigation measures to protect neighboring properties.

Sand and Gravel Extraction Operations

Total excavation of the site is estimated to include approximately 1,800,000 cubic yards of pit-run material and is expected to be excavated between 2022 and 2037. The total acreage from which material will be extracted is approximately 61.9. This excludes the vegetative buffer as well as the footprint of the 10-foot earthen berms. The Borough intends to solicit bids from Contractors to complete material extraction. Conceptual cross-sections are included as Exhibit 8. The intent of the cross-sections is to provide an approximate visual interpretation of the intended excavation. The volume estimate as well as the cross-sections are based on the best available information. Actual excavation volumes and controls will be determined by the data collected from the boreholes and monitoring wells and included in the contract for site development.

Conventional bulldozers, track-mounted backhoes, rubber-tired loaders, 10-12 cubic yard (CY) capacity dump trucks, and 18-30 CY capacity side or belly dump trucks will be used in the

operation. Typically the hauling will be done using a 25 CY dump. A majority of the material may be loaded onto trains from the adjacent existing material site. Local material hauling on the road system is anticipated to be 10% of the total annual extraction. An estimated average of 124,000 CY per year will be extracted from the site. Approximately 12,000 CY may be hauled annually via the local road system. Assuming a four-month operational period for local construction projects, six days a week, using 10 CY trucks, this could result in 106 CY per day being hauled off-site. This could be 10 ten-yard trucks resulting in 20-trips per day. This is based on the assumption that a majority of the material extracted from the site each year will be transported on the railroad. The anticipated traffic levels indicate no traffic impact analysis is required.

Blasting will not occur on site.

The working depth will typically be approximately 20 feet below original grade, as long as the depth of excavation remains a minimum of four feet above the seasonal high ground water table. Ground water monitoring will be required by the Contractor to ensure mining activities will not encroach within four feet of the seasonal high ground water level.

Development of the site is anticipated to begin from the south, and will depend on the contractor selected and their plans for utilization of the material. The mining plan is based on the premise of developing approximately six acres in each phase, providing an average of approximately 164,000 CY. Mining phase one could start as early as 2022, once the timber has been salvaged from the site. The roughly six acres in phase one would be excavated and developed into a preliminary operations area, where material processing and stockpiling would occur. Mining phases two through four would add additional operational area allowing for greater efficiency in the extraction and processing operations. Mining phases five through eleven would be reclaimed once completed by spreading soil, fertilizer, and seed. Internal transportation routes through these phases must be maintained to support the successive phases of extraction.

Most of the material extracted may be leaving the site via conveyor to a stockpile adjacent to a railcar loader. Truck haul routes are shown in Exhibit 3 – Site Plan. A water truck and/or sweeper may be used for dust control as needed. Haul routes will be maintained.

The operations area is situated within Phases 1-4 of the excavation and will be confined to the southern 20 acres, to minimize negative off-site effects of processing and handling activities. The operations area is shown on the Site Plans, located on the flat area in the southern portion of the project area. Reject material will be stockpiled for future road development in areas adjacent to the section line easement along the western boundary and the proposed public use easement along the southern boundary. Detailed layout of temporary and permanent facilities will be determined by the Contractor hired to develop the site.

The site is currently wooded and undeveloped. The landform for the area indicate the surficial deposits are comprised of Abandoned Meltwater Channel Alluvium. This geologic unit is described as channel fillings of former glacial meltwater streams and alluvium composed of pebble-cobble gravel and gravelly medium to coarse sand.

Organic overburden from the site will be stockpiled for use as earthen berms along the eastern and northern boundaries. Stockpiles of this material will be located in the operations area illustrated on the attached Site Plans.

I. Structures

A 25-foot setback is required from all property lines for structures, permanent or portable facilities, and equipment or material storage per MSB 17.28.070(A). Structures commonly associated with material extraction sites are planned for use within the site boundaries. All structures and processing equipment will be sited within the operations area in accordance with the required setbacks.

II. Buffer areas and Driveways

Buffers, haul routes and public access easements are shown in Exhibit 3. A driveway permit may be required depending on the haul route selected by the Contractor. The Contractor will be required to obtain all necessary permits to construct access and development within the section line easements. Development within the section line easements will require State authorization. Operations may continue year-round depending on winter weather conditions and demand. Driveways will be maintained during active operational periods. Buffers for this parcel include a 25-foot buffer along the eastern boundary with the 40-acres proposed for sale to MLCC. The southeast 40-acres of the parcel will provide a buffer between the material site and the residential lots to the east. This 40-acres will be reserved for open space and public recreation.

A minimum 200 foot buffer along the northern boundary includes the wetland buffer.

A 200-foot buffer along the senior housing and sports complex, is excluded from the proposed material site. This buffer was agreed to by the Borough and the MLCC for the senior center and sports fields.

A waiver to the visual screening requirements along the western and southern boundaries is requested as the neighboring land use is also a material site. The areas along the western and southern boundaries will be developed for road access to the future public facilities. Material extraction along the western and southern boundaries will help prepare these areas for future road construction. Land to the west and south is owned and operated by a material extraction contractor. An email supporting the visual screening waiver from this landowner is included as Exhibit 9. There is a 20+foot elevation difference between the subject parcel and the parcels to the west and south. The Borough proposes to extract material along the western and southern lot lines to prepare these areas for future roads. Once mining is complete, the Borough will plant trees along the western and southern property lines to visually screen the subject parcel to the west and south. This visual screen is included in anticipation of future public use of the site once material extraction is complete. The Contractor will be required to obtain the necessary permit for work within the section lines easements.

All traffic associated with the material extraction will ingress and egress the site from the southern 20 acres, via a new connection to North Suzanna Street, Pittman Road, or the Railroad. Vehicle parking will occur within the southern 20-acres of the site, not within the section line easements.

III. Wetlands and Waterbodies

No wetland areas are located in the area proposed for mining. Exhibit 5 shows all wetlands within a one-mile radius of the proposed mining site.

IV. Existing and Surrounding Land Uses

Property surrounding the site is residential to the north and east. The land south and west of the landfill is an existing material site. The Meadow Lakes Sports Complex also adjoins the eastern site boundary. Surrounding properties within a one-mile radius are identified in Exhibit 6. A list of all neighboring property owners within this same radius is also provided with this Exhibit.

The Meadow Lakes Community Comprehensive Plan was reviewed during development of this application. Meetings were held with the Meadow Lakes Community Council to discuss residents' concerns with the proposed material extraction. The development plan for the site was drafted with input from the Community Council.

Meadow Lakes has an extensive comprehensive plan (adopted 2005) that includes land use districts for all of the land contained within the community boundary. Each land use district has land use goals and encouraged/discouraged uses. It appears the property in question is classified in the Comprehensive Plan as "open space". Within the section, the Plan specifically speaks about the subject parcel, in the following excerpt:

> *MSB land is currently at a premium. Borough lands include two 160 acre parcels, plus the school and fire station properties. These parcels should be managed for current and future public uses. Two sites are already dedicated to community uses – one for a fire station and the school, the other at the intersection of Church and Pittman, for the community's second fire station.*
>
> *The Meadow Lakes Community Council recently acquired 40 acres of Borough land in a parcel just north of the Parks highway. The intent of the Community Council is to develop the site for a community center, a developed recreational facility, or other facility – such as a library or senior housing. In light of the lack of public land in the Meadow Lakes area, additional Borough parcels should be retained for similar public purposes.*

MLCC has achieved the intent of the above referenced 40 acres by building a senior housing facility, park, ballfields, trails, etc. The proposed land sale would allow MLCC to continue providing the community with various public use options and more availability of open space with the expansion of the ballfields, trails, and parks. Existing authorized trails are contained on the Meadow Lakes Sports Complex.

The language in the comprehensive plan states Borough lands should be managed for current and future public uses and goes on to say Borough parcels should be retained for similar public purposes. The proposed material extraction is in conformance with the Comprehensive Plan and MSB 17.30 and is supported by the community. The proposed material extraction is intended to prepare the site for future public facilities. The Reclamation Plan for the site is intended to leave the site in a condition suitable for use as public open space. The operational details of the proposed material extraction were developed with input from MLCC to ensure the setbacks, buffers, haul routes, and operation area minimized the potential for negative offsite effects.

