C. Alternatives

This chapter summarizes the development and evaluation of transportation system alternatives for travel within the City of Coos Bay. The existing and future (2020) transportation system needs were determined for each city and presented in Appendix B. The alternatives presented in this chapter were reviewed by the TAC and CAC to guide selection of projects and programs to be incorporated into the Transportation System Plan (TSP) for each city. The selection process was based on how well it complies with established goals and objectives for the TSP and general feedback from residents, merchants, and city staff.

This chapter outlines alternatives for the type of improvements that would be necessary as part of a long-range master plan. Phasing of implementation will be necessary since not all of the improvements can be done at once. This will require prioritization of projects and periodic plan updating to reflect current needs. Most importantly, it should be understood that the improvements outlined in the following sections are a guide for long-term (20 years) enhancement and improvement to the transportation systems in Coos Bay.

The proposed solution for many of these cases was a single improvement project or program. In some cases, however, there was a wide range of possible options to resolve identified safety, circulation, capacity or other types of operational issues. The cases are labeled as alternatives for a given location.

Motor Vehicles

Alternatives were developed for the motor vehicle system in Coos Bay for each location where needs were previously identified. These alternatives typically fall into one or more of the following categories: Intersection capacity/traffic control upgrades, Safety/Access Control, Circulation changes, or TSM and TDM measures (including alternative modes).

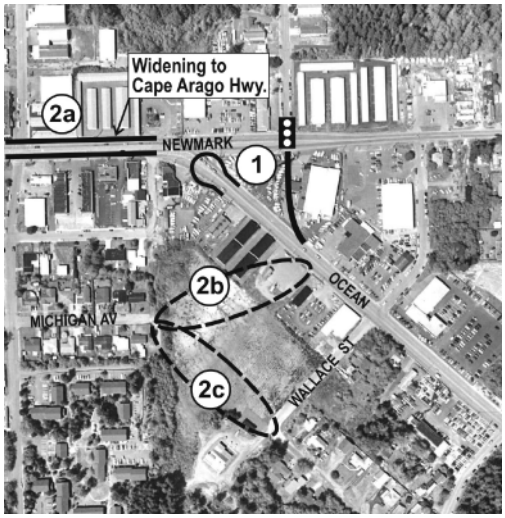
The following narrative generally present:

- Location of the project
- Types of existing or future needs (Safety, Capacity, Connectivity, Other)
- Proposed Solution or Alternative
- Potential Impacts
- Preliminary Planning Level Cost in five general categories:
    - Very Low (under $100,000)
    - Low ($100,000 to $249,999)
    - Moderate ($250,000 to $499,999)
    - High ($500,000 to $1,000,000)
    - Very High (over $1,000,000)

These rough costs will be refined once a final project list is selected from the set of alternatives presented in this memo. The purpose of the broad categories is to provide a general level of investment only. In several cases, a sketch graphic is provided to illustrate the improvement concept for a given location.

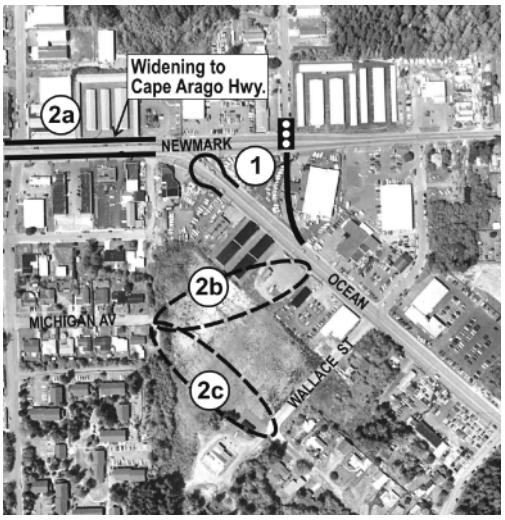
Location	Safety Issues	Circulation	Connectivity
1. Newmark Avenue at Ocean Boulevard	Wide intersection creates high speeds for turning vehicles.	Skewed intersection and narrow east leg prohibits westbound traffic from making left-turns.	Limited pedestrian crossing opportunities because of excessive width and high vehicle speeds.

Alternative	*Benefits*	*Implementation Issues*	*Cost Range*
1.A *-- Realign Ocean Avenue to meet Newmark at a 90-degree angle opposite Ackerman Street. Relocate traffic signal from existing intersection.*	*Improved vehicle and pedestrian circulation. Slower vehicle speeds through intersection.* *Redevelopment opportunity in SW quadrant.*	*Requires purchase of right-of-way and closure of existing roadway connection.*	*Very High*
1.B. *-- Extend corners on south side of existing intersection, and reduce departure lanes on Ocean Boulevard to a single lane.* *Widen westbound approach of Newmark to allow for a separate left-turn pocket. Upgrade traffic signal heads to 12" LED standards.*	*Improved vehicle and pedestrian circulation. Slower vehicle speeds through intersection.*	*Lane reduction requires transition on both ends.*	*Moderate*



Location	Safety Issues	Circulation	Connectivity
2. Newmark Avenue between Ocean Boulevard & Cape Arago Highway	None	Forecasted 2020 volume approaching limits for 2/3 lane roadway cross-section	Neighborhoods south of Newmark in Sunset District have limited east-west connections.

