

**MUNICIPALITY OF ANCHORAGE
MEMORANDUM**

DATE: January 29, 2018

TO: Planning and Zoning Commission

THRU: *DW* Dave Whitfield, Acting Manager, Current Planning Division

FROM: *FMM* Francis McLaughlin, Senior Planner

SUBJECT: Case 2017-0118, Supplemental Information

On December 11, 2017, the Commission held a public hearing on Case 2017-0118. After taking public testimony, the Commission closed the public hearing and postponed a decision on the case until amendments were made and brought back to the Commission for review. Enclosed are the amendments that the Commission requested. Chapters 7, 8 and 9 of the *Plan* were revised to reflect the desire of the community to limit the total number of residential dwelling units to those in the previously adopted *Plan*. Also, the amendments specifically call out the need for a future parking lot of 25 to 30 spaces to provide access to Chugach State Park. The Department recommends approval of the *Plan* with these amendments, which are shown in track changes.

7. LAND USE PLAN FOR CAROL CREEK PARCEL

The analysis of the site presented in the previous chapters and the 2010 Plan guides the proposed site plan for the Carol Creek parcel. The 2016 Update for this Site-Specific Land Use Plan sets out updated land use and infrastructure policy for HLB Parcel 1-074 the Carol Creek parcel and refines the direction of the 2010 Plan for the North Knoll (HLB 1-071). The site plan is presented in this chapter and development guidelines for each section of the parcel are summarized in Table 8.

Plan Objectives

The objectives below build from and match the general focus of the 2010 Plan, but are amended to reflect current administration priorities, recent and anticipated market trends, and better understanding of site characteristics and infrastructure issues and options.

- Develop in accordance with the Chugiak-Eagle River Comprehensive Plan and the Eagle River zoning ordinance (Title 21, Chapter 10).
- Protect and work within the constraints and opportunities of the natural setting of the area. In particular, protect Carol Creek and associated wetlands and groundwater resources.
- Retain and improve opportunities for access to open space, trails and other outdoor and indoor recreation amenities, for local residents and for visitors from outside the immediate neighborhood.
- Respect and protect the quality and character of the existing low density residential neighborhood to the north of the Heritage Land Bank holdings.
- Provide land for the planned AWWU storage reservoir(s) at the northeast corner of the property.
- Provide for development of new, good quality, moderate priced housing. Support the Administration's goal of increasing the supply of housing in the municipality.
- Take advantage of proximity to the uses adjoining the HLB parcel and respond to market trends, by providing a mixed use neighborhood, where it is easy, safe and inviting to walk to food and shopping, elementary school, sports complex, adjoining and nearby neighborhoods, and open space and trails.
- Keep down per-unit costs for new housing, through four main strategies:
 - Focus on moderate density housing, including duplexes, triplexes, townhouse and apartments, and single family homes with accessory dwelling units.
 - Reduce the cost to provide "backbone infrastructure", including water, sewer and road improvements, by being strategic about infrastructure timing and cost sharing
 - Where practical, use privately constructed/privately maintained roads and infrastructure, which is less costly to install than comparable facilities constructed by the Municipality to public standards.
 - Increase the number of allowed units above the 2010 Plan, in order to share the costs of infrastructure among a larger base.
- Allow for flexibility in the specific layout and numbers of future residential developments to take advantage of the skills and experience of individual developers, and respond to evolving market opportunities. At the same time, establish and require compliance with a set of residential development standards to ensure these are high quality developments and good neighbors to existing

residential areas, and that these residential developments take advantage of proximity to adjoining commercial and civic uses, the area's views, open spaces and other natural amenities.

Overview of the Land Use Plan

The site plan map on the following page (Map 7) illustrates the updated land use plan for the Carol Creek HLB parcel. The intent of the land use plan map is to provide a preliminary, conceptual land use plan, showing a reasonable, but not final layout of development areas, roads, trails, and open space. A more specific plan would come through the development process that shows a more specific layout of the roads, parcels, and infrastructure.

The overall pattern of land uses is generally very similar to the land use pattern of the 2010 Plan. Like the 2010 Plan this update does the following:

- Focus residential development on the northern and western side of the parcel.
- Retain a large corridor of public open space along Carol Creek.
- Allow for new single and multi-family housing nearby the surrounding shopping, school, recreation, and roadway in the western portion of the project area, and rural style, larger lot neighborhood in the north eastern section, to better match the character of the adjoining, existing neighborhood.
- Reserve a route for a road connection between the existing neighborhood to the north, and the access road coming into the Harry McDonald center off the Old Glenn Highway.
- Provide for a system of trails and open space connections between the future residential development and the Carol Creek corridor. Over 25 percent of the parcel is retained as a natural green belt to support an existing trail network and the Carol Creek.
- Recommends development of a parking area on the parcel to serve users of local trails.
- Require adherence to standards that guide the character of future development. Examples of such standards include providing a mix of housing types, styles, and densities; reducing the amount of impermeable surfaces and retain natural drainage contours to the greatest extent possible; orienting homes to maximize views; creating foot/bike connections to trails, open space corridors, and surrounding commercial and civic uses.

As in the 2010 Plan, the overall effect of the plan objectives and the proposed development combined with existing uses creates a walkable and multi-use district. This includes newly designated open space and new residential uses, plus the existing school, recreation facilities, and commercial uses. While occurring at a much smaller scale than downtown Eagle River, this mix of uses can offer similar advantages, including proximity of housing to jobs, recreation, shopping and transit; convenience for residents; and reduced reliance on the automobile.

While the overall pattern and location of land uses follows closely the 2010 Plan, this update does include several noteworthy additions:

- The allowed residential densities on the western portions of the project are increased, to allow for a maximum number of residential units that is higher than previously allowed in the 2010 Plan.
- A 3.5 acre parcel is reserved for future use by AWWU as a water reservoir site. This reservoir would serve the overall Eagle River community.
- This update includes a more detailed approach for providing needed infrastructure, with the goal of delivering water, sewer and other public services as cost-effectively as possible.

Land Use Recommendations

The Carol Creek parcel is a large site that can accommodate a variety of land uses. The key feature that defines the site is Carol Creek and associated wetlands, which provide an important drainage function and natural resource corridor. The parcel naturally divides into distinct areas based on site topography and the presence of the wetland. The site plan, Map 7, outlines the geography of these sections and Table 8 below summarizes the recommendations.

