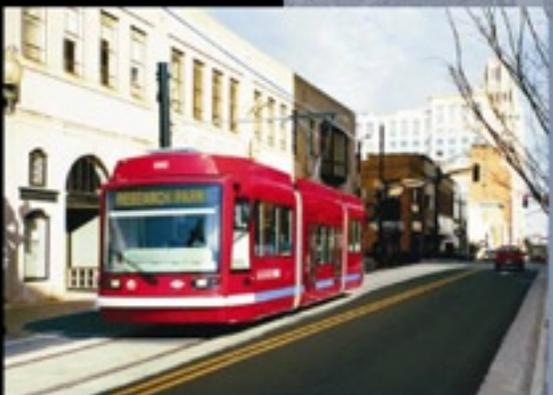




Transit Master Plan

August 2006



Creating Places Where People Want to Be





Transit Master Plan

August 2006



HDR

Executive Summary

The City of Rancho Cordova Transit Master Plan is the first of several planning documents that are intended to detail the City's recently adopted General Plan. Pedestrian and Bicycle Master Plans will follow and will also help shape the City's goal to provide safe and attractive alternative modes of travel.

The vision for transit in the City of Rancho Cordova provides new access opportunities for neighborhoods and serves to revitalize business centers. This vision will be accomplished through planning principles that join neighborhoods and provide new opportunities for connectivity across barriers exist today. Marketing and informational services will also promote a transit system that is "Fun, Fast and Frequent".

The Transit Master Plan proposes a system of city, neighborhood and regional services. The "Signature Service" will connect residents to businesses, shopping and recreation, and will provide a branding mechanism that will serve broader economic planning goals. An innovative approach for funding the 18.5 mile signature service routing will be needed over the next 20 years. The phasing plan will build an initial three mile streetcar route costing approximately sixteen million dollars per mile with follow up operations and maintenance costs of a about three million dollars annually.

In a shorter time horizon, shuttle services will provide access to neighborhoods and businesses within the City, and will connect to Regional Transit's Light Rail Gold Line. Neighborhood shuttle services are being initiated for new neighborhoods through the City's Special Tax for Transit Related Services (CSA10). Funding for shuttle services in existing neighborhoods has not been identified.

Proposed regional services, coordinated with Sacramento Regional Transit, will focus on future Bus Rapid Transit routes and additional stations along the Light Rail Gold Line. Light rail stations are proposed at Horn Road and at the Mine Shaft property.

Regional Transit's Bus Rapid Transit service will require additional right-of-way at intersections, and along congested segments of arterial roadway. The proposed Sunrise Boulevard Bus Rapid Transit corridor identifies alternative routes that should be resolved in the short term so that appropriate lead time can be provided to the development community.

The Transit Master Plan provides a bold approach to improve the mobility of citizens and to promote economic development and tourism in the City of Rancho Cordova. Extensive advocacy and development efforts will be needed to realize the great urbanism concepts promoted by the plan, focusing toward a balanced multi modal transportation system.



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INTRODUCTION

The purpose of the Transit Master Plan is to provide a multi-modal approach to support mobility as presented in the City of Rancho Cordova's General Plan. This plan is a supplemental document that feeds into the Land Use, Circulation, Economic Development, and Air Quality Elements the City has adopted. This plan represents a great challenge for Rancho Cordova, as it works to fulfill its vision – *Build a City*. Rancho Cordova is not just a city, but it is a unique city with great aspirations and vision for its future.



To accomplish this vision, the City of Rancho Cordova requires at least five key characteristics:

Great Urbanism – A City form that is authentic, enduring, diverse, connected, and defines its character and qualities

Great Centers – A full range of attractions to serve the economic, social and cultural needs of current and future Rancho Cordova community members

Great Parks – A parks, open space, bicycle and pedestrian system that reinforces the urban form and supports sustainability

Great Streets – A network that goes well-beyond “service requirements”, instead, being an equal partner in defining the City’s form, as well as function. Streets are the most significant investment of the public realm, and they should be treated as urban landscape elements

Great Transit – Transit must never be an “alternative”, but rather an integral component of Rancho Cordova’s mobility system. To achieve that “Great City” ideal, the city should not rely on single occupancy vehicles to define its mobility. A system rich in modes, and connected to the regional system, truly will move Rancho Cordova toward the greatness it desires.



The City is at a critical moment in its young history. With the majority of the development “on paper”, Rancho Cordova truly is a future city. This is an exciting, but daunting prospect. As it considers its transit future, in conjunction with the land use vision, the City must now consider how current and future residents will move around...for work, for shopping, for recreation...or any other purpose. Transit can be a great partner in the City’s development, as it is a shaping and connecting tool. Well-placed and timed transit is a powerful investment that:

- Reinforces healthy neighborhood patterns by providing new access and opportunities for compatible infill development
- Re-energizes downtowns and other urban districts through the introduction of circulators



- Revitalizes by-passed properties into more productive real estate and community assets, including residential centers, even as the Sacramento Region expands
- Redirects future land use patterns to be more transit supportive, offering the ability to create more diverse, walkable, mixed use communities.

All of these factors exist in Rancho Cordova. Therefore, as it matures, there is an opportunity to begin using the power of transit to help create the future city - *now*.

The Planning Team for the Transit Master Plan project understands the demands placed on Rancho Cordova based on its current and anticipated growth patterns and expectations. As it matures as a City, several modes of transit are potentially available – Streetcar, Bus Rapid Transit (BRT), buses, shuttles, among others. Then, a truly effective mobility system will emerge that can propel the City to its desired future. That is the role and function of the Transit Master Plan.

VISION STATEMENT AND PLANNING PRINCIPLES

A clear vision for transit, consistent with the City’s overall vision, helps direct the development of the Master Plan. The Vision for Transit is supported by a set of Principles that lead to further expansion into goals, policies and actions (Appendix B).

The Transit Vision

Rancho Cordova will be one of California’s premier transit-supportive communities. Transit and land use will forge a powerful partnership to create a livable and memorable Rancho Cordova.

The Transit Master Plan Principles

There are five principles guiding the development of individual transit services within the City.

Join Existing and Future City Area. Currently, the City of Rancho Cordova has development on both the north and south sides of Highway 50. There are limited routes that cross the freeway, creating a barrier to joining the two areas with frequent, well connected, and attractive transit services. The City needs to connect both areas to have a sense of unity. The newly developing areas such as Rio del Oro, Sunridge and Suncreek, should also be linked. Every attempt is made to provide a one seat, high frequency ride to as many of the city’s residents as possible. This principle is primary in developing the Transit Plan.

Foster North/South, East/West Connectivity. Achieving the principle of providing high quality service that will encourage the citizens of Rancho Cordova to leave their cars at home and utilize attractive transit will depend on how well the transit network is put together. The intent of the Master Plan is to provide the maximum level possible of connected transit services. This allows easy access from existing neighborhoods to downtown and to the new neighborhoods.

Possible Adjustments to Current and Future Routes. Today, Sacramento Regional Transit (RT) provides service coverage for the City. However, limited or low frequency service makes current transit less attractive than the private automobile. For example, most routes operate on 60-minute headways throughout the day. The current service schedule or span-of-service (total hours of day the route operates) is limited. There are opportunities with the existing RT routes to consolidate and reallocate more frequent and efficient services. Such consolidations can yield cost savings for RT and enhance service to the City.

Clarify and Identify System to Riders. The next principle is to ensure public awareness of the current and future transit routes. If transit is to be a primary means of movement, the system must be visible and accessible. Public awareness is a vital component to the success of all transit service systems. Special emphasis is placed on public communication to define the benefits of transit. The intent of the recommended “Signature Route” is to identify the primary transit corridor as the City’s commitment that transit is central to its mobility network.

Make Service Fun, Fast & Frequent. The bottom line is to create a new transit system that is fun, fast and frequent. These attributes are essential if the City is to have the type of transit system it desires.

Types of Transit Service

To implement the Vision and Goal, three types of transit (City, Neighborhood, and Regional) provide the service expected by City residents.

City

This type of transit service is similar to the services that RT currently provides for Rancho Cordova. City service is characterized as a major grid of routes. In this service type, the Plan recommends a “Signature Route” that visually represents the core of the new transit system. Streetscape, signage, shelters and amenities along this route create a memorable experience reflecting the quality and character required to assure the citizens that transit is coming - and it is of high quality. The City service extends out from this route. The Signature Route connects older neighborhoods with new ones; business centers with residential areas; both sides of Highway 50; and Rancho Cordova to the regional Light Rail Transit System (LRT).



Since the Signature Route runs through current and future development areas, it will have several different vehicle types (buses, shuttles, and streetcars), depending on the neighborhood and the transit need. When the City completely builds out, the preferred “Signature” vehicle is the streetcar, ultimately for the entire length of the Route.

Neighborhood

This type of transit service operates as a complement to the City service. It is a flexible service to existing neighborhoods (and future neighborhoods as they develop). The proposed service also serves youth, seniors, disabled and economically disadvantaged City residents. Current paratransit and on-call services fall into this service type.



Regional

These service types connect the City to the region and the region to the City. These services allow fast, frequent and limited stop transit for:

- Residents of Rancho Cordova to travel quickly and comfortably to destinations outside of the City for work, shopping and recreation
- Residents living outside of the City to reach their places of employment and other destinations in Rancho Cordova
- Residents outside Rancho Cordova who want to travel quickly through the City to their final destinations.

Regional service includes the existing LRT system and possible future BRT corridors. BRT is a service type – not a vehicle type – and it functions in the same manner as LRT. BRT is a longer distance service with fewer stops. BRT corridors are planned to preserve right-of-way in planned developments, as well as finding right-of-way within built up areas.

City/Neighborhood Service

This section presents a combined City/Neighborhood services discussion. This is appropriate since City and Neighborhood services work in tandem. Within Rancho Cordova, transit is a “nested” service - that is one type complements and connects with the other. The City/Neighborhood services reflect:

- A “Signature Route” that is the centerpiece of current and future transit service. This route is a clearly defined corridor, using high quality urban design features that demonstrate the City’s commitment to transit.
- A set of current and/or future RT routes that build off the Signature Route.
- Other routes the City may implement independently of RT or in conjunction with other jurisdictions, such as Elk Grove, Folsom, and El Dorado County.

The City/Neighborhood combination illustrates how the service fits into the overall system. These service types are distinct, with different routings and different modes of operation. They make the overall transit system function in a complementary, cohesive manner. The details of individual bus routes, their origins, destinations, and other operational characteristics are part of future Transit Plan development.



All areas of the City receive service, with the goal of:

- Linking north/south and east/west travel movements
- Defining a Signature Route and vehicle type for system identity
- Building a larger transit grid from the “Signature Route”
- Connecting neighborhoods to the regional system.

City/Neighborhood service consists of buses, streetcars, and shuttles. The service:

- Principally is intra-city service in nature
- Provides transit as a true mode of choice
- Introduces the modern streetcar as an attraction for new riders
- Supports compact, walkable neighborhood development
- Generally runs in the street
- Has variable station or stop spacing
- Has a frequency of service in the 10 – 20 minute range.

For the City, this service would be a major bus network/grid that generally follows existing and planned arterials or major thoroughfares. Existing RT bus service may be part of the network, as well as other modes such as BRT (see Regional section) and streetcars. The discussion of changes to the existing RT system is in the following section on Neighborhood service.

The implementation of City and Neighborhood services will be over the next 1, 5 or 20 years. Activities of future Transit Plan development will determine:

- What service types are rendered
- Who will be served
- Who will operate the service (RT, the City, or some other agency)
- Vehicle needs

- Capital costs
- Annual operating costs
- Other costs/funds for transit service.

The City service builds on the concept of a “Signature Route”, as indicated previously.

Signature Route

A Signature Route is the centerpiece of the City type service. This route clearly identifies the City’s commitment to transit. Since much of the City is still developing, the Signature Route implementation is in stages. During the years when the staged implementation is taking place, the streetcar will operate in those sections of the Route that can support such service. Areas such as Downtown Rancho Cordova may be such an area, and here the Signature Route will operate as a “Pedestrian Accelerator” and have potential stations or stops located approximately 800’ apart. Other sections, as they develop, may have the streetcar extended to meet the demand. In the meantime, buses can bridge the gap to keep the concept of the Signature Route alive. Nonetheless, the route is the “backbone” of the City service.

To make the Signature Route truly memorable, the modern streetcar is the recommended mode. A high image streetcar conveys to the region that Rancho Cordova is becoming a transit- supportive community – a place where citizens can travel safely and comfortably without a car. Since the streetcar route will be developed in stages, buses and shuttles would provide initial service to these routes.

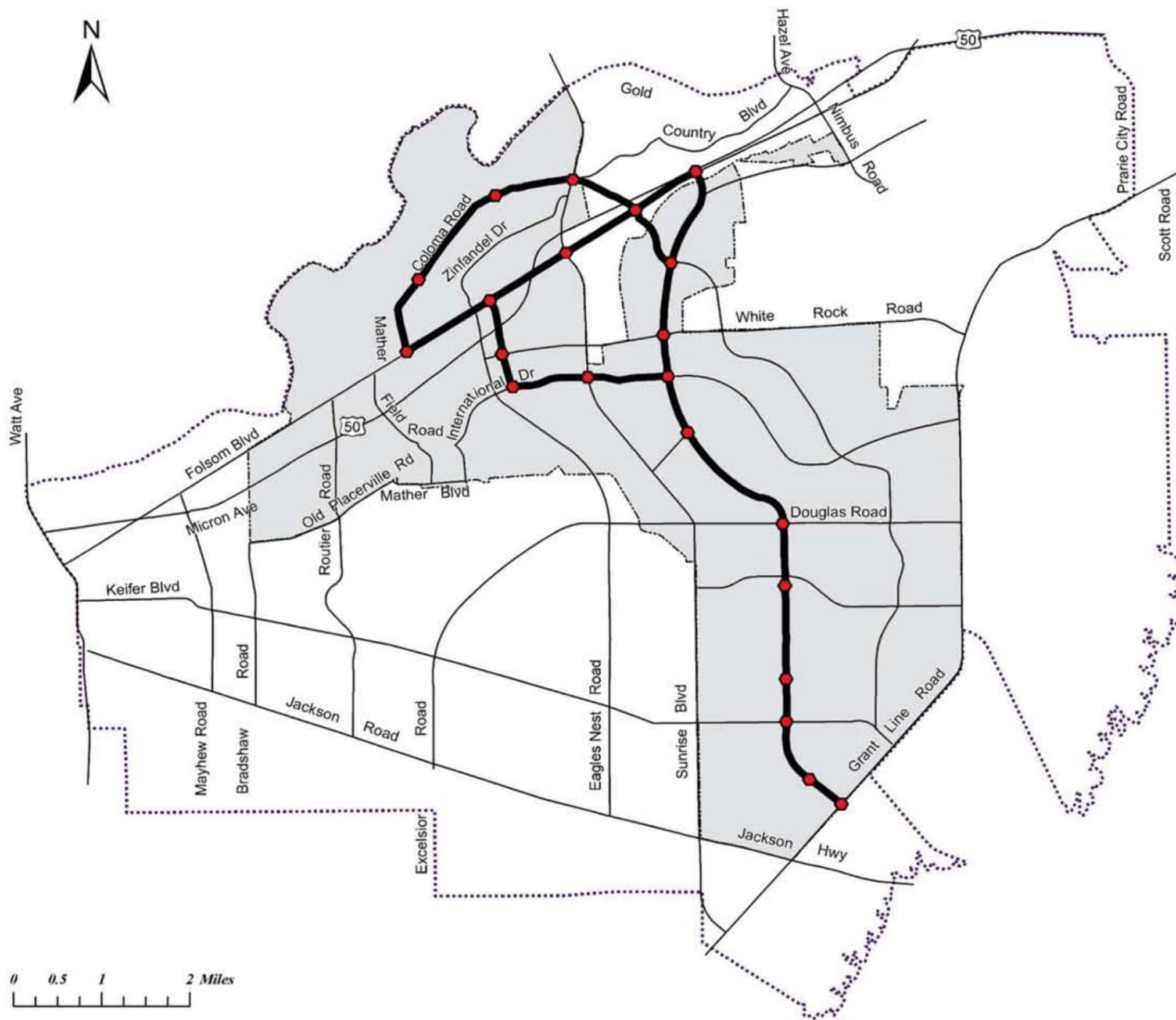
The Signature Route is 18.5 miles long, spans the entire length of the City from south to north, including north of Highway 50. Figure 1 highlights the proposed Signature Route. It follows Rancho Cordova Parkway from Grant Line Road in the south to Citrus Road (Citrus Road is a future connector to Folsom Boulevard), proceeds north on Sunrise to Coloma, and returns east along Folsom Boulevard to downtown. From downtown, the Route follows the proposed “Promenade” south to International Drive, where it turns east to rejoin Rancho Cordova Parkway. A connection to the Mine Shaft property and other points along Folsom Boulevard are also included.

Service on the Signature Route operates in a bi-directional manner that will allow passengers to pick the fastest trip for them based on where they are located. The Signature Route connects new and existing neighborhoods such as:

- | | |
|----------------------------------|-------------------------|
| • Coloma/Zinfandel Neighborhoods | • Villages at Zinfandel |
| • Anatolia | • Rio del Oro |
| • Suncreek | • Westborough |
| • Downtown District | • Capital Village |

The Signature Route provides frequent and fast service that easily connects to the Regional service. There are 21 potential stations, 19 of which are proposed to have a higher level of amenities than a traditional bus stop and 2 potential stations are proposed to have a higher level of amenities than the other 19 stations that could serve more than one mode. Amenity levels for the 19 potential stations can include: an expanded shelter or spaceframe, seating, signage, off-board fare payment, trash receptacles, emergency call box, next trip technology or other Intelligent Transportation hardware. Amenity levels for the remaining 2 potential stations can include those listed above plus additional pull-in bays for other bus service connections and parking. These high-end amenities reflect the level of investment that the City is making with a service of this type. On this alignment, there may be a need for additional right-of-way, especially within 200' of a rail station.

