



CHAPTER 6

Design Recommendations & Implementation

6 DESIGN RECOMMENDATIONS & IMPLEMENTATION

This Chapter outlines the strategy for funding and implementing the Columbus Avenue Study design recommendations. The conceptual recommendations developed through this study will undergo the following next steps in project development and implementation: (1) preliminary engineering and environmental assessment; (2) design review and SFMTA approvals; (3) final engineering design; and (4) legislation and construction. This Chapter identifies potential funding sources, required to support each phase of work, and also identifies the lead agency for each of the next steps. Community stakeholders will play an essential role in supporting the recommendations through next steps; this Chapter describes how the community can help facilitate improvements on the ground for Columbus Avenue.

6.1 Recommendations and Phasing

The Study recommendations are based on:

- Community-identified transportation needs and priorities,
- Technical analysis of transportation performance on Columbus Avenue; and
- Community feedback on the design alternatives.

The study team recommends five categories of improvements for the Columbus Avenue:

A – Improved parking management

B– Pedestrian priority measures, including sidewalk widening and the re-design of the Columbus / Green / Stockton intersection

C – Transit priority measures

D – Bicycle priority measures

E – Community Support for Implementation

The featured recommendation is the strategic widening of the Columbus Avenue sidewalks over time (Alternative 3), along with the redesign of the Columbus / Green / Stockton intersection. The recommendations within the Pedestrian Priority Measures section identify short-term steps to expand pedestrian space until funding is available to permanently widen the sidewalks.

The Study team has grouped the recommendations into three implementation phases.

Phase I (< 1 year)

Phase II (2 to 5 years)

Phase III (5+ years)

The delivery schedule of each phase depends largely on available funding.

For each recommendation, the following steps in project implementation generally apply:

Conceptual engineering and outreach. This Study completes the conceptual planning phase, which identifies both technical and community needs and priorities, develops a range of improvements designed to address those priorities, and screens the alternatives through a technical and community evaluation process. The result of the conceptual engineering phase are 5% engineering designs for one or more alternatives that emerge from analysis with no fatal flaws, technical feasibility, and community support.

Preliminary engineering, outreach, and environmental impact analysis. This phase involves working

closely with SFMTA and SFDPW staff to refine the community's preferred design concept(s). In this phase, engineering designs are developed to a 12% level in order to support environmental impact analysis and transportation performance analysis, and develop more refined cost estimates. Technical work in this stage likely involves a more detailed traffic and transit operations analysis as well as a review of cost estimates.

Design review and SFMTA approvals. Depending on the project, recommendations require staff approvals from SFMTA's Pre-TASC review body as well as the full TASC, which includes representatives from other departments and city agencies.

Final engineering design. Detailed engineering designs of the projects are developed during this stage, which is typically led by SFMTA or SFDPW.

Legislative approvals and Construction, led by SFMTA or SFDPW. Most transportation improvements involve legislative action from the SFMTA Board or the Board of Supervisors.

The following subsections outline the next implementation steps for recommendation sets A through D. Figure 1 graphically depicts the funding and implementation plan.

6.2 Parking Management Recommendations

The Study Team proposes three key recommendations for improving parking management along Columbus Avenue: making parking more readily available for both short-term and long-term parkers, and utilizing the existing supply of parking more efficiently. The recommendations are intended to implement the findings of the parking study documented in Chapter 3. The ultimate goal is to make parking more readily available for both short-term and long-term parkers, and utilize the existing supply of parking more efficiently.

6.2.1 Increase Visibility of Off-Street Parking. One of this Study's key technical findings is that several off-street garages are underutilized. Through outreach, the Study team found that many community members don't have accurate / sufficient awareness of the off-street garages availability, and that long-term parkers are using the scarce supply of on-street spaces. The study team recommends three steps to increase the visibility of off-street parking:

- Install directional signs. In spring 2009, SFMTA installed additional parking garage directional signs throughout North Beach.
- Monitor the effectiveness of the real-time parking information sign the City installed at Broadway and Columbus. If needed, identify additional locations for signs.

