Streetcar Summary Report

A feasibility study for a streetcar operating in downtown Fresno was launched in early 2010 as a separate task under the auspices of the Fresno Public Transportation Infrastructure Study (PTIS), funded jointly by the City of Fresno and Measure "C" sales tax initiative approved by Fresno County residents in 2008. The purpose of the streetcar study was to determine whether the streetcar could serve as an impetus for economic development projects downtown, where the streetcar should go, how it might be funded, and the timing considerations involved in its future implementation.

A series of one-on-one interviews, open houses and public meetings were held in March through September of 2010. The streetcar was also featured in a number of large public events during the spring and summer of 2010. The history of streetcars in downtown Fresno was researched, informational brochures about historic and future streetcar alignments, destinations and technology options were developed, and people voted on their preferences. Overwhelmingly, downtown Fresno merchants and property owners preferred the look of the modern streetcars as part of an overall effort to modernize the image of Fresno.

Following a coordinated public workshop with the Moule and Polyzoides design team for The Downtown Specific Plan project, two preferred alignments were selected. The top priority alignment was determined to be Fresno Street between the future high speed rail station just south of Broadway and the Regional Medical Center with a new underpass under the railroad tracks at "R" Street, and continuing up Fresno Street to San Joaquin Memorial High School, terminating on Floradora Street. This alignment connects the top two destinations downtown, providing high speed rail travelers a convenient link to downtown destinations and hospital employees a convenient transport mode to restaurants downtown and to the downtown transit center. A future extension of the streetcar eastbound on Floradora Street could connect to the Fresno Regional Airport.

The second priority alignment was determined to be along Van Ness and/or Fulton Streets through downtown with the potential of the streetcar to help revitalize the Fulton Mall, which is undergoing a redevelopment effort through the Downtown Specific Plan effort. It is unclear at this time how the Fulton Mall corridor will be redeveloped and if a significant investment in revitalizing the mall would complement a streetcar alignment here. It was envisioned that both Fulton and Van Ness streetcar alignments could continue as a one-way loop north to the Tower District, terminating at the City College Campus.

The capital cost of the Fresno Street line is estimated at $123 million, including the cost of the new railroad underpass and purchasing vehicles. The capital cost of the Van Ness/Fulton line is estimated at $102 to $116 million, including vehicles. A total of 44 stations were envisioned for the downtown. Each alignment would get five streetcars for startup operating at 15 minute frequencies from 7:00am to 9:00pm seven days a week. Ridership on the Fresno Street corridor is estimated at 1,200 daily boardings and on the Fulton/Van Ness/Wishon corridor at 900 daily boardings in the 2035 built out land use scenario. These estimates could be conservative (low) as a streetcar properly coordinated with revitalization of the downtown could experience synergistic benefits. The stronger the downtown, the greater the likelihood of higher streetcar patronage. Opening of the planned high speed rail station downtown coupled with intensified development around the station and downtown in general could double these conservative patronage estimates.

Prominent developers of downtown property were interviewed for their opinions on the potential impacts of streetcars, with the following results:

- The streetcar will have minimal impact on development unless other public investments are coordinated and implemented.

- Short-term impact will be very limited, but the streetcar can complement a ten to twenty year development strategy.
- The streetcar route must link major destinations to build early ridership, but also run adjacent to high-potential opportunity sites to encourage later development.
- The streetcar can reduce the length of time before 4- to 5-story higher-density residential projects can be built in Downtown, but the overall market suggests these buildings are many years away.
- A district-wide parking strategy will be necessary to complement the streetcar.
- The streetcar itself is unlikely to allow significant parking reductions.

The reports from the High Speed Rail authority do state that economic benefits will be greatest near stations, but do not go into great detail. They suggest increased property values and intensified use near stations, but do not go into detail. If development intensifies near the downtown station it stands to reason that the patronage potential for a streetcar would increase. In fact "last mile" access improvements to the station provided by a streetcar should enhance high speed rail ridership.

It is difficult to isolate the benefits of the streetcar from the economic benefits of other complementary actions. It is also difficult to determine if the streetcar alone would have led to the resulting benefits. The consensus in the planning community is that the streetcar by itself does not lead to economic benefits and that its investment needs to be closely coordinated with other actions. Sometime the streetcar is the tipping factor that promotes smart growth to occur.

With the high speed rail station appearing to become the front door to Fresno and the Central Valley, the impressive Regional Medical Center, concentration of civic center services/jobs, and cultural facilities downtown, the pieces seem to be coming into place for a vibrant downtown. Policies to deal with crime, measures to mitigate railroad noise and aggressive measures to attract market rate housing and supporting retail uses would seem to be the missing pieces. A streetcar could facilitate the later and help to integrate the Regional Medical Center into Fresno's Downtown (4,000 to 5,000 jobs). A streetcar operating in downtown Fresno would be one of the components of good urban design and transit accessibility that are magnets for growth and development. Cities that are growing share many of the following features with Fresno:

1. Flat terrain with Arizona like weather;
2. Convenient excellent medical facilities;
3. Pedestrian oriented street and development patterns;
4. Civic services;
5. Cultural activities including the ballpark;
6. Excellent rail service links to Bay Area, LA and Sacramento (think family and friends):
7. Central Valley cost housing: and
8. Modest priced labor

Seniors are one of the fastest growing population groups, they tend not to want a huge house to upkeep and generally they like the eight factors listed above. Apartments and condos downtown with minimal parking would seem well suited to the growing baby boomer market, particularly those cashing out of expensive Bay Area and LA homes.

Streetcar Funding and Implementation Schedule

Given the timing considerations for high speed rail to become a reality and the current depressed economic situation in downtown Fresno, it is not realistic to contemplate getting a streetcar system up and running in less than five years, particularly without the funding in place. It would be difficult to get both the federal and the local match at this time.

Specifically, in order to be eligible for federal funds, the project must be in the Transportation Improvement Program/Federal Transportation Improvement Program (TIP/FTIP) and the Regional Transportation Plan (RTP). The City of Fresno would be well advised to add streetcar development match money to the next allocation of Measure "C" funding for the 5 to 10-year scenario and add the streetcar project to the RTP. Once the future of high speed rail becomes more certain, the streetcar project would complement and help drive the new construction projects that will come to provide housing and offices downtown.

During the next development phase of the Streetcar Project, a more refined funding strategy should be built. Through additional analysis, a better understanding of the capacity of existing revenue sources to absorb the Project's capital and operating costs would be developed, as well as plans to close any funding gaps. Opportunities for private funding should be considered, as well as new sources of local funding such as redevelopment areas, new sales tax measures, and the implementation of a Vehicle Registration Fee.

1.0 Introduction

A key early step of the corridor planning process is a well-specified statement of the problem, or need that will be addressed by alternative solutions. When undertaken as part of the National Environmental Policy Act (NEPA) process to establish a basis for potential federal funding, a study "need and purpose" establishes the problems that must be addressed in the analysis; serves as the basis for the development of project goals, objectives, and evaluation measures; and provides a framework for determining which alternatives should be considered as reasonable options in a given corridor. More fundamentally, the statement of need and purpose serves to articulate – and justify - why an agency is proposing to spend potentially large amounts of taxpayers' money to study and implement a project that may cause significant environmental impacts, and why these impacts are acceptable.

1.1 Streetcar Need and Purpose

Need – Over the last 30-plus years, Downtown Fresno has experienced a significant decline in commercial and service sector activity resulting in increased county-wide trip generation required to access these now geographically disbursed destinations. The Downtown is now comprised largely of governmental and institutional services with little demand for commercial activity past work hours or on weekends. City administrators, downtown merchants and real estate developers have expressed an interest in investing in a fixed guideway streetcar project that could serve as a catalyst for reinvestment in the Downtown, following the demonstrated success of other streetcar projects across the country.

A streetcar system has the potential not only to link existing and future Downtown activity and transit centers, but also can provide the all-important permanence of a fixed guideway to invite complementary redevelopment by property owners.

Purpose – The purpose of the Downtown Fresno Streetcar Study is to investigate the feasibility, both technically and fiscally, of implementing a preferred fixed guideway streetcar concept that serves as catalyst for economic development while serving an identified transportation need for the Downtown. Through evaluation of a range of alternative alignments and operating scenarios, a preferred streetcar concept will be recommended that will have the most positive impact based on the following criteria:

1. Link existing major activity centers and redevelopment opportunity sites to support and stimulate economic development and the evolution of a more vibrant and economically healthy Downtown community;
2. Supplement the existing and planned transit system with a cross-town link to connecting regional transit facilities;

3. Provide an efficient and attractive option for how people move about the Downtown thereby reducing reliance on automobile trips, and contributing to reducing congestion and improved air quality in the greater Fresno area.

1.2 Streetcar Goals and Objectives

The following draft goals and objectives for the Study were refined based on the outcome of interviews with key Downtown stakeholders.

Goal A: Support and stimulate economic development.

- Invest in a permanent fixed transit system that attracts mixed-use development and encourages growth resulting in an overall increase in transit trips compared to the kind of development and trip patterns that occur without an enhanced transit investment.
- Provide economic and transportation benefits to residents, public institutions and businesses.
- Support and invite development and redevelopment of key opportunity sites in the Downtown by providing permanent transit infrastructure.
- Leverage publicly funded transportation infrastructure improvements to spur development at higher intensity than would otherwise occur.
- Provide alternatives to auto ownership and access to lower private sector development costs by reducing the demand for structured parking.
- Provide a transit link that supports the regional tourism industry.

Goal B: Support existing and future transit investments and customers.

- Improve regional transit access to the Downtown by providing connections to existing and planned transit facilities including future capacity to complement the proposed/planned Fresno Bus Rapid Transit service, the High Speed Rail station and the existing Amtrak station.
- Maximize the utility of existing transit investments by continuing to incrementally expand service and build ridership to justify future investments.

Goal C: Reduce reliance on single-occupant vehicle trips within the Downtown by providing a safe, convenient and reliable mobility option for how people choose to move about.

- Provide transit access between housing, jobs, and recreational and entertainment opportunities. Special consideration should be given to the previously identified Kerns Corridor to connect the Santa Fe Amtrak Depot, Civic Center Square, Fulton Mall and Chinatown.
- Link lodging and entertainment opportunities in downtown Fresno with visitor destinations in the Cultural Arts District, the Convention Center, Grizzlies Stadium and Chinatown.
- Provide transit access to government and medical services to the transit dependent members of the community.
- Reduces congestion downtown and contributes to improved air quality.

2.0 Streetcar Public Outreach

The Downtown Streetcar Feasibility Study began in March of 2010 with a series of one-on-one interviews with key stakeholders in the success of downtown Fresno. A total of 22 interviews were conducted during March 2nd through the 4th with property owners, merchants, builders and association representatives (such as Downtown Fresno Association). Also included were elected officials and representatives of special interest organizations such as historic preservation, community redevelopment, transit, health care and the environment.

An open house, held at the Chamber of Commerce on March 2nd drew 27 participants in to identify key streetcar destinations and potential alignments for downtown. A total of 72 streetcar-supportive businesses and destinations were found in the areas between downtown, the Tower District and San Joaquin Memorial High School. The locations of these destinations are mapped in Figure 1 and the names and addresses of these destinations are provided in Table 8 in the Appendix of this report.

The recommended streetcar alignments were finalized following a joint planning charrette with the Downtown Specific Plan consulting Team on September 29th, 2010. The preferred alignments are shown in Figure 2.

2.1 Streetcar Key Stakeholder Interviews

An important element in shaping a successful streetcar alternative is eliciting invaluable input from key stakeholders in the community. Kimley-Horn & Associates and sub-consultant Rhodes Consulting interviewed 21 different stakeholders from March 2 – 4, 2010. As shown below, this cross-section of stakeholders included property and business owners, local developers, business associations, non-profit organizations, public agencies, and private entities, as follows:

Table 1: Key Stakeholders Interviewed

Business/Agency		Contact Person
1.	Proctor's Jewelers	Brent Weiner
2.	Downtown Fresno Association	Jan Minami
3.	Downtown Revitalization Department	Elliot Balch
4.	Fresno Economic Opportunities Commission	Paul McLain-Lugowski
5.	Historic Preservation Commission	Karana Hattersley-Drayton
6.	Fresno Coalition for Art, Science & History	Cynthia Cooper
7.	Fresno Convention & Visitors Bureau	Jeff Eben
8.	Fresno Business Council	Deborah Nankivell
9.	Downtown Association/Fresno Discount Mall	Morgan Doizaki
10.	Downtown & Community Revitalization	Craig Scharton
11.	Building Industry Association	Mike Prandini
12.	Club One Casino	Kyle Kirkland
13.	Fresno Redevelopment Agency	Marlene Murphey
14.	Central Valley Bank (Chair of Downtown Association & PBID Committee)	Dan Doyle
15.	Fresno Chamber of Commerce	Al Smith
16.	Downtown Association/Tuolumne Hall	Jim Koch
17.	Pyramid Homes	Reza Assemi
18.	Fresno Economic Development Corporation	Steve Geil
19.	Lance-Kashian & Company	Ed Kashian
20.	Granville Homes	Jeff Roberts
21.	Tutelian & Company	Cliff Tutelian

2.2 Streetcar Interview Questions:

1. Do you think higher density and mixed use development needs to happen downtown before a streetcar project would work downtown?
2. Or, do you think a streetcar system in the downtown area would lead to significant redevelopment and investment in Fresno?
3. What kinds of development in particular do you think are needed to create a more vibrant Downtown? What do we need more of?
4. One of the goals of the study is to identify "opportunity sites" for redevelopment which might be stimulated by introduction of streetcar service. Are you aware of any areas or parcels in particular where a streetcar could be the catalyst for new investment by the private sector?
5. As a developer, what kinds of incentives would you like to see to redevelop parcels downtown?
6. What key destinations downtown do you think should be served by the streetcar? (see the map for this discussion)
7. What do you think the hours of operation and frequency of the streetcar service should be? (see the map for this discussion)
8. There are several ways the operating costs for the streetcar can be funded. Do you like or dislike any of the following suggestions?
   - Business Improvement Districts (BID) fees
   - A Tourism Tax (adds to hotel charges)
   - Streetcar fares
   - Raise on-street parking rates or specify capture area to dedicate proceeds to Streetcar operations
   - Dedicate a percentage from publicly owned parking garages downtown
   - Tax privately owned garages on a per stall or gross receipts basis?
   - Switch out operating revenues for the existing downtown circulator (and then eliminate it)
   - Increase fines for parking violations and dedicate that percentage to streetcars
   - Private sponsorship of stops and vehicles
9. Do you have any other ideas that would help make the streetcar project a success?

2.3 Streetcar Interview Results

The diversity of stakeholders interviewed yielded a wide range of comments on their perceptions of Downtown Fresno based on their unique needs and those of their constituents. Clear views were expressed on ways to stimulate economic development; housing opportunities; infrastructure needs; the role of streetcars and key origins and destinations that it should serve; and funding mechanisms. Several common themes emerged.