The reclamation plan is robust in its requirements for utilization of all organic overburden on site to be retained to support future use of the property for open space. The material extraction activities will not leave a scar or one big hole in the ground. When the mining is finished, the reclamation plan includes plans for community uses. The site will be available for use as public open space

until such time as it is developed for public facilities such as a school or library. The proposed extraction activities are consistent with the Meadow Lake Comprehensive Plan.

The proposed material extraction operation conforms to the approved Borough land classification of Material Lands and Reserve Use

V. Road and Access Plan

All traffic may ingress and egress the site via a new road connection to N. Suzanna Street or Pittman Road, which are paved residential roads. Site access is shown in the attached Site Plans and in Exhibit 3 – Site Map. Existing haul routes on the adjacent material site may also be used for site access.

Construction-related traffic may be expected to generate up to three trips per hour, during the peak construction season. A majority of the material extracted from the site may be conveyed to a stockpile area adjacent to the railroad and loaded on railcars. Extraction and removal traffic will not run out of the north of the site into the surrounding residential area.

VI. Visual Screening Measures

Residential areas and recreational trails are located in the vicinity of the proposed area of development. However, the western and southern boundaries of the site associated with this proposed mining site are bordered by an existing material site. The western and southern boundaries have section line easements that will be developed for future public facility road access once State authorization has been received by the Contractor. Visual screening will be included in the reclamation plan for the property, once these areas have been mined to prepare them for road construction. A vegetative buffer is part of the reclamation plan and will be planted along these boundaries to screen the property from the adjacent material site.

A 25-foot vegetative buffer will be reserved within the site boundary to screen the site from the 40-acres proposed to be sold to MLCC.

A 200+ foot buffer is reserved along the boundary, between the site and the senior housing and sports complex to the east.

A 200+ foot buffer is reserved along the northern boundary of the site.

Earthen berms, ten feet tall and forty feet wide will be constructed along the northern and eastern boundaries when material extraction activities are within 300 feet of site boundaries. Neighboring residential parcels to the north and east and recreational parcels to the east will additionally be buffered with naturally occurring vegetation.

Restricting the operation area to the south 20-acres of the site is intended to provide additional visual screening.

VII. Noise Mitigation

Residential areas and recreational trails are located in the vicinity of the proposed area of development. The earthen berms and existing vegetation will provide a noise buffer to these receptors. The below-grade excavation will also help to attenuate work area noise to acceptable levels consistent with the stipulations of MSB 17.28.060(A)(5). Additionally, haul trucks

removing the material from the site will be required to have the appropriate mufflers installed to minimize noise pollution in the adjacent neighborhoods. Restricting the operations to Monday through Saturday, from 6am to 10pm will provide additional noise mitigation. Restricting the operation area to the southern 20-acres of the site is also intended to provide noise mitigation. Additional earthen berms around processing equipment will be constructed when off-site noise levels exceeds the levels listed in MSB 17.28.060(A)(5).

VIII. Lighting Plan

Most of the work will be conducted primarily during daylight hours without the need for artificial lighting. The contractor will be required to obtain approval from MSB for any artificial lighting. Lighting may be used to illuminate activities in the work area, if needed. All lighting will be focused away from nearby residential areas and will be directed only onto the work at hand. Exterior lighting must be located and shielded to direct light towards the ground, in order to minimize light spillage onto adjacent properties and upward in to the night sky. Illumination or other fixtures mounted higher than 20 feet or 150 watts or more must have downward directional shielding, in accordance with MSB 17.28.060(A)(6).

IX. Dust Plan

Road dust control is a concern of high priority. The contract for development of this site shall contain a specific bid item to provide watering for dust control.

Borough staff or their agent will monitor conditions throughout construction and direct the construction contractor to water the roadway and haul routes as needed to prevent dust from becoming a problem. It is also anticipated that measures to reduce any by-product dirt transport from the borrow site by vehicle tires will be implemented within the borrow pit. The vegetative buffers are intended to mitigate off-site migration of dust. Mud tracked off-site onto public roads will be swept or washed as necessary.

X. Stormwater Pollution Prevention Plan (SWPPP)

The site will be developed to contain all stormwater runoff. The Contractor will be required to develop and implement a SWPPP and associated permitting for the life of the project. The SWPPP will be provided to the Borough for review and approval prior to commencement of extraction activities.

XI. Reclamation Plan

The site will be excavated to create a generally flat area with small rolling hills, in order to prepare the site for development of future public facilities. The site will be available for use as open space. Reclamation of the property will leave the site in a condition suitable for use as public open space until the site is developed for public facilities. To this end, the organic overburden will be stockpiled onsite and used to construct earthen berms for visual screening. The overburden will be distributed over the site upon completion of mining activities and the site will be seeded and fertilized to promote rapid revegetation. Trees will be planted along the western and southern property boundaries to screen the site from the adjacent material site.

Reclamation of each phase of mining will be completed within four growing seasons after completion. Slopes will be graded to a maximum 50% slope, and graded to blend with surrounding undisturbed topography. All surfaces will be stabilized and protected from erosion. Vegetative cover will be established and maintained over all disturbed areas on the site in conformance with the current Alaska Department of Natural Resources Revegetation Manual for Alaska. Reseeding of reclaimed areas will utilize certified seed suitable for Alaska, free of noxious weeds and undesirable plants identified in 11 AAC 34.020. Sixty percent live cover of the entire reclaimed area will be achieved by the end of the fourth growing season after completion of a mining phase. However, equipment access through each mining phase will be maintained and remain unreclaimed until mining and reclamation of the last phase is complete. This is in support of the agreement between the Borough and MLCC to restrict material hauling to the south of the site. Material from the last phases of mining must be transported south, across the site to the operations area.

At least 12" of organic overburden are estimated to be on site based on available data. All organic overburden will be stockpiled onsite and used for reclamation.

The Reclamation Plan and bond will be filed with the State when a contractor is selected to begin extraction activities.

XII. Long-Term Plan

This plan is specifically for the extraction of materials to prepare the site for the future public facilities and open space. The site is classified for material extraction and reserve use. Excavation to level the site for the future public facilities is anticipated to include 1,800,000 cubic yards of pit-run materials. Excavation is expected to take place from 2022 through 2037. The Borough Land and Resource Management Division is requesting this Conditional Use Permit to cover the activities associated with the development of this site for future public facilities.

gis.com/apps/mapviewer/index.html?webmap=13ed2116e4094f9994775af9a62a1e85

Matanuska-Susitna... | Intranet - Home | LRM Viewer | Matanuska-Susitna... | State of Alaska | Alaska: SDMS | BUR... | MSB FireWise Polic... | Firewise | PUA-Admin

king Water Protection Areas

ADEC Drinking Water Protection Areas, July 22, 2021

Open in Map Vie

×

Vater System

System Source

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on-Community Water

Water System (NC)

g Water Protection

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t buffer)

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er (Watershed

er Surface Water
uffer)

