MATANUSKA-SUSITNA BOROUGH

350 East Dahlia Avenue, Palmer, Alaska 99645 - 907-861-7874

PLATTING OFFICER Fred Wagner

PLATTING CLERK

PLATTING TECHNICIANS Amy Otto-Buchanan Kimberly McClure Matthew Goddard



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PLATTING BOARD AGENDA ASSEMBLY CHAMBERS 350 EAST DAHLIA AVENUE, PALMER

PLATTING BOARD MEETING

1:00 P.M.

June 16, 2022

Ways you can participate in Platting Board meetings:

IN PERSON OR IN WRITING: You can submit written comments by email to <u>platting@matsugov.us</u> or by mail to Matanuska-Susitna Borough, Platting Division, 350 E. Dahlia Avenue, Palmer, AK 99645

TELEPHONIC TESTIMONY: (Audio only)

Attention: For those using the telephonic system, please be advised that we have had technical difficulties. The preference for public participation is in-person or submission of written comments. Once public comments are closed, all public participation is also closed. To ensure your concerns are heard, it is best to present them in-person.

- Dial 1-855-225-1887; with Conference ID 8573#; You will hear "Joining conference" when you are admitted to the meeting. (If the system is down, you will need to attend the meeting in person to participate)
- You will be automatically muted and able to listen to the meeting.
- When the Chair announces audience participation or a public hearing you would like to speak to, press
 *3; you will hear "Your hand has been raised."
- When it is your turn to testify you will hear "Your line has been unmuted."
- State your name for the record, spell your last name and your mailing address, and provide your testimony.
- If you cannot access the telephonic system please call the Mat-Su Borough Platting's main phone line for directions. 907-861-7874

1. CALL TO ORDER

- A. Roll Call and Determination of Quorum (by Secretary)
- B. Pledge of Allegiance
- C. Approval of Agenda
- 2. APPROVAL OF MINUTES

(None)

- 3. AUDIENCE PARTICIPATION & PRESENTATIONS
 - A. PERSONS TO BE HEARD (Three minutes per person for Items not scheduled for public hearing)
- 4. UNFINISHED BUSINESS (None)
- 5. RECONSIDERATIONS/APPEALS (None)
- 6. PUBLIC HEARINGS
 - A. <u>RESOLUTION 2022-039</u>: A Resolution of the Matanuska-Susitna Borough Platting Board recommending adoption of an Ordinance amending MSB 43.05.015 Purpose and Scope, to reference the 2022 Subdivision Construction Manual.
- Platting Board Chair to read the Ex-Parte & Interest Memo.
 - B. LAURIE CHIPMAN: The request is to create one lot from Lots 1-4, Block 1 and Lots 1-4, Block 2, Meadowland Park Estates, Plat No. 83-88 and vacate the right-of-way of S. Derby Drive, to be known as CHIPMAN ACRES, containing 9.5 acres +/-. The petitioner is dedicating additional right-of-way in the southwest corner to facilitate further construction to the west of E. Republican Way which is currently encumbered by multiple power poles. The property is located directly north of E. Republican Way, east of S. Bodenburg Spur and south of S. Bodenburg Loop (Tax ID #2482B001L001-L004 & 2482B02L001-L004); lying within the SE '4 Section 34, Township 17 North, Range 02 East, Seward Meridian, Alaska. In the Butte Community Council and in Assembly District #1. Continued from the April 21, 2022 platting board hearing.
- Platting Board Chair to read the Ex-Parte & Interest Memo.
 - C. JEREMY D. AND ELAINE C. RIDLON: The request is to divide Tax Parcels A11 and A12 (Government Lots 1 and 2) into 40 lots, by a three phase Master Plan, to be known as BEAVER FLATS MASTER PLAN, containing 79.96 acres +/-. Petitioner will construct Borough standard streets within the existing Section Line Easement and the right-of-way of N. Duley Road and within the subdivision. This subdivision will have private roads. Parcel is located north of Big Beaver Lake, north of N. Beaver Lake Road and northwest of W. Hawk Lane (Tax ID # 17N03W04A011/A012); lying within the NE ¼ Section 04, Township 17 North, Range 03 West, Seward Meridian, Alaska. In the Big Lake Community Council and in Assembly District #5. Continued from the May 4, 2022 and March 17, 2022 platting board hearing.

- Platting Board Chair to read the Ex-Parte & Interest Memo.
 - D. WM CONSTRUCTION LLC: The request is to divide Tax Parcel A9 into ten lots by a two-phase Master Plan, to be known as WOLF WEST MSP containing 10 acres +/-. Petitioner will dedicate and construct interior street and cul-de-sac to Borough street standards. Parcel is located south of E. Tex-Al Drive, west of N. Engstrom Road and will be accessed by E. Amarok Avenue (Tax ID # 18N01E16A009); lying within the NE ¼ Section 16, Township 18 North, Range 01 East, Seward Meridian, Alaska. In the Fishhook Community Council and in Assembly District #6.
- Platting Board Chair to read the Ex-Parte & Interest Memo.
 - E. PRECISION FRONTIERS LLC, WADE STAHLE: The request is to divide Lot 2, Block 1, Wasilla Creek Estates, Plat No. 86-17, into six lots, to be known as EQUESTRIAN MEADOWS, containing 9.94 acres +/-. Petitioner will dedicate and construct a cul-de-sac to residential street standards. Parcels are located southeast of E. Jensen Road (Tax ID # 3177B01L002); lying within the SE ¼ Section 12, Township 18 North, Range 01 East, Seward Meridian, Alaska. In the Fishhook Community Council and in Assembly District #1.
- Platting Board Chair to read the Ex-Parte & Interest Memo.
 - F. DENNIS E. BYLER: The request is to divide Tax Parcel D3, Parcel 2, MSB 40-Acre Exemption 2015-19-EXM, recorded 2015-002388-0, into 31 lots and two tracts, to be known as SOUTH BLUFFS, containing 103.42 acres +/-. Petitioner will dedicate and construct interior streets to Borough street standards and construct the extension of W. Spruce Avenue to residential sub-collector standards. Parcel is located west of N. Church Road and north of W. Spruce Avenue (Tax ID # 18N01W31D003); lying within the SE ¼ Section 31, Township 18 North, Range 01 West, Seward Meridian, Alaska. In the Meadow Lakes Community Council and in Assembly District #7.
- Platting Board Chair to read the Ex-Parte & Interest Memo.
 - G. NORTHWEST LAND INVESTMENT: The request is to create nine lots from Parcel 1, MSB Waiver # 98-49 PWm, to be known as RIDDLEBURG STATION, containing 10.94 acres +/-. All lots will take access from the proposed internal street. The property is located south of W. Seldon Road, west of N. Lucille Street, and directly north of W. Spruce Avenue (Tax ID # 18N01W33D008); within the SE ¼ Section 33, Township 18 North, Range 01 West, Seward Meridian, Alaska. In the Tanaina Community Council and in Assembly District #6.
- Platting Board Chair to read the Ex-Parte & Interest Memo.
 - H. FOXGLOVE LLC: The request is to create 20 lots and one tract from Tax Parcels A9-10, B10-B13 and C7-C9 to be known as UTOPIA VIEW, containing 90.08 acres +/-. The property is located west of N. Church Road, east of N. Stanley Circle, and north of W. Parks Highway (Tax ID # 17N01W06C007-C009, B010-B013, A009-A010); within Section 06, Township 17 North, Range 01 West, Seward Meridian, Alaska. In the Meadow Lakes Community Council and in Assembly District #4.

- Platting Board Chair to read the Ex-Parte & Interest Memo.
 - I. NICHOLAS & CHEN LING MASTRODICASA: The request is to create 21 lots from Parcel 4, MSB Waiver 79-49-PWm, recorded as 73-331w, to be known as GLACIER VALLEY, containing 24.9 acres +/-. Petitioner will dedicate and construct interior streets to Borough residential street standards, to include one permanent cul-de-sac and one temporary cul-de-sac. Parcel is located north of E. Republican Way and south of S. Bodenburg Loop (Tax ID # 17N02E34D007); lying within the SW ¼ SE ¼ Section 34, Township 17 North, Range 02 East, Seward Meridian, Alaska. In the Butte Community Council and in Assembly District #1.
- 7. ITEMS OF BUSINESS & MISCELLANEOUS (None)

8. PLATTING STAFF & OFFICER COMMENTS

- A. Adjudicatory (if needed)
 - <u>Definition</u>: Law. To hear and settle an issue or a question regarding code.
- B. Upcoming Platting Board Agenda Items (Staff: Fred Wagner)
 - Introduction for July 7, 2022 Platting Board Hearing (Informational Only Subject to change)
 - Hatcher's Landing, Case 2022-072
 - Woodland Ridge, Case 2022-074
 - Shadowridge, Case 2022-052

9. BOARD COMMENTS

10. ADJOURNMENT

THE PLATTING BOARD WILL CONVENE AT <u>1:00 P.M.</u> on <u>June 16, 2022</u> in the <u>Assembly Chambers</u> of the <u>Dorothy Swanda Jones Building</u>, 350 E. Dahlia Avenue, Palmer, Alaska. To view the agenda or meeting packet please go to the following link: <u>www.matsugov.us/boards/platting</u>.



MATANUSKA-SUSITNA BOROUGH

Planning and Land Use Department

350 East Dahlia Avenue • Palmer, AK 99645 Phone (907) 861-7822 • www.matsugov.us planning@matsugov.us

STAFF REPORT

DATE: May 23, 2022

SUBJECT: 2022 Subdivision Construction Manual Update

RESOLUTION NO.: Platting Board Resolution 22-039

STAFF: Alex Strawn, Planning & Land Use Director



SUMMARY STATEMENT

In August 2020 the Matanuska-Susitna Borough Assembly adopted a major revision to the Subdivision Construction Manual. After working with the new manual for a construction season, both staff and the development community identified modifications that will clarify requirements of the manual. The modifications consist of general cleanup, modification of standards, and clarification of acceptable engineering techniques. Specifically, the changes can be summarized as follows:

- 1. General cleanup and clarification
- Removed the number of lot and length restriction on residential streets before it becomes a residential Subcollector
- 3. Modified standards for turnarounds and paved aprons
- Clarified compaction standards and added requirements for testing methods
- Require the use of NOAA rainfall data for all locations and added standards how to use the data
- Allow developers to put drainage facilities within utility easements while providing protections for future and existing utility facilities
 - Modified standards for water quality associated with treatment of runoff
- 8. Modified downstream evaluation and mitigation criteria for flood hazards
- Added requirements to the flood bypass design requirements

- 10. Added standards for ditch stabilization
- 11. Added minimum freeboard for all ditches
- 12. Added culvert gauge standards
- 13. Added energy dissipation requirements at culvert outlets
- 14. Added soil infiltration facility standards
- 15. Added pre-approved runoff calculation methods
- 16. Modified warranty timeframes to work better for both DPW and developers
 - 17. Added inspection deadline for Subdivision Agreements
 - 18. Removed appendices for example construction plan and paving special provision

Staff Recommendations

Staff respectfully recommends considering adoption of this legislation.

Matanuska-Susitna Borough Public Works Department

2022 Subdivision Construction Manual

(Roads, Drainage, and Utilities)

Adopted June 21, 2022

Effective June 21, 2022



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Acronyms & Abbreviations

AASHTO American Association of State Highway and Transportation Officials

ADFG Alaska Department of Fish and Game

ADT Average Daily Traffic

ADOT&PF Alaska Department of Transportation and Public Facilities

ATM Alaska Test Method
cfs cubic feet per second
CMP Corrugated metal pipe

DPW Department of Public Works of the Matanuska-Susitna Borough

FHWA Federal Highway Administration

ft feet

h:v horizontal to vertical

IDF Intensity-Duration-Frequency
IFC International Fire Code

in inches

ITE Institute of Transportation Engineers

LEW Low Erosivity Waiver

LRTP Long Range Transportation Plan

mph miles per hour

MSB Matanuska-Susitna Borough

N/A not applicable

NOAA National Oceanic and Atmospheric Administration

NRCS Natural Resources Conservation Service

NTP notice to proceed

OHWM ordinary high water mark

OSHP Official Streets and Highways Plan

PUE public use easement

ROW right-of-way

SCS Soil Conservation Service

VPD vehicles per day

Definitions

Engineer

Alaska.

Access Point The location along a road at which a driveway or road intersects. Arterial A road that provides a high level of mobility within the transportation network. Arterials have managed access with a minimal number of intersections or interchanges. Average Daily The total number of vehicle trips during a given time period (in whole days greater Traffic than one day and less than one year) divided by the number of days in that time period. Backslope On a roadway section in a cut, the portion of the roadside that slopes up from the roadside ditch and away from the roadway to the top of the cut, see Figure A-3. Catchment Area The total area contributing stormwater runoff to a particular point, site, or structure. A road that links local roads with arterials and performs some duties of each. Collector Collectors have managed access with a moderate number of intersections and driveways. Curve Return The curve located at the corner of an intersection, connecting the roadway edge of one road to the roadway edge of an intersecting road or driveway. Detention The temporary storage of runoff, for later controlled release. Drainage The configuration of a drainage system including manmade and natural features Pattern within a catchment area. A vehicular access way between a road and a parking area within a lot or property. Driveway Earthen material that is placed and compacted for the purpose of raising the grade Embankment of a roadway.

An individual who is registered as a Professional Civil Engineer in the State of

Feasible Reasonable and capable of being done or carried out.

Foreslope On a roadway section, the portion of the roadside that slopes down and away from

the roadway, see Figure A-3.

Functional Area The physical area of an intersection and

the area extending both upstream and downstream which includes perception reaction distance, maneuver distance, and

storage length.

Intersection The general area where two or more roads join or cross.

Local Road A road that provides access to abutting property, rather than to serve through

traffic. Local roads are not access controlled and can have frequent intersections

and driveways.

Lot Frontage A property line that abuts the right-of-way that provides access to the lot,

Ordinary High Water Mark

The elevation marking the highest water level which has been maintained for a sufficient time to leave evidence upon the landscape. Generally, it is the point where the natural vegetation changes from predominately aquatic to upland

species.

Positive Drainage Clear, unobstructed flow of water away from structures and roadways without

localized ponding.

Public Use Easement

Provides the rights for ingress, egress, roadways, right-of-way, public utilities, and slopes for cuts and fills. The rights are to the public in general, and public utilities governed by permits required under federal, state, and local laws and regulations.

May also be known as a public access easement or right-of-way.

Regulated Stream

Any watercourse along which the flood hazard areas have been mapped and approved by the Federal Emergency Management Agency; any stream which harbors fish, as determined by the Alaska Department of Fish and Game; or any

stream designated as regulated by MSB.

Retention The prevention of runoff. Stormwater, which is retained, remains indefinitely, with

the exception of the volume lost to evaporation, plant uptake, or infiltration.

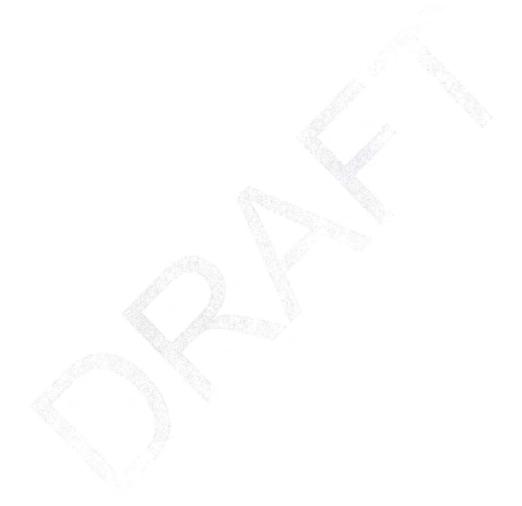
Right-of-way	A strip of land reserved, used, or to be used for a street, alley, walkway, airport, railroad, or other public or private purpose.
Road	A general term denoting a public thoroughfare used, or intended to be used, for passage or travel.
Road Prism	The foundation that supports the roadway; see Figure A-3.
Roadway	The portion of a road that includes driving lanes and shoulders, see Figure A-3.
Segment	A portion of road between two significant intersections or an intersection and its terminus.
Shoulder	The portion of a roadway contiguous to any traveled way for lateral support of surface courses, see Figure A-3.
Street	A general term usually denoting an urban or suburban road.
Stub	A right-of-way or road segment that is planned to be extended, typically short in length, which terminates at the boundary of a subdivision or masterplan phase.
T-intersection	A three leg intersection in the form of a "T".
Through Street	A road given preferential right of way; roads which intersect a through street are controlled, such as with a stop sign or yield sign.
Water Body	A permanent or temporary area of standing or flowing water. Water depth is such that water, and not air, is the principal medium in which organisms live. Water bodies include, but are not limited to: lakes, ponds, streams, rivers, sloughs, and all salt water bodies.



Introduction

This manual is intended to accomplish the following goals:

- (1) To establish standards for the design and construction of transportation networks throughout the Matanuska-Susitna Borough.
- (2) To provide information and guidelines for the design, construction, and upgrade of roads, drainage facilities, and utilities within rights-of-way.
- (3) To develop and maintain a safer and more efficient transportation system.
- (4) To minimize operation & maintenance efforts.



Section A. Street Design

A01 General

These provisions establish appropriate standards for the design of roads. The purpose of these provisions is to:

- (1) promote the safety and convenience of motorized and non-motorized traffic;
- (2) promote the safety of neighborhood residents;
- (3) minimize the long term costs for maintenance and repair;
- (4) protect the residential qualities of neighborhoods by limiting traffic volume, speed, noise, and air pollution;
- (5) encourage the efficient use of land; and
- (6) minimize the cost of road construction and thereby restrain the rise in housing costs.

A02 Applicability

These standards apply to the design and construction of all subdivision improvements within the Matanuska-Susitna Borough (MSB), with the exception of those streets within cities that exercise road powers by ordinance.

A03 Street Classifications

Roads within the MSB fall within one of the following functional classifications, in accordance with the Long Range Transportation Plan (LRTP): Interstate, Principal Arterial, Minor Arterial, Major Collector, Minor Collector, and Local Road. Functional classification of a road is based on its function, design, and current potential use. The applicant may request review of the functional classification of existing roads abutting or affecting the design of a subdivision or land development during the preapplication process.

This section provides design guidance for roads falling under local road and minor collector functional classifications.

A03.1 Residential Street

Residential streets are local roads intended to carry the least amount of traffic at the lowest speed. The Residential street will provide the safest and most desirable environment for a residential neighborhood. Developments should be designed so that all, or the maximum number possible, of the homes will front on this class of street.

A03.2 Residential Subcollector Street

Residential Subcollector streets are local roads that carry more traffic than Residential streets.

A03.3 Residential Collector Street

Residential Collector streets are the highest order of residential streets and are a type of minor collector. In large residential developments, this class of street may be necessary to carry traffic from

one neighborhood to another or from the neighborhood to other areas in the community. Residential Collector streets should provide the fewest direct accesses as possible.

A03.4 Mountain Access Road

Mountain Access Roads may be used in areas where the average cross slope exceeds 15 percent or to traverse terrain features in excess of 25 percent. Maintenance of Mountain Access Roads will be at the discretion of Department of Public Works (DPW). School bus access should be considered as school bus routes require all grades less than 10 percent. Mountain Access Road standards allow for steeper grades and switchbacks, but should otherwise be designed to Residential, Residential Subcollector, or Residential Collector standard as required by this section.

A03.5 Pioneer Road

Pioneer Roads may only be used where allowed by MSB or other applicable code. This classification establishes minimum requirements for roads providing physical access, but should otherwise be designed to Residential, Residential Subcollector, or Residential Collector standard as required by this section. No MSB maintenance will be provided for Pioneer Roads. Pioneer roads may be constructed offset from the centerline of the right-of-way (ROW) to facilitate future expansion of the road.

A03.6 Alleys

Alleys are permitted provided legal and physical access conforms to MSB or other applicable code. No MSB maintenance will be provided for Alleys.

A03.7 Other Street Types

The above classifications may be further typed as one of the following streets. These other street types should be designed to Residential, Residential Subcollector, or Residential Collector standard as required by this section.

- (a) Frontage Street streets parallel and adjacent to a major road corridor which provides access to abutting properties and separation from through traffic. See Section B for additional design standards.
- (b) Backage Street streets that provide access to lots located between the Backage Street and a major road corridor. See Section B for additional design standards.
- (c) Connector Street the portion of a street that connects a frontage or backage street to a major road corridor. See Section B for additional design standards.
- (d) Divided Street streets may be divided for the purpose of accommodating environmental features or avoiding excessive grading. In such a case, the design standards shall be applied to the appropriate street classification and a single lane width with a shoulder on each side.

A04 Access Criteria

A04.1 Residential Street

- (a) A Residential street provides access to abutting properties.
- (b) The anticipated average daily traffic (ADT) volume on Residential streets shall not exceed 400. A loop street shall be designed such that the anticipated ADT at each terminus of the loop street does not exceed 400, see Figure A-1.
- (c) Residential streets may intersect or take access from an equal or higher classification street. Both ends of a loop Residential street are encouraged to intersect the same collecting street and be designed to discourage through traffic.

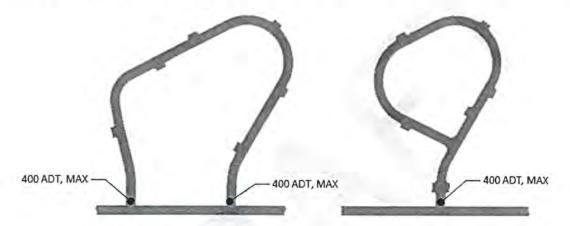


Figure A-1: Loop Residential Streets

A04.2 Residential Subcollector Street

- (a) A Residential Subcollector street provides access to abutting properties and may also move traffic from Residential streets that intersect it. Residential Subcollector streets are required when the ADT anticipated on the street will exceed the limits for Residential.
- (b) The anticipated ADT on Residential Subcollector streets shall not exceed 1000. A loop street shall be designed such that the anticipated ADT at each terminus of the loop street does not exceed 1000, see Figure A-2.
- (c) Residential Subcollector streets shall be designed to exclude all external through traffic that has neither origin nor destination on the Residential Subcollector or its tributary Residential streets. Adjacent parcels may acquire access if proven landlocked by legal or terrain features or if such Residential Subcollector access can be demonstrated to be beneficial to the public.
- (d) Residential Subcollector streets shall take access from a street of equal or higher classification.
- (e) Traffic calming elements should be considered for the design of Residential Subcollectors, such as avoiding long, straight segments and reducing the length of roadway from farthest lot to a collector.

(f) Residential Subcollector streets shall be provided with two continuous moving lanes within which no parking is permitted.

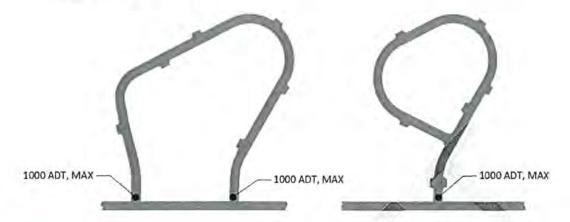


Figure A-2: Loop Residential Subcollector Streets

A04.3 Residential Collector Street

- (a) A Residential Collector street carries residential neighborhood traffic, but restricts or limits direct residential access. Residential Collector streets are required when the ADT anticipated on the street will exceed the limits for Residential Subcollectors.
- (b) Residential Collector streets should be designed to have as few residential lots directly fronting them as possible. When efficient subdivision design or physical constraints make this not possible, the average access point spacing shall be a minimum of 250 feet. Average access point spacing is calculated per segment and is equal to the segment length divided by the number of potential access points on both sides of the street. Undeveloped lots with only access to Residential Collector streets are counted as having at least one access point. When the average access point spacing on a segment of an existing Residential Collector street is less than 250 feet, the average access point spacing shall not decrease due to the subdivision.
- (c) Space shall be provided on these lots for turnaround so that vehicles will not have to back out onto Residential Collector streets.
- (d) Proposed access points on Residential Collector streets shall be shown on the preliminary plat.
- (e) Residential Collector streets shall be laid out to encourage connectivity within the transportation network.
- (f) If the anticipated ADT will exceed 3000, the street shall be classified at a higher level than Residential Collector by DPW.
- (g) Every Residential Collector shall be provided with no fewer than two access intersections to streets of equal or higher classification. If it is shown by the applicant that two accesses are not feasible, Residential Collector streets shall be provided with access to one street of equal or higher classification and be designed to accommodate a future second connection to a street of equal or higher classification, or otherwise be approved by DPW.
- (h) All Residential Collector streets shall be provided with two continuous moving lanes within which no parking shall be permitted.

A04.4 Access through Existing Streets

The anticipated ADT on existing Residential streets used to access a proposed subdivision may exceed 400, but shall not exceed 800, if:

- (a) alternate road corridors are not available or feasible;
- (b) horizontal geometry or access density prohibits upgrade to a higher standard road; and
- (c) the traffic impacts are mitigated.

A04.5 Traffic Impact Mitigation for Access through Existing Streets

Traffic impact mitigation on existing residential streets can include but is not limited to:

- (a) Traffic control devices (signage, striping) on segments where potential ADT exceeds 440;
- (b) LED street lighting, speed feedback signs, widened shoulders, inside corner widening for offtracking, or all-way stop intersections on segments where potential ADT exceeds 600.

A04.6 Commercial Uses on Residential and Residential Subcollector Streets

Exceptions to the ADT limits on Residential and Residential Subcollector streets, as set forth in A04.1 and A04.2, respectively, may be allowed for commercial uses that access the first 600 feet of such streets that intersect a Collector standard road or higher classification, as measured from the intersection point. The affected portion of the street and intersection shall be constructed to a higher standard as needed to accommodate the anticipated commercial traffic.

A05 Design Criteria

The design criteria for Residential, Residential Subcollector, and Residential Collector streets and Mountain Access and Pioneer roads are set forth in Table A-1. Any unspecified design criteria shall meet or exceed the design criteria for the roadway design speed in the latest edition of A Policy on Geometric Design of Highways and Streets (AASHTO).

Table A-1: Design Criteria

	Unit	Residential	Residential Subcollector	Residential Collector	Mountain Access ¹	Pioneer ¹
And the second						
Average Daily Traffic	VPD	≤400	401 – 1000	1001 - 3000	-	-
Typical Section						
ROW Width ²	ft	60	60	60	60	60
Lane Width	ft	10	10	11	10	10
Standard Gravel Shoulder Width	ft	2	2	2	O ³	03
Shared Paved Shoulder Width ⁴	ft	4	4	6	-	-
Roadway Width	ft	24	24	26	20 ³	20
Foreslope ⁵	h:v	3:1	3:1	4:1	2:1	3:1
Backslope ⁶	h:v	2:1	2:1	2:1	2:17	2:1
Crown, gravel	%	3	3	3	3	3
Crown, pavement	%	2	2	2	2	-
Engineering Criteria			1			
Design Speed	mph	25	30	35	-	-
Posted Speed	mph	20	25	30	-	
Stopping Sight Distance	ft	155	200	250	-	-
Horizontal Alignment					- Int	
Minimum Centerline Radius	ft	225	350	550	_8	-
with DPW Approval	ft	190	275	400	-	_
Minimum Tangent Between Curves	ft	100	100	100	100	100
Maximum superelevation	%	N/A	N/A	4	N/A	N/A

-

¹ Where a value is not given, Mountain Access and Pioneer Roads shall meet the criteria of the anticipated street classification.

² Minimum ROW required for new dedications; width of existing ROW may vary.

³ Where grades exceed 7 percent, the shoulder width shall be 2 feet for a total roadway width of 24 feet.

⁴ An optional paved shoulder may be provided on one or both sides of paved streets for non-motorized shared use.

⁵ Slope for the first 7.5 feet from the shoulder; may be steepened to 2:1 thereafter. Install guardrail when required by the latest edition of the *Roadside Design Guide* (AASHTO).

⁶ 2:1 Back slopes may be steepened to 1.5:1 if cuts exceed 5 feet and appropriate slope stabilization, as determined by the design engineer, is used. Retaining walls may be used to replace or augment backslopes.

⁷ Or backslope recommended by the design engineer based on actual conditions.

⁸ Switch backs are allowed provided cul-de-sac criteria is met or turning radius is 40 feet with a 2% grade.

	Unit	Residential	Residential Subcollector	Residential Collector	Mountain Access ¹	Pioneer ¹
Vertical Alignment						
Maximum Centerline Grade	%	10	10	10	15 ⁹	10
Minimum Rate of Vertical Curvature ¹⁰ ; Crest		12	19	29	-	-
Minimum Rate of Vertical Curvature ¹⁰ ; Sag		26	37	49	-	2
Minimum Flow Line Grades	%	0.5	0.5	0.5	1.0	0.5
Intersections				7		
Minimum ROW Corner Radius	ft	30	30	30	30	30
Minimum Curve Return Radius ¹¹	ft	20	25	30	-	-
Maximum Grade on through street within 50 feet of intersection	%	7	7	4	9	7

A06 Typical Section

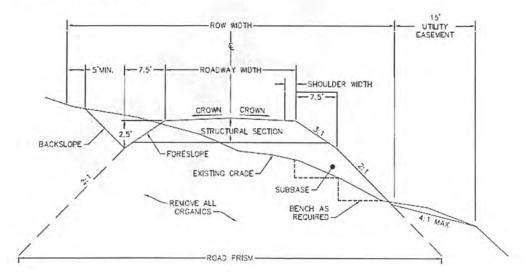


Figure A-3: Typical Section

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⁹ Up to 15% grade with no more than 200 linear feet of over 10% grade with a minimum of 100 linear feet of less than 10% grade for runout between steeper sections. Maximum grade in a horizontal curve is 10%.

 $^{^{10}}$ Rate of vertical curvature (K) is the length of curve (L) in feet per percent algebraic difference in intersecting grades (A); K = L / A

¹¹ 40-foot minimum curve return radius at intersections with higher order streets.

A07 Turnarounds

Streets with only one inlet shall terminate with a constructed turnaround, unless otherwise provided by A08.2.

A07.1 Cul-de-sac Turnarounds

- (a) A cul-de-sac turnaround with a drivable surface diameter (shoulder to shoulder) of 85 feet centered in a ROW diameter of 120 feet shall be provided at the terminus of Residential and Residential Subcollector streets.
- (b) Cul-de-sac turnarounds shall meet the configuration and dimensions shown in Figure A-4.
- (c) The grade throughout the surface of a cul-de-sac, as depicted in the shaded portion of Figure A-4, shall not exceed 4 percent.

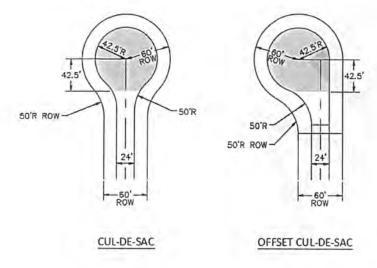


Figure A-4: Cul-de-sac Options

A07.2 Alternate Turnarounds

- (a) DPW may permit a street to terminate with an alternative turnaround that meets fire code when such a design is required by extreme environmental or topographical conditions, unusual or irregularly shaped tract boundaries, or when the location of the turnaround is intended to become an intersection.
- (b) Alternate turnarounds shall meet the configuration and dimensions shown in Figure A-5.
- (c) The grade throughout the turnaround surface, as depicted in the shaded portion of Figure A-5, shall not exceed 4 percent.

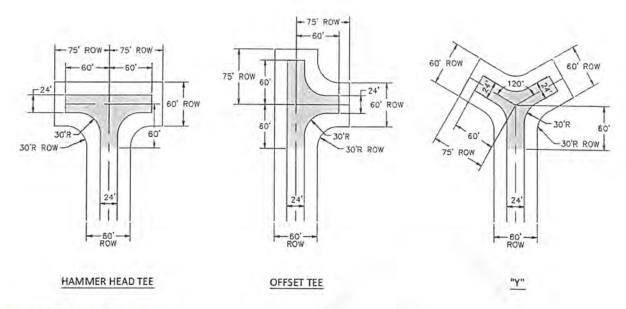


Figure A-5: Alternate Turnarounds

A08 Stub Streets

A08.1 Stub Street Construction

No construction is required if physical access is provided to all lots by adjoining streets as required by MSB or other applicable code.

A08.2 Temporary Turnarounds

Stub streets requiring construction that exceed 200 feet in length (measured from the intersection point to the end of required construction) will meet the requirements of A07.1 or A07.2. A temporary easement will be provided for the turnaround, which will automatically terminate upon extension of the street and physical removal of the turnaround. The centerline grade on stub streets without turnarounds shall not exceed 4%.

A09 Intersections

A09.1 Intersection Sight Distance

- (a) Whenever a proposed street intersects an existing or proposed street of higher order, the street of lower order shall be made a stop controlled street, unless alternate intersection control is used as allowed by this subsection.
- (b) Stop controlled streets shall be designed to provide intersection sight distance as specified in this subsection, Table A-2, and Figure A-6.
- (c) The entire area of the intersection sight triangles shown in Figure A-6 shall be designed to provide a clear view from point A at 3.5 feet above the roadway to all points 3.5 feet above the roadway along the lane centerlines from point B to point C and point D to point E.

- (d) Sight distances less than the recommended shall only be used when there are topographical or other physical constraints outside of the applicant's control.
- (e) The minimum sight distances listed in Table A-2 are for a passenger car to turn onto a two-lane undivided street and minor road approach grades of 3 percent or less. For other conditions, the minimum sight distance should be calculated by the applicant's engineer according to A Policy on Geometric Design of Highways and Streets (AASHTO).
- (f) Sight distances less than the minimum, where no other options exist, will require alternate intersection control or warning signs as determined by the applicant's engineer and approved by DPW.
- (g) Intersection sight triangles shall be located in their entirety within ROW or a sight distance maintenance easement.
- (h) Yield controlled intersections shall conform to sight distance requirements according to A Policy on Geometric Design of Highways and Streets (AASHTO).
- Intersections with state or other municipal ROW are subject to their respective requirements and review.

Table A-2: Recommended and I	Minimum	Intersection:	Sight	Distance
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Design Speed or Posted Speed Limit (whichever is greater)	S _d Recommended	S _d Minimum
MPH	ft	ft)
25	370	280
30	450	335
35	580	390
40	750	445
45	950	500
50	1180	555
55	1450	610
60	1750	665
65	2100	720

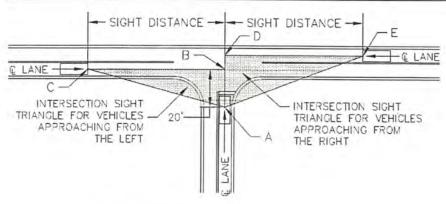


Figure A-6: Intersection Sight Distance

A09.2 Intersection Spacing

- (a) Minimum centerline to centerline distance between intersections on the same side or opposing sides of the through street shall be:
 - (1) 155 feet on Residential streets;
 - (2) 200 feet on Residential Subcollector streets;
 - (3) 300 feet on Residential Collectors and Minor Collectors; or
 - (4) 650 feet on higher order streets where other access standards do not exist.
- (b) If the above spacing along the through street cannot be met, intersections shall be aligned directly across from each other. Intersections on opposing sides of the through street may be offset up to 30 feet, with a preference for a left-right offset, as shown in Figure A-7.
- (c) Where pre-existing conditions do not allow for the above spacing and no other legal access exists, alternate spacing or offset most closely meeting (a) or (b) above may be allowed.
- (d) Additional intersections should be avoided within the functional area of major intersections with turning bays and approach tapers. Exceptions require DPW approval based upon constraints and no other feasible alternatives.

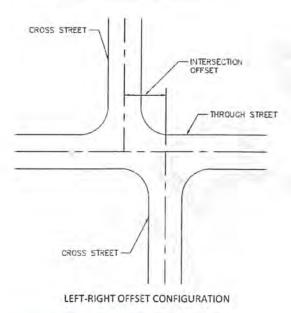


Figure A-7: Intersection Offset

A09.3 Minimum Intersection Angle

Streets should intersect with a straight segment at an angle as close to 90° as possible, but no less than 70°, for a minimum of 75 feet from the intersection point, as shown in Figure A-8.

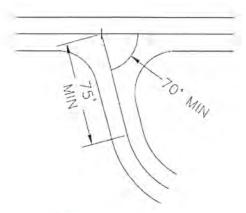


Figure A-8: Intersection Angle

A09.4 Landing

Controlled streets shall be provided with a typical 30-foot landing, conforming to Figure A-9, at its approach to a through street. The landing shall be sloped to match the crown of the through street. Vertical curves shall not be located in the landing to the extent feasible. Where a negative slope away from the through street is not feasible due to topographical constraints, the road shall be constructed in a manner that prevents water from flowing onto the through street.

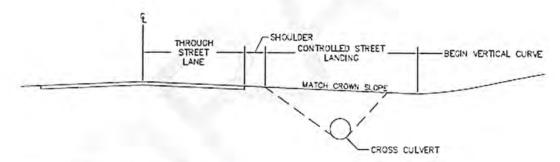


Figure A-9: Controlled Street Landing Profile

A09.5 Paved Apron

A proposed street which intersects an existing paved street shall be provided with a paved apron 40 feet from the edge of the existing pavement.

A10 Driveways

Driveways are not usually required to be constructed within the ROW at time of road construction. However, if an applicant chooses to construct driveways, driveway permits are required. The applicant may permit all driveways with one application. A driveway permit application can be obtained from the MSB Permit Center. Driveways onto state or other municipal ROW are subject to their respective requirements and review.

A11 Trailhead

Trailhead parking lot layout shall conform to applicable local, state, and federal requirements.

A12 Bicycle and Pedestrian Paths

Bicycle and pedestrian paths constructed within public ROW shall conform to the current edition of *Guide for the Development of Bicycle Facilities* (AASHTO), and any other applicable local, state, and federal requirements.

A13 Signage

Signs shall be provided and installed by the applicant in conformance with the latest edition of the Alaska Traffic Manual (ADOT&PF) and the Alaska Sign Design Specifications (ADOT&PF) prior to plat recordation.

- (a) Each street within a subdivision shall be identified and signed at its point of egress and ingress.
 Cul-de-sac streets will be signed and identified at their point of ingress
- (b) Intersection control signs shall be provided at designated intersections within the confines of the subdivision and at the intersection with the access road, if applicable.
- (c) Intersection control signs shall be located such that they are visible to approaching traffic and near corresponding stop or yield bars.
- (d) Speed limit signs shall be provided at entrances to the subdivision, where the speed limit changes, and at a minimum of one-mile intervals throughout the subdivision.
- (e) If a constructed stub street provides access to two or fewer lots and has no turnarounds a sign indicating a dead-end street shall be posted.
- (f) If a dedicated stub street is not constructed, no signs are required.
- (g) Install signs according to the criteria in Figure A-10, Figure A-11, and Figure A-12.
- (h) Signs within state or other municipal ROW are subject to their respective requirements and review.

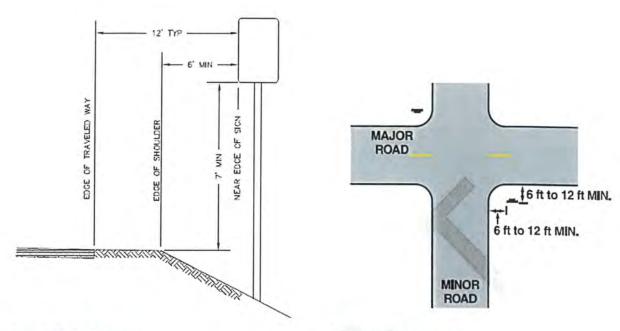
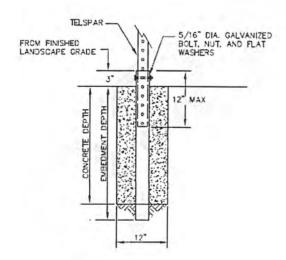


Figure A-10: Sign Placement

Figure A-11: Stop Sign Location



PERFORATED STEEL TUBES (P.S.T.) (12ga105" Wall Thickness)						
SIGN SURFACE AREA SQ. FT.	POST SIZE	EMBEDMENT DEPTH	CONCRETE DEPTH			
7' OR LESS	2" X 2"	27"	24"			
GREATER THAN 7	2 ½" X 2 ½ "	33"	30"			

Figure A-12: Concrete Foundation for Sign Post

A14 Railroad Crossings

All access requiring a crossing of the Alaska Railroad shall be subject to the Alaska Policy on Railroad/Highway Crossings (Alaska Railroad).

A15 Average Daily Traffic

- (a) The following formula shall be used to determine the required classification of streets: ADT = Number of lots x 10 for single-family residential use.
- (b) See Section G for other land uses.
- (c) For subdivisions of five or more lots, submit potential ADT calculations for the following locations with the preliminary plat:
 - at each intersection within the subdivision,
 - at each intersection en route to an existing Residential Collector street or higher classification, and
 - (3) at an existing Residential Collector street or higher classification.

A16 Design Deviations

Design deviations will be considered to address extenuating circumstances including but not limited to: existing substandard ROW, environmental conditions, or existing utilities or other structures. Design deviation requests shall be in writing and contain supporting information, justification, and suggested solutions. Design deviations may be allowed by DPW only for matters that do not fall under the jurisdiction of a Board or Commission. In no circumstances will a roadway width less than 20 feet or foreslopes steeper than 2:1 be allowed. Residential Collector streets shall be no less than 24 feet wide.



Section B. Major Road Corridors

B01 General

Major road corridors include major collectors, arterials, and interstates. This section provides references to and guidelines for the design and construction of major road corridors within the MSB.

B02 Right-of-way and Surface Widths

Table B-1: ROW and Surface Widths

Classification	Minimum ROW Width (ft)	Standard Lane Width (ft)	Number of Lanes	Shoulder Width (ft) 4 4-8 12	
Major Collector	80	12	2-3		
Arterial	100	12	3-4		
Interstate	200	12	4-6		

BO3 Frontage, Backage, and Connector Street Standards

Subdivisions adjacent to planned or existing major road corridors shall plan for future frontage or backage streets when any of the following conditions apply, unless it is shown by the applicant to be not necessary or feasible for future development and public safety with no written objection from the road authority.

- (a) Subdivisions accessing roads that are classified by ADOT&PF as Interstates.
- (b) Subdivisions accessing roads that are or are projected to grow above 20,000 vehicles per day (VPD).
- (c) Subdivisions accessing roads that are or are projected to have four or more lanes or median control per the LRTP or Official Streets and Highways Plan (OSHP).
- (d) Subdivisions that require a second access route.
- (e) To gain access to an existing or planned signal.
- (f) Where access to a minor arterial or collector as a connector road is feasible.
- (g) When there are existing or platted frontage or backage routes adjacent to the property.

B03.1 Separation Distances

Minimum ROW to ROW separation distance between major corridors and frontage or backage streets shall be:

- (a) 0 feet for locations with no connector street to the major road corridor;
- 100 feet for locations with a connector street to the major road corridor that lie between section lines and planned or existing intersections with other major road corridors;
- (c) 300 feet for locations where the connector street to the major road corridor is on a section line or planned or existing major road corridor.

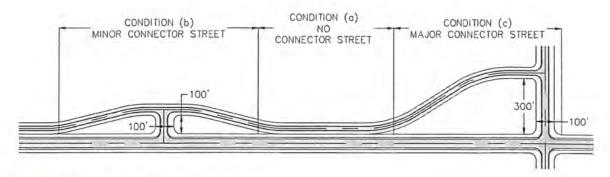


Figure B-1: Frontage Street Configurations

B03.2 Design Standards

- (a) Frontage streets
 - Minimum centerline radii may be reduced near intersections with through connector streets.
- (b) Connector streets
 - 100-foot ROW width desirable.
 - (2) Minimum 40-foot radius curve returns at the major road corridor.
 - (3) Minimum 4-foot wide shoulders for 100 feet from the edge of roadway of the major road corridor.
 - (4) Minimal direct access.

B03.3 Dedication and Setbacks

Dedicate ROW or additional building setbacks to allow for the frontage, backage, and connector street standards in this manual. The applicant shall submit design information sufficient to demonstrate that frontage, backage, and connector street dedications or building setbacks are in a practical location where road construction is feasible in accordance with this manual. The applicant shall be required to submit plan, profile, and cross-sections for the sections of road where existing grades along the proposed route exceed 10 percent, existing cross slopes exceed 15 percent, or if existing utilities or other physical features appear to create impediments to a road design meeting standards of this manual. Road plan and profile shall extend at least 300 linear feet on either side of the subject sections or to intersecting or adjacent ROW within 500 linear feet.

B04 Access Standards

(a) The average access point spacing on major road corridors, where other access standards do not exist, shall not exceed the minimums listed in Table B-2, based on the posted speed limit. Average access point spacing is calculated per segment and is equal to the segment length divided by the number of access points on both sides of the street. Undeveloped lots with only access to the major road corridor are counted as having at least one access point. (b) When the average access point spacing on a segment of an existing major road corridor is less than the minimum listed in Table B-2, the average access point spacing shall not decrease due to the subdivision.

Table 8-2: Average Access Point Spacing

Posted Speed Limit	Minimum Average			
(mph)	Access Point Spacing			
	(feet)			
30	250			
35	300			
40	360			
45	425			
50	495			
55	570			

B05 Future Corridors

Subdivisions shall be designed in a manner that does not conflict with the LRTP or the OSHP. Subdivisions containing future road corridors identified in the LRTP or OSHP are encouraged to include the future road corridor as part of the road layout of the subdivision.

Building setbacks prohibiting the location of any permanent structure within the future corridor may be voluntarily designated on the final plat. The area within the future road corridor shall be excluded from usable septic area calculations. The area within the future road corridor and building setbacks shall be excluded from usable building calculations.

B06 References

The following publications shall be used for design and construction standards of these classes of streets that are not otherwise established herein:

- (a) A Policy on Geometric Design of Highways and Streets, AASHTO (current edition).
- (b) Standard Specifications for Highway Construction, ADOT&PF (current edition);
- (c) Standard Modifications to the ADOT&PF Standard Specifications for Highway Construction, MSB (latest revision)
- (d) Alaska Highway Preconstruction Manual, ADOT&PF (latest revision)



Section C. Construction Requirements

CO1 General

This section establishes minimum construction requirements. Prior to any ground disturbing activities, call the Alaska Dig Line for utility locates in accordance with AS 42.30.400.

CO2 Road Construction

CO2.1 Clearing

Cut and dispose of all trees, down timber, stumps, brush, bushes, and debris. Cut trees and brush to a height of not more than 6 inches above the surrounding ground. Clear the ROW, slope easements, and sight distance triangles. Where ROW exceeds 60 feet, clear a minimum of 60 feet. Clear utility easements, if used, for utilities constructed with the development.

CO2.2 Grubbing

Remove and dispose of all stumps, roots, moss, grass, turf, debris, or other deleterious material within the fill and cut catch limits of the road plus 5 feet on each side, within the ROW, and cleared utility easements for underground utilities.

CO2.3 Disposal

Dispose of clearing and grubbing debris in an area designated by the applicant outside of all ROW, platted utility easements, and platted private road corridors. Organic debris 3 inches in diameter by 8 inches long, or smaller, may be left in place, outside of the road prism.

CO2.4 Slit Trenches

Slit trenches are not allowed in the ROW. Utility easements may be used as a borrow source above a 2:1 extension of the road prism, as shown in Figure A-3. Topsoil or other organic non-deleterious material may be disposed within the utility easement. Compact the disposal area with heavy equipment and grade the surface with positive drainage no steeper than 4:1 and no lower than the ditch line. Submit an as-built drawing showing the horizontal locations of borrow extraction along the road corridor with the Final Report.

C02.5 Embankment Construction

- (a) Construct the road with the required structural section, see Figure C-1, and dimensions, see Table A-1 and Figure A-3, as determined by its classification.
- (b) Prepare the subgrade. Remove all organics from the area below the road prism and dispose in locations where embankment is not proposed. Bench existing slopes that are steeper than 4:1, measured at a right angle to the roadway, where roadway embankment is to be placed.
- (c) Place material meeting, or verify in-situ material meets, the requirements for Subbase specified in subsection CO7 to a minimum depth of 20 inches with the upper 6 inches having no material with

- a diameter larger than 6 inches. Place embankment in horizontal layers, as directed by the engineer, for the full width of the embankment and compact as specified before the next lift is placed.
- (d) Place 4 inches of Surface Course meeting the requirements specified in subsection C07. Finish with a 3 percent crown, and compact as specified.
- (e) For Residential and Residential Subcollector standard roads, compact all embankment to not less than 90 percent of the maximum dry density at the optimum moisture content and the top 24 inches to not less than 95 percent of the maximum dry density at the optimum moisture content. For Residential Collector standard roads, compact all embankment to not less than 95 percent of the maximum dry density at the optimum moisture content.
- (f) Optimum moisture and maximum dry density will be determined by Alaska Test Method (ATM) 207 and ATM 212 or alternative methods approved by DPW.
- (g) In-place density shall be determined by ATM 213 or alternative method approved by DPW. Compaction tests on the Subbase layer shall be taken at representative locations along the roadways as follows:
 - (1) a minimum of three;
 - (2) at least one per segment;
 - (3) one additional test per 1000 linear feet, or portion thereof, when the combined length of roadway exceeds 1000 linear feet;
 - (4) at least one out of every three within three feet of the shoulder, and the remainder in the center of a driving lane.
- (h) For paved roadways, substitute Surface Course with a minimum of 2 inches of Base Course and 2 inches of HMA Type II, Class B, for Residential and Residential Subcollector streets, and a minimum of 3 inches of Base Course and 3 inches of HMA Type II, Class B, for Residential Collector Streets. Pavement shall meet MSB Special Provision Section 401 Hot Mix Asphalt Pavement. The width of the pavement shall be equal to two lane widths plus the shared paved shoulder width, if used, and finished with a 2 percent crown. Pavement edges shall be backed with additional Base Course graded and compacted flush with the pavement surface and tapered to the edge of the roadway. The pavement shall be washed or swept immediately following shouldering work.
- (i) Remove all loose material exceeding 6 inches in diameter from the ditches and foreslopes. Where slopes are 3:1 or steeper and longer than 10 feet measured along the slope face, trackwalk perpendicular to the slope, or the equivalent, to form 1-inch wide grooves parallel to the road no more than 12 inches apart.
- (j) Permanently stabilize backslopes 3:1 or steeper. Stabilization can be part of a subdivision agreement. Stabilization may be allowed to establish during the warranty period.

CO2.6 Unsuitable Subgrades

When structurally unsuitable material such as peat, saturated material, or permafrost are present within the ROW, provide an appropriate structural design for approval by DPW, according to Section F, prior to construction. Place embankment to a depth that will produce a stable road surface with a final grade 18 inches above the surrounding ground.

CO3 Roads Outside of a Road Service Area

Roads outside of a Road Service Area are not subject to the requirement for Surface Course.

CO4 Pioneer Road Construction Requirements

Pioneer roads, whether proposed or existing, shall meet the requirements of Figure C-1, Table A-1, and Figure A-3. Place material meeting, or verify in-situ material meets, the requirements for Subbase specified in subsection C07 to a minimum depth of 12 inches. Additional road embankment may be required to provide a stable road surface. Surface Course is not required. Pioneer roads may be constructed offset from the centerline of the ROW to facilitate future expansion of the road. Cross drainage culverts, minimum 18 inch diameter, will be installed where determined necessary and 24 inch ditches will be provided for drainage.

C05 Winter Construction

Winter construction may be allowed. DPW will not accept any roads until all ground has thawed and any settlement areas corrected.

C06 Alternate Methods and Materials

Use of alternate materials and road construction methods that will more appropriately fit the conditions of the specific road locations, following general engineering practices, may be proposed by the applicant or their engineer in writing. Final acceptance of such plans must be approved by DPW.

C07 Materials

CO7.1 Subbase

- (a) Is aggregate containing no muck, frozen material, roots, sod, or other deleterious matter;
- (b) has a plasticity index not greater than 6 as tested by ATM 204 and ATM 205; and
- (c) meets the requirements of Table C-2, as determined by ATM 304.

CO7.2 Base Course

- (a) Crushed stone or crushed gravel, consisting of sound, rough, durable pebbles or rock fragments of uniform quality;
- (b) free from clay balls, vegetable matter, or other deleterious matters;
- (c) meets the requirements of Table C-1; and
- (d) meets the requirements of Table C-2, as determined by ATM 304.

C07.3 Surface Course

- (a) Is a screened or crushed gravel, consisting of sound, rough, durable pebbles or rock fragments of uniform quality;
- (b) free from clay balls, vegetable matter, or other deleterious matters; and
- (c) meets the requirements of Table C-2, as determined by ATM 304.

Table C-1: Aggregate Quality Properties for Base Course

Property	Test Method	Base Course
L.A. Wear, %	AASHTO T 96	50, max
Degradation Value	ATM 313	45, min
Fracture, %	ATM 305	70, min
Plastic Index	ATM 205	6, max
Sodium Sulfate Loss, %	AASHTO T 104	9, max (5 cycles)

Table C-2: Aggregate Gradations

Sieve Designation	Subbase	Base Course	Surface Course		
1 1/2 inch			100		
1 inch		100			
3/4 inch		70 to 100	70 to 100		
3/8 inch		50 to 80	50 to 85		
No. 4	20 to 60	35 to 65	35 to 75		
No. 8		20 to 50	20 to 60		
No. 50		6 to 30	15 to 30		
No. 200	0 to 10	0 to 6	7 to 13		

(Percent Passing By Weight)

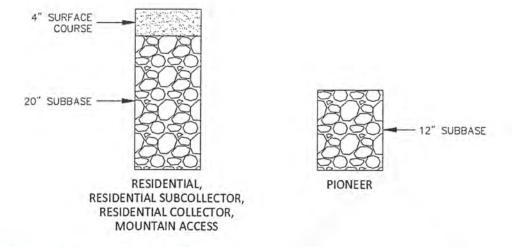


Figure C-1: Structural Sections for Gravel Roads

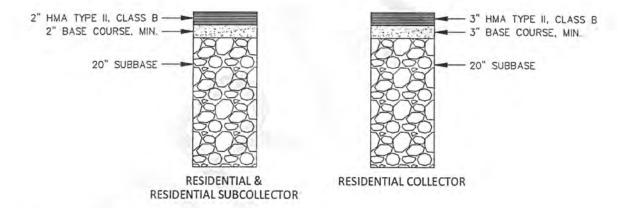


Figure C-2: Structural Sections for Paved Roads



Section D. Drainage

D01 General

The purpose of this section is to ensure that stormwater management is provided with land development activities. Responsible stormwater management is the treatment, retention, detention, infiltration, and conveyance of stormwater and other surface waters without adversely impacting adjoining, nearby, or downstream properties and receiving waters.

D02 Requirements

A preliminary drainage plan is required when road construction or disturbing land to create useable area for a subdivision is proposed. A drainage report is required for projects that include road construction, disturb 10,000 square feet of land or more, fill in wetlands, disturb land within 100 feet of the ordinary high water mark (OHWM) of a water body, disturb land within a mapped flood hazard area, or change the location, direction, quantity, or type of runoff leaving a site. See subsection D06 for specific requirements regarding fish passage culverts. It is the applicant's responsibility to comply with all other applicable federal, state, and local codes and regulations.

D02.1 Preliminary Drainage Plan

Submit a preliminary drainage plan, prepared by an engineer or other qualified professional registered in the State of Alaska, with the preliminary plat or ROW construction permit application. The preliminary drainage plan shall show the project site at a legible scale plottable on 11" by 17" paper or larger and depict the following:

- (a) Existing and proposed property lines, plottable easements disclosed in the title report, the OHWM of water bodies with 100-foot upland offset, and existing mapped flood hazard areas.
- (b) Existing topography with horizontal and vertical accuracy meeting US National Map Accuracy standards, with 5-foot contour intervals if the ground slope is less than 10 percent and 10-foot contour intervals if the ground slope is greater than 10 percent.
- (c) Existing features that convey or retain drainage, including but not limited to: water bodies, wetlands, natural valleys, swales, ditches, check dams, culverts, and pipe systems.
- (d) Proposed drainage pattern and features, both constructed and natural, on site. Identify conveyance types, flow directions, and any drainage changes that may affect adjacent property.
- (e) Proposed stream crossings and anticipated culvert sizes. Identify fish-bearing streams.

D02.2 Drainage Report

Submit a drainage report, prepared by an engineer or other qualified professional registered in the State of Alaska, as part of the construction plan submittal in subsection F01.2. The drainage report shall include the following:

(a) The drainage plan as specified in D02.1 (may be shown on two plans for clarity), updated to include:

- Pre-development and post-development catchment area boundaries determined using 2foot contour intervals; and
- (2) Locations of peak flow, peak velocity, and where runoff leaves the project site.
- (b) Description of methods, assumptions, and data sources used or made, including but not limited to:
 - (1) Rainfall data from the NOAA-14 Precipitation Frequency Data Server.
 - (2) Assumed post-development land cover conditions.
 - (3) Method used to determine runoff quantities, time of concentration, peak flows, etc.
- (c) Catchment area maps used or created to evaluate down-gradient conditions.
- (d) Identify design elements, with supporting runoff calculations, necessary to show compliance with the drainage design criteria set forth in D03.
- (e) Fish passage culvert plans, if applicable.

D03 Drainage Design Criteria

- (a) Design a drainage system for the project site to meet the criteria listed in Table D-1.
- (b) Retain natural drainage patterns to the extent possible.
- (c) Changes to drainage patterns must not adversely affect adjacent property or ROW.
- (d) Base the size and capacity of the drainage system on runoff volumes and flow rates assuming full development of the subdivision and a 10 percent increase to runoff from the catchment area.
- (e) Drainage easements are required where the ROW is not sufficient to accommodate drainage needs. See subsection E01.2.
- (f) Where drainage easements overlap utility easements:
 - Above ground drainage facilities, such as retention and detention basins, may be located in new utility easements only in a manner that will not interfere with utilities. See subsection H02.
 - (2) Above ground drainage facilities located within existing utility easements require a letter of non-objection from affected utilities.
 - (3) Culverts crossing utility easements require a letter of non-objection from affected utilities.
 - (4) Underground drainage facilities such as infiltration trenches and vertical inlets shall not be located in utility easements.
- (g) Drainage to state or other municipal ROW are subject to their respective requirements and review.

Table D-1: Drainage Sizing and Analysis Criteria

Design				
Requirement	Purpose	Criteria		
Conveyance	Size conveyances to	Drainage ditches: 10-year, 24-hour		
	pass design peak flows.	Non-regulated streams: 10-year, 24-hour		
		Regulated streams: 100-year, 24-hour		
Wetlands	Retain function of original wetlands	Preserve the pre-development function of wetlands. For jurisdictional wetland areas, comply with United States Army Corps of Engineers wetlands development retention requirements.		
Water Quality	Treat first flush pollutant loading	Treat runoff generated by 0.50 inch of rainfall in a 24-hour period.		
Erosion and	Ensure channel stability	Control flows in conveyance channels so that transport		
Sedimentation Control	for all project conveyances	of particles sized D50 and greater will not occur for the post-development peak flow.		
Extended	Protect streams and	Provide 12 to 24 hours of detention for the post-		
Detention	channels from damage	development project runoff in excess of pre-		
	from smaller, more frequent storm flows	development runoff volume for the 1-year, 24-hour storm.		
Flood Hazard	Control peak flow to	Option 1		
	minimize downstream	Maintain the post-development project runoff peak		
	impacts	flows from the 10-year, 24-hour storm to less than or equal to pre-development runoff peak flow at all project discharge points.		
		Option 2		
		Option 2 Maintain the post-development project runoff peak		
		flows to less than 1.10 times pre-development runoff		
		peak flow at all project discharge points. Evaluate		
		downstream until the project site area is less than 10%		
		of the total upstream basin area and mitigate adverse impacts.		
Flood Bypass	Prevent an increased	Compute post-development peak flow and delineate an		
	risk of flood damage	unobstructed, overland flow path for runoff to overtop		
	from large storm	or bypass project conveyance routes for the post-		
	events.	development 100-year, 24-hour storm.		

D04 Drainage Ditches

Stabilize ditches with gravel, turf, or rock riprap. See Table D-2 and Table D-3 for most common conditions and acceptable ditch lining materials. Evaluate channel stability for compliance with the Erosion and Sedimentation Control design requirement in Table D-1 for other conditions.

Normal ditch depth shall be 30 inches and according to the typical section shown in subsection A06. The design peak flow required by Conveyance Design in Table D-1 shall be conveyed within ditches with a minimum freeboard of 12 inches.

The ditch depth may be reduced at local high points of the ditch, provided the flow line offset is maintained and with DPW concurrence. Alternate ditch design along Residential and Residential Subcollector streets may be considered, if evidence is provided that the following conditions exist:

- (a) Ditches are a minimum of 18" deep;
- (b) The design peak flow required by Table D-1 is demonstrated to be conveyed within ditches with a minimum freeboard of 12 inches;
- Adequate drainage routes are provided and constructed within the ROW or designated drainage easements;
- (d) Flow lines are established at least 8 feet from the edge of roadway.
- (e) Ditches are deepened to provide cross drainage through 24" corrugated metal culverts (18" with DPW approval).
- (f) Cross sectional area of ditch is at least 15 square feet.

Table D-2: Ditch Stabilization

Flow (cfs)	Ditch Slope (ft/ft)										
	0.005	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10
2.0	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α
4.0	Α	Α	Α	Α	Α	Α	Α	Α	В	В	В
6.0	Α	Α	Α	Α	Α	Α	В	В	В	В	В
8.0	Α	Α	Α	Α	Α	В	В	В	В	В	В
10.0	Α	Α	Α	Α	В	В	В	В	В	В	С
20.0	Α	Α	Α	В	В	В	С	С	С	С	С
30.0	Α	Α	Α	В	В	С	С	С	D	D	D
40.0	Α	Α	В	В	С	С	С	D	D	D	Е
50.0	Α	Α	В	В	С	С	D	D	D	E	E
60.0	Α	Α	В	С	С	D	D	D	E	E	Е
70.0	Α	Α	В	С	С	D	D	Е	E	E	Е
80.0	Α	В	С	С	С	D	E	E	E	E	E
90.0	Α	В	С	С	D	D	E	E	E	E	F
100.0	Α	В	С	С	D	D	E	E	E	F	F

Table 0-3: Ditch Lining Materials

Туре	Material	D50 (in)	Dmax (in)	Dmin (in)	Thickness (in)
Α	Native Grass, Turf, or	Gravel wit	h < 6% fines		
В	Riprap or Bone Rock	3.0	4.5	1.5	6.0
C	Riprap or Bone Rock	6.0	9.0	3.0	12.0
D	Riprap or Bone Rock	9.0	13.5	4.5	18.0
E Riprap or Bone Rock		12.0	18.0	6.0	24.0

D05 Culverts

D05.1 General Culvert Design Criteria

The following criteria apply to all cross road culverts for runoff or seasonal drainage:

- (a) The minimum culvert slope is 0.5 percent.
- (b) Culverts longer than 100 feet require appropriate maintenance access and DPW approval
- (c) Cross road culverts shall have a minimum diameter of 18 inches.
- (d) Culverts shall be sized to convey the design peak flow required by Table D-1, based on the larger of the two computed sizes using inlet control and outlet control.
- (e) Culverts shall be corrugated metal pipe (CMP) and minimum:
 - (1) 16 gauge galvanized steel on Residential and Residential Subcollector streets;
 - (2) 12 gauge galvanized steel on Residential Collector and Minor Collector streets; or
 - (3) 16 gauge aluminum or aluminized if needed due to soil or water conditions.
- (f) Design and install energy dissipation rock aprons at culvert outlets in accordance with Hydraulic Engineering Circular No. 14 (FHWA).
 - (g) Install culverts in accordance with the manufacturer's recommendations for the anticipated traffic loads.

D05.2 Stream Crossing Culvert Criteria

The following criteria apply to all stream crossing culverts:

- (a) Prior to preliminary plat submittal, contact the Alaska Department of Fish and Game (ADFG), Division of Habitat to determine if a stream reach harbors fish. If so, stream crossing culverts shall be designed, constructed, and maintained according to D06.
- (b) Stream crossing culverts shall be placed as close to the pre-existing channel alignment as possible. Avoid placing culverts at pools and stream bends.
- (c) Road alignment shall be as close to perpendicular to the stream channel as possible.
- (d) Culvert slope shall be within 25 percent of the natural stream slope. For example, if the natural stream slope is 1.0 percent, the minimum design slope of the culvert would be 0.75 percent and the maximum design slope would be 1.25 percent.
- (e) Culvert outlet and inlet protection shall be used as necessary to reduce the risk of scour and perching.

- (f) Stream crossings shall be composed of a single pipe or arch for the main stream channel.
- (g) Overflow culverts may be used but should be placed at a higher elevation so that flows up to the OHWM pass through the primary culvert.
- (h) Stream crossings shall maintain the connectivity of wetlands adjacent to stream channels and shall accommodate sheet flow within such wetlands.
- (i) Stream crossing culverts shall not interfere with the functioning of floodplains and shall be designed to convey the design peak flow required by Table D-1. If the stream crossing culvert is not designed to accommodate the 100-year flow, a route must be established to safely convey flows exceeding the design peak flow without causing damage to property, endangering human life or public health, or causing significant environmental damage.
- (j) In cases of crossings within high entrenchment ratio environments, the ratio of the flood prone width to the OHWM width is greater than 2.2, floodplain overflow culverts may be beneficial to floodplain connectivity and can be used to pass the design flow. Minimum width requirements for the primary culvert still apply.
- (k) Stream crossing culverts shall have a minimum diameter of three feet.
- (I) Stream crossing culvert pipes and arches shall be metal.
- (m) Culverts longer than 100 feet require appropriate maintenance access and DPW approval
- (n) Install culverts in accordance with the manufacturer's recommendations for the anticipated traffic loads.

D06 Fish Passage Culverts

These criteria provide general design guidance for road crossings of fish-bearing streams to maintain the full hydrologic functioning of the water body they are crossing. Site-specific conditions, such as multi-thread channels, may require alternate design approaches.

D06.1 Pre-design Conference

Schedule a fish passage pre-design conference with DPW prior to permit submittals. The pre-design conference is to:

- (a) determine required permits;
- (b) coordinate interagency requirements;
- (c) determine any site-specific design requirements; and
- (d) establish a plan review process.

D06.2 Stream Simulation Method

Stream simulation methodologies shall be used for the design of all fish-bearing stream crossings. The stream simulation method uses reference data from a representative section, or reference reach, of the specific water body crossed. This method attempts to replicate the natural stream channel conditions found upstream and downstream of the crossing. Sediment transport, flood and debris conveyance, and fish passage are designed to function as they do in the natural channel.

Reference Reach

- (a) Select a reference reach on the water body being crossed that is outside any anthropogenic influence, such as an existing culvert. In most cases of new crossings, the reference reach can be at the crossing location.
- (b) The length of the reference reach should be a minimum of 20 times the reference bankfull width and no less than 200 feet.
- (c) If there is not a suitable reference reach on the water body being crossed, a reference reach may be chosen from another water body with similar geomorphic and hydrologic characteristics. The reference reach characteristics should meet the following criteria in comparison to the water body being crossed:
 - The reference reach bankfull width should be at least one half and no more than two times that of the water body being crossed;
 - (2) The reference reach bankfull discharge should be at least one half and no more than one and one half times the bankfull discharge of the water body being crossed; and
 - (3) The stream order of the reference reach should be within one stream order of the water body being crossed.
- (d) For a reference reach from another water body, the geomorphic characteristics of the crossing shall be scaled using ratios of the bankfull conditions.
- (e) The reference reach bankfull dimensions should be determined in the field by surveying a detailed cross section at the upper 1/3 of a representative riffle.
- (f) Reference data shall include, at a minimum:
 - (1) channel width at the OHWM,
 - (2) bankfull width,
 - bankfull cross-sectional area,
 - (4) bankfull slope based on the longitudinal profile,
 - (5) substrate, and
 - (6) potential for floating debris.

Culvert Size, Slope, and Substrate

In addition to D05.2, the following criteria apply to fish passage culverts:

- (a) Under normal flow conditions, the channel within or under the fish passage culvert shall not differ from the reference reach condition in regards to the channel width at the OHWM, cross-sectional area, slope, substrate, and ability to pass floating debris.
- (b) The width of fish passage culverts shall not be less than the greater of 1.2 times the channel width at the OHWM and 1.0 times the bankfull width.
- (c) Fish passage culverts shall have a minimum diameter of five feet.
- (d) The use of smooth wall culverts is prohibited.
- (e) The use of trash racks or debris interceptors is prohibited
- (f) Round culvert pipes shall have a minimum invert burial depth of 40 percent of the culvert diameter into the substrate. Arch or box culverts shall have a minimum invert burial depth of 20

- percent of the culvert's rise into the substrate, unless scour analysis shows less fill is acceptable. The minimum invert burial depth is 1 foot.
- (g) The gradation of the substrate material within a fish passage culvert shall be designed to be a dense, well-graded mixture with adequate fines to ensure that the majority of the stream flows on the surface and the minimum water depth is maintained.
- (h) Substrate material within or under the fish passage culvert shall remain dynamically stable at all flood discharges up to and including a 50-year flood. Dynamic stability means that substrate material mobilized at higher flows will be replaced by bed material from the natural channel upstream of the crossing. For crossings without an adequate upstream sediment supply, the substrate material within the crossing shall be designed to resist the predicted critical shear forces up to the 100-year flood. For culverts with a slope of 6 percent or greater, substrate retention sills may be required to allow the bed load to continuously recruit within the culvert.
- (i) Substrate material within or under the fish passage culvert shall incorporate a low flow channel. The low flow channel should mimic the reference reach where possible. If the low flow channel dimensions are not discernable from the reference reach, the low flow channel should have a cross sectional area of 15 to 30 percent of the bankfull cross sectional area and a minimum depth of 4 inches for juvenile fish and 12 inches for adult fish. The low flow channel should be defined by rock features that will resist critical shear forces up to the 100-year flood.
- (j) Constructed streambanks are recommended inside fish passage culverts to protect the culvert from abrasion, provide resting areas for fish, and provide for small mammal crossing. If streambanks are constructed through a crossing, the streambanks shall be constructed of rock substrate designed to be stable at the 100-year flood. The streambank width should be a minimum of 1.5 times the maximum sieve size of the streambed material (D100). The crossing width shall be increased to allow for the channel width plus the streambanks.
- (k) If substrate retention sills are used, they shall have a maximum weir height of one half of the culvert invert burial depth. Substrate retention sills shall be spaced so that the maximum drop between weirs is 4 inches. The use of sills without substrate is not allowed.
- (I) Other state and federal requirements may apply.

D06.3 Hydraulic Method

Hydraulically designed culverts are discouraged for fish-bearing stream crossings, though may be approved by DPW and ADFG in circumstances where stream simulation is not practical. In addition to D05.2, the following criteria apply to hydraulically designed culverts:

- (a) The hydraulic method uses the swimming capability and migration timing of target design species and sizes of fish to create favorable hydraulic conditions throughout the culvert crossing. Information and design software for this methodology is available from ADFG, Division of Sport Fisheries (Fishpass) and the US Forest Service (FishXing).
- (b) The design fish shall be a 55-milimeter (2.16-inch) juvenile coho salmon for anadromous streams and a 55-milimeter (2.16-inch) Dolly Varden char for non-anadromous streams. These criteria may change based on ongoing research by federal and state agencies.

- (c) Fish passage high flow design discharge will not exceed the 5 percent annual exceedance flow or 0.4 times the 2-year peak flow, whichever is lower and has the most supporting hydrologic data.
- (d) Fish passage low-flow design discharge shall ensure a minimum 6-inch water depth or natural low flow and depth within the reach the crossing occurs. In cases where local conditions preclude natural low flow characteristics, backwatering or in-culvert structures should be considered.
- (e) In cases where flared end sections with aprons are necessary and fish passage is required, water depths and velocities that satisfy fish passage criteria must be demonstrated across the apron in addition to within the culvert.
- (f) Fish passage criteria for culverts crossing tidally-influenced streams must be satisfied 90 percent of the time. Tidally-influenced streams may sometimes be impassable due to insufficient depth at low flow and low tide. If the tidal area immediately downstream of a culvert is impassable for fish at low tide, the exceedance criterion shall apply only to the time during which fish can swim to the culvert.
- (g) Other state and federal requirements may apply.

D07 Soil Infiltration Facilities

Soil infiltration may be used to reduce stormwater flow and volume with the following criteria:

- (a) Soil infiltration facilities within Borough ROW or drainage easements should be designed such that they are not considered Class V injection wells. See Appendix A for the EPA's memorandum addressing the subject in June 2008.
 - Private drainage facilities that are considered Class V injection wells require conformance with EPA regulations.

D08 Rainfall Data

D08.1 Rainfall Distribution

Intensity-Duration-Frequency (IDF) and 24-hour rainfall data are furnished by NOAA Atlas 14 Point Precipitation Frequency Estimates. Use SCS Type-I Rainfall Distribution and 24-hour rainfall depth to compute runoff.

D08.2 Runoff Transformation

Use the Rational Method for estimating peak flows in drainage basins less than 200 acres and with times of concentration less than 20 minutes for design of conveyances. Use NRCS (SCS) Unit Hydrograph Method for estimating runoff volumes and peak flows for other conditions and applications. Other methods more appropriate for site conditions may be utilized upon DPW approval.



Section E. Easements

E01 General

E01.1 Common Access Easements

When a shared driveway is required for two or more lots, a common access easement shall be granted for the exclusive use of the subject lots, unless otherwise accommodated. The common access easement shall be sized to reasonably accommodate separation of the shared driveway to the individual lots.

E01.2 Drainage Easements

Drainage easements are required where the ROW is not sufficient to accommodate drainage needs. Drainage easements can overlap with other platted easements and shall begin or terminate at the ROW. Drainage easements shall be a minimum width of 20 feet, and a minimum average length of 20 feet outside of any overlapping easements or of sufficient size and area shown to facilitate construction and maintenance.

E01.3 Slope Easements

Slope easements are required to contain all cut and fill slopes steeper than 2.5:1 that extend outside of the ROW, plus at least 5 feet outside the cut or fill catches.

E01.4 Sight Distance Maintenance Easements

Sight distance maintenance easements are required where intersection sight triangles extend outside of the ROW.

E01.5 Snow Storage Easements

Snow storage easements are required where the ROW is not sufficient to accommodate anticipated snow removal needs. Snow storage easements shall be located where the storage of snow would not impede sight distance.

E01.6 Utility Easements

Unless lots are otherwise served by alternate utility easements or agreements, at least one 15-foot utility easement adjacent to the ROW is required to allow for utility installation and maintenance. Additional utility easements may be required as deemed reasonably necessary by utility companies to serve the subdivision or protect existing facilities. The applicant is responsible for satisfying any conflicts that may occur in the request for easements from any utility company during the platting process.

Platted utility easements are to be clear of wells, septic systems, structures, or encroachments, as defined by MSB or other applicable code; unless the applicant has obtained an encroachment permit from the MSB and a "Non-Objection to Easement Encroachment" from each utility.

Utility easements are to be fully useable for utility installation where installation equipment can safely work. Whenever possible, utility easements should not be placed in swamps, steep slopes, or other unusable areas.

Section F. Development Implementation

F01 General

This section describes the procedure that is to be followed before constructing any improvements required for recording a subdivision plat. The applicant's engineer shall be the primary point of contact throughout this process.

It is the applicant's responsibility to determine, acquire, and follow permits required by other agencies. Approval from MSB does not supersede other agencies' permit requirements.

F01.1 Preliminary Plat Submittal

The preliminary plat submittal is to be accompanied by:

- (a) ADT calculations per A15;
- (b) Preliminary drainage plan per D02.1;
- (c) Road plan and profile for sections of road where proposed grades exceed 6 percent where cuts and fills exceed 5 feet in height measured from the centerline, or where slope easements will be required, and cross sections at the maximum cut and fill sections. Road plan and profile shall include the vertical curves or grade breaks on either side of the subject sections;
- (d) Road plan, profile, and cross-sections if required by B03.3; and
- (e) Intersection sight distance evaluation, if requested, according to A09.1.

F01.2 Construction Plans

Submit construction plans to DPW at least seven calendar days before the preconstruction conference. All plan drawing submittals shall be at a scale of 1 inch = 50 feet or more detailed, plottable on 11" by 17" paper. Construction plans shall include the following:

- (a) Drainage Report, according to D02.2;
- (b) Plan & Profile of proposed roads (if required by F01.1);
 - Existing topography with horizontal and vertical accuracy meeting US National Map Accuracy standards, two-foot contour intervals within the proposed road corridors.
- Asbuilt survey of visible improvements and above ground utilities within and adjacent to the subdivision;
- (d) Copy of agency accepted permit applications required for the improvements prior to construction, including but not limited to ADOT&PF Approach Road Permit, DNR Section Line Easement authorization, MSB Flood Hazard Development permit, and USACE wetland fill permit; and
- (e) Plans for any proposed improvements within the ROW that are outside of the scope of this manual (e.g. retaining walls or guard rail) or do not conform to the standards set forth herein, conforming to ADOT&PF design criteria and standards.

F01.3 Preconstruction Conference

The preconstruction conference is for the purpose of reviewing and approving the Subdivision Construction Plan for the required improvements. The engineer may request scheduling of a preconstruction conference with DPW after the preliminary plat has been approved by the Platting Board, the Platting Board Action Letter has been received, and the construction plans have been submitted. Scheduling of preconstruction conference requests may be delayed during the month of October. The applicant, or designated representative, and the engineer must attend the preconstruction conference. In addition to the construction plans, the following items will be provided at or prior to the preconstruction conference:

- (a) Cost estimate of required improvements for the determination of the inspection fee according to the most recently adopted Schedule of Rates and Fees;
- (b) Proof of compliance with the Alaska Pollutant Discharge Elimination System Program;
 - (1) Acceptable proof includes a Notice of Intent (NOI), a Low Erosivity Waiver (LEW), or a determination by a qualified person that neither is needed.
- (c) Rough plan and time line for construction;
- (d) Copy of any issued permits required for the improvements prior to construction;
- (e) Off-site material source and quantities; and
- (f) On-site clearing, grubbing, and topsoil disposal plan, location map.

The Subdivision Construction Plan must be signed by the applicant, or designated representative, and the engineer. Upon acceptance of the Subdivision Construction Plan by DPW and payment of the inspection fee, the Platting Division will issue a Notice to Proceed (NTP).

Some construction plans or permit approvals may take longer to develop or obtain, such as fish passage culvert plans and associated permits. Those finalized plans and issued permits may be submitted later but must be received and reviewed by DPW before construction begins within the respective areas.

F01.4 Interim Inspections

The applicant's engineer shall supervise all phases of construction. Notify DPW of changes to the Subdivision Construction Plan, such as adding or deleting a cross culvert, changes in culvert size, adding or deleting a drainage facility, grade changes of more than 1 percent or that would result in grades of over 6 percent or cuts or fills of over 5 feet in height measured from the centerline, or changes to foreslopes or backslopes. The changes should be approved by DPW prior to completion of construction. Periodic interim inspections may be conducted by DPW. Interim inspections may be requested by the engineer.

F01.5 Subdivision Agreements

If a developer wishes to enter into a Subdivision Agreement and the requirements of MSB 43.55.010(A) are met, the engineer shall submit a request to DPW no later than October 15th for an Interim Inspection. The Interim Inspection shall be attended by the engineer and DPW, and a list of remaining improvements and work items will be developed. The engineer shall then submit a request for a

Subdivision Agreement containing the scope of work, quantity estimates, and cost estimate in accordance with MSB 43.55 to Platting and for approval by DPW. DPW will only approve the request for a Subdivision Agreement if all of the minimum required improvements have been inspected by October 31st or before winter conditions prohibit inspection, whichever comes first.

F01.6 Pre-Final Inspection

When the engineer has determined that construction of the improvements will be substantially complete according to the Subdivision Construction Plan, the engineer will request a Pre-Final Inspection. The Pre-Final Inspection request must be received by September 30th and shall include a description of work yet to be completed. The Pre-Final Inspection will be scheduled to occur within 14 calendar days of the request and shall be attended by the engineer and DPW. A punch list will be developed, if any work items remain, at the Pre-Final Inspection.

F01.7 Final Inspection

When construction of the improvements and punch list items are complete according to the Subdivision Construction Plan, the engineer will request a Final Inspection of the improvements. The Final Inspection request must be received by October 15th. Final Inspections will cease October 31st, or when winter conditions prohibit inspection, whichever comes first. The Final Inspection will be scheduled to occur within 14 calendar days of the request and shall be attended by the engineer and DPW.

F01.8 Final Report

Upon DPW approval of the Final Inspection, the engineer shall submit a written Final Report to the Platting Division. The Final Report shall include:

- (a) Stamped and signed narrative describing at a minimum:
 - (1) road construction process and equipment used,
 - material source and disposal areas,
 - (3) road embankment and subbase used,
 - (4) road topping or pavement used,
 - (5) compactive effort,
 - (6) road dimensions and shaping (length, roadway width, material thicknesses, pavement width, crown, cul-de-sac or t-turnaround dimensions and slope, foreslope, backslope, maximum centerline grade, etc.) for each road constructed,
 - (7) drainage, ditch depth, location of drainage easements, and
 - (8) road standard certification (Pioneer Road, Residential Street, etc.) for each road constructed;
- (b) Stamped and signed final drainage plan, (minimum 11"x17");
- (c) As-built drawing showing the horizontal locations of borrow extraction along the road corridor;
- (d) Documentation verifying Surface Course thickness such as photos and descriptions of test pits,
 scale tickets, asbuilt surveys, or alternative methods approved by DPW;
- (e) Compaction test reports;
- (f) Gradation tests, if required; and

(g) Photos of each stage of construction.

DPW will review the report and provide comments, if necessary, within 14 calendar days.

F01.9 Construction Acceptance

Upon approval of the Final Report, DPW will issue a Certificate of Construction Acceptance.

F01.10 Warranty

All improvements are to be guaranteed until October 31st of the calendar year following DPW approval of the Final Inspection. Roads within a Road Service Area may be accepted for maintenance at the end of the warranty. Pioneer Roads are not eligible for maintenance. Maintenance of Mountain Access Roads is at the discretion of DPW.

During the warranty period, the applicant is responsible for any road maintenance including, but not limited to: snow removal, maintaining a smooth road surface and crown, maintaining stabilized foreslopes and backslopes, and maintaining positive drainage. If any deficiencies arise during the warranty, DPW will issue a punch list to the applicant by September 1st to allow time for completion of repairs. The applicant must notify DPW of completion of repairs by October 15th for the roads to be eligible for maintenance on November 1st.

The warranty period for improvements following completion of a subdivision agreement may be lessened to one calendar year. The applicant shall request a punch list from DPW no more than one month before the end of the one-year warranty.

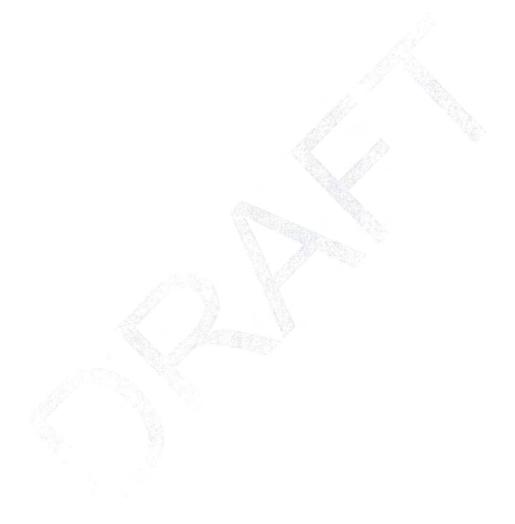
If the subdivision plat has not recorded by April 30th or if warranty repairs are not completed by October 15th, the warranty will be extended an additional year and the warranty process will be repeated.

Maintenance may be denied and the Certificate of Construction Acceptance revoked if deficiencies are not corrected to the satisfaction of DPW. A notice may be recorded indicating to the public that the MSB is not responsible for road upkeep and maintenance until such a time that the deficiencies are corrected.

Section G. Commercial and Industrial Subdivisions

G01 General

Commercial and Industrial subdivisions shall be designed using trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual, and to meet the standards of AASHTO, International Fire Code (IFC), and any other applicable standards or code.



Section H. Utilities

H01 General

These standards apply to the design and construction of utility facilities within the MSB. All utility installation within existing or proposed ROW or utility easements must comply with the provisions of MSB or other applicable code, or as otherwise approved by the permitting authority.

H02 Utility Location Guidelines

H02.1 Underground Utility Facilities:

- (a) The location of utility facilities placed within the ROW shall be coordinated with the permitting authority.
- (b) Backslopes or foreslopes which extend into a utility easement should not exceed 4:1. These limits are necessary for construction equipment for utility installation.
- (c) Utility facilities paralleling the road shall not be located within 10 feet of the roadway, unless otherwise approved by the permitting authority.
- (d) Underground road crossings shall be buried a minimum of 48 inches below finished grade. Backfill shall be compacted according to the requirements of Section C, or as otherwise approved by the permitting authority.
- (e) Conduit road crossings, if used, shall be installed in accordance with each utility company's standards and applicable code.
- (f) Standard burial depth of longitudinal utilities is 36 inches below grade. The applicant should delineate areas, such as where driveways and drainage easements are planned, where deeper burial may be needed.

H02.2 Above Ground Utility Facilities:

- (a) Above ground pedestals, poles, and utility facilities shall not be located within 10 feet of the roadway, unless an alternate design meets clear zone requirements.
- (b) Above ground pedestals, poles, and utility facilities shall not be located such that they substantially block intersection or driveway sight triangles.
- (c) Unless otherwise authorized by the permitting authority, above ground pedestals, poles, and utility facilities shall not be located within the ROW nearer than 40 feet from the point of intersection of the extension of the property lines at any existing or proposed intersection on Residential Collector streets or higher classification.
- (d) Above ground pedestals, poles, and utility facilities shall not be located within a common access easement or drainage easement, within 20 feet of a common access point, or within 10 feet of a roadway cross culvert.
- (e) Permanent 5-foot high snow marker poles, grey with white retroreflective sheeting or yellow, shall be installed on all pedestals and vaults.
 - (f) All guy wires installed within the ROW or utility easements adjacent to, or near to a roadway shall have a minimum 8-foot long yellow delineator installed above the anchor.

(g) Pedestals located within the ROW shall be located within the outer 1 foot of the ROW.

H02.3 Separation of Utilities:

- (a) Recommend 5-foot horizontal separation between power poles and buried utilities.
- (b) Recommend minimum 1-foot physical separation between all underground utilities.
- (c) Separation of storm, sewer, and water utilities shall meet the requirements of the Alaska Department of Environmental Conservation.

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Appendix A

Environmental Protection Agency Memorandum - Class V Injection Wells





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

JUN 12 2008

OFFICE OF WATER

MEMORANDUM

SUBJECT:

Clarification on which stormwater infiltration practices/technologies have

the potential to be regulated as "Class V" wells by the Underground

Injection Control Program

TO:

Water Division Directors, Regions 1-10

FROM:

Linda Boornazian, Director

Water Permits Division (MC 4203M)

Steve Heare, Director

Drinking Water Protection Division (MC 4606M)

Over the past several years stormwater infiltration has become an increasingly effective tool in the management of stormwater runoff. Although primary stormwater management responsibilities within EPA fall under the Clean Water Act (CWA), the infiltration of stormwater is, in some cases, regulated under the Safe Drinking Water Act (SDWA) with the goal of protecting underground sources of drinking water (USDWs). Surface and ground water protection requires effective integration between the overlapping programs. This memorandum is a step forward in that effort and is meant to provide clarification on stormwater implementation and green infrastructure, in particular under the CWA, which is consistent with the requirements of the SDWA's Underground Injection Control (UIC) Program.

In April 2007, EPA entered into a collaborative partnership with four national groups (the Association of State and Interstate Water Pollution Control Administrators, the Low Impact Development Center, the National Association of Clean Water Agencies, and the Natural Resources Defense Council) to promote green infrastructure as a cost-effective, sustainable, and environmentally friendly approach to stormwater management. The primary goals of this collaborative effort are to reduce runoff volumes and sewer overflow events through the use of green infrastructure wet weather management practices.

Within the context of this collaborative partnership, green infrastructure includes a suite of management practices that use soils and vegetation for infiltration, treatment, and evapotranspiration of stormwater. Rain gardens, vegetated swales, riparian buffers and porous pavements are all common examples of green infrastructure techniques that capture and treat stormwater runoff close to its source. Green infrastructure management practices typically do not include commercially manufactured or proprietary infiltration

devices or other infiltration practices such as simple drywells, which do not provide for pre-treatment prior to infiltration.

The partnership is promoting green infrastructure as an effective approach to stormwater management because these practices are associated with a number of environmental benefits. In addition to reducing and delaying runoff volumes, green infrastructure approaches can also reduce pollutant levels in stormwater, enhance ground water recharge, protect surface water from stormwater runoff, increase carbon sequestration, mitigate urban heat islands, and increase wildlife habitat.

Given the multiple benefits that green infrastructure can provide, EPA and its partners have increased efforts to incorporate green infrastructure techniques into stormwater management strategies nationwide. In recent years, public support for these practices has gradually increased. For more information on green infrastructure, please visit www.epa.gov/npdes/greeninfrastructure.

There are cases where stormwater infiltration practices are regulated as Class V wells under the UIC program, and State and local stormwater managers report that some developers are hesitant to incorporate green infrastructure practices because they fear regulatory approvals will slow the process and increase costs. EPA believes those fears are unfounded and notes that most green infrastructure practices do not meet the Class V well definition and can be installed without regulatory oversight by the UIC Program. However, EPA remains committed to the protection of USDWs and emphasizes the need for UIC program compliance (per 40 CFR 144).

To provide clarification on which stormwater infiltration techniques meet EPA's UIC Class V well definition, EPA's Office of Water has developed the attached "Class V Well Identification Guide." State or Regional stormwater and nonpoint source control programs, developers, and other interested parties are requested to contact the State or Regional UIC Program Director with primary authority for the UIC Class V program when considering the use of practices that have been identified, or potentially identified, as Class V wells. UIC program managers should consider the proximity to sensitive ground water areas when looking at the suitability of stormwater infiltration practices. Depending on local conditions, infiltration without pretreatment may not be appropriate in areas where ground waters are a source of drinking water or other areas identified by federal, state, or local governments as sensitive ground water areas, such as aquifers overlain with thin, porous soils.

Please share this memo and the attached guide with your State and Regional stormwater, nonpoint source control, UIC and other ground water managers, as well as with appropriate green infrastructure contacts. These programs are encouraged to coordinate on stormwater management efforts when sensitive ground water issues arise.

Attachment

Underground Injection Control (UIC) Program Class V Well Identification Guide

This reference guide can be used to determine which stormwater infiltration practices/technologies have the potential to be regulated as "Class V" wells. Class V wells are wells that are not included in Classes I through IV. Typically, Class V wells are shallow wells used to place a variety of fluids directly below the land surface. By definition, a well is "any bored, drilled, driven shaft, or dug hole that is deeper than its widest surface dimension, or an improved sinkhole, or a subsurface fluid distribution system" and an "injection well" is a "well" into which "fluids" are being injected (40 CFR §144.3). Federal regulations (40 CFR §144.83) require all owners/operators of Class V wells to submit information to the appropriate regulatory authorities including the following:

- 1. Facility name and location
- 2. Name and address of legal contact
- 3. Ownership of property
- 4. Nature and type of injection well(s)
- 5. Operating status of injection well(s)

For more information on Class V well requirements, please visit http://www.epa.gov/safewater/uic/class5/comply_minrequirements.html. For more information on green infrastructure, please visit http://www.epa.gov/npdes/greeninfrastructure.

The stormwater infiltration practices/technologies in rows A through I below are generally not considered to be wells as defined in 40 CFR §144.3 because typically they are not subsurface fluid distribution systems or holes deeper than their widest surface dimensions. If these practices/technologies are designed in an atypical manner to include subsurface fluid distribution systems and/or holes deeper than their widest surface dimensions, then they may be subject to the Class V UIC regulations. The stormwater infiltration practices/technologies in rows J through K however, depending upon their design and construction probably would be subject to UIC regulations.

	Infiltration Practice/Technology	Description	Is this Practice/Technology Generally Considered a Class V Well?
Α	Rain Gardens & Bioretention Areas	Rain gardens and bioretention areas are landscaping features adapted to provide on-site infiltration and treatment of stormwater runoff using soils and vegetation. They are commonly located within small pockets of residential land where surface runoff is directed into shallow, landscaped depressions; or in landscaped areas around buildings; or, in more urbanized settings, to parking lot islands and green street applications.	No.
В	Vegetated Swales	Swales (e.g., grassed channels, dry swales, wet swales, or bioswales) are vegetated, open-channel management practices designed specifically to treat and attenuate stormwater runoff. As stormwater runoff flows along these channels, vegetation slows the water to allow sedimentation, filtering through a subsoil matrix, and/or infiltration into the underlying soils.	No.
С	Pocket Wetlands & Stormwater Wetlands	Pocket/Stormwater wetlands are structural practices similar to wet ponds that incorporate wetland plants into the design. As stormwater runoff flows through the wetland, pollutant removal is achieved through settling and biological uptake. Several design variations of the stormwater wetland exist, each design differing in the relative amounts of shallow and deep water, and dry storage above the wetland.	No.
D	Vegetated Landscaping	Self-Explanatory.	No.
E	Vegetated Buffers	Vegetated buffers are areas of natural or established vegetation maintained to protect the water quality of neighboring areas. Buffer zones slow stormwater runoff, provide an area where runoff can infiltrate the soil, contribute to ground water recharge, and filter sediment. Slowing runoff also helps to prevent soil and stream bank erosion.	No

	Infiltration Practice/Technology	Description	Is this Practice/Technology Generally Considered a Class V Well?
F	Tree Boxes & Planter Boxes	Tree boxes and planter boxes are generally found in the right-of-ways alongside city streets. These areas provide permeable areas where stormwater can infiltrate. The sizes of these boxes can vary considerably.	No.
G	Permeable Pavement	Permeable pavement is a porous or pervious pavement surface, often built with an underlying stone reservoir that temporarily stores surface runoff before it infiltrates into the subsoil. Permeable pavement is an environmentally preferable alternative to traditional pavement that allows stormwater to infiltrate into the subsoil. There are various types of permeable surfaces, including permeable asphalt, permeable concrete and even grass or permeable pavers.	No.
Ĥ	Reforestation	Reforestation can be used throughout a community to reestablish forested cover on a cleared site, establish a forested buffer to filter pollutants and reduce flood hazards along stream corridors, provide shade and improve aesthetics in neighborhoods or parks, and improve the appearance and pedestrian comfort along roadsides and in parking lots.	No.
Ĭ	Downspout Disconnection	A practice where downspouts are redirected from sewer inlets to permeable surfaces where runoff can infiltrate.	In certain circumstances, for example, when downspout runoff is directed towards vegetated/pervious areas or is captured in cisterns or rain-barrels for reuse, these practices generally would not be considered Class V wells.
1	Infiltration Trenches	An infiltration trench is a rock-filled trench designed to receive and infiltrate stormwater runoff. Runoff may or may not pass through one or more pretreatment measures, such as a swale, prior to entering the trench. Within the trench, runoff is stored in the void space between the stones and gradually infiltrates into the soil matrix. There are a number of different design variations.	In certain circumstances, for example, if an infiltration trench is "deeper than its widest surface dimension," or includes an assemblage of perforated pipes, drain tiles, or other similar mechanisms intended to distribute fluids below the surface of the ground, it would probably be considered a Class V injection well.

	Infiltration Practice/Technology	Description	Is this Practice/Technology Generally Considered a Class V Well?
K	Commercially Manufactured Stormwater Infiltration Devices	Includes a variety of pre-cast or pre-built proprietary subsurface detention vaults, chambers or other devices designed to capture and infiltrate stormwater runoff.	These devices are generally considered Class V wells since their designs often meet the Class V definition of subsurface fluid distribution system.
L	Drywells, Seepage Pits, Improved Sinkholes.	Includes any bored, drilled, driven, or dug shaft or naturally occurring hole where stormwater is infiltrated.	These devices are generally considered Class V wells if stormwater is directed to any bored, drilled, driven shaft, or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system.

Matanuska-Susitna Borough Public Works Department

20222020 Subdivision Construction Manual

(Roads, Drainage, and Utilities)

Adopted Date August 18 June 21, 2020 2022

Effective Date January 1June 21July 19, 20221



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Acronyms

AASHTO American Association of State Highway and Transportation Officials

ADFG Alaska Department of Fish and Game

ADT Average Daily Traffic

ADOT&PF Alaska Department of Transportation and Public Facilities

ATM Alaska Test Method

DPW Department of Public Works of the Matanuska-Susitna Borough

IFC International Fire Code

ITE Institute of Transportation Engineers
LRTP Long Range Transportation Plan
MSB Matanuska-Susitna Borough

N/A Not applicable
NTP Notice to proceed

OHWM Ordinary high water mark

OSHP Official Streets and Highways Plan

PUE Public use easement

ROW Right-of-way
VPD Vehicles per day

Definitions

The location along a road at which a driveway or road intersects. Access Point Arterial A road that provides a high level of mobility within the transportation network. Arterials have managed access with a minimal number of intersections or interchanges. **Average Daily** The total number of vehicle trips during a given time period (in whole days greater Traffic than one day and less than one year) divided by the number of days in that time period. Backslope On a roadway section in a cut, the portion of the roadside that slopes up from the roadside ditch and away from the roadway to the top of the cut, see Figure A-3. Catchment Area The total area contributing stormwater runoff to a particular point, site, or structure. Collector A road that links local roads with arterials and performs some duties of each. Collectors have managed access with a moderate number of intersections and driveways. **Curve Return** The curve located at the corner of an intersection, connecting the roadway edge of one road to the roadway edge of an intersecting road or driveway. Detention The temporary storage of runoff, for later controlled release. The configuration of a drainage system including manmade and natural features Drainage within a catchment area. Pattern Driveway A vehicular access way between a road and a parking area within a lot or property. Earthen material that is placed and compacted for the purpose of raising the grade **Embankment** of a roadway. Engineer An individual who is registered as a Professional Civil Engineer in the State of Alaska.

Feasible Reasonable and capable of being done or carried out.

Foreslope On a roadway section, the portion of the roadside that slopes down and away from

the roadway, see Figure A-3.

Functional Area The physical area of an intersection and

the area extending both upstream and downstream which includes perception reaction distance, maneuver distance, and

storage length.

Intersection The general area where two or more roads join or cross.

Local Road A road that provides access to abutting property, rather than to serve through

traffic. Local roads are not access controlled and can have frequent intersections

and driveways.

Lot Frontage A property line that abuts the right-of-way that provides access to the lot.

Ordinary High

The elevation marking the highest water level which has been maintained for a sufficient time to leave evidence upon the landscape. Generally, it is the point

where the natural vegetation changes from predominately aquatic to upland

species.

Positive Clear, unobstructed flow of water away from structures and roadways without

Drainage localized ponding.

Public Use Provides the rights for ingress, egress, roadways, right-of-way, public utilities, and slopes for cuts and fills. The rights are to the public in general, and public utilities

slopes for cuts and fills. The rights are to the public in general, and public utilities governed by permits required under federal, state, and local laws and regulations.

May also be known as a public access easement or right-of-way.

Regulated Any watercourse along which the flood hazard areas have been mapped and approved by the Federal Emergency Management Agency; any stream which

harbors fish, as determined by the Alaska Department of Fish and Game; or any

stream designated as regulated by MSB.

Retention The prevention of runoff. Stormwater, which is retained, remains indefinitely, with

the exception of the volume lost to evaporation, plant uptake, or infiltration.

Right-of-way A strip of land reserved, used, or to be used for a street, alley, walkway, airport,

railroad, or other public or private purpose.

Road A general term denoting a public thoroughfare used, or intended to be used, for

passage or travel.

Road Prism The foundation that supports the roadway; see Figure A-3.

Roadway The portion of a road that includes driving lanes and shoulders, see Figure A-3.

Segment A portion of road between two significant intersections or an intersection and its

terminus.

Shoulder The portion of a roadway contiguous to any traveled way for lateral support of

surface courses, see Figure A-3.

Street A general term usually denoting an urban or suburban road.

Stub Road A right-of-way or road segment, that is planned to be extended, typically short in

length, which terminates at the boundary of a subdivision or masterplan phase of site plan, the purpose of which is to ultimately connect to abutting property when

it is developed.

T-intersection A three leg intersection in the form of a "T".

Through Street A road given preferential right of way; roads which intersect a through street are

controlled, such as with a stop sign or yield sign.

Water Body A permanent or temporary area of standing or flowing water. Water depth is such

that water, and not air, is the principal medium in which organisms live. Water bodies include, but are not limited to: lakes, ponds, streams, rivers, sloughs, and all

salt water bodies.

Introduction

This manual is intended to accomplish the following goals:

- (1) To establish standards for the design and construction of transportation networks throughout the Matanuska-Susitna Borough.
- (2) To provide information and guidelines for the design, construction, and upgrade of roads, drainage facilities, and utilities within rights-of-way.
- (3) To develop and maintain a safer and more efficient transportation system.
- (4) To minimize operation & maintenance efforts.

Section A. Street Design

A01 General

These provisions establish appropriate standards for the design of roads. The purpose of these provisions is to:

- (1) promote the safety and convenience of motorized and non-motorized traffic;
- (2) promote the safety of neighborhood residents;
- (3) minimize the long term costs for maintenance and repair;
- (4) protect the residential qualities of neighborhoods by limiting traffic volume, speed, noise, and air pollution;
- (5) encourage the efficient use of land; and
- (6) minimize the cost of road construction and thereby restrain the rise in housing costs.

A02 Applicability

These standards apply to the design and construction of all subdivision improvements within the Matanuska-Susitna Borough (MSB), with the exception of those streets within cities that exercise road powers by ordinance.

A03 Street Classifications

Roads within the MSB fall within one of the following functional classifications, in accordance with the Long Range Transportation Plan (LRTP): Interstate, Principal Arterial, Minor Arterial, Major Collector, Minor Collector, and Local Road. Functional classification of a road is based on its function, design, and current potential use. The applicant may request review of the functional classification of existing roads abutting or affecting the design of a subdivision or land development during the preapplication process.

This section provides design guidance for roads falling under local road and minor collector functional classifications.

A03.1 Residential Street

Residential streets are local roads intended to carry the least amount of traffic at the lowest speed. The Residential street will provide the safest and most desirable environment for a residential neighborhood. Developments should be designed so that all, or the maximum number possible, of the homes will front on this class of street.

A03.2 Residential Subcollector Street

Residential Subcollector streets are local roads that carry more traffic than Residential streets.

A03.3 Residential Collector Street

Residential Collector streets are the highest order of residential streets and are a type of minor collector. In large residential developments, this class of street may be necessary to carry traffic from one neighborhood to another or from the neighborhood to other areas in the community. Residential Collector streets should provide the fewest direct accesses as possible.

A03.4 Mountain Access Road

Mountain Access Roads may be used in areas where the average cross slope exceeds 15 percent or to traverse terrain features in excess of 25 percent. Maintenance of Mountain Access Roads will be at the discretion of DPW. School bus access should be considered as school bus routes require all grades less than 10 percent. Mountain Access Road standards allow for steeper grades and switchbacks, but should otherwise be designed to Residential, Residential Subcollector, or Residential Collector standard as required by this section.

A03.5 Pioneer Road

Pioneer Roads may only be used where allowed by MSB or other applicable code. This classification establishes minimum requirements for roads providing physical access, but should otherwise be designed to Residential, Residential Subcollector, or Residential Collector standard as required by this section. No MSB maintenance will be provided for Pioneer Roads. Pioneer roads may be constructed offset from the centerline of the ROW to facilitate future expansion of the road.

A03.6 Alleys

Alleys are permitted provided legal and physical access conforms to MSB or other applicable code. No MSB maintenance will be provided for Alleys.

A03.7 Other Street Types

The above classifications may be further typed as one of the following streets. These other street types should be designed to Residential, Residential Subcollector, or Residential Collector standard as required by this section.

- (a) Frontage Street streets parallel and adjacent to a major road corridor which provides access to abutting properties and separation from through traffic. See Section B for additional design standards.
- (b) Backage Street streets that provide access to lots located between the Backage Street and a major road corridor. See Section B for additional design standards.
- (c) Connector Street the portion of a street that connects a frontage or backage street to a major road corridor. See Section B for additional design standards.
- (d) Divided Street streets may be divided for the purpose of accommodating environmental features or avoiding excessive grading. In such a case, the design standards shall be applied to the appropriate street classification and a single lane width with a shoulder on each side.

A04 Access Criteria

A04.1 Residential Street

- (a) A Residential street provides access to abutting properties.
- (b) The anticipated average daily traffic (ADT) volume on Residential streets shall not exceed 400. A loop street shall be designed such that the anticipated ADT at each terminus of the loop street does not exceed 400, see <u>Figure A-1Figure A-1</u>.
- (c) Residential streets may intersect or take access from an equal or higher classification street. Both ends of a loop Residential street are encouraged to intersect the same collecting street and be designed to discourage through traffic.

Residential streets with only one inlet/outlet shall provide access to no more than 20 lots and not exceed 1000 feet in length (measured from the intersection point to the center point of the turnaround).

