

City and Borough of Juneau
Area Wide Transportation Plan

Volume I

Transportation Plan Recommendations

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Prepared by the
Department of Community Development

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Executive Summary

The Juneau Area Wide Transportation Plan (AWTP) defines the framework for transportation projects in the CBJ for the next 20 years. The plan includes recommended solutions for transportation problems and concerns throughout the borough. The collective implementation of these projects will affect the character of the entire transportation system in ways that are not only complimentary to one another but also consistent with the overall goals set forth by the Transportation Steering Committee (TSC). The plan also includes recommendations with respect to corridor preservation, transportation demand management, Egan Drive improvements, the Second Crossing, and land use zoning and development requirements.

The AWTP identifies the transportation goals and vision articulated by the TSC and the community over the course of the project. These goals can be characterized as focusing on safety, improvements to existing facilities, development of new facilities, improved connections between modes of transportation and cost effective solution concepts with limited environmental impacts.

This document and the associated *Volume II, Background Document*, constitute the Area Wide Transportation Plan (AWTP) for Juneau. The *Background Document* describes the details of the project process, the existing and future transportation assessments, and the project descriptions with proposed ranking. This document, which is entitled *Volume I, Transportation Plan Recommendations*, briefly reviews the planning process and analyses, but principally focuses on the projects, programs and policies recommended for implementation in the AWTP. The *Transportation Plan Recommendations* will be used by the CBJ and the state government in developing transportation projects for implementation over the next 20 years.

Production of the draft AWTP stimulated many written comments which were considered by the Transportation Steering Committee, the Planning Commission, and the Assembly. These letters are bound separately as an appendix to the final Area Wide Transportation Plan.

The integration of transportation planning with land use planning offers many opportunities to better prepare the community for the future. While coordination of the two activities is already taking place, ties between the two need to be strengthened with the goal of achieving true integration of transportation decisions with decisions concerning the proximity, type, spacing and density of commercial and residential development. This plan proposes important steps toward achieving this goal.

Summary of Plan Developments

The following were developed with the AWTP process:

- A project mission statement (presented in the Background Document Section A);
- An evaluation of existing transportation conditions (described in detail in the Background Document Section B);
- An analysis of the forecast 20-year transportation system operations on a sub-area and area wide basis (described in detail in the Background Document Section C);
- The identification of transportation system modifications that address forecast deficiencies on a sub-area and area wide basis (described in detail in the Background Document Section D);
- An evaluation and prioritization of transportation projects, programs, and policies that mitigate forecast transportation needs and build toward the transportation vision for the CBJ (described in detail in the Background Document Section E); and finally,
- A transportation plan for the City and Borough of Juneau that addresses current needs and outlines a future vision. The Framework plan identifies the preferred projects, programs, and policies recommended for implementation.

Introduction

Juneau is a progressive and diverse community effectively served by the presence of government. There is a tradition of leadership from local government that includes a willingness to invest in government services and an ability to make difficult decisions that prepare the community for the future.

However, when it comes to the surface transportation network, there is a gap between previous transportation planning efforts and mapping future changes and improvements. The community is best served if it has a transportation plan in place that confirms current spending and investment priorities and sets direction for future improvements as funding becomes available. An overall plan of this nature has not been available for many years. Thus, the primary purpose of preparing the AWTP is to fill this gap by providing a product that reflects agreements on community priorities with respect to government spending and investment in transportation.

The AWTP is put forward as the means of providing the community with a single document that considers land use and future development and establishes direction with respect to transportation in Juneau.

The scope of the planning effort included the way each of us move to and from our home. These trips can take place by foot, by bicycle, by calling a taxi or by catching a bus. In some areas these travel options are limited because facilities or services are not in place. For many reasons, most travel ends up being completed through the use of a privately owned motor vehicle. Typically, shorter trips close to the home can be easy to accomplish. However, longer trips are likely to overlap with trips made by others. As travel gets more concentrated from many people wanting to go to the same area, highways and buses become more crowded and the system stops working as well. There are numerous areas in Juneau where we have reached the point where efficiency is compromised because use of the system is heavy. A primary motivation for the planning effort was to propose solutions to these problem areas.

This planning effort was pursued at the behest of the Assembly Public Works and Facilities Committee, which established a Transportation Steering Committee for this purpose. This eight-member committee guided plan preparation, with city staff responsible for managing the project and preparing work products. Local funding was combined with federal funds and used to hire a consulting team, headed by Kittelson and Associates. DOT&PF was asked to contribute, including participation in the steering committee and the provision of technical background and expertise. Numerous planning and public involvement techniques were employed in preparing the draft plan.

Formulation of the Mission Statement

The aim of the statement is to identify the hopes and expectations of various segments of the community with respect to the transportation plan. The mission statement was drafted in 1999, at a time when major work was about to be initiated on identifying system deficiencies and possible responses. The original intent of the mission statement was to set direction for the planning effort following an extensive gathering of information about problems and issues related to the surface transportation network in Juneau. The statement is a prominent part of this plan because it points to the outcomes that this diverse community desires from the planning effort and provides a benchmark against which the contents of the plan can be evaluated.

Area Wide Transportation Plan Mission Statement

Overall, the surface transportation system in Juneau is in fair condition. Though current needs and improvements are important, our emphasis will be preparing surface transportation in the capital city for the new millennium. We anticipate that the biggest shortcomings of the existing transportation system will involve travel modes such as bicycles, pedestrians and transit.

For most of today's trips, surface transportation in Juneau relies on the automobile. Planning for the future needs to provide for continued use of the automobile and interconnecting other modes to broaden our transportation options. Thus, we see the Area Wide Transportation Plan as the next step in building upon existing strengths by identifying changes and additions to the existing network that will better serve this community.

Transportation planning involves many partners, and can not be done in isolation. It needs to actively involve the public. Transportation planning should incorporate local knowledge of conditions and priorities and consider other key factors, including land use and federal and state policy. The transportation plan may lead to changes in our land use policies.

The following principles will guide development of the Area Wide Transportation Plan:

- ***Public safety is of paramount concern.***
 - Measures that enhance safety for users of the transportation system will be carefully reviewed, evaluated, selected, and recommended.
- ***Previous land use planning provides the starting point.***
 - The plan will be based on community and land use policies, as described in documents such as the comprehensive plan, the land management plan, and land use ordinances although the plan may well lead to changes in these policies.
- ***Our community can offer an excellent quality of life to its residents.***
 - Improved transportation opportunities that enhance livability need to be pursued as part of the plan.
- ***Surface transportation relies on interconnected modes of travel.***
 - Needed transportation elements and connections that are absent from the existing system, such as bridges, waysides, transit shelters, and pathway links will be identified.
- ***The community's transportation system must provide people with more transportation choices.***
 - The transportation plan must recognize that transportation is more than just vehicles and pavement, and must encourage diversity in travel options.
- ***Efficiency in the system can be improved.***

- One purpose of the study is to identify and evaluate means for maintaining and improving the efficiency of the system.
- ***Balancing transportation needs and environmental concerns is achievable.***
- The first preference is improvements that avoid or minimize impacts to the environment, but all proposed changes will be weighed and evaluated in terms of their impacts.
- ***Vehicles require facilities that work effectively.***
- Collector links between arterial streets and local streets will be evaluated to ensure that the system works in a balanced manner.
- ***Bicycles provide a low-cost alternative to automobiles***
- Surface transportation needs to be improved so that it works as well for bicyclists as it does for other vehicle operators.
- ***Travel by foot needs to be safe and convenient.***
- The addition of pedestrian facilities at many locations is needed to provide for all travelers, including children, the elderly and the disabled.
- ***Public transit has a significant role in moving people***
- Opportunities to improve transit operations and route efficiency and to increase ridership and capacity will be identified and pursued.
- ***Preparing for future use of all modes requires careful consideration now.***
- The plan will support actions such as the identification and preservation of travel corridors for future transportation service, such as light rail.
- ***Improving the transportation system can be costly.***
- Proposed additions will be evaluated in terms of their cost-effectiveness and long-term maintenance costs.

Federal transportation policy provides a framework for federal and state transportation investments. In seeking transportation improvement, it is best to begin by investing in existing facilities, followed by improving their efficiency, especially where the facility connects transportation nodes. Investing in new transportation facilities may make sense, but it needs to build on improvements to the existing transportation system.

Involvement Methods and Planning Resources

The process used to assemble the plan relied on facilitated public and TSC meetings. Prior to these meetings, committee members spent two years getting familiar with the transportation network, safety concerns, facilities, services, current funding plans, and planning documents.

Committee and Public Involvement

The following involvement methods were used in preparing the plan:

Transportation Steering Committee Meetings – Regular committee meetings provided a forum for learning about and discussing transportation issues and problems in the community. Over the course of the planning effort, committee members found the opportunity to discuss the full range of issues and concerns that need to be addressed by a transportation plan. All meetings were open to the public.

Public Involvement – The planning process offered numerous opportunities and mediums for public involvement. Facilitated meetings were conducted in each of the planning sub-areas, display boards were posted in the Nugget Mall, public comments were heard at committee meetings and written comments were accepted throughout the planning period.

In summary, commonly expressed concerns with the current transportation system include safety, disincentives for travel by bicycle, foot or bus, quality of life, parking and neighborhood impacts. The most frequent comment expressed by the public was the desire for improved and expanded transit service.

Facilitated Meetings – Formulation of the plan itself resulted from a series of facilitated meetings held in 2000. The consultant team guided discussions at these meetings and was assisted by city and state staff. The principal product of the meeting series is a list of proposed solutions that respond to existing and forecasted deficiencies in the transportation system. At each meeting, committee members discussed and voted on how best to describe and present deficiencies and corresponding solutions to the community.

Visioning Workshop – In the spring of 2000, Juneau residents took part in a series of focus groups, design studios and public presentations. The work focused on developing the transportation vision that would direct the more detailed AWTP. A visioning report was prepared that summarizes the four days of work and fun of an estimated 150 people who gathered together to create a vision for Juneau.