er Surface Water
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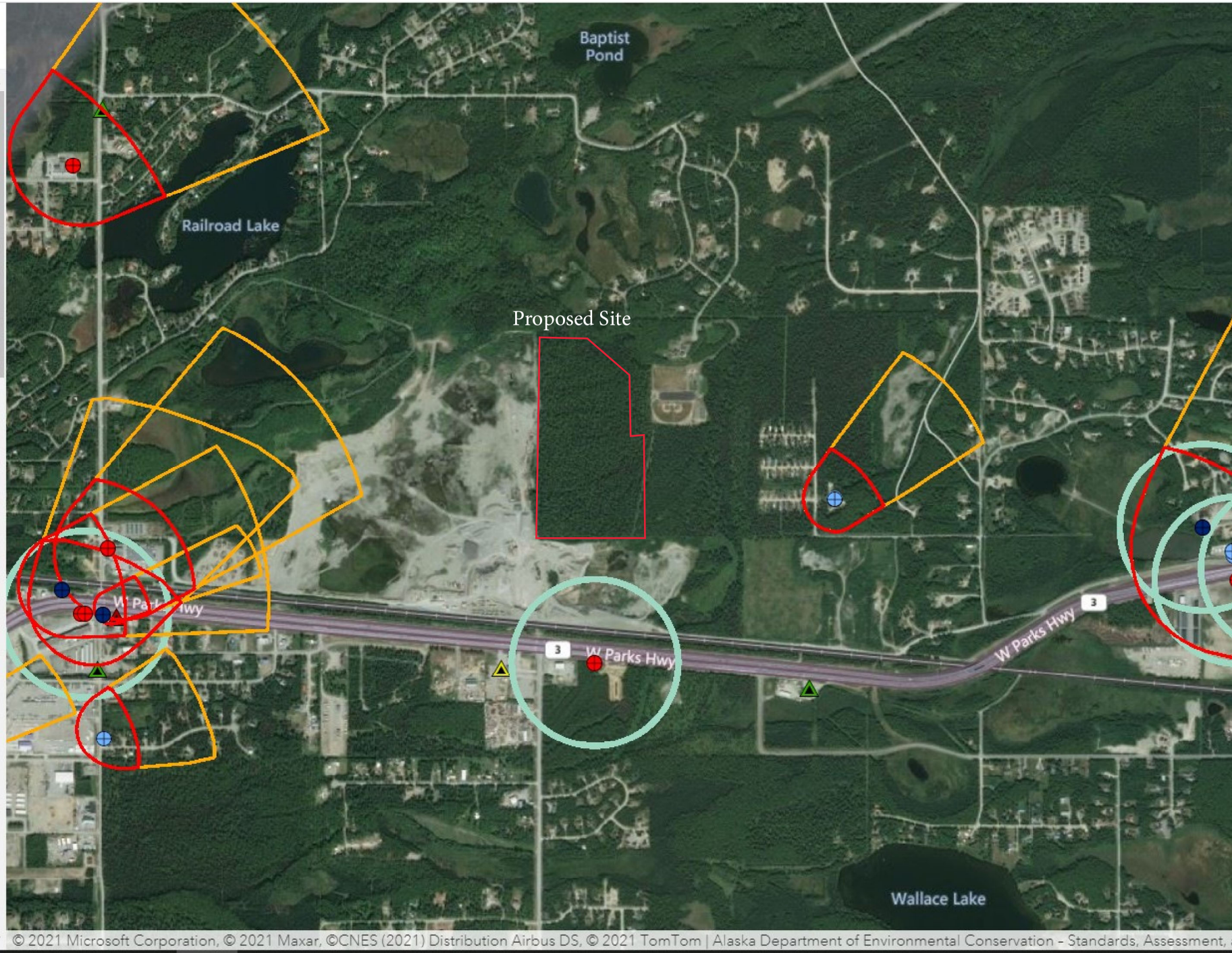


June 15, 2021

Mr. Emerson Krueger
Natural Resource Manager
Matanuska-Susitna Borough
350 E. Dahlia
Palmer, AK 99645-6488

Re: Hydrogeologic review and evaluation of a potential gravel extraction at parcel Tax ID 17N02W02C003, Wasilla, Alaska. Purchase Order No. 2021-00003462.

Dear Mr. Krueger:

This letter report is to provide the findings of a review of a potential new gravel resource extraction development at parcel Tax ID 17N02W02C003, near Vine Road and the Parks Highway, Wasilla, Alaska. The parcel is owned by the Matanuska-Susitna Borough. The objectives of this work are to:

- determine if gravel extraction, at least four feet above the seasonal high water table elevation, could have any significant negative effects on surrounding water wells;
- provide suggestions for acquiring further information for gravel extraction planning and monitoring; and
- provide information to develop a preliminary evaluation of the depth of potential gravel extraction, considering the geology and likely sloping water-table across the parcel.

Site Location and Hydrogeologic Setting

The proposed gravel extraction area (termed the MSB site in this report) is located north of the intersection of Vine Street and the Parks Highway and adjacent to a large existing gravel extraction operation (termed the QAP site in this report). The proposed extraction area at the MSB site is shown in Exhibit 1 (attached). The proposed extraction (as well as historic extraction from the QAP site) would be from a geologic unit described as "abandoned meltwater channel alluvium" consisting of "well-sorted pebble-cobble gravel and gravelly medium-coarse sand with rare to occasional boulders laid down by streams from melting glacial ice" (Daniels, 1981).

This deposit is underlain by silty glacial deposits and bedrock. There is a water table aquifer in the lower portion of the deposit. Extraction at the QAP site has occurred in close proximity to the property boundary of the MSB site and there is a cut bank approximately 20-25 feet high along the west and south boundaries of the MSB site.

Extraction at the QAP site appears to have been limited in depth to the approximate position of just above the water table. The floor of the QAP site slopes upward towards the northwest, in general conformance with the regional water table slope (Jokela and others, 1991). The QAP

5701 PENNY CIRCLE, ANCHORAGE, AK, 99516
jamunter@arctic.net
PHONE (907) 345-0165; FAX (907) 348-8592

Table 1. Summary of well data.

WELTS#	Land surface elevation (ft NAVD 88)	bedrock elevation (ft NAVD 88)	reported depth to water below land surface	aquifer top elevation	Aquifer tapped	Reported water-level elevation (ft NAVD 88)
4264	331	<259	41	268	sand, gravel	290
4268	335	<225	35	230	sand, gravel	300
7527	331	<268	36	276	sand, gravel	295
25299	328	<243	39	254	sand, gravel	289
29399	288	<208	29	220	gravel	261
43594	336	303	37	299	bedrock	299
48437	343	301	21	311	gravel	322
54756	336	<267	22	275	gravel	314
54763	324	<276	17	307	gravel	307
61818	357	<260	15	282	gravel	342
61820	349	<272	27	292	gravel	322
61822	347	<290	26	316	gravel	321
61824	345	<283	23	292	gravel	322
63254	320	<277	NR	308	gravel	NR
64175	365	313	33	333	gravel	332
67041	353	<255	40	273	gravel	313
75063	334	<296	19	315	gravel	315
MLCC#1	352	<277	40	280	gravel	312
MLCC#2	354	<266	54	271	sand, gravel	300
MLCC#3	347	259	NR	none	bedrock	none
MLCC#4	317	232	NR	234	gravel	none

notes
NR = not reported

general planning for the extraction of gravel from the MSB site and to guide further data collection. Several assumptions were made in order to construct this map:

- the water table is slightly below the elevation of the pit bottom west of the MSB site. The lowest elevation there is 284 ft amsl. Therefore an elevation of 283 ft is assumed.
- The elevation of the blue-colored pond south of the MSB site on Exhibit 1 represents the water table at an elevation of 282 ft amsl.
- There is an area of stained soils or a small amount of water inside a "280" contour located west of the MSB parcel. The elevation of the water table at that location is assumed to be 279 ft amsl.
- There is depression in the land surface extending below the "270" contour in the southwest region of the QAP site. The elevation of the water table there is assumed to be 269 ft amsl.
- The slope of the water table surface is assumed to be 0.006 ft/ft with an upward slope towards the northeast under the MSB site;
- The approximate water table is mapped only within the abandoned meltwater channel alluvial deposit mapped by Daniels (1981) that are at the MSB site and nearby areas.
- It appears that Little Meadow Creek to the east of the MSB site is perched above the regional water table and is not contoured as a part of the water table aquifer.

Effects of natural water level fluctuations

Absent human disturbance, water levels in a water table aquifer such as that found at the MSB site naturally fluctuates in response to seasonal variations in recharge and annual or multi-year periods of above or below average precipitation and snowmelt. These fluctuations can be up to several feet seasonally - perhaps even 4-8 feet in natural systems in the region during multi-year wet periods of above average precipitation.

At the QAP site, the upper limits of a water table rise are limited by the floor of the pit. Should the water levels rise above the floor of the pit, they will fill small depressions in the pit floor and water will flow as surface water in a southwesterly direction following the slope of the pit bottom. Thus, unless the pit geometry changes (or has changed since the lidar map was made), the expected maximum elevation of the water table along the west boundary of the MSB site is not expected to rise above approximately 284 ft amsl.

The approximate water table contour map shown in Exhibit 1 shows a sloping water table under the MSB site. The estimated water table elevation on the east side of the parcel is estimated to be approximately 290 to 292 ft amsl. With approximate land surface elevations of approximately 316-318 ft amsl along the east boundary of the MSB site, and a plan to stay four feet above the water table, this means that the depth of extraction along the eastern boundary would likely be no more than about 24 to 28 feet. This estimate could be refined with additional data collection about the actual water table position beneath the MSB site.

Potential effects of material extraction of local wells

By maintaining a separation of approximately four feet between the bottom of the MSB site extraction activities and the water table, the water table should remain relatively undisturbed and there should be no observable effect on the water levels in neighboring wells or their ability to produce water.