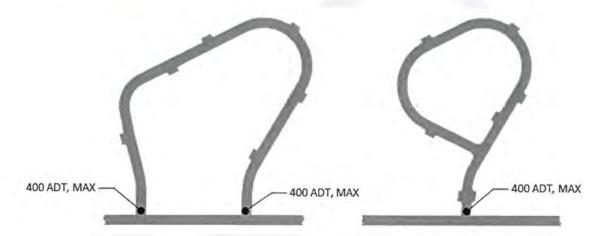


Figure A-1: Loop Residential Streets

A04.2 Residential Subcollector Street

- (a) A Residential Subcollector street provides access to abutting properties and may also move traffic from Residential streets that intersect it. Residential Subcollector streets are required when the ADT anticipated on the street will exceed the limits for Residential or when a street with only one inlet/outlet provides access to more than 20 lots or exceeds 1000 feet in length.
- (b) The anticipated ADT on Residential Subcollector streets shall not exceed 1000. A loop street shall be designed such that the anticipated ADT at each terminus of the loop street does not exceed 1000, see Figure A-2.
- (c) Residential Subcollector streets shall be designed to exclude all external through traffic that has neither origin nor destination on the Residential Subcollector or its tributary Residential streets. Adjacent parcels may acquire access if proven landlocked by legal or terrain features or if such Residential Subcollector access can be demonstrated to be beneficial to the public.
- (d) Residential Subcollector streets shall take access from a street of equal or higher classification.

- (e) Traffic calming elements should be considered for the design of Residential Subcollectors, such as avoiding long, straight segments and reducing the length of roadway from farthest lot to a collector.
- (f) Residential Subcollector streets shall be provided with two continuous moving lanes within which no parking is permitted.

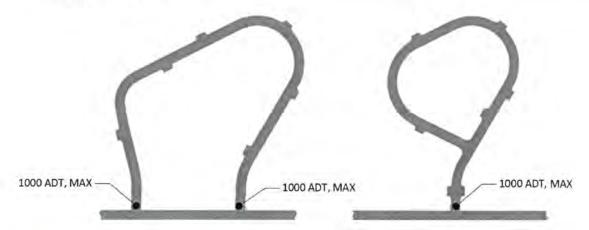


Figure A-2: Loop Residential Subcollector Streets

A04.3 Residential Collector Street

- (a) A Residential Collector street carries residential neighborhood traffic, but restricts or limits direct residential access. Residential Collector streets are required when the ADT anticipated on the street will exceed the limits for Residential Subcollectors.
- (b) Residential Collector streets should be designed to have as few residential lots directly fronting them as possible. When efficient subdivision design or physical constraints make this not possible, the average access point spacing shall be a minimum of 250 feet. Average access point spacing is calculated per segment and is equal to the segment length divided by the number of potential access points on both sides of the street. Undeveloped lots with only access to Residential Collector streets are counted as having at least one access point. When the average access point spacing on a segment of an existing Residential Collector street is less than 250 feet, the average access point spacing shall not decrease due to the subdivision.
- (c) Space shall be provided on these lots for turnaround so that vehicles will not have to back out onto Residential Collector streets.
- (d) Proposed access points on Residential Collector streets shall be shown on the preliminary plat.
- (e) Residential Collector streets shall be laid out to encourage connectivity within the transportation network.
- (f) If the anticipated ADT will exceed 3000, the street shall be classified at a higher level than Residential Collector by DPW.
- (g) Every Residential Collector shall be provided with no fewer than two access intersections to streets of equal or higher classification. If it is shown by the applicant that two accesses are not feasible, Residential Collector streets shall be provided with access to one street of equal or higher

- classification and be designed to accommodate a future second connection to a street of equal or higher classification, or otherwise be approved by DPW.
- (h) All Residential Collector streets shall be provided with two continuous moving lanes within which no parking shall be permitted.

A04.4 Access through Existing Streets

The anticipated ADT on existing Residential streets used to access a proposed subdivision may exceed 400, but shall not exceed 800, if:

- (a) alternate road corridors are not available or feasible;
- (b) horizontal geometry or access density prohibits upgrade to a higher standard road; and
- (c) the traffic impacts are mitigated.

A04.5 Traffic Impact Mitigation for Access through Existing Streets

Traffic impact mitigation on existing residential streets can include but is not limited to:

- (a) Traffic control devices (signage, striping) on segments where potential ADT exceeds 440;
- (b) LED street lighting, speed feedback signs, widened shoulders, inside corner widening for offtracking, or all-way stop intersections on segments where potential ADT exceeds 600.

A04.6 Commercial Uses on Residential and Residential Subcollector Streets

Exceptions to the ADT limits on Residential and Residential Subcollector streets, as set forth in A04.1 and A04.2, respectively, may be allowed for commercial uses that access the first 600 feet of such streets that intersect a Collector standard road or higher classification, as measured from the intersection point. The affected portion of the street and intersection shall be constructed to a higher standard as needed to accommodate the anticipated commercial traffic.

A05 Design Criteria

The design criteria for Residential, Residential Subcollector, and Residential Collector streets and Mountain Access and Pioneer roads are set forth in <u>Table A-1</u>. Any unspecified design criteria shall meet or exceed the design criteria for the roadway design speed in the latest edition of *A Policy on Geometric Design of Highways and Streets* (AASHTO).

Table A-1: Design Criteria

	Unit	Residential	Residential Subcollector	Residential Collector	Mountain Access ¹	Pioneer ¹
Average Daily Traffic	VPD	≤400	401 – 1000	1001 - 3000	-	-
Typical Section						
ROW Width ²	ft	60	60	60	60	60
Lane Width	ft	10	10	11	10	10
Standard Gravel Shoulder Width	ft	2	2	2	O ³	03
Shared Paved Shoulder Width⁴	ft	4	4	6	4	-
Roadway Width	ft	24	24	26	20 ³	20
Foreslope ⁵	h:v	3:1	3:1	4:1	2:1	3:1
Backslope ⁶	h:v	2:1	2:1	2:1	2:17	2:1
Crown, gravel	%	3	3	3	3	3
Crown, pavement	%	2	2	2	2	- /
Engineering Criteria						
Design Speed	mph	25	30	35	-	-
Posted Speed	mph	20	25	30	-	-
Stopping Sight Distance	ft	155	200	250	= -	-
Horizontal Alignment						
Minimum Centerline Radius	ft	225	350	550	_8	-
with DPW Approval	ft	190	275	400	E .	-
Minimum Tangent Between Curves	ft	100	100	100	100	100
Maximum superelevation	%	N/A	N/A	4	N/A	N/A

¹ Where a value is not given, Mountain Access and Pioneer Roads shall meet the criteria of the anticipated street classification.

6

² Minimum ROW required for new dedications; width of existing ROW may vary.

³ Where grades exceed 7 percent, the shoulder width shall be 2 feet for a total roadway width of 24 feet.

⁴ An optional paved shoulder may be provided on one or both sides of paved streets for non-motorized shared use.

⁵ Slope for the first 7.5 feet from the shoulder; may be steepened to 2:1 thereafter. Install guardrail when required by the latest edition of the *Roadside Design Guide* (AASHTO).

⁶ 2:1 Back slopes may be steepened to 1.5:1 if cuts exceed 5 feet and appropriate slope stabilization, as determined by the design engineer, is used. Retaining walls may be used to replace or augment backslopes.

⁷ Or backslope recommended by the design engineer based on actual conditions.

⁸ Switch backs are allowed provided cul-de-sac criteria is met or turning radius is 40 feet with a 2% grade.

	Unit	Residential	Residential Subcollector	Residential Collector	Mountain Access ¹	Pioneer ¹
Vertical Alignment						
Maximum Centerline Grade	%	10	10	10	15 ⁹	10
Minimum Rate of Vertical Curvature ¹⁰ ; Crest		12	19	29	-	-
Minimum Rate of Vertical Curvature ¹⁰ ; Sag		26	37	49	-	-
Minimum Flow Line Grades	%	0.5	0.5	0.5	1.0	0.5
Intersections						
Minimum ROW Corner Radius	ft	30	30	30	30	30
Minimum Curve Return Radius ¹¹	ft	20	25	30	- **	-
Maximum Grade on through street within 50 feet of intersection	%	7	7	4	9	7

⁹ Up to 15% grade with no more than 200 linear feet of over 10% grade with a minimum of 100 linear feet of less than 10% grade for runout between steeper sections. Maximum grade in a horizontal curve is 10%.

 10 Rate of vertical curvature (K) is the length of curve (L) in feet per percent algebraic difference in intersecting grades (A); K = L / A

¹¹ 40-foot minimum curve return radius at intersections with higher order streets.

A06 Typical Section

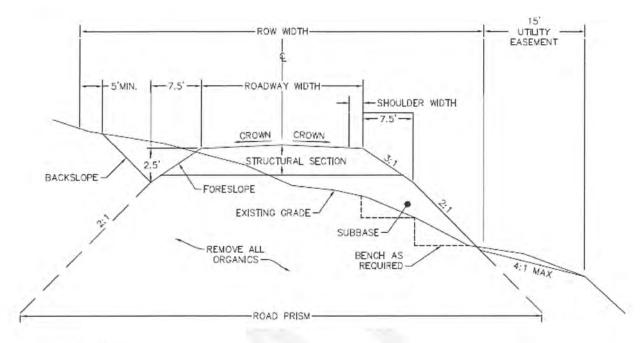


Figure A-3: Typical Section

A07 Turnarounds

Streets with only one inlet that exceed 200 feet in length (measured from the intersection point to the end of required construction) shall terminate with a constructed turnaround, unless otherwise provided by A08.2.

A07.1 Cul-de-sac Turnarounds

- (a) A cul-de-sac turnaround with a drivable surface diameter (shoulder to shoulder) of 85 feet centered in a ROW diameter of 120 feet shall be provided at the terminus of Residential and Residential Subcollector streets.
- (b) Cul-de-sac turnarounds shall meet the configuration and dimensions shown in Figure A-4.
- (c) The grade throughout the surface of a cul-de-sac, as depicted in the shaded portion of Figure A-4, shall not exceed 4 percent.

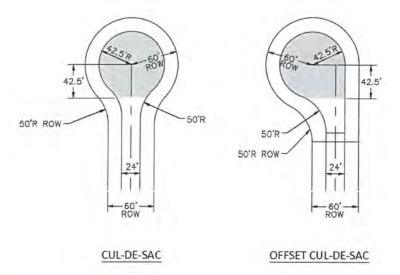


Figure A-4: Cul-de-sac Options

A07.2 Alternate Turnarounds

- (a) DPW may permit a street to terminate with an alternative turnaround that meets fire code when such a design is required by extreme environmental or topographical conditions, unusual or irregularly shaped tract boundaries, or when the location of the turnaround is intended to become an intersection.
- (b) Alternate turnarounds shall meet the configuration and dimensions shown in Figure A-5.
- (c) The grade throughout the turnaround surface, as depicted in the shaded portion of Figure A-5, shall not exceed 4 percent.

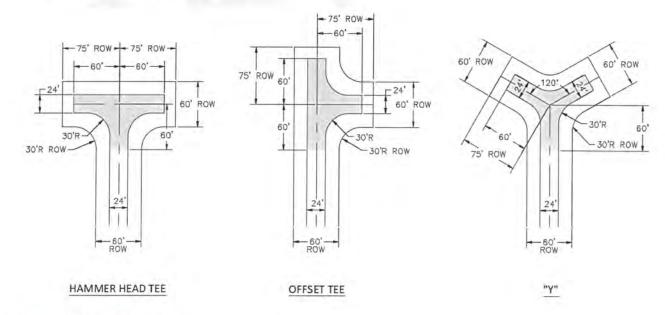


Figure A-5: Alternate Turnarounds

A08 Stub Streets

A08.1 Stub Street Construction

No construction is required if physical access is provided to all lots by adjoining streets as required by MSB or other applicable code.

A08.2 Temporary Turnarounds

All-sStub streets requiring construction that exceed 200 feet in length (measured from the intersection point to the end of required construction) will meet the requirements of A07A07.1 or A07.2. A temporary easement will be provided for the turnaround, which will automatically terminate upon extension of the street and physical removal of the turnaround. The centerline grade on stub streets without turnarounds shall not exceed 4%.

A09 Intersections

A09.1 Intersection Sight Distance

- (a) Whenever a proposed street intersects an existing or proposed street of higher order, the street of lower order shall be made a stop controlled street, unless alternate intersection control is used as allowed by this subsection.
- (b) Stop controlled streets shall be designed to provide intersection sight distance as specified in this subsection, <u>Table A-2Table A-2Table A-2</u>, and <u>Figure A-6Figure A-6Figure A-6</u>.
- (c) The entire area of the intersection sight triangles shown in <u>Figure A-6Figure A-6Figure A-6</u> shall be designed to provide a clear view from point A at 3.5 feet above the roadway to all points 3.5 feet above the roadway along the lane centerlines from point B to point C and point D to point E.
- (d) Sight distances less than the recommended shall only be used when there are topographical or other physical constraints outside of the applicant's control.
- (e) The minimum sight distances listed in <u>Table A-2Table A-2</u> are for a passenger car to turn onto a two-lane undivided street and minor road approach grades of 3 percent or less. For other conditions, the minimum sight distance should be calculated by the applicant's engineer according to A Policy on Geometric Design of Highways and Streets (AASHTO).
- (f) Sight distances less than the minimum, where no other options exist, will require alternate intersection control or warning signs as determined by the applicant's engineer and approved by DPW.
- (g) Intersection sight triangles shall be located in their entirety within ROW or a sight distance maintenance easement.
- (h) Yield controlled intersections shall conform to sight distance requirements according to A Policy on Geometric Design of Highways and Streets (AASHTO).
- Intersections with state or other municipal ROW are subject to their respective requirements and review.

Table A-2: Recommended and Minimum Intersection Sight Distance

Design Speed or Posted Speed Limit (whichever is greater)	S _d Recommended	S _d Minimum
MPH	ft	ft
25	370	280
30	450	335
35	580	390
40	750	445
45	950	500
50	1180	555
55	1450	610
60	1750	665
65	2100	720

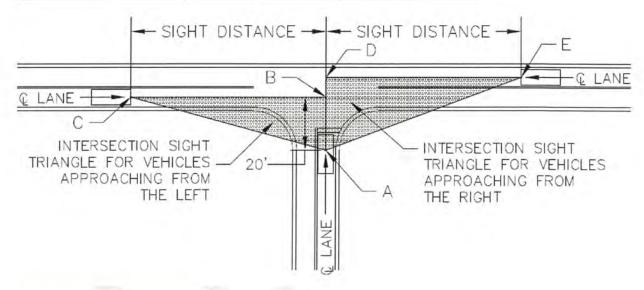


Figure A-6: Intersection Sight Distance

A09.2 Intersection Spacing

- (a) Minimum centerline to centerline distance between intersections on the same side or opposing sides of the through street shall be:
 - (1) 155 feet on Residential streets;
 - (2) 200 feet on Residential Subcollector streets;
 - (3) 300 feet on Residential Collectors and Minor Collectors; or
 - (4) 650 feet on higher order streets where other access standards do not exist.
- (b) If the above spacing along the through street cannot be met, intersections shall be aligned directly across from each other. Intersections on opposing sides of the through street may be offset up to 30 feet, with a preference for a left-right offset, as shown in Figure A-7.

- (c) Where pre-existing conditions do not allow for the above spacing and no other legal access exists, alternate spacing or offset most closely meeting (a) or (b) above may be allowed.
- (d) Additional intersections should be avoided within the functional area of major intersections with turning bays and approach tapers. Exceptions require DPW approval based upon constraints and no other feasible alternatives.

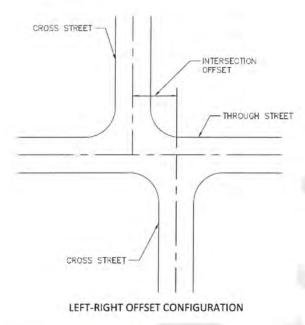


Figure A-7: Intersection Offset

A09.3 Minimum Intersection Angle

Streets should intersect with a straight segment at an angle as close to 90° as possible, but no less than 70°, for a minimum of 75 feet from the intersection point, as shown in Figure A-8.

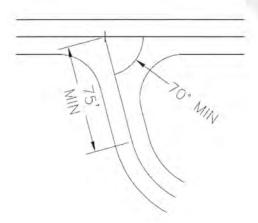


Figure A-8: Intersection Angle

A09.4 Landing

Controlled streets shall be provided with a <u>typical</u> 30-foot landing, conforming to Figure A-9, at its approach to a through street. The landing shall be sloped to match the crown of the through street. Vertical curves shall not be located in the landing to the extent feasible. Where a negative slope away from the through street is not feasible due to topographical constraints, the road shall be constructed in a manner that prevents water from flowing onto the through street.

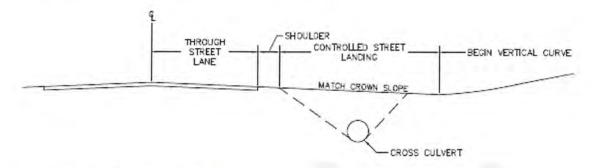


Figure A-9: Controlled Street Landing Profile

A09.5 Paved Apron

A proposed street which intersects an existing paved street shall be provided with a paved apron 40 feet from the edge of the existing pavement.

A proposed street which intersects an existing paved street shall be provided with a paved apron from the edge of the existing pavement to the end of the curve return plus 10 feet.

A11A10 Driveways

Driveways are not usually required to be constructed within the ROW at time of road construction. However, if an applicant chooses to construct driveways, driveway permits are required. The applicant may permit all driveways with one application. A driveway permit application can be obtained from the MSB Permit Center. Driveways onto state or other municipal ROW are subject to their respective requirements and review.

A12A11 Trailhead

Trailhead parking lot layout shall conform to applicable local, state, and federal requirements.

A13A12 Bicycle and Pedestrian Paths

Bicycle and pedestrian paths constructed within public ROW shall conform to the current edition of *Guide for the Development of Bicycle Facilities* (AASHTO), and any other applicable local, state, and federal requirements.

A14A13 Signage

Signs shall be provided and installed by the applicant in conformance with the latest edition of the *Alaska Traffic Manual* (ADOT&PF) and the *Alaska Sign Design Specifications* (ADOT&PF) prior to plat recordation.

- (a) Each street within a subdivision shall be identified and signed at its point of egress and ingress. Cul-de-sac streets will be signed and identified at their point of ingress
- (b) Intersection control signs shall be provided at designated intersections within the confines of the subdivision and at the intersection with the access road, if applicable.
- (c) Intersection control signs shall be located such that they are visible to approaching traffic and near corresponding stop or yield bars.
- (d) Speed limit signs shall be provided at entrances to the subdivision, where the speed limit changes, and at a minimum of one-mile intervals throughout the subdivision.
- (e) If a constructed stub street provides access to two or fewer lots and has no turnarounds a sign indicating a dead-end street shall be posted.
- (f) If a dedicated stub street is not constructed, no signs are required.
- (g) Install signs according to the criteria in Figure A-10, Figure A-11, and Figure A-12.
- (h) Signs within state or other municipal ROW are subject to their respective requirements and review.

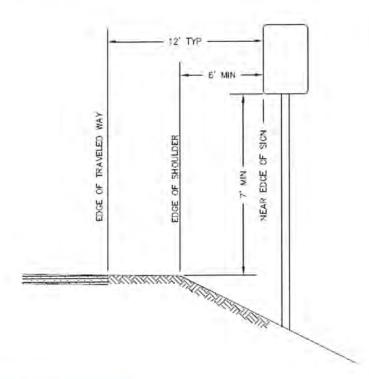
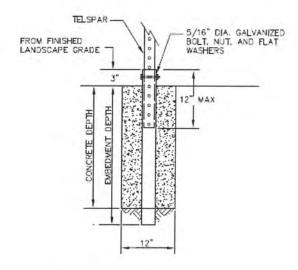


Figure A-10: Sign Placement



Figure A-11: Stop Sign Location



PERFORATED STEEL TUBES (P.S.T.) (12ga. – .105" Wall Thickness)					
SIGN SURFACE AREA SQ. FT.	POST SIZE	EMBEDMENT DEPTH	CONCRETE DEPTH		
7' OR LESS	2" X 2"	27"	24"		
GREATER THAN 7'	2 1/2" X 2 1/2 "	33"	30"		

Figure A-12: Concrete Foundation for Sign Post

A15A14 Railroad Crossings

All access requiring a crossing of the Alaska Railroad shall be subject to the *Alaska Policy on Railroad/Highway Crossings* (Alaska Railroad).

A16A15 Average Daily Traffic

- (a) The following formula shall be used to determine the required classification of streets: ADT = Number of lots x 10 for single-family residential use.
- (b) See Section G for other land uses.
- (c) For subdivisions of five or more lots, submit potential ADT calculations for the following locations with the preliminary plat:
 - (1) at each intersection within the subdivision,
 - (2) at each intersection en route to an existing Residential Collector street or higher classification, and
 - (3) at an existing Residential Collector street or higher classification.

A17A16 Design Deviations

Design deviations will be considered to address extenuating circumstances including but not limited to: existing substandard ROW, environmental conditions, or existing utilities or other structures. Design deviation requests shall be in writing and contain supporting information, justification, and suggested solutions. Design deviations may be allowed by DPW only for matters that do not fall under the jurisdiction of a Board or Commission. In no circumstances will a roadway width less than 20 feet or foreslopes steeper than 2:1 be allowed. Residential Collector streets shall be no less than 24 feet wide.

Section B. Major Road Corridors

B01 General

Major road corridors include major collectors, arterials, and interstates. This section provides references to and guidelines for the design and construction of major road corridors within the MSB.

B02 Right-of-way and Surface Widths

Table B-1: Right-of-way and Surface Widths

Classification	Minimum ROW Width (ft)	Standard Lane Width (ft)	Number of Lanes	Shoulder Width (ft)
Major Collector	80	12	2-3	4
Arterial	100	12	3-4	4-8
Interstate	200	12	4-6	12

BO3 Frontage, Backage, and Connector Street Standards

Subdivisions adjacent to planned or existing major road corridors shall plan for future frontage or backage streets when any of the following conditions apply, unless it is shown by the applicant to be not necessary or feasible for future development and public safety with non-objection no written objection from the road authority.

- (a) Subdivisions accessing roads that are classified by ADOT&PF as Interstates.
- (b) Subdivisions accessing roads that are or are projected to grow above 20,000 vehicles per day (VPD).
- (c) Subdivisions accessing roads that are or are projected to have four or more lanes or median control per the LRTP or OSHP.
- (d) Subdivisions that require a second access route.
- (e) To gain access to an existing or planned signal.
- (f) Where access to a minor arterial or collector as a connector road is feasible.
- (g) When there are existing or platted frontage or backage routes adjacent to the property.

B03.1 Separation Distances

Minimum ROW to ROW separation distance between major corridors and frontage or backage streets shall be:

- (a) 0 feet for locations with no connector street to the major road corridor;
- (b) 100 feet for locations with a connector street to the major road corridor that lie between section lines and planned or existing intersections with other major road corridors;
- (c) 300 feet for locations where the connector street to the major road corridor is on a section line or planned or existing major road corridor.

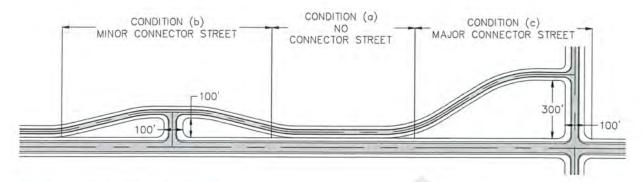


Figure B-1: Frontage Street Configurations

B03.2 Design Standards

- (a) Frontage streets
 - Minimum centerline radii may be reduced near intersections with through connector streets.
- (b) Connector streets
 - (1) 100-foot ROW width desirable.
 - (2) Minimum 40-foot radius curve returns at the major road corridor.
 - (3) Minimum 4-foot wide shoulders for 100 feet from the edge of roadway of the major road corridor.
 - (4) Minimal direct access.

B03.3 Dedication and Setbacks

Dedicate ROW or additional building setbacks to allow for the frontage, backage, and connector street standards in this manual. The applicant shall <u>submit design information sufficient to demonstrate prove</u> that frontage, backage, and connector street dedications or building setbacks are in a practical location where road construction is feasible in accordance with this manual. The applicant shall be required to submit plan, profile, and cross-sections <u>for the sections of road whereif</u> existing grades along the proposed route exceed 10 percent, existing cross slopes exceed 15 percent, or if existing utilities or other physical features appear to create impediments to a road design meeting standards of this manual. <u>Road plan and profile shall extend at least 300 linear feet on either side of the subject sections or to intersecting or adjacent rights-of-way within 500 linear feet.</u>

B04 Access Standards

(a) The average access point spacing on major road corridors, where other access standards do not exist, shall not exceed the minimums listed in <u>Table B-2Table B-2Table B-1</u>, based on the posted speed limit. Average access point spacing is calculated per segment and is equal to the segment length divided by the number of access points on both sides of the street. Undeveloped lots with only access to the major road corridor are counted as having at least one access point.

(b) When the average access point spacing on a segment of an existing major road corridor is less than the minimum listed in <u>Table B-2Table B-2</u>, the average access point spacing shall not decrease due to the subdivision.

Table B-28-1: Average Access Point Spacing

Posted Speed Limit (mph)	Minimum Average Access Point Spacing (feet)
30	250
35	300
40	360
45	425
50	495
55	570

B05 Future Corridors

Subdivisions shall be designed in a manner that does not conflict with the Long Range Transportation Plan or the Official Streets and Highways Plan. Subdivisions containing future road corridors identified in the LRTP or OSHP are encouraged to include the future road corridor as part of the road layout of the subdivision.

Building setbacks prohibiting the location of any permanent structure within the future corridor may be voluntarily designated on the final plat. The area within the future road corridor shall be excluded from usable septic area calculations. The area within the future road corridor and building setbacks shall be excluded from usable building calculations.

B06 References

The following publications shall be used for design and construction standards of these classes of streets that are not otherwise established herein:

- (a) A Policy on Geometric Design of Highways and Streets, AASHTO (current edition).
- (b) Standard Specifications for Highway Construction, ADOT&PF (current edition);
- (c) Standard Modifications to the ADOT&PF Standard Specifications for Highway Construction, MSB (latest revision)
- (d) Alaska Highway Preconstruction Manual, ADOT&PF (latest revision)

Section C. Construction Requirements

C01 General

This section establishes minimum construction requirements. Prior to any ground disturbing activities, call the Alaska Dig Line for utility locates in accordance with AS 42.30.400.

CO2 Road Construction

CO2.1 Clearing

Cut and dispose of all trees, down timber, stumps, brush, bushes, and debris. Cut trees and brush to a height of not more than 6 inches above the surrounding ground. Clear the ROW, slope easements, and sight distance triangles. Where ROW exceeds 60 feet, clear a minimum of 60 feet. Clear utility easements, if used, for utilities constructed with the development.

C02.2 Grubbing

Remove and dispose of all stumps, roots, moss, grass, turf, debris, or other deleterious material within the fill and cut catch limits of the road plus 5 feet on each side, within the ROW, and cleared utility easements for underground utilities.

CO2.3 Disposal

Dispose of clearing and grubbing debris in an area designated by the applicant outside of all ROW, platted utility easements, and platted private road corridors. Organic debris 3 inches in diameter by 8 inches long, or smaller, may be left in place, outside of the road prism.

CO2.4 Slit Trenches

Slit trenches are not allowed in the ROW. Utility easements may be used as a borrow source above a 2:1 extension of the road prism, as shown in Figure A-3. Topsoil or other organic non-deleterious material may be disposed within the utility easement. Compact the disposal area with heavy equipment and grade the surface with positive drainage no steeper than 4:1 and no lower than the ditch line. Submit an as-built drawing showing the horizontal locations of borrow extraction along the road corridor with the Final Report.

C02.5 Embankment Construction

- (a) Construct the road with the required structural section, see Figure C-1, and dimensions, see <u>Table A-1</u> and Figure A-3, as determined by its classification.
- (b) Prepare the subgrade. Remove all organics from the area below the road prism and dispose in locations where embankment is not proposed. Bench existing slopes that are steeper than 4:1, measured at a right angle to the roadway, where roadway embankment is to be placed.
- (c) Place material meeting, or verify in-situ material meets, the requirements for Subbase specified in subsection C07 to a minimum depth of 20 inches with the upper 6 inches having no material with

- a diameter larger than 6 inches. Place embankment in horizontal layers, as directed by the engineer, for the full width of the embankment and compact as specified before the next lift is placed.
- (d) Place 4 inches of Surface Course meeting the requirements specified in subsection C07. Finish with a 3 percent crown, and compact as specified.
- (e) For Residential and Residential Subcollector standard roads, compact all embankment to not less than 90 percent of the maximum dry density at the optimum moisture content and the top 24 inches to not less than 95 percent of the maximum dry density at the optimum moisture content. For Residential Collector standard roads, compact all embankment to not less than 95 percent of the maximum dry density at the optimum moisture content.
- (f) Optimum moisture and maximum dry density will be determined by Alaska Test Method (ATM) 207 and ATM 212 or alternative methods approved by DPW.
- (e)(g) In-place density shall be determined by ATM 213 or alternative method approved by DPW.

 Compaction tests on the subbase layer shall be taken at representative locations along the roadways as follows:
 - (1) a minimum of three;
 - (2) at least one per segment;
 - (3) one additional test per 1000 linear feet, or portion thereof, when the combined length of roadway exceeds 1000 linear feet;
 - (4) at least one out of every three within three feet of the shoulder, and the remainder in the center of a driving lane.
- (f)(h) For paved roadways, substitute Surface Course with a minimum of 2 inches of Base Course and 2 inches of HMA Type II, Class B, for Residential and Residential Subcollector streets, and a minimum of 3 inches of Base Course and 3 inches of HMA Type II, Class B, for Residential Collector Streets, in accordance with Appendix A. Pavement shall meet MSB Special Provision Section 401 Hot Mix Asphalt Pavement. The width of the pavement shall be equal to two lane widths plus the shared paved shoulder width, if used, and finished with a 2 percent crown. Pavement edges shall be backed with additional Base Course graded and compacted flush with the pavement surface and tapered to the edge of the roadway. The pavement shall be washed or swept immediately following shouldering work.
- (g)(i) Remove all loose material exceeding 6 inches in diameter from the ditches and foreslopes. Where slopes are 3:1 or steeper and longer than 10 feet measured along the slope face, trackwalk perpendicular to the slope, or the equivalent, to form 1-inch wide grooves parallel to the road no more than 12 inches apart.
- (h)(i) Permanently stabilize backslopes 3:1 or steeper. Stabilization can be part of a subdivision agreement. Stabilization may be allowed to establish during the warranty period.

CO2.6 Unsuitable Subgrades

When structurally unsuitable material such as peat, saturated material, or permafrost are present within the ROW, provide an appropriate structural design for approval by DPW, according to Section F, prior to

construction. Place embankment to a depth that will produce a stable road surface with a final grade 18 inches above the surrounding ground.

CO3 Roads Outside of a Road Service Area

Roads outside of a Road Service Area are not subject to the requirement for Surface Course.

CO4 Pioneer Road Construction Requirements

Pioneer roads, whether proposed or existing, shall meet the requirements of Figure C-1, <u>Table A-1</u> Table A-1, and Figure A-3. Place material meeting, or verify in-situ material meets, the requirements for Subbase specified in subsection CO7 to a minimum depth of 12 inches. Additional road embankment may be required to provide a stable road surface. Surface Course is not required. Pioneer roads may be constructed offset from the centerline of the ROW to facilitate future expansion of the road. Cross drainage culverts, minimum 18 inch diameter, will be installed where determined necessary and 24 inch ditches will be provided for drainage.

CO5 Winter Construction

Winter construction may be allowed. DPW will not accept any roads until all ground has thawed and any settlement areas corrected.

C06 Alternate Methods and Materials

Use of alternate materials and road construction methods that will more appropriately fit the conditions of the specific road locations, following general engineering practices, may be proposed by the applicant or their engineer in writing. Final acceptance of such plans must be approved by DPW.

C07 Materials

CO7.1 Subbase

- (a) Is aggregate containing no muck, frozen material, roots, sod, or other deleterious matter;
- (b) has a plasticity index not greater than 6 as tested by Alaska Test Method (ATM) 204 and ATM 205;
- (c) meets the requirements of Table C-2, as determined by ATM 304.

C07.2 Base Course

- (a) Crushed stone or crushed gravel, consisting of sound, rough, durable pebbles or rock fragments of uniform quality;
- (b) free from clay balls, vegetable matter, or other deleterious matters;
- (c) meets the requirements of Table C-1; and
- (d) meets the requirements of Table C-2, as determined by ATM 304.

C07.3 Surface Course

- (a) Is a screened or crushed gravel, consisting of sound, rough, durable pebbles or rock fragments of uniform quality;
- (b) free from clay balls, vegetable matter, or other deleterious matters; and
- (c) meets the requirements of Table C-2, as determined by ATM 304.

Table C-1: Aggregate Quality Properties for Base Course

Property	Test Method	Base Course 50, max	
L.A. Wear, %	AASHTO T 96		
Degradation Value	ATM 313	45, min	
Fracture, %	ATM 305 70, min		
Plastic Index	ATM 205 6, max		
Sodium Sulfate Loss, %	AASHTO T 104	9, max (5 cycles)	

Table C-2: Aggregate Gradations

Sieve Designation	Subbase	Base Course	Surface Course
1 1/2 inch		- 9	100
1 inch		100	1
3/4 inch		70 to 100	70 to 100
3/8 inch	400	50 to 80	50 to 85
No. 4	20 to 60	35 to 65	35 to 75
No. 8	10	20 to 50	20 to 60
No. 50	- 1	6 to 30	15 to 30
No. 200	0 to 10	0 to 6	7 to 13

(Percent Passing By Weight)

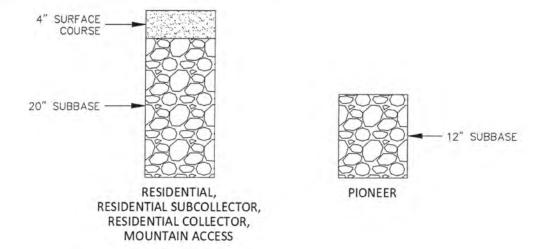


Figure C-1: Structural Sections for Gravel Roads

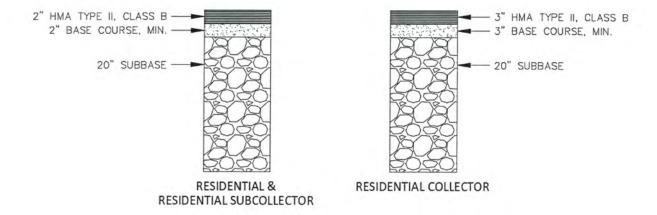


Figure C-2: Structural Sections for Paved Roads

Section D. Drainage

D01 General

The purpose of this section is to ensure that stormwater management is provided with land development activities. Responsible stormwater management is the treatment, retention, detention, infiltration, and conveyance of stormwater and other surface waters without adversely impacting adjoining, nearby, or downstream properties and receiving waters.

D02 Requirements

A preliminary drainage plan is required when road construction or disturbing land to create useable area for a subdivision is proposed. A drainage report is required for projects that include road construction, disturb 10,000 square feet of land or more, fill in wetlands, disturb land within 100 feet of the ordinary high water mark (OHWM) of a water body, disturb land within a mapped flood hazard area, or change the location, direction, quantity, or type of runoff leaving a site. See subsection D06 for specific requirements regarding fish passage culverts. It is the applicant's responsibility to comply with all other applicable federal, state, and local codes and regulations.

D02.1 Preliminary Drainage Plan

Submit a preliminary drainage plan, prepared by an engineer or other qualified professional registered in the State of Alaska, with the preliminary plat or ROW construction permit application. The preliminary drainage plan shall show the project site at a legible scale plottable on 11" by 17" paper or larger and depict the following:

- (a) Existing and proposed property lines, plottable easements disclosed in the title report, the OHWM of water bodies with 100-foot upland offset, and existing mapped flood hazard areas.
- (b) Existing topography with horizontal and vertical accuracy meeting US National Map Accuracy standards, with 5-foot contour intervals if the ground slope is less than 10 percent and 10-foot contour intervals if the ground slope is greater than 10 percent.
- (c) Existing features that convey or retain drainage, including but not limited to: water bodies, wetlands, natural valleys, swales, ditches, check dams, culverts, and pipe systems.
- (d) Proposed drainage pattern and features, both constructed and natural, on site. Identify conveyance types, flow directions, and any drainage changes that may affect adjacent property.
- (e) Proposed stream crossings and anticipated culvert sizes. Identify fish-bearing streams.

D02.2 Drainage Report

Submit a drainage report, prepared by an engineer or other qualified professional registered in the State of Alaska, as part of the construction plan submittal in subsection F01.2. The drainage report shall include the following:

(a) The drainage plan as specified in D02.1 (may be shown on two plans for clarity), updated to include:

- (1) Pre-development and post-development catchment area boundaries <u>determined using 2-foot contour intervals</u>; and
- (2) Locations of peak flow, peak velocity, and where runoff leaves the project site.
- (b) Description of methods, assumptions, and data sources used or made, including but not limited to:
 - (1) Rainfall data used (from the NOAA-14's Precipitation Frequency Data Server-or the Palmer Airport IDF curves in Figure D-1, whichever is more appropriate for the local conditions).
 - (2) Assumed post-development land cover conditions.
 - (3) Method used to determine runoff quantities, time of concentration, peak flows, etc.
- (c) Catchment area maps used or created to evaluate down-gradient conditions.
- (d) Identify design elements, with supporting runoff calculations, necessary to show compliance with the drainage design criteria set forth in D03.
- (e) Fish passage culvert plans, if applicable.

D03 Drainage Design Criteria

- (a) Design a drainage system for the project site to meet the criteria listed in Table D-1.
- (b) Retain natural drainage patterns to the extent possible.
- (c) Changes to drainage patterns must not adversely affect adjacent property or ROW.
- (d) Base the size and capacity of the drainage system on runoff volumes and flow rates assuming full development of the subdivision and a 10 percent increase to runoff from the catchment area.
- (e) Utility easements may be crossed by drainage features, but cannot be used to retain or detain water. Drainage easements are required where the ROW is not sufficient to accommodate drainage needs. See subsection E01.2.
- (f) Where drainage easements overlap utility easements:
 - Above ground drainage facilities, such as retention and detention basins, may be located in new utility easements only in a manner that will not interfere with utilities. See subsection H02.
 - (2) Above ground drainage facilities located within existing utility easements require a letter of non-objection from affected utilities.
 - (3) Culverts crossing utility easements require a letter of non-objection from affected utilities.
 - (4) Underground drainage facilities such as infiltration trenches and vertical inlets shall not be located in utility easements.
- (e)(g) Drainage to state or other municipal ROW are subject to their respective requirements and review.

Table D-1: Drainage Sizing and Analysis Criteria

Design				
Requirement	Purpose	Criteria		
Conveyance	Size conveyances to	Drainage ditches: 10-year, 24-hour		
Design	pass design peak flows.	Non-regulated streams: 10-year, 24-hour		
		Regulated streams: 100-year, 24-hour		
Wetland <u>s</u>	Retain function of	In areas where wetlands are disturbed, drainage must		
Retention original wetlands		be designed to pPreserve the pre-development function of the remaining wetlands. For jurisdictional wetland areas, comply with United States Army Corps of Engineers wetlands development retention requirements.		
Water Quality	Treat first flush	Treat runoff generated by 0.50 inch of rainfall in a 24-		
Protection	pollutant loading Ensure channel stability	hour period. Treat the initial 0.25 inch of post-developed runoff for each storm event.		
	for all project	Control flows in conveyance channels so that transport		
	conveyances	of particles sized D50 and greater will not occur for the		
		post-development 10-year, 24-hour storm.		
Erosion and	Ensure channel stability	Control flows in conveyance channels so that transport		
Sedimentation	for all project	of particles sized D50 and greater will not occur for the		
Control	conveyances	post-development peak flow.		
Extended	Protect streams and	Provide 12 to 24 hours of detention for the post-		
Detention	channels from damage	development project runoff in excess of pre-		
	from smaller, more	development runoff volume for the 1-year, 24-hour		
Class d Hannad	frequent storm flows	storm.		
Flood Hazard	Control project-peak flow to minimize	Option 1		
Protection		Maintain the post-development project runoff peak		
	downstream impacts	flows from the 10-year, 24-hour storm to less than 1.10		
		times or equal to pre-development runoff peak flow at all project discharge points.		
		all project discharge points.		
		Option 2		
		Maintain the post-development project runoff peak		
		flows to less than 1.10 times pre-development runoff		
		peak flow at all project discharge points. Evaluate		
		downstream until the project site area is less than 10%		
		of the total upstream basin area and mitigate adverse		
		impacts. If post development discharge is greater than		
		pre-development discharge, evaluate down-gradient		
		conditions for and mitigate adverse impacts for a		

		distance of 1 mile downstream from the project as measured along the flow path or to the receiving water body, whichever is less,
Project Flood Bypass	Prevent an increased risk of flood damage from large storm events.	Compute post-development peak flow and delineate Design or identify an unobstructed, overland flow path for runoff to overtop or bypass project conveyance routes for the post-development 100-year, 24-hour storm.

D04 Drainage Ditches

Stabilize ditches with gravel, turf, or rock riprap. See Table D-2 and Table D-3 for most common conditions and acceptable ditch lining materials. Evaluate channel stability for compliance with the Erosion and Sedimentation Control design requirement in Table D-1 for other conditions.

Table D-2: Ditch Stabilization

Flow		Ditch Slope (ft/ft)									
(cfs)	0.005	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10
2.0	A	<u>A</u>	<u>A</u>	<u>A</u>	A	<u>A</u>	<u>A</u>	A	A	A	<u>A</u>
4.0	A	<u>A</u>	A	<u>A</u>	<u>A</u>	A	A	<u>A</u>	<u>B</u>	<u>B</u>	<u>B</u>
6.0	<u>A</u>	A	A	<u>A</u>	A	<u>A</u>	<u>B</u>	<u>B</u>	<u>B</u>	B	<u>B</u>
8.0	<u>A</u>	<u>A</u>	<u>A</u>	A	A	B	<u>B</u>	В	B	B	<u>B</u>
10.0	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>B</u>	B	<u>B</u>	<u>B</u>	<u>B</u>	<u>C</u>
20.0	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>B</u>	<u>C</u>	<u>c</u>	<u>C</u>	<u>C</u>	<u>C</u>
30.0	<u>A</u>	<u>A</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>C</u>	<u>C</u>	CI	D	D	D
40.0	A	<u>A</u>	<u>B</u>	<u>B</u>	CI	<u>C</u>	<u>C</u>	D	D	D	E
50.0	<u>A</u>	<u>A</u>	<u>B</u>	<u>B</u>	<u>C</u>	C	D	D	D	E	E
60.0	<u>A</u>	A	B	<u>C</u>	<u>C</u>	D	D	D	E	E	E
70.0	<u>A</u>	<u>A</u>	<u>B</u>	<u>C</u>	C	D	D	E	E	E	E
80.0	<u>A</u>	<u>B</u>	<u>C</u>	<u>C</u>	<u>C</u>	D	E	E	E	E	E
90.0	A	<u>B</u>	<u>C</u>	C	D	D	E	E	E	E	Ē
100.0	A	<u>B</u>	<u>C</u>	<u>C</u>	D	D	E	E	E	F	E

Table D-3: Ditch Lining Materials

Type	Material	D50 (in)	Dmax (in)	Dmin (in)	Thickness (in)
<u>A</u>	Native Grass, Turf, or Gravel with < 6% fines				
B	Riprap or Bone Rock	3.0	4.5	1.5	6.0
C	Riprap or Bone Rock	6.0	9.0	3.0	12.0
D	Riprap or Bone Rock	9.0	<u>13.5</u>	4.5	18.0
E	Riprap or Bone Rock	12.0	18.0	6.0	24.0

Normal ditch depth shall be 30 inches and according to the typical section shown in subsection A06. The design peak flow required by Conveyance Design in Table D-1 shall be conveyed within ditches with a minimum freeboard of 12 inches.

The ditch depth may be reduced at local high points of the ditch, provided the flow line offset is maintained and with DPW concurrence. Alternate ditch design along Residential and Residential Subcollector streets may be considered, if evidence is provided that the following conditions exist:

- (a) Ditches are a minimum of 18" deep;
- (b) The design peak flow required by Table D-1 is demonstrated to be conveyed within ditches with a minimum freeboard of 12 inches;
- Adequate drainage routes are provided and constructed within the ROW or designated drainage easements;
- (d) Flow lines are established at least 8 feet from the edge of roadway.
- (e) Ditches are deepened to provide cross drainage through 24" corrugated metal culverts (18" with DPW approval).
- (f) Cross sectional area of ditch is at least 15 square feet.

D05 Culverts

D05.1 General Culvert Design Criteria

The following criteria apply to all cross road culverts for runoff or seasonal drainage:

- (a) The minimum culvert slope is 0.5 percent.
- (b) Culverts longer than 100 feet require appropriate maintenance access and DPW approval
- (c) Cross road culverts shall have a minimum diameter of 18 inches.
- (d) Culverts shall be sized to convey the design peak flow required by Table D-1, based on the larger of the two computed sizes using inlet control and outlet control.
- (e) Culverts shall be corrugated metal pipe (CMP) and minimum:
 - 16 gauge galvanized steel on Residential and Residential Subcollector streets;
 - (2) 12 gauge galvanized steel on Residential Collector and minor collector streets; or
 - (3) 16 gauge aluminum or aluminized if needed due to soil or water conditions.
- (f) Design and install energy dissipation rock aprons at culvert outlets in accordance with Hydraulic Engineering Circular No. 14 (FHWA).
- (e)(g) Install culverts in accordance with the manufacturer's recommendations for the anticipated traffic loads.

D05.2 Stream Crossing Culvert Criteria

The following criteria apply to all stream crossing culverts:

(a) Prior to preliminary plat submittal, contact the Alaska Department of Fish and Game (ADFG), Division of Habitat to determine if a stream reach harbors fish. If so, stream crossing culverts shall be designed, constructed, and maintained according to D06.

- (b) Stream crossing culverts shall be placed as close to the pre-existing channel alignment as possible. Avoid placing culverts at pools and stream bends.
- (c) Road alignment shall be as close to perpendicular to the stream channel as possible.
- (d) Culvert slope shall be within 25 percent of the natural stream slope. For example, if the natural stream slope is 1.0 percent, the minimum design slope of the culvert would be 0.75 percent and the maximum design slope would be 1.25 percent.
- (e) Culvert outlet and inlet protection shall be used as necessary to reduce the risk of scour and perching.
- (f) Stream crossings shall be composed of a single pipe or arch for the main stream channel.
- (g) Overflow culverts may be used but should be placed at a higher elevation so that flows up to the OHWM pass through the primary culvert.
- (h) Stream crossings shall maintain the connectivity of wetlands adjacent to stream channels and shall accommodate sheet flow within such wetlands.
- (i) Stream crossing culverts shall not interfere with the functioning of floodplains and shall be designed to convey the design peak flow required by Table D-1. If the stream crossing culvert is not designed to accommodate the 100-year flow, a route must be established to safely convey flows exceeding the design peak flow without causing damage to property, endangering human life or public health, or causing significant environmental damage.
- (j) In cases of crossings within high entrenchment ratio environments, the ratio of the flood prone width to the OHWM width is greater than 2.2, floodplain overflow culverts may be beneficial to floodplain connectivity and can be used to pass the design flow. Minimum width requirements for the primary culvert still apply.
- (k) Stream crossing culverts shall have a minimum diameter of three feet.
- (I) Stream crossing culvert pipes and arches shall be metal.
- (m) Culverts longer than 100 feet require appropriate maintenance access and DPW approval
- Install culverts in accordance with the manufacturer's recommendations for the anticipated traffic loads.

D06 Fish Passage Culverts

These criteria provide general design guidance for road crossings of fish-bearing streams to maintain the full hydrologic functioning of the water body they are crossing. Site-specific conditions, such as multi-thread channels, may require alternate design approaches.

D06.1 Pre-design Conference

Schedule a fish passage pre-design conference with DPW prior to permit submittals. The pre-design conference is to:

- (a) determine required permits;
- (b) coordinate interagency requirements;
- (c) determine any site-specific design requirements; and
- (d) establish a plan review process.

D06.2 Stream Simulation Method

Stream simulation methodologies shall be used for the design of all fish-bearing stream crossings. The stream simulation method uses reference data from a representative section, or reference reach, of the specific water body crossed. This method attempts to replicate the natural stream channel conditions found upstream and downstream of the crossing. Sediment transport, flood and debris conveyance, and fish passage are designed to function as they do in the natural channel.

Reference Reach

- (a) Select a reference reach on the water body being crossed that is outside any anthropogenic influence, such as an existing culvert. In most cases of new crossings, the reference reach can be at the crossing location.
- (b) The length of the reference reach should be a minimum of 20 times the reference bankfull width and no less than 200 feet.
 - (c) If there is not a suitable reference reach on the water body being crossed, a reference reach may be chosen from another water body with similar geomorphic and hydrologic characteristics. The reference reach characteristics should meet the following criteria in comparison to the water body being crossed:
 - The reference reach bankfull width should be at least one half and no more than two times that of the water body being crossed;
 - (2) The reference reach bankfull discharge should be at least one half and no more than one and one half times the bankfull discharge of the water body being crossed; and
 - (3) The stream order of the reference reach should be within one stream order of the water body being crossed.
 - (d) For a reference reach from another water body, the geomorphic characteristics of the crossing shall be scaled using ratios of the bankfull conditions.
 - (e) The reference reach bankfull dimensions should be determined in the field by surveying a detailed cross section at the upper 1/3 of a representative riffle.
 - (f) Reference data shall include, at a minimum:
 - (1) channel width at the OHWM,
 - bankfull width,
 - bankfull cross-sectional area,
 - (4) bankfull slope based on the longitudinal profile,
 - (5) substrate, and
 - (6) potential for floating debris.

Culvert Size, Slope, and Substrate

In addition to D05.2, the following criteria apply to fish passage culverts:

(a) Under normal flow conditions, the channel within or under the fish passage culvert shall not differ from the reference reach condition in regards to the channel width at the OHWM, cross-sectional area, slope, substrate, and ability to pass floating debris.

- (b) The width of fish passage culverts shall not be less than the greater of 1.2 times the channel width at the OHWM and 1.0 times the bankfull width.
- (c) Fish passage culverts shall have a minimum diameter of five feet.
- (d) The use of smooth wall culverts is prohibited.
- (e) The use of trash racks or debris interceptors is prohibited
- (f) Round culvert pipes shall have a minimum invert burial depth of 40 percent of the culvert diameter into the substrate. Arch or box culverts shall have a minimum invert burial depth of 20 percent of the culvert's rise into the substrate, unless scour analysis shows less fill is acceptable. The minimum invert burial depth is 1 foot.
- (g) The gradation of the substrate material within a fish passage culvert shall be designed to be a dense, well-graded mixture with adequate fines to ensure that the majority of the stream flows on the surface and the minimum water depth is maintained.
- (h) Substrate material within or under the fish passage culvert shall remain dynamically stable at all flood discharges up to and including a 50-year flood. Dynamic stability means that substrate material mobilized at higher flows will be replaced by bed material from the natural channel upstream of the crossing. For crossings without an adequate upstream sediment supply, the substrate material within the crossing shall be designed to resist the predicted critical shear forces up to the 100-year flood. For culverts with a slope of 6 percent or greater, substrate retention sills may be required to allow the bed load to continuously recruit within the culvert.
- (i) Substrate material within or under the fish passage culvert shall incorporate a low flow channel. The low flow channel should mimic the reference reach where possible. If the low flow channel dimensions are not discernable from the reference reach, the low flow channel should have a cross sectional area of 15 to 30 percent of the bankfull cross sectional area and a minimum depth of 4 inches for juvenile fish and 12 inches for adult fish. The low flow channel should be defined by rock features that will resist critical shear forces up to the 100-year flood.
- (j) Constructed streambanks are recommended inside fish passage culverts to protect the culvert from abrasion, provide resting areas for fish, and provide for small mammal crossing. If streambanks are constructed through a crossing, the streambanks shall be constructed of rock substrate designed to be stable at the 100-year flood. The streambank width should be a minimum of 1.5 times the maximum sieve size of the streambed material (D100). The crossing width shall be increased to allow for the channel width plus the streambanks.
- (k) If substrate retention sills are used, they shall have a maximum weir height of one half of the culvert invert burial depth. Substrate retention sills shall be spaced so that the maximum drop between weirs is 4 inches. The use of sills without substrate is not allowed.
- Other state and federal requirements may apply.

D06.3 Hydraulic Method

Hydraulically designed culverts are discouraged for fish-bearing stream crossings, though may be approved by DPW and ADFG in circumstances where stream simulation is not practical. In addition to D05.2, the following criteria apply to hydraulically designed culverts:

- (a) The hydraulic method uses the swimming capability and migration timing of target design species and sizes of fish to create favorable hydraulic conditions throughout the culvert crossing. Information and design software for this methodology is available from ADFG, Division of Sport Fisheries (Fishpass) and the US Forest Service (FishXing).
- (b) The design fish shall be a 55-milimeter (2.16-inch) juvenile coho salmon for anadromous streams and a 55-milimeter (2.16-inch) Dolly Varden char for non-anadromous streams. These criteria may change based on ongoing research by federal and state agencies.
- (c) Fish passage high flow design discharge will not exceed the 5 percent annual exceedance flow or 0.4 times the 2-year peak flow, whichever is lower and has the most supporting hydrologic data.
- (d) Fish passage low-flow design discharge shall ensure a minimum 6-inch water depth or natural low flow and depth within the reach the crossing occurs. In cases where local conditions preclude natural low flow characteristics, backwatering or in-culvert structures should be considered.
- (e) In cases where flared end sections with aprons are necessary and fish passage is required, water depths and velocities that satisfy fish passage criteria must be demonstrated across the apron in addition to within the culvert.
- (f) Fish passage criteria for culverts crossing tidally-influenced streams must be satisfied 90 percent of the time. Tidally-influenced streams may sometimes be impassable due to insufficient depth at low flow and low tide. If the tidal area immediately downstream of a culvert is impassable for fish at low tide, the exceedance criterion shall apply only to the time during which fish can swim to the culvert.
- (g) Other state and federal requirements may apply.

D07 Soil Infiltration Facilities

Soil infiltration may be used to reduce stormwater flow and volume with the following criteria:

- a) well-Soil infiltration facilities within Borough rights-of-way or drainage easements should be designed such that they are not considered Class V injection wells. See Appendix AAppendix A for the EPA's memorandum addressing the subject in June 2008.
 - (1) Private drainage facilities that are considered Class V injection wells require conformance with EPA regulations.

D07D08 Rainfall Data

D07.1D08.1 Rainfall Distribution

Intensity-Duration-Frequency (IDF) and 24-hour rainfall data are furnished by NOAA Atlas 14 Point Precipitation Frequency Estimates. Use SCS Type-I Rainfall Distribution and 24-hour rainfall depth to compute runoff.

D08.2 Runoff Transformation

<u>Use the Rational Method for estimating peak flows in drainage basins less than 200 acres and with times of concentration less than 20 minutes for design of conveyances. Use NRCS (SCS) Unit Hydrograph</u>

Method for estimating runoff volumes and peak flows for other conditions and applications. Other methods more appropriate for site conditions may be utilized upon DPW approval.

The following IDF curves and hyetograph, derived from data measured at the Palmer airport, may be used for runoff calculations.

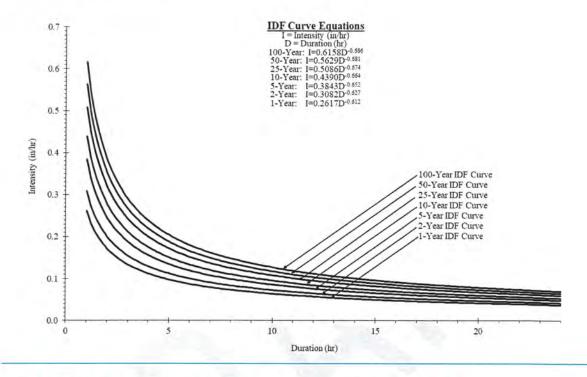


Figure D-1: Intensity Duration-Frequency Relationships for the Matanuska-Susitna Borough Source: Palmer Municipal Airport, 1999 to 2008, Stantee – 2009

Table D-2: Recurrence Interval Hyetographs (in/hr) for the Matanuska-Susitna Borough

100 Yea	20 ∧69k	25 Year	₹ 0 X621	≥ 	2 Year	1 Year	Fime (hr)
20.0	20.0	20.0	20.0	20.0	70.0	10:0	ŧ
20.0	20.0	20.0	20.0	20.0	70'0	20.02	7
£0.0	20:0	20.0	20.0	70'0	20.0	70'0	5
£0:0	£0.0	20.0	70'0	70.0	20.0	20.0	セ
£0.0	£0.0	£0.0	70.0	20.0	20.0	20.0	5
50.03	£0:0	€0.0	£0.0	70'0	20.0	20.0	9
10.0	£0.0	£0.0	£0.0	£0.0	70.0	20.0	t
10.0	10.0	1/0'0	£0:0	€0.0	£0.0	£0.0	8
50:0	50'0	10.0	1-0.0	10.0	60.03	£0.0	6
90:0	90:0	50'0	90.0	10.0	10.0	10.0	01
80.0	80.0	70.0	90:0	90:0	50:0	50:0	tt
01.0	01.0	60:0	80.0	20.0	20.0	90.0	77
79.0	95:0	15'0	11.0	85.0	££:0	97:0	£1
\$1.0	11.0	61.0	21.0	01.0	60:0	80.0	tt
70.0	90.0	90:0	50.0	50:0	10.0	1-0:0	ST
50.0	\$0:0	50.0	10.0	10.0	10.0	£0.0	97
10.0	1/0.0	10.0	10.0	£0.0	£0:0	£0.0	ZT
10.0	1/0.0	50.0	£0:0	£0:0	£0.0	20.0	81
£0.0	£0.0	£0:0	£0:0	£0:0	20.0	20:0	61
£0:0	£0.0	£0.0	20.0	20.0	20.0	20.0	07
50.0	£0.0	£0:0	20.0	70.0	20.0	20.0	17
£0:0	20:0	20.0	20.0	20.0	20:0	20.0	77
20.0	20.0	20.0	20.0	20.0	20.0	20.0	53
20:0	55'T	20.0	1.28	20.0	10'1	20:0	1630

Source: Palmer Municipal Airport, 1999 to 2008, Stantee average familiar mensions for each time step.

Section E. Easements

E01 General

E01.1 Common Access Easements

When a shared driveway is required for two or more lots, a common access easement shall be dedicated granted for the exclusive use of the subject lots, unless otherwise accommodated. The MSB is the permitting authority within common access easements. The common access easement shall be sized to reasonably accommodate separation of the shared driveway to the individual lots.

E01.2 Drainage Easements

Drainage easements are required where the ROW is not sufficient to accommodate drainage needs. Drainage easements can overlap with other platted easements and shall begin or terminate at the ROW. Drainage easements shall be a minimum width of 20 feet, and a minimum average length of 20 feet outside of any overlapping easements or of sufficient size and area shown to facilitate construction and maintenance.

E01.3 Slope Easements

Slope easements are required to contain all cut and fill slopes steeper than 2.5:1 that extend outside of the ROW, plus at least 5 feet outside the cut or fill catches.

E01.4 Sight Distance Maintenance Easements

Sight distance maintenance easements are required where intersection sight triangles extend outside of the ROW.

E01.5 Snow Storage Easements

Snow storage easements are required where the ROW is not sufficient to accommodate anticipated snow removal needs. Snow storage easements shall be located where the storage of snow would not impede sight distance.

E01.6 Utility Easements

Unless lots are otherwise served by alternate utility easements or agreements, at least one 15-foot utility easement adjacent to the ROW is required to allow for utility installation and maintenance. Additional utility easements may be required as deemed reasonably necessary by utility companies to serve the subdivision or protect existing facilities. The applicant is responsible for satisfying any conflicts that may occur in the request for easements from any utility company during the platting process.

Platted utility easements are to be clear of wells, septic systems, structures, or encroachments, as defined by MSB or other applicable code; unless the applicant has obtained an encroachment permit from the MSB and a "Non-Objection to Easement Encroachment" from each utility.

Utility easements are to be fully useable for utility installation where installation equipment can safely work. Whenever possible, utility easements should not be placed in swamps, steep slopes, or other unusable areas.



Section F. Development Implementation

F01 General

This section describes the procedure that is to be followed before constructing any improvements required for recording a subdivision plat. The applicant's engineer shall be the primary point of contact throughout this process.

It is the applicant's responsibility to determine, acquire, and follow permits required by other agencies. Approval from MSB does not supersede other agencies' permit requirements.

F01.1 Preliminary Plat Submittal

The preliminary plat submittal is to be accompanied by:

- (a) ADT calculations per A15;
- (b) Preliminary drainage plan per D02.1;
- (c) Road plan and profile for sections of road where proposed grades exceed 6 percent where cuts and fills exceed 5 feet in height measured from the centerline, or where slope easements will be required, and cross sections at the maximum cut and fill sections. Road plan and profile shall include the vertical curves or grade breaks on either side of the subject sections;
- (d) Road plan, profile, and cross-sections if required by B03.3; and
- (e) Intersection sight distance evaluation, if requested, according to A09.1.

F01.2 Construction Plans

Submit construction plans to DPW at least seven calendar days before the preconstruction conference. All plan drawing submittals shall be at a scale of 1 inch = 50 feet or more detailed, plottable on 11" by 17" paper. Construction plans shall include the following:

- (a) Drainage Report, according to D02.2;
- (b) Plan & Profile of proposed roads (if required by F01.1);
 - (1) Existing topography with horizontal and vertical accuracy meeting US National Map Accuracy standards, two-foot contour intervals within the proposed road corridors.
- Asbuilt survey of visible improvements and above ground utilities within and adjacent to the subdivision;
- (d) Copy of agency accepted permit applications required for the improvements prior to construction, including but not limited to ADOT&PF Approach Road Permit, DNR Section Line Easement authorization, MSB Flood Hazard Development permit, and USACE wetland fill permit; and
- (e) Plans for any proposed improvements within the ROW that are outside of the scope of this manual (e.g. retaining walls or guard rail) or do not conform to the standards set forth herein, conforming to ADOT&PF design criteria and standards.

F01.3 Preconstruction Conference

The preconstruction conference is for the purpose of reviewing and approving the Subdivision Construction Plan for the required improvements. The engineer may request scheduling of a preconstruction conference with DPW after the preliminary plat has been approved by the Platting Board, the Notification of Action (NOA)Platting Board Action Letter has been received, and the construction plans have been submitted. Scheduling of preconstruction conference requests may be delayed during the month of October. The applicant, or designated representative, and the engineer must attend the preconstruction conference. In addition to the construction plans, the following items will be provided at or prior to the preconstruction conference:

- (a) Cost estimate of required improvements for the determination of the inspection fee according to the most recently adopted Schedule of Rates and Fees;
- (b) Proof of compliance with the Alaska Pollutant Discharge Elimination System Program;
 - (1) Acceptable proof includes a Notice of Intent (NOI), a Low Erosivity Waiver (LEW), or a determination by a qualified person that neither is needed.
- (c) Rough plan and time line for construction;
- (d) Copy of any issued permits required for the improvements prior to construction;
- (e) Off-site material source and quantities; and
- (f) On-site clearing, grubbing, and topsoil disposal plan, location map.

The Subdivision Construction Plan must be signed by the applicant, or designated representative, and the engineer. Upon acceptance of the Subdivision Construction Plan by DPW and payment of the inspection fee, the Platting Division will issue a Notice to Proceed (NTP). See Appendix B for an example of the Subdivision Construction Plan.

Some construction plans or permit approvals may take longer to develop or obtain, such as fish passage culvert plans and associated permits. Those finalized plans and issued permits may be submitted later but must be received and reviewed by DPW before construction begins within the respective areas.

F01.4 Interim Inspections

The applicant's engineer shall supervise all phases of construction. Notify DPW of changes to the Subdivision Construction Plan, such as adding or deleting a cross culvert, changes in culvert size, adding or deleting a drainage facility, grade changes of more than 1 percent or that would result in grades of over 6 percent or cuts or fills of over 5 feet in height measured from the centerline, or changes to foreslopes or backslopes. The changes should be approved by DPW prior to completion of construction. Periodic interim inspections may be conducted by DPW. Interim inspections may be requested by the engineer.

F01.5 Subdivision Agreements

If a developer wishes to enter into a Subdivision Agreement and the requirements of MSB 43.55.010(A) are met, the Engineer shall submit a request to DPW no later than October 15th for an Interim Inspection. The Interim Inspection shall be attended by the engineer and DPW, and a list of remaining

Subdivision Agreement containing the scope of work, quantity estimates, and cost estimate in accordance with MSB 43.55 to Platting and for approval by DPW. DPW will only approve the request for a subdivision agreement if all of the minimum required improvements have been inspected by October 31st or before winter conditions prohibit inspection, whichever comes first.

F01.5F01.6 Pre-Final Inspection

When the engineer has determined that construction of the improvements will be substantially complete according to the Subdivision Construction Plan, the engineer will request a Pre-Final Inspection. The Pre-Final Inspection request must be received by September 30th and shall include a description of work yet to be completed. The Pre-Final Inspection will be scheduled to occur within 14 calendar days of the request and shall be attended by the engineer and DPW. A punch list will be developed, if any work items remain, at the Pre-Final Inspection.

F01.6F01.7 Final Inspection

When construction of the improvements and punch list items are complete according to the Subdivision Construction Plan, the engineer will request a Final Inspection of the improvements. The Final Inspection request must be received by October 15th. Final Inspections will cease October 31st, or when winter conditions prohibit inspection, whichever comes first. The Final Inspection will be scheduled to occur within 14 calendar days of the request and shall be attended by the engineer and DPW.

F01.7F01.8 Final Report

Upon DPW approval of the Final Inspection, the engineer shall submit a written Final Report to the Platting Division. The Final Report shall include:

- (a) Stamped and signed narrative describing at a minimum:
 - (1) road construction process and equipment used,
 - (2) material source and disposal areas,
 - (3) road embankment and subbase used,
 - (4) road topping or pavement used,
 - (5) compactive effort,
 - (6) road dimensions and shaping (length, roadway width, material thicknesses, pavement width, crown, cul-de-sac or t-turnaround dimensions and slope, foreslope, backslope, maximum centerline grade, etc.) for each road constructed,
 - (7) drainage, ditch depth, location of drainage easements, and
 - (8) road standard certification (Pioneer Road, Residential Street, etc.) for each road constructed;
- (b) Stamped and signed final drainage plan, (minimum 11"x17");
- (c) As-built drawing showing the horizontal locations of borrow extraction along the road corridor;
 (c)(d) Documentation verifying Surface Course thickness such as photos and descriptions of test pits,
 scale tickets, asbuilt surveys, or alternative methods approved by DPW;

(d)(e) Compaction test reports;

(e)(f) Gradation tests, if required; and (f)(g) Photos of each stage of construction.

DPW will review the report and provide comments, if necessary, within 14 calendar days.

F01.8F01.9 Construction Acceptance

Upon approval of the Final Report, DPW will issue a Certificate of Construction Acceptance.

F01.9F01.10 Warranty

All improvements are to be guaranteed until October 31st of the calendar year following issuance of the Certificate of Construction Acceptance DPW approval of the Final Inspection. Roads within a Road Service Area may be accepted for maintenance at the end of the warranty. Pioneer Roads are not eligible for maintenance. Maintenance of Mountain Access Roads is at the discretion of DPW.

During the warranty period, the applicant is responsible for any road maintenance including, but not limited to: snow removal, maintaining a smooth road surface and crown, maintaining stabilized foreslopes and backslopes, and maintaining positive drainage. If any deficiencies arise during the warranty, DPW will issue a punch list to the applicant by September 1st to allow time for completion of repairs. The applicant must notify DPW of completion of repairs by October 15th for the roads to be eligible for maintenance on November 1st.

The warranty period for improvements following completion of a subdivision agreement may be lessened to one calendar year. The applicant shall request a punch list from DPW no more than one month before the end of the one-year warranty.

If the subdivision plat has not recorded within 6 months of the date of the Certificate of Construction Acceptance by April 30th or if warranty repairs are not completed by October 15th, the warranty will be extended an additional year and the warranty process will be repeated.

Maintenance may be denied and the Certificate of Construction Acceptance revoked if deficiencies are not corrected to the satisfaction of DPW. A notice may be recorded indicating to the public that the MSB is not responsible for road upkeep and maintenance until such a time that the deficiencies are corrected.

Section G. Commercial and Industrial Subdivisions

G01 General

Commercial and Industrial subdivisions shall be designed using trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual, and to meet the standards of AASHTO, International Fire Code (IFC), and any other applicable standards or code.

Section H. Utilities

H01 General

These standards apply to the design and construction of utility facilities within the MSB. All utility installation within existing or proposed ROW or utility easements must comply with the provisions of MSB or other applicable code, or as otherwise approved by the permitting authority.

H02 Utility Location Guidelines

H02.1 Underground Utility Facilities:

- (a) The location of utility facilities placed within the ROW shall be coordinated with the permitting authority.
- (b) Backslopes or foreslopes which extend into a utility easement should not exceed 4:1. These limits are necessary for construction equipment for utility installation.
- (c) Utility facilities paralleling the road shall not be located within 10 feet of the roadway, unless otherwise approved by the permitting authority.
- (d) Underground road crossings shall be buried a minimum of 48 inches below finished grade. Backfill shall be compacted according to the requirements of Section C, or as otherwise approved by the permitting authority.
- (e) Conduit road crossings, if used, shall be installed in accordance with each utility company's standards and applicable code.
- (f) Standard burial depth of longitudinal utilities is 36 inches below grade. The applicant should delineate areas, such as where driveways and drainage easements are planned, where deeper burial may be needed.

H02.2 Above Ground Utility Facilities:

- (a) Above ground pedestals, poles, and utility facilities shall not be located within 10 feet of the roadway, unless an alternate design meets clear zone requirements.
- (b) Above ground pedestals, poles, and utility facilities shall not be located such that they substantially block intersection or driveway sight triangles.
- (c) Unless otherwise authorized by the permitting authority, above ground pedestals, poles, and utility facilities shall not be located within the ROW nearer than 40 feet from the point of intersection of the extension of the property lines at any existing or proposed intersection on Residential Collector streets or higher classification.
- (d) Above ground pedestals, poles, and utility facilities shall not be located within a common access easement or drainage easement, within 20 feet of a common access point, or within 10 feet of a roadway cross culvert.
- (e) Permanent 5-foot high snow marker poles, grey with white retroreflective sheeting or yellow, shall be installed on all pedestals and vaults.
- (f) All guy wires installed within the ROW or utility easements adjacent to, or near to a roadway shall have a minimum 8-foot long yellow delineator installed above the anchor.

(g) Pedestals located within the ROW shall be located within the outer 1 foot of the ROW.

H02.3 Separation of Utilities:

- (a) Recommend 5-foot horizontal separation between power poles and buried utilities.
- (b) Recommend minimum 1-foot physical separation between all underground utilities.
- (c) Separation of storm, sewer, and water utilities shall meet the requirements of the Alaska Department of Environmental Conservation.

References

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Appendix A

Environmental Protection Agency Memorandum - Class V Injection Wells

MSB Special Provision to the ADOT&PF Standard Specifications for Highway Construction





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

800s c. 1 MUL

OFFICE OF WATER

MEMORANDUM

SUBJECT: Clarification on which stormwater infiltration practices/technologies have

the potential to be regulated as "Class V" wells by the Underground

Injection Control Program

TO: Water Division Directors, Regions 1-10

FROM: Linda Boornazian, Director

Water Permits Division (MC 4203M)

Steve Heare, Director

Drinking Water Protection Division (MC 4606M)

Over the past several years stormwater infiltration has become an increasingly effective tool in the management of stormwater runoff. Although primary stormwater management responsibilities within EPA fall under the Clean Water Act (CWA), the infiltration of stormwater is, in some cases, regulated under the Safe Drinking Water Act (SDWA) with the goal of protecting underground sources of drinking water (USDWs). Surface and ground water protection requires effective integration between the overlapping programs. This memorandum is a step forward in that effort and is meant to provide clarification on stormwater implementation and green infrastructure, in particular under the CWA, which is consistent with the requirements of the SDWA's Underground Injection Control (UIC) Program.

In April 2007, EPA entered into a collaborative partnership with four national groups (the Association of State and Interstate Water Pollution Control Administrators, the Low Impact Development Center, the National Association of Clean Water Agencies, and the Natural Resources Defense Council) to promote green infrastructure as a cost-effective, sustainable, and environmentally friendly approach to stormwater management. The primary goals of this collaborative effort are to reduce runoff volumes and sewer overflow events through the use of green infrastructure wet weather management practices.

Within the context of this collaborative partnership, green infrastructure includes a suite of management practices that use soils and vegetation for infiltration, treatment, and evapotranspiration of stormwater. Rain gardens, vegetated swales, riparian buffers and porous pavements are all common examples of green infrastructure techniques that capture and treat stormwater runoff close to its source. Green infrastructure management practices typically do not include commercially manufactured or proprietary infiltration

devices or other infiltration practices such as simple drywells, which do not provide for pre-treatment prior to infiltration.

The partnership is promoting green infrastructure as an effective approach to stormwater management because these practices are associated with a number of environmental benefits. In addition to reducing and delaying runoff volumes, green infrastructure approaches can also reduce pollutant levels in stormwater, enhance ground water recharge, protect surface water from stormwater runoff, increase carbon sequestration, mitigate urban heat islands, and increase wildlife habitat.

Given the multiple benefits that green infrastructure can provide, EPA and its partners have increased efforts to incorporate green infrastructure techniques into stormwater management strategies nationwide. In recent years, public support for these practices has gradually increased. For more information on green infrastructure, please visit www.epa.gov/npdes/greeninfrastructure.

There are cases where stormwater infiltration practices are regulated as Class V wells under the UIC program, and State and local stormwater managers report that some developers are hesitant to incorporate green infrastructure practices because they fear regulatory approvals will slow the process and increase costs. EPA believes those fears are unfounded and notes that most green infrastructure practices do not meet the Class V well definition and can be installed without regulatory oversight by the UIC Program. However, EPA remains committed to the protection of USDWs and emphasizes the need for UIC program compliance (per 40 CFR 144).

To provide clarification on which stormwater infiltration techniques meet EPA's UIC Class V well definition, EPA's Office of Water has developed the attached "Class V Well Identification Guide." State or Regional stormwater and nonpoint source control programs, developers, and other interested parties are requested to contact the State or Regional UIC Program Director with primary authority for the UIC Class V program when considering the use of practices that have been identified, or potentially identified, as Class V wells. UIC program managers should consider the proximity to sensitive ground water areas when looking at the suitability of stormwater infiltration practices. Depending on local conditions, infiltration without pretreatment may not be appropriate in areas where ground waters are a source of drinking water or other areas identified by federal, state, or local governments as sensitive ground water areas, such as aquifers overlain with thin, porous soils.

Please share this memo and the attached guide with your State and Regional stormwater, nonpoint source control, UIC and other ground water managers, as well as with appropriate green infrastructure contacts. These programs are encouraged to coordinate on stormwater management efforts when sensitive ground water issues arise.

Attachment

Underground Injection Control (UIC) Program Class V Well Identification Guide

This reference guide can be used to determine which stormwater infiltration practices/technologies have the potential to be regulated as "Class V" wells. Class V wells are wells that are not included in Classes I through IV. Typically, Class V wells are shallow wells used to place a variety of fluids directly below the land surface. By definition, a well is "any bored, drilled, driven shaft, or dug hole that is deeper than its widest surface dimension, or an improved sinkhole, or a subsurface fluid distribution system" and an "injection well" is a "well" into which "fluids" are being injected (40 CFR §144.3). Federal regulations (40 CFR §144.83) require all owners/operators of Class V wells to submit information to the appropriate regulatory authorities including the following:

- 1. Facility name and location
- 2. Name and address of legal contact
- 3. Ownership of property
- 4. Nature and type of injection well(s)
- 5. Operating status of injection well(s)

For more information on Class V well requirements, please visit http://www.epa.gov/safewater/uic/class5/comply_minrequirements.html. For more information on green infrastructure, please visit http://www.epa.gov/npdes/greeninfrastructure.

The stormwater infiltration practices/technologies in rows A through I below are generally not considered to be wells as defined in 40 CFR §144.3 because typically they are not subsurface fluid distribution systems or holes deeper than their widest surface dimensions. If these practices/technologies are designed in an atypical manner to include subsurface fluid distribution systems and/or holes deeper than their widest surface dimensions, then they may be subject to the Class V UIC regulations. The stormwater infiltration practices/technologies in rows J through K however, depending upon their design and construction probably would be subject to UIC regulations.

	Infiltration Practice/Technology	Description	Is this Practice/Technology Generally Considered a Class V Well?
Α	Rain Gardens & Bioretention Areas	Rain gardens and bioretention areas are landscaping features adapted to provide on-site infiltration and treatment of stormwater runoff using soils and vegetation. They are commonly located within small pockets of residential land where surface runoff is directed into shallow, landscaped depressions; or in landscaped areas around buildings; or, in more urbanized settings, to parking lot islands and green street applications.	No.
В	Vegetated Swales	Swales (e.g., grassed channels, dry swales, wet swales, or bioswales) are vegetated, open-channel management practices designed specifically to treat and attenuate stormwater runoff. As stormwater runoff flows along these channels, vegetation slows the water to allow sedimentation, filtering through a subsoil matrix, and/or infiltration into the underlying soils.	No.
С	Pocket Wetlands & Stormwater Wetlands	Pocket/Stormwater wetlands are structural practices similar to wet ponds that incorporate wetland plants into the design. As stormwater runoff flows through the wetland, pollutant removal is achieved through settling and biological uptake. Several design variations of the stormwater wetland exist, each design differing in the relative amounts of shallow and deep water, and dry storage above the wetland.	No.
D	Vegetated Landscaping	Self-Explanatory.	No.
Е	Vegetated Buffers	Vegetated buffers are areas of natural or established vegetation maintained to protect the water quality of neighboring areas. Buffer zones slow stormwater runoff, provide an area where runoff can infiltrate the soil, contribute to ground water recharge, and filter sediment. Slowing runoff also helps to prevent soil and stream bank erosion.	No

	Infiltration Practice/Technology	Description	Is this Practice/Technology Generally Considered a Class V Well?
F	Tree Boxes & Planter Boxes	Tree boxes and planter boxes are generally found in the right-of-ways alongside city streets. These areas provide permeable areas where stormwater can infiltrate. The sizes of these boxes can vary considerably.	No.
G	Permeable Pavement	Permeable pavement is a porous or pervious pavement surface, often built with an underlying stone reservoir that temporarily stores surface runoff before it infiltrates into the subsoil. Permeable pavement is an environmentally preferable alternative to traditional pavement that allows stormwater to infiltrate into the subsoil. There are various types of permeable surfaces, including permeable asphalt, permeable concrete and even grass or permeable pavers.	No.
Н	Reforestation	Reforestation can be used throughout a community to reestablish forested cover on a cleared site, establish a forested buffer to filter pollutants and reduce flood hazards along stream corridors, provide shade and improve aesthetics in neighborhoods or parks, and improve the appearance and pedestrian comfort along roadsides and in parking lots.	No,
Ţ	Downspout Disconnection	A practice where downspouts are redirected from sewer inlets to permeable surfaces where runoff can infiltrate.	In certain circumstances, for example, when downspout runoff is directed towards vegetated/pervious areas or is captured in cisterns or rain-barrels for reuse, these practices generally would not be considered Class V wells.
J	Infiltration Trenches	An infiltration trench is a rock-filled trench designed to receive and infiltrate stormwater runoff. Runoff may or may not pass through one or more pretreatment measures, such as a swale, prior to entering the trench. Within the trench, runoff is stored in the void space between the stones and gradually infiltrates into the soil matrix. There are a number of different design variations.	In certain circumstances, for example, if an infiltration trench is "deeper than its widest surface dimension," or includes an assemblage of perforated pipes, drain tiles, or other similar mechanisms intended to distribute fluids below the surface of the ground, it would probably be considered a Class V injection well.

	Infiltration Practice/Technology	Description	Is this Practice/Technology Generally Considered a Class V Well?
K	Commercially Manufactured Stormwater Infiltration Devices	Includes a variety of pre-cast or pre-built proprietary subsurface detention vaults, chambers or other devices designed to capture and infiltrate stormwater runoff.	These devices are generally considered Class V wells since their designs often meet the Class V definition of subsurface fluid distribution system.
L	Drywells, Seepage Pits, Improved Sinkholes.	Includes any bored, drilled, driven, or dug shaft or naturally occurring hole where stormwater is infiltrated.	These devices are generally considered Class V wells if stormwater is directed to any bored, drilled, driven shaft, or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system.

Appendix B

Subdivision Construction Plan





MATANUSKA-SUSITNA BOROUGH

Public Works Department

350 East Dahlia Avenue • Palmer, AK 99645 (mailing address)
Phone (907) 861-7751 • Fax (907) 861-7735
e-mail: Terry, Dolang matsugov, us

MEMORANDUM

DATE: May 11, 2022

TO: Alex Strawn, Planning & Land Use Director

FROM: Terry Dolan, Public Works Director Terry Dolan D

SUBJECT: Department of Public Works' Position on the Subdivision Construction

Manual 2022 Update

I have reviewed the updates to the Subdivision Construction Manual and I support the implementation with the attached notes.

Attachment: as noted

DPW's Position on the Subdivision Construction Manual 2022 Update

Construction: We recommend the addition of language regarding the use of stormwater best management practices (BMPs) during construction.

BMPs should always be used, whether required for Alaska Pollutant Discharge Elimination System permit coverage or not, to maintain compliance with the Clean Water Act, Clean Air Act, Alaska Water Quality Standards (18 AAC 70), etc.

Water Quality: We recommend no change to the "first flush" design requirement.

The proposed change to this design requirement appears to be more stringent than the current standard, however in many cases the runoff calculations will show that the entirety of a 0.50" rain event will be absorbed in the ground and no treatment of runoff will need to be provided. This change overlooks the need for runoff treatment during frozen ground conditions, such as during a winter rain event or spring breakup. The current design requirement to treat the initial 0.25 inch of post-developed runoff intentionally ignores the differing permeability of site soils to account for when the ground or snow surface is sealed by ice.

Industry Standards

Section 12.3, page 12-8, of Highway Drainage Guidelines, 4th edition (AASHTO, 2007) says [emphasis mine] "Water quality facilities are most often designed to treat the "first flush" from a storm event, because the initial flush of runoff contains the highest percentage of pollutants. The first 15 mm (0.6 in) of storm runoff is generally considered to contain this surcharge of pollutants." Subdivision roads see considerably less traffic than the highways considered in this AASHTO manual, however winter sand and salt, oil leaks from parked vehicles, etc still contribute a significant amount of pollutants that should be considered.

The Municipality of Anchorage requires treatment of runoff from the 90th percentile storm (0.52") which is comparable to the proposed change to the Water Quality design requirement. However, the Muni requires treatment of runoff from all Impermeable areas with Green Infrastructure (i.e. rain garden or sedimentation basin).

Soil Infiltration Facilities: We recommend the addition of standards for soil Infiltration facilities. MSB currently has no standards for the size or location of these facilities which has resulted in large discrepancies between designers. Many of these soil infiltration facilities are being constructed within the roadside ditch which can cause damage to the road prism during freeze thaw cycles and are more likely to become clogged with sediment. See excerpt below from Section 12.3.3.2, page 12-17, of Highway Drainage Guidelines, 4th edition (AASHTO, 2007) supporting many of our recommended standards.

12.3.3.2 Infiltration Facilities

Properly functioning infiltration practices are effective water quality controls. To ensure that the longest possible life is realized from an installation, the engineer should consider the following points:

- The facility depth should be set to allow complete draining of the structure within 24 to 72 hours. This will ensure that the design volume is available to treat the next storm event.
- The minimum practical soil permeability is 25 mm/h (1 in/h). Advance soil tests should be conducted at all proposed infiltration sites to verify this rate.
- When water quality is a concern, the bottom of the facility should be set above the seasonal high groundwater table or bedrock to provide for filtering. An additional factor of safety should be considered if limited information on the groundwater table is available or if large fluctuations in water table elevations are typical of the area.
- A filter strip or vegetated swale should be provided upstream to buffer the facility from sources of high sediment loadings. Additionally, infiltration facilities should be kept a sufficient distance from the edge of pavement to prevent saturation of the roadway subbase.
- To avoid problems of slope saturation and excessive settlement, infiltration facilities should not be placed in fill areas.
- Construction of trenches (Figure 12-10), dry wells, and basins should be the last item completed on a project. Allowing stabilization of all contributing areas prior to constructing infiltration facilities will limit premature clogging through sediment deposition.
- To maximize storage volumes, infiltration facilities should be constructed with a flat bottom. In areas of steep slopes, use of several small facilities in series will reduce the depth of excavation over that required for a single large facility.
- Porous pavement (Figure 12-11) should be limited to application in low-volume traffic areas. A typical application would be a commuter parking lot. The passenger vehicle parking area would use porous pavement while the access lanes and the bus loading areas would have conventional pavement. Regular vacuuming will be necessary to maintain porosity.

C 1907 by the American Association of State Highway and Transportation Officials

CO1 General

This section establishes minimum construction requirements. Prior to any ground disturbing activities, call the Alaska Dig Line for utility locates in accordance with AS 42.30.400 and initiate construction stormwater Best Management Practices (BMPs). If required by Alaska Department of Environmental Conservation (ADEC) obtain coverage under the Construction General Permit (CGP) or individual APDES permit.

D03 Drainage Design Criteria

Table D-1: Drainage Sizing and Analysis Criteria

Design Requirement	Purpose	Criteria
Water Quality	Treat first flush pollutant loading	Treat the initial 0.25 inch of post-developed runoff for each storm event.

D07 Soil Infiltration Facilities

Soil infiltration may be used to reduce stormwater flow and volume with the following criteria:

- a) Perform field testing to determine soil infiltration rates using ASTM D3385 (Standard Test Method for Infiltration Rate of Soils in Field Using Double-Ring Infiltrometer) or the Falling Head Percolation Test Procedure (EPA) at or below the proposed bottom of the infiltration facility.
- b) The design infiltration rate shall be no more than 50% of field-measured rate.
- c) Where the field measured infiltration rate exceeds eight inches per hour, evaluate potential for groundwater contamination and provide appropriate measures to reduce rate of infiltration or provide pre-treatment.
- d) Soil infiltration facilities are not recommended in locations where the field measured infiltration rate is less than one inch per hour.
- In compliance with 18 AAC 80, facilities must be located a minimum distance of 200 feet from Public Water System wells. Water lines cannot be located in or under soil infiltration facilities.
- f) Consider ground water hydraulics and the proximity of soil infiltration facilities to private drinking water wells.
 - g) Underground soil infiltration facilities shall not be located in utility easements.
 - Minimum separation distance between the seasonal high groundwater table elevation and the bottom of soil infiltration facilities is two feet.
 - Soil infiltration facilities shall be located such that water is not held against the structural section and are generally not allowed in the roadside ditches.
 - Construction of soil infiltration facilities should occur after all contributing areas have been stabilized to limit premature clogging through sediment deposition.
 - k) Soil infiltration facilities within Borough rights-of-way or drainage easements should be designed such that they are not considered Class V injection wells. See Appendix A for the EPA's June 2008 memorandum addressing the subject.

(1) Private drainage facilities that are considered Class V injection wells require conformance with EPA regulations.

Karol Riese

From: Alex Strawn

Sent: Wednesday, May 18, 2022 9:18 AM

To: Karol Riese

Subject: FW: Subdivision Construction Manual Update

From: bruce@civilresourcesllc.com <bruce@civilresourcesllc.com>

Sent: Tuesday, May 17, 2022 10:38 AM

To: Alex Strawn <Alex.Strawn@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Fred Wagner

<Frederic.Wagner@matsugov.us>; 'Gary LoRusso' <garyl@mtaonline.net>; 'Jess Hall' <jhall@hallhomes.com>; 'Dave Miller'

<dmiller@nortakbuilders.com>; 'Curt Holler' <holler@mtaonline.net>

Subject: RE: Subdivision Construction Manual Update

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Comments:

- Not needed. Best Management Practices are required by SWPPP. Requirement for SWPPP/NOI are already required.
 Always using BMP'S even when not required is a personal preference, might be a good idea, but does not necessarily benefit Waters of the United States or Alaska.
- 2. Using runoff from 0.5" rainfall will treat 90% of all rainfall including snow melt during spring break up. Anchorage data plus snow melt estimates shows that snow melts at about 0.5" to 0.6" per day during spring break up. Snow melt will infiltrate into frozen ground in the winter just like any other time of the year unless "ice sealing" occurs. "Ice Sealing" is a rare event and did not occur this year. When it does occur, it reduces infiltration and lasts for one or two days. It would be considered an extreme event (less than 10% of all events). Other agencies base their requirement on the 90th percentile rainfall event and I recommend MSB do the same until more data and analyses justifies a higher value. It may be more appropriate to add requirements for snow storage facilities.
- Road side ditches are green infrastructure. Runoff from impervious paved road flows into gravel and vegetated road side
 ditches where water is filtered by vegetation and infiltrates into the ground. Filtering and infiltration is green
 infrastructure. Adding infiltration trenches improves performance.
- 4. I agree with adding standards for infiltration facilities following more study and analyses. A distinction between high and low capacity facilities is important. Standards often referenced are usually for high capacity facilities and not the small low capacity ditch infiltration trenches that are commonly used in the Borough. Clogging of small ditch infiltration ditches could be an issue downstream from a steep slope where there is sedimentation from upstream erosion or winter sanding. But this should not be an issue if steep ditches are stabilized to prevent movement of D₅₀ particle size and sand is reclaimed. Ditch trenches should be protected from clogging during and after construction until ditch has been stabilized. This is a standard SWPPP requirement. I have been placing rock/wattle check dams upstream of ditch trenches for this purpose. It would also be a good idea to cover the trench with filter fabric similar to septic absorption trenches. If this was done, you would need a small drop inlet to direct water into the rock under the fabric.
- Is there a history of road damage from ditch infiltration facilities? There shouldn't be. The large porous material in the trenches is not susceptible to freeze thaw and is outside the road prism.

I do not recommend any more changes to the SCM without more study and analyses. For example, are there wetlands, streams, or lakes that show degradation caused by upstream subdivisions? If not, why make any changes? Standards developed for high density impervious urban areas are not applicable to the low density pervious rural residential areas covered by the DCM. Maybe the SCM standards should differentiate between commercial, industrial, and residential storm water requirements.

Bruce J. Friedhoff, PE 3001 W. Stonebridge Drive Wasilla, AK 99654

Email: Bruce@CivilResourcesLLC.com

Phone: 907-354-3021

From: Alex Strawn < Alex. Strawn@matsugov.us>

Sent: Monday, May 16, 2022 4:59 PM

To: Jamie Taylor < Jamie. Taylor@matsugov.us >; Fred Wagner < Frederic. Wagner@matsugov.us >; 'Gary LoRusso'

<garyl@mtaonline.net>; 'Jess Hall' < ihall@hallhomes.com>; bruce@civilresourcesllc.com; 'Dave Miller'

<dmiller@nortakbuilders.com>; 'Curt Holler' <holler@mtaonline.net>

Subject: Subdivision Construction Manual Update

Good evening,

Attached is a memo from Public Works regarding the changes to the manual. Please let me know if you have any questions.

Thanks, Alex Strawn Planning & Land Use Director

Matanuska-Susitna Borough 350 E. Dahlia Palmer, AK 99645 (907) 861-7850 By:
Introduced:
Public Hearing:
Action:

A. Strawn May 16, 2022 June 6, 2022

MATANUSKA-SUSITNA BOROUGH PLANNING COMMISSION RESOLUTION NO. 22-18

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH PLANNING COMMISSION RECOMMENDING ADOPTION OF AN ORDINANCE AMENDING MSB 43.05.015 PURPOSE AND SCOPE, TO REFERENCE THE 2022 SUBDIVISION CONSTRUCTION MANUAL.

WHEREAS, in August 2020, the Matanuska-Susitna Borough Assembly adopted a major revision to the Subdivision Construction Manual; and

WHEREAS, after working with the new manual for a construction season, both staff and the development community identified modifications that will clarify requirements of the manual; and

WHEREAS, the modifications consist of general cleanup, modification of standards, and clarification of acceptable engineering techniques.

NOW, THEREFORE, BE IT RESOLVED, that the Matanuska-Susitna
Borough Planning Commission hereby recommends Assembly amending
MSB 43.05.015 Purpose and Scope, to reference the 2022 Subdivision
Construction Manual.

ADOPTED by the Matanuska-Susitna Borough Planning Commission this -- day of --, 2022.

Stafford Glashan, Chair

ATTEST

KAROL RIESE, Planning Clerk

(SEAL)

YES:

NO:

MATANUSKA-SUSITNA BOROUGH TRANSPORTATION ADVISORY BOARD RESOLUTION NO. 22-04

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH TRANSPORTATION ADVISORY BOARD RECOMMENDING APPROVAL OF AN ORDINANCE AMENDING MSB 43.05.015 PURPOSE AND SCOPE TO REFERENCE THE 2022 SUBDIVISION CONSTRUCTION MANUAL.

WHEREAS, in August 2020, the Matanuska-Susitna Borough
Assembly adopted a significant revision to the Subdivision
Construction Manual; and

WHEREAS, after working with the new manual for a construction season, both staff and the development community-identified modifications that will clarify the requirements of the manual; and

WHEREAS, the modifications consist of general cleanup, modification of standards, and clarification of acceptable engineering techniques. Specifically, the changes can be summarized as follows:

- 1. General cleanup and clarification
- 2. Removed the number of lot and length restriction on residential streets before it becomes a residential Sub collector
 - 3. Modified standards for turnarounds and paved aprons
- 4. Clarified compaction standards and added requirements for testing methods

- 5. Require the use of NOAA rainfall data for all locations and added standards on how to use the data
- 6. Allow developers to put drainage facilities within utility easements while providing protections for future and existing utility facilities
 - 7. Modified standards for water quality associated with the treatment of runoff
 - Modified downstream evaluation and mitigation criteria for flood hazards
 - 9. Added requirements to the flood bypass design requirements
 - 10. Added standards for ditch stabilization
 - 11. Added minimum freeboard for all ditches
 - 12. Added culvert gauge standards
 - 13. Added energy dissipation requirements at culvert outlets
 - 14. Added soil infiltration facility standards
 - 15. Added pre-approved runoff calculation methods
 - 16. Modified warranty timeframes to work better for both DPW and developers
 - 17. Added inspection deadline for Subdivision Agreements

18. Removed appendices for example construction plan and paving special provision.

NOW, THEREFORE, BE IT RESOLVED that the Matanuska-Susitna Borough Transportation Advisory Board recommends amending MSB 43.05.015 Purpose and Scope to reference the 2022 Subdivision Construction Manual with the following conditions:

- Prohibit drainage detention/retention facilities within utility easements for new subdivisions; and
- Incorporate recommendations contained within Department of Public Works Memorandum dated May 11, 2022; and
- 3. Ensure all utilities are notified and had an opportunity to provide input; and
- Require a maximum 12-inch lift thickness for subbase as described in CO2.5(c) for new or upgraded roads.

Joshua Cross, Chair

ADOPTED by the Matanuska-Susitna Borough Transportation Advisory Board this 23 day of MAY, 2022.

ATTEST:

Kim Sollien, Planning Services

Manager

LOCAL ROAD SERVICE AREA ADVISORY BOARD RESOLUTION NO. 22-

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH LOCAL ROAD SERVICE AREA ADVISORY BOARD TO THE BOROUGH ASSEMBLY

WHEREAS, in August 2020, the Matanuska-Susitna Borough Assembly adopted a major revision to the Subdivision Construction Manual; and

WHEREAS, after working with the new manual for a construction season, both staff and the development community identified modifications that will clarify requirements of the manual; and

WHEREAS, the modifications consist of general cleanup, modification of standards, and clarification of acceptable engineering techniques.

NOW, THEREFORE, BE IT RESOLVED, that the Local Road Service Advisory Board hereby recommends Assembly amending MSB 43.05.015 Purpose and Scope, to reference the 2022 Subdivision Construction Manual.

APPROVED BY UNANIMOUS VOTE on May 19, 2022.

Stephen Edward	ds, Chair	
Mike Shields,	Secretary	

CODE ORDINANCE

Sponsored by: Introduced: Public Hearing: Action:

MATANUSKA-SUSITNA BOROUGH ORDINANCE SERIAL NO. 22-057

AN ORDINANCE OF THE MATANUSKA-SUSITNA BOROUGH ASSEMBLY AMENDING MSB 43.05.015 PURPOSE AND SCOPE, TO REFERENCE THE 2022 SUBDIVISION CONSTRUCTION MANUAL UPDATE.

BE IT ENACTED:

Section 1. Classification. This ordinance is of a general and permanent nature and shall become a part of the Borough Code.

Section 2. Amendment of section. MSB 43.05.015(B)(3) is hereby amended to read as follows:

(3) [2020] 2022 Subdivision Construction Manual.

Section 3. Effective date. This ordinance shall take effect upon adoption.

ADOPTED by the Matanuska-Susitna Borough Assembly this - day of -, 2022.

EDNA DeVRIES, Borough Mayor

ATTEST:

LONNIE R. McKECHNIE, CMC, Borough Clerk

(SEAL)

By:
Introduced:
Public Hearing:
Action:

A. Strawn June 2, 2022 June 16, 2022

MATANUSKA-SUSITNA BOROUGH PLATTING BOARD RESOLUTION NO. 22-039

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH PLATTING BOARD RECOMMENDING ADOPTION OF AN ORDINANCE AMENDING MSB 43.05.015 PURPOSE AND SCOPE, TO REFERENCE THE 2022 SUBDIVISION CONSTRUCTION MANUAL.

WHEREAS, in August 2020, the Matanuska-Susitna Borough
Assembly adopted a major revision to the Subdivision Construction
Manual; and

WHEREAS, after working with the new manual for a construction season, both staff and the development community identified modifications that will clarify requirements of the manual; and

WHEREAS, the modifications consist of general cleanup, modification of standards, and clarification of acceptable engineering techniques.

NOW, THEREFORE, BE IT RESOLVED, that the Matanuska-Susitna Borough Platting Board hereby recommends Assembly amending MSB 43.05.015 Purpose and Scope, to reference the 2022 Subdivision Construction Manual.

ADOPTED by the Matanuska-Su	usitna Borough Platting Board this
day of, 2022.	
	WILFRED FERNANDEZ, Chair
ATTEST	
SLOAN VANGUNTEN Platting Board Clerk	
(SEAL)	
YES:	
NO:	

STAFF REVIEW AND RECOMMENDATIONS PUBLIC HEARING

JUNE 16, 2022

PRELIMINARY PLAT: CHIPMAN ACRES & ROW VACATION OF S. DERBY DRIVE

LEGAL DESCRIPTION: SEC 34, T17N, R02E, SEWARD MERIDIAN, AK

PETITIONERS: LAURIE CHIPMAN

SURVEYOR/ENGINEER: ALL POINTS NORTH

ACRES: 9.5 PARCELS: 1

REVIEWED BY: KIMBERLY MCCLURE CASE: 2022-026 & 027

REQUEST: The request is to create one lot from Lots 1-4, Block 1 and Lots 1-4, Block 2, Meadowland Park Estates, Plat No. 83-88 and vacate the right-of-way of S. Derby Drive to include the temporary turnaround, to be known as CHIPMAN ACRES, containing 9.5 acres more or less. The petitioner is dedicating additional right-of-way in the southwest corner to facilitate further construction to the west of E. Republican Way which is currently encumbered by multiple power poles. The property is located directly north of E. Republican Way, east of S. Bodenburg Spur and south of S. Bodenburg Loop; within the SE ¼ Section 34, Township 17 North, Range 2 East, Seward Meridian, Alaska. This case was continued from the April 21, 2022 Platting Board meeting.

EXHIBITS

Vicinity Map & Aerial Photos	EXHIBIT A - 4 pgs
Sight Visit Report & Photo	EXHIBIT B - 2 pgs
Petition for Vacation of Right-of-Way	EXHIBIT C - 2 pgs
Photos of Posting Notice of Vacation & Posting Affidavit	EXHIBIT D - 3 pgs

COMMENTS

Department of Public Works Operation & Maintenance	EXHIBIT E - 1 pg
Planning Division	EXHIBIT F - 1 pg
Utilities	EXHIBIT G - 4 pgs
Public	EXHIBIT H - 2 pgs

DISCUSSION: The subject parcel is located directly north of E. Republican Way, east of S. Bodenburg Spur and south of S. Bodenburg Loop. Access will be from E. Republican Way, a 66' wide road owned and maintained by the Borough. The proposed dedication of right-of-way in the southwest corner will allow access around the utility poles that currently encumber the existing Section Line Easement blocking the ability to construct a Borough standard road within the Section Line Easement. (**Exhibit B**) The dimensions of the proposed dedicated right-of-way is shown on the agenda plat as requested at the April 21, 2022 meeting.

Soils: A soils report was not required per MSB 43.20.281(A)(1)(i)(i), as this parcel is increasing in size and will be greater than 400,000 sf.

<u>Vacation:</u> The petitioner submitted a vacation petition to vacate the 50' x 627' right-of-way to include the temporary turnaround that lies between Lots 1-4, Block 1 and Lots 1-4, Block 2, Meadowland Park Estates pursuant to MSB 43.15.035. (Exhibit C)

A sign notifying the public of the date, time and place of the public hearing was posted. Staff has received photos of the sign being posted on April 8, 2022. Staff received the affidavit stating the vacation was posted as required by MSB 43.10.065(G). (Exhibit D)

S. Derby Drive was created and dedicated by Plat No. 83-88 on June 6, 1983 when Meadowland Park Estates subdivision was recorded. The right-of-way is not constructed to Borough residential standards. All of the lots in Meadowland Park Estates are owned by the same owner. The right-of-way is not needed by the design of the development to the north which is undeveloped and State agricultural land is located to the west of the property.

Staff notes the vacation request is consistent with MSB 43.15.035(B)(1)(b) Vacations.

- (B) A dedication to public use of land or interest in land may be vacated if the dedication is no longer necessary for present or future use. The platting board shall review the applications for vacation as follows:
 - (1) The platting board shall ordinarily approve vacations of public rights-of-way if:
 - (a) the vacation is conditioned upon the final approval of a plat affecting the same land which provides equal or better access to all areas affected by the vacation; or
 - (b) the surrounding area is fully developed and all planned or needed rights-of-way and utilities are constructed; or
 - (c) the right-of-way is not being used, a road is impossible or impractical to construct, and alternative access has been provided.

The vacation, if approved by the Platting Board, will be heard by the Assembly per MSB 43.10.065(F) (Recommendation 1).

<u>Comments</u>: Department of Public Works Operation & Maintenance (Exhibit E) had no objection. Planning Division (Exhibit F) commented, "No comment. ROW dedication seems like a fair alternative for community access. Ideal connection for north/south travel would be E Republican Way to connect with the S Bodenburg Spur road through SOA land."

<u>Utilities</u>: (Exhibit G) MTA, Enstar and GCI had no comments or objections. MEA did not respond to the request for comments.

<u>Public</u>: (Exhibit H) Nick Mastrodicasa, property owner to the north had no objection. Martin Klee, property owner to the southeast had no objection.

CONCLUSION: The preliminary plat of Chipman Acres is consistent with AS 29.40.070 Platting Regulations and MSB 43.15.016 Preliminary Plats. Legal and physical access will exist to the proposed lot, consistent with MSB 43.20.100 Access Required, MSB 43.20.120 Legal

Access and MSB 43.20.140 Physical Access. Frontage for the subdivision will exist, pursuant to MSB 43.20.320 Frontage. A soils report was not required. The vacation of the right-of-way to include the temporary turnaroud of S. Derby Drive is consistent with AS 29.40.120 through AS 29.40.160 and MSB 43.15.035 *Vacations*. At the time of staff report write-up, there were no objections to the plat or vacation from any federal or state agencies. At the time of staff report write-up, there were no responses to the Request for Comments from USACE; US Postmaster; Butte Community Council; Road Service Area #26 Greater Butte; MSB Emergency Services, Community Development, Assessments, Development Services, Pre-Design Division; or MEA. At the time of staff report write-up, there were no objections from the public in response to the Notice of Public Hearing.