6.2.2 Reduce Occupancy Rates for On-Street Parking to 85%. On-street parking is over-subscribed, especially during peak demand periods on Friday and Saturday evenings. Based on the findings of Chapter X, the study team recommends several steps to discourage long-term parkers from using on-street spaces, in order to free up those spaces for short-term needs. As identified in Chapter X, the objective is to maintain an average 85% occupancy level; in other words, to maintain approximately 1 out of 7 spaces available at any given time.

- Track the implementation of the Fishermen's Wharf SFPark pilot project. Chapter X describes the SFMTA's emerging SFPark program, which is designed to achieve 85% occupancy rates in key commercial corridors of San Francisco. The current SFPark trials include implementation in Fisherman's Wharf. If successful, the SFPark area should be extended to include Columbus Avenue as an SF park pilot / implementation area in the next round of SFPark implementation.

Through SFPark, the City could eventually determine the market rate for metered parking in North Beach.

- Expand the \$2.50 / hour meter zone north of Broadway into North Beach. SFMTA can draw upon analysis conducted as part of their recent Parking Meter Study to determine the appropriate boundaries.
- Extend meter hours until midnight during peak demand periods. This recommendation was included in the SFMTA's Parking Meter Study, released in late 2009, but the recommendations are not currently under consideration by the SFMTA Board.

6.2.3 Institute Universal Valet Parking. A universal valet parking program can be instituted by Columbus Avenue merchants in partnership with Columbus Avenue stakeholder groups. One strategy and a design for valet parking is shown on page x. A mechanism to help fund the valet operations would be a community benefits district or a business improvement district (discussed further in section 6.7 below)

6.2.4 Parking Benefit District.

6.3 Pedestrian Priority Measures

The featured recommendations of this Study are those that focus on prioritizing space along Columbus for pedestrians. The Study Team makes four key recommendations:

6.3.1 Reduce pedestrian crossing distances and improve visibility at corners by installing bulbouts as identified in Alternative 3. Two sets of bulbouts are the top priority:

- Columbus / Stockton / Green. The implementation of these bulbouts needs to proceed through the project development steps following conceptual design, as outlined in section 6.1. The technical work will be conducted in collaboration with MTA and will test the operations of the intersection and identify measures to reduce any potential delay effects on Muni in particular. This phase could be led by SFMTA or the Authority, depending on which agency is able to secure funding, but should be coordinated between the two agencies. Obtaining pre-TASC and TASC support for the design is a critical next step in implementation.

Additional in-reach to City departments is also required before the TASC will likely approve the Columbus / Stockton / Green designs, relating to fire code conformity.

Many cities in the United States, including San Francisco, have adopted fire code requiring a 20-foot clear area on streets, so that emergency vehicles can pass one another and other vehicles on their way to emergencies, and so that firefighting apparatus can deploy stabilizers with enough room for personnel to use equipment and ladders. On the blocks of Columbus where there is a median, Alternatives II and III would leave only 18 feet clear—sufficient space for fire trucks and Muni buses to pass cars that have pulled over, but a width that would not be in compliance with the code (Alternative III might comply with the code by counting a portion of the flex space). Adherence to modern fire codes in street design has tended to result in wider streets, placing fire safety in conflict with traffic safety. The U.S. Environmental Protection Agency and Congress for the New Urbanism, then, are working with firefighters, traffic engineers and planners to forge a consensus on street design that is both fire-safe and traffic-safe. Project planners will likewise need to work with the San Francisco Fire Department to address any concerns SFFP staff may have with the design.

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- Bulbouts along Washington Square Park, Columbus between Union and Filbert. The design of these bulbs is relatively simpler than for the Stockton / Green intersection, but the effects of the design on transit operations need to be reviewed with SFMTA. This segment of Columbus will be under construction in 201X when the Central Subway construction is completed. As the lead agency, the SFMTA can incorporate the bulbouts' final design and construction in the reconstruction process that will follow the Central Subway tunnel boring machine extraction. The community would have the role of asking the SFMTA to proceed in this fashion. The Authority should work with the SFMTA in order to ensure that the bulbouts can be accommodated. Coordination with larger projects is typically a prioritization criterion for local grants, so this opportunity increases funding chances for the project.