In practice, extraction operations may involve the need for a water supply and such a water supply could come either from an onsite pond or a well. In either case, the diversion of water should be authorized by the Alaska Division of Mining, Land and Water through a Temporary Water Use Authorization. Since the use of water would likely be non-consumptive (i.e. returned to the aquifer after use), the net impact on the surrounding water table should be negligible. Issuance of a Temporary Water Use Authorization typically comes with protective measures to avoid impacts and authority to revoke the authorization should problems occur.

As an industrial site involving the use of fueled vehicles and perhaps a power supply, the storage, transfer, and use of fuels creates some risk of leaks and spills. Normal industry precautions should be taken to prevent leaks and spills. The closest wells (at the Senior Center) are located upgradient of the MSB site and would not be expected to be impacted should a leak or spill occur. Other wells in a downgradient direction are located more than 0.5 miles distant. This is considered a sufficient separation to be protective unless a major spill or leak were to occur, or a leak in an underground facility would occur undetected for a long period of time. Again, normal industry precautions should be used to prevent leaks and spills.

Development considerations

To maintain a four-foot separation from the water table, several considerations are important. For initial planning:

- on the west side, the bottom of the excavation site should be planned to be no lower than 288 ft amsl;
- the bottom of the future extraction area should gradually rise towards the northeast in parallel with the water table slope of about 0.006 ft/ft. This indicates that the water table at the northeast portion of the excavation would be around 290 to292 ft amsl and the bottom of the excavation in that area should be no lower than about 294-296 ft amsl.

For detailed development planning:

- before excavation begins, test pits (with a backhoe) or test borings to should be advanced to determine the actual water-table position. Monitoring wells should be installed in at least three places roughly equidistant around the site perimeter that will not be mined for aggregate. Their location and the vertical elevations of the top of casings should be determined by survey to the nearest 0.1 ft vertical elevation or better. The wells should be constructed in a manner so as to prevent settling or frost heaving of the casing. The wells should be re-surveyed in the spring after frost leaves the ground to confirm their top of casing elevations.

- Water levels should be monitored at approximately monthly intervals for a year to determine seasonal fluctuations. Water-table contours should be drawn based on the highest water table elevation during the year and these water table contours should be used to determine the floor of the excavation, which would be four or more feet above the highest measured seasonal water table everywhere in the excavated area.

Resource Evaluation

The majority of the area targeted for potential gravel extraction is located in the area mapped as abandoned melt-water channel alluvium and should be suitable for producing marketable sand and gravel. There is a small area in the far north of the outlined area, which appears to consist of kame-esker deposits (Daniels, 1981). Kame-esker deposits consist chiefly of sand and gravel and are also potentially able to produce marketable materials, although there may be more silty or bouldery materials than would be found in the abandoned channel deposits. For this analysis, the kame-esker deposits will be assumed to provide marketable materials of similar quality as the channel deposits.

Using the approximate water table map (Exhibit 1) and an assumed overburden/topsoil thickness of one foot, and an assumption of staying four feet above the water table, the Mat-Su Borough calculated a preliminary volume of material available for extraction. This preliminary volume is 1,800,000 cubic yards of cubic yards (in place).

The on-site measurements from test pits or borings and monitoring wells can be used to refine the estimate of the thickness of overburden, marketable materials, and the quality of the kame-esker deposits.

Should you have any questions about this report, please call me at 345-0165 or 727-6310.

Sincerely,
J. A. Munter Consulting, Inc.

James A. Munter

James A. Munter, CPG
Principal Hydrogeologist
Certified Ground Water Professional No. 119481
Alaska Licensed Professional Geologist No. 568

References Cited

Daniels, C.L., 1981, Geologic and materials maps of the Anchorage C-7 SW Quadrangle, Alaska: Alaska Division of Geological & Geophysical Surveys Geologic Report 71, 2 sheets, scale 1:25,000. https://doi.org/10.14509/431

Jokela, J. Brett, James A. Munter, and James G. Evans, 1991, Ground-water resources of the Palmer-Big Lake area, Alaska. Alaska Division of Geological and Geophysical Surveys Report of Investigations 90-4, 38 pages, 3 sheets (1:25,000 scale).

Exhibits

Exhibit 1. Regional Groundwater Elevation Contour Map MSB007701.

Attachments

Attachment 1. Driller's logs of wells not found in WELTS.

MLCC#1

Daily Drilling Log

Penn Jersey Drilling Inc.

HC 34 Box 2201 Wasilla, Alaska 99654-9604

"Specialty work since 1952"

Telephone (907) 892-7206

Owner Of Land: HOWDIE INC.

Address: 4237 E. MERIDIAN LOOP
WASILLA.AK. 99654

Well - Site: SENIOR CENTER
PITTMAN ROAD

Date - Started: 7/16/2008

Date - Ended: 7/16/2008

Depth of Well: 75 FEET

Static Level of Water (ft): 40'

Draw Down (ft): _____

Gallons / minute: 60 GPM

Kind of Casing: 6" STEEL WELDED

Misc. Info: WELL #2. TRACE OF WATER & 25' & 38' _____ IRON TEST (a) 60'WAS .2 PPM (DRY GROUTED W/1 BAG)

AIR ROTARY

Kinds of Formation:

From (ft)	To (ft)	Formation Type
0	1	TOP SOIL
1	3	SILTY GRAVEL
3	25	SAND & GRAVEL
25	27	DAMP CLAY & GRAVEL
27	32	SAND & GRAVEL
32	38	CLAY & GRAVEL
38	40	CLAY & GRAVEL, TRACE OF WATER
40	72	SILTY GRAVEL
72	75	GRAVEL & WATER - 60 GPM.

Entry ID: 205 **Drilling Rig:** BIG RIG

MLCC#2

Daily Drilling Log

Penn Jersey Drilling Inc.

HC 34 Box 2201 Wasilla, Alaska 99654-9604 "Specialty work since 1952" Telephone (907) 892-7206

Owner Of Land: MEODOWLAKES COMMUNITY COUNCIL

Address: 1210 N. KIM DRIVE, STE #B
WASILA, ALASKA 99654

Well - Site: END OF KAREN ST. -
SENIOR CENTER BALL FIELDS, OFF PITTMAN

Date - Started: 7/28/2011

Date - Ended: 7/29/2011

Depth of Well: 88 FEET

Static Level of Water (ft): 54 FEET

Draw Down (ft):

Gallons / minute: 15+ GPM

Kind of Casing: 84' of 6" STEEL WELDED CASING

Misc. Info: IRRIGATION WELL, NOT GROUTED. INSTALLED 5' #30 SLOT STAINLESS WELL SCREEN.

Kinds of Formation:

From (ft)	To (ft)	Formation Type
0	2	TOPSOIL
2	7	SAND & GRAVEL
7	8	BOULDER
8	29	BROWN SAND & GRAVEL
29	83	SILT & GRAVEL
83	88	SAND,GRAVEL & WATER

From (ft)	To (ft)	Formation Type

Entry ID: 550

Drilling Rig: BIG RIG
AIR ROTARY

Drillers: TED & TOM SCHACHLE

/\ « MLCC#3

Daily Drilling Log

Penn Jersey Drilling Inc

HC 34 Box 2201 Wasilla, Alaska
99654-9604

"Specialty work since 1952"

Telephone (907) 892-7206

Owner Of Land: HOWDIE INC.

Address: 4237 E. MERIDIAN LOOP
WASILLA, ALASKA
99654

Well - Site: SENIOR CENTER
PITTMAN ROAD

Date - Started: 7/15/2008

Date - Ended:

7/16/2008

Depth of Well: 220 FEET

Static Level of Water (ft):

Draw Down (ft): _____

Gallons / minute: 1/8 GPM

Kind of Casing: 6" STEEL WELDED (100' OF CASING IN WELL)

Misc. Info: Well #1- (WELL WAS DRY GROUTED)
At 152' was a trace of water.

Kinds of Formation:

From (ft)	To (ft)	Formation Type
0	3	FILL DIRT
3	18	SILTY GRAVEL
18	31	BROWN SANDY GRAVEL
31	88	GREY CLAY & GRAVEL
88	91	SOFT BEDROCK
91	97	COAL
97	220	SANDSTONE BEDROCK

From (ft)	To (ft)	Formation Type

MLCC#4

Daily Drilling Log

Penn Jersey Drilling Inc.