Economic Development Opportunities

Stakeholders generally agree that Downtown Fresno is ripe for economic development, particularly with improvement in the current economy. Universally, however, the development community emphasizes that significant upgrades to the infrastructure are needed (water; sewer; street alignments; etc.) to attract and sustain a critical mass of development activity. They also strongly believe that there must be a fair and equitable mechanism to fund these improvements in order to make development economically feasible.

There is general acceptance that the proposed Downtown Fresno Property-Based Business Improvement District (PBID)—(an assessment district that generates special benefits to the properties located within the district boundaries) is an approach that may stimulate economic development Downtown by improving sales and property values, as proven in other California cities; but it is not a panacea.

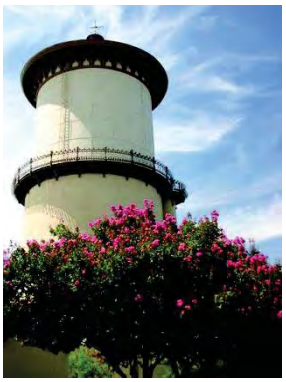
Some indicated that the lack of interest in redevelopment from local and absentee property owners who are happy to collect nominal rents and wait for some external catalyst to generate interest in their property, is a major impediment. A recurring theme heard from stakeholders is that many properties have a long family history of ownership and are paid for, and that owners are afraid to invest in improvements unless neighboring properties do likewise. This has resulted in a disjointed approach by owners and appears to be a "cultural" issue that has not been explored with creative incentives and approaches.

There is agreement that this attitude must be overcome and that the Redevelopment Agency perhaps should play a more aggressive role in development through public-private partnerships, land banking, and/or adopting new policies to expedite development.

Several developers feel that the Cultural Arts and Tower Districts are more ripe for redevelopment and may have more demand for mixed-use development than Downtown. Many stakeholders believe that those areas should definitely be considered for potential streetcar service.

Many expressed an interest in reopening the Fulton Mall to traffic and aligning the streetcar on this new street to invigorate the Mall. Some believe that reopening the Mall would generate increased retail and commercial exposure that could eventually lead to an "entertainment district model" that would include restaurants, bars, concerts in the stadium, and reuse of historic theaters. There also is general consensus that the perception that Downtown Fresno is dangerous needs to be addressed in order to draw people Downtown and stimulate nightlife.

Streetcar as a Catalyst for Downtown Redevelopment



Most stakeholders believe a streetcar system could help catalyze redevelopment in Downtown Fresno. There are varying opinions on whether the streetcar itself would stimulate development or whether new development would need to occur to support a streetcar. There is a need for more housing, more amenities and open space, and creation of "destination magnets" to draw people Downtown and to attract streetcar ridership.

Many feel that higher densities are essential for a streetcar system to thrive. They believe that a streetcar certainly would be a value added to incentivize developers to invest in Downtown.

The most common streetcar destinations mentioned include City and County government centers; Chukchansi Park; the Convention Center; Fulton Mall; the Regional Medical Center; the Cultural Arts and Tower Districts; Fresno City College; and the anticipated high-speed rail station.

Role of Housing in Downtown Fresno

Most stakeholders support increasing housing opportunities Downtown but emphasize the need for affordability. There is support for new housing with a wide range of price points to accommodate economic demographics.

Granville Homes is one of the few developers building any housing (apartment units) Downtown and is now constructing its fourth project. Developers strongly believe that a significant investment in public utilities infrastructure to support housing and other commercial developments is needed and will yield tangible results.

Many stakeholders indicated the need for retail goods and services to create "complete" neighborhoods. More entertainment and restaurant venues also should help draw people Downtown and create needed momentum.

Zoning and Development Patterns

There is agreement that the current zoning and the development process "needs to change." Some suggest that a complete overhaul of the current system is needed. Many want redevelopment rules that are "smart, fast, and cheap" to make Downtown more vibrant.

There is a lot of expectation for the new specific plans to simplify zoning and to reduce the time and cost involved in redevelopment. Some feel that the Fulton Corridor Specific Plan and the Downtown Neighborhood Community Plan efforts will lead to the elimination of conflicting and onerous regulations and that a "complete reboot" of the planning process is needed.

Downtown Parking Concerns

There are numerous concerns about the state of parking Downtown. Many want to see an overhaul of the public parking management system, including improved wayfinding, more promotion, and a new look at the pricing structure.

Many stated that on-street parking costs are lower than off-street parking costs but should be priced higher to encourage use of lots and garages for long-term parking. Generally, many believe that Fresno residents still maintain an agricultural town perspective on parking and do not like parking garages. A suggestion was made to create an economic incentive for people to park once and then utilize the streetcar for easier mobility Downtown.

Funding of Infrastructure Improvements

A variety of approaches were suggested to fund Downtown infrastructure improvements, including a streetcar system. There was general agreement that costs and fees must be distributed fairly, with developers stating that the development community should not and cannot bear the burden alone.

Some stakeholders mentioned instituting a gasoline sales tax and use of parking fees to offset infrastructure costs. Some believe that what inhibits growth is the lack of private investment to create tax increment financing (TIF) to fund infrastructure. Eliminating roads or excess right-of-ways

that have low usage could add land to the tax rolls generating more TIF. Many believe a strong incentive for redevelopment is the elimination of fees entirely, at least in targeted areas which rotate periodically to address redevelopment priorities. There was a suggestion that the City could fund new infrastructure through creation of a Mello-Roos Community Facilities District (CFD) and that tax increment dollars could be rebated to property owners to offset some of the cost. Further, the Mello-Roos funds could be used to operate the streetcar; and a non-profit corporation could operate the parking system, streetcar, and convention center and have the ability to issue bonds. (A CFD includes all properties that will benefit from capital and/or service improvements to be provided. A two-thirds majority vote of residents living within the proposed boundaries is needed.)

Conclusion

Fresno leaders have expressed an unwavering interest in revitalizing Downtown Fresno. There have been significant recent efforts to prudently plan for a rebirth of the area and to accomplish this through successful public-private collaboration. Willingness to collaborate with the private sector is imperative to propel Downtown.

Many successes are already evident from this public-private collaboration including, among others, Chukchansi Park, the Exhibit Hall Expansion and Convention Center Parking Garage, UCSF Fresno Medical Education Center, the Federal Courthouse, Civic Center Square, and the Santa Fe Promenade and Depot Renovation. New initiatives include a new full-service hotel, revitalization of Fulton Mall, and several other notable projects. The planned high speed rail station downtown could potentially be a “game changer” for downtown economic development. A streetcar system could strengthen the potential benefits of high speed rail. In many respects downtown’s future with high speed rail should be the foundation for opportunity planning more so than the past or near term thinking.

And, high speed rail could indeed be a game changer for downtown redevelopment over the next 20 years. If it is built as proposed and becomes the gateway to the central valley in some lesser form, it will transform development opportunities in the downtown and the streetcar could leverage benefits. Hopefully the downtown plan will be a bold vision that could take advantage of the opportunities that high speed rail presents. For example, the regional medical center is poised to expand dramatically with Fresno’s burgeoning population and hopefully the downtown plan will encourage this type of expansion.

The reports coming out of the High Speed Rail Authority do state the obvious that benefits will be greatest near stations, but do not go into great detail. They suggest increased property values and intensified use near stations, but do not go into detail. If development intensifies near the downtown station it stands to reason that the patronage potential for a streetcar would increase. In fact “last mile” access improvements to the station provided by a streetcar should enhance high speed rail ridership.

Regarding examples of economic benefits from other cities’ streetcar projects, the evidence is consistently positive. However, it is difficult to isolate the benefits of the streetcar from the economic benefits of other complementary actions. It is also difficult to determine if the streetcar alone would have led to the resulting benefits. The consensus in the planning community is that the streetcar by itself does not lead to economic benefits and that its investment needs to be closely coordinated with other actions. Sometime the streetcar is the tipping factor that promotes smart growth to occur. For example, the Seattle streetcar project was an integral part of the South Lake Union development plan (Microsoft’s Paul Allen). The project probably would have moved forward without the streetcar, but perhaps not at the same scale or form.

With the high speed rail station appearing to become the front door to Fresno and the Central Valley, the impressive Regional Medical Center, concentration of civic center services/jobs, and cultural facilities downtown, the pieces seem to be coming into place for a vibrant downtown. Policies to deal with crime, measures to mitigate railroad noise and aggressive

measures to attract market rate housing and supporting retail uses would seem to be the missing pieces. A streetcar could facilitate the later and help to integrate the Regional Medical Center into Fresno's Downtown (4,000 to 5,000 jobs). Growth attractors in other cities that Fresno shares include:

1. Flat terrain with Arizona like weather;
2. Convenient excellent medical facilities;
3. Pedestrian oriented street and development patterns;
4. Civic services;
5. Cultural activities including the ballpark;
6. Excellent rail service links to Bay Area, LA and Sacramento (think family and friends):
7. Central Valley cost housing: and
8. Modest cost labor?

Seniors are one of the fastest growing population groups, they tend not to want a huge house to upkeep and generally they like the eight factors listed above. Apartments and condos downtown with minimal parking would seem well suited to the growing baby boomer market, particularly those cashing out of expensive Bay Area and LA homes.

There is support for streetcar service and a strong belief that successful residential, retail and commercial development, and dependable transit approaches will provide needed synergy and will help catalyze Downtown Fresno. There is a need for links to major activity centers and redevelopment opportunity sites to support and stimulate economic development and the evolution of a more vibrant and economically healthy Downtown community. Efficient and attractive transportation options also will reduce reliance on single-occupancy vehicle cars, help reduce congestion, and improve air quality.

A clear message conveyed by stakeholders is that strong leadership can make changes to ease the economic development burden and provide the impetus needed to reinvigorate Downtown Fresno. Stakeholders want to see positive movement and tangible results rather than false starts and promises and another study on the shelf.

The community must be engaged in the process during all phases. And most importantly, there must be a unified, consistent plan and voice.

2.4 Streetcar Meeting, August 2010

A targeted informational and voting meeting for downtown merchants, property owners and key stakeholders was held on August 3, 2010. The purpose of the meeting was to inform attendees of progress on the streetcar study and to seek their input on preferred routes and selection of the streetcar technology (historic trolleys or modern streetcars). The meeting, held at the Chamber of Commerce, was attended by 30 participants who actively engaged in the dialogue about the future of downtown.

Table 2: Types of Streetcar Systems, Similarities and Differences

	Modern Streetcar	Vintage Trolley
Maneuverability	Has a front car at both ends, easy to reverse directions.	Most are one-way only, need a loop or turn-style to turn around.
Level boarding for faster service	Yes	Steps up
Accessible to the Disabled	Yes	No, but can add special lifts at stations
Passenger Capacity	150 – 160 (with standees)	70 – 90 (with standees)
Typical Cost	$3,500,000	$900,000
Operates in Mixed Traffic	Yes	Yes
Maintenance Cost	Lower	Higher

Summary of Comments

The Modern Streetcar technology was selected as the preferred technology. Given the choices of going two-way through Fulton Mall, two-way on Van Ness or a one-way Fulton/Van Ness loop, people preferred Fulton Street/Van Ness Avenue as a one-way loop through Fulton Mall. The Tower District/City College Extension as a one-way loop north on Van Ness and Wishon is preferred over the two-way on Wishon only. Using P Street to get close to the hospital and serve City Hall was voted for the most by far. Votes were across the board for whether or not to complete the Railroad Underpass to Hospital and up Fresno Street now, later, or never, but completing the underpass now got the most votes and there was much concern from the voters that a connection to the high speed rail station was necessary. The three most common votes for streetcar operating cost funding mechanisms were to dedicate a percentage of the PBID at renewal (next 5 years), private sponsorship of stops and vehicles (restaurants, Convention Center, etc.) as part of a larger marketing campaign ("Take the Streetcar to Dinner"), and Using Measure C funds. Voters seemed to be either passionately in support of or opposed to the idea of using Measure C "New Technology" funds for the streetcar project.

3.0 Downtown Streetcar Economic Impacts Analysis

Strategic Economics provided the following analysis of the proposed streetcar project in September of 2010:

- The potential functions and roles of a streetcar in Downtown Fresno
- A description of the alternative alignments under consideration;
- Evaluation of assessed value of existing development;
- Evaluation of the alternative alignments and locations of jobs;
- Evaluation of the alternative alignments and locations of existing and proposed housing in Downtown Fresno;
- Summary of developer opinions on the impact of the streetcar on development and property values; and Summary of next steps.

3.1 The Functions and Roles of a Streetcar in Downtown Fresno

At its most basic level, a streetcar provides local transportation circulation. Unlike bus rapid transit, regional light rail or heavy rail, a streetcar spans relatively short, walkable distances, has closely-spaced stops, and moves at lower speeds.

Streetcars generate economic benefits by creating local connectivity and thereby supporting or complementing pedestrian activity. Streetcars 'enhance walking' by shortening perceived distances between places, increasing visibility on blocks along or near the route, and connecting a larger area to regional transit and/or parking facilities. Unlike a bus, streetcars are often more appealing to riders and include significant public infrastructure investments that indicate permanence and dedication to quality performance. That permanence can reduce risk and increase value for developers and businesses that seek to locate along the alignment based on the increased visibility and pedestrian circulation.

In recent years, it has become clear that the presence of transit can increase property values and result in valuable development opportunities under certain market conditions. Several studies have documented a value "premium" for properties near transit, and many transit agencies and other stakeholders have become interested in harnessing this value. While such studies have found that new streetcar facilities may provide a value boost, one reason that property value is impacted is that when a streetcar is put in place, cities allow higher density development. Such impacts are possible because the streetcar may allow for higher density without necessitating as much parking or other new transportation facilities beyond the streetcar.

A recent study conducted by Reconnecting America found that underutilized parcels that are just far enough away from existing activity centers to not be walkable can become more attractive for development when a streetcar connects existing activity centers and creates new ones. Streetcars have offered a powerful connection between vacant and underutilized parcels in communities like Channelside (Tampa, Florida), the Pearl (Portland, Oregon), and South Lake Union (Seattle, Washington). In Portland, development occurred at higher densities, closer to the maximums allowed, than in other parts of the city. The Reconnecting America study found that vacant land increased in value over 100 percent in areas near the streetcar lines in all three cities during the five- to six-year time period researched.

The specific land use context of a streetcar system and conditions in the local real estate market can result in dramatically different property value impacts. While Fresno differs from many of the cities that have recently implemented streetcars and the current market conditions differ from those in place at the time of other recent streetcar projects, linking existing neighborhoods and employment centers to one another has the potential to create value in the "in between" places.