**Figure 1.
Signature Route**



Legend

-  Potential Location for High-End Amenities
-  Signature Transit Station
-  Planning Boundary
-  Roads
-  City Limits

The Streetcar Service

Practice shows that 2.5 - 3.0 miles is a workable length for a starter line. Downtown is the place to start, since it is a redevelopment area, and the streetcar can serve as a catalyst to further redevelopment efforts. General issues with respect to streetcar implementation include:

- Streetcars are in-street running with mixed traffic
- To facilitate pedestrian access, streetcars run in the outside lane next to the curb line
- Simple streetcar stops are part of the pedestrian zone, and next car technology gives confidence to riders
- On-board technology can facilitate smooth operations, including signal priority and queue jumping
- Vehicles are only 8.5' wide allowing travel on narrow streets such as Capital Village. Turning radii are tight allowing access to most City streets
- North-south access into downtown is via the proposed Promenade, allowing a convenient crossover for Highway 50
- Streetcar stops should coordinate with LRT stations, allowing easy intermodal connectivity
- Construction, absent expensive structures, can be fast-tracked, with an installation period of 14-16 months for a 2.5-mile route.



Once a starter line is in place, extensions are easier after the success of the service is established. If the City decides to pursue federal funds, the cost of a locally funded project can be a match for federal funds.

The Streetcar Loop

Within this Signature Route, the streetcar is the preferred vehicle. Because the Signature Route is approximately 18.5 miles long, and is located in future development areas, only a portion of the route would initially be served by streetcar. That portion of the Route is the streetcar loop and it is 7.0 miles in length, consisting of three segments/stages (Figure 2):

Segment/Stage 1 - International Drive from Sunrise Boulevard to Capital Village, where it turns north to join the proposed Pedestrian Promenade across Highway 50 into downtown, then paralleling Folsom Boulevard back to Sunrise Boulevard;

Segment/Stage 2 – Paralleling Folsom Boulevard to the area near the Citrus Road connector and turning southeast and joining the Rancho Cordova Parkway along a new roadway alignment; and

Segment/Stage 3 – From Rancho Cordova Parkway to the proposed International Drive extension, and turning back west on the proposed International Drive extension to Sunrise Boulevard.

These segments allow for cost-effective, focused implementation of the streetcar service.

Figure 2 shows a dashed line that represents a routing option from Rancho Cordova Parkway to the town center at the proposed Mine Shaft LRT station, returning along Folsom Boulevard to the Citrus Connector. The town center serves as a destination with an array of restaurants, movie theaters and retail and offices.

Streetcar Planning Cost Estimates

The capital costs for the 7.0-mile streetcar loop is approximately \$110.9M (exclusive of Stage 3A). Annual operating costs for Stages 1, 2, and 3 are approximately \$5.25M per year.

Streetcars capital costs are approximately \$15.7M per track mile. The cost components of the estimate include:

- Track work and electrification - \$9 million
- Vehicles - \$2.75M
- Stops - \$70K
- Maintenance facility - \$10M Total Cost (Only One Needed)
- Annual operating costs - \$750K per mile.

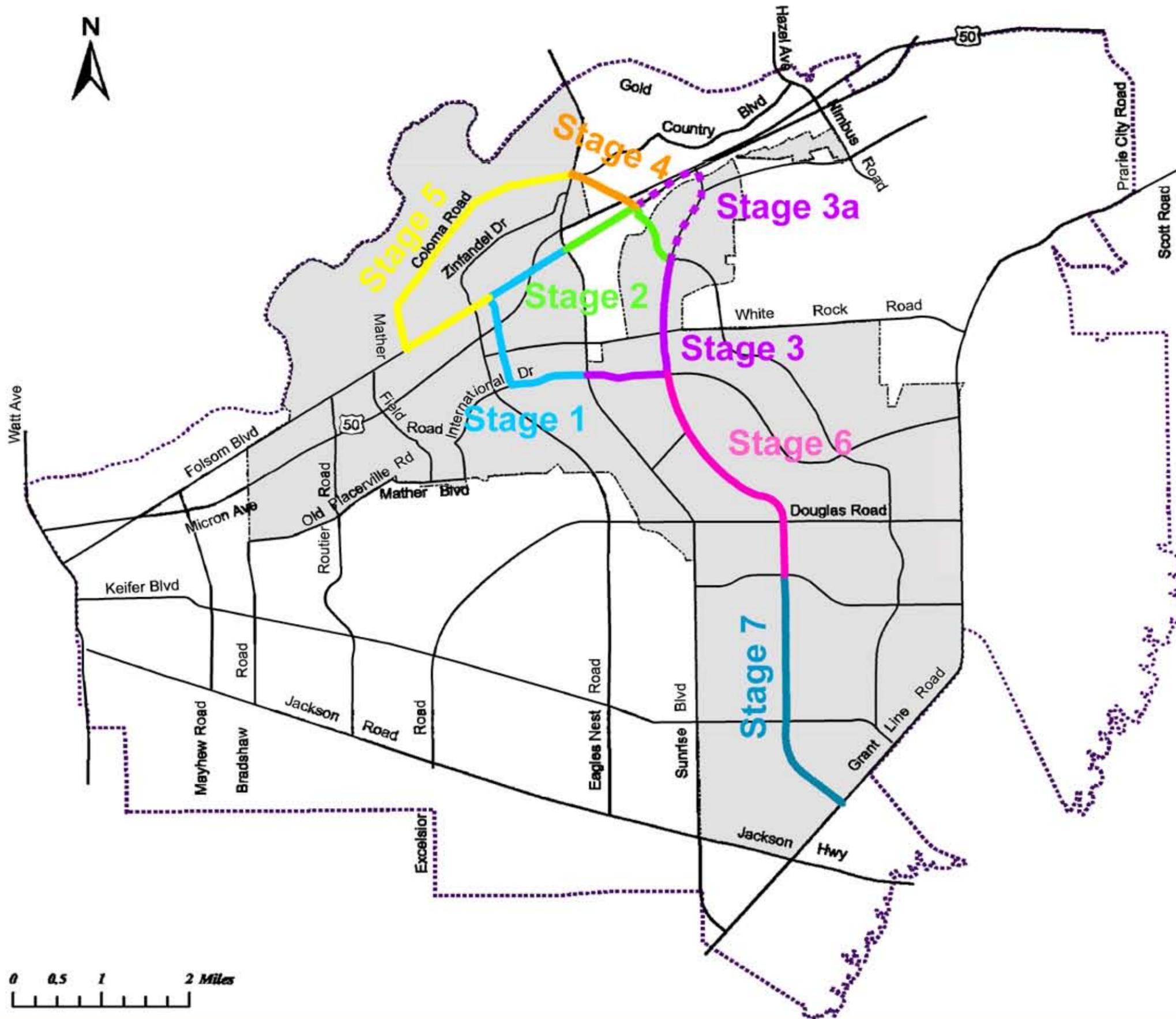
The costs shown are for single track, and excluding the maintenance facility, costs for bi-directional (double track) are \$23.4M per mile. Costs do not include right-of-way or structures.

Figure 2 shows Stages 1-7 that constitute the Signature Route. Only Stages 1-3 are streetcar lines. These three stages make up the streetcar loop, and Stage 3A is the option to the Mine Shaft LRT Station/Town Center.

- Stage 1 – approximately 3.0 miles, \$47.1M
- Stage 2 – approximately 1.7 miles, \$27.7M
- Stage 3 – approximately 2.3 miles, \$36.1M
- Stage 3A – approximately 2.0 miles, \$31.4M

While the City is building Stage 1, it can plan and conduct preliminary engineering and funding for other stages. Until a complete streetcar system is ready, specially designed buses can serve as a “placeholder” for future streetcar extensions. This way, the public will recognize Rancho Cordova Parkway as a true transit corridor. This interim bus service may hasten the public’s willingness to complete the streetcar system as proposed.

Figure 2. Signature Route Development Stages



Legend

- Stage 1: 3.0 miles
\$47.1 million
- Stage 2: 1.7 miles
\$27.7 million
- Stage 3: 2.3 miles
\$36.1 million
- ⋯ Stage 3a: 2.0 miles
\$31.4 million
- Stage 4: 0.8 miles
- Stage 5: 4.3 miles
- Stage 6: 2.9 miles
- Stage 7: 3.0 miles
- Planning Boundary
- Roads
- City Limits

Neighborhood Connectivity and Service Enhancements

The Neighborhood level is where the concept of local transit service is fully developed. In neighborhoods and districts, the citizens of Rancho Cordova see transit as a reality. Currently, RT provides direct service to the City with the following modes and routes:

- Light Rail Gold Line – Downtown – Folsom. Stations within Rancho Cordova are located at Sunrise Boulevard, Cordova Town Center, Zinfandel, Mather Field/Mills, and Butterfield
- 21 Sunrise – operates to and from Mather Field/Mills light rail station via: Folsom Boulevard, Coloma Road, Sunrise Boulevard to Sunrise Mall
- 28 Fair Oaks/Folsom – operates to and from Butterfield light rail station via: Folsom Boulevard, Cordova lane, Zinfandel Dr, Sunrise Boulevard, Fair Oaks Boulevard to Sunrise Mall
- 72 Rosemont/Lincoln Village – operates to and from Watt/Manlove light rail station and Mather Field/Mills light rail station via: Kiefer Boulevard, Branch Center/Bradshaw, Lincoln Village Drive, Routier, Rockingham and Mather Field Road
- 73 White Rock – operates to and from Mather Field/Mills light rail station to Sunrise Boulevard light rail station via: Mather Field Road, Rockingham Road, White Rock Road and Sunrise Boulevard
- 74 International – operates to and from Mather Field/Mills light rail station to Sunrise Boulevard light rail station via: Mather Field Road, International Drive, Data Drive, Reserve Drive, Zinfandel Drive, Data Drive, White Rock Road, Prospect Park Drive, Sun Center, Trade Center Drive to Sunrise Boulevard
- 75 Mather Field – operates to and from Mather Field/Mills light rail station to Mather Field/Mills light rail station via: Mather Field Road, Rockingham Drive, Old Placerville Road, McCready Avenue, Mather Boulevard, Femoyer Street, Whitehead Street and Mather Field Road.

These transit services are described in detail in the Existing Conditions report (Appendix C).

In general, the neighborhood connectivity and service enhancements will be based on:

- Working with RT to identify possible adjustments to existing bus services that:
 - Offer one-seat rides as often as possible
 - Consolidate existing services that will offer more frequent service using fewer vehicles at no increase in level of expenditure
 - Develop neighborhood services that utilize smaller vehicles that can get closer to the individual rider than larger buses.

- Neighborhood services that will connect residents and employees with RT routes and the Signature Route can also be provided by buses, shuttles or vans. Paratransit's Dial-a-Ride service can be continued and expanded to provide daily fixed route service along neighborhood streets. As service is developed, there will be an opportunity to evaluate alternative organizational and management strategies, which could include services provided by a City-owned and operated system or a mix of service options based on scale and type of service required, including public-private partnerships.

Figure 3 illustrates potential service routes that demonstrate how existing neighborhoods can be served. These route concepts can also be expanded as new neighborhoods are developed. This figure also identifies future RT Light Rail Stations at the Mine Shaft and Horn Road that will be the topic of continued discussion with Regional Transit.

Neighborhood Connectivity Cost Estimates

During future planning efforts for the City, refined cost estimates will be developed for short- and long-range service plans. These plans will identify the most cost-effective transit services to be implemented in any given year.

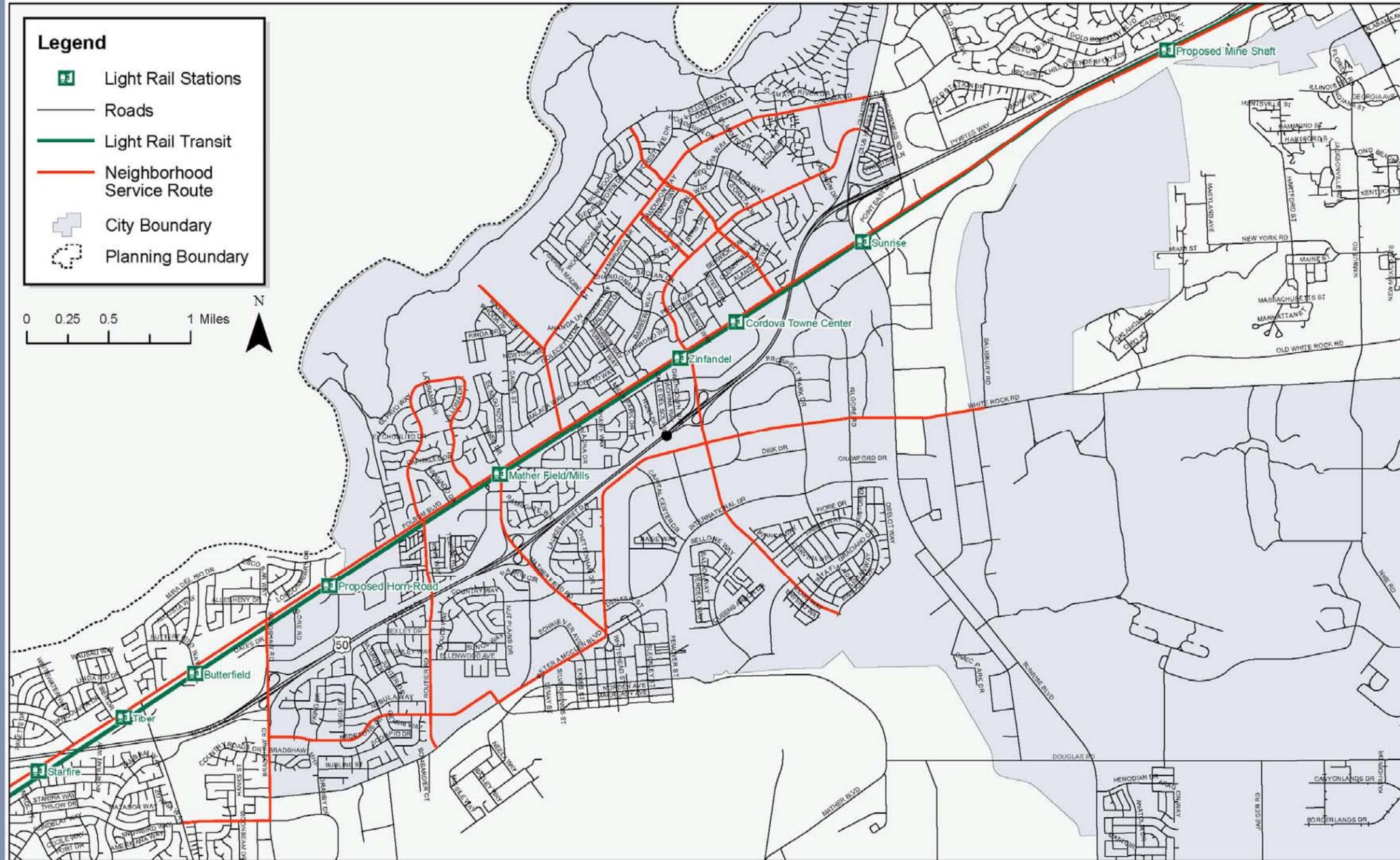
Typically, the cost for proposed transit services is based on:

- Length of route in miles
- Frequency of service
- Span-of-service
- Hourly cost
- Revenue hours
- Route speed in mph
- Trip time in minutes.

The following is an example of how planning level costs for proposed transit service are calculated. A proposed route has a round trip length of ten miles. The proposed route has the following operational characteristics:

- 15 minute peak frequency – 24 round trips/day (6:00 to 9:00am & 3:00 to 6:00pm)
- 30 minute off-peak frequency – 16 round trips/day
- Span-of-service 6 a.m. – 8 p.m.
- Route speed in mph (average 12 mph)
- Trip time in minutes – 50 minutes/round trip
- Revenue hours/day – 50 minutes x 40 round trips/day = 33.3 revenue hours/day.
- Hourly cost \$77/hour (RT cost per hour 2005).

Figure 3.
Potential
Neighborhood Transit
Service Routes



The example route is ten miles in length, has a 50 minute round trip time, and can expect to consume 33.3 revenue hours each day. Multiplying 33.3 revenue hours by \$77/revenue hour gives an approximate cost per day of \$2,566, or \$654,500/year based on 255 weekdays/year. If service were offered on Saturday and/or Sunday, estimated costs would be higher.

RT Service Enhancements

The design and implementation of possible adjustments to the existing transit system, as well as potential new services, could begin with reorganizing current RT services in the City. Future Transit Plan development could detail adjustments to create new routes that are more efficient, offer better connectivity both within the City and to other nearby major activity centers, and offer one-seat rides to shopping and employment for City residents as well as for others outside the City limits. Route combinations could be developed in such a way that will work seamlessly with LRT, the new Signature Route and other neighborhood services that may be implemented in the future. Current routes, with minor changes, could be reconfigured and consolidated for efficiency, to provide more connectivity with fewer transfers, and to be more competitive with the private automobile. Figure 4 is an example of a possible route consolidation.

Figure 4 shows a conceptual consolidation of Routes 21 Sunrise and 75 Mather Field. Currently, Route 21 Sunrise operates from Sunrise Boulevard (Sunrise Mall) in the north and ends at the Mather Field/Mills light rail station. Route 75 Mather Field, operates south of Highway 50 in the City's downtown area and then circulates back to the Mather Field/Mills light rail station. Today, these routes operate independently even though they serve the same light rail station. If riders want to reach the south side of Highway 50, they would have to transfer. Consolidating these two routes eliminates the need for a transfer and decreases travel time for patrons.

Regional Service

Rancho Cordova is an important area within the Sacramento region. The proposed regional service connects the City of Rancho Cordova with the overall Sacramento Region via transit. The service is fast, frequent and has limited stops. Regional service is important because it:

- Connects City residents to regional employment, shopping and recreational destinations
- Allows employees living outside of Rancho Cordova to have transit access to employment and other destinations in the City
- Provides a convenient pass through means of transportation for riders not having a trip that ends in the City.

