



Matanuska-Susitna Borough Asset Management Plan: Sand and Gravel Resources

northern  **economics inc.**

in association with
Tom Crafford and Associates

Prepared for the
**Matanuska-Susitna
Borough**

August 2005

Matanuska-Susitna Borough Asset Management Plan: Sand and Gravel Resources

Prepared for

The Matanuska-Susitna Borough

August, 2005

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Abbreviations

ADL	Alaska Division of Lands
CDP	Census District Place
ESRI	Earth Sciences Resource Institute
GIS	Geographical Information System
MSB	Matanuska-Susitna Borough
RFP	Request for Proposal
ROW	Right-of-way
TCA	Tom Crafford and Associates
USDA	U.S. Department of Agriculture

Executive Summary

In the spring of 2004, the Matanuska-Susitna Borough (MSB) issued a Request for Proposals (RFP) to prepare a sand and gravel asset management plan.

Northern Economics, Inc. teamed with Tom Crafford & Associates (TCA) to provide both geological and economic services related to the resource. The team's proposal was successful, and a notice to proceed was issued in July.

This draft report, coupled with the Geographical Information System (GIS) files on a compact disk (CD), presents project results. This gravel asset management plan identifies parcels that contain commercial quantities of sand and gravel and that are socially and economically feasible to develop.

This is the first phase of the project; MSB staff will issue notices to community councils and other adjacent landowners. Responses will be incorporated into the final project report.

Project Scope

The MSB designed this plan as an inventory, for the purpose of classifying parcels as "material lands" and to update its material resource inventory.

Nominated parcels had to meet three criteria:

- be within one mile of an access corridor (road, rail, or water);
- contain commercial quantities of sand and gravel; and
- be economically feasible to develop.

The Borough's core area west of Palmer was excluded from the study area. Figure ES-1 is a General Location Map.

After nomination, each parcel was researched to meet the Borough's classification process, including a preliminary best interest finding. Only existing information was specified for use on the project, including maps, records, and tables; no field work such as drilling or excavation was planned.

TCA developed the GIS base, with approximately 580 initial parcels (2003), using existing information (maps, aerial photographs, plats), and conducted limited field verification of all parcels that were accessible by road or trails.

All parcels are considered to have *high* potential for sand and gravel materials, but final development should be based on actual test drilling, core sampling, and confirmation of gravel presence.

Table ES-1. Nominated Gravel Parcels, Mat-Su Borough.

Gravel Parcel	Location	Resource Acres
Near Term		
28N05W31	North Parks	197
26N05W05	North Parks	179
Long Term		
26N06W28	North Parks	265
26N07W25	North Parks	202
25N04W17	North Parks	154
25N04W32	North Parks	579
24N04W19	North Parks	101
24N05W25	North Parks	319
23N04W02	North Parks	411
Near Term		
16N04W03	Point MacKenzie	485
15N04W28(N)	Point MacKenzie	132
15N04W28(S)	Point MacKenzie	95
15N04W32	Point MacKenzie	72
14N04W22	Point MacKenzie	117
Near Term		
17N02W02	Wasilla	116
Long Term		
16N03W01	Wasilla	636
		4,060

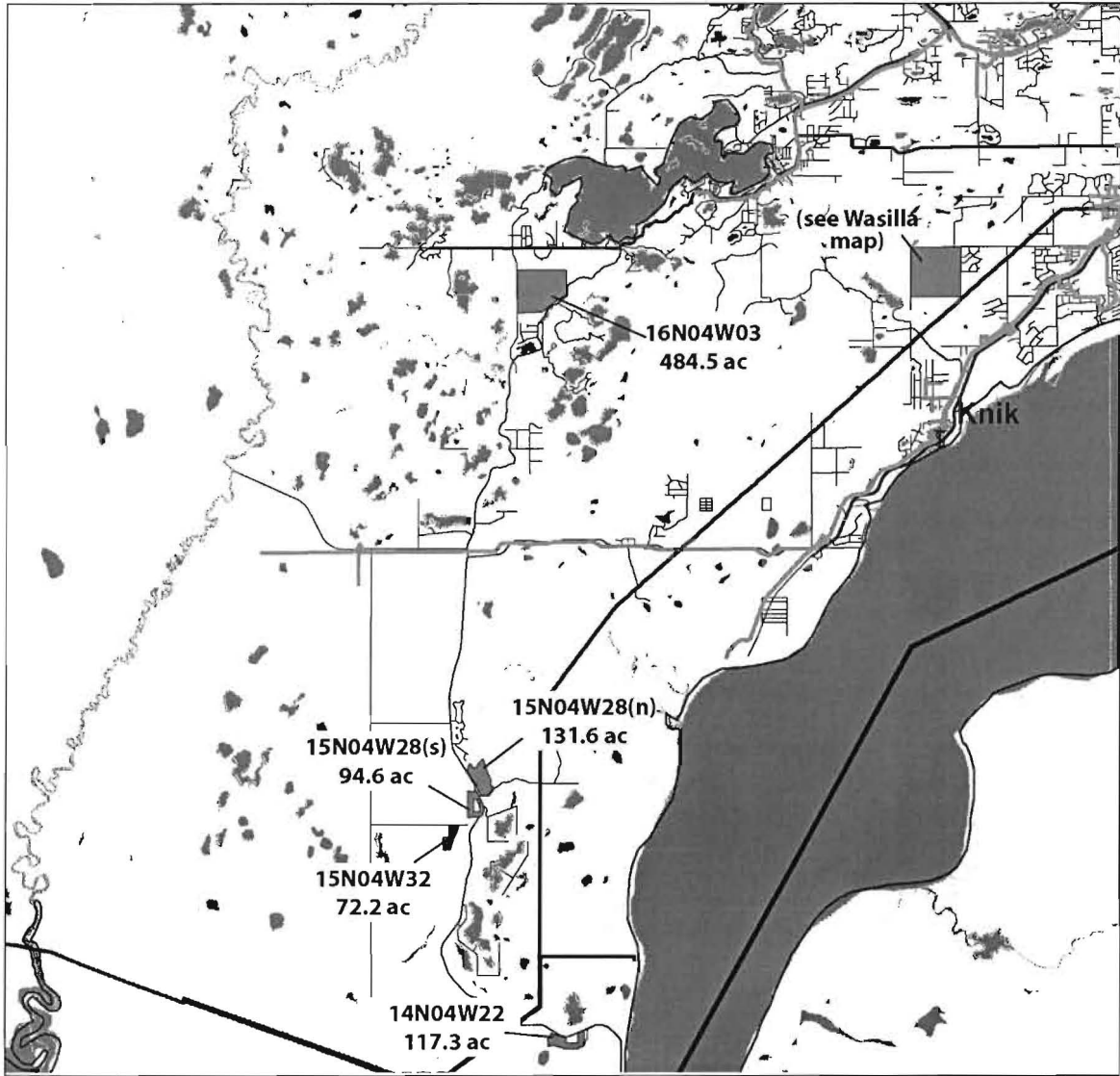
Note: Resource Acres are based on GIS analysis of proposed sand and gravel deposits. They are net projected acres of the gravel resource.

Parcel Maps

General location maps for the 16 parcels are shown in the following three figures.

These maps have been simplified to highlight the specific parcels and their location. More detail is contained within the GIS, including base maps and resource layers.

Figure ES-3. Point MacKenzie General Location Map.



Gravel Demand, Export

Total estimated market demand for gravel in the MSB and the Municipality of Anchorage is estimated at 4.9 million tons in 2004 and increasing to 5.5 million tons by 2010. Almost all of this gravel is mined in the MSB.

There are three main markets for MSB sand and gravel:

- Local markets, near end-users in the MSB area
- Regional markets, generally requiring longer distance truck haul or Alaska Railroad transport, such as Anchorage
- Export markets, off-shore and requiring either barge or ship transport

Local markets are generally met by truck haul of pit-run (unclassified) material, delivered directly to an end-user. Regional markets are farther away from source supplies and may be serviced by truck or rail transport for aggregate delivery.

Export markets, such as those in western Alaska (i.e., Bethel, Nome) are off-shore, and generally require barge or ship transport from, for example, a loading dock such as the conveyor system at Port MacKenzie.

Gravel prices in Bethel, used for this analysis, were in the \$35 to \$40 per ton range for 2004. Conversations with transportation companies suggest landed costs for gravel from Point MacKenzie, for the 13 to 16 day trip, would be in the \$55 to \$60 per ton range. These costs reflect the higher costs of world oil as of 2004, but not recent increases to over \$70 per barrel (2005).

Costs for gravel from Point MacKenzie are not competitive when compared with other material, both local and imported to Bethel.

Export of gravel from Port MacKenzie could become economically feasible if backhaul goods, such as containers, processed fish, or other commodities, could be secured for the return trip to Cook Inlet.

A significant near-term market opportunity is the Port of Anchorage expansion. Open cell design, like that at Point MacKenzie, would mean large quantities of gravel would be needed; it is likely that gravel from Point MacKenzie would be cost competitive for this expansion.

Introduction

In the spring of 2004, the Matanuska-Susitna Borough (MSB) issued a Request for Proposals (RFP) to prepare an asset management plan that would identify parcels that contain commercial quantities of sand and gravel and that are socially and economically feasible to develop.

Northern Economics, Inc. teamed with Tom Crafford & Associates (TCA) to provide both geological and economical services related to the resource. The team's proposal was successful, and a notice to proceed was issued in July. The Northern Economics team met with MSB land management staff to start the project.

Project Scope

The MSB designed this plan as an inventory, for the purpose of classifying parcels as "material lands" and to update the material resource inventory. Nominated parcels had to be within one mile of an access corridor (road, rail, or water); had to contain commercial quantities of sand and gravel; and had to be economically feasible to develop.

After nomination, each parcel was researched to meet the Borough's classification process, including a preliminary best interest finding. Only existing information was required for the project, including maps, records, and tables.

TCA developed the GIS base, using existing information (maps, aerial photographs, plats), and conducted limited field verification of all parcels that were accessible by road or trails. Only one proposed parcel, 24N05W25, was nominated without a field visit. In addition, Northern Economics' project manager visited approximately half of all proposed parcels, including all those at Point MacKenzie.

All parcels are considered to have *high* potential for sand and gravel materials, but final development should be based on actual test drilling, core sampling, and confirmation of gravel presence.

Background

The MSB lies in the heart of Southcentral Alaska, encompassing more than 25,000 square miles of rolling lowlands, mountains, lakes, rivers and streams. It is located approximately 50 miles north of Anchorage.

The Borough includes portions of the Alaska Range to the northwest, portions of the Chugach Mountains to the southeast, and essentially the entire Talkeetna and Clearwater Ranges in its interior. The

Both Northern Economics and T. Crafford and Associates used ArcView 9.X to view, analyze, and print initial project maps. Additional adjustments were made in the summer of 2005 using Adobe Photoshop, Adobe Illustrator and Microsoft Word.

Parcel Selection

This section provides information on how parcels were selected and how the final list of 16 candidate parcels was selected.

An initial list of 570 potential sand and gravel parcels was developed from work completed by TCA in 2003. This list included parcels of all sizes and all locations, but only on MSB lands.

Discussions with Alaska Sand and Gravel officers and other industry sources suggest commercial operations require a minimum pit life of at least seven years and a minimum annual production of one million tons per year. For purposes of project analysis, a minimum parcel size of 80 acres was used.

GIS Base Files

TCA used a GIS process to locate those MSB parcels that met the required criteria:

- Within one mile of a road or railroad
- Economically feasible to develop
- Socially feasible to develop
- Contains commercially developable quantities

The GIS files that accompany this report include ESRI-designated layers for 80 and 40 acre tracts, along with other site specific attributes.

- *GS1mileRRRdsBoroughLand2004 80 acres plus*
- *GS1mileRRRdsBoroughLand2004 40 acres plus*

A final layer shows only those parcels that were nominated as sand and gravel sites:

- *2004_Material_Lands*

Three adjustments were made, based on MSB staff input; Table 1 is a summary list of the final, nominated, parcels.

Labeling

Individual parcel labels follow the MSB's labeling system. For example, the first parcel, 28N05W31, refers to a parcel located in Township 28 North, Range 5 West, and Section 31.

