"...A streetcar is a great option offering a connection to Jack London Square, Chinatown, and Old Oakland."

Workshop Participant

REFINEMENT OF STREETCAR ALTERNATIVE

Based on both technical comparisons and stakeholder input, the streetcar system was determined to be the most desirable long-term alternative. Given this preference, the Project Team explored this alternative in greater detail, beginning with the identification of a preferred alignment. Five streetcar alignments were studied as distinct options, with a range in length of track, number of stops, and street routes. These included:

Option 1: Broadway "Spine"

Option 2: "U" Loop

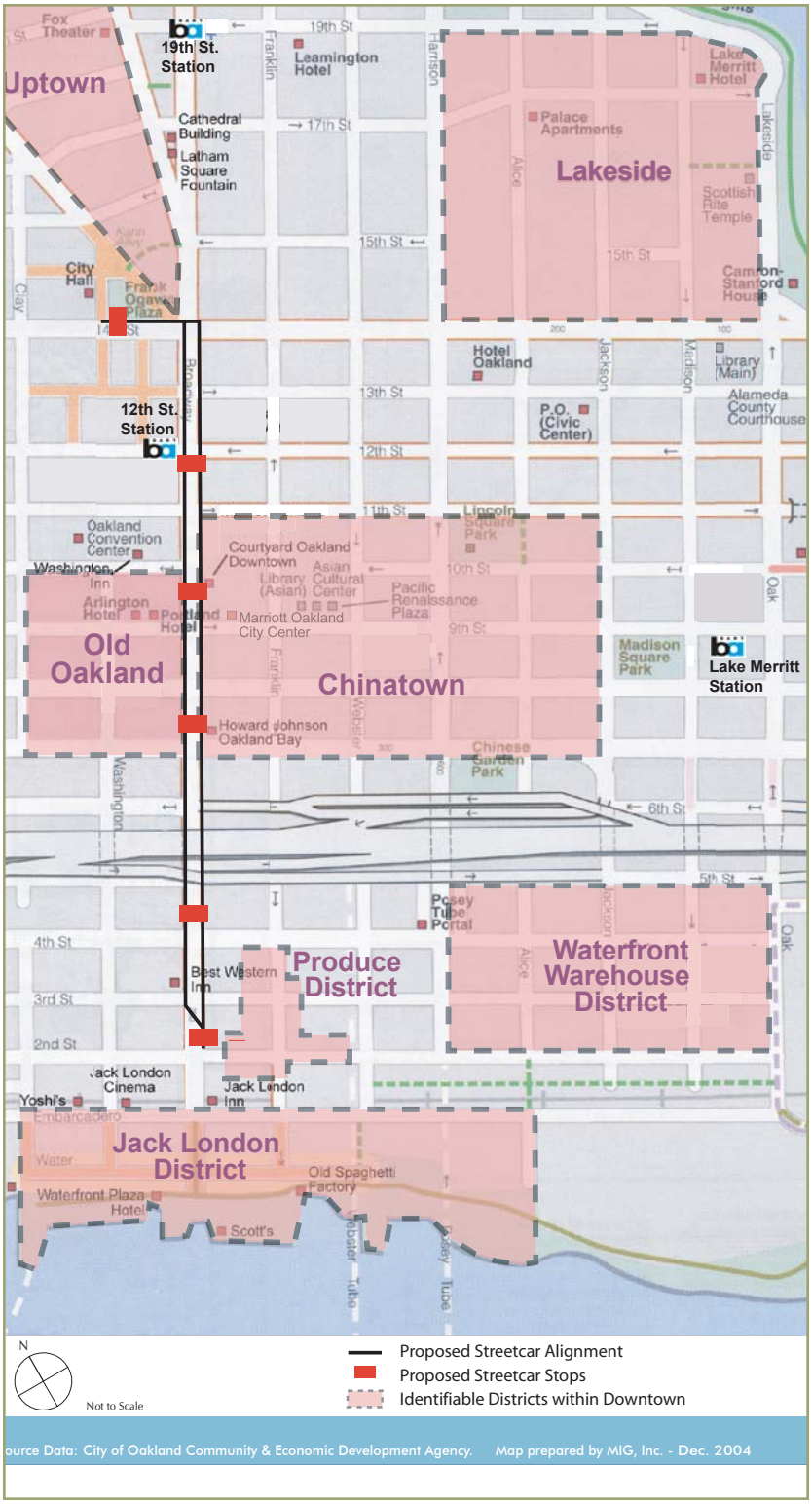
Option 3: "C" Loop

Option 4: "Small" Loop

Option 5: "Big" Loop

From these options, two alignments were considered to be the most viable. Further analysis of these two alignments involved a review of their compatibility with downtown Oakland's streetscape and their impact on traffic.

BROADWAY "SPINE" DIAGRAM



4.1 Alignment Options

OPTION 1: BROADWAY "SPINE"

The Broadway "Spine" alignment would run up and down Broadway, beginning on 14th Street in front of the Frank Ogawa Plaza and City Hall, and ending in the block between 2nd and Embarcadero Streets. This option is the shortest in length at just over half a mile. Six stops would be spaced over the 13 block-span, reasserting Broadway as the spine of downtown Oakland. This could be the first phase of a potentially larger system.

