

CHAPTER 8. TRANSPORTATION, STREETScape AND PARKING

Existing Transportation Network

Like many historic small downtowns throughout the US, downtown Juneau was not laid out with today's level of use of motor vehicles and pedestrian demands in mind. At its worst, during the peak visitor period in the summer, the existing street layout leads to well noted vehicle congestion particularly along the South Franklin Street/Marine Way corridor and high pedestrian density throughout the Downtown District. However, the street layout also offers benefits in terms of providing relatively walkable downtown and surrounding residential neighborhoods albeit sometimes via steep streets and staircases. Also contributing to the feeling of a walkable downtown, the narrow and sometimes winding streets, with on-street parking, provide perfect conditions for encouraging slow traffic speeds. The downtown has grown largely as blocks through older subdivisions that either simplified the underlying topography or followed it. This has resulted in patchwork of grid streets on slopes which are impractical for streets or street grades that would be balked at today, or tight, winding streets with expansion constrained by steep slopes of the waterfront.

Never-the-less the streets of Downtown Juneau have come a long way from the wooden board streets, some of which had to be elevated on wooden pilings to traverse the shoreline.

Overtime some expansion of the street network and right-of-way widths has been possible along the waterfront through the addition of rock fill notably South Franklin Street, and street between and including Egan Drive and Willoughby Avenue. The construction of Calhoun Avenue also opened up opportunities for newer subdivisions in the Flats. As mentioned earlier in this plan, the Seawalk has provided a much needed pedestrian route along the congested waterfront streets for recreational and non-recreational purposes.

As the use of motor vehicles has grown so too has the demand for streets to be used to provide parking. This in turn has led to narrower vehicle travel ways which has ultimately necessitated a one-way street network in the Downtown District. Parking has been a constant topic of study and discussion over the last 50 years. During this time the number downtown employees has increased with most of those employees living beyond reasonable walking and evening cycling distance. The response has been use of downtown land for both public and private parking structures and surface parking lots.

As well as the significant amount of tourism-related mass transportation that occurs during the summer, public transit also has a presence in the planning area. Public transit services from elsewhere in the Borough converge and circulate around the Downtown District relatively frequently entering and leaving via Willoughby Avenue. Transfers between Douglas and Valley bus services also occurs in the downtown.

In the last 20 years a number of downtown streets (Main Street, Seward Street, South Franklin Street Front Street have been reconstructed and demonstrate a commitment toward more pedestrian friendly facilities. The incorporation of bump-outs, colors and textures, and in some places vegetation, and street furniture into street design provides cues to vehicle drivers that they are in a pedestrian-orientated environment and they should drive accordingly. An ideally designed street should not need to rely on a posted speed limit alone to ensure speed limits are adhered to and it follows that a street should be designed to reflect the context of the surrounding land uses they serve.

What does the vision report recommend?

The Blueprint Downtown Vision Report identified a number of favored actions related to transportation, parking, and street design. These are interspersed throughout the various Focus Areas in the consultant report.

Focus Area A: Business Vitality

- Explore options, such as a West Douglas deep water port, to reduce industrial truck traffic crossing through Downtown.

The consultant recommendations do not go on to discuss the West Douglas concept.

Focus Area D: Vehicle Use and Parking including bicycles

- Create an electric downtown Circulator to move people between S. Franklin, Transit Center, Willoughby District, and remote parking.
- Use some of Downtown's vacant lots to add more parking in aesthetically pleasing multi-level parking garages.
- Create Park and Ride lots in the Valley and Douglas for transit and carpools to and from Downtown; incentivize large employers to use.

- Stop investing in parking structures. Redevelop areas now used for surface parking lots, emphasizing transit, car pools, car-sharing, bicycling, and walking.
- Electrify both city buses and tour buses to reduce fumes in Downtown (and at the Glacier).
- Provide Downtown bike lockers, bike parking, a bike share program, more bike racks with tools, and dedicated interconnected lanes for bicycling to/from and around town.
- In the long term, relocate AML and industrial truck traffic to an area outside of the Downtown Franklin Street bottleneck.
- Improve Capital Transit bus stops/shelters to better meet year-round needs, including displays that show real time route status, security cameras, and better snow removal.
- Ban vehicles, except the Circulator, during tourist season in defined Downtown areas to allow people to move more freely and create a plaza atmosphere.

The consultant recommendations focus on the need for a circulator but it is unclear who the circulator would serve – perhaps both tourists and locals alike. Some specific operating suggestions include ‘smaller semi-open slide in vehicles’ that have no fare running on a continuous loop. Traffic law issues are identified.

Bike lanes are also discussed under the consultant recommendations. It is noted that given the limited right-of-way on some downtown streets bike lanes may not be possible but unconventional solutions such as aerial walkways should be considered.

There is also some discussion on opposite views that were apparent from the public - some supported more downtown parking versus a need to focus on reduced parking and focusing on demand management solutions instead. The consultants note that some new structure in the Aak’w Kwaan Village area may be appropriate (possibly coupled with a circulator) while additional surface parking in the Downtown District is probably unnecessary.

Focus Area E: Pedestrian Access and Experience

- Complete the Seawalk from the AJ Dock to Overstreet Park.
- Provide adequate, safe, clean, and well-identified public restrooms.
- Improve and expand sidewalk canopies and ensure that walking routes are accessible and passable year-round.
- Create a pedestrian-only destination area(s) in the Downtown District.
- Add more historic info signage and Tlingit place-name signs along streets.

- Support the creation of more indoor/outdoor dining and shopping experiences
- Provide seating throughout Downtown for pedestrians to comfortably rest and take in the scene.
- Build in more green space, art installations, and pedestrian amenities

The Consultants recommendations highlight the importance of the Seawalk as both a functional and recreational pedestrian experience. Completion of the Seawalk should be a high priority to serve both tourist and local needs alike including a direct connection of a waterfront downtown with the water, and a way to ease and escape the congested waterfront sidewalks.

The existing linkages between the uplands areas paralleling the waterfront and the Seawalk are seen to work well. In other areas beyond the existing Seawalk the linkages need improvement.

It was noted that pedestrianization, or at least temporary pedestrian closures, of downtown streets with Front Street, portions of Seward Street, and Shattuck Way receiving strong support.

Focus Area F: Sustainability

- Develop complete cycling infrastructures (e.g. bike lanes, lockers, covered stands) into a clear network that encourages cycling as a means of transportation.

Consultant recommendations provide some discussion of electric vehicle charging infrastructure and dock electrification for cruise ships.

Focus Area G: Carrying Capacity

- Encourage the installation of an electric downtown circulator to reduce congestion.
- Reduce congestion by developing more infrastructure like Seawalk and street improvements.
- Increase bus staging to locations outside the bottleneck.
- Connect Gastineau Avenue to Thane Road as a bypass.
- Relocate/Rezone Rock Dump industrial area to reduce through-traffic.
- Determine sustainable visitor capacity and set a limit on cruise ships and cruise ship passengers.

The consultants note a need to move visitors out of bottleneck areas (South Franklin Street/Marine Way). They recommended considering a circulator service that links with off-site bus staging area with the Aak'w Kwaan Village district as a possible location. Another component of moving tourists through the bottleneck would be to provide a pedestrian alternative to a different staging area although this would require the Seawalk connection past the Merchants Wharf to be constructed.