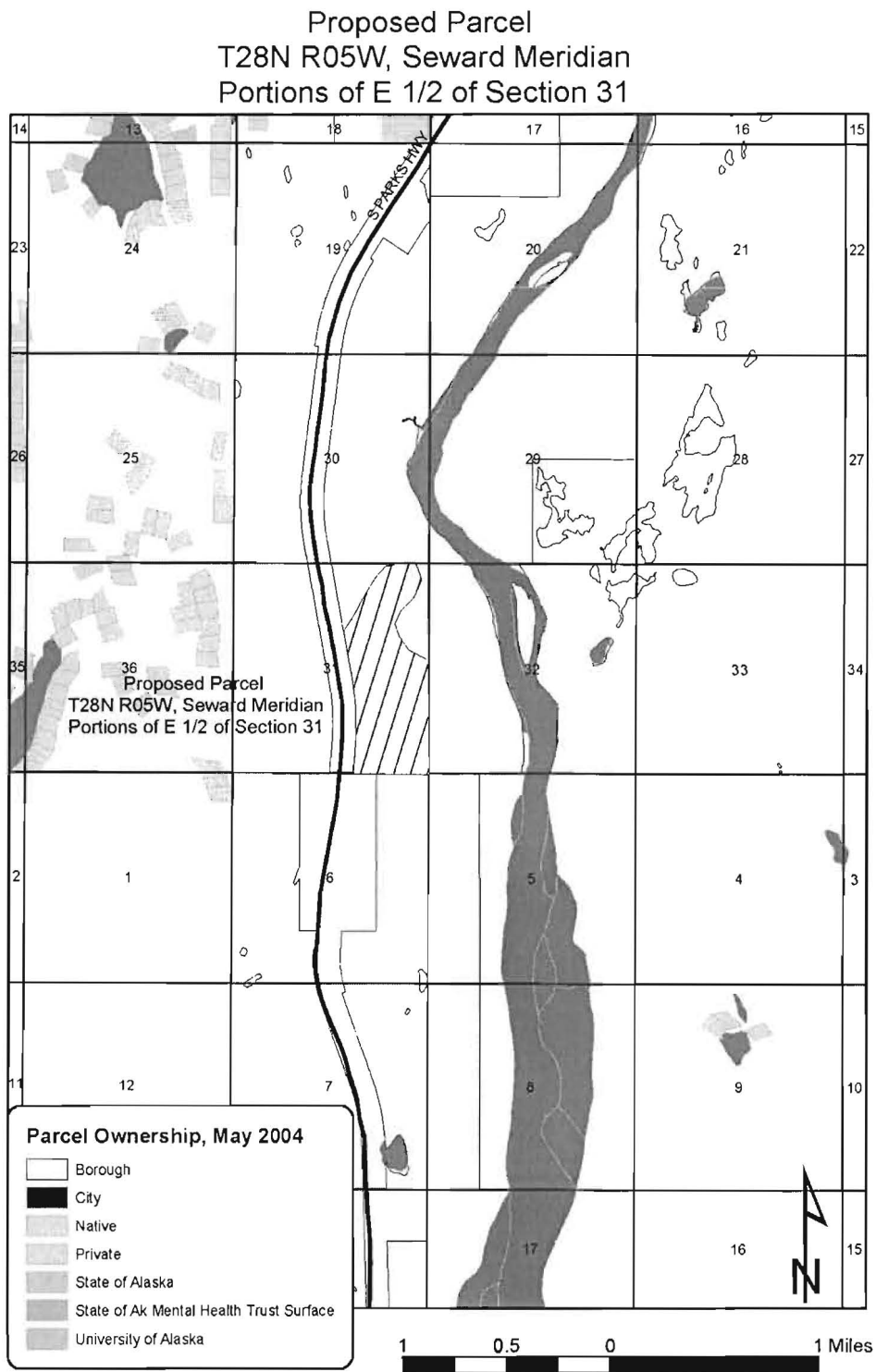
Near-term parcels totaled 1,393 net GIS acres for the eight parcels. The eight longer-term parcels totaled 2,667 acres. Total acreage is 4,060 acres of nominated gravel parcels.

GIS acres (or resource acres) are generally less than the gross acreage of larger MSB-owned lands. In many cases, the proposed gravel site occupies only a portion of the borough's selected land. To aid in the description of these parcels, Northern Economics retained the services of an experienced land manager to calculate the aliquot parts description of each proposed gravel parcel. These are protracted, or estimated, locations, since parcels have not yet been drilled to confirm gravel presence, or surveyed, following that resource confirmation.

Mapping Areas

Specific information, including maps, is shown in the following sections. There were four main mapping areas noted (North Parks, South Parks, Point MacKenzie, and Wasilla), but MSB review of the parcels eliminated the sole parcel in the South Parks area (as an agricultural sale). Since it was the only parcel proposed in that location, both the parcel and the general mapping area were removed from this report version. Each of the three remaining areas has a general location map, followed by maps of individual parcels within each area.

Figure 3. Parcel 28N05W31, North Parks Highway.



The parcel was selected on the basis of aerial photographs and on-site inspection by geologist Tom Crafford of TCA. Soils are gravelly and consistent with other gravel sites in the area.

I. Resources: The primary resource for this parcel is gravel and timber.

J. Assessment: The parcel is currently assessed at a value of \$62,900 for 251.51 acres or \$250 per acre.

III. Public, Board and Commission Comments & Recommendations

This is a Preliminary Best Interest Finding.

It will be reviewed and revised as needed by Mat-Su Borough Land Management staff.

IV. Analysis & Discussion

Classification of Borough lands is consistent with the Borough's policy to recognize suitable uses of lands. This parcel is well suited for sand and gravel development.

Special Conditions: None.

V. Preliminary Administrative Decision

Land Management is recommending the classification of this parcel as Materials Lands and then offering the parcel in a competitive material sale. MSB 23.05.030 allows for sale of public lands by competitive bid.

PRELIMINARY BEST INTEREST FINDING
for the
Reclassification and Disposition of Borough-owned Land
Parcel: 26N05W05 and 06.

I. Summary of Proposed Action

Land Management proposes to classify a tract of Borough owned land in the Talkeetna Area as Material Lands as shown on the map, Exhibit A.

II. Property Site Factors

A. Location: The subject parcel is located within Township 26 North, Range 05 West, West ½ of Section 05, East ½ of Section 06, Seward Meridian.

B. Legal Descriptions:

Tract A of Section 5 according to the Alaska State Cadastral Survey Plat Recorded in the Talkeetna Recording District on July 26, 1995 as Plat 95-31, being a portion of the West ½ of Section 5, and also according to the Cadastral Survey extension plat of Township 26 North, Range 5 West, Seward meridian, Alaska, filed in the Talkeetna Recording District on November 9, 1965, as Plat No. 65-5 and refilled on July 24, 1975 as Plat No. 75-21.

Tract B of Section 6, according to the Alaska State Cadastral Survey Plat recorded in the Talkeetna Recording District on July 26, 1995 as Plat 95-31, being a portion of the East ½ of Section 6, Township 26 North, Range 05 West, Seward Meridian, located in the Talkeetna Recording District, 3rd Judicial District, State of Alaska.

It is further identified as Lots 1-8, SW1/4 SW1/4 NW1/4, W1/2 SW1/4, W1/2 NW1/4 SE1/4 SW1/4, SW1/4 SE1/4 SW1/4, Sec 5 T26N R05W SM; and, Lots 1-7, E1/2 SE1/4 SE1/4 NE1/4, NE1/4 NE1/4 SE1/4, E1/2 SE1/4 NE1/4 SE1/4 Sec 6 T26N R05W SM, based on protraction.

The total proposed parcel consists of approximately 179 acres of net gravel development, based on GIS mapping.

C. Land Status: Acquired by Patent 14770, Book 155, Pages 410-412, Recorded November 16, 1995, Talkeetna Recording District.

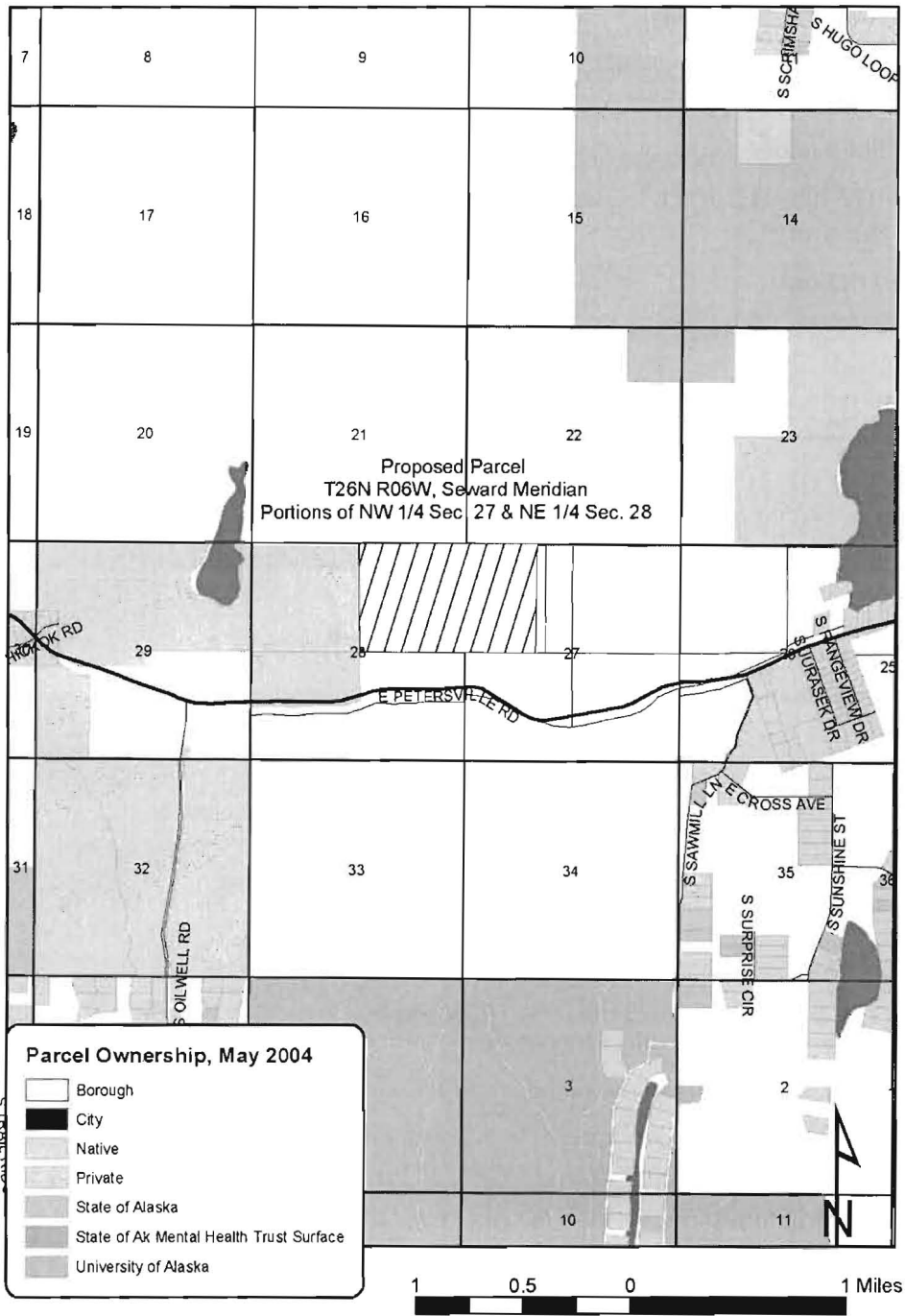
Also acquired by Patent 6744, Book 89, Pages 129-131, Recorded December 28, 1982, Talkeetna Recording District.

D. Restrictions:

1. Land Classification – This land is currently classified as Resource Management Land.
2. Land Use Plans – The subject property is within the Trapper Creek Management Unit, of the Petersville Road Subregion of the Susitna Area Plan. Guidelines for management Unit 5a states this land is to be managed for settlement, forestry, public recreation, and wildlife habitat. The subsurface estate is closed to coal leasing or prospecting and other locatable minerals are closed prior to disposal.
3. Title Restrictions – None.
4. Covenants – None.
5. Zoning – This parcel is within the Coastal Management Zone; the Chulitna River is located to the east.

Figure 5. Parcel 26N06W28, North Parks Highway.