HC 34 Box 2201 Wasilla, Alaska 99654-9604 "Specialty work since 1952" Telephone (907) 892-7206

Owner Of Land: MEODOWLAKES COMMUNITY COUNCIL

Address: END OF KAREN ST. PITMAN

Well - Site: END OF KAREN ST. -SENIOR CENTER BALL FIELDS, PITMAN

Date - Started: 7-14-2011

Date - Ended: 7-15-2011

Depth of Well: 90 FEET

Static Level of Water (ft): NO WATER

Draw Down (ft):

Gallons / minute: NO WATER

Kind of Casing: 6" STEEL WELDED

Misc. Info: ABANDONED WELL W/ 5 BAGS OF BENTONITE, PULLED CASING OUT.

Kinds of Formation:

From (ft)	To (ft)	Formation Type
0	21	BONEY GRAVEL
21	22	BROWN CLAY
22	29	GREY HARD PAN
29	68	GRAY SLTY GRAVEL
68	71	DAMP SILT & GRAVEL
78	79	DAMP GRAVEL
79	83	SILT & GRAVEL
83	85	GREEN GRAVEL, W/5 GPM WATER
85	88	COAL
88	90	BEDROCK

From (ft)	To (ft)	Formation Type

Entry ID: 544

Drilling Rig: LITTLE RIG AIR ROTARY

Drillers: TIM SCHACHLE & CRAIG SEIME

Exhibit 1

Regional Groundwater Elevation Contour Map MSB007701

This map illustrates the estimated elevation contours of the water table above NAVD 88 vertical datum.

Contours based on 2011 LIDAR Data.

Provisional

Legend WELTS#

- Wells [Static Water Elevation]
- Road
- Water Table Elevation Contour 280
- MSB Proposed Gravel Site
- MSB Parcel Tax ID 17N02W02C003

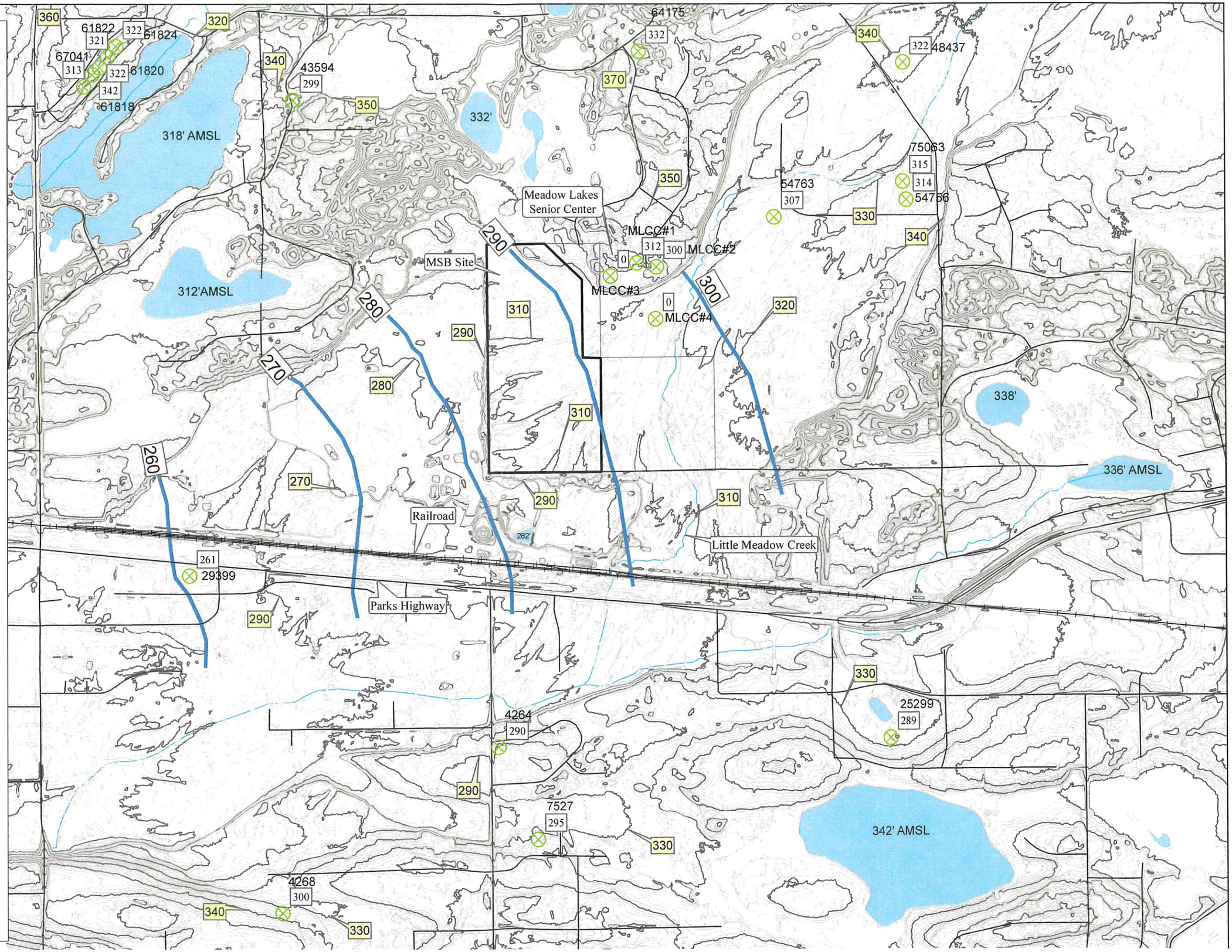
Land Surface Elevation (2 foot contours)

ELEVATION

- 2
- 10 — Elevation
- Lakes
- Steams

0 490 980 Feet

Date: April 2021
Sources: MSB GIS, DNR WELTS
Projection: NAD 83 AK ST PLN Z4
Vertical Datum: NAVD 88
Location: MSB



Matanuska - Susitna Borough
Land and Resource
Management Division

Exhibit 1
Vicinity Map

Meadow Lakes
Material Extraction
CUP Application

Legend

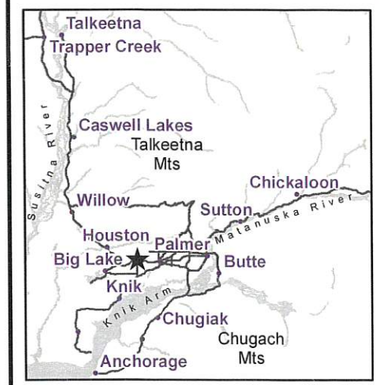
SUBJECT PARCEL C003

Project Location
17N02W02C003

18N02W29 | 18N02W27 | 18N02W26 | 18N02W25 | 18N01W30
18N02W32 | 18N02W33 | 18N02W34 | 18N02W35 | 18N02W36 | 18N01W31
17N02W05 | 17N02W04 | 17N02W03 | 17N02W02 | 17N02W01 | 17N01W06
17N02W08 | 17N02W09 | 17N02W10 | 17N02W11 | 17N02W12 | 17N01W07
17N02W17 | 17N02W16 | 17N02W15 | 17N02W14 | 17N02W13 | 17N01W18

N MEADOW LAKES LOOP
N PITTMAN RD
W BEVERLY LAKE RD
W SELDON RD
W PARKS HWY
S VINE RD
S CLAPP ST

45 46 47 48 49 50



N
W E
S

0 1,000 2,000 3,000 4,000
Feet

Date: April 2021
Sources: MSB GIS, MSB LRMD, AK DOT
Projection: NAD 83 AK ST PLN Z4
Location: MSB
Author: MSB LRMD

Matanuska - Susitna Borough
Land and Resource Management Division

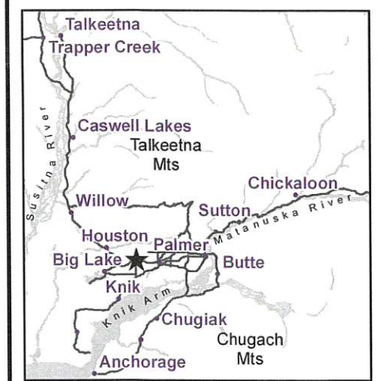
Exhibit 2
Location Map

Meadow Lakes Material Extraction CUP Application

Legend

- MSB Parcel 17N02WC003
- Mining Plan Area

Project Location
17N02W02C003



N
W E
S

0 500 1,000 1,500 2,000
Feet

Date: April 2021
Sources: MSB GIS, MSB LRMD, AK DOT
Projection: NAD 83 AK ST PLN Z4
Location: MSB
Author: MSB LRMD