Use of bicycles on the Seawalk is also mentioned as becoming a viable option once the Seawalk is completed.

Focus Area H: Natural Environment and Recreation

- Complete the Seawalk across the waterfront
- Electrify the public bus fleet, and incentivize tour groups to use electric vehicles.

The consultants also note that given the limited land area available in downtown and the number of competing land uses that using it for surface parking is inappropriate, however areas in the study area but outside of the Downtown District might provide suitable locations for additional parking surface lot or structure, especially if linked with a circulator.

Relevant Plans

The topic of transportation is one area that has benefitted from many specific recommendations in plans over the last 20 years. These specific actions, if not already implemented, will be presented and any new recommendations presented.

Key plans and studies that are referenced in this chapter are:

2001 AREA-WIDE TRANSPORTATION PLAN

This plan has a boroughwide scope and was the result of extensive background research on existing transportation conditions for all modes. The Plan identifies a number of boroughwide improvements that have relevance to transportation in the study area as well as specific downtown improvements.

2009 JUNEAU NON-MOTORIZED TRANSPORTATION PLAN

This is a boroughwide plan with a focus on pedestrian and bicycle facilities. As well as general policies and design guidelines to support increased walking and cycling as a replacement for private vehicle trips, it provides very specific recommendations for intersections and streets that require improvement to provide safer pedestrian and cycling environments – a number of these improvements are in the study area.

2012 WILLOUGHBY DISTRICT PLAN

This area specific plan recognizes the high use of land in the Aak'w Kwaan Village District for parking and recognizes that this is poor utilization of buildable flat land in the core of downtown. The plan recommends the existing 'super-blocks' between Willoughby Avenue, Egan Drive, Glacier Avenue, and Whitter Street are broken up with new streets constructed. Street design recommendations are also provided with the aim to have pedestrian scale lighting, widened sidewalks, narrower vehicle travel lanes, street trees, and on-street parking all of which provide a more attractive pedestrian environment and encourage lower speeds. Allowance of on-street parking is recommended as is the addition of a new parking structure that is managed to allow shared use between a number of public facilities and State offices. Improved wayfinding is also recommended.

2010 DOWNTOWN PARKING MANAGEMENT PLAN

This was a comprehensive review of parking in the down core and provided recommendations on specific management of both on-street and CBJ off-street parking facilities. The plan recommends a management approach to ensure long term parking does not occur in on-street short term parking spaces, and ensure appropriate levels of occupancy of both on-street and off-street spaces. The recommended solution was for all parking spaces to be subject to a variable fee pay-by-plate, multi-space meter system that encourage long-term parking to the CBJ off-street parking facilities. This plan was largely implemented but faulty technology saw the recommended system fail.

2008 CAPITAL TRANSIT DEVELOPMENT PLAN

This is a boroughwide plan. It contained an 'optimum scenario' with a number local looping services that connected to a frequent express service linking the Valley and Downtown. Implementation of this scenario was supported by the 2013 Comprehensive Plan. Part of this scenario would have included a frequent downtown circulator. The scenario would have required greater CBJ funding. A standalone downtown circulator was also explored. This Transit development Plan was superseded by the 2014 Transit Development Plan

2011 DOWNTOWN CIRCULATOR SHUTTLE FEASIBILITY STUDY

This was a supplementary study by the same consultants as the 2008 Transit Development Plan. This provided routing alternatives and cost estimates for downtown circulator. The consultants provided specific route and vehicle headway recommendations.

2014 CAPITAL TRANSIT DEVELOPMENT PLAN

This is a boroughwide plan but has some recommendations regarding bus shelters and routing that has some relevance to those bus stops Blueprint Downtown planning area that do not have bus shelters.

2003 DOWNTOWN TOURISM TRANSPORTATION STUDY

Makes recommendations on how to address increased tourism-related pedestrian and vehicle congestion in the Downtown District with an emphasis on the South Franklin Street/Marine Way corridor that parallel the cruise ship docks. Recommendations address improving pedestrian capacity and management, increasing right-of-way width to provide increased space for pedestrians and vehicles, and a new by-pass road alignment from Manilla Square to the Franklin Street dock via Gastineau Avenue/AJ Mill site. Many new buildings have been constructed on this corridor since the plan was written which may mean some recommendations are too costly and should be considered opportunities lost.

2012 SAFE ROUTES TO SCHOOLS

Site specific improvements were recommended based on audits of elementary schools around the Borough. Detailed recommendation for Harborview Elementary are provided. Some recommendations are for physical infrastructure improvements, management of journeys to schools, and education for parents and students.

2015 COORDINATED HUMAN SERVICES TRANSPORTATION PLAN

This is a boroughwide plan but identifies some issues that those with mobility limitations that are applicable to downtown. These include snow clearance to and around bus stops, adequate pick-up/drop-off locations for downtown residents, as well as a shortage of wheel-chair accessible taxis (particularly important for arriving cruise ship passengers).

2015 FRONT & FRANKLIN STREET RECONSTRUCTION PUBLIC OUTREACH

To support the reconstruction of downtown streets, a report providing a recommended design was produced based on extensive public input and review of existing plans. It includes useful support for public desires for how the Downtown District streets should appear and function to support all downtown users.

2013 COMPREHENSIVE PLAN OF THE CITY AND BOROUGH OF JUNEAU

As the overarching planning document for the future development for the Borough, the Comprehensive Plan includes a number of transportation policies, development guidelines, and implementing actions covering all transportation modes. Most relate to Boroughwide recommendations but some are specific to the Downtown area.

2017 CBJ DOCKS AND HARBORS BRIDGE PARK TO NORWAY POINT MASTER PLAN

Makes recommendations with conceptual reconstruction of uplands areas around the Harris and Aurora Harbors. Includes recommendation for a road/driveway running parallel to Egan Drive from Overstreet Park to the Yacht Club site. The preferred design also includes a resigned access points from Aurora Harbor on Egan Drive. A reduced size float plane facility is also recommended.

2016 DOWNTOWN BUSINESS ASSOCIATION MAIN STREET REPORT

Motor vehicle traffic

SOUTH FRANKLIN/MARINE WAY SUMMER TIME CONGESTION

Although no study has recently measured the level of delay at the Manilla Square intersection of South Franklin Street and Marine Way, anecdotally there are times of the day when traffic delay has been cited as unacceptable. The CBJ Comprehensive Plan recommends that LOS D or worse is unacceptable. DOT&PF traffic count data is available for the Main Street intersection for a day in 2013 when four cruise ships were docked. LOS A was observed during the AM and PM peak hours although during the AM peak hour for vehicles turning left onto Egan Drive from Main Street was LOS D (signal improvements as part of the Egan Drive reconstruction should improve this to LOS B). The size of ships and number of visitors have increased since that time. Every year DOT&PF undertake collects traffic flow data for a X week period on Downtown Juneau streets and from this generate an Annual Average Daily Traffic count (how do they do it for tube samples). The level of tourism-related traffic on the South Franklin corridor is sensitive to the number and size of cruise ships in port. While it is not known how many visitors were in port during the sampling period the DOT&PF data indicates that the AADT has increased by X% since the 2013 data.