3.2 Fresno Streetcar Alternative Alignments

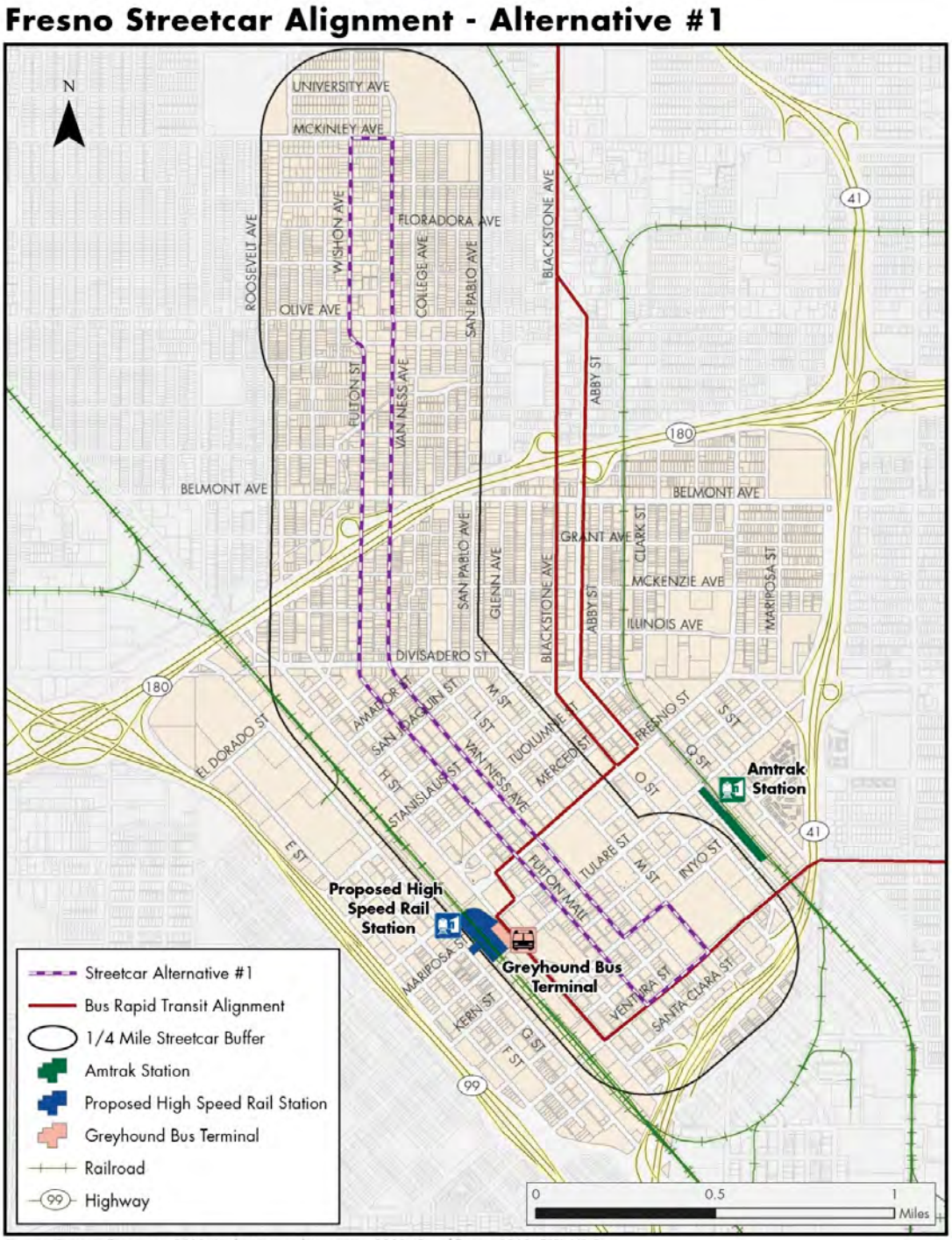
This analysis is based on the alternative alignments currently under consideration as part of the PTIS. The Kimley-Horn team held meetings in early August to consider alternative alignments for the Fresno streetcar. The team conducted a voting exercise with stakeholders to determine two alternative alignments, allowing for the possibility of a third alignment that may come out of the Downtown Specific Plan meetings to be held the last week of September, 2010.

Figure 3 illustrates Alternative #1, which is a one-way loop through the Downtown on the Fulton Mall and Van Ness Avenue with the Tower District/City College Extension on Wishon Avenue and Van Ness Avenue.

Figure 4 illustrates Alternative #2, which is a phased alignment. Phase 1 is a two-way alignment on Van Ness Avenue through the downtown travelling through the Tower District on Fulton Street and Wishon Avenue. Phase 2 of Alternative #2 is a two-way alignment with a loop Southwest of the proposed High Speed Rail Station traveling North on Fresno Street through the Downtown to Floradora Avenue.

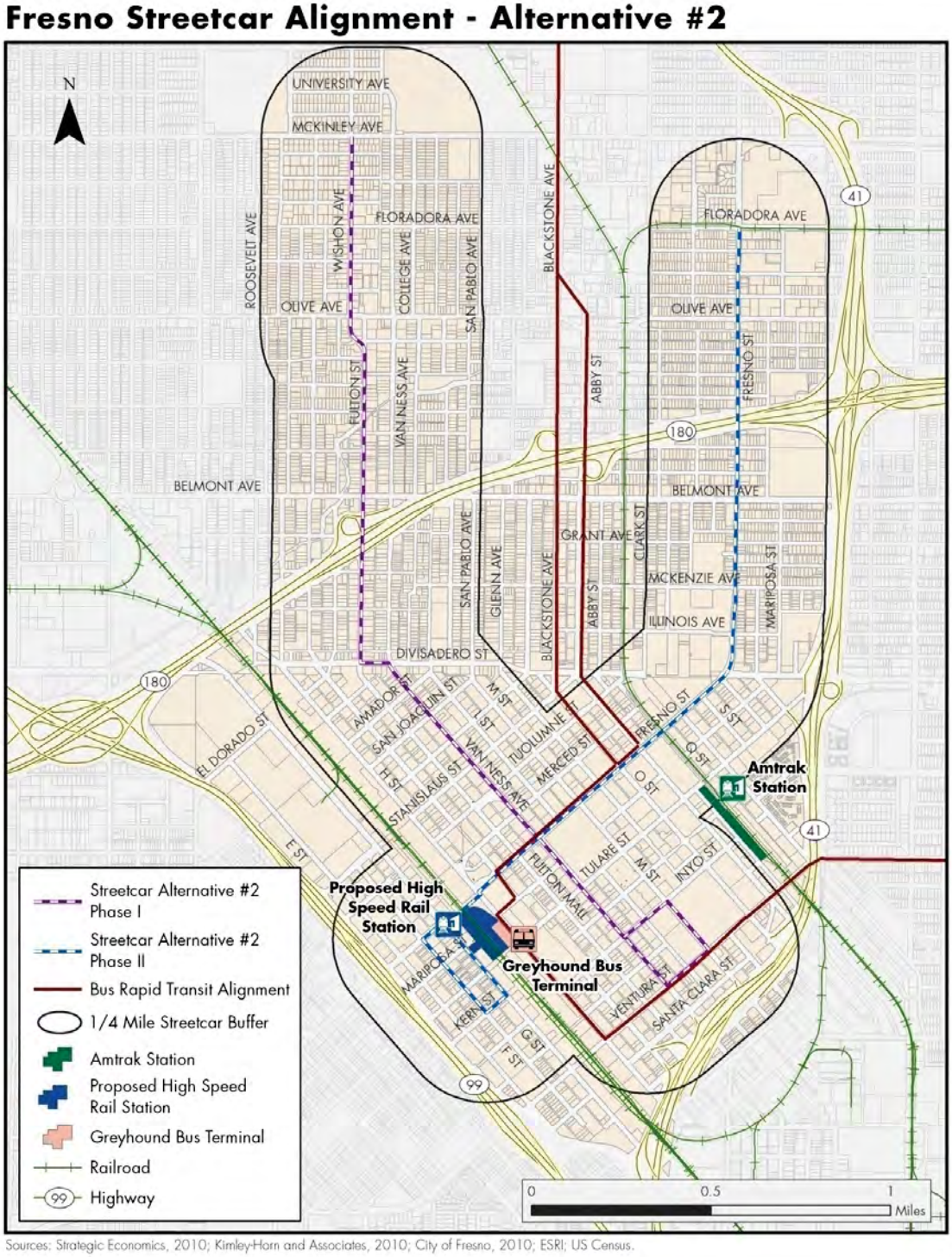
Figures 1 and 2 also include the locations for the existing Amtrak Station and Greyhound Bus Terminal and the proposed High Speed Rail Terminal as well as the alignment for the proposed Bus Rapid Transit.

Figure 3: Fresno Streetcar Alignment – Alternative 1



Sources: Strategic Economics, 2010; Kimley-Horn and Associates, 2010; City of Fresno, 2010; ESRI; US Census.

Figure 4: Fresno Streetcar Alignment – Alternative 2



Sources: Strategic Economics, 2010; Kimley-Horn and Associates, 2010; City of Fresno, 2010; ESRI; US Census.

3.4 Evaluation of Existing Development

This section provides a preliminary assessment of the potential for new or enhanced development associated with the two alternative alignments. The potential for new or enhanced development is important in consideration of alternative alignments because many of the most valuable local streetcar funding sources are closely tied to new development. If an increase in property value can be attributed to a new transit facility or system and some of that transit premium can be captured to help pay for the facility it could be a significant source of revenue for financing a new system.

Strategic Economics analyzed and mapped the assessed value of existing development in relation to the two alignment alternatives. The analysis identified those parcels that are currently vacant or underdeveloped using Fresno County Assessor's data to determine which parcels were likely candidates for new development or redevelopment.

To identify development opportunity sites around the potential Downtown Fresno Streetcar alignment, Strategic Economics used a ratio that divided the two components that determine a parcel's assessed value – improvement value and land value. The resulting "improvement to land value ratio" is a simple measure used to analyze the economic utility of a parcel. If the ratio is above 1.0, the on-site improvement has more value than the land on which it resides. If the ratio is less than 1.0, the assessed value of the land is higher than the on-site improvement, indicating that the property is currently "underutilized" and might be more likely to redevelop over time. This basic threshold is a standard measure of potential for redevelopment and has been found to represent the point where the market would identify land as eligible for redevelopment.1

This improvement to land ratio was calculated for the entire Downtown Triangle and a ¼ mile buffer around the alignment alternatives extending outside of the Downtown Triangle.

Figure 5 on the following page is a map showing the area considered in this analysis. This area was considered to allow the comparison of development potential for Alternatives #1 and #2 described above, but also to provide data for the consideration of other potential alignment options. Figure 3 shows the locations of the vacant and underutilized parcels in relation to the two alternative alignments.

As shown in Table 3, the total assessed value of the study area being considered is over $1.1 billion. Of the 5,283 parcels in the study area, 366 are vacant and 551 are underutilized using the ratio described above. Vacant parcels in the study area account for about $15 million in assessed value and the underutilized parcels account for about $49 million in assessed value.

1 *The California Infill Parcel Locator, Landis et al, 2006.*

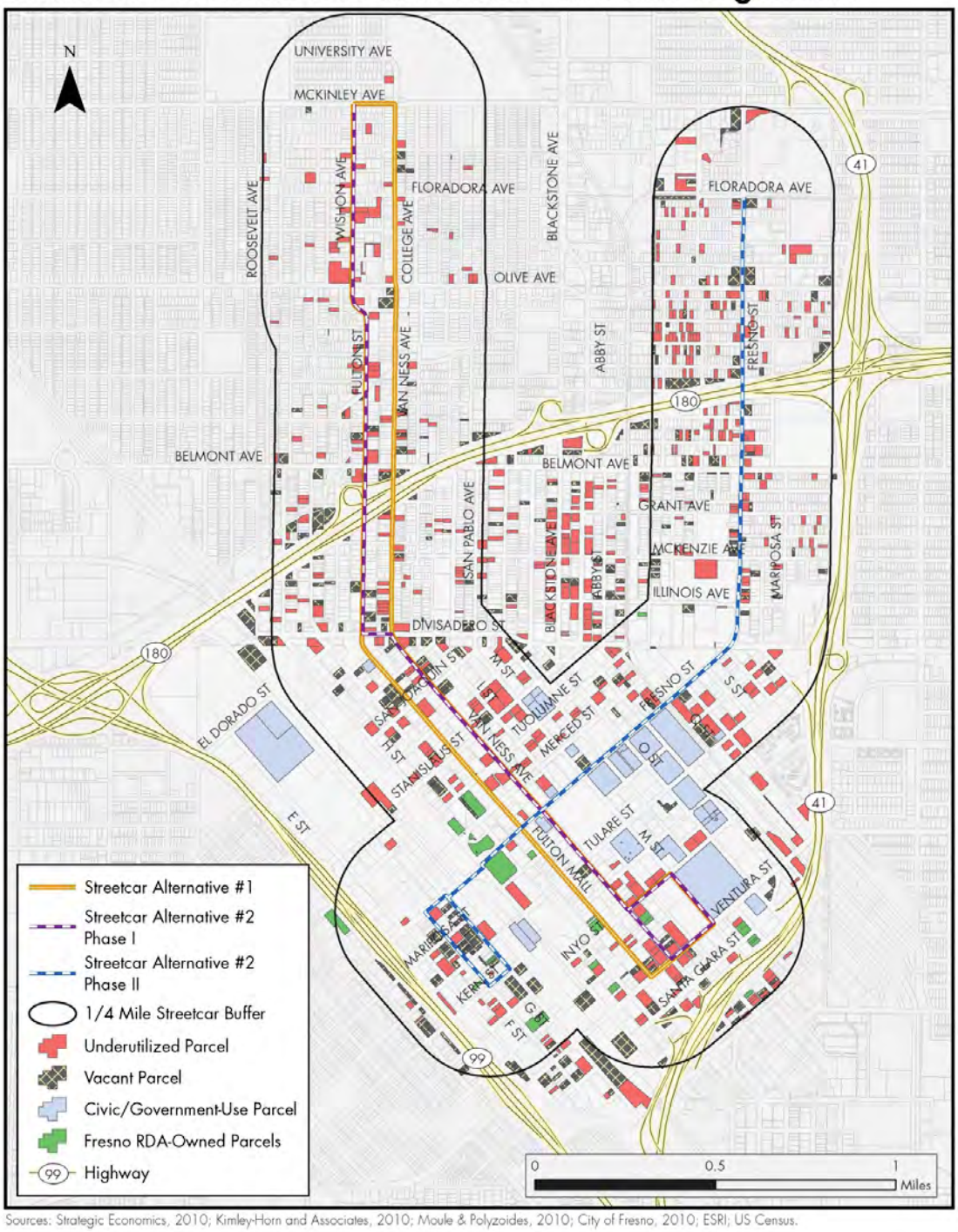
Table 3: Existing Assessed Value of Vacant and Underutilized Parcels in Downtown Fresno Streetcar Study Area

Parcel Type	Total Parcels	Total Assessed Value
Vacant	366	$15,352,000
Underutilized	516	$46,031,000
Other	4,401	$1,085,652,000
Total	5,283	$1,147,035,000

Sources: Fresno County Assessor's Office, 2010; Strategic Economics, 2010.

Figure 5: Vacant or Underutilized Parcels near Streetcar Alignments

Vacant or Underutilized Parcels Near Streetcar Alignments



Sources: Strategic Economics, 2010; Kimley-Horn and Associates, 2010; Moule & Polyzoides, 2010; City of Fresno, 2010; ESRI; US Census.