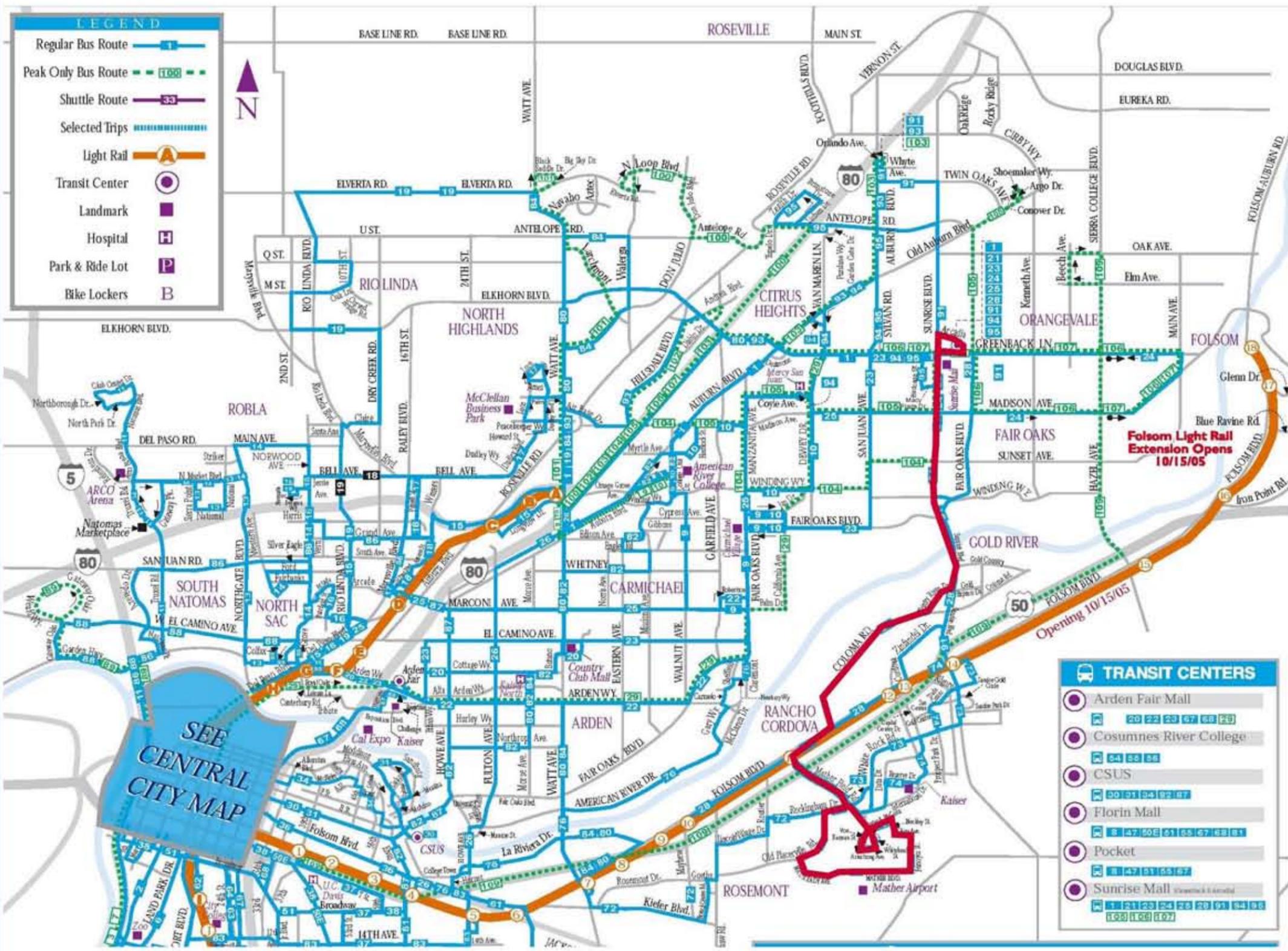


SAC LRT Vehicle



"Cool" BRT Vehicle

Figure 4.



Conceptual Bus Route Consolidation
**21 Sunrise/
 75 Mather Field**



Map Source: Sacramento Regional Transit District Regional Transit Bus & Light Rail System Map
 Effective September 4, 2005

Currently, RT's LRT system traverses Rancho Cordova west to east. In addition, the plan suggests complementary BRT corridors. The LRT and BRT routes, shown in teal and solid blue lines, respectively on Figure 5, indicate expanded north to south and east to west connectivity. LRT and BRT:

- Are principally longer, commuter-serving routes;
- Are oriented to travel time savings; stations are spaced one-half to one mile apart;
- Are built as separate, fixed guideways; and
- Have service frequency of 15 minutes or less.

BRT Transit Service

As indicated, ***BRT is a type of service, not a vehicle style or type.*** Therefore, there are multiple options for vehicles. Vehicles for BRT service can be the high-end style, resembling LRT vehicles, but having rubber-tires. Standard buses also are candidate vehicles, and they may be given special paint and design applications for identity purposes, distinguishing them from City type service vehicles. As long as the routes operate on a fast, frequent and limited-stop basis, they are regional-type transit services. Regional Transit Goals, Definitions and Guidelines are provided in Appendix E.

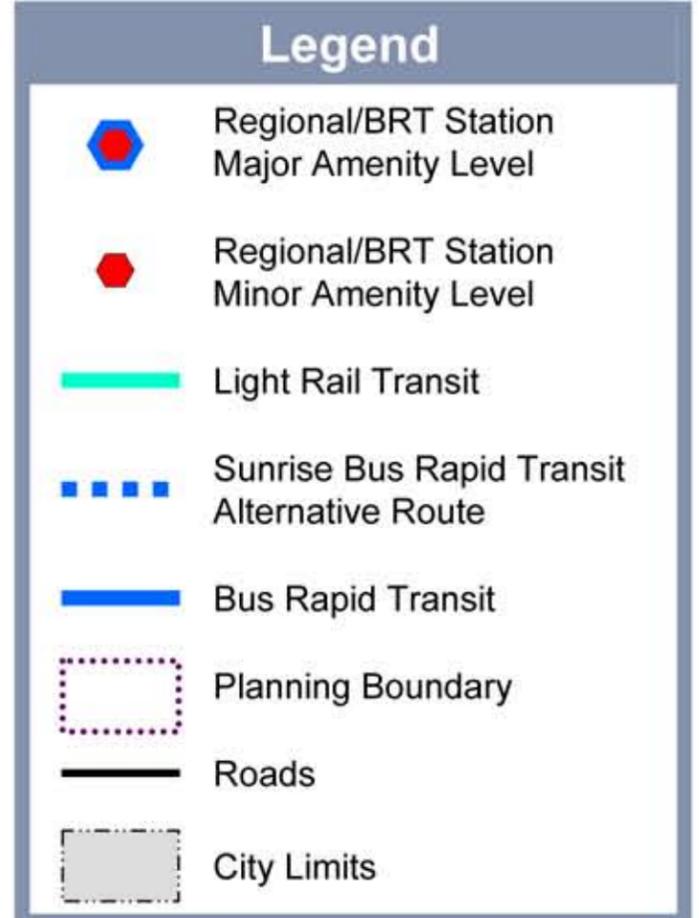
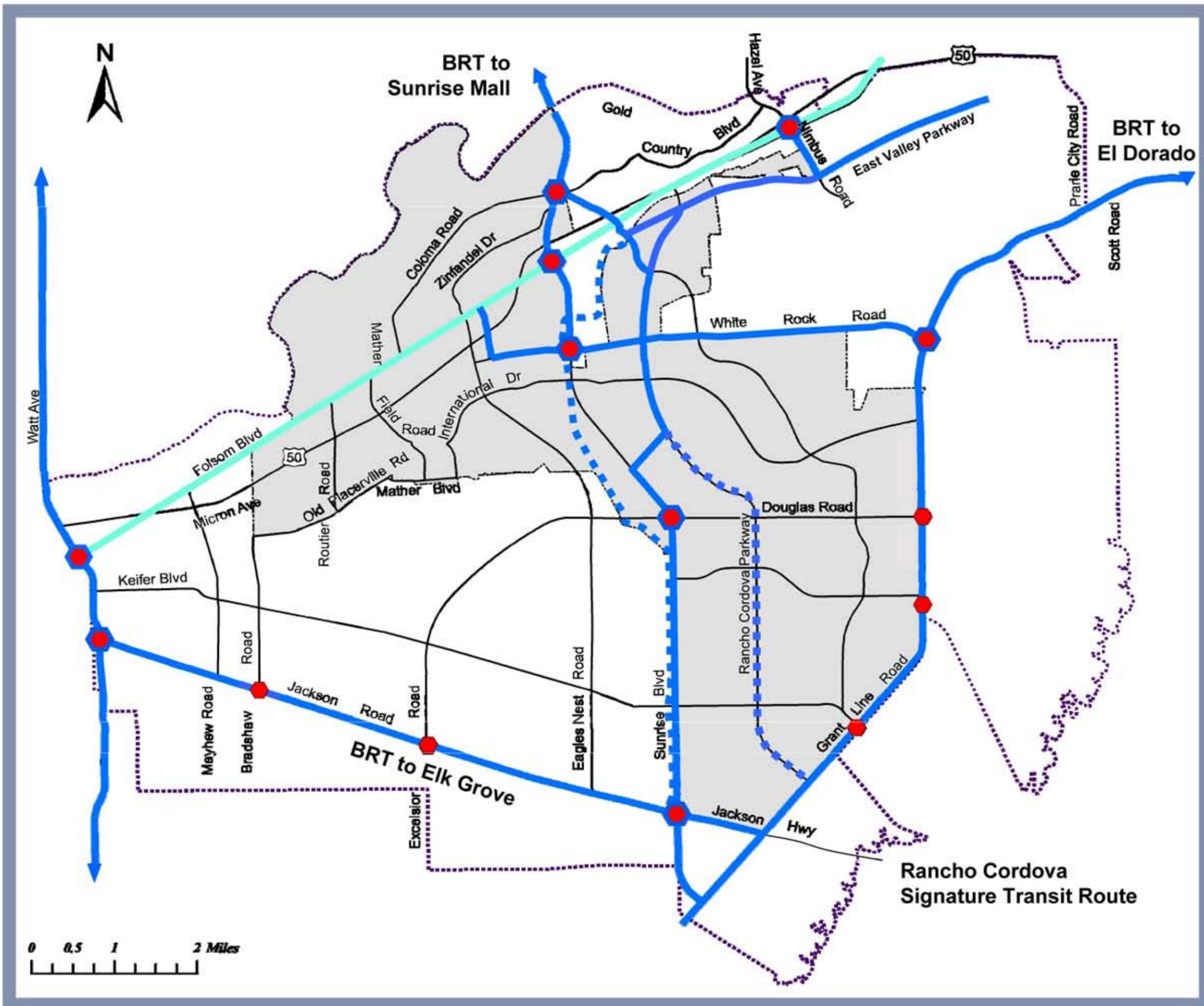
This proposed BRT system surrounds Rancho Cordova, and will provide a network of conveniently located routes that serve regional destinations. Regional BRT service will likely be provided by Regional Transit, unless the City desires to run other service, such as a direct Rancho Cordova line. The intent is to have each BRT line intersect with the LRT system for full regional accessibility and connectivity. Within Rancho Cordova, the existing regional service is provided along RT's existing east/west LRT line through Rancho Cordova. Two new LRT stations are recommended at the Mine Shaft and Horn Road. Proposed BRT corridors include:

- Grant Line Road from Elk Grove to the south to El Dorado County to the northeast. This route defines the eastern City limits and takes advantage of the Grant Line Road alternative of the Elk Grove/Rancho Cordova/El Dorado County connector. It intersects with the White Rock Road east/west BRT line.
- Sunrise Boulevard connecting at Grant Line Road in the south to just north of Douglas Road, cutting over to Rancho Cordova Parkway until it joins the proposed Citrus Road connector, then rejoining Sunrise and terminating at the Sunrise Mall. This route will provide a critical north/south BRT connection to the City of Rancho Cordova and the regional LRT system, as well as north to Sunrise Mall. Alternate routes are described on in the following section.
- Jackson Highway from Grant Line Road to Watt Avenue, as described in the Sacramento County General Plan Update. This alignment provides an east/west connection to the regional LRT system for residents in the southern area of the City.

**Figure 5.
Regional Service**



**Existing LRT and Proposed
BRT Routes with Alternative
Sunrise BRT Route**



0 0.5 1 2 Miles

- White Rock Road from Grant Line Road to the City Hall, where it joins the proposed pedestrian/transit Promenade into downtown. This route is the most “central” east/west corridor, providing regional access into the heart of Rancho Cordova, including the downtown.
- Following the proposed Easton Valley Parkway and connecting to Nimbus Road and turning north to the Hazel LRT station. This route allows east/west regional movement connecting to the north/south service in Westborough.

Alternate “Sunrise” BRT Routes

Alternatives are considered for Sunrise Boulevard due to its heavily congested condition, especially between White Rock Road and Folsom Boulevard. Working with City staff, the Planning Team sought alternatives that by-passed this segment of Sunrise. One alternative BRT route uses the Folsom South Canal from Jackson Highway to the Citrus Road connector (Figure 5). This alignment essentially parallels Sunrise Boulevard. As the City proceeds with Folsom South Canal corridor planning efforts, a detailed study can determine if this alternative is feasible. The Canal alternative is on federal property (Bureau of Reclamation), and the use of the right-of-way requires an intergovernmental agreement for transit or any other non-flood control/water conveyance use.

A second alternative follows the Signature Route (Rancho Cordova Parkway) from Grant Line Road to Sunrise Boulevard via the Citrus Road connector. Such service should be restricted to morning and afternoon peak commuting periods. Under this scenario, there are limited stops along Rancho Cordova Parkway. For example, upon leaving Grant Line Road, stops might be located only at Chrysanthy Boulevard, White Rock Road and finally at Folsom Boulevard. This allows smoother, more consistent flow than Sunrise Boulevard.

BRT Cost Considerations

For planning purposes, BRT capital costs for a fixed guideway can approach \$10M per mile. This amount includes stations, fixtures and lighting, urban design features, and associated amenities. Right-of-way acquisition costs are not included. BRT operating costs are equivalent to current RT express bus costs.

IMPLEMENTATION CONSIDERATIONS

As Rancho Cordova matures, the Transit Master Plan’s implementation may take several forms and structures. Only an overview is suggested here, since there are many decisions yet to be made: which entity will lead; what will it cost; how will it be funded; and are there transitional arrangements? These and other questions receive attention in future Transit Plan development.

Relationship with Sacramento Regional Transit

As the plan is proposed, RT provides regional service, since it extends beyond City boundaries, and this is a logical strategy. RT also currently offers the equivalent of “City” type service. Until the City ultimately decides its role as a transit provider, RT can deliver this City service that links to the Regional system. To facilitate effective transit service and coverage, the City and RT can coordinate routing, scheduling, frequency, and transferring between service types.

Additionally, if right-of-way is required, joint acquisition action between the two is a possibility. Operational and financial alternatives are set forth in future plan development.

LAND USE DEVELOPMENT CONSIDERATIONS

Right-of-Way Implications

If the City desires to establish fixed guideways for transit service, advance acquisition is required, if right-of-way is not available. To determine if such acquisitions are necessary, the Road Sizing Diagram found in the General Plan’s Circulation Element should be used as a guide. With Rancho Cordova Parkway defined as the “Signature Route” and fixed guideway anticipated, and development proceeding in the Suncreek area, the City acquired 30’ of additional right-of-way south of Douglas from the developers. Future negotiations in the Rio Del Oro area need the same consideration. Again, if RT is the service provider, the City and RT can cooperate in the land acquisition process.

Figure 6 shows roadways that likely will need additional right-of-way or other operational considerations that negate acquisition. Figure 6 shows the proposed “Citrus Connector” as a two-lane facility, but if it functions as a BRT route and a portion of the streetcar “loop”, two more lanes may be required.

When possible, the streetcar should share the right-of-way with automobiles, since it is only 8.5’ wide. It “obeys” the traffic laws and has a high passenger capacity. This approach minimizes acquisition costs and increases cost-effectiveness.

The only other right-of-way consideration is the 15’ wide area that RT requires at station locations. The total width at stations would be 40 feet, including two 12.5 foot BRT lanes.

Figure 7 illustrates possible median and outside-lane bus streetcar configuration cross-sections depicting ways that transit can operate in City streets. Transit can be in-street running with traffic, or it can be in separate fixed guideways (exclusive lane).

Integrated Transit in an Urban Environment



Land Use/Development Implications

While successful transit systems rely on appropriate technologies and service strategies, land uses and ancillary transportation services in the vicinity of transit systems are critical to successful operations. The continued development of transit planning in the City of Rancho Cordova will require cooperation and agreement with future development and redevelopment throughout the City. Policies and directives should be followed that provide supportive land uses and opportunities for transit station access.

Transit supportive policies could initially include:

- Provision of Park & Ride facilities
- Development of good pedestrian access to transit stations
- High density development within one-quarter mile of transit stations
- Increased density within one-half mile of transit stations
- Mixed use development in the vicinity of transit stations
- Residential subdivision design with a high degree of roadway and pedestrian connectivity.

The City of Rancho Cordova should partner with the development community in the early stages of project development in order to focus land use strategies that will support a robust transit system.