The causes of delays along the South Franklin Street/ Marine Way corridor include the eight pedestrian crossings (sometimes controlled by crossing guards), vehicles dwelling in the travel way as they wait for gaps in oncoming traffic to enter parking lots at bus staging areas serving Cruise Ship Terminal and Alaska Steamship Docks, and vehicles waiting for gaps in traffic before entering the Manilla Square 'tear drop' turnaround. The timing of the arrival of cruise ships can heavily influence the level of vehicle conflict that occurs. Typically, the most intense amount of tour bus departures from dock staging areas occur within the first hour and half of a ships arrival since cruise ship passengers generally wish to depart on a

tour as soon as they arrive into port. This also coincides with the rush passengers not participating in organized tours walking toward South Franklin Street. Scheduling of ship arrivals has been recommended in ????

Gastineau Avenue by-pass - The potential for congestion on the South Franklin Street portion of this corridor has been recognized in the 2001 Area-wide Transportation Plan, the 2004 Tourism Transportation Study, the 2004 Long Range Waterfront Plan, and the general concept of a by-pass is recommended for consideration in the 2013 Comprehensive Plan. These plans recommend a new road connecting Thane Road to the intersection of Marine Way and South Franklin Street using route through the former AJ Mill Site and the eastern end of Gastineau Avenue. Options for a circulation patterns include a one-way system with the existing South Franklin Street corridor or a bypass route. Consideration of the intersection design and the road profile would dictate how many lots would need to be purchased and buildings demolished. Since 2001, many of the lots that would be subject to the alignment have been developed and undertaking this project today would be more costly than when these plans recommended this alternative.

Removing traffic generated by Rock Dump Land Uses - One action recommended by the public during the Visioning work was for a deep water port in West Douglas with the aim to move some of the water dependent, truck traffic generating land uses from the Rock Dump. The development of West Douglas is something that has been identified in the Area-wide Transportation Plan, and the Comprehensive Plan with a West Douglas Conceptual Plan being adopted in 1997. The premise of the action identified by the public is that industrial traffic generated from the Rock Dump does not have a direct nexus with the Downtown but does contribute to traffic at the key congestion point of South Franklin Street and Marine Way. The size of the vehicles is also considered inappropriate given the number of pedestrians on sidewalks directly adjacent to the vehicle travel way. It should be noted that the land uses in the Rock Dump area that generate the industrial traffic are not there because of their proximity to downtown but due to it being water accessible for barge traffic and providing a large staging for shipping containers, fuel tanks etc. Moving industrial uses would have additional noise reduction benefits for downtown Douglas. To provide for traffic generated by a West Douglas development, a 2nd crossing giving more direct connection with the Valley and Lemon Creek is also needed. It is worth highlighting that based on the DOT&PF traffic data from 2013, only 3.4% of all vehicles heading outbound on Marine Way were classed as heavy vehicles, with 9% being busses. 82.7% of vehicles were classified as cars with 3.8% being medium duty vehicles.

Vehicle/pedestrian interaction - there are nine pedestrian crossings along the corridor between the Taku Smokeries and the Marine Way/Main Street intersection. Other than the crossing associated with the Main Street traffic signal all of these crossings are unsignalized. Providing

adequate crossing opportunities for the high volume of pedestrians between the Seawalk and docks is important. In recent years CBJ has provided crossing guards at some of the busier crosswalks. Controlling pedestrian crossings in this way also allows the crossing guards to keep traffic flowing along the corridor. Not all of the unsignalized crossings are supervised by crossing guards. Because of limited resources, guards are focused on the busiest locations during the busiest times or just one crossing guard being provided leaving one side of the road unsupervised which can lead to errant crossing by pedestrians on that side. Increased use of crossing guards at more of the crossings should be considered. Crossing guards are recommended in the Area-wide Transportation Plan.

The assumed increase in the number of pedestrians as more cruise passengers arrive during the summers has further raised concerns about pedestrians stepping from the sidewalk onto the travel way to pass other pedestrians. In 2019, CBJ implemented a recommendation of the 2003 Tourism Transportation Study. A pilot program for bollards and chains along part of the South Franklin Street section of the corridor was undertaken. The design of these barriers was reviewed and approved by the Historic Resources Advisory Board to ensure they did not detract from the Historic Design Guidelines. As managers of the right-of-way DOT&PF also had to review and approve the design and required a fixation method allowed that allowed the bollards to release upon impact from a vehicle. The barriers have to be removed during the winter to aid snow clearance. Anecdotally this pilot appears to have worked well and is to be expanded along the corridor in the 2020 season. This expansion will also aid directing pedestrians to the appropriate crosswalk.

The Seawalk paralleling this corridor has provided an alternative pedestrian route which has been important to remove pedestrians walking from the Franklin Dock east of Taku Smokeries and AJ Dock at the Rock Dump. The completion of new berths at the Cruise Terminal dock and the Alaska Steamship Dock has allowed sections of the boardwalk that was previously segregated for security purposes to be open up. The 2004 Tourism Transportation Study identifies that strong connections to strong connections the Seawalk and the South Franklin Street/Marine Way corridor.

Traffic delay Level Of Service (LOS) – The LOS is a measure of the average time delay in seconds of all traffic at an intersection. The delay time increases as the capacity of an intersection reaches its limit. There are 6 LOS categories.

A LOS A indicates free flow of traffic whereas a LOS D would indicate frequent delays in entering the intersection. A LOS E would require several minutes of delay in entering an un-signalized intersection, particularly if intending to make a left turn onto the road. Under a LOS D, several vehicles would be queued up at an intersection and the rear vehicle would require several minutes of delay before getting to pass through the intersection; this is, typically, considered by motorists to be “irritating.” Under a LOS E scenario, there may be 10 to 20 vehicles queued up to enter an intersection and a motorist may wait two full traffic signal cycles before entering the intersection or, at an un-signalized intersection may wait up to 15 minutes before passing through an intersection; this is, typically, considered terribly annoying by motorists. Under a LOS F, which is often termed “gridlock,” a motorist may wait several signal cycles before passing through the intersection and may be forced to turn around to find another route if seeking to turn left at an un-signalized intersection with a LOS F; this, typically, is considered unacceptable by motorists. By national planning standards, any Level of Service of D or worse is considered beyond the carrying capacity of the roadway and further traffic-generating land uses should not be routed through this roadway.

EGAN DRIVE

The main thoroughfare for traffic entering of leaving the Downtown District is Egan Drive. This State managed road (officially designated AK-7) was constructed in the early 1970s on fill over what were then tide flats. Previously all traffic had to use Willoughby Avenue and Glacier Highway so the increased capacity provided by the two lane Highway has provided obvious access advantages for the Downtown District. The development of the Outer Drive project, as it was known, also created an intersection with the Juneau-Douglas Bridge, and then continued past Harris and Aurora Harbors to the boundary of the study area at Norway Point. While the improvement has been use for motor vehicle traffic stretch of Egan Drive has been recognized as providing a barrier between the uplands and the waterfront. Both the Long Range Waterfront Plan and the Willoughby Plan in particular note the disconnection between the Aak’w Kwaan Village District and the waterfront. Recommendations for improved pedestrian connections across this stretch of Egan Drive are discussed later.