Table 4 summarizes the zoned uses for the underutilized parcels in the study area. Of the underutilized parcels included in the analysis, 255 parcels with existing value of almost $35 Million are zoned for commercial uses and 261 parcels with existing value of $11 Million are zoned for residential use.

Table 4: Zoned Uses for Underutilized Parcels in the Downtown Fresno Streetcar Study Area

Underutilized Parcel Type	Total Parcels	Total Assessed Value
Commercial	255	$34,960,000
Residential	261	$11,071,000
Total	516	$46,031,000

Sources: Fresno County Assessor's Office, 2010; Strategic Economics, 2010.

As illustrated in Figure 5 many of the vacant and underutilized parcels are located directly on the alternative alignments and may therefore be likely candidates for new development or redevelopment should the streetcar be located on those alignments. The improvement to land analysis excluded governmental, institutional and other tax-exempt properties, but Figure 3 does highlight (in green) those parcels owned by the Fresno Redevelopment Agency because they are likely to redevelop.

3.5 Relationship Between Alignment Alternatives and Location of Jobs

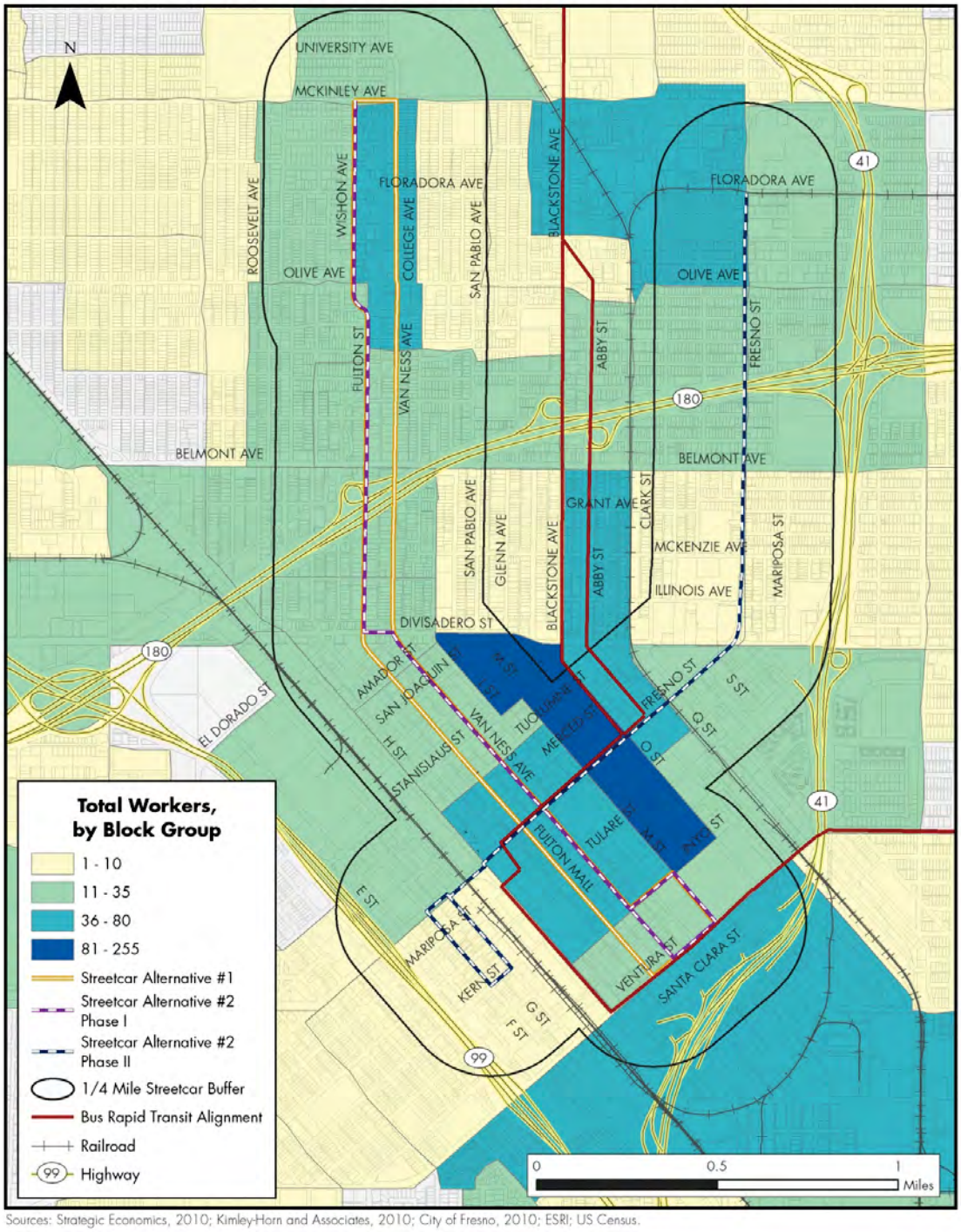
The Downtown Fresno Streetcar could help get commuters to their places of work. As discussed above streetcars are walk enhancers, shortening perceived distances between places. Streetcars can therefore provide a solution to the "last mile" connection issue by incentivizing workers to leave their cars at home. The proposed Bus Rapid Transit system would provide commuters with the option to get to Downtown Fresno, but the addition of a streetcar could help improve the last mile connection by getting more commuters closer to their places of work without using their car. Research on the role of transit in economic development also suggests that employers who offer workers the choice of taking high quality transit tend to experience lower absenteeism rates, which can help increase productivity and potential business growth.

Strategic Economics evaluated commute patterns for residents of Downtown Fresno, using the U.S. Census Bureau's 2008 Longitudinal Employer Household Dynamics (LEHD) data. This data enables evaluation of the place of residence for workers in any given block group throughout the United States ("Where Workers Live"), and of the place of work for residents of any given block group ("Where Residents Work"). In this analysis, Strategic Economics looked at where residents of the downtown neighborhoods work, to evaluate how far they are commuting and to where.

Figure 6 on the following page maps the place of work for residents of the Downtown Triangle to see if the streetcar could help get local residents to work. In the map, the darker blue areas represent the places where residents work in higher concentration. For example, a relatively high percentage of residents of the Downtown work between O Street and M Street and therefore that area within the map is darker than any other area in the map. The total number of residents who live in the study area and work in the study area is only about 750.

Figure 6: Work Location of Downtown/Streetcar Buffer Residents

Work Location of Downtown/Streetcar Buffer Residents



Sources: Strategic Economics, 2010; Kimley-Horn and Associates, 2010; City of Fresno, 2010; ESRI; US Census.

The analysis of place of work indicates that residents of the study area work in highest concentration within the Downtown Triangle or in the industrial area to the south of Downtown. Residents may choose to live in the Downtown because their housing and transportation costs are lower. The place of work analysis indicates that they may also live in the Downtown because of the proximity to their places of work.

To further examine the relationship between the alignment alternatives and jobs, Strategic Economics analyzed and mapped the number of jobs in relation to the alignment alternatives based on InfoUSA data. The streetcar has the potential of enhancing lunchtime dining and shopping options for Downtown workers. The concentration of jobs in the Central Business District (12,660 jobs) and the Civic Center (11,934 jobs) offers a built-in base of shoppers and lunchtime diners who could help to increase weekday retail sales activity in the Downtown and on the Fulton Mall specifically. Table 5 summarizes the number of jobs in the Downtown Triangle.

Table 5: Location and Number of Jobs In the Downtown Triangle

Location	Number of Jobs
Central Business District	12,660
Chinatown	1,934
Civic Center	11,934
Cultural Arts District	1,432
Jefferson	1,348
Lowell	587
South Stadium	1,142
Total Downtown Triangle	31,037

Sources: InfoUSA, 2010; ESRI; US Census; Strategic Economics, 2010.

Figures 7 and 8 on the following pages show the number of total jobs and the industry employment mix in relation to Alternatives #1 and 2. There are about 18,000 jobs within the buffer for Alternative #1 and about 34,000 jobs within the buffer for Alternative #2 (including Phases I and II).

Figure 7: Total Employment Adjacent to Streetcar Alternative 1

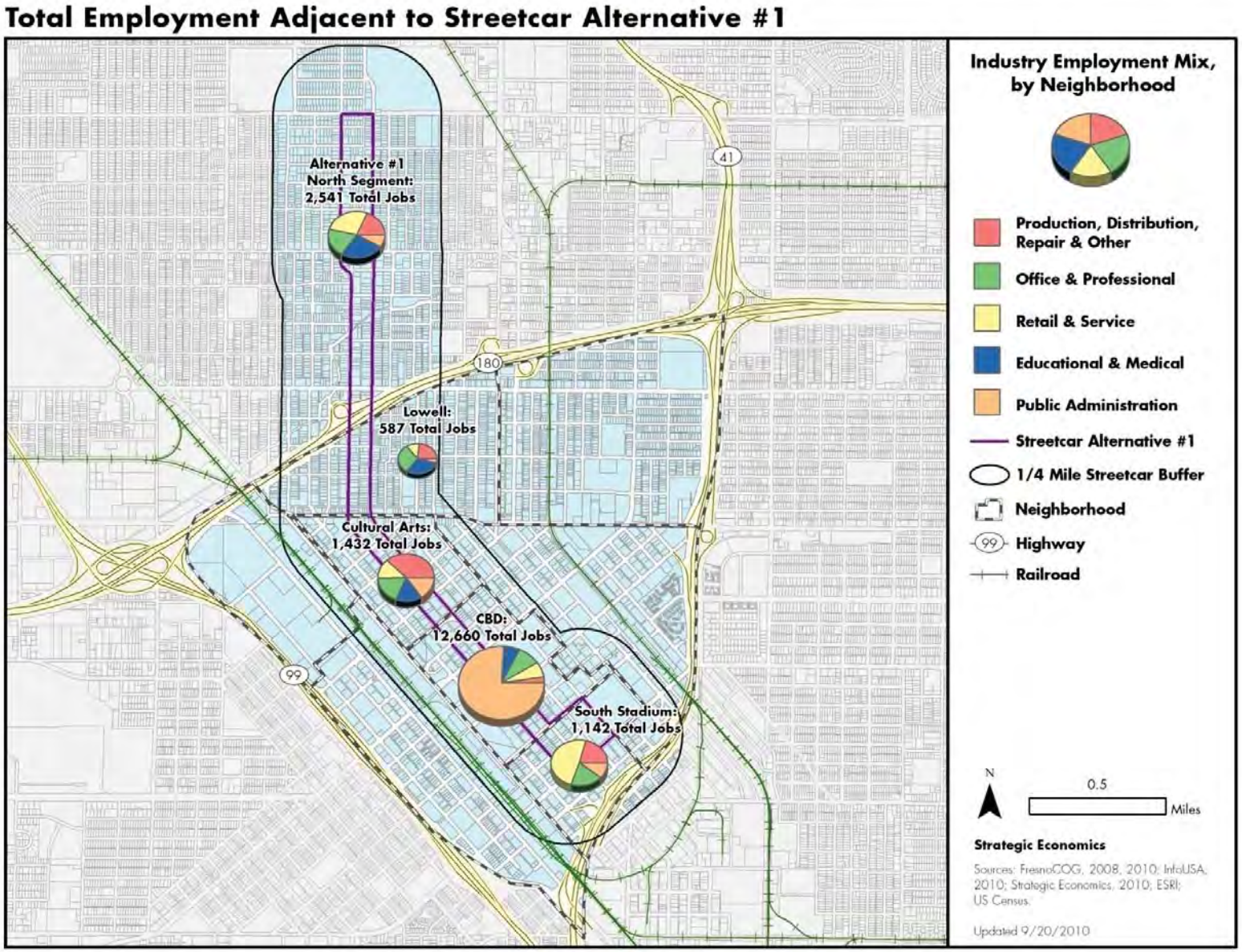
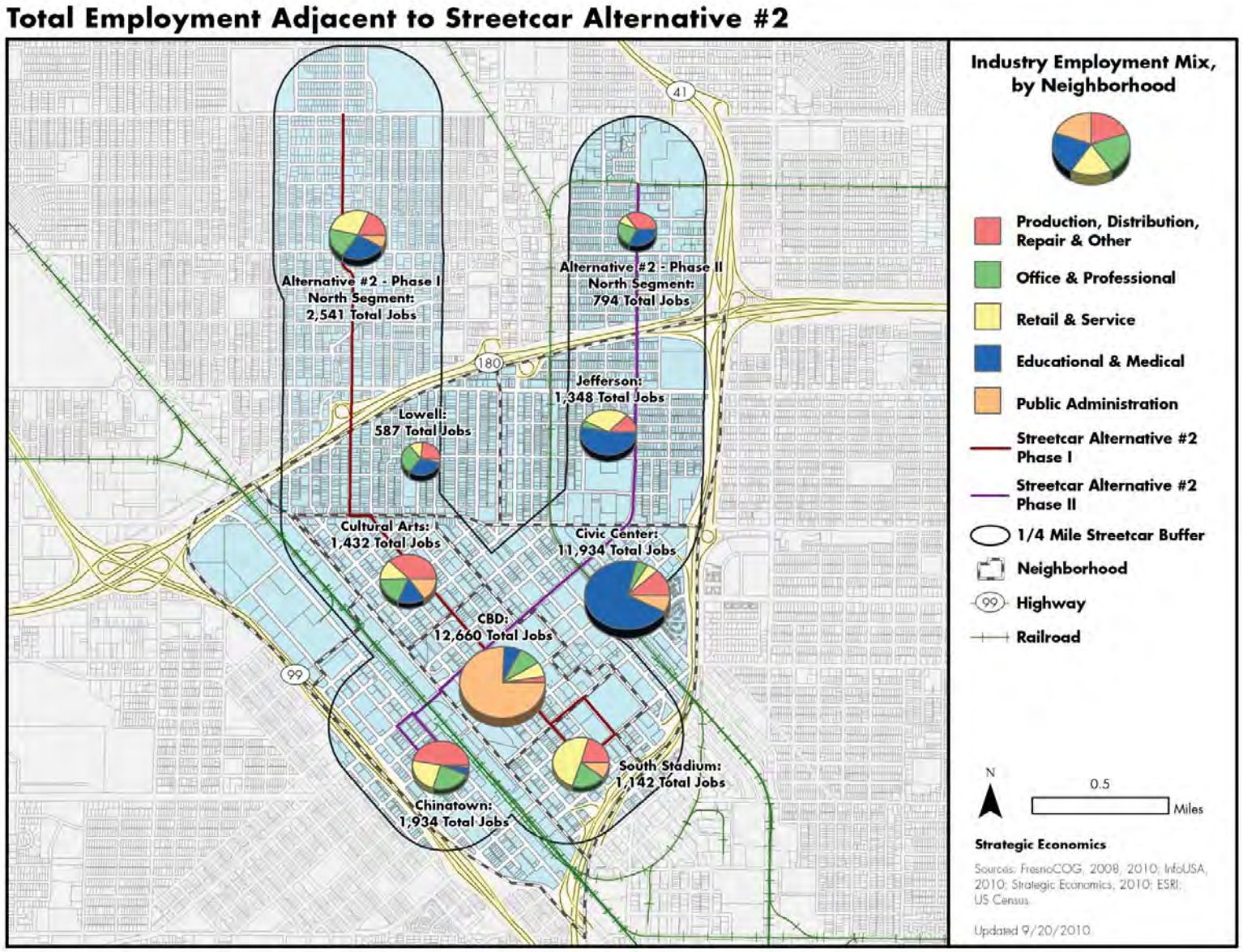


Figure 8: Total Employment Adjacent to Streetcar Alternative 2



3.6 Relationship between Alignment Alternatives and Existing and Proposed Housing and Amenities

Strategic Economics mapped new and proposed housing projects in the Downtown in order to show where market activity is currently occurring in relation to the alignment alternatives.

