Chapter 6 – Policy Considerations

6.1 OVERVIEW

This chapter outlines some of the major policy directions that will need to be pursued to effectively implement this Transit Master Plan. The chapter covers policy areas affecting CTS operations and capital planning and also speaks more broadly to street classification policies and land use planning considerations.

6.2 THE IMPERATIVE OF SPEED

In transit operations, time is literally money. Drivers are paid by the hour; and the time spent in service, far more than the distance traveled, determines what the service will cost to operate. Travel time, of course, also affects the attractiveness of service to passengers.

To remain effective, transit must place a premium on operating speed. CTS operations are currently slowed by many factors, including congestion, multiple stops, boarding time, and other elements. As the City grows, both traffic and transit demand will increase. In the absence of policies and strategies to protect speed, the system speed will tend to deteriorate. This deterioration will mean (1) less attractive service and (2) higher costs to run the same level of service, as drivers must be paid to sit in more severe congestion and through longer passenger boardings.

It is important to note that by focusing on service speed and cost-effective operation, other CTS goals related to its role as a social service provider are not ignored. CTS and the City of Corvallis will continue to provide services that address, as it says in the Corvallis Comprehensive Plan, "the needs of persons who, for whatever reason, do not use private automobiles."[16] Part of CTS's mission is to "provide community access as a social service by providing transportation to youth, elderly, disabled and low-income citizens".

The services described in the short- and long-term plans will maximize overall mobility and community access by offering convenient and frequent service where it can serve the largest market of transit riders. Paratransit service will continue to offer demand-responsive service to those patrons who cannot access the fixed-route system.

Many of the following sections address land use and street classification policies that will contribute to protecting speeds. CTS, however, can also do several important things:

- Maintain the designated stop system. In general, fixed stops should be placed no closer than every 800 feet and no further apart than 1,300 feet or about 1/4 mile. The purpose of fixed stops is to group waiting passengers so that the bus can serve them conveniently without stopping too often, while still offering a reasonable walking distance to transit. Fixed stops should only be placed in locations where they are accessible to the surrounding area and on hard surfaces where the bus wheelchair lifts or ramps can operate.

  A general principle of this plan, verified by the experience of many other agencies, is that people can be asked to walk slightly further in return for faster and more frequent service. Fixed stops are a key element of this strategy, providing faster service for everyone in return for slightly longer walks. Of

[16] Corvallis Comprehensive Plan, Transit Policy §10.6.2, see Chapter 3 of this report.

course, stop location, street design, and land use planning must all work to minimize walking distances within the stop spacing standard of 800 to 1,000 feet.

Exceptions in stopping only at designated stops the for the general public should only be made in the evenings after the peak period, especially in the winter when it is dark early. With lower ridership and less congestion to threaten running times, there can be more flexibility in letting passengers alight in safe locations that may not be designated stops. For the ADA-certified patrons who would find it a true hardship to use fixed stops, a special call-in system with a minimum one-hour notice for special stops could be implemented.

- The City should continue to replace its fleet with low floor buses as the buses reach their life expectancy as an alternative to time-consuming wheelchair lift operations. Lifts were an understandable means of implementing the ADA with the technology available at the time, but they will never be fast enough to provide wheelchair access in a way that protects running time and passenger convenience. An entire wheelchair boarding and alighting should be possible in under two (2) minutes. Most disabled people have no desire to delay the service and are open to advice on how to board and alight more quickly. CTS conducts training on an as-requested basis for patrons or agencies serving the disabled. ADA requires drivers to provide assistance in boarding and restraint for wheelchairs when needed. Help should be offered where it could speed the boarding and alighting process. It should be noted, however, that the disabled rider is under no obligation to accept assistance.
- All passengers should be encouraged to exit through the rear doors, especially at high-volume stops. Drivers approaching a stop where passengers are waiting to board should announce to alighting passengers: “Please exit through the back door.” This may only save 10 seconds, but the time adds up. Riders using bike racks will still need to exit through the front door. The automated passenger information system being installed Spring 2005 will periodically provide these types of reminders through automated announcements.
- Opportunities in street design, traffic signal operations for transit preferences will need to be explored to meet the requirements of minimum policy operating speeds, as described in the next section. Simple traffic signal priority devices have been installed on some of the City’s buses. The devices should be installed on the remaining active fleet.
- In areas with multiple signals that are timed in succession and closely spaced, stops should alternate between nearside and farside. This permits buses to clear several signals between stops, rather than being stopped at every light.
- Several intersections located along primary and secondary transit corridors require the installation of traffic signals to facilitate the flow of traffic to maintain operating speeds. Those intersections where signals are likely to improve transit service in the short-term include: Harrison Boulevard at 35th and 36th Streets; 35th and Western; and West Hills Road at 53rd Street. As traffic increases on South 3rd Street, a signal will be required at Goodnight or Rivergreen Avenue.