To summarize the report, the process identified the missing elements needed to transform Juneau into a quieter, more attractive, functional, safe and enjoyable place to visit, work, shop, play, find entertainment and live. With vision and thoughtful development:

- Downtown and neighborhood spaces would function as centers of public activity;
- Better linkages, sidewalks, parks and streetscapes would provide improved opportunities for an active lifestyle and positive social interaction;
- More people would be accommodated in the community by employing sustainable smart growth strategies;
- Light rail or other transit friendly systems would be built;
- Ferries would be convenient and centrally located;
- Juneau will continue to prosper with affordable, intact neighborhoods; and

- Car trips would be easier as fewer people depend on autos for the majority of their trips.

While the transportation vision and the AWTP are presented under separate covers, the products and recommendations of the documents are intended to support each other.

Planning Resources

Preparation of the AWTP relied on complimentary planning efforts. The following documents were key resources used for the preparation of the plan:

Comprehensive Plan (1995 Update dated November 1996) – The Comprehensive Plan identifies current and future development areas and, in general, defines the various land use boundaries and categories for development. This information was used to forecast increases in travel demand and traffic. The Comprehensive Plan provides for planning on a sub-area basis, a framework that was successfully incorporated into the AWTP.

Capital Transit: Transit Development Plan, 1996 – In summary, this plan proposes revising transit service to and from the Mendenhall Valley and Lemon Creek, and expanded service in the downtown core. Funding to make the revisions has not been approved as a part of the local budget. The committee concurred with the plan's philosophy that the community supports an expanded role for transit service in Juneau.

Juneau Non-Motorized Transportation Plan (1997) – This plan highlights the many opportunities for adding to the network of highway, streets and paths that could fully provide for travel by bicycle and by foot. Careful attention was paid throughout the committee's work to ensure that facility upgrades and additions provide for those not traveling by private vehicle.

Area Wide Transportation System Assessment (1998) – The assessment report set the foundation for the AWTP process. This initial data collection effort establishes a comprehensive collection of information on the existing transportation system and facilitated the identification of study areas that warranted specific analysis in the plan. The consultant team worked with various committees and planning teams to identify base assumptions and specific issues to focus the data collection effort. Information from the assessment report is presented in the form of maps, summary tables, text descriptions and detailed data sheets.

Land Use Opportunities and Constraints Report (1999) – This report summarizes the plans and regulations that pertain to how the CBJ intends to accommodate growth, where growth should, or should not, occur and the standards for development. Specifically, the information in this report quantifies the current land use conditions as well as the development opportunities and constraints for each sub-area. During the AWTP planning process, the findings and forecasts of the report were entered into a traffic model to approximate impacts to the current transportation system. While the information contained in the report was primarily used for modeling purposes, it also supports several land use conclusions that are presented as recommendations later in this document.

Juneau Parking Study (1999) – This report provides information to guide the development of a parking system for Downtown Juneau that is intended to address parking supply shortages, increase the efficiency of parking utilization, and to provide information necessary for discussion and decision making on various parking supply and management options. This report summarizes the parking supply and demand findings and describes potential alternatives. The scope of the study area is limited to the downtown core.

Transportation System Deficiency Analysis

Through traffic modeling, fieldwork, data analysis, public comment and committee discussion, an inventory of the existing and anticipated deficiencies of the ground transportation system was developed. The deficiency list is provided in the Background Document (Sections B and C) and is summarized below. Consistent with the Comprehensive Plan, deficiency identification was prepared for the borough as a whole (area wide) and for individual areas (sub-areas). The sub-areas are shown in Figure 8. While many of the transportation deficiencies that were identified are already recognizable, some of the future deficiencies are not apparent today.

One of the functions of planning is to bring attention to the needs or results that are likely to materialize with an expanded population and employment base. With growth comes increased demand on all community facilities and services, including transportation. Managing future demand involves both projecting where additional residences and jobs, as well as other land uses, will be located and forecasting travel demand of the larger community. The AWTP planning process evaluated whether the existing facilities and services had the ability and capacity to handle increased transportation volumes generated by a more populous community.

For planning purposes, it was projected that the population of Juneau would grow from 30,000 to 37,000 people over the next 20 years, based on an annual growth rate of one percent. Under the plan's forecast, Mendenhall Valley would continue to be the largest population center followed by Downtown, Lemon Creek, and Douglas Island. Employment would also continue to be centered in Downtown and the Mendenhall Valley.

For planning purposes, an annual vehicle travel growth rate of 1.5 percent was used in the AWTP. While the travel rate is higher than the rate increase forecasted for population and employment, based on past experience, it was concluded that future travel rates and patterns will be similar to the current situation. In the past, DOT&PF has documented that the rate of vehicle trip increase is roughly double the population rate increase. In other words, with each additional person, approximately two additional vehicle trips occur per day. The forecast assumes that within the 20 year planning horizon, while there may be slight changes, there will not be a major shift away from private vehicle travel in Juneau. The totals for each mode of travel will increase, however the respective shares for each mode will be comparable to today. It is impossible to foretell whether this assumption will hold true over the 20 year planning horizon. However, by periodically updating the plan, the opportunity is provided to adjust this assumption to reflect changes that are likely to occur overtime. For example, in future versions of the AWTP, the travel mode assumption may change due to a demonstrated shift in travel behavior, transportation innovations, local/state/federal environmental and transportation policies, or land use decisions and policies

The forecast p.m. peak hour traffic volumes are shown in Figures 9A-9C. These volumes were used to evaluate future traffic operations and vehicular travel patterns. Again, the analysis was conducted assuming that relative to today, there is no major change in travel behavior by Juneau residents and that no new transportation facilities are constructed (e.g. new roads, different forms of transit, new bicycle facilities) prior to the end of the 20-year planning horizon. As Juneau is forecasted to grow, the deficiency analysis considered facility capacity. There are other areas of concern, or deficiencies, besides capacity that were identified as well. Future transportation conditions were forecasted and evaluated to determine future needs that, in summary, relate to safety, capacity, connectivity and equal opportunities for all modes of transportation (modal equity).

Safety Analysis of the Existing System

Reflecting a public safety emphasis, the consultant team conducted a review of the reported accident history of the Juneau transportation system. The review looked at reported accident data involving injuries to drivers, passengers, pedestrians, and bicyclists and other types of

accidents. Data from past accidents was analyzed to see if the incidence of accidents at intersections or along road segments was higher than expected based on the level of use. This review is described in detail in the background document and the results are summarized here. In general, the system performed acceptably when incidence of accidents was compared to levels of use. Perceived and documented safety concerns are included in the deficiency list.

For analysis purposes, the consultant employed a standard accident threshold (one or more accidents per one million miles of vehicle travel) to identify significant accident rates on primary road segments throughout the borough. Based on reported accident data from 1994-1998, the consultant identified two route segments that warrant further review. Both of the segments have relatively low traffic volumes and the total number of accidents was also low.

- Further review is recommended for a 650-foot segment of the North Douglas Highway where four accidents took place during the data period. The location of this segment is about 0.4 miles before Sundown Drive.
- On the outskirts of downtown, three accidents were recorded along Glacier Highway, between Highland Drive and the 2.5-mile intersection of Egan Drive. Analysis of this section did not find indications of design deficiencies

Looking separately at intersections, the consultant used a standard measure for safety evaluation, rate of accidents per million entering vehicles. The review identified the seven intersections in Table 1 below. Typically, as an intersection accident rate approaches and/or exceeds one or more accidents per million entering vehicles, further study is performed to identify if possible intersection improvements may reduce the incidence of accidents. In general, it is anticipated that if no changes are made in accident-prone areas, as traffic volume increases, the number and rate of accidents will increase even more significantly. Proposed solutions that would make changes at each of these intersections are found later in this report.

Table 1: Reported Accidents 1997-1999

	Total	Accidents	(1997-1999)	Average	Accident	Weighted
	Injury	Other	All	Daily Volumes	Rate (weighted)	
Glacier Highway/Sunny Drive	9	8	17	13,828	1.12	3.50
Egan Drive/Mendenhall Loop Rd	19	20	39	35,153	1.01	2.99
Mendenhall Loop Rd/ Mendenhall Blvd/ Valley Blvd	5	9	14	12,983	0.98	2.39
Riverside Drive/Vintage	9	8	17	18,619	0.83	3.58
Glacier Highway/Back Loop Rd	6	3	9	9,941	0.83	3.03
Egan Drive at the Salmon Creek traffic signal	9	11	20	27,312	0.67	1.87
Egan Drive/10th Street	6	10	16	30,235	0.48	1.21

The table includes a weighted accident rate, derived by assigning a weight of 1 to accidents where only property was damaged, a weight of 5 to accidents involving minor (non-disabling) injuries and a weight of 25 to accidents involving major, disabling injuries. Accidents involving fatalities are assigned a weight of 50, but none occurred during this period.

Deficiency Summaries, Solution Listings and Project Rankings

In response to the identified safety and transportation deficiencies, the consultant team proposed solution projects to be implemented on both a sub-area and area wide scale (detail is provided in Section D and E of the Background Document). To determine how well a project addressed each deficiency and supported the overall intent of the plan, concepts from the AWTP mission statement were embodied into criteria used for the evaluation of solutions. The results of the criteria exercise served as a starting point for project ranking discussions.

Overall, more than 60 potential solutions are recommended in the AWTP. A number of solutions are broad in scope, affect multiple sub-areas and would be costly and time consuming to complete. Others are simple in nature, and could be completed with a much smaller effort. The following sections present:

- A summary of the results of the deficiency analysis,
- Improvement solutions that, if pursued, would eliminate or lessen identified deficiencies, and
- The recommended timeframe for implementation of solution projects.

The list of solutions that apply area wide are presented first, followed by individual sub-areas. Each section includes a brief summary describing existing and future deficiencies, followed by the proposed solutions. Each solution has an index number, description, and time frame indicator. The index number is for record keeping only, and has no other significance. During the AWTP process, funding considerations did not bias the suggested implementation timeframe. The timeframe indicator identifies whether it makes sense to pursue a solution now (near-term), versus waiting about five years (medium-term) or ten years or more (long-term) to seriously consider implementation of project planning or design.