Proposed Parcel
 T26N R06W, Seward Meridian
 Portions of NW 1/4 Sec. 27 and NE 1/4 Sec. 28



I. Resources: The primary resource for this parcel is gravel and timber.

J. Assessment: The parcel is portion of two larger parcels currently assessed at a value of \$425 per acre (section 27) and \$550 per acre (section 28).

III. Public, Board and Commission Comments & Recommendations

This is a Preliminary Best Interest Finding.

It will be reviewed and revised as needed by Mat-Su Borough Land Management staff.

IV. Analysis & Discussion

Classification of Borough lands is consistent with the Borough's policy to recognize suitable uses of lands. This parcel is well suited for sand and gravel development.

Special Conditions: None.

V. Preliminary Administrative Decision

Land Management is recommending the classification of this parcel as Materials Lands and then offering the parcel in a competitive material sale. MSB 23.05.030 allows for sale of public lands by competitive bid.

PRELIMINARY BEST INTEREST FINDING
for the
Reclassification and Disposition of Borough-owned Land
Parcel: 26N07W25

I. Summary of Proposed Action

Land Management proposes to classify a tract of Borough owned land in the Petersville Area as Material Lands as shown on the map, Exhibit A.

II. Property Site Factors

A. Location: The parcel is located within Township 26 North, Range 07 West, Section 25, Seward Meridian.

B. Legal Descriptions:

Tracts, B and E, of Section 25, according to Alaska State Cadastral Survey Plat 79-73, being a portion of Township 26 North, Range 07 West, Seward Meridian, located in the Talkeetna Recording District, 3rd Judicial District, State of Alaska, containing approximately 202 acres, as measured by GIS analysis.

It is further described as: Lots 1-5, S1/2 N1/2 NE1/4, S1/2 NE1/4, S1/2 NE1/4 NW1/4, SE1/4 NW1/4 Sec 25 T26N R04W SM.

C. Land Status: Acquired by Patent 4813, Book 74, Pages 49 and 50, Recorded March 17, 1980, Talkeetna Recording District.

D. Restrictions:

1. Land Classification – This land is currently classified as Forest Management Land.
2. Land Use Plans – The subject property is within the Trapper Creek Management Unit, of the Petersville Subregion of the Susitna Area Plan. The plan for Unit 5a states this land is to be managed for settlement, forestry, public recreation, and wildlife habitat.
3. Title Restrictions – None.
4. Covenants – None.
5. Zoning – None.
6. Easements & Other Reservations – A 150 foot scenic buffer exists, subject to the Petersville Road Corridor Management Plan.

E. Current Land Use: The current use of the parcel is Resource Management.

F. Surrounding Land Use: Other properties in this area are currently being used for residential and agricultural purposes.

G. Existing Infrastructure: The Parcel is abutted by W Petersville road to the north.

H. Soils & Terrain: According to the USDA Natural Resources Conservation Service Soil Survey of the Matanuska-Susitna Valley Area, Alaska dated June 30, 2000, map 9 of 71, the soils for this parcel are located just west of the mapping boundary.

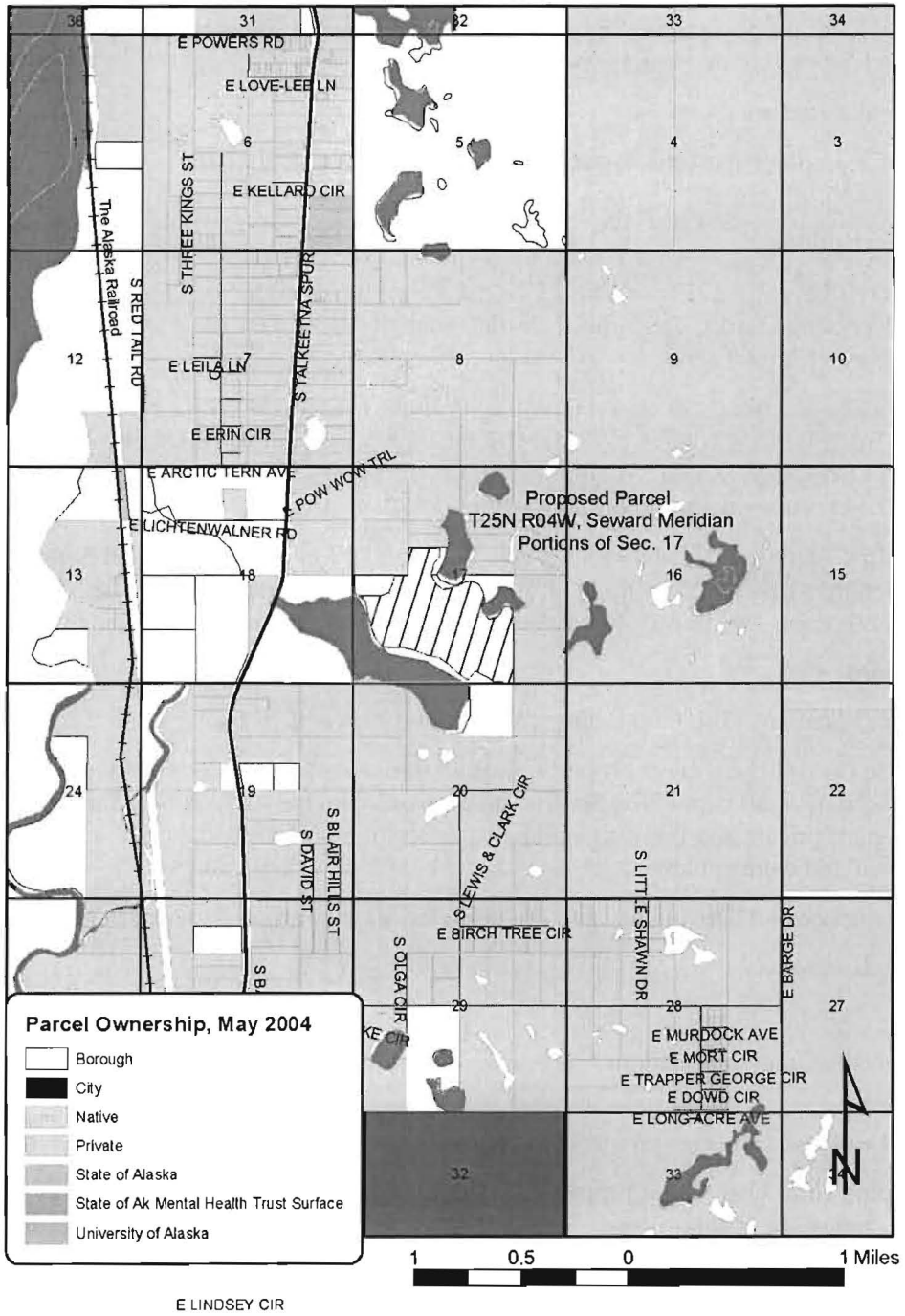
The parcel was selected on the basis of aerial photographs and on-site inspection by geologist Tom Crafford of Crafford and Associates. Soils are gravelly and consistent with other gravel sites in the area.

I. Resources: The primary resources for this parcel are gravel and timber.

J. Assessment: The parcel is currently part of larger parcels that are appraised at \$600 per acre.

Figure 7. Parcel 25N04W17, North Parks Highway.

Proposed Parcel
T25N R04W, Seward Meridian
Portions of Sec. 17



The soil is well-suited for forestry. It has severe limitations for buildings due to shallow excavation risk and a high potential for frost action.

I. Resources: The primary resource for this parcel is gravel and timber.

J. Assessment: The parcel is part of three MSB parcels currently assessed at an average of \$749 per acre.

III. Public, Board and Commission Comments & Recommendations

This is a Preliminary Best Interest Finding.

It will be reviewed and revised as needed by Mat-Su Borough Land Management staff.

IV. Analysis & Discussion

Classification of Borough lands is consistent with the Borough's policy to recognize suitable uses of lands. This parcel is well suited for sand and gravel development.

Special Conditions: None.

V. Preliminary Administrative Decision

Land Management is recommending the classification of this parcel as Materials Lands and then offering the parcel in a competitive material sale. MSB 23.05.030 allows for sale of public lands by competitive bid.

PRELIMINARY BEST INTEREST FINDING
for the
Reclassification and Disposition of Borough-owned Land
Parcel: 25N04W32

I. Summary of Proposed Action

Land Management proposes to classify a tract of Borough owned land in the Talkeetna Area as Material Lands as shown on the map, Exhibit A.

II. Property Site Factors

A. Location: The subject parcel is located within Township 25 North, Range 04 West, and consists of all of Section 32, Seward Meridian.

B. Legal Descriptions:

That Section 32, Township 25 North, Range 04 West, Seward Meridian, located in the Talkeetna Recording District, 3rd Judicial District, State of Alaska, approximately 579 acres as measured by GIS analysis.

C. Land Status: Acquired by Patent 5281, Book 80, Pages 799 to 801, Recorded August 11, 1981, Talkeetna Recording District.

D. Restrictions:

1. Land Classification – This land is currently classified as material lands.
2. Land Use Plans – The subject property is within the Talkeetna Management Unit, of the South Parks Highway Subregion of the Susitna Area Plan. Guidelines for Unit 9a state this land is to be managed for private and public land banks, agriculture, forestry, public recreation, settlement, and wildlife habitat.
3. Title Restrictions – None.
4. Covenants – None
5. Zoning – None
6. Easements & Other Reservations – ROW permits ADL 32991, 21221, 19455; 50-foot easements around lakes per Patent 5281.

E. Current Land Use: The current use of the parcel is resource management land.

F. Surrounding Land Use: Other properties in this area are currently being used for recreational, agricultural, and residential purposes.

G. Existing Infrastructure: This parcel is abutted by the S Talkeetna Spur Road to the west and southwest.

H. Soils & Terrain: According to the USDA Natural Resources Conservation Service Soil Survey of the Matanuska-Susitna Valley Area, Alaska dated June 30, 2000, map 14 of 71, the soils are Nancy silt loam soils that have moderate limitations for crops and hay due to low fertility and high, late-summer, precipitation, along with increased wind erosion hazard from clearing and tillage.

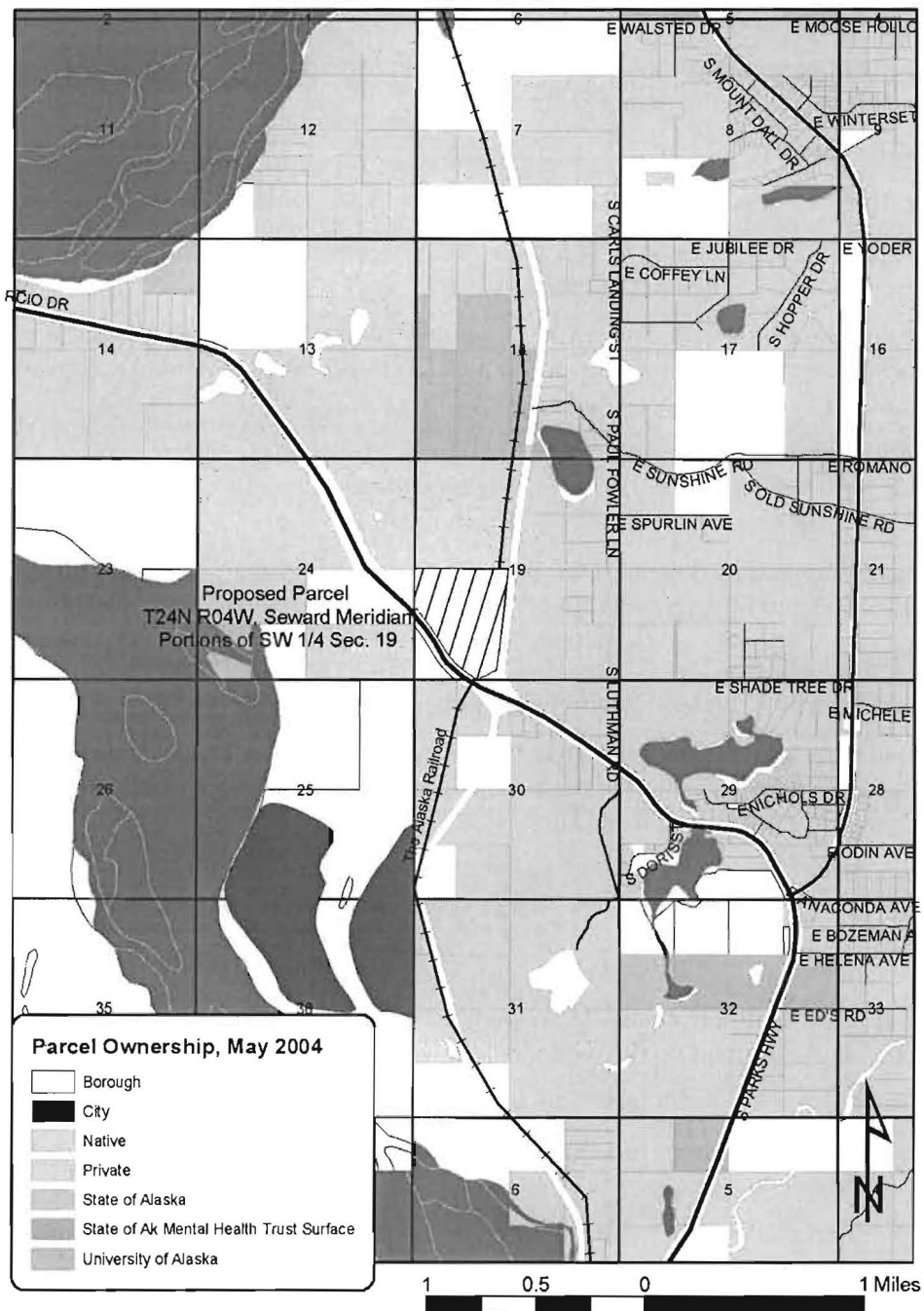
The soil is well-suited for forestry. It has severe limitations for buildings due to shallow excavation risk and a high potential for frost action.