Table 8. Summary of Recommended Land Uses for Carol Creek Parcel

Area	Land Use Classification	Land Use Classification Description
Tract 1		
Section 1.1 Tract 1	Residential, Medium Density (15 to 30) to 15 DUA)	Provides for a range of single- and multi-family housing in neighborhoods and offers a diversity of housing choices. Recommended residential uses include townhouses and multi-family, including row or cottage homes. The intended overall density range is greater than 15 and up to 30 between 7 and 15 dwelling housing units per gross acre. The physical form, appearance and street orientation of multi-family/attached housing development should be designed to be compatible with nearby lower density housing. Building scale, single-family character and landscaped setbacks of new development, as well as low traffic volumes on local streets, can contribute to neighborhood character and support compatibility with surrounding areas. No more than 115 dwelling units shall be developed on this tract.
Section 1.2 Section 1.3 Section 1.4	Residential, Medium Density (7 to 15 DUA)	Provides for a range of single- and multi-family housing in neighborhoods and offers a diversity of housing choices. Residential uses include standard duplexes, townhouses and row or cottage housing. The intended overall density range is greater than 7 and up to 15 housing units per gross acre. The physical form, appearance and street orientation of multi-family/attached housing development should be designed to be compatible with nearby lower density housing.
Section 1.5	Residential, Medium Density (7 to 10 DUA)	Provides for attached single-family housing and small lot homes. The predominant land use consists of more compact forms of single-family residential, such as small lot houses or duplexes and triplexes. The intended density range is 7 to 10 housing units per gross acre. Building scale, single-family character and landscaped setbacks of new development, as well as low traffic volumes on local streets, contribute to a low intensity, single-family style living environment.
Tract 2		
Section 2.1 Section 2.2 Tract 2	Residential, Low Density (1-2 DUA)	Provides for neighborhoods with a semi-rural atmosphere consisting generally of single-family homes on half acre or larger sized lots. Allows the option for accessory dwelling units.

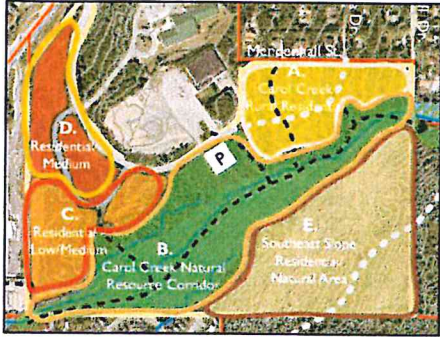
Area	Land Use Classification	Land Use Classification Description
	<p>Note: density above 2 DUA requires connection to the public water system</p>	<p>Building scale and landscaped setbacks of new development, as well as low traffic volumes on local streets, contribute to a low intensity living environment. Development to match the density and character of the adjacent neighborhood.</p> <p><u>No more than 7 dwelling units shall be developed on this tract.</u></p>
<p>Tract 3</p>	<p>Park and Natural Resources</p>	<p>Retain a substantial open space corridor along Carol Creek, including the creek itself and adjoining wetlands and forested areas. Provide for active and passive recreation, conservation of natural areas, and trail corridors connecting neighborhoods.</p> <p>Manage this corridor to be substantially undisturbed, to protect water quality, to ensure the integrity of the wetlands, to provide non-motorized trails, and to maintain an open space buffer between the residential neighborhoods on either side of this green space.</p>
<p>Tract 4</p>	<p>PLI</p>	<p>Sell this parcel to Anchorage Water and Wastewater Utility Reservoir.</p> <p>Sell to AWWU at fair market value as a location for water reservoir to help supply the overall water needs of Eagle River. Purchase agreement to outline the framework for a memorandum of understanding about shared infrastructure costs.</p>
<p>Tract 5</p>	<p>Very Low Density Residential or Park and Natural Resource</p>	<p>Provides for large-lot, single-family residences in a rural environment, much of which is served by private wells and septic systems.</p> <p>The predominant land use consists of detached houses on lots one acre or larger in size. The intended overall density for new development is less than one housing unit per gross acre. This type of development results from a combination of preferred lifestyles, a lack of public infrastructure, remoteness and environmental constraints.</p> <p><u>No more than 3 dwelling units shall be developed on this tract. If this tract remains undeveloped open space, the 3 units should be allocated instead to Tract 1.</u></p> <p>See above for Park and Natural Resource <u>description.</u></p>

Housing Development

This plan proposes to ~~increase~~ maintain the maximum number of housing units ~~recommended~~ allowed in the 2010 Plan. The proposed land uses recommended on Map 7 and summarized in Table 8 ~~could yield an approximate doubling of the amount of housing proposed in the 2010 Plan.~~ may be developed within the proposed density ranges for Tracts 1, 2 and 5, but the total number of dwelling units shall not exceed 125 for the entire parcel. See comparison of the 2010 to 2016 site plans below.

2010 Plan

2016 Update



The additional housing can be attributed in part to the reconfiguration and increase in size of Tract 1 coupled with an increase in the proposed residential density of the westernmost portions of the parcel (Sections 1.1 and 1.2). In the 2010 Plan this area was identified as Sections C and D and totaled approximately 15 acres. The adjustment was also in response to some of the area previously proposed as low density housing (Section A in the 2010 Plan) now proposed for the 3.5 acre AWWU reservoir site (Tract 4

Formatted: Highlight

Table 9 presents a range of housing units for each Tract and Section of the plan based on the proposed land use classifications and associated densities. This plan seeks to allow flexibility to respond to the market, infrastructure costs, and site characteristics; ILLB recognizes that setting a site-wide threshold of housing units for an individual Tract or Section may be necessary, similar to the strategy in the 2010 Plan.

Table 9. Estimated Residential Units Proposed for Carol Creek Parcel (Revised based on Planning & Zoning Commission December 2017 Public Hearing)

2016 Plan Tract + Section	2010 Plan Section	Gross Area (acres)	Developable Area (approx. ~70%; acres)	2016 UPDATE PROPOSED Density	REVISED Density based on Dec. PZC Discussion	REVISED Housing Units based on Dec. PZC Discussion	2010 Adopted Plan - Housing Units
Tract 1 (Medium Density Residential)	C + D	27.61	15.946	7-30 DUA	7-15 DUA	115	110
Approximate Access and Utility Allocation		2.6	N/A				
Tract 1 Previously Referred to as Section 1.1*	Density ranged from 3-6 DUA to 7-10 DUA	4.44	3.11	15-30 DUA			
Tract 1 Previously Referred to as Section 1.2*		8.54	5.98	15-30 DUA			
Tract 1 Previously Referred to as Section 1.3*		1.97	1.38	7-15 DUA			
Tract 1 Previously Referred to as Section 1.4*		4.64	3.25	7-15 DUA			
Tract 1 Previously Referred to as Section 1.5*		3.19	2.23	7-10 DUA			
Tract 2 (Low Density Residential)	A	8.37	4.69	1-2 DUA	1-2 DUA	7	10
Tract 2 Previously Referred to as Section 2.1*	Density	4.2	2.94	1-2 DUA			
Tract 2 Previously Referred to as Section 2.2*	1-2 DUA	2.78	1.95	1-2 DUA			
Tract 3 (Open Space)	E	25.48	N/A		-		
Tract 4 (AWWU Reservoir)	A	3.5	N/A		-		
Tract 5 (Rural Residential)	B	26.12	N/A	<1 DUA	<1 DUA	3	5
TOTAL		92 acres	76 acres			125	125

*See Appendix E for Site-Specific Land Use Map as presented to the Planning & Zoning Commission December 2017 Public Hearing that defines the boundaries of the Tract Sections.