Project sequencing will be considered as funding or partnership opportunities occur. For example, if an opportunity arises to fund a transit project that has a mid-range ranking, that opportunity should be pursued even though there may be high-priority road or pathway projects that have yet to be funded. To continue the example, that same mid-range transit project should not be implemented before a high-priority transit project if both are eligible for the same funding. Project development and prioritization is further discussed in the Implementation section of this document, on page 34.

Area Wide Deficiencies

Egan Drive is the principal roadway that serves area wide travel in the community. The highway is forecast to receive more vehicle travel. Signalized intersections on Egan Drive will become more congested as the volume of personal vehicle use increases with growth. Intersection congestion along Egan Drive adversely affects regional mobility, and lessens the safety and quality of service for other modes of travel, including walking, bicycling and transit. To enhance safety and preserve the mobility of all modes it is necessary to maintain efficient traffic operations on this roadway.

Based on existing development patterns and forecasted population and employment growth, there will be additional demand for collector level residential access streets directly off of main roads and highways. Limiting the number of access points on primary roadways will be important to preserve traffic operations and public safety.

For all modes of travel, connections within sub-areas and between sub-areas are currently deficient. It is forecast that the absolute number of travelers demanding non-auto travel will increase, resulting in greater pressure for more frequent and comprehensive transit service and a comprehensive bicycle and pedestrian network.

**Area Wide Priority Solution List
Local**

ID	SOLUTION	DESCRIPTION	TIMEFRAME
1.1	Transportation Demand Management Policies*	Implement transportation demand policies throughout the CBJ focusing on reducing single occupant vehicle trips and promoting alternative modes of travel such as transit, carpooling, and bicycling. These policies should also focus on encouraging telecommuting, flexible work schedules, and be presented as incentives. * This solution is a policy choice, rather than a development or construction-project that the CBJ will implement.	Near-term
2	Increased Frequency of Transit Service	Double service frequency, to a bus every 30 minutes, along existing local routes during peak hours Monday through Sunday. Extend Care-A-Van service from 6 PM to 9 PM on Sundays.	Near-term
3	Develop Local Street Connections	Develop local street connections between subdivisions and adjacent local or collector streets to maximize connectivity and minimize local vehicle trips on principal roadways. Where feasible, connect streets for pedestrian, bicycle and vehicle use. Improve connections from neighborhoods to regional trail system.	Near-term
4	Maintenance of Bicycle Lanes, Pathways, Sidewalks and Bus Stops	Maintain bicycle lanes, pathways, sidewalks and bus stops with regular re-striping, re-surfacing, street sweeping and snow removal.	Near-term
5	Enhanced Routes to School Program	Fund enhanced routes to school program to construct sidewalks and/or bicycle and pedestrian routes from neighborhoods to schools.	Near-term
6	Pedestrian and Bicycle Facilities on Local and Collector Streets	With new construction and reconstruction, evaluate pedestrian and bicycle needs and recommend sidewalks on one or both sides of a street, as appropriate, in all commercial or residential subdivisions.	Near-term
7	Improved Local Transit Service in the Mendenhall Valley	Restructure local service on the existing Mendenhall Valley/Lemon Creek/Downtown route. Provide a circle route using Mendenhall Loop Road and Riverside Drive. This route will continue to Downtown on Egan Drive as Express service. Create a separate route providing service on Glacier Highway to the Lemon Creek area, and another route serving the West Mendenhall Valley. Both new routes would connect to other routes at the Valley transfer center (Nugget Mall).	Near-term
10	Access Management Policies for Residential Subdivision Design	Implement access management policies to address residential subdivision access onto principal roadways.	Near-term

ID	SOLUTION	DESCRIPTION	TIMEFRAME
12	Pave Gravel Streets	Pave remaining unpaved streets to decrease negative air quality impacts and improve circulation. Consider including sidewalks and bicycle lanes.	Near-term
15	Bicycle Storage	Install bike racks and/or lockers at activity areas and bus stops.	Near-term

**Area Wide Priority Solution List
State**

ID	SOLUTION	DESCRIPTION	TIMEFRAME
1.2	Egan Drive Grade Separated Interchanges	Develop plans and construct Egan Drive grade separated interchanges at yet unidentified locations between 10th/Egan and Riverside Drive. Interchanges will include pedestrian and bicycle facilities to provide better crossing and connectivity opportunities. Within the next six months, CBJ and DOT will jointly develop more detailed options, with enough pre-design, so everyone will understand the project better and make a better choice.	Near-term
1.3	Fund EIS for Second Crossing	Complete an Environmental Impact Statement for a second Gastineau Channel crossing for motor vehicles, bicycles, and pedestrians.	Near-term
14	Gastineau Channel Second Crossing	Pending completion of the EIS, construct second channel crossing from North Douglas Island. The crossing would provide improved connectivity for all modes of travel and secondary emergency access. A second crossing would divert some of the existing vehicle trips from the Juneau-Douglas Bridge but would not eliminate the need for identified capacity and safety improvements.	Near-term
16	Gastineau Channel Coastal Trail	Extend Seawalk pathway on a coastal trail that parallels Egan Drive from Norway Point to Yandukin Drive.	Medium-term

**Area Wide Priority Solution List
Joint**

ID	SOLUTION	DESCRIPTION	TIMEFRAME
11	Transit Support Improvements	Provide additional transit support including: bus stop signs/schedules, transit center at Nugget Mall and Downtown, maintenance program for transit facilities, additional vehicle storage and an ongoing marketing program.	Near-term
8	Off-Street Pathways	To the extent possible, use existing and new easements to construct pathways connecting schools, shopping centers, neighborhoods, transit stops, parks, trails and other activity areas.	Near-term

ID	SOLUTION	DESCRIPTION	TIMEFRAME
13	Trailhead Access Improvements	Provide adequate parking, bicycle racks and other facilities at trailheads.	Medium-term
	Mass Transit	Complete an analysis of transit opportunities, including fixed-guideway system, bus rapid transit, light rail and other mass transit options.	Medium-term
17	Mass Transit Route	Between Downtown and the Mendenhall Valley, preserve the existing Egan Drive median for the future development of a dedicated mass transit route for buses, high occupancy vehicles, light rail, or a fixed-guideway system.	

Downtown/Thane Deficiencies

In the Downtown/Thane sub-area, the forecast transportation issues relate to pedestrian circulation and capacity, auto capacity, parking, transit service, and circulation for heavy vehicles and tour buses. The competing pressures of limited opportunities to expand the transportation infrastructure, continued growth in the tourist industry, and growth in the population of Juneau will make downtown circulation more and more congested. The intersection of 10th/Egan is already operating poorly today and conditions are forecast to worsen. With continued growth similar to existing patterns, parking will also be more constrained. The Downtown transportation infrastructure needs to be modified and improved with an emphasis on carrying more people more efficiently on all modes of transportation.

Downtown/Thane Priority Solution List

ID	SOLUTION	DESCRIPTION	TIMEFRAME
18	10th/Egan Intersection Improvement	Identify best form and design of intersection control to reduce congestion, maximize traffic flow and develop extra capacity for long-term growth. Options include additional travel lanes, signal control modifications or grade separation. Preserve and protect the safety and access of bicycle and pedestrian users through the project area.	Near-term
19	Egan Drive-Gold Creek to Main Street Improvement	Maintaining existing Egan Drive right-of-way and four lanes of traffic, implement roadside visual cues or physical treatments to develop a safe and efficient roadway for pedestrians, bicyclists and motorists. Treatments may include narrowing travel lanes, extending sidewalks, adding bicycle lanes, installing curb extensions, street furniture and landscaping.	Near-term
20	Downtown Circulator Service	Provide frequent, weather protected, shuttle service within Downtown and between downtown activity areas and remote parking. Provide user facilities at stops on the route. Integrate shuttle with Capital Transit schedule.	Near-term

ID	SOLUTION	DESCRIPTION	TIMEFRAME
21	Tour Bus Dispatch Service	To achieve more efficient tour bus staging, develop a centralized dispatch service to direct buses to staging areas. This will reduce competition for bus parking stalls and vehicle "re-circulation" through downtown.	Near-term
22	Interactive Downtown Pedestrian Management	To facilitate peak season pedestrian flow, provide uniformed personnel to assist pedestrians with directions to destinations, encourage pedestrians to travel specified routes, and/or cross Marine/Franklin/Thane at predetermined locations. This would be an operational program.	Near-term
23	South Franklin/Marine Way Intersection Improvement	Construct a roundabout or other improvement sufficient in size to accommodate design vehicles and pedestrian, bicycle and parking garage traffic.	Near-term
24	Downtown Parking Management	Implement on-street and off-street parking programs to appropriately manage on-street parking. Options include parking meters, parking fees, joint use parking for daytime/nighttime uses, commuter choice programs and residential permit zones. On a seasonal basis in the downtown core, install removable bollards, or a similar treatment, to accommodate demand for pedestrian sidewalks and on-street parking. See the Juneau Parking Study for further detail.	Near-term
25	Downtown Harbor Access Consolidation	Construct a local street parallel to Egan Drive (on the channel side) to connect Aurora and Harris Harbors and consolidate access. This project will improve the safety and function of downtown harbor access and coordinate with the operation of Egan Drive.	Medium-term
26	Marine Park Steamship Wharf Improvements	Improve the efficiency and capacity of the area for all users.	Near-term
27	Thane Road Improvement	Reconstruct Thane Road as a two-lane roadway with pedestrian and bicycle facilities for improved connection to residential and recreation areas.	Medium-term
28	Seawalk-Sheep Creek to Norway Point	Develop a pedestrian and bicycle path from Sheep Creek through downtown waterfront activity centers to Norway Point. Provide signage and connections between the pathway and activity areas.	Near-term

ID	SOLUTION	DESCRIPTION	TIMEFRAME
29	Downtown and Remote Parking	Develop at grade or structured parking at the edges of downtown and on Douglas Island to reduce vehicle trips to the core. Locate downtown parking areas close to the core but in advance of congested locations. Limit public parking facilities on the waterfront. Incorporate covered bicycle parking in all parking structure plans.	Medium-term
30	Gastineau Channel Water Taxi	Fund a water taxi from remote parking on Douglas Island to Downtown Juneau.	Medium-term
31	Willoughby Avenue	Maintain Willoughby Avenue as a multimodal corridor, with sidewalks and shared lanes for vehicles and bicycles. Maintain low travel speeds for vehicles.	
32	Gastineau Avenue Extension	To promote system redundancy, consider extending Gastineau Avenue to connect with Thane Road.	