Broadway at 11th Street

Broadway at 2nd Street

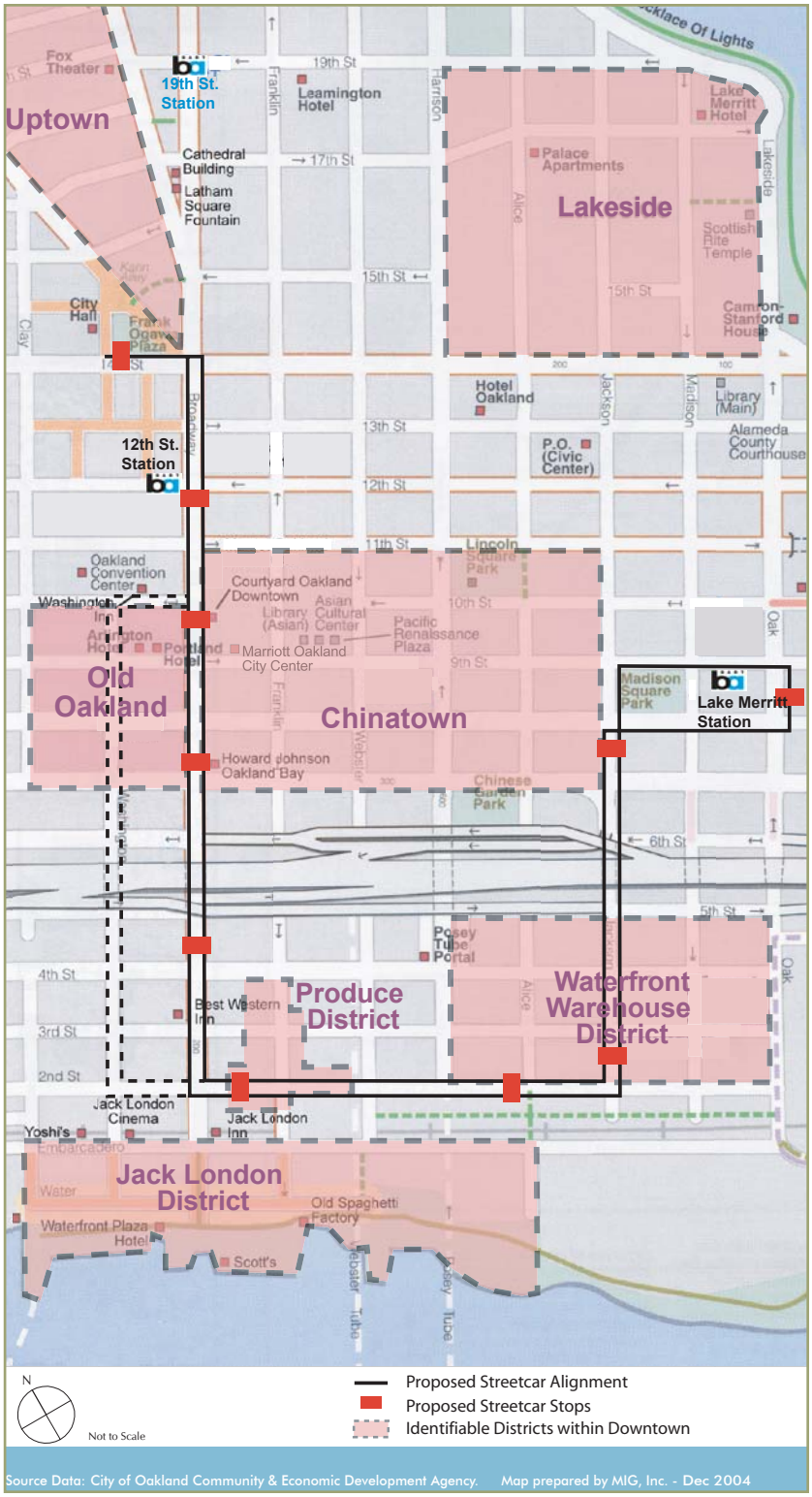
OPTION 2: "U" LOOP

The "U" Loop option extends the first option over to the Amtrak Station on 2nd and Alice Streets and up to Lake Merritt BART Station. This option better serves the Chinatown District and the Warehouse District. In addition, this option has an alternative route down Washington Street, which could more directly serve the Old Oakland District (the technical analysis reflected in the profile below is gathered from the Broadway alignment). The "U" Loop is double the length of Option One at one and a half miles.

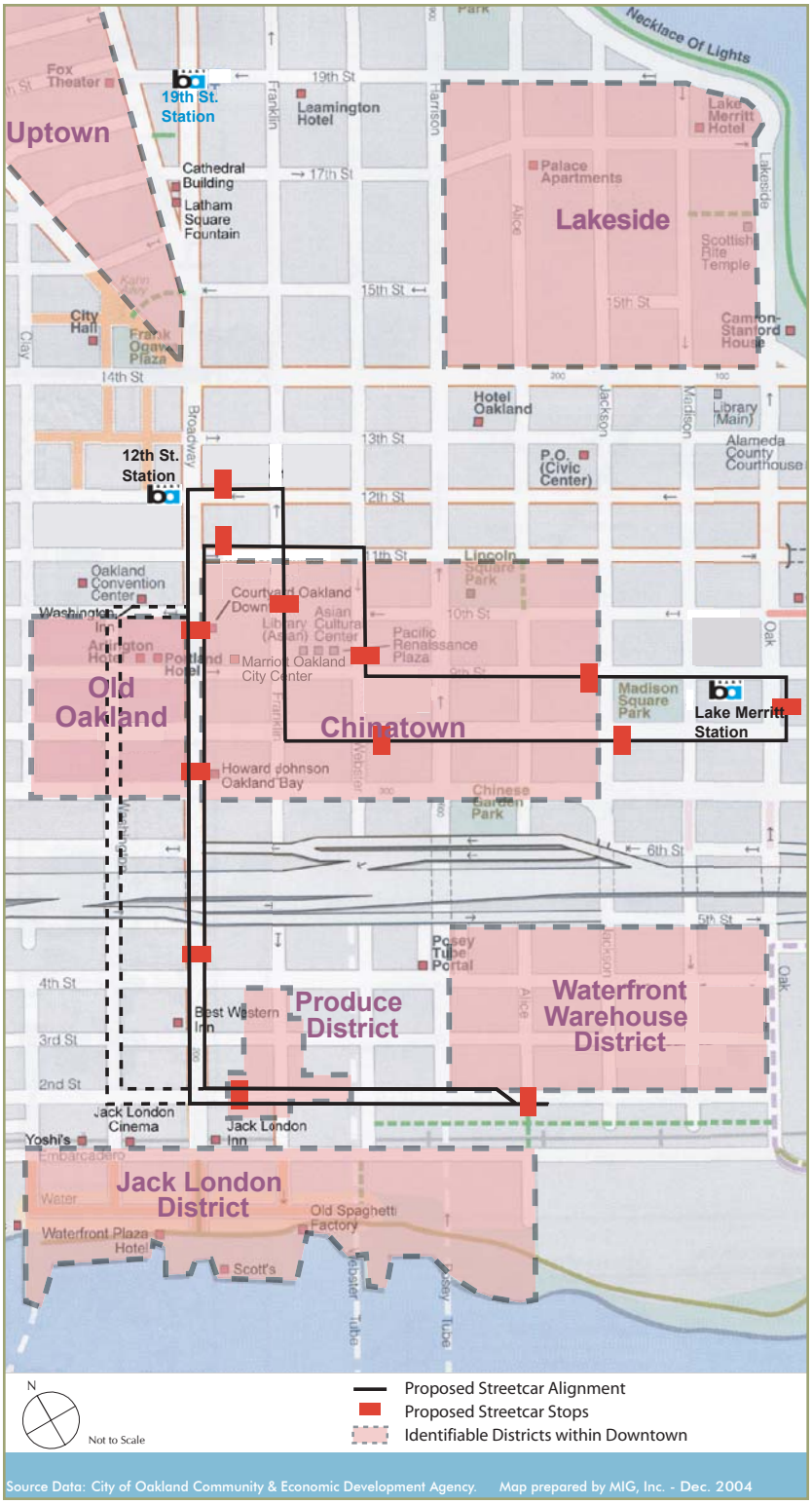
2nd at Harrison Street

Jackson at 3rd Street

"U" LOOP DIAGRAM



"C" LOOP DIAGRAM



OPTION 3: "C" LOOP

The third option is the "C" Loop, which extends the Broadway "Spine" option to the Amtrak and Lake Merritt BART Stations via Chinatown, rather than through the Warehouse District. This option is comparable to the "U" Loop in length, number of stops, ridership, and capital and operating costs. Like Option Two, the "C" Loop has the alternative of running along Washington Street rather than Broadway.