Alternative	*Benefits*	*Implementation Issues*	*Cost Range*
2.A *-- Provide additional motor vehicle capacity on Newmark Avenue to two lanes in each direction between Ocean Boulevard and Cape Arago Highway to the west.*	*Less delay during peak hours.*	*Major impacts to on-street parking and curb extensions.*	*Very High*
(See photo below)			
2.B & 2.C. – *Extend local street connection via Michigan Avenue connecting to Ocean Avenue (see photo) by two possible alignments. Alt. 2C connects to existing street stub at Wallace Street.*	*Better neighborhood access and circulation. Less travel demand on congested portion of Newmark.*	*Adding traffic to existing local streets can cause friction with residents.*	*Very High*



Location	Safety Issues	Circulation	Connectivity
3. Newmark Avenue between Norman and Ocean Boulevard	None	Forecasted 2020 volume approaching limits for 2/3 lane roadway cross-section	None
Alternative	*Benefits*	*Implementation Issues*	*Cost Range*
3.A. – *Coos Bay has a widening project (to provide two travel lanes with a center left turn lane/median) between Norman and Ocean. It appears that is improvement project will likely provide sufficient capacity for the 20-year horizon. It was previously thought that it would eventually be upgraded to a five-lane section, however, based on the 2020 travel demand model, further widening would not be necessary.*	*Less delay during peak hours.* *Adds sidewalks and bike lanes where none exist today.*	*Consolidating existing direct access to maintain facility capacity.*	*Very High*

Location	Safety Issues	Circulation	Connectivity
4. Coos River Highway at Olive Barber (Related to Items 5 & 12)	Non-standard intersection configuration. Limited sight distance approach from west.	Moderate turning volumes. High truck volumes on Olive Barber.	None
Alternative	*Benefits*	*Implementation Issues*	*Cost Range*
4.A *-- A traffic signal may become warranted in the future. Options for upgraded traffic control should be explored, such as providing an advance signal head for eastbound traffic on Coos River Highway before the horizontal curve if the intersection does become signalized. There is limited sight distance to the intersection from the west.* *Install traffic signal at the point that it becomes warranted. At the point that a traffic signal is installed, consolidate intersection by eliminating southbound to westbound "slip" lane from Coos River Highway to Olive Barber.*	*Superior safety for turning movements.*	*Coordination with on-going Isthmus Slough Bridge replacement study.*	*Moderate*

Location	Safety Issues	Circulation	Connectivity
5. **US 101 at Bunker Hill/Coos River Highway (Related to Items 4 & 12)**	Non-standard intersection configuration. Poor access controls on side streets approaching traffic signals.	Limited vehicle queue storage, especially for large trucks.	None
Alternative	*Benefits*	*Implementation Issues*	*Cost Range*
5.A *-- ODOT is conducting a study to determine feasible alternatives for this area. The recommendation of that study will be incorporated into the TSP when it is available.*	*N/A*	*N/A*	*N/A*

Location	Safety Issues	Circulation	Connectivity
6. **Woodland Drive at Thompson Road**	High turning movement volumes. Relatively high vehicle speeds on Woodland. Lack of controlled pedestrian crossing locations.	Major access point to medical offices and hospital area.	Only east-west collector serving this neighborhood.
Alternative	*Benefits*	*Implementation Issues*	*Cost Range*
6.A *– Consider traffic signal installation as new development occurs in this proximity. Include sidewalk, curb ramps, and emergency vehicle pre-emption signals.*	*Less delays for side street traffic turing onto Woodland Drive. Controlled pedestrian crossings.*	*None.*	*Moderate*

Location	Safety Issues	Circulation	Connectivity
7. 7th Street at Anderson Avenue	High number of potential vehicle conflicts, undefined pedestrian crossings.	Major intersection for vehicles entering downtown grid network.	Many alternative routes available for side street traffic.