6.3 STREET CLASSIFICATION NEEDS OF PRIMARY CORRIDORS

Primary and secondary transit corridors should be specified in the City’s Transportation Plan, Street Functional Classification System and standards established for each. As the backbone of future transit service, primary corridors must continue to allow efficient and convenient transit operations. This translates into the need to maintain operating speeds and the need to incorporate pedestrian amenities convenient to transit service.

As stressed in the previous section, operating speed is the most important element of maintaining efficiency. Thus, primary corridors should have corresponding minimum operating speeds that are protected as a matter of policy in street classification systems. To do this, Street Functional Classifications, developed by the City and other governmental entities, should have an overlay that indicates primary transit corridors. This overlay would define a minimum operating speed (current transit speeds are recommended). This will prevent worsening operating speed as growth leads to new development and congestion.

Road construction and new development should be evaluated for its impact on these minimum policy operating speeds. If these minimums are threatened, then plan changes or compensating transit speed enhancements should be made. One feature that has an important impact on traffic speeds is the number of driveway openings on a street. Limiting driveway access and consolidating existing driveways will reduce the number of cross-traffic conflicts and enhance driver and pedestrian safety, at the same time it protects or improves travel speeds. In addition, operating speeds are drastically reduced if traffic backs up on the street while entering parking areas. Thus, developments should have ample space for traffic between the street and parking spaces to prevent traffic back ups on the street.

To ensure convenient transit access, the primary transit corridor overlay should also require safe pedestrian crossing opportunities at bus stops, which generally occur every 800 to 1,000 feet. At a minimum, marking the crosswalk near the stop should be considered. At high demand points, pedestrian-activated signals should be considered.

The entire length of each corridor should provide sidewalks, crosswalks, accessible curb cuts, and other features necessary to allow safe and convenient access from transit to all points along and near the primary corridor.

6.4 LAND USE IMPACTS OF PRIMARY CORRIDORS

Primary transit corridors will have a high level of service aimed at competing with the automobile. Land use planning along Primary corridors should support this goal.

The following land use policies are recommended for primary corridors:

- All new land uses and activities that will generate major transit demand should be located along the primary network. If they are not, then the incremental operating cost of extending the primary network to serve them should be funded as part of the development planning. This provision should apply to:
    - medical facilities
    - community centers, including public sports facilities
    - social service offices
    - secondary schools
    - colleges and university classroom buildings
    - residential development above 10 dwelling units per acre (apartments)
    - commercial developments above the size of a standard supermarket (about 20,000 square feet)
- All land uses along the primary network should provide optimal walk access for transit passengers. This means they should have street-front entrances that are easily accessible from the sidewalk.
- All activity centers (see list above) should have entrances directly on the street, no more than 50 feet from a transit stop and no more than 50 feet from a safe crosswalk to a transit stop on the opposite side of the street.

- Activity centers (see list above) should be planned along a street such that the previous requirements can be met without requiring closely-spaced stops. In special cases, stop spacing as short as 600 feet may be acceptable. However, stop spacing every 800 to 1,000 feet is ideal.

6.5 STOP FACILITIES

Each stop should, as a minimum, include a sign and ADA accessibility from the sidewalk to the curb. Some higher use stops may warrant the installation of a bench or shelter. Eventually, all stops along the primary network should be equipped with shelters, including passenger information. Over the course of 20 years, this would mean installation of about 200 shelters. Of course, transit amenities should be placed first at highest use stops and then added over time as funding and stop use warrant.