9th at Webster Street

8th at Harrison Street

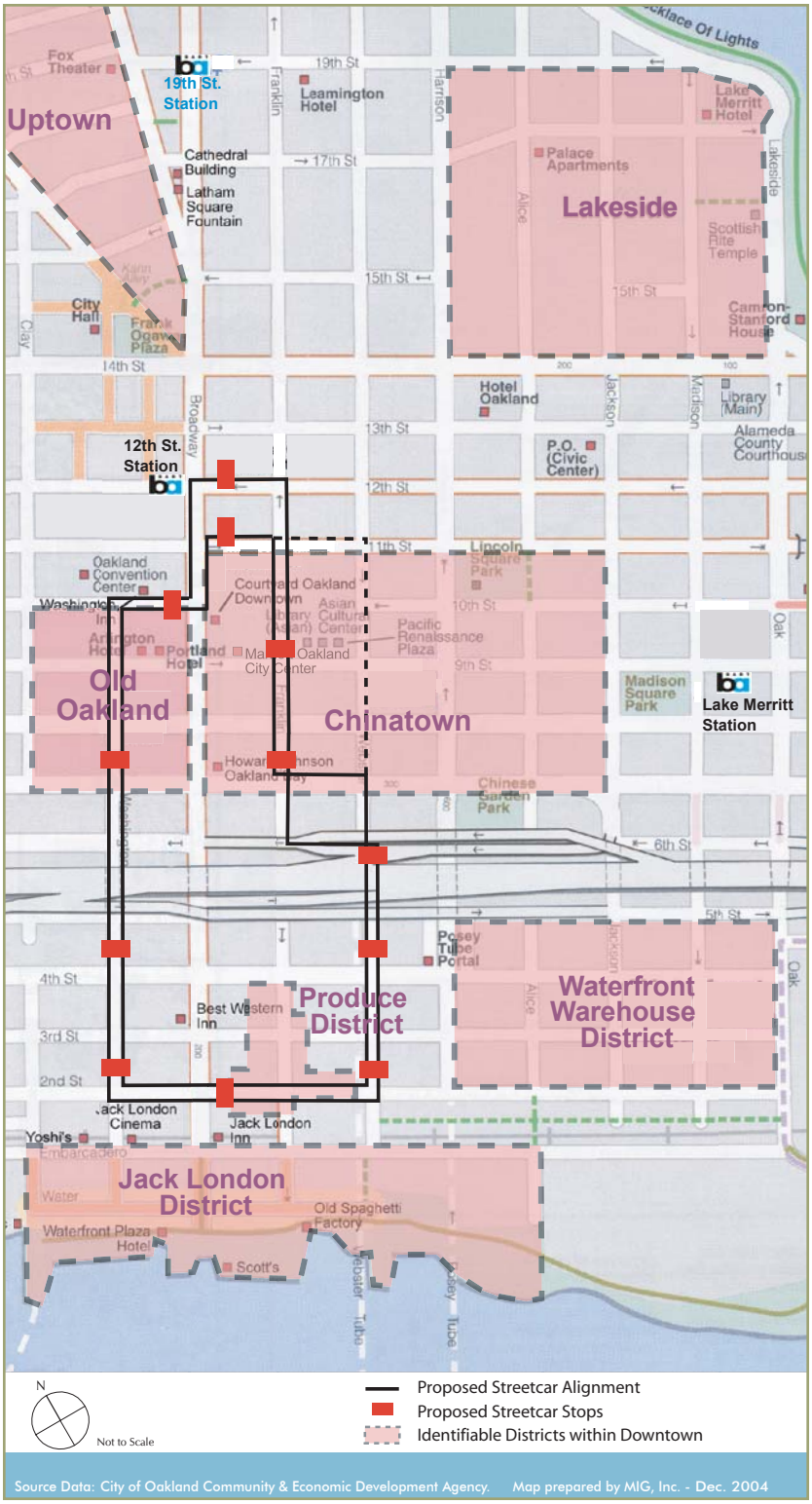
OPTION 4: "SMALL" LOOP

Option Four is called the "Small" Loop because it makes a full loop down Washington Street to 2nd Street, up Webster/Franklin Streets through Chinatown and back to Broadway. It is the only option that does not have an option to travel down Broadway for more than two blocks. It would take slightly longer to reach JLS from 12th Street Station, because its path is less direct than those with Broadway alignments. This option is comparable in route length, and capital and operating costs to Options Two and Three.

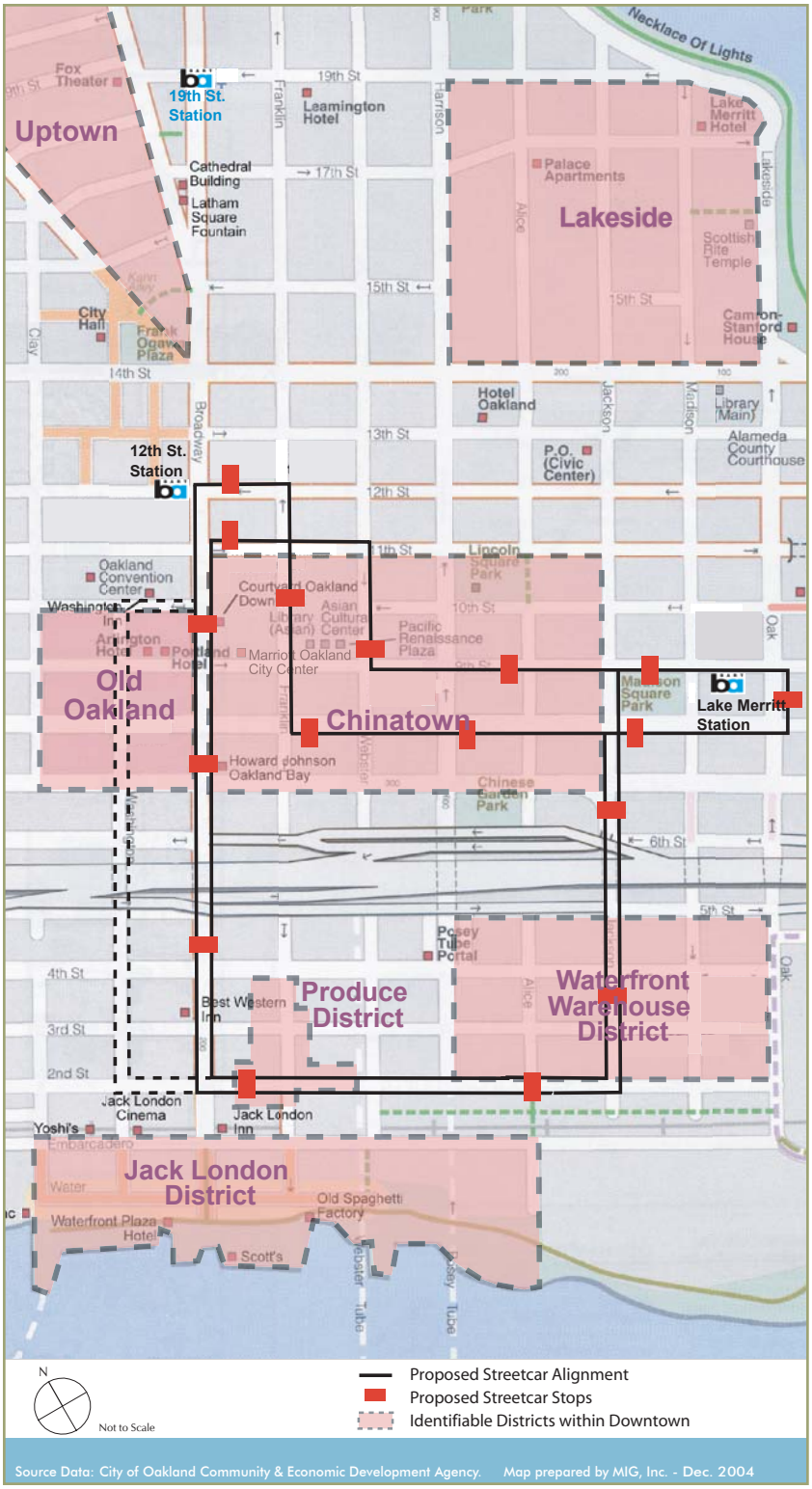
Washington at 4th Street

6th at Webster Street

"SMALL" LOOP DIAGRAM



"BIG" LOOP DIAGRAM



OPTION 5: "BIG" LOOP

The fifth option called the "Big" Loop combines Options Two and Three to make a complete loop connecting JLS and the Amtrak, Lake Merritt and 12th Street Stations. It can be considered a longer-term, full phase option. It has a total length of just over two miles. This option also has the possibility of running up and down Washington Street rather than Broadway.

Webster at 8th Street

Franklin at 9th Street

4.2 Alignment Conclusions

There was no consensus about the best alignment for a streetcar system in downtown Oakland as each of the options generated a list of pros and cons from meeting participants. In general, stakeholders wanted a system with a quick connection from downtown to the Jack London District, as well as the ability to circulate between downtown neighborhoods.

Some liked the simplicity and low cost of the Broadway "Spine" alignment, possibly as the first phase of a potentially much broader circulation system than the "Small" loop. These stakeholders saw Broadway as Oakland's historic parallel to San Francisco's Market Street and the ideal location for a visible transit spine. The Broadway alignment also provides a consistent transit line along the edge of Chinatown, while not interfering with its commerce and activity. This option would be roughly one-half the capital and operating costs of the other alignment options; though, it is also expected to encourage fewer riders than the other five options given its smaller scale. It is the most cost effective of the options with the lowest cost per new rider and could also be most readily integrated and coordinated with existing AC Transit lines to potentially save on operating costs.