I. Resources: The primary resource for this parcel is gravel and timber.

J. Assessment: The parcel is part of two parcels currently assessed at an average of \$473 per acre.

Figure 9. Parcel 24N04W19, North Parks Highway.

Proposed Parcel
 T24N R04W, Seward Meridian
 Portions of SW 1/4 Sec. 19



The soil is well-suited for forestry. It has severe limitations for buildings due to shallow excavation risk and a high potential for frost action.

I. Resources: The primary resource for this parcel is gravel and timber.

J. Assessment: The parcel is currently assessed at a value of \$800 per acre.

III. Public, Board and Commission Comments & Recommendations

This is a Preliminary Best Interest Finding.

It will be reviewed and revised as needed by Mat-Su Borough Land Management staff.

IV. Analysis & Discussion

Classification of Borough lands is consistent with the Borough's policy to recognize suitable uses of lands. This parcel is well suited for sand and gravel development.

Special Conditions: None.

V. Preliminary Administrative Decision

Land Management is recommending the classification of this parcel as Materials Lands and then offering the parcel in a competitive material sale. MSB 23.05.030 allows for sale of public lands by competitive bid.

PRELIMINARY BEST INTEREST FINDING
for the
Reclassification and Disposition of Borough-owned Land
Parcel: 24N05W25 and 36

I. Summary of Proposed Action

Land Management proposes to classify a tract of Borough owned land in the Montana Area as Material Lands as shown on the map, Exhibit A.

II. Property Site Factors

A. Location: The subject parcel is located within Township 25 North, Range 04 West, Sections 25 and 36, Seward Meridian.

B. Legal Descriptions:

GLO Lots 3 and 4, SE1/4, Section 25 and GLO Lots 1 and 2, NE1/4 of 36, Township 24 North, Range 05 West, Seward Meridian, located in the Talkeetna Recording District, 3rd Judicial District, State of Alaska, approximately 319 acres.

These are further described on a protracted aliquot basis as:

Lots 1-16, SE1/4 NE1/4 SW1/4, E1/2 SW1/4 NE1/4 SW1/4, SE1/4 SW1/4, SE1/4 SE1/4 SE1/4 Sec 25 T24N R05W SM

Lots 1-16, NE1/4 NE1/4, E1/2 SE1/4 NE1/4, NW1/4 SE1/4 NE1/4, E1/2 NE1/4 NW1/4, NW1/4 NE1/4 NW1/4, E1/2 SW1/4 NE1/4NW1/4, NE1/4 SE1/4 NW1/4 Sec 36 T25N R05W SM

C. Land Status: Acquired by Patent 5404, Book 82, Pages 610 to 611, Recorded November 17, 1981, Talkeetna Recording District.

D. Restrictions:

1. Land Classification – This land is currently classified as Forest Management Land.
2. Land Use Plans – The subject property is within the Montana Creek Management Unit, of the South Parks Highway Subregion of the Susitna Area Plan. Plan guidelines for Unit 10a state this land is to be managed for private and public land banks, agriculture, forestry, public recreation, settlement, and wildlife habitat.
3. Title Restrictions - None
4. Covenants – None
5. Zoning – None
6. Easements & Other Reservations –None.

E. Current Land Use: The current use of the parcel is forest management.

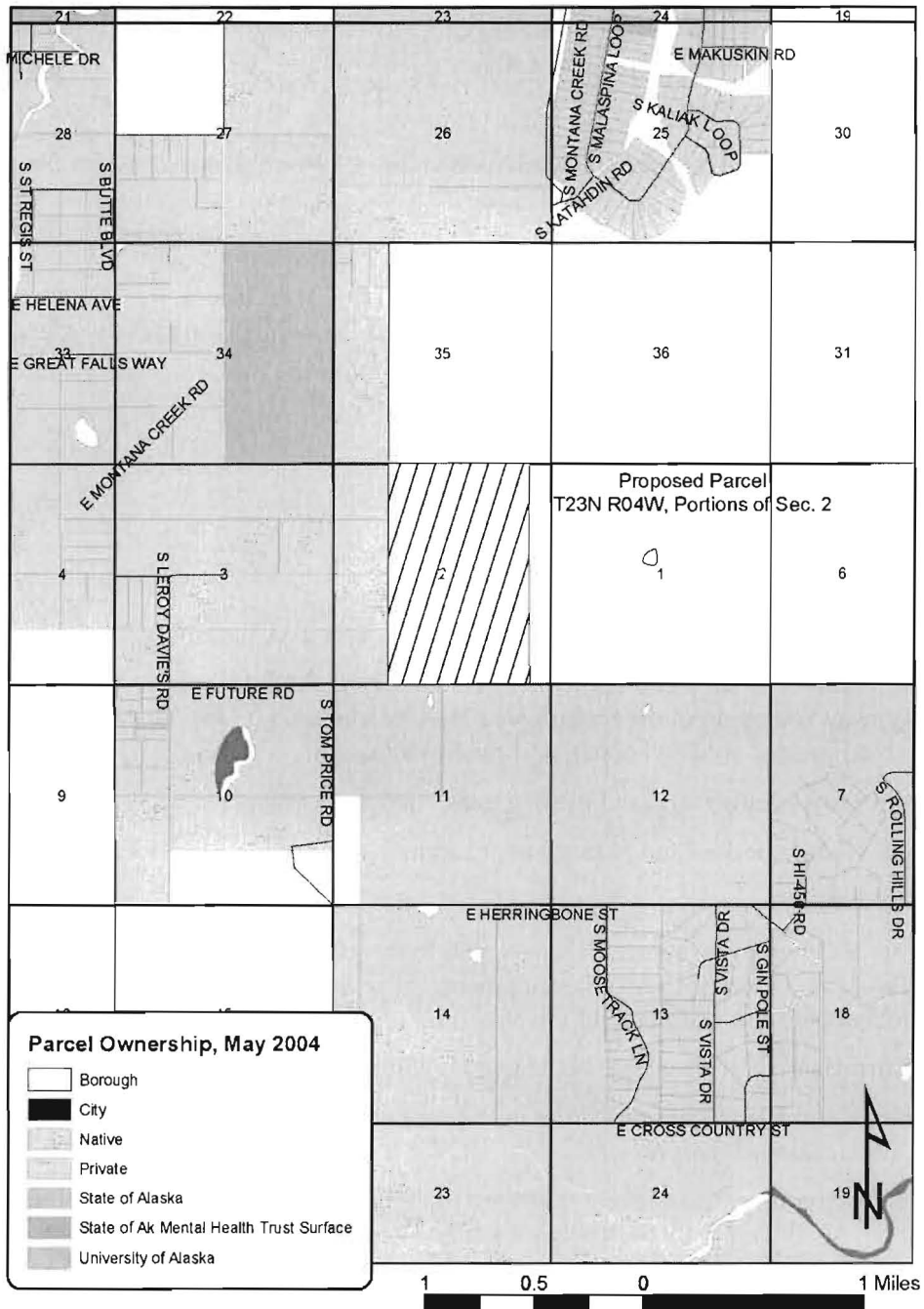
F. Surrounding Land Use: Other properties in this area are currently being used for recreational, agricultural, and residential purposes.

G. Existing Infrastructure: The Alaska Railroad abuts the parcels on the east.

H. Soils & Terrain: According to the USDA Natural Resources Conservation Service Soil Survey of the Matanuska-Susitna Valley Area, Alaska dated June 30, 2000, map 14 of 71, Nancy silt loam soils have moderate limitations for crops and hay due to low fertility and high, late-summer, precipitation, along with increased wind erosion hazard from clearing and tillage.

Figure 11. Parcel 23N04W02 North Parks Highway.

Proposed Parcel
T23N R04W, Portions of Sec. 2



J. Assessment: The parcel is part of two larger parcels. The northern part of the parcel is appraised at \$375 per acre and the southern part is assessed at \$240 per acre.

III. Public, Board and Commission Comments & Recommendations

This is a Preliminary Best Interest Finding.

It will be reviewed and revised as needed by Mat-Su Borough Land Management staff.

IV. Analysis & Discussion

Classification of Borough lands is consistent with the Borough's policy to recognize suitable uses of lands. This parcel is well suited for sand and gravel development.

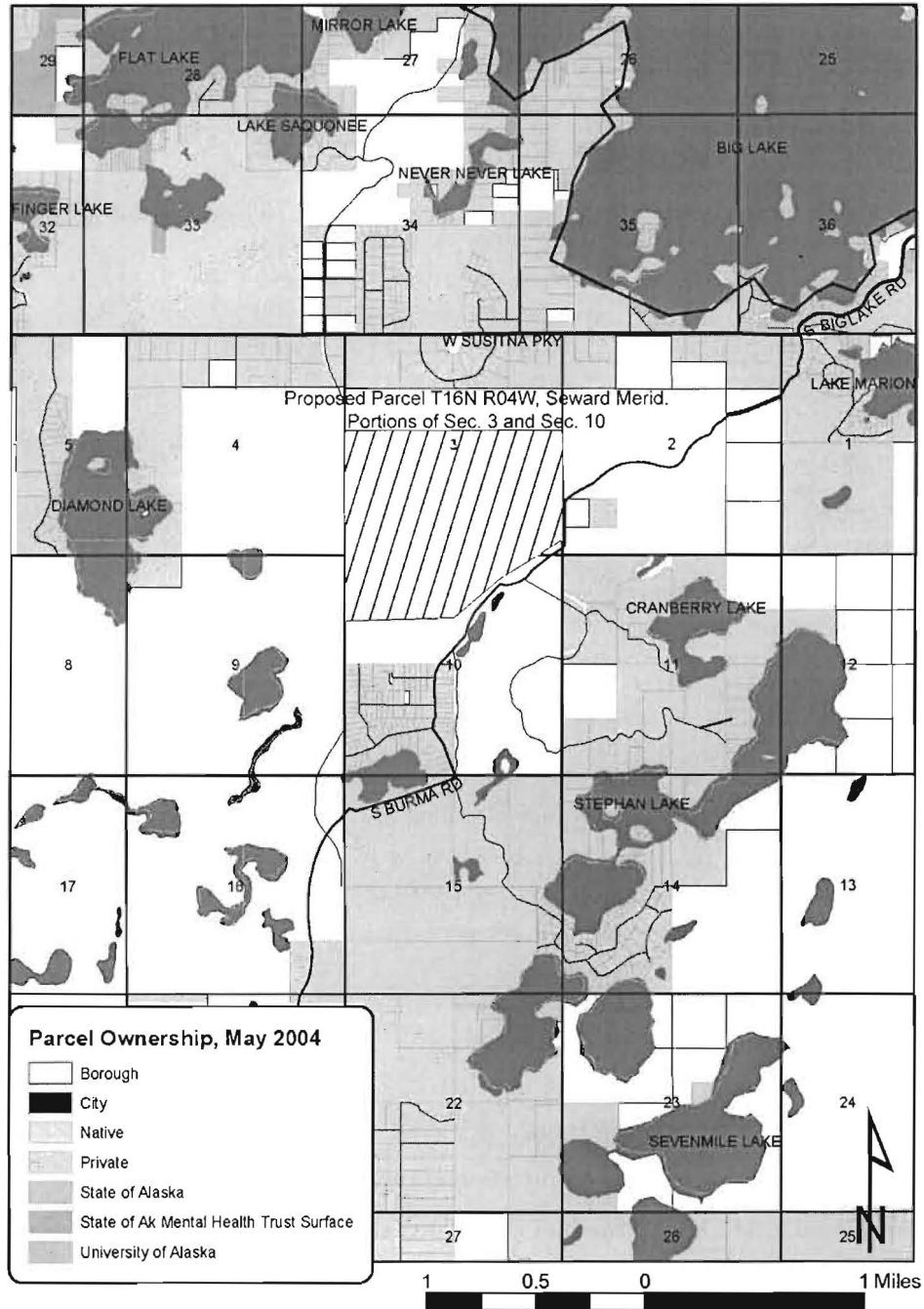
Special Conditions: None.