**Figure 6.
ROW Implications
and Operational
Considerations**

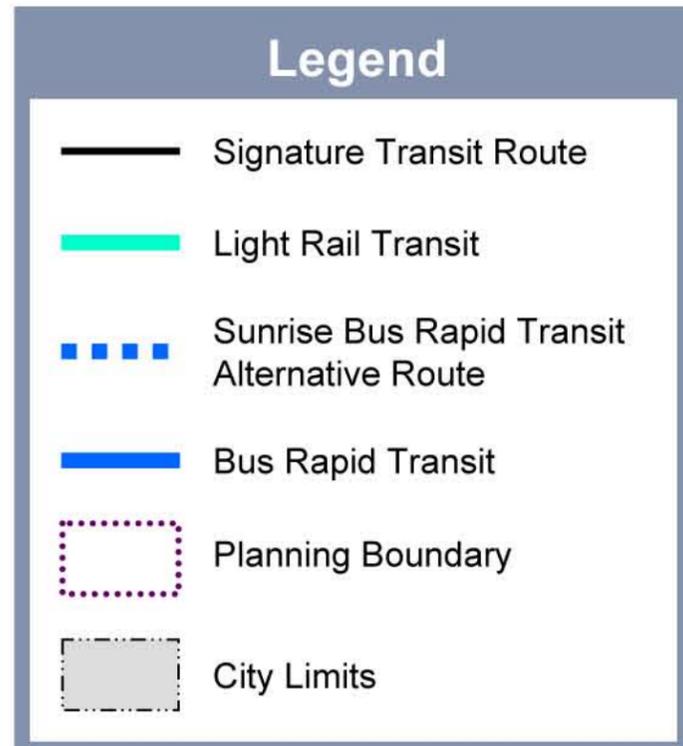
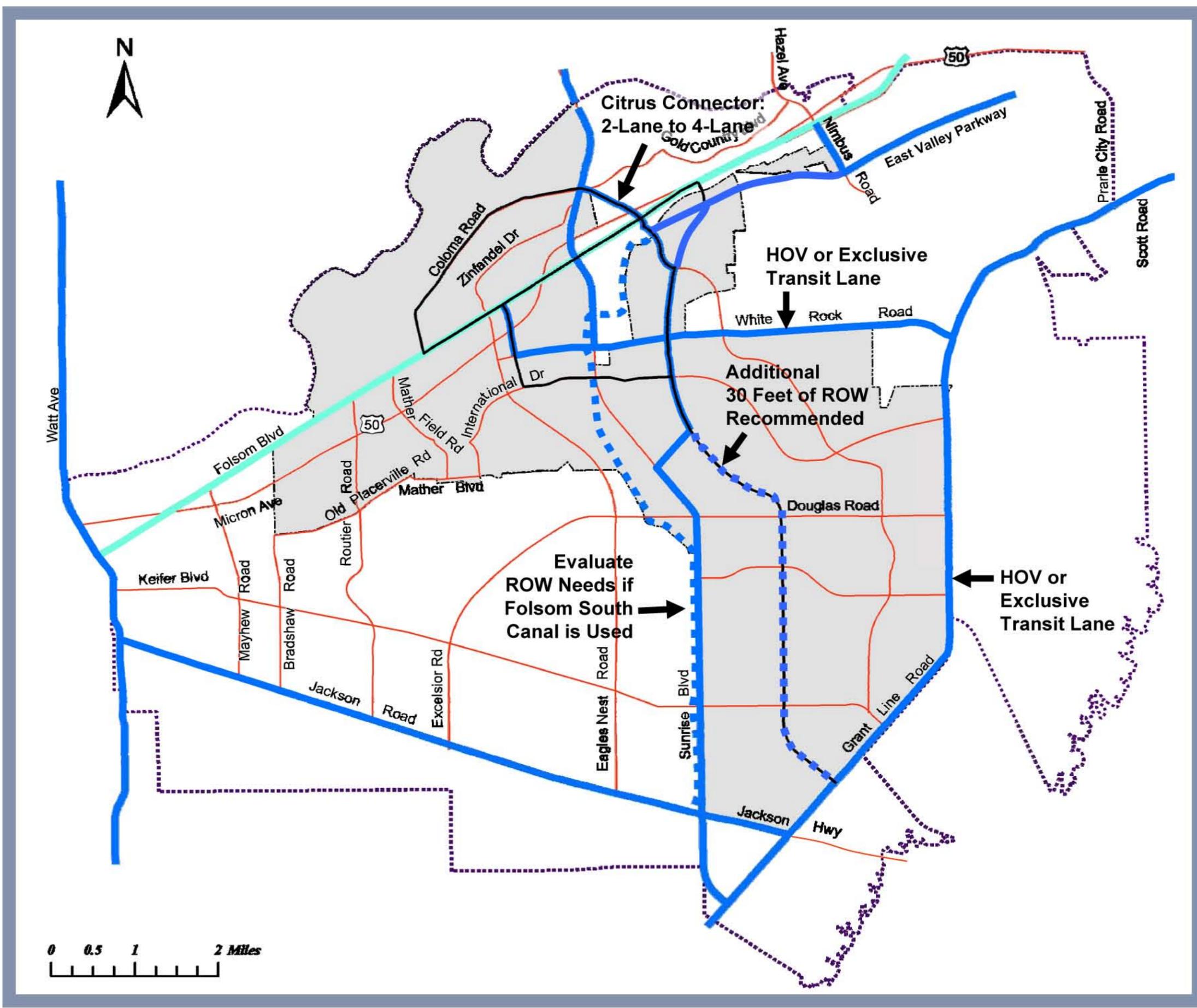
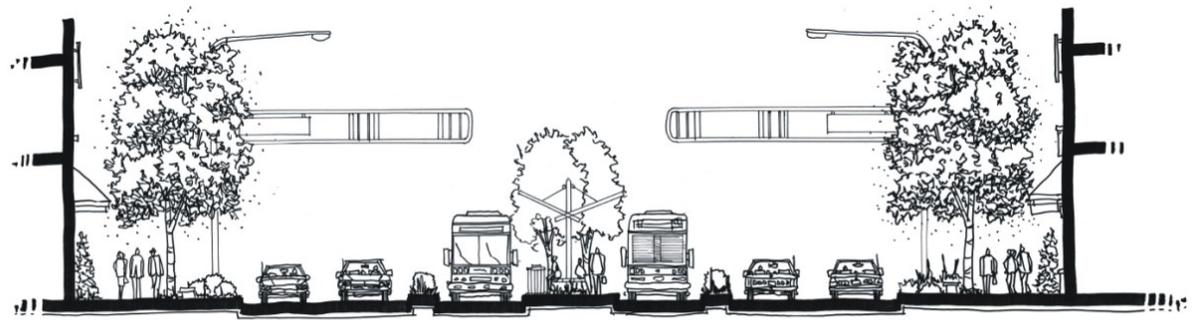
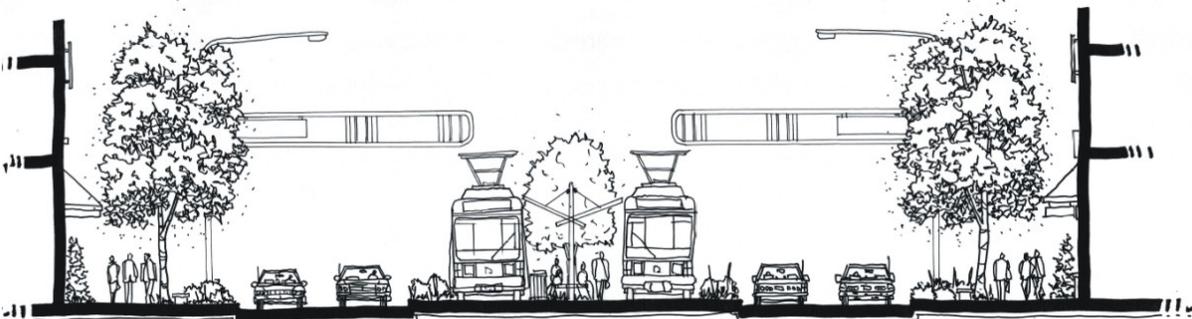


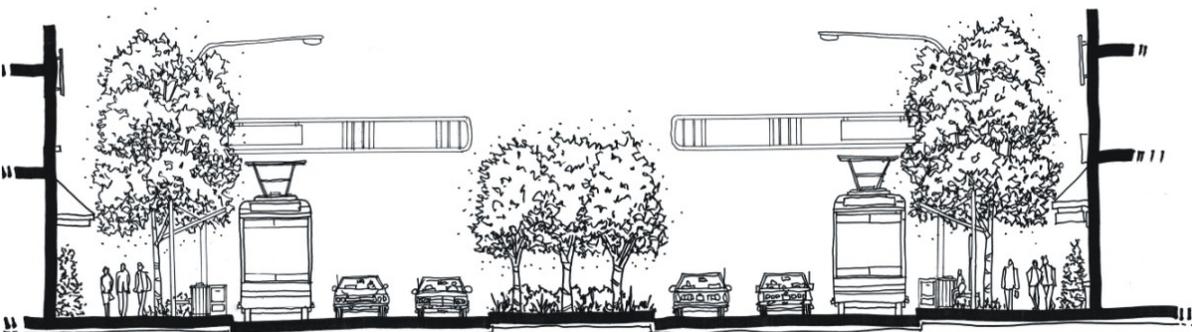
Figure 7. Cross-sections of Conceptual Bus and Streetcar Configurations



Cross-section A: Bus in Median Configuration



Cross-section B: Streetcar in Median Configuration



Cross-section C: Streetcar in Inside Configuration

The 30 feet of additional right-of-way along Rancho Cordova Parkway is sufficient for either option. As the City develops actual right-of-way width requirements for the various roadway types, additional right-of-way needs for specific transit types can be recommended. For the streetcar, the first preference is to be in street-running (mixed traffic), requiring no additional right-of-way.

Station/Stop Development

Various figures included within this document show station locations, but in many cases, these can be simple roadside shelters, an example of which is shown in Photo 1. Most bus stops only have a bench and a route sign. At key locations, however, to set the tone for high quality transit, more elaborate shelters, platforms, and furnishings are appropriate. This is especially true where two modes interconnect. This transfer station has more opportunity for retail and support services. These amenities should mirror the level of detail for a LRT station. Right-of-way demands around these stations may be higher depending on whether or not vehicles are expected to pull out of the main lanes of traffic as passenger's board and de-board.

Photo 2 is an example of a BRT multimodal station with a major amenity level high. This type of station has joint uses in addition to being a transit station. Such a station may be developed as a public/private partnership.



Photo 1. Walk-up Station



Photo 2. Multimodal Station

Transit Funding

Transit systems are financed principally using state, local and federal funds. Federal funds usually require matching funds, except in the few cases where there are direct grants for specialized services. A dedicated funding source is necessary to have an effective transit system. In fact, the Federal Transit Administration (FTA) requires a predictable source of local funds to receive federal monies. The Sacramento region, through “Measure A” and other sources such as impact fees and user charges, has dedicated funding sources. With systems expanding, the funding formula grows more critical. With the advent of the streetcar, complex public/private funding solutions are becoming the norm.

Federal Revenue Sources

Federal funding for public transportation comes through the U.S. Department of Transportation (USDOT), and the FTA manages them. Programs and funding for public transportation were enabled under the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. The Act established authorizing levels and programs for transit and highway projects, and it institutionalized the ability to shift funds from one program to another depending on local priorities. ISTEA expired in 1997, replaced by the Transportation Equity Act for the 21st Century (TEA-21). TEA-21, which was effective from 1998 to 2003, generally maintained the previously established programs and raised the overall level of funding. Congress recently reauthorized the third iteration (2003-2009) of the surface transportation program, known as SAFETEA-LU, and President Bush signed it into law in August 2005.

Section 5309 Funds - The FTA administers funding programs designed to assist local agencies in funding new rail starts. Competition for FTA “New Starts” funding is fierce nationally, with many cities around the country developing “New Starts” projects, seeking Federal participation as a principal funding source. For example, FTA received over 60 applications for “New Starts” projects in FY 2005. The cost of new rail systems can be high, sometimes in the billions of dollars. As a result, the FTA process for qualifying a project for “New Starts” funding is very structured and comprehensive.

“Small Starts” is a new Section 5309 provision for projects that are seeking less than \$75M in federal funding, with a total estimated project cost of less than \$250M. It is designed to fund BRT, streetcars, and commuter rail projects. The FTA will provide Federal assistance only if FTA finds that the project is: (a) based on planning and Alternative Analysis, (b) justified based on a review of its public transportation supportive land use policies, cost effectiveness, and effect on local economic development; and (c) supported by an acceptable degree of local financial commitment.

In both cases, a proposed project first must be authorized by Congress and secondly, it must be accompanied by a complete Alternatives Analysis process to the satisfaction of the FTA. Administrative rules and procedures governing project review for “Small Starts” projects are expected in 2006 for FY 2008 funding.

Section 5311 Funds - This non-urbanized area funding program (5311) provides transit capital and operating assistance through the State to rural areas (less than 50,000 in population). FTA provides the California Department of Transportation with an annual appropriation to fund the maintenance, development, improvement and use of public transportation systems in rural and small urban areas in California.

Section 5310 Funds - The special needs funding program (5310) provides transit capital and operating assistance to the State of California for allocation to organizations or governmental authorities that offer specialized transportation services to elderly persons and to persons with disabilities. This program allows for the transfer of funds to the non-urbanized area program (5311), if funds are used for the purpose authorized.

Section 5317 Funds - The New Freedom Initiative (5317) provides formula grants to the State for new transportation services and transportation alternatives for individuals with disabilities beyond those required by the Americans with Disabilities Act of 1990 (ADA), including motor

vehicle programs that assist persons with disabilities with transportation to and from jobs or employment services. States solicit applications for grants and then award the grants on a competitive basis. This program allows for the transfer of 5317 funds to the non-urbanized area program (5311), provided the funds are used for the authorized purpose.

Congestion Mitigation Air Quality (CMAQ) and Transportation Enhancement Funding - These program funds are designed to assist communities with transportation strategies that reduce auto emissions and enhance the multi-modal functioning of local and regional transportation systems. Both help reduce air pollution. The availability of these funding sources has been continued under SAFETEA-LU. Allocated through Metropolitan Planning Organizations (MPOs), the virtue of these programs is the flexibility they allow in dedicating federal surface transportation funds to a wide spectrum of transportation-related investments.

Economic Development Administration (EDA) Grants - Although not yet used for a streetcar project, the Public Works Grants provided by the U.S. Department of Commerce's Economic Development Administration is a potential source of capital grant funding. Given the program's stated purposes and the potential project's strong connection with strategic job-creating investments, a case can be made for these funds to be used.

Local Revenue Sources

In the discussion of federal funding, the point was made regarding the use of local funds as a match. Additionally, as the City moves toward developing a predictable transit system a variety of non-traditional sources exists. Rancho Cordova imposes impact fees for transportation improvements, including transit. The growing array of local revenue sources illustrates that financing of transit projects are different and complex.

Optional Local Sales Tax - The most pervasive local revenue source is the use of an optional local sales tax. This source is popular because it provides significant revenue, generally in the millions, on an annual basis. Sacramento's Measure A falls into this category of local funding. Since it is multi-year, the sales tax is dependable. The tax is subject to a public referendum.

Tax Increment Financing - California law allows the use of Tax Increment Financing (TIF) for infrastructure necessary to support new development. Under the legislation, an area is designated as "blighted", and new revenues, derived from increasing real estate value in that district, are directed to infrastructure that supports that value. This form of financing is a "bootstrapping" mechanism, making investments that support real estate development and improvement, channeling the increased yield in public revenues to more investments, and so on.

General Obligation (GO) Bonds - Using the full faith and credit of the City, GO bonding is a useful tool for financing the capital costs of transit investments.

Business Improvement District(s) - Rancho Cordova could consider the formation of a Business Improvement District (BID) as an additional means of generating real estate-related revenue for the streetcars or other circulators. BIDs may be established by a municipality or county resolution. The establishment of a BID is usually predicated on the approval of a majority of the property owners within the proposed district. The funds from the property assessment can be used to promote and market the area. Funds also can be used to enhance



security, maintenance, beautification, and transportation. The property owners shall be specially benefited by the provision of the BID services and will be assessed upon each such property in reasonable proportion to the benefits derived from the services. Numerous BIDs have been established throughout the country.

BIDs typically rely on an assessment applied to the properties within a defined area, based on an assessed property value, a per-square-foot basis, or a linear frontage basis. The property owners must agree to the assessment.

Special Assessment Districts - Municipalities and counties may choose to create a Special Assessment District to provide services or construct capital infrastructure for specified benefits to property owners. Creating the Special Assessment District, adopting an equitable formula, and documenting the benefits may be accomplished by resolution of the City. Much like the BID requirements, the properties being assessed must be specifically benefited by the services and/or capital improvements. The assessment must be reasonably proportionate to the benefits. Unlike the BID, the governing jurisdiction may create the resolution without any vote of the affected property owners. The special assessment allows greater flexibility than that allowed in BIDs.

The special assessment is a valid tool for generating revenues as the local share of capital and/or operating costs associated with the proposed streetcar system. There are as many special assessment variations as the projects that employ them. The viability of this approach is determined by the rationale for allocating the cost burdens to potential beneficiaries, as well as the impacts on property values that might result from both the benefit to be received and the costs to be allocated. There are several basic approaches to such special assessments; among them, California law provides for Infrastructure Financing Districts, a mechanism that could be used to assess benefited property owners for a portion of the cost of a streetcar line serving their properties.

The range of potential assessment rates also varies, and the experience of other communities was researched for similar assessment districts and rates used to fund local transportation-related infrastructure. Based on the beneficial effect of streetcar or light rail projects on property values and development in other U.S. cities, it is reasonable to forecast that the streetcar system itself would benefit nearby properties by enhancing their development potential.

Rental Car Taxes – Some communities are using taxes from rentals of automobiles to fund transit studies and operations. This can be a controversial provision, if there is not a broad base of other sources.

Passes - Pass programs, supported by employers and educational institutions, can be a significant revenue source, again typically for ongoing costs. For reasons of employee trip reduction, reduced parking demand, and mitigation of parking conflicts with adjacent areas, employers have multiple incentives for supporting employee transit pass programs.

Ancillary Revenues (Advertising and Sponsorships) - The potential ancillary revenue for this system has two components. First is the media value of the advertising on, within, and near the vehicles. The second is concession agreements and/or rental fees on vending machines or automatic teller machines at the proposed stops. There have been a wide variety of approaches to ancillary revenues in other streetcar projects. Some projects have been aggressive in exploiting these opportunities, others are more cautious.