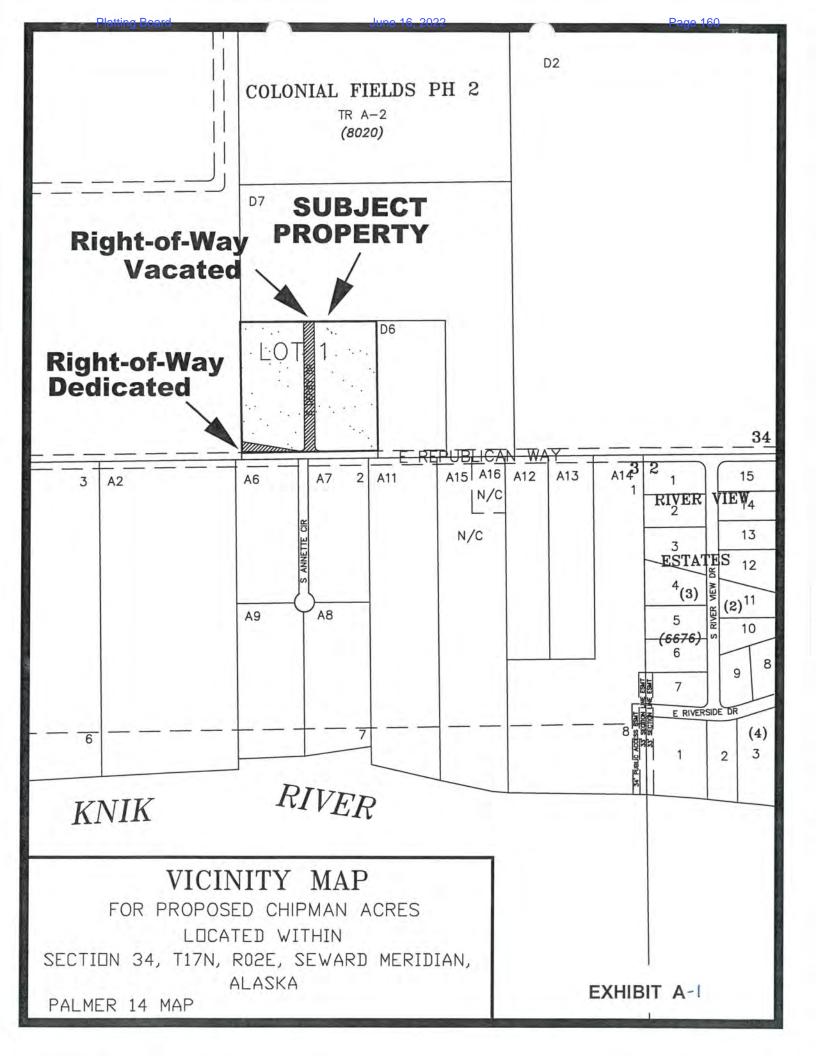
FINDINGS OF FACT FOR THE PRELIMINARY PLAT AND RIGHT-OF-WAY VACATION OF S. DERBY DRIVE

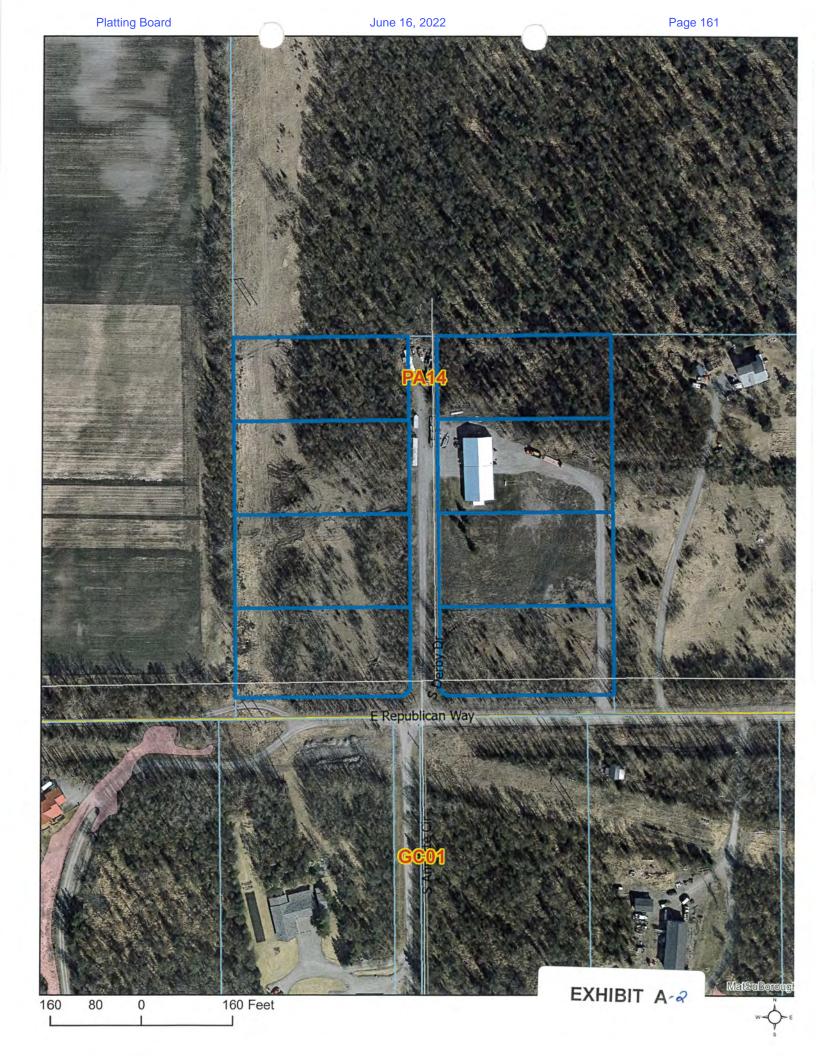
- 1. The preliminary plat of Chipman Acres is consistent with AS 29.40.070 *Platting Regulations* and MSB 43.15.016 *Preliminary Plats*.
- 2. The vacation of the right-of-way to include the temporary turnaroud of S. Derby Drive is consistent with AS 29.40.120 through AS 29.40.160 and MSB 43.15.035 Vacations.
- 3. The vacation of the right-of-way is consistent with MSB 43.15.035(B)(1)(b) Vacations.
 (B) A dedication to public use of land or interest in land may be vacated if the dedication is no longer necessary for present or future use. The platting board shall review the applications for vacation as follows:
 - (1) The platting board shall ordinarily approve vacations of public rights-of-way if:
 - (a) the vacation is conditioned upon the final approval of a plat affecting the same land which provides equal or better access to all areas affected by the vacation; or
 - (b) the surrounding area is fully developed and all planned or needed rights-of-way and utilities are constructed; or
 - (c) the right-of-way is not being used, a road is impossible or impractical to construct, and alternative access has been provided.
- 4. The vacation of the right-of-way to include the temporary turnaround of S. Derby Drive was posted in accordance with MSB 43.10.065(G).
- 5. A soils report was not required per MSB 43.20.281(A)(1)(i)(i).
- 6. Frontage for the subdivision will exist pursuant to MSB 43.20.320 Frontage.
- Legal and physical access will be provided to the proposed lot consistent with MSB 43.20.100 Access Required, MSB 43.20.120 Legal Access and MSB 43.20.140 Physical Access.
- 8. At the time of staff report write-up, there were no objections from any federal or state agencies.
- At the time of staff report write-up, there were no responses to the Request for Comments from USACE; US Postmaster; Butte Community Council; Road Service Area #26 Greater Butte; MSB Emergency Services, Community Development, Assessments, Development Services, Pre-Design Division; or MEA.
- 10. At the time of staff report write-up, there were no objections from the public in response to the Notice of Public Hearing.

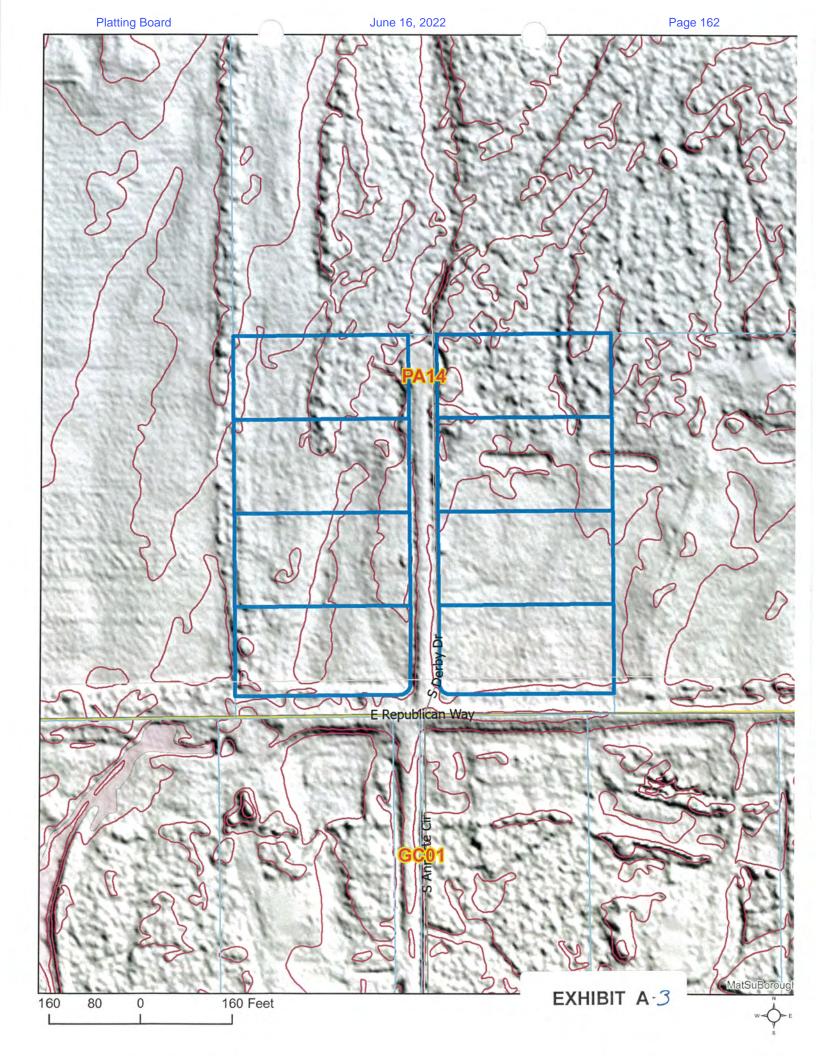
RECOMMENDATION FOR APPROVAL OF PRELIMINARY PLAT AND RIGHT-OF-WAY VACATION OF S. DERBY DRIVE

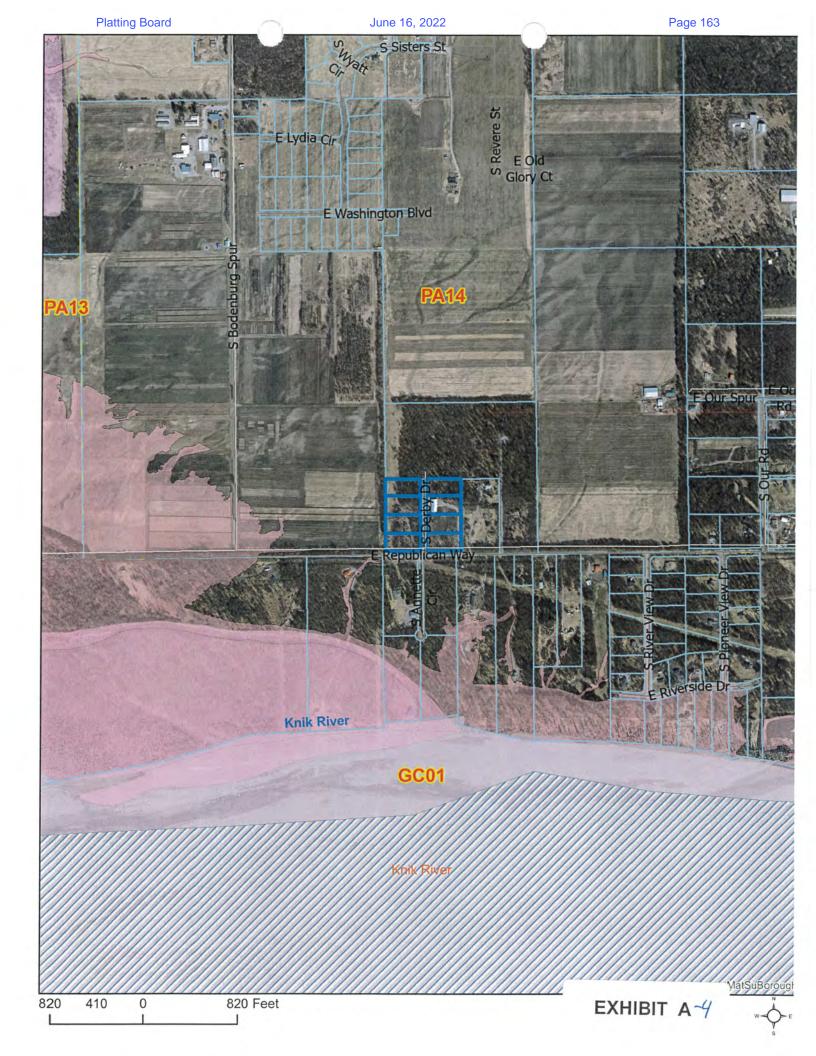
Suggested motion: "I move to approve the preliminary plat of Chipman Acres and the vacation of right-of-way to include the temporary turnaroud of S. Derby Drive Section 34, Township 17 North, Range 02 East, Seward Meridian, Alaska, contingent on staff recommendations:"

- Obtain the Borough Assembly approval of the vacation within 30 days of Platting Board's written Notification of Action. MSB Assembly has 30 days from the date of the Platting Board decision to deny the request.
- Taxes and special assessments must be paid in full for the year of recording, pursuant to MSB 43.15.053(F) and AS 40.15.020. Pay taxes and special assessments (LIDs), by CERTIFIED FUNDS OR CASH.
- 3. Provide updated Certificate to Plat executed within seven (7) days of recording of plat.
- 4. Provide beneficiary affidavits from holders of legal and equitable interest, if any,
- 5. Show all easements of record on final plat.
- 6. Pay postage and advertising fees.
- 7. Submit recording fees payable to Department of Natural Resources.
- 8. Submit final plat in full compliance with Title 43.









SITE VISIT REPORT

Case Name: Chipman Acres	Date: 3/02/22 Time: morning
Owner: Laurie Chipman	Case Number: 2022-027
Surveyor/Engineer: All Points North	Tax ID #: 2482B001L001-L004 & 2482B02L001-L004
Subdivision: Meadowland Park Estates	Regarding: Vacation of S. Derby Drive

SITE CONDITIONS

Weather: clear	Temperature: cold	
Wind: normal		
General Site Condition: relati	vely flat terrain	

Personnel on site:

MSB Platting Staff (Amy Otto-Buchanan, Kimberly McClure & Matthew Goddard)

Photo is taken from the right-of-way of E. Republican Way facing west.

Equipment in use:

Camera and Borough vehicle

Current phase of work:

No current construction or activity

Reason for Visit/Remarks: (See attached photos)

To show the placement of the utility poles within the section line easement of E. Republican Way and the area to be dedicated by this proposed platting action.

Signed By: Kernely ask clew

Date: 4/22/22



Matanuska-Susitna Borough Telephone (907) 861-7874 350 East Dahlia Avenue Palmer, Alaska 99645-6488

PETITION FOR VACATION OF RIGHT-OF-WAY

Comes now the	undersigned, LAURIE CHIPMAN , and petitions the
to-wit.	tna Borough to vacate the right-of-way lying within the following described property, EADOWLAND PARK FSTATES, PLAT # 83-88,
PAY	FADOWLAND PARK ESTATES, PLAT # 83-88, WER RELORDING DISTRICT, T 17N ROZE, SECT 34
Said right-of-way	being more fully described as: DERBY DRIVE
	RECEIVED
	(ATTACH SUPPLEMENTAL SHEET IF APPLICABLE) FEB 8 2022
Submitted herev	vith are the following:
2. A recorde 3 \$250.00 F 4. \$500.00 f	the plat showing the right-of-way to be vacated; or ad public easement creating the public right-of-way; and Right-of-Way Vacation Fee with Regular Plat; or or Stand Alone Vacation. ht by this petition is for the following reason(s): (ATTACH PAGES, IF NEEDED)
Sui	BDIVISION IS OWNED BY I OWNER
DE	BDIVISION IS OWNED BY I OWNER NOR
AD	TACENT DEVELOPMENT.
APPLICANT	Name: MAYUNGGAREN Email:
OR	Mailing Address: POBOX 2543 PALMER Zip: 99645
OWNER	Contact Person: Laurie / Tom Chipman Phone: 907 388-4788
SURVEYOR	Name (FIRM): ALL POINTS NORTH Email: MAXE all points north, u
	Mailing Address: Po BOX 4207 PALMER Zip: 99645
	Contact Person: MAX SUILUNGER Phone:

SIGNATURES OF PETITIONER(S):	
Laure Chopman	<u> </u>
subject to consent of the City Co Borough Assembly has 30 days t	43.15.035(D), vacations of public rights-of-way are nuncil or Borough Assembly. The City Council or from the date of Platting Board written decision in
	ch to veto the action.
	ETED BY THE MATANUSKA-SUSITNA BOROUGH
THE APPLICATION HAS BEEN REVIEW NOTED ABOVE.	EWED AND FOUND TO MEET SUBMITTAL STANDARDS AS
2-25-22 DATE	PLATTING DIVISION REPRESENTATIVE
SCHEDULED FOR DI ATTING BOARD MEET	ING OF: 4-21-22





Chipman Ac

RECEIVED

APR 2 1 2022

PIATINE



Chipman Ac

RIGHT-OF-WAY OR PUBLIC USE EASEMENT VACATION POSTING AFFIDAVIT

In accordance with MSB 43.10.065(G), I hereby certify that I posted, and have maintained for 30 days prior to the public hearing, the prescribed vacation notice along the boundary of the property at all common points of access to that portion of the right-of way or easement that is subject of the application.

Date Posted: 4-8-2022 Pla	atting Case #: 2022 - 027
Printed Name Chipman Sig	dull har
Printed Name Po Box 2543 - Palmer AK Mailing Address Ph	907- 746- 3932 one Number
NOTARY CERTIFICATION	
State of Alaska)	
Third Judicial District)	
SUBSCRIBED and SWORN to (or affirmed) before me	this 9 day of May
2022, by Laurie Chipmen	
(name of signers(s))	A
AN OLAY	1 day
(sie	nature and seal of notary)
I ROLARY MY	commission expires: 8/20/2023
***	Title .
THE OF ACTUAL	
and the state of t	

From: Jamie Taylor

Sent: Monday, March 21, 2022 3:43 PM

To: Kimberly McClure
Cc: Elaine Flagg

Subject: RE: Chipman Ac & S. Derby Dr vacation (KMc)

No objection.

Jamie Taylor, PE (she/her)
Civil Engineer
Matanuska-Susitna Borough
Department of Public Works
t: 907-861-7765 c: 907-355-9810

jamie.taylor@matsugov.us http://www.matsugov.us/

From: Kimberly McClure < Kimberly. McClure@matsugov.us>

Sent: Friday, February 25, 2022 4:52 PM

To: Alex Strawn <Alex.Strawn@matsugov.us>; andrew.fraiser@enstarnaturalgas.com; Andy Dean

<Andy.Dean@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Charlyn Spannagel

<Charlyn.Spannagel@matsugov.us>; Cindy Corey <Cindy.Corey@matsugov.us>; colton.percy@alaska.gov; Dubour,

Adam J (DFG) <adam.dubour@alaska.gov>; Eric Phillips <Eric.Phillips@matsugov.us>; Fire Code

<Fire.Code@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; GCI <ospdesign@gci.com>; Jacque Malette

<jacque.malette@matsugov.us>; James Christopher <James.Christopher@enstarnaturalgas.com>; Jamie Taylor

<Jamie.Taylor@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Jim Jenson <James.Jenson@matsugov.us>; John

Aschenbrenner < John. Aschenbrenner@matsugov.us>; Mark Whisenhunt < Mark. Whisenhunt@matsugov.us>; MEA

<mearow@matanuska.com>; pamela.j.melchert@usps.gov; Permit Center < Permit.Center@matsugov.us>; Planning

<MSB.Planning@matsugov.us>; regpagemaster@usace.army.mil; row@mtasolutions.com; Terry Dolan

<Terry.Dolan@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; butteakcc@gmail.com;

snowshark1@hotmail.com; meshie@mtaonline.net; TimHaleDistrict1@gmail.com

Subject: Chipman Ac & S. Derby Dr vacation (KMc)

Below is a link to a request for comments for Chipman Acres and S. Derby Drive vacation, Case #2022-026, Tech KMc.

Comments due by March 21, 2022.

https://matsugovus-my.sharepoint.com/:f:/g/personal/kimberly mcclure matsugov us/EiF-76Z62RHo1XGZeFESncBIHXcPOMCX6f I5vaEhwyHA?e=qyOKGy

Please open the link in Chrome or copy and paste the link to your browser. Using Microsoft Edge seems to cause some viewing problems.

Thank you,
Kimberly McClure
Platting Technician
861-7873
Kimberly.McClure@matsugov.us

From: Kelsey Anderson

Sent: Monday, March 21, 2022 4:30 PM

To: Kimberly McClure

Subject: RE: Chipman Ac & S. Derby Dr vacation (KMc)

No comment. ROW dedication seems like a fair alternative for community access, Ideal connection for north/south travel would be E Republican Way to connect with the S Bodenburg Spur road through SOA land.

-Kelsey Anderson

From: Kimberly McClure < Kimberly. McClure@matsugov.us>

Sent: Friday, February 25, 2022 4:52 PM

To: Alex Strawn <Alex.Strawn@matsugov.us>; andrew.fraiser@enstarnaturalgas.com; Andy Dean

<Andy.Dean@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Charlyn Spannagel

<Charlyn.Spannagel@matsugov.us>; Cindy Corey <Cindy.Corey@matsugov.us>; colton.percy@alaska.gov; Dubour,

Adam J (DFG) <adam.dubour@alaska.gov>; Eric Phillips <Eric.Phillips@matsugov.us>; Fire Code

<Fire.Code@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; GCl <ospdesign@gci.com>; Jacque Malette

<jacque.malette@matsugov.us>; James Christopher <James.Christopher@enstarnaturalgas.com>; Jamie Taylor

<Jamie.Taylor@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Jim Jenson <James.Jenson@matsugov.us>; John

Aschenbrenner < John. Aschenbrenner@matsugov.us>; Mark Whisenhunt < Mark. Whisenhunt@matsugov.us>; MEA

<mearow@matanuska.com>; pamela.j.melchert@usps.gov; Permit Center < Permit.Center@matsugov.us>; Planning

<MSB.Planning@matsugov.us>; regpagemaster@usace.army.mil; row@mtasolutions.com; Terry Dolan

<Terry.Dolan@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; butteakcc@gmail.com;

snowshark1@hotmail.com; meshie@mtaonline.net; TimHaleDistrict1@gmail.com

Subject: Chipman Ac & S. Derby Dr vacation (KMc)

Below is a link to a request for comments for Chipman Acres and S. Derby Drive vacation, Case #2022-026, Tech KMc.

Comments due by March 21, 2022.

https://matsugovus-my.sharepoint.com/:f:/g/personal/kimberly_mcclure_matsugov_us/EiF-76Z62RHo1XGZeFESncBIHXcPOMCX6f_l5vaEhwyHA?e=qyOKGy

Please open the link in Chrome or copy and paste the link to your browser. Using Microsoft Edge seems to cause some viewing problems.

Thank you,
Kimberly McClure
Platting Technician
861-7873
Kimberly.McClure@matsugov.us

From: Holly Sparrow <hsparrow@mtasolutions.com>

Sent: Monday, March 7, 2022 12:07 PM

To: Kimberly McClure

Subject: RE: Chipman Ac & S. Derby Dr vacation (KMc)

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.] Hello,

MTA has reviewed the plat for Chipman Acres. MTA has no comments.

Thank you for the opportunity to comment.

Holly Sparrow, Right of Way Agent

1740 S. Chugach St., Palmer, Alaska 99645

Office: (907) 761-2599 | www.mizsolullon.co



Life, Technology, Together

From: Kimberly McClure < Kimberly. McClure@matsugov.us>

Sent: Friday, February 25, 2022 4:52 PM

To: Alex Strawn <Alex.Strawn@matsugov.us>; andrew.fraiser@enstarnaturalgas.com; Andy Dean

<Andy.Dean@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Charlyn Spannagel

<Charlyn.Spannagel@matsugov.us>; Cindy Corey <Cindy.Corey@matsugov.us>; colton.percy@alaska.gov; Dubour,

Adam J (DFG) <adam.dubour@alaska.gov>; Eric Phillips <Eric.Phillips@matsugov.us>; Fire Code

<Fire.Code@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; GCl <ospdesign@gci.com>; Jacque Malette

<jacque.malette@matsugov.us>; James Christopher <James.Christopher@enstarnaturalgas.com>; Jamie Taylor

<Jamie.Taylor@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Jim Jenson <James.Jenson@matsugov.us>; John

Aschenbrenner < John. Aschenbrenner@matsugov.us>; Mark Whisenhunt < Mark. Whisenhunt@matsugov.us>; MEA

<mearow@matanuska.com>; pamela.j.melchert@usps.gov; Permit Center < Permit.Center@matsugov.us>; Planning

<MSB.Planning@matsugov.us>; regpagemaster@usace.army.mil; Right of Way Dept. <row@mtasolutions.com>; Terry

Dolan <Terry.Dolan@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; butteakcc@gmail.com;

snowshark1@hotmail.com; meshie@mtaonline.net; TimHaleDistrict1@gmail.com

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Subject: Chipman Ac & S. Derby Dr vacation (KMc)

Below is a link to a request for comments for Chipman Acres and S. Derby Drive vacation, Case #2022-026, Tech KMc.

Comments due by March 21, 2022.



ENSTAR Natural Gas Company
A DIVISION OF SEMCO ENERGY
Engineering Department, Right of Way Section
401 E. International Airport Road
P. O. Box 190288
Anchorage, Alaska 99519-0288
(907) 277-5551
FAX (907) 334-7798

March 1, 2022

Matanuska-Susitna Borough, Platting Division 350 East Dahlia Avenue Palmer, AK 99645-6488

To whom it may concern:

ENSTAR Natural Gas Company has reviewed the following preliminary plat and has no comments or recommendations.

 CHIPMAN ACRES & S. Derby Drive Vacation (MSB Case # 2022-026)

If you have any questions, please feel free to contact me at 334-7944 or by email at james.christopher@enstarnaturalgas.com.

Sincerely,

James Christopher

Right of Way & Compliance Technician

ENSTAR Natural Gas Company

James Christopher

OSP Design Group <ospdesign@gci.com> From:

Tuesday, March 8, 2022 3:05 PM Sent:

Kimberly McClure To: OSP Design Group Cc:

RE: Chipman Ac & S. Derby Dr vacation (KMc) Subject:

Chipman Ac & S. Derby Dr. vacation (KMc).pdf; Agenda Plat.pdf Attachments:

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Kimberly,

In review GCI has no comments or objections to the plat, attached is the signed plat for your records.

Thanks,

MIREYA ARMESTO

GCI | Technician II, GIS Mapping m: 907-744-5166 | w: www.gci.com

From: Kimberly McClure < Kimberly.McClure@matsugov.us>

Sent: Friday, February 25, 2022 4:52 PM

To: Alex Strawn <Alex.Strawn@matsugov.us>; andrew.fraiser@enstarnaturalgas.com; Andy Dean

<Andy.Dean@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Charlyn Spannagel

<Charlyn.Spannagel@matsugov.us>; Cindy Corey <Cindy.Corey@matsugov.us>; colton.percy@alaska.gov; Dubour,

Adam J (DFG) <adam.dubour@alaska.gov>; Eric Phillips <Eric.Phillips@matsugov.us>; Fire Code

<Fire.Code@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; OSP Design Group <ospdesign@gci.com>; Jacque Malette < jacque.malette@matsugov.us>; James Christopher < James.Christopher@enstarnaturalgas.com>; Jamie Taylor < Jamie. Taylor@matsugov.us>; Jill Irsik < Jill. Irsik@matsugov.us>; Jim Jenson < James. Jenson@matsugov.us>; John Aschenbrenner < John. Aschenbrenner @matsugov.us>; Mark Whisenhunt < Mark. Whisenhunt @matsugov.us>; MEA <mearow@matanuska.com>; pamela.j.melchert@usps.gov; Permit Center <Permit.Center@matsugov.us>; Planning <MSB.Planning@matsugov.us>; regpagemaster@usace.army.mil; row@mtasolutions.com; Terry Dolan <Terry.Dolan@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; butteakcc@gmail.com;

snowshark1@hotmail.com; meshie@mtaonline.net; TimHaleDistrict1@gmail.com

Subject: Chipman Ac & S. Derby Dr vacation (KMc)

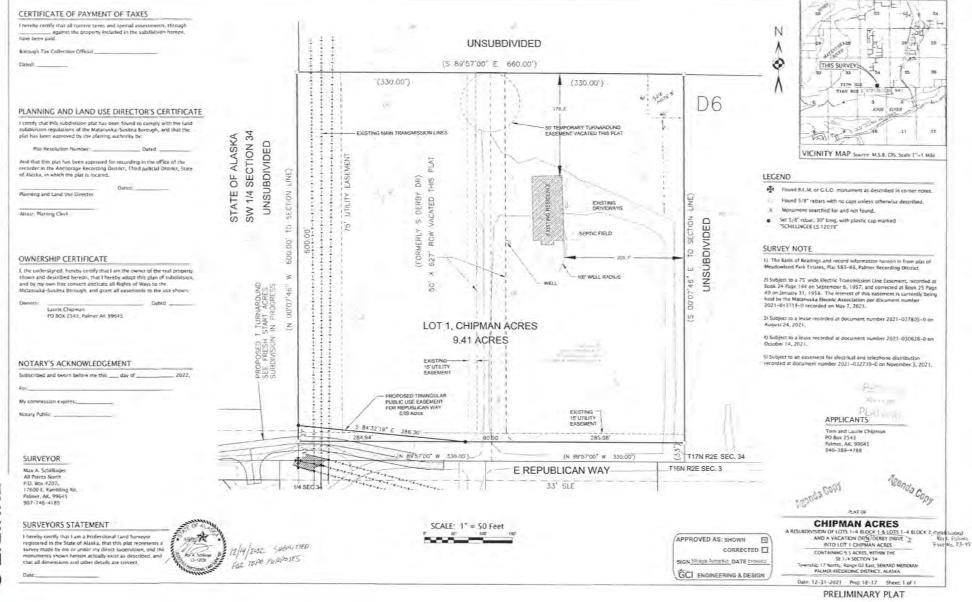
[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

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https://matsugovus-my.sharepoint.com/:f:/g/personal/kimberly mcclure matsugov us/EiF-76Z62RHo1XGZeFESncBIHXcPOMCX6f I5vaEhwyHA?e=qyOKGy

Please open the link in Chrome or copy and paste the link to your browser. Using Microsoft Edge seems to cause some viewing problems.

Thank you, Kimberly McClure Platting Technician 861-7873 Kimberly.McClure@matsugov.us



MATANUSKA-SUSITNA BOROUGH 'LATTING DIVISION

50 EAST DAHLIA AVENUE PALMER, ALASKA 99645



APR 0 6 2022
PLATTING

117N02E34D007 9 MASTRODICASA NICHOLAS MASTRODICASA CHEN LING 8041 ROVENNA ST ANCHORAGE AK 99518-2450

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NOTIFICATION OF PUBLIC HEARING

The Matanuska-Susitna Borough Platting Board will consider the following:

PETITIONER/OWNER: LAURIE CHIPMAN

REQUEST: The request is to create one lot from Lots 1-4, Block 1 and Lots 1-4, Block 2, Meadowland Park Estates, Plat No. 83-88 and vacate the right-of-way of S. Derby Drive, to be known as **CHIPMAN ACRES**, containing 9.5 acres +/-. The petitioner is dedicating additional right-of-way in the southwest corner to facilitate further construction to the west of E. Republican Way which is currently encumbered by multiple power poles. The property is located directly north of E. Republican Way, east of S. Bodenburg Spur and south of S. Bodenburg Loop (Tax ID #2482B001L001-L004 & 2482B02L001-L004); lying within the SE ¼ Section 34, Township 17 North, Range 02 East, Seward Meridian, Alaska. In the Butte Community Council and in Assembly District #1.

The Matanuska-Susitna Borough <u>Platting Board</u> will hold a public hearing in the <u>Assembly Chambers</u> at the <u>Dorothy</u> <u>vanda Jones Building</u>, 350 E. Dahlia Avenue, Palmer, Alaska on the proposed <u>Subdivision</u>. The public hearing is heduled for <u>April 21, 2022</u>, starting at 1:00 p.m. We are sending you this notice as required by State Law and orough Ordinances.

For comments regarding the proposed action, this form may be used for your convenience by filling in the information below and mail this notice to the MSB Platting Division, 350 E. Dahlia Avenue, Palmer, Alaska 99645 or e-mail: platting@matsugov.us. Comments received from the public after the platting board packet has been written and sent to the Board will be given to the Platting Board in a "Hand-Out" the day of the meeting. Please do not send comments or questions directly to Platting Board members. Board members may not receive or engage in ex-parte contact with the applicant, other parties interested in the application, or members of the public concerning the application or issues presented in the application. All public comments are due one (1) day prior, by 12:00 p.m
To request additional information please contact the Platting Technician, Kimberly McClure at (907) 861-7873.
To view the agenda or meeting packet please go to the following link: www.matsugov.us/boards/platting.

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MATANUSKA-SUSITNA BOROUGH >LATTING DIVISION

350 EAST DAHLIA AVENUE PALMER, ALASKA 99645



116N02E03A015 7 KLEE MARTIN D PO BOX 2354 PALMER, AK 99645-2354 Matanuska-Susitna Borough Permit Center

APR 0 5 2022

Received

FIRST CLASS

NOTIFICATION OF PUBLIC HEARING

The Matanuska-Susitna Borough Platting Board will consider the following:

PETITIONER/OWNER: LAURIE CHIPMAN

REQUEST: The request is to create one lot from Lots 1-4, Block 1 and Lots 1-4, Block 2, Meadowland Park Estates, Plat No. 83-88 and vacate the right-of-way of S. Derby Drive, to be known as **CHIPMAN ACRES**, containing 9.5 acres +/-. The petitioner is dedicating additional right-of-way in the southwest corner to facilitate further construction to the west of E. Republican Way which is currently encumbered by multiple power poles. The property is located directly north of E. Republican Way, east of S. Bodenburg Spur and south of S. Bodenburg Loop (Tax ID #2482B001L001-L004 & 2482B02L001-L004); lying within the SE ¹/₄ Section 34, Township 17 North, Range 02 East, Seward Meridian, Alaska. In the Butte Community Council and in Assembly District #1.

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me: MARTIN	KLEE	Address:	15278	REPUBLICAN	WAY
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PRELIMINARY PLAT

June 16, 2022

Platting Board



STAFF REVIEW AND RECOMMENDATIONS PUBLIC HEARING JUNE 16, 2022

PRELIMINARY PLAT: BEAVER FLATS MASTER PLAN & PUBLIC USE EASEMENT

VACATION

LEGAL DESCRIPTION: SEC 04, T17N, R03W, SEWARD MERIDIAN AK

PETITIONERS: JEREMY D. & ELAINE C. RIDLON

SURVEYOR/ENGINEER: HANSON LAND SOLUTIONS

ACRES: $79.96 \pm$ PARCELS: 40

REVIEWED BY: AMY OTTO-BUCHANAN CASE #: 2022-013/050

REQUEST: The request is to divide Tax Parcels A11 and A12 (Government Lots 1 and 2) into 40 lots, by a three phase Master Plan, to be known as **BEAVER FLATS MASTER PLAN**, containing 79.96 acres +/-. Petitioner will construct Borough standard streets within the existing Section Line Easement, the right-of-way of N. Duley Road and within the subdivision. The streets within the subdivision will be private roads. Petitioner is also proposing to vacate a 50' wide Public Use Easement, recorded at 2004-021138-0. Parcel is located north of Big Beaver Lake, north of N. Beaver Lake Road and northwest of W. Hawk Lane; lying within the NE ¼ Section 04, Township 17 North, Range 03 West, Seward Meridian, Alaska.

EXHIBITS

EXHIBIT A - 5 pgs
EXHIBIT B – 3 pgs
EXHIBIT C – 23 pgs
EXHIBIT $D-5$ pgs
EXHIBIT E – 4 pgs
EXHIBIT $F-1$ pg
EXHIBIT G-6 pgs

AGENCY COMMENTS

AGENCI COMMENTS	
Department of Public Works Operations & Maintenance	EXHIBIT H – 2 pgs
Development Services	EXHIBIT $I - 1$ pg
Land & Resource Management	EXHIBIT $J-1$ pg
Planning Division	EXHIBIT K-1 pg
ADF&G	EXHIBIT $L-1$ pg
Utilities	EXHIBIT $M - 4 pgs$
Public Comment	EXHIBIT N – 5 pgs

<u>DISCUSSION</u>: The proposed subdivision is north of Big Beaver Lake and N. Beaver Lake Road; northwest of W. Hawk Lane. Petitioner has provided documents confirming 50' wide Section Line Easements on the east and north sides of Section 4, the west side of Section 3, and on the south side of Section 33 (Exhibit

F). Average Daily Traffic (ADT) calculations are at **Exhibit E**. Pursuant to Subdivision Construction Manual (SCM) A04.1, the interior streets of the proposed subdivision will be built to residential street standards, as the ADT is 400 at the entrance to the subdivision. Pursuant to SCM A04.2, the Section Line Easement and the right-of-way of N. Duley Road and a portion of N. Beaver Lake Road to the intersection with N. Victor Road will be built to residential sub-collector standard as the ADT is 670 (see *Recommendation #5*). Access requirements of MSB 43.20.100 Access Required, MSB 43.20.120 Legal Access and MSB 43.20.140 Physical Access will be met once all streets are constructed.

Petitioner is providing access to adjacent property that is unsubdivided to the west and two accesses to the south. The "West Stub Road" and the "East Stub Road" will need to be constructed, with temporary culde-sacs for both, as they are longer than 200' and will be providing access to Lots 1 and 4, Block 3 for the western stub and for Lot 1, Block 1 on the eastern stub (see *Recommendation #5b*). Petitioner will be dedicating and constructing a temporary cul-de-sac at the western terminus of W. Beaver Flats Road.

Petitioner proposes private roads for this subdivision. Pursuant to MSB 43.20.100(C), gated subdivisions and private roads shall be approved if:

- (1) Internal roads conform to the requirements of the SCM for residential standards minimum;
- (2) Emergency services shall be provided access to deliver services within the private subdivision;
- (3) There is no possibility or public necessity to provide for public through traffic because alternate legal access to adjoining properties is available and that alternate access is constructible in accordance with the SCM.
- (4) Private road maintenance is guaranteed. The petitioner will be required to submit a documented plan stating what seasons the road maintenance shall be performed, contact information for maintenance, length of the maintained road(s) in feet and the surface type (see *Recommendation #6*). Staff notes that the parcel to the north and to the west has access via a 100' wide Section Line Easement. Parcels to the south have access from the 60' wide right-of-way of W. Concord Street.

Vacation of Right-of-Way: (Exhibit G):

Pursuant to MSB 43.15.035(B), a public use easement or right-of-way may be vacated if equal or better access exists to all areas affected, (B)(1)(a), or;

the surrounding area is fully developed and all planned or needed rights-of-way and utilities are constructed, (B)(1)(b) or;

the right-of-way is not being used, a road is impossible or impractical to construct and alternative access is provided (B)(1)(c).

The proposed vacation of the Public Use Easement (PUE) recorded at 2004-021138-0 will remove an easement that will no longer be needed with the recording of Beaver Flats Subdivision. With this new subdivision, the easterly Lot 4 of MSB Waiver 81-66-PWm (81-119w) will be provided with a constructed public road the entire length of its eastern boundary. Parcel 3 of the same waiver will be receiving additional access to the north via the proposed eastern stub road of the new subdivision. Parcels 1 and 2 of the same waiver will retain access via W. Concord Street and Lot 2 of MSB Waiver 2004-001-PWm (2004-002299-0) will be afforded access via the new western stub road in addition to its current access via W. Concord Street.

Pursuant to MSB 43.10.065(G), a sign notifying the public of the vacation request and the date, time and location of public hearing, shall be posted and maintained by the applicant at the site for 30 days prior to

the public hearing. Petitioner has submitted an affidavit to Platting staff, verifying the posting has been made. Posting Affidavit at **Exhibit G-6**.

<u>Soils Report</u>: A geotechnical report was submitted (**Exhibit C**), pursuant to MSB 43.20.281(A). Simon Gilliland, PE, notes testholes were excavated to a minimum of 12'. Testhole location map and soils log are attached. Soils are classified as GM and SM in all testholes; sieve analysis reports are attached to each soil log. Groundwater was encountered at approximately 8' in all testholes. Fill will be required in the testholes in which groundwater was encountered at less than 8'. All lots have at least 10,000 sf of useable building area and all have at least 10,000 sf of contiguous useable septic area, or will once the specified fill, regrading and standard septic designs have been provided (see *Recommendation #8*). Topographic map and as-built are at **Exhibit B**. Preliminary constructions plans (plan & profile and drainage plan) are at **Exhibit D**.

Comments: Department of Public Works Operations & Maintenance (Exhibit H) notes the angle between N. Duley Road and the Section Line Easement (SLE) road is much too small, less than 35 degrees. The intersection can be no less than 70 degrees for a distance of 75' from the intersection point (see Recommendation #4c). In the soils report, there is one test hole representing an area encompassed by six or seven lots that found 5' of peat and groundwater at 1.5' below ground. The MSB wetland viewer shows a large wetland in this area. Wetlands should not be filled to create useable area. Petitioner will need a wetland determination and a Department of Army (USACE) permit if jurisdictional wetlands are determined (see Recommendation #7). Upgrade a portion of N. Beaver Lake Road, N. Duley Road and construct the SLE road to residential subcollector standards and interior subdivision roads to residential standards (see Recommendation #5). Determine if right-of-way exists, or obtain right-of-way, for the portion of N. Duley Road southwest of the section where the road is shown to be constructed (see Recommendation #5d).

Development Services (**Exhibit I**) has no comment. Land & Resource Management Division (**Exhibit J**) has no comments. Planning Division (**Exhibit K**) notes wetlands are present throughout both parcels. Development of these wetlands may require a permit from the US Army Corps of Engineers. The vacation does not seem appropriate per MSB 43.20.100(C)(3); considering the pattern of growth in this area, the likelihood that this and additional ROW will be needed, is high. While it does appear there is still access to neighboring parcels, that cannot be the only consideration and thinking about future transportation needs and connections is crucial at this state. To that end, it also does not seem necessary that the internal roads be private. In the future, this could easily be a problem as the remaining parcels will likely be built out. ADF&G (**Exhibit L**) has no objections.

<u>Utilities</u>: (Exhibit M) MTA requests a 15' wide utility easement on both sides of Tract A. Enstar has no comments, recommendations or objections. GCI has no objections. MEA did not respond. Staff notes since this subdivision has private roads, utility easements will need to be addressed between the petitioner and the utility companies.

Public Comment: (Exhibit N)

Ellen Halverson, owner of Tax Parcel A7, directly south, is concerned about the traffic impact on the eastern side of her property. She feels it is important to be aware that increasing the population density in the neighborhood will potentially be disruptive and disturbing to those who have made our homes here for many years. Suggests such things as firearm use be limited.

Jill Parsons, who lives 1.5 miles from the proposed subdivision and received the notice from the Big Lake Community Council. Her concerns the lack of information in the Notice of Public Hearing; no size of the proposed lots or well and septic was stated; question on private roads; easement width sufficient for snowfall storage; and no information on adjacent property ownership. Staff notes Ms. Parsons' questions were answered by email, and further questions were also addressed.

At the time of staff report write-up, there were no responses to the Request for Comments from US Army Corps of Engineers; Community Council Big Lake; Fire Service Area #136 West Lakes; Road Service Area #21 Big Lake; MSB Emergency Services, Assessments, or Pre-Design Division; or MEA.

CONCLUSION: The preliminary plat of BEAVER FLATS MASTER PLAN is consistent with AS 29,40.070 Platting Regulations and MSB 43.15.016 Preliminary Plats. The vacation of the 50' wide public use easement is consistent with MSB 43.15.035(B). There were no objections from any federal or state agencies, or utilities. There was one objection from Planning Division to the vacation and private roads. There were no objections to the plat from the public in response to the Notice of Public Hearing; two concerns were received. Legal and physical access will exist to the proposed lots, consistent with MSB 43.20.100 Access Required, MSB 43.20.120 Legal Access and MSB 43.20.140 Physical Access. Frontage for the subdivision will exist, pursuant to MSB 43.20.320 Frontage. A soils report was submitted, pursuant to MSB 43.20.218(A)(1).

FINDINGS OF FACT

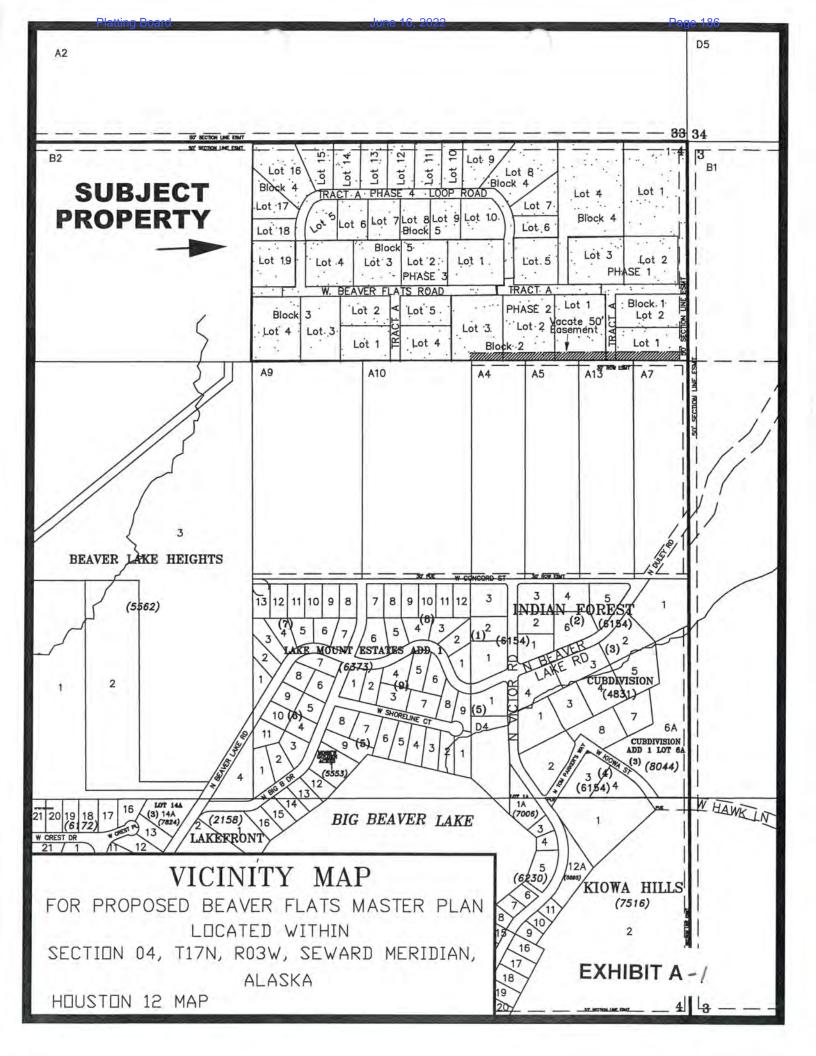
- The plat of Beaver Flats Master Plan is consistent with AS 29.40.070 Platting Regulations and MSB 43.15.016 Preliminary Plats.
- 2. The vacation is consistent with MSB 43.15.035(B).
- A soils report was submitted, pursuant to MSB 43.20.281(A)(1). An updated soils report will be required, once fill/regrading has been accomplished.
- 4. The lots have the required frontage pursuant to MSB 43.20.320 and MSB 43.20.300(E) Flag lots.
- At the time of staff report write-up, there were no responses to the Request for Comments from US Army Corps of Engineers; Community Council Big Lake; Fire Service Area #136 West Lakes; Road Service Area #21 Big Lake; MSB Emergency Services, Assessments, or Pre-Design Division; or MEA.
- 6. There were no objections from any federal or state agencies, or utilities.
- 7. There was one objection from Planning Division to the vacation and private roads.
- There were no objections from the public in response to the Notice of Public Hearing; two concerns were received.
- 9. This subdivision will be served by private roads.

RECOMMENDATIONS OF CONDITIONS OF APPROVAL

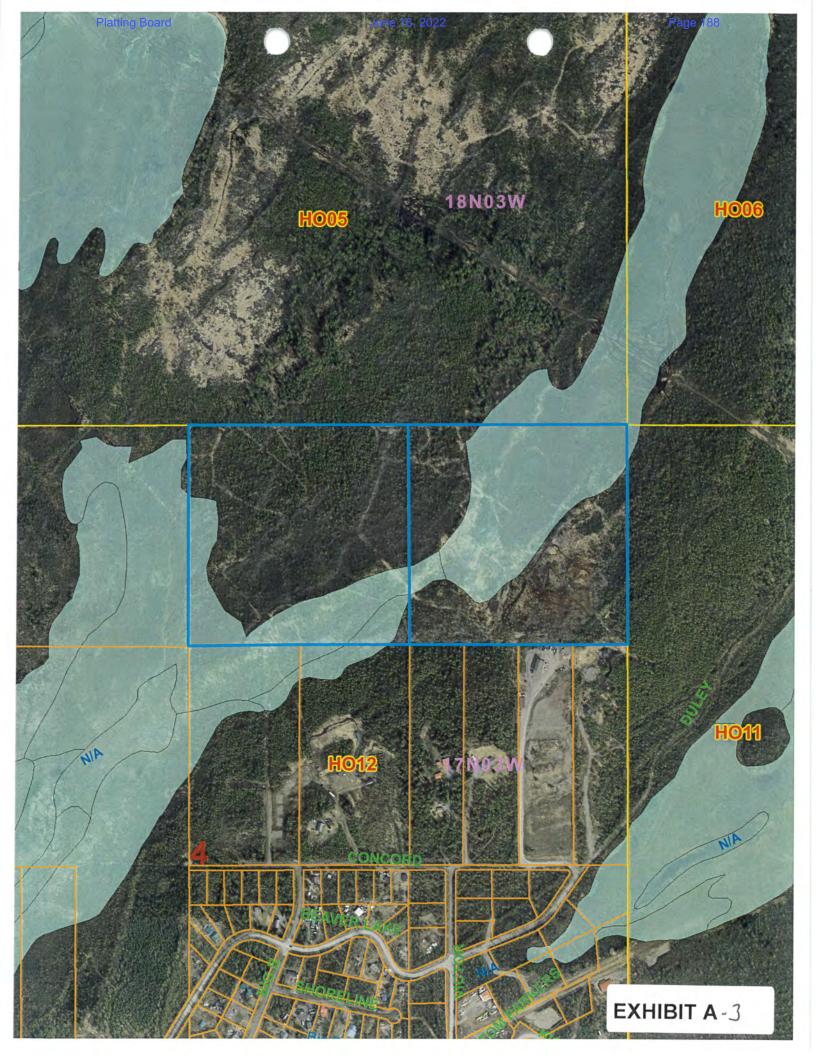
Suggested motion: I move to approve the preliminary plat of Beaver Flats Master Plan, Section 04, Township 17 North, Range 03W, Seward Meridian, Alaska, contingent on staff recommendations

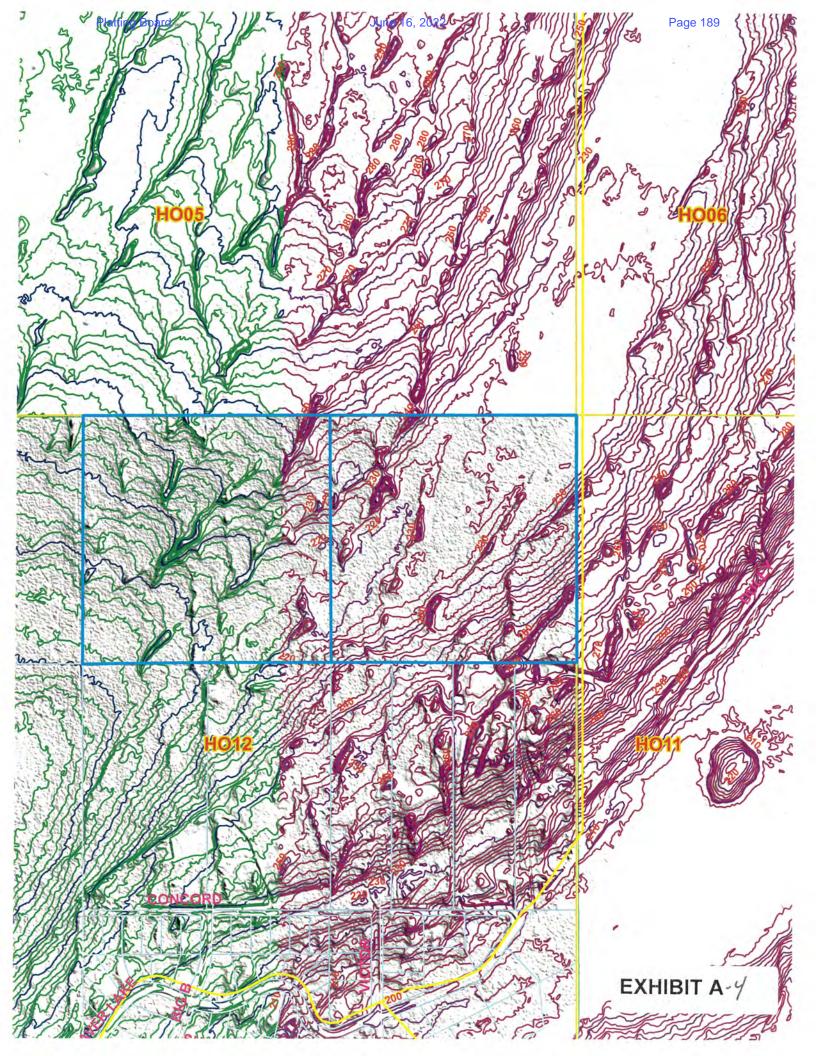
- 1. Obtain approval of the vacation from the Assembly within 30 days of the written decision.
- Taxes and special assessments must be paid in full for the year of recording, pursuant to MSB 43.15.053(F) and AS 40.15.020. For each phase plat, pay taxes and special assessments (LIDs), by CERTIFIED FUNDS OR CASH.
- Provide updated Certificate to Plat executed within seven (7) days of recording of plat and submit Beneficiary Affidavit for any holders of a beneficial interest for each phase plat.
- Pay postage and advertising fees.

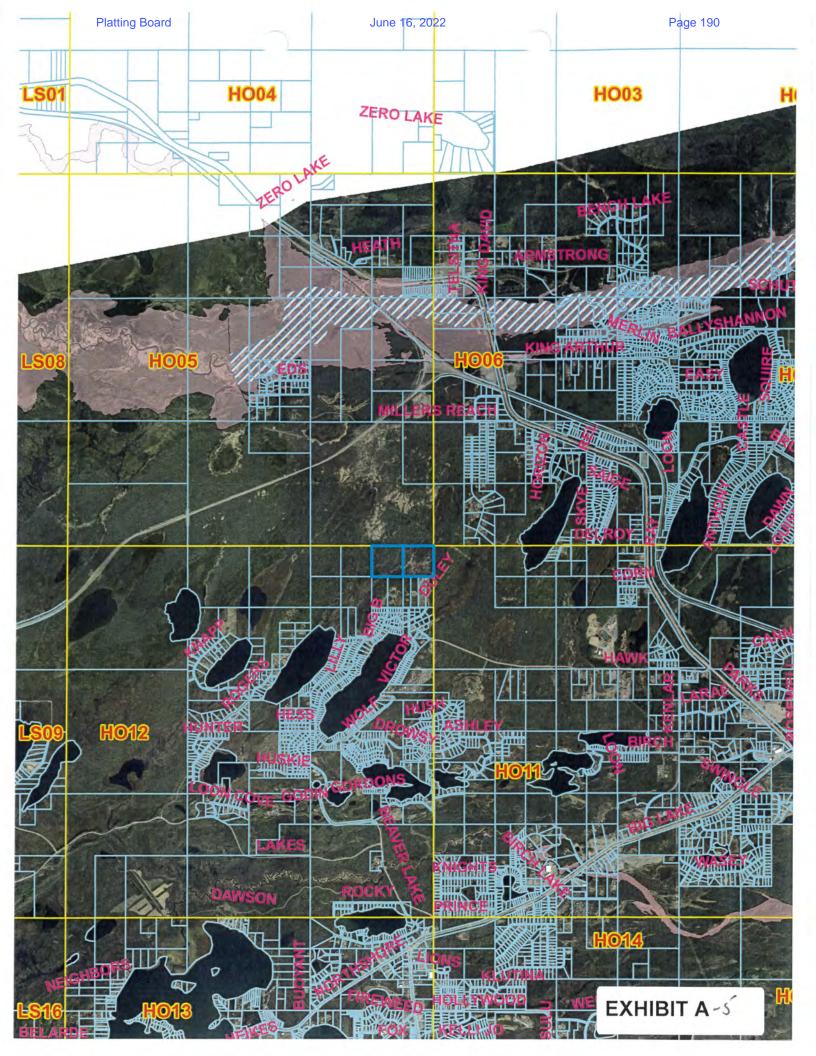
- Construct interior street and cul-de-sac to MSB residential street standards. Construct the Section Line Easement, the right-of-way of N. Duley Road and a portion of N. Beaver Lake Road to residential subcollector standard:
 - a. Submit cost estimate, arrange a pre-construction meeting with Department of Public Works (DPW), pay inspection fee and obtain a Notice to Proceed from Platting staff. Submit street inspection reports as required by Section F1.4, F1.5 and F1.6 of the Subdivision Construction Manual.
 - b. Dedicate and construct temporary cul-de-sacs on the western and eastern stub roads.
 - c. Ensure the angle between N. Duley Road and the Section Line Easement (SLE) is no less than 70 degrees for a distance of 75' from the intersection point.
 - d. Provide easement documentation for the portion of N. Duley Road from W. Concord Street northeast to the Section Line Easement.
 - e. Provide DPW acceptance of the road to Platting staff.
 - f. Platting staff to approve all road names.
 - g. Provide as-built of streets once construction is complete.
- 6. Provide document for private road maintenance to Platting staff, pursuant to MSB 20.20.100(4).
- Section 404 of the Clean Water Act requires a DA permit be obtained for the placement or discharge of dredged and/or fill materials into the water of the US, including jurisdictional wetlands. Petitioner to obtain a wetlands permit, if necessary.
- 8. Provide updated soils report, once the fill and regrading have been completed.
- 9. Show all easements of record on each phase plat.
- 10. Submit recording fees, payable to Department of Natural Resources (DNR), for each phase plat.
- 11. Submit phase plats in full compliance with Title 43.





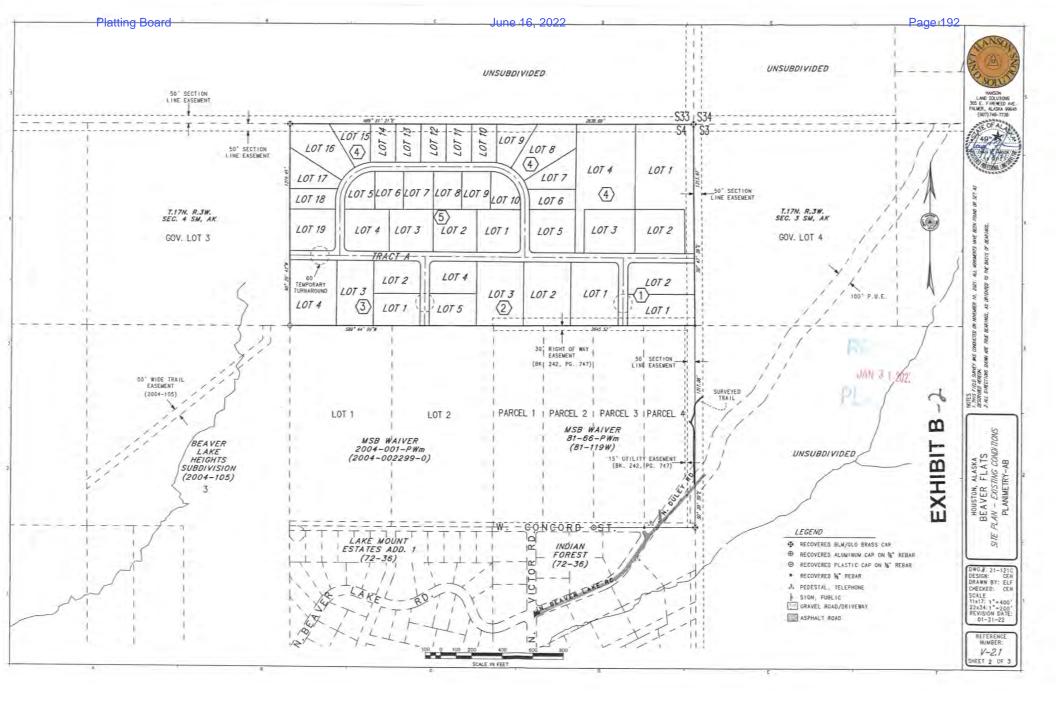


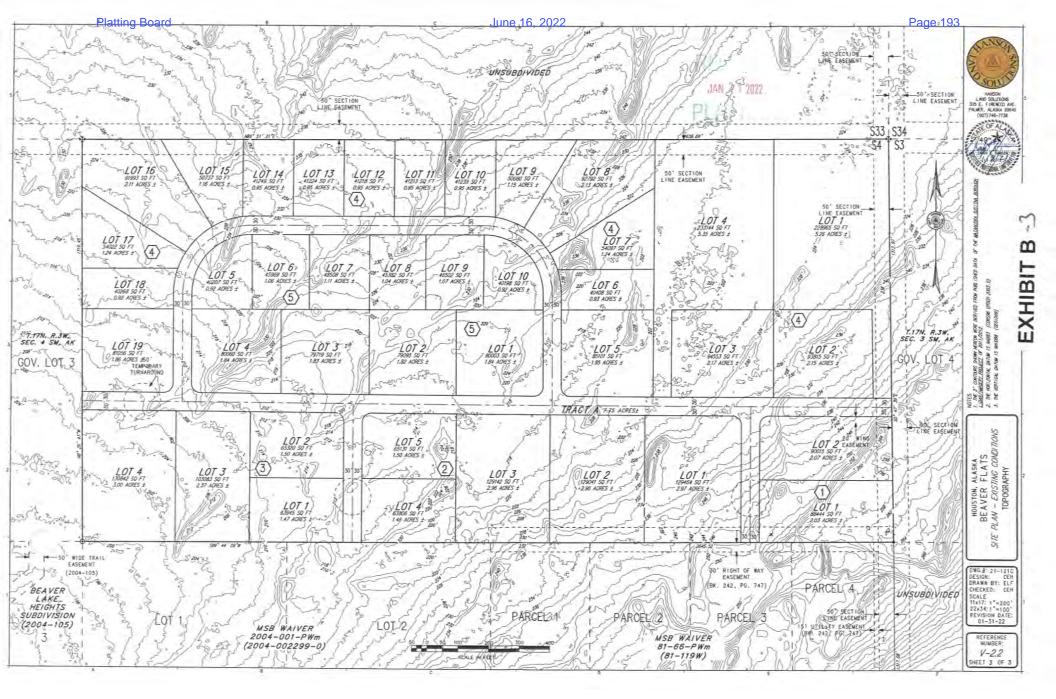






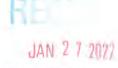






SURVEYING, ENGINEERING & LAND DEVELOPMENT SERVICES 305 E. Fireweed Ave. Palmer, AK 99645





USEABLE AREA CERTIFICATION

BEAVER FLATS SUBDIVISION

A SUBDIVISION OF

GOVERNMENT LOTS 1 & 2, SEC 4, T17N R3W, SM, AK

INTRODUCTION TO INVESTIGATION

The following report outlines parameters and conclusions of an investigation into the suitability of the proposed subdivision lots for supporting construction and on-site waste-water treatment. Consideration is limited to only those lots containing less than 400,000 square feet of area and the report specifically addresses parameters set forth in Title 43.20.281 of the Matanuska-Susitna Borough Code.

	INDIVIDUAL LOTS: MINIMUM SIZES
X	All lots within this proposed subdivision are composed of at least 40,000 square feet in total area.
	EXCEPTIONS:
	USABLE BUILDING AREAS
	CONFLICTING USE CONSIDERATIONS:
X	All land recognized as suitable for Building Area is outside of lands dedicated to Public Use and lands reserved by Mat-Su Borough Improvement Setbacks, including boundary and water/wetland setbacks.
	TOPOGRAPHIC/PLANIMETRIC CONSIDERATIONS:
\boxtimes	All land recognized as suitable for Building Area is characterized by slopes and soils upon which construction is possible.
	USABLE SEPTIC AREAS
	CONFLICTING USE CONSIDERATIONS:
\times	All land recognized as suitable for Useable Septic Area is outside of any land dedicated to Public Use.
\boxtimes	The Useable Septic Area is not situated within any easement (Utility or otherwise) such that use of said easement would interfere with an on-site septic.
	TOPOGRAPHIC/PLANIMETRIC CONSIDERATIONS:
X	The useable area consists entirely of land sloping less than 25% or will be at final certification.
\boxtimes	The useable area is set back 50° from any slopes exceeding 25% with more than 10° of elevation change or will be at final certification.
X	The useable area is not less than 100' from the mean high water of any body of water, swamp, bog or marsh
\boxtimes	The useable area is not less than 200' from any public water well, nor less than 100' from any known private water well
\boxtimes	The useable area is outside of any known debris burial site.
	SOILS INVESTIGATION
	EXCAVATIONS
\boxtimes	Test-holes or borings have been made such that the bottom of the excavation is at least 12' deep and "shallow trench" or "bed systems" are anticipated
	Test-holes or borings have been made such that the bottom of the excavation is at least 16' deep and "deep trench" or "sewage pits will likely be used
	Test-holes or borings were made to the depth of permafrost or an impermeable layer. (test holes with permafrost or impermeable layer):

	SOIL CLASSIFICATIONS			
		on system area are expected to have a form Soils Classification System as:	percolation rate of 15 m	inutes per inch or faster and have
	(GW) TEST HOLES:	norm sons emasmenton system us.	(GP) TEST HOLES	S
	(SW) TEST HOLES:		(SP) TEST HOLES	
\boxtimes	Soils within the potential absorpti Classification System as:	on system area have been shown by n	nechanical analysis to be	classified under the Uniform Soils
-	(GM) TEST HOLES: 5, 9		(SM) TEST HOLES	8: 1, 2, 3, 4, 6, 7, 8, 10
		on system area have been shown by a nservation (ADEC) regulations to hav		
	Bedrock, Clay, or other impermea	ble stratum was encountered.	TEST HOLES:	
		GROUND WATER INVES	STIGATION	
	No groundwater was encountered		TIGATION .	
\boxtimes		some Test Holes and excavation conti	nued at least 2° below en	counter depth. Seasonal High Wal
	Monitoring Test I	loles May through October:	TEST HOLES	5: 2, 3, 4, 6, 7, 8, 10
	Monitoring Test I			
		ottling or Staining Analysis:	TEST HOLES	D.
\boxtimes	☐ Soil Mo	ottling or Staining Analysis:		
\boxtimes		ottling or Staining Analysis:		5; 2, 3, 4, 6, 7, 8, 10
	Depth to seasonal high water is a n	ottling or Staining Analysis: nin, of 8*		
	Soil Mo	ottling or Staining Analysis: nin, of 8*		5: 2, 3, 4, 6, 7, 8, 10
	Depth to seasonal high water is a notate to seasonal high water is less Fill will be re	ottling or Staining Analysis: nin, of 8* ss than 8* equired	TEST HOLES	5: 2, 3, 4, 6, 7, 8, 10
\boxtimes	Depth to seasonal high water is a reduced by the seasonal high water is less Fill will be residued.	ottling or Staining Analysis: nin, of 8' ss than 8' equired	TEST HOLES uitable standard design v	2, 3, 4, 6, 7, 8, 10 will be provided
	Depth to seasonal high water is a notate to seasonal high water is less Fill will be re	ottling or Staining Analysis: nin, of 8' ss than 8' equired	TEST HOLES	2, 3, 4, 6, 7, 8, 10 vill be provided
\boxtimes	Depth to seasonal high water is a reduced by the seasonal high water is less Fill will be reduced by SUM. Additional Fill required to ensure the seasonal high water is less SUM.	ottling or Staining Analysis: nin, of 8' ss than 8' equired	TEST HOLES uitable standard design v	2, 3, 4, 6, 7, 8, 10 will be provided
\boxtimes	Depth to seasonal high water is a reduced by the seasonal high water is less Fill will be residued.	is than 8' sequired As IMARY OF REQUIRED FU 8' of coverage above water table ons preclude the reasonable nee and a standard septic	TEST HOLES uitable standard design v	2, 3, 4, 6, 7, 8, 10 vill be provided
\boxtimes	Depth to seasonal high water is a result of the seasonal high water is less Fill will be result. SUM Additional Fill required to ensure to the following special consideration creation of 8° of water table clearare design will be provided and constructions.	ottling or Staining Analysis: nin, of 8' ss than 8' equired As IMARY OF REQUIRED FU 8' of coverage above water table ons preclude the reasonable nee and a standard septic ucted:	TEST HOLES uitable standard design v RTHER ACTION Lots:	2, 3, 4, 6, 7, 8, 10 vill be provided
\boxtimes	Depth to seasonal high water is a reduced by the seasonal high water is less of the se	ottling or Staining Analysis: nin, of 8' ss than 8' equired As IMARY OF REQUIRED FU 8' of coverage above water table ons preclude the reasonable nee and a standard septic ucted:	TEST HOLES uitable standard design v	2, 3, 4, 6, 7, 8, 10 vill be provided
\boxtimes	Depth to seasonal high water is a result of the seasonal high water is less Fill will be result. SUM Additional Fill required to ensure to the following special consideration creation of 8° of water table clearare design will be provided and constructions.	pattling or Staining Analysis: min, of 8* is than 8' equired	TEST HOLES uitable standard design v RTHER ACTION Lots:	2, 3, 4, 6, 7, 8, 10 vill be provided
	Depth to seasonal high water is a reduced by the seasonal high water is less of the seasonal high water is a reduced to establish to seasonal high water is a reduced to seasonal high water is less of the seasonal high w	ottling or Staining Analysis: nin, of 8' ss than 8' equired As IMARY OF REQUIRED FU 8' of coverage above water table ons preclude the reasonable nee and a standard septic ucted: minate slopes in excess of 25% lish sufficient usable area.	TEST HOLES uitable standard design v RTHER ACTION Lots:	2, 3, 4, 6, 7, 8, 10 vill be provided
	Depth to seasonal high water is a report to seasonal high water is less of Fill will be resulted. SUM Additional Fill required to ensure to the following special consideration of 8° of water table clearare design will be provided and construction of 8° of water table clearare design will be provided and construction. The following special consideration of 8° of water table clearare design will be provided and construction. The following special consideration of 8° of water table clearare design will be required to eliminate to the following special consideration of 8° of water table clearare design will be required to eliminate to the following special consideration of 8° of water table clearare design will be required to eliminate the following special consideration of 8° of water table clearare design will be required to eliminate the following special consideration of 8° of water table clearare design will be required to eliminate the following special consideration of 8° of water table clearare design will be required to eliminate the following special consideration of 8° of water table clearare design will be required to eliminate the following special consideration of 8° of water table clearare design will be required to eliminate the following special consideration of 8° of water table clearare design will be required to eliminate the following special consideration of 8° of water table clearare design will be required to eliminate the following special consideration of 8° of water table clearare design will be required to eliminate the following special consideration of 8° of water table clearare design will be required to eliminate the following special consideration of 8° of water table clearare design will be required to eliminate the following special consideration of 8° of water table clearare design will be required to eliminate the following special consideration of 8° of water table clearare design will be required to eliminate the following special consideration of 8° of water table clearare	pattling or Staining Analysis: min, of 8' as than 8' equired	TEST HOLES uitable standard design v RTHER ACTION Lots:	2; 2, 3, 4, 6, 7, 8, 10 vill be provided L2-3, B2; L 3-4, B3; L1-19, B4.
□ I have foreg	Depth to seasonal high water is a repetit to seasonal high water is a result of the proposed 43.20.281 of the Matanuska-Susitive forms of the proposed and contraction of the proposed 43.20.281 of the Matanuska-Susitive parameters have directed my	pattling or Staining Analysis: min, of 8° is than 8' equired	TEST HOLES uitable standard design v RTHER ACTION Lots:	s; 2, 3, 4, 6, 7, 8, 10 vill be provided
□ I have foregoing as for	Depth to seasonal high water is a respective fill will be respectively. Sum additional Fill required to ensure the following special consideration of 8° of water table clearar design will be provided and construction of 8° of water table clearar design will be provided and construction of 8° of water table clearar design will be provided and construction of 8° of water table clearar design will be required to elim No further action required to established as a seasonal field of the proposed 43.20.281 of the Matanuska-Susiting parameters have directed my this ons for all lots with an area less flows: I. All contain sufficient over	is than 8' sequired As IMARY OF REQUIRED FU 8' of coverage above water table ons preclude the reasonable note and a standard septic ucted: Ininate slopes in excess of 25% Ish sufficient usable area. Is subdivision in light of the Borough Code. The investigation. My to than 400,000 sq. ft. are rall area 2. All have at	TEST HOLES uitable standard design v RTHER ACTION Lots:	2; 2, 3, 4, 6, 7, 8, 10 vill be provided L2-3, B2; L 3-4, B3; L1-19, B4.
	Depth to seasonal high water is a real popular to seasonal high water is a real popular to seasonal high water is less of Fill will be real popular to ensure the following special consideration of 8° of water table clear a design will be provided and construction of 8° of water table clear and the following will be required to elim to further action required to established the following parameters have directed my clusions for all lots with an area less those to follows: L. All contain sufficient over 10,000 square feet of "Useable But."	ottling or Staining Analysis: nin, of 8' ss than 8' equired As IMARY OF REQUIRED FU 8' of coverage above water table ons preclude the reasonable nee and a standard septic ucted: minate slopes in excess of 25% lish sufficient usable area. I subdivision in light of in Borough Code. The investigation. My is than 400,000 sq. ft. are rall area 2. All have at ilding Area" 3. All have at	TEST HOLES uitable standard design v RTHER ACTION Lots:	s; 2, 3, 4, 6, 7, 8, 10 vill be provided
I have Title forego concerns to least will a	Depth to seasonal high water is a result of the proposed 43.20.281 of the Matanuska-Susitive grange parameters have directed my husions for all lots with an area less those of a guare feet of "Contiguous once the specified Fill, Re-Grading uses once the specified Fill, Re-Grading	is than 8' equired As IMARY OF REQUIRED FU 8' of coverage above water table ons preclude the reasonable nee and a standard septic ucted: Ininate slopes in excess of 25% Ish sufficient usable area. I subdivision in light of the investigation. My is than 400,000 sq. ft. are reall area 2. All have at liding Area" 3. All have at Useable Septic Area" or	TEST HOLES uitable standard design v RTHER ACTION Lots: Lots:	Size 2, 3, 4, 6, 7, 8, 10 vill be provided L2-3, B2; L 3-4, B3; L1-19, B4; L1, L4-6, L10, B5;
I have Title forego concerns to least will a	Depth to seasonal high water is a result of the proposed 43.20.281 of the Matanuska-Susitivisms for all lots with an area less llows: I. All contain sufficient over 10,000 square feet of "Contiguous"	is than 8' equired As IMARY OF REQUIRED FU 8' of coverage above water table ons preclude the reasonable nee and a standard septic ucted: Ininate slopes in excess of 25% Ish sufficient usable area. I subdivision in light of the investigation. My is than 400,000 sq. ft. are reall area 2. All have at liding Area" 3. All have at Useable Septic Area" or	TEST HOLES uitable standard design v RTHER ACTION Lots: Lots:	2, 3, 4, 6, 7, 8, 10 vill be provided
I have foregoing as for least least will a Design of the least least will a least le	Depth to seasonal high water is a respective formula of the proposed 43.20.281 of the Matanuska-Susitive formula parameters have directed my dusions for all lots with an area less flows: I. All contain sufficient over 10,000 square feet of "Contiguous once the specified Fill, Re-Grading girs have been provided."	is than 8' sequired As IMARY OF REQUIRED FU 8' of coverage above water table ans preclude the reasonable nee and a standard septic ucted: Ininate slopes in excess of 25% Ish sufficient usable area. I subdivision in light of the investigation. My is than 400,000 sq. ft. are reall area 2. All have at at Useable Septic Area" or and Standard Septic 1//8/2 Z	TEST HOLES uitable standard design v RTHER ACTION Lots: Lots:	Size 2, 3, 4, 6, 7, 8, 10 vill be provided L2-3, B2; L 3-4, B3; L1-19, B4; L1, L4-6, L10, B5;
I have foregoing as for least least least least Simo	Depth to seasonal high water is a result of the proposed 43.20.281 of the Matanuska-Susitive grange parameters have directed my husions for all lots with an area less those of a guare feet of "Contiguous once the specified Fill, Re-Grading uses once the specified Fill, Re-Grading	is than 8' equired As IMARY OF REQUIRED FU 8' of coverage above water table ons preclude the reasonable nee and a standard septic ucted: Ininate slopes in excess of 25% Ish sufficient usable area. I subdivision in light of the investigation. My is than 400,000 sq. ft. are reall area 2. All have at liding Area" 3. All have at Useable Septic Area" or	TEST HOLES uitable standard design v RTHER ACTION Lots: Lots:	Size 2, 3, 4, 6, 7, 8, 10 vill be provided L2-3, B2; L 3-4, B3; L1-19, B4; L1, L4-6, L10, B5;

GEOTECHNICAL ANALYSIS – SOIL INSPECTION LOG										
Parcel:	GOVERNMENT LOTS 1 & 2, SEC 4, T17N R3W, SM, AK	TEST HOLE NO.	Date:	10-12-21						
Insp. By:	SIMON GILLILAND	1	Job #	21-121						

	TEST HOLE EXCAVATION ANALYSIS		TE	ST HOLE	LOCAT	ION MAP				
1ft 2ft 3ft			See attached							
4ft				PERCOL	ATION	TEST				
5ft		Reading	Date	Gross Time	Net Time	Depth to Water	Net Drop			
6ft		1								
		2								
7ft SM	SILTY SANDS, SAND-SILT MIXTURES	3								
		4								
8ft		5								
9ft		7								
210		8								
Oft		9								
		10								
1ft		- 11								
		12								
12ft				Iole Diam.						
				un Betwee	n:					
13ft				ft and		ft Deep				
14ft 15ft 16ft 17ft				Mex S	49 1H W 3 SIMON C CE-	Milus GILLILAND GILLILAND	A THE STATE OF THE			
8ft		COMM	ENTS:		10000	ESSION				
9ft										
Oft										
Depth			WATE	ER LEVEI	MONI	TORING				
14ft	Total Depth of Test Hole		Date		TER LE					
None	Depths where Seeps encountered									
None	Depths where Ground Water encountered									
	Depths where Impermeable Soil (Silt / Clay / Bedrock encountered									
None No	Monitor Tube Installed?									



BEAVER FLATS SUBDIVISION

A SUBDIVISION OF

GOVERNMENT LOTS 1 & 2, SEC 4, T17N R3W, SM, AK

Mechanical Analysis

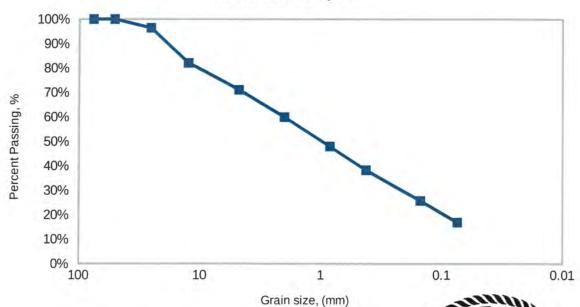
Date Sampled: 10/12/2021
Date Started: 01/13/2022
Date Completed: 01/17/2022

TH- 1
Sample depth: 8 ft

Project #: 21-121

					Percent	Passing				
Sieve	3"	2"	1"	1/2"	#4	#10	#20	#40	#100	#200
TH-1	100%	100%	96%	82%	71%	60%	48%	38%	26%	16.8%

Mechanical Analysis



Soil Classification: SM

PI= LL= PL= Non-Plastic

Simon Sillilon Date

Professional Engineer

1/18/22



GEOTECHNICAL ANALYSIS – SOIL INSPECTION LOG										
Parcel:	GOVERNMENT LOTS 1 & 2, SEC 4, T17N R3W, SM, AK	TEST HOLE NO.	Date:	10-12-21						
Insp. By:	SIMON GILLILAND	2	Job#	21-121						

		TEST HOLE EXCAVATION ANALYSIS		TE	ST HOLE	LOCAT	TON MAP	
1ft	OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PLASTICITY	See attached					
2ft 3ft	PT	PT PEAT AND OTHER HIGHLY ORGANIC SOILS						
4ft			-		PERCOL	ATION	TEST	
5ft			Reading	Date	Gross	Net	Depth to	Net Drop
184		WELL CRAPED CAMPS OF THE LANGUAGE MODERATE PARTS OF TAXABLE	L.Y. DICKE	277	Time	Time	Water	O STORES
6ft	SW-SM	WELL-GRADED SANDS, GRAVELLY SANDS, MODERATE FINES, SILTY SANDS, SAND-SILT MIXTURES	1 2					
7ft			3					
			4					
8ft			5					
			6					
9ft			7					
			8					
0ft			9					
			10					
1ft			11					
2ft			12	Dana I	Iole Diam.	(in).		
1211			+		dun Betwee			
13ft					ft and	-	ft Deep	
14ft 15ft 16ft					16	49 IH Mon	Billiland	X
7ft 8ft		7			No.	CE TO PROPRO	19/27 ENSIT	ع
			COMM	ENTS:			NASAR.	
9ft								
0ft								
D	epth			WATI	ER LEVEI	L MONT	FORING	
		Total Depth of Test Hole		Date		TER LE		
	None	Depths where Seeps encountered						
	1.5ft	Depths where Ground Water encountered						
	None	Depths where Impermeable Soil (Silt / Clay / Bedrock encountered						
	YES	Monitor Tube Installed?						



BEAVER FLATS SUBDIVISION

A SUBDIVISION OF

GOVERNMENT LOTS 1 & 2, SEC 4, T17N R3W, SM, AK

Mechanical Analysis

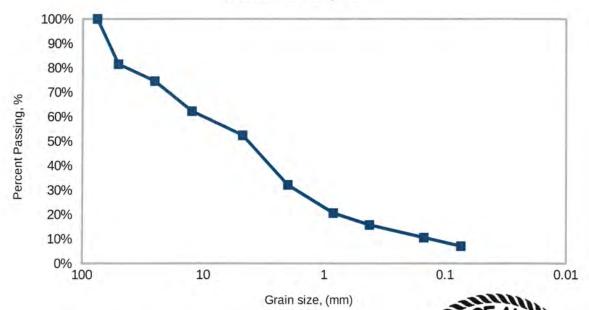
Date Sampled: 10/12/2021
Date Started: 01/13/2022
Date Completed: 01/17/2022

TH- 2
Sample depth: 6 ft

Project #: 21-121

					Percent	Passing				
Sieve	3"	2"	1"	1/2"	#4	#10	#20	#40	#100	#200
TH-2	100%	81%	75%	62%	52%	32%	21%	16%	10%	7.0%

Mechanical Analysis



Soil Classification: SW-SM

PI= LL= PL= Non-Plastic

Simon Gilliland P.E.

Professional Engineer

1/18/22



GEOTECHNICAL ANALYSIS – SOIL INSPECTION LOG									
Parcel:	GOVERNMENT LOTS 1 & 2, SEC 4, T17N R3W, SM, AK	TEST HOLE NO.	Date:	10-12-21					
Insp. By:	SIMON GILLILAND	3	Job#	21-121					

		TEST HOLE EXCAVATION ANALYSIS		TE	ST HOLE	LOCAT	ION MAP		
1ft	OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PLASTICITY	See attached						
2ft 3ft	ML	INORGANIC SILTS & VERY FINE SANDS, ROCK FLOUR							
4ft					PERCOL	ATION	TEST		
5ft			Reading	Date	Gross Time	Net Time	Depth to Water	Net Drop	
6ft			t						
			2						
7ft			3						
064		WELL CHARE CAMPS CHAVELLY SANDS MODERATE PAGE OF THE	4						
8ft	SW-SM	WELL-GRADED SANDS, GRAVELLY SANDS, MODERATE FINES, SILTY SANDS, SAND-SILT MIXTURES	5						
9ft		SALLO SIET MATORES	7						
H			8						
Oft			9						
ore			10						
1ft			11						
			12						
2ft				Perc. I	lole Diam.	(in.):			
				Test R	un Betwee	n:			
3ft					ft and		ft Deep		
14ft 15ft 16ft 17ft					Miles & S.	49 TH SIMON C. CE: SPECIFICATION	8.U.h. 6.U.h. 6.11.1.AND 10731 19722 555,001A	* A Marian Manian Marian Maria	
			COMM	ENTS:			Hans		
9ft									
Oft									
D	epth			WATI	ER LEVEI	MONI	TORING		
		Total Depth of Test Hole		Date	WA	TER LE	VEL		
	7ft	Depths where Seeps encountered							
	lone	Depths where Ground Water encountered							
	lone	Depths where Impermeable Soil (Silt / Clay / Bedrock encountered							
		Monitor Tube Installed?							



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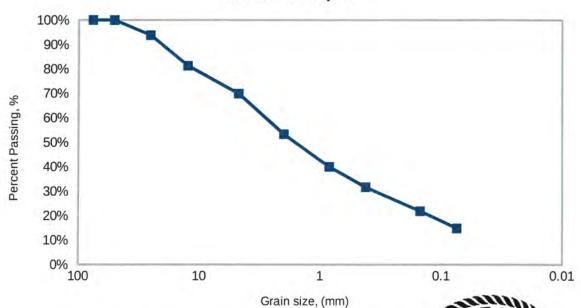
Mechanical Analysis

Date Sampled: 10/12/2021 Date Started: 01/13/2022 **Date Completed:** 01/17/2022

TH-3 Sample depth: 8ft Project #: 21-121

					Percent	Passing				
Sieve	3"	2"	1"	1/2"	#4	#10	#20	#40	#100	#200
TH-3	100%	100%	94%	81%	70%	53%	40%	32%	22%	14.8%

Mechanical Analysis



Soil Classification: SW-SM

PI= LL= PL= Non-Plastic

Simon Gilliland P.E.

Professional Engineer

	GEOTECHNICAL ANALYSIS – SOIL INSPECTION LOG								
Parcel:	GOVERNMENT LOTS 1 & 2, SEC 4, T17N R3W, SM, AK	TEST HOLE NO.	Date:	10-12-21					
Insp. By:	SIMON GILLILAND	4	Job#	21-121					

		TEST HOLE EXCAVATION ANALYSIS		TE	ST HOLE	LOCAT	ION MAP		
1ft	OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PLASTICITY			See	attached			
2ft	SW-SM	WELL-GRADED SANDS, GRAVELLY SANDS, MODERATE FINES, SILTY SANDS, SAND-SILT MIXTURES	r l						
3ft									
4ft					PERCOL	ATION	TEST		
5ft	SM	SILTY SANDS, SAND-SILT MIXTURES	Reading	Date	Gross Time	Net Time	Depth to Water	Net Drop	
6ft			1						
			2						
ft			3						
			4						
Bft			5						
			6						
ft			7						
			8						
0ft			9						
			10						
1ft			11						
			12						
2ft					Iole Diam				
20			+ +		ft and		6.6		
3ft			1		ft and		ft Deep		
4ft 5ft 6ft 7ft					16 × 8	49 TH Man SIMON C CE	Billih Gilliland 10731		
8ft			COMM	ENTS:	.,0	PROPERTY.	ESSIONAL		
9ft									
0ft									
I	epth		T	WATI	ER LEVE	L MONI	FORING		
		Total Depth of Test Hole	1 1	Date		TER LE			
		Depths where Seeps encountered							
		Depths where Ground Water encountered							
1									
		Depths where Impermeable Soil (Silt / Clay / Bedrock encountered							



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Mechanical Analysis

Date Started: 01/13/2022

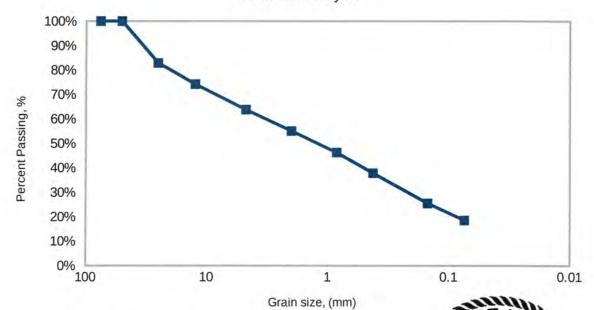
Date Completed: 01/17/2022

TH- 4
Sample depth: 4 ft

Project #: 21-121

					Percent	Passing				
Sieve	3"	2"	1"	1/2"	#4	#10	#20	#40	#100	#200
TH- 4	100%	100%	83%	74%	64%	55%	46%	38%	25%	18.5%

Mechanical Analysis



Soil Classification: SM

PI= LL= PL= Non-Plastic

Simon Gilliland P.E.

Professional Engineer

1/18/22 Date

	GEOTECHNICAL ANALYSIS – SOII	INSPECTION LOG		
Parcel:	GOVERNMENT LOTS 1 & 2, SEC 4, T17N R3W, SM, AK	TEST HOLE NO.	Date:	10-12-21
Insp. By:	SIMON GILLILAND	5	Job#	21-121

		TEST HOLE EXCAVATION ANALYSIS		TE	ST HOLE	LOCAT	ION MAP	
1ft	OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PLASTICITY			See	attached	6	
2ft								
3ft								
4ft								
A					PERCOL	ATION	TEST	
5ft			Reading	Date	Gross Time	Net Time	Depth to Water	Net Drop
6ft			1					
7ft	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	3					
11			4					
8ft			5					
12.5			6					
9ft			7					
			8					
0ft			9					
			10					
1ft			11					
2ft			12	Perc I	Hole Diam.	(in.):		
211			7 1		Run Betwee			
3ft			7 1		ft and		ft Deep	
4ft 5ft 6ft					16	49 TH	Billily C	***************************************
7ft 8ft			COMM	ENTS:	W. S.	CE-	110731 8/22 ESSIONAL END	
8ft			COMM	ENTS:	William I	CE-	110731 8/22 ESSIONAL	
8ft 9ft			COMM	ENTS:	(A)	CE-	110731 8/22 ESSIONA	
8ft 9ft 0ft	epth		COMM		ER LEVE	CE PROPRIED	TORING	
8ft 9ft 0ft	2ft	Total Depth of Test Hole	COMM			CEP PROPRIED		
8ft 9ft Oft De	2ft one	Depths where Seeps encountered	COMM	WAT				
8ft 9ft Oft N N	2ft		COMM	WAT				



BEAVER FLATS SUBDIVISION

A SUBDIVISION OF

GOVERNMENT LOTS 1 & 2, SEC 4, T17N R3W, SM, AK

Mechanical Analysis

Date Sampled: 10/12/2021 Date Started: 01/13/2022

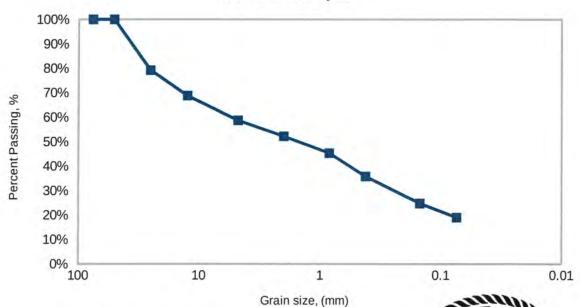
Date Completed: 01/17/2022

5 TH-Sample depth: 8ft

Project #: 21-121

					Percent	Passing				
Sieve	3"	2"	1"	1/2"	#4	#10	#20	#40	#100	#200
TH-5	100%	100%	79%	69%	59%	52%	45%	36%	25%	18.9%

Mechanical Analysis



Soil Classification: GM

PI= LL= PL= Non-Plastic

Simon Gilliland P.E.

Professional Engineer



	GEOTECHNICAL ANALYSIS – SOII	L INSPECTION LOG		
Parcel:	GOVERNMENT LOTS 1 & 2, SEC 4, T17N R3W, SM, AK	TEST HOLE NO.	Date:	10-12-21
Insp. By:	SIMON GILLILAND	6	Job#	21-121

		TEST HOLE EXCAVATION ANALYSIS		TE	ST HOLE	LOCAT	ION MAP	
1ft	OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PLASTICITY			See	attached		
2ft 3ft	SW-SM	WELL-GRADED SANDS, GRAVELLY SANDS, MODERATE FINES, SILTY SANDS, SAND-SILT MIXTURES						
4ft					PERCOL	ATION	TEST	
5ft			Reading	Date	Gross Time	Net Time	Depth to Water	Net Drop
6ft			1					
			2					
7ft	SM	SILTY SANDS, SAND-SILT MIXTURES	3					
3ft			5					
M			6					
)ft			7					
11			8					
Oft			9					
			10					
1ft			11					
			12					
2ft					Hole Diam.			
					Run Betwee			
3ft					ft and		ft Deep	
14ft 15ft 16ft 17ft					Month of the second	49 TH SIMON C CE	BULLAND.	
			COMM	ENTS:			Illian.	
9ft								
0ft								
D	epth			WAT	ER LEVE	L MONI	FORING	
		Total Depth of Test Hole		Date	WA	TER LE	EVEL	
	4ft	Depths where Seeps encountered						
N		Depths where Ground Water encountered Depths where Impermeable Soil (Silt / Clay / Bedrock encountered						



BEAVER FLATS SUBDIVISION

A SUBDIVISION OF

GOVERNMENT LOTS 1 & 2, SEC 4, T17N R3W, SM, AK

Mechanical Analysis

Date Started: 01/13/2022

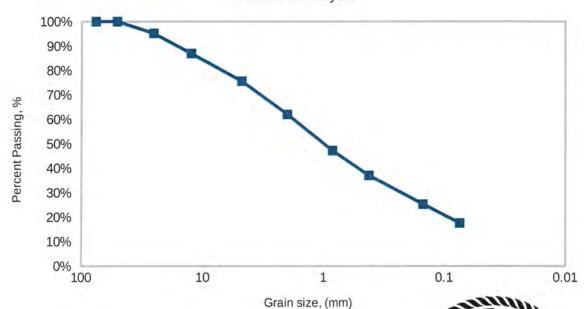
Date Completed: 01/17/2022

TH- 6
Sample depth: 6 ft

Project #: 21-121

					Percent	Passing				
Sieve	3"	2"	1"	1/2"	#4	#10	#20	#40	#100	#200
TH-6	100%	100%	95%	87%	76%	62%	47%	37%	25%	17.5%

Mechanical Analysis



Soil Classification: SM

PI= LL= PL= Non-Plastic

Simon Gilliland P.E.

Professional Engineer

1/18/22

SIMON C. GILLILAND
CE-110731
CE-110731
CE-PROFESSIONAL

	GEOTECHNICAL ANALYSIS – SOII	L INSPECTION LOG		
Parcel:	GOVERNMENT LOTS 1 & 2, SEC 4, T17N R3W, SM, AK	TEST HOLE NO.	Date:	10-12-21
Insp. By:	SIMON GILLILAND	7	Job#	21-121

		TEST HOLE EXCAVATION ANALYSIS		TE	ST HOLE	LOCAT	ION MAP	
1ft	OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PLASTICITY			See	attached		
2ft								
3ft								
4ft					DEDCOL	ATION	TECT	
5ft			Reading	Date	Gross Time	Net Time	Depth to Water	Net Drop
6ft			1					
			2					
7ft	SM	SILTY SANDS, SAND-SILT MIXTURES	3					
			4					
8ft			5					
			6					
9ft			7					
			8					
0ft			9					
			10					
1ft			11					
			12			7		
2ft			- +		Hole Diam. tun Betwee			
3ft					ft and	_	ft Deep	
4ft					2	ATE OF	ALAG	4.
5ft 6ft					**	49 TH	8 LELI	
7ft					1	SIMON C	GILLILAND	
8ft			COMM	ENTS:	100	ERED PROP	ESSIONAL ENON	
9ft			Comm					
Oft								
Do	epth		T	WATI	ER LEVE	L MONI	TORING	
	2ft	Total Depth of Test Hole		Date		ATER LE		
	4ft	Depths where Seeps encountered						
- 2								
	one	Depths where Ground Water encountered						
N	one one	Depths where Ground Water encountered Depths where Impermeable Soil (Silt / Clay / Bedrock encountered						



BEAVER FLATS SUBDIVISION

A SUBDIVISION OF

GOVERNMENT LOTS 1 & 2, SEC 4, T17N R3W, SM, AK

Mechanical Analysis

Date Sampled: 10/12/2021 Date Started:

Date Completed:

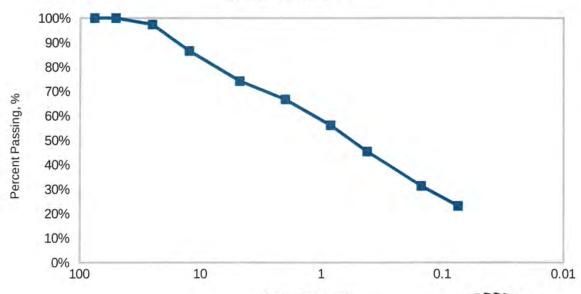
01/13/2022 01/17/2022

7 TH-

Sample depth: 8ft Project #: 21-121

	Percent Passing																
Sieve	3"	2"	1"	1/2"	#4	#10	#20	#40	#100	#200							
TH- 7	100%	100%	97%	87%	74%	67%	56%	45%	31%	23.1%							

Mechanical Analysis



Grain size, (mm)

Soil Classification: SM

LL= PL= Non-Plastic PI=

Simon Gilliland P.E.

Professional Engineer

GEOTECHNICAL ANALYSIS – SOIL INSPECTION LOG										
Parcel:	GOVERNMENT LOTS 1 & 2, SEC 4, T17N R3W, SM, AK	TEST HOLE NO.	Date:	10-12-21						
Insp. By:	SIMON GILLILAND	8	Job#	21-121						

		TEST HOLE EXCAVATION ANALYSIS		TE	ST HOLE	LOCAT	TON MAP				
1ft	OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PLASTICITY			See	attached					
2ft											
3ft											
4ft					DEDCOL	PERCOLATION TEST					
5ft			Reading	Date	Gross Time	Net Time	Depth to Water	Net Drop			
6ft	SM	SILTY SANDS, SAND-SILT MIXTURES	1								
-			2								
7ft			3								
			4								
ft			5								
			6								
Oft			7								
			8								
0ft			9								
			10								
1ft			-11								
			12								
2ft				Perc. I	Hole Diam	. (in.):					
				Test R	Run Betwee	en:					
3ft			4 1		ft and		ft Deep				
4ft					بج	TE O	ALAG	٥.			
5ft					760 **	49 TH	*	*1			
6ft					3.3	imon	Belliha				
7ft					118	SIMON C	GILLILAND 110731	É			
8ft			COMM	ENTS.	.4	SPED PROP	ESSIONAL ENG				
			COMM								
9ft											
0ft	epth			WATI	ER LEVE	L MONI	TORING	-			
Oft De	epth Oft	Total Depth of Test Hole		WATI	ER LEVE	L MONI					
Oft Do	0ft	Total Depth of Test Hole Depths where Seeps encountered									
Oft Do		Depths where Seeps encountered									
Oft Do 1 3	0ft .5ft										



BEAVER FLATS SUBDIVISION

A SUBDIVISION OF

GOVERNMENT LOTS 1 & 2, SEC 4, T17N R3W, SM, AK

Mechanical Analysis

Date Sampled: 10/12/2021

Date Started: 01/13/2022

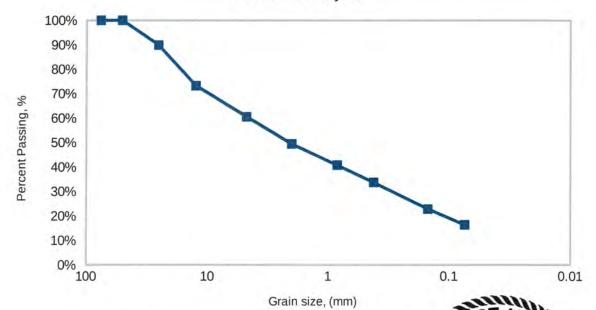
Date Completed: 01/17/2022

2021 TH- 8
2022 Sample depth: 6 ft

Project #: 21-121

					Percent	Passing										
Sieve	3"	2"	1"	1/2"	#4	#10	#20	#40	#100	#200						
TH-8	100%	100%	90%	73%	61%	49%	41%	34%	23%	16.3%						

Mechanical Analysis



Soil Classification: SM

PI= LL= PL= Non-Plastic

Simon Gilliland P.E.

1/18/22 Date

Professional Engineer

Date

GEOTECHNICAL ANALYSIS – SOIL INSPECTION LOG											
Parcel:	GOVERNMENT LOTS 1 & 2, SEC 4, T17N R3W, SM, AK	TEST HOLE NO.	Date:	10-12-21							
Insp. By:	SIMON GILLILAND	9	Job#	21-121							

		TEST HOLE EXCAVATION ANALYSIS		TE	ST HOLE	LOCAT	ION MAP				
1ft	OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PLASTICITY			See	attached					
2ft											
3ft											
4ft											
					PERCOLATION TEST						
5ft			Reading	Date	Gross Time	Net Time	Depth to Water	Net Drop			
6ft			1								
23	GW-GM	WELL-GRADED GRAVELS, GRAVEL-SAND MIX, MODERATE FINES,	2								
7ft		SILTY SANDS, SAND-SILT MIXTURES	3								
0.0			4								
8ft			6								
9ft			7								
2.00			8								
10ft			9								
			10								
11ft			11								
			12								
12ft					Hole Diam.	1					
126			1 1	Test Run Between: ft and ft Deep							
13ft			-		n anu		пъсер				
14ft					المحيد	E OF	ALAS	1 0.			
15ft			3imon Billi				X	**			
16ft							Selling.				
17ft					1	CE-	10731	2			
18ft			COMM	ENTS:	.0	PROF	ESSIONAL				
19ft			- Jimin								
20ft											
Г	epth			WATI	ER LEVEI	MONI	ORING				
		Total Depth of Test Hole		Date		TER LE					
	None	Depths where Seeps encountered									
		Depths where Ground Water encountered									
		Depths where Impermeable Soil (Silt / Clay / Bedrock encountered									
	No	Monitor Tube Installed?									



BEAVER FLATS SUBDIVISION

A SUBDIVISION OF

GOVERNMENT LOTS 1 & 2, SEC 4, T17N R3W, SM, AK

Mechanical Analysis

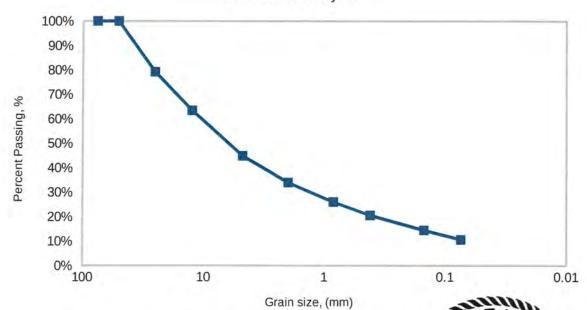
Date Started: 01/12/2021
Date Started: 01/13/2022
Date Completed: 01/17/2022

TH- 9
Sample depth: 8 ft

Project #: 21-121

					Percent	Passing											
Sieve	3"	2"	1"	1/2"	#4	#10	#20	#40	#100	#200							
TH- 9	100%	100%	79%	63%	45%	34%	26%	21%	14%	10.6%							

Mechanical Analysis



Soil Classification: GW-GM

PI= LL= PL= Non-Plastic

Simon Gilliland P.E.

Professional Engineer

1/18/22 Date

GEOTECHNICAL ANALYSIS – SOIL INSPECTION LOG										
Parcel:	GOVERNMENT LOTS 1 & 2, SEC 4, T17N R3W, SM, AK	TEST HOLE NO.	Date:	10-12-21						
Insp. By:	SIMON GILLILAND	10	Job#	21-121						

		TEST HOLE EXCAVATION ANALYSIS		TE	ST HOLE	LOCAT	ION MAP	
1ft	OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PLASTICITY			See	attached		
2ft								
3ft								
4ft					PERCOI	ATION	TEST	
5ft			Reading	Date	Gross Time	Net Time	Depth to Water	Net Drop
6ft			1					
			2					
7ft	SM	SILTY SANDS, SAND-SILT MIXTURES	3					
8ft			5					
***			6					
9ft			7					
			8					
0ft			9					
			10					
1ft			11					
			12	-				
2ft					Hole Diam			
3ft			+		Run Betwee	1	ft Deep	
Jit					it and	- 22	an beep	
4ft						⊋ OF	AL	
					Z	VIC.	10	10.
5ft					10	49 TH	X	10
-					3		0.01.0.	
6ft					10	May	Billing	3
7ft					100	SIMON C	GILLILAND .	
/14					100	201/1	10/31	2
8ft				n. ma	1	CHED PROF	ESSIONAL	
9ft			COMM	ENIS:				
Oft								
	epth			WATI	ER LEVE	L MONI	FORING	
	3ft	Total Depth of Test Hole		Date		TER LE		
(6ft	Depths where Seeps encountered						
	one	Depths where Ground Water encountered						
	one	Depths where Impermeable Soil (Silt / Clay / Bedrock encountered						
	ES	Monitor Tube Installed?						