Douglas Island Deficiencies

On Douglas Island, the nature of the forecast transportation deficiencies relate to access to Downtown Juneau and other areas of the CBJ, as well as non-motorized access within and between North and South Douglas Island. The neighborhoods adjacent to Douglas Highway in South Douglas are not inter-connected. This lack of connectivity necessitates that all local vehicle, pedestrian and bicycle trips be made on Douglas Highway. The most significant capacity deficiency will be the intersection of Douglas Highway/North Douglas Highway. Without capacity improvements, this intersection will remain congested during the peak travel periods of the day.

From a regional perspective, the CBJ Comprehensive Plan has identified a large area on the west side of Douglas Island as having potential for new development in the future. An extension of the North Douglas Highway will provide the sole access. This sole access will become a transportation system deficiency in the future, given the need for increased connectivity between sub-areas of the community. Some form of access to this area needs to be provided if development plans are to proceed.

Douglas Island Priority Solution List

ID	SOLUTION	DESCRIPTION	TIMEFRAME
33	Douglas Highway/North Douglas Highway Intersection Improvement	Identify the best form of intersection control for the location. Options include roundabout, additional roadways to modify intersection circulation and/or a traffic signal. Improvement will create convenient circulation opportunities for pedestrians, bicyclists and vehicles. Integrate Cordova Street intersection with this improvement.	Near-term

ID	SOLUTION	DESCRIPTION	TIMEFRAME
34	Douglas Highway Pedestrian Improvement	Install crosswalk signing and striping at major collector street connections, sidewalk on uphill side, bus pullouts/shelters and adequate winter lighting.	Medium-term
35	Douglas Harbor Moorage and Upland Parking Expansion	Construct additional launch ramp, small-boat moorage and four-acre fill for upland parking. Repair Mayflower Island causeway to reverse erosion. Reconstruct Savikko Road and provide pedestrian and bicycle facilities.	Near-term
36	North Douglas Highway Resurfacing and Shoulder/Bike Lane Widening	Widen the highway to 30 feet. Add pedestrian and bicycle facilities on the waterside from Fish Creek to False Outer Point. Improve the launch ramp area, the False Outer Point Wayside and the Outer Point Trailhead.	Near-term
37	Douglas Island Bench Road	Construct bench road to serve through trips between the bridge and North Douglas. Shorter trips would remain on existing highway. New road would include pedestrian and bicycle facilities.	Medium-term
38	North Douglas Highway Extension	Extend North Douglas Highway in support of potential new growth on West Douglas Island. The extension will include pedestrian and bicycle facilities.	Long-term

Twin Lakes/Lemon Creek Deficiencies

Pedestrian deficiencies in Lemon Creek and Twin Lakes relate to an incomplete sidewalk system within neighborhoods, between neighborhoods and activity centers, and along main roadways. Further, Egan Drive isolates the Sunny Point neighborhood from other areas, even if the traveler is using motorized transportation. Bicycle travel along Glacier Highway is made difficult due to gravel on the shoulder lane and high volumes of motorists traveling at posted speeds along the roadway next to the shoulder lane.

Forecast transportation deficiencies relate to p.m. peak hour intersection capacity at Sunny Point/Egan Drive, Vanderbilt/Egan Drive and Channel Drive/Egan. Glacier Highway through Lemon Creek is forecast to carry 14,000 vehicles per day. This will be at or near the capacity of a roadway with two travel lanes and a center turn lane. A significant roadway connectivity gap in this area is that Egan Drive is currently the only direct connection between Twin Lakes and Downtown. In the case of an emergency or even a scheduled closure of a portion of Egan Drive, this complete reliance on a single road facility could prevent the general public and or emergency service providers from traveling between Downtown/Douglas Island and other areas of the CBJ.

Twin Lakes/Lemon Creek Priority Solution List

ID	SOLUTION	DESCRIPTION	TIMEFRAME
39	Glacier Highway-Anka Street Intersection Improvement	Construct left turn bays, intersection crosswalks, bus pullout/shelters and install a traffic signal.	Near-term

ID	SOLUTION	DESCRIPTION	TIMEFRAME
40	Lemon Creek Sidewalk System	Develop a complete sidewalk system on Davis St, Central Ave, Anka St and Commercial Blvd. Coordinate this system with access to the middle school area.	Near-term
41	Glacier Highway-Lemon Creek Area Corridor Management Plan	Develop and implement a plan for adjacent land use access, sidewalks, pedestrian crossings, bus pullouts/shelters, intersection control and new intersections. Consider limiting future access directly onto Glacier Highway to preserve traffic operations on the roadway. In the vicinity of DZ Middle School, integrate future traffic control or new intersections with Glacier Highway pedestrian needs.	Near-term
42	New Lemon Creek Crossing	Construct a collector level street north of Glacier Highway that crosses Lemon Creek and connects Anka Street and Davis Street. This link will allow local connection between neighborhoods and commercial areas without requiring the use of Glacier Highway. The new crossing would be the primary route to Lemon Creek Correctional Facility. The roadway would be constructed as a two-lane roadway with pedestrian and bicycle facilities.	Medium-term
43	Glacier Highway-3-Mile Connection	Develop a Glacier Highway connection in the vicinity of the Hospital. The connection would be two lanes with pedestrian and bicycle facilities. The road would function as a through route and as a secondary access to the Hospital. This project will address considerable topographical and land use constraints.	Medium-term
44	Egan Drive-Lemon Creek Pedestrian and Bicycle By-Pass	Construct a separated pedestrian/bicycle path parallel to Egan Drive from the Sunny Point/Glacier Highway intersection to Vanderbilt Hill to better connect the Mendenhall Valley and Downtown. Provide year round maintenance.	Medium-term
45	Lemon Creek Bench Road	Preserve right-of-way and construct a bench road along the northern edge of existing development in the Lemon Creek area to accommodate new development to the north. This would be a two-lane road with pedestrian and bicycle facilities.	Long-term

Mendenhall Valley/Airport/Nugget Mall Deficiencies

Forecast transportation deficiencies relate to non-motorized connections within neighborhoods, and between neighborhoods and activity centers. For example, connections for pedestrians and bicyclists along Glacier Highway and intersecting local streets could be improved. It is forecast that the intersections of Mendenhall Loop Road/Egan Drive, Mendenhall Loop Road/Mendenhall Mall Road, and Riverside Drive/Egan Drive will operate over capacity within the 20-year planning horizon.

With respect to Riverside Drive, the future High School and improvements to Dimond Park will increase vehicle trips and non-motorized trips. Without improvements, Riverside Drive will not be able to adequately accommodate pedestrian, bicycle and motorized travel along and across the roadway. At the airport, transportation issues include continuing to provide efficient and safe access to and from the airport, while minimizing or eliminating the number of “cut-through” trips traveling through the airport terminal area (instead of on Egan Drive and Glacier Highway).

Mendenhall Valley/Airport/Nugget Mall Priority Solution List

ID	SOLUTION	DESCRIPTION	TIMEFRAME
46	Riverside Drive Corridor Improvement	Evaluate appropriate intersection control at the new Dimond Park intersection with Riverside Drive. Maintain existing bicycle lane striping. Provide bus pullouts/shelters. Develop strong pedestrian connections from neighborhoods to Dimond Park area and the retail areas to the south. Extend Riverside Drive to Back Loop Road via an extension of the existing alignment or by crossing Mendenhall River in the vicinity of Melvin Park and connecting with Back Loop Road between River Road and Steelhead Street. With realignment maintain existing Riverside Drive north of Melvin Park as a local street with traffic calming treatments to maintain lower speeds consistent with the surrounding residential homes.	Near-term
47	Mendenhall Loop Road Boulevard Treatment	Develop Mendenhall Loop Road as a four-lane boulevard with a median and/or turn pockets from Egan Drive through Glacier Spur Road. Integrate traffic signal locations and access control with neighborhood and school district needs. Possible locations for new signals are Taku Blvd, Mendenhall Blvd and Nancy Street. Design the roadway for 30 to 35 mile per hour travel speeds. Boulevard treatments include landscaped medians, bike lanes, buffer strips, bus pullout/shelters and a separated pathway for pedestrians and bicycles. The pathway would replace and/or integrate with the existing pathway. At pathway intersections with streets, modify grading for a flatter pathway approach and integrate the pathway crossing at the intersection stop bar. At the intersection of Back Loop Road and Glacier Spur Road consider constructing a roundabout.	Medium-term
48	Egan Drive Multi-Use Path Improvement	Widen and realign the multi-use path along Egan Expressway and correct other deficiencies including pavement deterioration. Upgrades include replacing narrow bridges, raising section elevations, increasing the path width from 8 to 10 feet and constructing a transition to the southbound bike lane along Mendenhall Loop Road.	Near-term