V. Preliminary Administrative Decision

Land Management is recommending the classification of this parcel as Materials Lands and then offering the parcel in a competitive material sale. MSB 23.05.030 allows for sale of public lands by competitive bid.

Figure 13. Parcel 16N04W03, Point MacKenzie.

Proposed Parcel
T16N R04W, Seward Meridian
Portions of Sec. 3 and Sec. 10



These soils have severe limitations for shallow excavations, frost action and building-related corrosion. Kichatna soils are suited for forestry purposes. Substrata of these soils are probably sources of gravel and sand.

I. Resources: The primary resources for this parcel are gravel and timber.

J. Assessment: The parcel is part of two larger parcels that are assessed at \$386 and \$495 per acre (north – section 3 and south – section 10), respectively.

III. Public, Board and Commission Comments & Recommendations

This is a Preliminary Best Interest Finding.

It will be reviewed and revised as needed by Mat-Su Borough Land Management staff.

IV. Analysis & Discussion

Classification of Borough lands is consistent with the Borough's policy to recognize suitable uses of lands. This parcel is well suited for sand and gravel development.

Special Conditions: None.

V. Preliminary Administrative Decision

Land Management is recommending the classification of this parcel as Materials Lands and then offering the parcel in a competitive material sale. MSB 23.05.030 allows for sale of public lands by competitive bid.

PRELIMINARY BEST INTEREST FINDING
for the
Reclassification and Disposition of Borough-owned Land
Parcel: 15N04W28

I. Summary of Proposed Action

Land Management proposes to classify a tract of Borough owned land in the Goose Bay Area as Material Lands as shown on the map, Exhibit A.

II. Property Site Factors

A. Location: The subject parcel is located within Township 15 North, Range 04 West, Section 28, Seward Meridian.

B. Legal Descriptions:

That Tract A portion of Section 28, Township 15 North, Range 04 West, Seward Meridian, located in the Palmer Recording District, 3rd Judicial District, State of Alaska, containing approximately 132 acres as measured by GIS analysis.

It is further described as aliquot parts (protracted): Lots 1-15, N1/ SW1/4 SW1/4 NW1/4, SE1/4 SW1/4 SW1/4 NW1/4, SE1/4 SW1/4 NW1/4, SW1/4 SE1/4 NW1/4, W1/2 NE1/4SW1/4, NE1/4,NW 1/4 SW1/4, N1/2 NE1/4 SE1/4 SW1/4, SW1/4 NE1/4 SE1/4 SW1/4, NW1/4 SE1/4 SW1/4 Sec 28 T15N R04W SM.

C. Land Status: Acquired by Patent 14466, Book 0843, Pages 900 to 902, Recorded April 12, 1996, Palmer Recording District.

D. Restrictions:

1. Land Classification – This land is currently classified as general purpose.
2. Land Use Plans – The subject property is within the Point MacKenzie Management Unit, of the Willow Sub-basin of the Susitna Area Plan. Guidelines for management Unit 20 state this land is to be managed for Port Development, Industrial and Commercial Uses.
3. Title Restrictions – None.
4. Covenants – None.
5. Zoning – This parcel is within the Coastal Management Zone.
6. Easements & Other Reservations – There is a 100' easement along West Alsop Road. Tract A (ASCS 870354) excludes the Point MacKenzie Road ROW.

E. Current Land Use: The current use of the parcel is materials, in part.

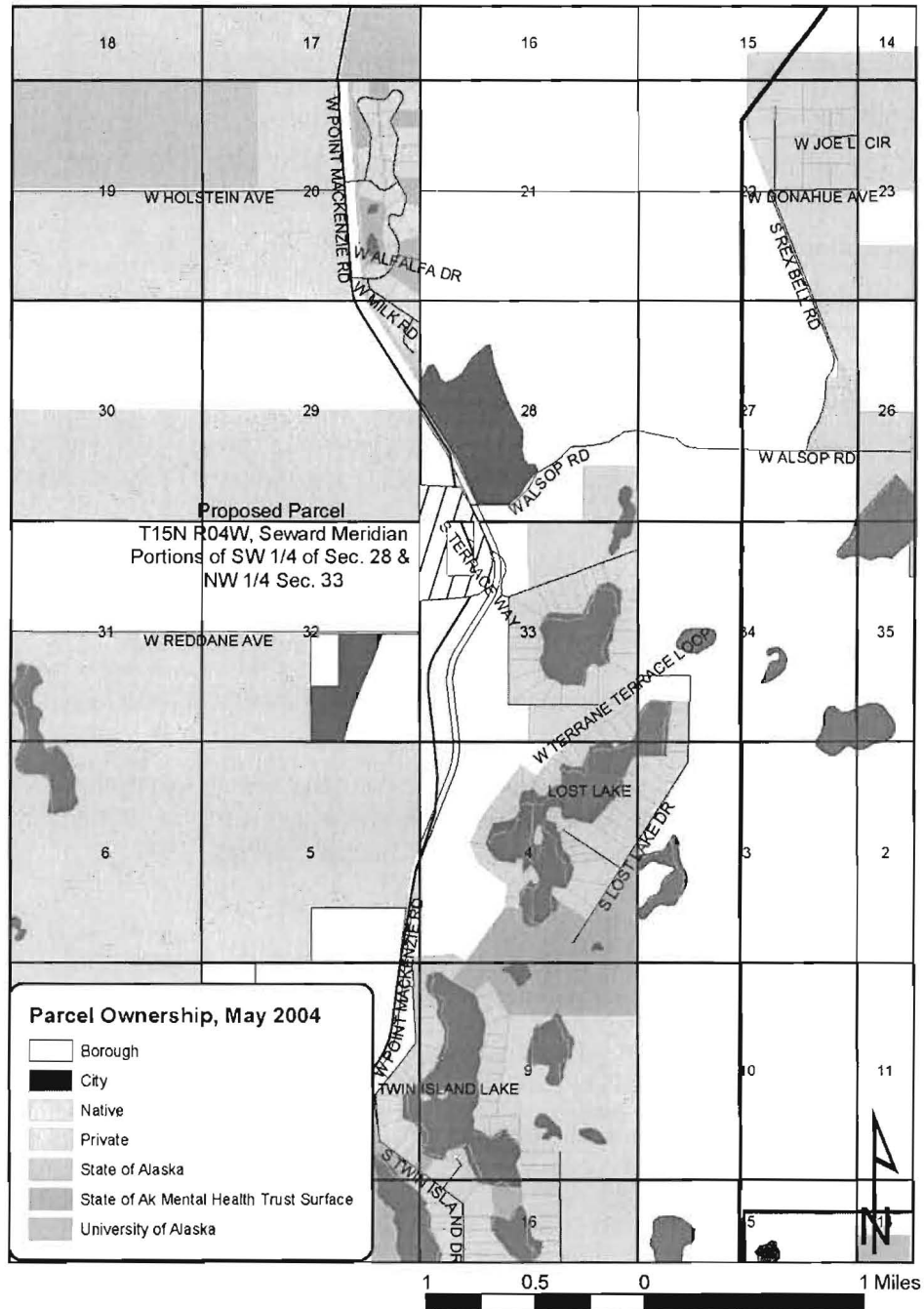
F. Surrounding Land Use: Other properties in this area are currently being used for agriculture and materials purposes.

G. Existing Infrastructure: This parcel is abutted by the West Point Mackenzie Road, to the west, and the Alsop Road to the south and southeast.

H. Soils & Terrain: According to the USDA Natural Resources Conservation Service Soil Survey of the Matanuska-Susitna Valley Area, Alaska dated June 30, 2000, map 68 of 71, Kashwitna silt loams have moderate limitations for crop and hay production due to slope, low fertility, depth to gravel and relatively high, late-summer, precipitation.

Figure 15. Parcel 15N04W28(S), Point MacKenzie.

Proposed Parcel
 T15N R04W, Seward Meridian
 Portions of SW 1/4 of Sec. 28 & NW 1/4 Sec. 33



Site development limitations include high susceptibility to wind and water erosion, frost action, and potential high permeability for septic leaching to water tables. The soil is well-suited for forestry.

I. Resources: The primary resource for this parcel is gravel and timber.

J. Assessment: The parcel is part of a larger parcel is assessed at \$400 per acre.

III. Public, Board and Commission Comments & Recommendations

This is a Preliminary Best Interest Finding.

It will be reviewed and revised as needed by Mat-Su Borough Land Management staff.

IV. Analysis & Discussion

Classification of Borough lands is consistent with the Borough's policy to recognize suitable uses of lands. This parcel is well suited for sand and gravel development.

Special Conditions: None.

V. Preliminary Administrative Decision

Land Management is recommending the classification of this parcel as Materials Lands and then offering the parcel in a competitive material sale. MSB 23.05.030 allows for sale of public lands by competitive bid.

PRELIMINARY BEST INTEREST FINDING
for the
Reclassification and Disposition of Borough-owned Land
Parcel: 15N04W32

I. Summary of Proposed Action

Land Management proposes to classify a tract of Borough owned land in the Goose Bay Area as Material Lands as shown on the map, Exhibit A.

II. Property Site Factors

A. Location: The subject parcel is located within Township 15 North, Range 04 West, Section 32, Seward Meridian.

B. Legal Descriptions:

That Tract B portion, SE1/4, excluding Reddane Avenue, of Section 32, Township 15 North, Range 04 West, Seward Meridian, located in the Palmer Recording District, 3rd Judicial District, State of Alaska, measuring approximately 157 acres by GIS analysis.

An Amended Plat of ASLA 80-111, Sheet 5 of 8, filed in the Palmer Recording District on October 1, 1980 as No. 80-108, refilled on December 29, 1980 as No. 80-155, on March 5, 1981 as Plat No. 81-33, and on July 26, 1982 as Plat No. 82-80.

Further, the parcel is described as protracted aliquot parts: Lots 1-5, NE1/4 NW1/4 SE1/4, N1/2 SE1/4 NW1/4 SE1/4, SW1/4 SE1/4 NW1/4 SE1/4, W1/2 NE1/4 SW1/4 SE1/4, W1/2 SW1/4 SE1/4 Sec 32 T15N R04W SM

C. Land Status: Acquired by Patent 6755, Book 287, Pages 755 and 756, Recorded December 28, 1982, Palmer Recording District.

D. Restrictions:

1. Land Classification – This land is currently classified as materials.
2. Land Use Plans – The subject property is within the Point MacKenzie Management Unit, of the Willow Sub-basin of the Susitna Area Plan. Guidelines for management Unit 20 state this land is to be managed for Port Development, Industrial and Commercial Use.
3. Title Restrictions – None.
4. Covenants – None.
5. Zoning – This parcel is within the Coastal Management Zone.
6. Easements & Other Reservations – Access is by West Reddane Road to the south and west and Reddane to Merlene Lane. There is a 100' easement along Merlene Lane.