The "U" Loop was seen as a potential second phase for a Broadway alignment, with the service heading from the Jack London District to the Amtrak Station and then toward the Lake Merritt BART station and Laney College. This option's ridership would be 50% greater than the Broadway "Spine" option. The operating and capital costs, however, would be 100% greater.

Meeting participants expressed a concern about a streetcar operation in the heart of Chinatown given its density and commercial activity, especially on 8th and 9th Streets. This meant that there was generally less support for the "C" Loop option or a "Big" Loop option.The "Big" Loop has considerably higher estimated capital and operating costs than the other options.

The "Small" Loop option was a favorite of some since it functions like a tight downtown circulator and connects a variety of neighborhoods with tourist appeal. Some also like the fact that this option avoids Broadway, which they view as heavily trafficked and unappealing. This option was considered to better serve Old Oakland and Chinatown, while not interfering with auto traffic and bus service on Broadway. However, its total cost per transit trip is the second highest of the five options.

Finally, many favored the idea of a future phase that extended any streetcar option to Uptown and the 19th Street BART Station. Some also favored the idea of linking the Amtrak Station and Lake Merritt into a downtown transit circulator.

ALIGNMENT OPTIONS COMPARISON TABLE

	Options				
	# 1	# 2	# 3	# 4	# 5
	Broadway	"U" loop	"C" loop	Small loop	Big loop
Profile for Streetcar or Rubber Tire					
Frequency (minutes)	7.5	7.5	7.5	7.5	7.5
Route Length (miles)	0.68	1.54	1.54	1.44	2.12
Number of Stops	6	10	10	12	13
Travel Time (minutes):					
12th Street to JLS	4	4	4.5	5.5	4.5
Chinatown to JLS	N/A	N/A	5.5	5	5.5
Chinatown to Lake Merritt	N/A	N/A	3.0	N/A	3
Lake Merritt to 12th Street	N/A	11	5	N/A	5.5
Performance for Streetcar					
Ridership	2,010	2,940	3,040	2,440	3,120
Capital Cost (in millions of 2004 $)	38	60	64	61	75
Annual Operating Cost (in millions of 2004 $)	1.7	3.4	3.4	3.4	4.2
Performance for Rubber-Tire					
Ridership	1,800	2,630	2,720	2,180	2,790
Capital Cost (in millions of 2004 $)	12	17	17	20	21
Annual Operating Cost (in millions of 2004 $)	2	3.4	3.4	4	4.7
Streetcar Cost Effectiveness					
Est. Total Cost per New Transit Trip (in 2004 $)	$9.66	$11.14	$10.90	$13.60	$13.64
Gross Operating Cost per Passenger	$2.92	$3.99	$3.86	$4.80	$4.64
Rubber-Tire Cost Effectiveness					
Est. Total Cost per New Transit Trip (in 2004 $)	$5.68	$6.25	$6.05	$8.88	$7.80
Gross Operating Cost per Passenger	$3.26	$4.46	$4.31	$5.38	$5.19

Altogether with technical and stakeholder input, the two alignments that have the most overall appeal were:

- **The Broadway "Spine" as the first phase to a broader loop.**
- **The "Small" Loop Option on Washington, 2nd, Franklin, Webster, and 14th Streets.**

As a result, the Project Team focused additional analysis and concept refinement on these two streetcar alignments.

4.3 Streetscape Compatibility

The streetcar system is a flexible rail technology that easily integrates into existing street configurations. The modern electric streetcar is typically 8.5 feet wide and 60 feet in length. Like a bus, it operates in mixed flow traffic lanes, meaning that cars and buses can share the lane with the streetcar tracks; and thus, traffic flow is typically unhindered. Usually, the streetcar operates along the far right travel lane alongside the on-street parking lane. The streetcar stops are accommodated by extending the sidewalk at the corner to the edge of the travel lane (this extension is called a bulb out). In some cases the alignments might include segments of track in the lane next to the median, with boarding from an island platform.

Streetscape improvements along the route should include:

1. Signalized intersections at streetcar stops.
2. Forty-five-foot long sidewalk bulb outs at stops (the width should be no more than the width of the parking lane or travel lane, which is generally eight feet).
3. Consolidation and coordination of light and sign poles for streetcar overhead wiring.
4. A coordinated signage program.
5. Regularly trimmed trees to ensure streetcar clearance.

In addition to these improvements, it is recommended that each stop be outfitted with a shelter, proper lighting, seating options, trash receptacles, and street trees.

Once the two preferred streetcar alignments were identified, the Project Team conducted a more thorough analysis to determine the streetcar system's compatibility with the existing and proposed streetscapes along the Broadway "Spine" and "Small" Loop alignments. The Team reviewed existing right-of-way constraints, ongoing planning efforts, and adopted streetscape improvements along the proposed routes.

Cities across the country are accommodating streetcars within their urban corridors with relative ease. However, to ensure the proposed streetcars' ability to fit in the downtown Oakland environment, three Oakland City plans were reviewed:

1. Pedestrian Master Plan

City of Oakland 2002

2. The Estuary Policy Plan

Oakland, California 1999

3. Downtown Oakland Streetscape Master Plan

City of Oakland

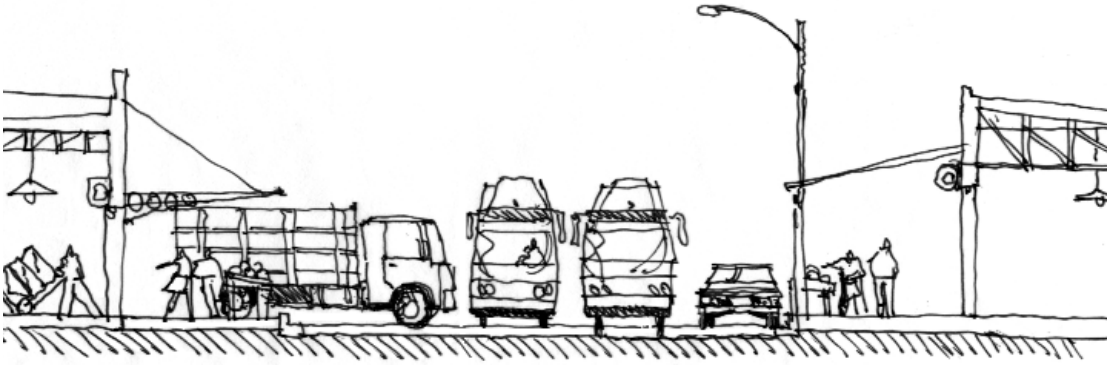
From this review, the Team identified a number of issues for further study as the streetcar design enters its next phase.[2] These are described as follows.

2ND STREET PRODUCE DISTRICT

The Pedestrian Master Plan identifies the Produce District as a key location for improved pedestrian activity and identifies the placement of a trolley line along Broadway to 2nd Street.

[2] In the future, there will be a need to coordinate with the *Revive Chinatown!* Plan for the Chinatown District.

CROSS SECTION OF 2ND STREET IN THE PRODUCE DISTRICT



Consequently, the Pedestrian Master Plan recommends the relocation of the weekly farmer's market to Franklin Street between 2nd and 3rd streets and notes that the wholesale nature of the district is changing. Careful planning will have to take place along this stretch of 2nd Street so that loading and unloading activities do not conflict with streetcar movement and auto circulation. A detailed study of this street should be conducted.