APPENDIX A - MEETING NOTES

Subject:	Rancho Cordova Transit Master Plan Kick-Off Meeting		
Client:	City of Rancho Cordova		
Project:	Transit Master Plan	Project No:	201201 - 36421
Meeting Date:	1/11/06	Meeting Location:	HDR Conference Room
Attendees:	<p><i>City of Rancho Cordova:</i> Cyrus Abhar, Elizabeth Sparkman, Paul Junker, Jeffrey Beiswenger, Curt Haven, Bob Rockett</p> <p><i>HDR & HDR/S.R. Beard & Assoc.:</i> Mike Hochschild, David Taylor, Lisa Carpenter</p> <p><i>The Hoyt Co.:</i> Wendy Hoyt, Kim Pallari</p> <p><i>PMC:</i> Christopher Jordan</p> <p><i>AQMD:</i> Jeane Borkenhagen</p>		
Notes by:	Lisa Carpenter		

Topics Discussed

I. Project Background

The City of Rancho Cordova (City) is completing its circulation plan for the City at full build out (2050). They had hoped that the pedestrian and bicycle plan would go hand in hand with the roadway network.

II. Fee Projections

Above and beyond SACRT's transit fees and plans, the City has a transportation fee of \$17.5 (based on \$ 1.3 billion in improvements). The City has CSA10 funding which is designed to provide traffic relief. In the past, CSA10 dollars have been available for air quality mitigation. CSA10 dollars are not yet detached from LAFCO. This process will take several more months.

When the development fee is updated, the City will receive about \$1 million/year for transportation related to the Sunridge Specific Plan. The City also has an interim transit plan that includes \$150 million in transit improvements.

III. Sacramento Regional Transit (SACRT)

The City does not presently receive good transit service operation from SACRT. When Elk Grove implemented their own transit service, ridership increased 70% within the first six months.

City staff has spoken to Dr. Scott (SACRT) about remaining part of SACRT's jurisdiction. However, the City could remove itself from SACRT's jurisdiction, as Elk Grove has done, if SACRT doesn't increase more localized service to the Rancho Cordova community.

IV. City Goals/Priorities

The City wants the Transit Master Plan to be tangible, something that can be implemented and not simply put on a shelf and unused.

Transit is an element of the Rancho Cordova General Plan which is scheduled to be adopted by June 2006. Because of timing, the City would like to see some policy and framework for future transit plans included in the General Plan. This will allow some time to continue the Master Plan study and flush out the specifics after the adoption of the General Plan. A General Plan Advisory Committee has been formed.

The City currently has 34,000 new homes under application and does not want to lose them due to not having a current transit master plan. If the process of developing a transit master plan takes longer than eight weeks, then the City stands to lose some opportunities for development south of Douglas (e.g., Sun Ridge). The area south of Douglas is the first area of focus for the transit master plan to accommodate the urgent need and pressure by the developers. The team should look at facilities, ROW, technology, park-n-ride or kiss-n-ride opportunities south of Douglas. The number one priority is to define what needs to be accomplished for the General Plan. Connectivity and development of a good plan is key.

V. City Data

Christopher Jordan provided an overview of the City's available maps/data.

RC adopted the Sacramento County Mobility Study results.

The current Transit System Map identifies Rancho Cordova Parkway to Jeager as one of several corridors with enhanced technology opportunities such as BRT.

At full build out, Rancho Cordova will have 1.5 to 1.75 jobs per household.

Fehr & Peers is presently preparing a revised roadway sizing diagram.

VI. Charrettes

The team should bring the stakeholders some specific recommendations to the charrette as stakeholders are presently experiencing some study overload. The transit ideas and systems should be in place before gathering the public or stakeholders for comments. The City would like to see some initial numbers and cost for different transit alternatives before the charrette. An effort should be made to help educate stakeholders as to the cost of various transit types. Potential dates for the charrette include February 15th and 16th.

VII. Action Items

- √ Wendy to talk with Dr. Scott and SACOG about the project and the quick turn around.
- √ Kim to set up the meeting with RT (Taiwo Jaiyeoba and Mike Wiley) to gather information.
- √ Elizabeth to provide growth/fee projections for the City
- √ Jeane to send point system information to HDR
- √ Chris will provide more updated City maps

Rancho Cordova Transit Master Plan
Meeting with Regional Transit
January 30, 2006

Attendees:

Mike Wiley, RT
Taiwo Jaiyeoba, RT
Don Smith, RT
Mike Hochschild, HDR
Kim Pallari, The Hoyt Company

The purpose of the meeting was to kick-off information sharing between RT and Rancho Cordova regarding transportation planning in the regional, and specifically within Rancho Cordova. In order to begin development of Rancho Cordova's Transit Master Plan, M. Hochschild needs to gather information from RT on their long range regional and localized planning for transit.

M. Wiley provided some general comments regarding where RT is in their Transit Master Plan update process. The Master Plan adopted by RT in 1993 is in the process of being updated. Some of the old concepts have been initiated but others have not due to funding and a regional change in visioning, focusing more on land use such as: in-fill, re-use, mixed use etc. The updated Master Plan will look at the regional visions and coincide with SACOG's Metropolitan Transportation Plan (MTP) through the Blueprint process. The plan will look at the major corridors in the region and identify what improvements need to take place.

M. Wiley further explained that because the various cities such as Rancho Cordova have not fully adopted the Blueprint MTP plans, RT cannot at this time have a solid vision for the localized areas. RT currently has some ideas of what they would like to see, but are waiting to hear from the local jurisdictions on the Blueprint plans as well as waiting for some other projects to move further along including the planning project currently under way by SACOG called the Elk Grove-Rancho Cordova-El Dorado Connector Project.

The Strategic Plan that the RT Board of Directors approved clearly shows the focus of RT on enhancing mobility within the region. This does not necessarily mean that RT will operate all transit within the region but will focus on a seamless system with one fare structure, where the public can go to one source for access information on how to use the system. RT does have the capability of operating and providing all modes of transit to the region. RT would like to know how the Rancho Cordova land use plan fits into the Blueprint Plan so that RT can assist Rancho Cordova in enhancing their transit.

M. Wiley also stressed that the Transit Master Plan for Rancho Cordova be directly connected to pedestrian mobility. The process that Rancho Cordova is currently involved in will help RT in that they will basically take the Transit Master Plan that Rancho Cordova adopts and place it into the RT Master Plan. The problem will be coming up with the funding elements for the plan.

T. Jaiyeoba explained that RT is very interested in working with Rancho Cordova to come up with a feasible plan that will be included in the Rancho Cordova General Plan and ultimately implemented in the City.

RT would like to see the current land use and circulation maps that show the planned developments and major corridors so that they can understand how to best include the transit. What is planned and what is approved. Once they have more information, they will then be able to assist Rancho Cordova in the creation of a Transit Master Plan.

Action Items:

1. **M. Hochschild** to email T. Jaiyeoba a detailed list of the operational information that he needs on RT's current routes within their system.
2. **M. Hochschild** to provide RT with the current RC circulation map and land use maps by Monday, February 6th.
3. **M. Hochschild** to provide RT with information or studies that demonstrate density thresholds that support different bus services and streetcar services.
4. **M. Hochschild** to contact D. Taylor and C. Abhar regarding the Charrette approach (recommendations with some concepts for RT).
5. **RT** to review RC information in preparation for the Charrette scheduled for late February.
6. **K. Pallari** to work with RT staff to schedule the two-day Charrette to ensure maximum attendance.
7. **K. Pallari** to work with HDR to finalize the invite list, letter and format for the Charrette.
8. **K. Pallari** to talk with Cyrus Abhar regarding Charrette dates (targeted for 22-28th)

Subject:	Rancho Cordova Transit Master Plan Planning Team Meeting		
Client:	City of Rancho Cordova		
Project:	Transit Master Plan	Project No:	201201 - 36421
Meeting Date:	2/23/06	Meeting Location:	City Hall Meeting Room
Attendees:	<i>City of Rancho Cordova:</i> Cyrus Abhar, Mark Thomas, Elizabeth Sparkman, Jeffrey Beiswenger <i>HDR & HDR/S.R. Beard & Assoc.:</i> Mike Hochschild, David Taylor, Lisa Carpenter <i>The Hoyt Co.:</i> Kim Pallari <i>PMC:</i> Christopher Jordan <i>SACOG:</i> Anne Novotny <i>SACRT:</i> Taiwo Jaiyeoba, Don Smith		
Notes by:	Lisa Carpenter, w/ input from Kim Pallari		

Topics Discussed

I. Introduction

Cyrus provided a brief introduction as to the importance of the existing opportunity to conduct short and long-term planning for the City of Rancho Cordova with regard to the Transit Master Plan.

Meeting attendees introduced themselves as there were attendees from SACRT and SACOG who had not previously attending the Transit Planning discussions.

II. Update of Transit Planning Process

Mike provided a brief updated on the progress of the transit planning process noting that he was examining the existing conditions and related issues while David Taylor was working to address policy, goals and general plan related issues.

Mike outlined key purposes of the March 20th and 21st meeting including 1) presenting the City's signature service; 2) present and seek input on planning activities related to the City's bus service; 3) presentation of transit modes and routes; and 4) possible transit connection points with RT stations.

Chris expressed some concern regarding obtaining sufficient transit information in time to include it in the General Plan update. Chris, Mike and David agreed to dates for submittal of transit information for inclusion in the General Plan Update.

III. Candidate Transit Technologies

David presented an overview of three transit technologies for the City's consideration including bus rapid transit, street cars, and light rail. Costs, maintenance and service factors of all three technologies were presented.

IV. Signature Service Map

David and Mike presented a signature service map showing suggested core services/routes for discussion purposes with meeting attendees. Issues for consideration included: connection to RT stations/services, bi-directional track, connection to north of Sunrise, ridership sustainability, land use development, potential development of a convention area, and options for operational responsibilities.

V. March 20th and 21st Planning Workshop Format

The March 20th and 21st Planning Workshop will be held at City Hall.

Attendees will include the Planning Team:

Cyrus Abhar
Mark Thomas
Elizabeth Sparkman
Christopher Jordan
Jeff Beiswenger
Anne Novotny
Jeane Borkenhagen
Taiwo Jaiyeoba
Don Smith
Mike Hochschild
David Taylor
Lisa Carpenter
Wendy Hoyt
Kim Pallari

A new agenda for the 2-day workshop will be circulated next week. The agenda will detail what the workshop will include so that the Rancho Cordova City Council members that wish to attend can choose when best to sit in.

On March 21st in the afternoon, key property owners will be invited to attend to provide input on the progress that has been made by the Planning Team. The agenda will reflect the time that is designated for the property owner participation.

Property Owners Include:

Mind Shaft - Brian Cooley
Aerojet - David Hatch
Rio Del Oro - Russ Davis
Judy Waegell

Representatives from the BIA, Sunridge Development and others to be identified by Cyrus after his meeting on Friday with local developers.

The Property Owners will be invited to the workshop (Day 2 afternoon) via an invitation letter

that will be mailed out no later than March 3rd. The Hoyt Company will be responsible for approval of text and mailing of the letter.

VI. April 3rd City Council Workshop

On April 3rd, the City will host a City Council Workshop that will be open to the public and project stakeholders (meeting time TBD). This workshop will provide an opportunity for the city to introduce the Transit Master Plan to a greater audience of City Council members, key stakeholders and the community. Attendees will be able to provide valued input at this time on the progress that the City has made on the Transit Master Plan.

Promotion of the April 3rd Workshop is yet to be determined. The Hoyt Company will work with City General Plan staff to identify the best course of promoting the event, whether through web site, email distribution, media or mailings.

Notification to the public regarding the open City Council Workshop should occur no later than March 13th to provide three weeks notice.

VII. Action Items

RANCHO CORDOVA

1. Christopher Jordan to send David Taylor the latest General Plan information by Friday February 24.
2. Cyrus Abhar to email Kim Pallari the list of Property Owners that wish to attend on March 21st by Tuesday, February 28th.
3. Cyrus Abhar to provide HDR with the DKS Origin/Destination Study that shows residents that live and work in RC by Wednesday March 1st.
4. Cyrus Abhar to review TMP information received on March 3rd and determine if more is needed as a place holder in the General Plan by March 8th.
5. Mark Thomas to work with Kim Pallari on workshop logistics and overall management of the project (continuous).

REGIONAL TRANSIT

1. Taiwo Jaiyeoba and RT to provide Mike Hochschild with RT data by March 3rd.

HDR

1. Mike Hochschild and Team to send Rancho Cordova Transit Master Plan information to be placed in the General Plan by Friday March 3rd.
2. Mike Hochschild and Team to provide any additional information if feasible to Rancho Cordova by March 10th for insertion into the General Plan before releasing it to the Public on March 15th.
3. Mike Hochschild and Team to look at the signature corridor and include area north of Sunrise (Citrus Road) before the March Workshop.

The Hoyt Company

1. Kim Pallari to work with Mark Thomas and HDR Team to coordinate the March and April Workshops, promotion, invitation letter, stakeholder list and overall facilitation of the outreach approach.
2. Kim Pallari to email Agenda for the 2-Day Workshop to the Planning Team by Wednesday March 1st.
3. Kim Pallari to facilitate the mailing of the invitation letter the property owners by March 3rd.

Subject:	Transit Master Plan - Planning Team Planning Workshop		
Client:	City of Rancho Cordova		
Project:	Rancho Cordova Transit Master Plan	Project No:	201201- 36421
Meeting Date:	March 20, 2006	Meeting Location:	City Hall - American River Room
Attendees:	<p>City of Rancho Cordova: Mark Thomas, Cyrus Abhar</p> <p>SACRT: Taiwo Jaiyeoba, Don Smith</p> <p>SACOG: Jim Brown</p> <p>PMC/City of Rancho Cordova - Christopher Jordan, Jeffery Beiswenger</p> <p>HDR: Mike Hochschild, David Taylor, Lisa Carpenter</p> <p>The Hoyt Co.: Wendy Hoyt, Kim Pallari</p>		
Notes by:	Lisa Carpenter		

Topics Discussed

I. Welcome

Kim Pallari welcomed the Planning Team to the 2-day workshop. Other persons invited, but unable to attend included: Jeane Borkenhagen, from the Sacramento Metropolitan Air Quality Management District, and Jim Brown, of the Sacramento Area Council of Governments.

II. Progress Update

Mike provided a summary of the HDR Team progress on the General Plan language and the Transit Master Plan. A brief progress summary follows.

General Plan Progress

The HDR Team submitted transit-related narratives for inclusion the General Plan.

Transit Master Plan Progress

The Team has been working to identify ways to:

- Join north and south areas of the city
- Connect existing and new development in the city
- Ways to tie the city to the larger regional system
- Ways to simplify routes (1 seat rides)
- Opportunities to create visible, identifiable service (e.g., fun, free, frequent)

The Team identified the following informational needs:

- Identification of existing roadway congestion
- Impact on sizing diagram (How wide are the 2-, 4-, 6-, 8 lanes?)
- Information on Sac RTs station approach parameters

III. Goal of Planning Team Workshop

The Planning Team established the following goals to be accomplished by the end of the first day of the workshop.

- Draw up cross sections
- Identifying producers and attractors (on build out)

IV. RT Expectations / Introductory Comments

Taiwo provided some brief introductory remarks regarding RTs partnership with the City, applauding the City's effort to specifically call out transit in its master plan. This effort for the City is well-timed with other RT activities. Taiwo noted that RT is working with SACOG to develop a regional transportation master plan (TMP). The TMP will be plugged into the Blueprint. RT will ultimately have a master plan. Other key points made by Taiwo included:

- Current RT System in the City
New housing (34,000 housing units) anticipated in the City will have major impact on modifications to existing services and introduction of new services. RT anticipates a strong concentration to link BRT to the regional system.
- Understanding the impact of developer fees and potential financing is important.
- Eventually, the RT system will go to the Amtrak station downtown which will allow people to go to San Francisco without driving. The concept of transit oriented design (TOD) is critical. It will be important to identify the major nodes. Having high and medium density around the transit stations is important.
- RT is aware that contributions to the system may also affect air quality.
- Consideration should be given to the necessary maintenance facilities for future transit-related equipment.

V. Presentation of the City's Vision

David gave a presentation to the Planning Team summarizing the City's vision, goals and policies related to transit. Planning Team members were asked to provide comments on the draft vision. Other concepts presented by David included:

- Multi-level development to support BRT in the future
- Sensitivity to number of units per acre
- Maximizing the City's investment, while increasing ridership
- Levels of service
- Levels of Service
- Use of consistent transit terminology
- Signature Transit Route
- Station locations (can function to tie together major intersections, town centers, residential and commercial areas)

VI. Map Comments

The Planning Team worked together throughout the afternoon to revise the draft transit planning maps. Discussion topics included:

Regional Service Connections
Sunrise to Roseville

Elk Grove Connector
Bradshaw connecting Jackson to Folsom

Stations

Regional, BRT, Signature Route

Local Service Discussion - City-Wide Connections
City's Road Sizing Diagram
District Boundaries

Subject:	Rancho Cordova Transit Master Plan Planning Team Workshop Day 2 - Morning Session Meeting with Council Members Linda Budge and Dave Sander		
Client:	City of Rancho Cordova		
Project:	Transit Master Plan	Project No:	201201 - 36421
Meeting Date:	March 21, 2006 (8:30 a.m.)	Meeting Location:	City Hall Meeting Room
Attendees:	<p>City of Rancho Cordova: <i>Council Members:</i> Linda Budge and Dave Sander <i>City Staff:</i> Cyrus Abhar, Mark Thomas, Elizabeth Sparkman</p> <p>SACRT: Taiwo Jaiyeoba</p> <p>PMC/City of Rancho Cordova - Christopher Jordan, Jeffery Beiswenger</p> <p>HDR: Mike Hochschild, David Taylor, Lisa Carpenter</p> <p>The Hoyt Co.: Wendy Hoyt, Kim Pallari</p>		
Notes by:	Lisa Carpenter		

Topics Discussed

I. Introductions

Wendy Hoyt introduced the group to Council Members Linda Budge and Dave Sander.

II. Vision

The City's vision for transit was presented and discussed with the Council Members.

Council Member Budge noted that the vision did not transit access for the growing population of older residents.