E. Current Land Use: The current use of the parcel is materials.

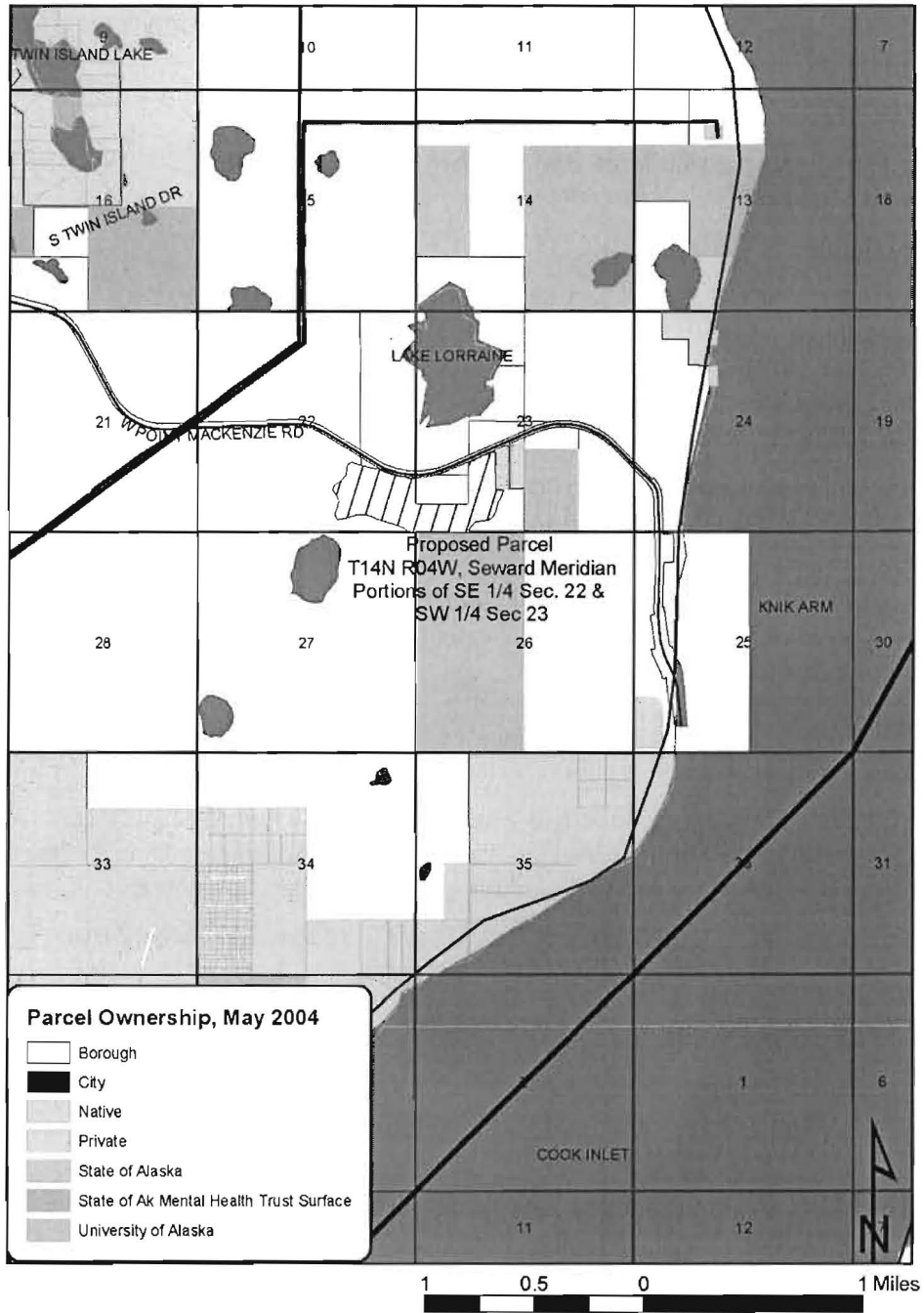
F. Surrounding Land Use: Other properties in this area are currently being used for agriculture and commercial and industrial purposes.

G. Existing Infrastructure: None

H. Soils & Terrain: According to the USDA Natural Resources Conservation Service Soil Survey of the Matanuska-Susitna Valley Area, Alaska dated June 30, 2000, map 68 of 71, Kashwitna silt loams have moderate limitations for crop and hay production due to slope, low fertility, depth to gravel and relatively high, late-summer, precipitation. Site development limitations include high susceptibility to

Figure 17. Parcel 14N04W22, Point MacKenzie.

Proposed Parcel
 T14N R04W, Seward Meridian
 Portions of SE 1/4 Sec. 22 and SW 1/4 Sec 23



moderate limitations for crop and hay production due to slope, low fertility, depth to gravel and relatively high, late-summer, precipitation.

Site development limitations include high susceptibility to wind and water erosion, frost action, and potential high permeability for septic leaching to water tables. The soil is well-suited for forestry.

I. Resources: The primary use of this land is directed by the Port MacKenzie *Port Master Plan*. That plan allows for material site development with the current classification of Industrial and Commercial use.

J. Assessment: The parcel is part of larger parcels that are assessed at \$292 and \$800 per acre (in Section 22 and Section 23), respectively.

III. Public, Board and Commission Comments & Recommendations

This is a Preliminary Best Interest Finding.

It will be reviewed and revised as needed by Mat-Su Borough Land Management staff.

IV. Analysis & Discussion

Use of these Borough lands is consistent with the Borough's policy to recognize suitable uses of lands. This parcel is well suited for sand and gravel development and that use is allowed by the established *Port Master Plan*. If approved, this use would be platted on the Master Plan Map. Identifying land for resource (gravel) extraction prior to further development as an industrial tract is appropriate and consistent with Borough policy.

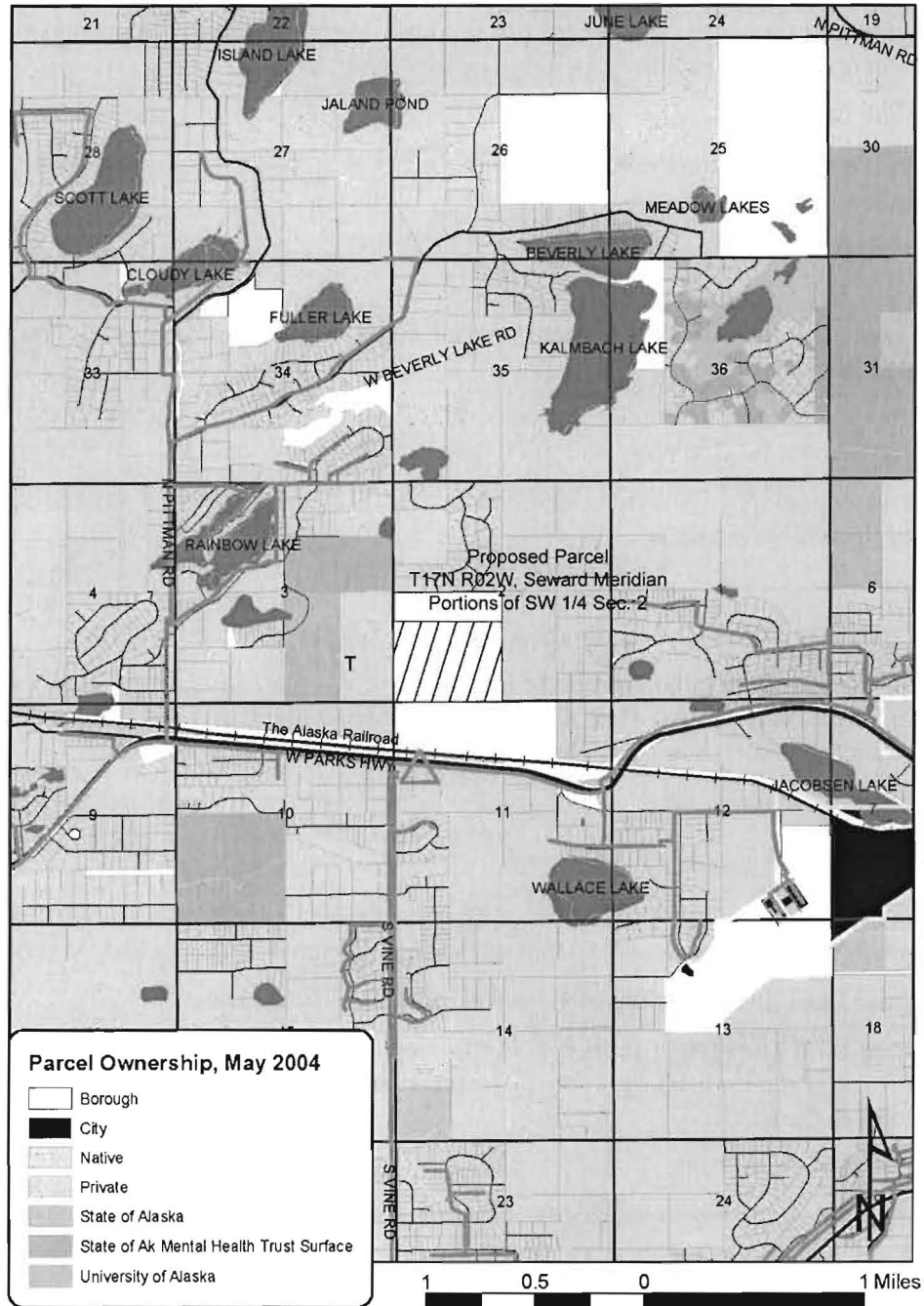
Special Conditions: See the Port MacKenzie *Port Master Plan* for further guidance.

V. Preliminary Administrative Decision

MSB 23.05.120/130 allows for gravel sales, as a land-based resource. The land itself would remain under Borough management and retained for further development consistent with *Port Master Plan*.

Figure 19. Parcel 17N02W02, Wasilla.

Proposed Parcel
 T17N R02W, Seward Meridian
 Portions of SW 1/4 Sec. 2



J. Assessment: The parcel is currently assessed at a value of \$1,148 per acre.

III. Public, Board and Commission Comments & Recommendations

This is a Preliminary Best Interest Finding.

It will be reviewed and revised as needed by Mat-Su Borough Land Management staff.

IV. Analysis & Discussion

Classification of Borough lands is consistent with the Borough's policy to recognize suitable uses of lands. This parcel is well suited for sand and gravel development.

Special Conditions: None.

V. Preliminary Administrative Decision

Land Management is recommending the classification of this parcel as Materials Lands and then offering the parcel in a competitive material sale. MSB 23.05.030 allows for sale of public lands by competitive bid.

PRELIMINARY BEST INTEREST FINDING
for the
Reclassification and Disposition of Borough-owned Land
Parcel: 16N03W01

I. Summary of Proposed Action

Land Management proposes to classify a tract of Borough-owned land in the Goose Bay Area as Material Lands as shown on the map, Exhibit A.

II. Property Site Factors

A. Location: The subject parcel is located within Township 16 North, Range 03 West, Section 01, Seward Meridian.

B. Legal Descriptions:

Section 01, Township 16 North, Range 03 West, Seward Meridian, located in the Palmer Recording District, 3rd Judicial District, State of Alaska, consisting of approximately 636 acres, measured by GIS analysis.

C. Land Status: Acquired by Patent 5020, Book 212, Pages 553 and 554, Recorded May 15, 1980, Palmer Recording District.

D. Restrictions:

1. Land Classification – This land is currently classified as Forest Management.
2. Land Use Plans – The subject property is within the Wasilla Management Unit, of the Willow Sub-basin of the Susitna Area Plan. Guidelines for Unit 18 state this land is to be managed for settlement, small farms and commercial agriculture, recreation (fishing and local and regional parks).
3. Title Restrictions – None.
4. Covenants – None.
5. Zoning – None
6. Easements & Other Reservations – 50-foot easement along water bodies and section line easements are noted on the Borough's web site

E. Current Land Use: The current use of the parcel is resource management land.

F. Surrounding Land Use: Other properties in this area are currently being used for recreational, agricultural, and residential purposes.

G. Existing Infrastructure: The Knik-Goose Bay Road and South Knik-Knack Mud Shack Road are within one mile of the southeast corner of the parcel. The parcel adjoins the West Clay Chapman Road on the south side of the parcel.