Roads and Other Infrastructure

Roads, water and sewer and other infrastructure improvements are required to service the new residential development. To be successful, development of this site will require thoughtful coordination of the road improvements and water service delivery with the development of AWWU's reservoir site, as well as coordination with other municipal entities such as the MOA Private Development, the Anchorage School District and the MOA Parks and Recreation Department. Map 8 identifies specific public infrastructure improvements that the site will need for development. Detailed recommendations follow.

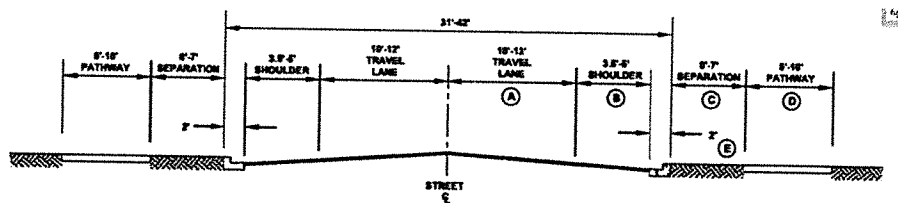
Access and Transportation

The Development Objective related to access and transportation outlined in the 2010 Plan continues to hold true for this 2016 Update. That objective is to provide access to new areas of development, connectivity to and between existing neighborhoods, and to plan new roadway and pedestrian circulation in a manner that reduces traffic speeds, maximizes safety, creates attractive streets that maintain rural character, minimizes environmental impacts, and encourages use of alternatives to the automobile - walking, biking, and transit.

Roads

The road access status of the area remains the same as in 2010 and is described as follows. There are two points of road access into the project area: the Fish Hatchery Road and the McDonald Center Road. Fish Hatchery Road on the north provides the only access to a system of smaller residential streets, serving approximately 80 homes (this includes the addition of the Troy Davis homes built on the former HLB Muldrow Street parcels). Harry McDonald Road provides access to the McDonald recreation center and the Fire Lake School. This "road" is not built to normal Municipal public road standards. Since the passage of the 2010 Plan, the new Official Streets and Highways Plan (OSHP) has classified McDonald Road as a collector.

Typical Design for Collector Road



NOTES:

- (A) 12-FOOT TRAVEL LANES SHALL BE USED ONLY ON INDUSTRIAL/COMMERCIAL COLLECTORS OR RESIDENTIAL/NEIGHBORHOOD COLLECTORS WITH HIGH TRUCK TRAFFIC.
- (B) A 7-FOOT SHOULDER WILL ONLY BE ALLOWED WHERE THERE IS ON-STREET PARKING. ON-STREET PARKING MAY ONLY BE PROVIDED ON ONE SIDE OF A NEIGHBORHOOD OR RESIDENTIAL COLLECTOR ROADWAY. PARKING WILL BE ALLOWED ON ONE OR BOTH SIDES OF AN INDUSTRIAL/COMMERCIAL COLLECTOR.
- (C) THE DESIRABLE SEPARATION FOR PEDESTRIAN FACILITIES ALONG ALL COLLECTORS IS 7 FEET. IN SOME CASES THE PEDESTRIAN FACILITIES MAY BE ATTACHED TO THE BACK OF CURBS PROVIDING THERE IS A 5-FOOT SHOULDER. THE MINIMUM MAINTAINABLE WIDTH FOR A VEGETATED BUFFER IS 3 FEET.
- (D) PEDESTRIAN FACILITIES MUST BE PROVIDED ON BOTH SIDES OF A COLLECTOR ROAD. THE MINIMUM WIDTH OF A SIDEWALK IS 5 FEET. MULTI-USE PATHWAYS MAY VARY IN WIDTH BETWEEN 8 TO 10 FEET.
- (E) CURBS AND GUTTER MUST BE TYPE 1 (REF. DCM SECTION 1.06 DESIGN COMPONENTS).

Source: Municipality of Anchorage Project Management and Engineering Design Criteria Manual (2007)