Alternative	*Benefits*	*Implementation Issues*	*Cost Range*
***7.A** -- Construct barrier restricting access from southwest quadrant of intersection to Commercial/Anderson couplet. Retain two-lanes on "S" curve from eastbound Central Avenue to Anderson Avenue.* 	*Reduced vehicle movement conflicts.* *Defines appropriate travel way on "S" curve from southbound 7th Avenue to Anderson.*	*Re-routing side street traffic on 7th Street and Anderson.*	*Low*
***7.B.** -- Force traffic traveling eastbound on Central Avenue into one lane (left). Construct median/barrier precluding access from Central/Anderson to 7th Street south of Anderson or to Anderson Street west of 7th Street.* 	*Reduced vehicle movement conflicts. Retains full access from existing side streets.*	*Shifts turning traffic onto adjacent blocks for eastbound Central Avenue traffic.*	*Moderate*

Location	Safety Issues	Circulation	Connectivity
8. Central / Anderson between 10th Street and Broadway	No defined bike lanes. Pedestrian crossings partially blocked by on-street parking.	Recent in-road traffic diverters force lane changes.	N/A
Alternative	*Benefits*	*Implementation Issues*	*Cost Range*
***8.A** – Paint red curbs for no on-street parking within 20 feet of corner.*	*Better crosswalk visibility.*	*Minor parking loss.*	*Very Low.*
***8.B.** – Add curb extensions on corners with major pedestrian crossings.*	*Shorter pedestrian crossing distance.*	*Minor parking loss.*	*Low.*
***8.C.** – Consider striping bike lane on right side along parking stalls. May require narrowing of travel lanes or partial removal of on-street parking.*	*Better bike facility definition.*		*Low.*
***8.D.** – Consider removing the in-road traffic diverters at 4th Street and 2nd Street.*	*Eliminates unneeded traffic weaving.*	*Access impacts to businesses at 2nd Street – unless two-way flow re-instated.*	*Moderate*

Location	Safety Issues	Circulation	Connectivity
9. Central / Anderson between 6th and 7th Avenue	Vehicles entering at "Y" junction of Central / 7th add potential vehicle conflicts.	Need to reduce conflicts at this junction.	Alternative routes available.

Alternative	*Benefits*	*Implementation Issues*	*Cost Range*
***9.A.** – Close Central Avenue between west end of Commercial / Anderson couplet and 7th Street. Re-direct local business traffic to the east via 6th Street and Central.*	*Reduced vehicle conflicts.*	*Minor out-of-direction travel.*	*Low.*

Table C-1 : Other Suggested Improvements in Coos Bay

Locations / Recommendation	*Benefits*	*Implementation Issues*	*Cost Range*
10. Bayshore Drive / North Front Street Area *Access management plan to eliminate mid-block access onto Bayshore Drive as redevelopment occurs.*	*Reduced vehicle conflicts, and improved carrying capacity.*	*Long-term coordination with City to ensure access spacing standard compliance.*	*Very Low (occurs with development).*
11. Bayshore / Johnson Avenue *Evaluate improvement alternatives for eastbound left turning traffic from Johnson Avenue onto Bayshore. Improvement alternatives may include modification of traffic signal to allow for protected phasing for eastbound left turns (the westbound left is prohibited since Bayshore is one-way northbound). In conjunction, striping on Johnson will need to be evaluated since the right-hand lane drops as a right-turn only lane just east of Bayshore at Fred Meyer.*	*More clear travel way for side street movements.*	*Potential modification of traffic signal controls in coordination with ODOT.*	*Very Low.*
12. Isthmus Slough Bridge (Related to Items 4 & 5) *ODOT Bridge Design department is studying alternative designs for the bridge on Coos River Highway. No funding has been allocated for design and construction.*	*More reliable slough crossings.*	*N/A*	*N/A*
13.Anderson Avenue *See Alternatives 8.A.-8.D..*	*Improved Traffic Flow on Anderson Ave.*	*N/A*	*N/A*

Locations / Recommendation	*Benefits*	*Implementation Issues*	*Cost Range*
14. US 101 at Central Avenue *Modify traffic signal to be pedestrian-actuated. This provides safe pedestrian access across US 101 without unnecessarily impeding through motor vehicles. Update traffic signal heads as suggested in #15. Re-evaluate location of stop bar.*	*Reduces delays for motor vehicles.*	*ADA compliant curb ramps.*	*Low.*
15. US 101 Southbound from Central Avenue to Elrod Avenue *Outdated traffic signal heads and traffic controllers in this corridor should be upgraded. Interconnect should be improved, loop detectors installed and timing plans should be developed to better coordinate the signals and progression of vehicles through downtown Coos Bay on US 101 between Commercial Avenue and Elrod Avenue (about 1,000 feet).*	*Significantly reduces motor vehicle delays.* *Improved visibility of traffic signals.*	*Wireless/modem communication between controllers should be considered.*	*High.*
16. 2nd/Golden *High collision rates at this intersection that warrants further exploration and identification of traffic control or other alternatives*	*Identify cause of high number of collisions*	*Cause not yet determined*	*Low/Moderate*
17. Ocean Boulevard (Entire Length) *Restripe to 3 lanes (two travel lanes and a continuous center left turn lane/median) and bike lanes*	*Provides bike lanes on a major arterial*	*N/A*	*Low/Moderate*
18. Lakeshore Drive between Seagate Avenue and Crocker Street *Evaluate potential traffic calming measures to determine appropriate treatment to slow traffic.*	*Net reduction in motor vehicle travel speeds.*	*Coordinate installations with fire district and emergency response units.*	*Low.*