H. Soils & Terrain: According to the USDA Natural Resources Conservation Service Soil Survey of the Matanuska-Susitna Valley Area, Alaska dated June 30, 2000, map 53 of 71, Deception silt loam soil has moderate crop limitations on slopes greater than 20% and due to depths to very gravelly material. These soils have severe limitations for shallow excavations, frost action and building-related corrosion. Deception soils are suited for forestry purposes.

I. Resources: The primary resource for this parcel is gravel and timber.

J. Assessment: The parcel is currently assessed at a value of \$450 per acre.

Gravel Market Analysis

This section provides information about the demand for sand and gravel within the project area, along with estimates for regional and, potentially, export markets.

Total estimated market demand in the MSB and the Municipality of Anchorage is estimated at 4.9 million tons in 2004 and 5.5 million tons by the year 2010. Almost all of this gravel is mined in the MSB.

There are three main markets for MSB sand and gravel:

- Local markets, near end-users
- Regional markets, generally requiring longer distance truck haul or Alaska Railroad transport
- Export markets, off-shore and requiring either barge or ship transport

Local and regional market demand can be readily projected using per capita consumption estimates. A more detailed sources and uses market analysis is beyond the scope of this project, but for planning purposes it is not required.

Per capita consumption is based on industry estimates of annual sand and gravel consumption in Anchorage, four million tons, and the 2004 estimated population, 277,500 people. This generates a per capita figure of 14.4 tons per person per year.

Table 2 illustrates total market demand for sand and gravel in 2004 and projected through 2010. The mapped regions reflect those areas discussed in Section 2 of this report, while population figures are based on State of Alaska Department of Labor and Workforce Development estimates.

Table 2. Estimated Population and Gravel Demand, Matanuska-Susitna Borough and Municipality of Anchorage, 2004 and 2010.

Mapped Region	Est. Pop 2004	Est. 2004 Gravel Tons	Est. 2010 Gravel Tons
North Parks	2,394	34,508	39,129
South Parks	1,856	26,753	31,686
Point MacKenzie	216	3,114	8,452
Wasilla	2,394	851,431	1,103,020
MSB (all)	63,534	915,805	1,182,287
Anchorage	277,500	4,000,000	4,271,367
Total Est. Market	341,034	4,915,805	5,453,654

Certain areas in the MSB are outside official CDPs and are classed as *Rest of MSB*; areas outside the project area were left blank as to region (e.g. Skwentla CDP).

North Parks Area

Table 4 illustrates local market demand for the North Parks area.

Table 4. Estimated Gravel Demand, North Parks Area, in Tons, 2004 and 2010.

Census District Place	Mapped Region	Est. Pop 2004	Est. 2004 Gravel Tons	Est. 2010 Gravel Tons
Chase CDP	North Parks	27	389	208
Petersville CDP	North Parks	15	216	90
Talkeetna CDP	North Parks	844	12,166	13,907
Trapper Creek CDP	North Parks	436	6,285	6,577
Y CDP	North Parks	1,072	15,452	18,348
Total		2,394	34,508	39,129

South Parks Area

The South Parks area consists of a single CDP, Willow. Estimated gravel consumption is:

- 2004 – 26,753 tons
- 2010 – 31,686 tons

Point MacKenzie Area

The Point MacKenzie area also consists of a single CDP, Point MacKenzie. Estimated gravel consumption is:

- 2004 – 3,114 tons
- 2010 – 8,452 tons

Wasilla Area

The Wasilla area has the largest population within the MSB, and the largest sand and gravel consumption. Table 5 summarizes 2004 population and projected 2004 and 2010 sand and gravel consumption in tons.

Export

At least five sources of potential export gravel are located at Port MacKenzie, very close to tidewater.

Estimates made in 2002 suggested a minimum of 12 million tons of exportable aggregate were located on the south side of the Port MacKenzie road.

The five parcels nominated as materials sites at Port MacKenzie will have significantly more than this, depending on how many parcels are drilled to confirm gravel depth. This study suggests considerable amounts of gravel would be available from the five sites, enough to examine gravel export as an option.

A key factor for potential gravel export is gravel pricing in western Alaska markets, such as Bethel. There is very little high quality gravel in most of these areas and gravel is usually imported from local, regional, or Canadian (Prince Rupert) sources. The question is how competitive is gravel from Port MacKenzie?

A prior commodities flow study by Northern Economics in 2002 indicated costs of Port MacKenzie gravel in western Alaska, at Bethel, were as follows:

Bethel gravel selling price	\$35 per ton, Class B \$40 per ton, Class A
Trip duration	16 to 20 days
Delivered cost, haul only	\$33 per ton (20 days at \$5500, 3000 tons)

Load and storage costs (short-term only) at Bethel, alongside the river, were estimated at \$0.75 to \$2.00 per ton for company-owned storage; unloading costs along the Kuskokwim, by either conveyor (preferred) or front-end loader, were estimated at \$2.00 per ton. At these costs, Port MacKenzie gravel was not competitive; the costs of gravel extraction, loading, hauling and conveying to a barge were not considered for this 2002 work.

For this project, Northern Economics re-established contact (in 2004) with Anderson Tug and Barge, as well as Knik Construction. Quotes for delivered material in Bethel for 2005 are in the \$55 to \$60 per ton range, reflecting the significantly higher costs of oil. These, again, are transportation costs only.

Appendix A: Patents

State of Alaska



Patent

No. 18079

Know Ye By These Presents that the Grantor, the STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES, 550 West 7th Avenue, Suite 1050A, Anchorage, Alaska 99501-3579, pursuant to AS 29.65.010-.140 and the regulations promulgated thereunder, and the Final Finding and Decision dated March 21, 1980, for good and valuable consideration, grants and conveys to the Grantee, the Matanuska-Susitna Borough, whose mailing address of record is 350 East Dahlia Avenue, Palmer, Alaska 99645, Grantee's successors and assigns, all that real property situated in the Talkeetna Recording District, State of Alaska, and described as follows:

TOWNSHIP 28 NORTH, RANGE 5 WEST, SEWARD MERIDIAN, ALASKA

SECTION 5: TRACTS A, D AND E.

SECTION 8: TRACTS A, D AND E.

SECTION 17: TRACTS A AND D.

SECTION 18: W1/2SE1/4.

SECTION 19: TRACTS A, D AND F.

SECTION 30: TRACTS A AND D.

SECTION 31: TRACTS A AND D.

CONTAINING 3,068.29 ACRES, MORE OR LESS.

ACCORDING TO THE ALASKA STATE CADASTRAL SURVEY PLAT RECORDED IN THE TALKEETNA RECORDING DISTRICT ON JANUARY 15, 1993, AS PLAT 93-6.

Subject to:

Platted and valid existing easements and reservations.

A public right-of-way easement, 20 feet wide, within Section 5, ADL 216797.

Page 1 of 3

BOOK 80 PAGE 488

State of Alaska



Patent

No. 5848

Know All Men By These Presents that the State of Alaska, in consideration of the sum of TEN AND NO/100 DOLLARS

lawful money of the United States, and other good and valuable considerations, now paid, the receipt whereof is hereby acknowledged, does hereby grant to

MATANUSKA-SUSITNA BOROUGH

P.O. Box B, Palmer, Alaska 99645 and to

its successors, heirs and assigns, all that real property situated in the Borough of Matanuska-Susitna

State of Alaska, and described as follows:

TOWNSHIP 26 NORTH, RANGE 6 WEST, SEWARD MERIDIAN

SECTION 25: TRACT A, TRACT B AND TRACT C.

SECTION 26: TRACT A, TRACT B, TRACT C, TRACT D AND TRACT G.

SECTION 27: TRACT A, TRACT B, TRACT C, TRACT D, TRACT E AND TRACT F.

SECTION 28: TRACT A, TRACT B, TRACT C, TRACT D, TRACT E AND TRACT F.

SECTION 29: TRACT A, TRACT B AND TRACT C.

SECTION 30: TRACT A, TRACT B AND TRACT C.

TRACT D, TRACT E AND TRACT F.
Subject to Right-of-Way Permit ADL 200221.

CONTAINING 2,495.10 ACRES, MORE OR LESS.

Subject to valid existing trails, roads and easements.

Subject to the reservation of a 50 foot wide lineal perpetual public easement along the line of the ordinary high water mark of Peters Creek, Moose Creek and East Fork of Moose Creek as portrayed on the Alaska Division of Lands Supplemental Cadastral Survey Plat located within Tract A, Township 26 North, Range 6 West, Seward Meridian, filed in the Talkeetna Recording District on May 25, 1979 as Plat No. 79-75 and further subject to the reservation of a 50 foot wide perpetual public access easement to the

State of Alaska

BOOK 36 PAGE 113
Talkeetna Recording District



TALKEETNA INDEX
Serial No. 67-207

Patent

No. 549

Know All Men By These Presents that the State of Alaska in consideration of the sum of
 ONE AND NO/100-----DOLLARS,
 lawful money of the United States and other good and valuable consideration, now paid, the receipt
 whereof is hereby acknowledged, does hereby grant to MATANUSKA-SUSITNA BOROUGH
 A Second Class Borough organized and existing pursuant to the
 Laws of the State of Alaska
 its successors
 and assigns all the real property situated in the Borough of MATANUSKA-SUSITNA
 State of Alaska, described as follows:

TOWNSHIP TWENTY-FIVE (25) NORTH, RANGE FOUR (4) WEST, SEWARD MERIDIAN

SECTION 6: GLO Lots 4, 5, 6, 7 and Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40 of the Paper Subdivision of the SE $\frac{1}{4}$, the S $\frac{1}{2}$ of the NE $\frac{1}{4}$ and GLO Lots 1 and 2 of Section 6 in Township 25 North, Range 4 West, Seward Meridian as per ADL Plat 39-50, filed July 25, 1966 (Plat file 66-3);

SECTION 7: GLO Lots 1, 2, 3, 4, E $\frac{1}{2}$, and Lots 41, 42, 43, 44, 45, 46, 47, 48, 50, 49, 51, 52, 53, 54, 55, 56, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69 of the Paper Subdivision of the E $\frac{1}{2}$ of Section 7 in Township 25 North, Range 4 West, Seward Meridian, as per ADL Plat 39-51 filed July 25, 1966 (Plat File 66-4) and Lots 57A, 57B, 57C, 57D of the Subdivision of Lot 57 of the Paper Subdivision of the E $\frac{1}{2}$ of Section 7 in Township 25 North, Range 4 West, Seward Meridian, as per ADL Plat 19-95 filed August 29, 1966 (Plat File 66-5);

SECTION 8: ALL;

SECTION 17: N $\frac{1}{2}$;

SECTION 19: E $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$, E $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ and those portions of the N $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ lying west of the centerline of the Sunshine-Talkeetna Highway (Project No. S-0583 (2));

SECTION 20: S $\frac{1}{2}$;

SECTION 29: E $\frac{1}{4}$, NW $\frac{1}{4}$;

SECTION 30: Lots 3 and 8, NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$;

BOOK 80 PAGE 199

State of Alaska



Patent

No. 5281

Know All Men By These Presents, that the State of Alaska, in consideration of the sum of TEN AND NO/100-----DOLLARS lawful money of the United States, and other good and valuable considerations; now paid, the receipt whereof is hereby acknowledged, does hereby grant to

MATANUSKA-SUSITNA BOROUGH

P.O. Box B, Palmer, Alaska 99645

and to

its successors heirs and assigns, all that real property situated in the Borough of Matanuska-Susitna

State of Alaska, and described as follows:

TOWNSHIP 25 NORTH, RANGE 4 WEST, SEWARD MERIDIAN

SECTION 17: GLO LOT 1.
Subject to Right-of-Way Permit ADL 32991.

GLO LOTS 2, 3.

SECTION 19: SE1/4SW1/4NE1/4.
Subject to Right-of-Way Permits ADL 33042 and ADL 32991.
SW1/4SE1/4NW1/4.
Subject to Right-of-Way Permit ADL 32991.

SECTION 29: E1/2SW1/4. Subject to Right-of-Way Permits ADL 45978 and ADL 33042.
Subject to Letter of Entry ADL 75797.

GLO LOT 1. Subject to Right-of-Way Permits ADL 45978 and ADL 33042.

GLO LOT 2.