Major Transit Stops should feel like on-street transit stations and should be visible to the entire community as indicative of transit's essential role in the life of the City. A higher level of amenities should also be provided at Major Neighborhood Centers. Facilities at Major Transit Stops should include area lighting, larger shelters, covered bicycle parking, paving treatments, landscaping, signage and where appropriate, opportunities for vending activities and other design amenities.

Where Major Transit Stops are served on both sides of the street, they should also have a signalized pedestrian crossing within 50 feet. (This is usually already present as part of a traffic signal but should be provided as a pedestrian-activated signal if not.) Pedestrian signals should be timed and programmed to give pedestrians the right-of-way as soon as possible, since otherwise pedestrians will tend to jaywalk, especially on two lane streets.

Apart from the Downtown Transit Center, the Major Transit Stops would include:

- Timberhill transfer point
- Kings and Buchanan
- Monroe and Kings
- 35th/36th and Harrison area
- 35th and Western (proposed neighborhood focus area)
- 53rd and West Hills Road (proposed neighborhood focus area)
- 53rd south of Philomath Highway (Sunset Shopping Center)
- Highway 99 and Goodnight Avenue (proposed neighborhood focus area)
- 9th and Buchanan
- Highland and Circle
- 9th and Circle
- Hewlett Packard
- One major stop in the Good Samaritan Regional Medical Center area

These are selected based upon expected, long-term passenger volumes, as well as the function of certain locations (Timberhill, Kings and Monroe) as existing or possible transfer points.

6.6 DOWNTOWN TRANSIT CENTER

Even as new opportunities for non-downtown connections are created, the Corvallis Transit System will remain strongly downtown oriented. The Downtown Transit Center can accommodate up to five buses on site and two buses on-street at one time. This facility will serve local transit, including two intercity buses, for the short-term. Expansion of transit service, as proposed in the long-term plan will require two additional buses. Any expansion of the Downtown Transit Center should take into consideration of the following:

- As routes become more frequent, deviation time becomes more of a problem. For this reason, the transit center should be designed so that buses can flow through it rapidly in whatever direction they need to go. An ideal transit center provides two-way circulation, with bus ingress and egress at both ends, so that buses never have to loop out of their direction of travel. One effective design is to provide on-street stops in one direction, with an off-street drive in the opposite direction, both boarding on the same central island.
- Buses must have maximum freedom to turn various directions as they leave the center and to approach it from different directions.
- The center must provide a safe place to transfer from one bus to another, ideally without crossing a street.
- If 15-minute headways on primary routes are achieved, as in the High scenario and if reasonable potential for unforeseen growth is to be accommodated, then the center will eventually need to accommodate up to seven CTS buses at once, plus two intercity buses. All seven buses must be able to be accommodated at one time to ensure effective connections. Prior to reaching 15-minute headways on primary routes, the transit center will need to accommodate up to five CTS buses at once. At least one additional bay and eventually two, should be provided for existing and future intercity services. On-street expansion potential should also be identified as part of the center plan.
- Opportunities to combine the facility with other carriers, especially Greyhound and/or the Valley Retriever, should be explored.
- The center should feel like a high-quality, attractive transit “station”. Adjacent land uses, on-site vending opportunities, and other design features should all be planned with the intention of maintaining the center as a hub of activity, not just a place for transit users to wait. A diversity of people should have reason to be at the center for various reasons so that the center gives passers by the impression that transit is for “people like me”.
- Finally, the center should provide essential facilities for drivers, especially restrooms, including a break room. (The current transit center has one driver, unisex restroom.) These can be provided under an agreement with an adjacent business or agency or can be included in the design.

6.7 BUS ISSUES

Like other infrastructure investments such as streets and parking facilities, transit buses should be sized to accommodate peak loads. This often means providing excess capacity during certain times of day in order to avoid the extra operating costs associated with increasing frequencies during higher demand periods. Transit systems should operate vehicles that are large enough to accommodate the largest expected load during the entire day.