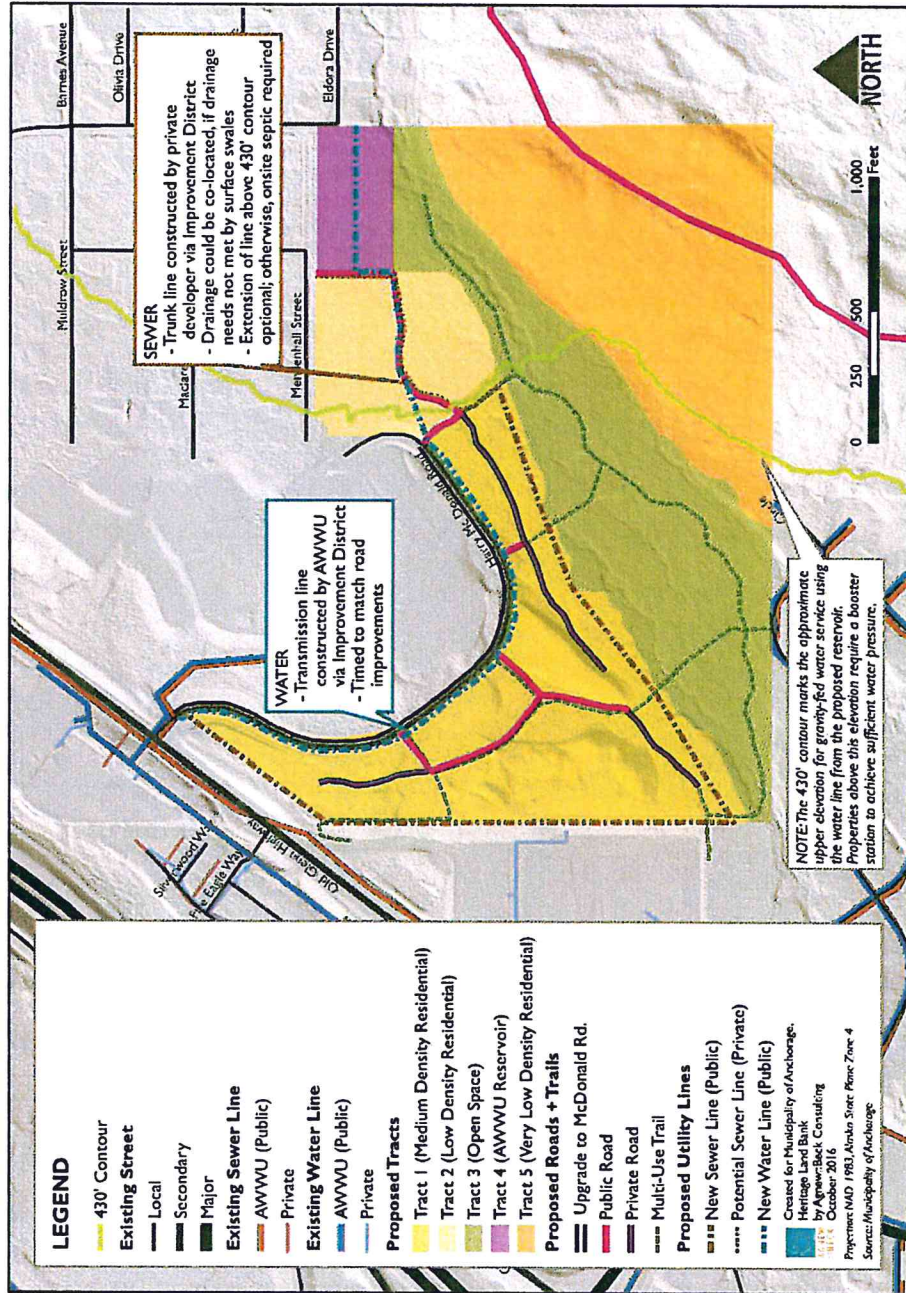
Like in the 2010 Plan, this 2016 Update carries forward the policy of connecting the existing Fish Hatchery Road residential road system westward into McDonald Road. This extension will provide an indirect but functional alternative access to the existing residential area, increasing safety and emergency access and an option for the neighborhood to reach the sports center and school by a more direct route. This intent reflects a Municipality-wide policy of creating connectivity between adjoining neighborhoods.

The project team was mindful of the concerns by existing residents regarding the roadway to connect the Harry McDonald Road to the rural residential neighborhood off Fish Hatchery Road. As outlined above, this new connection will be designed as a meandering rural road, in order to discourage heavy use of this route.

Pedestrian Facilities

The project area has a well-developed, largely informal trail system, with a number of frequently used trails along Carol Creek, and connections to those trails from the residential neighborhoods to the north and south. A sidewalk runs along the road up to the access drive into Fire Lake Elementary. Informal, but well-trod trails, run across ~~Section 1-1~~ the northeastern corner of Tract 1, likely providing a more direct route for people coming up from the Old Glenn Highway, in particular residents on the south side of the highway going to and from school and/or the Harry McDonald Center. Likewise there are well established social trails along the length of the western edge of Tract 1, and connecting from the southwest corner of the tract into the Fred Meyer parking lot.

Map 8. Proposed Infrastructure Improvements and Coordinated Development



Throughout the update process, the project team met with Anchorage Traffic Department and Project Management and Engineering (PM&E) representatives to better understand access and traffic issues in the area, to review the development proposal, understand what traffic improvements the proposed plan may trigger, and develop a cost-saving approach to providing needed infrastructure. Specific outcomes of this process, building from the policies in the 2010 Plan and focused on the road system, are outlined below.

Specific recommendations for creating an integrated system of pedestrian and vehicular travel ways are included in the development standards section in the following Chapter.

Recommended Access Strategies and Improvements:

- Develop neighborhood roads and walkways considering all modes of transportation including pedestrians, cyclists and automobiles to maximize the efficiency and safety of the circulation system. *(See Development standards section for more details on policies for sidewalk and trail systems)*
- Upgrade McDonald Road to municipal standards for a collector street up to the Harry McDonald Center (currently this road is a driveway). It is recommended that HLB staff nominate the collector upgrade of Harry McDonald Road during the upcoming 2019 Anchorage Metropolitan Area Transportation Solutions (AMATS) Transportation Improvement Program (TIP) planning effort. This program would gain access to federal funding with a local match.
- The improvements to Harry McDonald Road from a private local road to a collector should be timed to coincide with AWWU’s installation of the water line needed to serve the new reservoir. Installing the water line and improving the road at the same time can lead to substantial cost savings, allow for cost sharing, and reduces the length of time public access is disrupted (see *Water and Sewer*).
- To reduce the cost of roadway improvements this plan recommends that the 80-foot right-of-way for the Harry McDonald Road be shifted so right-of-way is located on land shared between HLB, the Anchorage School District, and the Municipality Parks and Recreation managed Harry J. McDonald Center property. This would free up a small but non-trivial increment of HLB land for housing, while providing for an improved road that benefits all these users.
- Extend McDonald Road through Tract 2 to the existing rural residential area – Mendenhall/Malaspina Streets. Provide a circuitous route and build to rural standards.
- When McDonald Road is improved, include enhanced pedestrian safety and street crossing(s) to Fire Lake Elementary and McDonald Center. Provide for safe pedestrian facilities (sidewalk and/or multi-use trail) along both sides of the road, from the Old Glenn Highway to the McDonald Center, and the extension into the Mendenhall/Malaspina residential area.
- Work with the Anchorage School District and State Department of Transportation and Public Facilities to provide for safe pedestrian access along McDonald Road and across the Old Glenn Highway. Ultimately, a controlled intersection (stop light) may be required at the intersection of McDonald Road with the Old Glenn Highway, primarily due to the new traffic tied to new residential development, as well as existing development to the west of the Highway, and public use of the Harry McDonald Center and Fire Lake Elementary School. *(See note below regarding traffic impact analysis)*
- Public streets within new residential areas will be built to local residential street standards.
- Individual developers will determine the specific layout of residential areas, including roads, trails, storm water conveyance, etc. consistent with policies established in this plan, resulting in a refined site plan and subdivision design, as required under the introduction to the development standards section on Page 36.

- A road to serve the southeast slope, low-density residential development area may be needed if that development occurs in the future. As this road would traverse a steep area, the following objectives will be followed:
 - Choose a route that requires the least amount of cut and grading; design the route to be minimally visible from off site.
 - Design the road to work with existing topography, e.g., contouring across the property either just above the open space corridor, or two thirds of the way up the slope in the area where there are several flatter, potential home sites.
 - Design road to minimize impact with adjacent open space corridor.
 - Road design should be rural in nature.
 - Avoid switchback roads.
- Formalize access and improve the trail system and wayfinding within the Carol Creek corridor.