In 2019, the State of Alaska Department of Transportation and Public Facilities (DOT&PF) began a major reconstruction of the stretch of Egan Drive between 10th Street and South Seward Street. Such improvements were identified in the 2001 Area-wide Transportation Plan (Priority # 19) and further supported in the Waterfront Plan and the Willoughby District Plan. Once completed the construction will incorporate the treatments suggested in 2001 – narrower traffic lanes, dedicated bike lanes, extended sidewalks, with curb extensions and retention of existing vegetation and new vegetation to provide visual cues that this section of Egan Drive should be driven differently than the higher speed stretches. The project features narrower vehicle lanes (11 feet instead of 13 feet) directly adjacent to dedicated bike lanes with wide separation markings (6 inches instead of the DOT&PF standard of 4 inches), and a slower posted speed limit, and additional crossings will result in slower traffic speeds. The Long Range Waterfront Plan recommends that a gateway treatment be added to the area immediately after the 10th Street Bridge intersection to provide a clear visual cue that drivers are entering a ‘different’ driving environment and to enhance the Downtown identity. Between Whittier Street and Main Street the existing two lane layout will be rationalized with a single lane in each direction and the use of auxiliary turn lanes for the parking lots associated with the Merchants Wharf and Four Points Hotel, for Willoughby Avenue or Main Street if heading inbound. This layout will also free up right-of way to provide space for bike lanes along the entire section.

DOT&PF have no plans to amend speed limits or street layout between 10th Street and Norway Point. Outbound from 10th Street speed limit increases to 40mph and then to 55mph after Norway Point. Paralleling this section of Egan Drive is an informal harbor road through the Harris Harbor parking lot. The Area-wide Transportation Plan and the recent Docks and Harbors Bridge Park to Norway Point Master Plan both recommend a ‘road’ connecting Harris and Aurora Harbors paralleling Egan Drive. The latter plan recommends a connection with W. Ninth Street at Overstreet Park, passing under the Bridge. Additional upland between the UAS building and the Yacht Club would be required to complete this connection. The entrances of the existing parking lots that currently allow exiting across two lanes of traffic and merging with outbound traffic would also be reconfigured to prevent this. The design of this ‘road’ would need to consider how it meets with parking lot requirements in the Land Use Code.

10TH STREET INTERSECTION (JUNEAU-DOUGLAS BRIDGE)

This intersection is one of the busiest intersections in Juneau. With only one bridge connecting the mainland to Douglas Island all Douglas traffic passes through this intersection. Based on the 2013 DOT&PF data, this intersection is LOS E in the PM peak hour (Outbound traffic to Douglas has the worst delays – LOS F). The intersection operates at LOS C during the AM Peak hour, which conflicts with the LOS E or F level reported in the 2013 Comprehensive Plan. While some upgrade of the traffic signals will occur in the Egan Drive upgrade project with all signalized junctions being linked to smooth traffic leaving the Downtown District this will not improve the performance of the 10th Street Intersection. In 2002, a DOT&PF

proposal to provide additional capacity at the intersection involved a reversible traffic lane on the bridge. This would have required removing the bike lane shoulders on the bridge with all pedestrians and cyclists being concentrated into 7.5ft wide shared use path. This proposal is not being implemented in the 2019 reconstruction. As noted above the CBJ Comprehensive Plan and Land Use Code generally regard an intersection of LOS D or worse as unsatisfactory. This intersection is identified in the Area-wide Transportation Plan as a priority improvement for the downtown area. The bridge is also the only pedestrian link to Douglas Island and so all pedestrian and bicycle traffic also goes through the intersection. The Non-Motorized Transportation Plan identifies the entire stretch of Egan Drive from 10th Street to Main Street as needing improvements for both pedestrians and cyclists. The 2019 reconstruction will not significantly alter any pedestrian facilities at this location and bicyclists will be guided toward dismounting and using the pedestrian crossing if heading across the Juneau Douglas Bridge. Some upgrade to the striping of the yield intersections to continental-ladder style crossings will occur as part of Egan Drive upgrades but the mid-crossing refuges will not be improved. Currently, ladder-style crosswalks are only allowed at yield crosswalks due to DOT&PF design regulations.

DOT&PF have no immediate plans to upgrade the intersection. Short of restricting certain turning movements, there is little that can be done to improve the existing signalized intersection if current traffic levels prevail. An option of a two lane roundabout is sometimes raised but would require additional right-of-way for the XXft outer edge to outer edge diameter roundabout. This could impact the proposal in the Bridge Park to Norway Point plan to have a separate access 'road' for the docks immediately adjacent to the existing intersection.

A number of participants in the Vision public outreach expressed a need for a 2nd crossing connecting North Douglas to somewhere on Egan Drive closer to the Valley. If this did occur it is possible that some traffic from Douglas or the Valley would choose that route instead and alleviate some traffic at the bridge but this would be unlikely to alleviate the long delay for those turning to Douglas from Downtown in the PM peak.

DOWNTOWN DISTRICT

Right-of-way width in the Downtown District is limited varying between 50 feet on Front Street to as little as 35 feet on Seward Street. This leaves a difficult balancing act to provide wide sidewalks, travel lane widths suitable for emergency vehicle access while also providing parking on one or possibly both sides of the street. In order to accommodate these demands a one-way circulation system has been adopted. This circulation system provides for a more comfortable walking environment for pedestrians as they only have to be concerned with looking one-way when crossing roads. During the 2015 Front and Franklin Street public outreach for the reconstruction of some streets in the Downtown District altering the existing one-way traffic pattern received very few comments. There were some general comments about the Downtown District being too

congested generally. However, during the Vision public outreach and the public outreach for the Front and Franklin St reconstruction, there was some support for closing some streets in the downtown to vehicle traffic either on a permanent or temporary basis. However, this would conflict with retaining all on-street parking in the Downtown District. Shattuck Way, portions of Seward Street, and Front Street were all discussed as being suitable for pedestrianization either during the Visioning or the Front and Franklin Street public outreach. Some closures of Front Street do occur on occasional First Friday events and to good effect although this requires support of Community Service Officers to barricade the street with a vehicle in case emergency access is needed to the street.

TRAFFIC CALMING

A number of plans refer to the need for traffic calming. This is not used in relation to dropping speed limits but more to reflect that there are some streets in the study area where the street does not deliver the appropriate visual cues for them to obey the speed limit – i.e. driving at the speed limit seems counter intuitive to the feel of the street. Use of vegetation, narrower lanes, center medians, street furniture, lower height lighting, and on-street parking are all tools that can help reinforce lower speed limits. This does have implications for snow clearing and storage in winter months though. Streets where additional traffic calming could be encouraged based on past plans and output from the visioning work include Basin Road, Calhoun Avenue, Glacier Avenue, Egan Drive, and portions of W. 12th Street. **ADD ANY OTHERS?**

Parking – to be continued!