MATANUSKA-SUSITNA BOROUGH
LAND AND RESOURCE
MANAGEMENT DIVISION

EXHIBIT 3 - SITE PLAN LAYOUT 1 OPERATIONAL FEATURES AND EXISTING TOPOGRAPHY (10' CONTOURS)

LEGEND

- PROPOSED ACCESS
- 40' WIDE x 10' TALL EARTHEN BERM
- MATERIAL EXTRACTION AREA
- MINING PLAN AREA OF DISTURBANCE

N
W E
S

0 75 150 225 300
Feet

DATE: APRIL, 2021
SOURCES: MSB GIS, MSB LRMD
PROJECTION: NAD 83 AK ST PLN Z4
LOCATION: MEADOW LAKES
AUTHOR: MSB LRMD

(6255)
15' PUE
C3
WETLANDS
POOR SOILS
WETLANDS
100' UNDISTURBED WETLAND BUFFER
UNDISTURBED AREA
TRACT A
40' WIDE X 10' TALL EARTHEN BERM
MEADOW LAKES SENIOR CENTER
MATERIAL EXTRACTION AREA
200' UNDISTURBED VEGETATED BUFFER
50' SECTION LINE EASEMENT
PROPOSED OPEN SPACE
SITE DRAINAGE WILL BE AWAY FROM PROPERTY EDGE
25' UNDISTURBED VEGETATED BUFFER
MATERIAL PROCESSING AND STAGING WILL BE CONFINED TO THE SQUTHERN 20 ACRES
40' WIDE X 10' TALL EARTHEN BERM
PROPOSED 50' EASEMENT TO DEDICATE 100' WIDE PUE IN 40 ACRE EXEMPTION PLAT
33' SECTION LINE EASEMENT
50' SECTION LINE EASEMENT
PROPOSED ACCESS TRUCK HAUL ROUTE 1 MILE TO PITTMAN ROAD
PROPOSED ACCESS TRUCK HAUL ROUTE 0.75 MILE TO SUZANNA STREET
A25