CLASS II AND III BIKEWAYS

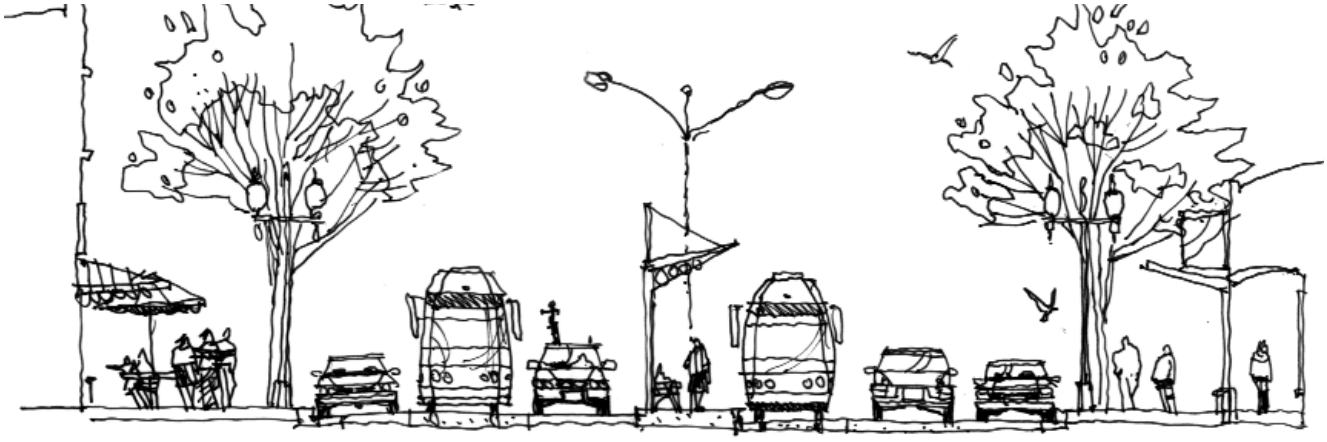
The Pedestrian Master Plan recommends two potential east-west alignments for a class III bikeway (which is often referred to as a bike route for shared use with pedestrian or motor vehicle traffic) along 2nd Street or 3rd Street. In addition, the Plan recommends one north-south class II bikeway (which is often referred to as a bike lane defined by a striped lane for one-way travel) alignment along Washington Street. Streetcar alignment will have to be coordinated with this bikeway.

Given the existing loading and unloading along the Produce District and the potential streetcar route along 2nd Street, this study recommends that the bike route be located one block north on 3rd Street. This alignment maintains bike routes in close proximity to JLS, Old Oakland, and the Produce Market, and would provide a less congested route for bicylists. Designing the exact streetcar alignment along Washington Street will require coordination with the proposed bikeway as well.

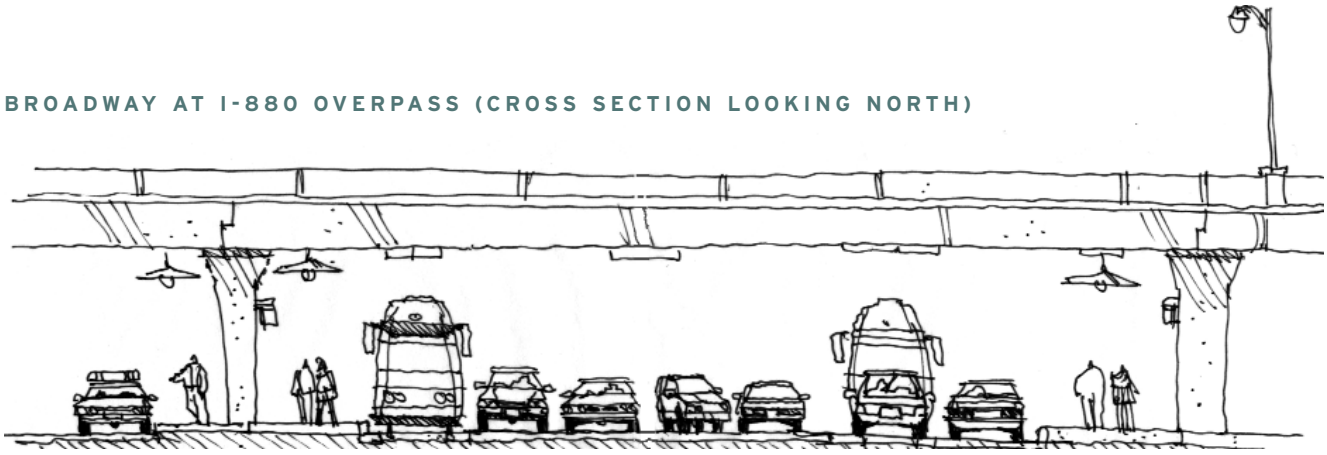
WEBSTER STREET GREEN

The Estuary Policy Plan identifies a major streetscape improvement along Webster Street from 4th Street to the wharf. Webster Street is located directly above the Webster Tunnel leading to Alameda. The tunnel was constructed with a 45-foot easement along the west side of the street that precludes development. Currently the easement is used for surface parking lots. The Estuary Policy Plan proposed creating a 45-foot wide open space down the center of this stretch of Webster Street, thereby shifting the southbound lane of Webster to the west side of the open space. It is imperative that a Webster Street alignment is coordinated with the right-of-way determined for the Webster Street Green.

BROADWAY WITH CENTER ALIGNMENT (CROSS SECTION LOOKING NORTH)



BROADWAY AT I-880 OVERPASS (CROSS SECTION LOOKING NORTH)



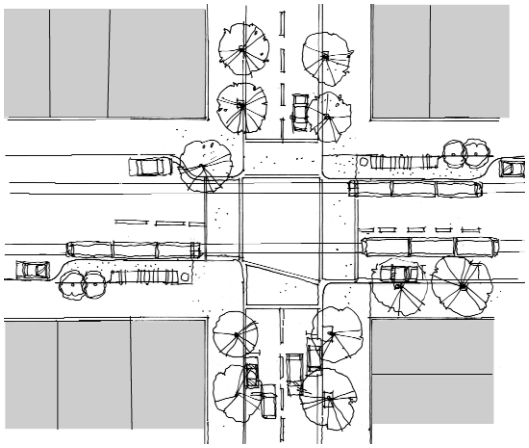
BROADWAY TURNING MOVEMENTS

Significant turning movements on and off Broadway occur between 6th and 9th Streets. To best avoid conflict between the vehicular traffic in this stretch, it is recommended that consideration be given to placing the northbound streetcar along the center median, rather than along the sidewalk. This configuration would require passengers to exit the streetcar on its left side. In lieu of bulb outs, medians at the stops would be widened to accommodate passengers. The increased median width would not reduce the number of travel lanes on Broadway (the existing lanes are wider than the necessary minimum).

BROADWAY AT THE I-880 OVERPASS

Though none of the plans include the Broadway at I-880 area, special planning coordination will be necessary at this location, which has unique traffic considerations. Southbound, Broadway's two through-lanes widen to four under the freeway structure, of which three are left-turn only lanes onto I-880 and only one is a through-lane to JLS. It is recommended that the southbound streetcar tracks steer clear of the turning lanes by running alongside the west sidewalk. To improve circulation, an additional through lane could be added west of the existing through lane, providing two through lanes southbound where there is

TYPICAL STREETCAR STOPS



This plan view drawing shows how the sidewalk bulb outs will provide the streetcar with stops for easy boarding and ample sidewalk accommodations, without reducing the number of travel lanes.

now only one. In such a case, the streetcar would run in the curb lane. This would require reducing the sidewalk (which is now about 20 feet in width) to about 10 feet. General streetscape improvements that have been discussed for the area include public art, overhead lighting, and parking screens to increase the perception of safety. This is a challenging street-level environment from the point of view of pedestrian movement and urban design, but introduction of a streetcar and coordination with streetscape treatments to the north (Downtown Core) and to the south (Jack London Square) could help ameliorate the sense of a divisive barrier created by the I-880 structure.