ID	SOLUTION	DESCRIPTION	TIMEFRAME
49	Glacier Highway North Improvement	Reconstruct Glacier Highway North, from Duck Creek to Egan Drive, and construct sidewalks, bicycle lanes and bus pullout/shelters. Coordinate pedestrian crossing at Egan Drive with Brotherhood Bridge improvement project. Construct cul-de-sac on east end of Del Ray Road to eliminate a Duck Creek culvert.	Near-term
50	Old Dairy Road Resurfacing and Bike Lane/Shoulder Widening	Reconstruct Old Dairy Road from Glacier Highway to Yandukin Drive and add bicycle lanes. Pavement width would be 31.5 feet, plus gutter, curb and sidewalk on the south side to Airport Blvd. Repair and upgrade drainage.	Near-term
51	Under Thunder Pathway	Along the base of Thunder Mountain, construct a pathway between the Mendenhall Glacier Recreation Area and Egan Drive. Provide connections from the pathway to neighborhood streets east of Mendenhall Loop Road. Connect Atlin Drive to Hurlock Avenue using existing right-of-way.	Near-term
52	Mendenhall Mall Road Improvement	The Mendenhall Mall Road is privately owned. Acquire public ownership and improve the street to include landscaping, bus pullout/shelter, curb and gutter, formalized access to parking areas and bicycle lanes.	Medium-term
53	Glacier Highway-Airport Area Streetscape Treatments	Coordinate and extend street furniture, landscaping and interpretive signage from the Mendenhall Loop Road Boulevard project.	Long-term
54	Airport Access	In the long term consider future airport development plans to ensure that development of the transportation system on Egan Drive is coordinated with future airport access needs. The future system should ensure efficient access between the regional system and the airport. In addition, consider that land use development and zoning in the area will influence future airport access needs.	
55	Glacier Highway-Egan Drive to Glacier Highway North	It is forecast that the 2020 two-way traffic volumes will be approximately 12,000 vehicles per day on this section of road. A three-lane facility will accommodate these traffic volumes. Preserve the existing right-of-way to construct five lanes if needed at the end of the planning horizon.	
56	Glacier Highway-McNugget Connection	To promote system redundancy, consider a road connection between the sections of Glacier Highway that terminate in the vicinity of the McNugget intersection.	

Industrial Blvd/Engineer's Cutoff Road, Back Loop Road Deficiencies

Forecast transportation deficiencies relate to isolated intersection capacity and/or geometric deficiencies on Glacier Highway at the Industrial Way, Fritz Cove, and the Back Loop intersections. In addition, there is potential for significantly more development to occur in this sub-area. Such development can be more easily accommodated if steps are taken beforehand to preserve right-of-way for transportation links and connections.

Industrial/Engineer's Cutoff, Back Loop Road Priority Solution List

ID	SOLUTION	DESCRIPTION	TIMEFRAME
57	Glacier Highway-Riverside Drive to Jensine Street Improvement	Construct intersection and traffic flow improvements, particularly in the vicinity of the Industrial Blvd intersection. Widen Brotherhood Bridge to reflect new roadway section and alignment on both ends and provide for increased volumes of vehicles, pedestrians and cyclists.	Near-term
58	Industrial Boulevard, Engineer's Cutoff Road and Fritz Cove Road Pedestrian and Bicycle Improvements	Construct bicycle and pedestrian facilities on these roadways. Recognizing constraints, provide lighting as appropriate.	Near-term
59	Back Loop Road and Montana Creek Road Improvements	Construct a separated path from Mendenhall River School to the river. From the river to Auke Bay, construct pedestrian and bicycle facilities, bus pullouts/shelters and intersection street lighting. Widen Montana Creek Road and Skaters Cabin Road and add sidewalks and bike lanes.	Medium-term
60	Glacier Highway-Mendenhall River to Auke Bay	Preserve right-of-way and limit access onto Glacier Highway between Riverside Drive and Auke Bay to ultimately develop this road as a four-lane free flow facility providing higher capacity and mobility and less accessibility. This could be constructed instead of or in combination with the Auke Bay Bypass.	

Auke Bay/Glacier Highway Deficiencies

Forecast transportation deficiencies relate to Auke Bay specifically, in that the Glacier Highway is the only arterial through the area as well as the "main street" of the sub-area. Within a relatively congested area, there is a significant difference in travel speeds between motorized vehicles making local or through trips and pedestrians and bicyclists traveling along or across the highway. This area must be designed to adequately serve pedestrians, bicyclists, local vehicle trips and through vehicle trips.

Auke Bay/Glacier Highway Priority Solution List

ID	SOLUTION	DESCRIPTION	TIMEFRAME
61	Glacier Highway-Fritz Cove Road to Auke Bay Ferry Terminal Roadway Reconstruction, Back Loop Road Intersection Improvement and Auke Bay "Main Street" Treatment	Construct a roundabout or traffic signal at the Back Loop Road intersection. Integrate the intersection with main street/traffic calming treatments through Auke Bay. Treatments to be used include landscaping, sidewalks on both sides of the street, access management, pedestrian level lighting, bus pullout/shelter, curb extensions and bicycle lanes. A roundabout could serve as a gateway treatment and a traffic-calming device in the school area. Include pedestrian crossing amenities between University of Alaska campus facilities that are separated by the highway.	Near-term
62	Glacier Highway-Tee Harbor to Echo Cove Improvements	Widen Glacier Highway travel lanes and provide a pedestrian and bicycle pathway, or shoulder lane, from Tee Harbor to the end of the road.	Medium-term
63	Auke Bay Ferry Terminal Improvements	As more ferry service is provided, particularly fast ferry, there will be a need for additional on-site parking. Improved services for non-motorists will also be needed such as a shuttle service and bicycle connections. Improved USFS campground signage and route information is needed at the terminal. Install time sensitive flashing lights that are activated for motorist activity around a ferry arrival or departure. When activity subsides, flashing light will automatically turn off.	Medium-term
64	Lena Point/NOAA Access	Identify and improve the access route to the proposed NOAA facility at Lena Point. Alternatives include improving the existing road or constructing a new access road through the interior of Lena Loop. The interior road will also provide access to other CBJ lands for future development.	Near-term
65	Glacier Highway-Auke Bay Bypass	Realign Glacier Highway from Auke Lake to the ferry terminal to function as a bypass of Auke Bay.	Long-term
66	Future Ferry Terminal	If an additional ferry terminal is constructed north of the existing terminal, access and parking at both terminals should be evaluated as a function of the ferry service to be provided at each location.	

Consolidated Solution List

The following list contains proposed solutions in a consolidated format that need to be pursued immediately as a consequence of this plan. In general, some type of preliminary work is already underway for many of these solutions.

SUBAREA	ID #	SOLUTION and DESCRIPTION
	1	Egan Drive Grade Separated Interchanges
Areawide		Develop plans and construct Egan Drive with grade separated interchanges at yet unidentified locations between 10th/Egan and Riverside Drive. Interchanges will include pedestrian and bicycle facilities to provide better crossing and connectivity opportunities. Within the next six months, CBJ and DOT will jointly develop more detailed options, with enough pre-design, so everyone will understand the project better and make a better choice.
	1.3	Gastineau Channel Second Crossing
Areawide		Complete an Environmental Impact Statement for a second Gastineau Channel crossing for motor vehicles, bicycles, and pedestrians.
	2	Increased Frequency of Transit Service
Areawide		Double service frequency, to a bus every 30 minutes, along existing local routes during peak hours Monday through Sunday. Extend Care-A-Van service from 6 PM to 9 PM on Sundays.
	18	10th/Egan Intersection Improvement
Downtown/ Thane Road		Identify best form and design of intersection control to reduce congestion, maximize traffic flow and develop extra capacity for long-term growth. Options include additional travel lanes, signal control modifications or grade separation. Preserve and protect the safety and access of bicycle and pedestrian users through the project area.
	19	Egan Drive-Gold Creek to Main Street Improvement
Downtown/ Thane Road		Maintaining existing Egan Drive right-of-way and four lanes of traffic, implement roadside visual cues or physical treatments to develop a safe and efficient roadway for pedestrians, bicyclists and motorists. Treatments may include narrowing travel lanes, extending sidewalks, adding bicycle lanes, installing curb extensions, street furniture and landscaping.
	33	Douglas Highway/North Douglas Highway Intersection Improvement
Douglas		Identify the best form of intersection control for the location. Options include roundabout, additional roadways to modify intersection circulation and/or a traffic signal. Improvement will create convenient circulation opportunities for pedestrians, bicyclists and vehicles. Integrate Cordova Street intersection with this improvement.
	39	Glacier Highway-Anka Street Intersection Improvement
Twin Lakes/ Lemon Creek		Construct left turn bays, intersection crosswalks, bus pullout/shelters and install a traffic signal. (This project is scheduled for construction in the summer of 2001)
	46	Riverside Drive Corridor Improvement
Valley/ Airport/ Nugget Mall		Evaluate appropriate intersection control at the new Dimond Park intersection with Riverside Drive. Maintain existing bicycle lane striping. Provide bus pullouts/shelters. Develop strong pedestrian connections from neighborhoods to Dimond Park area and the retail areas to the south. Extend Riverside Drive to Back Loop Road via an extension of the existing alignment or by crossing Mendenhall River in the vicinity of Melvin Park and connecting with Back Loop Road between River Road and Steelhead Street. With realignment maintain existing Riverside Drive north of Melvin Park as a local street with traffic calming treatments to maintain lower speeds consistent with the surrounding residential homes.