MATANUSKA-SUSITNA BOROUGH
LAND AND RESOURCE
MANAGEMENT DIVISION

EXHIBIT 4 - SITE PLAN LAYOUT 2
MATERIAL EXTRACTION
PHASED DEVELOPMENT

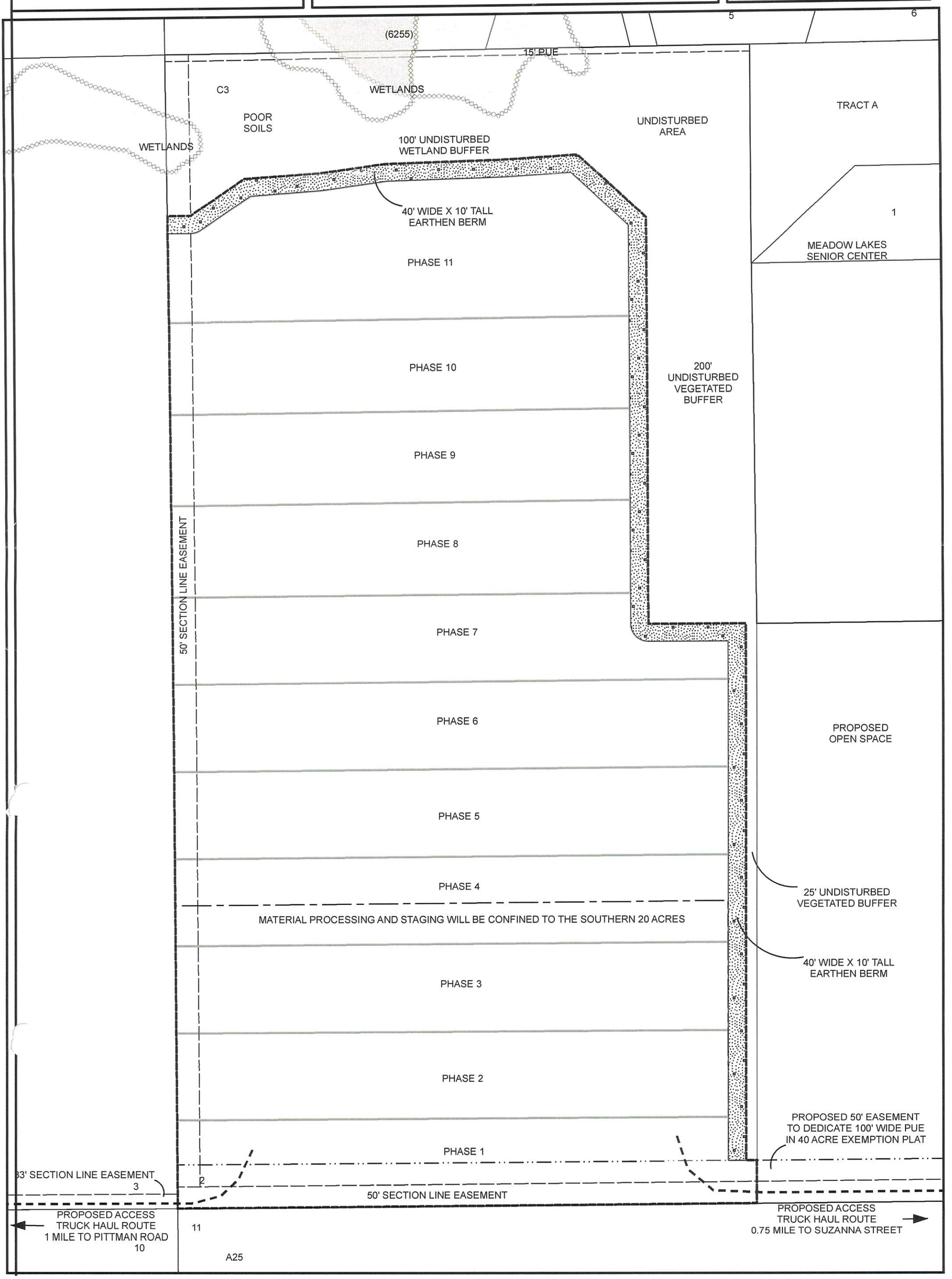
LEGEND

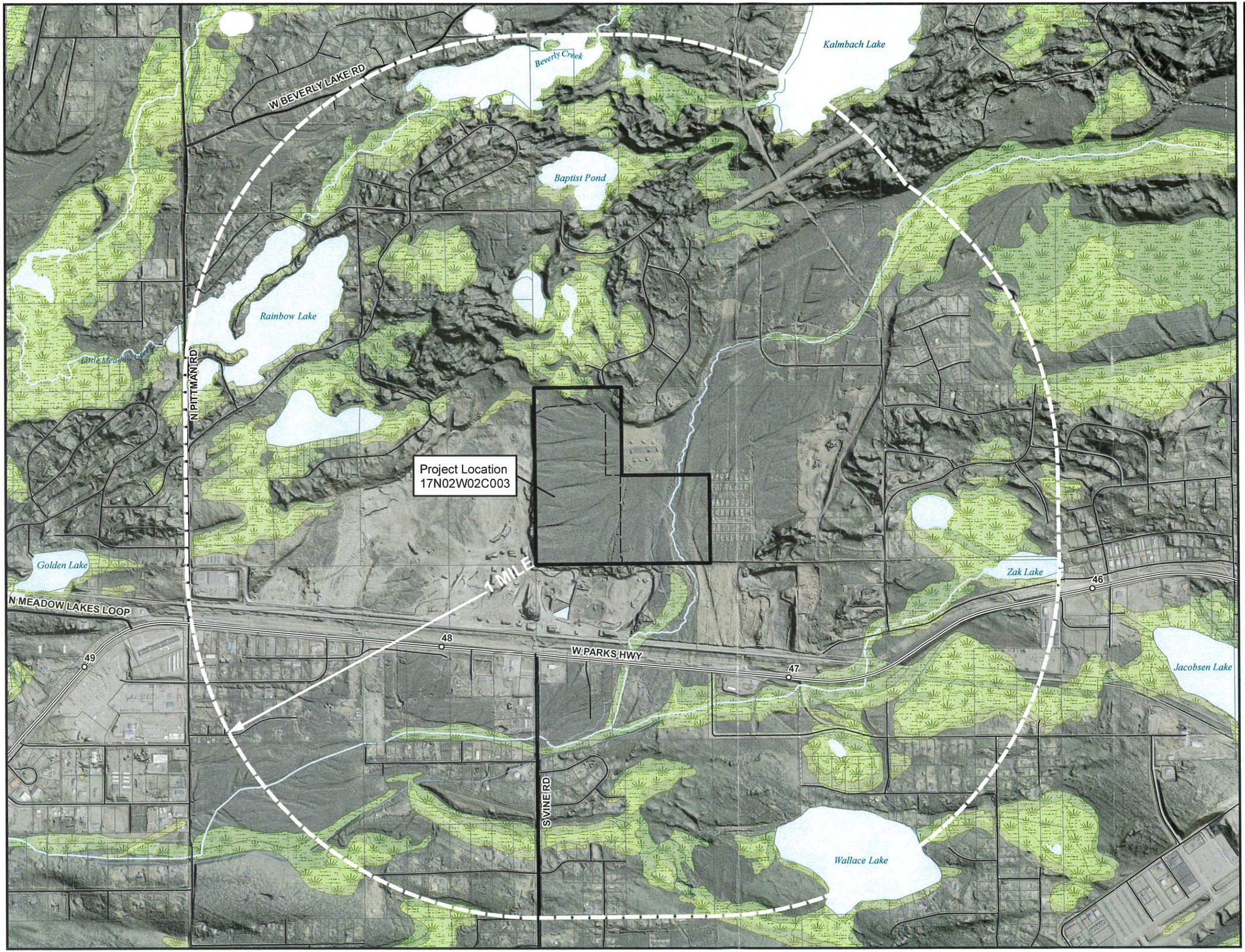
- PROPOSED ACCESS
- 40' WIDE x 10' TALL EARTHEN BERM
- MATERIAL EXTRACTION PHASES
- MINING PLAN AREA OF DISTURBANCE

N
W E
S

0 75 150 225 300
Feet

DATE: APRIL, 2021
SOURCES: MSB GIS, MSB LRMD
PROJECTION: NAD 83 AK ST PLN Z4
LOCATION: MEADOW LAKES
AUTHOR: MSB LRMD





Matanuska - Susitna Borough
Land and Resource Management Division

Exhibit 5
Wetlands and Waterbodies Map

Meadow Lakes Material Extraction CUP Application

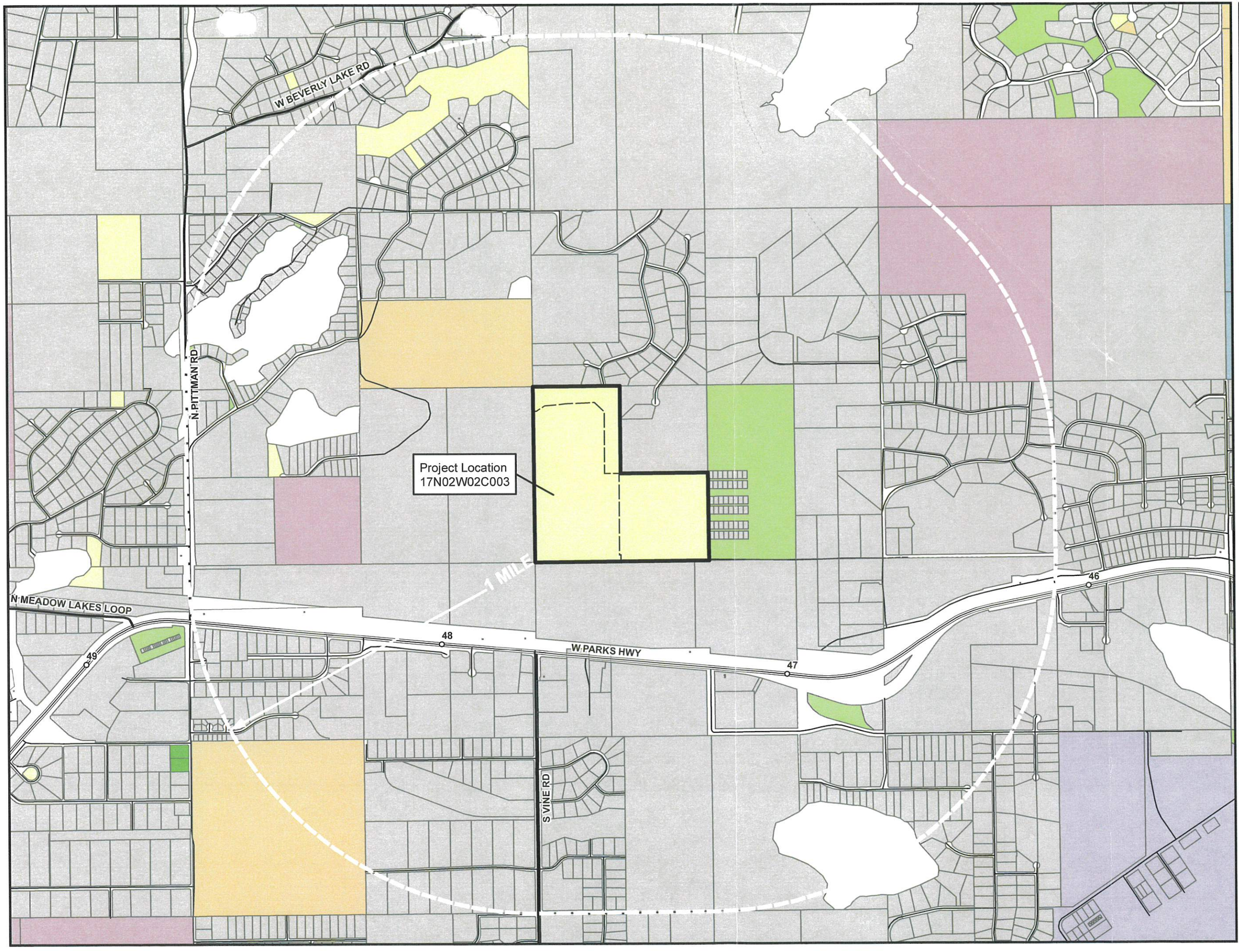
Legend

- MSB Wetland Mapping
- National Wetland Inventory
- MSB Waterbody Lines
- NHD Waterbody Lines
- NHD Waterbody Polygons

N
W E
S

0 650 1,300 1,950 2,600
Feet

Date: April 2021
Sources: MSB GIS, MSB LRMD, AK DOT
Projection: NAD 83 AK ST PLN Z4
Location: MSB
Author: MSB LRMD



Matanuska - Susitna Borough
Land and Resource Management Division

Exhibit 6
Surrounding Land Ownership

Meadow Lakes Material Extraction CUP Application

LAND STATUS
- BOROUGH
- CITY
- COOPERATIVE
- MENTAL HEALTH
- NATIVE CORP
- STATE
- PRIVATE
- PUBLIC UNIVERSITY

N
W E
S

0 650 1,300 1,950 2,600
Feet

Date: April 2021
Sources: MSB GIS, MSB LRMD, AK DOT
Projection: NAD 83 AK ST PLN Z4
Location: MSB
Author: MSB LRMD

Exhibit 8

Regional Groundwater Elevation Contour Map

Transects and Cross Sections

This map illustrates the estimated elevation contours of the water table above NAVD 88 vertical datum.

Contours based on 2011 LIDAR Data.