BEAVER FLATS SUBDIVISION

A SUBDIVISION OF

GOVERNMENT LOTS 1 & 2, SEC 4, T17N R3W, SM, AK

Mechanical Analysis

Date Sampled: 10/12/2021

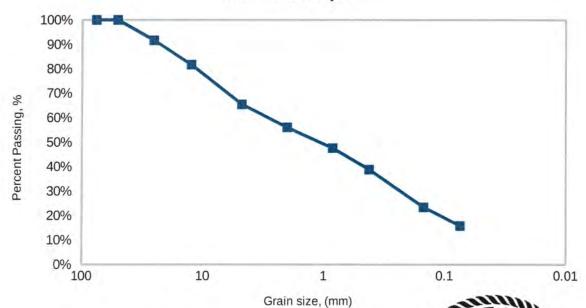
Date Started: 01/13/2022
Date Completed: 01/17/2022

TH- 10
Sample depth: 8 ft

Project #: 21-121

					Percent	Passing				
Sieve	3"	2"	1"	1/2"	#4	#10	#20	#40	#100	#200
TH- 10	100%	100%	92%	82%	65%	56%	48%	39%	23%	15.7%

Mechanical Analysis



Soil Classification: SM

PI= LL= PL= Non-Plastic

0. 0000

Simon Gilliland P.E.

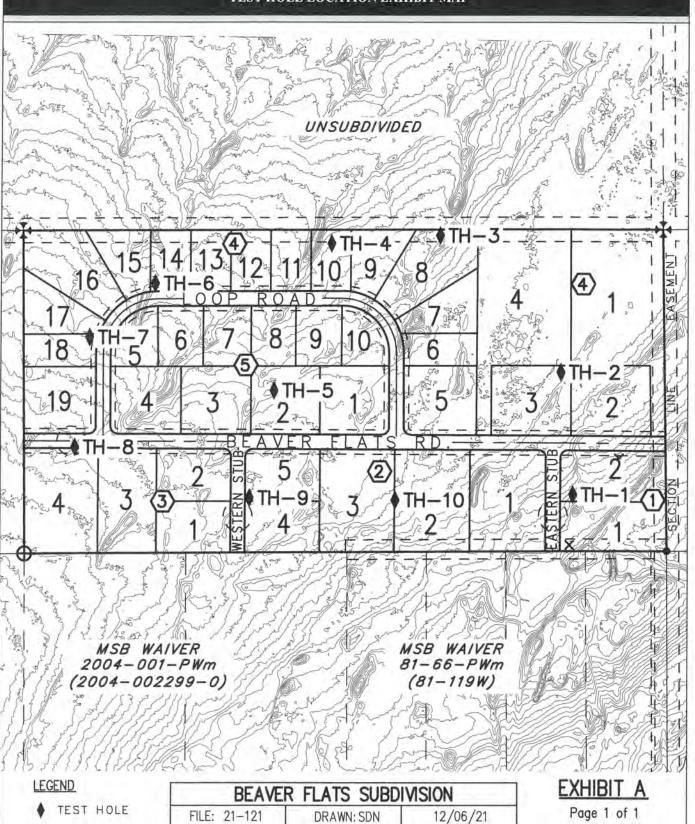
Professional Engineer

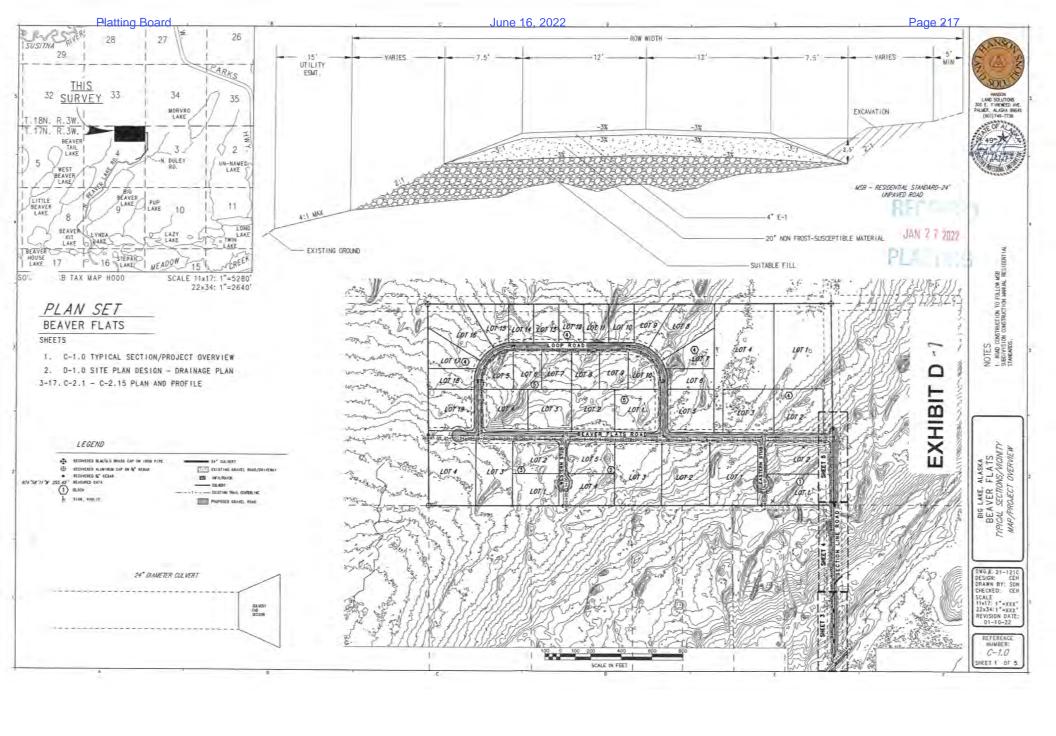
1/18/22 Date

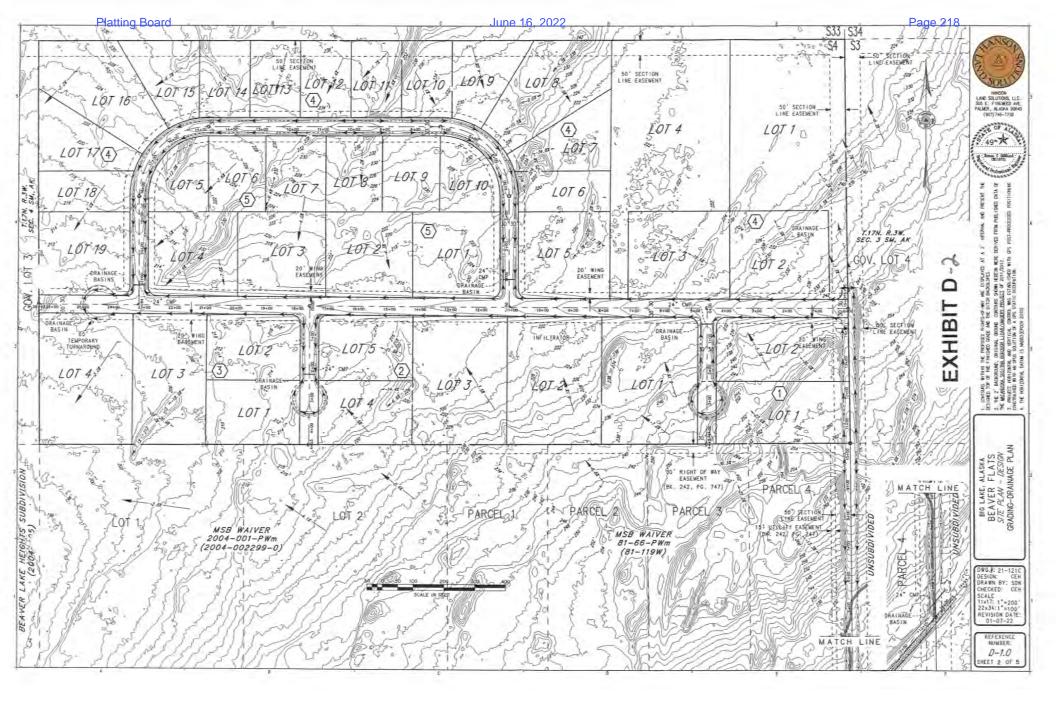


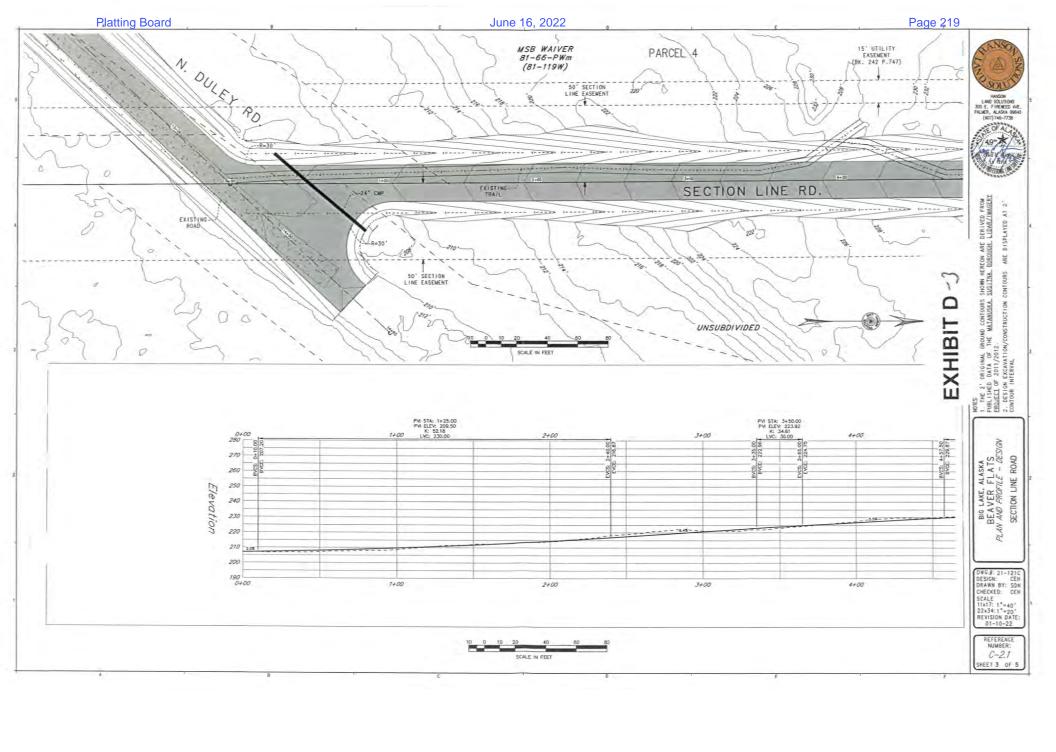
SUR VEYING, ENGINEERING, & LAND DEVELOPMENT SERVICES
305 EAST FIREWEED AVENUE PALMER, ALASKA, 99645

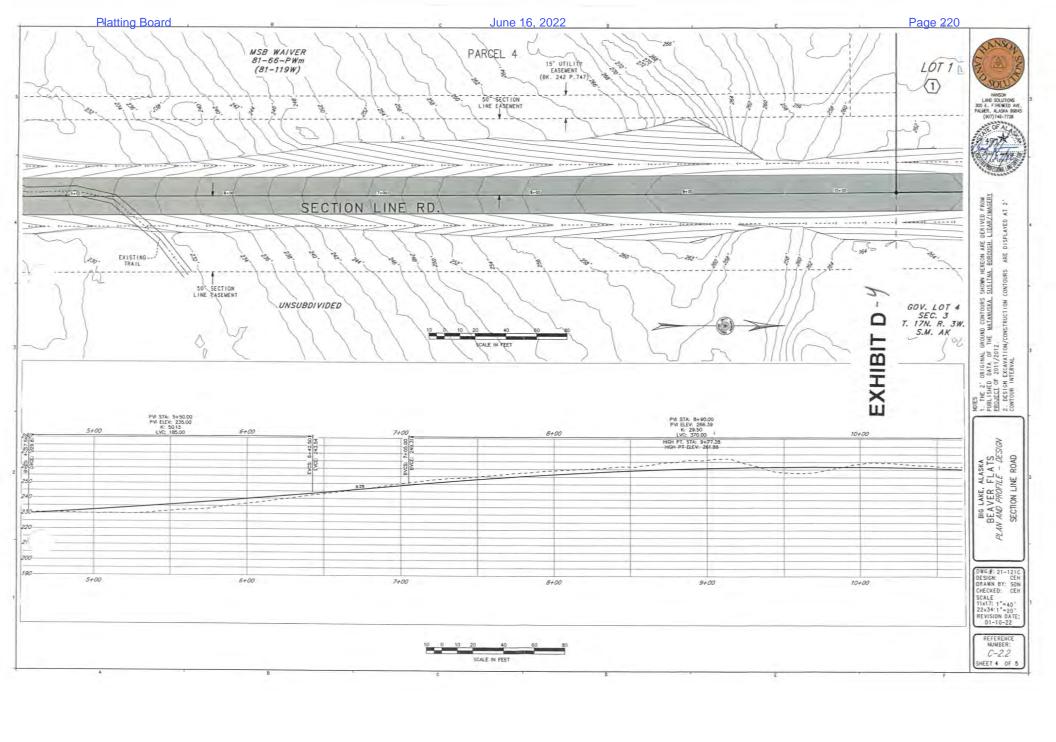
TEST HOLE LOCATION EXHIBIT MAP

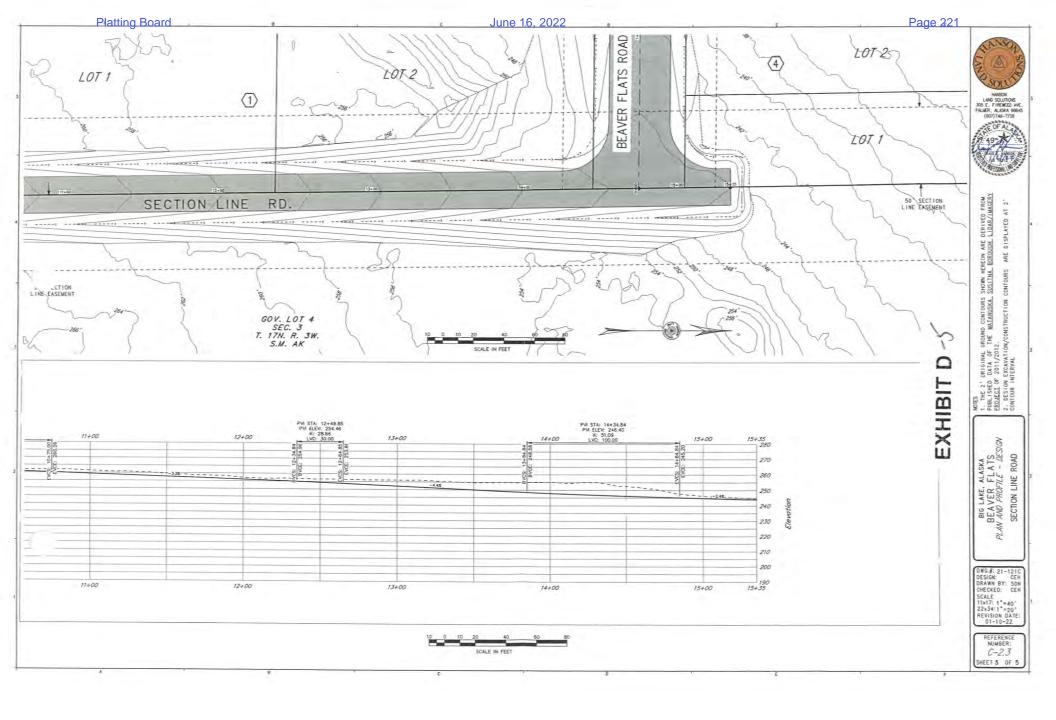












HANSON LAND SOLUTIONS

SURVEYING, ENGINEERING & LAND DEVELOPMENT SERVICES 305 E. FIREWEED AVE. PALMER, AK 99645



December 17, 2021

Fred Wagner, PLS MSB Platting Officer 350 E Dahlia Ave Palmer, Alaska 99645

Beaver Flats Subdivision



Dear Mr. Wagner,

Please reference the attached calculation tables with regards to ADT counts within the proposed subdivision and the anticipated exit routes.

Table A: Existing ADT Counts at Adjacent Intersections

Road Intersection	Average Daily Traffic (ADT		
N. Duley Rd. and Section Line	30		
N. Duley Rd. and W Concord St. / N Beaver Lakes Rd.	70		
N Beaver Lakes Rd. exiting at N. Victor Rd.	260		

Based on the current plan the subdivision is anticipated to increase traffic on N Duley Rd by 410 ADT. With a proposed plat of 40 lots this adds an additional 400 total ADT; also potentially routes additional lot to the west through the subdivision for an additional 10 ADT. See Table B below showing post subdivision updated ADT totals.

HANSON LAND SOLUTIONS

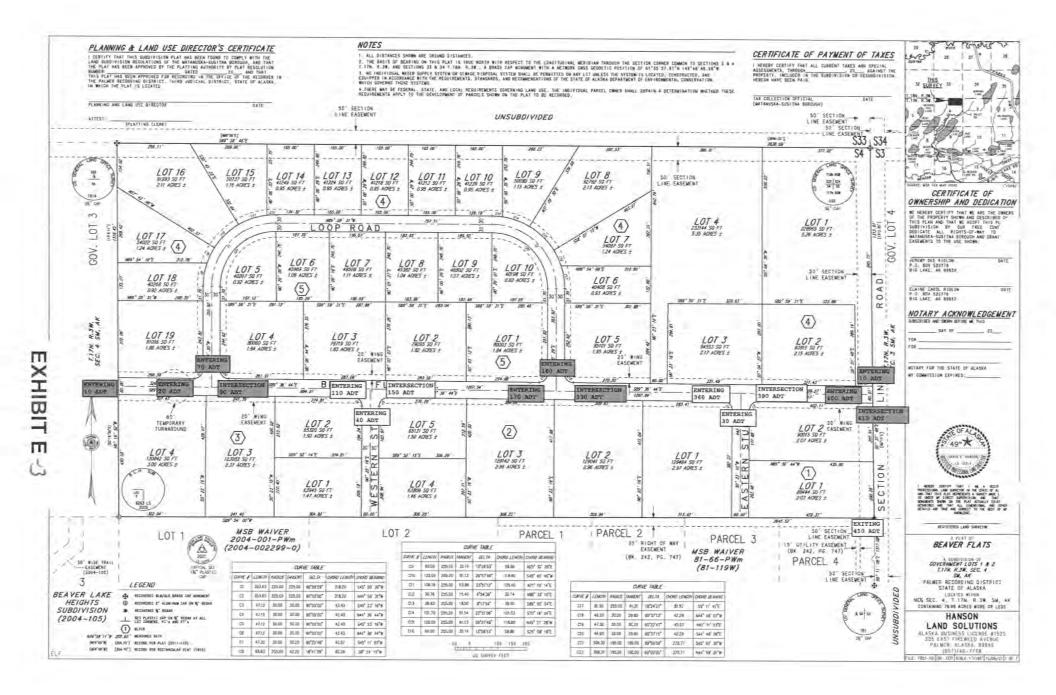
SURVEYING, ENGINEERING & LAND DEVELOPMENT SERVICES
305 E. FIREWEED AVE. PALMER, AK 99645

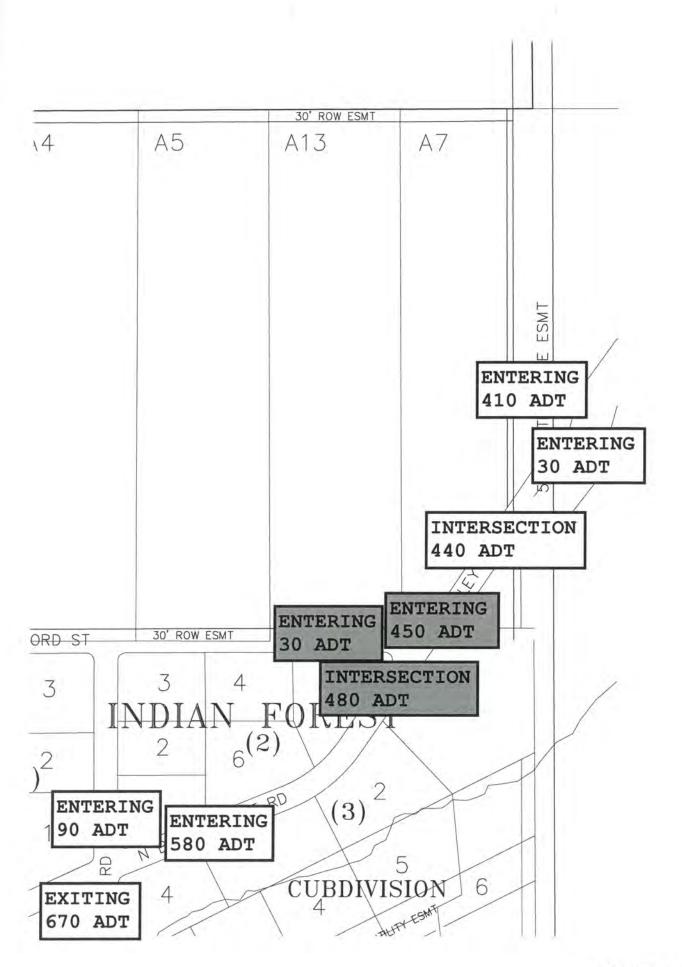
Table B: Anticipated Future ADT Counts at Adjacent and Created Intersections

Road Intersection	Average Daily Traffic (ADT		
Existing Intersections			
N. Duley Rd. and Section Line	440		
N. Duley Rd. and W Concord St. / N Beaver Lakes Rd.	480		
N Beaver Lakes Rd. exiting at N. Victor Rd.	670		
New Intersections	1-1		
Beaver Flats and Section Line	410		
Beaver Flats and Eastern Stub	390		
Beaver Flats and E end Loop Rd	330		
Beaver Flats and Western Stub	150		
Beaver Flats and W end Loop Rd	90		

Respectfully,

Simon Gilliland, PE Hanson Land Solutions 305 E, Fireweed Ave. Palmer, AK 99645 (907)746-7738



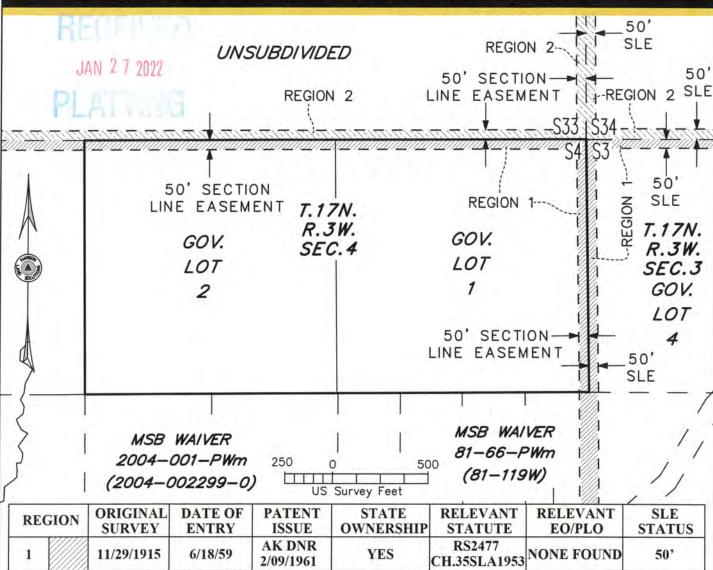


HANSON LAND SOLUTIONS

SURVEYING, ENGINEERING, & LAND DEVELOPMENT SERVICES

305 EAST FIREWEED AVENUE PALMER, ALASKA, 99645

SECTION LINE EASEMENT & ROW DETERMINATION RESEARCH



REGION	ORIGINAL SURVEY	DATE OF ENTRY	PATENT ISSUE	STATE OWNERSHIP	RELEVANT STATUTE	RELEVANT EO/PLO	SLE STATUS
1	11/29/1915	6/18/59	AK DNR 2/09/1961	YES	RS2477 CH.35SLA1953	NONE FOUND	50'
2	12/4/1915	6/18/59	AK DNR 2/09/1961			NONE FOUND	



INFORMATION PRESENTED HEREON PRESENTS THE RESULTS OF RESEARCH CONDUCTED UNDER MY SUPERVISION TO DETERMINE THE EXISTENCE OF SECTION LINE EASEMENTS OVER THE DEPICTED REGIONS. I HEREBY CERTIFY THAT THE IDENTIFIED EASEMENTS EXIST AS SHOWN BASED ON THE PRESENTED RESEARCH RESULTS AND COMMONLY ACCEPTED PRINCIPLES OF SECTION LINE EASEMENT EXISTENCE DETERMINATION IN THE STATE OF ALASKA.

CRAIG HANSON, PLS

DETERMINATION MADE FOR REGIONS ADJACENT TO SECTION LINES COMMON TO SECTIONS 3&4 OF T.17N. R.3W. SM, AK AND SECTIONS 33&34 T.18N. R.3.W SM, AK. File: 21-121 | Scale: 1"=500' | Drawn: SDN | 01/12/22 | P.1 OF 1

Matanuska-Susitna Borough Telephone (907) 861-7874 350 East Dahlia Avenue Palmer, Alaska 99645-6488

PETITION FOR VACATION OF RIGHT-OF-WAY

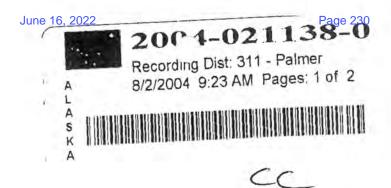
Comes now the	undersigned, HANSON LAND SOLUTIONS	, and petitions the
Matanuska-Susi to-wit:	itna Borough to vacate the right-of-way lying with	hin the following described property,
GOVERN	MENT LOT 1, SECTION 4, T. 17N. R. 3	W. SEWARD MERIDIAN, AK
Onlist alabet after		
	y being more fully described as:	T. 17N. R.3W. S.M. AK
	(ATTACH SUPPLEMENTAL SHEET IF APPL	ICABLE)
Submitted herev	with are the following:	
 A recorde \$250.00 F 	the plat showing the right-of-way to be vacated ed public easement creating the public right-of-water Right-of-Way Vacation Fee with Regular Plat; or For Stand Alone Vacation.	vay; and
The action soug	ht by this petition is for the following reason(s):	(ATTACH PAGES, IF NEEDED)
APPLICANT	Name: HASON LAND SOLUTIONS	Email:_platting@hlsalaska.com
OR	Mailing Address: 305 E. FIREWWED AVE	. PALMER, AK Zip: 99645
OWNER	Contact Person: CRAIG HANSON	Phone: (907) 746-7738
SURVEYOR	Name (FIRM): Hanson Land Solutions	Email: admin@hansonlandsolutions.com
	Mailing Address: 305 E Fireweed Ave Palmer AK	Zip: 99645
	Contact Person; Craig Hanson	Phone:(907)746-7738

SIGNATURES OF PETITIONER(S):	
11.011	
Ciay CHans	_
NOTE: In accordance with MCD 42.45	(00F/D)
	5.035(D), vacations of public rights-of-way are il or Borough Assembly. The City Council or
	the date of Platting Board written decision in veto the action.
willen to	veto the action.
	oooooooooooooooooooooo
THIS AREA TO BE COMPLETED	D BY THE MATANUSKA-SUSITNA BOROUGH
THE APPLICATION HAS BEEN REVIEWE NOTED ABOVE.	D AND FOUND TO MEET SUBMITTAL STANDARDS AS
4/12/22	any 9. Oth Duck
DATE	PLATTING DIVISION REPRESENTATIVE
SCHEDULED FOR PLATTING BOARD MEETING O	5/19/21
SOURCE TO THE POPULATION OF THE PROPERTY OF TH	11.11

EXHIBIT G 2

The proposed vacation of the PUE recorded at 2004-021138-0 will remove an easement that will no longer needed with the recording of Beaver Flats Subdivision.

With this new subdivision, the easterly Lot 4 of MSB Waiver 81-66-PWm (81-119W) will be provided with a constructed public road the entire length of it's eastern boundary. Parcel 3 of said Waiver will be receiving additional access to the north via the "Eastern Stub" road of the new subdivision. Parcels 1 and 2 of said Waiver will retain access via W. Concord St. and Lot 2 of MSB Waiver 2004-001-PWm (2004-002299) will be afforded access via the new "W. Stub Rd" in addition to it's current access via W. Concord St.



MSB#004231 2004 Spring Land Sale Project #04-151 Parcel#03-030

704-0984

QUITCLAIM DEED

The GRANTOR, Matanuska-Susitna Borough, a municipal corporation organized and existing under the laws of the state of Alaska, whose address is 350 East Dahlia Avenue, Palmer, Alaska 99645, for Ten Dollars (\$10.00) and other valuable consideration, receipt of which is hereby acknowledged, conveys and quitclaims to the GRANTEE(S), Leonard T. Kelley, a married man, whose address of record is 821 N Street, #206, Anchorage, Alaska 99501, all interest it has, if any, in the following described real property:

Government Lot 1, Section 4, Township 17 North, Range 3 West, Seward Meridian, located in the Palmer Recording District, Third Judicial District, State of Alaska.

TOGETHER WITH all the improvements thereon, if any, and all rights of the Grantor to any and all hereditaments and appurtenances hereto;

RESERVING UNTO THE GRANTOR, its successors and assigns, a public use easement being described as the South fifty feet (50°) of said parcel, for ingress and egress, roadways, rights-of-way, utilities, and slopes for cut and fill; and

SUBJECT TO all reservation, exceptions, easements, covenants, conditions, restrictions, and plat notes of record.

Dated this ZZad day of July , 2004.

GRANTOR:

MATANUSKA-SUSITNA BOROUGH, a municipal corporation by:

ATTEST: MICHELLE M. McGEHEE

Borough Clerk

IOHN DUFFY

Borough Manager

(SEAL)

1

GRANTEE'S ACCEPTANCE

-7

1 pm/0			
Leonard T. Kelley, GRA	NTEE		
	GRANTOR'S A	ACKNOWLEDGMENT	
STATE OF ALASKA))ss.		
Third Judicial District).		
On <u>fuly</u> personally known to me, of the municipal corpora	appeared and acknowled	Duffy, manager of the Mai	tanuska-Susitna Borough, who is ed the Quitclaim Deed on behalf
of the municipal corpora		Notary Public for My commission e	State of Alaska xpires: 9/19/04
	GRANTEE'S A	ACKNOWLEDGMENT	xpires: 9/19 O. A. S. In K. S.
STATE OF ALASKA))ss.		0 00110
THIRD JUDICIAL DIS		20	Mary
On 7/30		Celley, personally appeared	Alask William
<u>v</u>	who is personally known whose identity I proved whose identity I proved of	on the basis of	_
	re me that he signed the	Quitclaim Deed for the pur	rposes stated therein.
(SEAL) OFFICE STATE O LINDA L	- 100411./_	Notary Public for State of My commission expires:	flaill alaske
	***************************************	Return to: GRAN	NTEE

2



EXHIBIT G -5

RIGHT-OF-WAY VACATION POSTING AFFIDAVIT

In accordance with MSB 43.10.065(G), I hereby certify that I posted the prescribed vacation notice for 30 days prior to the public hearing along the boundary of the property at all common points of access to that portion of the proposed right-of-way vacation.

Date Posted: 5/2/22		Platting Case #: 2022-013
Public Hearing date: June 2	2, 2022	
Elaine Ridlon		El A
Printed Name		Signature
PO BOX 520776		907-982-7530
Mailing Address		Phone Number
Big Lake	Zip:99652	
NOTARY CERTIFICATION		
State of Alaska)	
Third Judicial District)ss)	
SUBSCRIBED and SWORN t	o (or affirmed) befor	re me this 5 day of May
20 <u>22</u> , by <u>Elaine</u> R	of signers(s))	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Raphul I Mayer
7*****	-	(signature and seal of notary)
RACHEL I. MO Notary Publ State of Alas	ic)	My commission expires: 12/02/2023
My Commission Expires		

EXHIBIT G -6

From: Jamie Taylor

Sent: Wednesday, April 27, 2022 2:58 PM

To: Amy Otto-Buchanan

Cc: Elaine Flagg

Subject: RE: Updated RFC for Beaver Flts MSP and PUE Vacation

In addition to my previous comments: determine if ROW exists, or obtain ROW, for the portion of Duley Road SW of the section line where the road is shown to be constructed.

Jamie Taylor, PE (she/her)
Civil Engineer
Matanuska-Susitna Borough
Department of Public Works
t: 907-861-7765 c: 907-355-9810

jamie.taylor@matsugov.us/ http://www.matsugov.us/

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Wednesday, April 13, 2022 10:32 AM

To: akchief@mtaonline.net; clinchnot@yahoo.com; hsfirewise@gmail.com; Percy, Colton T (DFG)

- <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner
- <John.Aschenbrenner@matsugov.us>; mokietew@gmail.com; Fire Code <Fire.Code@matsugov.us>; John Fairchild
- <John.Fairchild@matsugov.us>; Tawnya Hightower <Tawnya.Hightower@matsugov.us>; Victor Snell
- <Victor.Snell@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>;
- msb.hpc@gmail.com; Brad Sworts < Brad. Sworts@matsugov.us>; Elaine Flagg < Elaine. Flagg@matsugov.us>; Terry Dolan
- <Terry.Dolan@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Charlyn Spannagel
- <Charlyn.Spannagel@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Alex Strawn
- <Alex.Strawn@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; Permit Center
- <Permit.Center@matsugov.us>; Mark Whisenhunt <Mark.Whisenhunt@matsugov.us>; Theresa Taranto
- <Theresa.Taranto@matsugov.us>; Andy Dean <Andy.Dean@matsugov.us>; mearow@matanuska.com;
- row@mtasolutions.com; andrew.fraiser@enstarnaturalgas.com; James Christopher
- <James.Christopher@enstarnaturalgas.com>; row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>
 Subject: Updated RFC for Beaver Flts MSP and PUE Vacation

The following link contains the updated Request for Comments for Beaver Flats Master Plan. The update includes the vacation of a 50' wide PUE. Comments are due by April 28, 2022. If you do not have additional comments on the proposed vacation, there is no need to reply again, as I have the original comments on file. If you need additional information, please refer to the link labeled Beaver Flts MSP. Thanks, A.

Beaver Flts MSP (PUE) Beaver Flts MSP

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

Amy Otto-Buchanan Platting Technician

From: Jamie Taylor

Sent: Thursday, February 24, 2022 2:01 PM

To: Amy Otto-Buchanan

Subject: RE: RFC Beaver Flts MSP #22-013

The angle between Duley Road and the SLE road is much too small (~35 degrees). The intersection can be no less than 70 degrees for a distance of 75 feet from the intersection point.

Soils report – there is one test hole representing an area encompassed by 6 ot 7 lots that found 5 feet of peat and groundwater at 1.5' below ground. The MSB wetland viewer shows a large wetland in this area. Wetlands should not be filled to create useable area. Will need a wetland determination and USACE permit if jurisdictional wetlands are determined.

Upgrade Duley Road and construct SLE road to Residential Subcollector standard and interior subdivision roads to Residential standard.

Jamie Taylor, PE **Civil Engineer** Matanuska-Susitna Borough Department of Public Works

t: 907-861-7765 c: 907-355-9810

jamie.taylor@matsugov.us http://www.matsugov.us/

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Monday, January 31, 2022 3:05 PM

To: Horton, George C (DNR) <george.horton@alaska.gov>; Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner

<John.Aschenbrenner@matsugov.us>; mokietew@gmail.com; hsfirewise@gmail.com; clinchnot@yahoo.com; akchief@mtaonline.net; Fire Code <Fire.Code@matsugov.us>; John Fairchild <John.Fairchild@matsugov.us>; Tawnya

Hightower < Tawnya. Hightower@matsugov.us>; Jill Irsik < Jill.Irsik@matsugov.us>; Eric Phillips

<Eric.Phillips@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; msb.hpc@gmail.com; Debbie Bakic

<Debbie.Bakic@matsugov.us>; Terry Dolan <Terry.Dolan@matsugov.us>; Jim Jenson <James.Jenson@matsugov.us>;

Jamie Taylor <Jamie.Taylor@matsugov.us>; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; MSB Farmers <MSB.Farmers@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>;

Fred Wagner < Frederic. Wagner@matsugov.us>; Permit Center < Permit.Center@matsugov.us>; Mark Whisenhunt

<Mark.Whisenhunt@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; Andy Dean

<Andy.Dean@matsugov.us>; mearow@matanuska.com; row@mtasolutions.com;

andrew.fraiser@enstarnaturalgas.com; James Christopher < James.Christopher@enstarnaturalgas.com>;

row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>

Subject: RFC Beaver Flts MSP #22-013

The following contains a link for a Revised Request for Comments for Beaver Flats Master Plan #2022-013 for 217N03W04A011/A012. The change reflects the petitioner's request for private roads. Comments are due by February 24, 2022. Please let me know if you have any questions. Thanks, A.

From: Permit Center

Sent: Friday, February 4, 2022 10:06 AM

To: Amy Otto-Buchanan

Subject: RE: RFC Beaver Flats MSP #22-013

No Comment

Respectfully,

Pamela Ness

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Friday, January 28, 2022 2:19 PM

To: Horton, George C (DNR) <george.horton@alaska.gov>; Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner

<John.Aschenbrenner@matsugov.us>; mokietew@gmail.com; hsfirewise@gmail.com; clinchnot@yahoo.com; akchief@mtaonline.net; Fire Code <Fire.Code@matsugov.us>; John Fairchild <John.Fairchild@matsugov.us>; Tawnya Hightower <Tawnya.Hightower@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips

<Eric.Phillips@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; msb.hpc@gmail.com; Debbie Bakic

<Debbie.Bakic@matsugov.us>; Terry Dolan <Terry.Dolan@matsugov.us>; Jim Jenson <James.Jenson@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; MSB Farmers <MSB.Farmers@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Mark Whisenhunt

<Mark.Whisenhunt@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; Andy Dean

<Andy.Dean@matsugov.us>; mearow@matanuska.com; row@mtasolutions.com;

andrew.fraiser@enstarnaturalgas.com; James Christopher < James.Christopher@enstarnaturalgas.com>;

row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>

Cc: Sonya Pevan <spevan@houston-ak.gov>; Raymond Russell <rrussell@houston-ak.gov>; mbell@houston-ak.gov; clerk@houston-ak.gov

Subject: RFC Beaver Flats MSP #22-013

The following link contains a Request for Comments for Beaver Flats Master Plan, case #2022-113, for 217N03W04A011/A012. Comments are due by February 24, 2022. Please let me know if you have questions. Thanks, A.

https://matsugovus-my.sharepoint.com/:f:/g/personal/amy_ottobuchanan_matsugov_us/EoyuMNHL681KnEAc8x_43BgBXxQbfD9q09l0kqD_mdE3Mw?e=FZ2nME

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates using issues.

Amy Otto-Buchanan
Platting Technician
amy.otto-buchanan@matsugov.us
861-7872



MATANUSKA-SUSITNA BOROUGH Community Development

Land & Resource Management

350 East Dahlia Avenue • Palmer, AK 99645 Phone (907) 861-7869 • Fax (907) 861-8635

MEMORANDUM

DATE: April 14, 2022

TO: Fred Wagner, Platting Officer

FROM: Land & Resource Management

SUBJECT: Preliminary Plat Comments / Case #2022-013/050

Platting Tech: Amy Otto-Buchanan

Public Hearing: May 19, 2022

Applicant / Petitioner: Jeremy D. & Elaine C. Ridlon

TRS: 17N03W04

Tax ID: 17N03W04A011/A012 Subd: Beaver Flats Master Plan

Tax Map: HO 12

Comments:

No objection to proposed master plan or vacation of right-of-way.

From: Leda Borys

Sent: Thursday, April 28, 2022 8:39 AM

To: Amy Otto-Buchanan

Subject: RE: Updated RFC for Beaver Flts MSP and PUE Vacation

Natural Resources

Wetlands are present throughout both parcels. Development of these wetlands may require a permit from the US Army Corps of Engineers.

Access

The vacation does not seem appropriate per 43.20.100 C3: There is no possibility or public necessity to provide for public through traffic because alternate legal access to adjoining properties is available and that access is constructible in accordance with Subdivision Construction Manual standards

Considering the pattern of growth in this area, the likelihood that this and additional ROW will be needed, is high. While it does appear there is still access to neighboring parcels, that cannot be the only consideration and thinking about future transportation needs and connections is crucial at this stage. To that end, it also does not seem necessary that the internal roads be private. In the future, this could be easily be a problem as the remaining parcels will likely be built out.

Cheers,

Leda

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Wednesday, April 13, 2022 10:32 AM

To: akchief@mtaonline.net; clinchnot@yahoo.com; hsfirewise@gmail.com; Percy, Colton T (DFG)

- <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner
- <John.Aschenbrenner@matsugov.us>; mokietew@gmail.com; Fire Code <Fire.Code@matsugov.us>; John Fairchild
- <John.Fairchild@matsugov.us>; Tawnya Hightower <Tawnya.Hightower@matsugov.us>; Victor Snell
- <Victor.Snell@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>;

msb.hpc@gmail.com; Brad Sworts <Brad.Sworts@matsugov.us>; Elaine Flagg <Elaine.Flagg@matsugov.us>; Terry Dolan

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- <Theresa.Taranto@matsugov.us>; Andy Dean <Andy.Dean@matsugov.us>; mearow@matanuska.com;

row@mtasolutions.com; andrew.fraiser@enstarnaturalgas.com; James Christopher

<James.Christopher@enstarnaturalgas.com>; row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com> Subject: Updated RFC for Beaver Flts MSP and PUE Vacation

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Beaver Flts MSP (PUE) Beaver Flts MSP

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

From: Percy, Colton T (DFG) <colton.percy@alaska.gov>

Sent: Monday, February 14, 2022 10:33 AM

To: Amy Otto-Buchanan

Subject: RE: RFC Beaver Flts MSP #22-013

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Hi Amy,

Alaska Department of Fish and Game has no objections to the proposed platting actions. The proposed actions will not affect public access to public lands and waters. Thank you for the opportunity to review and comment on the proposed actions.

Colton T. Percy

Habitat Biologist Access Defense Program Alaska Department of Fish and Game Division of Wildlife Conservation 333 Raspberry Rd Anchorage, AK 99518 907-267-2118

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Monday, January 31, 2022 3:05 PM

To: Horton, George C (DNR) <george.horton@alaska.gov>; Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner

<John.Aschenbrenner@matsugov.us>; mokietew@gmail.com; hsfirewise@gmail.com; clinchnot@yahoo.com; akchief@mtaonline.net; Fire Code <Fire.Code@matsugov.us>; John Fairchild <John.Fairchild@matsugov.us>; Tawnya Hightower <Tawnya.Hightower@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips

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andrew.fraiser@enstarnaturalgas.com; James Christopher < James.Christopher@enstarnaturalgas.com>;

row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>

Subject: RFC Beaver Flts MSP #22-013

CAUTION: This email originated from outside the State of Alaska mail system. Do not click links or open attachments unless you recognize the sender and know the content is safe.

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https://matsugovus-my.sharepoint.com/:f:/g/personal/amy_ottobuchanan_matsugov_us/EoyuMNHL681KnEAc8x_43BgBXxQbfD9q09l0kqD_mdE3Mw?e=uwcLVz

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

From: Holly Sparrow hsparrow@mtasolutions.com

Sent: Wednesday, April 13, 2022 2:15 PM

To: Amy Otto-Buchanan

Subject: RE: Updated RFC for Beaver Flts MSP and PUE Vacation

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Hello,

MTA would like to request a 15' utility easement on each side of Tract A.

Thank you for the opportunity to comment.

Holly Sparrow, Right of Way Agent

1740 S. Chugach St., Palmer, Alaska 99645

Office: (907) 761-2599 | www.mtasolutions.com



Life. Technology. Together.

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Wednesday, April 13, 2022 10:32 AM

To: akchief@mtaonline.net; clinchnot@yahoo.com; hsfirewise@gmail.com; Percy, Colton T (DFG)

- <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner
- <John.Aschenbrenner@matsugov.us>; mokietew@gmail.com; Fire Code <Fire.Code@matsugov.us>; John Fairchild
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- <Theresa.Taranto@matsugov.us>; Andy Dean <Andy.Dean@matsugov.us>; mearow@matanuska.com; Right of Way

Dept. <row@mtasolutions.com>; andrew.fraiser@enstarnaturalgas.com; James Christopher

<James.Christopher@enstarnaturalgas.com>; row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>

Subject: Updated RFC for Beaver Flts MSP and PUE Vacation

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Beaver Flts MSP (PUE)

Beaver Flts MSP



ENSTAR Natural Gas Company A DIVISION OF SEMCO ENERGY Engineering Department, Right of Way Section

401 E. International Airport Road P. O. Box 190288 Anchorage, Alaska 99519-0288 (907) 277-5551 FAX (907) 334-7798

January 14, 2022

Matanuska-Susitna Borough, Platting Division 350 East Dahlia Avenue Palmer, AK 99645-6488

To whom it may concern:

ENSTAR Natural Gas Company has reviewed the following plat and has no comments or recommendations.

 BEAVER FLATS (MSB Case # 2022-013)

If you have any questions, please feel free to contact me at 334-7944 or by email at james.christopher@enstarnaturalgas.com.

Sincerely,

James Christopher

Right of Way & Compliance Technician

ENSTAR Natural Gas Company

James Christopher

From: OSP Design Group <ospdesign@gci.com>
Sent: Wednesday, April 20, 2022 2:20 PM

To: Amy Otto-Buchanan
Cc: OSP Design Group

Subject: RE: Updated RFC for Beaver Flts MSP and PUE Vacation

Attachments: Revised RFC Packet.pdf; Agenda Plat.pdf; Upgraded RFC Packet.pdf; Agenda Plat

20220519.pdf

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Amy,

In review GCI has no comments or objections to the plat, attached is the signed plat for your records.

Thanks,

MIREYA ARMESTO

GCI | Technician II, GIS Mapping m: 907-744-5166 | w: www.gci.com

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Wednesday, April 13, 2022 10:32 AM

To: akchief@mtaonline.net; clinchnot@yahoo.com; hsfirewise@gmail.com; Percy, Colton T (DFG)

- <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner
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- <James.Christopher@enstarnaturalgas.com>; row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>

Subject: Updated RFC for Beaver Flts MSP and PUE Vacation

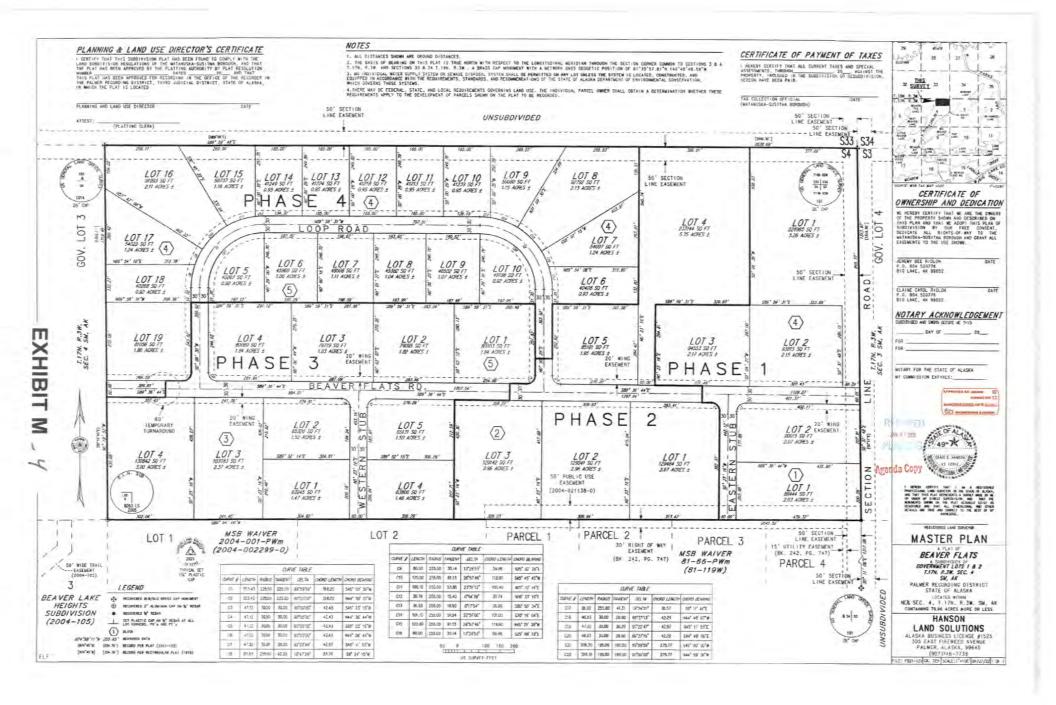
[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

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Beaver Flts MSP (PUE) Beaver Flts MSP

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

Amy Otto-Buchanan Platting Technician



Kimberly McClure

From: Halverson, Ellen <Ellen.Halverson@providence.org>

Sent: Tuesday, March 15, 2022 5:25 PM

To: MSB Platting

Subject: regarding petition of Jeremy and Elaine Ridion regarding the Beaver Flats Master Plan

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

To: Mat Su Platting Board

Regarding the upcoming hearing. Currently scheduled for March 17th 2022 at 1 pm

On the vicinity map, I own the property A7. My property and life will be directly affecting by the subdivision planned by the Ridlon's. The Ridlon's have been my neighbors for many years. And I have appreciated living next door, watching their family grow, and appreciate their help with my own projects. The road to the subdivision will be coming up the side of my property. Have been aware that there is a right of way(easement), on my property, that allows access to the land behind mine. So, I really don't feel that I have any choice in this matter, and understand that Jeremy and Elaine have the right to develop their property in a manner that benefits them.

That said, still am concerned, about traffic coming up the side of my land, which has previously been next to undeveloped land. Do feel it is better to work together with my great neighbors, the Ridlon's, than try and fight this process.

However, feel it is important that the platting board be aware that increasing the population density in the neighborhood will potentially be disruptive, and disturbing to those of us who have made our homes here for many years.

And suggest that things such as firearm use be limited in this subdivision, as it is disturbing and frightening to have guns fired close to home. There may be other ideas that the platting board has to minimize the disturbance that a new subdivision will have on the surrounding land owners.

Thank you,

Ellen Halverson PO Box 874151 Wasilla AK 99687

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From: MSB Platting

Sent: Friday, March 11, 2022 11:44 AM

To: 'Parson Jill'
Cc: Fred Wagner

Subject: RE: comments re 2022-013 AOB

Jill: The Request for Comments was sent to akchief@mtaonline.net. If you would like that email address changed, please contact Sloan VonGunten at sloan.vongunten@matsugov.us or 861-8573 to request that change. The Request for Comments were also sent to firecode@matsugov.us, john.fairchild@matsugov.us and tawny.hightower@matsugov.us for the West Lakes Fire Service Area. See comments below in blue. If you have further questions, please direct them to Fred Wagner, Platting Officer at Frederic.wagner@matsugov.us or 861-7870, as I will be out of the office for over three weeks. Thank you.

From: Parson Jill <personaljmp@mtaonline.net>

Sent: Friday, March 11, 2022 11:05 AM
To: MSB Platting <Platting@matsugov.us>
Subject: Re: comments re 2022-013 AOB

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

I appreciate your comments. Yes, I read the notes and looked at the map but the map is very hard to read (heavy, blurred text) and the section line information is blurred and not clear. Perhaps if the map was larger, which would eliminate some of the bottom of the map and a small part at the top, it would be easier to read.

You don't answer my question about road width and fire truck clearance. Road width is built to MSB Residential Street Standards or MSB Residential Sub-Collector Standards. That is the requirement of code. You say the subdivision will have emergency services clearance but my question is are the roads wide enough to handle tanker trucks passing each other. At the BLCC meeting the fire chief stated they don't get these notices - is that true? If they do and don't respond, I'll be happy to talk with the chief about the importance of their responses and I know she will listen, grateful for the opportunity to respond.

Also, the map shows roads, west of Beaver Flats and south at two points. You say they are shown as tracts because this subdivision has private roads. What access will these tracts (roads) have? This is all one Tract, Tract A, which will be the streets for the subdivision. It is labeled a tract because as it is not dedicated right-of-way to the Borough. This private street will access the street to be constructed in the Section Line Easement, then the right-of-way of N. Duley Road, then N. Beaver Lake Road to N. Victor Road. Recall the Millers Reach fire where access roads became a major issue for subdivisions that had only one access out. Unless these tracts are connected to something, which is not shown on this map, that could be a significant problem in the future, especially if access is through private property with no recorded easements to Borough-maintained roads.

I realize your space constraints. Twenty years ago I was the Borough's Land Management Officer and reviewed hundreds of these applications. Sometimes what was clear to us was not to the public receiving these notices, so we always had a couple people review the notice to hopefully make them clearer. These Notices of Public Hearing are reviewed by three different people before they are sent out. We often found legal easements missing where roads were planned, which as you know can create many problems. Please keep in mind that the Vicinity Maps are derived from our Tax Maps, which may or may not show all easements of record. The Plat

does. Now I'm just one of the public trying to make sense of what I'm seeing and it certainly is from a different perspective. I especially appreciate your quick response. Thank you.

I think the section line easement is where the power line now goes. If I'm correct, I assume you have also seen the MEA maps that show where the line is relative to where the access road is planned. For the petitioners sake, I hope they won't need to move any power poles to put in their road.

Regarding the BLCC notice sent on Jan 22. I'm on the BLCC Board and I never saw that packet. To what address are you emailing these notices? Will you email them to me, for the BLCC, in the future at the above address? I will see that the Board and the BLCC membership gets to review and respond. I'm finding that when the Board changed in the last two elections, BLCC notices still went to former Board members and did not get forwarded, and our existing Board does not recognize the importance of providing BLCC feedback. I'm trying to get us organized but it's a difficult task. Hopefully we'll get a generic email address that won't change from Board to Board. I especially understand how important BLCC responses can be to you when you are doing your work, and am still working on getting our BLCC Board to recognize this task needs to be done, timely. If there is a change in the email address for the Big Lake Community Council, please contact the Platting Office so we can make these changes.

Thanks again. Jill

On Mar 11, 2022, at 9:20 AM, MSB Platting < Platting@matsugov.us > wrote:

Jill: See comments below in blue. We are limited on the amount of information that we can provide on the Notification of Public Hearing, as it needs to be a total of one page. I hope this addresses your concerns. Thank-you.

March 10, 2022

I received your notice from the Big Lake Community Council (BLCC). I am commenting as an individual although my comments reflect concerns expressed at the BLCC meeting on Tuesday.

- 1. Lack of information in this notice concerns me. You show the proposed subdivision but you do not show what road(s) will access these lots and the text does not make this clear. What are the access roads and are they Borough maintained, meet Borough standards, and constructed within legal road easements? The Notice of Public Hearing notes "Petitioner will construct borough standard streets within the existing Section Line Easement and the right-of-way of N. Duley Road..." What width are the section line easements 66' or 100' or? The Vicinity Map shows a 50' wide Section Line Easement on Section 3 and 4 for a total of 100'. I found N Duley Road on this map but this road and the part of Beaver Lakes Road to which it leads is not Borough maintained and does not appear to meet Borough road standards and may not be on a legal road easement. Petitioner will be required to construct or upgrade the access to sub-collector standards from N. Victor Road all the way to the proposed subdivision. What is Tract A that appears in several places. Tract A in the proposed subdivision will be the street, however, since this is a private subdivision, the street is not dedicated to the Borough, and therefore, is identified as a tract. Is it a road easement? These should be shown and described on the attached map and in text. There are at least three Tract A's that look like roads that end at lot boundaries, not onto existing roads. Will these "roads" be constructed to access roads not shown on this map? If the access roads do not meet Borough road standards, will they be upgraded by the petitioner to meet those standards? Any street within a private subdivision is required to be constructed to residential street standards.
- 2. There's nothing stating the size of the proposed lots All lots developed in the Borough are required to be a minimum of 40,000 sf, if they are to be served by on site well and septic, which in this case, will be and if the lots will have on site well and septic. It doesn't look like any provision has been made for a community well and/or septic. Do the soils support that number of new lots, all with wells and septics? Staff has the engineer's report, which will be available in the staff report, which documents that each lot has the required 10,000 sf of contiguous useable septic area and an additional 10,000 sf of buildable area.
- 3. You note private roads. Will these roads be built to standards which allow fire service, and will the subdivision be acceptable for fire vehicles to get to the lots to fight a fire or do ambulance rescue? One comment made at the BLCC meeting was that fire vehicles need 22

feet to pass each other, and if there's a fire needing tankers for water (nothing shows that this subdivision will have fire hydrants) that road width is needed to get to water. Are the private roads able to address this concern? Emergency services are always allowed access to private subdivisions.

- 4. With the snowfalls we've had this year, the need for wide enough road easements to allow snow storage along the sides is critical. Do these private roads have adequate width and shoulders to handle the snow we are seeing this year and subsequent drainage ditching? Will the subdivision have any lot/area retained to handle excess snow if needed? In short, what criteria/standards will these private roads follow? Constructed to residential street standards and signed off by the Borough engineer to ensure they meet requirements.
- 5. Unfortunately, the BLCC did not get this notice until just before the meeting and it was not distributed until the night of the monthly meeting. So BLCC members did not have the opportunity to review this notice and few comments were discussed. If the BLCC responded to this notice, no official vote was taken on comments made by BLCC members. The Big Lake Community Council was emailed the complete Request for Comments packet that went out on January 22, 2022 this is more information on the proposed subdivision than the Notice of Public Hearing. It includes a copy of the plat, the soils report, plan and profiles for the proposed road and the upgrading of the Section Line Easement access street and the upgrading of N. Duley Road.
- 6. There's no information on adjacent property ownership. Are they all undeveloped lots? Have they given road easements for these lots to access Borough maintained roads. We do not put adjacent property ownership on Vicinity Maps. This information is available on the Borough's website at the "My Property" tab.

Amy Otto-Buchanan
Platting Technician
amy.otto-buchanan@matsugov.us
861-7872

I do not support this subdivision without having additional information noted above.

Jill Parson PO Box 521315 Big Lake, AK 99652

NATANUSKA-SUSITNA BOROUGH LATTING DIVISION

50 EAST DAHLIA AVENUE PALMER, ALASKA 99645

> Big Lake Community Council PO Box 520931 Big Lake, AK 99652

> > FIRST CLASS

NOTIFICATION OF PUBLIC HEARING

The Matanuska-Susitna Borough Platting Board will consider the following:

PETITIONER/OWNER: JEREMY D. AND ELAINE C. RIDLON

REQUEST: The request is to divide Tax Parcels A11 and A12 (Government Lots 1 and 2) into 40 lots, by a three phase Master Plan, to be known as BEAVER FLATS MASTER PLAN, containing 79.96 acres +/-. Petitioner will construct Borough standard streets within the existing Section Line Easement and the right-of-way of N. Duley Road and within the subdivision. This subdivision will have private roads. Parcel is located north of Big Beaver Lake, north of N. Beaver Lake Road and northwest of W. Hawk Lane (Tax ID # 17N03W04A011/A012); lying within the NE ¼ Section 04, Township 17 North, Range 03 West, Seward Meridian, Alaska. In the Big Lake Community Council and in Assembly District #5.

The Matanuska-Susitna Borough <u>Platting Board</u> will hold a public hearing in the <u>Assembly Chambers</u> at the <u>Dorothy Swanda Jones Building</u>, 350 E. Dahlia Avenue, Palmer, Alaska on the proposed <u>Subdivision</u>. The public hearing is scheduled for <u>March 17, 2022</u>, starting at 1:00 p.m. We are sending you this notice as required by State Law and Borough Ordinances.

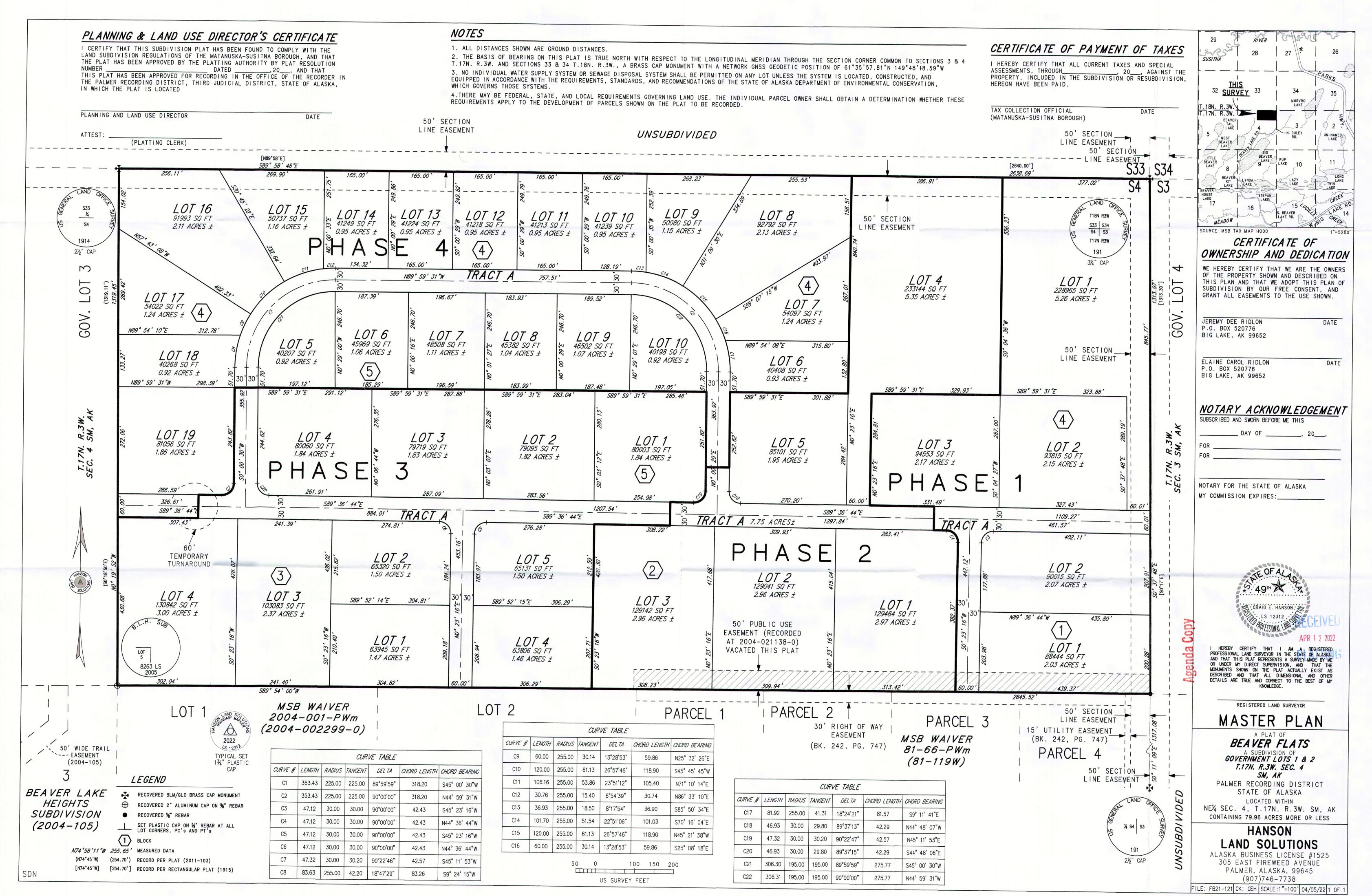
or comments regarding the proposed action, this form may be used for your convenience by filling in the information below and main notice to the MSB Platting Division, 350 E. Dahlia Avenue, Palmer, Alaska 99645 or e-mail: platting@matsugov.us. Comment received from the public after the platting board packet has been written and sent to the Board will be given to the Platting Board in a "Hand-Out" the day of the meeting. Please do not send comments or questions directly to Platting Board members. Board members may not receive or engage in ex-parte contact with the applicant, other parties interested in the application, or members of the public concerning the application or issues presented in the application. All public comments are due one (1) day prior, by 12:00 p.m. To request additional information please contact the Platting Technician, Amy Otto-Buchanan at (907) 861-7872.

To view the agenda or meeting packet please go to the following link: www.matsugov.us/boards/platting.

Please follow all public protocols in relation to the mandates regarding Covid-19 for public participation.

[] No Objection Name: JIM	[] Objecti	on [X Cor	ncern Addi	ess. Po	BO	x 53	1315	BIG (AKE	
Comments: my	RESID	Pleas	15	WITH	in	1,5mi	leg	This med	pup	reed
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Note: Vicinity Map Located on Reverse Side



STAFF REVIEW AND RECOMMENDATIONS PUBLIC HEARING JUNE 16, 2022

PRELIMINARY PLAT: WOLF WEST MASTER PLAN

LEGAL DESCRIPTION: SEC 16, T18N, R01E, SEWARD MERIDIAN AK

PETITIONERS: WM CONSTRUCTION LLC

SURVEYOR/ENGINEER: HANSON LAND SOLUTIONS

ACRES: 10 ± PARCELS: 10

REVIEWED BY: AMY OTTO-BUCHANAN CASE #: 2022-048

REQUEST: The request is to divide Tax Parcel A9 into ten lots by a two-phase Master Plan, to be known as **WOLF WEST MSP** containing 10 acres +/-. Petitioner will dedicate and construct interior street and cul-de-sac to Borough street standards. Parcel is located south of E. Tex-Al Drive, west of N. Engstrom Road and will be accessed by E. Amarok Avenue; lying within the NE ¼ Section 16, Township 18 North, Range 01 East, Seward Meridian, Alaska.

EXHIBITS

Vicinity Map and Aerial Photos	EXHIBIT A – 5 pgs
Topographic Map and As-Built	EXHIBIT $B-3$ pgs
Geotechnical Report and Drainage Map	EXHIBIT C - 7 pgs
Average Daily Traffic (ADT) Calculations	EXHIBIT D - 5 pgs

AGENCY COMMENTS

Department of Public Works Operations & Maintenance	EXHIBIT $E - 1 pg$
Department of Emergency Services	EXHIBIT F - 2 pgs
ADF&G	EXHIBIT $G-1$ pg
Utilities	EXHIBIT $H - 3 pgs$

<u>DISCUSSION</u>: The proposed subdivision is south of E. Tex-Al Drive, west of N. Engstrom Road and will be accessed by E. Amarok Avenue, a recently constructed street in Wolf Ridge. Petitioner is creating ten lots by a two-phased Master Plan. The construction of the street and cul-de-sac and Lots 1-5 will occur in the 1st phase. Lots 6-10 will occur in the 2nd phase. Street and cul-de-sac will be constructed to Borough residential street standards (see *Recommendation #4*). Topographic mapping and as-built at Exhibit B. ADT Calculations at Exhibit D.

<u>Soils Report</u>: A geotechnical report was submitted (**Exhibit C**), pursuant to MSB 43.20.281(A). Simon Gilliland, PE, Hanson Land Solutions, notes three testholes were excavated to 12.5'. Receiving soils are GP (poorly-graded gravels, gravel-sand mix, little fines). No groundwater was encountered. All lots have at least 10,000 sf of contiguous useable septic area and 10,000 sf of useable building area. Test hole logs and location map attached. Drainage map at **Exhibit C-7**.

<u>Comments</u>: Department of Public Works Operations & Maintenance (Exhibit E) comments: Certify to residential subcollector standard the portions of E. Alyeska Drive, N. Tahoe Drive and E. Wolf Creek Road that make up the corridor between E. Aspen Ridge Road and the northern segment of N. Engstrom Road (see *Recommendation #4d*). Note the potential Average Daily Traffic (ADT) on E. Aspen Ridge Road is already more than twice the limit of 1,000 for its classification of Residential Subcollector. The ADT supports the need for an alternate collector standard route in this area, such as connecting the north and south portions of N. Engstrom Road along the section line. E. Aspen Ridge Road is not an ideal collector corridor due to it having frequent residential driveways.

Department of Emergency Services (Exhibit F) notes "this particular area in the Borough already has a very high traffic load on roads that have not been upgraded for the increased flow. Also, since the Borough has a history of devastating wild files and serious floods requiring the evacuation of neighborhoods and subdivisions, and the history of the difficulty involved in evacuating those subdivisions because of access issues for both those leaving and the emergency responders trying to get in, I recommend consideration be given to having a second access remote from the first to help alleviate congestion and confusion during times of emergency." Staff notes the road to this subdivision (N. Engstrom Road) was upgraded by this same developer last year. The conditions of approval for Wolf Ridge Master Plan included upgrading to residential subcollector, with the vertical alignment and intersection grades designed to meet residential collector standards for future upgrades if/when they become necessary. The roads both within and outside of this subdivision are not even remotely close to a requirement for a second access per code. Furthermore, where would a second access be? This consideration is not applicable for this case given the location and the lack of available options for a secondary access.

ADF&G (Exhibit G) has no objections.

<u>Utilities</u>: (Exhibit H) MTA has no comments. GCI has no objections. Enstar has no comments or recommendations. MEA did not respond.

At the time of staff report write-up, there were no responses to the Request for Comments from US Army Corps of Engineers; Community Council Fishhook; Fire Service Area #132 Greater Palmer Consolidated; Road Service Area #28 Gold Trail; MSB Community Development, Assessments, Planning, Development Services or Pre-Design Division; or MEA.

CONCLUSION: The preliminary plat of WOLF WEST MASTER PLAN is consistent with AS 29.40.070 Platting Regulations and MSB 43.15.016 Preliminary Plats. There were no objections from any federal or state agencies, Borough departments, or utilities. There were no objections to the plat from the public in response to the Notice of Public Hearing. Legal and physical access will exist to the proposed lots, consistent with MSB 43.20.100 Access Required, MSB 43.20.120 Legal Access and MSB 43.20.140 Physical Access. Frontage for the subdivision will exist, pursuant to MSB 43.20.320 Frontage. A soils report was submitted, pursuant to MSB 43.20.218(A)(1).

FINDINGS OF FACT

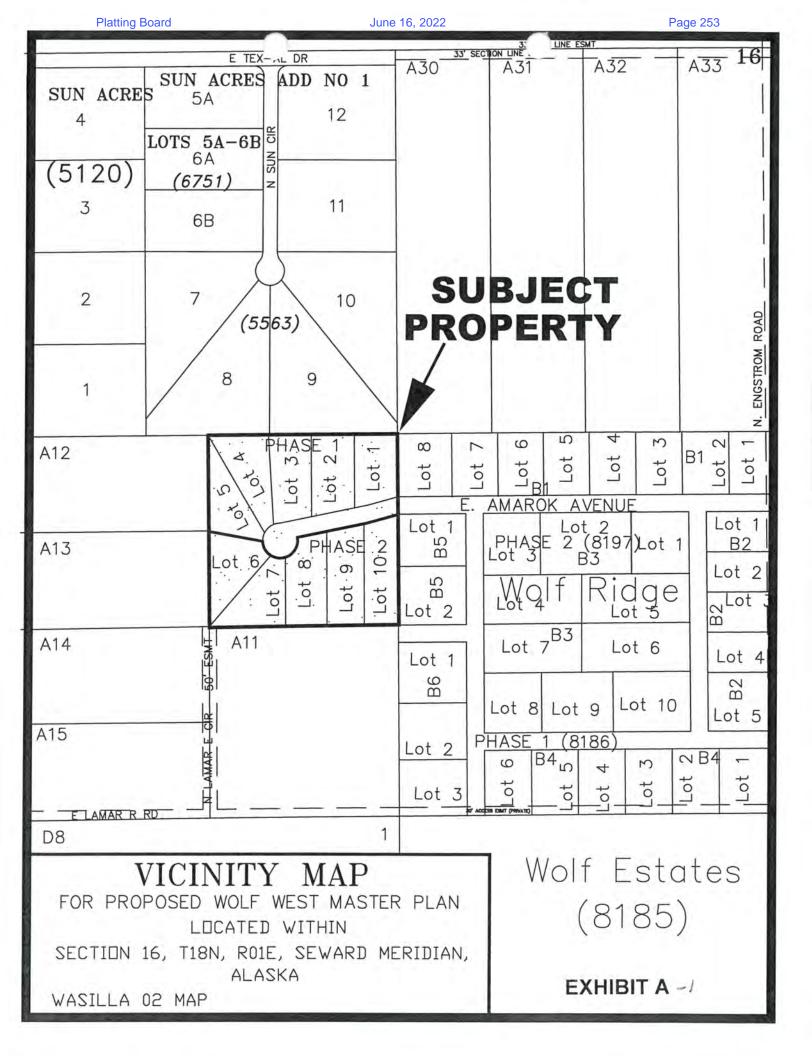
 The plat of Wolf West Master Plan is consistent with AS 29.40.070 Platting Regulations and MSB 43.15.016 Preliminary Plats.

- A soils report was submitted, pursuant to MSB 43.20.281(A)(1). All lots have the required useable septic area.
- 3. All lots will have the required frontage pursuant to MSB 43.20.320.
- 4. At the time of staff report write-up, there were no responses to the Request for Comments from US Army Corps of Engineers; Community Council Fishhook; Fire Service Area #132 Greater Palmer Consolidated; Road Service Area #28 Gold Trail; MSB Community Development, Assessments, Planning, Development Services or Pre-Design Division; or MEA.
- 5. There were no objections from any federal or state agencies, Borough departments, or utilities.
- 6. There were no objections from the public in response to the Notice of Public Hearing.

RECOMMENDATIONS OF CONDITIONS OF APPROVAL

Suggested motion: I move to approve the preliminary plat of Wolf West Master Plan, Section 16, Township 18 North, Range 01E, Seward Meridian, Alaska, contingent on staff recommendations

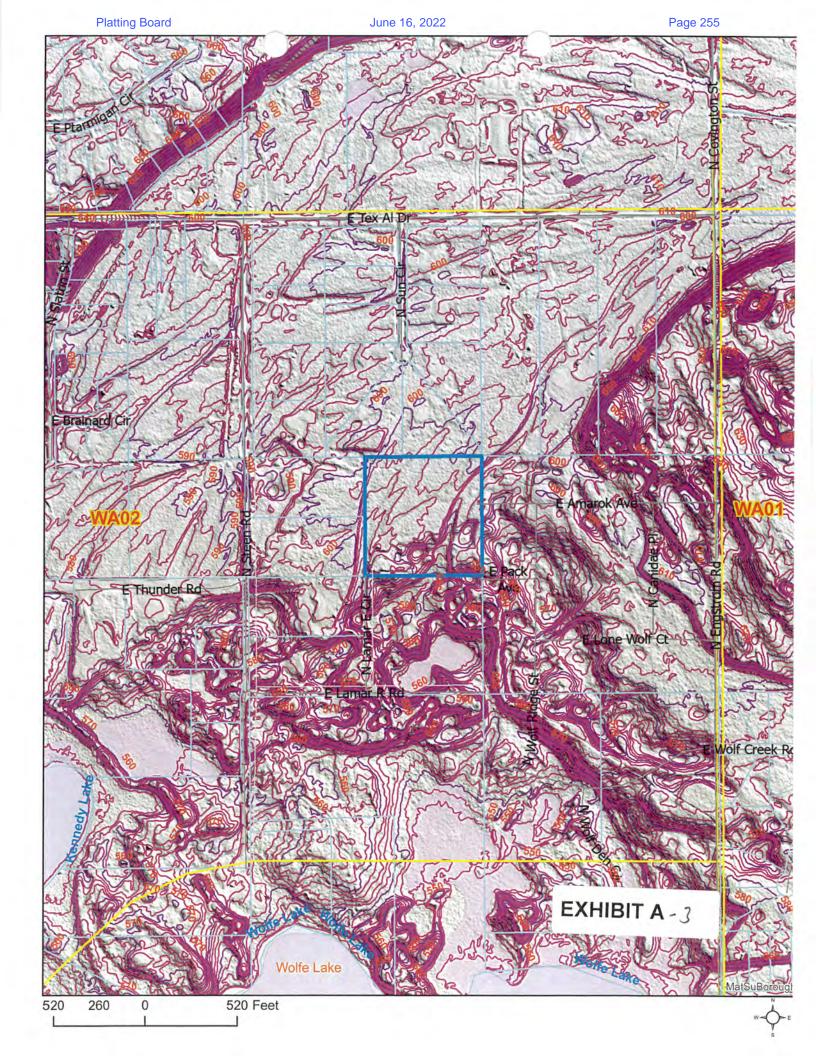
- Taxes and special assessments must be paid in full for the year of recording, pursuant to MSB 43.15.053(F) and AS 40.15.020. For each phase plat, pay taxes and special assessments (LIDs), by CERTIFIED FUNDS OR CASH.
- Provide updated Certificate to Plat executed within seven (7) days of recording of each phase plat and submit Beneficiary Affidavit for any holders of a beneficial interest for each phase plat
- 3. Pay postage and advertising fees.
- 4. Construct interior street and cul-de-sac to MSB residential street standards:
 - a. Submit cost estimate, arrange a pre-construction meeting with Department of Public Works (DPW), pay inspection fee and obtain a Notice to Proceed from Platting staff. Submit street inspection reports as required by Section F1.4, F1.5 and F1.6 of the Subdivision Construction Manual.
 - b. Provide DPW acceptance of the road to Platting staff.
 - c. Provide as-built of streets once construction is complete.
 - d. Certify E. Alyeska Drive, N. Tahoe Drive and E. Wolf Creek Road that make up the corridor between E. Aspen Ridge Road and the northern segment of N. Engstrom Road to residential subcollector standard.
- 5. Show all easements of record on final phase plats.
- 6. Submit recording fees, payable to Department of Natural Resources (DNR), for each phase plat.
- 7. Submit final phase plats in full compliance with Title 43.

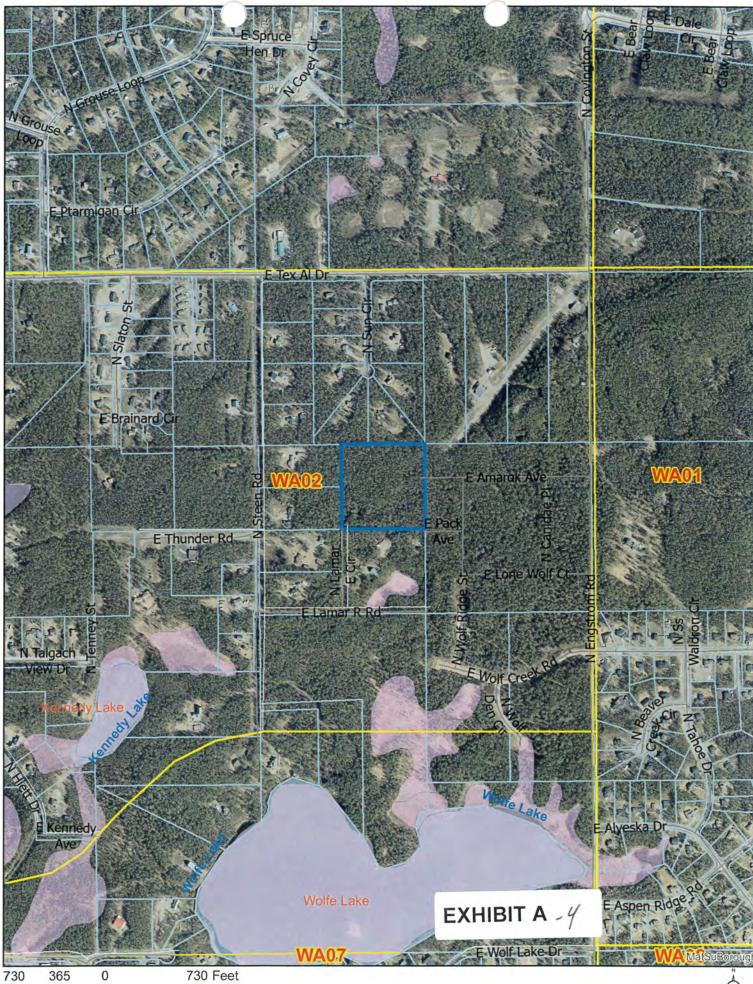


520 Feet

260

520

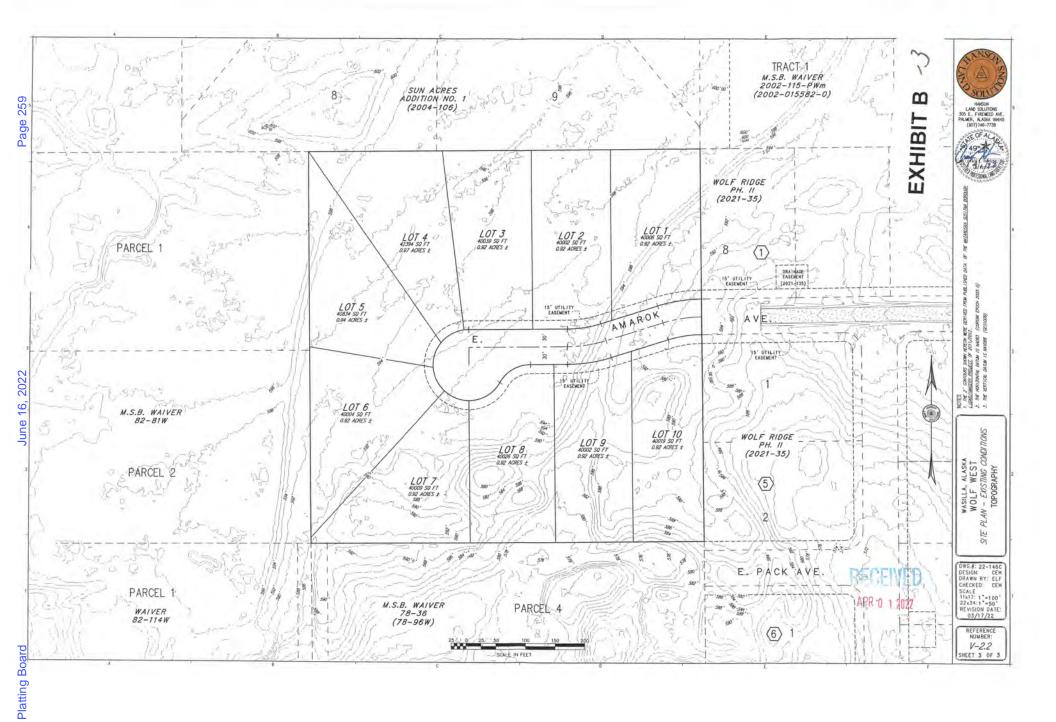




365 0 730 Feet







SURVEYING, ENGINEERING & LAND DEVELOPMENT SERVICES 305 E. Fireweed Ave. Palmer, AK 99645





USEABLE AREA CERTIFICATION

WOLF WEST SUBDIVISION

A SUBDIVISION OF

MSB WAIVER RES. 78-36 (78-96w) NE1/4 SEC 16, T18N R1E, SM ALASKA

INTRODUCTION TO INVESTIGATION

The following report outlines parameters and conclusions of an investigation into the suitability of the proposed subdivision lots for supporting construction and on-site waste-water treatment. Consideration is limited to only those lots containing less than 400,000 square feet of area and the report specifically addresses parameters set forth in Title 43.20.281 of the Matanuska-Susitna Borough Code.

	INDIVIDUAL LOTS: GEOMETRY
\times	All lots within this proposed subdivision are composed of at least 40,000 square feet in total area.
	EXCEPTIONS:
\times	Lots of 40,000 square feet minimum maintain the 3-to-1 lot configuration ratio per Title 43.20.300(B).
	Lots of 40,000 square feet minimum maintain an average width of at least 125 ft but exceed the 3-to-1 ratio due to unusable wetlands and/or natural ground slope exceeding 25 percent.
-/	USABLE BUILDING AREAS
	CONFLICTING USE CONSIDERATIONS:
\boxtimes	All land recognized as suitable for Building Area is outside of lands dedicated to Public Use and lands reserved by Mat-Su Boroug Improvement Setbacks, including boundary and water/wetland setbacks.
	TOPOGRAPHIC/PLANIMETRIC CONSIDERATIONS:
\times	All land recognized as suitable for Building Area is characterized by slopes and soils upon which construction is possible.
	USABLE SEPTIC AREAS
	CONFLICTING USE CONSIDERATIONS:
\times	All land recognized as suitable for Useable Septic Area is outside of any land dedicated to Public Use.
\boxtimes	The Useable Septic Area is not situated within any easement (Utility or otherwise) such that use of said easement would interfere with an on-site septic.
	TOPOGRAPHIC/PLANIMETRIC CONSIDERATIONS:
\boxtimes	The useable area consists entirely of land sloping less than 25% or will be at final certification.
\boxtimes	The useable area is set back 50' from any slopes exceeding 25% with more than 10' of elevation change or will be at final certification.
\times	The useable area is not less than 100' from the mean high water of any body of water, swamp, bog or marsh
\boxtimes	The useable area is not less than 200' from any public water well, nor less than 100' from any known private water well
\boxtimes	The useable area is outside of any known debris burial site.
	SOILS INVESTIGATION
	EXCAVATIONS
\boxtimes	Test-holes or borings have been made such that the bottom of the excavation is at least 12' deep and "shallow trench" or "bed systems" are anticipated
	Test-holes or borings have been made such that the bottom of the excavation is at least 16' deep and "deep trench" or "sewage pits will likely be used
	Test-holes or borings were made to the depth of permafrost or an impermeable layer. (test holes with permafrost or impermeable layer):

SURVEYING, ENGINEERING & LAND DEVELOPMENT SERVICES 305 E. Fireweed Ave. Palmer, AK 99645

			ALONDO DO CONONA	
) AA Simo	on Gilliland P.E. Date		3/24/22	CHOME -
Reast	10,000 square feet of "Contiguous Useable Septic Area"		SIMON C. GILLILA	AND &
Title foreg conci as foi least	the assessed the land of the proposed subdivision in light of 43.20.281 of the Matanuska-Susitna Borough Code. The going parameters have directed my investigation. My lusions for all lots with an area less than 400,000 sq. ft. of llows: 1, All contain sufficient overall area 2. All have a 10,000 square feet of "Useable Building Area" 3. All ha	e are it ive at	5 Mm Silh	
	No further action required to establish sufficient usable a	area.	Transfer of the last	h.
	Re-Grading will be required to eliminate slopes in exces	ss of 25%	Lots:	
	The following special considerations preclude the reason creation of 8° of water table clearance and a standard septesign will be provided and constructed:			
	Additional Fill required to ensure 8' of coverage above	water table	Lots:	
	SUMMARY OF REC	QUIRED FU	RTHER ACTION	
	Depth to seasonal high water is less than 8'	☐ As	nitable standard design will be pro	ovided
	Depth to seasonal high water is a min. of 8"		TEST HOLES:	
		,		
	☐ Monitoring Test Holes May through Oc Soil Mottling or Staining Ana		TEST HOLES:	
	Groundwater was encountered in some Test Holes and e table level was determined by:			lepth. Seasonal High Wa
\boxtimes	No groundwater was encountered in any of the Test Hol			
	GROUND WA	TER INVES	TIGATION	
	Bedrock, Clay, or other impermeable stratum was encou	untered.	TEST HOLES:	
	Soils within the potential absorption system area have b Department of Environmental Conservation (ADEC) res HOLES:			
	(GM) TEST HOLES:		(SM) TEST HOLES:	
	Soils within the potential absorption system area have b Classification System as:	been shown by m	echanical analysis to be classified	d under the Uniform Soil
	(SW) TEST HOLES:		(SP) TEST HOLES:	
	(GW) TEST HOLES:		(GP) TEST HOLES: 1, 2, 3	

SURVEYING ENGINEERING & LAND DEVELOPMENT SERVICES 305 E. Fireweed Ave. Palmer, AK 99645

GEOTECHNICAL ANALYSIS – SOIL INSPECTION LOG								
Parcel:	MSB WAIVER RES. 78-36 (78-96w)	TEST HOLE NO.	Date:	03/24/22				
Insp. By:	SIMON GILLILAND	1	Job#	22-146				

		TEST HOLE EXCAVATION ANALYSIS		TE	ST HOLE	LOCAT	ION MAP	
1ft	OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PLASTICITY	See attached					
2ft			1					
3ft								
4ft								
7.7					PERCOI	ATION	TEST	
5ft			Reading	Date	Gross Time	Net Time	Depth to Water	Net Drop
6ft			1					
76	CP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIX, LITTLE/ FINES	2					
7ft	GP	TOOKL I-GRADED GRAVELS, GRAVEL-SAND MIA, LITTLE/ FINES	3					
8ft			5					
			6					
9ft			7					
			8					
10ft			9					
11ft			10 11					
			12					
12ft					lole Diam. un Betwee			
13ft					ft and		ft Deep	
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17ft					N. Po	SIMON C	GILLILAND	
18ft			COMM	ENTE.	10	ERED PROP	ESSIONAL ENGIN	ġ.
19ft			COMM	EN15:				
20ft								
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	epth 12ft	Total Depth of Test Hole	+ 4	Date	ER LEVE	TER LE		
	lone	Depths where Seeps encountered		Date	VV P	TEKLE	· · EL	
	lone	Depths where Ground Water encountered						
	lone	Depths where Impermeable Soil (Silt / Clay / Bedrock encountered						
	No	Monitor Tube Installed?						

SURVEYING ENGINEERING & LAND DEVELOPMENT SERVICES 305 E. Fireweed Ave. Palmer, AK 99645

GEOTECHNICAL ANALYSIS – SOIL INSPECTION LOG							
Parcel:	MSB WAIVER RES. 78-36 (78-96w)	TEST HOLE NO.	Date:	03/24/22			
Insp. By:	SIMON GILLILAND	2	Job#	22-146			

		TEST HOLE EXCAVATION ANALYSIS		TE	ST HOLE	LOCAT	ION MAP	
1ft 2ft	OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PLASTICITY	See attached					
3ft 4ft					PERCOL	ATION	TEST	
5ft			Reading	Date	Gross Time	Net Time	Depth to Water	Net Drop
6ft			1 2		Time	Time	Water	
7ft			3					
7.10	GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIX, LITTLE/ FINES	4					
8ft			5					
			6					
9ft			7					
			8					
10ft			9					
11ft			10					
12ft			12		lole Diam.			
126			- 1		un Betwee		6.0	
13ft			+ 4		ft and		ft Deep	
14ft 15ft 16ft					West States	49 TH MON C CE-	Sillah J GILLILAND 110731	
8ft			COMM	ENTS:	0	ERED PRO	ESSIONAL ENGI	5
9ft								
Oft								
De	pth		l l	WATI	ER LEVEI	MONI	FORING	
	2ft	Total Depth of Test Hole		Date		TER LE		
	one	Depths where Seeps encountered			.,,,			
	one	Depths where Ground Water encountered						
	one	Depths where Impermeable Soil (Silt / Clay / Bedrock encountered						
	No	Monitor Tube Installed?	-					

SURVEYING ENGINEERING & LAND DEVELOPMENT SERVICES 305 E. Fireweed Ave. Palmer, AK 99645

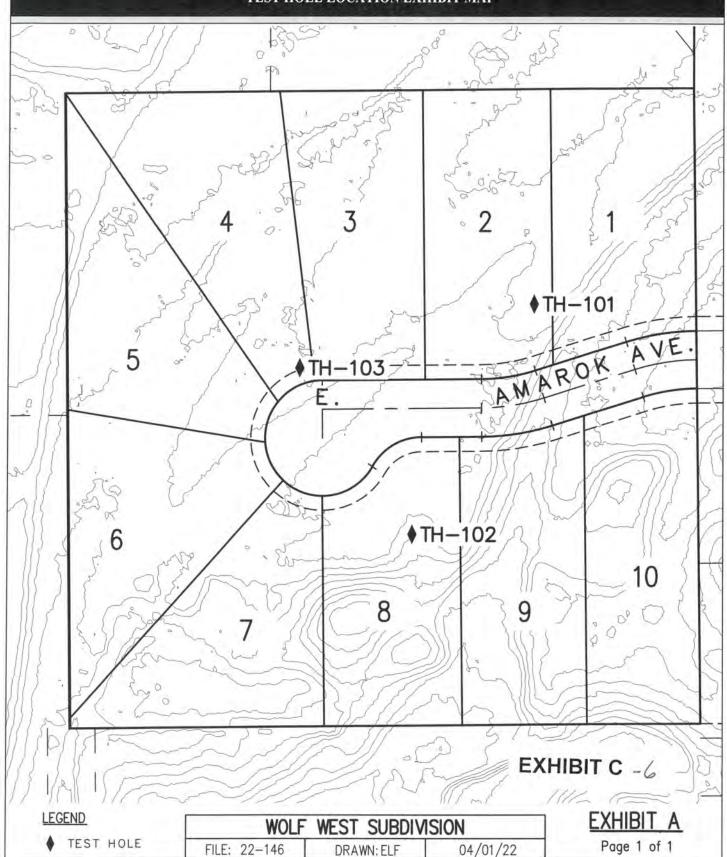
GEOTECHNICAL ANALYSIS – SOIL INSPECTION LOG								
Parcel:	MSB WAIVER RES. 78-36 (78-96w)	TEST HOLE NO.	Date:	03/24/22				
Insp. By:	SIMON GILLILAND	3	Job#	22-146				

		TEST HOLE EXCAVATION ANALYSIS		TE	ST HOLE	LOCAT	ION MAP	
1ft 2ft	OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PLASTICITY	See attached					
3ft								
4ft					PERCOL	ATION	TEST	
5ft			Reading	Date	Gross Time	Net Time	Depth to Water	Net Drop
6ft			1 2					
7ft	GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIX, LITTLE/ FINES	3					
			4					
8ft			5					
			6					
9ft			7					
			8					
0ft			9					
			10					
1ft			11			-		
2ft			12		Hole Diam.			
3ft			- }		Run Betwee	en:	ft Deep	
4ft 5ft					100	(本語) 49 吐	ALION	The state of the s
7ft						SIMON C CE-	GILLILAND 110731	
8ft			COMMENTS:					
9ft								
0ft								
De	pth			WAT	ER LEVE	MONT	TORING	
	2ft	Total Depth of Test Hole		Date	_	TER LE		
N	one	Depths where Seeps encountered						
	one	Depths where Ground Water encountered						
N	one No	Depths where Impermeable Soil (Silt / Clay / Bedrock encountered Monitor Tube Installed?						

SURVEYING, ENGINEERING, & LAND DEVELOPMENT SERVICES

305 EAST FIREWEED AVENUE PALMER, ALASKA, 99645

TEST HOLE LOCATION EXHIBIT MAP



6-7

SURVEYING, ENGINEERING & LAND DEVELOPMENT SERVICES 305 E. FIREWEED AVE. PALMER, AK 99645





April 1, 2022

Fred Wagner, PLS MSB Platting Officer 350 E Dahlia Ave Palmer, Alaska 99645

Wolf Ridge Subdivision

Dear Mr. Wagner,

Please reference the attached calculation tables with regards to ADT counts within the proposed subdivision and the anticipated exit routes.

Table A: Existing ADT Counts at Adjacent Intersections

Road Intersection	Average Daily Traffic (ADT)
Existing end of E. Amarok Ave.	10
N. Wolf Ridge St. and E. Amarok Ave.	60
N Canidae Pl and E. Amarok Ave.	160
E. Tex-Al Dr. and N. Engstrom Rd.	500
E. Amarok Ave. and N. Engstrom Rd.	270
E. Lone Wolf Ct. and N. Engstrom Rd.	170
E. Wolf Creek Rd. and N. Engstrom Rd.	320
N. Tahoe Dr. and E. Wolf Creek Rd.	530
N. Tahoe Dr. and N. Beaver Creek Cir.	650
E. Alyeska Dr. and N. Tahoe Dr.	820
E. Aspen Ridge Rd. and E. Alyeska Dr.	2,040
N. Engstrom Rd. and E. Aspen Ridge Rd.	2,140

It is anticipated that roughly 50% of the traffic generated from the subdivision will travel each direction depending on destination. Generic travel times to anticipated general destination locations utilizing Google Maps were analyzed and supplemented with travel times based on

SURVEYING, ENGINEERING & LAND DEVELOPMENT SERVICES 305 E. FIREWEED AVE. PALMER. AK 99645

posted speed limits and assumed delays for intersection stopping for those roads not yet constructed or within the Google Maps database. It is anticipated that traffic headed for Palmer and Anchorage will always head south towards E Wolf Creek Rd and that the majority of the traffic bound for Wasilla will head north towards Tex-Al. For the proposed subdivision the travel times to Wasilla was faster going north to Tex-Al for destinations west of the Parks and Palmer-Wasilla Hwy intersection which encompasses the majority of Wasilla. With a proposed plat of 10 lots this adds an additional 100 total ATD; 50 ADT in each direction as this lot has platted but unconstructed access from the SW corner. See Table B below showing these updated totals.

Table B: Anticipated Future ADT Counts at Adjacent and Created Intersections

Road Intersection	Average Daily Traffic (ADT)
Existing end of E. Amarok Ave.	100
N. Wolf Ridge St. and E. Amarok Ave.	150
N Canidae Pl and E. Amarok Ave.	250
E. Tex-Al Dr. and N. Engstrom Rd.	550
E. Amarok Ave. and N. Engstrom Rd.	360
E. Lone Wolf Ct. and N. Engstrom Rd.	300
E. Wolf Creek Rd. and N. Engstrom Rd.	370
N. Tahoe Dr. and E. Wolf Creek Rd.	580
N. Tahoe Dr. and N. Beaver Creek Cir.	700
E. Alyeska Dr. and N. Tahoe Dr.	870
E. Aspen Ridge Rd. and E. Alyeska Dr.	2,090
N. Engstrom Rd. and E. Aspen Ridge Rd.	2,190

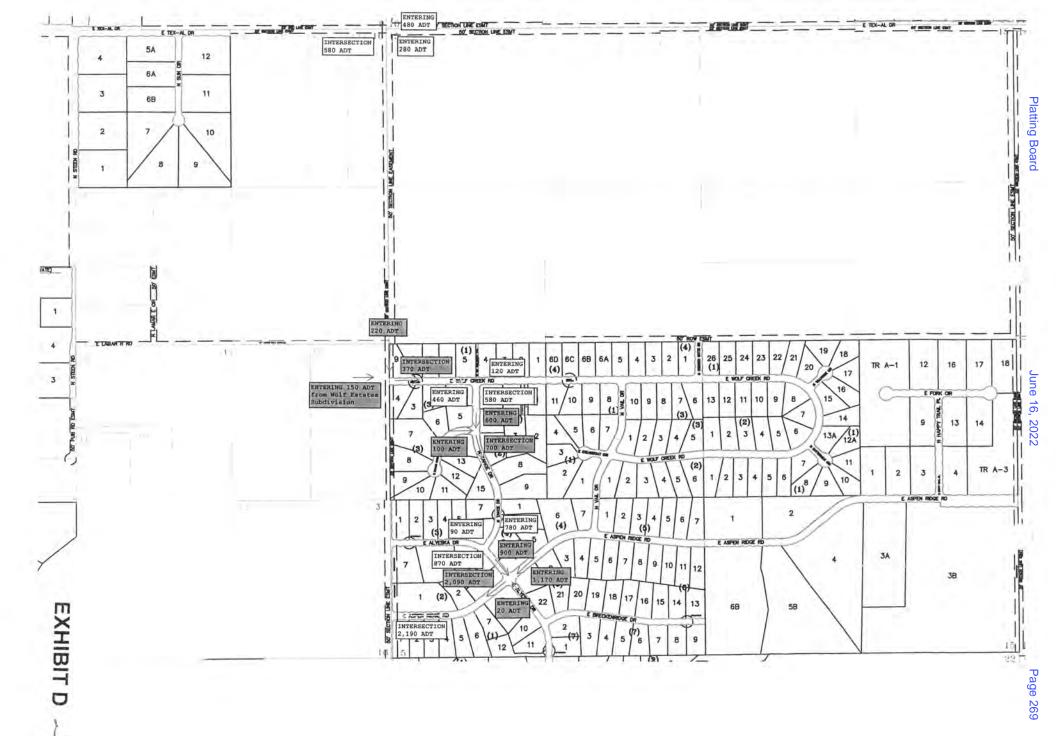
Respectfully,

Simon Gilliland, PE Hanson Land Solutions 305 E, Fireweed Ave.

Simon Billiland

Palmer, AK 99645 (907)746-7738





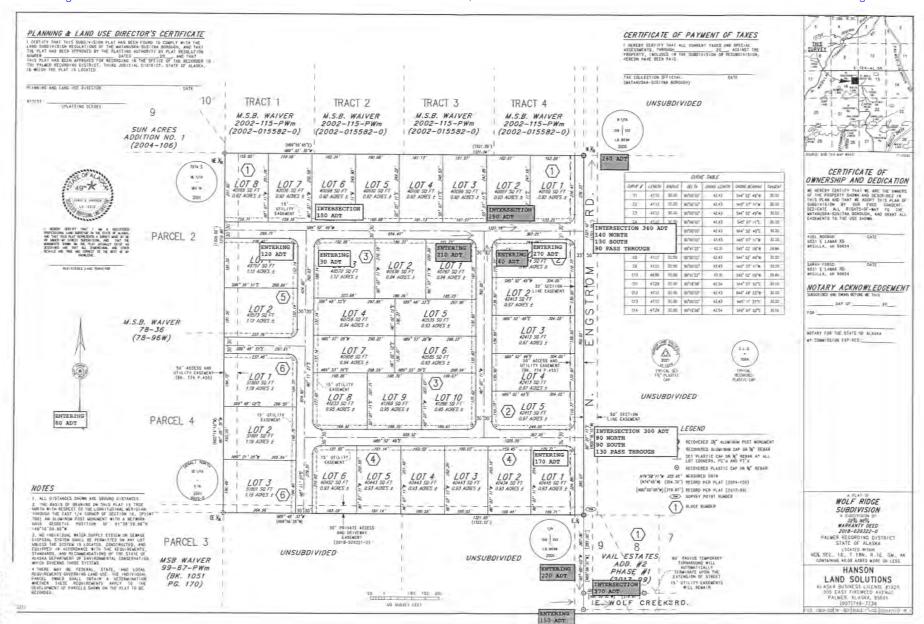
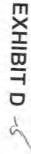
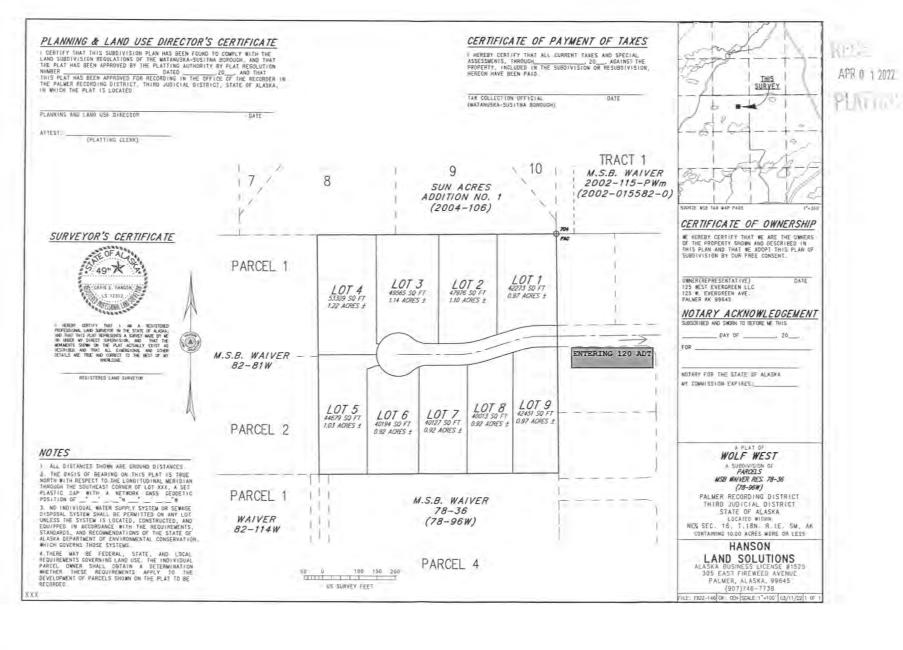


EXHIBIT D - >





From: Jamie Taylor

Sent: Wednesday, April 27, 2022 2:44 PM

To: Amy Otto-Buchanan

Cc: Elaine Flagg; Brad Sworts

Subject: RE: Wolf West MSP #22-048

Certify to Residential Subcollector standard the portions of Alyeska Drive, Tahoe Drive, and Wolf Creek Road that make up the corridor between Aspen Ridge Road and the northern segment of Engstrom Road.

Note that the potential ADT on Aspen Ridge Road is already more than twice the limit of 1000 for its classification of Residential Subcollector. The ADT supports the need for an alternate collector standard route in this area, such as connecting the north and south portions of Engstrom Road along the section line. Aspen Ridge Road is not an ideal collector corridor due to it having frequent residential driveways.

Jamie Taylor, PE (she/her)
Civil Engineer
Matanuska-Susitna Borough
Department of Public Works
t: 907-861-7765 c: 907-355-9810

jamie.taylor@matsugov.us/ http://www.matsugov.us/

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Tuesday, April 12, 2022 3:12 PM

To: earl.almdale@gmail.com; mschoming@crweng.com; mothers@mtaonline.net; Percy, Colton T (DFG)

<colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner

<John.Aschenbrenner@matsugov.us>; Jesse Sumner <jessesumnerdistrict6@gmail.com>; Fire Code

<Fire.Code@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>;

msb.hpc@gmail.com; Brad Sworts <Brad.Sworts@matsugov.us>; Elaine Flagg <Elaine.Flagg@matsugov.us>; Terry Dolan

- <Terry.Dolan@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Charlyn Spannagel
- <Charlyn.Spannagel@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Alex Strawn
- <Alex.Strawn@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; Permit Center
- <Permit.Center@matsugov.us>; Mark Whisenhunt <Mark.Whisenhunt@matsugov.us>; Theresa Taranto
- <Theresa.Taranto@matsugov.us>; Andy Dean <Andy.Dean@matsugov.us>; mearow@matanuska.com;
- row@mtasolutions.com; andrew.fraiser@enstarnaturalgas.com; James Christopher
- <James.Christopher@enstarnaturalgas.com>; row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>

Subject: Wolf West MSP #22-048

The following link contains a Request for Comments for Wolf West MSP, Case 2022-048 to subdivide 18N01E16A009. Comments are due by April 27, 2022. Please let me know if you have any questions. Thanks, A.