Traffic Impact Analysis

The typical threshold for a Traffic Impact Analysis (TIA) is whether the new development will generate 100 trips in the peak hour of the adjacent roadway. The level of development proposed for these tracts will likely require a TIA at the time of platting, zoning, or other basic project approvals. The TIA will help to determine whether a signalized intersection would be required for the development. National practices for the development of TIAs are evolving, shifting to reflect a growing emphasis on the importance of reducing traffic generation through shifting trips from private automobiles to trips on foot, by bike or transit. The future TIA should reflect these trends, and take into account the design of the project and the resulting options for people to get to commercial services, to school and other destinations without reliance on a car.

Storm Water

The 2010 Plan did not include specific strategies for managing storm water. During this planning process the Project Team consulted with MOA Private Development and discussed several options for dealing with storm water: a fully piped system, surface flow to Carol Creek, and onsite storage in filtration ponds. Each system has benefits, costs and varying standards. For instance, where public systems are used, pipes in roads with curbs and gutters require less land than surface swales, which can free up more property for development. Surface swales that extend for longer distances require a large public right of way for maintenance and access of the drainage swale. The public ROW required for a lengthy surface swales is at least 20 feet wide, and capable of supporting a 70,000 lb. vehicle, which is in effect a small road. Shorter swales do not require these higher standards.

The Carol Creek project will likely rely on several different drainage strategies, reflecting the characteristics of the land in each Section of the parcel. The overarching strategy is to minimize drainage requirements by relying on onsite infiltration, and flow of water into the adjoining Carol Creek open space. This approach – which helps minimize development costs, should work well for most of the Tract 1, Sections 1.2, 1.4, 1.5 and for Tract 2. These tracts all adjoin the Carol Creek open space corridor, and drainage needs to be met through short surface swales into that open space. Exact dimensions would vary depending on whether they were ~~publically~~ publicly or privately developed and owned.

The terrain in Section 1.4 the northwestern corner of Tract 1, adjacent to the Old Glenn Highway, flows to the north. This area may need to rely on subsurface storm water drains. MOA Private Development indicated that the storm water pipe along the Old Glenn Highway is owned by the state; the state's Department of Transportation and Public Facilities (DOT&PF) indicated that storm water could likely be piped from the development into the pipe beneath the Old Glenn Highway. When the parcel is developed, a drainage analysis can help to ensure the pipe being tapped into is large enough to handle the additional flow.

Summary of Recommended Storm Water Strategies and Improvements:

- Use different approaches to manage storm water based on the site conditions of the section of the parcel being developed, with primary reliance on surface drainage to the nearby Carol Creek open space corridor.
- Minimize the amount of impervious surfaces developed as part of the site, and maximize onsite infiltration.
- In areas where a piped storm water system may be required, coordinate installation of this system with the sanitary sewer installation, to reduce costs by sharing the trench needed for both pipe systems.
- Subdivision or development immediately adjoining Carol Creek may require analysis to determine the elevation and extent of the 100-year flood along Carol Creek.

Public Water and Sewer; Onsite Private (Well and Septic) Systems

The conditions related to water and sewer have not materially changed since the 2010 Plan. As before, the Harry McDonald Center currently is connected to Municipal water and sewer; the surrounding residential neighborhoods on the north side of the project area rely on onsite wells and septic systems. Portions of the surrounding north-side neighborhoods have a history of challenges with onsite systems – most notably the residential area above Knob Hill Drive, where ground water resources are limited, and for the several homes that rely on surface water from Carol Creek.

The same general policy guidelines in the 2010 Plan remain for this 2016 Update. This plan seeks to develop appropriate water and sewer facilities to accommodate the proposed areas of development. The majority of the site – Tract 1 – is planned to link to Municipal public water and sewer service. Tract 2 development will likely rely on onsite well and septic systems, and these should be designed to not impact existing systems or water quality.

Public Water

This planning update looked more deeply at one of the development policies presented in the 2010 Plan, which was to “explore options to pay for necessary extension of public water and sewer to serve the Carol Creek residential areas, requiring cooperative arrangements between the Municipality, Anchorage Water and Wastewater Utility (AWWU), and the private developers of Carol Creek residential projects.”

AWWU is a partner in this current planning effort as they pursue the acquisition of a portion of the Carol Creek property for a water reservoir site. This alliance has opened up new opportunities for coordination of infrastructure improvements to the site and methods for sharing improvement costs. Specifically, AWWU will need to build a new water transmission line to deliver water to the new reservoir. This update recommends the planned new residential development be timed in order to utilize the new water transmission line after it is constructed. Likewise, this plan proposes that improvements to the Harry McDonald road are timed to correspond with construction of the water line. AWWU is currently projecting design funding for the water transmission line and reservoir will be requested in the next six to ten years, with a request for construction funding and actual construction following the design phase. That time frame could align with the proposed funding of the McDonald Road improvements through the AMATS project nomination process in 2019.

Construction of the water transmission line by AWWU reduces the overall cost of infrastructure to be borne by developers. If developers construct the water line prior to AWWU, the full cost is borne by the developer with a contribution from AWWU for a small portion of the construction costs. It is therefore, more economical for developers to wait for AWWU to construct water transmission infrastructure.

AWWU has indicated the water line to the reservoir can only serve development below 427-foot elevation (approximate elevation shown along the 430-foot contour line on Maps 6 and 8). Areas above that elevation would not have enough pressure to be served without construction of a booster station to add pressure to the stored water, which would cost approximately \$1 million plus 1,000 linear feet of distribution line. Given these costs it is not likely that the small amount of new residential development planned for Tract 2 could afford these costs.

It is possible that at some point in the future, the owners of the new properties proposed in Tract 2, as well as the approximately 80 homes to the north in the Fish Hatchery Road neighborhood, would opt to collectively pay for extension of public water and/or sewer. This would require the residents to work together and with AWWU to develop a special assessment district to finance the infrastructure improvements needed to deliver either or both of these services.

Public Sewer

A possible location for a sewer line to serve ~~Section 4~~ new development in Tract 1 of the Carol Creek parcel is shown in Map 8. Sewer is gravity fed and can support development in both Tracts 1 and 2. Conversations with AWWU when preparing the 2016 Update support sewer development by a private entity. Depending on the phasing of residential development, this line may be incrementally extended, starting at the ~~in Section 4-4~~ with units developed closest to the Old Glenn Highway intersection in Tract 1, but sized to support buildout of the full site.

Other cost saving measures may be possible at the time of development. A more precisely planned alignment of the sewer line is likely, based on the siting of the development and topography, which could reduce the length of the line and the cost to build. In addition, depending on the depth of the trench required for each type of infrastructure, if a piped storm water system is required, the same trench could support both sanitary sewer and storm water. If feasible, it offers another opportunity to coordinate infrastructure improvements to minimize the amount of groundwork, excavation, and costs.