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SUBAREA	ID #	SOLUTION and DESCRIPTION
	57	Glacier Highway-Riverside Drive to Jensine Street Improvement
Industrial/ Engineers Cutoff, Back Loop		Construct intersection and traffic flow improvements, particularly in the vicinity of the Industrial Blvd intersection. Widen Brotherhood Bridge to reflect new roadway section and alignment on both ends and provide for increased volumes of vehicles, pedestrians and cyclists.
	61	Glacier Highway-Fritz Cove Road to Auke Bay Ferry Terminal Roadway Reconstruction, Back Loop Road Intersection Improvement and Auke Bay "Main Street" Treatment
Auke Bay		Construct a roundabout or traffic signal at the Back Loop Road intersection. Integrate the intersection with main street/traffic calming treatments through Auke Bay. Treatments to be used include landscaping, sidewalks on both sides of the street, access management, pedestrian level lighting, bus pullout/shelter, curb extensions and bicycle lanes. A roundabout could serve as a gateway treatment and a traffic-calming device in the school area. Include pedestrian crossing amenities between University of Alaska campus facilities that are separated by the highway.
	3	Develop Local Street Connections
Areawide		Develop local street connections between subdivisions and adjacent local or collector streets to maximize connectivity and minimize local vehicle trips on principal roadways. Where feasible, connect streets for pedestrian, bicycle and vehicle use. Improve connections from neighborhoods to regional trail system.
	4	Maintenance of Bicycle Lanes, Pathways, Sidewalks and Bus Stops
Areawide		Maintain bicycle lanes, pathways, sidewalks and bus stops with regular re-striping, re-surfacing, street sweeping and snow removal.
	20	Downtown Circulator Service
Downtown/ Thane Road		Provide frequent, weather protected, shuttle service within Downtown and between downtown activity areas and remote parking. Provide user facilities at stops on the route. Integrate shuttle with Capital Transit schedule.
	21	Tour Bus Dispatch Service
Downtown/ Thane Road		To achieve more efficient tour bus staging, develop a centralized dispatch service to direct buses to staging areas. This will reduce competition for bus parking stalls and vehicle "re-circulation" through downtown.
	34	Douglas Highway Pedestrian Improvement
Douglas		Install crosswalk signing and striping at major collector street connections, sidewalk on uphill side, bus pullouts/shelters and adequate winter lighting.
	40	Lemon Creek Sidewalk System
Twin Lakes/ Lemon Creek		Develop a complete sidewalk system on Davis St, Central Ave, Anka St and Commercial Blvd. Coordinate this system with access to the middle school area.
	47	Mendenhall Loop Road Boulevard Treatment
Valley/ Airport/ Nugget Mall		Develop Mendenhall Loop Road as a four-lane boulevard with a median and/or turn pockets from Egan Drive through Glacier Spur Road. Integrate traffic signal locations and access control with neighborhood and school district needs. Possible locations for new signals are Taku Blvd, Mendenhall Blvd and Nancy Street. Design the roadway for 30 to 35 mile per hour travel speeds. Boulevard treatments include landscaped medians, bike lanes, buffer strips, bus pullout/shelters and a separated pathway for pedestrians and bicycles. The pathway would replace and/or integrate with the existing pathway. At pathway intersections with streets, modify grading for a flatter pathway approach and integrate the pathway crossing at the intersection stop bar. At the intersection of Back Loop Road and Glacier Spur Road consider constructing a roundabout.

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SUBAREA	ID #	SOLUTION and DESCRIPTION
Industrial/ Engineers Cut-off, Back Loop	58	Industrial Boulevard, Engineer's Cutoff Road and Fritz Cove Road Pedestrian and Bicycle Improvements Construct bicycle and pedestrian facilities on these roadways. Recognizing constraints, provide lighting as appropriate.
Auke Bay	62	Glacier Highway-Tee Harbor to Echo Cove Improvements Widen Glacier Highway travel lanes and provide a pedestrian and bicycle pathway, or shoulder lane, from Tee Harbor to the end of the road.

Significant Committee Recommendations

During the course of the AWTP process, there were a number of recommendations that the TSC considered that generated lively and healthy discussion. As an attempt to provide a background for several of the more significant considerations, a brief summary of the discussion and review material is provided below.

Transportation Demand Management

Solutions that reflect a philosophy of managing demand for trips by private vehicle are well represented in the solution lists. Overall, one in four solutions would encourage people to travel by means other than the single occupant vehicle. This philosophy is termed Transportation Demand Management (TDM), and is pursued through programs and policies that are adopted by either local government or major employers. In the Alaskan setting, state policy-makers rely on local governments to decide how much emphasis a community wishes to place on managing demand. The AWTP includes a policy statement that the CBJ will implement TDM.

TDM policies and programs frequently include:

- Flexible work hours,
- Telecommuting,
- Car-pool or van-pool incentives,
- Park and ride facilities,
- Changes to discourage use of short-term parking by those who park all-day,
- Land use policies supporting more concentrated development in transit service areas,
- Transit subsidies for employees,
- Higher frequency transit service,
- Transit system enhancements (e.g. transit centers, bus shelters, lighting at bus stops, service hours consistent with activity schedules, etc.),
- Shuttle service connecting localized areas of high activity, and
- Constructing, lighting and maintaining a variety of pedestrian and bicycle facilities (e.g. multi-use pathways, sidewalk additions, new non-motorized links, etc.).

Of the above options, none were ruled out. The plan places the most emphasis on increasing the frequency of transit service, adding sidewalks and paths in outlying areas, the prompt removal of snow, maintenance of sidewalks and paths and the establishment of circulator (shuttle) service in the downtown area.

When compared to the 4-8% national rate of TDM effectiveness (defined as single-occupancy vehicle trip reduction), TDM strategies have been more successful in Juneau. As the local rate of success for programs and policies vary, a summary statement on the effectiveness of TDM in Juneau is difficult to document, but appears to be about twice the national average. The implementation and expansion of TDM policies and programs will provide varying rates of return, however, as a whole, the pursuit of new and improved TDM policies and programs in Juneau has real merit. The benefits of TDM go beyond vehicle trip reduction, and include quality of life improvements, opportunities for more active lifestyles, and the preservation and improvement of urban settings.

After discussing the potential for additional TDM measures in Juneau, the TSC concluded that the programs and policies referenced above are a necessary element of the transportation plan. However, with the implementation of TDM, the AWTP solution projects will still be necessary to address deficiencies related to safety, capacity, facility design and connectivity. TDM is considered to be a part of the deficiency solutions but is not the total answer to these problems. Rather, TDM should be one of the elements used for a system-wide solution.

Roundabouts

Juneau relies on traffic signals to regulate pedestrian and vehicle movements (through and turning) at busier intersections. However, signals are not the ideal treatment for all intersections. A form of intersection control, termed a roundabout, is currently receiving attention throughout the nation, and in Juneau as a result of the Visioning Workshop. DOT&PF has installed roundabouts in the Anchorage area and is considering the application in other communities.

Roundabouts have the potential to improve safety at several of Juneau's intersections, while providing for all movements with less congestion and delay. Drivers enter a roundabout at a slow speed and move to the right around a large center island. Exiting the roundabout is completed by a low speed turn to the right away from the center island. Instead of crossing the center island, pedestrians walk around the roundabout, using crosswalks at each entrance and exit. Bicyclists have the option to travel with pedestrians on these paths instead of sharing the travel lane with motor vehicles.

At the time the AWTP was being developed, the intersection of the Douglas and North Douglas highways at the west end of the Douglas Bridge appeared to be the most likely location for Juneau's first roundabout. This intersection operates similar to a roundabout in that driver's yield the right-of-way before entering the intersection during the morning commute to work. With a roundabout, this operating pattern would apply consistently to all entering vehicles. Temporary detours during construction could be laid out to accustom drivers, bicyclists and pedestrians to operation of the completed roundabout.

Developing a roundabout intersection is the best way to answer questions about how well they will perform in Juneau. Community acceptance is critical to installing roundabouts at intersections. Experience from outside the community indicates that roundabouts in Juneau will meet or exceed community expectations.

Concept Approval for Egan Drive

One of the most challenging discussions faced by the TSC was the recommendation for future improvements to Egan Drive, between the Mendenhall River and downtown. With this plan, a series of interchanges, at or near current intersections, along Egan Drive is recommended. Interchanges would establish Egan Drive as a "free flow" expressway, removing traffic signals that interrupt the movement of through traffic.

The following text is specific to motor vehicles on Egan Drive as alternate routes for bicyclists and pedestrians are provided on Glacier Highway and the proposed trails (by-pass and coastal). Intersection improvements to Egan Drive are likely to benefit transit service, and may improve crossing opportunities for bicyclists and pedestrians. DOT&PF has previously presented interchanges as a solution concept to the public. To date, interchanges have been a tentative solution as the public has expressed concern with the magnitude and potential impacts of the proposed projects. Through an open planning and public involvement process, the AWTP provides the forum for Egan Drive safety and capacity solutions to be discussed and to establish a general direction for DOT&PF to implement.

Terminology Discussion - Juneau does not offer any examples of interchanges, which vary considerably in terms of their layout and complexity. Interchanges entail grade separation, which means that the elevation of the main route is either above or below the intersecting route. Thus, a bridge (or overcrossing) is constructed to carry one of the two intersecting routes over the other. More complex types of interchanges make it possible for any movement from one route to another to be accomplished without stopping the vehicle.

Interchanges differ in the ways in which they provide for the exchange of traffic between the main route and the intersecting route. Cloverleaves require a large area of land surrounding the

intersection of the two routes, which is used for circular ramps from one route to the other. The “All Directional Four Leg” is the technical term for a more compact interchange, which has four large overhead ramps for left-turn movements from one route to the other. These types of more complex interchanges have not been proposed for Juneau, with the exception of a circular ramp at the southwest corner of Loop Road and Egan.

For most locations in Juneau, the preferred conceptual design is termed a diamond interchange. In a diamond interchange, traffic exchange between routes relies on a single exit ramp in each direction that ends at a standard intersection regulated by stop signs, a traffic signal or a roundabout. Diamonds are the simplest and probably most common type of interchange, particularly in the urban setting.

Key Points – The recommendation for safety and capacity improvements on Egan Drive required extensive discussion related to the future form and function of the highway. Presented for the committee’s consideration was a summary of the existing and forecasted traffic conditions. This information established a baseline for discussing the proposal for interchanges and other improvement strategies for Egan Drive. Discussion topics included a preference for responding to increasing trips with transit and other forms of Transportation Demand Management, cost and overall cost-effectiveness, concerns with environmental impacts, and the more general concern that interchanges do not fit the Juneau setting.

The facilitated discussion for this topic involved comparing the grade-separated option for Egan Drive with leaving intersections at-grade (ground elevation). Without grade separation, continued growth in vehicle traffic is likely to lead to widening Egan Drive from four to six travel lanes (three in each direction) and to the installation of additional traffic signals. In the absence of interchanges, added travel lanes would be needed for safe traffic flow along Egan Drive and at the approaches to each traffic signal, where adequate storage is required for waiting vehicles so that all traffic can move through the intersection during each cycle of the signal.