Pedestrians

During the Visioning work it was frequently noted that the study area is very walkable. This is a reflection on the small grid upon which the streets are laid out. Even in the Highlands, where the streets perform meandering switch backs to more sensibly fit the topography, relatively direct walking routes are still possible. In the original town site there are many rights of way which are too steep to be suitable for motor vehicles but these are often used to provide connecting staircases and so maintain the connectivity benefits of a grid layout for pedestrians.

Walking as a transportation mode delivers health and environmental benefits compared to using motor vehicles – the Comprehensive Plan, the Non-Motorized Transportation Plan, and the Climate Action and Implementation Plan have recognized the importance of providing a street environment that encourages walking. Having people walk through neighborhoods also helps develop a sense of community and provides ‘eyes on the street’ security.

There are very few sections of streets in the planning area that do not have a sidewalk on at least one side and many have sidewalks on both sides. Most downtown streets including have low speed limits of 20 mph. Higher speed streets are Willoughby Avenue (30mph) and Egan Drive (35mph following reconstruction).

Design standards - The Non-motorized Transportation Plan and the Willoughby Plan promote a ‘Complete Streets’ and ‘Context Sensitive Design’ concepts – these street design approaches aim for streets to account for the desired users, providing dedicated facilities and design features for each, and the surrounding uses and built environment. This often includes street design approaches to ensure motor vehicle drivers ‘feel’ the speed they should be travelling rather than just relying on posted speed limits. This is a departure from the past approach where streets were built to facilitate vehicle travel, treating non-motorized modes as after thoughts.

The Non-motorized Transportation Plan notes the following key design considerations for pedestrian friendly design:

- **Safe crossings** at appropriate locations and clearly marked for all users that ideally match the desired travel paths and do not divert pedestrians too far.
- **Continuous and direct routes** to reduce walking distances and keep pedestrians out of the vehicle travel way.
- **Mixed Land Uses** to allow people to live closer to destinations. Segregated Land Uses separate the distance between destinations making walking less attractive.
- **Accessibility** considerations for all pedestrians including though with mobility impairments include providing adequate sidewalk widths, sufficiently wide curb cuts, with no obstacles and well maintained.
- **Traffic separation** on higher speed streets with vegetated buffers.
- **Interesting places** and pedestrian focused designs to improve the pedestrian experience.

STREET DESIGN FOR PEDESTRIANS

Street reconstruction in the Downtown District over the last 15? years has occurred with pedestrians in mind. Bulb-outs and refuge islands are frequently incorporated into the street design. Safer continental style cross walks are utilized wherever it is legal to do so, sidewalks have been

widened where possible while striking a balance with lane width. Vegetation and paving features have also provided visual cues to drivers of the appropriate speed limit. Seating opportunities throughout downtown was a public recommendation in the Vision work. The provision of seating is a difficult balance to strike because of the few locations where it would not restrict sidewalk width and the anti-social gatherings that sometimes occur; equally there are many locals and tourists that would benefit from having somewhere to sit. Encouraging businesses at suitable locations where there are sidewalk bulb-outs or wider sections of sidewalk to place daytime benches on to the street could be one option.

CANOPIES

The majority of sidewalks in the Downtown District have canopies which keep pedestrians dry and keep sidewalks free from snow. It is noted that as sidewalks have been widened that canopy depths have not been extended. The Tourism Transportation Study identifies that where wider sidewalks are present canopies should be extended to cover the full width of the sidewalk. Permits from CBJ or the State would be required. The study recommends this could be addressed when buildings are reconstructed although CBJ could consider other incentives to speed this process up. The CBJ Land Use Code currently requires canopies to be added for new construction or where exterior work is being undertaken that exceeds \$25,000. This could be extended beyond the Downtown Historic District to cover more of the Downtown District (assuming the Historic District is not extended). Canopies are recommended in the Willoughby Plan but again the Land Use Code does not require this. A further issue is canopies that do not extend further toward the sidewalk is that many do not drain to a downspout and create a drip line that marks the sidewalk and often catches pedestrians.

DOWNTOWN STAIRCASE CONNECTIONS

A number of useful pedestrian connections are made using staircases (e.g. Chicken Ridge, Star Hill, Gastineau Avenue, Calhoun Avenue, Distin Avenue, Pine Street). These staircases undergo periodic maintenance but some are overgrown which prevents existing lighting working effectively or are just poorly lit.

SPECIFIC PLAN RECOMMENDATIONS FOR PEDESTRIANS

Non-motorized transportation plan –A comprehensive list of specific improvements for the Blueprint Downtown study area are identified in the Non-motorized Transportation Plan. These improvements are categorized into the type of improvement:

Safe Crosswalks, Bridges and Intersections - Most improvements relate to the intersections along Egan Drive between 10th and Main Street and are being addressed through the 2019 reconstruction project. These included three additional crosswalks at Glacier Avenue and Willoughby Avenue (which will be added in the Egan Drive reconstruction) and a crossing at Whittier Street (which was added in 2009). Traffic calming was also identified as a concurrent need and this will again be addressed in the Egan Drive reconstruction. A new crosswalk at Willoughby Avenue and Capital Avenue was also identified – this has already been installed.

Sidewalk and Streetscape improvements – Egan Drive features in these improvements with a vegetated strip separating the sidewalk from the travel way. Prior to reconstruction there was a 2ft vegetative strip along part of this section of Egan Drive. Limited right-of-way width - fill is already being added to accommodate new cycle lanes - has meant that a vegetative strip cannot be added but having a cycle lane separating the vehicle travel way and pedestrian sidewalk will provide separation albeit not as attractive. In addition, improvements between 10th Street and Highland Drive are recommended to improve safe routes to schools. More discussion on Safe Routes to Schools is provided below. Lower priority improvements are identified for Calhoun Avenue and Capital Avenue. Both are scheduled for reconstruction on the FY2020-2025 CIP.

Willoughby Plan – The need for improved pedestrian connections is identified in this plan. New streets are recommended to break-up the ‘super blocks’ that currently exist – currently pedestrians have to traverse parking lots to take the most direct route from the State Office Building and other destinations in the Aak’w Kwaan Village District. The aim of breaking up the area with additional streets is to deliver an improved pedestrian experience and more direct routes. Guidance is given on how these new streets should be designed to provide a quality pedestrian setting. The plan also identifies five new or improved walking connections to and from the Aak’w Kwaan Village District:

- (1) Stairs and walking path next to Goldbelt Hotel to future Capitol campus on Telephone Hill;
- (2) Stairs/walking path from Village Street up to Distin Avenue;
- (3) Traffic light and pedestrian crossing of Egan from new Seawalk to Gold Creek Park/Glacier Ave;

- (4) Sidewalk along one side of Capital Avenue from Village Street to West 9th; and
- (5) Walking path and overlook from Calhoun Ave (on way to Governor's Mansion) on the top floor (parallel with Calhoun) of a new State office/parking garage, presumably with easy public access to an elevator that connects Calhoun Avenue with Willoughby Avenue.

Capital Avenue is currently scheduled for reconstruction as part of the CBJ Capital Improvement Program and will incorporate a new sidewalk with the street likely turned into a one-way street due to the limited right-of-way width.