Onsite Water and Sewer (Well and Septic) Systems

The rural residential development proposed for Carol Creek Tract 2 will be served by onsite wells. Depending on the specific phasing of development in Tract 1, and public sewer line costs, this area may be able to tie into the upper end of the sewer trunk line serving Tract 1. More likely, development in Tract 2 will rely on onsite water and wastewater systems.

Residents in the neighborhoods adjoining the planned new residential areas are concerned about adequate well water and water pressure. Consistent with standard Municipal subdivision policy, prior to approving a subdivision plat, test wells need to be drilled and soil samples collected to determine the adequacy of water for the subdivision and affected adjoining areas.

Parks and Natural Resources

Recommendations related to parks and natural resources are identical to the 2010 Plan. As stated in that plan, the proposed 25.5-acre natural resource area is the backbone of the uses planned for the Carol Creek parcel. Preserving this wetland and creek corridor is essential to maintaining the quality of the surrounding neighborhoods, preserve and protect critical wetland habitat and important drainage functions and maintains and improves property values. Out-the-door access to open space and trails is a proven way to increase the desirability of a residential neighborhood, and particularly so for moderate or higher density residential.

Specific development objectives for the natural resource corridor include:

- Ensure connectivity through the greenbelt to and from all surrounding neighborhoods and the adjacent commercial areas. Retain a “green window” along the road looking into the natural resource corridor.
- Provide a network of non-motorized trails within the corridor as well as a public access route leading to Chugach State Park to the east. Existing informal trails in the area provide a good sense of the locations and number of needed trails.
-
- The 2010 Plan recommended development of a parking area and trailhead on the south side of the McDonald Road, for users outside of the nearby neighborhoods. This plan also includes a recommendation for a medium sized parking area (25 to 30 spaces) somewhere on the parcel. The parking area may be located adjacent to McDonald Drive, another existing road with access to the parcel, or within a newly-developed neighborhood in Tract 1 or 2. The location of the parking area will be determined during the subdivision process. Given the existing capacity for parking at the McDonald Center and the development suitability of this portion of the site, the 2016 Update recommends not building an additional parking area for trail users and instead adding this to Tract 1 as a site for future housing development.
- Ensure that the proposed parking area, is in an appropriate location and connects to existing and new trails within the open space area.
- Design trails to minimize impacts on water quality and the natural environment. Allow only limited clearing of vegetation for trail development. If and when the trail is constructed east of HLB property, across the privately-owned parcel to the east and BLM land bordering Chugach State Park, ensure that the trail is set back from the Creek, to protect water quality.
- Work with the Eagle River Parks and Recreation Division to improve and maintain the area. It is the intent of the Heritage Land Bank to set aside portions of this natural resource corridor for consideration as a wetland mitigation bank site. The decision on whether some portion of this area may become Municipal Park will be made in the future.
- Comply with U.S. Army Corps of Engineers requirements in order to obtain wetland mitigation credit for retention and conservation of the wetland.
- Consider the ongoing use of the field immediately west of the Harry J. McDonald Center as a landing spot for hang gliders and parasailers. The issue here is avoiding extending obstacles higher than 30 feet immediately adjoining this landing area. Current plans for development – which is set well back from the landing area, and which will generally be on slopes below the landing area, and below the tops of the existing tree canopy, suggest the planned residential development will not create safety issues for these users.

Note: Carol Creek contains a 15 foot “screen easement” in their original plat (Appendix A), as well as a 100-foot creek maintenance development setback.

8. DEVELOPMENT STANDARDS

Chapter 7 presented a conceptual site plan that recommends land uses and shows how open space, circulation, drainage and shared infrastructure should work for the project as a whole. This project is likely to be developed in phases: prior to final platting of any given tract, a more refined site plan will be needed that responds to the market conditions at that time, as well as incorporating the required continuity of open space, drainage, trails, circulation and other shared infrastructure. This more refined site plan would show, for example, how the trail and road system in Tract 1/Section 1.4 would connect to the roads, trails and open space connections elsewhere in adjoining Sections 1.2, 1.3, 1.4 Tract 1 and the dedicated open space in Tract 3. This chapter presents general standards that should be incorporated into any future site plans, addressing circulation and other development issues.

Tract 1 – Medium Density Residential (western area of the parcel)

Objectives

Quality design is essential to the success of the creation of this new neighborhood. Overall objectives for the design and character of this project include:

- Compact Development, which promotes the efficient provision of public services and infrastructure, and allows retention of natural areas.
- Multi-Use, which places homes, jobs, stores, parks, and services within walking distance of one another.
- Full Utilization of Urban Services (e.g., water, sewer, storm drainage, parks, and transportation facilities), which maximizes the return on public investments in infrastructure.
- Transportation Efficiency, or development of a street system supporting multiple modes of transportation, which yields more direct routes (shorter distances) between local destinations, conserves energy, reduces emergency response times, and provides alternatives to the automobile for those who are unable or choose not to drive a car.
- Human-Scale Design, or development in which people feel safe and comfortable walking from place to place because buildings, streetscapes, parking areas, landscaping, lighting, and other components of the built environment are designed foremost with pedestrians in mind.
- Environmental Health, or development which requires adequate light and air circulation, management of surface water runoff, and treatment and disposal of waste. The plan recommends a 50 foot setback from the existing stream channels when defining the southern boundary of this tract.
- No more than 115 dwelling units shall be developed on this portion of the parcel.

Formatted: CER Bullet List

Development Standards

Site Design

- Create a neighborhood that is safe, accessible, and easy to move through for pedestrians and vehicles.
- Concentrate higher density housing on the west side of the project area.
- Ensure that new development takes advantage of site amenities including the Carol Creek open space corridor and the site's sunny, southwest facing slopes and viewshed potential.
- Encourage site design that protects or enhances the natural amenities of the area, as much as practical, through retention of existing trees and vegetation.

- Provide “fingers” of open space, extending from the Carol Creek corridor into residential areas.
- Provide adequate onsite snow storage space or store snow off site to ensure the integrity of the landscaped or natural vegetated areas.
- Minimize predominance of driveways, parking areas, and other paved impervious surfaces.

Circulation of Vehicles and Pedestrians

- Develop neighborhood roads and walkways consider all modes of transportation including pedestrians, cyclists and automobiles to maximize the efficiency and safety of the circulation system.
- Provide for a well-developed pedestrian circulation system for the site as a whole, so all new residences have a safe, attractive, convenient, and direct walking routes to:
 - the school and Harry McDonald Center;
 - the commercial areas and the Old Glenn Highway to the west;
 - the Carol Creek open space; and
 - any future access to the Chugach State Park.
- Allow for and encourage use of shared driveways serving small clusters of homes, to reduce costs, maximize retention/provision of existing, or replanted landscapes.