Capacities with Respect to Existing Traffic Volumes - Existing volumes (in each direction) on the most heavily used portions of Egan Drive exceed 2,000 vehicles per hour, and are forecast to increase to almost 3,000 vehicles per hour within the 20 year planning horizon. Currently, two travel lanes carry these volumes in each direction. The consultant compared existing volumes of traffic in the p.m. peak hour to estimated capacities. This analysis looked at traffic flows in one direction, from downtown to the Mendenhall Valley during the p.m. peak hour. Estimates of approximate capacity provide a range of volumes that if exceeded would prompt congestion, delay and potentially gridlock.

Table 2: Capacity Comparisons for Egan Drive

Traffic Volumes	Peak Hour (One Way)
Highest current volume on Egan Drive ¹	2,200 vehicles per hour
Existing (At-Grade Intersections) - Approximate capacity	2,000 – 2,500 vehicles per hour
Forecast (2020) highest volumes ²	2,900 vehicles per hour
Three Travel Lanes -Approximate capacity with traffic signals at intersections	3,200 – 3,400 vehicles per hour
Grade Separation - Approximate capacity of two travel lanes in each direction	4,500 – 4,800 vehicles per hour

Table 2 contrasts single-direction volumes with the capacity of Egan Drive to carry these volumes. Already, existing volumes (outbound in the p.m. peak hour) on the most heavily used segments of Egan Drive are close to or at the capacity of the current design. The table indicates that current intersections limit the capacity of Egan Drive well before the capacity of two travel

¹ Outbound from Yandukin heading toward McNugget; figure for outbound from Salmon Creek is 2,100.

² Outbound figures from both Yandukin and Salmon Creek.

lanes without intersections is reached. If intersection concerns are addressed, Egan Drive could carry twice as much peak traffic as today without being at capacity.

What would happen to travel on Egan Drive if peak hour volumes exceed capacity? If signals remain in place, drivers would find that they would slow and stop well before the signal is reached, and would wait for two or more signal cycles before they cleared the intersection. Instead of carrying moving traffic, the travel lanes at each signal would store vehicles delayed by two or more signal cycles.

This delay would also effect routes that intersect Egan Drive. Adding lanes at intersecting routes would be needed in response to deteriorating performance of signals along Egan Drive. Effects would be minor at an intersection such as the Vanderbilt signal, where there is ample space for storage on the intersecting route. However, storage space for waiting vehicles on intersecting streets is problematical at some locations. For example, there are already problems related to nearby intersections and inadequate vehicle storage on Glacier Highway and Channel Drive where they intersect Egan Drive at Salmon Creek.

Once traffic flow through an intersection exceeds capacity, the time required to restore normal operations can be substantial. A site-specific estimate depends on the nature of peak traffic flows, and whether the peak period is a short spike or a prolonged period of high volumes. The national experience is that the time period required to restore normal operations is three to five times the length of the period during which volumes exceed capacity. In other words, once conditions become congested, it can take a long time for the congestion to clear.

The forecast of future congestion assumes that no action is taken to alter the intersections of Egan Drive. It is important that direction be set now with respect to accommodating traffic growth on Egan Drive, so that adequate time is available to make the changes that enable growth to take place without major delays and disruptions during peak travel periods. If at-grade intersections are retained, then adding a third travel lane would increase capacity. However, the addition of a third travel lane could be avoided and more capacity gained if intersections become grade separated interchanges. As traffic levels increase, major investment in Egan Drive, in the form of either additional travel lanes or grade-separated interchanges, will be required.

Accidents – Accident experience at traffic signals is different from accident experience at interchanges. These differences become more pronounced as travel speeds increase. The national experience with traffic signals is that while signals reduce the severity of accidents at intersections, they are accompanied by an increase in the overall number of accidents. However, accident severity remains a problem on higher speed routes with signals, because drivers must quickly reduce vehicle speeds from 55 miles per hour so that they can stop at the signal. Poor surface conditions, driver miscalculation and poor driver choices all increase the potential of an accident at a signalized intersection. In response, the combination of high travel speeds on routes with signalized intersections is avoided in other communities and states.

With respect to Egan Drive, the installation of traffic signals has benefited travelers, but has not reduced the number of accidents or led to low accident rates at intersections. For example, the highest number of accidents in Southeast Alaska occurs in Juneau at the intersection of Egan Drive and Mendenhall Loop Road. In comparison, based on the national experience, grade separation would result in intersections with dramatically fewer accidents. This reduction takes place because the potential for collision is reduced.

The “through” segments of Egan (between intersections) have low accident rates, despite high volumes and travel speeds. As shown on Figures 7A through 7C, accident rates for these segments range between 0.10 and 0.44 accidents per million vehicle miles.

Increased Size of the Roadway Footprint – Any change to Egan Drive that improves safety and increases capacity is expected to require fill placement in areas not previously disturbed by the highway. Grade separation would lead to the placement of fill in the vicinity of interchanges. The option of constructing additional travel lanes discussed above would be most safely accomplished

by placing fill along the outer edges of Egan Drive.³ The option of added lanes also requires additional fill at intersections, where the total lane requirement along Egan Drive could be as high as ten lanes.

In comparison to interchanges, the amount of fill required for the three travel lane option (fill along the outer edges of Egan Drive and at intersections) is estimated to cover roughly two to four times the area required for grade separation. The grade separation option requires the placement of fill at interchange locations and the ramp approaches to an overcrossing.

Conclusion - Essentially the committee considered three options for Egan Drive. The interchange option is recommended as it most closely reflects the project mission statement. In summary:

- The “do-nothing” option. This option would require the community to accept lower peak hour capacity and speeds, decreased safety, and the existing pattern of poorly connected circuitous travel routes.
- The interchange, or grade separated, option with four travel lanes. With this option the center median can be preserved for future uses, such as a dedicated corridor for public transportation and high occupancy vehicles. The capacity of the route could be increased without a considerable expansion of the highway footprint. With the removal of traffic signals, the route is anticipated to become safer and more predictable. This option also presents the best opportunity for facilitating pedestrian, bicycle, vehicle and transit circulation.
- The at-grade option with six travel lanes and traffic signals. This option would occupy most of the available right-of-way now, be more difficult to integrate with pedestrian and bicycle circulation and due to fill needs, has significant environmental consequences. It is anticipated that this option would also diminish the median corridor.

Second Crossing

A second crossing of Gastineau Channel would directly link the North Douglas Highway to the rest of the CBJ road network. The proposed crossing would improve access between the Mendenhall Valley and Douglas Island for various trip purposes, including recreation, shopping, commuting, goods movement and travel to the airport and ferry terminal. It would also provide a second route for emergency vehicles crossing Gastineau Channel and simplify traffic management for construction projects on the Douglas Bridge and connecting intersections. The Assembly has taken a number of actions in support of the Second Crossing, including ranking it as a top transportation priority. The Assembly has also supported a related improvement, extension of the North Douglas Highway.

The connectivity benefits of a Second Crossing are significant. The congestion relief benefits to the existing bridge would not be as significant but could still be important. The Second Crossing would not eliminate the need for future improvements at these intersections. In addition, there will be significant environmental issues associated with the crossing.

Corridor Preservation

Corridor preservation provides the opportunity to tentatively establish where to locate future transportation corridors. By identifying corridors now it is possible to head off future conflicts with other development proposals.

³ It is also possible to place an additional travel lane for each direction in the existing median; however, this raises concerns with respect to use of the median as a safety refuge and as a possible corridor for future transit service.

The Comprehensive Plan already identifies several corridors for future roads. It is recommended that further attention be paid to identification of additional corridors, beginning with the Second Crossing. Locating this corridor is a critical decision for the community given that the existing crossing is not centrally located with respect to either the Mendenhall Valley or West Douglas. Identifying the preferred location for the Second Crossing also benefits the evaluation of improvements to Egan Drive because a major intersection is needed where the connection to the Second Crossing intersects either Egan Drive or the Glacier Highway.

One of the significant benefits of grade separated interchanges on Egan Drive is that the center median can be retained for future mass transit use. With the development of Egan Drive it is important to retain the central median as a corridor.

Recommendations for Land Use Zoning and Development Standards

One of the primary responsibilities of the CBJ is to facilitate future growth by insuring that adequate land is available when needed, and that growth promotes the public health, safety and convenience. The Comprehensive Plan provides guidance and policies relating to the CBJ's future land use patterns in terms of physical form, housing, economic development and community development. The CBJ Land Use Code outlines the various requirements for development.

Juneau's future community form depends on transportation and the amount of land that is available to meet projected demand for residential, commercial, open space and industrial uses. Compact urban development is preferable to urban sprawl and is called for in the Comprehensive Plan. As well, the results of the Visioning Workshop verified that compact development is preferred for Juneau. By concentrating development, the CBJ will limit the number of acres dedicated to urban uses and minimize the per-unit cost of extending lines for sewer, water and utilities and for improvements to the transportation system. Significant reductions in travel, energy consumption and pollution will result by encouraging the development of residential uses in relative proximity to shopping, employment and facilities for recreational and cultural uses.

As discussed below, work efforts associated with the AWTP have highlighted land use designations and development standards that warrant consideration and possible refinement to:

- support the mission statement of the AWTP,
- implement projects listed as recommended deficiency solutions, and
- facilitate envisioned growth patterns.

Land Use Controls and Zoning

With the development of the Existing Land Use Opportunities and Constraints Report, a series of windshield field inventories of the CBJ were conducted in 1998 and 1999 to map how land in the community was being utilized. The location of sensitive natural resources and hazard areas were also added to the maps. The report concludes that based on forecast population and employment growth, the land base of the community, and the Comprehensive Plan guidance for future development, there is a buildable land supply that is anticipated to meet the 20 year development demand. The report allows for several conclusions to be drawn that, if implemented, would appear to support aesthetically pleasing, compact development that is proximate to urban services. These considerations are presented on a sub-area basis.

Downtown/Thane - The focus of new development in this sub-area will be associated with the waterfront and the Rock Dump. At the time the AWTP was drafted, a planning effort for the Downtown waterfront area was underway. The redevelopment of Willoughby Avenue into a mixed-use area will best be accommodated through an articulated vision or plan for development that is specific to the corridor. This exercise should include design standards for buildings, landscaping and parking and specify land use preferences.