6.3.2 Expand sidewalk space temporarily and in the short-term by allowing flexible use of the parking lane for café seating. In order to implement this, the approach to ADA accommodation needs to be determined. The Authority proposes accommodating persons with disabilities on sidewalk seating alongside the parking lane (see Appendix X). The City of San Francisco Planning Department is currently leading policy discussions on the codification of shared public ways, including determining the strategy for ADA accommodation. The City is also advancing the flex-lane concept through its Pavement to Parks program, led by the Planning Department, DPW, and the Mayor's Office of Greening. Columbus Avenue will be included in the City's next round of Pavement to Parks trials, expected in January 2010.

6.1.2.3 Expand sidewalk space permanently by widening the sidewalk into the existing parking lane and creating a shared space or Flex lane. In order to implement this, ADA accommodation needs to be addressed. As discussed in detail in Appendix X, the Authority proposes that flex spaces be identified similarly to a driveway, and not as a "hazardous vehicular way." This will avoid the need for truncated dome detection between the pedestrian-only sidewalk and the flex space. Instead of yellow truncated domes, the flex space can be delineated with a textured, contrast-color pavement to provide detection for persons with disabilities. Finalizing the ADA approach can be coordinated with the Planning Department's codification of shared public ways (see bullet above).

The locations for sidewalk widening should be strategically determined due to funding constraints, with the block of Columbus between Union and Stockton/Green as the highest priority. Community support along the stretches of Columbus Ave where widening is proposed is also essential. The community has a role to play by bolstering local support, especially among merchants along Columbus Ave, and helping identify the first stretches of Columbus Ave to be widened. The popular and visible PARKing day event led by RENEW SF and the Great Streets project could become an annual occurrence, which would strengthen grass roots support for permanent widening while the City completes preliminary engineering and environmental analysis and seeks funding.

6.1.2.4 Expand path of travel on sidewalk by replanting trees in parking lane as they require replacement over time.

6.4 Transit Priority Measures

Three key transit recommendations are offered:

6.4.1 Construct bus bulbouts. Each Muni stop along Columbus Avenue, as well as stops at Stockton and Union Streets, is proposed for bulbouts. Segments of Columbus where the sidewalk is permanently widened (Alternative 3) do not require bulbouts, but other locations should receive them. Along with

bulbouts, station platforms should be upgraded per TEP recommendations for Rapid routes, with furnishings and amenities and NextMuni real time arrival information.

6.4.2 Consolidate bus stops, per the recommendations of SFMTA’s Transit Effectiveness Project, in order to reduce transit delays. SFMTA is planning for a systemwide implementation of TEP recommendations, including stop consolidation recommendations, in 2010; consolidations along the Columbus Avenue routes should be implemented as part of this action.

6.4.3 Install transit signal priority at Stockton / Green. The Authority should obtain information from TEP’s transit engineering group on the costs and other issues related to this measure. The 5YPP for SFgo has a category set aside for “spot” signal controller treatments on the Muni Rapid network.

6.5 Bicycle Priority Measures

The key recommendation related to bicycling is the reduction of traffic lanes from two in each direction to one (also called the “road diet”), as one of the effects of the road diet will be to enable cyclists to ride alongside traffic in the wide lane.

A number of steps are required to implement the road diet:

- SFMTA peer review and coordination. The Authority will meet with SFMTA’s Transit Engineering team to review the transportation modeling results for the road diet, focusing in particular on any impacts to transit, and measures to mitigate any effects on transit. The SFMTA Transit Engineering group will need to concur with modeling results and proposed transit mitigations before the road diet can move forward.
- Design and carry out a pilot project designed to allow the City to evaluate the effect of the road diet on traffic and transit operations. A pilot, similar to a Market Street pilot project, is currently under development by the Authority and SFMTA.
- Develop circulation plan and engineering design for pilot. The Authority is currently working with the Nelson/Nygaard team and with SFMTA to develop an engineering design involving striping and temporary bulbs.