III. Defining Success & Comments on Transit Opportunities

Wendy led a discussion on defining transit success for the city, posing the question: What would success look like to the council members?

Council Member Budge's comments included:

- Desire for a trolley line that starts in the Villages, extends to Sunrise-Douglas and provides service up and down Sunrise.
- Would like to avoid removing landscaping along Sunrise
- Likes in-street, mixed-flow operation, despite potential slow downs
- Need to provide and East-West transit opportunity for workers

- If transit is provided north of Folsom Blvd, it could be used to transfer people to stations and stores.
- Extend service on Coloma and potentially select a couple of major cross town corridors
- Envisions trolleys and shuttles north of Hwy. 50
- Expressed some concern over potential future traffic congestion created due to limited grocery stores in the Preserve area.
- Need to be open to the possibility that transit subsidiaries (such as Folsom Stage Line and E-Transit) may be a future reality.
- City has been contacted repeatedly by Elk Grove re: commuter bus route between two cities.
- Give consideration to obtaining transit statistics of emerging community such as North Natomas
- One of City's greatest issues is cut through traffic

Council Member Sander's comments included:

- Encourages realism with regard to operational costs of system
- Suggests identifying how many miles can be built based on fees and operational costs and give consideration to replacement cost of vehicles
- May be sufficient densities for transit service on Coloma near apartment complexes and schools. (Bus service to Coloma has been reduced.)
- Suggests giving consideration to whether or not there will be sufficient ridership to support a particular route or system
- Some concern regarding establishing sufficient ridership (avoid serving only a small percentage of the community)
- The business park would be second targeted area. There is no way to use transit at this time.
- It is critical to connect local service to Light Rail.
- Prefers street cars over buses if street cars can be built efficiently.
- Frequency is critical.
- Important to give public a clear idea of what can affordably be accomplished

IV. Planning Team Process and Efforts to Date

Following comments from the Council Members regarding transit opportunities for the City, the Mike Hochschild summarized the process used by the Planning Team to develop a preliminary transit map for the City.

The preliminary transit map was prepared by HDR giving consideration to issues such as the following:

- Limiting transfers
- Connecting the Northern and Southern, and Eastern and Western areas of the City
- Clarifying and simplifying the system
- Simplifying the existing RT service
- Transit connections to new and existing developments
- Regional through traffic
- Better serve the reverse commute

The transit map was presented to the Planning Team for discussion the previous day (Day One of the Planning Team Workshop). The Planning Team worked together to refine the transit map based on the collective knowledge of the team. The map was updated to reflect the various

comments and will undergo further refinement based on comments received from the Council Members and numerous property owners and developers.

The map presents transit opportunities at the following service levels:

- Regional (some form of BRT, potentially an express bus)
- Signature Service - Promenade -- Up Ranch Cordova Parkway, to International, north on the Promenade/Olsen Overpass to south of Folsom Blvd. and then north to complete the loop.
- Local service (street car, or other mode)
- District service was not shown on the preliminary transit map, but is in development and is anticipated to provide intra-district service

Council Member Budge had the following comments on the preliminary transit map:

- Likely resistance to connector alternatives off Jackson Highway
- Be cognizant of the social divider that an overly large boulevard can become

Responding to an inquiry by Taiwo, Council Member Sander stated that he was agreeable to locating a transit maintenance facility in the City, noting that the City has more industrial land than most of the county.

V. Sales Tax and Other Possible Revenue Generating Opportunities

The Planning Team and Council Members briefly discussed a range of revenue generating opportunities including the current half cent sales tax for regional transportation projects. The team also discussed their perception of the region's receptivity to future transit sales tax or Measure A funding. In the past, the City's allocation of the sales tax revenues was approximately \$85 million for a 30-year period. About 5 % of the region's population resides in Rancho Cordova.

Subject:	Rancho Cordova Transit Master Plan Planning Team Workshop Day 2 - Afternoon Session with Property Owners	
Client:	City of Rancho Cordova	
Project:	Transit Master Plan	Project No: 201201-36421
Meeting Date:	March 21, 2006 (1:00 p.m.)	Meeting Location: City Hall Meeting Room
Attendees:	<p>City of Rancho Cordova Cyrus Abhar Mark Thomas Elizabeth Sparkman</p> <p>PMC/City of Rancho Cordova Christopher Jordan Jeffery Beiswenger</p> <p>HDR Mike Hochschild Lisa Carpenter</p> <p>The Hoyt Co. Wendy Hoyt Kim Pallari</p>	<p>Property Owners/Representatives: Brian Holloway, Sun Creek & Pardee Homes Brady Taddol, The Hodgson Co., Sun Creek Patrick Willis, Mine Shaft Property Jim Galovan, Woodside Homes Judy Waegell, Waegell Property Doug Mull, Lewis Company Ron Metzker, Mine Shaft Property Gary Schnell, River West Investments Brian Cooley, Mine Shaft Property</p>
Notes by:	Lisa Carpenter and Kim Pallari	

Topics Discussed

I. INTRODUCTIONS/WELCOME

Wendy welcomed the attendees and shared with the group that the planning team was interested in the property owners' perspective, their vision for transit--identifying what would be reasonable and excitable from their perspective, as well as issues or concerns that they have regarding the Transit Master Plan conceptual Map. Meeting attendees then introduced themselves to the group and identified what property they represent.

II. GENERAL PLAN PROCESS AND NEXT STEPS

Cyrus thanked the property owners for attending and described the General Plan process that the City is undertaking and how transit opportunities are incorporated into the General Plan. Cyrus also noted that the City Council was intentional about providing choices for transit in Rancho Cordova. Transit-related activities underway include development of the circulation element of the General Plan which includes a pedestrian/bicycle component.

Cyrus provided a cursory review of the next step, noting that information would be presented to the City Council Members at an April 3, 2006 workshop. The purpose of this workshop is for the Council to hear and respond to the transit vision for the City as well of some of the specific concepts of the vision. After the April 3rd workshop, the next step would be to develop a transit plan based on council feed back.

Cyrus reiterated the importance of receiving feedback from property owners and invited them to attend the City Council workshop on April 3rd. He encouraged attendees to provide candid comments on the work to date, identifying transit elements they consider most beneficial and least useful.

III. PROGRESS TO DATE

Mike provided background on the work accomplished to date, providing an overview of the preliminary planning effort to identify the following:

- regional network
- local routes and stations
- signature transit route - Rancho Cordova Parkway
- District service (intra-city service)

IV. FACILITATED DISCUSSION

Wendy facilitated a discussion with the property owners to receive input on the preliminary transit map presented by Mike, beginning first with general questions and then asking specific questions. The questions posed and the comments received are presented below.

What is your overall response to the preliminary transit planning map?

- Is it intended for the shuttle route to include some of the light rail stations?
- What is planned for the Mine Shaft property?
- There needs to be a connection from Rancho Cordova Parkway to Folsom Boulevard.
- Sun Creek station locations will need to be close to where village centers are proposed. It is difficult to serve high school and middle school populations and a 40-acre community park that is between stations locations. Wetlands in the area create challenges for transit users to gain access to area station. How will you get users onto the system? Perhaps a shuttle could be use.
- Will there be parking at each station? What is the difference between the stations?
- Does Sunrise Boulevard require two separate designated right of way alignments having BRT or Streetcars?
- What does the cross section look like for BRT with a designated guideway?

- Has the City decided that there will not be a connection off of Rancho Cordova Parkway to Folsom Boulevard or north of Highway 50?
- How many lanes are planned south of Kiefer Road on Rancho Cordova Parkway?

As the City begins to implement service beyond Highway 50, are there geographic areas that make more sense than others for higher priority transit implementation?

- Yeager Road and Rancho Cordova Parkway is a high priority and critical corridor. As traffic on Sunrise Boulevard is alleviated, this area rises as a critical corridor.
- There seems to be a focus on transit lines that connect with Sunrise Boulevard and the next station (the Mine Shaft area). You may want to connect to Hazel Avenue as a reliever for Grant Line Road, or Americano Road.
- There are areas where property owners are building facilities now. Suggest focusing on those areas.
- More definition on modes, right-of-way needs, and any expectations on site plans is needed. We are making a lot of assumptions now of what Rancho Cordova Parkway will look like. We are making assumptions regarding how much right-of-way is needed, where stops would be located etc. What about center lanes? We are currently redesigning for a 6-lane facility with 15-foot dedicated lane. This design effort cannot stop at this point. We have a 30-day window to incorporate new information. Beyond that timeframe, we will have to go back and redesign again. Kiefer Road and Douglas Road is the most important segment. A preliminary station design would also be helpful.
- Douglas Road is a priority. The area will need a substantial White Rock Road corridor sooner, rather than later. White Rock Road is a priority.
- BRT on sunrise is important. Traffic studies show traffic issues on Sunrise Boulevard cannot be fixed, but the proposed plan provides an option.
- What are the concepts for getting across the river? How are we going to obtain the north-south connection over the river via Sunrise Boulevard? Traffic studies show that when travelers get to Fair Oaks Boulevard, the traffic issues subside. Getting past the bluffs is the challenge.
- RT has a park-n-ride lot on Coloma Road that was never build and is slated for high density housing.
- Will Citrus Road be a designated BRT route?
- There is a distinction between Jackson Highway and Grant Line Road. There are growth pressures on Grant Line Road. Is there a right-of-way distinction or lane configuration between the two? Has the study team identified a different level of service that would be provided between Jackson Highway and Grant Line Road?

- In the southern area of the City, near the Waegell properties, the number of transit stops generally appears to correspond with the number of intersections/commercial areas. There are more town centers in the south. The map should show the minor stops vs. the major stops as it becomes more defined.

With limited funds, what are the highest priorities?

- Will large amounts of parking be available? Does each station contain a park-n-ride lot? What have been the discussions regarding a major connection across the canal near the Mine Shaft property? A large parking area would inhibit the density of housing being discussed. There is a concern that there is not a high density of parking in one location. PUC has indicated that they are not going to grant any additional crossings of the rail line. There is a narrow sliver of land for crossing, making access difficult. Might consider a shuttle or vehicle access if it was just a straight thoroughfare.
- Would welcome the concept of placing the station south of the Folsom South Canal.

What kind of issues do you see in balancing land use and site planning with their needs?

- How does this process integrate with RT's processes?
- What has the City learned about urban interchanges in suburban areas? Where will they be? Other examples where they have been used successfully?
- Has the City decided that there will not be a connection off of Rancho Cordova Parkway to Folsom Boulevard or north of Highway 50?
- How many lanes are planned south of Kiefer Road on Rancho Cordova Parkway?
- If the Elk Grove/Rancho Cordova/El Dorado Connector road is built, then it needs to be considered as a limited access road. We have to be thinking about some form of grade separation.
- Do you envision any models where you would have a Folsom Boulevard or Gold River interchange/connection with the EG/RC/ED Connector?
- Rancho Cordova Parkway does not lend itself to a town center.

**Rancho Cordova Transit Master Plan
City Council Workshop
April 3, 2006
American River North Room
4:00 p.m. – 5:00 p.m.**

Meeting Summary

City of Rancho Cordova Attendees:	Anna Moger, Assistant City Clerk
Mayor Robert McGarvey	
Vice Mayor David Sander	Planning Team Attendees:
Council Member Linda Budge	Taiwo Jaiyeoba, RT
Council Member Ken Cooley	Don Smith, RT
Council Member Dan Skoglund	Jeanne Borckenhagen, SACQMD
Members of the Planning Commission	Carl Haack, HDR
Cyrus Abhar, Public Works	Mike Hochschild, HDR
Mark Thomas, Public Works	Wendy Hoyt, The Hoyt Company
Christopher Jordan, Planning	Kim Pallari, The Hoyt Company

On Monday, April 3rd, 2006 the City of Rancho Cordova City Council held a Study Session/Workshop for the Transit Master Plan Project. The session was open to the Public and promoted through email announcements sent to the City General Plan email list, as well as through information listed in the Grapevine and Sacramento Bee. There were approximately 16 community members in attendance as well as the Rancho Cordova City Council and Project Planning Team members.

The purpose of the Study Session was to present the concept Transit Master Plan to the Council and garner feedback and direction for moving forward. The session began with a power point presentation and concluded with open discussion regarding the Transit Master Plan. Cyrus Abhar began by introducing the Project Team and providing Project background. Wendy Hoyt, kicked off the presentation by providing information on the vision and goals of the Transit Master Plan as well as Phase I and II components of the Project. Following this report, Mike Hochschild walked the attendees through slides regarding different types of transit opportunities, modes and alignments.

During the discussion period, the following questions and comments from the City Council members were addressed:

Mayor McGarvey:

- Need to identify some sort of shuttle or streetcar alignment for north of Folsom Boulevard to get those living in the older part of town to current transit service such as the new light rail transit line.
- It looks like we want to develop big picture service to augment what Sacramento Regional Transit District (RT) currently has in place in our City.
- The schedule of these services will be very important so that people can utilize transit to travel to and from their destinations.

Vice Mayor David Sander: *(Also submitted a comment card)*

- Coloma Road needs to be a focused alignment as part of the Transit Master Plan. This area already has transit oriented development (TOD) elements. We cannot move forward without recognizing Coloma Road.
- Currently RT runs 60-minute headways along Coloma Road. This does not work for anyone in this room tonight; we need more frequency in our transit system.
- Also, we need to do a financial check or reality check to see what we can afford to do and what is not feasible. Please be visionary but realistic.
- The Transit Master Plan map should include the proposed light rail transit stations at Horn Road and the Mineshaft Property. It would be foolish not to consider placing a light rail station at the Mindshaft property.

Councilwomen Budge: *(Also submitted a comment card)*

- We definitely need shuttle service north of Highway 50 to accommodate those living in that area. They will utilize the "specialized service or localized service". Adding this type of service in that area will be a great benefit to the community.
- When looking at the Citywide Service, please think about what the current main arterials are within our City (La Loma Drive, Zinfandel Drive, Routier Road, and McGregor Drive). These streets are the ones that our community utilizes to get around the City and should be targeted for Citywide Service alignments rather than basing this service on what RT currently provides.
- When looking at the main travel routes, it seems that we have too many layers included. We need to focus on the Citywide Service specifically.

Councilman Cooley:

- Zinfandel Drive is our Downtown District, it seems that there should be at least one (of three shown on the map) high-end transit station with all the amenities located along this alignment.
- Can we connect the Lincoln Village neighborhood area with the Downtown area? They are currently isolated from our job centers and the light rail stations because of Highway 50.
- We need to improve this connection and simplify the commute route to the job centers and even possibly the Franchise Tax Board to the west of Rancho Cordova. The other connections to the east and south look fine.
- Please use Lincoln Village Drive as apposed to the Old Placerville Road. This is a more central route.

During the discussion session, the following comments and questions from the community members were addresses:

Dennis Dunn:

- Rancho Cordova has transit-oriented development along Coloma Road today and RT has cut their service along this alignment which does not make sense. We need to get people from the housing areas that do not have sidewalks, to a point where they can pick up transit service.

Brian Cooley, Mindshaft Property:

- There is currently a black box around our property on the map, what does this mean? We are currently working on a planning application for our property and would like to know how the City Council feels about connections to Folsom Boulevard and inclusion of a potential light rail station on our property?
- What type of right of way is needed for transit stations?
- Has anyone considered bus rapid transit or BRT along Folsom South Canal?

Mike Barnbaum, RT Mobility Advisory Council

- I want to ensure that this Transit Master Plan is a universal system that is fully accessible to those with special needs.
- Does Rancho Cordova want to form their own Transit Service or are they working in partnership with RT?

Taiwo Jaiyoba, RT Director of Planning

- RT has been a part of this process from the beginning and it has been a great project. Rancho Cordova is a unique City in that they are looking at transit as part of their General Plan.
- Transit oriented development is not going to be successful unless it includes multiple transit modes, not just BRT. It is important to identify key stations and think about tapping into developer funds when looking at funding this plan. There is a lot of opportunity to densify the area and create real TODs along the Signature Route to support the ridership that is needed for the transit system.
- Also, keep in mind that the Federal Transportation Administration is very concerned about land uses as they relate to funding transit projects.

The following comments were collected via comment cards available at the session:

Comment Card #1

Currently public transit is highly used by students – Does this system allow middle/high school students to get to proposed school site?

Does this system give our youth access to proposed recreation opportunities – movie theatres, bowling, water parks/swimming areas, libraries?

Additionally – no signature services is close to Mather Lake, Hagen Park, Goethe?

Please outreach to Independence at Mather, proposed signature route bisects a natural/preserve area.

Submitted by:

Joyce Martin

11123 Concord River

Rancho Cordova, CA 95670

852-8626

martinjk@covad.net

Comment Card #2

Add the light rail stations at the Mineshaft Property and Horn Road.

Add to the Citywide Service the following:

- Folsom Boulevard in its entirety (Watt to Sunrise)
- Geothe Road (Mayhew to Bradshaw – and east?)
- Lincoln Village (Bradshaw to Routier)
- Routier Road
- West La Loma to La Loma semi-circle
- South White Rock
- Zinfandel Drive
- McGregor Road

These are all citywide main routes, not confined to a district.

Submitted by:

Councilwomen Linda Budge

Comment Card #3

1. Provide service to existing residents
2. Signature Route is the most important project
 - a. It must work, must be laid out to work

- b. Must be phased and affordable
 - c. Must feed our job base, make light rail workable for our 100,000 employees
3. Land uses along Rancho Cordova Parkway and other transit corridors need to be altered to promote and require TOD.

Submitted by:
Vice Mayor David Sander

At the conclusion of the discussion, Cyrus Abhar stated that this is a unique process that the City of Rancho Cordova is implementing. Mr. Abhar reported that currently, the City would like to work with RT to create a united service for the community of Rancho Cordova. He then recapped the key points heard during the discussion.