Building Siting and Orientation

- Use building styles that help create a sense of overall cohesion to the neighborhood, while not creating streets with monotonous repetition of building form. Vary façades and building placement in relationship to the street and adjoining buildings.
- Building design should reflect differences in site locations; for example, corner buildings should have different side façades and window treatment than buildings in interior locations; buildings on slopes should use stepped foundations that respond to local changes in topography.
- Encourage northern design elements to protect solar access and reduce wind exposure and to provide quality development that is responsive to its surroundings and climate.

Building Design and Articulation

The housing density ranges associated with each ~~Section-tract~~ reflect a transition from an urban to more “rural” neighborhoods, reflecting the current mix of land uses in the area, from commercial areas along the Old Glenn Highway to the large-lot subdivision to the northeast. A primary objective is to avoid developing in the style of site condominiums found across the Old Glenn Highway from the Carol Creek area. Undesirable qualities include monotonous character (structures lack variety, layout is uniform), predominance of garages and parking areas, and lack of natural vegetation and/or space for replanted vegetation. Specific design standards for buildings include:

- Create a positive relationship to the street, with features such as easily visible front entries, reduced dominance of garage doors, and other human scaled features:
 - Require street facing ground floor and front façades windows.
 - Require building front entries to be prominent, inviting and visible from the street
 - Encourage use of features such as covered front porches that give this neighborhood a sense of being a friendly, “people place.”
- Ensure a diversity of housing unit styles by incorporating features that create variety and visual interest. Require a variety of building models that include variations of window placement, entrance location, garage sizes and placements, and façade details.

- Add architectural features such as porches, balconies, bays, varied roof heights, variations in façades to include recesses and extensions, and other building elements to visually reduce the mass of the building and create visual interest. Simple, unadorned box shape buildings are not permitted.
- Maximize light, views and privacy through window placement.
- Sides and rears of buildings should display a similar level of quality and detail as the front façade when visible from the street. On corner lots, blank walls should be avoided.
- Encourage articulation of design features such as projections, recesses, varied rooflines, and building heights.
- Minimize the percentage of garage doors dominating the front elevation through a variety of garage sizes (single-car, tandem, double). For example, for row housing or townhouse style housing, garages are designed to be recessed into the building, with windows, projecting balconies, living space and landscaping as dominating features facing the streetscape.
- Encourage and allow for different housing densities to be located side by side, such as a townhouse adjoining duplexes and single family homes.
 - o Medium Density allows a variety of building styles, including townhouses, duplexes, and multi-family dwellings. Small, single-family detached “cottage homes” are also permitted.

Storm Water Drainage

- Retain natural drainage and contours to the degree possible, recognizing that the site includes several smaller, steep-sided mounds and low ridges that will likely require substantial grading to take advantage of this site’s potential to provide moderate priced housing.
- Manage runoff as much as possible by using surface swales integrated into the site’s open space system and the Carol Creek corridor. Reduce the amount of runoff from new development areas by minimizing impervious surfaces, retaining and/or replanting native vegetation, and directing water to onsite infiltration areas.
- Development should minimize or mitigate adverse impacts on the surrounding neighborhood by effectively managing drainage, snow melt, and storm water run-off.

Tract 2 – Low Density Residential (northeastern area of the parcel)

Objective

New development should preserve character of existing low-density, residential rural neighborhood. Features that support the character of the adjacent neighborhood include: mature trees and foliage, rural roadways that are narrow and following an indirect route, and individual wells and septic systems. The new development should complement and enhance the quiet, rural sense of the well-established neighborhood to the north. No more than 7 dwelling units shall be developed on this portion of the parcel/tract.

Development Standards

- Generate a visually diverse stock of low-density housing that retains the existing neighborhood character. Design options include one- or two-story single-family detached housing, with the potential for accessory dwelling units.
- Construct a new road connection through Tract 2 in a way that provides a low volume, secondary connection, and at the same time, provides good access to new residential uses on this tract.
- Retain natural vegetation and trees within building setbacks around periphery of each lot to be consistent with rural, wooded character; exceptions allowed for driveway

- Retain natural drainage and contours to greatest extent possible. Work with existing topography to minimize the amount of grading, cut, and fill.
- Minimize percentage of lot covered by impervious surfaces.
- Plan development to protect the quality and quantity of subsurface water used by existing residents.

Tract 3 – Carol Creek Open Space Corridor

Objective

Preserve this area as an undeveloped corridor in public ownership. The parcel will be managed to ensure the integrity of the wetlands, preserve important drainage functions, and protect water quality; provide non-motorized trails and recreation opportunities to area residents and visitors from beyond the neighborhood; and to help maintain the quality and property value of the surrounding neighborhoods. It is the intent of the Heritage Land Bank to set aside portions of this natural resource corridor for consideration in a wetland mitigation bank. The decision on whether some portion of this area may become Municipal Parklands will be made in the future.

Development Standards

- Ensure connectivity through the greenbelt to and from all surrounding neighborhoods and the adjacent commercial areas.
- Provide a network of non-motorized trails within the corridor as well as a public access route leading to Chugach State Park to the east. Existing informal trails in the area provide a good sense of the locations and number of needed trails.
- Design trails to minimize impacts on water quality and the natural environment. Allow only limited clearing of vegetation for trail development. If and when the trail is constructed east of HLB property into Chugach State Park, (crossing land currently held by the BLM), ensure that the trail is set back from the Creek, to protect water quality.

Tract 4 – AWWU Reservoir Site

Objective

Dispose of land to Anchorage Water and Wastewater Utility (AWWU) to accommodate the development of a water reservoir(s).

Development Standards

The reservoir(s) shall include visual screening and a buffer to minimize visual impacts to the adjacent neighborhood. Specific development requirements will be determined directly through the AWWU planning process, which includes public involvement, once they acquire the land from HLB.