The community can implement the plans and visions for both of these areas by offering incentives that are too beneficial for private developers to pass on. This concept is also known as "carrots as sticks". Examples include decreased parking, increased density, tax adjustments, increased building height, and streamlined land use reviews.

In order to encourage new downtown development, parking will need to be accommodated by public and private entities so as to mitigate the constraint. Consistent with the Visioning

Workshop, development requirements should direct parking to be incorporated with the various downtown settings in a manner that is considerate of the surrounding land uses and promotes the function and appearance of the area.

Douglas - With the installation of public sewer lines and construction of the recommended improvements to the transportation system, significant opportunities for development will be provided for all land use types. The implementation of smart growth concepts is recommended for development opportunities that exist at the north and south ends of Douglas. Typically, smart growth development includes clusters of housing that have multi-modal links to employment and activity centers. Smart growth development retains more open, or undisturbed, space than standard development practices and usually costs less to build and maintain.

Twin Lakes/Lemon Creek - In response to forecast growth in this sub-area, the AWTP recommends that a corridor management plan be developed through Lemon Creek. With the development of the corridor plan by state and local agencies, articulate a vision for Lemon Creek that is incorporated into the Comprehensive Plan and land use zoning. Comments provided during the Visioning Workshop suggested that a “downtown” Lemon Creek should be established in the school area.

There are a significant number of dwellings that will reach their design lives during the 20 year planning horizon of the AWTP. Through land use zoning, the CBJ should translate redevelopment opportunities into increased housing density, variety and supply. The CBJ has public land holdings in this sub-area that are likely to be developed for housing during the planning period. As well, the CBJ has stated a desire to develop a consolidated Public Works facility and possibly another school in the Lemon Creek area. Of all the sub-areas, Lemon Creek offers the most potential for evolution and change. With change comes the opportunity to implement smart growth concepts and realize the vision of the area. Change will likely be accelerated as transportation constraints related to access and circulation in this sub-area are addressed.

To improve health care service in the region and to diversify Juneau's economy, the Comprehensive Plan states that there is a desire to expand the services and medical facilities in the vicinity of the hospital. The developable land surrounding the hospital is not currently zoned to accommodate a substantial expansion. In the near future, consider rezoning rural lands to a commercial designation. To promote compact and thoughtful growth in this area, develop a specific parking strategy that supports the function of the hospital complex and allows for additional buildings, or expansions, and for the retention of quiet, open spaces that are consistent with a campus setting and a convalescent environment.

Airport/West Mendenhall Valley - There are a significant number of dwellings and commercial structures in the lower valley that will reach their design lives during the 20 year planning horizon of the AWTP. Through land use zoning, translate residential and commercial redevelopment opportunities into increased density and supply. Several of the oldest commercial areas are developed with single story structures that occupy large tracts of land. A more efficient and economical design of these commercial properties would mix land uses, including housing, and building heights. To encourage the private sector to include a mix of land uses and structures on large properties, and to provide, or promote, multi-modal access and circulation, offer “carrots as sticks” through substantial development bonuses (including increased density, decreased parking and tax adjustments), streamlined land use reviews, and tax adjustments.

East Mendenhall Valley (Back Loop/Industrial Blvd/Engineer's Cutoff/Fritz Cove Rd) - The majority of this sub-area is not served by the public sewer system. Land use and development pressure will intensify when sewer is provided. Development on public land in the Peterson Hill area provides a prime opportunity to implement the concepts of smart growth. As stated above, smart growth development includes clusters of housing that have pedestrian, bicycle, transit and vehicle links to employment and activity centers. Smart growth development retains more open, or undisturbed, space than standard practices and usually costs less to build and maintain. Development of this type will be more consistent with the green belts that are established along

the Mendenhall River and Auke Lake, and could easily integrate with the trail system and the Dimond Park pedestrian bridge. Development in this sub-area may necessitate the provision of another public school. Consider the location of a school site that can be easily accessed by students and provides a quality of life benefit to the surrounding neighborhood.

Auke Bay to the End of the Road - As the majority of this sub-area is outside of the public sewer service boundary there will be constraints to the patterns of development that are typical in other sub-areas. Rather in this sub-area, increased local and tourist use of recreation and scenic areas is likely to increase the pressure for related public facilities/services and for development related to water uses along the shore.

Expanded service at the Auke Bay ferry terminal and more offerings at the UAS campus will also affect the demand for service provisions and associated commercial land uses. The AWTP and comments from the Visioning Workshop recommend a “main street” treatment in the vicinity of the Auke Bay School and Statter Harbor to calm traffic, provide for multi-modal access and circulation, and to create a “downtown Auke Bay”. Currently there are four small multi-family land use designations in the vicinity of Auke Bay, several of which are developed similar to single family subdivisions. Consider designating additional multi-family zoning in the vicinity of Auke Bay to increase the supply of housing that is proximate to commercial, educational and recreational services. The capacity for public wastewater treatment will be a constraint to development that will need to be addressed in the near term.

Land Use Code Revisions

To correspond with the recommended transportation projects in the solution lists, several land use code requirements will need to be aligned. The following list contains recommended changes and a starting point for code amendment discussions:

- 1) In all areas of the borough, with major subdivision development, require sidewalks on public streets. Allow the Planning Commission the discretion of determining if sidewalks are required on one or both sides of a street or if alternate provisions would satisfy non-motorized access and circulation.
- 2) In all areas of the borough, with major developments, require the construction, or plat identification, of pathways to connect existing and potential developments, land uses and activity areas. Provide incentives to developers to construct pathways that reduce or eliminate vehicle conflict points. Pathways may serve as an alternate to sidewalk construction at the discretion of the Planning Commission.
- 3) With the development of a land use that will attract a significant number of users, provide a substantial incentive to install bus shelters, bicycle racks and/or lockers. Require these facilities for significant public projects.
- 4) Develop basic access management policies for primary road corridors, including consolidated access points for subdivisions and developments.
- 5) Provide incentives to encourage redevelopment, in-fill development and compact development. Incentives may include reduced permit fees, streamlined review processes, density bonuses, reduced parking and tax adjustments. Review the benefits and detriments of establishing improvement areas, or zoning overlay areas, where specific, articulated requirements and review processes would apply.
- 6) In the Downtown area, allow parking requirements to be consolidated for small developments with joint use/maintenance agreements. To preserve the character of mixed-use and historic areas, develop design and location criteria to promote the appearance and function of these parking facilities.

Implementation - What comes next?

The AWTP identifies transportation solutions and speaks to the importance of proposed investments in the transportation network that serves the community. Official adoption of the plan by the CBJ Assembly concludes the planning process and documents that the community's elected leaders endorse the priorities, positions, and recommendations contained in the plan. Assembly adoption also provided the opportunity to refine and clarify the community's recommendations with respect to improving the surface transportation system. Effective coordination with DOT&PF must continue, including advocacy for local requests in the State Transportation Improvement Program (STIP). It is of the utmost importance the development, design, and construction of projects by DOT include community consultation and cooperation. It is only through such cooperative effort that the community will be assured that state projects within the community reflect community values and priorities. CBJ encourages consideration of factors such as community scale, impacts, cost-benefit analysis (including social and economic factors), and context sensitive design.

Turning Solutions into Specific Projects -The solution lists present a wide range of projects for state and local facilities. Some solutions are specific enough that a single project is expected to result in the intended outcome. Other solutions will take many incremental projects to be achieved. Projects will be funded through a variety of sources including grants, the CBJ Capital Improvement Program, the DOT&PF State Transportation Improvement Program (which is largely funded by federal sources) and private development. Projects will be submitted for funding based on the stipulations of various programs and the priority rank assigned in the AWTP. As project funding is identified and resources committed to each project, the project specifics will be further refined in design and public review processes.

In general, project funding from state and federal sources is directed towards elements of the transportation network, such as transit, trails and paths, federal highways, safety improvements, ferries and airports. To illustrate an example, if a project receives funding from the federal highways program, due to stipulations that come with the funding, it would not be possible to spend that money on transit operations or an airport project, regardless of the desires of the community.

It is important to note that the AWTP is intended to reflect the project preferences and recommendations of the community. Transportation funding from the state and federal government is channeled to the local level through project evaluation processes that also consider regional or statewide needs. While a project may be of great significance to a community, if it does not closely match the evaluation criteria of a funding source it will not get developed. This "mis-match" in funding values is a source of frustration for all parties. In these cases, the challenge of implementing a solution project will be to identify elements, or portions, that can be funded from various sources.

Future Revisions - Following adoption, city staff will conduct periodic revisions of the AWTP based on changing conditions, new information and unexpected developments. The AWTP will be updated within five years of Assembly adoption. It is anticipated that a broad review of the plan, beginning with the mission statement, will be conducted.

The integration of transportation planning with land use planning offers many opportunities to better prepare the community for the future. While coordination of the two activities is already taking place, ties between the two need to be strengthened with the goal of achieving true integration of transportation decisions with decisions concerning the proximity, type, spacing and density of commercial and residential development. This goal will also be pursued when the Comprehensive Plan is revised and updated.

Summary

As presented in the AWTP, the vision for future transportation in the CBJ is a system that serves all modes of transportation equitably, efficiently and cost effectively. The vision includes improved connections between modes of transportation and between activity areas (e.g. parks, schools, retail areas). Improved connectivity will be accomplished by establishing physical connections and planning for future connections that are integrated into new roadways or developments as they are constructed (e.g. bike lanes, sidewalks, pedestrian and bicycle only pathways and bridges, bus stops, and bus shelters). It is also important to realize the connection between land use and transportation. In order for the transportation plan to accomplish its objectives, the land use plan and the associated development regulations must support the concepts included in the transportation plan. The AWTP is a tool for identifying transportation projects for implementation in the future and to aid CBJ Staff, DOT&PF Staff, and the community in achieving the vision for future transportation in the CBJ.