Key points are as follows:

- More service to neighborhoods
- Signature Route is ok as long as the plan includes the other alignments to augment the route
- Look into utilizing Folsom South Canal as an additional alignment
- Include LRT stations at Horn Road and the Mineshaft Property
- Provide connections to Lincoln Village
- Further develop Citrus Road pedestrian over crossing as an ideal alignment for a transit connection
- Include transit on the Sunrise Boulevard Bridge over the American River



GOALS, POLICIES AND ACTIONS

Building on the Vision and Principles, the next step in activating the Master Plan is to set forth the Goals and implementing Policies and Actions. The following text was recommended for use in the Rancho Cordova General Plan. While these texts were not incorporated in the General Plan, the thinking provides valuable direction in the development of future transit plan efforts.

Goals

Establish a high quality transit system that, connects all parts of the city, serves neighborhoods, meets the needs of special populations, and links to regional destinations

Policies and Actions

Policy 1.0 Develop a transit system to meet the multiple mobility needs of Rancho Cordova residents.

- Action 1.1.** Create, implement, and regularly update a Transit Master Plan for Rancho Cordova that identifies the type of system desired for the City. Transit routes should serve major destinations for office employment and shopping, convention, sports and entertainment venues, major institutions, concentrations of multi-family housing, and other land uses likely to attract public transit ridership.
- Action 1.2.** Develop three types of transit service – City, Neighborhood, and Region.
- Action 1.3.** For City and neighborhood service, evaluate the use of buses, streetcars, shuttles, and vans.
- Action 1.4.** Identify a “Signature” transit route that sets the standard for transit service in the City. This route combines premium transit service (more than one mode) with quality urban design applications and streetscape amenities. The preferred mode for the Signature Route is the streetcar. This route gives visual identity and reality that transit is an essential means of travel. The balance of the City’s system is built from this route.
- Action 1.5.** Regardless of mode, promote the use of environmentally friendly fuels to support improved regional air quality.
- Action 1.6.** Evaluate alternative organization and management arrangements for the delivery of transit service within the City. Such alternatives range from all services provided by



RT, to all services provided by a City-owned and operated system, or to a mix of service options based on scale and type of service required, including public-private partnerships.

- Action 1.7.** Work with transit provider(s) to develop and implement the Transit Master Plan and any additional transit services within the City that are timely, cost-effective, coordinated with growth patterns, and responsive to existing and future transit demand.
- Action 1.8.** Pursue all available sources of local, state, federal and private funding for capital and operating expenses. Evaluate the City’s current transit impact fee based on future service demands.
- Action 1.9.** Ensure that transit service corresponds with, and provides for regional plans and policies that support regional and citywide mobility.
- Action 1.10.** Coordinate with RT staff on the review of development projects near station areas to ensure both transit and development needs are met.

Policy 2.0

Promote transit-supportive land use at all scales to increase transit ridership, support economic development, and create livable neighborhoods.

- Action 2.1.** Take advantage of the role of transit as a new form of “access” to increase economic development and redevelopment opportunities.
- Action 2.2.** Provide high capacity transit access to employment and commercial centers to reduce congestion. Promote the use of employee shuttles as an interim service until circulators develop.
- Action 2.3.** Develop walkable, mixed-use developments that take advantage of the existing and proposed transit investments.
- Action 2.4.** Accommodate all modes of transit in village centers, and local and regional town centers. Use transit in these centers to promote pedestrian activity and civic pride. Ensure street and sidewalk connectivity between stations and retail, office, and residential uses.
- Action 2.5.** Prepare station area plans and implementing regulations for each station (regardless of mode). Focus on ¼- and ½-mile radii around the stations, with the highest densities and intensities located in the ¼-mile radius.



Policy 3.0

Maintain and improve access and mobility for seniors, youth, the disabled, and the economically disadvantaged.

Action 3.1. Encourage paratransit service within the City by working with service providers to better identify service gaps and resources, and to improve response times.

Action 3.2. Continually evaluate the use and potential expansion of dial-a-ride and other on-demand services to serve the mobility needs of seniors and disabled residents.

Action 3.3. Explore the use of multiple providers for this service, including RT and private service companies.



Sacramento Regional Transit

Twenty Year Plan – Transit Master Plan October 1993

Existing Transit Master Plan Adopted October 1993

In 1973, RT became the primary transit service provider in the Sacramento region. In 1987, RT opened its first light rail system that operated service in two corridors between Downtown Sacramento and outlying areas. In 1988 with the passage of Measure A, the Sacramento region voted to give its support for further expansion of public transit with the implementation of a local sales tax and bond measures to finance construction of rail projects (1989 Propositions 108 and 116). In response to these actions, RT developed an improved bus feeder network to complement rail transit service. These improvements were responsible for increases in system ridership.¹

From 1989 to 1991, RT conducted a System Planning Study to provide the basis for development of a long range transit development plan, and to qualify their transit alternatives for the federal and State of California funding processes. Upon completion of the Systems Planning Study in 1991, the RT Board of Directors directed agency staff to develop a Transit Master Plan using the study as its foundation. Between 1993 and 2005, RT had not produced an update to the 1993 plan. It is expected that RT will update the 1993 Transit Master Plan beginning in late 2006 or 2007.

Mission of the 1993 Transit Master Plan

- The 1993 Transit Master Plan adopted a Mission Statement that provided a framework for expanding transit service that would:
- Increase transit ridership
- Enhance regional travel and mobility
- Guide transit infrastructure investment
- Secure stable financial resources for transit capital and operating needs
- Encourage the development of transit oriented land uses
- Provide a framework for the preservation of future transit rights-of-way
- Integrate with regional air quality improvement strategies
- Support effective and efficient district management strategies, and
- Provide a regional blueprint for prioritizing transit infrastructure investment by geographic location and level of development intensity.

¹ Twenty Year Transit Master Plan – Sacramento Regional Transit – 1993.



RT's Transit's Master Plan was developed to easily integrate with other regional long range planning documents such as transportation and circulation plans produced by Sacramento County, Sacramento Area Council of Governments (SACOG) and other jurisdictions such as the City of Rancho Cordova.

Vision of the 1993 Transit Master Plan

RT's 1993 Transit Master Plan described a long-range service expansion program that included:

- Service area expansion
- Light rail development in eight corridors
- Transit fleet expansion to 500 vehicles
- 200 light rail vehicles and 60 electric rail vehicles
- Major capital investments in new bus operating and maintenance facilities
- An additional light rail facility
- Provisions for right-of-way acquisition and investment
- Track
- Stations
- Transit centers
- Park and ride lots and other passenger amenities
- Passenger information systems
- Maintenance equipment, and
- Communications equipment.

In 1993, RT estimated that the transit investment described above would add in the range of 200,000 to 450,000 boardings per day, and it was expected that all of the new services would be fully integrated with all other modes that were available. Figure C-1 shows the transit corridors that RT expected to develop between 1993 and 2013.



APPENDIX C: BACKGROUND PLANNING INFORMATION

Community, Mobility, and Environment

The prevalence of two-income households traveling in different directions has resulted in a departure from the “traditional” travel patterns of “suburb to CBD” for jobs and shopping. This has resulted in a significant increase in inter- and intra-suburban cross-town (suburb to suburb) trips generated in the region. At the time of this study in the Sacramento area, almost 80% of the daily trips were not work-related. These growth and travel patterns have had significant impacts on the region’s transportation systems. And as population and employment shifted outward from the CBD, travel demand has intensified in the growth corridors along Interstate 5, Interstate 80, Highway 50 and Highway 99. Table C-1 shows the 1993 Projected Population Growth for the Sacramento Region 1988 – 2010, and Table B-2 shows the 1993 Projected Employment Growth for the Sacramento Region 1988 - 2010.

Table C-1. Sacramento Region 1988 – 2010 Projected Population Growth

Jurisdiction	1988 Population	Est. 2010 Population	Percent Growth
Sacramento County	961,900	1,382,814	44
Folsom	23,350	73,100	213
Galt	7,450	26,871	261
Isleton	920	1,008	10
City of Sacramento	334,700	491,329	47
Unincorporated	595,480	790,506	33
Sutter County	60,900	79,100	30
Live Oak	3,980	5,708	43
Yuba City	23,050	34,803	51
Unincorporated	33,870	38,589	14
Yolo County	133,500	201,400	51
Davis	43,200	65,000	50
West Sacramento	27,550	37,576	36
Winters	3,790	7,900	108
Woodland	36,950	59,110	60
Unincorporated	22,010	31,843	45
Yuba County	56,600	66,600	18
Marysville	11,400	11,552	1
Wheatland	1,830	2,314	26
Unincorporated	43,370	52,734	22
South Placer County	54,425	161,959	298
Lincoln	6,225	18,674	200



APPENDIX C: BACKGROUND PLANNING INFORMATION

Community, Mobility, and Environment

Jurisdiction	1988 Population	Est. 2010 Population	Percent Growth
Rocklin	13,850	45,022	225
Roseville	34,350	98,263	186
El Dorado County³ (western portion)	46,980	110,614	135
Regional Total	1,314,305	2,002,687	52

Source: RT Systems Planning Study

Table C-2. Sacramento Region 1984 – 2010 Projected Employment Growth

County/Community Area	1984	2010	Percent Growth
Sacramento County	342,782	688,276	101
Franklin/Laguna	508	16,828	3,212
South Natomas	4,782	67,329	1,308
North Natomas	1,299	12,909	894
Vineyard	686	3,184	364
Elk Grove	3,532	12,596	257
Folsom Area	6,197	20,558	232
Consumnes	501	1,666	233
Galt	1,140	4,132	262
North Sacramento	21,101	58,445	177
Rancho Cordova	33,371	79,830	139
Land Park/Pocket/Meadowview	20,086	45,161	125
East City	37,044	77,085	108
Delta	3,460	7,427	115
South Sacramento	33,077	54,720	65
Rio Linda/Elverta	1,302	2,551	96
Citrus Heights	14,259	21,481	51
Downtown	72,427	99,969	38
North Central Area	36,340	48,621	34

³ Area includes Placerville and unincorporated El Dorado County west of Placerville. 1988 population estimated from growth rates provided by El Dorado County Community Development Department.



APPENDIX C: BACKGROUND PLANNING INFORMATION

Community, Mobility, and Environment

County/Community Area	1984	2010	Percent Growth
Orangevale	3,636	4,140	14
Carmichael	7,636	8,475	11
Fair Oaks	2,800	3,003	7
Arden Arcade	36,378	37,591	3
Rancho Murieta	129	129	0
Southeast	1,091	451	-59
Sutter County	17,943	30,588	70
Live Oak	461	1,023	122
Yuba City	14,654	26,066	78
Unincorporated	2,828	3,499	24
Yolo County	49,500	87,691	77
Davis	17,466	28,132	61
West Sacramento	9,938	20,999	111
Winters	1,280	2,669	109
Woodland	19,889	34,319	73
Unincorporated	927	1,572	70
Yuba County	19,725	24,763	26
Linda/Olivehurst	4,042	6,710	66
Marysville	8,918	10,250	15
Wheatland	469	630	34
Unincorporated	6,296	7,173	14
South Placer County	26,721	79,790	199
Lincoln	2,579	14,355	457
Rocklin	2,189	14,825	475
Roseville	21,953	50,610	131
El Dorado County (western portion)⁴	26,721	79,790	199
Regional Total	456,671	911,108	100

Source: RT Systems Planning Study

⁴ El Dorado County not included in regional total.



Public Transit

When the 1993 RT Twenty Year Master Plan was published, RT operated a light rail line that was 18.3 miles in length that extended radially from the CBD toward the east and northeast suburbs. The bus system was generally designed to be complementary in nature to the rail line as a feeder system along with providing cross town and other local bus services. It was expected that the starter system that was in place in 1993 would need to be expanded in order to meet the growing needs of the Sacramento region.

Inter-Agency Coordination

Transit system development in the Sacramento region is affected by the interaction of a number of agencies that exist at federal, state and local levels. Some agencies have an advisory role with RT, providing review and input to RT's short and long-range planning process. Other agencies have a financial role, whereby they allocate tax money based on a qualifying criteria or law. These agencies are:

Federal – The US Department of Transportation Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA), disperse both formula grant and discretionary monies to RT based on RT's compliance with specific qualifying criteria.

State – The California Department of Transportation (Caltrans) has both an advisory and financial relationship with RT. Caltrans reviews and approves RT's transportation improvement programs and RT's state transportation funding applications.

The California Transportation Commission (CTC) interacts with RT on a financial level. The CTC reviews, prioritizes and disburses discretionary state transportation funds.

Regional – SACOG interacts with RT on both a planning and financial level. RT and SACOG coordinate on development of the transit elements of SACOG's Regional Transportation Plan (RTP) and other transportation studies. SACOG is also responsible for disbursing federal and state funds to RT.

The Sacramento Metropolitan Air Quality Management District (SMAQMD) develops programs to achieve and maintain state and federal air quality standards. SMAQMD's relationship with RT is advisory on issues of mutual concern.

Local – The Sacramento Transportation Authority (STA) is a joint city-county agency responsible for prioritization and dispersion of tax receipts that are generated by the half-cent sales tax, as well as the lead agency for the state-mandated Congestion Management Program. The County of Sacramento also coordinates with RT on transportation systems management, land use development, right-of-way preservation and transit service issues.

RT Service Area

The transit network of the Sacramento region began its development in serving a well defined urban core. This urban core strongly supported the public transit systems of the past. The automobile and the changes in behavior it brought quickly redefined the urban landscape of the Sacramento region. The rapid growth of suburban areas required RT and its



predecessors to develop transit services in these areas. Continued growth of downtown, due to its role as the State Capital of California, encouraged development of a system which connected these suburban areas with downtown. However, the development pattern of suburban communities like Rancho Cordova discouraged transit usage. Because of this, the region's transit services continued to be concentrated in the urban core of Sacramento, downtown, and those residential and commercial districts surrounding it.

Evolution of Service

Public transit, as with most public infrastructure, is most efficiently and effectively provided in areas with adequate population and employment density to justify capital and operating expenses. RT prioritizes the enhancement of existing transit service and will support reutilization, redevelopment and infill development in the existing urban areas of the service area.

RT supports the development of transit service in new growth areas based on several variables. As communities like Rancho Cordova continue to grow and evolve, RT committed that it would evaluate their existing services and demand for service expansions as a whole and determine where scarce resources could best be put to use.

Before RT would commit to extending service to new areas of the service area, it would evaluate proposed services based on a number of criteria including:

- Population density
- Employment density
- Land use design
 - Orientation
 - Accessibility
- Person trip characteristics and focus
- Jurisdictional coordination
- Local community support efforts.

Travel Markets

RT serves a number of travel markets and in an attempt to provide the most efficient service possible, RT must balance sometimes competing objectives in serving these diverse markets. RT's mission is to ensure adequate levels of mobility for all segments of society.

The Work-Related Trip

It is not unexpected that 50% of all trips by bus and 80% of all trips by LRT during peak periods are work-related trips. Most of these trips are destined for downtown Sacramento, and as the capital of California, Sacramento has a strong base of employment in the Central City which heavily utilizes transit. The system of trunk line light rail and bus transit focused



on downtown Sacramento will ensure convenient and reliable transit service for this travel market. However, in recent years, there has been a significant movement of population and employment to the suburbs. The fastest growth in employment in the year 2010 will be in the suburbs.

In 1993, these high growth areas were predicted to be:

- Arden/Arcade
- East Sacramento
- Rancho Cordova
- South Placer County/Roseville
- South and North Natomas

In 1993 RT began developing a network of feeder bus routes overlaid upon the trunk line system connected by timed transit centers. This network was intended to provide high levels of mobility to meet the needs of suburb to suburb commuters.

The Non-Work-Related Trip

Despite the high numbers of transit trips made for work purposes during the peak travel periods, the majority of transit trips on the RT system have non-work-related purposes. The presence of strong non-work travel demand is highly important to efficient use of personnel and equipment. RT provides mobility to social services, health care, shopping, educational opportunities and recreation sites. RT committed itself to improving its services to these facilities and sites. RT will coordinate with local jurisdictions, health care and social service providers to ensure that health care and social service facilities are located and designed with transit accessibility in mind.

System Design

RT has developed a comprehensive and balanced transit system which can efficiently and effectively serve the needs of the service area. The backbone of this system is a trunk line system of light rail transit and high frequency bus service corridors. Overlaid upon this system is a grid network of feeder bus routes, as well as a system of community based circulator services, providing maximum connectivity opportunities through a system of time-transfer transit centers. Rancho Cordova benefits from a number of bus routes and the Folsom LRT line within its jurisdiction.

Service Mode

When developing its service plans RT carefully considers the appropriate mode for transit service delivery. Factors such as ridership, transportation network interface, population and employment density and accessibility will be taken into account in making mode choice decisions.



Light Rail Transit

The light rail transit system serves as the spine of a multimodal system of low emission public transportation for the Sacramento region. Light rail transit provides high frequency, high capacity trunk line service in major travel network. The LRT extension to the Folsom area has only recently become a reality and was not a part of the 1993 plan. This new extension has opened a number of new light rail stations in Rancho Cordova that provide an opportunity for a fast trip into downtown Sacramento as well as connectivity to local bus routes that provide service to Rancho Cordova and nearby areas.

HOV/Busway

RT has developed a regional system of High Occupancy Vehicle (HOV) lanes throughout the Sacramento region. RT will continue to work to coordinate these plans with its transit system development to ensure proper phasing and implementation of HOV facilities which enhance its overall transportation network.

Electric Trolley Bus

Electric trolley buses provide an intermediate mode in RT's planned system of low emission transit services. Electric trolley buses combine low maintenance requirements, increased acceleration, quietness and environmentally friendliness with the flexibility of utilizing existing roadways as well as exclusive rights-of-way. RT will utilize trolley buses in those corridors that require high frequency transit service, but are unable to support the increased capital expense required for light rail.

Standard Bus

The typical clean-fueled bus will continue to be the vehicle of choice to operate the majority of RT's transit routes. Buses will be required to provide service in suburban areas that are unable to support service frequencies of 15 minutes or less. In new growth areas, peak period feeder service is provided to light rail and trolley bus corridors. It is expected that 70% of total revenue hours will be operated by buses.

Route Network

By 1993, Sacramento had developed a route network that had downtown as its focus with routes operating in a radial fashion from the center of town. "Radial" networks provide rapid movement of people to the urban core, but may force longer indirect trips for those not wishing to end their trip downtown.