Wolf W MSP

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

From: Fred Wagner

Sent: Wednesday, April 13, 2022 9:33 AM

To: Don Cuthbert

Subject: FW: Wolf West MSP #22-048

Don,

The road to this subdivision (N. Engstrom) was upgraded by this same developer last year. The conditions of approval for Wolf Ridge MSP included upgrading to residential subcollector, with the vertical alignment and intersection grades designed to meet residential collector standards for future upgrades if/when they become necessary.

The roads both within and outside of this subdivision are not even remotely close to a requirement for a second access per code. Furthermore, where would this access come from?

I appreciate that you are trying to make reasonable responses to these requests, but this consideration isn't applicable for this case given the location and the lack of available options for a secondary access.

Sincerely,

Fred Wagner, PLS MSB Platting Officer (907)861-7870 Office (907)354-8501 Cell

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Wednesday, April 13, 2022 9:12 AM

To: Fred Wagner < Frederic. Wagner@matsugov.us>

Subject: FW: Wolf West MSP #22-048

He's at it again. A.

From: Fire Code < Fire.Code@matsugov.us > Sent: Wednesday, April 13, 2022 9:02 AM

To: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Subject: RE: Wolf West MSP #22-048

Amy,

This particular area in the Borough already has a very high traffic load on roads that have not been upgraded for the increased flow. Also, Since the Borough has a history of devastating wild fires and serious floods requiring the evacuation of neighborhoods and subdivisions, and the history of the difficulty involved in evacuating those subdivisions because of access issues for both those leaving and the emergency responders trying to get in, I recommend consideration be given to having a second access remote from the first to help alleviate congestion and confusion during times of emergency.





Donald Cuthbert
Fire Marshal
Fire & Life Safety Division
Central Mat-Su Fire Department
(907) 861-8030
FireCode@matsugov.us

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Tuesday, April 12, 2022 3:12 PM

To: earl.almdale@gmail.com; mschoming@crweng.com; mothers@mtaonline.net; Percy, Colton T (DFG)

<colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner

<<u>John.Aschenbrenner@matsugov.us</u>>; Jesse Sumner <<u>jessesumnerdistrict6@gmail.com</u>>; Fire Code

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msb.hpc@gmail.com; Brad Sworts < Brad.Sworts@matsugov.us >; Elaine Flagg < Elaine.Flagg@matsugov.us >; Terry Dolan

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row@mtasolutions.com; andrew.fraiser@enstarnaturalgas.com; James Christopher

<<u>James.Christopher@enstarnaturalgas.com</u>>; row@enstarnaturalgas.com; row@enstarnat

Subject: Wolf West MSP #22-048

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Wolf W MSP

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

Amy Otto-Buchanan
Platting Technician
amy.otto-buchanan@matsugov.us
861-7872

From: Percy, Colton T (DFG) <colton.percy@alaska.gov>

Sent: Wednesday, April 20, 2022 2:41 PM

To: Amy Otto-Buchanan

Subject: RE: Wolf West MSP #22-048

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Hi Amy,

Alaska Department of Fish and Game has reviewed the proposed platting actions and has no objections. The proposed patting actions will not affect public access to public lands and waters. Thanks you for the opportunity to review and comment.

Colton T. Percy

Habitat Biologist Access Defense Program Alaska Department of Fish and Game Division of Wildlife Conservation 333 Raspberry Rd Anchorage, AK 99518 907-267-2118

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Tuesday, April 12, 2022 3:12 PM

To: earl.almdale@gmail.com; mschoming@crweng.com; mothers@mtaonline.net; Percy, Colton T (DFG)

- <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner
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msb.hpc@gmail.com; Brad Sworts <brad.sworts@matsugov.us>; Elaine Flagg <Elaine.Flagg@matsugov.us>; Terry Dolan

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<James.Christopher@enstarnaturalgas.com>; row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>

Subject: Wolf West MSP #22-048

CAUTION: This email originated from outside the State of Alaska mail system. Do not click links or open attachments unless you recognize the sender and know the content is safe.

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Wolf W MSP

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

Amy Otto-Buchanan Platting Technician

From: OSP Design Group <ospdesign@gci.com>
Sent: Wednesday, April 20, 2022 8:54 AM

To: Amy Otto-Buchanan
Cc: OSP Design Group

Subject: RE: Wolf West MSP #22-048
Attachments: RFC Packet.pdf; Agenda Plat.pdf

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Amy,

In review GCI has no comments or objections to the plat, attached is the signed plat for your records.

Thanks,

MIREYA ARMESTO

GCI | Technician II, GIS Mapping m: 907-744-5166 | w: www.gci.com

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Tuesday, April 12, 2022 3:12 PM

To: earl.almdale@gmail.com; mschoming@crweng.com; mothers@mtaonline.net; Percy, Colton T (DFG)

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Subject: Wolf West MSP #22-048

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Wolf W MSP

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Amy Otto-Buchanan
Platting Technician
amy.otto-buchanan@matsugov.us
861-7872



ENSTAR Natural Gas Company A DIVISION OF SEMCO ENERGY Engineering Department, Right of Way Section 401 E. International Airport Road P. O. Box 190288 Anchorage, Alaska 99519-0288 (907) 277-5551 FAX (907) 334-7798

April 12, 2022

Matanuska-Susitna Borough, Platting Division 350 East Dahlia Avenue Palmer, AK 99645-6488

To whom it may concern:

ENSTAR Natural Gas Company has reviewed the following preliminary plat and has no comments or recommendations.

 WOLF WEST (MSB Case # 2022-048)

If you have any questions, please feel free to contact me at 334-7944 or by email at james.christopher@enstarnaturalgas.com.

Sincerely,

James Christopher

Right of Way & Compliance Technician

ENSTAR Natural Gas Company

James Christopher

From: Holly Sparrow hsparrow@mtasolutions.com

Sent: Wednesday, April 13, 2022 10:09 AM

To: Amy Otto-Buchanan

Subject: RE: Wolf West MSP #22-048

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Good morning,

MTA has reviewed the plat for Wolf West. MTA has no comments.

Thank you for the opportunity to comment.

Holly Sparrow, Right of Way Agent

1740 S. Chugach St., Palmer, Alaska 99645

Office: (907) 761-2599 | www.mtasolutions.com



Life. Technology. Together.

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Tuesday, April 12, 2022 3:12 PM

To: earl.almdale@gmail.com; mschoming@crweng.com; mothers@mtaonline.net; Percy, Colton T (DFG)

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Dept. <row@mtasolutions.com>; andrew.fraiser@enstarnaturalgas.com; James Christopher

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Subject: Wolf West MSP #22-048

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Wolf W MSP

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Amy Otto-Buchanan

SUN ACRES

ADDITION NO. 1

(2004-106)

150.30'

LOT 3

40039 SQ FT

0.92 ACRES ±

107.97

N89° 51′ 22″W .

PHASE

SURVEY

PLANNING & LAND USE DIRECTOR'S CERTIFICATE

I CERTIFY THAT THIS SUBDIVISION PLAN HAS BEEN FOUND TO COMPLY WITH THE LAND SUBDIVISION REGULATIONS OF THE MATANUSKA-SUSITNA BOROUGH, AND THAT THE PLAT HAS BEEN APPROVED BY THE PLATTING AUTHORITY BY PLAT RESOLUTION NUMBER ______ DATED _____, 20___, AND THAT THIS PLAT HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE RECORDER IN THE PALMER RECORDING DISTRICT, THIRD JUDICIAL DISTRICT, STATE OF ALASKA, IN WHICH THE PLAT IS LOCATED

PLANNING AND LAND USE DIRECTOR

DATE

ATTEST: ___ (PLATTING CLERK)

LEGEND

- RECOVERED ALUMINUM CAP ON %" REBAR
- RECOVERED PLASTIC CAP ON %" REBAR
- RECOVERED %" REBAR
- SET PLASTIC CAP ON %"x30" REBAR
- SET 2½" ALUMINUM POST MONUMENT

N74°58'11"W 255.65' MEASURED DATA

(N74°45'W) (254.70') RECORD PER PLAT (2014-151)

704 SURVEY POINT NUMBER

1 BLOCK

	/	'		
	UN	NSON		
	FAR	SOLUTION OF THE PROPERTY OF TH	8	
	2	DON	7	
		Λ		

CURVE TABLE									
CURVE #	LENGTH	RADIUS	DEL TA	CHORD LENGTH	CHORD BEARING	TANGENT			
C1	65.56	225.00	16°41'41"	65.33	S81° 31' 35"W	33.01			
C2	66.60	225.00	16°57'37"	66.36	S81° 39' 33"W	33.55			
C3	74.32	255.00	16°41'52"	74.05	S81° 31' 40"W	37.42			
C4	57.72	195.00	16°57'37"	57.51	S81° 39' 33"W	29.07			
C5	8.05	60.00	7°41'21"	8.05	S86° 17' 57"W	4.03			
C6	45.00	60.00	42°58'19"	43.95	S60° 58' 08"W	23.62			
C7	45.00	60.00	42°58'19"	43.95	S17° 59' 49"W	23.62			
C8	45.00	60.00	42°58'19"	43.95	N24° 58' 30"W	23.62			
C9	45.00	60.00	42°58'19"	43.95	N67° 56' 48"W	23.62			
C10	63.28	60.00	60°25'25"	60.38	S60° 21' 20"W	34.94			
C11	62.83	60.00	60°00'00"	60.00	S60° 08' 38"W	34.64			
C12	75.48	255.00	16°57'37"	75.21	S81° 39′ 33″W	38.02			
C13	56.80	195.00	16°41'26"	56.60	S81° 31' 28"W	28.61			

LINE TABLE		
LINE #	LENGTH	BEARING
L1	30.00	S0° 08' 38"W
L2	19.16	S73° 10' 44"W
L3	23.45	N89° 51' 22"W
L4	10.00	S0° 05' 44"E

2022

TYPICAL SET 1¾" PLASTIC

M.S.B. WAIVER 82-81W PARCEL 2

SURVEYOR'S CERTIFICATE

CRAIG E. HANSON

I HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF ALASKA, AND THAT THIS PLAT REPRESENTS A SURVEY MADE BY ME

OR UNDER MY DIRECT SUPERVISION, AND THAT THE MONUMENTS SHOWN ON THE PLAT ACTUALLY EXIST AS DESCRIBED AND THAT ALL DIMENSIONAL AND OTHER DETAILS ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

REGISTERED LAND SURVEYOR

DECAMP

2071-5

PARCEL

N89° 52' 02"W

LOT 4 42394 SQ FT

0.97 ACRES ±

225.42'

LOT 5

40834 SQ FT

0.94 ACRES ±

LOT 6

40004 SQ FT

0.92 ACRES ±

CERTIFICATE OF PAYMENT OF TAXES

I HEREBY CERTIFY THAT ALL CURRENT TAXES AND SPECIAL ASSESSMENTS, THROUGH ASSESSMENTS, THROUGH______, 20___, AGAINST THE PROPERTY, INCLUDED IN THE SUBDIVISION OR RESUBDIVISION, HEREON HAVE BEEN PAID.

NE 1/16

SEC 16

LOT 1 40006 SQ FT

0.92 ACRES ±

LOT 10 40019 SQ FT

0.92 ACRES ±

660.68

134.27

LOT 2 40002 SQ FT

0.92 ACRES ±

15' UTILITY

EASEMENT -

LOT 9

40002 SQ FT

0.92 ACRES ±

167.00

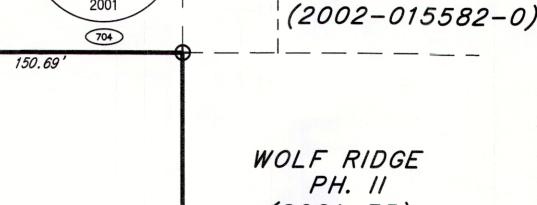
15' UTILITY EASEMENT---

PHASE

LOT 8 40026 SQ FT

0.92 ACRES ±

TAX COLLECTION OFFICIAL DATE (MATANUSKA-SUSITNA BOROUGH)



2021

LS 12312

2021

LS 12312

WOLF RIDGE

(2021 - 35)

PH. // —

(2021 - 35)

TRACT

M.S.B. WAIVER

2002-115-PWm

a AVE.

CERTIFICATE OF OWNERSHIP AND DEDICATION

SOURCE: MSB TAX MAP WA01, WA02, WA07, & WA08 1"=5280"

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY SHOWN AND DESCRIBED ON THIS PLAN AND THAT I ADOPT THIS PLAN OF SUBDIVISION BY MY FREE CONSENT, DEDICATE ALL RIGHTS-OF-WAY TO THE MATANUSKA-SUSITNA BOROUGH, AND GRANT ALL EASEMENTS TO THE USE SHOWN.

DATE

MIKE THOMPSON (OWNER) WM CONSTRUCTION, LLC P.O. BOX 4042 PALMER, AK 99645

NOTARY ACKNOWLEDGEMENT SUBSCRIBED AND SWORN BEFORE ME THIS

__ DAY OF _____, 20___,

NOTARY FOR THE STATE OF ALASKA MY COMMISSION EXPIRES:___

Agenda Copy

RECEIVED APR 0 1 2022 PLATTING

WOLF WEST A SUBDIVISION OF PARCEL 2 MSB WAIVER RES. 78-36 (78-96W) PALMER RECORDING DISTRICT

A MASTER PLAN OF

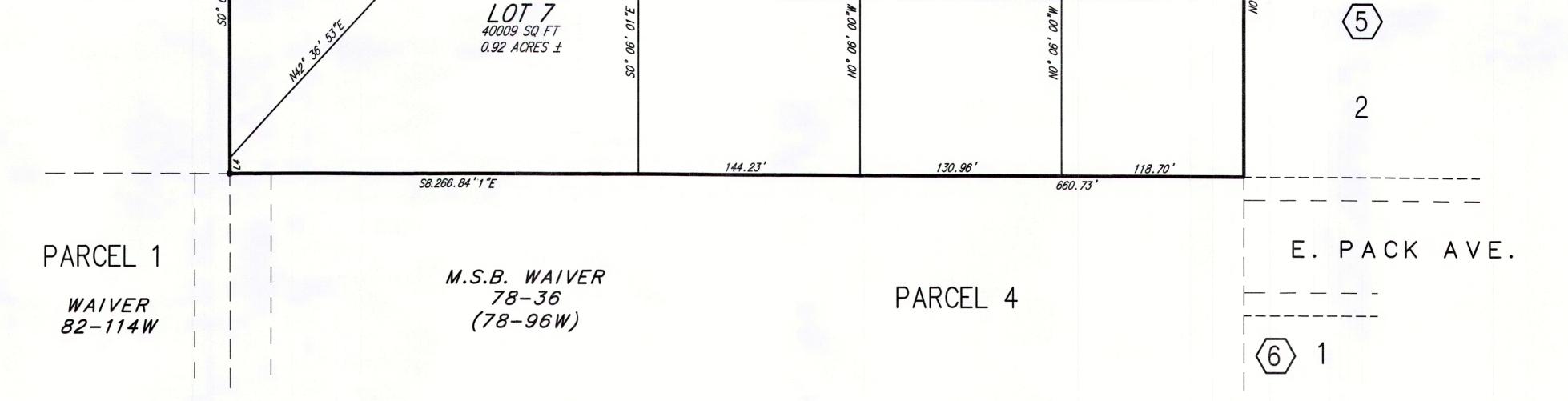
THIRD JUDICIAL DISTRICT STATE OF ALASKA LOCATED WITHIN NE1/4 SEC. 16, T.18N. R.1E. SM, AK CONTAINING 10.00 ACRES MORE OR LESS

HANSON LAND SOLUTIONS ALASKA BUSINESS LICENSE #1525 305 EAST FIREWEED AVENUE

PALMER, ALASKA, 99645 (907)746-7738 FILE: FB22-146 CK: CEH SCALE:1"=100' 04/01/22 1 OF 1

NOTES

- 1. ALL DISTANCES SHOWN ARE GROUND DISTANCES. 2. THE BASIS OF BEARING ON THIS PLAT IS TRUE NORTH WITH RESPECT TO THE LONGITUDINAL MERIDIAN THROUGH THE NORTHEAST CORNER OF LOT 1, A RECOVERED ALUMINUM CAP (SURVEYED POINT 704),
- WITH A NETWORK GNSS GEODETIC POSITION OF 61° 39' 12.99"N 149° 16' 37.32"W
- 3. NO INDIVIDUAL WATER SUPPLY SYSTEM OR SEWAGE DISPOSAL SYSTEM SHALL BE PERMITTED ON ANY LOT UNLESS THE SYSTEM IS LOCATED, CONSTRUCTED, AND EQUIPPED IN ACCORDANCE WITH THE REQUIREMENTS, STANDARDS, AND RECOMMENDATIONS OF THE STATE OF ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION,
- WHICH GOVERNS THOSE SYSTEMS. 4. THERE MAY BE FEDERAL, STATE, AND LOCAL REQUIREMENTS GOVERNING LAND USE. THE INDIVIDUAL PARCEL OWNER SHALL OBTAIN A DETERMINATION WHETHER THESE REQUIREMENTS APPLY TO THE DEVELOPMENT OF PARCELS SHOWN ON THE PLAT TO BE
- 5. THIS SUBDIVIDION IS ENCUMBERED BY A MEA
- BLANKET EASMENT RECORDED ON DECEMBER 29. 1977 AT BOOK ISU, PAGE 154



50 0 100 150 200

US SURVEY FEET

STAFF REVIEW AND RECOMMENDATIONS PUBLIC HEARING JUNE 16, 2022

PRELIMINARY PLAT: EQUESTRIAN MEADOWS

LEGAL DESCRIPTION: SEC 12, T18N, R01E, SEWARD MERIDIAN AK

PETITIONERS: PRECISION FRONTIERS LLC

SURVEYOR/ENGINEER: SOUTHWEST AK SURVEYING LLC/SDCS LLC

ACRES: 9.94 + PARCELS: 6

REVIEWED BY: AMY OTTO-BUCHANAN CASE #: 2022-044

REQUEST: The request is to divide Lot 2, Block 1, Wasilla Creek Estates, Plat No. 86-17, into six lots, to be known as **EQUESTRIAN MEADOWS**, containing 9.94 acres +/-. Petitioner will dedicate and construct a cu-de-sac to residential street standards. Parcels are located southeast of E. Jensen Road; lying within the SE ¼ Section 12, Township 18 North, Range 01 East, Seward Meridian, Alaska.

EXHIBITS

Vicinity Map and Aerial Photos

to a section of the testing to be a section of the testing of the	
Geotechnical Report	EXHIBIT $B - 9 pg$
AGENCY COMMENTS	
Department of Public Works Operations & Maintenance	EXHIBIT $C-1$ pg
Department of Emergency Services	EXHIBIT $D-1$ pg
Planning Division	EXHIBIT $E - 1 pg$
ADF&G	EXHIBIT $F-1$ pg
Utilities	EXHIBIT $G-3$ pgs
Site Visit Report, 04/27/2022	EXHIBIT H - 10 pgs
Public Comment	EXHIBIT I - 1 pg

<u>DISCUSSION</u>: The proposed subdivision is southwest of E. Jensen Road. Petitioner is creating six lots; access will be from the cul-de-sac only. Lots 1 & 2 will access by a 40' wide shared driveway easement, as will Lots 5 & 6, to allow for driveways 40' from the curve return of the cul-de-sac to E. Jensen Road. Petitioner will be constructing a Borough residential standard cul-de-sac (see *Recommendation #4*). Four of the lots are flag lots, with the required pole widths, pursuant to MSB 43.20.300(E).

<u>Soils Report</u>: A geotechnical report was submitted (**Exhibit C**), pursuant to MSB 43.20.281(A). Dan Steiner, PE, Steiner Design and Construction Services, LLC, notes five testholes were excavated. Testhole location map and soils logs are attached. Testholes varied in the soils that were encountered. Testholes #1, #3 and #4 had soils conditions compatible with conventional septic systems. Soils were gravely sands with cobbles. Groundwater was encountered in Testhole #1 at 7'. Soils in Testhole #2 and Testhole #5 have soils considered to be unusable septic soil. The configuration of the lots allows each lot to have 10,000 sf

EXHIBIT A - 4 pgs

of useable septic area. Existing drainage plan is from the north to south/southeast. There are currently no drainage issues with this site. Overall existing drainage patterns will not be altered by this new subdivision. Based on the soils data and existing topography, there is a minimum of 10,000 sf of contiguous useable septic area and a minimum of 10,000 sf of useable building area within each of the proposed lots as required by MSB code.

Comments: Department of Public Works Operations & Maintenance (Exhibit C) notes the power pole, pedestal and other above-ground utility facilities in the right-of-way within 40' of the intersection will need to be relocated (see *Recommendation #6*). Subdivision Construction Manual 2020 H02.2(c) states above-ground utility facilities shall not be located within the right-of-way nearer than 40' from the point of intersection of the extension of the property lines at any existing or proposed intersection on Residential Collector streets or higher classification. Submit drainage report to DPW seven days prior to the desired preconstruction conference date (see *Recommendation #4*). Pursuant to MSB 43.20.281(A)(1)(a), useable septic area is an area where the seasonal high water table is a minimum of 8' below the surface. The results of Testhole #1 indicate groundwater was found at 7'; the area is not useable for the purpose of subdividing without the addition of fill. The drainage report will need to address the fill or regrading of lots as well. Staff notes an updated soils report will need to be provided once the fill/regrading of Lots #5 & #6 has been done (see *Recommendation #5*).

Department of Emergency Services (**Exhibit D**) has no comment. Planning Division (**Exhibit E**) notes E. Jensen Avenue is identified as a future collector level street on the Official Streets and Highways Plan (OSHP) and the Long Range Transportation Plan (LRTP), and will be designed for a mix of access and mobility. To reduce unnecessary conflict points, access should be limited where possible. All lots in this proposed subdivision should make access from the new proposed road. The new proposed road should intersect E. Jensen Avenue directly across from N. Showers Street to allow for the safest and most efficient intersection. The section line to the east of the parcel is also shown on the OSHP as a future collector road. This should be considered during development. Staff notes all lots will access from the cul-de-sac. Lots 5 & 6 will share a common access easement for driveway access, as will Lots 1 & 2. No direct access to E. Jensen Road will be allowed (see Recommendation #7). ADF&G (Exhibit F) has no objections.

<u>Utilities</u>: (Exhibit G) MTA has no comments. GCI has no objections. Enstar has no comments or recommendations. MEA did not respond.

<u>Public Comment</u>: (Exhibit I) Kelvin Simonson, owner of Lot 3, Block 3, Wasilla Creek Estates, to the north, has no objections.

At the time of staff report write-up, there were no responses to the Request for Comments from US Army Corps of Engineers; Community Council Fishhook; Fire Service Area #132 Greater Palmer Consolidated; Road Service Area #16 South Colony; MSB Community Development, Assessments, Development Services or Pre-Design Division; or MEA.

<u>CONCLUSION</u>: The preliminary plat of EQUESTRIAN MEADOWS is consistent with AS 29.40.070 Platting Regulations and MSB 43.15.016 Preliminary Plats. There were no objections from any federal or state agencies, Borough departments, or utilities. There were no objections to the plat from the public in response to the Notice of Public Hearing; there was one non-objection. Legal and physical access will exist to the proposed lots, consistent with MSB 43.20.100 Access Required, MSB 43.20.120 Legal Access and

MSB 43.20.140 Physical Access. Frontage for the subdivision will exist, pursuant to MSB 43.20.320 Frontage. A soils report was submitted, pursuant to MSB 43.20.218(A)(1).

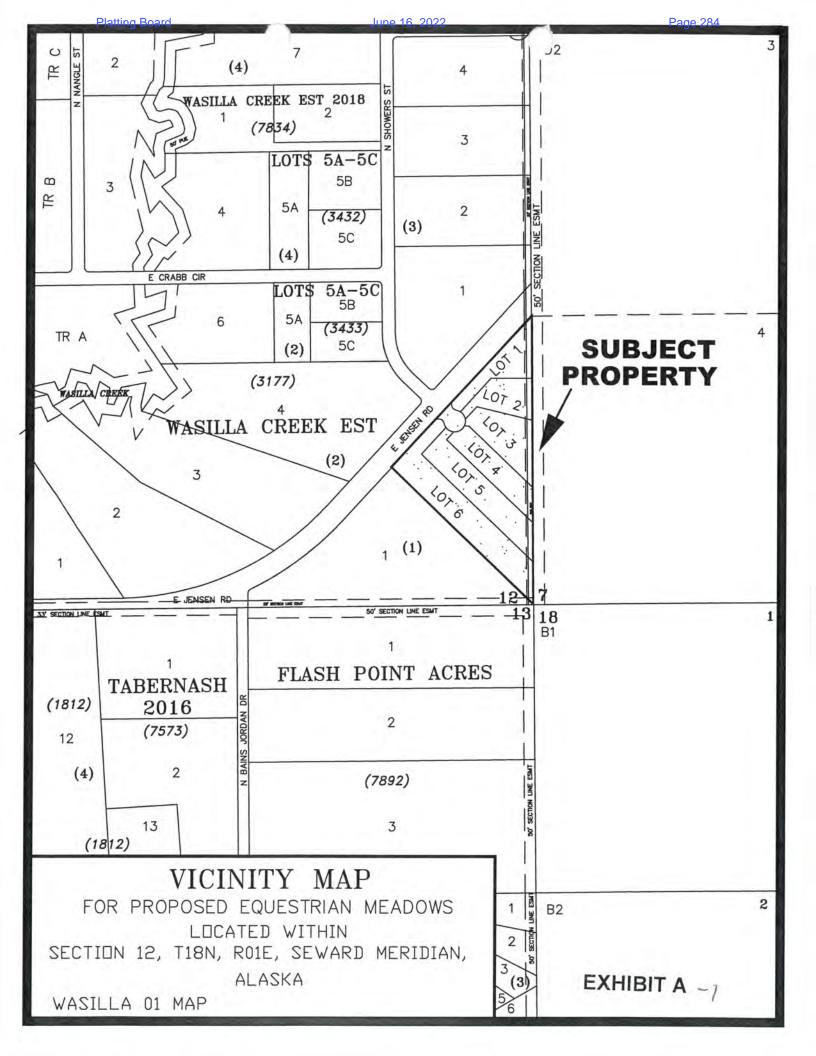
FINDINGS OF FACT

- The plat of Equestrian Meadows is consistent with AS 29.40.070 Platting Regulations and MSB 43.15.016 Preliminary Plats.
- 2. A soils report was submitted, pursuant to MSB 43.20.281(A)(1).
- 3. All lots will have the required frontage pursuant to MSB 43.20.320 and MSB 43.20.300(E) Flag lots.
- 4. At the time of staff report write-up, there were no responses to the Request for Comments from US Army Corps of Engineers; Community Council Fishhook; Fire Service Area #132 Greater Palmer Consolidated; Road Service Area #16 South Colony; MSB Community Development, Assessments, Development Services or Pre-Design Division; or MEA.
- 5. There were no objections from any federal or state agencies, Borough departments, or utilities.
- There were no objections from the public in response to the Notice of Public Hearing; there was one non-objection.

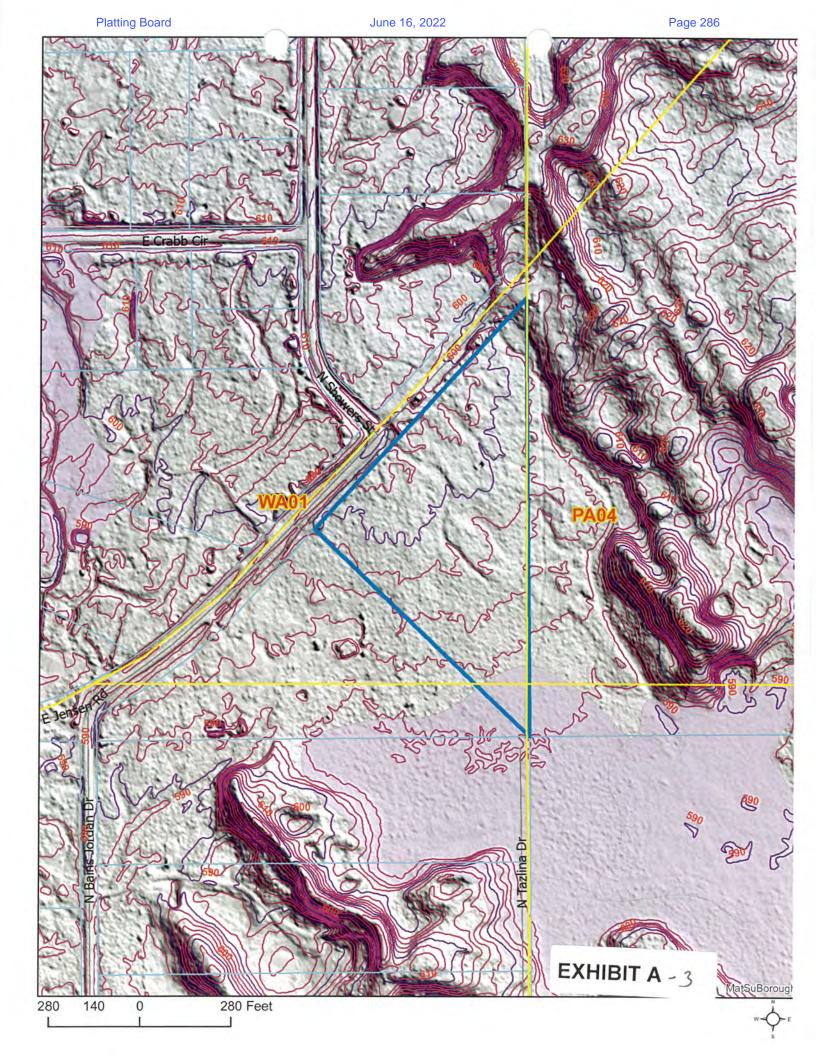
RECOMMENDATIONS OF CONDITIONS OF APPROVAL

Suggested motion: I move to approve the preliminary plat of Equestrian Meadows, Section 12, Township 18 North, Range 01E, Seward Meridian, Alaska, contingent on staff recommendations

- Taxes and special assessments must be paid in full for the year of recording, pursuant to MSB 43.15.053(F) and AS 40.15.020. Pay taxes and special assessments (LIDs), by CERTIFIED FUNDS OR CASH.
- Provide updated Certificate to Plat executed within seven (7) days of recording of plat and submit Beneficiary Affidavit for any holders of a beneficial interest.
- 3. Pay postage and advertising fees.
- 4. Construct cul-de-sac to MSB residential street standards:
 - a. Submit cost estimate, arrange a pre-construction meeting with Department of Public Works (DPW), pay inspection fee and obtain a Notice to Proceed from Platting staff. Submit street inspection reports as required by Section F1.4, F1.5 and F1.6 of the Subdivision Construction Manual.
 - b. Provide DPW acceptance of the road to Platting staff.
 - c. Platting staff to approve all road names.
 - d. Provide as-built of streets once construction is complete.
- 5. Provide an updated geotechnical report for Lots #5 & #6, after fill/regrading has been done.
- Remove power pole, pedestal and other above-ground utility facilities in the right-of-way within 40' of the intersection, pursuant to Subdivision Construction Manual 2020 H02.2(c).
- Provide plat note to state: "All lots will access from the cul-de-sac. No direct access to E. Jensen Road is allowed."
- 8. Show all easements of record on final phase plat.
- 9. Submit recording fees, payable to Department of Natural Resources (DNR).
- 10. Submit final plats in full compliance with Title 43.









5900 W. Dewberry Dr Wasilla, AK 99623



Phone: (907) 357-5609 Fax: (907) 357-5608

March 8, 2022

Fred Wagner Platting Officer Matanuska-Susitna Borough 350 E. Dahlia Ave. Palmer, AK 99645-6488



Re: Engineering Report

Equestrian Meadows - A Subdivision of Lot 2 Block 2 of Wasilla Creek Estates

Mr. Wagner,

This letter is to serve as the engineering report for the above referenced subdivision and platting action. The platting action is to replat one parcel of approximately 10 acres into 6 lots. The lots range in size from 0.92 acres to 3.53 acres. Access to the proposed subdivision is from Jensen Road. A small cul-de-sac bulb will be constructed as part of this project to provide access to the proposed lots. The lot configuration is required due to the soil conditions encountered. This will be discussed later in this report.

Site Topography

There is a small change in topography on this existing parcel. The existing drainage pattern is from the north to the south / southeast. The change is approximately 10'. With the current topography there are areas over 10,000 square feet, on each proposed parcel that are usable building areas.

Drainage Plan

Currently, there are no drainage issues with this site. The platting action of this subdivision will require the construction of a small cul-de-sac bulb. This will require an infiltration basin to absorb the increase in runoff from this small bulb. The overall existing drainage patterns of the existing parcel will not be altered by this new subdivision.

A drainage plan is included with this report (Figure 1). The area of construction for this small cul-de-sac bulb is approximately 8,500 sq.ft. As a result, a Final Drainage Study should not be needed for this development.

Mr. Fred Wagner Matanuska-Susitna Borough Engineering Report – Equestrian Meadows

Page 2 of 2

Soils Investigation

Soil information is needed to determine if existing soil conditions are suitable for onsite wastewater disposal systems. This includes soils capable of supporting a soil absorption system that meets all Alaska Department of Environmental Conservation (ADEC) requirements including offset requirements from groundwater and bedrock.

Five test holes were excavated to determine existing soil conditions. A figure showing the test hole locations and logs of the test holes are included with this report. The test holes varied in the soils that were encountered. Test holes 1, 3, and 4 had soil conditions that were compatible with conventional septic systems. The soils were gravely sands with cobbles. Groundwater was encountered in test hole 1 at a depth of 7'.

The soils in test hole 2 would be challenging to construct a conventional septic system. Test hole 5 has gravely sandy soils, but an impervious layer of soil at 8'. Because of these soil conditions, there is a portion of this subdivision that is considered to have "unusable septic soil". This area is indicated if Figure 1.

The soil conditions resulted in the lot configuration shown in the plat. This configuration allows each lot to have 10,000 square feet of usable septic area.

Summary

Based on the soils data and existing topography, there is a minimum of 10,000 square feet of contiguous septic area and a minimum of 10,000 square feet of usable building area within each of the proposed lots as required by the Matanuska-Susitna Borough. The overall drainage pattern of the existing parcel will not be altered by this platting action

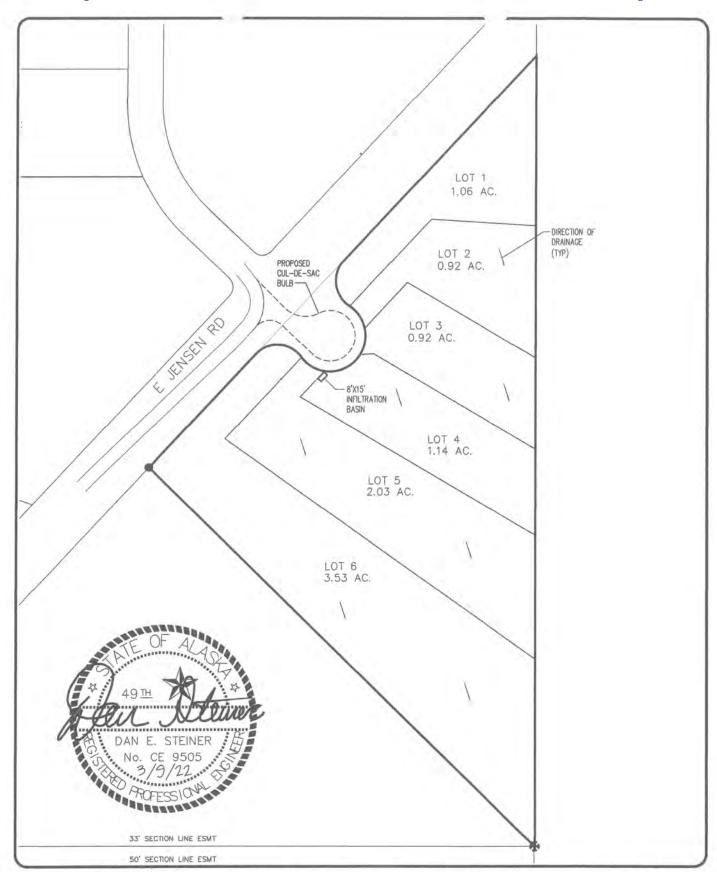
Sincerely,

Dan Steiner, P.E.

Manager

des encl.







5900 W. DEWBERRY D.R. WASILLA, AK 99623

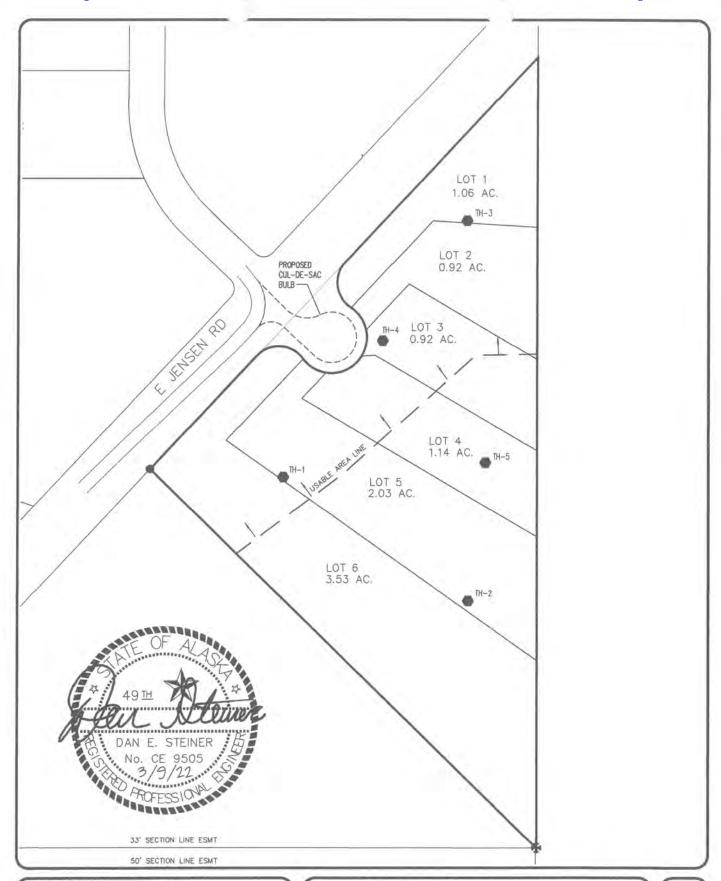
PH: (907) 357-5609 FAX: (907) 357-5608 EQUESTRIAN MEADOWS SUBDIVISION

DRAINAGE IMPROVEMENTS

EXHIBIT B -3

FIGURE

1





5900 W. DEWBERRY D.R. PH: (907) 357-5609 WASILLA, AK 99623 FAX: (907) 357-5608 EQUESTRIAN MEADOWS SUBDIVISION

TEST HOLE LOCATIONS

FIGURE

2

EXHIBIT B -4

5900 W. Dewberry Dr. Wasilla, AK 99623 Phone: (907) 357-5609 Fax: (907) 357-5608

TEST HOLE # PERFORMED BY: PROJECT: LEGAL DESC.	Jer Lot			10/25/2021 Estates		65	No. CE 9505 11/1/21 PROFESSION	
PROJECT NO.	21-	039					SEAL	
DEPTH, FT	0-6" Top	SOIL TYPE soil / roots and	organics	[/0	SITE	DI AN		
1.				SLOPE	JOINE !	DAM		
2-	0.5' - 2.5'	Brown Sand (OL)	dy Loam	m				
3-	2.5'-4'	Fine Sand (SP)						
5- 6-	4'-8.5'	Gravely Sar w/ Cobbles						
7- - 8-		(SP)						
9-								
10-	8.5'-10'	Peat	GROUNDWA ENCOUNTER		SLOP	E		
11-	10'-14'	Blue/Gray Clay/Silt (Plastic) (CL-ML)	AT WHAT DE	R				
14-						LATION TE		
- BOH 15-			READING	DATE	TIME	NET TIME	DEPTH TO WATER	NET DROP
16-								
17-								
18-								
-								
19-								
20-			PERC. RATE	(min/in)	PERC. HO	LE DIA.	APPLICATION RATE:	g/d/sf
21-			TEST RUN B	ETWEEN	ft &		ft	
22-			COMMENTS					
			PERFORMED	BY:			DATE:	

5900 W. Dewberry Dr. Wasilla, AK 99623 Phone: (907) 357-5609 Fax: (907) 357-5608

TEST HOLE # PERFORMED BY: PROJECT: LEGAL DESC.		2 Dan Steiner, P. Jensen Road E Lot 2 Block 1 W	xtension	10/25/202 Estates	1		No. CE 9505 11/1/21 PROFESSION	
PROJECT NO.		21-039					SEAL	
DEPTH, FT		SOIL TYPE						
1-	0-6"	Topsoil / roots and	organics	SLOPE	SITE	PLAN		
3-	0.5'-5'	Fine Sand w/ Trace of S (SP)	Silt					
5-	5'-6,5'	Blue/Gray Clay/Silt (Plastic) (CL-ML)						
7-	6.5'-8'	Sand (SP)						
9- 10- - 11- - 12- BOH	8'-12'	Blue/Gray Clay/Silt (Plastic) (CL-ML)	GROUNDWA' ENCOUNTER AT WHAT DE DEPTH AFTE MONITORING	PTH? 6.5	5	PE		
14-					PERCO	DLATION TE	ST	
15- - 16- - 17- - 18- -			READING	DATE	TIME	NET TIME	DEPTH TO WATER	NET DROP
20-			PERC. RATE		PERC. Ho		APPLICATION RATE:	g/d/sf
22-]			COMMENTS:				DATE:	

5900 W. Dewberry Dr. Wasilla, AK 99623 Phone: (907) 357-5609 Fax: (907) 357-5608

TEST HOLE # PERFORMED BY: PROJECT: LEGAL DESC. PROJECT NO.	Dan			10/25/202 Estates	21		No. CE 9505 11/1/21 ROFESSION	
DEPTH, FT		SOIL TYPE					SEAL	
-		oil / roots and		SLOPE	S	ITE PLAN		
1-	0.5' - 1.5'	Brown Sand (OL)	y Loam	PE				
2-					11			
3-								
4-								
-		Gravely San	nd					
5- - 6-	1.5'-10'	w/ Cobbles						
7		(SP)						
7-								
8-					-11			
9-								
10-			GROUNDW		lo s	LOPE		
		DI 10			/a			
11-	10'-14'	Blue/Gray Clay/Silt	AT WHAT D		/d			
12-		(Plastic) (CL-ML)	DEPTH AFT MONITORIN		la L			
13-		4						
14- BOH						COLATION TE		
15-			READING	DATE	TIME	NET TIME	DEPTH TO WATER	NET DROP
-								
16-								
17-								
18-								
19-								
20-								
19			PERC. RATI	E (min/in) PERC	. HOLE DIA.	APPLICATION RATE:	g/d/sf
21-			TEST RUN	BETWEEN	ft	8,	ft	
22-			COMMENTS	3:				
			PERFORME	D BY:			DATE:	

5900 W. Dewberry Dr. Wasilla, AK 99623 Phone: (907) 357-5609 Fax: (907) 357-5608

TEST HOLE # PERFORMED BY: PROJECT: LEGAL DESC. PROJECT NO.	Dar			10/25/202 Estates	1		No. CE 9505 11/1/21 PROFESSION	
DEPTH, FT		SOIL TYPE					SEAL	
1 -	0-6" Tops 0.5' - 1.5'	Brown Sand (OL)		SLOPE	SITE	PLAN		
3- 4-								
5- 6-	1.5'-10'	Gravely San w/ Cobbles (SP)	d					
7- 8-								
9-			GROUNDWA' ENCOUNTER		O SLOP	PE		
11-	10'-14'	Blue/Gray Clay/Silt (Plastic) (CL-ML)	AT WHAT DE	R				
14- BOH					PERCO	DLATION TE	ST	
15-			READING	DATE	TIME	NET TIME	DEPTH TO WATER	NET DROP
16-								
17-								
18-								
-								
19-								
20-			PERC. RATE	(min/in)	PERC. HO	DLE DIA.	APPLICATION RATE:	g/d/sf
21-			TEST RUN BE		ft 8	k	_ft	
			PERFORMED	BY:			DATE:	

5900 W. Dewberry Dr. Wasilla, AK 99623 Phone: (907) 357-5609 Fax: (907) 357-5608

TEST HOLE # PERFORMED BY: PROJECT: LEGAL DESC. PROJECT NO.	Jei	5 In Steiner, P.I. Insen Road Ex t 2 Block 1 W -039	ctension	10/25/202 Estates	1	(V)	PROFESSION	
DEPTH, FT		SOIL TYPE					SEAL	
	0-6" Top	osoil / roots and o	organics	SLOPE	SITE	PLAN		
1.				OPE				
2-	0.5' - 3'	Brown Sandy (OL)	y Loam					
3-		(52)						
4-								
5-		Gravely Sand	d					
-	3'-8'	w/ Cobbles						
6-		(SP)						
7-								
8-								
9-								
10-		Blue/Gray	GROUNDWA		SLO	PE		
-	8'-12'	Clay/Silt						
11-		(Plastic) (CL-ML)	AT WHAT DE	PTH?	a			
12- - BOH			DEPTH AFTI		a			
13-			MONTONIA	- 1#				
14-					PERCO	DLATION TE	ST	
-			READING	DATE	TIME	NET TIME	DEPTH TO WATER	NET DROP
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-								
20-			PERC. RATE	(min/in)	PERC. HO	OLE DIA.	APPLICATION RATE:	g/d/sf
21-			TEST RUN B			š		
22-			LOT NON D	- 11 Hell				
			COMMENTS					
			100000000000000000000000000000000000000	5.50			2.20	
			PERFORME	D BY:			DATE:	

From: Jamie Taylor

Sent: Friday, April 22, 2022 6:17 PM

To: Amy Otto-Buchanan

Cc: Elaine Flagg

Subject: RE: RFC Equestrian Mdws 22-044

The power pole, pedestal, and any other above ground utility facilities in the ROW within 40 feet of the intersection will need to be relocated. 2020 SCM H02.2(c) says above ground utility facilities shall not be located within the ROW nearer than 40 feet from the point of intersection of the extension of the property lines at any existing or proposed intersection on Residential Collector streets or higher classification.

A drainage report will be required as the borough does not have any minimum size requirements for road construction. The drainage report shall be submitted at least 7 days prior to the desired preconstruction conference date.

Per 43.20.281(A)(1)(a), useable septic area is that area where the seasonal high water table is a minimum of eight feet below the surface. The results of test hole 1, groundwater found at seven feet, indicates the area is not useable for the purpose of subdividing without the addition of fill. The drainage report will need to address the fill or regrading of lots as well.

Jamie Taylor, PE (she/her)
Civil Engineer
Matanuska-Susitna Borough
Department of Public Works

t: 907-861-7765 c: 907-355-9810

jamie.taylor@matsugov.us http://www.matsugov.us/

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Friday, April 8, 2022 9:08 AM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; John Aschenbrenner

<John.Aschenbrenner@matsugov.us>; timhaledistrict1@gmail.com; pamela.j.melchert@usps.gov;

earl.almdale@gmail.com; cobbfam@mtaonline.net; mothers@mtaonline.net; Fire Code <Fire.Code@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>;

Elaine Flagg < Elaine. Flagg@matsugov.us>; Jamie Taylor < Jamie. Taylor@matsugov.us>; Terry Dolan

<Terry.Dolan@matsugov.us>; msb.hpc@gmail.com; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; Planning

<MSB.Planning@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Fred Wagner

<Frederic.Wagner@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Mark Whisenhunt

<Mark.Whisenhunt@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; Andy Dean

<Andy.Dean@matsugov.us>; mearow@matanuska.com; row@mtasolutions.com;

andrew.fraiser@enstarnaturalgas.com; James Christopher < James.Christopher@enstarnaturalgas.com >;

row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>

Subject: RFC Equestrian Mdws 22-044

The following link contains a Request for Comments for Equestrian Meadows, MSB Case #2022-044, to subdivide 53177B01L002. Comments are due by April 29, 2022. Please let me know if you have questions. Thanks, A.

From: Fire Code

Sent: Thursday, April 14, 2022 9:28 AM

To: Amy Otto-Buchanan

Subject: RE: RFC Equestrian Mdws 22-044

Amy,

Fire and Life Safety has no issue with this.



Donald Cuthbert
Fire Marshal
Fire & Life Safety Division
Central Mat-Su Fire Department
(907) 861-8030
FireCode@matsugov.us

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Friday, April 8, 2022 9:08 AM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; John Aschenbrenner

<John,Aschenbrenner@matsugov.us>; timhaledistrict1@gmail.com; pamela.j.melchert@usps.gov;

earl.almdale@gmail.com; cobbfam@mtaonline.net; mothers@mtaonline.net; Fire Code <Fire.Code@matsugov.us>; Jill

Irsik < Jill.Irsik@matsugov.us>; Eric Phillips < Eric.Phillips@matsugov.us>; Brad Sworts < Brad.Sworts@matsugov.us>;

Elaine Flagg < Elaine. Flagg@matsugov.us>; Jamie Taylor < Jamie. Taylor@matsugov.us>; Terry Dolan

<Terry.Dolan@matsugov.us>; msb.hpc@gmail.com; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; Planning

<MSB.Planning@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Fred Wagner

<Frederic.Wagner@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Mark Whisenhunt

<Mark.Whisenhunt@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; Andy Dean

<Andy.Dean@matsugov.us>; mearow@matanuska.com; row@mtasolutions.com;

andrew.fraiser@enstarnaturalgas.com; James Christopher < James.Christopher@enstarnaturalgas.com>;

row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>

Subject: RFC Equestrian Mdws 22-044

The following link contains a Request for Comments for Equestrian Meadows, MSB Case #2022-044, to subdivide 53177B01L002. Comments are due by April 29, 2022. Please let me know if you have questions. Thanks, A.

Equestrian Mdws

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

Amy Otto-Buchanan
Platting Technician
amy.otto-buchanan@matsugov.us
861-7872

From: Adam Bradway

Sent: Friday, April 22, 2022 1:18 PM

To: Amy Otto-Buchanan

Cc: Rick Antonio

Subject: RE: RFC Equestrian Mdws 22-044

Comments

Transportation:

E Jensen Ave is identified in the Matanuska-Susitna Borough Official Streets and Highways Plan(OSHP), and the MSB Long Rage Transportation Plan(LRTP). This road is identified as a future collector level road and will be designed for a mix of access and mobility. To reduce unnecessary conflict points, access should be limited where possible. All lots in this proposed subdivision should make access from the new proposed road.

The new proposed road should intersect E Jensen Ave directly across from N Showers St. to allow for the safest and most efficient intersection.

The section line to the east of the parcel is also shown on the OSHP as a future collector road. This should be considered during development.

Adam Bradway

Matanuska-Susitna Borough: Planner II 350 E Dahlia Ave, Palmer, Alaska (907) 861-8608

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Friday, April 8, 2022 9:08 AM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; John Aschenbrenner

<John.Aschenbrenner@matsugov.us>; timhaledistrict1@gmail.com; pamela.j.melchert@usps.gov;

earl.almdale@gmail.com; cobbfam@mtaonline.net; mothers@mtaonline.net; Fire Code <Fire.Code@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>;

Elaine Flagg <Elaine.Flagg@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Terry Dolan

- <Terry.Dolan@matsugov.us>; msb.hpc@gmail.com; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; Planning
- <MSB.Planning@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Fred Wagner
- <Frederic.Wagner@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Mark Whisenhunt
- <Mark.Whisenhunt@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; Andy Dean
- <Andy.Dean@matsugov.us>; mearow@matanuska.com; row@mtasolutions.com;

andrew.fraiser@enstarnaturalgas.com; James Christopher < James.Christopher@enstarnaturalgas.com;

row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>

Subject: RFC Equestrian Mdws 22-044

The following link contains a Request for Comments for Equestrian Meadows, MSB Case #2022-044, to subdivide 53177B01L002. Comments are due by April 29, 2022. Please let me know if you have questions. Thanks, A.

Equestrian Mdws

From: Percy, Colton T (DFG) <colton.percy@alaska.gov>

Sent: Monday, April 11, 2022 9:03 AM

To: Amy Otto-Buchanan
Subject: RE: RFC Crabb Est 22-043

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links,]

Hi Amy,

Alaska Department of Fish and Game has reviewed the proposed platting actions and has no objections. The proposed actions will not affect public access to public lands and waters. I would like to note that Wasilla Creek has been identified as an anadromous stream (AWC: 247-50-10260-2019). Wasilla Creek rns through the southeast corner of lot three. Any future activities that may impact Wasilla Creek will require a Fish Habitat Permit from the Alaska Department of Fish and Game Habitat Division.

Thank you for the opportunity to review and comment.

Colton T. Percy

Habitat Biologist Access Defense Program Alaska Department of Fish and Game Division of Wildlife Conservation 333 Raspberry Rd Anchorage, AK 99518 907-267-2118

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Thursday, April 7, 2022 4:12 PM

Subject: RFC Crabb Est 22-043

CAUTION: This email originated from outside the State of Alaska mail system. Do not click links or open attachments unless you recognize the sender and know the content is safe.

The following link contains a Request for Comments for Equestrian Mdws, MSB Case #2022-044 to subdivide 118N01E12C010. Comments are due by April 25, 2022. Please let me know if you have any questions. Thanks, A.

Crabb Est

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

From: OSP Design Group <ospdesign@gci.com>

Sent: Friday, April 15, 2022 3:45 PM

To: Amy Otto-Buchanan
Cc: OSP Design Group

Subject: RE: RFC Equestrian Meadows 22-044
Attachments: RFC Packet.pdf; Agenda Plat.pdf

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Amy,

In review GCI has no comments or objections to the plat, attached is the signed plat for your records.

Thanks,

MIREYA ARMESTO

GCI | Technician II, GIS Mapping m: 907-744-5166 | w: www.gci.com

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Friday, April 8, 2022 9:08 AM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; John Aschenbrenner

<John.Aschenbrenner@matsugov.us>; timhaledistrict1@gmail.com; pamela.j.melchert@usps.gov;

earl.almdale@gmail.com; cobbfam@mtaonline.net; mothers@mtaonline.net; Fire Code <Fire.Code@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>;

Elaine Flagg <Elaine.Flagg@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Terry Dolan

<Terry,Dolan@matsugov.us>; msb.hpc@gmail.com; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; Planning

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<Andy.Dean@matsugov.us>; mearow@matanuska.com; row@mtasolutions.com;

andrew.fraiser@enstarnaturalgas.com; James Christopher < James.Christopher@enstarnaturalgas.com>;

row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>

Subject: RFC Equestrian Mdws 22-044

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

The following link contains a Request for Comments for Equestrian Meadows, MSB Case #2022-044, to subdivide 53177B01L002. Comments are due by April 29, 2022. Please let me know if you have questions. Thanks, A.

Equestrian Mdws

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

Amy Otto-Buchanan
Platting Technician
amy.otto-buchanan@matsugov.us
861-7872

Holly Sparrow hsparrow@mtasolutions.com From:

Sent: Friday, April 8, 2022 9:55 AM

To: Amy Otto-Buchanan

Subject: RE: RFC Equestrian Mdws 22-044

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links,]

Hello,

MTA has reviewed the plat for Equestrian Meadows, MTA has no comments.

Thank you for the opportunity to comment.

Holly Sparrow, Right of Way Agent

1740 S. Chugach St., Palmer, Alaska 99645

Office: (907) 761-2599 | www.mtasolutions.com



Life, Technology, Together,

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Friday, April 8, 2022 9:08 AM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; timhaledistrict1@gmail.com; pamela.j.melchert@usps.gov; earl.almdale@gmail.com; cobbfam@mtaonline.net; mothers@mtaonline.net; Fire Code <Fire.Code@matsugov.us>; Jill Irsik < Jill.Irsik@matsugov.us>; Eric Phillips < Eric.Phillips@matsugov.us>; Brad Sworts < Brad.Sworts@matsugov.us>; Elaine Flagg <Elaine.Flagg@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Terry Dolan <Terry.Dolan@matsugov.us>; msb.hpc@gmail.com; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Mark Whisenhunt <Mark.Whisenhunt@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; Andy Dean <Andy.Dean@matsugov.us>; mearow@matanuska.com; Right of Way Dept. <row@mtasolutions.com>; andrew.fraiser@enstarnaturalgas.com; James Christopher < James.Christopher@enstarnaturalgas.com>; row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>

Subject: RFC Equestrian Mdws 22-044

The following link contains a Request for Comments for Equestrian Meadows, MSB Case #2022-044, to subdivide 53177B01L002. Comments are due by April 29, 2022. Please let me know if you have questions. Thanks, A.

Equestrian Mdws

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.



ENSTAR Natural Gas Company A DIVISION OF SEMCO ENERGY

Engineering Department, Right of Way Section 401 E. International Airport Road P. O. Box 190288 Anchorage, Alaska 99519-0288 (907) 277-5551 FAX (907) 334-7798

April 8, 2022

Matanuska-Susitna Borough, Platting Division 350 East Dahlia Avenue Palmer, AK 99645-6488

To whom it may concern:

ENSTAR Natural Gas Company has reviewed the following preliminary plat and has no comments or recommendations.

 EQUESTRIAN MEADOWS (MSB Case # 2022-044)

If you have any questions, please feel free to contact me at 334-7944 or by email at james.christopher@enstarnaturalgas.com.

Sincerely,

James Christopher

Right of Way & Compliance Technician

ENSTAR Natural Gas Company

ames Christopher

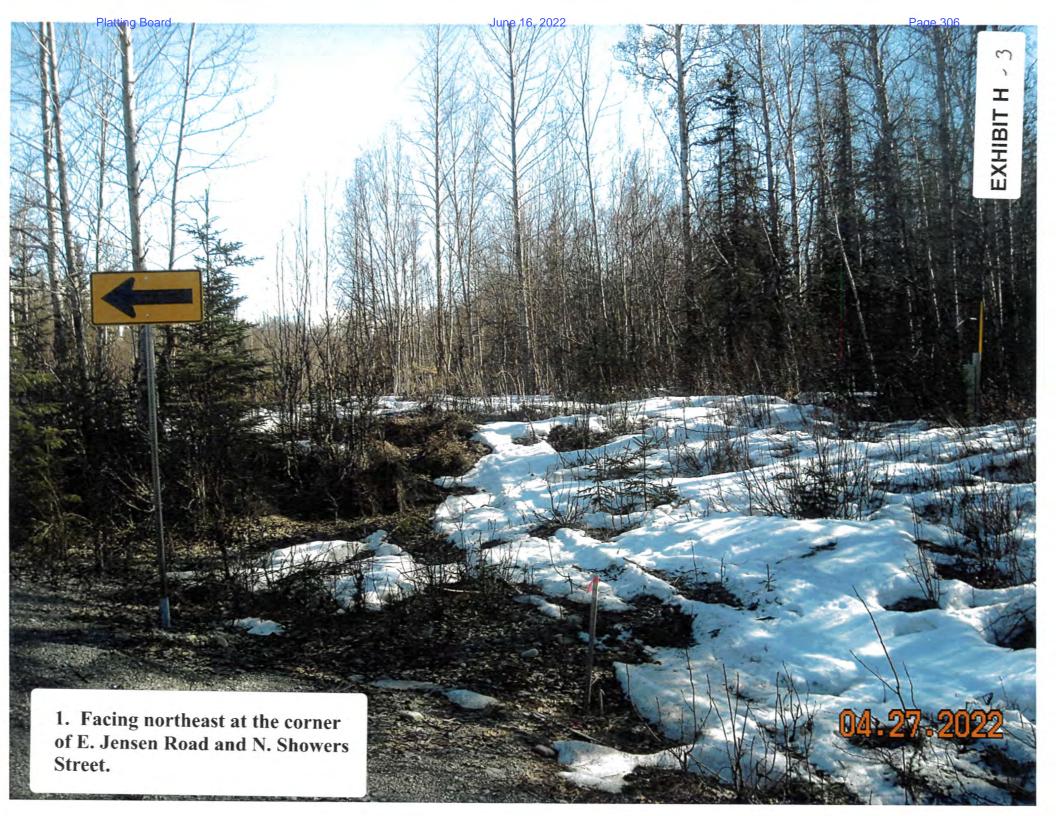
SITE VISIT REPORT

Case Name: Equestrian Meadows	Date: 04/27/2022 Time: 11AM				
Owner: Precision Frontiers LLC	Case Number: 2022-044				
Surveyor/Engineer: SW AK/SDCS	Tax ID #:				
Subdivision:	Regarding:				

	SITE CONDITIONS
Weather: Warm	Temperature: 60 F
Wind: None	
General Site Condition: Uncons	structed
Personnel on site: Amy Otto-Bu	chanan and Matthew Goddard, Platting Technicians
Equipment in use: Camera	
Current phase of work: Schedu	led for Platting Board – May 19, 2022
Reason for Visit/Remarks: (See	attached photos)
Visual of where the cul-de-sac will	be placed in relation to N. Showers Street and E. Jensen
Avenue intersection. Power pole a	and utility box needs to be moved. Site distance to the
curve on N. Showers Street.	

Signed By: Amy Otto-Buchanan

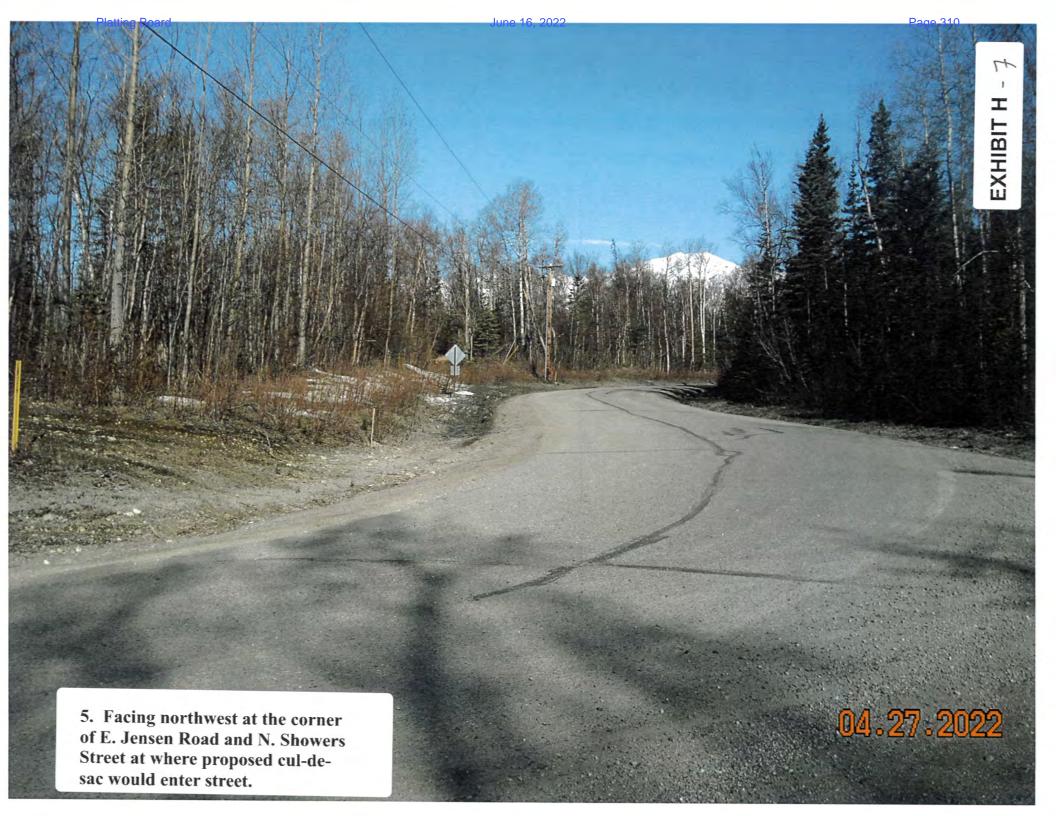
Date: 04/27/2022



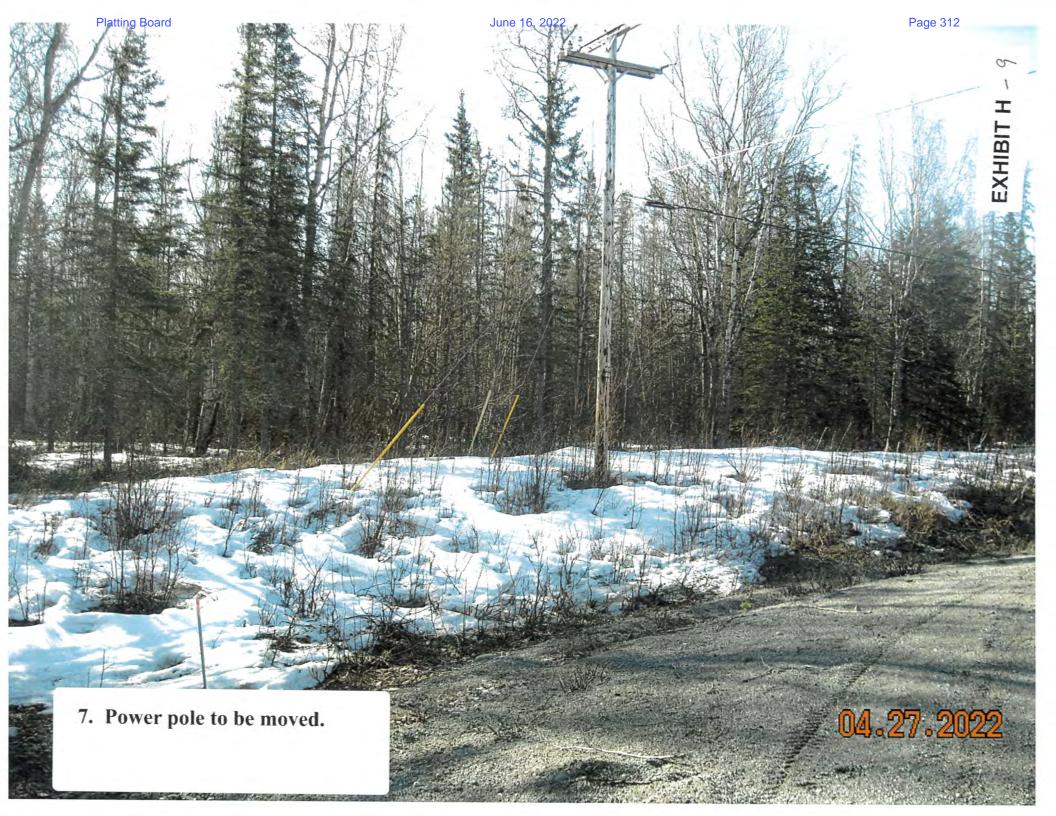














From: K Simonson <kelvinsimonson@gmail.com>

Sent: Wednesday, May 4, 2022 8:29 AM

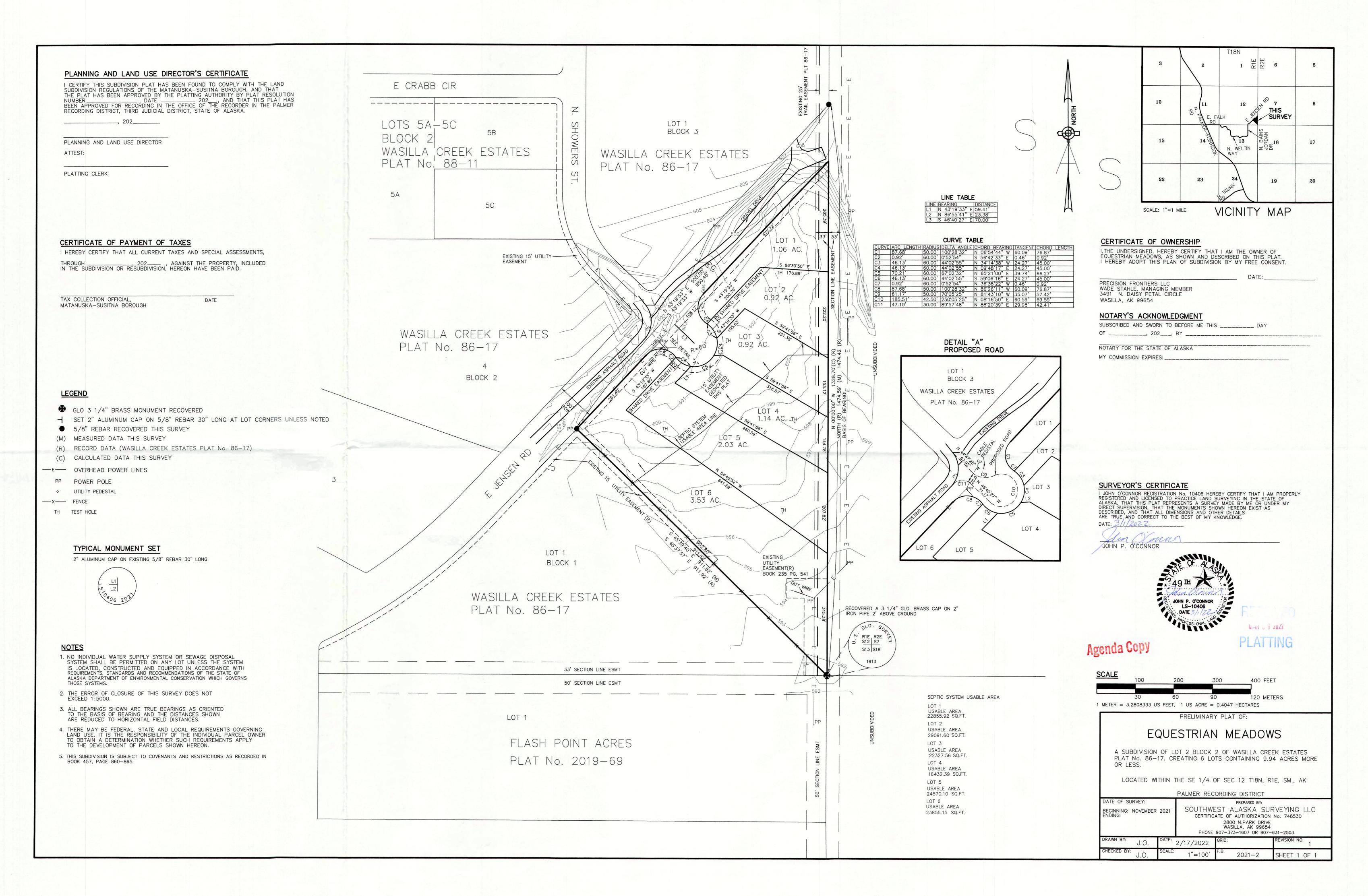
To: MSB Platting

Subject: Equestrian Meadows

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Regarding petition by Precision Frontiers LLC, Wade Stahle for L2, B1, Wasilla Creek Estates, Plat No. 86-17 into six lots: No Objection.

Kelvin Simonson, 7241 N Showers St, Palmer, AK 99645



STAFF REVIEW AND RECOMMENDATIONS PUBLIC HEARING JUNE 16, 2022

PRELIMINARY PLAT: SOUTH BLUFFS

LEGAL DESCRIPTION: SEC 31, T18N, R01W, SEWARD MERIDIAN AK

PETITIONERS: DENNIS E. BYLER

SURVEYOR/ENGINEER: KEYSTONE SURVEYING/SDCS LLC

ACRES: 103.42 + PARCELS: 33

REVIEWED BY: AMY OTTO-BUCHANAN CASE #: 2022-046

REQUEST: The request is to divide Tax Parcel D3, Parcel 2, MSB 40-Acre Exemption 2015-19-EXM, recorded at 2015-002388-0, to create 31 lots and two tracts, to be known as **SOUTH BLUFFS**, containing 103.42 acres +/-. Petitioner will dedicate and construct interior streets to Borough street standards and construct the extension of W. Spruce Avenue to residential sub-collector standards. Parcel is located west of N. Church Road and north of W. Spruce Avenue; lying within the SE ¼ Section 31, Township 18 North, Range 01 West, Seward Meridian, Alaska.

EXHIBITS

Vicinity Map and Aerial Photos

riennity map and rienari motos	DES DES
Geotechnical Report	EXHIBIT $B-35 pg$
AGENCY COMMENTS	
Department of Public Works Operations & Maintenance	EXHIBIT $C-1$ pg
Department of Emergency Services	EXHIBIT $D-1$ pg
Development Services	EXHIBIT $E - 2 pgs$
ADF&G	EXHIBIT $F - 1 pg$
ADOT&PF	EXHIBIT G-2 pgs
Utilities	EXHIBIT H – 3 pgs
Adjustment of Lot Line for Lot 5, Block 2	EXHIBIT I - 1 ng

<u>PISCUSSION</u>: The proposed subdivision is west of N. Church Road and north of W. Spruce Avenue, Petitioner is creating 31 lots and two tracts; access will be from the extension of W. Spruce Avenue, two interior streets, one permanent cul-de-sac and one temporary cul-de-sac. All lots will take access from the interior streets, with the exception of Tracts A & B, which will access W. Spruce Avenue by benefit of a 60' X 60' Common Access Easement at the common lot line. Petitioner will be constructing Borough standard interior streets and the extension of W. Spruce Avenue to the necessary standard (see *Recommendation #4*). Petitioner is providing access to the unsubdivided parcel to the west, to promote interconnectivity, pursuant to MSB 43.20.060(C) & (D). No direct access will be granted to N. Church Road, unless authorized by the permitting authority; Plat Note #7 addresses this.

EXHIBIT A - 5 pgs

Surveyor has provided an updated sketch for the adjustment of lot line for Lot 5, Block 2, (Exhibit I) which will be addressed on final plat. The reason for the lot line change is Lot 5, Block 2, did not have the required waterbody frontage on the original plan.

Soils Report: A geotechnical report was submitted (Exhibit B), pursuant to MSB 43.20.281(A). Dan Steiner, PE, Steiner Design and Construction Services, LLC, notes 23 testholes were excavated. Testhole location map and soils logs are attached. Soils conditions varied throughout. Where useable soils included silt, a percolation test was performed and the results of the percolation tests are shown on the soils logs. All lots, with the exception of Lots 2 & 3, Block 3 have useable septic areas. To obtain the necessary useable septic area on these two lots, soils conditions will be verified during roadway construction. If there is not enough useable septic area, these lots will be graded to provide the minimum required (see Recommendation #6). No drainage issues currently exist. This action will require approximately 3,000° of new road. Runoff will be directed toward the existing ponds. A number of drainage basins will be constructed along the proposed streets. A drainage plan is included in this report. Average Daily Traffic calculation is 370 ADT. Based on the soils data and existing topography, there is a minimum of 10,000 sf of contiguous useable septic area and a minimum of 10,000 sf of useable building area within each of the proposed lots as required by MSB code, with the exception of Lots 2 & 3, Block 3. These two lots will require verification prior to recording (see Recommendation #6). Average Daily Traffic (ADT) calculation is at Exhibit B-5 and Exhibit B-12.

<u>Comments</u>: Department of Public Works Operations & Maintenance (**Exhibit C**) notes the Section Line Road/extension of W. Spruce Avenue is not certified to any standard. The street will need to be upgraded and certified to the standard required by the estimated Average Daily Traffic (ADT) (see *Recommendation #4*). If multi-family housing is planned, it will be best to capture that in the ADT calculation now to ensure the property standard road is constructed. What is the depth of the pond next to the Section Line? ADOT&&PF Highway Preconstruction Manual says permanent bodies of water over 3' deep may be considered a longitudinal no-traversable hazard. Determine if guardrail is warranted.

Department of Emergency Services (Exhibit D) has no comment. Development Services Code Compliance (Exhibit E) notes there is an open code compliance case on the parcel, #11807, open since 10/13/2020. This will need to be resolved prior to recording (see *Recommendation #7*). Permit Center notes the parcel appears to have two driveways that do not have permits on file. ADF&G (Exhibit F) has no objections.

ADOT&PF: (Exhibit G) Recommends "Plat Note #7 be corrected to separate out access authority: MSB for Spruce and ADOT&PF for Church Road. Concur with no direct access to Church Road from Lot 17, Block 2 and Lot 11, Block 3 and Tract B. Recommend looking at relocating N. Short View Road to western edge of Lot 1. Consider dedication of ½ width for future north-south access road along western side of tract." Staff allows that Plat Note #7 is quite clear on the intent that no direct access will be granted to N. Church Road unless approved by ADOT&PF.

<u>Utilities</u>: (Exhibit H) MTA has no comments. GCI has no objections. Enstar has no comments or recommendations. MEA did not respond.

At the time of staff report write-up, there were no responses to the Request for Comments from US Army Corps of Engineers; Community Council Meadow Lakes; Fire Service Area #136 West Lakes; Road

South Blfs 2022-046 06/16/2022 Service Area #28 Gold Trail; MSB Community Development, Assessments or Pre-Design Division; or MEA.

CONCLUSION: The preliminary plat of SOUTH BLUFFS is consistent with AS 29.40.070 Platting Regulations and MSB 43.15.016 Preliminary Plats. There were no objections from any federal or state agencies, Borough departments, or utilities. There were no objections to the plat from the public in response to the Notice of Public Hearing. Legal and physical access will exist to the proposed lots, consistent with MSB 43.20.100 Access Required, MSB 43.20.120 Legal Access and MSB 43.20.140 Physical Access. Frontage for the subdivision will exist, pursuant to MSB 43.20.320 Frontage. A soils report was submitted, pursuant to MSB 43.20.218(A)(1).

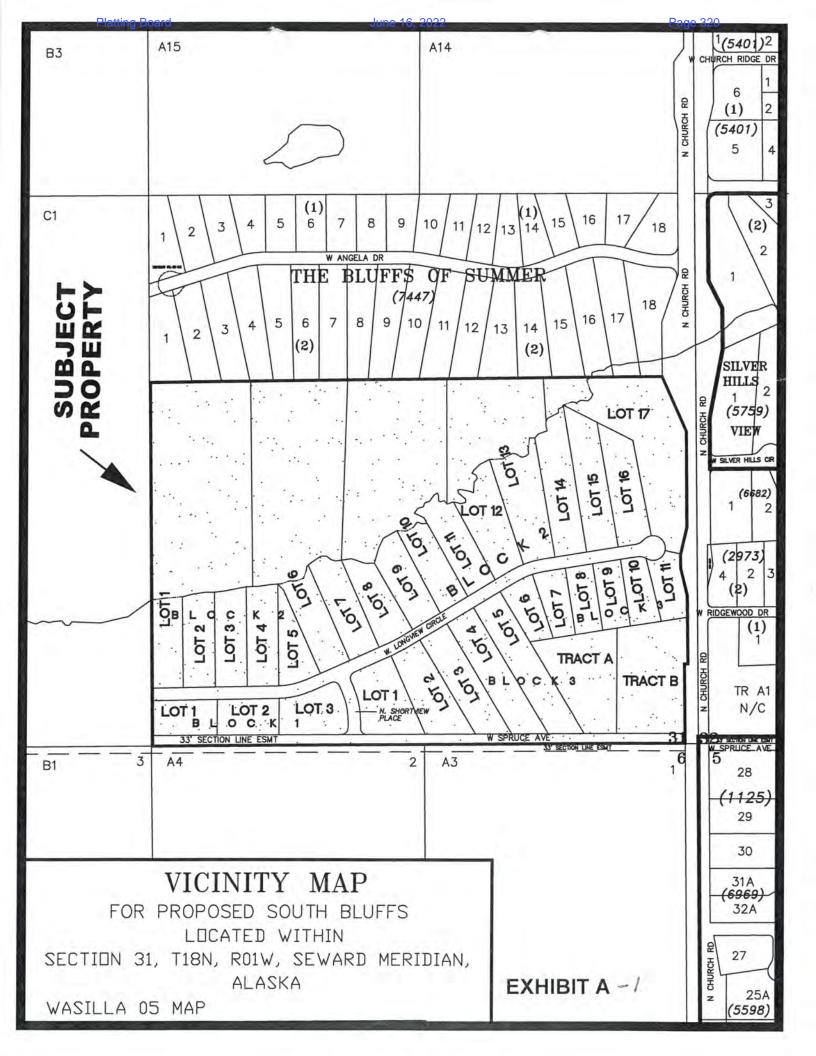
FINDINGS OF FACT

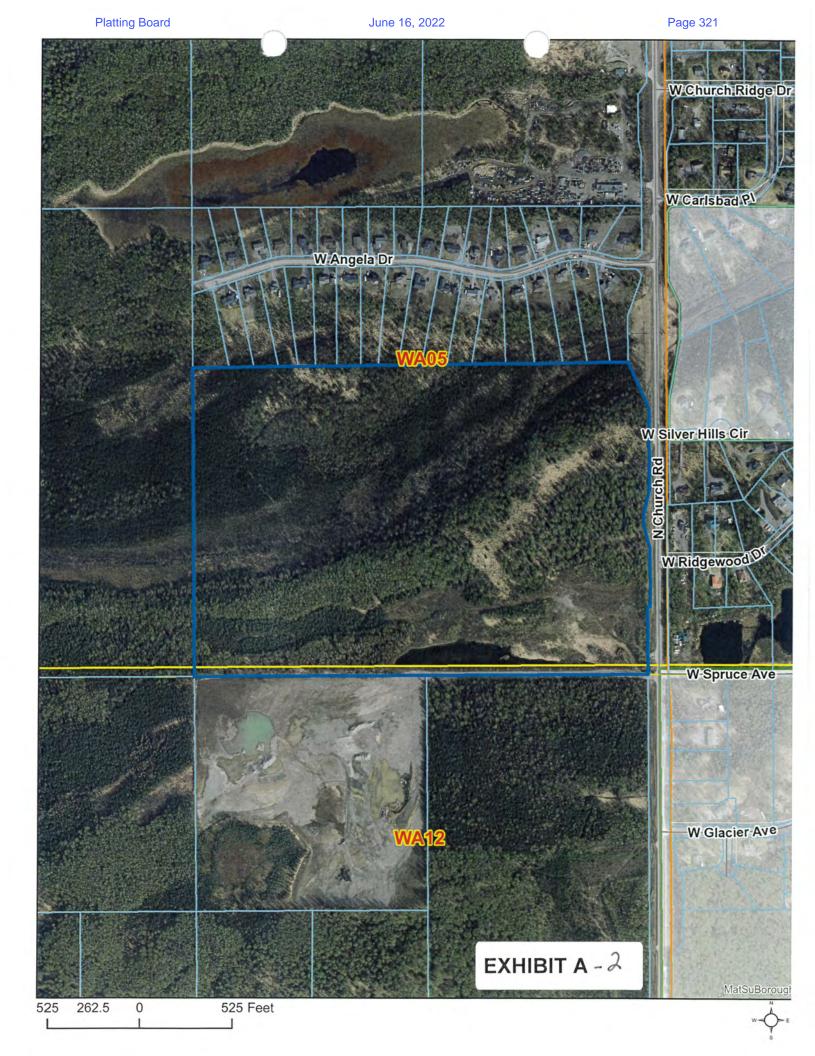
- The plat of South Bluffs is consistent with AS 29.40.070 Platting Regulations and MSB 43.15.016 Preliminary Plats.
- 2. A soils report was submitted, pursuant to MSB 43.20.281(A)(1).
- 3. An updated soils report will be required for Lots 2 & 3, Block 3, to verify useable septic area.
- 4. All lots will have the required frontage pursuant to MSB 43.20.320.
- At the time of staff report write-up, there were no responses to the Request for Comments from US Army Corps of Engineers; Community Council Meadow Lakes; Fire Service Area #136 West Lakes; Road Service Area #28 Gold Trail; MSB Community Development, Assessments or Pre-Design Division; or MEA.
- 6. There were no objections from any federal or state agencies, Borough departments, or utilities.
- 7. There were no objections from the public in response to the Notice of Public Hearing.

RECOMMENDATIONS OF CONDITIONS OF APPROVAL

Suggested motion: I move to approve the preliminary plat of South Bluffs, Section 31, Township 18 North, Range 01W, Seward Meridian, Alaska, contingent on staff recommendations

- Taxes and special assessments must be paid in full for the year of recording, pursuant to MSB 43.15.053(F) and AS 40.15.020. Pay taxes and special assessments (LIDs), by CERTIFIED FUNDS OR CASH.
- Provide updated Certificate to Plat executed within seven (7) days of recording of plat and submit Beneficiary Affidavit for any holders of a beneficial interest.
- 3. Pay postage and advertising fees.
- Construct interior streets and cul-de-sacs and W. Spruce Avenue to MSB residential/residential subcollector street standards:
 - a. Submit cost estimate, arrange a pre-construction meeting with Department of Public Works (DPW), pay inspection fee and obtain a Notice to Proceed from Platting staff. Submit street inspection reports as required by Section F1.4, F1.5 and F1.6 of the Subdivision Construction Manual.
 - b. Provide DPW acceptance of the road to Platting staff.
 - c. Platting staff to approve all road names.
 - d. Provide as-built of streets once construction is complete.
- 5. Show all easements of record on final plat.
- 6. Provide useable septic area verification for Lots 2 and 3, Block 3.
- 7. Resolve open Code Compliance Case #11807 prior to recording.
- 8. Submit recording fees, payable to Department of Natural Resources (DNR).
- 9. Submit final plat in full compliance with Title 43.











Engineering Report

South Bluffs Subdivision Wasilla, Alaska

Prepared for:

Byler Contracting P.O. Box 877750 Wasilla, AK 99687

Prepared by:

Steiner Design & Construction Services, LLC 5900 W. Dewberry Dr. Wasilla, AK 99623

March, 2022

TABLE OF CONTENTS

1.0	INTRODUCTION1
2.0	TOPOGRAPHY1
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6.0	SUMMARY3
Figure	es
APPE	NDICES
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1.0 INTRODUCTION

This is the Engineering Report is for the South Bluffs Subdivision. The platting action is to subdivide approximately 103 acres into smaller lots and tracts. The design of this subdivision is being completed following the Matanuska-Susitna Borough (MSB) Subdivision Construction Manual 2020.

All the lots will need an on-site septic system and water system. As a result, all lots will have a minimum size of 40,000 square feet. Figures 1 and 2 show the location of the proposed subdivision. Figure 3 shows the subdivision layout. All figures are at the end of the report.

2.0 TOPOGRAPHY

This existing parcel has significant changes in topography throughout the site. There is an area on the north side of the subdivision that is a lowland with a bluff on the south side that slopes up to the upper portion of the site.

The topography of the upper portion varies in elevation. The natural drainage varies directions depending where on the site you are. Figure 4 includes the topography of the site. There are two small ponds in the upper area. They are also shown on Figure 4.

This subdivision has been designed with consideration for the topographic changes, the existing bluff, and the lowlands. The current layout of this subdivision provides each lot with a minimum of 10,000 square feet of buildable area.

3.0 SOILS INVESTIGATION

Soil information is needed to determine if existing soil conditions are suitable for onsite wastewater disposal systems. This includes soils capable of supporting a soil absorption system that meets all ADEC offset requirements from groundwater and bedrock and areas that are at least 50' from slopes that are steeper than 4(Hor.):1(Vert.).

June 16, 2022 Page 328

A soils investigation was performed. 23 test holes were excavated to determine soil characteristics. Figure 4 indicates the test hole locations. Logs of the test holes are included with this report.

Soil conditions varied throughout the site. The number of test holes is indicative of the changing soil conditions. Where usable soils also included silt, a percolation test was also performed. The percolation test results are included in the soil logs.

Changes in topography and areas of soil that are not compatible with a conventional septic system make areas of the parcel "unusable". Figure 5 shows the unusable areas. All other areas are "usable". All the lots have at least 10,000 square feet of usable septic area, with the exception of lots 2 and 3 of Block 3. This is shown in Figure 5. To obtain the needed 10,000 square feet of usable septic area, during roadway construction, soil conditions for these two lots will be verified. If there is not enough usable area, these lots will be graded to provide the minimum area required.

4.0 DRAINAGE PLAN

Currently, there are no drainage issues with this site. The platting action of this subdivision will require the construction of approximately 3,000 feet of new road. To take care of the increase in runoff from this subdivision, runoff will be directed toward the exiting ponds as much as possible. Also, a number of drainage basins will be constructed along the proposed roads. The overall existing drainage patterns of the existing parcel will not be altered by this new subdivision.

A drainage plan is included with this report (Figure 6). This figure shows the proposed location of the drainage basins, culverts, and drainage swales that will be part of the subdivision construction. Once this plat has been reviewed and accepted, a final drainage report will be prepared. This will include the final number and location of drainage improvements associated with this project.

5.0 SUBDIVISION ACCESS / ROAD CONSTRUCTION

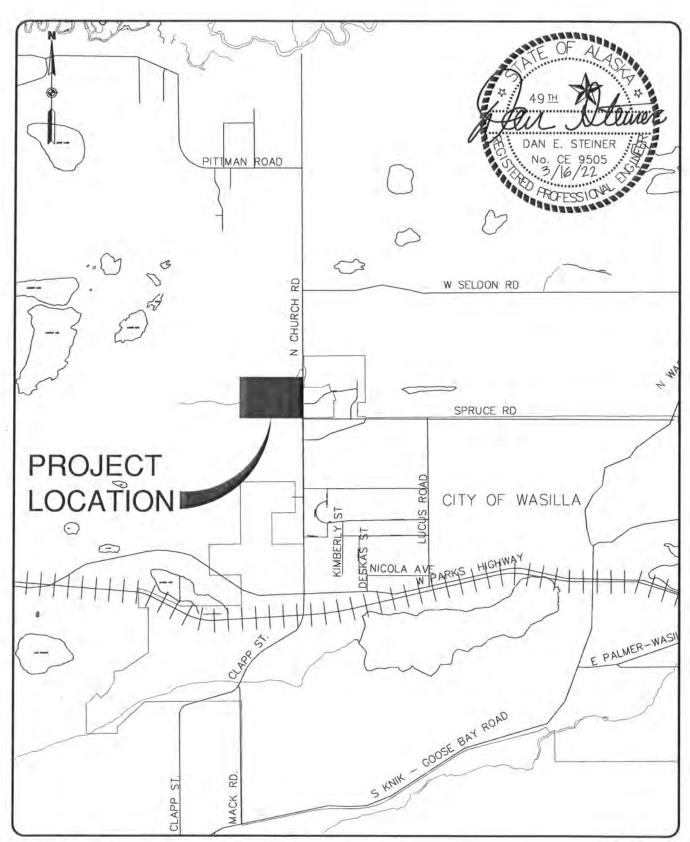
As stated, there will be approximately 3,000 feet of new road construction. All roads will be constructed to residential standards. Access to the proposed roads will be from Spruce Avenue.

5.1 Average Daily Traffic (ADT)

An ADT drawing has been prepared (Figure 7) showing the ADT at all intersections from Church Road to the proposed subdivision. With the proposed subdivision, the ADT for this road was calculated to be 370.

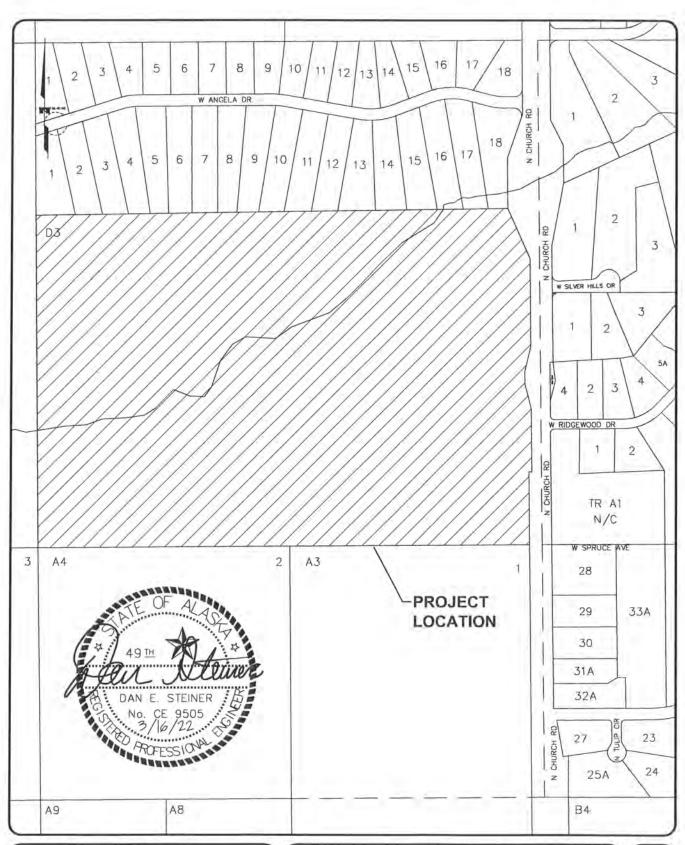
6.0 SUMMARY

- This subdivision is being designed and constructed per the MSB Subdivision Construction Manual 2020.
- Based on topography and soil conditions, each lot has a minimum of 10,000 square feet of buildable area. All but two lots have a minimum of 10,000 square feet of contiguous usable septic area. For the two lots that have less than 10,000 square feet of contiguous usable septic area, soil conditions will be verified that they do have 10,000 square feet of contiguous usable septic area, or they will be graded to provide the required septic area.
- Drainage facilities have been provided to direct runoff to either exiting ponds or infiltration basins.
- All new roads will be constructed to MSB standards.



5900 W. DEWBERRY D.R. PH: (907) 357-5609 WASILLA,AK 99623 FAX:(907) 357-5608 VICINITY MAP

FIGURE



SDCS, LLC

5900 W. DEWBERRY DR. PH: (907) 357-5609 WASILLA,AK 99623 FAX:(907) 357-5608 SOUTH BLUFFS SUBDIVISION

LOCATION MAP

FIGURE

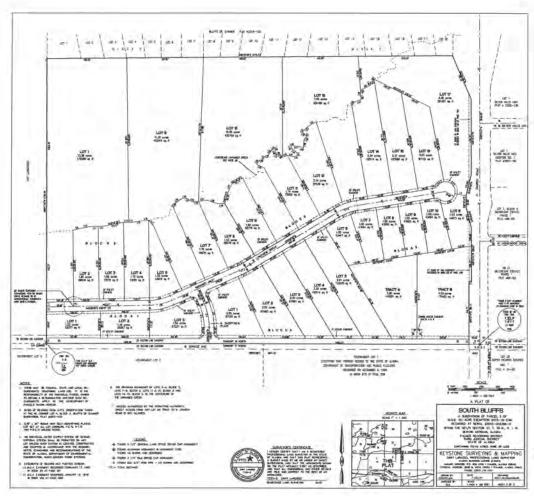
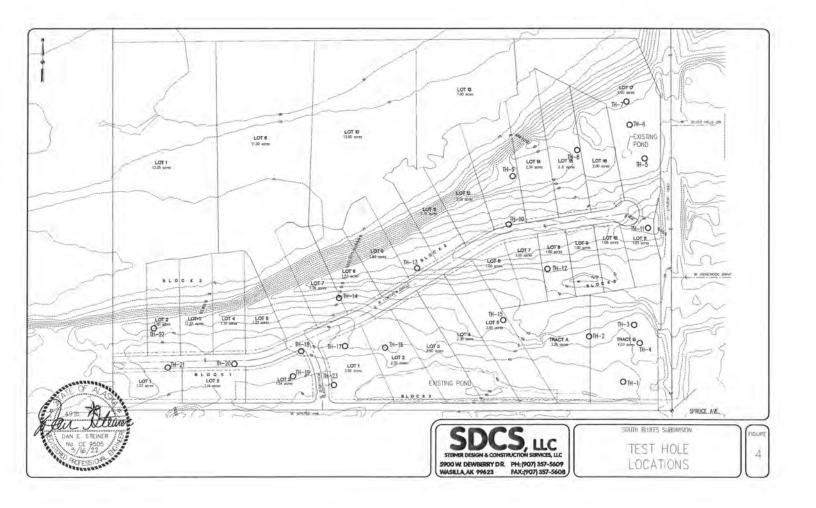
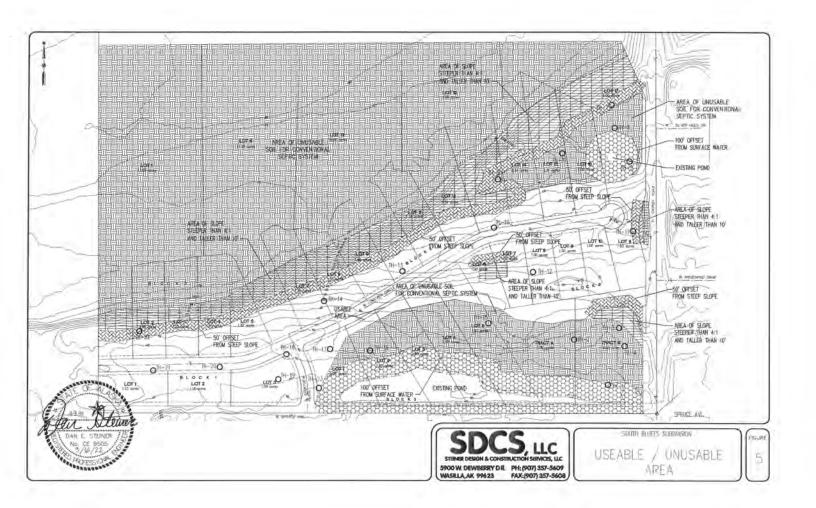
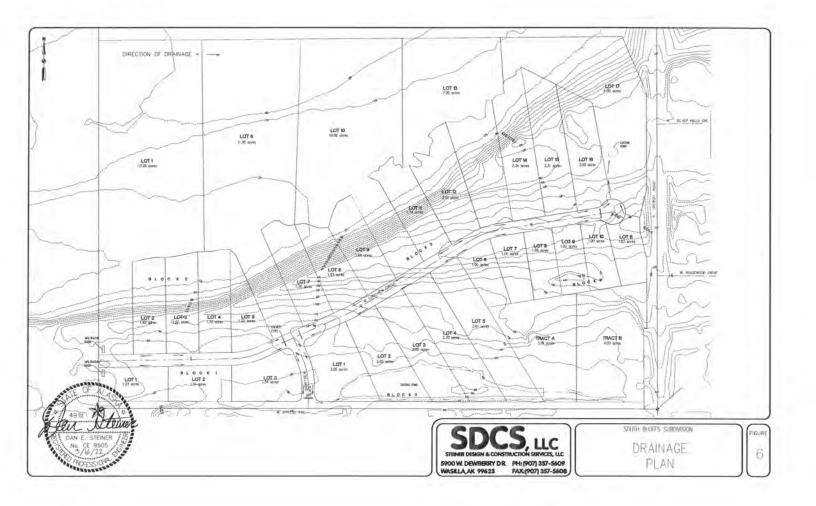
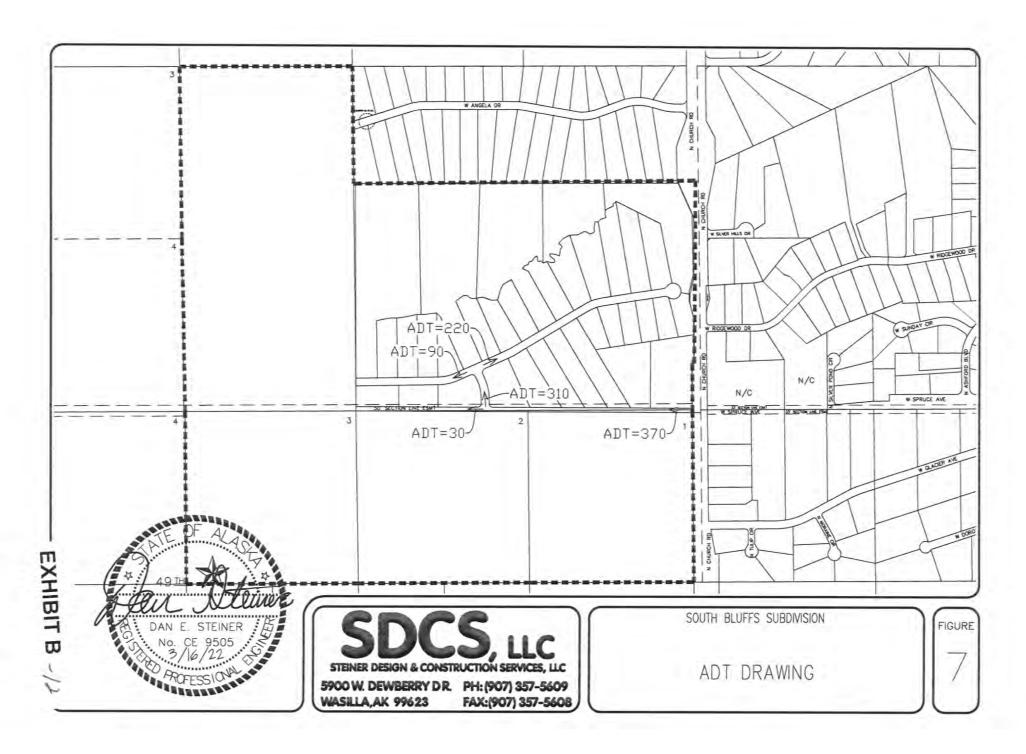


FIGURE 3









5900 W. Dewberry Dr. Wasilla, AK 99623 Phone: (907) 357-5609 Fax: (907) 357-5608

TEST HOLE # PERFORMED BY; PROJECT: LEGAL DESC.		Dan Steiner, P. South Bluffs Su		5/25/202			DAN E STEINER NO. CE 9505 G/19/21 ACTESSION	
PROJECT NO.		21-015				-	0541	
DEPTH, FT		SOIL TYPE					SEAL	
1-	0-1	Topsoil		SLOPE	S	ITE PLAN		
2- 3- 4-	1'-5'	Gravely San Cobbles (SP)	id w/					
5- 6- BOH	5'-6'	Sandy Silt w/ Gravel (ML)						
8-					-11			
9-								
10-			GROUNDWA ENCOUNTER			LOPE		
34								
11-			AT WHAT DE	-	-			
12-			MONITORING		a			
14-					PER	COLATION	TEST	
-			READING	DATE	TIME	NETTIN		NET DROP
15-								
16-								
17-								
18-								
19-								
20-			PERC RATE	(min/in)	PERC	HOLE DIA.	APPLICATION RATE:	gld/sf
21-						_	= :	3.4.6.
22-			COMMENTS:			&		
			PERFORMED	BY:			DATE:	

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TEST HOLE / PERCOLATION TEST

TEST HOLE # PERFORMED BY: PROJECT: LEGAL DESC. PROJECT NO.	S	2 an Steiner, P.E outh Bluffs Sul 1-015			No. CE 9505			
DEPTH, FT		SOIL TYPE					SEAL	
-	0-0.5	Topsoil		SL	SITE	PLAN		
1-				SLOPE				
2-								
3-								
4-	0.5'-7'	Gravely Sand w/ Cobbles	d					
5-		(SP)						
6-								
7-								
8-								
9-		Silty Gravel w/ Cobbles	1					
10-	7'-12'	(GM)	GROUNDWAT		SLO	PE		
			ENCOUNTER		-71			
11-			AT WHAT DE	PTH? 9'	_			
12-			DEPTH AFTER					
- BOH 13-			MONITORING	11/6				
14-					PERCO	DLATION TE	ST	
			READING	DATE	TIME	NETTIME	DEPTH TO WATER	NET DROP
15-								
16-								
17-								
18-								
19-								
20-			PERC. RATE	(min/in)	PERC. HO	OLE DIA.	APPLICATION RATE:	g/d/sf
21-				-			S	graner
22-			TEST RUN BE	- LIVVEEN	ft &	×	_ft	
40			COMMENTS:					
			PERFORMED	BY:			DATE:	

DAN E. STEINER

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TEST HOLE # PERFORMED BY PROJECT: LEGAL DESC.		3 an Steiner, P.E outh Bluffs Sub		5/25/2021		66	No. CE 9505 6/19/21 ROFESSION	
PROJECT NO.	21	-015				-	2.450	
DEPTH, FT		SOIL TYPE					SEAL	
1-	0-0.5'	Topsoil		SLOPE	SI	TE PLAN		
3-	0.5'-2.5'	Silty Gravel w/ Cobbles (GM)						
5- 6-	2,5'-7'	Silt (Very Tig (Impermeable (ML)						
7- - BOH 8-								
9-			CROUNDWA	TED	lei lei	OPE		
10-			GROUNDWA		<u> </u>	OPE		
11-			AT WHAT DE	PTH?n/	a			
12-			DEPTH AFTE					
13-			MONITORIN	G?n/	a			
14-					PERO	COLATION TE	ST	
15-			READING	DATE	TIME	NET TIME	DEPTH TO WATER	NET DROP
1 4								
16-								
17-								
18-								
19-								
20-								
\delta			PERC. RATE	(min/in)	PERC.	HOLE DIA.	APPLICATION RATE:	g/d/sf
21-			TEST RUN B	ETWEEN	ft	&	ft	
22-			COMMENTS	_			-0	
			DEDECORME	n av.			DATE	

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TEST HOLE # PERFORMED BY: PROJECT:		4 Dan Steiner, P. South Bluffs Su	DATE:	5/25/202	1		600	DAN E. STEINER No. CE 9505 G/19/21 ROFESSION	
PROJECT NO.		21-015						0511	
DEPTH, FT		SOIL TYPE						SEAL	
1-	0-0,5'	Topsoil		SLOPE	=- 1	SITE	PLAN		
				PE					
2-									
3-	0.5'-7'	Silt (Very Tig	ght)						
4-		(Impermeab (ML)							
5-		(IVIL)							
6-									
7-									
-									
8-									
9- - BOH			GROUNDWA	TER		SLOPE	5		
10-			ENCOUNTER	ED? N	0				
11-			AT WHAT DE	PTH?n/	'a				
12-			DEPTH AFTE						
13-			MONITORING	6? <u>n/</u>	a				
14-			1		DE	PCO	LATION TE	CT.	
3-1			READING	DATE	TIME		NET TIME	DEPTH TO WATER	NET DROP
15-									
16-									
17-									
18-				2 - 1					
19-									
20-									
III A			PERC. RATE	(min/in)	PER	C. HO	E DIA.	APPLICATION RATE	g/d/sf
21-			TEST RUN BE	ETWEEN		ft &		ft	
22-			COMMENTS			1			
			COMMENTS:						
			PERFORMED	BY:				DATE:	

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TEST HOLE # PERFORMED BY: PROJECT: LEGAL DESC.		5 Dan Steiner, P. South Bluffs Su		5/25/2021	=	No. CE 9505			
PROJECT NO.		21-015					OFAL		
DEPTH, FT		SOIL TYPE					SEAL		
1.		0'-2'	- Frozen	SLOPE	SITE	PLAN			
2-	0'-7'	Peat		m					
3-		(PT)							
4-									
5-									
6-									
7-									
8-	7'-9'	Blue Clay							
9-		(CL)	100						
- BOH			GROUNDWATER ENCOUNTER		SLOF	PΕ			
11-			AT WHAT DE						
12-			DEPTH AFTE	-	2				
13-			MONITORING						
14-					DERCO	DLATION TE	QT.		
15-			READING	DATE	TIME	NET TIME	DEPTH TO WATER	NET DROP	
16-									
17-									
18-									
19-									
20-			PERC RATE	(min/in)	PERC. HO	OLE DIA.	APPLICATION RATE:	g/d/sf	
21-			TEST RUN BE	TWEEN	ft 8		ft		
22-			COMMENTS						
			PERFORMED	BY:			DATE		

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TEST HOLE # PERFORMED BY		6 Dan Steiner, P.		5/25/2021		No. CE 9505 6			
PROJECT:		South Bluffs Su	ubdivision			1 4 75	AROFESSION		
PROJECT NO		21-015					SEAL		
DEPTH, FT		SOIL TYPE					SEAL		
1.	0-1'	Topsoil 0'-2'	- Frozen	SLOPE	SITE	PLAN			
	1'-2'	Peat		PE					
2-		(PT)							
3-									
4-									
	2'-6'	Blue Clay							
5-		(CL)							
6-									
- BOH 7-									
-									
8-									
9-			00011101111						
10-			GROUNDWA ENCOUNTER	V-7.13	SLOP	E			
-									
11-			AT WHAT DE	PTH?n/a	-				
12-			DEPTH AFTE		1,4				
13-			MONITORING	? <u>n/a</u>	_				
			-		DEDAG	LATIONITE	O.T.		
14-			READING	DATE	TIME	LATION TE	ST DEPTH TO WATER	NET DROP	
15-									
16-									
17.9									
17-									
18-			-			-			
19-									
10						1		T	
20-			PERC RATE	(min/in)	PERC HO	LE DIA	APPLICATION RATE:	g/d/sf	
21-								grarai	
-			TEST RUN BE	TWEEN _	ft &		ft		
22-			COMMENTS:						
			PERFORMED	BY:			DATE:		

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TEST HOLE # PERFORMED BY: PROJECT; LEGAL DESC.		7 Dan Steiner, P. South Bluffs Su		5/25/521		60	No. CE 9505 6/19/21 PROFESSION	
PROJECT NO.		21-015						
DEPTH, FT		SOIL TYPE					SEAL	
1	0-1	Topsoil		SLOPE	SITE	PLAN		
2-	1'-2'	Sandy Loan		PE				
	1-2	(OL)						
3-								
4-								
5-	2'-8'	Sandy Silt (I (ML)	Damp)					
6-		(Mic)						
7-								
8-					- 11			
9-	8'-9'	Blue Clay						
- BOH 10-		(CL)	GROUNDWA ENCOUNTER	N. W.	SLOF	PE		
11-			AT WHAT DE		7			
					_			
12-			MONITORING					
13-								
14-			READING	DATE	PERCO	NET TIME	ST DEPTH TO WATER	NET DROP
15-					(3)7.2			THE PROPERTY
16-								
17-								
18-								
19-								
20-			PERC. RATE	(min/in)	PERC. HC	DLE DIA.	APPLICATION RATE	g/d/sf
21-			TEST RUN BE	TWEEN	ft &		ft	
22-				_				
			COMMENTS:					
			PERFORMED	BY			DATE.	