Within the Downtown, the majority of new or rehabilitated housing is being built in the Cultural Arts District. As shown in Table 6, at least 316 units were recently constructed/rehabilitated or are planned and proposed for the Cultural Arts District, out of approximately 639 known units recently completed or planned within the Downtown. These projects generally consist of rental units in multi-family housing, with a mix of new construction and rehabilitation of existing buildings; however, the majority of these projects were publicly-assisted.

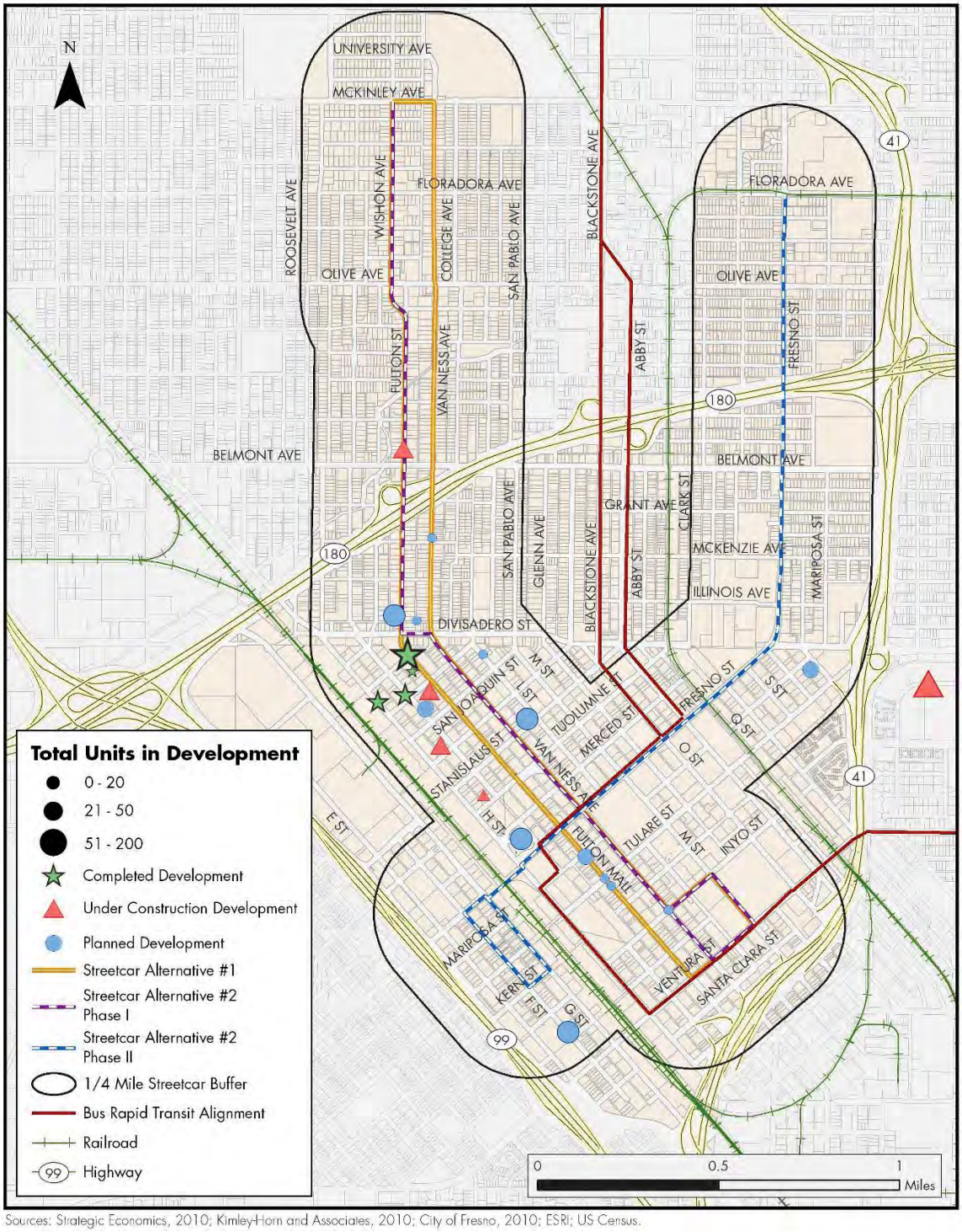
Table 6: Recently-Built, Planned, and Proposed Housing Projects in the Downtown Fresno Streetcar Study Area

Name	Location*	Type	Tenure	Status	Units
Mariposa and U	Jefferson	New	Rental	Planned	37
Van Ness Row Houses	Lowell	New	Unknown	Planned	20
Los Pinos	Lowell	Renovation	Rental	Planned	52
64 N. Fulton	Lowell	Renovation	Unknown	Under construction	19
Numerous	Lowell-Jefferson	Renovation	Various	Under construction	15
Mayflower Lofts	CBD	Renovation	Rental	Under construction	15
Broadway Lofts	CBD	Renovation	Rental	Under construction	23
Hotel Fresno	CBD	Renovation	Rental	Planned	68
Security Bank Building	CBD	Renovation	Own	Planned	27
JC Penney Building	CBD	Renovation	Pending	Planned	Pending
Berkeley Block	CBD	Renovation	Pending	Planned	Pending
Chinatown Lofts	Chinatown	New	Rental	Planned	200
Iron Bird Lofts	Cultural Arts	New	Rental	Completed	80
Fulton Village / Fulton Lofts	Cultural Arts	New	Rental	Under construction	68
Vagabond Lofts	Cultural Arts	New	Rental	Completed	38
H Street Lofts	Cultural Arts	New	Rental	Completed	26
Factory Tire	Cultural Arts	Unknown	Rental	Planned	39
Bastian Court	Cultural Arts	New	Rental	Planned	61
L Street Homes	Cultural Arts	Unknown	Pending	Planned	Pending
Pearl Building	Cultural Arts	Renovation	Rental	Completed	4
Droge Building	South Stadium	Renovation	Rental	Planned	14
				Completed New and Renovated Units	148
				Planned or Under Construction New and Renovated Units	639+

Source: City of Fresno, 2010; Strategic Economics, 2010

Figure 9 on the following page shows the locations of recently built, planned, and proposed housing projects in the Downtown Fresno Streetcar study area. In the figure, the different shapes denote the status and size of the development projects, with stars representing completed projects, triangles representing projects under construction, and circles representing planned projects. As detailed in the legend on the figure, the size of the various shapes corresponds to the size of the project.

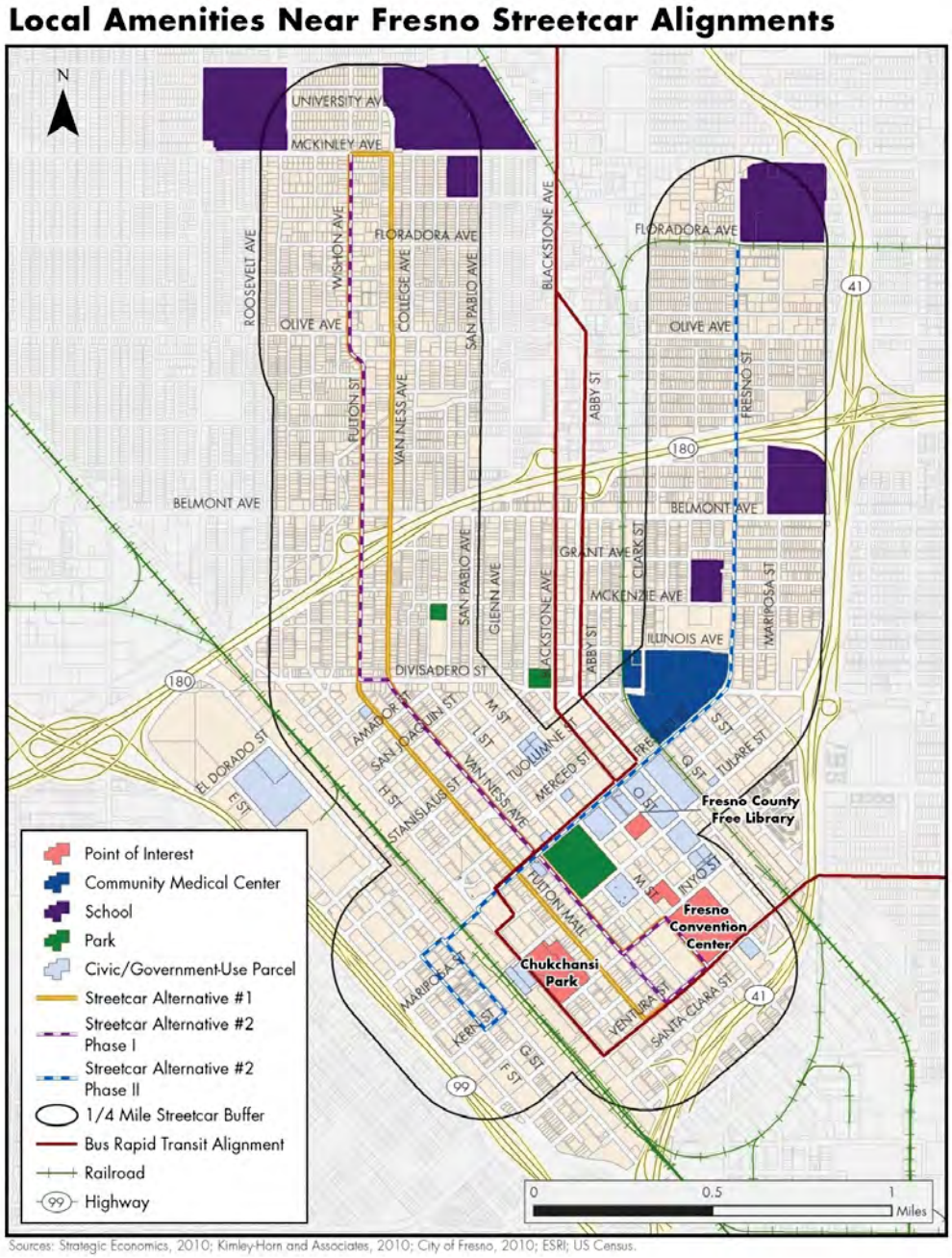
Figure 9: Development Projects near Fresno Streetcar Alignments



Sources: Strategic Economics, 2010; Kimley-Horn and Associates, 2010; City of Fresno, 2010; ESRI; US Census.

The alternative alignments under consideration have the potential to improve access to Downtown for students, faculty, and staff of Fresno City College, Fresno High School, and San Joaquin Memorial High School. National studies show that students and employees at higher education institutions have a greater tendency to walk, bike, and take transit than other employment sectors. Although it is a commuter campus, the Fresno City College offers a natural source of ridership for the streetcar if students and staff have somewhere to go in the Downtown.

Figure 10: Local Amenities near Fresno Streetcar Alignments



Sources: Strategic Economics, 2010; Kimley-Horn and Associates, 2010; City of Fresno, 2010; ESRI; US Census.

3.7 Streetcar Impact on Development and Property Values

This section discusses the potential impact of a streetcar on new development in Downtown Fresno. As discussed above the streetcar has the potential to impact redevelopment in the Downtown. Other cities where a streetcar was introduced have experienced a positive impact on local property values because the streetcar connected neighborhoods and created new ones.

The Fulton Corridor Specific Plan process is currently underway, but preliminary land use alternatives include up to 25 million square feet of capacity for new development in the Downtown. Table 7 shows square feet of various land uses under low, medium, and high scenarios for development capacity in the Downtown.

Table 7: Range of Development Capacity Under the Fulton Corridor Specific Plan

Land Use Category	Low	Mid	High
Dwelling Units	1,590	5,247	13,629
Dwelling Units (SF)	1,908,124	6,295,976	16,354,485
Office (SF)	605,645	1,885,144	4,885,680
Retail (SF)	345,680	1,160,355	3,049,502
Industrial (SF)	123,795	235,740	462,942
Total	**2,983,244**	**9,577,216**	**24,752,608**

The mid-range development capacity scenario is generally consistent with the market analysis conducted by Strategic Economics. The mid-range development capacity scenario shown in Table 7 would result in an additional 13,000 residents and 10,000 employees in the Downtown.

The proposed high speed rail station in Downtown Fresno has the potential to further impact the types and amounts of development that occur in the area. The streetcar could be complementary to the high speed rail system, allowing patrons to make last mile connections throughout the Downtown area.

Results of the Developer Interviews

Strategic Economics conducted interviews with several local developers to qualitatively gauge the potential impact of a streetcar on the development market in Downtown Fresno. The findings below summarize developer opinions based on their local experience and expertise.

The streetcar will have minimal impact on development unless other public investments are coordinated and implemented.

As a standalone project, the streetcar is unlikely to increase the pace or intensity of development in Downtown Fresno. Instead, the streetcar must be accompanied by significant coordination and cooperation among City departments to meet several oft-stated needs: 1) improve the water and sewer infrastructure, 2) seamless coordination of goals and actions between City departments, and 3) willingness to work closely with developers in obtaining public sector funding resources, whether local, state, or federal. The development community recognizes the weak market in Downtown, but these public-sector obstacles tend to be consistently raised as barriers to building better momentum.

Short-term impact will be very limited, but the streetcar can complement a ten to twenty year development strategy.

The Fresno region does contain demographic segments typically interested in 'downtown-living,' but capturing this

segment is difficult in a place long-focused on automobile accessibility and suburban lifestyles. Interviewees stated that Downtown Fresno may take at least 15 to 20 years to become a vibrant place, but the streetcar can fit into that long-term strategy and make a slight difference in pace. Most interviewees felt that such a strategy must initially focus on connecting destinations and encouraging development of a residential population.

The streetcar route must link major destinations to build early ridership, but also run adjacent to high-potential opportunity sites to encourage later development.

Given the long perceived timeline for improvements in the Downtown development market, interviewees expressed a strong need for the streetcar to build early momentum by connecting major destinations. It must be recognized that the streetcar may often run empty at night until significant additions of housing and nightlife occur. In this interim period, interviewees noted that the streetcar route must, at a minimum, connect the length of the Fulton Mall, Chukchansi Park, the Civic Center area, the Convention Center, the Community Regional Medical Center, and the Cultural Arts District. Between these destinations, the routing must also run adjacent to high numbers of vacant or underutilized properties to encourage later development potential.