BROADWAY BUS STOPS

Recent streetscape improvements have been made to Broadway between 12th and 14th Streets to distribute bus stops. The terminus of the streetcar in the City Center area will have to be carefully planned and located to avoid congestion, allow bus boarding to occur as usual, and provide for effective bus/streetcar transfers.

WASHINGTON STREET STREETSCAPE IMPROVEMENTS

The Downtown Streetscape Master Plan is in its final stages of design development for two to three blocks along Washington Street between 7th and 10th Streets. The improvements will consist of the reconstruction of brick sidewalks along this area, and corner bulb outs on 6th, 7th, and 8th Streets to improve the pedestrian realm and accommodate angled street parking on the streets perpendicular to Washington Street. In planning for the ideal placement of a streetcar stop, the alignment will need to be coordinated with bulb outs and respect the recent improvements.

Careful planning in these areas will allow the streetcar system to easily fit into the rights-of-way along either alignment route and can help improve the streetscape activity within these areas. The frequency and activity of the streetcars increases the "eyes on the street" helping to improve the perception of safety along the route. The streetcars' accompanying street furniture and amenities will further enhance downtown Oakland and the surrounding districts.

4.4 Traffic Impacts

In order to refine the streetcar concept further, the Project Team analyzed the traffic impacts of a streetcar operation for the Broadway "Spine" and "Small" Loop options.

A field review of both alignments was conducted to collect information relevant to the streetcar operations. This information included parallel and angle parking characteristics; roadway and intersection lane widths and designations; traffic congestion levels; intersection geometrics and traffic signal control operations; bike lanes; and bus stop and loading locations (See the Traffic Impacts Diagram on the following page). A documentation review was also undertaken to identify previous corridor recommendations that may conflict with streetcar operations along either route.

After reviewing the opportunities and constraints for the two streetcar options, the following locations were identified as potential issues for streetcar operations that would require more in-depth analysis before track construction. None of the issues mentioned below represent fatal flaws that would preclude the implementation of a streetcar operation.

CITY CENTER AREA

The proposed turn-around area, west of Broadway, on 14th Street would impact the operations of the traffic signals along Broadway. Special transit phasing might have to be introduced, potentially creating some additional delay for other traffic.

BROADWAY CORRIDOR

Additional traffic delays caused by in-lane streetcar stops and maneuvers would cause occasional traffic signal "cycles" to exceed capacity. However, intervening cycles, between streetcar arrivals, would allow traffic to clear and the street to return to normal operations. Any reduction of bus vehicles due to the introduction of streetcars could compensate for this impact to some degree.

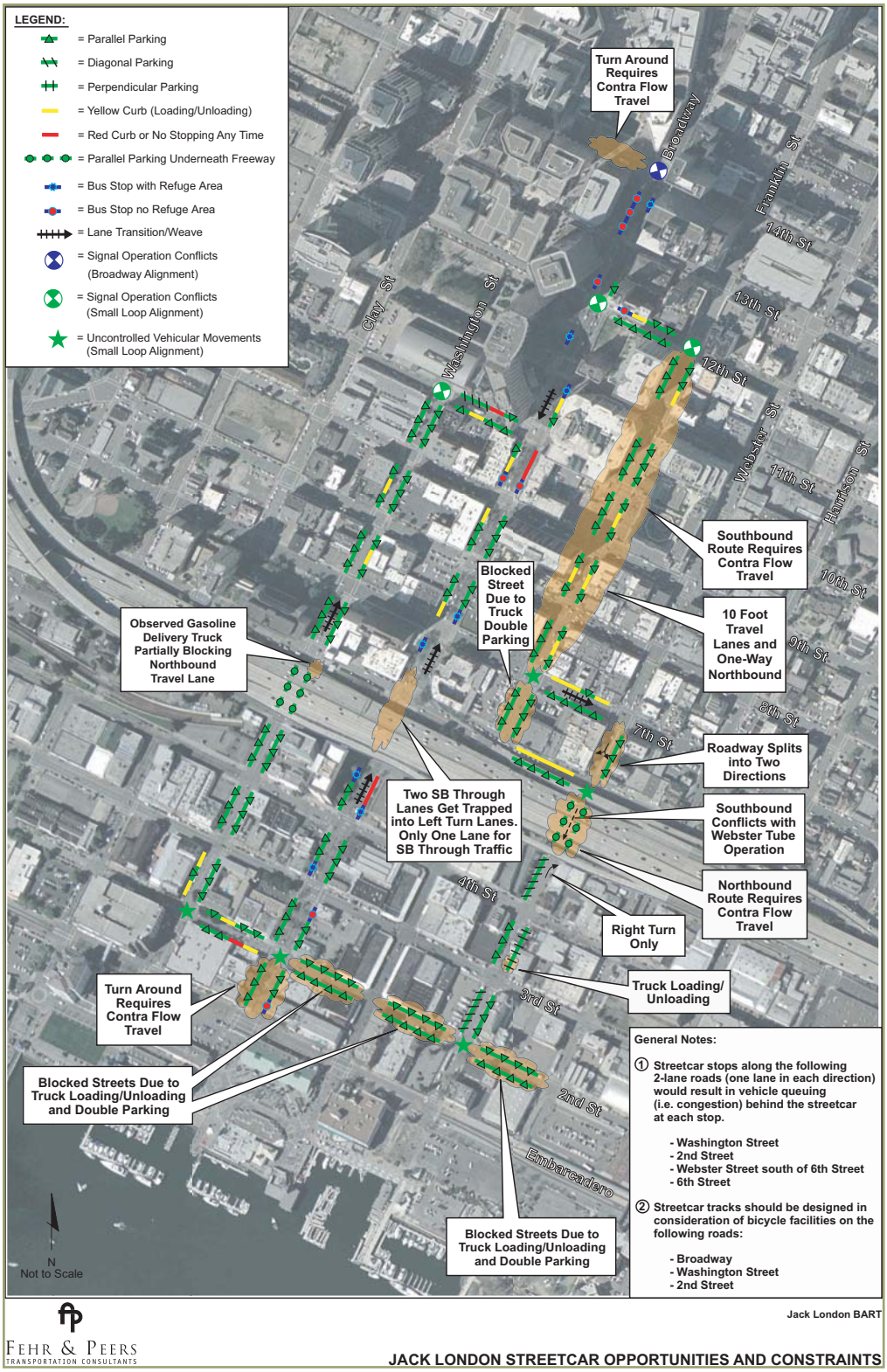
BROADWAY AT I-880

The current operations of Broadway under the I-880 overpass would be complicated by the addition of the streetcar. The southbound movement, which is limited to one travel lane, would be impacted by the streetcar along with the freeway ramp movements. However, alternative streetcar alignments, such as running in the southbound shoulder, are available. Regardless of the specific southbound alignment, we recommend against a streetcar stop in this area.

FRANKLIN STREET

The current lane widths on Franklin Street, 10 feet, are not ideal for use by the streetcar, and might need to be widened, reducing the number of traffic lanes. If Franklin Street is converted into a two-way street, the streetcar would occupy the single lane for through traffic in each direction (with a third lane available for traffic turns).

TRAFFIC IMPACTS DIAGRAM



As a result, while through traffic would still be permitted, it would be slowed by streetcars in the through lanes and by possible parking and delivery maneuvers, so that the character of Franklin Street would likely change to a local-use, "transit first" street. This configuration would need to be coordinated with the *Revive Chinatown!* plans for street changes.

WEBSTER TUBE PORTAL

The current operations of the Webster Tube Portal would be greatly complicated by the addition of streetcar movements. Both the northbound and southbound streetcar routes would be negatively impacted by the traffic entering the Portal. The southbound route would have the greatest impact on Portal operations, as the streetcar would have to weave across traffic entering the Portal at 6th Street before continuing on Webster Street under I-880.