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TEST HOLE # PERFORMED BY: PROJECT: LEGAL DESC.		8 Dan Steiner, P.B South Bluffs Sul		5/25/2021		0.00	No. CE 9505 6/19/21 PROFESSION	
PROJECT NO.		21-015					SEAL	
DEPTH, FT	0-1	SOIL TYPE Topsoil		Iro	SITE	DI ANI		
2-		Торзон		SLOPE	51121	LAN		
3- 4-	1'-5'	Sitly Gravel (GM)						
5-								
7- - BOH	5'-'7'	Blue Clay (CL)						
8-								
9-								
10-			GROUNDWA' ENCOUNTER		SLOP	E		
11-			AT WHAT DE					
T.A.					_			
12-			DEPTH AFTE MONITORING					
13-								
14-						LATION TE		
15-			READING	DATE	TIME	NETTIME	DEPTH TO WATER	NET DROP
16-								
-								
17-								
18-								
19-				2 1		1		
20-								
21-			PERC, RATE	(min/in)	PERC. HO	LE DIA.	APPLICATION RATE:	g/d/sf
			TEST RUN BE	TWEEN _	ft &		ft	
22-			COMMENTS:					
			PERFORMED	BY:			DATE:	

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TEST HOLE # PERFORMED BY: PROJECT: LEGAL DESC.		9 n Steiner, P.E uth Bluffs Sub		5/25/202	1		CO	DAN E STEINE No. CE 9505 G/19/23 ROFESSION	2 41 1
PROJECT NO.	21-	015						SEAL	
DEPTH, FT		SOIL TYPE						SEAL	
2-	0-0.5' 0.5' - 2.5'	Topsoil Sandy Loam (OL)		SLOPE	Î	SITE	PLAN		
4- - 5- 6-	22.50								
7- - 8-	2.5'-14'	Gravely Sand w/ Cobbles (SP)							
9-					_				
10-			GROUNDWA		lo	SLOP	В		
11-			AT WHAT DE		/a				
12- - 13-			DEPTH AFTE	R	/a				
14-					P	FRCO	LATION TE	ST.	
- BOH 15-			READING	DATE	TIM		NET TIME	DEPTH TO WATER	NET DROP
16-									
17-									
18-									
19-									
20-			PERC. RATE	(min/in	PEI	RC. HOI	E DIA.	APPLICATION RATE	g/d/sf
21-			TEST RUN BI			_ft &		ft	
			PERFORMED	BY:				DATE:	

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TEST HOLE # PERFORMED BY: PROJECT: LEGAL DESC.	Da	10 n Steiner, P.I uth Bluffs Su		5/25/202	1	DAN E. STEINER No. CE 9505 S/19/21 ROFESSION			
PROJECT NO.	21-	015						CEAL	
DEPTH, FT		SOIL TYPE						SEAL	
. —	0-0.5' 0.5' - 2.5'	Topsoil		SLOPE		SITE PI	_AN		
1-	0.5 - 2.5	Sandy Loam (OL)		PE					
2-					- 11				
3-									
4-					- 4				
4.6									
5-									
6-									
7-	2.5'-14'	Gravely Sand w/ Cobbles a							
3		with a trace of			- 1				
8-		(SP)							
9-			200 0 / 11 m 12 / 1			F27 42			
10-			GROUNDWA		lo	SLOPE			
11-					/a				
110			AT WHAT DE	P1H2	d				
12-			DEPTH AFTE MONITORING		/a				
13-			MONTON						
14-					PF	RCOL	ATION TE	ST	
- вон			READING	DATE	TIME		NET TIME	DEPTH TO WATER	NET DROP
15-			1	6/9/2021	12: 20			0.00	
16-			2		12: 38		18	6.00	6.00
17-			3 4		12: 39 12: 59		20	0,00	6.00
			5		1: 00		24	0.00	
18-			6		1: 21		21	6.00	6.00
19-			-						
20-				2000					
21-			PERC RATE	4(min/in) PER	RC. HOLE	DIA. 6"	APPLICATION RATE:	125 g/d/sf
2			TEST RUN B	ETWEEN	6	ft &	7	ft	
22-			COMMENTS						
			COMMENTS:						
			PEDEODMER	BY:	PIDin	hne		DATE: 6/9	2021

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TEST HOLE # PERFORMED BY: PROJECT: LEGAL DESC.	Da	11 n Steiner, P.E uth Bluffs Sub		5/25/2021		DAN E. STEINER No. CE 9505 ROFESSION				
PROJECT NO.	21-	015			_					
DEPTH, FT		SOIL TYPE					SEAL			
1-	0-0.5' 0.5' - 1.5'	Topsoil Sandy Loam		SLOPE	SIT	TE PLAN				
	0.5 - 1.0	(OL)		P						
2-										
3-										
4-										
5-										
4										
6-	1.5'-14'	Gravely Sand	ı							
7-		w/ Cobbles								
8-		Trace of Silt (SP)			- -					
9-										
			GROUNDWA		SLO	OPE				
10-			ENCOUNTER	RED? No	0					
11-			AT WHAT DE	PTH?n/	a					
12-			DEPTH AFTE							
13-			MONITORING	3?	a					
14-					DED	COLATIONITE	CT			
- BOH			READING	DATE	TIME	NET TIME	DEPTH TO WATER	NET DROP		
15-			1	6/12/2021	8: 20		0.00			
16-			2	G()Z/ZGZ (8; 27	7	6.00	6.00		
17-			3 4		8; 28 8; 37	9	0.00 6.00	6.00		
18-			5		8: 38 8: 47	9	0.00			
-			0		0. 47	9	6.00	6.00		
19-										
20-			0.000.00.0	4.5		011	2	PAGE PAGE		
21-			PERC RATE	1.5 (min/in)	PERC. F	HOLE DIA. 6"	APPLICATION RATE:	125_g/d/sf		
1			TEST RUN B	ETWEEN	6 ft	8 7	ft			
22-			COMMENTS							
			PERFORMED	BY:	PJ Pinard		DATE: 6/12	/2021		

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TEST HOLE # PERFORMED BY:		12 Dan Steiner, P.		5/25/202	0	6	No. CE 9505	
PROJECT: LEGAL DESC.		South Bluffs Su	ıbdivision				AND THE STORY	
PROJECT NO.		21-015				_	SEAL	
DEPTH, FT		SOIL TYPE					SEAL	
7.1	0-1	Topsoil		SLOPE	SITE	PLAN		
1-				OPE				
2-	1'-3'	Sandy Loam						
3-		(OL)						
4-								
5-					11811			
6-	3'-14'	Sandy Silt						
7-		w/ Gravel						
8-		(ML)						
9-			GROUNDWA	TER	SLO	PF		
10-			ENCOUNTER					
11-			AT WHAT DE	PTH? n/	a			
			AI WIAI DE	1101	<u> </u>			
12-			DEPTH AFTE MONITORING					
13-			WOWITOKING		<u>a</u>			
14-					DEDC	DLATION TE	CT	
- BOH			READING	DATE	TIME	NETTIME	DEPTH TO WATER	NET DROP
15-								
16-			2	6/10/2021	2: 30 3: 00	30	7.00 6.00	1.00
-			3	47 (37442)	3: 00		7.00	
17-			5		3; 30	30	6.25 7.00	0.75
18-			6		4: 00	30	6.25	0.75
10								
19-								
20-			Carry Control		3.504.0	- Au	Tanke Laboration &	
21-			PERC RATE	40 (min/in)	PERC. H	DLE DIA. 6"	APPLICATION RATE:	335 g/d/sf
-			TEST RUN BI	ETWEEN	6 ft 8	š	ft	
22-			COMMENTS:					
			Variety of the		averse.		202	ledera li
			PERFORMED	BY:	PJ Pinard		DATE: 6/10	/2021

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TEST HOLE # PERFORMED BY: PROJECT: LEGAL DESC.		Dan Steiner, P.E South Bluffs Sub		5/25/202			DAN E. STEINER No. CE 9505 6/19/21 PROFESSION	
PROJECT NO.		21-015				-	SEAL	
DEPTH, FT		SOIL TYPE					OL, IL	
1-	0-1'	Topsoil		SLOPE	5	SITE PLAN		
	7. 2.			m	- 1 1			
3-	1'-3'	Sandy Loam (OL)						
4-								
-					- 1 1			
5-								
6-					1.1			
7-	3'-14'	Gravely Sand w/ Cobbles a			- 11			
		Trace of Silt	,,,,		11.1			
8-		(SP)			- 1111			
9-								
40			GROUNDWA			SLOPE		
10-			ENCOUNTER	EDY IN	0			
11-			AT WHAT DE	PTH?n/	а			
12-			DEPTH AFTE	R				
			MONITORING		a			
13-								
14-					PEF	RCOLATION TE		
- BOH			READING	DATE	TIME	NET TIME	DEPTH TO WATER	NET DROP
13-			100	6/8/2010	10: 15		6.00	
16-			2		10: 21	6	0.00	6.00
17-			3		10: 22	8	6.00 0.00	6.00
4			5	F /	10: 31		6.00	
18-			6		10: 39	8	0.00	6.00
19-								
20-								
20-			PERC. RATE	1.3 (min/in)	PERC	HOLE DIA 6"	APPLICATION RATE:	125 g/d/sf
21-							7.	
22-			TEST RUN BE	- IVVEEN	6 1	t &7		
221			COMMENTS:					
			walker to the same of the same		D I D	à.	p.:	2024
			PERFORMED	BY:	PJ Pina	ru .	DATE: 6/8/	2021

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TEST HOLE # PERFORMED BY: PROJECT: LEGAL DESC.		14 an Steiner, P.E outh Bluffs Sub		5/25/202	1		No. CE 9505 6/19/21 ROFESSION	8
PROJECT NO.	2	1-015					SEAL	
DEPTH, FT		SOIL TYPE					SEAL	
1-	0-1'	Topsoil		SLOPE	SITE	PLAN		
		9 5 VC 7		E				
2-	1'-2.5	Sandy Loam (OL)						
3-								
4-								
4								
5-								
6-	0.51-441	Canada Cill						
7-	2,5'-14'	Sandy Silt w/ Gravel and	Cobbles					
8-		(ML)						
9-			GROUNDWA	TER	SLO	DE.		
10-			ENCOUNTER		lo			
11-			AT WHAT DE	PTH? n.	/a			
					0			
12-			DEPTH AFTE MONITORING		/a			
13-								
14-					PERC	OLATION TE	ST	
- BOH			READING	DATE	TIME	NET TIME	DEPTH TO WATER	NET DROP
15-			1	6/8/2021	11: 20		7.00	
16-			2		11: 50 11: 50	30	4.75 7.00	2.25
17-			4		12: 20	30	5.00	2.00
40			5		12: 20	20	7.00	2.00
18-			6		12: 50	30	5.00	2.00
19-				-				
20-			1271		_			
24			PERC RATE	15 (min/in	PERC. H	OLE DIA 6"	APPLICATION RATE:	190 g/d/sf
21-			TEST RUN BE	ETWEEN	6 ft 8	3 7	ft	
22-								
			COMMENTS:					
					Wiles.		2.2	222
			PERFORMED	BY.	PJ Pinard		DATE: 6/8/	2021

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TEST HOLE # PERFORMED BY: PROJECT:		15 Dan Steiner, P.E South Bluffs Sub		5/25/2021		66	No. CE 9505	
LEGAL DESC.			411101011				ASSESSMENT OF THE PARTY OF THE	
PROJECT NO.	2	1-015					CEAL	
DEPTH, FT		SOIL TYPE					SEAL	
1-	1'	Topsoil		SLOPE	SITE	PLAN		
	- 2'	Sandy Loam (OL)		m				
3- - 4-								
5- 6- BOH	6'	Gravely Silt w/ Cobbles (ML)						
7-								
9-			GROUNDWA		SLOP	PE		
11-			AT WHAT DE	EPTH? 3.5	5			
12-			DEPTH AFTE					
13-			montro tart					
14-						DLATION TE		
15-			READING	DATE	TIME	NET TIME	DEPTH TO WATER	NET DROP
16-								
17-								
18-						-		
19-								
20-								
23			PERC RATE	(min/in)	PERC. HO	DLE DIA.	APPLICATION RATE	g/d/sf
21-			TEST RUN B	ETWEEN	ft 8		ft	
22-			COMMENTS					
			PERFORMED) RV	PJ Pinard		DATE: 7/1/	2016

5900 W. Dewberry Dr. Wasilla, AK 99623

Phone: (907) 357-5609 Fax: (907) 357-5608

TEST HOLE / PERCOLATION TEST

5/26/2021 TEST HOLE # DATE PERFORMED BY: Dan Steiner, P.E. PROJECT: South Bluffs Subdivision LEGAL DESC 21-015 PROJECT NO. SEAL DEPTH, FT SOIL TYPE 0-1 SITE PLAN Topsoil SLOPE 2-1' - 3' Sandy Loam (OL) 3-5-6-3'-12" Silt w/ Gravel (ML) 8-9-GROUNDWATER SLOPE Yes 10-**ENCOUNTERED?** AT WHAT DEPTH? 11-12-**DEPTH AFTER** BOH MONITORING? n/a 13-14-PERCOLATION TEST READING DATE NET DROP NET TIME DEPTH TO WATER 15-6/9/2021 1: 25 7.00 16-2 1: 55 30 3.25 3.75 3 1. 55 7.00 17 4 25 30 3.50 3.50 25 7.00 2: 55 6 30 3.50 3.50 18-19-20-PERC. RATE 8.6 (min/in) PERC. HOLE DIA. 6" APPLICATION RATE: 190 g/d/sf 21-3 ft & 4 ft TEST RUN BETWEEN 22-COMMENTS:

PERFORMED BY: PJ Pinard

DATE: 6/9/2021

5900 W. Dewberry Dr. Wasilla, AK 99623

Phone: (907) 357-5609 Fax: (907) 357-5608

TEST HOLE # PERFORMED BY: PROJECT: LEGAL DESC.	Di Se	17 an Steiner, P.E	DATE:	5/26/202	1		60	DAN E STEINER No. CE 9505 G/19/21 PROFESSION	
PROJECT NO.	2	I=015						SEAL	
DEPTH, FT	0.40	SOIL TYPE		Ci.	_	laure :			
1-	0-1'	Topsoil		SLOPE		SITE	PLAN		
2-	1' - 2.5'	Sandy Loam (OL)							
3-		(/							
4-									
5-									
- 4									
6-	2.5'-12'	Sandy Silt w/	Gravel						
7-	2.0-12	and Cobbles	Olavei						
8-		(ML)							
0-									
9-			9270400						
10-			GROUNDWA		es	SLOPE			
184									
11-			AT WHAT DE	PTH?S	9'				
12-			DEPTH AFTE						
- BOH			MONITORING	9? <u>n</u>	/a				
100									
14-			DEADNIA				LATION TE		The way
15-			READING	DATE	TIMI		NET TIME	DEPTH TO WATER	NET DROP
12			- 1 -	6/9/2021	11: 40			7.00	
16-			3		12: 10 12: 10	1 - 1	30	6.13 7.00	0.88
17-			4		12: 40		30	6.25	0.75
			5		12: 40	100		7.00	
18-			6		1: 10		30	6.25	0.75
19-				-					
20-									
20-			PERC RATE	40 (min/in)	PEF	RC. HOL	EDIA 6"	APPLICATION RATE:	335 g/d/sf
21-								7.	
22-			TEST RUN BI	=IVVEEN	6	па	7.	n	
4-1			COMMENTS						
						0.54		Table 1	Lare V
			PERFORMED	BY:	PJ Pin	ard		DATE: 6/9/	2021

5900 W. Dewberry Dr. Wasilla, AK 99623

Phone: (907) 357-5609 Fax: (907) 357-5608

TEST HOLE # PERFORMED BY: PROJECT: LEGAL DESC.		Dan Steiner, P.E South Bluffs Sub		5/26/202	1	600	DAN E. STEIN No. CE 950 6/19/21 ACFESSIO	241
PROJECT NO.		21-015			-	-	SEAL	
DEPTH, FT		SOIL TYPE					SEAL	
1.	0-1'	Topsoil		SLOPE	SIT	E PLAN		
	411 701	Conditions		B				
2-	1"-3"	Sandy Loam (OL)						
3-								
4-								
5-								
6-								
-	3'-12'	Silt w/ Gravel						
7-		(ML)						
8-					-17.			
9-				_				
10-			GROUNDWA		O SLC	OPE		
					7			
11-			AT WHAT D		<u>a</u>			
12- BOH			MONITORIN		/a	_		
13-								
14-				-	PERC	OLATION TE	ST	
15-			READING	DATE	TIME	NET TIME	DEPTH TO WATE	R NET DROP
4			1	6/3/2021	10: 10		7.00	
16-			3		10: 40	30	5.25 7.00	1.75
17-			4 5		11: 10 11: 10	30	5.50 7.00	1.50
18-			6		11: 40	30	5.50	1.50
19-								
-4								
20-			PERC. RATE	20 (min/in	PERC. H	OLE DIA. 6"	APPLICATION RAT	E: 250 g/d/sf
21-			TEST RUN B	ETWEEN	5 ft	& 6	ft	
22-			COMMENTS			<u> </u>		
			PERFORME	2.0%	PJ Pinard		DATE: 6	/3/2021

5900 W. Dewberry Dr. Wasilla, AK 99623 Phone: (907) 357-5609 Fax: (907) 357-5608

TEST HOLE # PERFORMED BY: PROJECT: LEGAL DESC.	Da	19 n Steiner, P.E uth Bluffs Sub		5/26/202		CS	No. CE 9505 6/19/21 PROFESSION	
PROJECT NO.	21-	015					CEAL	
DEPTH, FT		SOIL TYPE					SEAL	
1 - 2- 3- 4-	0-0.5' 0.5' - 1.5'	Topsoil Sandy Loam (OL)		SLOPE	SITE	PLAN		
5-								
6- 7- - 8-	1.5'-14'	Gravely Sand w/ Cobbles Occs. +8" Ro (SP)						
9-			GROUNDWA ENCOUNTER		SLOF	E		
11- - 12- - 13-			DEPTH AFTE MONITORING	R				
14-					DEDCC	LATION TE	CT.	
- BOH			READING	DATE	TIME	NET TIME	DEPTH TO WATER	NET DROP
16- 17-								
18-								
20-						Ĺ		
21-			PERC. RATE			LE DIA.	APPLICATION RATE:	g/d/sf
22-			COMMENTS				.10	
			PERFORMED	BY:	PJ Pinard		DATE: 7/1/	2016

5900 W. Dewberry Dr. Wasilla, AK 99623 Phone: (907) 357-5609 Fax: (907) 357-5608

DEPTH, FT	0-1'	SOIL TYPE Topsoil Sandy Loam (OL)	=	SLOPE	SITE	PLAN	SEAL	
2-		Topsoil Sandy Loam	7	SLOPE	SITE	PLAN	SEAL	
2-		Topsoil Sandy Loam		SLOPE	SITE	PLAN		
3-	1' - 3'			OPE				
3-	1' - 3'			17.	1 1			
4-		(GE)						
-								
6-	3'-14'	Sitly Sand w/ (Gravel		111			
7-		(SM)						
8-					- 111			
9-								
-			GROUNDWA		SLO	PE		
10-			ENCOUNTER					
11-			AT WHAT DE	PTH?n/:	a			
12-			DEPTH AFTE					
13-			MONITORING	9?	<u>d</u>			
14-		-			PERCO	DLATION TE	ST	
- BOH		1 9	READING	DATE	TIME	NET TIME	DEPTH TO WATER	NET DROP
15-		1.3	1	6/11/2021	7: 10		6.00	
16-		3	3		7: 18 7: 19	08	0.00 6.00	6.00
17-			4		7: 29	10	0.00	6.00
18-		3	5 6		7: 30 7: 40	10	6.00	6.00
19-								
-		- 0						
20-			PERC. RATE	1.7 (min/in)	PERC. HO	DLE DIA. 6"	APPLICATION RATE:	125 g/d/st
21-			TEST RUN BI			7		
22-			COMMENTS:				-10	
			PERFORMED		PJ Pinard			2021

5900 W. Dewberry Dr. Wasilla, AK 99623 Phone: (907) 357-5609 Fax: (907) 357-5608

TEST HOLE # PERFORMED BY: PROJECT: LEGAL DESC.	Da	21 in Steiner, P.	DATE:	5/26/2021		6	DAN E. STEINER No. CE 9505 G/19/21 ROFESSION	
PROJECT NO.	21	-015				-	OFAL	
DEPTH, FT		SOIL TYPE					SEAL	
1-	0-0.5	Topsoil		SLOPE	SIT	EPLAN		
12	0.5'-2.5'			PE				
2-								
3-					4.4			
4-								
5-					1.1			
6-								
7-	2.5'-10'	Silty Sand w/ Gravel an	d Cabbles		-111			
4		Occas. +8"			11.11			
8-		(SM)						
9-			GROUNDWA	TED	leir	OPE		
10-			ENCOUNTER)FE		
11-			AT WHAT DE	PTH? n/a	a			
12-	10'-14'	Gravely Sand	d DEPTH AFTE	-R				
34		some, +8"	MONITORING		a_			
13-		Rock (SP)						
14- - BOH			READING	DATE	PERC	OLATION TE	ST DEPTH TO WATER	NET DROP
15-						7		THE PORTOR
16-			2	6/11/2021	8: 10 8: 16	06	6.00 0.00	6.00
17-			3 4		8: 17 8: 24	07	6.00 0.00	6,00
3.9			5		8: 25		6.00	
18-			6		8: 32	7	0.00	6.00
19-								
20-			Caralina					Part Production
21-			PERC. RATE	1.2 (min/in)	PERC. H	OLE DIA. 6"	APPLICATION RATE:	125 g/d/sf
-			TEST RUN B	ETWEEN _	6 ft	87	ft	
22-			COMMENTS					
			PERFORMED	BY:	PJ Pinard		DATE: 6/11	/2021

5900 W. Dewberry Dr. Wasilla, AK 99623 Phone: (907) 357-5609 Fax: (907) 357-5608

TEST HOLE # PERFORMED BY: PROJECT: LEGAL DESC.		22 Dan Steiner, P.E South Bluffs Sub		5/26/202	1		609	DAN E. STEINER No. CE 9505 6/19/21 ROFESSION	
PROJECT NO.		21-015				_		OFAL	
DEPTH, FT		SOIL TYPE						SEAL	
1-	0-1	Topsoil	- 1	SLOPE	S	ITE PLAN	1		
	and the	40.11.11		PE					
2-	1' - 3'	Sandy Loam (OL)		117					
3-					- 411				
4-									
5-									
- 3									
6-	3'-14'	Sandy Silt							
7-		w/ Gravel and (ML)	Cobbles						
8-		(WL)							
9-						_			
10-			GROUNDWAT			LOPE			
2.			ENCOUNTER						
11-			AT WHAT DE	PTH?	<u>a</u>				
12-			DEPTH AFTE		L				
13-			MONITORING	? <u>n/</u>	<u>a</u>				
14-					PER	COLAT	ION TE	ST	
- BOH			READING	DATE	TIME		ET TIME	DEPTH TO WATER	NET DROP
15-			1	6/11/2021	9: 35			7.00	
16-			3		10: 05 10: 05		30	5.25 7.00	1.75
17-			4		10: 35		30	5.38	1.63
18-			5		10: 35 11: 05		30	7.00 5.38	1.63
-									
19-		0							
20-			PERC RATE	18 (min/in)	PERC	HOLED	A 6"	APPLICATION RATE	250 ald/st
21-									200 graisi
22-			TEST RUN BE	TWEEN	6π	&	7	π	
251			COMMENTS:						
			DEDECOMED	DV.	D / Dinor	-A		DATE: CHA	12021

5900 W. Dewberry Dr. Wasilla, AK 99623 Phone: (907) 357-5609 Fax: (907) 357-5608

TEST HOLE # PERFORMED BY; PROJECT: LEGAL DESC.		23 Dan Steiner, P.E South Bluffs Sub		5/26/2021		No. CE 9505			
PROJECT NO.		21-015					120		
DEPTH, FT		SOIL TYPE					SEAL		
1-	0-1'	Topsoil		SLOPE	SITE	PLAN			
	41 - 21	0.44/1.558		PE					
2-	1' - 2'	Sandy Loam (OL)							
3-									
4-									
5-									
6-									
7-	3'-14'	Gravely Sand w/ Cobbles	1						
11.54		(SP)							
8-									
9-			GROUNDWA	TER	SLOP	F			
10-			ENCOUNTER		_				
11-			AT WHAT DE	ртн? n/a					
12-			DEPTH AFTE	R					
- BOH 13-			MONITORING	s?n/a					
-									
14-			READING	DATE	TIME	LATION TE	ST DEPTH TO WATER	NET DROP	
15-									
16-									
17-									
18-									
9.									
19-									
20-			PERC RATE	(min/in)	PERC. HO	LE DIA.	APPLICATION RATE:	g/d/sf	
21-			TEST RUN BE				1		
22-			COMMENTS:	_					
			PERFORMED	BY:			DATE		

Amy Otto-Buchanan

From: Jamie Taylor

Sent: Wednesday, April 27, 2022 1:15 PM

To: Amy Otto-Buchanan

Cc: Elaine Flagg

Subject: RE: RFC South Bluffs #22-046

If multi-family housing is planned it will be best to capture that in the ADT calculation now to ensure the proper standard road is constructed.

The section line road/extension of Spruce Avenue is not certified to any standard. That road will need to be upgraded and certified to the standard required by the estimated ADT.

What is the depth of the pond next to the section line? ADOT&PF Highway Preconstruction Manual says permanent bodies of water over 3 feet deep may be considered a longitudinal non-traversable hazard. Determine if guardrail is warranted.

Jamie Taylor, PE (she/her)
Civil Engineer
Matanuska-Susitna Borough
Department of Public Works

t: 907-861-7765 c: 907-355-9810

jamie.taylor@matsugov.us http://www.matsugov.us/

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Friday, April 8, 2022 3:06 PM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; Ron Bernier <Ron.Bernier@matsugov.us>; msb-platting-notice@mlccak.org; mschoming@crweng.com; hsfirewise@gmail.com; Fire Code <Fire.Code@matsugov.us>; John Fairchild <John.Fairchild@matsugov.us>; Tawnya Hightower <Tawnya.Hightower@matsugov.us>; Jill Irsik

<Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Elaine

Flagg <Elaine.Flagg@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Terry Dolan

<Terry.Dolan@matsugov.us>; msb.hpc@gmail.com; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; Planning

- <MSB.Planning@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Fred Wagner
- <Frederic.Wagner@matsugov.us>; Permit Center < Permit.Center@matsugov.us>; Mark Whisenhunt
- <Mark.Whisenhunt@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; Andy Dean
- <Andy.Dean@matsugov.us>; mearow@matanuska.com; row@mtasolutions.com;

andrew.fraiser@enstarnaturalgas.com; James Christopher < James.Christopher@enstarnaturalgas.com>;

row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>; allen.kemplen@alaska.gov

Subject: RFC South Bluffs #22-046

The following link contains a Request for Comments for South Bluffs, #2022-046 to subdivide 118N01W31D003. Comments are due by April 29, 2022. Please let me know if you have any questions. Thanks, A.

South Blfs

From: Fire Code

Sent: Wednesday, April 13, 2022 9:37 AM

To: Amy Otto-Buchanan

Subject: RE: RFC South Bluffs #22-046

Amy,

Fire and Life Safety has no issue with this.



Donald Cuthbert
Fire Marshal
Fire & Life Safety Division
Central Mat-Su Fire Department
(907) 861-8030
FireCode@matsugov.us

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Friday, April 8, 2022 3:06 PM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; Ron Bernier <ron.bernier@matsugov.us>; msb-platting-notice@mlccak.org; mschoming@crweng.com; hsfirewise@gmail.com; Fire Code <Fire.Code@matsugov.us>; John Fairchild <John.Fairchild@matsugov.us>; Tawnya Hightower <Tawnya.Hightower@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Elaine Flagg <Elaine.Flagg@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Terry Dolan <Terry.Dolan@matsugov.us>; msb.hpc@gmail.com; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Mark Whisenhunt <Mark.Whisenhunt@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; Andy Dean <Andy.Dean@matsugov.us>; mearow@matanuska.com; row@mtasolutions.com; andrew.fraiser@enstarnaturalgas.com; James Christopher <James.Christopher@enstarnaturalgas.com>; row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>; allen.kemplen@alaska.gov Subject: RFC South Bluffs #22-046

The following link contains a Request for Comments for South Bluffs, #2022-046 to subdivide 118N01W31D003. Comments are due by April 29, 2022. Please let me know if you have any questions. Thanks, A.

South Blfs

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

Amy Otto-Buchanan
Platting Technician
amy.otto-buchanan@matsugov.us
861-7872

From: Permit Center

Sent: Friday, April 15, 2022 4:58 PM

To: Amy Otto-Buchanan

Subject: RE: RFC South Bluffs #22-046

Good Afternoon,

This parcel appears to have two driveways that do not have permits on file. Please have them apply for their driveway permits.

Thank you,

Jennifer Monnin, CFM MSB Permit Technician 350 E Dahlia Ave Palmer, AK 99645 907-861-7822 Jennifer.monnin@matsugov.us

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Friday, April 8, 2022 3:06 PM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; Ron Bernier <Ron.Bernier@matsugov.us>; msb-platting-notice@mlccak.org; mschoming@crweng.com; hsfirewise@gmail.com; Fire Code <Fire.Code@matsugov.us>; John Fairchild <John.Fairchild@matsugov.us>; Tawnya Hightower <Tawnya.Hightower@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Elaine Flagg <Elaine.Flagg@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Terry Dolan <Terry.Dolan@matsugov.us>; msb.hpc@gmail.com; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Mark Whisenhunt <Mark.Whisenhunt@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; Andy Dean <Andy.Dean@matsugov.us>; mearow@matanuska.com; row@mtasolutions.com; andrew.fraiser@enstarnaturalgas.com; James Christopher <James.Christopher@enstarnaturalgas.com>; row@enstarnaturalgas.com>; GSP Design Group <ospdesign@gci.com>; allen.kemplen@alaska.gov Subject: RFC South Bluffs #22-046

The following link contains a Request for Comments for South Bluffs, #2022-046 to subdivide 118N01W31D003. Comments are due by April 29, 2022. Please let me know if you have any questions. Thanks, A.

South Blfs

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

Amy Otto-Buchanan
Platting Technician
amy.otto-buchanan@matsugov.us



From: Theresa Taranto

Sent: Tuesday, April 12, 2022 9:19 AM

To: Amy Otto-Buchanan
Cc: Michael Johnson

Subject: RE: RFC South Bluffs #22-046

Case # 11807 has been open since 10/13/20. CCO Mike Johnson.

Thank you,

Theresa Taranto

Mat-Su Borough Development Services Administrative Specialist

350 E Dahlia Ave. Palmer, Alaska 99645 907-861-8574 www.matsugov.us

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Friday, April 8, 2022 3:06 PM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; Ron Bernier <Ron.Bernier@matsugov.us>; msb-platting-notice@mlccak.org; mschoming@crweng.com; hsfirewise@gmail.com; Fire Code <Fire.Code@matsugov.us>; John Fairchild <John.Fairchild@matsugov.us>; Tawnya Hightower <Tawnya.Hightower@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Elaine Flagg <Elaine.Flagg@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Terry Dolan <Terry.Dolan@matsugov.us>; msb.hpc@gmail.com; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Mark Whisenhunt <Mark.Whisenhunt@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; Andy Dean <Andy.Dean@matsugov.us>; mearow@matanuska.com; row@mtasolutions.com; andrew.fraiser@enstarnaturalgas.com; James Christopher <James.Christopher@enstarnaturalgas.com>; row@enstarnaturalgas.com>; oSP Design Group <ospdesign@gci.com>; allen.kemplen@alaska.gov Subject: RFC South Bluffs #22-046

The following link contains a Request for Comments for South Bluffs, #2022-046 to subdivide 118N01W31D003. Comments are due by April 29, 2022. Please let me know if you have any questions. Thanks, A.

South Blfs

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

Amy Otto-Buchanan
Platting Technician
amy.otto-buchanan@matsugov.us
861-7872

From: Percy, Colton T (DFG) <colton.percy@alaska.gov>

Sent: Monday, April 11, 2022 9:44 AM

To: Amy Otto-Buchanan

Subject: RE: RFC South Bluffs #22-046

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

HI Amy,

Alaska Department of Fish and Game has reviewed the proposed platting actions and has no objections. The proposed actions will not affect public access to public lands and waters. Thank you for the opportunity to review and comment.

Colton T. Percy

Habitat Biologist Access Defense Program Alaska Department of Fish and Game Division of Wildlife Conservation 333 Raspberry Rd Anchorage, AK 99518 907-267-2118

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Friday, April 8, 2022 3:06 PM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; Ron Bernier <Ron.Bernier@matsugov.us>; msb-platting-notice@mlccak.org; mschoming@crweng.com; hsfirewise@gmail.com; Fire Code <Fire.Code@matsugov.us>; John Fairchild <John.Fairchild@matsugov.us>; Tawnya Hightower <Tawnya.Hightower@matsugov.us>; Jill Irsik

<Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; Brad Sworts <brad.sworts@matsugov.us>; Elaine

Flagg <Elaine.Flagg@matsugov.us>; Jamie Taylor <jamie.taylor@matsugov.us>; Terry Dolan

<Terry.Dolan@matsugov.us>; msb.hpc@gmail.com; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; Planning

<MSB.Planning@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Fred Wagner

<Frederic.Wagner@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Mark Whisenhunt

<Mark.Whisenhunt@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; Andy Dean

<Andy.Dean@matsugov.us>; mearow@matanuska.com; row@mtasolutions.com;

andrew.fraiser@enstarnaturalgas.com; James Christopher < James.Christopher@enstarnaturalgas.com >;

row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>; Kemplen, Allen (DOT)

<allen.kemplen@alaska.gov>

Subject: RFC South Bluffs #22-046

CAUTION: This email originated from outside the State of Alaska mail system. Do not click links or open attachments unless you recognize the sender and know the content is safe.

The following link contains a Request for Comments for South Bluffs, #2022-046 to subdivide 118N01W31D003. Comments are due by April 29, 2022. Please let me know if you have any questions. Thanks, A.

South Blfs

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

Amy Otto-Buchanan



Department of Transportation and Public Facilities

Program Development and Statewide Planning Anchorage Field Office

> 4111 Aviation Avenue P.O. Box 196900 Arichorage, AK 99519-6900 Main number; 907-269-0520 Fax number; 907-269-0521 Website: dat.state.ak.us

April 18, 2022

Fred Wagner, Platting Officer Matanuska-Susitna Borough 350 East Dahlia Avenue Palmer, Alaska 99645

Re: Plat Review

Dear Mr. Wagner:

The Alaska Department of Transportation and Public Facilities (DOT&PF) has reviewed the following plats and has no comments:

Poulk HO 09 Airplane Acres

The Alaska Department of Transportation and Public Facilities (DOT&PF) has reviewed the following plats and has the following comments:

Pre-App HO15 Tulip

 Proposed vacation of state right-of-way must be routed through the Department of Natural Resources. Please contact Stan Brown at 269-8521 for more information on their review process.

Pre-App 11 Hale 17N02E02D022

o No Direct Access to Old Glenn Highway. Property to use Graham Circle.

South Bluffs

- Plat Note 7 could be corrected to separate out access authority; MSB for Spruce and DOT&PF for Church Road
- o Concur with NDA to Church Road from Lot 17 Block 2 and Lot 11 Block 3 and Tract B
- o Recommend looking at re-locating North Short View Road to western edge of Lot 1.
- Consider dedication of ½ width for future north-south access road along western side of tract.

Cruz WA08 Gateway Capital

- No Direct Access to Trunk Road from Lot 1 or Lot 2.
- o Access to be from East Katherine Drive
- o Request dedication of PUE to match Stringfield
- Kiech WC11

- o Request dedication of right-of-way for West Willow Fishhook Road
- One driveway access only to be provided from Lot 2 to West Willow Fishhook Road.

Smith WA11 57448000L002

- o Per HPCM 1190.3, must use Hardrock Circle for Primary Access to both lots.
- Suggested that an access easement to Hardrock Circle for Lot 2B
- Requests improves access to KGB for all property, minimizes congestion and maximizes large vehicle access, emergency response and improves public safety
- Per HPCM 1190 Spacing Standards, please show a common use easement for all existing parcels at current access, Lots 2A, 2B and the property to the north.
- Please see the attached detailed section drawing produced by the KGB Reconstruction project for more information.

All properties accessing DOT&PF roads must apply to Right of Way for a driveway permit, subject to provisions listed in 17 AAC 10.020. Any previously issued driveway permits become invalid once the property undergoes a platting action and must be reissued.

We recommend the petitioner verify all section line easements and DOT&PF road rights-of-way adjacent to their property. For assistance, the petitioner may contact the Engineering group within the Right of Way section in DOT&PF at (907) 269-0700. The petitioner is liable to remove any improvements within the easements and rights-of-way that impede the operation and maintenance of those facilities even if they are not shown on the plat, so it is in the petitioner's best interest to identify the exact locations and widths of any such easements or rights-of-way before they improve the property.

If any section line easements or road rights-of-way exist within the bounds of their plat, we recommend the petitioner dedicate them. If there is an existing right-of-way or easement, the petitioner is unable to develop that portion of the property yet continues to pay property taxes on it; dedicating will remove that cost to the petitioner.

If there are any questions regarding these comments please feel free to contact me at (907) 269-0513 or allen.kemplen@alaska.gov.

Sincerely,

Allen Kemplen

Mat-Su Core Area Planner

cc: Scott Thomas, P.E., Regional Traffic Engineer, Traffic Safety and Utilities Brad Sworts, MSB Transportation Manager Sean Baski, Chief, Highway Design Danika Simpson, Property Management Supervisor, Right of Way Tom Schmid, Highway Design Project Manager

From: OSP Design Group <ospdesign@gci.com>

Sent: Tuesday, April 19, 2022 4:28 PM

To: Amy Otto-Buchanan
Cc: OSP Design Group

Subject: RE: RFC South Bluffs #22-046

Attachments: RFC Packet.pdf; Agenda Plat Pg 1.pdf; Agenda Plat Pg 2.pdf

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Amy,

In review GCI has no comments or objections to the plat, attached is the signed plat for your records.

Thanks,

MIREYA ARMESTO

GCI | Technician II, GIS Mapping m: 907-744-5166 | w: www.gci.com

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Friday, April 8, 2022 3:06 PM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; Ron Bernier <Ron.Bernier@matsugov.us>; msb-platting-notice@mlccak.org; mschoming@crweng.com; hsfirewise@gmail.com; Fire Code <Fire.Code@matsugov.us>; John Fairchild <John.Fairchild@matsugov.us>; Tawnya Hightower <Tawnya.Hightower@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Elaine Flagg <Elaine.Flagg@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Terry Dolan <Terry.Dolan@matsugov.us>; msb.hpc@gmail.com; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Fred Wagner

- <Frederic.Wagner@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Mark Whisenhunt
- <Mark.Whisenhunt@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; Andy Dean
- <Andy.Dean@matsugov.us>; mearow@matanuska.com; row@mtasolutions.com;
- andrew.fraiser@enstarnaturalgas.com; James Christopher < James.Christopher@enstarnaturalgas.com>;

row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>; allen.kemplen@alaska.gov

Subject: RFC South Bluffs #22-046

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

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South Blfs

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

Amy Otto-Buchanan
Platting Technician
amy.otto-buchanan@matsugov.us
861-7872

From: Holly Sparrow <hsparrow@mtasolutions.com>

Sent: Monday, April 11, 2022 9:36 AM

To: Amy Otto-Buchanan

Subject: RE: RFC South Bluffs #22-046

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Good morning,

MTA has reviewed the plat for South Bluffs. MTA has no comments.

Thank you for the opportunity to comment.

Holly Sparrow, Right of Way Agent

1740 S. Chugach St., Palmer, Alaska 99645

Office: (907) 761-2599 | www.mtasolutions.com



Life, Technology, Together.

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Friday, April 8, 2022 3:06 PM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; Ron Bernier <Ron.Bernier@matsugov.us>; msb-platting-notice@mlccak.org; mschoming@crweng.com; hsfirewise@gmail.com; Fire Code <Fire.Code@matsugov.us>; John Fairchild <John.Fairchild@matsugov.us>; Tawnya Hightower <Tawnya.Hightower@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Elaine Flagg <Elaine.Flagg@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Terry Dolan <Terry.Dolan@matsugov.us>; msb.hpc@gmail.com; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Mark Whisenhunt <Mark.Whisenhunt@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; Andy Dean <Andy.Dean@matsugov.us>; mearow@matanuska.com; Right of Way Dept. <row@mtasolutions.com>; andrew.fraiser@enstarnaturalgas.com; James Christopher <James.Christopher@enstarnaturalgas.com>; row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>; allen.kemplen@alaska.gov Subject: RFC South Bluffs #22-046

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South Blfs

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ENSTAR Natural Gas Company
A DIVISION OF SEMCO ENERGY
Engineering Department, Right of Way Section
401 E. International Airport Road
P. O. Box 190288

Anchorage, Alaska 99519-0288 (907) 277-5551 FAX (907) 334-7798

April 8, 2022

Matanuska-Susitna Borough, Platting Division 350 East Dahlia Avenue Palmer, AK 99645-6488

To whom it may concern:

ENSTAR Natural Gas Company has reviewed the following preliminary plat and has no comments or recommendations.

• SOUTH BLUFFS (MSB Case # 2022-046)

If you have any questions, please feel free to contact me at 334-7944 or by email at james.christopher@enstarnaturalgas.com.

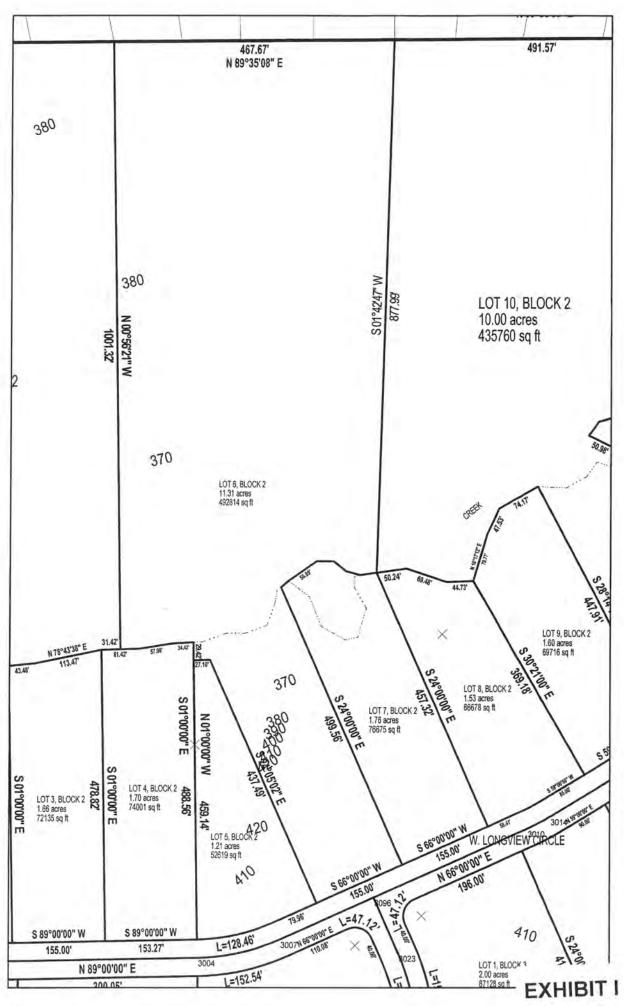
Sincerely,

James Christopher

Right of Way & Compliance Technician

ENSTAR Natural Gas Company

ames Christopher



CERTIFICATION OF PAYMENT OF TAXES CERTIFICATE OF OWNERSHIP & DEDICATION 0 23 I HEREBY CERTIFY THAT ALL CURRENT TAXES AND SPECIAL I CERTIFY THAT I AM THE OWNER OF THE PROPERTY ASSESSMENTS, THROUGH ______, 20____, SHOWN AND DESCRIBED IN THIS PLAN AND THAT I BEVERLY \Leftrightarrow AGAINST THE PROPERTY, INCLUDED IN THE SUBDIVISION W. SELDON RD. ADOPT THIS PLAN OF SUBDIVISION BY MY FREE CONSENT, OR RESUBDIVISION, HEREON HAVE BEEN PAID. DEDICATE ALL RIGHTS-OF-WAY TO THE MATANUSKA-SUSITNA BOROUGH AND GRANT ALL EASEMENTS TO THE USE SHOWN. KALMBACH ' LAKE 36 BOROUGH TAX COLLECTION OFFICIAL W. SPRUCE AVE. LEGEND FOUND 2 1/2" GENERAL LAND OFFICE BRASS CAP MONUMENT DENNIS E. BYLER DATE FOUND ALUMINUM MONUMENT IN MONUMENT CASE - AS SHOWN AND DESCRIBED PLANNING & LAND USE DIRECTOR'S CERTIFICATE P.O. BOX 877750 WASILLA, ALASKA 99687-7750 ⊕ FOUND 3 1/4" BLM BRASS CAP MONUMENT I CERTIFY THAT THIS SUBDIVISION PLAN HAS BEEN FOUND TO COMPLY WITH THE LAND SUBDIVISION REGULATIONS OF O FOUND OLD 3/4" IRON PIPE - AS SHOWN AND DESCRIBED NOTARY ACKNOWLEDGMENT THE MATANUSKA-SUSITNA BOROUGH, AND THAT THE PLAT JACOBSENTIAKE (T) = TOTAL DIMENSIONHAS BEEN APPROVED BY THE PLATTING AUTHORITY BY SUBSCRIBED AND SWORN TO BEFORE ME THIS_____ PLAT RESOLUTION NO._____ DAY OF _____, 20____ THIS PLAT HAS BEEN APPROVED FOR RECORDING IN THE PALMER RECORDING DISTRICT, THIRD JUDICIAL DISTRICT, VICINITY MAP STATE OF ALASKA, IN WHICH THE PLAT IS LOCATED. NOTARY FOR THE STATE OF ALASKA SCALE 1" = 1 MILE MY COMMISSION EXPIRES PLANNING & LAND USE DIRECTOR 1/4 CORNER ATTEST: FOUND OLD 3/4" IRON PIPE FROM GLO MONUMENT - 1.0" BELOW WATER SURFACE. PLATTING CLERK BENEFICIARIES PIPE ROTTED OFF WITH MAG, NAIL IN CENTER SIGNATURE DATE NAME/TITLE C-1/4 CORNER N89°55'56"W 2640.51' ALAN B. WHITE TRUST S89°55'56"E 1020 SAGE CREEK COURT 1/4 CORNER 1/4 CORNER HEBER CITY, UTAH 84032 NOTARY ACKNOWLEDGMENT TIBN RIW SUBSCRIBED AND SWORN TO BEFORE ME THIS_____ 1/4 DAY OF ______, 20_____ \$ 31 \$ 32 LS 9689 \$ 36 \$ 31 PF CA MIT NOTARY FOR THE STATE OF UTAH CONTROL SKETCH FOUND 2 1/2' ALUMINUM ADOT & PF MONUMENT 1 INCH = 200 FEET MY COMMISSION EXPIRES IN MONUMENT CASE FOUND 2 1/2" GLO BRASS CAP MONUMENT 0.2" ABOVE GROUND CAP ROTTED OFF THE 3/4" IRON PIPE IN ROAD SIGNATURE DATE N89'35'08"E 2476.73 NAME/TITLE ALASKA PRIVATE EQUITY 2, LLC P.O. BOX 520777 BIG LAKE, ALASKA 99652 NOTARY ACKNOWLEDGMENT SUBSCRIBED AND SWORN TO BEFORE ME THIS_____ DAY OF ______, 20_____ NOTARY FOR THE STATE OF ALASKA LINE TABLE MY COMMISSION EXPIRES LINE LENGTH BEARING L1 65.61' S89°55'46"E L2 33.00' S00'12'44"E L3 15.62' S89°47'16"W NOTES L4 70.79' N78°45'22"W L5 33.00' N0011'42"W 1. THERE MAY BE FEDERAL, STATE AND LOCAL RE-QUIREMENTS GOVERNING LAND USE. IT IS THE L6 30.00' S0011'42"E L7 30.00' S00'11'42"E RESPONSIBILITY OF THE INDIVIDUAL PARCEL OWNER L8 30.00' N01'00'00"W TO OBTAIN A DETERMINATION WHETHER SUCH RE-L9 52.16' N76°13'29"E QUIREMENTS APPLY TO THE DEVELOPMENT OF L10 58.75' N81°02'23"E PARCELS SHOWN HEREON. L11 45.95' N8918'01"E 2. BASIS OF BEARING FROM G.P.S. OBSERVATION TAKEN L12 43.48' N84*27'32"E AT THE NE CORNER LOT 4, BLOCK 2, BLUFFS OF SUMMER L13 31.42' N88"14'00"E SUBDIVISION, PLAT #2015-103 L14 30.00' N88*14'00"E L15 57.98' N81"15'10"E 3. 5/8" x 30" REBAR WITH SELF-IDENTIFYING PLASTIC L16 34.42' N87°09'56"E FOUND 2 1/2" ALUMINUM ADOT & PF MONUMENT IN MONUMENT CASE IN ROAD CAP SET AT ALL LOT CORNERS, P.C.'S, P.T.'S L17 40.00' N43'39'23"W FOUND 3 1/4" BLM BRASS CAP MONUMENT AND P.R.C.'S UNLESS NOTED. S89°47'16"W L18 16.49' N48'40'19"E 15.62' L19 56.89' N5510'46"E 0.2' ABOVE GROUND 4. NO INDIVIDUAL WATER SUPPLY SYSTEM OR SEWAGE L20 28.41' S89'40'02"E STATE OF AK T18N R1W L21 26.93' S52°02'50"E DISPOSAL SYSTEM SHALL BE PERMITTED ON ANY T18N R1W L22 23.45' S75'08'28"E LOT UNLESS SUCH SYSTEM IS LOCATED, CONSTRUCTED S 31 S 32 S 6 S 5 1/4 5 31 L23 27.66' N82°03'03"E AND EQUIPPED IN ACCORDANCE WITH THE REQUIRE-L24 50.24' N82°03'03"E MENTS, STANDARDS AND RECOMMENDATIONS OF THE L25 69.48' S71°28'12"E T17N STATE OF ALASKA, DEPARTMENT OF ENVIRONMENTAL LS 9689 L26 44.73' N88°03'33"E CONSERVATION, WHICH GOVERN THOSE SYSTEMS. 2007 L27 47.53' N25'33'01"E 1/4 CORNER TOWNSHIP 18 NORTH 2575.69 L28 50.98' N64°52'41"W S 31 5. EASEMENTS OF RECORD NOT PLOTTED HEREON: L29 28.32' N35*50'49"E a) M.E.A. EASEMENT RECORDED FEBRUARY 17, 1960 S89*55'56"E 2641.30' TOWNSHIP 17 NORTH S 6 L30 27.64' N74°52'47"E IN BOOK 29 AT PAGE 20 L31 20.63' N21°54'03"E b) M.E.A. EASEMENT RECORDED JANUARY 12, 1979 L32 22.53' N70°54'28"E IN BOOK 183 AT PAGE 669 L33 39.59' N36°31'11"E L34 16.85' N62"19'50"E 6. THE RIPARIAN BOUNDARY OF LOTS 2-4, BLOCK 2, L35 | 11.87' | S24'14'48"E LOTS 7-9, BLOCK 2, LOTS 11 & 12, BLOCK 2 AND L36 27.01' S02*45'08"E L37 8.36' S61°30'47"E LOTS 14-15, BLOCK 2, IS THE CENTERLINE OF THE UNNAMED CREEK. L38 20.47' N75"15'09"E L39 21.79' S40'42'20"E A PLAT OF L40 32.52' N69'33'16"E 7. UNLESS AUTHORIZED BY THE PERMITTING AUTHORITY, L41 38.24' S76°51'28"E CURVE TABLE DIRECT ACCESS FROM ANY LOT OR TRACT TO N. CHURCH SOUTH BLUFFS L42 | 23.30' N73'44'53"E ROAD IS NOT ALLOWED. CURVE LENGTH RADIUS TANGENT DELTA CHORD CHORD BEARING L43 15.90' N03'49'33"W C1 47.12' 30.00' 30.00' 90°00'00" 42.43' N45°04'04"E L44 45.69' N49°55'46"W A SUBDIVISION OF PARCEL 2 OF C2 47.12' 30.00' 30.00' 90°00'00" 42.43' S44°55'56"E L45 | 13.93' | N09°01'59"W M.S.B. 40-ACRE EXEMPTION 2015-19-EXM L46 13.22' N79°01'09"E C3 | 134.42' | 320.00' | 68.22' | 24°04'04" | 133.43' | N11°57'58"W RECORDED AT SERIAL #2015-002386-0 C4 147.02' 350.00' 74.61' 24'04'04" 145.94' N11'57'58"W L47 | 46.52' | S79"16'19"E WITHIN THE SE1/4 SECTION 31, T. 18 N., R. 1 W. C5 | 159.62' | 380.00' | 81.01' | 24"04'04" | 158.45' | N11"57'58"W L48 | 17.42' | S66°55'22"E C6 47.12' 30.00' 30.00' 90°00'00" 42.43' N69°00'00"W

C7 152.54' 380.00' 77.31' 23°00'00" 151.52' N77°30'00"E SEWARD MERIDIAN, ALASKA L49 51.37' N04'45'34"E PALMER RECORDING DISTRICT L50 23.44' N39"13'25"E C8 140.50' 350.00' 71.21' 23'00'00" 139.56' N77'30'00"E THIRD JUDICIAL DISTRICT L51 17.29' N26'36'24"W STATE OF ALASKA L52 20.08' N62°57'32"W C9 | 128.46' | 320.00' | 65.10' | 23°00'00" | 127.60' | N77°30'00"E C10 47.12' 30.00' 30.00' 90'00'00" 42.43' \$21'00'00"W L53 16.86' N32°23'36"E CONTAINING 103.42 ACRES, MORE OR LESS C11 46.43' 380.00' 23.24' 07*00'00" 46.40' N62*30'00"E L54 39.29' N45'49'11"E SURVEYOR'S CERTIFICATE L55 52.73' N62*59'06"E C12 42.76' 350.00' 21.41' 07'00'00" 42.73' N62'30'00"E

L56 26.70' N42'00'13"E

L57 44.20' N70°23'16"E

L58 | 23.22' N16*51'23"W

L59 24.91' N01°40'30"E

L60 14.27' N29°12'31"E

L62 17.76' N04°36'34"W

L63 19.74' N65°58'23"E

L64 | 11.94' | N26°22'04"E

L61 60.63' N63'03'16"E

C13 39.10' 320.00' 19.57' 07'00'00" 39.07' N62'30'00"E

C14 59.69' 380.00' 29.91' 09"00'00" 59.63' \$63"30'00"W

C15 86.22' 380.00' 43.30' 13°00'00" 86.03' \$74°30'00"W

C16 134.39' 350.00' 68.03' 22°00'00" 133.57' \$70°00'00"W

C17 72.61' 320.00' 36.46' 13*00'00" 72.45' S65*30'00"W

C18 50.27' 320.00' 25.18' 09'00'00" 50.21' \$76'30'00"W

C20 | 118.44' | 60.00' | 90.82' | 113°05'53" | 100.12' | N67°47'34"E

C21 | 115.45' | 60.00' | 86.08' | 110°14'38" | 98.44' | N43°52'41"W

C22 45.39' 60.00' 23.84' 43*20'30" 44.31' S59*19'45"W

June 16, 2022

Platting Board

RECEIVED MAR 2 1 2022

KEYSTONE SURVEYING & MAPPING GARY LORUSSO, PROFESSIONAL LAND SURVEYOR ALASKA BUSINESS LICENSE #134615 MAILING ADDRESS: P.O. BOX 2216 * PALMER, ALASKA 99645 PHYSICAL ADDRESS: 3635 N. VISTA CIRCLE * PALMER, ALASKA 99645

I HEREBY CERTIFY THAT I AM A REGISTERED

PROFESSIONAL LAND SURVEYOR IN THE STATE

OF ALASKA AND THAT THIS PLAT REPRESENTS

A SURVEY MADE BY ME OR UNDER MY DIRECT

ON THE PLAT ACTUALLY EXIST AS DESCRIBED,

GARY LoRUSSO .

7330-S

SUPERVISION, AND THAT THE MONUMENTS SHOWN

AND THAT ALL DIMENSIONAL AND OTHER DETAILS

DATE

ARE TRUE AND CORRECT TO THE BEST OF MY

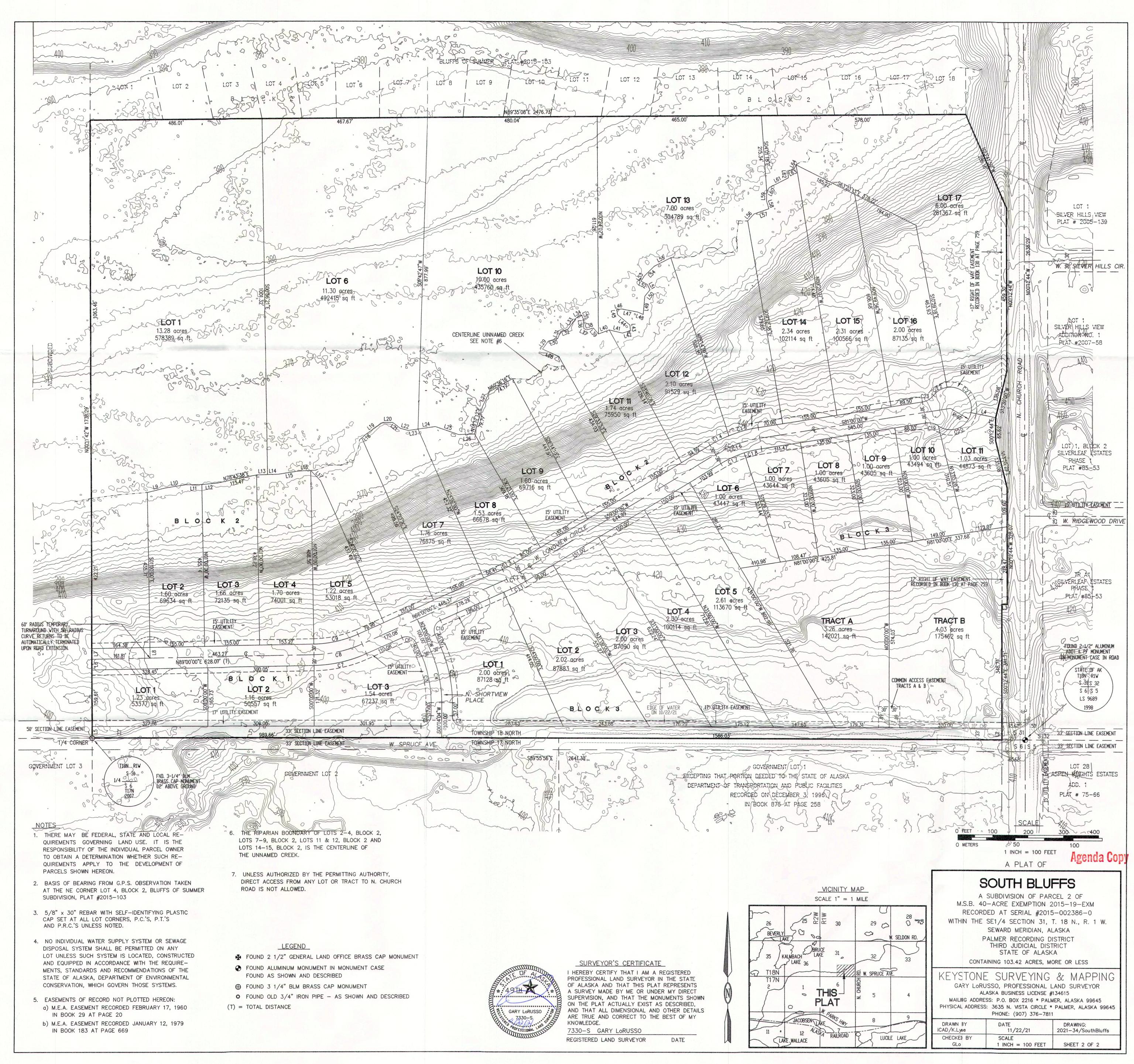
KNOWLEDGE.

7330-S GARY LoRUSSO

REGISTERED LAND SURVEYOR

DRAWN BY DRAWING: iCAD/K.Lyne 11/22/21 2021-34/SouthBluffs CHECKED BY SCALE 1 INCH = 200 FEET GLo SHEET 1 OF 2

PHONE: (907) 376-7811



MAR 2 1 2022 PLATTING

STAFF REVIEW AND RECOMMENDATIONS PUBLIC HEARING JUNE 16, 2022

PRELIMINARY PLAT: RIDDLEBURG STATION

LEGAL DESCRIPTION: SEC 33, T18N, R01W, SEWARD MERIDIAN AK

PETITIONERS: NORTHWEST LAND INVESTMENT

SURVEYOR/ENGINEER: KEYSTONE SURVEYING & MAPPING

ACRES: 10,9 ± PARCELS: 9

REVIEWED BY: MATTHEW GODDARD CASE #: 2022-042

REQUEST: The request is to create nine lots from Parcel 1, MSB Waiver # 98-49 PWm, to be known as RIDDLEBURG STATION, containing 10.94 acres +/-. All lots will take access from the proposed internal street. The property is located south of W. Seldon Road, west of N. Lucille Street, and directly north of W. Spruce Avenue; within the SE ¼ Section 33, Township 18 North, Range 01 West, Seward Meridian, Alaska. In the Tanaina Community Council and in Assembly District #6.

EXHIBITS

Vicinity Map and Aerial Photos	EXHIBIT $A-5$ pgs
Geotechnical Report	EXHIBIT $B - 12 pgs$
Average Daily Traffic (ADT) Calculations	EXHIBIT C-1 pg
Drainage Plan	EXHIBIT D -1 pg

AGENCY COMMENTS

ADF&G	EXHIBIT $E - 1 pg$
Department of Public Works Operations & Maintenance	EXHIBIT $F-1$ pg
MSB Emergency Services	EXHIBIT $G-1$ pg
Utilities	EXHIBIT H – 4 pgs
Public Comment	EXHIBIT I - 2 pgs

<u>DISCUSSION</u>: The proposed subdivision is creating nine lots. All lots will all take access from the proposed N. Jack Minnick Circle. Proposed Lots 5, 7 and 8 will be flag lots. The petitioner will need to provide documentation showing approval for the access road onto W. Spruce Ave, a City of Wasilla owned and maintained road.

<u>Access</u>: Legal and physical access to the proposed lots are required pursuant to MSB 43.20.100 Access Required, MSB 43.20.120 Legal Access and MSB 43.20.140 Physical Access. Access requirements will be met once the interior street is constructed.

<u>Soils Report</u>: A geotechnical report was submitted (**Exhibit B**), pursuant to MSB 43.20.281(A). Robert Walden notes that all lots will need some manipulation (cut/fill) to get useable area after the road is put in for better access. All lots have no water table issues and will achieve the minimum required 10,000 square feet of usable building area and 10,000 square feet of contiguous usable septic area per MSB Title Code. A sieve analysis was provided as all test holes contained soils that were classified as GM and SM. Drainage Plan is shown at **Exhibit D**.

An updated soils report will be needed once all fill and/or regrading has been completed. (See Recommendation #4)

Comments:

ADF&G (Exhibit E) has no objections.

MSB Department of Public Works Operations & Maintenance (Exhibit F) notes that the drainage report will need to show that the development of the road and subdivision lots will not increase the peak flow and runoff volume that leave the site.

An updated drainage report will need to be submitted to Department of Public works prior to the Preconstruction meeting that will satisfy the current requirements of the Subdivision Construction Manual. (See recommendation #5)

MSB Emergency Services (Exhibit G) has no objections

Utilities: (Exhibit H):

Enstar has no comments or recommendations. GCI has no objections. MTA has no comments. MEA did not respond.

Public Comments (Exhibit I):

Ron Rucker, a property owner to the west, has concerns about the increased traffic on a busy road and the sight distances involved at the entry point to W. Spruce Avenue.

Michael Doran, a property owner to the east, has no objections.

At the time of staff report write-up, there were no responses to the Request for Comments from US Army Corps of Engineers; City of Wasilla; Community Council Tanaina; Fire Service Area #130 Central Mat-Su; Road Service Area #28 Gold Trail; MSB Community Development, Assessments, Development Services, Planning, or Pre-Design Division; or MEA.

CONCLUSION: The preliminary plat of Riddleburg Station is consistent with AS 29.40.070 Platting Regulations and MSB 43.15.016 Preliminary Plats. There were no objections from any federal or state agencies, Borough departments, or utilities. There were no objections to the plat from the public in response to the Notice of Public Hearing. Legal and physical access will exist to the proposed lots, consistent with MSB 43.20.100 Access Required, MSB 43.20.120 Legal Access and MSB 43.20.140 Physical Access. Frontage for the subdivision will exist, pursuant to MSB 43.20.320 Frontage. A soils report was submitted, pursuant to MSB 43.20.218(A)(1).

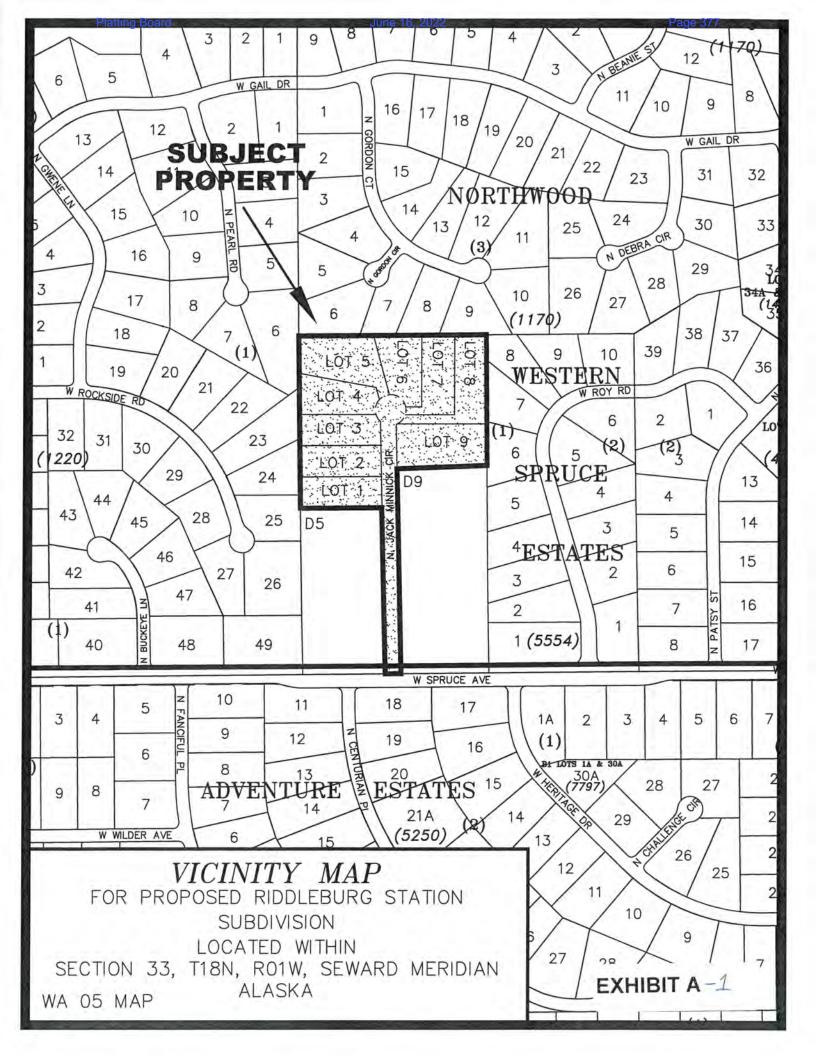
FINDINGS OF FACT

- The plat of Riddleburg Station is consistent with AS 29.40.070 Platting Regulations and MSB 43.15.016 Preliminary Plats.
- 2. A soils report was submitted, pursuant to MSB 43.20.281(A)(1)
- After fill and/or regrading all lots will have legal and physical access consistent with MSB 43.20.100, MSB 43.20.120 and MSB 43.20.140.
- All lots will have the required frontage pursuant to MSB 43.20.320.
- 5. At the time of staff report write-up, there were no responses to the Request for Comments from US Army Corps of Engineers; City of Wasilla; Community Council Tanaina; Fire Service Area #130 Central Mat-Su; Road Service Area #28 Gold Trail; MSB Community Development, Assessments, Development Services, Planning, or Pre-Design Division; or MEA.
- At the time of staff report write-up there were no objections from any federal or state agencies, Borough departments, or utilities.
- At the time of staff report write-up there were no objections; one concern and one non objection from the public in response to the Notice of Public Hearing.

RECOMMENDATIONS OF CONDITIONS OF APPROVAL

Suggested motion: I move to approve the preliminary plat of Riddleburg Station, Section 33, Township 18 North, Range 01 West, Seward Meridian, Alaska, contingent on staff recommendations

- Taxes and special assessments must be paid in full for the year of recording, pursuant to MSB 43.15.053(F) and AS 40.15.020. Pay taxes and special assessments (LIDs), by CERTIFIED FUNDS OR CASH.
- 2. Provide updated Certificate to Plat executed within seven (7) days of recording of plat and submit Beneficiary Affidavit for any holders of a beneficial interest.
- 3. Pay postage and advertising fees.
- 4. Submit an updated soils report to Platting staff once all regrading and/or fill has been completed.
- 5. Construct interior street and cul-de-sac MSB residential street standards:
 - a. Submit cost estimate, arrange a pre-construction meeting with Department of Public Works (DPW), pay inspection fee and obtain a Notice to Proceed from Platting staff. Submit street inspection reports as required by Section F1.4, F1.5 and F1.6 of the Subdivision Construction Manual.
 - b. Submit an updated drainage report to DPW and Platting staff.
 - c. Provide DPW acceptance of the road to Platting staff.
 - d. Platting staff to approve all road names.
- 6. Show all easements of record on final plat.
- 7. Submit recording fees, payable to Department of Natural Resources (DNR).
- 8. Submit plat in full compliance with Title 43.



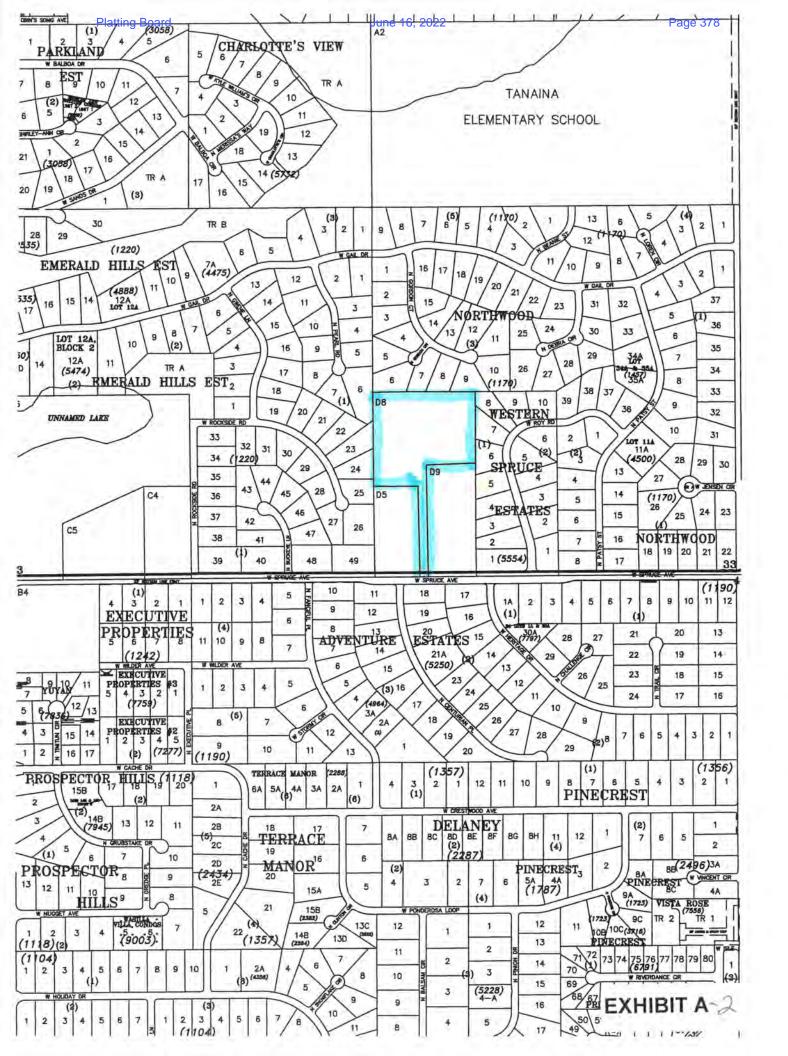
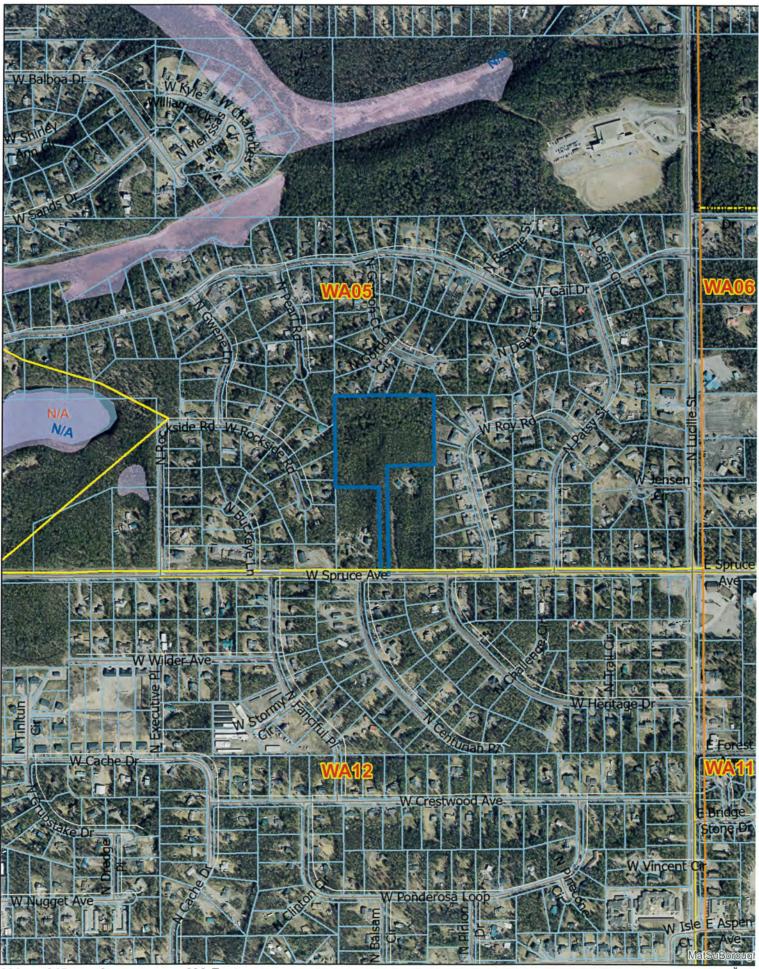


EXHIBIT A-3



690 345 0 690 Feet

WALDEN Construction Consulting and Engineering, LLC

2422 W James T Cir, Wasilla, AK 99654

2/27/2022

Riddleburg soil & drainage letter

Fred Wagner Platting Matanuska-Susitna Borough 350 E. Dahlia Avenue Palmer, Alaska 99645

To Whom this may concern,

There will be 9 lots in Riddleburg station. The road will be built to residential subdivision standards per SCM 2020. In this road section most all soils cuts for the road alignment fall over the 0-10% on the 200-sieve. I advise using cuts from the north lots to build up the road subbase. The north lots 4,5,6,7,8 soils have been noted on the test hole reports to blend soils to achieve the goal of under 10% to be used as the road subbase.

All lots will need some manipulation (cut/fill) to get usable area after the road is put in for better access. All lots have no water table issues and will achieve the 10,000 square feet of usable building and 10,000 square feet of contiguous usable septic area per MSB title 43. The silts are non-plastic per 5 tests by HDL.

Existing drainage flow has been reviewed, two cross culvert's identified to help maintain original drainage, one natural detention area on the adjoining lot, two new detention basins will be constructed in the ditch line to take most runoff from the road construction into those basins. There will be very little runoff to Spruce just the last 75 feet or so.

Sincerely,

Robert L Walden
Robert L Walden

Cell #907-354-6661

robertwcce@gmail.com

Attachments: Test hole map, WCCE TH logs, HDL Gradations, and Drainage map.



Walden Constuction Consulting and Engineering LLC Cell #907-354-6661

TESTHOLE LOG #1

Legal Description: Riddleburg Station Lot 1/2 Date: 1/28/2022

Inspected By: Robert Walden, PE

16	ML
1ft	
2ft	4
3ft	
4ft	
5ft	
6ft	
7ft	SM
8ft	
9ft	
10ft	
11ft	
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map Location on map 61.60154 -149.46492

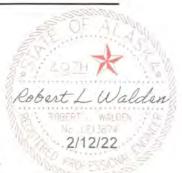
Comments:

Perc test will be required for septic soil # Silty Sand w/Gravel - 23.3% on 200 sieve This onsight material will not be acceptable for MSB subbase material 0-10% on 200.

Total Depth of Testhole 12 ft.

Groundwater/Seeps Encountered? Y N

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y N At _____





AGGREGATE/SOILS TEST REPORT

PROJECT: RIDDLEBURG STATION DATE TAKEN: 1/28/2022 PROJECT NO .: 22-402 DATE TESTED: 2/1/2022 CLIENT: WCCE TESTED BY: NP SAMPLE NO .: 22P62 REVIEWED BY: JAB LOCATION: TH1 DESCRIPTION: L1 & L2

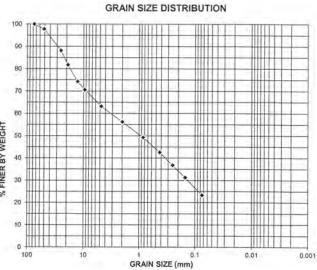
SIEVE ANALYSIS TEST

TM	D422)

Sieve	Diameter	Total %
Size	(mm)	Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	98
1"	25.4	88
3/4"	19.0	82
1/2"	12.7	74
3/8"	9.5	71
#4	4.75	63
#10	2.00	56
#20	0.85	49
#40	0.425	43
#60	0.25	37
#100	0.15	31
#200	0.075	23.3

% Gravel:	3
%Sand:	3
% Fines:	2
D60:	3
D30:	0
D10:	
Cu:	
Cc:	
% .02 mm:	
% Moisture:	6
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	N

36.8 39.8 23.3 .49 1.14 % FINER BY WEIGHT 40 6.4 20 100 NP



HYDROMETER TEST

(ASTM D422)

	THE THE BILL		001
Elapsed	Diameter	Total %	Apparen
Time (min)	(mm)	Passing	% Absor
0			
0.5			(ASTM
1			Bull
2			SSE
5			Apparen
8			% Absor
15			
30			(ASTM D
60			Dry De
250			Dry De
1440			M
		1	M
			Car lana

(ASTM C127) Bulk SpG: SSD SpG:

nt SpG: rption:

1 C128) k SpG: D SpG: t SpG: rption:

D1557) en (U): en (C): 1% (U): 1% (C):

SpG (assumed): M-D Test Method:

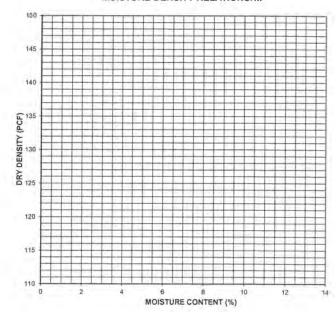
CLASSIFICATION: Silty Sand w/Gravel

USC: SM

Remarks:

FROST CLASS:

MOISTURE-DENSITY RELATIONSHIP



JOHN A. BUZDOR, P.E. 2/11/2022

Walden Constuction Consulting and Engineering LLC Cell #907-354-6661

TESTHOLE LOG #2

Legal Description: Riddleburg Station Lot 3/4 Date: 1/28/2022

Inspected By: Robert Walden, PE

Ground level 1ft ML 2ft 3ft 4ft 5ft 6ft 7ft GP-GM 8ft 9ft 10ft 11ft 12ft 13ft 14ft 15ft 16ft 17ft 18ft 19ft

Testhole Location Map
Location on map
61.60228
-149.46469

Comments:

Septic design 150 soils

Poorly Graded Gravel w/Silt & Sand

5.3% on 200 sieve

This onsight material will be acceptable

for MSB subbase material 0-10% on 200.

Total Depth of Testhole 15 ft.

20ft

Groundwater/Seeps Encountered? Y (N) At _____

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y N At _____ft.





AGGREGATE/SOILS TEST REPORT

PROJECT: RIDDLEBURG STATION DATE TAKEN: 1/28/2022 PROJECT NO .: 22-402 DATE TESTED: 2/1/2022 CLIENT: WCCE **TESTED BY:** NP SAMPLE NO .: 22P63 REVIEWED BY: JAB LOCATION: TH2 DESCRIPTION: L3 & L4

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve	Diameter	Total %
Size	(mm)	Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	96
1"	25.4	84
3/4"	19.0	77
1/2"	12.7	67
3/8"	9.5	61
#4	4.75	48
#10	2.00	36
#20	0.85	27
#40	0.425	17
#60	0.25	11
#100	0.15	8
#200	0.075	5.3

HYDROMETER TEST

(ASTM D422)

Diameter

(mm)

Total %

Passing

Elapsed

Time (min)

0 0.5

2

5

8

15 30

60

250

1440

% Gravel:	52.0
%Sand:	42.7
% Fines:	5.3
D60:	9.18
D30:	1.22
D10:	0.21
Cu:	43.9
Cc:	0.8
% .02 mm:	
% Moisture:	3.3
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	

Plastic Index:

(ASTM C127)

Bulk SpG: SSD SpG:

Apparent SpG: % Absorption:

(ASTM C128) Bulk SpG: SSD SpG: Apparent SpG: % Absorption: (ASTM D1557) Dry Den (U): Dry Den (C): M% (U): M% (C):

SpG (assumed): M-D Test Method:

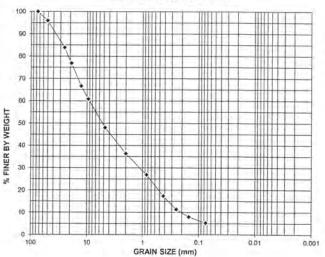
Poorly Graded Gravel w/Silt & Sand CLASSIFICATION:

USC: GP-GM

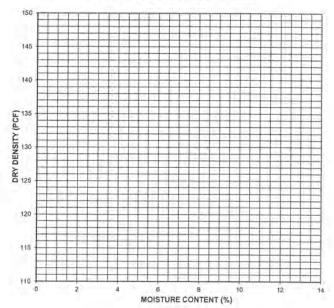
Remarks:

FROST CLASS:

GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



JOHN A. BUZDOR, P.E. 2/10/2022

Walden Constuction Consulting and Engineering LLC Cell #907-354-6661

TESTHOLE LOG #3

Legal Description: Riddleburg Station Lot 5/6 Date: 1/28/2022 Inspected By: Robert Walden, PE

Ground	ML
1ft	IVIL
2ft	
3ft	- 014/
4ft	SW
5ft	
6ft	
7ft	
8ft	
9ft	
10ft	SP-SM
11ft	OF-OW
12ft	
13ft	
14ft	
15ft	
16ft	
17ft	
18ft	
19ft	
20ft	

Testhole Location Map Location on map 61.60265 -149.46409

Comments:

Perc test will be required for septic soil # Poorly Graded Sand w/Silt & Gravel 10.2% on 200 sieve Remove ML then top 1-6 feet clean fill This onsight material will need blending for MSB subbase material 0-10% on 200.

Total Depth of Testhole 15 ft.

Groundwater/Seeps Encountered? Y (N)

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y N At_





AGGREGATE/SOILS TEST REPORT

RIDDLEBURG STATION PROJECT: DATE TAKEN: 1/28/2022 PROJECT NO .: 22-402 DATE TESTED: 2/1/2022 CLIENT: WCCE TESTED BY: NP SAMPLE NO .: 22P64 REVIEWED BY: JAB LOCATION: TH3 DESCRIPTION: L5 & L6

SIEVE ANALYSIS TEST

	(ASTM D4ZZ	
Sieve	Diameter	Total %
Size	(mm)	Passing
6"	152,4	
4"	100.0	
3"	76.2	100
2"	50.8	97
1"	25.4	87
3/4"	19.0	79
1/2"	12.7	71
3/8"	9.5	66
#4	4.75	56
#10	2.00	45
#20	0.85	34
#40	0.425	25

% Gravel:	43.9
%Sand:	45.9
% Fines:	10.2
D60:	6.58
D30:	0.66
D10:	
Cu:	
Cc:	
% .02 mm:	
% Moisture:	3.7
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	NP

100 10 GRAIN SIZE (mm)

HYDROMETER TEST

0.25

0.15

0.075

19

14

10.2

#60

#100

#200

(ASTM D422)

App	Total %	Diameter	Elapsed
% A	Passing	(mm)	Time (min)
			0
(A		0.000	0.5
			1
			2
App		- 4	5
% A			8
			15
(AS			30
D			60
Di			250
			1440

(ASTM C127) Bulk SpG: SSD SpG:

Apparent SpG: % Absorption:

(ASTM C128)
Bulk SpG:
SSD SpG:
Apparent SpG:
% Absorption:

(ASTM D1557)
Dry Den (U):

Dry Den (U): M% (U): M% (C):

SpG (assumed): M-D Test Method:

CLASSIFICATION: Poorly Graded Sand w/Silt & Gravel

USC: SP-SM

FROST CLASS:

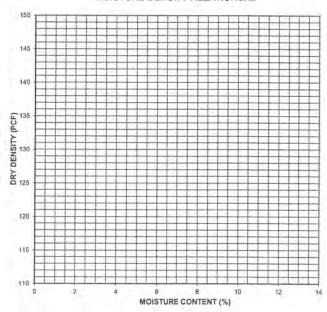
Remarks:

MOISTURE-DENSITY RELATIONSHIP

0.01

0.001

GRAIN SIZE DISTRIBUTION



JOHN A. BUZDOR, P.E. 2/10/2022

Walden Constuction Consulting and Engineering LLC Cell #907-354-6661

TESTHOLE LOG #4

ft	ML	Testhole Location Map
2ft		Location on map
3ft		61.60258
lft .		-149.46241
5ft		
6ft		
7ft	GW-GM	
Bft		
9ft		
10ft		
11ft		
		Comments:
12ft		Comments: Septic design 150 soils
12ft 13ft		
12ft 13ft 14ft		Septic design 150 soils
11ft 12ft 13ft 14ft 15ft		Septic design 150 soils Well Graded Gravel w/Silt & Sand
12ft 13ft 14ft 15ft		Septic design 150 soils Well Graded Gravel w/Silt & Sand 6.9% on 200 sieve
12ft 13ft 14ft 15ft		Septic design 150 soils Well Graded Gravel w/Silt & Sand 6.9% on 200 sieve This onsight material will be acceptable
12ft 13ft 14ft 15ft 16ft		Septic design 150 soils Well Graded Gravel w/Silt & Sand 6.9% on 200 sieve This onsight material will be acceptable
12ft 13ft 14ft 15ft 16ft 17ft		Septic design 150 soils Well Graded Gravel w/Silt & Sand 6.9% on 200 sieve This onsight material will be acceptable
12ft 13ft 14ft 15ft 16ft 17ft 18ft 19ft 20ft	n of Testhole 13	Septic design 150 soils Well Graded Gravel w/Silt & Sand 6.9% on 200 sieve This onsight material will be acceptable for MSB subbase material 0-10% on 200.



AGGREGATE/SOILS TEST REPORT

RIDDLEBURG STATION PROJECT: DATE TAKEN: 1/28/2022 PROJECT NO .: 22-402 DATE TESTED: 2/1/2022 CLIENT: WCCE TESTED BY: NP SAMPLE NO .: 22P65 REVIEWED BY: JAB LOCATION: TH4 DESCRIPTION: L7 & L8

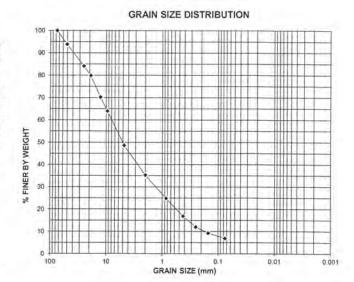
SIEVE ANALYSIS TEST

1	(ASTM D422))
ì	Diameter	Ī

Sieve	Diameter	Total %
Size	(mm)	Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	94
1"	25.4	84
3/4"	19.0	80
1/2"	12.7	70
3/8"	9.5	64
#4	4.75	49
#10	2.00	35
#20	0.85	25
#40	0.425	17
#60	0.25	12
#100	0.15	9
#200	0.075	6.9

% Gravel:	51.4
%Sand:	41.6
% Fines:	6.9
D60:	8.28
D30:	1.42
D10:	0.18
Cu:	47.0
Cc:	1.4
% .02 mm:	
% Moisture:	3.8
Fine Modulus:	
(ASTM D4218)	

ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	1



HYDROMETER TEST

(ASTM D422)

Elapsed	Diameter	Total %
Time (min)	(mm)	Passing
0		
0.5		
1		
2	1	
5		
8		
15		
30		
60		
250		
1440		

(ASTM C127)
Bulk SpG:
SSD SpG:
pparent SpG:

% Absorption:

(ASTM C128) Bulk SpG: SSD SpG: Apparent SpG:

% Absorption: (ASTM D1557) Dry Den (U): Dry Den (C): M% (U): M% (C): SpG (assumed):

M-D Test Method:

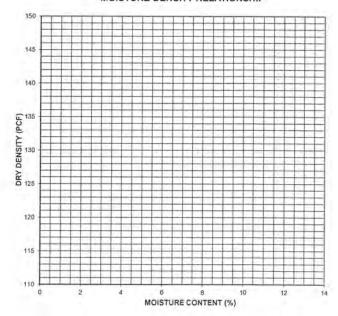
CLASSIFICATION: Well Graded Gravel w/Silt & Sand

USC: GW-GM

Remarks:

FROST CLASS:

MOISTURE-DENSITY RELATIONSHIP



JOHN A. BUZDOR, P.E. 2/10/2022

Walden Constuction Consulting and Engineering LLC Cell #907-354-6661

TESTHOLE LOG #5

Legal Description: Riddleburg Station Lot 9/10 Date: 1/28/2022

Inspected By: Robert Walden, PE

Ground level ML 1ft 2ft 3ft 4ft 5ft 6ft 7ft SM 8ft 9ft 10ft 11ft 12ft 13ft 14ft 15ft 16ft 17ft 18ft

Testhole Location Map
Location on map
61.60172
-149.46326

Comments:

Perc test will be required for septic soil #

Silty Sand w/Gravel

14.3% on 200 sieve

This onsight material will need blending

for MSB subbase material 0-10% on 200.

Total Depth of Testhole 14 ft.

19ft 20ft

Groundwater/Seeps Encountered? Y N

At _____ ft.

Impermeable Soil (Silt/Clay/Bedrock) Encountered? Y (N) At _____ft.





AGGREGATE/SOILS TEST REPORT

PROJECT: RIDDLEBURG STATION DATE TAKEN: 1/28/2022 PROJECT NO .: 22-402 DATE TESTED: 2/1/2022 CLIENT: WCCE TESTED BY: NP SAMPLE NO .: 22P66 REVIEWED BY: JAB LOCATION: TH5 DESCRIPTION: L9 & L10

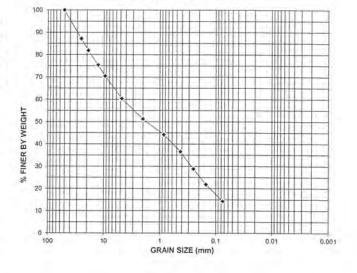
SIEVE ANALYSIS TEST

(ASTM D422)

Sieve	Diameter	Total %
Size	(mm)	Passing
6"	152.4	
4"	100.0	
3"	76.2	
2"	50.8	100
1"	25.4	87
3/4"	19.0	82
1/2"	12.7	75
3/8"	9.5	70
#4	4.75	60
#10	2.00	51
#20	0.85	44
#40	0.425	37
#60	0.25	29
#100	0.15	22
#200	0.075	14.3

% Gravel:	39.7
%Sand:	46.0
% Fines:	14.3
D60:	4.65
D30:	0.28
D10:	
Cu:	
Cc:	
% .02 mm:	
% Moisture:	8.8
Fine Modulus:	
(ASTM D4318)	
Liquid Limits	

ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	N



GRAIN SIZE DISTRIBUTION

HYDROMETER TEST

(ASTM D422		SSI
Elapsed	Diameter	Total %	Apparen
Time (min)	(mm)	Passing	% Abso
0			
0.5			(ASTM
1			Bul
2			SSI
5			Apparen
8			% Abso
15			
30			(ASTM I
60			Dry D
250			Dry D
1440			N
			N

(ASTM C127) Bulk SpG: SSD SpG:

nt SpG: orption:

M C128) lk SpG: D SpG: nt SpG: orption:

D1557) en (U); en (C): M% (U): M% (C):

SpG (assumed): M-D Test Method:

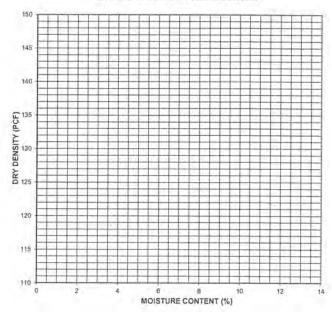
CLASSIFICATION: Silty Sand w/Gravel

USC: SM

FROST CLASS:

Remarks:

MOISTURE-DENSITY RELATIONSHIP



JOHN A. BUZDOR, P.E. 2/10/2022

CERTIFICATE OF OWNERSHIP & DECICATION VE CORRECT OF MODELNESS OF RE-MODIFIES OF THE PROPERTY DESCRIBED IN THIS PLAN AND THAT HE PROPERTY DESCRIBED AS THE PLAN AND THAT HE PADOR AND DESCRIBED AND TO THE WITHOUT DESCRIPTION OF THE CONSIST AND THAT HE PADOR OF THE CONSIST AND THE PADOR OF THE DATE SACAVATE INC. NAME/TITLE MORTHWEST LAND BINESTMENTS, LLD MISSILA, MASKA \$9654 NOTARY ACKNOWLEDOVENT NOTARY FOR THE STATE OF ALASKA MY COMMISSION EXPRES

PLAINING & LAND USE DIRECTOR'S CERTIFICATE I CEPTETY TEAT THIS SUBSTIMBON PLAN HAS BEEN FOUND TO COMPLY WITH THE LAND SUBMINISCH REQUIRATIONS OF THE MATERIAL SUBSTIMBON TO BUT THE PLAN HAS BEEN APPROVED BY THE PLANTING MUTHORITY BY PLANT PERSONALITIES IN THE PLANTING PLANTING PROPERTY BY PLANTING PLANTING

PLANNING & LAND USE DIRECTOR PLATENG CLIBIX

CERTIFICATION OF PAYMENT OF TAXES

I HERBY CERTY THAT ALL CURTEST TAKES AND SPECIAL PROCESSAIDHS, THROUGH 20.

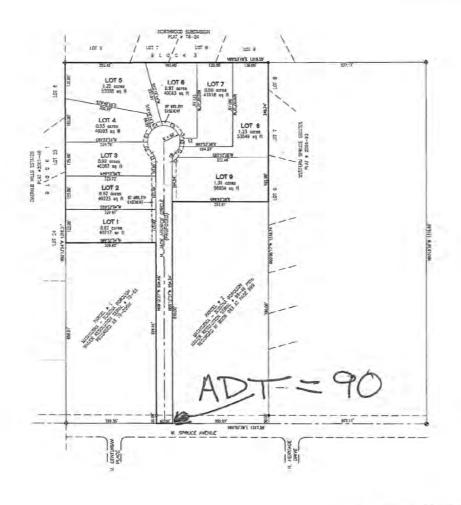
ACAINST THE PROPORTY, NICLICED IN THE SUPERVISOR OR WESLINGWISON, HERBON HAVE BEEN PAID.

BOROUGH TAX COLLECTION OFFICIAL

LIME YASKE DE | DES | HOUSE 12 4609 RESSTANT

CURVE TABLE | Dept. | Sect. | Sect. | Dept. | Dept

TO DE DE DE NE CENT FOR BLIDE





SURVEYOR'S CERTIFICATE

HARMET CREET THAT I AM A RESPONDE

FROMESSORIA LAND SURVEYOR IN the STATE

OF ALMSA AND THAT THOS PLAT REPRESURS

A SERVEY MARKET FOR ECT AND ARTHUR

SURVEY MARKET FOR ECT AND ARTHUR

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SOMMESSOR.

7330-S GARY LoRUSSO PERSONALD LAND SUPPEYOR

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	100	THIS PLAT	Thomas a	34 2 street he	San
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NOTES

- INVESTIGATION OF THE MODIFIES OF THE MEDITAL STATE AND LOCAL RE-CHEMICAL SOUTHWAY LAND USE. IT IS BE RESPONSELLTY OF THE MOTIVAL AMERICA CHIEF TO DETAIL A DETERMINATION NECTER SUCH VE-DUNEMENTS APPLY TO THE DEVELOPMENT OF PARICELS SHOWN HEREON.
- I. BASIS OF BEARING FROM G.A.S. CRISENVIATION TAXER AT THE SURVEY CONTROL POINT SHOWN HEREON.
- \$ 5/4" # 30" REBAR WITH SELF-IDDNIEFYNG PLASTIC DAP SET AT ALL LOT COMBERS, P.C.'S, P.E.'S AND P.E.C.'S UNLESS HOTED.
- NO HONOUAL MATER SUPPLY SYSTEM OR SOUNCE SUPPOSAL SYSTEM SHALL BE PERMITTED ON MAY LOT UMBESS SUCH SYSTEM IS LOCATED, CONSTRUCTED AND EQUIPPED IN ACCORDANCE WITH THE REQUIRE-MENTS, STANDARDS AND RECOMMENDATIONS OF THE STATE OF ALASKA, DEPARTMENT OF ENVIRONMENTAL CONSERVATION, WHICH GOVERN THOSE SYSTEMS.
- 5. EASTWENTS OF RECORD NOT PLOTTED HEREONs) N.E.A. EASENENT RECORDED FERRINARY 17, 1980-IM BOOK 29 AT PAGE 137.
- b) WEA EASEMENT RECORDED AUGUST 7, 1986 IN BOOK 965 AT PAGE 315.

LEGEND

- TOUNG CENERAL LAND OFFICE BRASS CAP MONAMENT AS SHOWN AND DESCRIBED
- AS SHOWN AND DESCRIPED
- O FOUND 3/4" FROM PIPE



A PLAT OF

RIDDLEBURG STATION

A SJEDYMSON OF PARCEL # MATURUSKA-SISTINA BOROUSH WAYNER RESOUTION DRAL #08-48 PM- RECORDED WE BOOK 963 AT PAGE 69 WITHIN THE SWI/A SEL/A SECTION 33, T. 18 N., R. 1 N. SEWARD MERIDIAN, ALASKA

PALMER RECORDING DISTRICT THIRD JUDICIAL DISTRICT STATE OF ALASKA CONTAINING TO S ACKES, MORE OF LESS

KEYSTONE SURVEYING & MAPPING

CAN' LORISSO, PROFESSIONAL LAND SURVEYOR
ALSON RESIRES DECIRE JULIES
VALUE ADDRESS FOR RIM STR. FRANKE, ALSON MAKE
PROSCAL ADDRESS, SOS IN, WETA GORCE * PALLOR, ALSON SIGN.

PHONE: (NOT) 374-7811					
CHOUTHAN SEATER EX.	DATE 3/18/22	DRAIDIZ 2021-39/Middeburg			
OKEDED SY	SCALE 1 84CH = 100 FETT	BATT FOF F			

CERTIFICATE OF DWNERSHIP & DEDICATION

SECTION BORDLY AND PARKET BY DEPTH OF STRONGERY SHOWN AND DESCRIBED IN THIS PLAN AND THAT WE ADOPT THIS PLAN OF SHREYNOW BY OUR PROCE CONSENT, DEDICATE ALL RIGHTS-OF-WAY TO THE MATANUSKA-SUSTINA BOROLDM AND GRANT ALL EASEMENTS TO THE USE SHOWN.