The streetcar can reduce the length of time before 4- to 5-story higher-density residential projects can be built in Downtown, but the overall market suggests these buildings are many years away.

The streetcar can make minor improvements in the pace of development in Downtown, which may eventually lead to a maximum of four- to five-story residential projects; for the foreseeable future, however, development is likely to be less intense, at a maximum of thirty to forty units per acre. Early residential projects are needed to increase Downtown vibrancy, but there will be a need to balance early, less-intense projects with preservation of sites for future projects.

A district-wide parking strategy will be necessary to complement the streetcar.

Interviewees were quick to dismiss project-specific parking requirements in Downtown. There is widespread recognition that Downtown has significant parking, but it is poorly utilized. By shortening perceived distances as a “walk-extender,” the streetcar can complement a district-wide parking strategy that takes advantage of available spaces while reducing project-specific requirements.

The streetcar itself is unlikely to allow significant parking reductions.

Although the streetcar can enable more efficient use of existing and future parking, Fresno remains an automobile-centric area. Developers noted that market-based requirements, which closely parallel existing regulations, are not likely to decrease with the addition of a streetcar. Owners and renters of new condominiums and apartments are highly likely to own vehicles, if only because of the limits of Fresno’s Downtown and the large land area of the region; commercial uses will need parking for similar reasons. Developers suggested that the strategy to complement the streetcar must focus on off-site and more efficient use of district-wide parking rather than on-site, project-specific requirements.

4.0 Potential for Value Capture

To date, the most significant local contributions to financing streetcars in other locations has come from creating some type of benefit assessment district and “capturing value” from that increment of new development. Property owners are willing to pay into these districts for three reasons depending on what kind of property they own:

- First are the property owners who will receive entitlements to build significant increments of new developments, in some cases that would not have been possible without the increased accessibility offered by a streetcar. For these owners, the marginal increase in the value of their property will outweigh any additional costs related to the assessment.
- Second are existing businesses that will get an increase in sales as a result of increased pedestrian activity in their area.
- Third are those big institutions or employers who want to grow without increasing auto trips and understand that contributing to transit is much more cost effective than building new parking facilities, or even moving to a more auto-oriented location.

In order to provide a qualitative assessment of the potential for value capture in a local funding strategy for Fresno, Strategic Economics polled developer interviewees regarding several potential local funding and financing mechanisms for streetcar operation and capital. In general, interviewees were critical of nearly all local value capture techniques due to the potential increase in costs and perceived negative impact on attracting visitors, businesses, and residents in what is already a very weak market with little unsubsidized development activity.

The following list briefly summarizes developer opinion of the subject funding techniques:

Benefit Assessment: Multiple interviewees suggested an assessment district or other fees for new development, with the goal of placing the primary cost burden on sites and new projects directly adjacent to the streetcar route; however, such a technique is more often used to fund capital costs rather than operating costs.

PBID Revenue: Strong opposition, though this may change if the recently-approved PBID proves successful. Passage was contentious, and many property owners view the fees as a further barrier to financial feasibility for their properties or developments.

Transient Occupancy Tax: Generally garnered weak support due to poor hotel performance, but such a tax may become more viable if hotel performance improves; the tax must be kept low.

On–Board Fare Collection: Strong support was expressed for a minimal fare, with possible free rides for special events or times of day.

Raise On-Street Parking Costs or Create a Parking Revenue Capture Zone: Minimal support, with most interviewees stating that people are angry about the parking meters and unaccustomed to paying for parking.

Capture a Percentage of Revenue from Publicly–Owned Garages: Mixed support, with caveats that maintenance needs take a higher priority and that fees shouldn't be increased to support the streetcar.

Tax Privately–Owned Garages on a Per–Stall Basis: Almost no support. Very few such garages exist due to the high cost to build and operate them. A tax may make more sense if the Downtown area is permitted flexible use of spaces rather than dedicating a given space solely to a particular office or residence's mandated parking requirement.

Transfer Operating Revenues from the Existing Circulator: Overwhelming support.

Dedicate an Increase in Fines for Parking Violations to the Streetcar: Almost no support. Parking tickets are one of the greatest complaints about coming to Downtown.

Private Sponsorship of Vehicles and Stops: Overwhelming support; however, most interviewees doubt this can raise much money in Fresno.

Value Capture Findings and Recommendations

One single source will not pay for either the construction or operation of the streetcar. Most recent streetcar projects have relied on a patchwork of funding sources with federal participation but at least some local funding. The Fresno Downtown Streetcar will also likely be funded through a number of different local and possibly federal sources.

To date, the most significant local contributions to financing streetcars in other locations has come from creating some type of benefit assessment district and capturing value from that increment of new development and benefits to existing development.

5.0 Capital Development Costs

The cost to construct a streetcar system in Fresno could vary widely based on length of the system, type of streetcar selected, number of stations, means of hanging the overhead power lines, the extent of roadway reconstruction and extent of utility relocation required. Some unknown amount of these costs might be carried by other improvement projects in the city. In general the costs including rolling stock will be $30 million per mile or more, so streetcar systems are not inexpensive to construct and the longer the network the higher the costs.

Cost estimates were developed for seven major project elements and soft cost and contingency costs were then added to these basic costs. The estimated costs we believe are on the high side and that more detailed engineering should lead to lower costs. The seven major elements were:

Track construction elements

Roadway reconstruction/improvement elements

Power and Systems elements

Utility relocation elements

Stations

Maintenance and storage facility for trains

Train-sets

Track Construction

Cost to construct track is primarily driven by the length of track required. The number of switches and amount of special track work (like at turns) also impacts costs. To some degree the track costs are also dependent on the speed and weight of the trains, but for estimating purposes modern streetcars similar to those operated in Portland, Tacoma and South Lake Union Seattle were assumed.

Roadway Reconstruction/Improvement Elements

These costs are primarily driven by the length of roadway being demolished and reconstructed. Single track segments tend to have higher roadway reconstruction cost per track-mile than double track segments. The costs also depend on location within the street the track is located and the degree that sidewalks, curb/gutter and other elements must be reconstructed. Roadway costs also include modifications to traffic signal controllers, displays and detection along with signage and striping changes required to accommodate the streetcar service. If signals are being upgraded and pavement overlays are planned some of these costs can be avoided. The major costs, however, are associated with the roadway demolition and reconstruction itself. As it is a major cost, the underpass of the BNSF tracks was separately estimated. We suspect that up to one half of its costs could be funded as a railroad grade separation project with the other half coming from Measure C rail consolidation funds. For purposes of this analysis costs for the Fulton Mall segment was treated similarly to the costs of general roadways. This assumption also was used for utility relocation costs. If refurbishment of the Mall is planned some of these costs could be avoided (if costs are assigned to the Mall Project). Sometimes these ancillary improvement costs are pushed onto public transit projects (for funding reasons) and the cost per mile are higher and not lower.

Power and Systems Elements

This cost category includes power substations, the overhead wire system for power distribution and signal and communications systems. At least one substation every mile is assumed. The cost also envision that new poles will need to be installed to suspend the overhead power lines, however with new building construction it might be possible to suspend some wire with eyebolts into the buildings. In general, the costs of double track wire is substantially less than single track wire measured in terms of track feet of operations.

Utility Relocation

Utility relocation is a major cost and construction disruption impact. Water, sewer and other utilities are modernized and relocated along with rail transit construction for a wide variety of reasons. This helps to minimize disruptions to streetcar service once it begins operations and it minimizes corrosive impacts of "stray currents" on underground utilities. If the utilities in downtown must be upgraded to support more intense new development some of these costs move from relocation costs to modernization costs. They still must be funded, but they benefit more than just the streetcar project.

Stations

Stations can be very simple like the curb extension stations in Portland to very elaborate like those used for most light rail stations. Ticket vending machines and other station amenities can also substantially increase costs. Basic shelters and next train information systems tend to be modest cost items. For cost estimating purposes we are assuming that the stations are "side platform" or curb extension stations similar to Portland stations.

Maintenance and Storage Facility

These facilities can be very simple shed type structures or modern reinforced concrete buildings. The size depends on the size of the fleet envisioned. It is possible to initiate service with a modest interim shed and upgrade/expand in the future as site area permits. It must be located near the passenger service tracks, but can be located in marginal locations. Portland has its streetcar barn located underneath an elevated freeway. Location under the planned high speed rail tracks might be possible in Fresno. For cost estimating purposes a facility for six trains is envisioned.

Trains

The streetcar segments being considered are generally about six miles roundtrip. At 10 mph average operating speed 36 minutes would be required for a roundtrip. Allowing nine minutes for schedule recovery/layover per roundtrip would require three streetcars to operate 15 minute headway service. An additional streetcar is needed for a backup train to allow servicing etc. It is desirable to have fifth train as a spare to address mechanical and other problems that arise. While a fifth streetcar vehicle would be expensive to add, it would help ensure the desired 15 minute or better headway (if the estimated 10 mph speed proved unattainable) and the fifth car could augment capacity if needed for special events (like a ballgame).

Soft costs

These costs cover the planning and design of the system, mobilization, construction management, traffic management, project insurance and start up debugging of the new system. A factor of 36 percent was added to the total of all of the "hard costs" (elements 1-7) in order to account for these softcosts. Ten percent was estimated for construction management, 2 percent for traffic management, 20 percent for planning/design/permits, 2 percent for insurance, 2 percent for start up costs

Contingencies

There are a huge number of unknowns at this time that will impact costs and most of these factors tend to increase costs. To allow for these unknown a 15% contingency was added to the hard cost (items 1-7).

5.1 Alternative 1: Tower District Loop

Alternative 1 consists of a one-way loop (clockwise) linking the Convention Center area with Fresno City College. It includes about 32,000 feet of one way track. For cost estimating purposes a total of 24 stations were defined. The total cost for this alternative is estimated at $116 million, comprised of the following:

- $14.3 million for track installation;
- $10.5 million for roadway/traffic improvements;
- $15.5 million for power and systems;
- $9.6 million for utility relocation;
- $1.8 million for stations;
- $5.0 million for maintenance and storage facility;
- $20.0 million for vehicles;
- $ 27.6 million for soft costs; and
- $ 11.6 million for contingencies.

It might be possible to phase the implementation of this option, constructing the section south of Divisadero first. A short additional section of track and power would need to be added on Divisadero between Fulton and Van Ness to allow this phasing. It would save the initial expense of perhaps two streetcars, several stations and more than one mile of track. Thus about a third of the $116 million could be deferred to phase two. It is unclear, however, how strong the patronage would be for the downtown only loop. It would fail to attract City College riders and it would weaken the potential commuter use of the service.

5.2 Alternative 2 Phase 1: Tower District Line

Alternative 2's Tower District line is similar to Alternative 1's, except it is a two way line, rather than a one-way loop service. With similar termini the lengths of the systems are similar. Alternative 2, however, reconstructs only about half the street lengths as Alternative 1. Phase 1 is estimated to cost $102 million for its 13,300 feet of two-way track and 3,800 feet of one-way track. Twenty four stations are defined for this roughly three mile line.

- $12.9 million for track installation;
- $8.6 million for roadway and traffic improvements;
- $11.3 million for power and systems;
- $7.8 million for utility relocation;
- $1.8 million for stations;
- $5.0 million for maintenance and storage facility;
- $20.0 million for vehicles;
- $24.2 million for softcosts; and
- $10.2 million for contingencies.

Significant cost savings accrue for track, roadway, catenary and utility elements of the project, which also helped to reduce softcosts and contingency costs.

Similar to Alternative 1, it might be possible to phase the implementation of this line to reduce initial costs. Patronage demand for the shorten service is questionable.

5.3 Alternative 2 Phase 2: Fresno Street Line

Phase 2 is a slightly shorter line than the Tower District lines. It would consist of about 2.3 miles of double track and have about 20 stations. Five trains are estimated to provide the service, with two serving as spares. The cost of Phase 2 is estimated to be $123 million including the full cost of an underpass under the BNSF tracks. This cost element accounts for about 30% of the total project costs. Thus, if the underpass is considered a separately funded project, the cost of the Phase 2 Fresno Street Line would be about $86 million.

- $10.2 million for track installation;
- $31.2 million for roadway (and underpass);
- $9.5 million for power and systems;
- $6.2 million for utility relocation;
- $1.5 million for stations;
- $3.0 million for maintenance and storage facility;
- $20.0 million for trains;
- $29.4 million for soft costs;
- $12.2 million for contingencies.

The maintenance and facility costs assume an expansion of a Phase 1 facility.

If the Fresno Street line were ultimately extended east to the Fresno Yosemite International Airport via current Floradora freight rail tracks as a "time separated" operation it is estimated to cost and additional $ 35 million. This assumes 30

minute frequency service utilizing trainsets not requiring overhead power lines. The extension would be about two miles in length.

Phase two could be itself phased with the initial phase being from high speed rail to the Regional Medical Center, either terminating at Divisadero or at Belmont Street. An initial operating segment between the high speed rail station and Divisadero would cost about $90 million including the underpass. An initial operating segment (IOS) terminating at Belmont would cost about $107 million including the underpass. The cost of the underpass totals about $38 million and if funded separately would reduce the Divisadero IOS costs to $52 million and the Belmont IOS costs to $69 million.

6.0 Streetcar Ridership Analysis

Many factors influence people to use streetcars. These include intensity of mobility demands in the corridor, and competitiveness of the streetcar option versus walking or driving. Ideal environments for streetcar use include:

- Mixed use destinations and attractions within close proximity, but beyond comfortable walking distances – the larger the number of trips generated by these uses the stronger the demand for streetcar travel;
- Connections to major transportation hubs including rail stations, bus transit stations and downtown fringe intercept parking lots – streetcars function like moving sidewalks to extend the acceptable walking distances to these hubs; and
- Presence of tourist uses in the corridor.

These market features should include current needs, but opportunities associated with future redevelopment of the corridor also are important. Most streetcar projects are implemented as economic development strategies more so than transportation projects. Streetcars operate slower than buses, so long distance transportation linkage connections do not lend themselves to streetcar use. Short linkages also favor frequent fare free service. It is more expensive to provide frequent fare free service on long distance corridors. Desirably the corridor should have a high activity street free from traffic congestion.

Market–sheds for Streetcars – While temperatures in the summertime are high, Downtown Fresno is otherwise a comfortable place to walk. It is flat and traffic does not constitute a major walking deterrent (signal cycles downtown tend to be short). Rather than wait for a 10 or 15 minute frequency streetcar, most people would likely walk five blocks downtown (length of Fulton Mall is six blocks). More than five blocks, it becomes more attractive to use the streetcar. Blocks are generally about 400 feet in length. Factoring in delays crossing streets and averaging walk times for younger and older pedestrians, the average block takes about two minutes to walk – so five blocks would take about ten minutes to walk or almost the suggested 15 minute streetcar frequency. It should be noted that streetcar stops would themselves be located about three to four blocks apart – so some walking would be required to access the stops. Walking distances for trips beginning or ending at locations not directly along the streetcar route would add to the required walking distances to reach stops.