The Willoughby Plan also recommended additional crosswalks across Egan Drive. In particular a 2nd crosswalk at the Whittier intersection is likely to be in demand once the Subport area is redeveloped. CBJ requested that DOT&PF provide conduit plan for a 2nd signalized crosswalk here as part of the Willoughby reconstruction with striping and signals can be added when the demand requires it. The Egan Drive reconstruction will add a new crosswalk at Glacier Avenue although DOT&PF are not intending this to be a signalized crosswalk.

Long-range Waterfront Plan – the key pedestrian recommendation of this plan is for the Seawalk. The Seawalk provides a recreational component but also acts as a key tool to disperse cruise ship pedestrians from the crowded South Franklin Street corridor. The missing links in the Seawalk between Marine Park and Overstreet Park, and from the Franklin Dock to AJ Docks need completion. The latter will reduce pedestrian traffic walking along Thane Road from the AJ Dock in the same way the Seawalk from Franklin Dock removed pedestrians.

Tourism Transportation Plan – The Tourism Transportation Plan identifies a number of improvements related to pedestrian traffic in the Marine Way/South Franklin Street corridor.

- Removal and relocation of street furniture (to maximize existing sidewalk capacity)
- Modifications to and enforcement of development standards such as building orientation, setback requirements, building awning requirements (to provide for sufficient vehicle and pedestrian system capacity/width and to maximize useable sidewalk width)
- Increase sidewalk capacity and width where possible (a minimum width of 12' is recommended based on existing peak pedestrian flows)
- Enhancement and development of the existing seawalk (to provide redundant and alternate pedestrian travel routes)
- Strategic placement of crosswalks (to minimize pedestrian crossing interference and conflicts with vehicular travel)
- Strengthening Seawalk connections to South Franklin Street (to provide redundant and alternate pedestrian travel routes)
- Increased crosswalk visibility using markings and signing (to minimize pedestrian crossing interference and conflicts with vehicular travel)
- Pedestrian channelization (to minimize pedestrian crossing interference and conflicts with vehicular travel)

Comprehensive Plan - In addition to generally providing policies that support non-motorized transportation some specific recommendations are made regarding pedestrian facilities in the Downtown District. Policy 5.6 - IA4 recommends that pedestrian usage of downtown should be facilitated with physical improvements, Land Use Code amendments, or other programs or initiatives which could include:

- A. Encourage development that improves year-round safe, convenient and dry pedestrian facilities;
- B. Extend the waterfront seawalk;
- C. Repair and widen sidewalks and provide a network of canopies throughout downtown;
- D. Separate pedestrian ways from vehicular traffic, where practical;
- E. Encourage development of dry, secure bicycle storage throughout downtown; and
- F. Consider revising the parking requirements in the CBJ Land Use Code to eliminate or drastically reduce the parking requirement for residences.

Bicyclists

The needs of cyclists are different from those of pedestrians. The Non-motorized Transportation Plan highlights that national design guidelines acknowledge there are three types of cyclists:

- **Advanced:** Advanced riders are those who use their bicycle much the same way as they use a car. Convenience, speed and direct access to a destination with minimum detour or delay are main priorities. They are generally comfortable riding with traffic, but need to have sufficient operating space on the roadway or shoulder.
- **Basic:** Basic or less confident adult riders may also use their bicycles for transportation purposes but prefer to avoid roads with fast and busy motor vehicle traffic unless there is ample road width. Basic riders are comfortable riding on neighborhood streets and shared use paths and prefer designated facilities such as bike lanes or wide shoulder lanes on busier streets.
- **Children:** Children on their own or with adults may not travel as fast as their adult counterparts but still require access to key community destinations and make up a major part of the non-motorized transportation use in Juneau. They often travel between neighborhoods, schools, parks, stores and recreation facilities. Residential streets with low traffic volume and speeds, linked to designated bike lanes along arterial streets and separated paths can safely accommodate children without encouraging them to travel in heavy traffic.

In recognition of this, it is recommended that bicycle facilities cater for all three types of rider in order to encourage riders of all abilities to feel they can cycle to replace private motor vehicle trips. The Comprehensive Plan and the Juneau Climate and Implementation Action Plan recognizes the contribution that modal shift to non-motorized transportation modes can make to Climate Action goals. The Visioning work identified a public desire to develop cycling network with greater availability of covered bike stands or lockers. The Cross-Juneau Bikeway concept of a complete bike lane network that connects the entire borough, largely follows State road alignments although in the Downtown area this also includes some CBJ maintained roads along Willoughby Avenue, Glacier Avenue, and part of 10th Street. Parts are yet to be implemented although the Egan Drive reconstruction will complete a significant portion in the study area.

Non-motorized Transportation Plan – this plan has most detail on improvements identified for the study area. Bike lanes are recommended on Egan Drive between 10th Street and Main Street as part of comprehensive improvements for non-motorized users. As part of the 2019 Egan Drive improvements dedicated bike lanes will be added. Stripping will utilize the 6 inch dividing line required by the 2009 Non-motorized Transportation Plan. Wider bike lane lines and fog lines encourage better lane keeping from motorists.

Bike lanes are also recommended along Glacier Avenue between 10th Street and Highland Drive as part of improvements related to Safe Routes to Schools but this has not yet been implemented.

Other specific bike facility improvement in the Downtown area include stripping and signage on Willoughby Avenue and 10th Street between Egan Drive and Glacier Avenue. The latter will be added as part of the 2019 Egan Drive reconstruction. In some locations separated bike lanes such as the South Franklin Street/Marine Way corridor are not possible because of limited right-of-way.

Willoughby Plan – Bike Lanes along Willoughby Avenue are also identified as a need in this Plan.

Front and Franklin Street reconstruction public outreach – Additional bike locking facilities were identified as a need as part of this outreach. Some decorative bike stands have been located around parts of downtown using canopies to provide shelter from the elements.

Secure bike storage - In the same way someone needs to be able to park a car in an appropriate and safe place, cyclists also need to have suitable facilities to leave their bike at the end of their journey to work, shop, or recreate. Bike stands are of a mixed standard in the study area many times appearing to be an afterthought in terms of location, protection from the weather, or designs that do not damage bikes. Bike parking options may also be limited in many downtown dwellings including multifamily units where bicycle parking was not considered or new covered bike lockers would encroach into building setbacks. There are no publically available bike lockers Downtown – CBJ may wish to consider providing bike lockers at existing CBJ parking lots and parks.

Safe Routes to Schools – use Safe routes to Schools Plan

Transit

The Capital Transit public transit service provides relatively good connection between the Downtown District, and Douglas or The Valley with services at least every 30minutes. A key recommendation of past plans focusing on Downtown parking have recommended greater investment in and service provision in the Capital Transit system as part of the Demand Management side of the solution. Service frequency and coverage have both increased over the years although further increases have been recommended in the 2014 Transit Development Plan. The Downtown Transit Center (DTC) was completed in 2010 as part of the construction of a parking structure and new downtown police substation. It provided heated enclosed waiting facilities with space for a concession stand; the space is often used for sleeping and experiences anti-social behavior which has led to it being underutilized by the general public. Providing transportation options to the rest of the borough without the need for car ownership is also a key part of reducing minimum parking rates – a barrier to redevelopment of underutilized downtown properties for additional residential or commercial uses.