CTS buses are often full during the peak hours of use. Even in the long range, High Scenario (presented in Chapter 4), peak activity corresponding with OSU class times would often fill buses. When new buses are

purchased, bus size should be carefully considered to balance capacity with peak passenger loading. As ridership grows with population, 40-foot buses may be necessary, at least on some routes.

A common misconception is that smaller buses save operating costs because they are lighter and more fuel efficient. In reality, there is little difference in the per mile cost of heavy-duty vehicles, regardless of the length of the coach. Lighter-duty vehicles are prone to more maintenance problems and generally have a shorter useful life. The largest single factor in determining overall cost is the cost of the labor for the vehicle driver, which does not vary according to vehicle size.

This is not to suggest that the larger transit buses should not be "friendly" in every way possible. Unique paint schemes, bus "wraps" and other treatments are encouraged to ensure that the bus fits into the local environment. Low-floor coaches, which are becoming more common in the industry, allow for easy boarding for all passengers, including those with disabilities, elders, and passengers with packages. In addition to offering enhanced accessibility, the low-floor coaches eliminate maintenance-intensive lift equipment in favor of simpler ramp mechanisms. Boarding speeds are improved, as passengers are not required to walk up and down steps to enter or exit the coach.

All transit buses, regardless of fuel type, should be viewed as improving air quality, since one bus can eliminate many cars on the road, making many cold starts. Cleaner diesel engines are available and many systems are choosing these while other technologies are being studied, developed, and tested.

Alternative fuel technology is advancing. Compressed natural gas (CNG) is receiving attention among the larger transit systems across the country. CNG is a reliable and relatively inexpensive fuel. However, CNG requires expensive fuel station infrastructure and a supply mechanism that may not be readily available. The decisions to convert to any alternative fuel should be made as part of an overall City strategy, allowing fueling infrastructure to be spread over a larger fleet than CTS. A transit system of CTS's size alone could probably not justify the cost of conversion to CNG. Today, if there is a "rule of thumb" it would be that large transit properties (those with more than 100 vehicles) are converting to CNG, while smaller properties are proceeding with clean diesel technology for future purchases.

Electric/diesel (hybrid) buses are becoming available in all sizes. Hybrid buses have potential for transit service because they are relatively non-polluting, quiet, and have very low maintenance. Hybrid powered coaches are priced at a significant premium over similar diesel or gasoline-powered vehicles but may offer longer vehicle life, assuming that batteries are replaced on a fairly regular schedule. Battery life for electric powered transit coaches is about five (5) years.

Bio-diesel is available as a blend of bio-component to diesel or as 100% bio-component (B100). There is a cost premium related to bio-diesel. The City Public Works Department is using B-20 (20% bio component) in the diesel fleet with no negative effects (other than increased fuel cost). The bio-diesel is considered a "premium grade" diesel due to its cleaner burning and higher lubricity. The higher lubricity may extend engine life. As the fuel industry continues its movement to eliminate sulfur in diesel, which provides lubricity, this feature becomes more attractive. Neither the engines nor the fueling systems need to be modified to burn B-20, so there is no cost to convert to its use.

Alternative fueled vehicles should continue to be evaluated as part of an overall City strategy to make decisions that will benefit both the transit system and the City's environment. Fleet reliability must always be the top criteria, since transit ridership can only be maximized with a reliable service.

6.8 SYSTEM COVERAGE EXPANSION

CTS is currently a heavily subsidized system. The primary funding sources are the FTA 5307 operating grant and the City of Corvallis General Fund which is funded primarily by city property taxes (see Figure 1-1). Since the 5307 grant is for operations within the Urbanized Area (UA) service can be provided outside the Corvallis City limits using this funding source (as is currently being done by the Philomath Connection). But since the Corvallis General Fund comes from property taxes paid by the city property owners, expanding the service outside the Corvallis city limits would require additional funds to provide for the local match for the expanded service (the City of Philomath currently provides the local match for the Philomath Connection). Although it is desirable to extend services outside the Corvallis city limits to serve the Crescent Valley area, Lewisburg, Adair Village and Corvallis Municipal Airport, as anticipated in the CAMPO RTP, the service can not be extended without new funding sources.