If five block "no rider sheds" were defined for the high speed rail station, Regional Medical Center, City Hall, Fulton Mall, and Convention Center:

- High Speed Rail Station – San Joaquin, M Street, Ventura and Highway 99;
- Regional Medical Center – Highway 41, N Street, Blackstone and Illinois Street;
- City Hall – Ventura, Van Ness, San Joaquin and Divisadero

- Fulton Mall – O Street and F Street; and
- Convention Center – Ventura, H Street, Tuolumne Street and BNSF tracks.

Thus, patrons at the new high speed rail station would be more likely to walk than ride the streetcar for trips shorter than M Street or Highway 99 along Fresno Street and shorter than Ventura or San Joaquin Streets along H Street. Trips destined to City Hall and the Regional Medical Center from the high speed rail station would likely use a streetcar rather than walk. Few trips would use the streetcar from the convention center to City Hall or overall civic center complex.

Van Ness/Fulton/Wishon Corridor – The extent of streetcar patronage from the Van Ness/Fulton/Wishon corridor north of Divisadero Street will likely be two to three times the current Route 28 bus service patronage. Boardings along this section of Route 28 (Divisadero to south of City College) are not high. Obviously if the development density were to double or triple along this section of the corridor, the potential streetcar boardings would also increase.

The Van Ness/Fulton corridor is estimate to have about 20,000 jobs and 7,000 housing units within 1,000 feet of the streetcar line in 2035. Most of the jobs are downtown and most of the housing is north of Divisadero Street. For an approximate three mile long corridor this translates into 6,500 jobs per mile and 2,300 housing units per mile. Estimate is that this corridor might generate about 300 boardings per mile or about 900 daily boardings.

Fresno Street Corridor – The COFCG travel model provides an indication of travel activity by traffic analysis zones within the downtown area. For the Year 2035 the Fresno Street alignment from high speed rail to Floradora Street is estimated to have about 10,000 dwelling units and 30,000 jobs within about 1,000 feet of the alignment. Most of the housing is located north of Highway 180. Half of the jobs are located in the area from H Street to O Street between Fresno and Tulare Streets and the Regional Medical Center. For an approximate three mile long corridor this translates into about 10,000 jobs per mile and 3,300 housing units per mile. Estimate is that this base market might generate 400 boardings per mile or a total of 1,200 daily boardings (one percent mode choice).

High Speed Rail Station – Patronage forecasts for the new high speed rail station are 13,300 daily passengers in 2035. Half of the total boardings and alighting are estimated to be Fresno residents and the other half residents of other communities served by high speed rail. Twenty percent of these trips are estimated to be home based work trips. In addition to these passenger trips, other trips will be made by staff of the station and by well wishers and greeters. Absence, detailed information on well wishers, greeter and staff a total of 25,000 daily person trips are envisioned for the high speed rail station. If 20% of these trips were to/from the downtown area and a fifth of these were to use the streetcar, 1,000 daily trips would patronize the streetcar to/from the high speed rail station.

Regional Medical Center – With 4,000 employees at the Regional Medical Center it would also be a major market for streetcar patrons. In addition to this staff, visitors make a large number of trips to this site. So postulating 5,000 daily population and 2.5 trips per person this site would generate about 12,500 daily person trips. Most of the commute trips will be made by car, but another 1,250 daily person trips might walk or use the streetcar – say 800 additional streetcar riders.

City College – Usage by City College students is possible, particularly if offered fare free. This service would compete with the planned BRT on Blackstone which will require full fare payment.

Summary Assessment of Patronage Potential – Factoring in the ridership potential for City College (1,000 boardings), High Speed Rail Station (1,000 riders) and the Regional Medical Center (800 riders) the Van Ness/Fulton corridor is estimate to attract 1,500 to 2,000 daily riders (depending on free fare diversion from BRT) and the Fresno Corridor is estimated to attract 2,500 to 3,000 daily boardings

VI. Streetcar Operations and Management Plan

Operations of the streetcar service will be critical to its success. Service must be sufficient frequent, reliable and speedy and cover the hours and days of service demanded by its market-shed. The service must also be nimble and able to adjust to changing needs and opportunity markets.

6.1 Streetcar Operations Plan

Most streetcar systems operate from 8am to 8pm seven days a week. FAX's current bus services are operated from about 6am to 9pm on weekdays and 7am to 6pm on weekdays. Route 28 which currently operated along the Fulton and Van Ness corridors operates from 6am to 11pm on weekdays and 7am to 7pm on weekends. The free downtown shuttle operates from 6am to 6pm on weekdays and does not operate on weekends.

Major activity centers that will be potentially served by the streetcar service span all seven days of the week and most hours of the day. The planned high speed rail service is envisioned to operate from 6am or earlier to midnight or later seven days a week. The Regional Medical Center is a 24 hour seven day a week operation. Its major shift is essentially from 8am to 5pm. The clinical staff tends to work 12 hour shifts with 7am to 7pm being the major shift. City College classes primarily are between 8am and 10pm weekdays.

For streetcars serving the Fulton and Van Ness Corridor it will be important to coordinate their service with conventional bus service. It makes little sense to operate a free fare streetcar service on the same streets as a full fare Route 28 bus. Thus, service on the Route 28 bus will need to be modified to complement the streetcar service. Route 28 is one of FAX's most popular bus lines and its connects Kings Canyon to Clovis via Tulare, Downtown, City College, Manchester Center, Fashion Fair, and Shaw Avenue. Route 28 will be revamped or eliminated to accommodate the planned BRT service on Kings Canyon and Blackstone. This will leave the Fulton and Van Ness Corridor between downtown and City College unserved except for the streetcar service.

This setting suggests that a Streetcar service for the Fulton/Van Ness Corridor should operate from 7am to 9pm on weekdays. On weekends service might start at 9am. For the Fresno Street Corridor service from 7am to 9pm is suggested seven days a week to serve the high speed rail station and Regional Medical Center. The 7am to 9pm operation would likely consist of three streetcars operating 14 hours a day (almost two eight hour shifts when report and turn in time is added). This totals 300 revenue hours a week of service and allowing for five annual holidays, about 15,000 revenue vehicles annually of service.

With estimated daily patronage of 1,500 to 2,000 for the Fulton/Van Ness Corridor and 2,500 to 3,000 daily for the Fresno Street Corridor this would translate to 35 to 45 average boardings per vehicle hour of service and 70 average boardings per vehicle hour of service respectively for these two corridors. These are generally within the capacities of the envisioned service.

The cost to operate this service will depend on how it is provided and local labor and other cost factors. In addition to the cost of the streetcar operators and mechanics, there are also cost associated with maintaining the track and overhead power distribution system. Average cost per revenue vehicle bus hour at FAX is approximately $100 today. The modern tram in Portland costs about 50% more per hour to operate than their buses. Thus, the cost to operate a streetcar in Fresno can be expected to run about $150 per train-hour.

At $150 per train-hour the Fulton/ Van Ness and the Fresno Street streetcar service could each be expected to cost $2.3 million annually to operate.

6.2 Streetcar Management Plan

Options exist for governance, ownership and operations management. The entity that sets policy, oversees operations, owns the equipment, obtains/distributes funds and is legally responsible are all important. Typically the city owns the equipment and is the recipient of federal and state funding for streetcar systems. Most of the streetcar options use city right of way (public streets) and thus the city has in place the governance, ownership, legal and operational resources to implement and manage a streetcar service. If the operations and capital funding for the streetcar service is from city-wide sources or conduits, the city would be the logical entity to manage and operate the streetcar. This is also true if a portion of the funds come from a local downtown assessment tax directed towards covering operating subsidies.

Portland's streetcar system is run by a non-profit group – Portland Streetcar Inc. (PSI). PSI is a group of local property owners which contracts with a management firm and then with Tri-Met for local operations. Tri-Met is the regional public transit provider of bus and light services. PSI serves as a coordinator between private and public sectors. King County Metro operates the new South Lake Union Streetcar service.

7.0 Phasing Strategy for Streetcar Implementation

Downtown could benefit from a streetcar service in the future, but current demand conditions are not strong enough to support the investment. Opening of the high speed rail service with a downtown station will increase patronage demands and associated revitalization and intensification of uses and activities downtown would further benefit to/from streetcar service. Plans currently envision high speed rail service commencing in 2020. The on-going recession, possible political changes and environmental issues might push opening back to 2025. Once the project becomes a certainty and the details of the downtown station are defined it is likely that investors will become energized and will move forward to develop projects downtown. Having a plan in place for the streetcar with its implementation defined, will further encourage higher density uses in the downtown and help to avoid future development conflicts. For example, it might help to convince developers that less off street parking will be needed, helping to make new residential units more affordable. As it typically requires five years or more to plan, design (including environmental clearances), fund and open a major transit investment project Fresno should start the process by 2015 at the latest. Desirably the process should start in 2012 at which time political, recession and other factors influencing implementation of high speed rail should be better known. The environmental studies for high speed rail are planned for completion at the end of 2011. The earlier the process begins the more a streetcar project will help the city achieve its vision for the downtown.

This strategy is prudent for the Fresno Street streetcar alternative, which directly connects the high speed rail station to the Regional Medical Center. It also is appropriate for the Tower District which will benefit indirectly from revitalization in the downtown associated with opening of high speed rail service. By 2012 more information could be developed about increased densities along the Fulton Corridor. These increased development densities would be needed to justify local and federal funding for the streetcar system.

Given the timing considerations for high speed rail to become a reality and the current depressed economic situation in downtown Fresno, it is not realistic to contemplate getting a streetcar system up and running in less than five years, particularly without the funding in place. It would be difficult to get both the federal and the local match at this time. The high speed rail station to the regional hospital would be the strongest market and should be the City's top priority line to implement once the economic situation changes. It is less clear at this time how the Fulton Mall corridor will be redeveloped and if a significant investment in revitalizing the mall would complement a streetcar alignment here.

8.0 Streetcar Financing Plan

Overview

The matrix of funding sources provides a broad overview of federal, state, and local funding programs, matching the conceptual nature of the feasibility plan for the Streetcar Project. It presents a comprehensive listing of potential sources. As the plan for the Streetcar Project is refined, it will be possible to identify funding sources that are well suited to the project. If that refinement does not occur in the short run, the revenue sources should be revisited whenever it does occur to see if eligibility requirements have changed or if there are new sources of funding available.

Regional Funding Environment

As is true throughout the state, regional and local agencies confront ongoing revenue shortfalls in funding capital projects for service expansion and revenue shortfalls for funding maintenance and operations of existing transit services. For example, in 2006 the voters in Fresno County approved an ½ cent local sales tax measure, called "Measure C." It is projected to raise $1.7 billion over the 20 year lifetime of the tax. Currently identified needs for Measure C funding, not including the Streetcar Project, are approximately $4.6 billion or 2.7 times the funding projected to be available.

8.1 Funding and Financing Sources and Strategies

This section of the memorandum provides an overview of funding sources and strategies for streetcar construction and operations, focusing on the kinds of strategies that are most likely to be useful within the Fresno context. It also provides a qualitative assessment of the potential for value capture in a local funding strategy for Fresno.

Streetcar Funding Sources

A wide variety of funding sources and financing mechanisms are available for the development of streetcar systems, but their applicability to the Fresno Streetcar will vary depending on alignment selected and other factors. Successful streetcar funding strategies have typically included multiple local, state, and federal sources, so it is important to carefully consider the variety of potentially available and appropriate sources.

Through its work locally and nationally Strategic Economics has reviewed a broad range of funding sources and strategies that have been used (or are under consideration) elsewhere or could potentially be used to finance streetcar construction and operations. This scan of funding sources is intended to inform work in the future to develop a funding plan for the Fresno Streetcar (not part of this scope).

Table 8: Summary of Funding Sources for Streetcar Capital, Planning and Operations

Funding Source Name	Description	Permitted Use of Funding	Where Used / Under Consideration
Federal			
Congestion Mitigation and Air Quality	Funding for transportation projects that contribute to air quality improvements and reduce congestion.	Capital, Operations	Tampa, FL; Kenosha, WI
Department of Energy - State Energy Grants	Need to prove energy efficiency.	Capital	Oakland, CA
Federal Transit Act - New Starts Program	Grants for capital costs of new fixed guideway systems, extensions, and bus corridors.	Capital	Little Rock, AR
Federal Transit Act - Small Starts Program	Grants for capital costs of new fixed guideway systems, extensions, and bus corridors.	Capital	Portland, OR
Transportation and Community System Preservation	Funds for research and grants to improve the efficiency of the transportation system, reduce environmental impacts of transportation, reduce the need for costly future public infrastructure investments, ensure efficient access to jobs, services, and centers of trade, examine community development patterns and identify strategies to encourage private sector development patterns and investments that support these goals.	Planning	Little Rock, AR
Housing and Urban Development Grants	Federal source that can be used for property acquisition.	Capital	
New Market Tax Credits	Must be organization focused on low income communities.	Capital	
Economic Development Administration Grants	Can be used for infrastructure planning or construction.	Planning, Capital	
Environmental Protection Agency (Brownfields)	Used for planning brownfield redevelopment.	Planning, Capital	
Housing and Urban Development Brownfields Economic Development Initiative	Environmental remediation and property development.	Planning, Capital	
Community Development Block Grants	Funds for the benefit of low- and moderate-income persons that prevent or eliminate slums or blight, or address urgent community development needs.	Planning, Capital	

Funding Source Name	Description	Permitted Use of Funding	Where Used / Under Consideration
Federal, continued			
Housing and Urban Development Section 108 Loans	Can be used same as CDBG, property acquisition, rehabilitation of publicly owned property, construction or reconstruction of public facilities including street, sidewalk, and other site improvements.	Capital	
Urbanized Area Formula Grant	transit capital and operating assistance in urbanized areas and for transportation related planning.	Capital	
Surface Transportation Program	Flexible funding that may be used (as capital funding) for public transportation capital improvements, among other uses.	Capital	
Federal Transit Act - Livable Community Grants	Livable Communities Initiative encourages transportation agencies and local governments to introduce proposed transportation improvements to communities in the early stages of the planning process.	Planning	Little Rock, AR
Federal Transit Act - Urban Circulator Grants	Grants for capital costs of new fixed guideway systems, not to exceed $25 million.	Capital	
State			
Intermodal Development Fund	State funding for major capital investments in public rail and fixed-guideway transportation facilities and systems which provide intermodal access.	Capital	Florida
License Fee and Title Registration Fees	Tax assessed annually on each vehicle owned.	Capital, Operations	California, Other States
Local Option Gas Tax	Sales tax on gasoline.	Capital, Operations	California
Local Option Transit Tax	Usually a sales tax .	Capital, Operations	Charlotte, NC; Denver, CO; Miami,
Motor Vehicle ExciseTax	Sales tax on motor vehicles, dedicated to transportation.	Capital	Minnesota
State Capital Funding	State bond programs.	Capital	North Carolina, California
State Infrastructure Bank	Low interest loans provided to finance public infrastructure .	Capital	Florida, California
Tax Abatement Reallocation	Similar to tax increment financing, revenues from a tax collected by a City can be held for a designated use.	Capital	Minnesota
Transportation Development State Sales Tax	Statewide sales tax with revenues designated for transportation purposes.	Capital	California
Vehicle Property Tax	Tax assessed on the value of motor vehicles.	Capital, Operations	Massachusettes