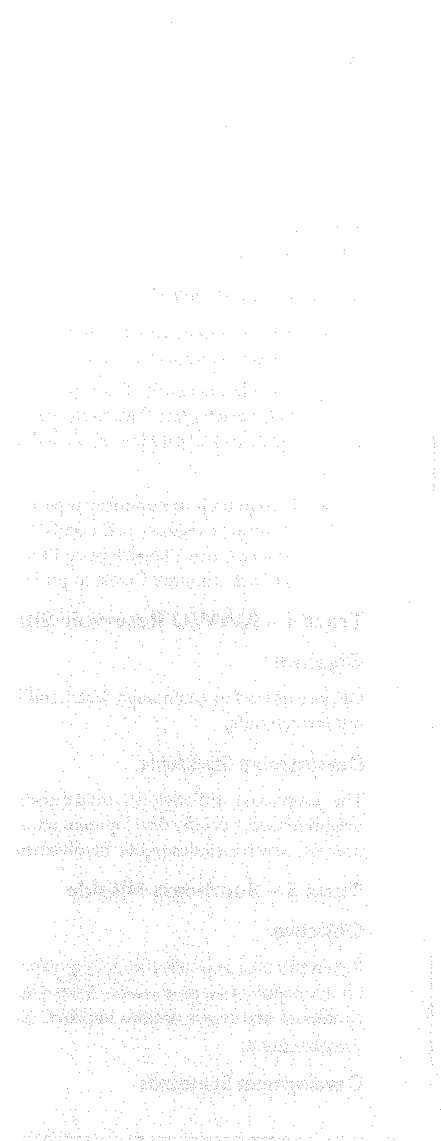
Tract 5 – Southeast Hillside

Objective

Retain this area as ~~publically~~ publicly owned open space in the near term, with the option for future, very large lot development (approximately 3-5 homes). This development may be more viable in the future if market conditions and access options improve. No more than 3 dwelling units shall be developed on this portion of the parcel.

Development Standards

The parcel is very steep with several flatter areas that might allow for development of carefully engineered house sites, with superior views. If this site is developed in the future, careful siting and roadway development standards will be necessary.



9. IMPLEMENTATION STRATEGY

Plan Implementation Process

Formatted: CER Heading 1

Approval Process Synopsis Based Planning & Zoning Commission Input

Formatted: CER Heading 2

After the planning process is complete, and the plan approved, a series of separate steps are required for disposal and development of HLB land. As a result of the Planning & Zoning Commission (PZC) meeting held on December 11, 2017, taking in considered comments, testimony, and included the wishes/discussion of the P & Z Commission PZC, HLB, as a result of that meeting, has made some adjustments/changes to the Land Use Plan. Table 10 has been modified to show new zoning recommendations, with special limitations capping the development potential to that of the 2010 Plan, with lower densities that will reflect those densities identified and approved in the 2010 Land Use Plan. Additionally, Map 7 has been amended to show the lower density portions of on Sections 1.1 through 1.5 Tract 1 to show graphic consistency.

Next Steps :: Platting and Zoning

After the planning process is complete, and the plan approved as a comprehensive plan amendment, a series of separate steps are required for disposal and development of HLB land. To implement this plan and set the stage for land disposals, HLB will go through the necessary steps to plat and zone these parcels, consistent with this P-plan. This process will define the boundaries of the tracts for disposal. The process will also apply the specific zoning codes that implement this P-plan's land use designations. The process for platting and zoning process requires a formal public noticing and a public hearing. The following zoning is recommended to implement the recommendations of this plan (Table 10).

Recommended Zoning

Table 10. Recommended Zoning for Carol Creek Parcel

PARCEL NAME	Land Use Recommendation	Recommended Zoning	Zoning Notes
North Knoll (HLB 1-071)	Park and Natural Resources	Retain as CE-PLI	
Carol Creek (HLB 1-074)			
Tract 1 (Residential)Section 1.1	Low to Medium Density Residential (7 to 15 DUA)	CE-R-2M-SL	Recommend special limitation (SL) for administrative site plan review to conform to design standards; cap at 15 dwelling units.
Tract 2 (Residential)Section 2.1	Low Density Residential (1 to 2 DUA)	CE-R2A or CE-R-6	Recommend special limitation (SL) for min. 40,000 sf lots, if public water and/or sewer not feasible for this site; cap at 7 dwelling units.
Section 2.2 Tract 3 (Creek Corridor)	Low Density Residential (1 to 2 DUA) Park and Natural Resources	CE-R2A or CE-R-6 Retain as CE-PLI	Recommend special limitation (SL) Recommend SL for min. 40,000 sf lots, if public water and/or sewer not feasible for this site.
Tract 4 (AWWU Parcel)	Community Facility (AWWU Reservoir)	Retain as CE-PLI	
Tract 5 (Slope or Residential)	Rural Residential (< 1 DUA) or Park and Natural Resources	CE-R-10 SL or PLI	Recommended special limitation (SL) cap at 3 dwelling units.

Formatted: Not Highlight

Disposal of Property

The formal steps to dispose of the HLB parcels must follow a process established in AMC Section 25.40.025. This process requires extensive public noticing and a public notice hearing at a HLBAC meeting. After receiving comments from the general public regarding the possible disposal, as well as area Community Councils or other parties, the Heritage Land Bank Advisory Commission will make its recommendation to the Assembly. The disposal must then be presented in a formal public hearing before the Assembly and approved by Assembly ordinance.

If disposal of the parcels is approved, HLB would then proceed with conveying the parcels to any interested party, likely a developer or development company. HLB is most likely to convey larger tracts of land to developers who will subsequently subdivide these larger tracts into individual residential lots.

Pathway to Development

Additional platting and permitting will be necessary prior to development of the parcels. Previously identified in this plan is the requirement for a Traffic Impact Analysis (TIA) to determine the extent to which the McDonald Road and Old Glenn Highway intersection will need to be improved.

Whether or not this parcel is developed, ultimately it will come down to market demand, developer interest, and whether the development pro forma indicates that the cost to develop new housing can yield a viable return for a developer. As noted in the 2012 Housing Study, current conditions for development are not inspiring the amount and diversity of housing needed for the community. The study points to the need for the City Municipality to play a role in incentivizing more diverse housing development. This project offers an opportunity for reducing hurdles and costs to produce the type of diverse housing the greater Anchorage community needs. Effective collaboration between the multiple municipal agencies with an interest and presence in the Carol Creek area can help make the development of the parcel possible.

BIBLIOGRAPHY

- AMC 21.10
- AMC 21.50.130
- AMC 25.40
- Chugach State Park Plan, 1986
- Chugiak-Eagle River Comprehensive Plan Update, 2006
- Municipality of Anchorage Traffic Department Traffic Impact Analysis (TIA) Policy, 2006
- Municipality of Anchorage Project Management and Engineering Design Criteria Manual (2007)
- Chugiak-Eagle River Long-Range Transportation Plan, 2007
- Chugach State Park Access Plan [public hearing draft], 2010
- Municipality of Anchorage Official Streets and Highways Plan, 2011
- Eagle River Central Business District and Residential Core Circulation Study, 2011
- Municipality of Anchorage Housing Demand Analysis, 2012
- Municipality of Anchorage Wetlands Management Plan Update, 2014

