Planning Department
Redevelopment

September 10, 2008

To: Planning Commission
Transportation Commission

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Subject: West Berkeley Circulation Master Plan – Status, Policy Objectives, and Issues

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Recommendation

Staff recommends the Planning Commission consider and provide feedback on the five criteria described herein for prioritizing transportation improvement projects under consideration in the West Berkeley Circulation Master Plan (WBCMP). These criteria provide a methodology to rank the nearly 100 capital projects identified in the WBCMP. Additionally, the commission may want to provide feedback on other issues identified herein.

Background

The West Berkeley Project Area Commission (PAC) developed a scope of work for the West Berkeley Circulation Master Plan (WBCMP) with Planning and Transportation Commission input following a joint meeting of the three bodies in January 2007. The PAC engaged in public discussion of the Plan's tasks and the Redevelopment Agency (Agency) approved a contract with Wilbur Smith and Associates (WSA) in June 2007. The tasks include:

- Provide baseline traffic data
- Evaluate cumulative traffic
- Standardize baseline traffic counts for development decisions
- Facilitate evaluation of the West Berkeley Plan
- Identify improvements, key funding needs, and critical infrastructure, funding options & implementation strategy
- Analyze increased rail traffic effects on circulation and potential crossing improvements
- Evaluate preferred truck routes
- Identify opportunities for improving freeway access
- Establish criteria and identify options for updating the WBCMP with community input

In August 2007 the Agency also entered into a contract with WSA for a related Quiet Zone Feasibility Study.

Planning and Transportation Commission members have served as liaisons between the PAC and their respective commission for each of the public meetings described below
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In November 2007 WSA presented the WBCMP Existing Conditions Report to the PAC and in April 2008 WSA presented the Future Conditions Report. The results are briefly summarized later in this report. To review the reports and related presentations, see the WBCMP website at: http://www.ci.berkeley.ca.us/ContentDisplay.aspx?id=556

On July 10, 2008 WSA presented the draft methodology for prioritizing possible capital improvements, as well as a draft list of possible capital improvements sorted by type of project, short and long-term implementation schedules, and geography to the PAC. The PAC suggested revisions to the criteria and additional capital projects. On July 28, 2008 WSA provided staff a revised capital list sorted by mode and adding the projects generated by the initial response to the draft list. The draft list is attached, as well as found at: http://www.ci.berkeley.ca.us/ContentDisplay.aspx?id=556
The criteria and consideration of their relative importance is discussed further below as we are seeking Commission input on the weighting of the ranking criteria.

Discussion

As noted earlier, one of the WBCMP tasks is to identify capital improvement projects that improve circulation in West Berkeley. Potential improvement projects will be ranked (per the criteria discussed herein) and will then be tested for feasibility and implementation ability. Inclusion in the WBCMP prospective list identifies improvements the City wants to investigate further. Inclusion in the WBCMP final Capital Improvement List indicates that the City has an interest in pursuing its implementation (pending project-specific review of both environmental and cost factors). The WBCMP does not take the place of project level analysis and public dialogue about specific projects.

WBCMP Criteria

WSA developed an evaluation process to rank potential improvement projects based on the criteria described below. Feedback from the commission is requested on the relative importance of the objectives described by the criteria as summarized below.

1. Congestion Relief: Reducing delay caused by current or future congestion, measured per person across all modes.
2. Reduction of Environmental Impacts: Reducing greenhouse gas (GHG) emissions and vehicle miles traveled.
3. Safety: Increasing safety and reducing conflicts among travel modes.
4. Livability: Increasing users' comfort and convenience.
5. Network Resilience: Increasing network resilience to changing market and reduced resources.

Using these criteria, WSA will assign points to each potential improvement project, reflecting its ability to meet each objective. Ranking is mode-specific, meaning that rank will vary for

transit, auto, commercial vehicle, bike, and pedestrian modes. Auto travel is further split between local and regional traffic.

The WBCMP model provides the opportunity to alter the relative priority of each of the criteria/objective in the future. This reflects the PAC's intent that the WBCMP function as a living document allowing for institutionalized updates.

One can allot 100 points distributed equally or in various weightings for each project objective. In October or November the PAC will consider giving varied or equal weights to each of the criteria, which will affect the ranking of projects, leading to a range of possible priorities. In an effort to inform that future policy exercise, staff requests that the commission discuss and, if desired, allocate points among the criteria, defined more fully below.