SECTION 31: SE1/4SE1/4. Excluding that certain Willow-Talkeetna Highway and all appurtenances thereto, Alaska Project Number S-0583(2) Junction FAP 35 North to Talkeetna. Subject to Right-of-Way Permits ADL 21221 (BLM Serial No. A-059164), ADL 19455 (BLM Serial No. A-058711) and ADL 32991.

BOOK 72 PAGE 803

State of Alaska



Patent

No. 4676

Know All Men By These Presents that the State of Alaska, in consideration of the sum of TEN AND NO/100 ----- DOLLARS

lawful money of the United States, and other good and valuable considerations, now paid, the receipt whereof is hereby acknowledged, does hereby grant to

MATANUSKA-SUSITNA BOROUGH

P. O. Box B, Palmer, Alaska 99645 and to

its successors and assigns, all that real property situated in the Borough of Matanuska-Susitna State of Alaska, and described as follows:

TOWNSHIP 24 NORTH, RANGE 4 WEST, SEWARD MERIDIAN

SECTION 19: LOT 5

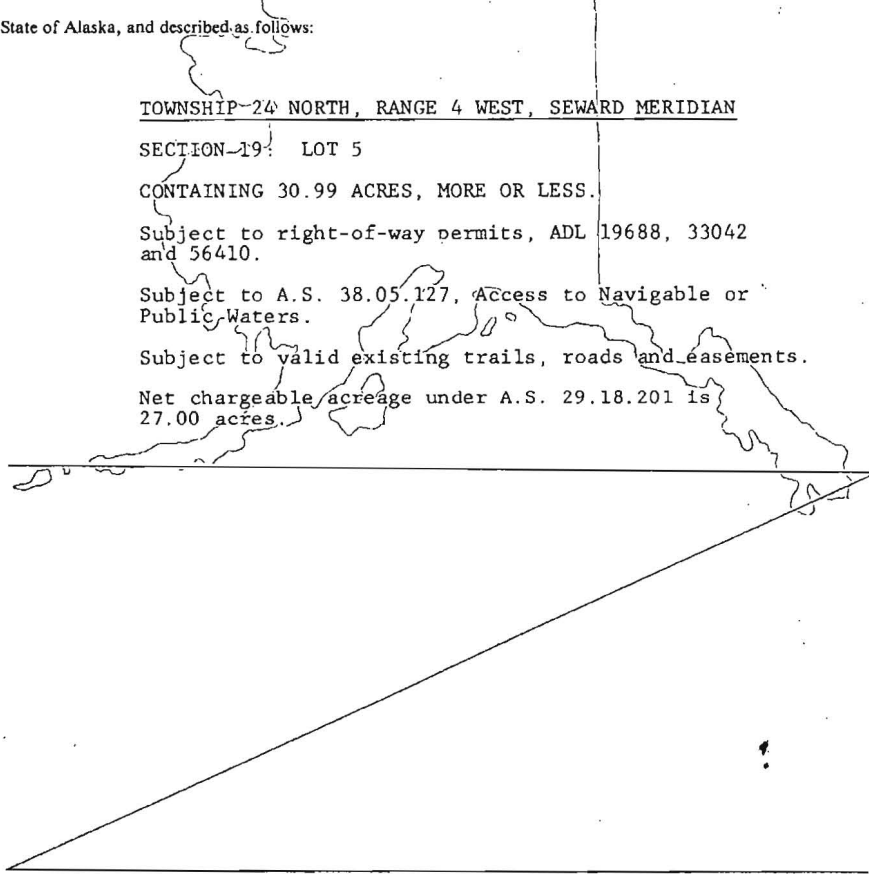
CONTAINING 30.99 ACRES, MORE OR LESS.

Subject to right-of-way permits, ADL 19688, 33042 and 56410.

Subject to A.S. 38.05.127, Access to Navigable or Public Waters.

Subject to valid existing trails, roads and easements.

Net chargeable acreage under A.S. 29.18.201 is 27.00 acres.



BOOK 216 PAGE 736

State of Alaska



Patent

No. 5180

Know All Men By These Presents that the State of Alaska, in consideration of the sum of TEN AND NO/100 ----- DOLLARS lawful money of the United States, and other good and valuable considerations, now paid, the receipt whereof is hereby acknowledged, does hereby grant to

MATANUSKA-SUSITNA BOROUGH

Box B, Palmer, Alaska 99645 and to

its successors and assigns, all that real property situated in the Borough of Matanuska-Susitna State of Alaska, and described as follows:

TOWNSHIP 23 NORTH, RANGE 4 WEST, SEWARD MERIDIAN

SECTION 1: GLO LOTS 1, 2, 3, 4, S $\frac{1}{2}$, S $\frac{1}{4}$.

SECTION 2: GLO LOTS 1, 2, 3, S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$.

SECTION 4: GLO LOT 4.
Subject to Letter of Entry, ADL 79951.

SECTION 17: SE $\frac{1}{4}$, E $\frac{1}{2}$ NE $\frac{1}{4}$,
Subject to Letter of Entry, ADL 79951.

SECTION 29: N $\frac{1}{2}$ NE $\frac{1}{4}$.

SECTION 36: E $\frac{1}{2}$.

CONTAINING 1,800.31 ACRES, MORE OR LESS.

Subject to valid existing trails, road and easements.

Subject to all reservations of record.

Subject to the reservation of a 50 foot wide lineal perpetual public easement along the line of the ordinary high water mark of Montana Creek, Goose Creek and Caswell Creek as portrayed on the Official Township Survey Plat for Township 23 North, Range 4 West, Seward Meridian, Alaska, examined and approved by the U.S. Surveyor General's Office in Juneau, Alaska on May 20, 1918 and further subject to the reservation of a 50 foot wide perpetual public access easement to the aforementioned lineal public easement along the above bodies of water. Said public access easement shall be identified by the Grantee and shall be subject to the

State of Alaska



Patent

No. 14466

Know Ye By These Presents that the Grantor, the STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES, 3601 C Street, Suite 960, Anchorage, Alaska 99503-5936, pursuant to AS 29.65.010-.140 and the regulations promulgated thereunder, for good and valuable consideration, now paid, the receipt whereof is hereby acknowledged, grants and conveys to the Grantee, the MATANUSKA-SUSITNA BOROUGH, whose mailing address of record is 350 Dahlia Avenue, Palmer, Alaska 99645-6488, Grantee's successors and assigns, all that real property situated in the Palmer Recording District, State of Alaska, and described as follows:

TOWNSHIP 15 NORTH, RANGE 4 WEST, SEWARD MERIDIAN

SECTION 9: TRACT A PLUS A 25.76 ACRE LAKE.

SECTION 21: S1/2.

SECTION 22: TRACT A.

SECTION 27: TRACT A.

SECTION 28: TRACT A EXCLUDING POINT MACKENZIE ROAD ROW.

SECTION 33: TRACT A-1-A EXCLUDING POINT MACKENZIE ROAD ROW.

CONTAINING 2330.88 ACRES, MORE OR LESS.

ACCORDING TO THE AMENDED ALASKA STATE CADASTRAL SURVEY PLAT RECORDED IN THE PALMER RECORDING DISTRICT ON DECEMBER 14, 1989 AS PLAT 89-59.

Subject to:

Platted and valid existing easements and reservations.

Road right-of-way, 100 feet wide, within Sections 9, 22, 27 and 28, ADL 32386.

Page 1 of 3

INDEX

State of Alaska

BOOK 78 PAGE 176
Palmer Recording District



PALMER 69-2620
Serial No.

Patent

No. 971

Know All Men By These Presents that the State of Alaska in consideration of the sum of ONE AND NO/100 DOLLARS, lawful money of the United States and other good and valuable consideration, now paid, the receipt whereof is hereby acknowledged, does hereby grant to MATANUSKA-SUSITNA BOROUGH, A Second Class Borough organized and existing pursuant to the laws of the State of Alaska, its successors ~~hereby~~ and assigns all the real property situated in the Borough of Matanuska-Susitna, State of Alaska, described as follows:

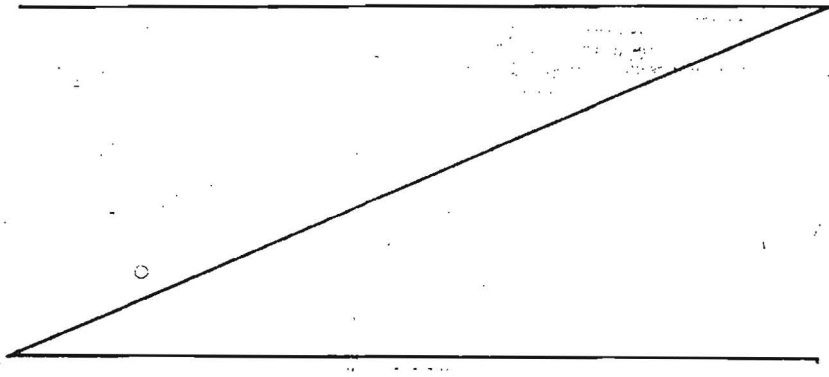
TOWNSHIP FOURTEEN (14) NORTH, RANGE FOUR (4) WEST, SEWARD MERIDIAN:

- Section 13: Lot 1, NW $\frac{1}{4}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ SW $\frac{1}{4}$
- Section 14: Lots 1 and 2, N $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$
- Section 15: all
- Section 22: Lots 1, 2, NE $\frac{1}{4}$ SE $\frac{1}{4}$
- Section 23: Lots 1, 2, 3 and 4, S $\frac{1}{2}$ SW $\frac{1}{4}$, NE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$
- Section 24: Lots 2, 3 and 4, NW $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$
- Section 25: Lots 1, 2, 3 and 4
- Section 26: E $\frac{1}{2}$

CONTAINING A TOTAL OF 2,321.39 ACRES MORE OR LESS.

SUBJECT TO A PUBLIC ACCESS ROAD 100 FEET IN WIDTH RESERVED BY THE DIVISION OF LANDS UNDER ADL 32384.

SUBJECT TO TIMBER SALE CONTRACT ADL 39085 FOR A TERM OF TEN (10) YEARS EFFECTIVE MAY 27, 1968 TO KALMBACH, INC. EMBRACES ALL OF THE ABOVE SUBJECT LANDS EXCEPT THE SE $\frac{1}{4}$ SE $\frac{1}{4}$ OF SECTION 15; LOTS 1, 2, NE $\frac{1}{4}$ SE $\frac{1}{4}$ OF SECTION 22; LOTS 1, 2, 3 AND 4, NE $\frac{1}{4}$ SW $\frac{1}{4}$ OF SECTION 23; LOTS 1 AND 2 OF SECTION 14.



BOOK 212 PAGE 553

State of Alaska



Patent

No. 5020

Know All Men By These Presents that the State of Alaska, in consideration of the sum of TEN AND NO/100 _____ DOLLARS lawful money of the United States, and other good and valuable considerations, now paid, the receipt whereof is hereby acknowledged, does hereby grant to _____

MATANUSKA-SUSITNA BOROUGH

Box B, Palmer, Alaska 99645

and to

its successors and assigns, all that real property situated in the Borough of Matanuska-Susitna State of Alaska, and described as follows:

TOWNSHIP 16 NORTH, RANGE 3 WEST, SEWARD MERIDIAN

SECTION 5: S $\frac{1}{2}$ N $\frac{1}{2}$.
Subject to Right-of-Way Permits, ADL Nos. 16980 and 19057.

GLO LOTS 3, 4, N $\frac{1}{2}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$.

SECTION 31: SE $\frac{1}{4}$ SW $\frac{1}{4}$.
Subject to Letter of Entry-ADL No. 63268.

GLO LOT 6.

SECTION 1: GLO LOTS 1, 2, 3, 4, S $\frac{1}{2}$ N $\frac{1}{2}$, S $\frac{1}{2}$.

SECTION 3: GLO LOT 1, S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$.

SECTION 4: GLO LOT 1, S $\frac{1}{2}$ NE $\frac{1}{4}$.

SECTION 8: S $\frac{1}{2}$ SE $\frac{1}{4}$, W $\frac{1}{2}$.

SECTION 9: NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$.

SECTION 10: SW $\frac{1}{4}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$.

SECTION 30: GLO LOTS 1, 2, E $\frac{1}{2}$, E $\frac{1}{2}$ NW $\frac{1}{4}$.

CONTAINING 2,888.58 ACRES, MORE OR LESS.

Subject to valid existing trails, roads and easements.