NAME DATE 227800A PALMER, ALASKA 99645-6166 NOTARY ACKNOWLEDGMENT

MOTARY FOR THE STATE OF ALASKA MY COMMISSION EXPIRES ___

PLANNING & LAND USE DIRECTOR'S CERTIFICATE I CERTIFY THAT THIS SUBDIVISION PLAN HAS BEEN FOUND TO COMPLY WITH THE LAND SUBDIVISION REGULATIONS OF THE MATANUSKA-SUSTINA SORGULOI, AND THAT THE PLAT HAS BEEN APPROVED BY THE PLATTING AUTHORITY BY PLAT RESOLUTION NO.

DATED 20 AND THAT THIS PLAT HAS BEEN APPROVED FOR RECORDING IN THE PALMER REDORDING DISTRICT, THERD ADDICAL DISTRICT, STATE OF ALASKA, IN WHICH THE PLAT IS LOCATED.

DATE PLANNING & LAND USE DIRECTOR ATTEST PLATTING CLERK

CERTIFICATION OF PAYMENT OF TAXES

HEREBY CERTIFY THAT ALL CURRENT TAKES AND SPECIAL ASSESSMENTS, THROUGH 70.
ASSESSMENTS, THROUGH 70.
ACASIST THE PROPERTY, INCLIDED IN THE SUBDIVISION OR RESUBDIVISION, HEREON HAVE BEEN PAID.

ISSIDUCH TAX COLLECTION OFFICIAL

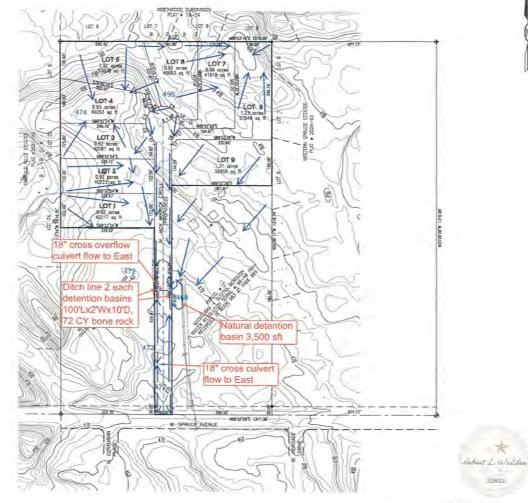
LINE TABLE

CNE	LENGTH	SEARING
11	25.26	54K13'09'V
12	48.16"	NEW 37 25 1
13	24.25	\$5516 467

CURVE TABLE

CURKE	LENGTH	RADUS	THESAM	DELIN	Dioro.	CHORD SEARING
C1 -	57.87	50.00	15.87	4379730"	36.95	K0152'57'W
CZ	44.09	60.00	23.09	42'06'12"	43.11*	52729'46'E
[2]	45.00	80.00"	23.53	450000	43.78	5300170W
64	45.65	60.00"	23.63	45'00'00"	4338	563'03'20'W
52	73.57	60.00	-41.8C	5F45'34"	68.68	165733°23°W
C5	45.03"	60.00	23.55	45.00,00	43.98	H04*10*06*W
£7	27.42	60.00	13.76	25'48'15"	25.79	85074017
CS.	57.82	50.00	19.67	45729/30"	36.93	521127"54"W

Drainage Plan 2-27-2022





NOTES

- 1. THER MAY BE FEDERAL STATE AND LOCAL RE-OURSEMENTS COVERING LAND USE IT IS THE RESPONSELITY OF THE MOVIDUAL PARCEL GIMER TO OBTAIN A DETERMINATION INVESTIGE SUCH RE-OUREMENTS APPLY TO THE DEVELOPMENT OF PARCELS SHOWN HEREON.
- 2. BASIS OF BEARING FROM G.P.S. DESERVATION TAKEN AT THE SURVEY CONTROL POINT SHOWN HEREON.
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- 5. EASEMENTS OF RECORD NOT PLOTTED HEREON.

LEGEND

- TOUND GENERAL LAND OFFICE BRASS CAF MONUMENT AS SHOWN AND DESCRIBED
- AS SHOWN AND DESCRIBED
- D TOUNG 3/4" BON PIPE . FOLING S/M" REBAR



A PLAT OF

RIDDLEBURG STATION

A SUBDIVISION OF PARCEL #1
MATANUSKA-SUSTINA BOROUGH WAIVER RESOLUTION SERIAL #98-49 PWM RECORDED IN BOOK 963 AT PAGE 999 MITHIN THE SET /4 SWI /4 SECTION 33, T. 18 N. R. 1 W.

SEWARD MERIDIAN, ALASKA PALMER RECORDING DISTRICT THIRD JUDICIAL DISTRICT STATE OF ALASKA CONTAINING 10.9 ACRES, MORE OR LESS

KEYSTONE SURVEYING & MAPPING

CARY LORUSSO, PROFESSIONAL LAND SURVEYOR
ALASAA BUSNESS LICTOR (1748)
MALIEK ADMINESS LICTOR (1748)
MALIEK ADMINESS P.D. 602 2218 - PALIERY, ALASAA 98645
MINISTER, ALONESS. 3839 N. 4933 CRICE * PALIERY, ALASAA 98645
MINISTER, ALONESS. 3839 N. 4933 CRICE * PALIERY, ALASAA 98645
MINISTER, ALONESS. 3839 N. 4933 CRICE * PALIERY, ALASAA 98645

CRAMA BY	DATE	DRAMNG:	
EAD/Klyne	12/28/21	2021-39/Hodeburg	
CHECKED BY	SCALE 1 MOH = 100 FEET	54E7 1 0F 1	



SURVEYOR'S CERTIFICATE JOUNTAINT S JOHNSTON AN A PROSTERO PROFESSIONAL LAND SEMENTS IN THE STATE PROFESSIONAL LAND SEMENTS IN THE STATE PROFESSIONAL LAND SEMENTS IN THE STATE AS JURYEY MADE BY ME OF DURCH MY OPERT SUPERVISOR, AND THAT THE MINIMANIN'S SHOWN IN THE PAST ACTUALLY BEST AS DESCRIBED, AND THAT ALL DIMENSIONAL AND OTHER DETAILS, NOWLEDGE AND THAT ALL DIMENSIONAL AND OTHER DETAILS.

7330-S. GARY LORUSSO REGISTERED LAND SURVEYOR

DATE

2/20/22

Matthew Goddard

From: Percy, Colton T (DFG) <colton.percy@alaska.gov>

Sent: Monday, April 11, 2022 8:52 AM

To: Matthew Goddard

Subject: RE: RFC Riddleburg Station (MG)

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Hi Matthew,

Alaska Department of Fish and Game has reviewed the proposed platting actions and has no objections. The proposed actions will not affect public access to public lands and waters. Thank you for the opportunity to review and comment.

Colton T. Percy

Habitat Biologist Access Defense Program Alaska Department of Fish and Game Division of Wildlife Conservation 333 Raspberry Rd Anchorage, AK 99518 907-267-2118

From: Matthew Goddard < Matthew. Goddard@matsugov.us>

Sent: Tuesday, April 5, 2022 12:09 PM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; Dubour, Adam J (DFG) <adam.dubour@alaska.gov>; regpagemaster@usace.army.mil; Planning <Planning@ci.wasilla.ak.us>; publicworks@ci.wasilla.ak.us; tanainacommunity@gmail.com; davemtp@mtaonline.net; mschoming@crweng.com; Fire Code <Fire.Code@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; Elaine Flagg <Elaine.Flagg@matsugov.us>; Debbie Bakic <Debbie.Bakic@matsugov.us>; Terry Dolan <Terry.Dolan@matsugov.us>; Jamie Taylor <jamie.taylor@matsugov.us>; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; Jacque Malette

<jacque.malette@matsugov.us>; MSB Farmers <MSB.Farmers@matsugov.us>; Permit Center

<Permit.Center@matsugov.us>; Mark Whisenhunt <Mark.Whisenhunt@matsugov.us>; Theresa Taranto

<Theresa.Taranto@matsugov.us>; Andy Dean <Andy.Dean@matsugov.us>; Planning <MSB.Planning@matsugov.us>;

Alex Strawn <Alex.Strawn@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>;

pamela.j.melchert@usps.gov; John Aschenbrenner < John. Aschenbrenner@matsugov.us>; Jesse Sumner

andrew.fraiser@enstarnaturalgas.com; James Christopher < James.Christopher@enstarnaturalgas.com>;

ospdesign@gci.com; msb.hpc@gmail.com

Subject: RFC Riddleburg Station (MG)

CAUTION: This email originated from outside the State of Alaska mail system. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello,

The following link is a Request for Comments to create nine lots from Parcel # 1, MSB Waiver 98-49 PWm, Tax ID # 18N01W33D008.

Comments are due by April 26, 2022. Please let me know if you have any questions.

https://matsugovus-

my.sharepoint.com/:f:/g/personal/matthew_goddard_matsugov_us/EsWFnjB03r9Hg6oAOQWqJ4oBGycEyhnNxh_jOXTI eWLq-A?e=wNFsrT

Matthew Goddard

From: Jamie Taylor

Sent: Friday, April 22, 2022 5:46 PM

To: Matthew Goddard Cc: Elaine Flagg

Subject: RE: RFC Riddleburg Station (MG)

Drainage: The drainage report will need to show that development of the road and subdivision lots will not increase the peak flow and runoff volume that leaves the site. The ditch line detention basins are not allowable with the indicated dimensions. Infiltration trenches should not be deeper than they are wide, or they may be considered class V injection wells. The drainage report will also need to address the regrading of the lots to ensure runoff storage is not compromised.

Soils: If the native soils are used for road embankment, ensure the percentage of fines <10% is consistent throughout the entirety of the road.

Jamie Taylor, PE (she/her)
Civil Engineer
Matanuska-Susitna Borough
Department of Public Works

t: 907-861-7765 c: 907-355-9810

jamie.taylor@matsugov.us http://www.matsugov.us/

From: Matthew Goddard < Matthew. Goddard @matsugov.us>

Sent: Tuesday, April 5, 2022 12:09 PM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; adam.dubour@alaska.gov; regpagemaster@usace.army.mil;

Planning <Planning@ci.wasilla.ak.us>; publicworks@ci.wasilla.ak.us; tanainacommunity@gmail.com;

davemtp@mtaonline.net; mschoming@crweng.com; Fire Code <Fire.Code@matsugov.us>; Jill Irsik

<Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; Elaine Flagg <Elaine.Flagg@matsugov.us>; Debbie

Bakic < Debbie.Bakic@matsugov.us>; Terry Dolan < Terry.Dolan@matsugov.us>; Jamie Taylor

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<jessesumnerdistrict6@gmail.com>; mearow@matanuska.com; row@enstarnaturalgas.com; row@mtasolutions.com;

andrew.fraiser@enstarnaturalgas.com; James Christopher < James.Christopher@enstarnaturalgas.com >;

ospdesign@gci.com; msb.hpc@gmail.com

Subject: RFC Riddleburg Station (MG)

Hello,

The following link is a Request for Comments to create nine lots from Parcel # 1, MSB Waiver 98-49 PWm, Tax ID # 18N01W33D008.

Matthew Goddard

From: Fire Code

Sent: Tuesday, April 12, 2022 12:55 PM

To: Matthew Goddard

Subject: RE: RFC Riddleburg Station (MG)

Matthew,

Fire and Life Safety has no issue with this.



Donald Cuthbert
Fire Marshal
Fire & Life Safety Division
Central Mat-Su Fire Department
(907) 861-8030
FireCode@matsugov.us

From: Matthew Goddard < Matthew. Goddard @matsugov.us>

Sent: Tuesday, April 5, 2022 12:09 PM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; adam.dubour@alaska.gov; regpagemaster@usace.army.mil;

Planning <Planning@ci.wasilla.ak.us>; publicworks@ci.wasilla.ak.us; tanainacommunity@gmail.com; davemtp@mtaonline.net; mschoming@crweng.com; Fire Code <Fire.Code@matsugov.us>; Jill Irsik

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https://matsugovus-

my.sharepoint.com/:f:/g/personal/matthew_goddard_matsugov_us/EsWFnjB03r9Hg6oA0QWqJ4oBGycEyhnNxh_jOXTI eWLq-A?e=wNFsrT

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

Thank you, Matthew Goddard Platting Technician



ENSTAR Natural Gas Company
A DIVISION OF SEMCO ENERGY
Engineering Department, Right of Way Section
401 E. International Airport Road
P. O. Box 190288
Anchorage, Alaska 99519-0288
(907) 277-5551

FAX (907) 334-7798

April 5, 2022

Matanuska-Susitna Borough, Platting Division 350 East Dahlia Avenue Palmer, AK 99645-6488

To whom it may concern:

ENSTAR Natural Gas Company has reviewed the following preliminary plat and has no comments or recommendations.

· Riddleburg Station

If you have any questions, please feel free to contact me at 334-7944 or by email at james.christopher@enstarnaturalgas.com.

Sincerely,

James Christopher

Right of Way & Compliance Technician

ENSTAR Natural Gas Company

James Christopher

Matthew Goddard

From: OSP Design Group <ospdesign@gci.com>

Sent: Monday, April 11, 2022 1:04 PM

To: Matthew Goddard Cc: OSP Design Group

Subject: RE: RFC Riddleburg Station (MG)
Attachments: RFC Packet.pdf; Agenda Plat.pdf

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Matthew,

In review GCI has no comments or objections to the plat, attached is the signed plat for your records.

Thanks,

MIREYA ARMESTO

GCI | Technician II, GIS Mapping m: 907-744-5166 | w: www.gci.com

From: Matthew Goddard < Matthew. Goddard @matsugov.us>

Sent: Tuesday, April 5, 2022 12:09 PM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; adam.dubour@alaska.gov; regpagemaster@usace.army.mil;

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Subject: RFC Riddleburg Station (MG)

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https://matsugovus-

my.sharepoint.com/:f:/g/personal/matthew goddard matsugov us/EsWFnjB03r9Hg6oAOQWqJ4oBGycEyhnNxh jOXTI eWLq-A?e=wNFsrT

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

CERTIFICATE OF OWNERSHIP & DEDICATION

ME CERETY DATA WE ARE THE OMNERS OF THE PROPERTY SHOWN AND DESCRIBED IN THIS PLAN AND DHAT ME CENT. DESCRIPTION OF THE PROPERTY OF THE USE SHOWN

SIGNATURE

DATE

NAME/TITLE HORTHWEST LAND INVESTMENTS, ELC 6000 357 E PARKS HIDWAY

NOTARY ACKNOWLEDGMENT.
SUBSCRIBED AND SWORN TO BEFORE ME THIS.

NOTARY FOR THE STATE OF ALASKA

MY COMMISSION EXPIRES

PLANNING & LAND USE DIRECTOR'S CERTIFICATE I DEFINY THAT THIS SUBDIVISION FLAN HAS BEEN FOUND TO COME! WITH THE LAND SUBDIVISION REQULATIONS OF THE WATANUSKA-SUSTINA BOROUGH, AND THAT THE FLAT HAS BEEN APPROVED BY THE PLATTING AUTHORITY BY PLAT RESOLUTION NO.

DATE

PLANNING & LAND USE DIRECTOR

ATTEST.

PLATTING CLERK

CERTIFICATION OF PAYMENT OF TAXES

I HEREBY CENTEY THAT ALL CUPRENT TAXES AND SPECIAL ASSESSMENTS, THROUGH NO. ASSESSMENTS, THE PROPERTY, WOLLDED IN THE SUBDIVISION OR RESUBDIVISION. HEREON HAVE BEEN PAID.

DATE

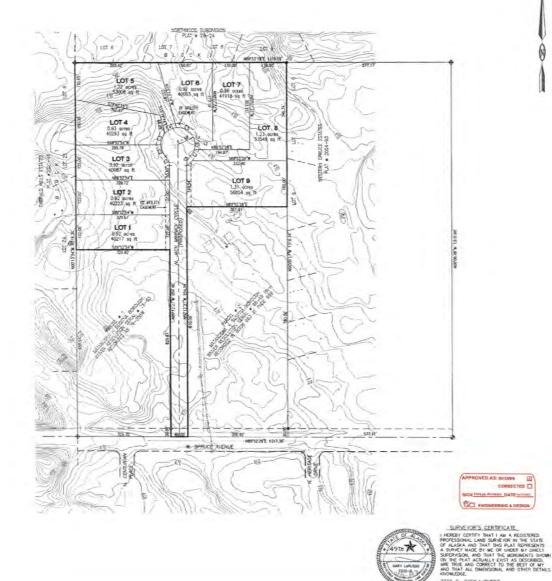
BOROUGH TAX COLLECTION OFFICIAL

LINE TABLE

UNE	LONGS	SEARING
43	26.26	\$4813'09'W
12	48.08	M8752787
13	2426	35514'44'E

CURVE TABLE

CURVE	LENGTH	RADIUS	THEODE	DELTA	0.000	CHOPS BEARING
- 61	37.82	50.00	19.67	47.75 30		N2752'57'W
						2777461
63	45.03"	40.00	23.63"	4.5'00'90"	43.98	\$2075520 W
				4700'00"		\$1.57.570°W
C5	73.07	60.00	41.84	69'46'34"	68,64	NSU 3575 W
-06	45.01	400,000	23.63	4700'00"	43.95	HOT 10'05 W
E):				25°4E 15	25.79	MOTH SHIT
-83	37.82	50.00	19.87	4,5'20'30"	36.93	527275419





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NOTES

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- 5/6" » 30" REBAR WITH SELF-IDENTIFYING PLASTIC CAP SET AT ALL LOT CORNERS, P.C.'S. P.T.'S AND P.R.C.'S UNLESS MOTED.
- 4. NO NOVOLUL WATER SUPPLY SYSTEM OF SERVICE DISPOSAL SYSTEM DYALL BE PERMITTED ON ANY LOT UNLESS STORM SYSTEM IS LOCATED, CONGRECTED AND EQUIPMENT ON ACCORDINATE WITH THE REQUIREMENTS, AND EXPONENTIAL TO DEVERTIGATION, STATE OF ALSOA, DEPARTMENT OF DEVERTIGATION, WHOST CONSERVATION, WHOST CONSERVATION HOLD SYSTEMS.
- EASEMENTS OF RECORD HOT PLOTTED HEREON—
 M.E.A. EASEMENT RECORDED FEBRUARY 17, 1980— HI BOOK 29 AT PAGE 137.
- b) M.E.A. EASEMENT RECORDED AUGUST 7, 1988 IN BOOK 965 AT PAGE 395

LEGEND

7330-S GARY LORUSSO REGISTERED LAND SURVEYOR

- ♣ FOUND GENERAL LAND OFFICE BRASS CAF MONUMENT AS SHOWN AND DESCRIBED
- FOUND ALUMINUM CAP MONUMENT AS SHOWN AND DESCRIBED
- D FOUND 3/4" MON PIPE
- . FOUND 5/6" REBAR

nda Copy RECEIVED



A PLAT OF

RIDDLEBURG STATION

A SUBDIVISION OF PARCEL #1
MATANUSKA-SUISTINA BORDUCH WAVER RESOLUTION
ERIAL #98-49 PMIN RECORDED IN BOOK 965 AT PACE 999
WITHIN THE SWI/A SELTA SECTION 33, T. 18 N., R. 1 W.
SEWARD MERIDIAN, ALASKA

PALMER RECORDING DISTRICT THRO JUDICIAL DISTRICT STATE OF ALASKA CONTAINING 10.9 ACRES, MORE OR LESS

KEYSTONE SURVEYING & MAPPING GARY LUMIUSCO, PROFESSIONAL LAND SURVEYOR ALASKA BUSHESS LICENSE #34615

MALING ADDRESS P.O. BOX 2216 * PALINER, RASHA 99645.
PHYSICAL ADDRESS SIGS N. HSTN CROLE * PALINER, ALASKA 99645.
PHONE: (907) 376-7811
DRAWN BY CART. DRAWNS

CANAL BY	SATE 3/16/22	DRAMNG: 2001 - 51/Riddleburg	
DEDED BY	SCALE I MON = 100 FEET	SHEET 1 OF 1	

Matthew Goddard

From: Holly Sparrow <hsparrow@mtasolutions.com>

Sent: Tuesday, April 5, 2022 1:23 PM

To: Matthew Goddard

Subject: RE: RFC Riddleburg Station (MG)

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Hello,

MTA has reviewed the plat for Riddleburg Station. MTA has no comments.

Thank you for the opportunity to comment.

Holly Sparrow, Right of Way Agent

1740 S. Chugach St., Palmer, Alaska 99645

Office: (907) 761-2599 | www.mtasolutions.com



Life. Technology. Together.

From: Matthew Goddard < Matthew. Goddard@matsugov.us>

Sent: Tuesday, April 5, 2022 12:09 PM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; adam.dubour@alaska.gov; regpagemaster@usace.army.mil;

Planning <Planning@ci.wasilla.ak.us>; publicworks@ci.wasilla.ak.us; tanainacommunity@gmail.com;

davemtp@mtaonline.net; mschoming@crweng.com; Fire Code <Fire.Code@matsugov.us>; Jill Irsik

<Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; Elaine Flagg <Elaine.Flagg@matsugov.us>; Debbie

Bakic < Debbie.Bakic@matsugov.us>; Terry Dolan < Terry.Dolan@matsugov.us>; Jamie Taylor

<Jamie.Taylor@matsugov.us>; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; Jacque Malette

<jacque.malette@matsugov.us>; MSB Farmers <MSB.Farmers@matsugov.us>; Permit Center

<Permit.Center@matsugov.us>; Mark Whisenhunt <Mark.Whisenhunt@matsugov.us>; Theresa Taranto

<Theresa.Taranto@matsugov.us>; Andy Dean <Andy.Dean@matsugov.us>; Planning <MSB.Planning@matsugov.us>;

Alex Strawn <Alex.Strawn@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>;

pamela.j.melchert@usps.gov; John Aschenbrenner < John. Aschenbrenner @matsugov.us >; Jesse Sumner

<jessesumnerdistrict6@gmail.com>; mearow@matanuska.com; row@enstarnaturalgas.com; Right of Way Dept.

<row@mtasolutions.com>; andrew.fraiser@enstarnaturalgas.com; James Christopher

<James.Christopher@enstarnaturalgas.com>; ospdesign@gci.com; msb.hpc@gmail.com

Subject: RFC Riddleburg Station (MG)

Hello,

The following link is a Request for Comments to create nine lots from Parcel # 1, MSB Waiver 98-49 PWm, Tax ID # 18N01W33D008.

Comments are due by April 26, 2022. Please let me know if you have any questions.

MSB Platting

From: ronald rucker <r_rucker_01@yahoo.com>

Sent: Tuesday, May 3, 2022 10:03 AM

To: MSB Platting

Subject: MSB Waiver #98-49 PWm

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

My name is Ronald Rucker. My wife and I live at 1800 N Buckeye Lane. Our mailing address is 1900 N Buckeye Lane, Wasilla, Alaska, 99654. My wife and I lived in the house at 1900 N Buckeye for over 41 years. Last fall we moved next door to one of the units in our son's duplex at 1800 N Buckeye. Our daughter, son-in-law, and three grandkids now live in the house at 1900 N Buckeye.

I wish to express concern with the proposed subdivision called Riddleburg Station and the new road called N Jack Minnick Cir.

First, W Spruce Ave is a semi-busy street. Most of the traffic exceeds the speed limit by 5 to 10 miles per hour. Some of the traffic exceeds the speed limit by more than 10 miles per hour.

Second, in a distance estimated at about 1000 feet encompassing from N Buckeye to beyond N Jack Minnick there is a visibility or sight limiting hill. West of that hill there are two roads with limited access visibility to W Spruce, one on each side of W Spruce, No Buckeye and N Fanciful. East of that hill there are currently three driveways and one road, N Centurian, with access visibility to W Spruce. Two driveways are on the same side of W Spruce as the proposed N Jack Minnick and one driveway and N Centurian are on the other side of W Spruce. This proposal adds a new road and a potentially significant amount of traffic to an area with limited access visibility. This is probably an accident waiting to happen.

Third, the notification I received does not specify whether the nine new lots are intended for single-family or multi-family residences. The latter will increase the amount of potential traffic even more.

Finally, this hearing has not yet occurred yet the base dirt work for N Jack Minnick Cir is nearly complete. Additionally, there has been significant clearing and a large gravel pad installed immediately adjacent to W Spruce that I believe in on parcel D9 on the notification vicinity map. What is intended for this parcel and what will be that impact on increasing traffic in an area with limited access visibility.

Thank You.

Sincerely, Ron Rucker 907-841-6992 Platting Board

June 16, 2022

1ATANUSKA-SUSITNA BOROUGH LATTING DIVISION

50 EAST DAHLIA AVENUE PALMER, ALASKA 99645



55554B02L006 33 DORAN MICHAEL R STE A 1174 N LEATHERLEAF LOOP WASILLA AK 99654-6514 RECEIVED
MAY 0 4 2022
PLATTING

SPES486514 COOS

NOTIFICATION OF PUBLIC HEARING

The Matanuska-Susitna Borough Platting Board will consider the following:

PETITIONER/OWNER: NORTHWEST LAND INVESTMENT

REQUEST: The request is to create nine lots from Parcel 1, MSB Waiver # 98-49 PWm, to be known as **RIDDLEBURG STATION**, containing 10.94 acres +/-. All lots will take access from the proposed internal street. The property is located south of W. Seldon Road, west of N. Lucille Street, and directly north of W. Spruce Avenue (Tax ID # 18N01W33D008); within the SE ½ Section 33, Township 18 North, Range 01 West, Seward Meridian, Alaska. In the Tanaina Community Council and in Assembly District #6.

The Matanuska-Susitna Borough <u>Platting Board</u> will hold a public hearing in the <u>Assembly Chambers</u> at the <u>Dorothy Swanda Jones Building</u>, 350 E. Dahlia Avenue, Palmer, Alaska on the proposed <u>Subdivision</u>. The public hearing is scheduled for <u>May 19, 2022</u>, starting at 1:00 p.m. We are sending you this notice as required by State Law and Borough Ordinances.

or comments regarding the proposed action, this form may be used for your convenience by filling in the information elow and mail this notice to the MSB Platting Division, 350 E. Dahlia Avenue, Palmer, Alaska 99645 or e-mail: platting@matsugov.us. Comments received from the public after the platting packet has been written will be given to the Platting Board in a "Hand-Out" the day of the meeting. All public comments are due one (1) day prior, by 12:00 p.m. To request additional information please contact the Platting Technician, Matthew Goddard at (907) 861-7881. To view the agenda or meeting packet please go to the following link: www.matsugov.us/boards/platting.

Name: Mich	ael Doran	Address: 380	W Roy Road,	Wasilla, Ale 9968
Comments:			0	

Case # 2022-042 MG Note: V

Note: Vicinity map Located on Reverse Side

CERTIFICATE OF OWNERSHIP & DEDICATION

WE CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY SHOWN AND DESCRIBED IN THIS PLAN AND THAT WE ADOPT THIS PLAN OF SUBDIVISION BY OUR FREE CONSENT, DEDICATE ALL RIGHTS-OF-WAY TO THE MATANUSKA-SUSITNA BOROUGH AND GRANT ALL EASEMENTS TO THE USE SHOWN.

SIGNA	TURE

DATE

NAME/TITLE
NORTHWEST LAND INVESTMENTS, LLC
#200 357 E. PARKS HIGHWAY

NOTARY ACKNOWLEDGMENT

WASILLA, ALASKA 99654

SUBSCRIBED AND SWORN TO BEFORE ME THIS_____
DAY OF ______, 20_____

NOTARY FOR THE STATE OF ALASKA

MY COMMISSION EXPIRES ____

PLANNING & LAND USE DIRECTOR'S CERTIFICATE

I CERTIFY THAT THIS SUBDIVISION PLAN HAS BEEN FOUND
TO COMPLY WITH THE LAND SUBDIVISION REGULATIONS OF
THE MATANUSKA-SUSITNA BOROUGH, AND THAT THE PLAT

HAS BEEN APPROVED BY THE PLATTING AUTHORITY BY
PLAT RESOLUTION NO.________,
DATED_______, 20_____, AND THAT
THIS PLAT HAS BEEN APPROVED FOR RECORDING IN THE

THIS PLAT HAS BEEN APPROVED FOR RECORDING IN THE PALMER RECORDING DISTRICT, THIRD JUDICIAL DISTRICT, STATE OF ALASKA, IN WHICH THE PLAT IS LOCATED.

DATE

PLANNING & LAND USE DIRECTOR

ATTEST:

PLATTING CLERK

CERTIFICATION OF PAYMENT OF TAXES

I HEREBY CERTIFY THAT ALL CURRENT TAXES AND SPECIAL ASSESSMENTS, THROUGH _______, 20_____, AGAINST THE PROPERTY, INCLUDED IN THE SUBDIVISION OR RESUBDIVISION, HEREON HAVE BEEN PAID.

DATE

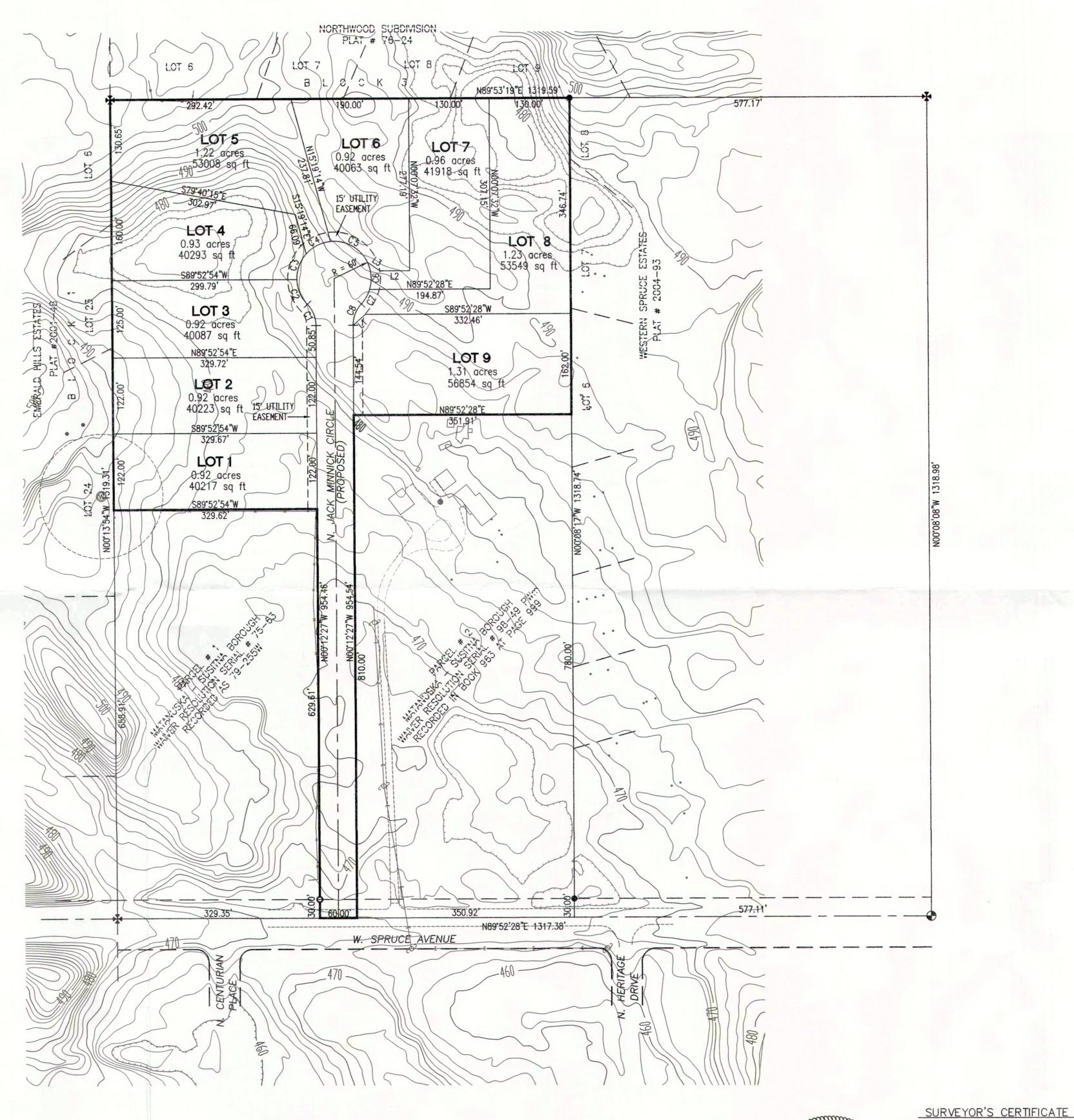
BOROUGH TAX COLLECTION OFFICIAL

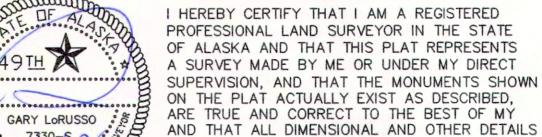
LINE TABLE

LINE	LENGTH	BEARING
L1	26.26'	S48'13'09"W
L2	48.08'	N89°52'28"E
L3	24.26'	S55°14'44"E

CURVE TABLE

CURVE	LENGTH	RADIUS	TANGENT	DELTA	CHORD	CHORD BEARING
C1	37.82	50.00	19.87	43°20'30"	36.93	N21°52'37"W
C2	44.09'	60.00'	23.09'	42°06'12"	43.11	S22°29'46"E
C3	45.03'	60.00'	23.63	43°00'00"	43.98'	S20°03'20"W
C4	45.03	60.00'	23.63'	43°00'00"	43.98'	S63°03'20"W
C5	73.07	60.00	41.84'	69°46'34"	68.64	N60°33'23"W
C6	45.03	60.00	23.63'	43°00'00"	43.98'	N04°10'06"W
C7	27.02	60.00	13.74'	25°48'15"	26.79'	N30°14'01"E
C8	37.82	50.00	19.87	43°20'30"	36.93'	S21°27'54"W



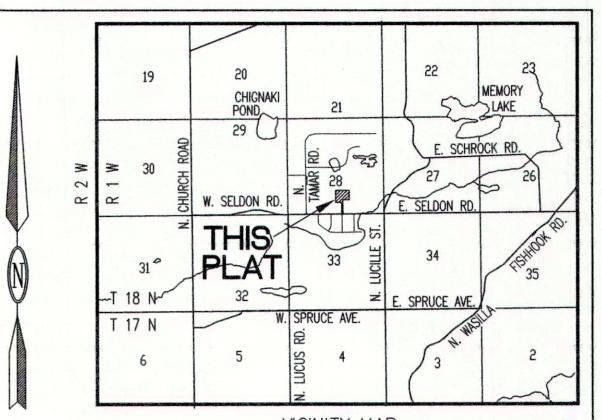


7330-S GARY LoRUSSO

KNOWLEDGE.

REGISTERED LAND SURVEYOR

DATE



VICINITY MAP

SCALE 1" = 1 MILE

NOTES

- 1. THERE MAY BE FEDERAL, STATE AND LOCAL REQUIREMENTS GOVERNING LAND USE. IT IS THE RESPONSIBILITY OF THE INDIVIDUAL PARCEL OWNER TO OBTAIN A DETERMINATION WHETHER SUCH REQUIREMENTS APPLY TO THE DEVELOPMENT OF PARCELS SHOWN HEREON.
- BASIS OF BEARING FROM G.P.S. OBSERVATION TAKEN AT THE SURVEY CONTROL POINT SHOWN HEREON.
- 5/8" x 30" REBAR WITH SELF-IDENTIFYING PLASTIC CAP SET AT ALL LOT CORNERS, P.C.'S, P.T.'S AND P.R.C.'S UNLESS NOTED.
- 4. NO INDIVIDUAL WATER SUPPLY SYSTEM OR SEWAGE DISPOSAL SYSTEM SHALL BE PERMITTED ON ANY LOT UNLESS SUCH SYSTEM IS LOCATED, CONSTRUCTED AND EQUIPPED IN ACCORDANCE WITH THE REQUIRE—MENTS, STANDARDS AND RECOMMENDATIONS OF THE STATE OF ALASKA, DEPARTMENT OF ENVIRONMENTAL CONSERVATION, WHICH GOVERN THOSE SYSTEMS.
- EASEMENTS OF RECORD NOT PLOTTED HEREON:
 a) M.E.A. EASEMENT RECORDED FEBRUARY 17, 1960
 IN BOOK 29 AT PAGE 137.
- b) M.E.A. EASEMENT RECORDED AUGUST 7, 1988 IN BOOK 965 AT PAGE 395.

LEGEND

- FOUND GENERAL LAND OFFICE BRASS CAP MONUMENT AS SHOWN AND DESCRIBED
- ◆ FOUND ALUMINUM CAP MONUMENT AS SHOWN AND DESCRIBED
- o FOUND 3/4" IRON PIPE
- FOUND 5/8" REBAR



0 FEET 100 200 300 400

0 METERS 50 100
1 INCH = 100 FEET

A PLAT OF

RIDDLEBURG STATION

A SUBDIVISION OF PARCEL #1

MATANUSKA—SUSITNA BOROUGH WAIVER RESOLUTION

SERIAL #98—49 PWm RECORDED IN BOOK 963 AT PAGE 999

WITHIN THE SW1/4 SE1/4 SECTION 33, T. 18 N., R. 1 W.

SEWARD MERIDIAN, ALASKA
PALMER RECORDING DISTRICT
THIRD JUDICIAL DISTRICT
STATE OF ALASKA

CONTAINING 10.9 ACRES, MORE OR LESS

KEYSTONE SURVEYING & MAPPING GARY LORUSSO, PROFESSIONAL LAND SURVEYOR ALASKA BUSINESS LICENSE #134615

MAILING ADDRESS: P.O. BOX 2216 * PALMER, ALASKA 99645
PHYSICAL ADDRESS: 3635 N. VISTA CIRCLE * PALMER, ALASKA 99645
PHONE: (907) 376-7811

DRAWN BY iCAD/K.Lyne	DATE 3/16/22	DRAWNG: 2021-39/Riddleburg
CHECKED BY GLo	SCALE 1 INCH = 100 FEET	SHEET 1 OF 1



STAFF REVIEW AND RECOMMENDATIONS PUBLIC HEARING JUNE 16, 2022

PRELIMINARY PLAT: UTOPIA VIEW

LEGAL DESCRIPTION: SEC 06, T17N, R01W, SEWARD MERIDIAN AK

PETITIONERS: FOXGLOVE, LLC

SURVEYOR/ENGINEER: ACUTEK GEOMATICS, LLC

ACRES: 90.08 ± PARCELS: 21

REVIEWED BY: MATTHEW GODDARD CASE #: 2022-063

REQUEST: The request is to create 20 lots and one tract from Tax Parcels A9-10, B10-B13 and C7-C9 to be known as **Utopia View**, containing 90.08 acres +/-. The property is located west of N. Church Road, east of N. Stanley Circle, and north of W. Parks Highway; within Section 06, Township 17 North, Range 01 West, Seward Meridian, Alaska. In the Meadow Lakes Community Council and in Assembly District #4.

EXHIBITS

Vicinity Map and Aerial Photos	EXHIBIT A – 4 pgs
Site Visit Photos	EXHIBIT B – 8 pgs
Geotechnical Report	EXHIBIT $C - 32 pgs$
Average Daily Traffic Count (ADT)	EXHIBIT $D-1$ pg
Road Design	EXHIBIT E -9 pgs

AGENCY COMMENTS

ADF&G	EXHIBIT $F-1$ pg
Department of Public Works Operations & Maintenance	EXHIBIT $G-1$ pg
Planning	EXHIBIT $H-3$ pgs
Utilities	EXHIBIT $I - 7 pgs$
Public	EXHIBIT $J - 1 pg$

<u>DISCUSSION</u>: The proposed subdivision will be creating 20 lots and one tract. The petitioner will be constructing a Borough standard road to provide access for all lots in this subdivision. The proposed culde-sac at the northern end of the road is to be a temporary cul-de-sac that will automatically be vacated upon continuation of the road. As this is not fully within a Road Service Area, the petitioner will need to provide documentation showing how the roads will be maintained before this can record (Recommendation #6). Access for the subdivision will be from N. Jack Nicklaus Drive a City of Wasilla owned and maintained road, through N. Mana Naen Drive and W. Elvas Lane, both of which are privately maintained roads.

Access: Legal and physical access to the proposed lots are required pursuant to MSB 43.20.100 Access Required, MSB 43.20.120 Legal Access and MSB 43.20.140 Physical Access. Access requirements will be met once interior street is constructed.

Soils Report: A geotechnical report was submitted (Exhibit C), pursuant to MSB 43.20.281(A). Robert Walden, P.E., notes that "all lots will need some manipulation (cut/Fill) to get usable area and will be surveyed after the road is put in for better access. All lots in this in this phase have no water table issues and will achieve the 10,000 square feet of usable building area and 10,000 square feet of contiguous usable septic area per MSB title 43. The silts are non-plastic per three tests by HDL, see invoice.

Existing drainage flow has been reviewed, cross culverts identified to help maintain original drainage, one detention area on the north east corner of W. Elvas Lane and Utopia on Lot I, identified, and most run off is trying to leave the subdivision development to its natural wetland area to the north and north-east."

A sieve analysis was provided as GM soils were present in most test holes.

Average Daily Traffic (ADT) Calculations are at Exhibit D.

An updated soils report will be required once all cut/fill has been completed showing that all lots have the minimum required building and septic area (Recommendation #5).

Comments:

ADF&G (Exhibit E) has no objections.

Department of Public Works Operations & Maintenance (Exhibit G):

Roads:

Certify Ben Hogan Avenue to Residential Collector Standards due to traffic counts being greater than 1000 on the ADT. Although the City of Wasilla maintains Ben Hogan Avenue, most of it is outside the city limits and the Mat-Su Borough Subdivision Construction Manual standards apply.

Utopia View North of Elvas Lane is longer than 1000 Linear Feet and is required to meet Residential Subcollector standards. Elvas Lane and Mana Naen Drive will also need to be constructed and/or certified to Residential Subcollector standard. Redesign Utopia View with minimum 350' centerline radius.

The Plan & Profile shows grade breaks without vertical curves and vertical curves with K values as small as 5.4. the vertical alignment of Elvas Lane and Utopia View will need to be redesigned with K values meeting Residential Subcollector standard and Utopia View (south of Elvas Lane) with K values meeting Residential standard.

The portion of the subdivision within RSA 27 will not be eligible for Borough maintenance until it connects to another Borough maintained road.

Drainage:

Submit a drainage report at least 7 days prior to the desired preconstruction conference date (Recommendation #4-f). The drainage report should address the impacts to runoff due to the fill and/or regrading to create useable area.

Soils:

Submit a soils report certifying useable area exists after fill or regrading per an approved Subdivision Construction Plan (preconstruction conference) (Recommendation #5).

MSB Planning Department (Exhibit H) Provided excerpts from the Meadow Lakes Community Comprehensive Plan.

Utopia View Page 2 of 4

Utilities: (Exhibit I) Enstar has no comments or recommendations. GCI has no comments or objections to the Plat. MTA notes that "dedicate all rights of way to the Matanuska-Susitna Borough and grant all easements to the use shown" be added to the plat. Platting staff notes that this shall be corrected during the final review before recording. MEA did not respond.

Public Comments (Exhibit J):

Jenna Worley, a homeowner to the south objects due to the increase in traffic, noise, and wear on the roads.

At the time of staff report write-up, there were no responses to the Request for Comments from US Army Corps of Engineers; City of Wasilla; Meadow Lakes Community Council; MSB Fire Service Area 130 Central Mat-Su, Road Service Area 027 Meadow Lakes, Emergency Services, Community Development, DPW Pre-Design Division, Assessments, Development Services; or MEA.

CONCLUSION: The preliminary plat of Utopia View is consistent with AS 29.40.070 Platting Regulations and MSB 43.15.016 Preliminary Plats. There were no objections from any federal or state agencies, Borough departments, or utilities. There was one objection to the plat from the public in response to the Notice of Public Hearing. Legal and physical access will exist to the proposed lots, consistent with MSB 43.20.100 Access Required, MSB 43.20.120 Legal Access and MSB 43.20.140 Physical Access. Frontage for the subdivision will exist, pursuant to MSB 43.20.320 Frontage. A soils report was submitted, pursuant to MSB 43.20.218(A)(1).

FINDINGS OF FACT

- 1. The plat of Utopia View is consistent with AS 29.40.070 Platting Regulations and MSB 43.15.016 Preliminary Plats.
- 2. A soils report was submitted, pursuant to MSB 43.20.281(A)(1).
- 3. All lots will have legal and physical access consistent with MSB 43.20.100, MSB 43.20.120 and MSB 43.20.140.
- 4. All lots will have the required frontage pursuant to MSB 43.20.320.
- 5. At the time of staff report write-up, there were no responses to the Request for Comments from US Army Corps of Engineers; City of Wasilla; Meadow Lakes Community Council; MSB Fire Service Area 130 Central Mat-Su, Road Service Area #27 Meadow Lakes, Emergency Services, Community Development, DPW Pre-Design Division, Assessments, Development Services; or MEA.
- 6. There were no objections from any federal or state agencies, Borough departments, or utilities.
- 7. There was one objection from the public in response to the Notice of Public Hearing.

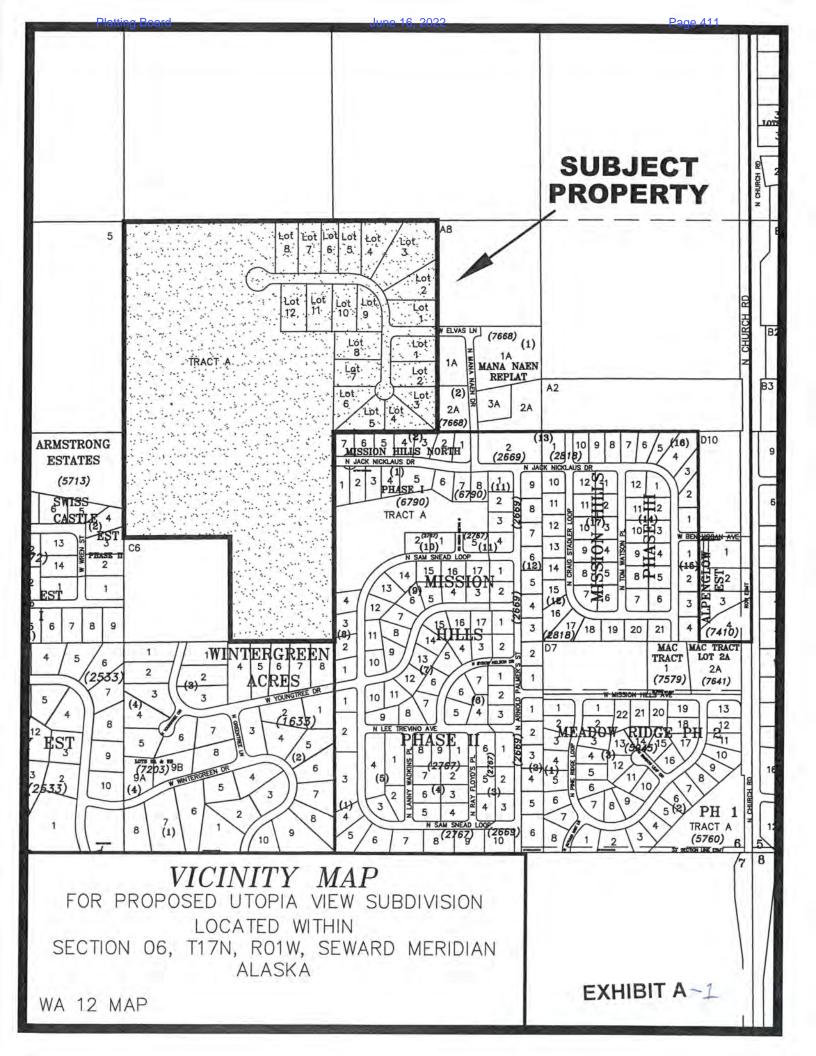
Page 3 of 4

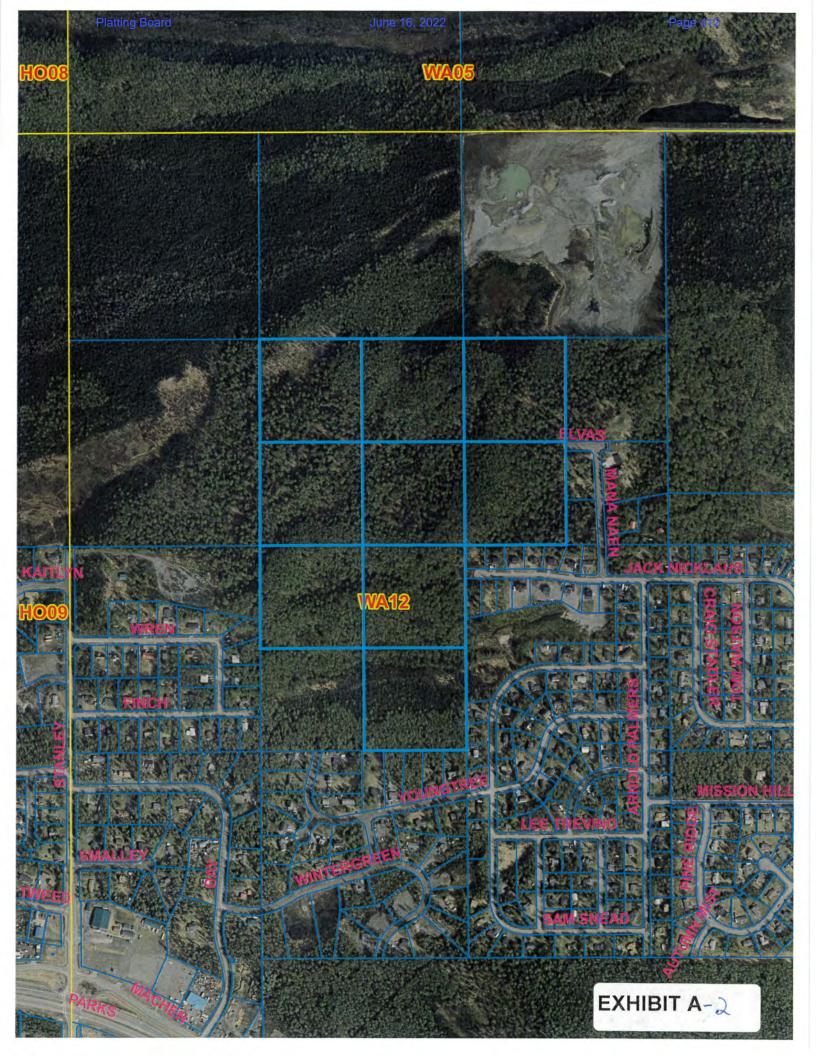
RECOMMENDATIONS OF CONDITIONS OF APPROVAL

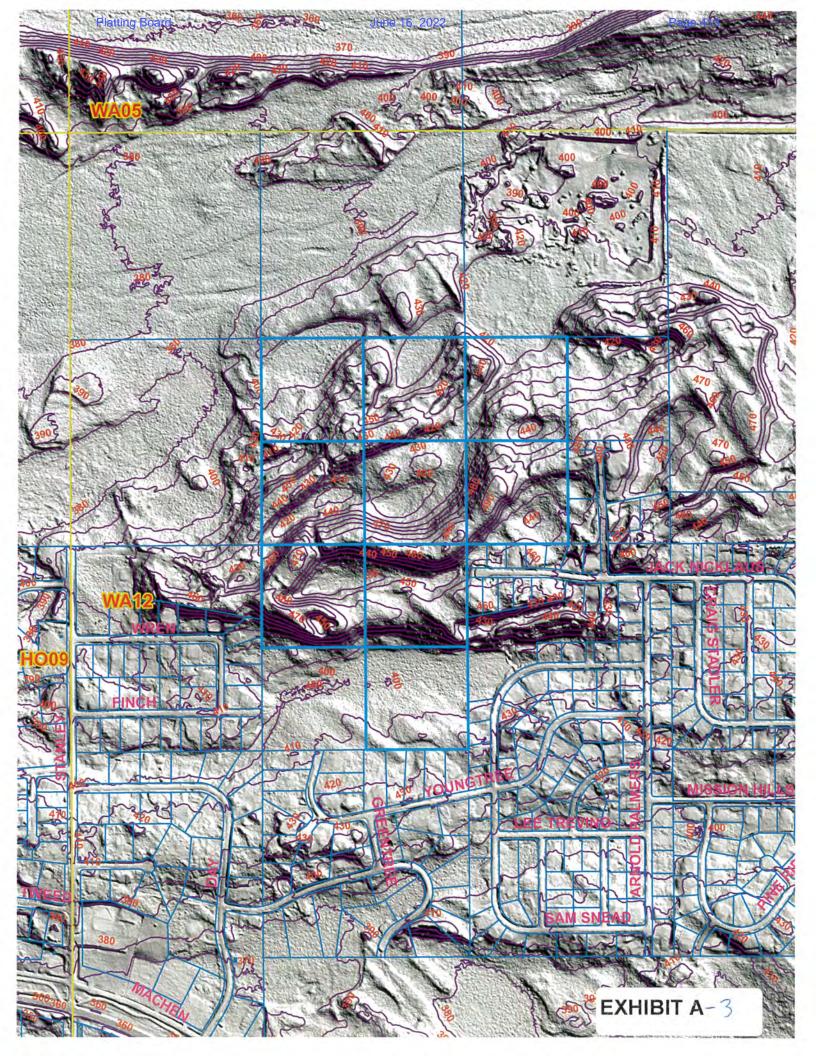
Suggested motion: I move to approve the preliminary plat of Utopia View, Section 06, Township 17 North, Range 01 West, Seward Meridian, Alaska, contingent on staff recommendations

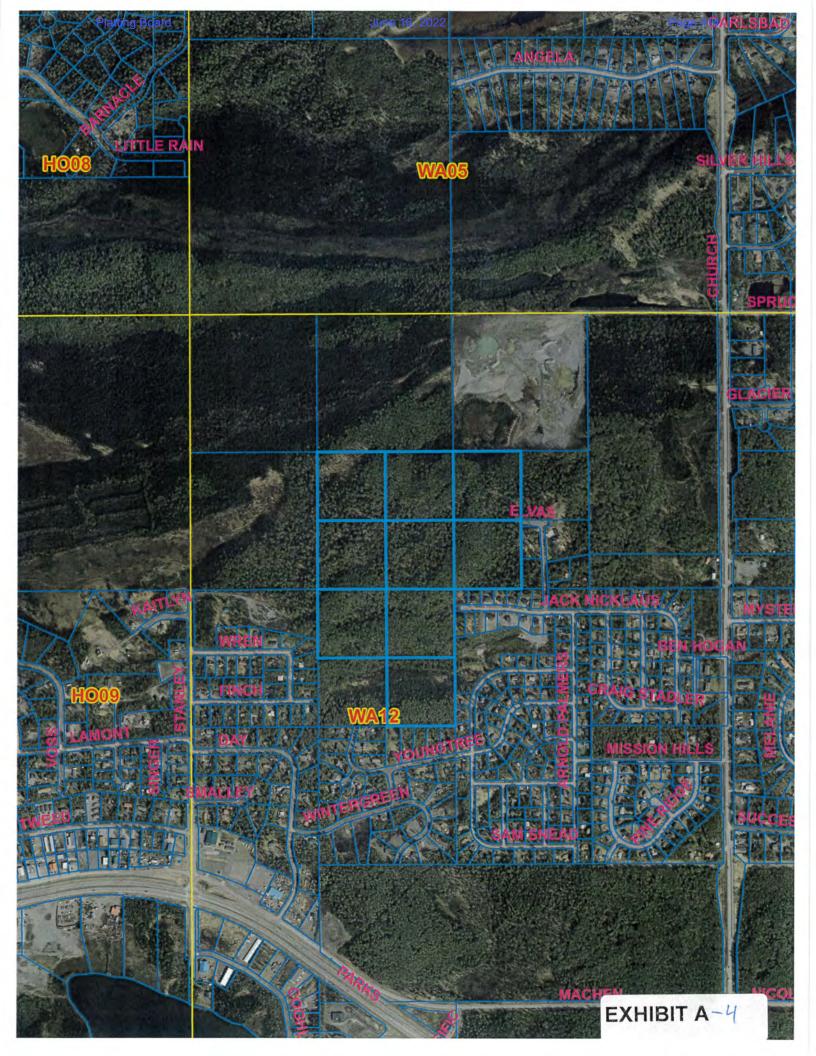
- Taxes and special assessments must be paid in full for the year of recording, pursuant to MSB 43.15.053(F) and AS 40.15.020. Pay taxes and special assessments (LIDs), by CERTIFIED FUNDS OR CASH.
- 2. Provide updated Certificate to Plat executed within seven (7) days of recording of plat and submit Beneficiary Affidavit for any holders of a beneficial interest.
- 3. Pay postage and advertising fees.
- 4. Construct interior street and cul-de-sac to MSB street standards:
 - Construct the portion of Utopia View south of W. Elvas Lane and the southern cul-de-sac to MSB Residential Street Standards.
 - Construct Utopia View from W. Elvas Lane to the northern cul-de-sac to Residential Subcollector street standards.
 - c. Upgrade/certify W. Elvas Lane and N. Mana Naen Drive to Residential Subcollector street standards.
 - d. Upgrade/Certify W. Ben Hogan Avenue to Residential Collector street standards.
 - e. Submit cost estimate, arrange a pre-construction meeting with Department of Public Works (DPW), pay inspection fee and obtain a Notice to Proceed from Platting staff. Submit street inspection reports as required by Section F1.4, F1.5 and F1.6 of the Subdivision Construction Manual.
 - Submit a drainage report to Department of Public Works and Platting staff at least seven days prior to the preconstruction meeting.
 - g. Submit a corrected Plan and Profile to Department of Public Works and Platting staff at least seven days prior to the preconstruction meeting.
 - h. Submit an updated ADT to Department of Public Works and Platting staff at least seven days prior to preconstruction meeting that includes the proposed subdivision, showing the traffic counts at all intersections.
 - Provide DPW acceptance of the road to Platting staff.
 - j. Platting staff to approve all road names.
- Submit an updated Soils Report once all regrading has been completed showing that all lots being created have the required 10,000 square feet of useable building area and 10,000 square feet of contiguous useable septic area.
- 6. Submit documentation showing who will maintain the proposed streets.
- 7. Show all easements of record on final plat.
- 8. Submit recording fees, payable to Department of Natural Resources (DNR).
- 9. Submit plat in full compliance with Title 43.

Utopia View Page 4 of 4









SITE VISIT REPORT

Case Name: Utopia View	Date: 05/20/2022 Time: 10:30 am
Owner: Fox Glove LLC	Case Number: 2022-063
Surveyor/Engineer: Acutek/walden	Tax ID #: 17N01W06A010/B013/C008
Subdivision:	Regarding:

	SITE CONDITIONS
Weather: Sunny	Temperature: 65°
Wind: Light Breeze	
General Site Condition: Partial	ly constructed roads
Personnel on site: Amy Otto-Bu	uchanan, Kimberly McClure, Matthew Goddard
Equipment in use: Borough Veh	icle and Camera
Current phase of work: Pre He	aring
Reason for Visit/Remarks: (See	attached photos)

Signed By: Mallher Sodde

Date: 5/20/22

207,47

AX PARCEL A

Z

MANA NAEN

R

MANA NAEN REPLA

LOT

LÓ7/2

100 LOT 3

LOT 2

1.2 Acres. 53383.0 Sq.ft. 315.98

1893817E LOTA

1.1 Acres. 50058.5 Sq.ft

LOT 1 1.1 Acres. 47294,5 Sq.ft.

LOT 2 1.1 Acres. 45882.4 Sq.ft.

N8922'07"E

276.41

531.81 658.64

LOT 4 1.0 Acres. 44310.8 Sq.ft.

LOT 3

1.0 Acres. 45624.1 Sq.ft.

-300.99

2.5 Acres. 107634.1 Sq.ft.

145,00

194

- 160.03'

LOT 11 1.1 Acres. 48009.5 Sq.

LOT 12 1:1 Acres. B017:1 Sq.ft

NO 38 28

145,00

LOT 10

A10/

40T/8 1.2 Acres. 51137:5 Sq.ft.

5892129"W 298,00

LOT 7 1.2 Acres. 50692.3 Sq.ft.

LOT 5

殿

CKLAUS DR

58952'00"W

273.22

0

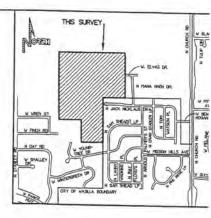
LOT 6

/1.1 Acres./ 45837.7 Sq.ft

36921

22.08

LOT 4 1.4 Acres. 59793.9 Sq.ft.



NUM	DELTA	ARC	RADIUS	BEARING I	DISTANCE
CI	815'00"	319,07	225,00'	N40'59'13'W	293.00
C2	8'42'48"	29.65	195,00	N85'58'07'W	2963
63	815'00"	276.53	195.00	N40'5113'W	253.93
64	16"32"28"	73.62	255.00	N8.203'6"W	73.36
65	14'32'54"	64.75	255.00	N66'30'35"W	64.57
66	243127	109.15	255.00	N46'58'25"W	108.32
C7	133701	60.60	255.00	N2754'IFW	60.46
83	20'43'57"	92.27	255.00	NIC 43 42 W	91.77
69	40,00,00	47.12	30.00	5452(43'E	42.43
CIO	40,00,00	47,12	30.00	544'38'17'W	42.43
C11	43'20'30"	37.82	50.00	5270/38°E	36.93
CI2	20'23'19"	21.35	60.00	N33'30'34'W	21.24
CI3	451452	47.36	60.00	N 0'41'26'W	46,16
C14	66'06'34"	69.23	60.00	N545915E	65.45
CIS	6713'41	70.40	60.00	558'20'37'E	66.43
C16	50'18'16"	5268	60.00	5 0'25'21'W	5100
C17	17'24'15"	18.23	60,00	53416'38'W	18.15
C18	43'20'30"	37,52	50.00	N2f18'32'E	36.93
C19	43'20'30"	37.82	50.00	568'00'14"W	36.93
C20	9318'59"	97.72	60.00	5 0'19'30'E	87.27
C21	423515	37.16	50,00	568'16'38'E	36.32

GRAPHIC SCALE 1 INCH = 100 FEET

PLATITIONS

Agenda Copy

A SUBDIVISION OF FOLLOWING DESCRIBED PROPERTIES, SEWARD MERIDIAN, TOWNSHIP IT NORTH RANGE I WEST. ONE-GUARTERISWIAI SOUTHWEST ONE-GUARTERISWIAI SOUTHEAST ONE-GUARTERISWIAI NORTHWEST ONE-GUARTERISTONE ONE-GUARTERISWIAI NORTHWEST ONE-GUARTERISTONE ONE-GUARTERISWIAI SOUTHWEST ONE-GUARTERISWIAI NORTHWEST ONE-GUARTERISWIAI NORTHWEST ONE-GUARTERISWIAI SOUTHWEST ONE-GUARTERISWIAI SOUTHWEST ONE-GUARTERISWIAI SOUTHWEST ONE-GUARTERISWIAI SOUTHWEST ONE-GUARTERISWIAI SOUTHWEST ONE-GUARTERISWIAI SOUTHWEST ONE-GUARTERISWIAI NORTHWEST ONE-GUARTERISWIAI NORTHWEST ONE-GUARTERISWIAI SOUTHWEST ONE-GUARTERISWIAI NORTHEAST ONE-GUAR

PALMER RECORDING DISTRICT

EXHIBIT B

DESIGNED BY	TLN	SCATE: L. 100.	FELD BOOK:	N/A
DRAWN BY	TAN	DATE	HAP HOL	WA 12
DEOKED	TLN	FLE No. 19-10	96ET 1	or 2





WALDEN Construction Consulting and Engineering, LLC

2422 W James T Cir, Wasilla, AK 99654

6/3/2022

Utopia View soil & drainage letter

Fred Wagner Platting Matanuska-Susitna Borough 350 E. Dahlia Avenue Palmer, Alaska 99645

To Whom this may concern,

Phase I of this subdivision development; Starts at W Elvas Lane off the north portion of N Mana Naen Drive from the Mission Hills subdivision. The road will be built to residential subdivision standards per SCM 2020. In this road section most all soils cuts for the road alignment fall between 0-10% on the 200-sieve. Some areas have been noted on the test hole reports to blend soils to achieve the goal of under 10% to be used as the road subbase.

All lots will need some manipulation (cut/fill) to get usable area and will be surveyed after the road is put in for better access. All lots in this phase have no water table issues and will achieve the 10,000 square feet of usable building and 10,000 square feet of septic contiguous area per MSB title 43. The silts are non-plastic per three tests by HDL, see invoice.

Existing drainage flow has been reviewed, cross culvert's identified to help maintain original drainage, one detention area on the north east corner of W Elvas Lane & Utopia on Lot 1, identified, and most run off is trying to leave the subdivision development to its natural wetland area to the North and North-east.

ADT will be 20 lots at 10*20 = 200 ADT.

Sincerely,

Robert L Walden

Robert L Walden

Cell #907-354-6661

robertwcce@amail.com

Attachments: HDL Gradations, Invoice, WCCE TH logs, and Test hole map.

TESTHOLE LOG #3

Ground level	- A. A. T. B. M.
1ft ML	Testhole Location Map
2ft	
3ft	
4ft	
5ft	
6ft	
7ft GP-GM	
8ft Gr -GW	
9ft	
10ft	
10ft 11ft	
	Comments:
11ft 12ft	GP-GM; Poorly graded gravel w/Silt & sand
11ft 12ft 13ft	GP-GM; Poorly graded gravel w/Silt & sand #200-5.7%
11ft 12ft 13ft 14ft	GP-GM; Poorly graded gravel w/Silt & sand
11ft 12ft 13ft 14ft	GP-GM; Poorly graded gravel w/Silt & sand #200-5.7%
11ft 12ft 13ft 14ft 15ft	GP-GM; Poorly graded gravel w/Silt & sand #200-5.7% Great area for road sub base and to blend with TH
11ft 12ft 13ft 14ft 15ft	GP-GM; Poorly graded gravel w/Silt & sand #200-5.7% Great area for road sub base and to blend with TH
11ft	GP-GM; Poorly graded gravel w/Silt & sand #200-5.7% Great area for road sub base and to blend with TH



AGGREGATE/SOILS TEST REPORT

CHURCH RD SD DATE TAKEN: 4/24/2021 PROJECT: DATE TESTED: 4/30/2021 20-401 PROJECT NO .: NP TESTED BY: CLIENT: WCC&E SAMPLE NO .: 21P94 REVIEWED BY: JAB DESCRIPTION: LOCATION: TH 3-2 UKN

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve	Diameter	Total %
Size	(mm)	Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	97
1"	25.4	81
3/4"	19.0	70
1/2"	12.7	58
3/8"	9.5	51
#4	4.75	34
#10	2.00	22
#20	0.85	16
#40	0.425	11
#60	0.25	8
#100	0.15	7
#200	0.075	5.7

% Gravel:	66.2
%Sand:	28.1
% Fines:	5.7
D60:	13.65
D30:	3.83
D10:	0.35
Cu:	39.5
Cc:	3.1
% .02 mm:	
% Moisture:	2.0
Fine Modulus:	

(ASTM D4318	3)
Liquid Limi	t:
Plastic Limi	t:
Plastic Index	

(ASTM C127)

HYDROMETER TEST

Elapsed	Diameter	Total %
Time (min)	(mm)	Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1459		
2750		

Bulk SpG:
SSD SpG:
Apparent SpG:
% Absorption:

% Absorption:
(ASTM C128)
Bulk SpG:
SSD SpG:
Apparent SpG:
% Absorption:
(ASTM D1557)
Dry Den (U):
Dry Den (C):
M% (U):
M% (C):
SpG (assumed):

M-D Test Method:

CLASSIFICATION: Poorly Graded Gravel w/Silt & Sand

GP-GM USC:

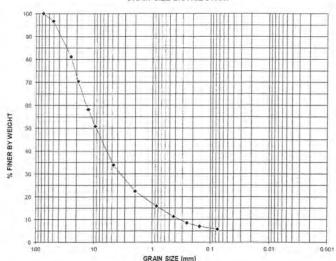
FROST CLASS:

Remarks:

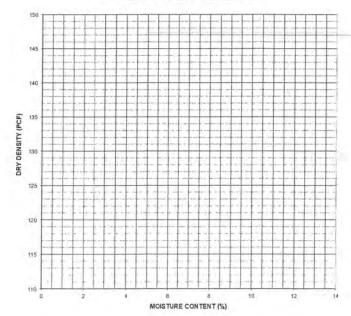


2/12/22

GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



JOHN A. BUZDOR, P.E. 5/3/2021

TESTHOLE LOG #4

SP St SP St SP St S	1ft N/I	Testhole Location Map
SP Ift Ift Ift Oft Oft Oft Oft Oft	IVIL	restroite Education Wap
fit fit fit fit fit fit fit Oft 1ft 2ft GM; Silty Gravel w/sand #200-15.3% 2-4 foot cut grade for road base could blend into 5' Goal #200 gradation 0-10%	00	
ft ft ft ft ft Oft Oft 1ft 2ft Sft GM; Silty Gravel w/sand #200-15.3% 2-4 foot cut grade for road base could blend into 5' Goal #200 gradation 0-10% Goal #200 gradation 0-10%	Sr	
ft f		
ft ft ft Oft Oft Oft Oft Oft Oft Oft Oft	oft	
Comments: GM; Silty Gravel w/sand #200-15.3% 2-4 foot cut grade for road base could blend into 5' Goal #200 gradation 0-10% Goal #200 gradation 0-10%	7ft	
Comments: GM; Silty Gravel w/sand #200-15.3% 2-4 foot cut grade for road base could blend into 5' Goal #200 gradation 0-10%	ft GM	
Comments: GM; Silty Gravel w/sand #100-15.3% 2-4 foot cut grade for road base could blend into 50 Goal #200 gradation 0-10% Gtt Goal #200 gradation 0-10%	eft	
Comments: GM; Silty Gravel w/sand #200-15.3% 2-4 foot cut grade for road base could blend into 5' Goal #200 gradation 0-10% Goal #200 gradation 0-10%		
GM; Silty Gravel w/sand #200-15.3% 2-4 foot cut grade for road base could blend into 5' Goal #200 gradation 0-10% Goal #200 gradation 0-10%		
#200-15.3% 2-4 foot cut grade for road base could blend into 5' Goal #200 gradation 0-10% 7ft 8ft 9ft	1 Oft	
2-4 foot cut grade for road base could blend into 50 Goal #200 gradation 0-10% Oft Oft Oft	Oft 1ft	
Goal #200 gradation 0-10% Goal #200 gradation 0-10%	0ft 1ft 2ft	GM; Silty Gravel w/sand
7ft	0ft 1ft 2ft 3ft	GM; Silty Gravel w/sand
Bft Oft	Oft 1ft 2ft 3ft 4ft	GM; Silty Gravel w/sand
9ft	0ft 1ft 2ft 3ft 4ft 5ft	GM; Silty Gravel w/sand #200-15.3% 2-4 foot cut grade for road base could blend into 5'
	0ft 1ft 2ft 3ft 4ft 5ft	GM; Silty Gravel w/sand #200-15.3% 2-4 foot cut grade for road base could blend into 5'
oft San	0ft 1ft 2ft 3ft 4ft 5ft 6ft	GM; Silty Gravel w/sand #200-15.3% 2-4 foot cut grade for road base could blend into 5'
	10ft 11ft 12ft 13ft 4ft 5ft 6ft 7ft 8ft 9ft	GM; Silty Gravel w/sand #200-15.3% 2-4 foot cut grade for road base could blend into 5'
	0ft 1ft 2ft 3ft 4ft 5ft 6ft 7ft 8ft	GM; Silty Gravel w/sand #200-15.3% 2-4 foot cut grade for road base could blend into 5' Goal #200 gradation 0-10%
	0ft 1ft 2ft 3ft 4ft 5ft 6ft 7ft 8ft	GM; Silty Gravel w/sand #200-15.3% 2-4 foot cut grade for road base could blend into 5' Goal #200 gradation 0-10%



AGGREGATE/SOILS TEST REPORT

CHURCH RD SD DATE TAKEN: 4/24/2021 PROJECT: PROJECT NO .: 20-401 DATE TESTED: 4/30/2021 TESTED BY: NP CLIENT: WCC&E REVIEWED BY: JAB SAMPLE NO .: 21P95 DESCRIPTION: LOCATION: 1H 4-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve	Diameter	Total %
Size	(mm)	Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	94
1"	25.4	80
3/4"	19.0	72
1/2"	12.7	62
3/8"	9.5	58
#4	4.75	50
#10	2.00	45
#20	0.85	39
#40	0.425	34
#60	0.25	28
#100	0.15	22
#200	0.075	15.3

% Gravel:	50.0
%Sand:	34.8
% Fines:	15.3
D60:	11.00
D30:	0.32
D10:	
Cu:	
Cc:	
% .02 mm:	
% Moisture:	4.3
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Diactic Limit	

(ASTM D4318)
Liquid Limit:
Plastic Limit:
Plastic Index:

(ASTM C127)

HYDROMETER TEST

(ASTM D422)

Elapsed	Diameter	Total %
Time (min)	(mm)	Passing
0		
0.5		
t		
2		
5		
8		
15		
30		
60		
250		
1459		
2750		

Bulk SpG
SSD SpG
Apparent SpG
% Absorption

% Absorption:
(ASTM C128)
Bulk SpG:
SSD SpG:
Apparent SpG:
% Absorption:
(ASTM D1557)
Dry Den (U):
Dry Den (C):
M% (U):
M% (C):
SpG (assumed):
M-D Test Method:

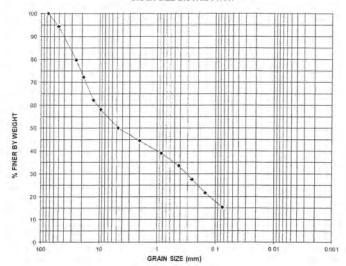
CLASSIFICATION: Silty Gravel w/Sand USC: GM

FROST CLASS:

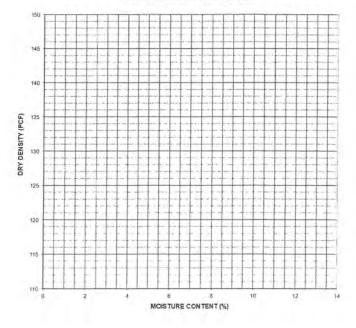
Remarks:



GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



JOHN A. BUZDOR, P.E. 5/3/2021



TESTHOLE LOG #5

t ML	Testhole Location Map
t	
t l	
GM	
Givi	
ft	
ft	
ft ft	Comments:
	Comments: GM; Silty Gravel & Sand
ft ft	
ft	GM; Silty Gravel & Sand
ft ft	GM; Silty Gravel & Sand #200 13.9%
ft ft ft	GM; Silty Gravel & Sand #200 13.9% Blend this material with Lot 6 for good subbase
ft ft ft ft	GM; Silty Gravel & Sand #200 13.9% Blend this material with Lot 6 for good subbase
ft ft ft ft	GM; Silty Gravel & Sand #200 13.9% Blend this material with Lot 6 for good subbase
ft ft ft ft ft ft ft ft	GM; Silty Gravel & Sand #200 13.9% Blend this material with Lot 6 for good subbase
ft	GM; Silty Gravel & Sand #200 13.9% Blend this material with Lot 6 for good subbase Goal #200 gradation 0-10%
t t t t t t t t t t t t t t t t t t t	GM; Silty Gravel & Sand #200 13.9% Blend this material with Lot 6 for good subbase Goal #200 gradation 0-10%



AGGREGATE/SOILS TEST REPORT

CHURCH RD SD PROJECT: PROJECT NO .: 20-401 CLIENT: WCC&E 21P96 SAMPLE NO .: LOCATION: UKN

DATE TAKEN: 4/24/2021 3/6/1905 DATE TESTED: TESTED BY: NP REVIEWED BY: JAB DESCRIPTION: 1H S-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve	Diameter	Total %
Size	(mm)	Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2*	50.8	99
1"	25.4	85
3/4"	19.0	80
1/2"	12.7	69
3/8"	9.5	61
#4	4.75	44
#10	2.00	36
#20	0.85	30
#40	0.425	25
#60	0.25	21
#100	0.15	18
#200	0.075	13.9

% Gravel:	56.1
%Sand:	30.0
% Fines:	13.9
D60:	9.17
D30:	0.93
D10:	
Cu:	
Cc:	
% .02 mm:	
% Moisture:	5.4
Fine Modulus:	

(ASTM D4318)
Liquid Limit:
Plastic Limit:
Plastic Index:

GRAIN SIZE DISTRIBUTION % FINER BY WEIGHT 0.1 0.01 0.001 GRAIN SIZE (mm)

MOISTURE-DENSITY RELATIONSHIP

HYDROMETER TEST

(ASTM D422)		
Elapsed Time (min)	Diameter (mm)	Total % Passing
0	7	
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1459		
2750		11-

Bulk	SpG
SSD	SpG
pparent	SpG
Ahearr	tion

(ASTM C127)

% Absorption.
(ASTM C128)
Bulk SpG:
SSD SpG:
Apparent SpG:
% Absorption:
(ASTM D1557)

(ASTM D1	557
Dry Den	(U)
Dry Den	(C)
M%	(U):
M%	(C):

CLASSIFICATION:	Silty Gravel w/Sand	
USC:	GM	

FROST CLASS:

Remarks:

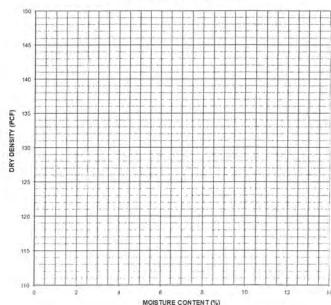




(ASTM D1	557
Dry Den	(U)
Dry Den	(C)
M%	(U):



2/12/22



JOHN A. BUZDOR, P.E. 5/3/2021

EXHIBIT C -8

TESTHOLE LOG #6

Ground level		
ft M	Testhole Location Map	
t		
t		
t		
t		
	-1 - 1	
GI GI		
t		
Oft		
ft		
ft	Comments:	
4	GP; Poorly graded Grave	ls
ott		
	#200 1.5%	
ft		olend with others for road
ft ft	#200 1.5%	olend with others for road
aft ift ift ift ift	#200 1.5% Use this area material to	olend with others for road
ft ft ft	#200 1.5% Use this area material to	olend with others for road
ft ft	#200 1.5% Use this area material to	olend with others for road



AGGREGATE/SOILS TEST REPORT

PROJECT: CHURCH RD SD DATE TAKEN: 4/24/2021 PROJECT NO .: 20-401 DATE TESTED: 4/30/2021 TESTED BY: NP CLIENT: WCC&E JAB SAMPLE NO .: 21P97 REVIEWED BY: LOCATION: UKN DESCRIPTION: TH 6-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve	Diameter	Total %
Size	(mm)	Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	95
1"	25.4	73
3/4"	19.0	65
1/2"	12.7	54
3/8"	9.5	50
#4	4.75	42
#10	2.00	39
#20	0.85	31
#40	0.425	19
#60	0.25	8
#100	0.15	3
#200	0.075	1.5

% Gravel:	57.8
%Sand:	40.7
% Fines:	1.5
D60:	15.99
D30:	0.82
D10:	0.27
Cu:	58.3
Cc:	0.2
% .02 mm:	
% Moisture:	1.2
Fine Modulus:	
(ASTM D4318)	

(ASTM D4318)
Liquid Limit:
Plastic Limit:
Plastic Index:

(ASTM C127) Bulk SpG:

HYDROMETER TEST

	(ASTM D422)	
Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		K I
30		
60		
250		
1459		
2750		

Dain op o.
SSD SpG:
Apparent SpG:
% Absorption:
(ASTM C128)

(ASTM C128)
Bulk SpG:
SSD SpG:
Apparent SpG:
% Absorption:
(ASTM D1557)
Dry Den (U):
Dry Den (C):
M% (U):
M% (C):

SpG (assumed): M-D Test Method:

Poorly Graded Gravel w/Sand CLASSIFICATION:

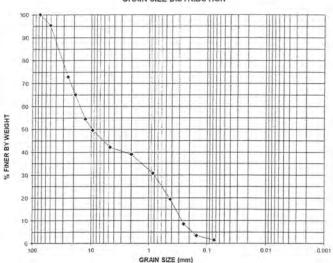
USC: FROST CLASS:

Remarks:

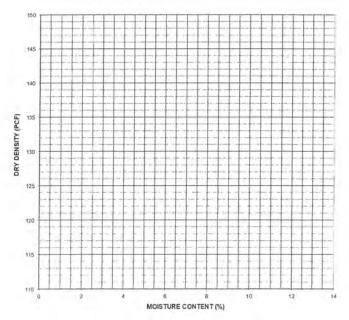


2/12/22

GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



JOHN A. BUZDOR, P.E. 5/3/2021

1ft ML	
2ft	Testhole Location Map
ft	
ft	
t	
gP-GM	
t	
t	
Oft	
1ft	
2ft	Comments:
Bft	GP-GM; Poorly graded gravel w/Silt & sand
lft	#200 11.4%
t	This area mixed with Lot 6 will provide great road
ft	subbase, Goal #200 gradation 0-10%
ft	
ft	
t t	



CHURCH RD SD PROJECT: PROJECT NO .: 20-401 CLIENT. WCC&E SAMPLE NO .: 21P98 LOCATION:

DATE TAKEN: 4/24/2021 DATE TESTED: 4/30/2021 TESTED BY: NP REVIEWED BY: JAB

TH 7-1

DESCRIPTION: UKN

SIEVE ANALYSIS TEST

	(ASTM D422)	
Sieve	Diameter	Total %
Size	(mm)	Passing
6"	152.4	
-4"	100.0	
3"	76.2	100
2"	50.8	96
1"	25.4	82
3/4"	19.0	77
1/2"	12.7	65
3/8"	9.5	56
#4	4.75	41
#10	2.00	36
#20	0.85	32
#40	0.425	28
#60	0.25	22
#100	0.15	17
#200	0.075	11.4

% Gravel: 59.0 %Sand: 29.6 % Fines: 11.4 D60; 10.85 D30: 0.65 D10: Cu: Cc: % .02 mm: % Moisture: 5.4 Fine Modulus:

(ASTM D4318) Liquid Limit: Plastic Limit: Plastic Index:

(ASTM C127)

HYDROMETER TEST (ASTM D422)

	(MOTHER DAZZ)	
Elapsed	Diameter	Total %
Time (min)	(mm)	Passing
0	-	
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1459		
2750		

Bulk SpG: SSD SpG: Apparent SpG:

% Absorption: (ASTM C128) Bulk SpG: SSD SpG: Apparent SpG: % Absorption: (ASTM D1557) Dry Den (U): Dry Den (C): M% (U): M% (C): SpG (assumed):

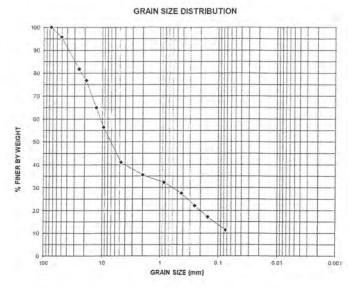
M-D Test Method:

CLASSIFICATION: Poorly Graded Gravel w/Silt & Sand

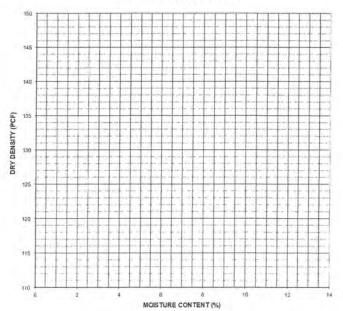
USC: GP-GM

FROST CLASS:

Remarks:



MOISTURE-DENSITY RELATIONSHIP



2/12/22

Robert L Walden

JOHN A. BUZDOR, P.E. 5/3/2021

Ground level	Taethola Legation Mag
1ft ML	Testhole Location Map
2ft 3ft	
4ft	11
5ft	
Sft	
7ft GP-GM	
Bft	
9ft	-
10ft	
11ft	Comments:
11ft 12ft	Comments: GP-GM; Poorly graded gravel w/Silt & sand
11ft 12ft 13ft	
11ft 12ft 13ft 14ft	GP-GM; Poorly graded gravel w/Silt & sand
11ft 12ft 13ft 14ft	GP-GM; Poorly graded gravel w/Silt & sand #200-8.3%
11ft 12ft 13ft 14ft 15ft	GP-GM; Poorly graded gravel w/Silt & sand #200-8.3% Area good to blend with TH 9 for good road subbase
11ft 12ft 13ft 14ft 15ft 16ft	GP-GM; Poorly graded gravel w/Silt & sand #200-8.3% Area good to blend with TH 9 for good road subbase
10ft 11ft 12ft 13ft 14ft 15ft 16ft 17ft 18ft	GP-GM; Poorly graded gravel w/Silt & sand #200-8.3% Area good to blend with TH 9 for good road subbase



 PROJECT:
 CHURCH RD SD

 PROJECT NO.:
 20-401

 CLIENT:
 WCC&E

 SAMPLE NO.:
 21P99

 DATE TAKEN:
 4/24/2021

 DATE TESTED:
 4/30/2021

 TESTED BY:
 NP

 REVIEWED BY:
 JAB

 DESCRIPTION:
 TH 8-1

SIEVE ANALYSIS TEST

UKN

	D422)

LOCATION:

Sieve	Diameter	Total %
Size	(mm)	Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2*	50.8	97
1"	25.4	82
3/4"	19.0	75
1/2"	12.7	66
3/8"	9.5	61
#4	4.75	51
#10	2.00	42
#20	0.85	34
#40	0.425	26
#60	0.25	18
#100	0.15	13
#200	0.075	8.3

% Gravel:	49.2
%Sand:	42.5
% Fines:	8.3
D60:	8.90
D30:	0.65
D10:	0.10
Cu:	86.8
Cc:	0.5
% .02 mm:	
% Moisture:	2.8
Fine Modulus:	

(ASTM D4318)
Liquid Limit:
Plastic Limit:
Plastic Index:

(ASTM C127)

HYDROMETER TEST

(ASTM D422)

Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1459		
2750		

Bulk SpG:
SSD SpG:
Apparent SpG:
% Absorption:

% Absorption:
(ASTM C128)
Bulk SpG:
SSD SpG:
Apparent SpG:
% Absorption:
(ASTM D1557)
Dry Den (U):
Dry Den (C):
M% (U):
M% (C):

SpG (assumed): M-D Test Method:

CLASSIFICATION: Poorly Graded Gravel w/Silt & Sand

USC: GP-GM

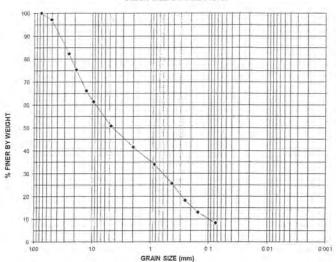
FROST CLASS:

Remarks:

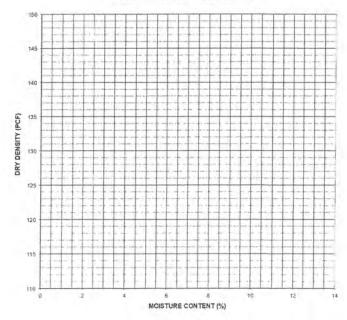


2/12/22

GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



JOHN A. BUZDOR, P.E. 5/3/2021

4.64	evel	Tasthala Lanatina Man
1ft	ML	Testhole Location Map
2ft		
3ft	1	
4ft	1	
5ft	-	
6ft		
7ft	GP	
8ft	-	
9ft	-	
10ft	1	
11ft	- 1	
		Commonts:
11.00	1	Comments:
13ft		GP; Poorly graded gravel
13ft 14ft		GP; Poorly graded gravel #200-4.7%
13ft 14ft 15ft		GP; Poorly graded gravel #200-4.7% Great area for road sub base and to blend with TH
13ft 14ft 15ft 16ft		GP; Poorly graded gravel #200-4.7%
13ft 14ft 15ft 16ft 17ft		GP; Poorly graded gravel #200-4.7% Great area for road sub base and to blend with TH
13ft 14ft 15ft 16ft 17ft 18ft		GP; Poorly graded gravel #200-4.7% Great area for road sub base and to blend with TH
12ft 13ft 14ft 15ft 16ft 17ft 18ft 19ft		GP; Poorly graded gravel #200-4.7% Great area for road sub base and to blend with TH
13ft 14ft 15ft 16ft 17ft 18ft		GP; Poorly graded gravel #200-4.7% Great area for road sub base and to blend with TH
13ft 14ft 15ft 16ft 17ft 18ft 19ft	n of Testhole 13	GP; Poorly graded gravel #200-4.7% Great area for road sub base and to blend with TH 10, Goal gradation #200 0-10%.
13ft 14ft 15ft 16ft 17ft 18ft 19ft	n of Testhole <u>13</u>	GP; Poorly graded gravel #200-4.7% Great area for road sub base and to blend with TH 10, Goal gradation #200 0-10%.
13ft 14ft 15ft 16ft 17ft 18ft 19ft 20ft Total Dept	n of Testhole 13	GP; Poorly graded gravel #200-4.7% Great area for road sub base and to blend with TH 10, Goal gradation #200 0-10%. Robert L C



CHURCH RD SD PROJECT: 20-401 PROJECT NO .: CLIENT: WCC&E SAMPLE NO .: 21P100 LOCATION: UKN

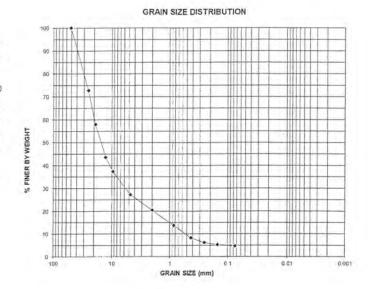
DATE TAKEN: 4/24/2021 4/30/2021 DATE TESTED: TESTED BY: NP REVIEWED BY: JAB DESCRIPTION: TH 9-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve	Diameter	Total %
Size	(mm)	Passing
6"	152.4	
4"	100.0	
3"	76.2	
2"	50.8	100
1"	25.4	73
3/4"	19.0	58
1/2"	12.7	44
3/8"	9.5	37
#4	4.75	27
#10	2,00	20
#20	0.85	14
#40	0.425	8
#60	0.25	6
#100	0.15	5
#200	0.075	4.7

% Gravel:	72.8
%Sand:	22.5
% Fines:	4.7
D60:	19.90
D30:	6.08
D10:	0.56
Cu:	35.3
Cc:	3.3
% .02 mm:	
% Moisture:	1.7
Fine Modulus:	



HYDROMETER TEST

	(ASTM D422)	
Elapsed	Diameter	Total %
Time (min)	(mm)	Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1459		
2750		

(ASTM C127)	1
Bulk SpG:	

SSD SpG: Apparent SpG: % Absorption:

> (ASTM C128) Bulk SpG: SSD SpG: Apparent SpG: % Absorption:

(ASTM D1557) Dry Den (U): Dry Den (C): M% (U): M% (C):

SpG (assumed): M-D Test Method:

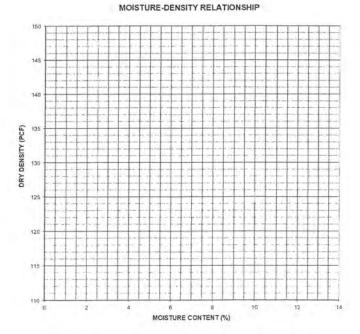
CLASSIFICATION:	Poorly Graded Gravel w/Sand
USC:	GP

2/12/22

FROST CLASS:

Remarks:





JOHN A. BUZDOR, P.E. 5/3/2021

EXHIBIT C-16

Ground level	
Ift ML	Testhole Location Map
2ft	
3ft	
4ft	
5ft	
oft	
ft GW-GM	
ft	
ft	
TL .	
Oft 1ft	
Oft 1ft	Comments:
0ft 1ft 2ft	Comments: GW-GM; Well graded gravel w/Silt & Sand
Oft 1ft 2ft 3ft	
0ft 1ft 2ft 3ft 4ft	GW-GM; Well graded gravel w/Silt & Sand
0ft 1ft 2ft 3ft 4ft 5ft	GW-GM; Well graded gravel w/Silt & Sand #200-9.6%
0ft 1ft 2ft 3ft 4ft 5ft	GW-GM; Well graded gravel w/Silt & Sand #200-9.6% Good area to blend with TH 42
0ft 1ft 2ft 3ft 4ft 5ft 6ft	GW-GM; Well graded gravel w/Silt & Sand #200-9.6% Good area to blend with TH 42
Oft	GW-GM; Well graded gravel w/Silt & Sand #200-9.6% Good area to blend with TH 42
0ft 1ft 2ft 3ft 4ft 5ft 6ft 7ft	GW-GM; Well graded gravel w/Silt & Sand #200-9.6% Good area to blend with TH 42
0ft 1ft 2ft 3ft 4ft 5ft 6ft 7ft 8ft 9ft	GW-GM; Well graded gravel w/Silt & Sand #200-9.6% Good area to blend with TH 42 Goal #200 gradation 0-10%
0ft 1ft 2ft 3ft 4ft 5ft 6ft 7ft	GW-GM; Well graded gravel w/Silt & Sand #200-9.6% Good area to blend with TH 42 Goal #200 gradation 0-10%



PROJECT: CHURCH RD SD PROJECT NO .: 20-401 WCC&E CLIENT: SAMPLE NO .: 21P101 LOCATION: UKN

DATE TAKEN: 4/24/2021 DATE TESTED: 4/30/2021 NP TESTED BY: REVIEWED BY: JAB DESCRIPTION: TH 10-1

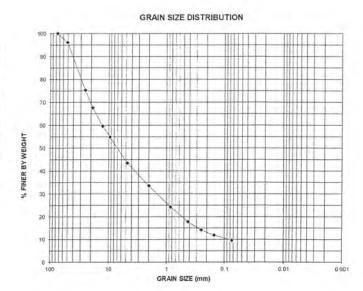
SIEVE ANALYSIS TEST

(ASTM D422)

Sieve	Diameter	Total %
Size	(mm)	Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50,8	96
1"	25.4	75
3/4"	19.0	68
1/2"	12.7	60
3/8"	9.5	55
#4	4.75	43
#10	2.00	33
#20	0.85	24
#40	0.425	18
#60	0.25	14
#100	0.15	12
#200	0.075	9.6

% Gravel:	56.6
%Sand:	33.8
% Fines:	9.6
D60:	13.04
D30:	1.57
D10:	0.09
Cu:	147.4
Cc:	2.1
% .02 mm:	
% Moisture:	3.4
Fine Modulus:	

Fine Modulus:
(ASTM D4318)
Liquid Limit:
Plastic Limit:
Plastic Index:



HYDROMETER TEST

Elapsed	Diameter	Total %
Time (min)	(mm)	Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1459		
2750		

Bulk SpG:
SSD SpG:
Apparent SpG:

(ASTM C127)

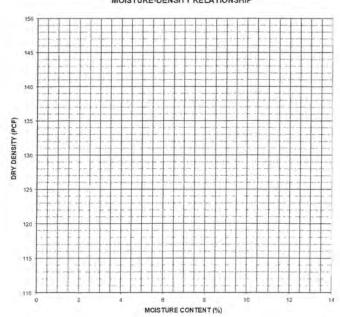
Apparent SpG:
% Absorption:
(ASTM C128)
Bulk SpG:
SSD SpG:
Apparent SpG:
% Absorption:
(ASTM D1557)
Dry Den (U):
Dry Den (C):
M% (U):
M% (C):
SpG (assumed):
M-D Test Method:

CLASSIFICATION:	Well Graded Gravel w/Silt & Sand
usc:	GW-GM

Remarks:



MOISTURE-DENSITY RELATIONSHIP



JOHN A. BUZDOR, P.E. 5/3/2021



1ft ML	
	Testhole Location Map
2ft	
ft	
ft	
t	
GP-GM	
t	
ft	
Oft	
1ft	
2ft	Comments:
3ft	GP-GM; Poorly graded gravel w/Silt & sand
	#200-5.2%
ft	
	Major cut through here this material will be great
ift	Major cut through here this material will be great Road base, Goal #200 0-10%.
Aft Sft Sft	
ft ft	
ft ft	



 PROJECT:
 CHURCH RD SD

 PROJECT NO.:
 20-401

 CLIENT:
 WCC&E

 SAMPLE NO.:
 21P123

 LOCATION:
 UKN

 DATE TAKEN:
 4/29/2021

 DATE TESTED:
 5/4/2021

 TESTED BY:
 DEM

 REVIEWED BY:
 JAB

 DESCRIPTION:
 TH 18-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve	Diameter	Total %
Size	(mm)	Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	98
1"	25.4	88
3/4"	19.0	81
1/2"	12.7	69
3/8"	9.5	62
#4	4.75	46
#10	2.00	38
#20	0.85	29
#40	0.425	19
#60	0.25	12
#100	0.15	8
#200	0.075	5.2

% Gravel:	53.9
%Sand:	40.9
% Fines:	5.2
D60;	8,92
D30;	1.00
D10:	0.21
Cu:	42.3
Cc:	0.5
% .02 mm:	
% Moisture:	2.0
Fine Modulus:	
(ASTM D4318)	

(ASTM D4318)
Liquid Limit:
Plastic Limit:
Plastic Index:

(ASTM C127)

HYDROMETER TEST

(ASTM D422)

Elapsed Time (min)	Diameter (mm)	Total %
0	(100.)	
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

Bulk	SpG
SSD	SpG
Apparent	SpG
% Absor	otion

ripparent opo.
% Absorption:
(ASTM C128)
Bulk SpG:
SSD SpG:
Apparent SpG:
% Absorption:
(ASTM D1557)
Dry Den (U):
Dry Den (C):
M% (U):
M% (C):

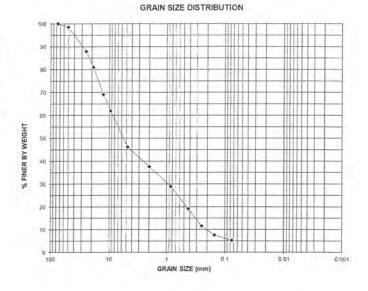
SpG (assumed): M-D Test Method:

CLASSIFICATION: Poorly Graded Gravel w/Silt & Sand

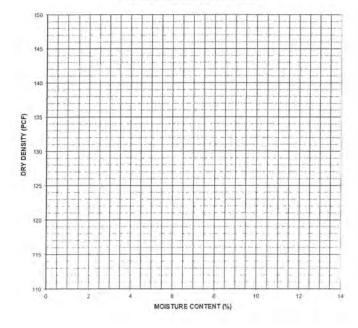
USC: GP-GM

FROST CLASS:

Remarks:



MOISTURE-DENSITY RELATIONSHIP



t L Walden

2/12/22

JOHN A. BUZDOR, P.E. 5/10/2021

EXHIBIT C-20

Access do la
Gravel w/Sand
Cand adams.
Sand w/gravel
his and the state of the state
his material will be great
dation 0-10%.
10 min 10
Robert L U
ft. 2/12/2
t



PROJECT: CHURCH RD SD DATE TAKEN: 4/24/2021 DATE TESTED: 4/30/2021 PROJECT NO .: 20-401 NP WCC&E TESTED BY: CLIENT: SAMPLE NO .: 21P105 REVIEWED BY: JAB DESCRIPTION: LOCATION: UKN TH 19-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve	Diameter	Total %
Size	(mm)	Passing
6"	152.4	
4"	100.0	
3°	76.2	100
2"	50.8	96
1"	25.4	81
3/4"	19.0	73
1/2*	12.7	61
3/8"	9.5	55
#4	4.75	43
#10	2.00	36
#20	0.85	31
#40	0.425	23
#60	0.25	15
#100	0.15	9
#200	0.075	4.7

% Gravel:	57.1
%Sand:	38.2
% Fines:	4.7
D60:	12.02
D30:	0.82
D10:	0.16
Cu:	74.1
Cc:	0,3
% .02 mm:	
% Moisture:	2.9
Fine Modulus:	

(ASTM D4318)
Liquid Limit:
Plastic Limit:
Plastic Index:

(ASTM C127)

GRAIN SIZE (mm)

% FINER BY WEIGHT 0.01 0.001

GRAIN SIZE DISTRIBUTION

HYDROMETER TEST

Elapsed	Diameter	Total %
Time (min)	(mm)	Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1459		
2750		

Bulk	SpG
SSD	SpG
Apparent	SpG
% Absorp	tion

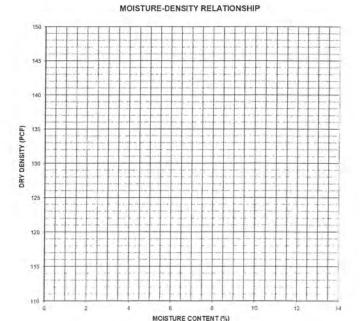
Apparent SpG:
% Absorption:
(ASTM C128)
Bulk SpG:
SSD SpG:
Apparent SpG:
% Absorption:
(ASTM D1557)
Dry Den (U):
Dry Den (C):
M% (U):
M% (C):

SpG (assumed): M-D Test Method:

CLASSIFICATION:	Poorly Graded Gravel w/Sand
USC:	GP

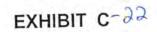
FROST CLASS:

Remarks:



2/12/22

JOHN A. BUZDOR, P.E. 5/3/2021



Ground level	
1ft ML	Testhole Location Map
2ft	-
3ft	
4ft	
5ft	
6ft	
7ft GW	
8ft GVV	
9ft	
1 Oft	
11ft	
12ft	Comments:
13ft	GW; Well graded Gravel w/sand
14ft	#200 2.4%
	This area will be fill on a hill draining south.
15ft	
16ft	
16ft 17ft	
15ft 16ft 17ft 18ft	

Platting Board ENGINEERING Consultantsic

PROJECT: PROJECT NO .: CHURCH RD SD

20-401 WCC&E

SAMPLE NO .: LOCATION:

CLIENT:

21P106 UKN

DATE TAKEN: 4/24/2021 DATE TESTED: 4/30/2021 TESTED BY: NP REVIEWED BY: JAB DESCRIPTION: TH 20-1

SIEVE ANALYSIS TEST

(ASTM D422)

(ASTM D422)		
Sieve	Diameter	Total %
Size	(mm)	Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	97
1"	25.4	76
3/4"	19.0	67
1/2"	12.7	52
3/8"	9.5	45
#4	4.75	34
#10	2.00	27
#20	0.85	23
#40	0.425	17
#60	0.25	9
#100	0.15	4
#200	0.075	2.4

% Gravel: 66.4 %Sand: 31.2 % Fines: 2.4 D60: 16.09 D30: 3.14 D10: 0.27 Cu: 58.7 Cc: 2.2 % .02 mm: % Moisture: 2.6 Fine Modulus:

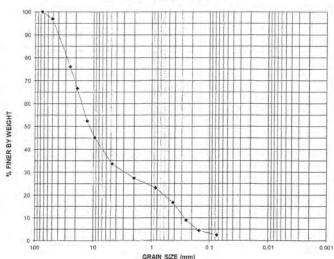
(ASTM D4318) Liquid Limit:

Plastic Limit: Plastic Index:

NP

GRAIN SIZE DISTRIBUTION

Page 446



HYDROMETER TEST

	(ASTM D422)	
Elapsed Time (min)	Diameter (mm)	Total % Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1459		
2750		

(ASTM C127) Bulk SpG:

SSD SpG:

Apparent SpG: % Absorption:

> (ASTM C128) Bulk SpG:

SSD SpG: Apparent SpG: % Absorption:

(ASTM D1557)

Dry Den (U): Dry Den (C): M% (U):

M% (C):

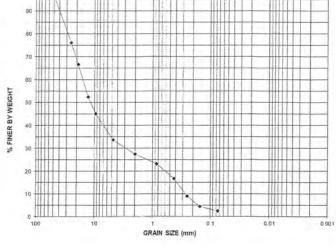
SpG (assumed): M-D Test Method:

CLASSIFICATION: Well Graded Gravel w/Sand

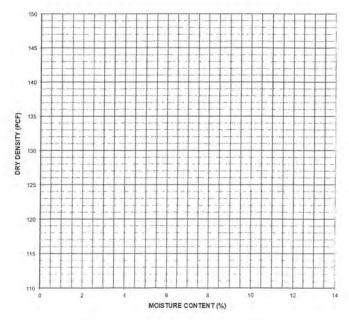
USC: GW

FROST CLASS:

Remarks:



MOISTURE-DENSITY RELATIONSHIP



7/12/22

JOHN A. BUZDOR, P.E. 5/3/2021

EXHIBIT C-24

1ft	level	Testhole Location Map
2ft	ML	Tostriole Location Iviap
3ft		
4ft		
ift		
Sft	GP	
ft.		
3ft		
)ft		
Oft	SW	
1ft		
	GP	Comments:
2ft	GP	Comments: GP; Poorly graded gravel
2ft 3ft	GP	
2ft 3ft 4ft	GP	GP; Poorly graded gravel
2ft 3ft 4ft 5ft	GP	GP; Poorly graded gravel #200-2.7%
2ft 3ft 4ft 5ft 6ft	GP	GP; Poorly graded gravel #200-2.7%
2ft 3ft 4ft 5ft 6ft	GP	GP; Poorly graded gravel #200-2.7%
2ft 3ft 4ft 5ft 6ft 7ft 8ft 9ft	GP	GP; Poorly graded gravel #200-2.7%
2ft 3ft 4ft 5ft 6ft 7ft 8ft	GP	GP; Poorly graded gravel #200-2.7%
2ft 3ft 4ft 5ft 6ft 7ft 8ft 9ft		GP; Poorly graded gravel #200-2.7% This area will be fill on a hill draining south.
2ft 3ft 4ft 5ft 6ft 7ft 9ft	GP pth of Testhole 14	GP; Poorly graded gravel #200-2.7% This area will be fill on a hill draining south.
2ft 3ft 4ft 5ft 6ft 7ft 9ft Oft	pth of Testhole 14	GP; Poorly graded gravel #200-2.7% This area will be fill on a hill draining south. Pobert L C
2ft 3ft 4ft 5ft 6ft 7ft 8ft 9ft Oft		GP; Poorly graded gravel #200-2.7% This area will be fill on a hill draining south. Pobert L C