An issue for further in-reach with the Department of Public Works relates to drainage and street crowning. The relatively steep grade of the cross-section of some segments of Columbus—the “crowning” of the roadway—raises a number of issues. Key among these is whether even modest relocation of the curb line would require partial or complete reconstruction of the street from curb to curb in order to maintain adequate drainage. City staff have indicated that regardless of a street’s ability to accommodate runoff (roadways are typically designed to volumes typical of a 100-year storm, while drains and sewers are designed to a five-year storm standard), curb heights of six inches are standard. Without regrading, Alternative III would almost certainly result in curbs less than six inches high in most locations. Use of the parking lane for cafe seating, however, should not require new structural elements.

6.6 Funding Sources

Funding sources include a package of local and regional and funding.

6.6.1 Safe Routes to Transit. Safe Routes to Transit is a regional grant program that supports planning and capital project implementation. Administered by the Metropolitan Transportation Commission (MTC), The Safe Routes to Transit (SR2T) Program awards grants to facilitate walking and bicycling to regional transit.

The most recent round of Safe Routes to Transit grants were awarded in 2009. \$4.2M was available for the 9-county Bay Area. The Authority, in partnership with SFMTA, submitted a grant that would fund final design work for Columbus Avenue. Because Columbus Avenue is less directly connected to regional transit (in comparison to other competing applications for the Balboa and Glen Park BART station areas in San Francisco), this application was not funded. However, the application performed well and was ranked highly, indicating that Columbus Avenue may be a strong candidate for future cycles of this grant program.

The next call for Safe Routes to Transit will be issued in 2011.

6.6.2 Transportation for Livable Communities. The Columbus Avenue project will be a strong candidate for Transportation for Livable Communities (TLC) grants. TLC has grants awarded and administered both by MTC and by counties; the Authority administers the county program. Grants are awarded approximately every 2 years. Funds are intended to support projects that encourage multimodal travel, more livable neighborhoods, and the development of jobs and housing in existing town centers. Successful projects improve walking and bicycle access to public transit hubs and stations, major activity centers and neighborhood commercial districts as a way of fostering community vitality.

The next cycle of TLC funding will be a regionally-competitive call for projects in late January or early February, 2010. Grants will likely be awarded by June, 2010. Beginning with this round of funding, MTC is scoring applications more highly the further they are in engineering design. To compete well this round, the community will need to commit to a Columbus / Stockton / Green design and/or specific blocks of Columbus Avenue to be widened (and parking removed), and the Authority and SFMTA will need to concur on project engineering design, traffic and transit mitigations, and initiate engineering design to bring a project as close to a 35% level as practicable.

6.7 Community Involvement

Another critical part of implementation is ongoing community support, including:

- Letters of support for construction grants and legislative changes.
- Community contribution to funding non-conventional projects / higher levels of maintenance and operation. The ideal approach is the creation of a Business Improvement District (BID) or Central Business District (CBD). BID funds can help pay permitting and liability costs, or special event costs, or the cost of developing custom-made risers, associated with the ongoing flex-use-of-parking-space program).

RENEW SF will be in charge of coordinating and funding the efforts to gain community support.

Vocal support from community members is necessary in order to:

- Help pay for the costlier designs
- Identify strategic blocks, along which to widen the sidewalks with merchants' support
- Lobby local decision makers (SFMTA and Authority boards) in favor of the community's preferred alternative