2ND STREET

Delivery schedules on 2nd Street might need to be altered to keep the through travel lanes clear

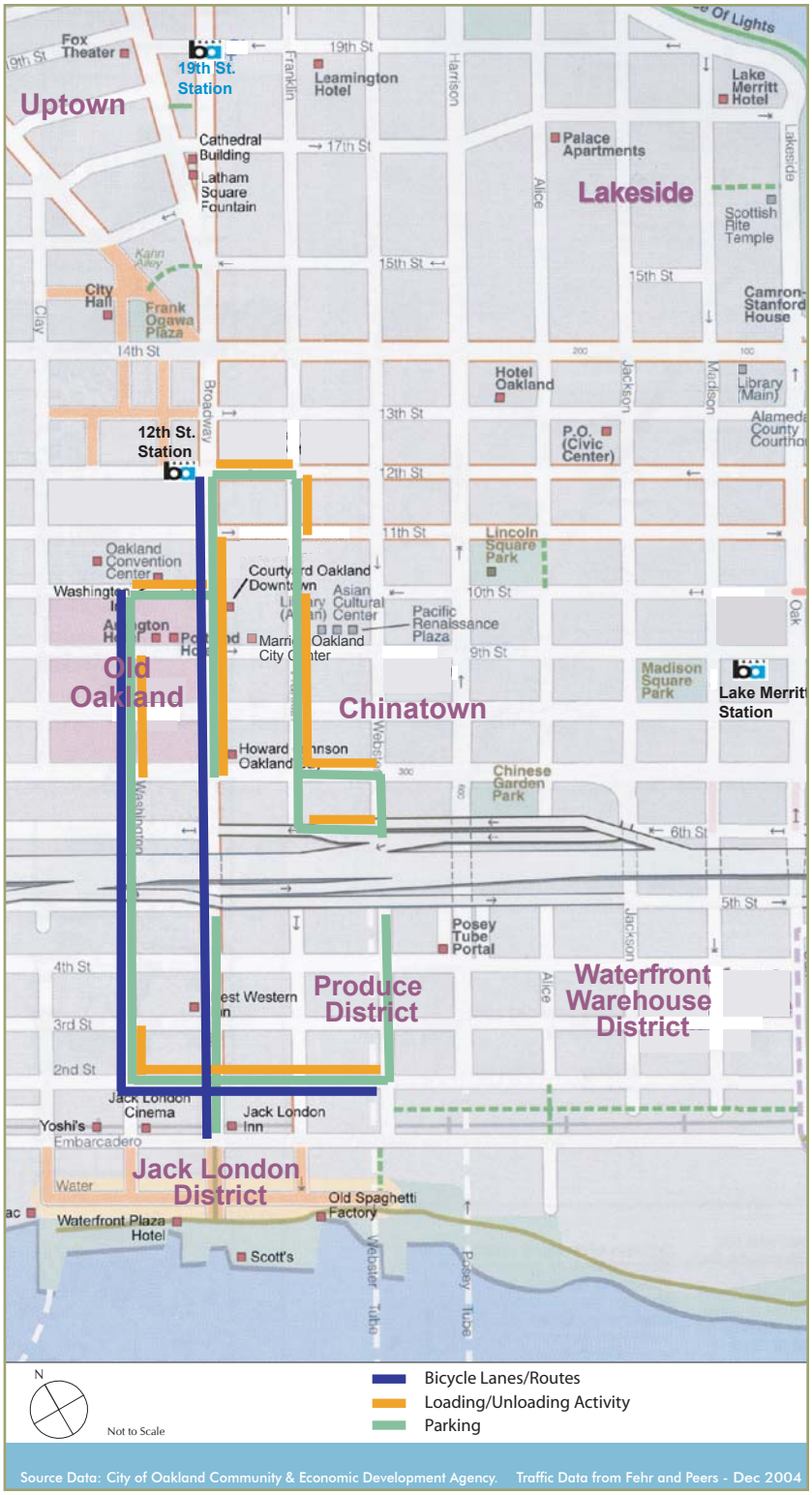
along 2nd Street. A possible solution is to limit truck operations along the corridor to night-delivery only. If the delivery trucks cannot be fully regulated, the streetcar operations would be delayed by double parked trucks.

In addition to the location-specific issues, there are three areawide concerns that warrant attention (See diagram to the right):

- **Parking:** Parking maneuvers could hamper streetcar progression and schedule adherence, and streetcar delays would impact general traffic as well.
- **Truck Activity:** Delivery truck schedules and/or drop-off locations would have to be altered to accommodate the streetcar operations. Any double parking in the streetcar travel lane would effectively stop streetcar operations and impact the vehicular traffic as well.
- **Bicycle Routes:** The streetcar might present a hazard to bicyclists when riding along or crossing the tracks. Bike lanes and routes in the study area would have to be moved off of the streetcar route.

Of the two alignment options, the Broadway "Spine" option appears to present fewer operational issues than the "Small" Loop. In both cases, however, the above challenges would need to be subjected to more detailed study in order to define a preferred streetcar alignment. Additional engineering and community involvement will be required to fully address street function and performance, streetscape, and character issues related to the multimodal use of streets along the streetcar alignments.

AREAWIDE TRAFFIC CONCERNS DIAGRAM



"...Both the sleek, modern streetcars and the old-time, vintage trolley car can generate a tremendous amount of local excitement and enthusiasm for what many consider a great community amenity."

STREETCAR FUNDING CONCEPTS

Streetcar projects have been developed in several cities across the United States in recent years and dozens more are in the planning stages in cities as large as Philadelphia and Los Angeles and as small as Racine, Wisconsin and Salem, Oregon.

Most recent projects have relied on local funding to cover at least part of the capital costs of construction. The specific sources of these local funds used vary widely from bonding against future city parking revenue in Portland, to a hotel tax in New Orleans, to capital funds allocated from regional Metropolitan Planning Organizations (MPOs), to local transit operators, in the case of several other cities.

5.1 Capital Funding

In the case of Oakland, there is a projected $60 - $75 million available for City of Oakland-sponsored transportation projects over the next 25 years. Meanwhile, the total amount of funds requested by projects in the current Countywide Transportation Plan already greatly exceeds that amount. At this time, it does not appear that any additional transportation funds will be made available from the State of California to the City of Oakland in the near future, given the fiscal and political environment in Sacramento. To compete for funds in the near term, more money would have to become available for transportation projects, and the streetcar project would have to receive a high prioritization from local elected officials.

Some streetcar projects have used federal money for capital construction, although generally in a form distributed by regional MPOs. Funding from the highly competitive federal "New Starts" program for new rail systems has not been a major component of streetcars funding to date. Typically, streetcar projects do not score well on the Federal Transit Administration criteria, which are aimed at achieving travel times savings for large numbers of commuters. Streetcars carry smaller numbers of patrons and are often used for pedestrian activation, placemaking, and downtown economic development.

To assist funding for smaller scaled transit projects like streetcars and bus rapid transit, Congress is considering adding a "Small Starts" funding program for streetcars in the federal transportation reauthorization bill (known as TEA-LU). If passed by Congress, this grant program would provide funding for projects with a federal cost share of between $25 million and $75 million. Total funding over six years would be about $935 million. In the future, this program could be a potential source of funds for an Oakland streetcar. The federal "New Starts" programs still rely on some type of local match. The first step to attaining federal money is to have a project in the Countywide Transportation Plan and the Regional Transportation Plan.

Another type of funding used in the capital development of streetcar projects is money gathered from voluntary local improvement districts. These are mechanisms used by property owners to tax themselves in order to provide some specific local benefit in a designated zone. In Portland, about $9.5 million or 17% of the total project costs were raised this way, with a new streetcar line being planned in Seattle expected to generate over 50% of project costs from a Local Improvement District. Property owners may be willing to help finance a streetcar, given its tendency to add value to nearby property and to encourage local economic development.