A number of construction projects in recent years (Capitol Building, Franklin Street reconstruction, Gastineau Hotel demolition, Egan Drive reconstruction) have affected the ability of Transit to run settled consistent routes through the downtown area since 2015 route changes and timetable frequencies. Some services that enter the Downtown District perform a loop past the downtown library, up South Franklin Street,

passing the Capitol Building before terminating at the DTC. This loop is available as a free hop on service and has been for many years. This free service is easy to enforce because all transit users have to alight the bus at the DTC. The current downtown route has changed considerably from the one noted in the 2003 Downtown Tourism Transportation Study – this downtown loop would first head to the Capitol Building on entering the Downtown District, then head down Seward Street to turnaround in the Cruise Terminal parking lot before finishing the loop via South Franklin Street, passing the Capitol Building a second time before heading out to Egan Drive via Main Street. The hills in the downtown area sometimes require operation of ‘winter routes’ where services do not undertake the downtown loop entirely skipping the Marine Way/South Franklin portion and instead go directly to the DTC.

The 2013 Comprehensive Plan supports a ‘Transit First’ policy with greater investment and support for Capital Transit services. Most recommendations in the 2014 Transit Development Plan were outside of the Downtown area or were boroughwide improvements. Some boroughwide improvements are relevant to the downtown area are as follows:

- Operate all services to/from the DTC – this is as much symbolic as well as operational for driver breaks etc.
- Maintain timed transfers between the Douglas and Valley routes at the Federal Building
- Develop Park and Ride using existing parking lots such as UAS, the Nugget Mall, the Mendenhall Mall, and somewhere on the Douglas route.
- Earlier and later services to Downtown – make use of transit fit with downtown workers schedules.
- Provide Holiday service – this would benefit Downtown residents
- Use of electronic timetabling – lets users navigate the myriad of service options to determine the most direct route and transfer locations. Paper timetabling is confusing and barrier to first time or occasional users.
- Continued investment in bus stops - many bus stops in the downtown area and Downtown District do not have bus shelters.
- Bike lockers at high ridership locations – in downtown this could be at the DTC, Federal Building,

PARK AND RIDE (P&R)

P&R services have frequently been mentioned as part of the parking solution in Downtown parking plans or within transit plans. The premise of a Juneau P&R system would be for single occupancy vehicle drivers to undertake the first part of their journey by car, park at a designated parking area in Auke Bay, The Valley, Lemon Creek, Douglas or even the outskirts of the study area (e.g. Bill Ray Center or a new structure between W. Eighth and Ninth Street) before using a bus to travel directly to their office Downtown. While individuals maybe using an informal Park and Ride using existing private parking lots in conjunction with Capital Transit there is no formal CBJ organized P&R system. CBJ is in the process of

constructing a Valley Transit Center (VTC) which will serve as a transfer hub for bus services circulating in the Valley and those heading to Downtown. The VTC will incorporate semi-enclosed shelters and a P&R lot for 59 vehicles where they can board Capital Transit buses to continue on their journey; there are options to expand the size of parking. The commuter market is expected to be the most likely to use the service.

The reality is that driving to Downtown Juneau is not congested enough to impose a significant enough time penalty where a High Occupancy Vehicle lane supporting transit and/or a dedicated P&R service would be a more attractive travel choice. P&R also imposes a time penalty on the user as they transfer from their car to transit; services with higher frequency are likely to be more attractive. The other key decision factors that would encourage use of a P&R service would be:

1. Direct cost (e.g. fuel, and parking costs if free workplace parking is not provided),
2. Time to search for parking and walk from parking to office (which may not be an issue if a guaranteed parking space is provided),
3. Time to do other things while commuting
4. Conscience related to vehicle emissions

For greater uptake, a P&R service would likely have to be free, or paid for by an employer on the condition that they released their parking privilege. In 2019, CBJ began to provide the option for employees to choose a Capital Transit monthly bus pass instead of a free parking pass – of 105 downtown CBJ employees receiving either pass, 8 have chosen to receive a bus pass. CBJ may wish to consider other options, including fiscal, to make a P&R service more attractive than SOVs but this is likely to be more publically acceptable if it were with the aim to incentivize P&R use rather than penalize SOV - a balance of both may be needed. P&R on the periphery of Downtown that would coincide with a transit circulator to deliver them to their workplace would have to be frequent. The closer to their destination a driver is, the less willing they will be to add a transfer to their journey especially if that transfer wait time is not short.

TRANSIT CIRCULATOR

A Transit Circulator for the Downtown area is something that received many mentions in the Visioning work and has featured as part of a number of past plans including the Area-wide Transportation Plan, the Comprehensive Plan, Juneau Parking Study, and was explored as part of both the 2008 Transit Development Plan (the same consultants provided a 2011 report on circular options to DBA), and the 2014 Transit Development Plan.

The Visioning results suggest that the public had two ideas for a circulator in mind:

- i) **Tourist circulator** - this would shuttle tourists to a staging area beyond the South Franklin Street/Marine Way corridor to a staging area elsewhere. Further study would need to be undertaken on this concept to understand what benefits it would deliver in terms of

reduced vehicles in the corridor, logistical issues in terms of connecting with tour buses, costs, and options for alternate staging areas. A fixed route system (e.g. light rail) that would operate in the vehicle travel way with other traffic, moving all passengers to a staging area beyond the South Franklin Street/Marine Way corridor could be a concept.

- ii) **Capital Transit circulator** – while primarily for residents the service could also be available to tourists in summer months. This type of service is the one that has received most study in recent plans and was implemented in 1984 and ceased in 1987 as funding was cut. Most alignments studied would link the Flats/Aak’w Kwaan Village District with the Downtown District via South Franklin Street.

The 1984-1987 circulator utilized a dedicated circulator bus that filled in the headway gaps between standard Capital Transit routes connecting other parts of the Borough with Downtown. A fare free zone was implemented for all services and extended from the Bill Ray Center. As mentioned above, the standard Capital Transit services performed a more intricate route through the Downtown District than they do today and included a turnaround at the site of the Cruise Terminal Dock (which was then the Ferry Terminal). To provide a more frequent headway a single bus was added that only performed a circulator route – this delivered a headway of all buses doing a downtown loop of between 7-13 minutes during off-peak hours. This circulator route was similar to the Downtown loop that today’s Capital Transit service performs except it would terminate and turnaround at the Bill Ray Center. Part of the purpose of the circulator was to increase the market for users of the Marine Park Garage parking structure that was under construction at the time.

The 2008 Transit Development Plan summarizes a 1986 operational report on the success of the 1984-1987 Circulator. Surveys of users indicated that 40% of users indicated they would not have made the trip had they not had the free circulator service. However, only 5% of those surveyed said they would have used a private car to undertake the trip. This indicates the majority of the trips made on the downtown shuttle were made by patrons who were either ride-dependent, or would have taken transit or another alternative mode (i.e., biking or walking) regardless of the presence of a fare-free zone and circulator shuttle.