B Pedestrian Priority Measures									
I Flex Lanes: Expand sidewalk space via flexible use of the parking lane for café seating.									
a	Conduct a pilot / trial of flex lane installation	COMPLETE, SEPT 2009	RENEW SF						
b	Demonstrate flex lane concept as part of City Pavement to Parks program	TBD	TBD	SF Planning					
c	Obtain MOD concurrence sidewalk-edge ADA seating accommodation.	N/A	N/A	Better Streets Plan team					
d					Formalize city program: develop a template permit application; develop boilerplate liability language; develop template design with barriers.	N/A	N/A	Pavement to Parks Program	
II Design Alternative III: Expand sidewalk space permanent expansion into the parking lane									
a	Finalize design approach: identify textured pavement design and color contrast that can serve as detectable warning between ADA path of travel (existing sidewalk) and flex lane.	N/A	N/A	Better Streets Plan team					
b	Finalize policy defining "hazardous vehicular way" as a through street with speeds above 10 mph	N/A	N/A	Better Streets Plan team					
c					Identify locations - work with businesses block-to-block to obtain letters of support and/or petition for sidewalk widening, either partially or into the parking lane.	N/A	N/A	RENEW SF	
								Develop engineering designs	Transportation for Livable Communities SFMTA
								Construction	\$4,105,000 * Transportation for Livable Communities SFMTA
III Design Alternative III: Columbus / Stockton / Green Re-Design									
	TAC input on benefits / impacts of Alt 3 and refine design	N/A	N/A	Authority					
	TASC review	N/A	N/A	Authority	Engineering design	N/A	Prop K	Authority / SFMTA	
					Legislative process	N/A	N/A	SFMTA	
								Transportation for Livable Communities	SFMTA
					Construction	1,563,000			
III Design Alternative III: Reduce crossing distances and improve pedestrian visibility at corners									
a					Develop engineering designs for Columbus / Stockton / Green corner bulbs (see below)			Transportation for Livable Communities	MTA Livable Streets
								Transportation for Livable Communities	SFMTA
					Construction	\$950,000 *			
b					Develop engineering designs for Filbert / Union / Powell curb bulbs as part of Final Design for the Central Subway project			Central Subway / Safe Routes to Transit grant	Central Subway / Safe Routes to Transit grant
								Construction as part of the Central Subway project	\$2,382,000 grant Central Subway project / Safe Routes to Transit grant Central Subway Project / Safe Routes to Transit grant
IV Expand path of travel on sidewalk by replanting trees in parking lane as they require replacement over time									
a	Develop prototypical design for tree in parking lane curb that accommodates street sweepers	--	staff time from DPW	DPW					
b	If an existing tree dies, seek to implement the strategies for permanent sidewalk widening above (line B.II), and plant new tree in widened sidewalk. If sidewalk is not a candidate for permanent widening, then plant tree in parking lane. Outreach / legislation / Construction.	TBD	TBD	DPW BUF with MTA Livable Streets and Community (RENEW SF)					

C Transit Priority Measures							
I Reduce transit delays / mitigate transit impacts							
a	Consolidate bus stop at locations identified in the TEP	outreach	N/A	N/A	RENEW SF		
		Legislative process	N/A	N/A	SFMTA		
b	Construct bus bulbs					Develop engineering design. For each bulb, when initiating design, implement the steps to consider permanent sidewalk widening (line BII). See BIIc Safe Routes to Transit [Obtain from DPW] Safe Routes to Transit	Authority / SFMTA Authority / SFMTA
c	Install transit signal priority at Stockton / Green						Design and construction ~ \$50,000 Lifeline Transportation Program SFMTA Legislative process N/A N/A SFMTA
D Bicycle Priority Measures							
I Expand safe space for bicycling							
a	Change lane configuration to one traffic lane in each direction						
	Develop circulation plan and refine / test transit mitigations ~ \$50,000	Authority			Authority / SFMTA		
	Design and implement pilot project to evaluate one traffic lane per direction ~ \$50,000	Authority			Authority / SFMTA		
	Develop transition design (intersection / lane configurations where reverts back to two in each direction)	N/A	N/A		Authority / SFMTA		
	Prepare environmental assessment	N/A	N/A		Authority / SFMTA		
						Develop engineering design	Prop K Authority / SFMTA
						Legislative process: lane conversion; turn restrictions.	N/A N/A SFMTA
						Construction	TBD Transportation for Livable Communities SFMTA
E Community Support for Implementation							
I Demonstrated community support for recommendations and implementation							
	Letters of support for construction grants and legislative changes	N/A	N/A		RENEW SF		
II Community contribution to funding nonconventional projects / higher levels of maintenance and operation							
	Adopt BID or CID (e.g., BID funds can support the permitting and liability costs, or costs of developing custom risers, associated with ongoing flex use of parking space program, or special event implementation).	N/A	N/A		RENEW SF		