Provisional

Legend

- Road
- Water Table Elevation Contour (280)
- Earthen Berm
- MSB Proposed Gravel Site
- MSB Parcel Tax ID 17N02W02C003

Land Surface Elevation (2 foot contours)

ELEVATION

- 2
- 10
- Lakes
- Steams

0 250 500 Feet

N W E S

Date: April 2021
Sources: MSB GIS, DNR WELTS
Projection: NAD 83 AK ST PLN Z4
Vertical Datum: NAVD 88
Location: MSB

360

64175

Eathern Berm

Material Extraction Site Boundary

280' Groundwater Table Elevation Contour

300' Groundwater Table Elevation Contour

MSB Parcel Tax ID 17N02W02C003

336' AMSL

Little Meadow Creek

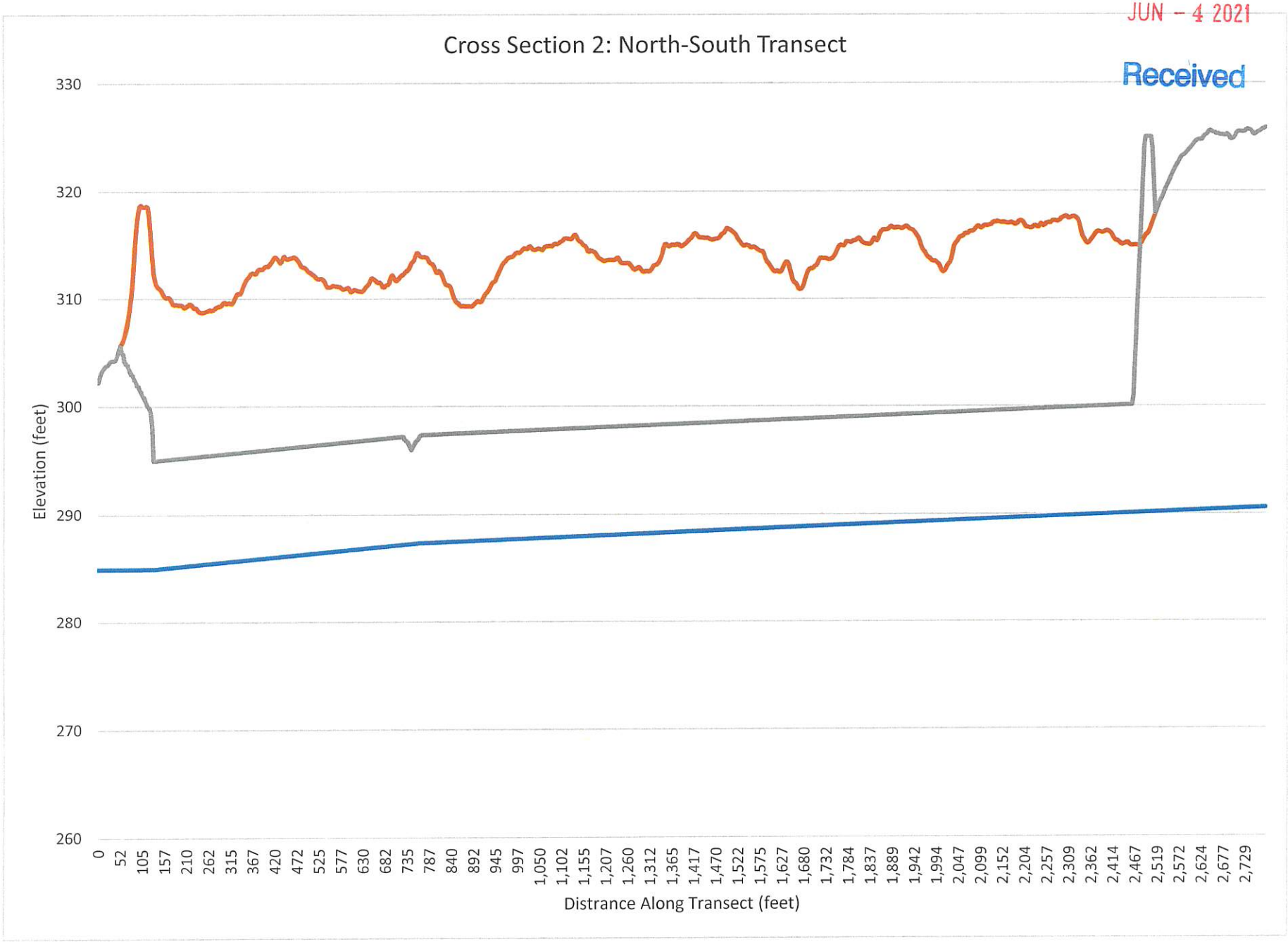
Transect 1

Transect 2

25299

342' AMSL

290' Groundwater Table Elevation Contour



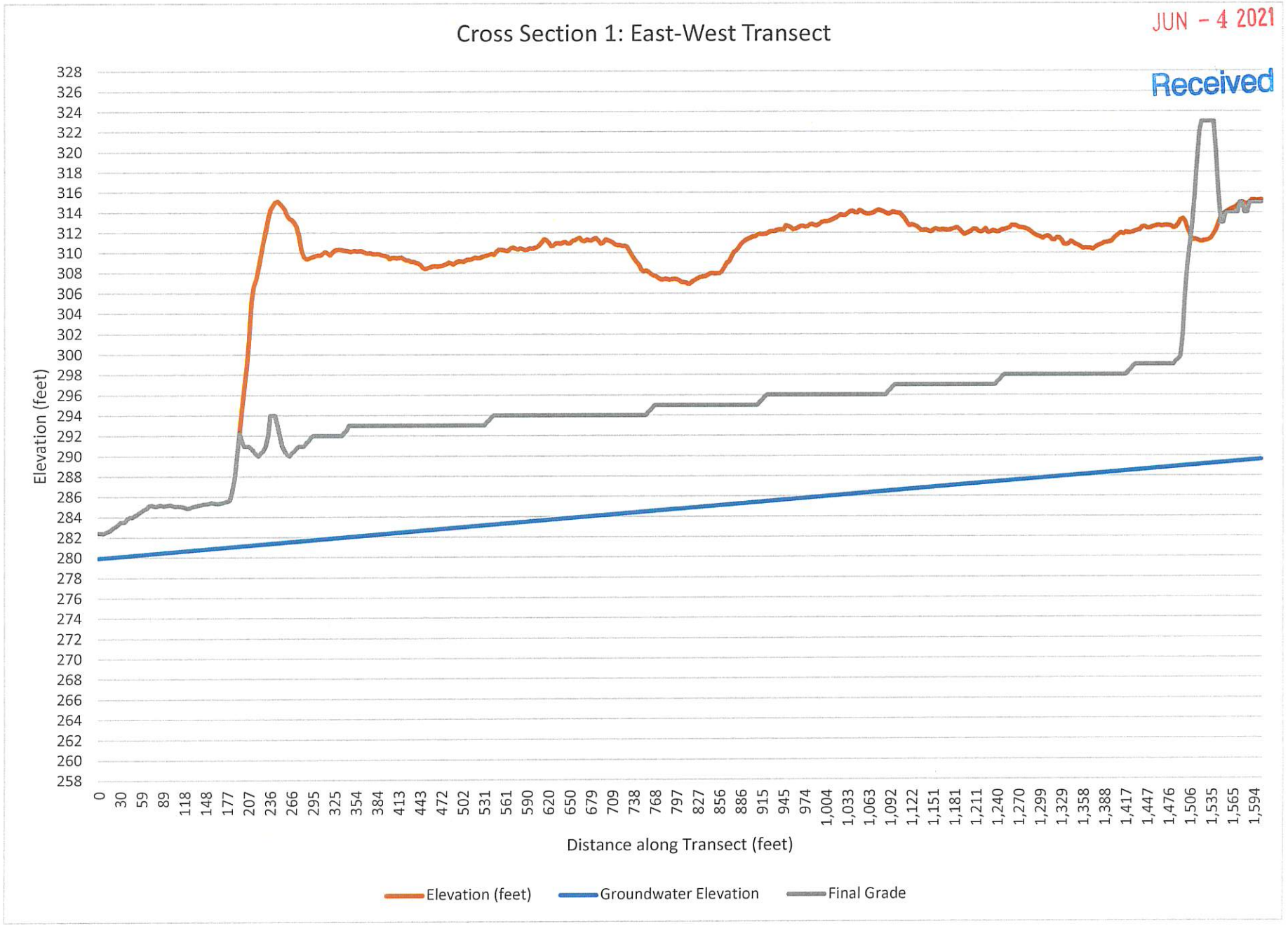


Exhibit #9

Emerson Krueger

From: PORTER, Todd (ANQAP) <tporter@colaska.com>
Sent: Wednesday, May 5, 2021 4:49 PM
To: Emerson Krueger
Cc: ROSKELLEY, Jeff (ANQAP); CARLSON, Ron (ANQAP)
Subject: Pit Information
Attachments:

Hi Emerson.

Also, we do waive the visual buffer as previously requested.

Let me know if there is anything else that we can do to help.

Thanks,

Todd