Quantitative Measures

Congestion Relief: Operating performance relates to the level of delay experienced by the user and will be measured in terms of *person delay* using standard assumptions for vehicle occupancies and applied all modes of travel.

Reduction of Transportation Segment Environmental Impacts: Environmental performance is measured by the benefit an improvement has on reducing harmful greenhouse gas (GHG) emissions. It is measured in terms of pounds of GHG emissions from fuel consumption estimates using EPA standards.

Qualitative Measures

Safety: Safety attributes include both actual and perceived safety by users of the transportation network. Improvements that minimize conflict between modes and within modes and improve safety conditions of facilities (operating, waiting, storage) are given value under this criteria.

Livability (Comfort and Convenience): Attributes evaluated in this criterion include the cost of using a given mode, the ease to access or use that mode, the ability to store or park that mode, and the minimization of any other discomforts experienced while using that mode of travel. General aesthetics are also included in this assessment. Criteria include:

- Directness of network/ability to make turns
- Appropriate speeds
- Availability parking, stops/stations, and/or loading
- Cost of use
- Separation of modes

Network Resilience: Network resilience refers to the ability of the transportation network to perform critical functions such as facilitating the movement of people and goods and provision of emergency and utility services, under variable, uncertain and extreme conditions. These conditions may include:

- Congestion of a network link
- Failure of a network link (roadway, bridge, rail)
- Shortage of a critical resource such as petroleum

Projects that diversify the transportation system to allow an increase in alternative modes are positively ranked under this objective.

WBCMP Findings and Issues

For the Existing Conditions Report, WSA analyzed 57 West Berkeley intersections including 25 intersections during weekend peak conditions. This analysis included all signalized intersections and one-third of all other West Berkeley intersections. Findings include:

- Weekend data revealed a growing level of congestion that rivals weekday peak conditions. All but two of 14 weekend segments failed
- In November 2007 16 out of 28 segments on West Berkeley's key arterials (Gilman, University, Ashby and San Pablo Avenue) were operating at LOS E or F at certain peak times and directions.
- Morning weekday commutes were the best performing time period.

The Future Conditions Report presents a "worst case" scenario. It describes the circulation problems that will result from future growth if not mitigated by capital improvement projects (including vehicular, transit, bicycle, and pedestrian) and changed behaviors.

The Future Conditions Report's forecasts for 2015 and 2030 indicate that these same segments (as described above) on Gilman, University, Ashby and San Pablo Avenue if not mitigated will worsen to the point that by 2030 gridlock is expected on 13 of 28 arterial segments, with another five approaching gridlock and all but three failing. Concurrently four intersections in West Berkeley now failing are:

- Gilman interchange
- Ashby and 7th
- University and 6th
- University and San Pablo

And these are projected to be joined as follows:

by 2015:

- Gilman and San Pablo
- Ashby and San Pablo
- University and Frontage

And by 2030:

- Gilman and 4th, I-80, Eastshore
- University and 9th, I-80,

Regional vs. Local Traffic Impacts – One of the major findings of the WBCMP is the potential impact of regional through traffic on local roadway capacity. Through traffic originates from and arrives at destinations outside of Berkeley, impacting roadways without contributing local benefits (e.g. taxes, workforce, etc).

The Alameda County Congestion Management Authority (ACCMA) assumes 1.5 percent annual growth on all arterials such that most of West Berkeley's most congested streets face 43% growth in use by 2030. Such growth exceeds existing capacity, resulting in significant queuing and delays on arterials and bypass traffic on residential streets. The dilemma is that efforts Berkeley residents make to restrict locally generated traffic creates capacity only to be demanded by regional travelers attempting to bypass I-80 gridlock. Metering, congestion pricing, signal timing, improvements to locally serving modes are strategies used to address through traffic on local streets. San Pablo and Ashby Avenue offer unique dilemmas as State highways for which there is minimal local control. As major arterials they offer opportunities for increased transit services but like each West Berkeley arterial offer significant obstacles to pedestrian and bicycle crossings.

Transit Access Improvements/ Through Traffic/Parking - *S*ome improvements intended to reduce vehicle miles traveled and congestion-related travel delay could reduce either the number of on-street parking spaces or restrict the hours they are available. The WBCMP currently includes potential projects that involve the removal of parking spaces to accomplish one of the following objectives:

- Decrease congestion (by adding turning lanes or additional through lanes)
- Lower GHG emissions and person delay on transit (bus lanes, queue jumps or bus bulbouts)

The WBCMP has included a column for each project to assess the number of parking spaces lost or time-restricted. These factors can be reviewed for their impact on the relative ranking of projects depending on a variety of parking policies. The PAC has initially expressed concern for preserving retail parking.