ENGINEERING Consultantsuc

AGGREGATE/SOILS TEST REPORT

PROJECT: CHURCH RD SD PROJECT NO .: 20-401 CLIENT: WCC&E SAMPLE NO .: 21P141 LOCATION: UKN

DATE TAKEN: 4/29/2021 DATE TESTED: 5/4/2021 TESTED BY: DEM REVIEWED BY: JAB DESCRIPTION: TH 21-1

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve	Diameter	Total %	
Size	(mm)	Passing	
6"	152.4		
4"	100.0		
3"	76.2	100	
2"	50.8	95	
1"	25.4	73	
3/4"	19.0	65	
1/2"	12,7	54	
3/8"	9.5	49	
#4	4.75	38	
#10	2.00	31	
#20	0.85	22	
#40	0.425	13	
#60	0.25	7	
#100	0.15	4	
#200	0.075	2.7	

% Gravel:	61.9
%Sand:	35.4
% Fines:	2.7
D60:	16.23
D30:	1.86
D10:	0.34
Cu:	48.2
Cc:	0.6
% .02 mm:	
% Moisture:	0.8
Fine Modulus:	

C 1112 1113 00102
(ASTM D4318)
Liquid Limit:
Plastic Limit:
Plastic Index:

% FINER BY WEIGHT

GRAIN SIZE DISTRIBUTION

(ASTM C127)

Bulk SpG: SSD SpG:

Elapsed Time (min)	Diameter (mm)	Total %
nime (min)	(mm)	rassing
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

HYDROMETER TEST

(ASTM D422)

Apparent SpG:
% Absorption:
(ASTM C128)
Bulk SpG:
SSD SpG:
Apparent SpG:
% Absorption:
(ASTM D1557)
Dry Den (U):

Dry Den (C):
M% (U):
M% (C):
SpG (assumed):
M-D Test Method:

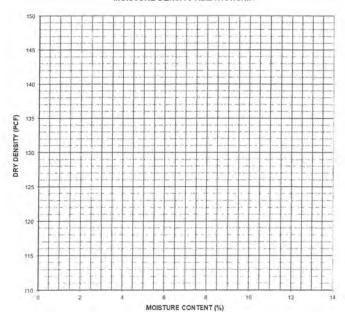
CLASSIFICATION:	Poorly Graded Gravel w/Sand
USC:	GP
FROST CLASS:	

Remarks:



MOISTURE-DENSITY RELATIONSHIP

GRAIN SIZE (mm)



JOHN A. BUZDOR, P.E. 5/10/2021



0.001

Ground level	2 3 40 7 5 400
1ft ML	Testhole Location Map
2ft	
3ft	
4ft	
5ft	
6ft	
GP-GM	
8ft	
9ft	
10ft	
11ft	
	Comments:
12ft	GP-GM; Poorly Graded Gravel w/Silt & Sand
12ft 13ft	GP-GM; Poorly Graded Gravel w/Silt & Sand #200 5.8%
12ft 13ft 14ft 15ft	GP-GM; Poorly Graded Gravel w/Silt & Sand
12ft 13ft 14ft 15ft	GP-GM; Poorly Graded Gravel w/Silt & Sand #200 5.8%
12ft 13ft 14ft	GP-GM; Poorly Graded Gravel w/Silt & Sand #200 5.8% Good area for sub base & ditch cuts
12ft 13ft 14ft 15ft 16ft 17ft	GP-GM; Poorly Graded Gravel w/Silt & Sand #200 5.8% Good area for sub base & ditch cuts
12ft 13ft 14ft 15ft 16ft	GP-GM; Poorly Graded Gravel w/Silt & Sand #200 5.8% Good area for sub base & ditch cuts
12ft 13ft 14ft 15ft 16ft 17ft 8ft 9ft	GP-GM; Poorly Graded Gravel w/Silt & Sand #200 5.8% Good area for sub base & ditch cuts
12ft 13ft 14ft 15ft 16ft 17ft 18ft 19ft	GP-GM; Poorly Graded Gravel w/Silt & Sand #200 5.8% Good area for sub base & ditch cuts Goal #200 gradation 0-10%
12ft 13ft 14ft 15ft 16ft 17ft 18ft	GP-GM; Poorly Graded Gravel w/Silt & Sand #200 5.8% Good area for sub base & ditch cuts Goal #200 gradation 0-10% 13 ft. Rebert L



CHURCH RD SD DATE TAKEN: 4/29/2021 PROJECT: DATE TESTED: 5/4/2021 PROJECT NO .: 20-401 TESTED BY: DEM CLIENT: WCC&E SAMPLE NO .: 21P142 REVIEWED BY: JAB DESCRIPTION: LOCATION: TH 42-1 UKN

SIEVE ANALYSIS TEST

(ASTM DASS)

Sieve	Diameter	Total %
Size	(mm)	Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	98
1"	25.4	79
3/4"	19.0	71
1/2"	12.7	58
3/8"	9.5	51
#4	4.75	41
#10	2.00	35
#20	0.85	30
#40	0.425	21
#60	0.25	14
#100	0.15	11
#200	0.075	5.8

% Gravel:	59.0
%Sand:	35.2
% Fines:	5.8
D60:	13.86
D30:	0.91
D10:	0.14
Cu:	98.8
Cc:	0.4
% .02 mm:	
% Moisture:	3,0
Fine Modulus:	

(ASTM D4318)
Liquid Limit:
Plastic Limit:
Plastic Index:

(ASTM C127)

HYDROMETER TEST

(ASTM D422)

Elapsed	Diameter	Total %
Time (min)	(mm)	Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
	- 1	

Bulk SpG
SSD SpG
Apparent SpG
% Absorption

repairem op o.
% Absorption:
(ASTM C128)
Bulk SpG:
SSD SpG:
Apparent SpG:
% Absorption:
(ASTM D1557)
Dry Den (U):
Dry Den (C):
M% (U):
M% (C):
SpG (assumed):
M.D. Test Mathed

M-D Test Method:

CLASSIFICATION: Poorly Graded Gravel w/Silt & Sand USC:

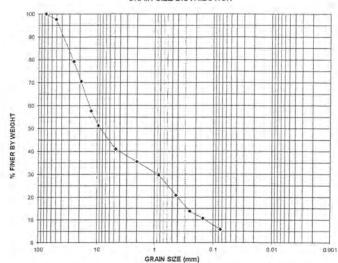
FROST CLASS:

Remarks:

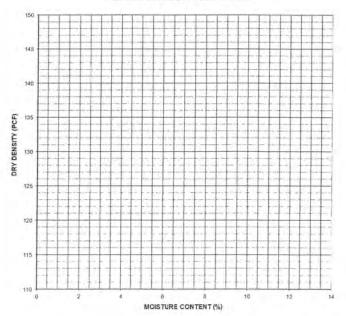


2/12/22

GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



JOHN A. BUZDOR, P.E. 5/10/2021

1ft ML	Testhole Location Map
2ft	
3ft	
4ft	
5ft	
6ft	
7ft GP-GM	
8ft	
9ft	
10ft	
11ft	
12ft	Comments:
13ft	GP-GM; Poorly graded gravel w/Silt & sand
	#200 5.6%
14ft	
	Good area for sub base & ditch cuts
15ft	Good area for sub base & ditch cuts Goal #200 gradation 0-10%.
15ft 16ft	
15ft 16ft 17ft	
14ft 15ft 16ft 17ft 18ft 19ft	



CHURCH RD SD	DATE TAKEN:	4/29/2021
20-401	DATE TESTED:	5/4/2021
WCC&E	TESTED BY:	DEM
21P125	REVIEWED BY:	JAB
UKN	DESCRIPTION:	TH 43-1
	20-401 WCC&E 21P125	20-401 DATE TESTED: WCC&E TESTED BY: 21P125 REVIEWED BY:

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve	Diameter	Total %
Size	(mm)	Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2*	50.8	99
1"	25.4	84
3/4"	19.0	79
1/2"	12.7	69
3/8"	9.5	63
#4	4.75	49
#10	2.00	39
#20	0.85	30
#40	0.425	21
#60	0.25	13
#100	0.15	8
#200	0.075	5.6

% Gravel:	51.
%Sand:	43.
% Fines:	5.6
D60:	8.5
D30;	0.8
D10:	0.18
Cu:	46,2
Cc:	0.5
% .02 mm:	
% Moisture:	3.5
Fine Modulus:	

(ASTM D4318)
Liquid Limit:
Plastic Limit:
Plastic Index:

(ASTM C127)

HYDROMETER TEST

(ASTM D422)

Elapsed	Diameter	Total %
Time (min)	(mm)	Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1440		

	Bulk	SpG
	SSD	SpG
App	arent	SpG
% 1	Absor	otion

Apparent SpG:
% Absorption:
(ASTM C128)
Bulk SpG:
SSD SpG:
Apparent SpG:
% Absorption:
(ASTM D1557)
Dry Den (U):
Dry Den (C):
M% (U):

SpG (assumed): M-D Test Method:

M% (C):

CLASSIFICATION: Poorly Graded Gravel w/Silt & Sand

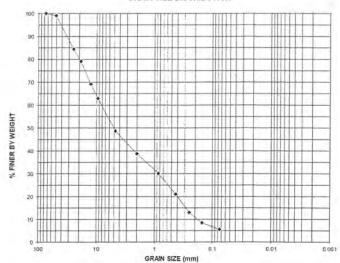
USC: GP-GM

FROST CLASS:

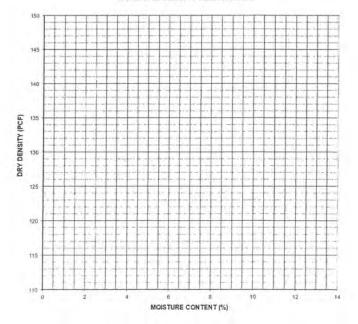
Remarks:



GRAIN SIZE DISTRIBUTION



MOISTURE-DENSITY RELATIONSHIP



JOHN A. BUZDOR, P.E. 5/10/2021

Ground level	- 0.75 - 10 A
1ft ML	Testhole Location Map
211	
ft	
GP-GM	
t	
t	
t	
t	
ft SP	
1ft	0
eft SW	Comments: 2 5-8:GP-GM: Poorly graded gravel w/Silt & sand
SW Sft	2.5-8;GP-GM; Poorly graded gravel w/Silt & sand
1 ft SW Sft \$	2.5-8;GP-GM; Poorly graded gravel w/Silt & sand #200 11.7% most of this area will be culdesac fill
1 ft	2.5-8;GP-GM; Poorly graded gravel w/Silt & sand #200 11.7% most of this area will be culdesac fill 8-10;SP; Poorly graded sand
SW Sft Sft Sft	2.5-8;GP-GM; Poorly graded gravel w/Silt & sand #200 11.7% most of this area will be culdesac fill 8-10;SP; Poorly graded sand not sampled
1 ft	2.5-8;GP-GM; Poorly graded gravel w/Silt & sand #200 11.7% most of this area will be culdesac fill 8-10;SP; Poorly graded sand not sampled 10-14;SW;Well graded Sand w/gravel
3ft 4ft 5ft 6ft 7ft 8ft	2.5-8;GP-GM; Poorly graded gravel w/Silt & sand #200 11.7% most of this area will be culdesac fill 8-10;SP; Poorly graded sand not sampled
1ft SW 3ft Sft S	2.5-8;GP-GM; Poorly graded gravel w/Silt & sand #200 11.7% most of this area will be culdesac fill 8-10;SP; Poorly graded sand not sampled 10-14;SW;Well graded Sand w/gravel
SW Sft	2.5-8;GP-GM; Poorly graded gravel w/Silt & sand #200 11.7% most of this area will be culdesac fill 8-10;SP; Poorly graded sand not sampled 10-14;SW;Well graded Sand w/gravel not sampled
Stt SW Stt SW Stt Stt Stt Stt Stt Stt Stt Stt Stt St	2.5-8;GP-GM; Poorly graded gravel w/Silt & sand #200 11.7% most of this area will be culdesac fill 8-10;SP; Poorly graded sand not sampled 10-14;SW;Well graded Sand w/gravel not sampled
ft SW Sft ft ft ft ft ft ft	2.5-8;GP-GM; Poorly graded gravel w/Silt & sand #200 11.7% most of this area will be culdesac fill 8-10;SP; Poorly graded sand not sampled 10-14;SW;Well graded Sand w/gravel not sampled 14 ft. Robert L C



CHURCH RD SD DATE TAKEN: 4/24/2021 PROJECT: DATE TESTED: 4/30/2021 20-401 PROJECT NO .: NP TESTED BY: CLIENT: WCC&E SAMPLE NO .: 21P109 REVIEWED BY: JAB DESCRIPTION: TH 44-1 LOCATION: UKN

SIEVE ANALYSIS TEST

(ASTM D422)

Sieve	Diameter	Total %
Size	(mm)	Passing
6"	152.4	
4"	100.0	
3"	76.2	100
2"	50.8	99
1"	25.4	89
3/4"	19.0	82
1/2"	12.7	73
3/8"	9.5	69
#4	4.75	58
#10	2.00	49
#20	0.85	40
#40	0.425	31
#60	#60 0.25	
#100	0.15	16
#200	0.075	10,5

% Gravel:	41.8
%Sand:	47.7
% Fines:	10.5
D60:	5.56
D30:	0.41
D10:	
Cu:	
Cc;	
% .02 mm:	
% Moisture:	6.6
Fine Modulus:	
(ASTM D4318)	
Liquid Limit:	
Plastic Limit:	
Plastic Index:	NP

100	IN	V. I	111				П					Ш		
90		•												
80		1		\parallel	ŀ		H						H	-
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80														
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40				1							#		Н	
30				+			1							
20				#	-		H	•						
10										•				
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HYDROMETER TEST

(ASTM D422)

Elapsed	Diameter	Total %
Time (min)	(mm)	Passing
0		
0.5		
1		
2		
5		
8		
15		
30		
60		
250		
1459		
2750		

Bulk SpG.	
SSD SpG:	
Apparent SpG:	
% Absorption	

(ASTM C127)

3: % Absorption: (ASTM C128) Bulk SpG: SSD SpG: Apparent SpG: % Absorption: (ASTM D1557) Dry Den (U): Dry Den (C): M% (U): M% (C): SpG (assumed):

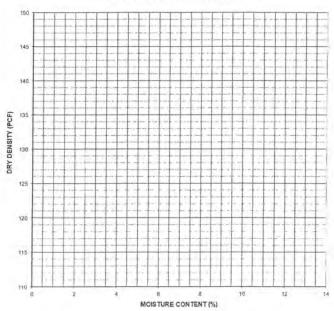
M-D Test Method:

CLASSIFICATION: Poorly Graded Sand w/Silt & Gravel SP-SM USC:

FROST CLASS:

Remarks:

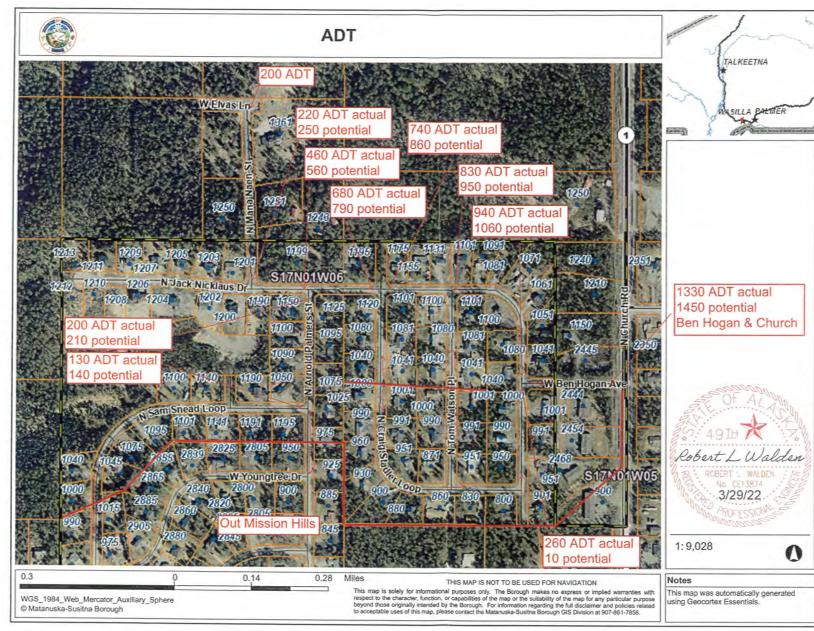
MOISTURE-DENSITY RELATIONSHIP

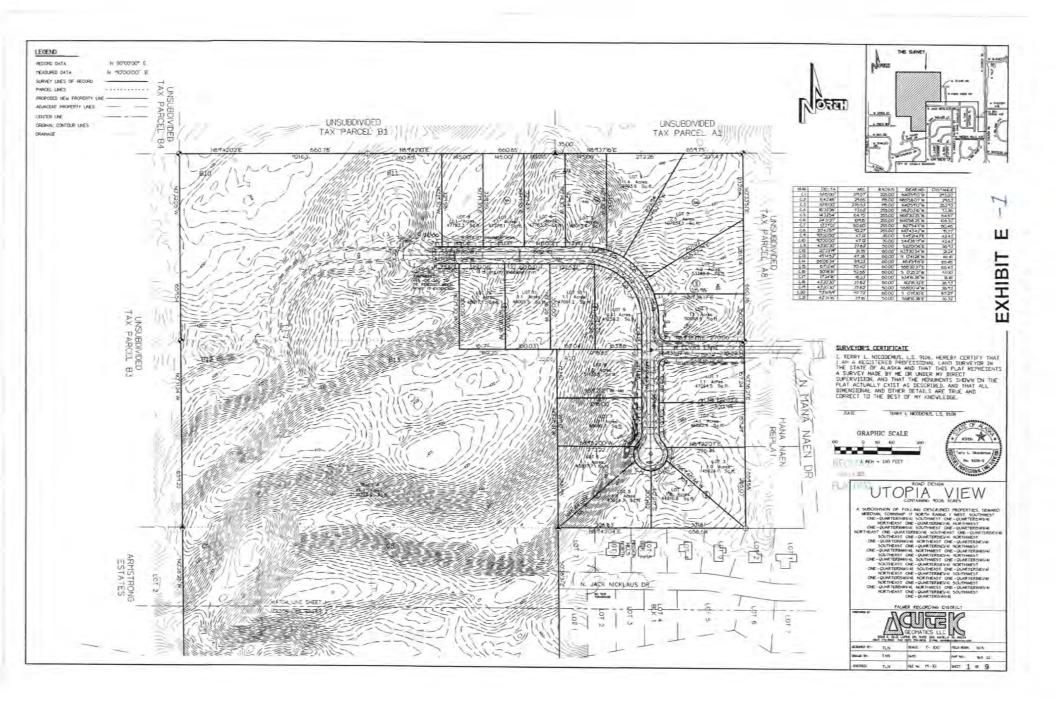


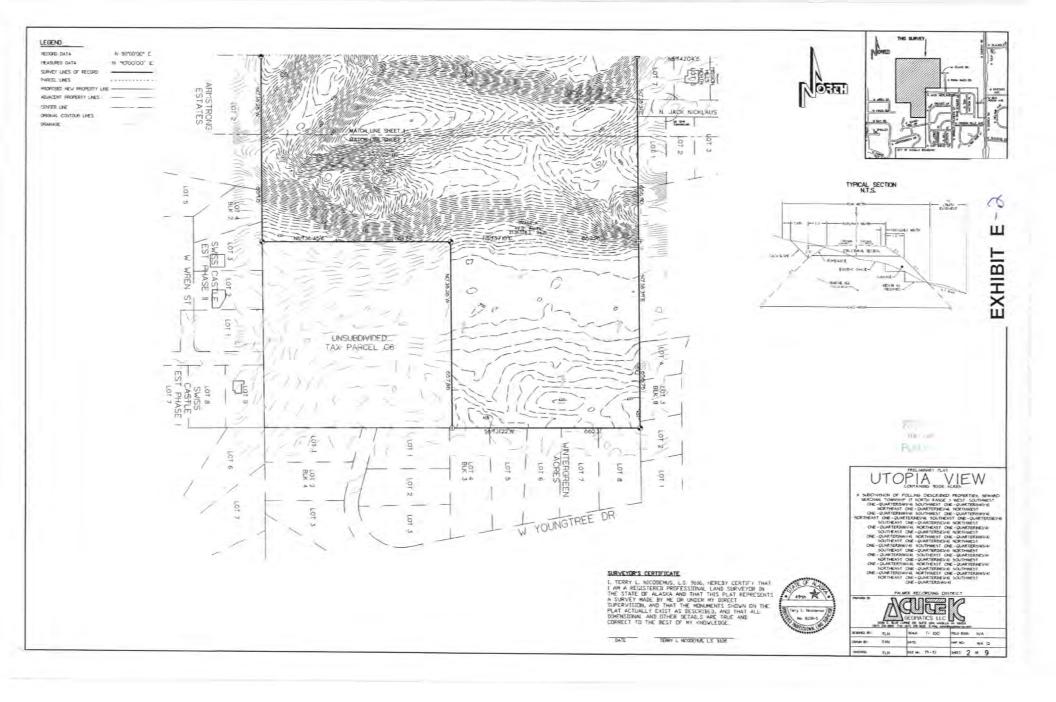
Robert L Walder

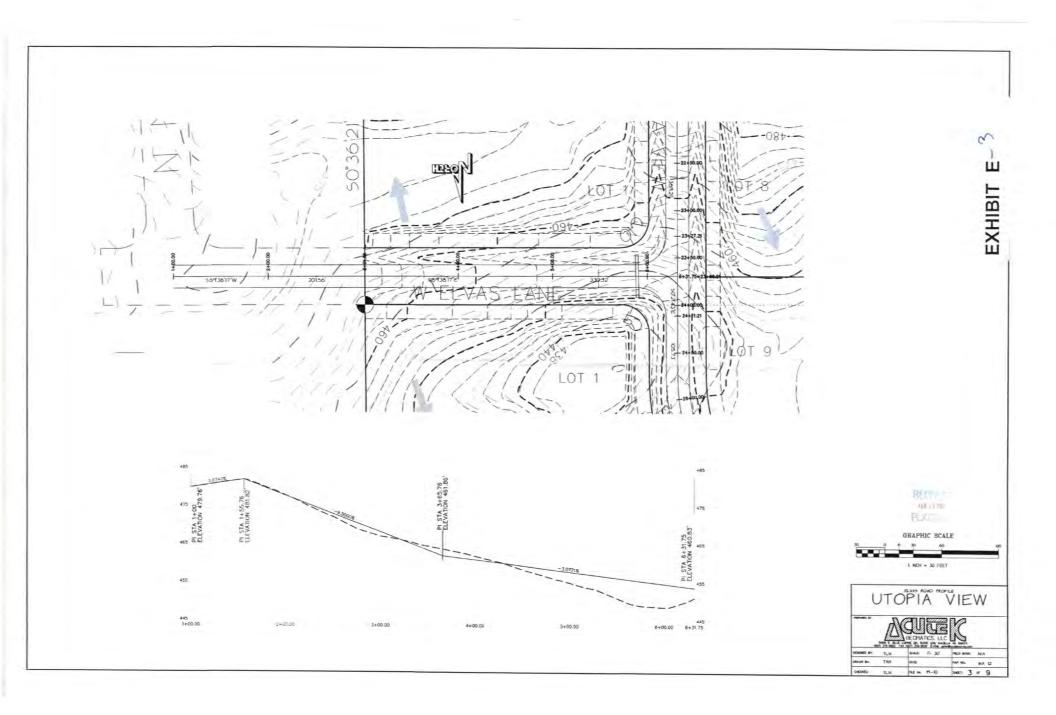
JOHN A. BUZDOR, P.E. 5/3/2021

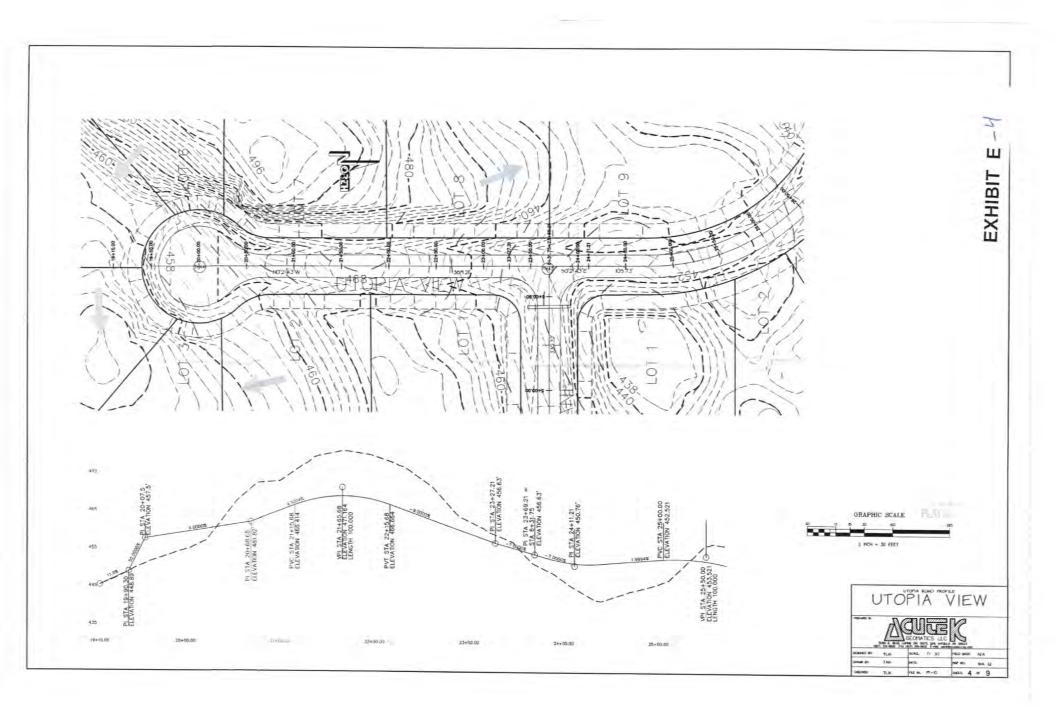


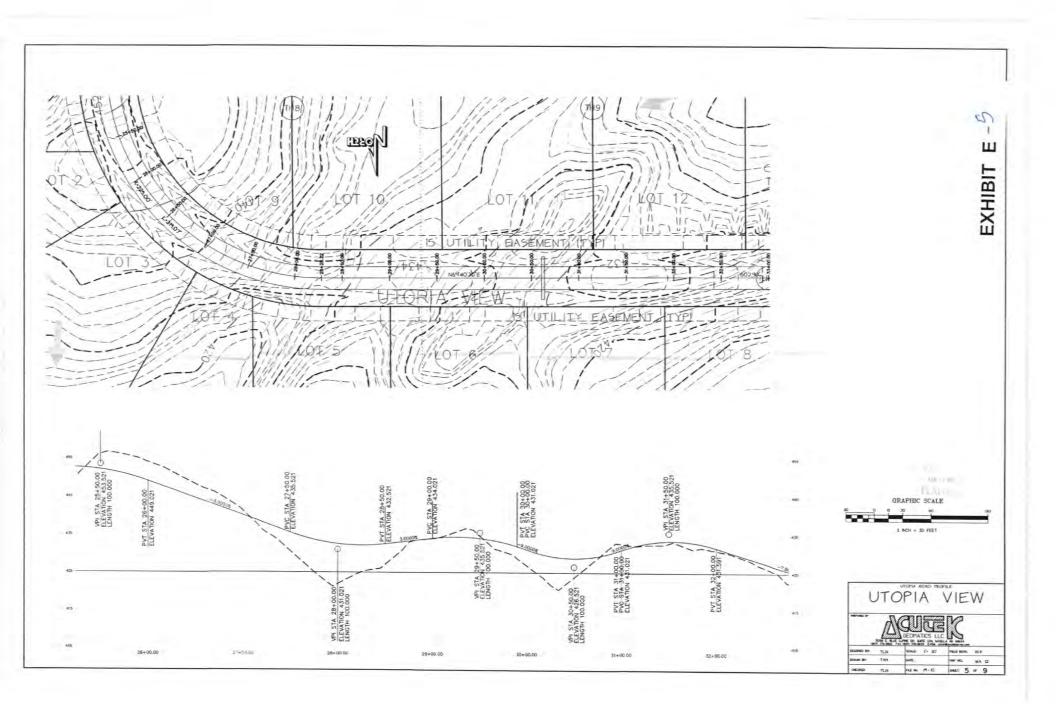


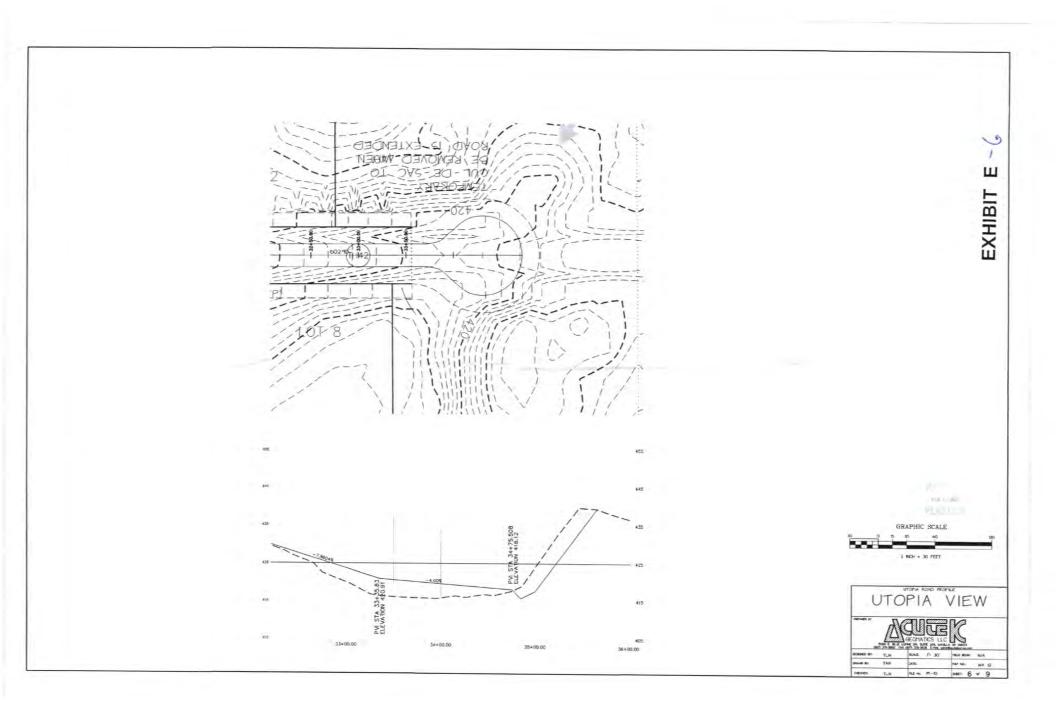


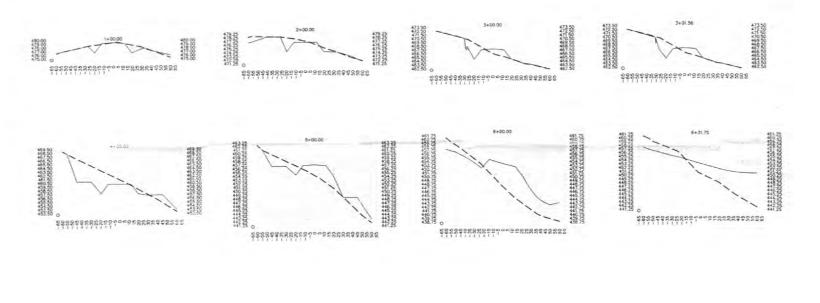












June 16, 2022

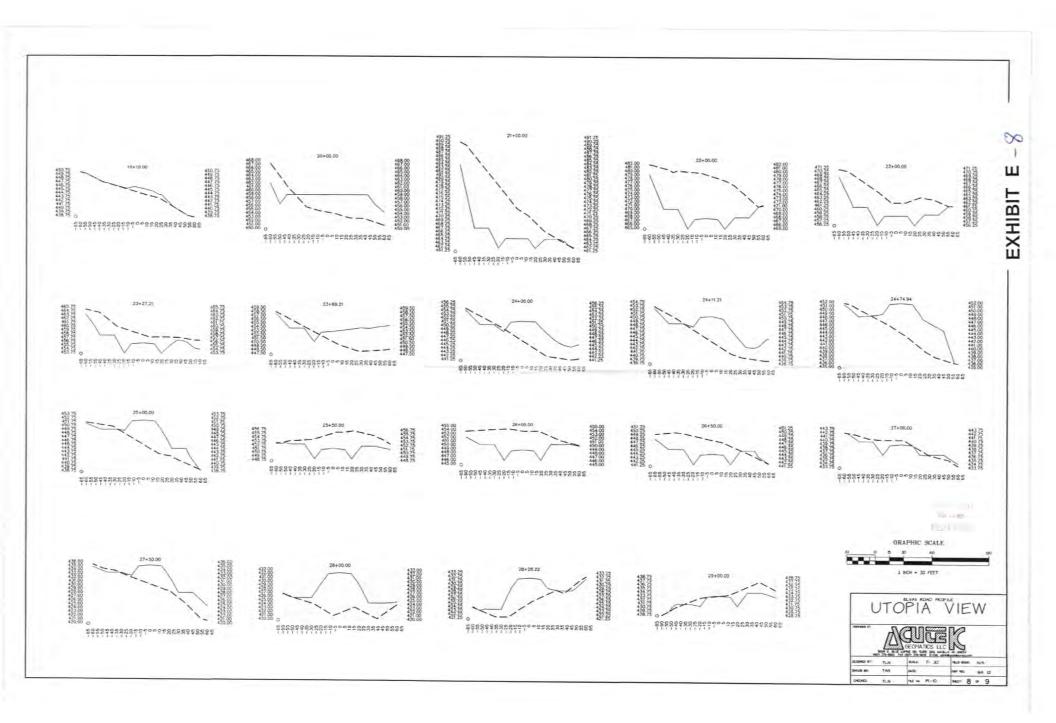
GRAPHIC SCALE

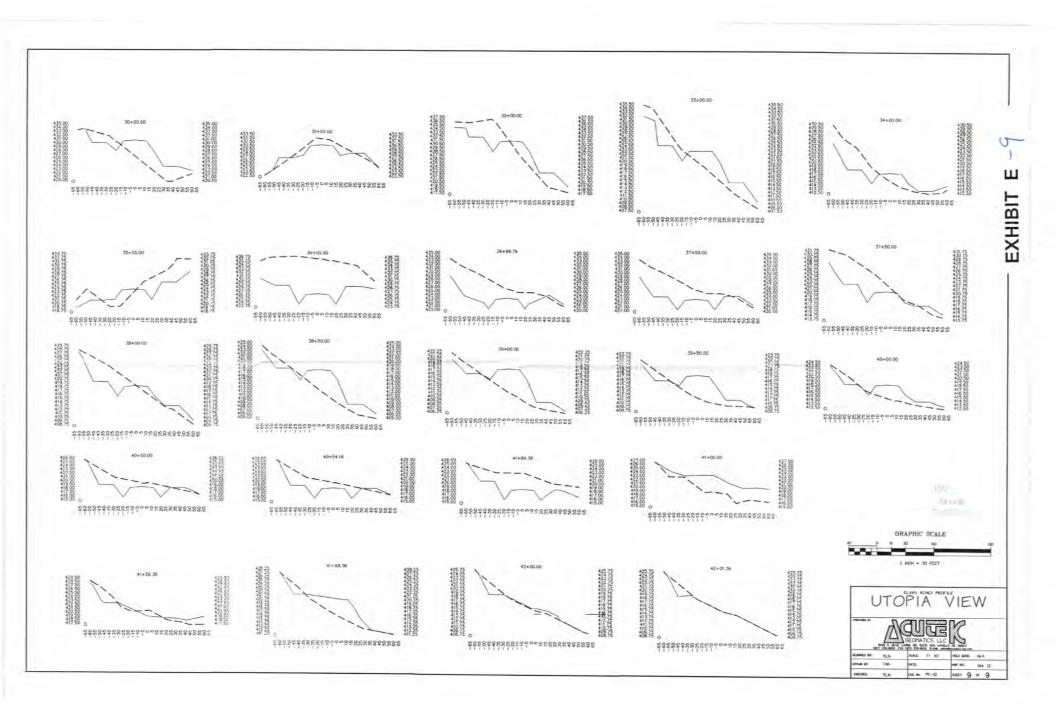
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June 16, 2022

Page 463





Matthew Goddard

From: Percy, Colton T (DFG) <colton.percy@alaska.gov>

Sent: Tuesday, May 10, 2022 9:31 AM

To: Matthew Goddard

Subject: RE: RFC Utopia View (MG)

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Hi Matthew,

Alaska Department of Fish and Game has reviewed the proposed platting actions and has no objections. The proposed actions will not adversely affect fish, wildlife, habitat, or public access to public lands and waters. Thank you for the opportunity to review and comment on these platting actions.

Colton T. Percy

Habitat Biologist Access Defense Program Alaska Department of Fish and Game Division of Wildlife Conservation 333 Raspberry Rd Anchorage, AK 99518 907-267-2118

From: Matthew Goddard < Matthew. Goddard@matsugov.us>

Sent: Friday, April 29, 2022 1:43 PM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; Dubour, Adam J (DFG) <adam.dubour@alaska.gov>

Subject: RFC Utopia View (MG)

CAUTION: This email originated from outside the State of Alaska mail system. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello,

The following link is a Request for Comments for the proposed Utopia View subdivision. Comments are due by May 20, 2022. Let me know if you have any questions.

Utopia View

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

Matthew Goddard
Platting Technician
Matthew.Goddard@matsugov.us
(907) 861-7881

Matthew Goddard

From: Jamie Taylor

Sent: Tuesday, May 17, 2022 2:47 PM

To: Matthew Goddard

Cc: Elaine Flagg; Butch Ehmann; Matthew Jacob; Fred Wagner

Subject: RE: RFC Utopia View (MG)

Roads:

Certify Ben Hogan Avenue to Residential Collector standard due to traffic > 1000 ADT. Although the COW maintains Ben Hogan Avenue, most of it is outside of the city limits and MSB SCM standards apply.

Utopia View north of Elvas Lane is longer than 1000 LF and is required to meet Residential Subcollector standard. Elvas Lane and Mana Naen Drive will also need to be constructed and/or certified to Residential Subcollector standard. Redesign Utopia View with minimum 350' centerline radius.

The plan & profile shows grade breaks without vertical curves and vertical curves with K values as small as 5.4. Redesign the vertical alignment of Elvas Lane and Utopia View (north of Elvas Lane) with K values meeting Residential Subcollector standard and Utopia View (south of Elvas Lane) with K values meeting Residential standard.

The portion of the subdivision within RSA 27 will not be eligible for borough maintenance until it connects to another borough maintained road.

Drainage:

Submit a drainage report at least 7 days prior to desired preconstruction conference date. The drainage report should address the impacts to runoff due to the fill and/or regrading to create useable area.

Soils:

Submit soils report certifying useable area exists after fill or regrading per an approved Subdivision Construction Plan (preconstruction conference).

Jamie Taylor, PE (she/her) Civil Engineer Matanuska-Susitna Borough Department of Public Works

t: 907-861-7765 c: 907-355-9810 jamie.taylor@matsugov.us

http://www.matsugov.us/

From: Matthew Goddard < Matthew. Goddard @ matsugov.us>

Sent: Friday, April 29, 2022 8:49 AM

To: regpagemaster@usace.army.mil; Planning <Planning@ci.wasilla.ak.us>; publicworks@ci.wasilla.ak.us; Tim Swezey <tim.swezey@mlccak.org>; psfisher@gci.net; Camden Yehle <camdenyehle@gmail.com>; davemtp@mtaonline.net; lana@mtaonline.net; Fire Code <Fire.Code@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; Elaine Flagg <Elaine.Flagg@matsugov.us>; Debbie Bakic <Debbie.Bakic@matsugov.us>;

Matthew Goddard

From: Adam Bradway

Sent: Tuesday, May 17, 2022 1:38 PM

To: Matthew Goddard

Cc: Gerrit Verbeek; Rick Antonio
Subject: RE: RFC Utopia View (MG)

Attachments: _ags_8e2b2510-d629-11ec-b684-0050568e03ba.pdf

Comments

See attachment for wetland map.

Excerpts from Meadow Lakes Community Comprehensive Plan Land Use

- 1. Maintain the Community's Rural Character Community surveys and public workshops show that for most residents, the area's rural character is one of the top motivations to live in Meadow Lakes. This character includes low density housing, friendly neighbors, limited traffic, large tracts of open land, good views, presence of wildlife, and ready access to trails, rivers, lakes, and recreation. Strategies to maintain and enhance this rural character include:
- Housing Densities Encourage low density residential development in the majority of the community. The exact
 policies should be worked out through the Special Land Use District processs to implement this plan, but community
 sentiment strongly favors a targer greater than the 40,000 square feet minimum currently required under MSB
 standards. In other areas, lots significantly larger than this target are more appropriate, for example in key
 watershed and wetland areas, and along the community's three major watersheds. For the purpose of clarity, the
 Planning Team thought it was important to identify specific minimum lot size.
- While working with the target for minimum lot size, the size of specific subdivision lots should consider the following:
- o Physical character of the land –minimum lot sizes are acceptable where soil quality and drainage is good; lots should be larger where soil quality and drainage is poor.
- o Use of "open space" subdivision process to the degree land is dedicated to community use as open space, parks and trails through the open space subdivision process, lot sizes are allowed to be smaller.
- o Size of surrounding lots lots in new subdivisions should be at least the minimum, and should respond to the size of surrounding lots, e.g., if an "inholding" is subdivided in a neighborhood of large lots, the lots around the edge of the new subdivision should match the sizes of surrounding parcels.
- Open Space Guide growth to retain and expand public open space, waterways and trails. Retain the "natural feel" of the community and the dominate sense of natural landscapes – forests, wetlands, streams, wildlife, and views.
- Establish "Open Space" subdivision policies so sub-dividers are encouraged to retain land for trails and recreation and to protect natural areas like wetlands or streams.
- 2. Concentrate and Screen Commercial Development; Avoid Sprawl Along the Parks Highway In past public workshops and surveys, people expressed a clear concern that the Parks Highway should not be lined with strip commercial development like what is found in other parts of the southern Mat-Su Borough. The community recognizes that without land use controls, development will likely scatter along the length of the Parks Highway. Strategies to reach this goal include:
- Appearance of Roadside Commercial Development Require retention and/or planting of evergreen buffers, trees
 and other landscape features so roadside development is attractive. Encourage modest sized, attractive signage and
 roadside development.

Site Development Standards (for all types of uses)

To protect unique site opportunities and constraints, including slope, natural vegetation, water quality, and views, and to maintain a sense of the natural setting, the following standards are established:

- 1. Grading Encourage retention of natural contours.
- Natural Vegetation/Site Disturbance Maximize retention of existing vegetation; grading and clear cutting the entire parcel prior to selling or developing land is strongly discouraged. Large portions of the site's natural vegetation and contours should be maintained.
- 3. Drainage Development must not change drainage patterns or create drainage or icing problems on adjoining lots. Construction of driveways and other impervious areas must not increase summer runoff or winter ice on adjoining roads or properties.
- 4. Water Quality & Erosion Use drainage swales, holding basins and similar best management practices to ensure runoff from developed areas does not degrade quality of water in adjoining streams and lakes. See appendix for voluntary MSB best management practices.
- Hazards and Sensitive Areas Avoid development in hazard areas, including floodplains and steep slopes. Minimize development and development impacts on wetlands and other sensitive natural environments.
- 6. Setbacks From Waterbodies Require at least the MSB 75' minimum development setback from streams, lakes, wetlands and other water bodies; "development" is defined as habitable structures. Non habitable structures, such as boathouses, sheds, decks or saunas can be built within 75' of lakes and streams, but these improvements should be designed to have minimal environmental and visual impact on the adjoining waterway.
- 17.55.020 Setbacks for Shorelands (B) docks, piers, marinas, aircraft hangars and boathouses may be located closer than 75 feet and over the water, provided they are not uses for habitation and do not contain sanitary or petroleum fuel storage facilities. (E) No part of a subsurface sewage disposal system shall be closer than 100 feet from any body or water or watercourse.
- 7. Protection of Water Quality Use of land adjoining waterbodies shall be designed to minimize impacts on water quality. Actions to achieve this goal include minimizing removal of natural vegetation along the majority of the edge of lakes, streams or wetlands, to keep lawn chemicals, silt, and septic effluents out of the watershed, to inhibit bank erosion and provide habitat for wildlife such as ducks and loons, while also providing some screening of development.

Meadow Lakes Comprehensive Plan Major Goals & Strategies: LAND USE 35 8. Trail Reservations on Private Land – To the greatest degree possible, reserve for continued public use all important existing community trails crossing private land when that private land is subdivided. This can be done through the "open space subdivision" policy outlined later in this chapter. Trails may be reserved along traditional routes, or moved to new locations within the parcel. Trails shall be included as part of all new collector roads.

Underground Utilities – If practical, utilities should be placed underground.
 Exceptions include high voltage electric transmission lines, sub-transmission lines, and substations.

Adam Bradway

Matanuska-Susitna Borough: Planner II 350 E Dahlia Ave, Palmer, Alaska (907) 861-8608

June 16, 2022 **Utopia View Wetlands**







Date: 5/17/2022

Cadastral_Parcels

Environment Wetlands CookInlet

DISTURB
Depression
Discharge Slope

Drainageway / Tidal Riverine
Floating Island Spring Fo

Floating Island
Headwater Fen
Kettle

LAKE

Lakebed

and Fen

Spring Fen
Tidal

Tidal / Drainageway

VLD Trough
Wetland / Upland Complex

This map is solely for informational purposes only. The Borough makes no express or implied warranties with respect to the character, function, or capabilities of the map or the suitability of the map for any particular purpose beyond those originally intended by the Borough. For information regarding the full disclaimer and policies related to acceptable uses of this map, please contact the Matanuska-Susitna Borough GIS Division at 907-861-7858



ENSTAR Natural Gas Company
A DIVISION OF SEMCO ENERGY
Engineering Department, Right of Way Section
401 E. International Airport Road
P. O. Box 190288
Anchorage, Alaska 99519-0288
(907) 277-5551
FAX (907) 334-7798

April 29, 2022

Matanuska-Susitna Borough, Platting Division 350 East Dahlia Avenue Palmer, AK 99645-6488

To whom it may concern:

ENSTAR Natural Gas Company has reviewed the following preliminary plat and has no comments or recommendations.

Utopia View

If you have any questions, please feel free to contact me at 334-7944 or by email at james.christopher@enstarnaturalgas.com.

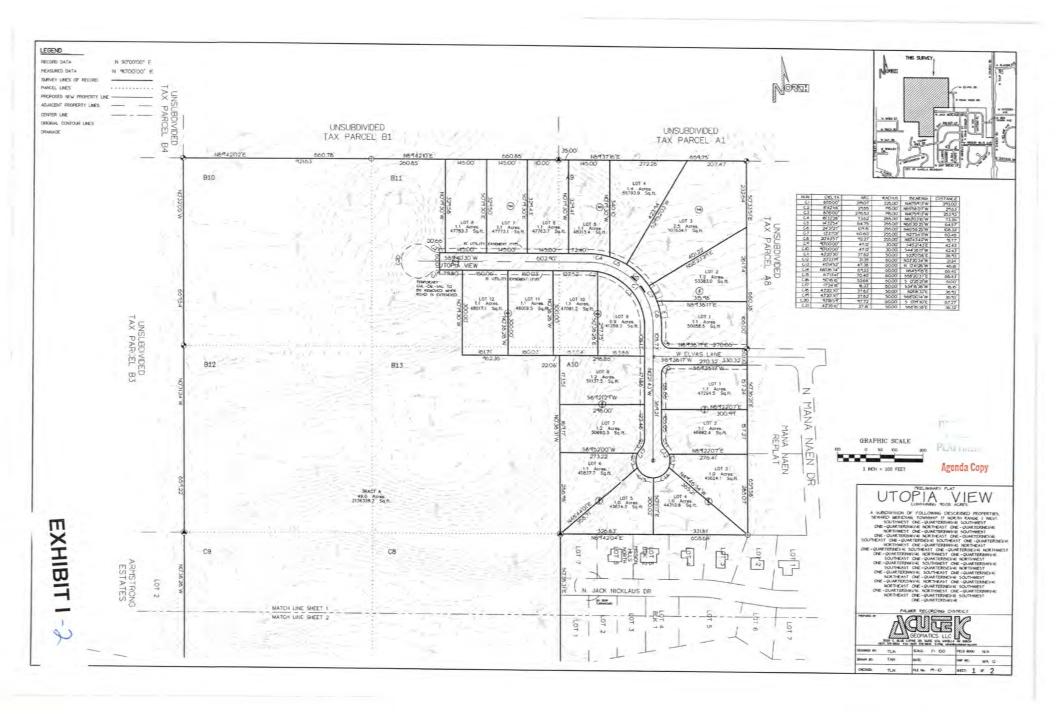
Sincerely,

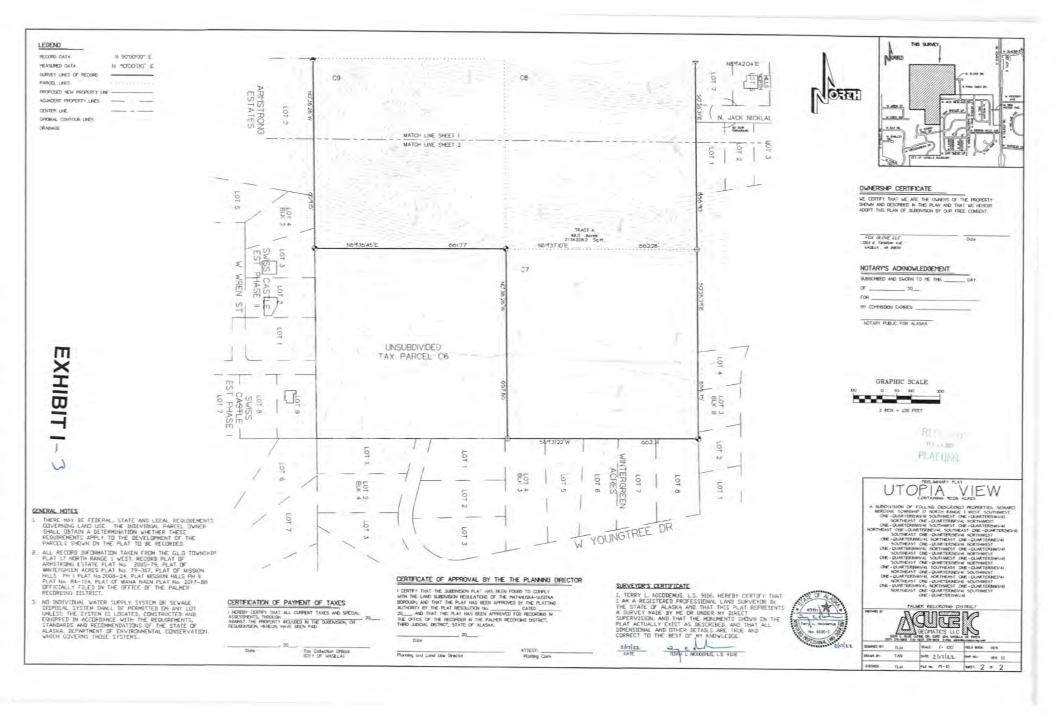
James Christopher

Right of Way & Compliance Technician

ENSTAR Natural Gas Company

James Christopher





Matthew Goddard

From: OSP Design Group <ospdesign@gci.com>

Sent: Wednesday, May 4, 2022 1:27 PM

To: Matthew Goddard
Cc: OSP Design Group
Subject: RE: RFC Utopia View (MG)

Attachments: RFC Packet.pdf; Agenda Plat.pdf

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Matthew,

In review GCI has no comments or objections to the plat, attached is the signed plat for your records.

Thanks,

MIREYA ARMESTO

GCI | Technician II, GIS Mapping m: 907-744-5166 | w: www.gci.com

From: Matthew Goddard < Matthew. Goddard@matsugov.us>

Sent: Friday, April 29, 2022 8:49 AM

To: regpagemaster@usace.army.mil; Planning <Planning@ci.wasilla.ak.us>; publicworks@ci.wasilla.ak.us; Tim Swezey <tim.swezey@mlccak.org>; psfisher@gci.net; Camden Yehle <camdenyehle@gmail.com>; davemtp@mtaonline.net;

lana@mtaonline.net; Fire Code <Fire.Code@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips

<Eric.Phillips@matsugov.us>; Elaine Flagg <Elaine.Flagg@matsugov.us>; Debbie Bakic <Debbie.Bakic@matsugov.us>;

Terry Dolan <Terry.Dolan@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Charlyn Spannagel

<Charlyn.Spannagel@matsugov.us>; Jacque Malette <jacque.malette@matsugov.us>; MSB Farmers

<MSB.Farmers@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Mark Whisenhunt

<Mark.Whisenhunt@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; Andy Dean

<Andy.Dean@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Fred

Wagner <Frederic.Wagner@matsugov.us>; pamela.j.melchert@usps.gov; John Aschenbrenner

<John.Aschenbrenner@matsugov.us>; robyundtmsb@gmail.com; mearow@matanuska.com; row@mtasolutions.com; andrew.fraiser@enstarnaturalgas.com; James Christopher <James.Christopher@enstarnaturalgas.com>;

row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>

Subject: RFC Utopia View (MG)

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Hello

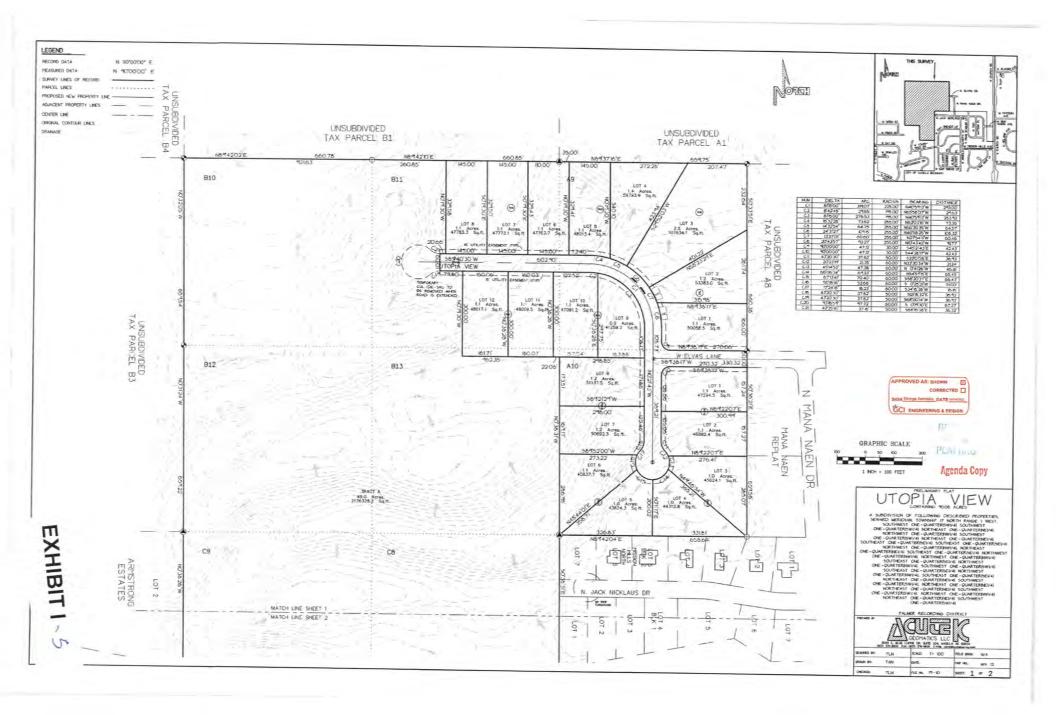
The following link is a Request for Comments for the proposed Utopia View subdivision. Comments are due by May 20, 2022. Let me know if you have any questions.

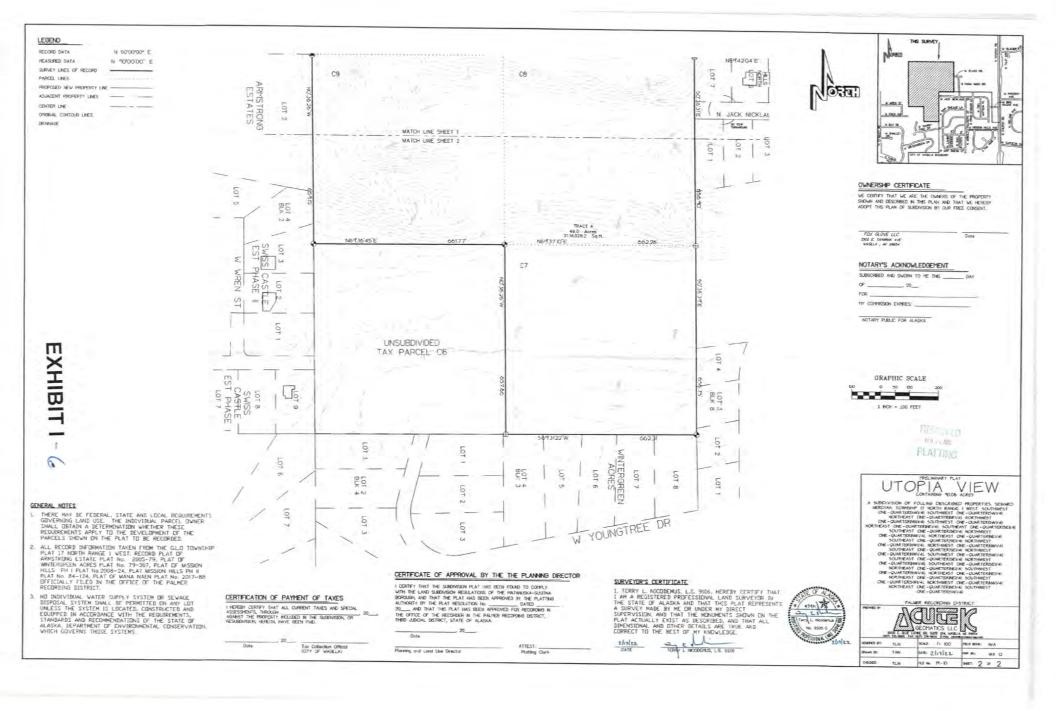
Utopia View

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

Matthew Goddard Platting Technician

Page 474





Matthew Goddard

From: Holly Sparrow hsparrow@mtasolutions.com

Sent: Friday, April 29, 2022 10:10 AM

To: Matthew Goddard

Subject: RE: RFC Utopia View (MG)

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Good morning,

MTA has reviewed the plat for Utopia View. MTA requests that "dedicate all rights of way to the Matanuska-Susitna Borough and grant all easements to the use shown" be added.

Thank you for the opportunity to comment.

Holly Sparrow, Right of Way Agent

1740 S. Chugach St., Palmer, Alaska 99645

Office: (907) 761-2599 | www.mtasolutions.com



Life, Technology, Together.

From: Matthew Goddard < Matthew. Goddard @matsugov.us>

Sent: Friday, April 29, 2022 8:49 AM

To: regpagemaster@usace.army.mil; Planning <Planning@ci.wasilla.ak.us>; publicworks@ci.wasilla.ak.us; Tim Swezey <tim.swezey@mlccak.org>; psfisher@gci.net; Camden Yehle <camdenyehle@gmail.com>; davemtp@mtaonline.net;

lana@mtaonline.net; Fire Code <Fire.Code@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips

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<John.Aschenbrenner@matsugov.us>; robyundtmsb@gmail.com; mearow@matanuska.com; Right of Way Dept.

<row@mtasolutions.com>; andrew.fraiser@enstarnaturalgas.com; James Christopher

<James.Christopher@enstarnaturalgas.com>; row@enstarnaturalgas.com; ospdesign@gci.com

Subject: RFC Utopia View (MG)

Hello,

The following link is a Request for Comments for the proposed Utopia View subdivision. Comments are due by May 20, 2022. Let me know if you have any questions.

Utopia View

TANUSKA-SUSITNA BOROUGH ATTING DIVISION

JEAST DAHLIA AVENUE ALMER, ALASKA 99645



51633B02L002 199 WORLEY LESLIE L & JENNA E 3060 W YOUNGTREE DR WASILLA AK 99623

FIRST CLASS

9962384197 HO43

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NOTIFICATION OF PUBLIC HEARING

The Matanuska-Susitna Borough Platting Board will consider the following:

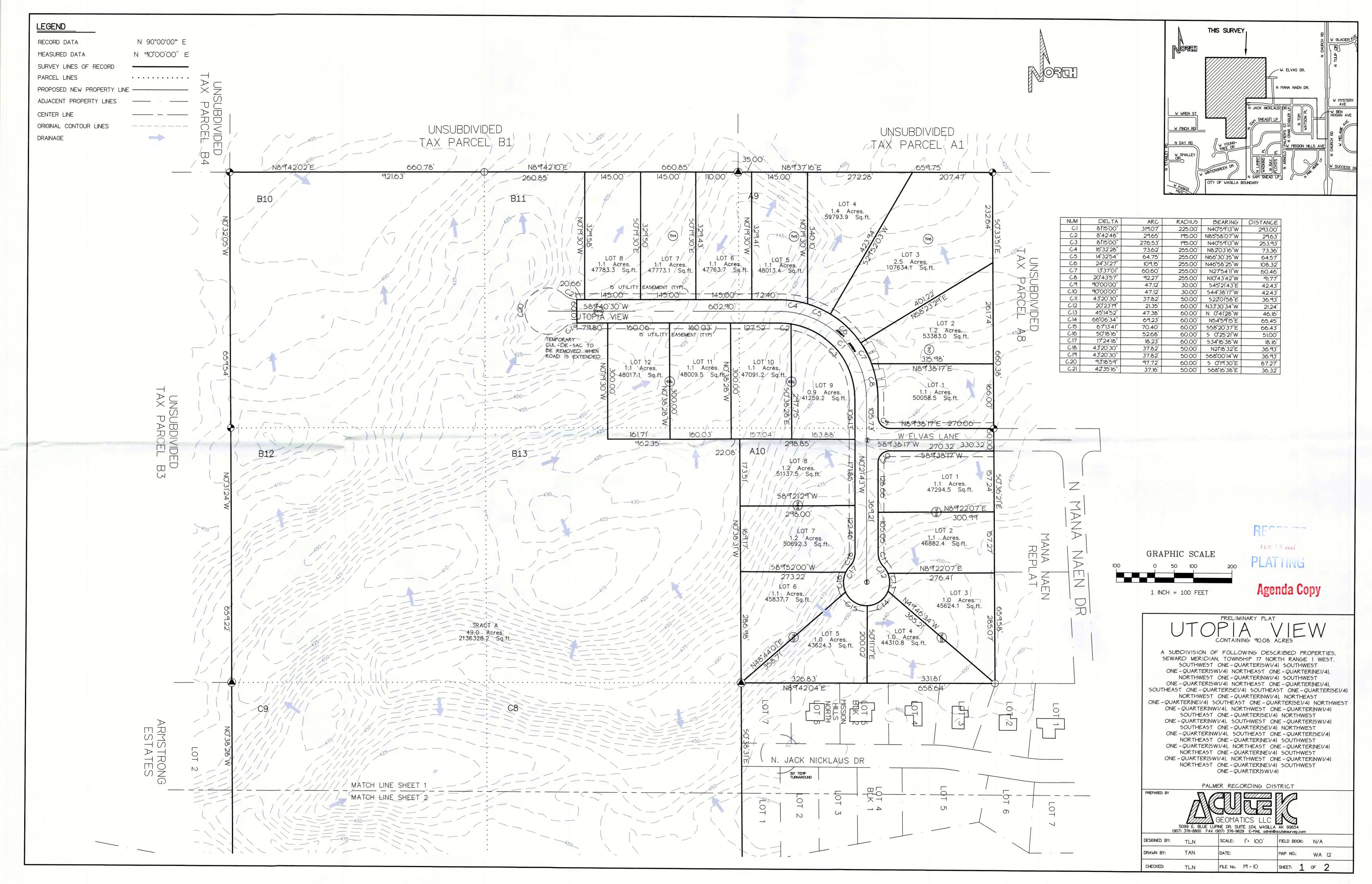
PETITIONER/OWNER: FOXGLOVE LLC

REQUEST: The request is to create 20 lots and one tract from Tax Parcels A9-10, B10-B13 and C7-C9 to be known as **UTOPIA VIEW**, containing 90.08 acres +/-. The property is located west of N. Church Road, east of N. Stanley Circle, and north of W. Parks Highway (Tax ID # 17N01W06C007-C009, B010-B013, A009-A010); within Section 06, Township 17 North, Range 01 West, Seward Meridian, Alaska. In the Meadow Lakes Community Council and in Assembly District #4.

The Matanuska-Susitna Borough <u>Platting Board</u> will hold a public hearing in the <u>Assembly Chambers</u> at the <u>Dorothy Swanda Jones Building</u>, 350 E. Dahlia Avenue, Palmer, Alaska on the proposed <u>Subdivision</u>. The public hearing is scheduled for <u>June 16, 2022</u>, starting at 1:00 p.m. We are sending you this notice as required by State Law and Borough Ordinances.

For comments regarding the proposed action, this form may be used for your convenience by filling in the information below and mail this notice to the MSB Platting Division, 350 E. Dahlia Avenue, Palmer, Alaska 99645 or e-main platting@matsugov.us. Comments received from the public after the platting packet has been written will be given to the Platting Board in a "Hand-Out" the day of the meeting. All public comments are due one (1) day prior, by 12:00 p.m. To request additional information please contact the Platting Technician, Matthew Goddard at (907) 861-7881. To view the agenda or meeting packet please go to the following link: www.matsugov.us/boards/platting.

[] No Objection [] Concern
Name: Jenna Worley address: 3000 W youngtrice Ir comments: I am concerned about the amount of
comments: I am concerned about the amount of
traffic this would add to church Road and
our neighborhard specifically, We already have
More traffic than the roads are designed
for. Adding 20 more # lots for homes is soing to
cause more congestion, more noise, more road wear
and tear all leading to worse driving (and living) condition Case # 2022-063 MG, Note: Vicinity map Located on Reverse Side





STAFF REVIEW AND RECOMMENDATIONS PUBLIC HEARING JUNE 16, 2022

PRELIMINARY PLAT: GLACIER VALLEY

LEGAL DESCRIPTION: SEC 34, T17N, R02E, SEWARD MERIDIAN AK

PETITIONERS: NICHOLAS & CHEN LING MASTRODICASA

SURVEYOR/ENGINEER: BULL MOOSE SURVEYING/SDCS LLC

ACRES: 24.9 + PARCELS: 21

REVIEWED BY: AMY OTTO-BUCHANAN CASE #: 2022-064

REQUEST: The request is to create 21 lots from Parcel 4, MSB Waiver 79-49-PWm, recorded as 73-331w, to be known as GLACIER VALLEY, containing 24.9 acres +/-. Petitioner will dedicate and construct interior streets to Borough residential street standards, to include one permanent cul-de-sac and one temporary cul-de-sac. Parcel is located north of E. Republican Way and south of S. Bodenburg Loop; lying within the SW ¼ SE ¼ Section 34, Township 17 North, Range 02 East, Seward Meridian, Alaska.

EXHIBITS

Vicinity Map and Aerial Photos	EXHIBIT A – 4 pgs			
Geotechnical Report	EXHIBIT B – 15 pgs			

AGENCY COMMENTS

Department of Public Works Operations & Maintenance	EXHIBIT $C - 1$ pg
Department of Emergency Services	EXHIBIT $D-1$ pg
Planning	EXHIBIT $E-1$ pg
ADF&G	EXHIBIT $F - 1 pg$
Utilities	EXHIBIT G-3 pgs

<u>PISCUSSION</u>: The proposed subdivision is south of S. Bodenburg Loop and north of E. Republican Way. Petitioner is creating 21 lots. Access will be from 60' wide rights-of-way to be dedicated and constructed. S. Revere Street will connect to S. Revere Street in Colonial Fields South. The unnamed street east to west will end in a permanent cul-de-sac. All streets will be constructed to Borough residential standard streets, to include the stub road of S. Revere Way (see *Recommendation #4*). Petitioner will not be connecting to S. Derby Drive, as that right-of-way will be vacated when Chipman Acres records.

<u>Soils Report</u>: A geotechnical report was submitted (**Exhibit B**), pursuant to MSB 43.20,281(A). Dan Steiner, PE, Steiner Design & Construction Services, LLC, notes ten testholes were excavated. Testhole location map and soils logs are attached. All testholes included gravely sands and all encountered groundwater. However, the depth of the groundwater is compatible with conventional septic systems. Each lot has 10,000 square feet of contiguous useable septic area and 10,000 square feet of useable building area. Existing drainage pattern is from north to south; elevation change is approximately 4'. There are no drainage

issues with this site. The platting action will required construction of approximately 2,100' of new road. A number of drainage basins will be constructed along the proposed roads. A drainage plan is included at **Exhibit B-3**. Average Daily Traffic (ADT) calculations are at **Exhibit B-4**.

Comments: Department of Public Works Operations & Maintenance (Exhibit C) questions if seasonal high water table was determined. Drainage report to be submitted a least seven days prior to the desired preconstruction conference date (see *Recommendation #4*). Department of Emergency Services (Exhibit D) questions if there are any roadway improvements included to handle the increased traffic onto E. Republican Way. Staff notes Average Daily Traffic count out to S. Old Glenn Highway is 810; a count of 1,000 requires upgrade of the street. Planning (Exhibit E) notes the petitioner should consider extending the right-of-way of the east-west road to connect to the parcel to the west; this would allow for a more connected street network as the area is subdivided and built-out. The MSB Planning Division generally discourages cul-de-sacs as they reduce connectivity, increase travel time, and fore cars to use more local roads. Staff notes the petitioner is connecting to the north, which will create interconnectivity once the phases of Colonial Fields South master plan are built out. The reason for not connecting to the west is the main electrical transmission line within the 100' wide utility easement. There is access to the west adjoining parcel from 50' wide access easements on the state land, and from the Section Line Easements on the south. ADF&G (Exhibit F) has no objections.

<u>Utilities</u>: (Exhibit G) MTA has no comments. GCI has no objections. Enstar has no comments or recommendations. MEA did not respond.

At the time of staff report write-up, there were no responses to the Request for Comments from US Army Corps of Engineers; Community Council Butte; Fire Service Area #2 Butte; Road Service Area #26 Greater Butte; MSB Community Development, Assessments, Development Services, or Pre-Design Division; or MEA.

CONCLUSION: The preliminary plat of GLACIER VALLEY is consistent with AS 29.40.070 Platting Regulations and MSB 43.15.016 Preliminary Plats. There were no objections from any federal or state agencies, Borough departments, or utilities. There were no objections to the plat from the public in response to the Notice of Public Hearing. Legal and physical access will exist to the proposed lots, consistent with MSB 43.20.100 Access Required, MSB 43.20.120 Legal Access and MSB 43.20.140 Physical Access. Frontage for the subdivision will exist, pursuant to MSB 43.20.320 Frontage. A soils report was submitted, pursuant to MSB 43.20.218(A)(1).

FINDINGS OF FACT

- The plat of Glacier Valley consistent with AS 29.40,070 Platting Regulations and MSB 43.15.016 Preliminary Plats.
- A soils report was submitted, pursuant to MSB 43.20.281(A)(1). All lots have the required septic area and building area.
- 3. All lots will have the required frontage pursuant to MSB 43.20.320.
- 4. At the time of staff report write-up, there were no responses to the Request for Comments from US Army Corps of Engineers; Community Council Butte; Fire Service Area #2 Butte; Road Service Area #26 Greater Butte; MSB Community Development, Assessments, Development Services, or Pre-Design Division; or MEA.
- 5. There were no objections from any federal or state agencies, Borough departments, or utilities.

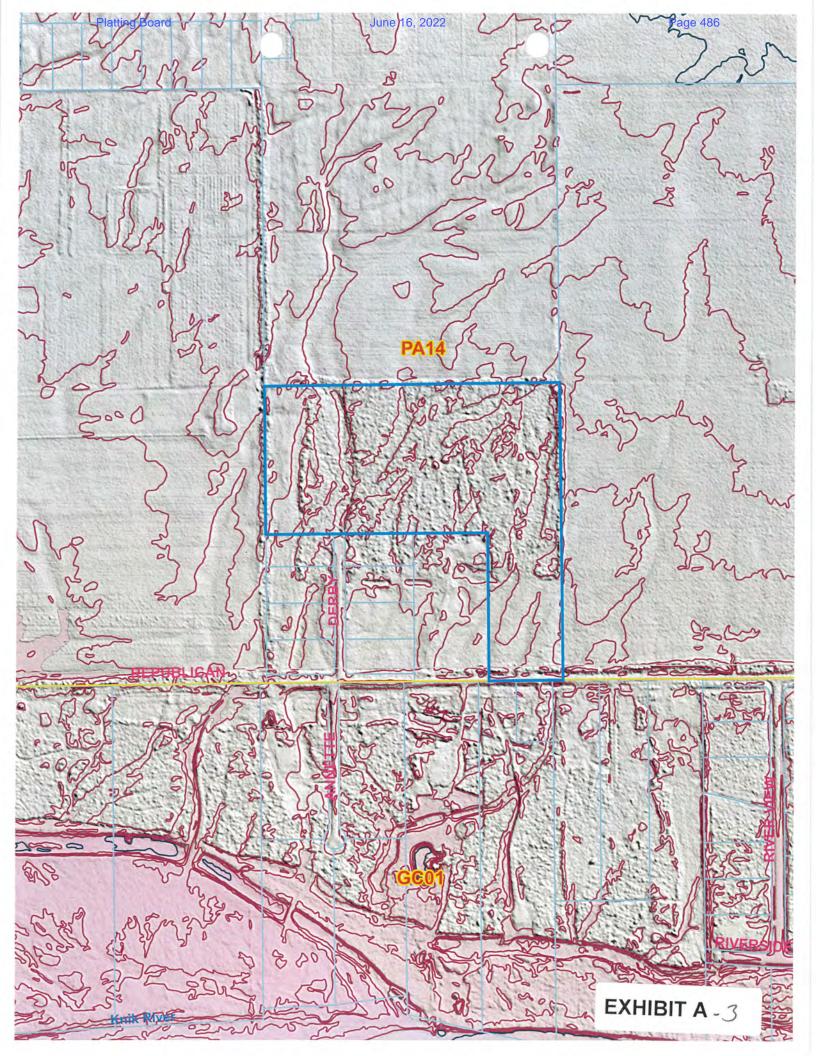
Glacier Vly 2022-064 06/19/2022 6. There were no objections from the public in response to the Notice of Public Hearing.

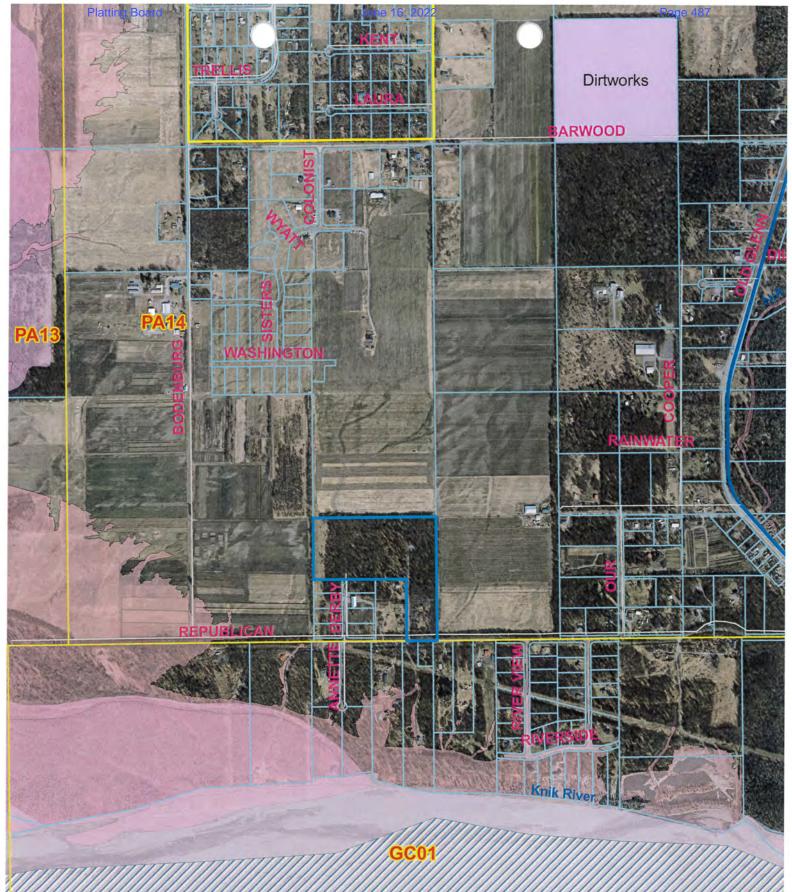
RECOMMENDATIONS OF CONDITIONS OF APPROVAL

Suggested motion: I move to approve the preliminary plat of Glacier Valley, Section 34, Township 17 North, Range 02E, Seward Meridian, Alaska, contingent on staff recommendations:

- Taxes and special assessments must be paid in full for the year of recording, pursuant to MSB 43.15.053(F) and AS 40.15.020. Pay taxes and special assessments (LIDs), by CERTIFIED FUNDS OR CASH.
- 2. Provide updated Certificate to Plat executed within seven (7) days of recording of plat and submit Beneficiary Affidavit for any holders of a beneficial interest.
- 3. Pay postage and advertising fees.
- 4. Construct interior streets, permanent cul-de-sac and stub road to MSB residential street standards:
 - a. Submit cost estimate, arrange a pre-construction meeting with Department of Public Works (DPW), pay inspection fee and obtain a Notice to Proceed from Platting staff. Submit street inspection reports as required by Section F1.4, F1.5 and F1.6 of the Subdivision Construction Manual.
 - b. Provide DPW acceptance of the road to Platting staff.
 - c. Platting staff to approve all road names.
 - d. Provide as-built of streets once construction is complete.
- 5. Show all easements of record on each final plat.
- 6. Submit recording fees, payable to Department of Natural Resources (DNR).
- 7. Submit final plat in full compliance with Title 43.







GEO2

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5900 W. Dewberry Dr Wasilla, AK 99623



Phone: (907) 357-5609 Fax: (907) 357-5608

APR 2 7 2022

March 9, 2022

Fred Wagner Platting Officer Matanuska-Susitna Borough 350 E. Dahlia Ave. Palmer, AK 99645-6488

Re: Engineering Report

Mastrodicasa Subdivision - A Subdivision of Lot D7

Section 34, T17N, R2E, Seward Meridian

Mr. Wagner,

This letter is to serve as the engineering report for the above referenced subdivision and platting action. The platting action is to replat one parcel of approximately 25 acres into 21 lots. The lots range in size from 0.93 acres to 2.09 acres. Access to the proposed subdivision is from Republican Way.

Site Topography

There is very little change in topography on this existing parcel. The existing drainage pattern is from the north to the south. However, the change in elevations is only about 4'. There are areas that, based on the MSB topographic information, that are virtually flat. With the current topography there are areas over 10,000 square feet on each proposed parcel that are usable building areas.

Drainage Plan

Currently, there are no drainage issues with this site. The platting action of this subdivision will require the construction of approximately 2,100 feet of new road. To take care of the increase in runoff from this subdivision, a number of drainage basins will be constructed along the proposed roads. The overall existing drainage patterns of the existing parcel will not be altered by this new subdivision.

A drainage plan is included with this report (Figure 1). This figure shows the proposed location of the drainage basins and culverts that will be part of the subdivision construction. Once this plat has been reviewed and accepted, a final drainage report will be prepared. This will include the final number and location of drainage improvements associated with this project.

Mr. Fred Wagner Matanuska-Susitna Borough Engineering Report – Mastrodicasa Subdivision

Page 2 of 2

Roadway Construction

As stated, there will be approximately 2,100 feet of new road construction. All roads will be constructed to residential standards. Access to the proposed roads will be from Republican Way.

Average Daily Traffic (ADT)

An ADT drawing has been prepared showing the ADT at all intersections from the Old Glenn Highway to the proposed subdivision. Republican Way is classified as a Residential Subcollector. This road is allowed to have a maximum ADT of 1000. With the proposed subdivision, the ADT for this road was calculated to be 810. See Figure 2.

Soils Investigation

Soil information is needed to determine if existing soil conditions are suitable for onsite wastewater disposal systems. This includes soils capable of supporting a soil absorption system that meets all Alaska Department of Environmental Conservation (ADEC) requirements including offset requirements from groundwater and bedrock.

10 test holes were excavated to determine existing soil conditions. Figure 3 show the test hole locations. Logs of the test holes are included with this report. The soils were very consistent. All holes included gravely sands. All holes also encountered groundwater. However, the depth of the groundwater is compatible with conventional septic systems.

The soil conditions allow each lot to have 10,000 square feet of usable septic area.

Summary

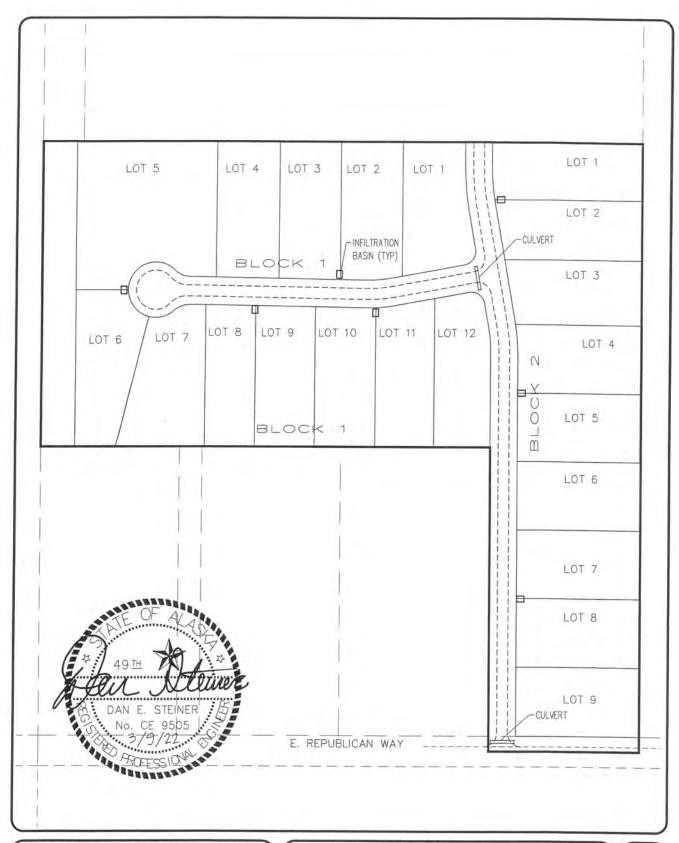
Based on the soils data and existing topography, there is a minimum of 10,000 square feet of contiguous septic area and a minimum of 10,000 square feet of usable building area within each of the proposed lots as required by the Matanuska-Susitna Borough. The overall drainage pattern of the existing parcel will not be altered by this platting action

Sincerely.

Dan Steiner, P.E.

Manager

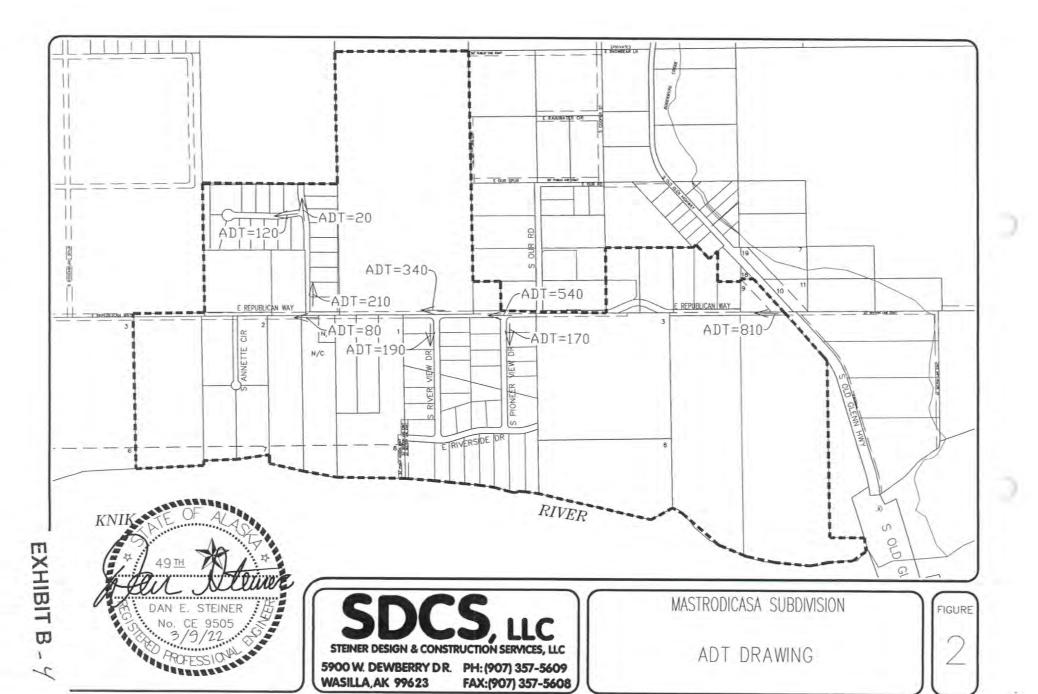
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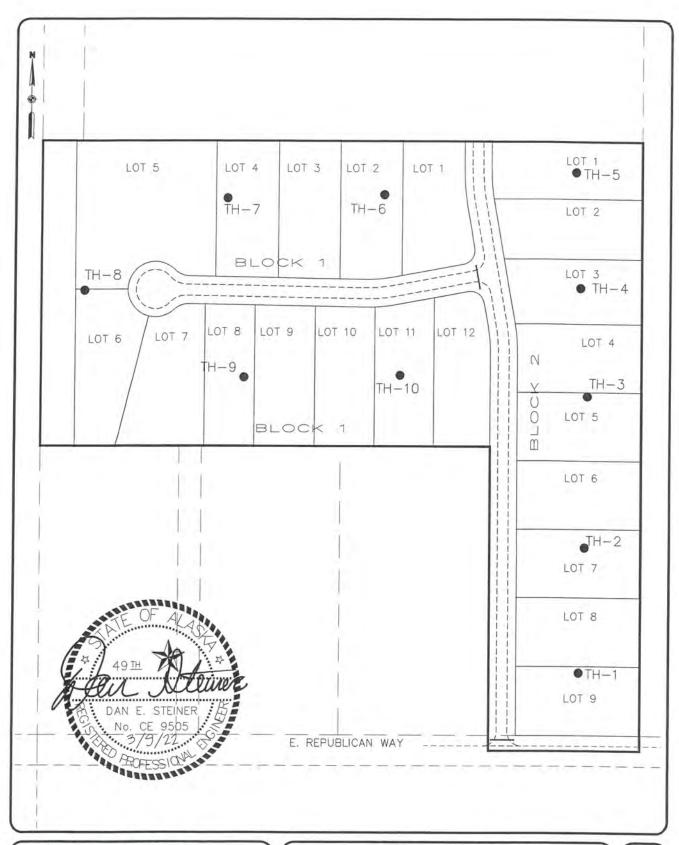


5900 W. DEWBERRY D.R. PH: (907) 357-5609 WASILLA, AK 99623 FAX: (907) 357-5608 MASTRODICASA SUBDIVISION

DRAINAGE IMPROVEMENTS

FIGURE





SDCS, LLC STEINER DESIGN & CONSTRUCTION SERVICES, LLC 5900 W. DEWBERRY D.R. PH: (907) 357-5609

FAX:(907) 357-5608

WASILLA, AK 99623

MASTRODICASA SUBDIVISION

TEST HOLE LOCATIONS

FIGURE

5900 W. Dewberry Dr. Wasilla, AK 99623 Phone: (907) 357-5609 Fax: (907) 357-5608

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5900 W. Dewberry Dr. Wasilla, AK 99623 Phone: (907) 357-5609 Fax: (907) 357-5608

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5900 W. Dewberry Dr. Wasilla, AK 99623

Phone: (907) 357-5609 Fax: (907) 357-5608

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5900 W. Dewberry Dr. Wasilla, AK 99623 Phone: (907) 357-5609 Fax: (907) 357-5608

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5900 W. Dewberry Dr. Wasilla, AK 99623 Phone: (907) 357-5609 Fax: (907) 357-5608

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5900 W. Dewberry Dr. Wasilla, AK 99623

Phone: (907) 357-5609 Fax: (907) 357-5608

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22-			COMMENTS						
			PERFORMED	BY:			DATE:		

5900 W. Dewberry Dr. Wasilla, AK 99623 Phone: (907) 357-5609 Fax: (907) 357-5608

TEST HOLE # PERFORMED BY: PROJECT:	9 DATE: 1/18/2022 Dan Steiner, P.E. Mastrodicasa Subdivision						3/7/22 30 ARCTESS 10 A		
PROJECT NO.	21-	041				SEAL			
DEPTH, FT		SOIL TYPE							
1.		soil / roots and o		SLOPE		SITE	PLAN		
2-	0.5' - 1.5'	Brown Sandy w/ Roots (OL		m					
3-									
4-									
5-									
6-									
7-	1,5'-14'	Gravely Sand	l w/						
8- - 9-		cobbles (SP)							
10-			GROUNDWA		es	SLOPE			
11-			AT WHAT D	-53 - 50	0'				
12-			DEPTH AFT	-					
13-			MONITORIN	G?n	/a				
14-							ATION TE	ST	
- BOH			READING	DATE	TIM	ΙE	NET TIME	DEPTH TO WATER	NET DROP
16-									
17-									
18-									
19-									
20-			PERC RATE	/min/in) PE	BC HOL	E DIA	APPLICATION RATE:	g/d/sf
21-					, , , ,			ft	grafa
22-			COMMENTS			200 90.			
			COMMENTS						
			PERFORME	D BY;				DATE:	

5900 W. Dewberry Dr. Wasilla, AK 99623

Phone: (907) 357-5609 Fax: (907) 357-5608

TEST HOLE # PERFORMED BY: PROJECT:	10 DATE: 1/18/2022 Dan Steiner, P.E.					No. CE 9505			
	Mastrodicasa Subdivision					- ARCFESS 10V			
PROJECT NO.	21-041					SEAL			
DEPTH, FT		SOIL TYPE					SEAL		
1-	0-0.5' Topsoil / roots and organcis				SIT	SITE PLAN			
2-	0.5' - 1.5' Brown San w/ Roots (0				- 11				
3-									
4-									
5-									
6- - 7-									
8-	1.5'-14'	Gravely Sand cobbles	d w/						
9-		(SP)							
10-			GROUNDWA ENCOUNTER		SLO	PE			
11-			AT WHAT DE	PTH?9.5	5'				
12-			DEPTH AFTE		a L				
13-									
- BOH			READING	DATE	TIME	OLATION TE NET TIME	ST DEPTH TO WATER	NET DROP	
15-					7.1110	7,27,11112	DEL TITTO WATER	NET DROP	
16-									
17- - 18-						1			
19-									
20-									
21-			PERC. RATE (min/in) PERC. HOLE DIA			OLE DIA.	APPLICATION RATE:g/d/sf		
22-			TEST RUN BETWEENft &				_ft		
			COMMENTS:						
			DEBEODMED DV						
			PERFORMED BY:				DATE:		

From: Jamie Taylor

Sent: Wednesday, May 18, 2022 9:55 AM

To: Amy Otto-Buchanan

Cc: Elaine Flagg

Subject: RE: RFC Glacier Vly #22-064

Soils: Was seasonal high water table determined?

Drainage: Submit drainage report at least 7 days prior to desired preconstruction conference date.

Jamie Taylor, PE (she/her)
Civil Engineer
Matanuska-Susitna Borough
Department of Public Works
t: 907-861-7765 c: 907-355-9810

jamie.taylor@matsugov.us http://www.matsugov.us/

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Tuesday, May 3, 2022 3:46 PM

To: Percy, Colton T (DFG) <<u>colton.percy@alaska.gov</u>>; <u>regpagemaster@usace.army.mil</u>; <u>pamela.j.melchert@usps.gov</u>; John Aschenbrenner <<u>John.Aschenbrenner@matsugov.us</u>>; <u>timhaledistrict1@gmail.com</u>; <u>butteakcc@gmail.com</u>; <u>Mike and Elaine Shields <<u>meshie@mtaonline.net</u>>; <u>snowshark1@hotmail.com</u>; <u>Fire Code <<u>Fire.Code@matsugov.us</u>>; <u>Jill.Irsik@matsugov.us</u>>; <u>Eric Phillips@matsugov.us</u>>; <u>Brad Sworts@matsugov.us</u>>; <u>Elaine</u></u></u>

Flagg < Elaine. Flagg@matsugov.us >; Jamie Taylor < Jamie. Taylor@matsugov.us >; Terry Dolan

<Terry.Dolan@matsugov.us>; msb.hpc@gmail.com; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; MSB

Farmers < MSB.Farmers@matsugov.us>; Planning < MSB.Planning@matsugov.us>; Alex Strawn

<<u>Alex.Strawn@matsugov.us</u>>; Fred Wagner <<u>Frederic.Wagner@matsugov.us</u>>; Permit Center

<Permit.Center@matsugov.us>; Mark Whisenhunt <Mark.Whisenhunt@matsugov.us>; Theresa Taranto

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row@mtasolutions.com; Andre < Andre@fixedheight.com >; James Christopher

<James.Christopher@enstarnaturalgas.com>; row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>

Subject: RFC Glacier Vly #22-064

The following link contains a Request for Comments, Glacier Valley, #22-064, to subdivide 117N02E34D007. Comments are due by May 26, 2022. Please let me know if you have questions. Thanks, A.

Glacier Valley

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

Amy Otto-Buchanan
Platting Technician
amy.otto-buchanan@matsugov.us

From: Fire Code

Sent: Monday, May 23, 2022 10:40 AM

To: Amy Otto-Buchanan

Subject: RE: RFC Glacier Vly #22-064

Amy,

Are there any roadway improvements included to handle the increased traffic onto Republican Way? Don



Donald Cuthbert
Fire Marshal
Fire & Life Safety Division
Central Mat-Su Fire Department
(907) 861-8030
FireCode@matsugov.us

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Tuesday, May 3, 2022 3:46 PM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; timhaledistrict1@gmail.com; butteakcc@gmail.com; Mike and Elaine Shields <meshie@mtaonline.net>; snowshark1@hotmail.com; Fire Code <Fire.Code@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Elaine Flagg <Elaine.Flagg@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Terry Dolan

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row@mtasolutions.com; Andre <Andre@fixedheight.com>; James Christopher

<James.Christopher@enstarnaturalgas.com>; row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com> Subject: RFC Glacier Vly #22-064

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Glacier Valley

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

Amy Otto-Buchanan
Platting Technician
amy.otto-buchanan@matsugov.us
861-7872

From: Adam Bradway

Sent: Monday, May 23, 2022 1:21 PM

To: Amy Otto-Buchanan

Subject: RE: RFC Glacier Vly #22-064

Comments

Transportation:

The petitioner should consider extending the ROW of the proposed East-West road to stub connect to the parcel to the west, this would allow for a more connected street network as the area is subdivided and built out. The Matanuska-Susitna Borough Planning Division generally discourages cul-du-sacs as they reduce connectivity, increase travel times, and force cars to use more local roads.

Adam Bradway

Matanuska-Susitna Borough: Planner II 350 E Dahlia Ave, Palmer, Alaska (907) 861-8608

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Tuesday, May 3, 2022 3:46 PM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; timhaledistrict1@gmail.com; butteakcc@gmail.com; Mike and Elaine Shields <meshie@mtaonline.net>; snowshark1@hotmail.com; Fire Code <Fire.Code@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Elaine

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<James.Christopher@enstarnaturalgas.com>; row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com> Subject: RFC Glacier Vly #22-064

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Glacier Valley

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Amy Otto-Buchanan
Platting Technician
amy.otto-buchanan@matsugov.us
861-7872

From: Percy, Colton T (DFG) <colton.percy@alaska.gov>

Sent: Tuesday, May 10, 2022 9:43 AM

To: Amy Otto-Buchanan

Subject: RE: RFC Glacier Vly #22-064

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Hi Amy,

Alaska Department of Fish and Game has reviewed the proposed platting actions and has no objections. The proposed actions will not adversely affect fish, wildlife, habitat, or public access to public lands and waters. Thank you for the opportunity to review and comment on these platting actions.

Colton T. Percy

Habitat Biologist
Access Defense Program
Alaska Department of Fish and Game
Division of Wildlife Conservation
333 Raspberry Rd
Anchorage, AK 99518
907-267-2118

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Tuesday, May 3, 2022 3:46 PM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; timhaledistrict1@gmail.com; butteakcc@gmail.com; Mike and Elaine Shields <meshie@mtaonline.net>; snowshark1@hotmail.com; Fire Code <Fire.Code@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; Brad Sworts

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<James.Christopher@enstarnaturalgas.com>; row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com>

Subject: RFC Glacier Vly #22-064

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The following link contains a Request for Comments, Glacier Valley, #22-064, to subdivide 117N02E34D007. Comments are due by May 26, 2022. Please let me know if you have questions. Thanks, A.

Glacier Valley

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Amy Otto-Buchanan Platting Technician

From: OSP Design Group <ospdesign@gci.com>

Sent: Friday, May 6, 2022 9:30 AM

To: Amy Otto-Buchanan
Cc: OSP Design Group

Subject: RE: RFC Glacier Vly #22-064
Attachments: RFC Packet.pdf; Agenda Plat.pdf

[EXTERNAL EMAIL - CAUTION; Do not open unexpected attachments or links.]

Amy,

In review GCI has no comments or objections to the plat, attached is the signed plat for your records.

Thanks,

MIREYA ARMESTO

GCI | Technician II, GIS Mapping m: 907-744-5166 | w: www.gci.com

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Tuesday, May 3, 2022 3:46 PM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; timhaledistrict1@gmail.com; butteakcc@gmail.com; Mike and Elaine Shields <meshie@mtaonline.net>; snowshark1@hotmail.com; Fire Code <Fire.Code@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Elaine

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Subject: RFC Glacier Vly #22-064

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Glacier Valley

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Amy Otto-Buchanan
Platting Technician
amy.otto-buchanan@matsugov.us
861-7872

From: Holly Sparrow hsparrow@mtasolutions.com

Sent: Wednesday, May 4, 2022 9:51 AM

To: Amy Otto-Buchanan

Subject: RE: RFC Glacier Vly #22-064

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Good morning,

MTA has reviewed the plat for Glacier Valley. MTA has no comments.

Thank you for the opportunity to comment.

Holly Sparrow, Right of Way Agent

1740 S. Chugach St., Palmer, Alaska 99645

Office: (907) 761-2599 | www.mtasolutions.com



Life, Technology, Together.

From: Amy Otto-Buchanan < Amy. Otto-Buchanan@matsugov.us>

Sent: Tuesday, May 3, 2022 3:46 PM

To: Percy, Colton T (DFG) <colton.percy@alaska.gov>; regpagemaster@usace.army.mil; pamela.j.melchert@usps.gov; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; timhaledistrict1@gmail.com; butteakcc@gmail.com; Mike and Elaine Shields <meshie@mtaonline.net>; snowshark1@hotmail.com; Fire Code <Fire.Code@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Elaine Flagg <Elaine.Flagg@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Terry Dolan

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Dept. <row@mtasolutions.com>; Andre <Andre@fixedheight.com>; James Christopher

<James.Christopher@enstarnaturalgas.com>; row@enstarnaturalgas.com; OSP Design Group <ospdesign@gci.com> Subject: RFC Glacier Vly #22-064

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Glacier Valley

Please open in Chrome or copy & paste. Opening in Microsoft Edge creates viewing issues.

Amy Otto-Buchanan



ENSTAR Natural Gas Company
A DIVISION OF SEMCO ENERGY
Engineering Department, Right of Way Section
401 E. International Airport Road
P. O. Box 190288
Anchorage, Alaska 99519-0288
(907) 277-5551
FAX (907) 334-7798

May 3, 2022

Matanuska-Susitna Borough, Platting Division 350 East Dahlia Avenue Palmer, AK 99645-6488

To whom it may concern:

ENSTAR Natural Gas Company has reviewed the following preliminary plat and has no comments or recommendations.

 GLACIER VALLEY SUBDIVISION (MSB Case # 2022-064)

If you have any questions, please feel free to contact me at 334-7944 or by email at james.christopher@enstarnaturalgas.com.

Sincerely,

James Christopher

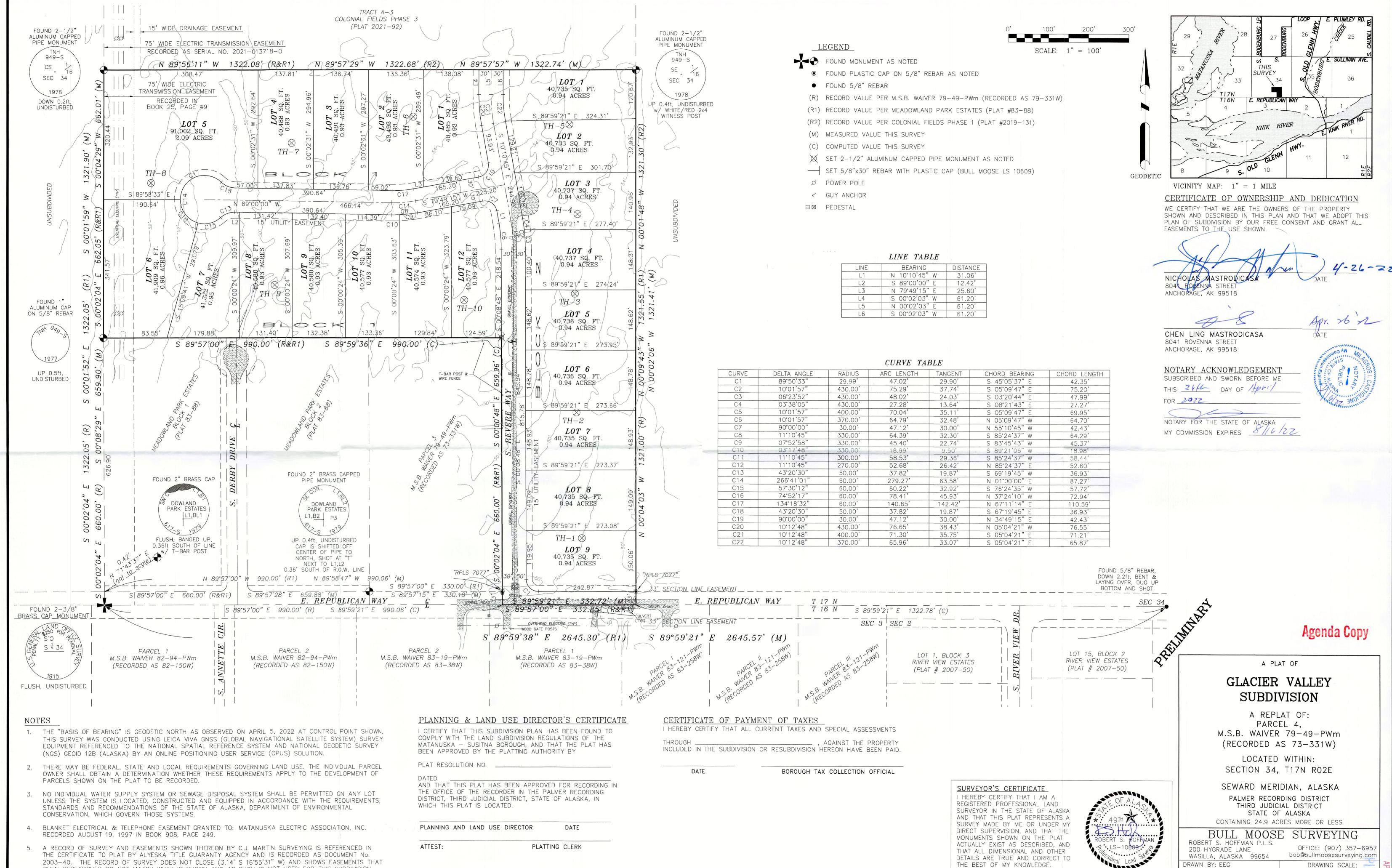
Right of Way & Compliance Technician

ENSTAR Natural Gas Company

ames Christopher

WHEN RESEARCHED DO NOT MATCH WHAT IS SHOWN AND AS SUCH IS NOT USED FOR THIS SUBDIVISION.

6. CONTOURS TAKEN FROM MAT-SU BOROUGH LIDAR PROJECT OF 2011.



RECEIVED

1"=100'

SHEET

1 OF 1

DATE: 4/22/2022

CHECKED BY: RSH

4/22/2022

ROBERT S. HOFFMAN, P.L.S.

LS 10609 PROFESSIONAL LAND SURVEYOR