A preliminary analysis by BART staff has determined that if an assessment district were established in downtown Oakland, similar to Portland's with similar tax rates, it would generate about 10-14% of project costs, depending upon the streetcar alignment chosen (assumes an assessment zone within an approximate two-block radius of the streetcar route). The establishment of such a district would require the consent of the owners of 50% of the taxable assessed value. This type of special district in Oakland could alternatively be used to raise funds for the streetcar's ongoing operating costs.

5.2 Operations Funding

For most cities and transit agencies, identifying revenue sources for ongoing transit operations is even more of a challenge than funding construction. Fortunately, recent streetcar systems have used an array of creative means to keep their streetcars rolling. In fact, Tampa's electric streetcar operates without any traditional local public subsidies at all.

Collecting fares from riders is one obvious method of offsetting operating costs. While some streetcars are free, like Tacoma's, a majority of recently established streetcars do charge for fares, such as Charlotte, Memphis and the Muni F line in San Francisco. Farebox revenue in Tampa represents about 25% of total operating costs.

If fares were charged on a streetcar in downtown Oakland, they could make a respectable contribution to operating revenues. Given the projected ridership of a streetcar on Broadway, and based on a $1 fare per ride, the farebox could generate about $400,000 annually, or about 20% of the total operating costs.

It is extremely rare for federal or state transportation funds to be used to subsidize streetcar operations. In Tampa, Congestion Mitigation and Air Quality (CMAQ) funds were used for a period of three years while the city built an endowment fund aimed at using the interest for streetcar operations. In most cases, though, the primary method of funding streetcars is normal public funds dedicated to transit operations.

There is a possibility that new streetcar service on Broadway could reduce AC Transit operating costs, since it might allow for the diversion of some bus service along Broadway. A detailed understanding of how a streetcar operation would mesh with AC Transit service, however, would have to be studied in more detail.

Several streetcar systems have been successful in acquiring private funds for their operations. Since streetcars add value to property near the line, local improvement districts have been used to raise funds voluntarily from private property owners. While Portland used these types of funds to cover one-time capital costs, Tampa has used

The streetcars that used to serve downtown Oakland and neighborhoods beyond could be reintroduced to the city. Historic trolleys are often a big draw for tourists and everyday riders.

them to help offset their ongoing operations. At a rate of $0.33 per $1,000 in taxable assessed value, they have raised enough funds to cover about 25% of operating costs. Oakland could follow the Tampa model. If the same rates used in Tampa were applied in Oakland, then a local streetcar assessment district would generate roughly $250,000, or about 12.5% of total operating costs.

Another method to bring in private funds includes advertising on the outside of the streetcars or on the inside of the cars above the windows, similar to many bus and metro systems. Also, the streetcar operator can offer sponsorships or naming rights for streetcar stops or for the trolley vehicles themselves. For example, Tampa used this strategy to raise about $5 million from entities like Time Warner, Suntrust Bank, and the Tampa Port Authority to build an endowment fund to support streetcar operations though interest payments.

Both the sleek, modern streetcars and the old-time, vintage trolley car can generate a tremendous amount of local excitement and enthusiasm for what many consider a great community amenity. In fact, some may be so enthusiastic that they are willing to make their own voluntary financial or in-kind contribution or support a local improvement district to see the project succeed. For example, Portland raised $30,000 for first year operations through ticket sales for an inaugural event. Finally, several streetcar systems, such as Tuscon, San Francisco, and Dallas use volunteer labor to operate, maintain, or promote historic trolleys.

CONCLUSIONS

This study concludes the first step of the planning process for transit improvements between 12th Street and Jack London Square. A typical Transit Project Development Process such as this takes anywhere from four to ten years from the initial conceptual planning to operation. This study represents the first stage of a multi-step process: Conceptual Planning.

The key summary points from the study are as follows:

- **There is a desire for an improved transit link from downtown to JLS and a circulator between neighborhoods.**
- **A streetcar is the favorite transit mode for the long-term, partly due to its ability to stimulate development and add interest to downtown.**
- **BART could provide a long-term link to Jack London Square via a new line to Alameda.**
- **Although less popular, rubber-tire bus or shuttle is a viable short-term alternative.**

This final section also includes lessons from other cities on the benefit of nonprofit streetcar advocacy groups and potential next steps emerging from this study.

6.1 Lessons from Other Cities

Across the country, nonprofit organizations have played a vital role in both the development and ongoing operation of streetcar transit services. As advocates, these groups have helped to build support for streetcar projects, keeping them in the public eye until they were successfully implemented. The Tampa & Ybor City Street Railway Society in Tampa, Florida spent over a decade acting as a proponent of that city's existing TECO streetcar line. In San Francisco, the Market Street Railway's advocacy for streetcars includes a website, a quarterly newsletter, and solicitations for donations to support their activities.

Nonprofits groups have also been involved in acquiring and restoring historic vehicles used in streetcar systems. The Market Street Railway helped to acquire funding for the restoration of vintage "PCC" streetcars and also acquired rare trolleys from around the world for San Francisco's F-line. They have also created informational displays inside the streetcars and clean the car interiors. In a similar vein, the Tampa & Ybor City Street Railway Society has acted as the "locator, curator, and restorer of original Tampa Streetcar artifacts." Their focus has been on the restoration of vintage historic Tampa trolley cars through the use of volunteer labor.

In some cases, nonprofit organizations have actually operated streetcars. Charlotte Trolley in Charlotte, North Carolina started as a grassroots effort operating a limited schedule streetcar in 1996 on a city-owned rights-of-way. The line has since been upgraded with operations turned over to the local transit operator and the line integrated into the city's overall transit network. The organization, however, still exists as a "friends of the trolley" support organization.

In Portland, Oregon, the nonprofit corporation "Portland Streetcar Inc" manages the development, construction, and operation of the streetcar. "Tampa Streetcar Inc." is another nonprofit that manages streetcar operations and contracts with a local government transit agency to operate the service. The ability to acquire donations and to use volunteer labor are advantages of a nonprofit managing a trolley line. In addition, if the streetcar has a dedicated source of funding, such as a local business assessment district, then segregating and protecting these funds from competing priorities may be easier if managed by a single purpose nonprofit.

Following the lead of other cities, citizens in Oakland who are enthusiastic about a downtown streetcar could join together to form a nonprofit organization. This group could promote the streetcar concept, build enthusiasm for it, explore creative funding opportunities, and generally help to keep the vision alive.

6.2 Next Steps

Those involved in this project, whether community members, elected officials, or the Project Team all agree on the need for a better connection between the City Center area and Jack London Square. There is also strong desire for improved connections between downtown neighborhoods.

A new type of transit service could provide a valuable source of mobility, as well as a mechanism for stimulating development in the Jack London District. Generally, because of its abilities to satisfy these goals, the streetcar was the preferred long-term technology for most participants. Given the length of time required to develop a streetcar system and the uncertainty of funding, however, there is strong support for an enhanced bus or shuttle service in the short term.

To develop a streetcar system, the next step in the process would be to identify funding sources to begin the initiation of the environmental review process and for project capital costs. This would be followed by a design and bid stage with a construction/test stage to follow. The full operation of a new streetcar service would occur no sooner than 2009 and more likely would not occur until the 2010's, even if funding is identified in the near term.

The following are some future steps that were identified by those involved in the study.

THE NEXT STEPS ARE:

- **City of Alameda, BART, and City of Oakland to consider underground BART shuttle concept as part of Alameda multimodal study.**
- **City of Oakland to work with the private sector to implement a limited shuttle bus service to the Jack London District.**
- **Streetcar proponents to consider the creation of Oakland Streetcar nonprofit organization as a focal point to advocate and promote streetcar concept.**
- **Potential nonprofit to work with public agencies to identify funding opportunities.**
- **Potential nonprofit to seek funding for detailed streetcar feasibility study prior to environmental analysis.**

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