The 2008 Transit Development Plan notes that there may be increased demand for a downtown circulator since population in the Downtown area had increased by 38% between 1990 and 2000. The circulator could also link parking structures (both existing and future) to add convenience to additional visitors to Downtown. It examined three different scenarios. The recommended alternative provided a 15 minute headway at an annual cost of approximately \$886,140, approximately 85% would be covered by Federal Transit Agency pass-through funding. The 2008 Transit Development Plan examined using a Downtown Circulator as a standalone option from the rest of the Capital Transit service but also as part of a service integrated into an ‘optimum scenario’ where a trunk route connected with a number of other loop services throughout the Borough.

In 2011, the 2008 Transit Development Plan consultants were asked to provide some new circulator alternatives that included extending a circulator service to the Franklin Dock or AJ Docks, running along Calhoun Avenue, and included looping past Overstreet Park. This study presented similar costs as the 2008 study. A 10 minute headway was assumed and there would be no fare.

The 2014 Transit Development Plan stated that a Circulator service would cost approximately \$600,000 per year but gave no routing recommendations.

Discussions have been underway at a CBJ management level for 2-3 years about options. Older CBJ buses could be pressed into service immediately if funding and drivers were available, while other potentially attractive improvement, such as the much-requested electric system, was pursued.

ELECTRIC TRANSIT BUSES

As electric bus technology has improved they have become more attractive and viable as an alternative for Capital Transit. CBJ has successfully pursued Federal grants to assist with the purchase of three electric buses and associated charging equipment. Electric buses typically cost twice as much as conventional diesel buses but in theory have low maintenance and running costs. Concerns remain about their suitability for Juneau's climate and ability to deliver the required range but it is hoped they are a success so Capital Transit can continue to invest in the technology as other buses reach the end of their useful life.

Street maintenance and snow clearance

During visioning work the issue of snow clearance on sidewalks in the Downtown District and residential neighborhoods was raised. Streets are cleared on a prioritized basis. CBJ Streets Division uses smaller ‘four-wheeler’ ploughs are used to clear sidewalks in the Downtown District. Elsewhere CBJ Parks and Recreation maintain sidewalks and parking lots around CBJ facilities, and Docks and Harbors provide some clearance of snow on the Seawalk. The CBJ Municipal code requires that individual property owners clear snow from sidewalks in front of their own buildings. This is poorly enforced and there is often a patchwork of cleared and uncleared sidewalks. Narrow rights-of-way in most of the study area mean there is little space to store snow moved from the vehicle travel way by snow ploughs and in places where there are small or non-existent front yards there is nowhere to move snow. Many will have participated in the disheartening battle of clearing a sidewalk by berming on the edge of the sidewalk only for a snow plough to push the berm back onto the sidewalk. Speed of clearance and collection of snow from streets and sidewalks by CBJ is limited by available personnel resource and equipment – trucking of snow also has emissions consequences. In addition, when designing streets a balance needs to be found between providing all the elements that provide attractive and pedestrian friendly streetscapes (e.g. street furniture, sidewalk bulb-outs, refuge islands, vegetation, and narrow travel lanes) and the ability to clear snow as quickly as possible with as little damage as possible. Curbs on the recently reconstructed sections of South Franklin Street and Front Street have already been damaged after only one or two winters. Some of this is related to tight return radius for bulb-outs in part to retain as many parking spaces as possible. Improved training and additional clearance resources would enable crews to clear snow in a less hasty manner.

The CBJ Comprehensive Plan (8.6 –IA7) states that adequate resources should be dedicated to clearing snow from shared paths and sidewalks sidewalk while recognizing the need for prioritization of snow clearance on sidewalks (8.6 – IA8). This prioritization should be based on providing safe walking routes for school children, where high numbers of pedestrians are present, or where no alternative routes are available. As the senior population increases the level of ‘adequate resources’ may need to be reassessed. The Comprehensive Plan also give guidance (12.9 - DG1) on the use of landscaping in Rights-of-Way. The guidance states that *‘landscaping should be hardy enough to withstand snow storage, or located so as to not interfere with snow storage and removal; this does not preclude the installation of street trees or planted medians, but ensures that their location and the species selected for planting can withstand critical snow storage and removal activities’*. Street trees and vegetation identified in other plans should not be ruled out when street improvements occur on the basis that they slow down snow clearance – the design and species should be instead be appropriate.

Travel Demand Management

Instead of building additional capacity to solve peak road congestion or parking demand, a Travel Demand Management (TDM) program can be implemented. TDM is the development of policies and strategies to reduce travel demand or redistribute demand to use different modes, take different routes, or operate at different times. Specific programs are then developed to implement those policies.

The various parking plans reviewed above, the Area-wide Transportation Plan, the Willoughby Plan, the Climate Action and Implementation Plan, and the Comprehensive Plan all recognize the cost of trying to build additional infrastructure to solve congestion or parking shortage issues. All these plans recommend that a comprehensive TDM program be implemented. In most cases it is recommended to focus on the CBJ, State and Federal employees.

The following Comprehensive implementing actions provide very clear guidance on what a program should include.

5.5 - IA2 Develop a comprehensive multi-modal (e.g., pedestrian, bicycle, bus, vessel, vehicle) transportation plan for the downtown area that addresses the need to emphasize, provide for and/or improve non-private-vehicle transportation facilities throughout downtown while assuring adequate short-term parking to support business and government activities. This plan should be a key element of a larger transit system between the Alaska Marine Highway System Auke Bay Ferry Terminal, east and west Mendenhall Valley, Douglas, North Douglas, and downtown with convenient stops and bus transfer stations in-between, with dispersed park and ride facilities as components of this system, along with high-density, affordable housing. Consider implementing a downtown circulator shuttle or trolley.

8.5 - IA6 To reduce the demand for land-consuming parking spaces, reduce use of fossil fuels, and encourage the use of public transit, the CBJ government and community should urge downtown federal, state, and local government agencies, as well as private-sector employers to participate in a Coordinated Downtown Transportation Management Program managed by CBJ staff or a third party. The program could include, but would not be limited to, the following features:

A. Free or heavily discounted transit passes to area employees;

B. Improved bus service, including a downtown circulator shuttle;

C. Organized vanpools and carpools;

D. Convenient and free parking for car- and van-pool vehicles, preferential parking for car sharing, electric, hybrid and other alternate fuel-powered or multiple-user vehicles;

E. Instituting residential parking programs to discourage commuting motorists from long term on-street parking in residential neighborhoods;

F. Satellite parking within shuttle distance to major destinations in downtown Juneau.

G. Working with the State of Alaska to allow off-hour parking in state employee parking facilities and lots to ease evening and week-end event parking congestion;

H. Increasing parking enforcement, as nearly all of these parking-related actions require enforcement or they will be of minimal utility;

I. Coordinated, perhaps mandatory, staggered or flexible work hours for area employees to avoid peak hour traffic;

J. Provision of safe pedestrian and bicycle routes throughout downtown; and,

I. Provision of safe pedestrian and bicycle routes throughout downtown; and,

K. Provision of secure, dry bicycle storage as well as shower and locker facilities for commuting cyclists [presumably at the workplace].