Transit Access Improvements – San Pablo and University Avenue bus services are impacted by existing and future levels of congestion on these arterials (particularly as assumed in the ACCMA growth assumptions discussed above). The WBCMP considers three improvements that could address this growing conflict.

- **Bus lane** - provision of a bus lane only could be targeted to a specific time of day (e.g. peak hours in the morning when businesses are not open) or that could be combined with truck lanes such that mode conflict is reduced and goods movement enhanced.
- **Queue jumps** – Queue jumps restrict parking at an intersection corner to allow bypass of cars waiting at signalized intersections. The length of the queue determines the length of the jump and parking impact. Queue jumps can allow right turns not previously accommodated or offer a refuge area for cyclists.
- **Bus bulbouts –** Bus bulbouts allow buses to pick up passengers in the travel lane, without angling into a curbside bus stop. A sidewalk is built across the former parking spaces to meet the travel lane and – as in San Francisco where they can be 140' long – additional sidewalk amenities may be included. Delay to through traffic is minimized as the busses do not need to angle into the bus stops and parking loss is minimized.

While all of the above options are currently under consideration in the WBCMP, the recommendations could be mixed and matched but in no case would they be redundantly implemented.

Turning Movements and Through Lanes – 6/7th, Dwight, Gilman, Hearst, Heinz are all discussed in the WBCMP draft project improvement list as possible locations for left or right turn or through lane additions. In these cases 8 to 15 parking space could be lost to accommodate the new travel lane or turn lane. Conflicts with pedestrians and cyclists must be considered in introducing turn lanes.

Rail Impacts – The Port is funded to explore up to four active rail lines from Oakland to Richmond where there are two currently in operation. Reactivation of a third line that is currently in place but in disrepair is likely, even if addition of a fourth line is not feasible. Gilman faces significant delay at the tracks to the possible detriment of the I-80 on and off ramps. With significant investment planned in the Gilman interchange it is imperative that the railway operations do not queue back onto the freeway.

Next Steps

In September, Commissions (Planning & Transportation), the City Council, and stakeholders will review the project status and ranking criteria. PAC will discuss the ranking criteria in October or November 2008.

After the PAC ranks potential projects, the Implementation Plan will include three or four scenarios. The Implementation Plan will also include planning-level cost assessments and financing strategies, as well as a Transportation Demand Management (TDM) Plan.

It is not anticipated that there will be an environmental analysis of the WBCMP or that it will be adopted as a formal plan. Rather, it provides the analysis, tools, and recommendations for a variety of future uses including the following.

- WSA will provide the City with a traffic model (Traffix) that includes baseline conditions and which will provide a tool for:
  - Traffic analysis of development applications
  - Sensitivity analysis of changed conditions: new studies or data, zoning changes, policy review

- The list of ranked capital improvements can be used for the following projects:
  - Development impact fee nexus study specific to West Berkeley (unfunded)
  - Public Works' 2010 Capital Improvement Program (CIP)
  - Possible Agency funding for priority project(s)
  - Grant application priorities and supporting documentation

Future capital improvements may be evaluated and added to these potential capital improvement lists based on changed conditions or policy initiatives. There are currently nearly 100 capital projects under consideration in the WBCMP. These have not yet been ranked or vetted for engineering or financial feasibility. Each is being considered for

selection of top priorities, elimination of potentially competing projects and development of an Implementation Strategy. The Implementation Strategy will address phasing, capital funding needs, and potential funding sources for the highest ranked projects. The list of improvements addresses area-wide problems with specific attention to existing and potentially exacerbated problems at San Pablo Avenue, Gilman, Ashby, and University Avenue.

The WBCMP will eventually be presented to the Redevelopment Agency for review and discussion.

Conclusion

In bringing this item to you tonight we wish to inform you of progress made to date and to get feedback on the ranking criteria. We ask for the relative priority you place on the five policy objectives, and if desired, discussion of the issues described above. Staff will inform the PAC's process with your recommendations. Again as the WBCMP is intended to be a living document, future rankings may emphasize differing objectives. However the WBCMP will have a set of recommended capital improvements for future consideration.