Funding Source Name	Description	Permitted Use of Funding	Where Used / Under Consideration
Local and Regional			
Local/Regional Sales Tax	Sales tax imposed by local government.	Capital, Operations, Planning	
Transit Occupancy Tax	Revenues generated from hotel stays.	Capital, Operations, Planning	
Rental Car Tax	Sales tax imposed on rental cars.	Capital, Operations, Planning	Wisconsin
Convention Center Rental Tax	Charge for use of convention center.	Capital, Operations, Planning	
Event Ticket Tax	Charge added to event tickets.	Capital, Operations	Columbus, OH
Restaurant Tax	Charge added to restaurant bills.	Capital, Operations	
Utility Users Tax	Charge for transit added to utility bill.	Capital, Operations, Planning	
Parking Revenue	Revenues from parking meters or structures.	Capital, Operations, Planning	Portland, OR
Parking Surcharge	Charge added to parking fees, designated for transit / transportation purposes.	Capital, Operations, Planning	
Transit Pass Program / Farebox	Revenues generated from rider fares.	Capital, Operations, Planning	
Philanthropic Donations / Foundation Grants	Private money gifted for transit program.	Capital, Planning	Galveston, TX; Detroit, MI
Redevelopment / Tax Increment Financing (TIF)	TIF freezes the property tax revenue at its “base rate” in the current year, and diverts any additional tax revenue each year into a separate pool of money used to finance the improvements.	Capital	Portland, OR

Funding Source Name	Description	Permitted Use of Funding	Where Used / Under Consideration
Local and Regional, continued			
Assessment District	Revenues from district established to provide improvements and assess property owners.	Capital, Operations, Planning	Tampa, FL
Business Improvement District	District established to provide special services	Capital, Operations, Planning	Seattle, WA; Portland, OR
Community Facilities District	Revenue from special taxes imposed to finance public facilities with debt secured by a lien on property within the district.		
Development Impact Fees / In Lieu Fees	One-time charge to new development for the construction of public capital improvements to mitigate for impacts of development.	Capital	Tampa, FL
General Obligation Bonds	Revenue generated from municipal bonds backed by property taxing power of local government.	Capital	
Naming Rights	Revenue generated from sponsorship or naming of the system, cars, or shelters for a fee.	Capital, Operations	Portland, OR; Seattle, WA; Tampa, FL
Vehicle and Shelter Advertising	Revenue generated from monthly advertising on interior/exterior of cars or shelters.	Capital, Operations	Portland, OR; Seattle, WA; Tampa, FL
Vehicle Air Pollution Fees	Air Quality Management Districts levy a tax on vehicles	Planning	California
Energy Development Grant	Energy efficiency.	Capital	Cincinnati, OH

8.2 Funding and Financing Strategic Issues

This section highlights key potential funding sources and strategic issues for consideration in Fresno. All strategic issues presented here would need to be addressed in a financing strategy for the streetcar.

Federal Sources

Federal sources have made significant contributions to other streetcar projects. Other recent streetcar projects have received federal funding ranging from 10 to over 50 percent of total project costs.

Federal contributions to streetcar projects are likely to come from the Federal Transit Administration, which has recently established new funding programs and policies that make funding for streetcars more accessible, including the Urban Circulator Grants, which are providing grants up to $25 million for fixed guideway systems. The most recent funding cycle is closed, but this new source of funding demonstrates the type of urban livability project funding that could be available for projects that have local support in place.

In recent experience the Federal Transit Administration has provided funds to streetcar projects in other cities for up to 50 percent of the capital costs or $25 million, whichever is lowest. There have been exceptions to this practice, but $25 million is currently a reasonable assumption for a federal contribution to a good project. Downtown Fresno is not a highly visible downtown, but linking the streetcar to the high speed rail program and to the City of Fresno's investments in the downtown should help obtain federal funding.

In order to qualify and be competitive for such federal funding, Fresno would need to be prepared to assemble a significant local contribution. It is unlikely that federal funds will be made available to a project that does not have adequate local support to generate a significant financial contribution.

Local Funding Sources

Local funding of other streetcar projects came from a wide variety of sources, including bonding against future city parking revenue in Portland, local development impact fees in Tampa, and a local improvement district in Seattle. Streetcar financing typically requires a broad patchwork of funding sources. Potential local sources of funding and financing for Fresno with the potential to pay for infrastructure and that should be further studied are described below.

Property-Based Sources

To date, the most significant local contributions to financing streetcars have come from capturing the value from new development. Potential property-based sources are:

- **Tax Increment Financing:** Most of the areas adjacent to the two alternative alignments under consideration lie within various project areas of the Fresno Redevelopment Agency. Therefore, tax increment financing (TIF) should be considered a potential funding source for the streetcar.
- **Community Facilities District:** Outside of a tax increment financing approach, the most common debt financing mechanisms for major infrastructure improvements such as a streetcar or other circulator is the Mello-Roos, also known as a Community Facilities District (CFD), or a benefit assessment district. The CFD allows the City to issue a bond that covers the cost of making infrastructure improvements, in exchange for payment of an annual fee by each property owner, which is usually set on a per-unit and/or per-square-foot basis. The boundaries of a CFD can be drawn in any way, but would usually include properties that are set to benefit from the improvements being made. A

CFD requires a two-thirds majority vote of residents living within the proposed boundaries. Because of that approval requirement, however, the Mello-Roos or CFD is most commonly used where there are a limited number of property owners.

- **Assessment District:** An Assessment District is conceptually similar to a CFD, but is less flexible. An Assessment District allows the city to issue a bond against special assessments on included properties, but can be difficult to establish since the assessment must be directly proportional to the benefits received. Also, an assessment district is a direct lien on included properties for bond repayment rather than the CFD's tax-based lien. Assessment Districts are frequently used to help fund streetcar projects.
- **Business Improvement District or Property Based Improvement District:** A Business Improvement District (BID) assesses businesses, and a Property Based Improvement District (PBID) assesses businesses and property owners. BIDs and PBIDs are formed via a vote of potential members and most often support maintenance, safety, and marketing efforts for the district. However, BIDs and PBIDs can be used to support improvements, especially operating expenses.

Other Local, Regional, and State Sources

- **Measure C:** Fresno County voters originally approved Measure C for transportation purposes in 1986. Measure C was extended beyond its original 20 year term in2007. This half cent sales tax is projected to generate $1.7 billion in new revenues for transportation improvements through 2027. About a third of the projected revenues, or $593.6 million, is designate for the Local Transportation Program with the goal of improving the local transportation systems of the cities in Fresno County. As mentioned previously in this report current identified needs for Measure C funding, not including the Streetcar Project, exceed the funding projected to be available.
- **Parking Revenue:** A streetcar has the potential to make management of parking more efficient, thus enabling new development and enhanced retail competitiveness without a proportional growth in parking need. Such parking efficiencies could provide a source of funding for both capital and operating needs. Parking revenues have been a significant source of funding for several other streetcar systems. In Portland, parking garage bonds and other parking revenues played a significant part, making up over half of the funding.
- **Advertising and Naming Rights:** Other streetcar systems have generated revenue from selling sponsorships or naming rights to the system, cars, or shelters and from advertising on shelters or on the interior or exterior of cars. Advertising revenue can be used for operating costs. In Tampa, the streetcar received $1 million for naming rights to the entire system as well as $250,000 for naming rights to a car and $100,000 for naming rights for eight of ten station stops.2 Shelter and car advertising provides ongoing operations funding in Portland, Seattle, and Tampa.
- **Institutional Cooperation:** The City could partner with institutions that would contribute to the construction and /or operation of the streetcar, including Fresno City College and the Community Regional Medical Center.

There are many creative local sources that can potentially offer funding for operations for the streetcar and encourage ridership, including:

- Naming rights for public facilities.
- Shelter advertising.
- Streetcar passes in exchange for increased parking fees.
- "Energy efficient" rebates on utility bills in exchange for purchase of streetcar passes.

2 *Street Smart: Streetcars and Cities in the Twenty First Century, 2009.*

Next Steps

Given the likely cost of the streetcar project, it is prudent to begin thinking about funding now. In order to be eligible for certain types of funding, the project must take steps to be included in regional planning documents. Specifically, in order to be eligible for federal funds, the project must be in the Transportation Improvement Program/Federal Transportation Improvement Program (TIP/FTIP) and the Regional Transportation Plan (RTP).

During the next development phase of the Streetcar Project, a more refined funding strategy should be built. The strategy will be a road map that targets specific revenue sources and includes an advocacy component. Through additional analysis, a better understanding of the capacity of existing revenue sources to absorb the Project's capital and operating costs would be developed, as well as plans to close any funding gaps. During this phase, the opportunities for private funding should be considered, as well as new sources of local funding such as redevelopment areas, new sales tax measures, and the implementation of a Vehicle Registration Fee.

Appendix A

Table 8: List of Key Businesses/Destinations Along Downtown Fresno Streetcar Alignment

No.	Name	Address	Type
1	Broadway Lofts	1625 Broadway Street	Key Destination
2	Luau Restaurant	1663 Fulton Street	Streetcar-Supportive Business
3	Fresno Farmers Market	1612 Fulton Street	Streetcar-Supportive Business
4	Arte Americas	1630 Van Ness Avenue	Streetcar-Supportive Business
5	Jon Jon's Grand Central Station	1432 H Street	Streetcar-Supportive Business
6	Broadway Studios	1416 Broadway Street	Key Destination
7	KJWL Radio	1415 Fulton Street	Streetcar-Supportive Business
8	Warnors Theater	1400 Fulton Street	Key Destination
9	CVS Pharmacy	1302 Fulton Mall	Streetcar-Supportive Business
10	Mezcal Bar and Grill	1310 Van Ness Avenue	Streetcar-Supportive Business
11	Packing Shed Restaurant	2119 Merced Street	Streetcar-Supportive Business
12	America's Best Value Inn	2425 Merced Street	Streetcar-Supportive Business
13	Parsley Garden Café	1237 Fulton Mall	Streetcar-Supportive Business
14	Rotary Amhitheater	2135 Fresno Street	Key Destination
15	Fresno Chamber of Commerce	2331 Fresno Street	Key Destination
16	Legion of Valor Museum	2425 Fresno Street	Key Destination
17	Community Regional Medical Center	2823 Fresno Street	Key Destination
18	Fresno County Office of Education	1111 Van Ness Avenue	Key Destination
19	Fresno County Plaza / Downtown Transit Center	1101 M Street	Key Destination
20	Fresno Water Tower Center	2444 Fresno Street	Key Destination
21	United States Government: Federal Office Building	2500 Tulare Street	Key Destination
22	Fresno City Hall	2600 Fresno Street	Key Destination
23	Los Panchos Restaurant	1000 Fulton Mall	Streetcar-Supportive Business
24	Downtown Association of Fresno	2014 Tulare Street	Key Destination
25	US Post Office / Fresno Unified School District	2309 Tulare Street	Key Destination
26	Fresno County Library	2420 Mariposa Street	Key Destination
27	State of California - Fresno Office	2550 Mariposa Mall	Key Destination

No.	Name	Address	Type
28	Coney Island Restaurant	1906 Tulare Street	Streetcar-Supportive Business
29	Club Brazil Restaurant	968 Broadway Street	Streetcar-Supportive Business
30	Tommy's Restaurant	944 Fulton Mall	Streetcar-Supportive Business
31	Galeria Mexico	932 Fulton Mall	Streetcar-Supportive Business
32	Kikku Japanese Food	2336 Tulare Street	Streetcar-Supportive Business
33	Downtown Association of Fresno	2014 Tulare Street	Key Destination
34	Fresno County Offices	2221 Kern Street	Key Destination
35	Downtown Express	915 N Street	Streetcar-Supportive Business
36	Sushi Hana	2321 Kern Street	Streetcar-Supportive Business
37	Lily's Café	2326 Tulare Street	Streetcar-Supportive Business
38	Shepherd's Inn Restaurant	935 Santa Fe Avenue	Streetcar-Supportive Business
39	US District Court	2500 Tulare Street	Key Destination
40	Fresno Amtrak Station	2650 Tulare Street	Key Destination
41	Joe's Steak House & Grill	831 Van Ness Avenue	Streetcar-Supportive Business
42	Hero's Sports Lounge & Pizza	820 Van Ness Avenue	Streetcar-Supportive Business
43	Super 8 Motel	2127 Inyo Street	Streetcar-Supportive Business
44	Downtown Club	2120 Kern Street	Streetcar-Supportive Business
45	Fresno Convention & Entertainment Center	848 M Street	Key Destination
46	Radisson Hotel & Conference Center Fresno	2233 Ventura Street	Streetcar-Supportive Business
47	Bobby Salazar's Mexican Restaurant	2405 Capitol Street	Streetcar-Supportive Business
48	Mecca Billiards	732 Fulton Street	Streetcar-Supportive Business
49	Fig Tree Gallery	644 Van Ness Avenue	Key Destination
50	Selland Arena	700 M Street	Key Destination
51	Holliday Inn Fresno Downtown Hotel	1055 Van Ness Avenue	Streetcar-Supportive Business
52	Basque French Bakery	2625 Inyo Street	Streetcar-Supportive Business
53	Canteen of Fresno Inc.	527 L Street	Streetcar-Supportive Business
54	Yeraz Restaurant	2348 Ventura Street	Streetcar-Supportive Business
55	Holy Trinity Armenian Apostolic Church	537 M Street	Key Destination
56	Valley Lahvosh Baking Co.	502 M Street	Streetcar-Supportive Business

No.	Name	Address	Type
57	First Presbyterian Church	1540 M Street	Key Destination
58	Wells Fargo Bank	1206 Van Ness Avenue	Streetcar-Supportive Business
59	African American Museum	1857 Fulton Street	Key Destination
60	Downtown Transit Center	n/a	Key Destination
61	Proposed High Speed Rail Station	n/a	Key Destination
62	Chukchansi Park	n/a	Streetcar-Supportive Business
63	US Internal Revenue Service (IRS)	2525 Capitol Street	Streetcar-Supportive Business
64	Fresno County Superior Court	255 N Fulton Street	Key Destination
65	Fresno Police Department CU	1004 N Van Ness Avenue	Streetcar-Supportive Business
66	Tower District (Tower Theater, Restaurants, Businesses)	n/a	Key Destination
67	Fresno City College	1101 University Avenue	Key Destination
68	Fresno High School	1839 Echo Avenue	Key Destination
69	San Joaquin Memorial High School	1406 N Fresno Street	Streetcar-Supportive Business
70	La Estrella Market	449 N Fresno Street	Streetcar-Supportive Business
71	Fresno Central Market	294 N Fresno Street	Streetcar-Supportive Business
72	Port of Subs	264 N Fresno Street	Streetcar-Supportive Business