As the region began to grow, it was expected that development patterns and travel behavior would emerge in ways that would focus fewer and fewer trips on the downtown area. Suburb to suburb trips were expected to increase significantly far into the future.

Due to these travel pattern changes, RT began to alter its route planning practices by developing multidirectional routes that focused service upon a network of timed transfer points or transit centers. These transit centers maximized connection opportunities for riders by not requiring a trip downtown and then a transfer to a route that they really wanted in the first place.



Land Use

In 1993, RT developed guidelines and standards for coordinating land use development with transit services by addressing both regional policy and project site oriented planning issues. Policy planning activities focused on the link between land use and transit as one of many strategies for managing growth, regional air pollution, traffic congestion and other quality of life concerns. The evolution of Sacramento County's Transit Oriented Development (TOD) Design Guidelines is part of the sensitivity being applied to planning approaches being developed to improve the link between transit and land use.

The purpose of coordinating land use patterns with transit service is to improve transit system efficiency and use. A productive transit system, in turn, can offer a solution to community problems and social, economic and environmental benefits. The land use and transit relationship is only a part of the larger, dynamic urban system involving many other variables.

The City of Rancho Cordova is very interested in realizing the benefits of combining the planning of future transit services with the planning of development through land use planning. The City realizes that increasing congestion is a quality of life issue that must be addressed.

Land Use Patterns

Strengthening the link between land use patterns and the transit system can also improve transit system usage. Land use patterns are a critical determinant of travel demand. In turn, the structure of the transportation system can influence the character of land use development. Linking land use to support transit usage ranges from regional policy planning issues to focused physical planning issues.

- Establish a clear and consistent boundary in Sacramento County beyond which urban services, including transit, will not be provided and urban development will not be permitted
- Increase development concentrations and enhancing pedestrian accessibility in the Sacramento Central city and at limited number of suburban activity centers (focused around transit centers)
- Locate major new development projects along existing, proposed and adopted light rail and bus transit corridors
- Provide incentives, such as joint development for in-fill land uses contiguous to where transit and urban services already exist or have been scheduled for implementation
- Require site design evaluation for transit access and operational requirements such as geometric design, passenger loading areas, and transit user amenities
- Require site designs and land use mixes that support and enhance pedestrian accessibility to transit



APPENDIX C: BACKGROUND PLANNING INFORMATION

Community, Mobility, and Environment

- Require minimum density and intensity levels for developments within transit corridors that depend upon the regional location, transit mode, and service level desired
- Coordinate transportation demand management strategies with land use strategies such as parking supply and pricing policies, to increase transit attractiveness.





The Transit Master Plan Team identified five technologies that are most applicable for operations within the City of Rancho Cordova. The technologies are described based on their function and capacities, beginning with longer distance and higher capacity vehicles.

Light Rail and Bus Rapid Transit

Light Rail Transit (LRT) and Bus Rapid Transit (BRT) are the highest capacity vehicles, serving the longest distance commutes. Principally, these vehicles:

- Are for commuters traveling longer distance (10-20 miles)
- Focus on travel time savings – getting from Point A to Point B as soon as possible
- Run in separate fixed guide ways, although they can run in the streets with automobiles
- Can have innovative vehicle design, especially for BRT

Station spacing ranges from one-half to one-half mile, depending on land use conditions.

Photo D-1 shows an existing RT Light Rail vehicle. This vehicle already operates within the City limits and will not be considered for future alignments within the City.

BRT vehicles can be the high-end variety that resemble LRT vehicles and operate on rubber tires. Photo D-2 shows an example of a higher end Bus Rapid Transit Vehicle (BRT). This type of vehicle is designed to look like an LRT vehicle or a streetcar, but it has rubber tires and, if necessary, can operate in the travel lanes with automobiles. This type of BRT vehicle costs less than a similar LRT or street car vehicle. Other types of BRT can cost even less because they can use vehicles that are more like regular city buses, but still operate with fast and frequent service.



The Modern Streetcar



Photo D-3 shows a streetcar technology that could be implemented as the preferred vehicle for the Signature Route that is being proposed for Rancho Cordova.

The modern streetcar is a new “old” technology that is a pedestrian accelerator with a passenger capacity of 110, with 30 sitting and 80 standing. Streetcars operate with overhead electric power and are in-street running (or they can operate in a fixed guide way). Capital costs are usually in the range of \$12 - \$15 million/mile, and for a 2.5-mile system, operating and maintenance costs are approximately \$2-2.5 million/year. Other characteristics of the streetcar are:

- Vehicle Length – 66 feet
- Vehicle speed – 45 to 60 mph
- Service Range – 3 to 15 miles
- Station Spacing – 800’ to 1000’
- Service Frequency – 8 to 15 minutes
- Turning Radius – 40’ to 60’
- Frequency - 5 to 30 minutes

Buses and Shuttles

Photos D-4 and D-5 are examples of the type of local transit and shuttles that are considered for service operations within the City. RT currently operates the 40’ transit vehicle shown in Photo D-4. This vehicle is the predominant vehicle for City type service and will not be different from what is operating today. The shuttle, Photo D-5, is the most likely candidate for paratransit and on-demand service. It may also be used as a neighborhood shuttle service.



Proposed Corridors

Following is a list of BRT corridors proposed by RT. During regional planning efforts currently underway other BRT corridors may be identified. Please contact RT for updates.

- Florin Road
- Stockton Boulevard
- Sunrise Boulevard
- Watt Avenue/Elk Grove Florin Road

For more information about BRT, please contact:

Long Range Planning
Sacramento Regional Transit
(916) 321-2800



Definitions, Goals & Design Guidelines for Bus Rapid Transit in the Sacramento Area

Adopted by Sacramento Regional Transit Board of Directors on November 14, 2005

Introduction

Over the last few years, Bus Rapid Transit (BRT) has become an emerging mode of transportation. It has found success in various cities in the world and in a number of cities in our nation. For example, Los Angeles opened their Orange BRT Line in the San Fernando Valley on November 1, 2005. The Orange Line experienced 11,000 riders on its first day of service. This is considerably higher than the 5,000 to 7,000 riders per day that were projected.

BRT has been identified as a high capacity mode of transit that can be built for a much less cost than light rail transit. In January 2004, Sacramento Regional Transit (RT) began the first phase of what might eventually become a BRT service along Stockton Boulevard (the Stockton *50-E Bus*). The *50-E* features traffic signal priority*, queue jumps and limited stop service. On the back page of this brochure is a list of proposed corridors that have been designated for BRT by RT.

During discussions about BRT, it was found that there was an inconsistent understanding of what BRT is – ranging from a bus service that skips a few stops to service that operates in exclusive lanes with distinctive vehicles and stations. In November 2004, RT assembled a task force to develop standards for BRT service in the Sacramento area. The BRT Task Force consisted of members of the general public, disabled community, college district administration, businesses, transportation agencies and planning departments in the region (specific members are listed on the right). Their mission was to develop definitions, goals and design guidelines for transportation planners to use to help develop BRT in the Sacramento region. The product developed by the BRT Task Force and adopted by RT's Board of Directors is on pages 4 and 5.

* Terms in italics are defined in the Glossary on Page 3.

BRT Task Force

Jim Brown	Sacramento Area Council of Governments
Gabriel Corley	Caltrans District 3 Office of Regional & Transit Planning
Warren Cushman	Californians for Disability Rights
Don Dean	Caltrans Research
Azadeh Doherty	City of Sacramento Department of Transportation
Katie Eastham	Caltrans District 3 Office of Regional & Transit Planning
Nedzlene Ferrario	Sacramento County Planning
Kathy Garcia	City of Rancho Cordova
Tom Garcia	City of Folsom
Paul Harriman	NAG
Mike Kashiwagi	City of Elk Grove
Ann Kohl	ECOS & No Way LA
Wayne A. Lewis	CalTrans District 3 Deputy District Director
Tim Murphy	General Corp. Sacramento Metropolitan Chamber of Commerce
Erik Reitz	Yolo County Transportation District
Jon Sharpe	Los Rios Community College District Vice Chancellor of Finance & Administration
Barbara Stanton	Ridership for the Masses
Tom Zlotkowski	County of Sacramento Department of Transportation
RT Staff:	
Fred Arnold	Teri Sheets
Mike Fitzpatrick	Don Smith
Jeff Gualco	David Solomon
Taiwo Jaiyeoba	Greta Vohlers
Al Schweim	Mike Wiley

ELEMENT	CRITERIA	Local Bus	Express Bus	E-Bus	BRT
Special Identification	Vehicles have special color branding & appearance			X	X
	Stations have special color & appearance, are specially signed, illuminated, with amenities			X	X
Running Ways Vehicles	Over 50% of the route is grade-separated exclusive lanes (transitway)				X
	At-grade designated transit lanes/High Occupancy Vehicle (HOV) lanes		X	X	X
	Mixed flow lanes with queue jumps at intersections	X	X	X	
	Lane-assist and precision-docking guidance technology				X
	Specialized BRT vehicles (40-foot, 60-foot, or 80-foot)				X
	Stylized or specially upgraded buses (40-foot or 60-foot)		X	X	X
	Conventional 40-foot buses, may include Neighborhood Ride Buses	X			
Fare Collection	Pay on-board or show pass/transfer to the operator	X	X	X	X
	Possess proof-of-payment, display on demand of inspector			X	X
FOR THE ROUTE, SUM UP THE NUMBER OF (X's) IN EACH COLUMN AND DIVIDE BY THE FACTOR SHOWN (PLACE ANSWER BELOW AS A PERCENTAGE)		+ 9	+ 10	+ 15	+ 17
RESULTANT PROPORTION OF EACH BUS SERVICE TYPE REPRESENTED					

Example

If a bus service has:

- Less than 25% of its stations spaced greater than 1/2 mile apart;
- Average headway of 30 minutes;
- The route has major direction changes;
- No or few traffic signal priority intersections;
- Buses do not have real time passenger information;
- Buses operate in mixed flow lanes;
- Buses are conventional 40-foot buses; and
- Passengers pay on-board or show pass to operator.

Eight check marks may be made in the Local Bus column, three in the Express Bus Column and zero in the Enhanced Bus and BRT columns. Using the formulas, the bus service is 78% like a Local Bus (7÷9); 30% like an Express Bus and 0% like Enhanced Bus or BRT.

Appendix A: Evaluation Criteria

The evaluation criteria counts the elements used to define a particular service. Criteria includes: stations/stops, service and operating plan, ITS, special branding identification, running ways, vehicles and fare collection. The table below may be used to compare existing or proposed bus service with the elements and criteria listed.

If the service being evaluated has one of the elements or criteria listed below, an (X) may be placed in the appropriate column. By totaling the responses (X's) and comparing them to the total elements and criteria typically found in that service, the type of service provided may be identified. Follow the directions at the end of the table to determine what the service is most like. It may be concluded that the bus service is most like the one with the closest percentage to 100.

ELEMENT	CRITERIA	Local Bus	Express Bus	E-Bus	BRT
Stations	More than 75% of stations spaced greater than 1/2 mile apart				X
	Between 25-75% of stations spaced greater than 1/2 mile apart		X	X	
	Less than 25% of stops spaced greater than 1/2 mile apart	X			
	Station platform height allows level entry into vehicles			X	X
Service & Operating Plan	Average headway 15 minutes or less			X	X
	Average headway 20 minutes or more	X			
	Average headway Peak Hour Service only	X	X		
	Straight-line route with few bends or direction changes			X	X
	Generally straight-line route, some bends and loops		X		
Major direction changes, bends, neighborhood loops	X				
Intelligent Transportation Systems (ITS)	Coordinated traffic signal timing for transit service			X	X
	More than 75% of route has traffic signal priority				X
	Between 25-75% of route has traffic signal priority			X	
	Less than 25% of route has traffic signal priority	X	X		
	More than 75% of stations have real-time passenger information				X
	Some stations have real time passenger information		X	X	
Buses have real-time passenger information	X	X	X	X	

What is BRT?

BRT allows buses to travel faster ideally in separate rights of way, but can be in mixed flow of traffic by utilizing the following features:

- Stations spaced 1/2 to 1 mile apart
- Elevated platforms to allow fast and easy boarding
- Specialized buses
- Fast fare collection
- *Intelligent Transportation System (ITS)* such as traffic signal priority
- Queue jumps

These elements result in decreased travel time, increased reliability, improved identity and image, improved safety and security and increased capacity.

Why do we need to "define" BRT?

Because of the wide-range of options that can potentially speed up bus service, defining BRT is an industry-wide problem. It is necessary to define it because funding can be contingent on the definitions of a particular service. A lot of focus has been given to this on a national level as it applies to federal funding (SAFETEA-LU: Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, 2005). For example, one of the defining factors being considered on a federal level is that at least 50 percent of the service must be in an exclusive lane to be considered BRT. While developing RT's definitions, goals and design guidelines, the BRT Task Force tried to be consistent with the national trends. A provision also included the ability to amend RT's guidelines with any new national guidance.

Design guidelines are also needed to provide consistency of application and to inform developers as to RT's expectations pertaining to right-of-way for dedicated lanes and station areas.



Glossary

fixed-route service: A bus route that does not deviate from its route.

grade separation: When a lane (or rail track) separates from the road to cross over/under a street or other obstacle.

Intelligent Transportation System (ITS): The use of technology such as traffic signal timing, signal priority or real-time information to make transit more efficient or effective.

limited stop service: When a route is designed to not stop at every bus stop at which a local route would normally stop.

queue jumps: The bus sends an electronic message to the traffic signal giving the crossing lanes a yellow, then red light. The right hand turn lane receives a green light allowing the traffic to make their right turn. This clears the right hand lane allowing the bus to use it to bypass traffic.

signal priority: The bus sends an electronic message to the approaching traffic signal telling it to either extend the green light or give the crossing lanes a yellow, then red light. Crossing times for pedestrians are affected but pedestrians still have adequate time to cross the street.

Definitions

Definitions have been created for Regional Transit's family of *fixed-route* bus service. Definitions have been included for: Local Bus, Express (commuter) Bus, Enhanced Bus (*E-Bus*) and BRT. These definitions identify the characteristics of the particular service. In some cases the elements used to define the service may overlap with different services. In order to help make a determination between the service types, evaluation criteria have also been developed (please see Appendix A on pages 6 and 7).

Local Bus:

Bus service that picks up and discharges passengers at frequent, designated places (stops) that are on public thoroughfares (mixed flow traffic). Passengers pay on-board or display passes/transfers to the operator. This service operates at low average route speeds (6-11 miles per hour).

Express (Commuter) Bus:

Bus service similar to local bus service at the beginning and end of the route, often using expressways or freeways for part of the trip. Usually operates during peak travel periods and in peak directions. Passengers pay on-board or display passes/transfers to the operator. This service operates with a higher average route speed than local bus service.

Enhanced Bus (E-Bus):

Bus service with easily identified vehicles and stations. Operates with frequent headways (15-minute service). Station spacing is typically 1/2 to 1 mile apart along major corridors. Includes some traffic signal priority. Amenities (e.g. headways, station spacing and design, right-of-way, use of passenger information technologies, fare-collection method) fall short of Bus Rapid Transit. This service typically operates faster than local bus service, but slower than Bus Rapid Transit.

Bus Rapid Transit (BRT):

Premium bus service with large easily identified vehicles in conjunction with high platform stations that allow rapid boarding capability. Operates with frequent headways (15 minutes or less). Station spacing typically 1/2 to 1 mile apart along major corridors. BRT service employs simple routing schemes, with a significant amount of traffic signal priority at roadway intersections along the corridor, and may incorporate exclusive or specially designed rights-of-way. Passenger information technologies are incorporated into vehicles and stations. Passengers carry a valid ticket/pass subject to random inspection. This service achieves high average route speeds (20 miles per hour or greater off-peak, 15 miles per hour or greater during peak periods).



Goals

The following goals are recommended to be adopted by local jurisdictions within appropriate policy documents. Current and long-range planning documents and efforts to support Bus Rapid Transit shall:

- Goal 1:** Recognize the value of high capacity transit as a means of reducing air pollution, traffic congestion and providing mobility for residents and visitors in the region;
- Goal 2:** Work closely with Regional Transit to provide an integrated long-range transit vision for transit application in the region. This includes setting aside right-of-way and infrastructure for public transit;
- Goal 3:** Recognize the full range of bus service available including, but not limited to Local Bus, Express Bus, Enhanced Bus and BRT. Any of these modes may be used as an interim service until the long-range transit vision is attained; and
- Goal 4:** Incorporate amenities to speed service including traffic signal priorities, queue jump and ITS.

Enhanced Bus and BRT Design Guidelines

The following design guidelines were developed to assist local planners, developers and Regional Transit staff when evaluating development projects (please refer to the list of proposed BRT corridors on the back page):

1. Stations should be 1/2 to 1 mile apart, unless increased speed and/or higher ridership justifies closer placement (e.g. near town centers, industrial parks and airports). Enhanced Bus and BRT stops/stations shall be incorporated into development projects where appropriate. Pedestrian access to the stops/stations should be maximized; lighting, covered walkways and shelters should be provided. Stations and shelter design shall be coordinated with RT staff.
2. Where appropriate, park and ride facilities should be provided in close proximity to significant stops/stations. Shared or joint use parking should be encouraged.
3. The impacts of cross traffic in relationship to transit should be minimized using *grade separations*, queue jumps and signal preemption.
4. Each station should have good access for other modes of travel including autos, pedestrians, bicycles, electric vehicles, buses and shuttles.
5. The design standard for right-of-way for BRT travel lanes shall be a minimum of 12.5 feet for each travel lane or 25 feet for two lanes. Right-of-way width for two-travel lanes and station area shall be 40 feet with a length of 200 feet. The 40-foot width would accommodate two 12.5-foot wide lanes and a 15-foot wide station.
6. ITS shall be incorporated as it becomes feasible to do so.
7. RT, City and County staff shall work together to maximize traffic signal timing, traffic signal priority, queue jumps and other measures to move transit vehicles through corridors at greater speeds.
8. Off-board fare collection shall be implemented where possible.